RK05
disk drive
engineering drawings

R. Tinga.
2370 1.

digital equipment corporation · maynard, massachusetts

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

SEQUENCE	
DRAWING DIRECTORY	B-DD-RKØ5-Ø SHEET #1 ONLY
MODULE UTILIZATION LIST	C-MU-RKØ5-Ø-2
READ/WRITE	D-CS-G18Ø-Ø-1
INDEX SECTOR	D-CS-M77ØØ-Ø-1
CONTROL & INTERLOCK	D-CS-M77Ø2-Ø-1
TRACK ADDRESS DIFFERENCE	D-CS-M77Ø1-Ø-1
POSITION SERVO PREAMP	D-CS-G938-Ø-1
SERVO POWER AMP CIRCUIT	D-CS-H6Ø4-Ø-1
SERVO POWER AMP	E-UA-H604-0-0
CONTROL PANEL CIRCUIT	D-CS-5409698-0-1
CONTROL PANEL	E-IA-5409698-0-0
RELAY BOARD CIRCUIT	D-CS-5409574-0-1
DECPACK MOTOR RELAYS	E-IA-5409574-0-0
CHASSIS WIRING	D-BD-RKØ5-Ø-1
ACCESSORY LIST	A-AL-RKØ5-Ø-17
POWER SUPPLY (H743)	B-DD-H743-0
WIRE LIST	K-WL-RKØ5-0-3

SEQUENCE	MFG. PRINT SET
MODULE UTILIZATION (PL)	A-PL-RKØ5-Ø-2
RKØ5 TESTER	B-DD-RKØ5-T
DECPACK ASSY	D-UA-RKØ5-0-0
DECPACK ASSY (PL)	A-PL-RKØ5-0-0
WIRED ASSY	D-AD-7008696-0-0
LINEAR POSITIONER ASSY	D-AD-7008702-0-0
LINEAR POSITIONER ASSY (PL)	A-PL-7008702-0-0
H743 POWER SUPPLY	B-DD-H743-0

This is PRINT SET [X]

UNIT VARIATIONS

VARIATION	TITLE	PRINT SET TYPE: RKØ5-Ø
RKØ5-AA	DECPACK 115V 60HZ	X
RKØ5-AB	DECPACK 230V 60HZ	X
RKØ5-BA	DECPACK 115V 50HZ	X
RKØ5-BB	DECPACK 230V 50HZ	X
RKØ5-CA	RKØ5-AA, H967	
RKØ5-CD	RKØ5-BB, H967	
RKØ5-DE	RKØ5-AA, H960, 861 POWER CONTROL	
RKØ5-DF	RKØ5-AB, H960, 861	
RKØ5-DH	RKØ5-BA, H960, 861	
RKØ5-DJ	RKØ5-BB, H960, 861	

REVISIONS	DATE	CHG. NO.	REV
	6/72	RKØ5-14	A
E.S.		RKØ5-16	B
G.S.		RKØ5-23	C
E.S.		RKØ5-26	D
D.J.		RKØ5-28	E
D.J.		RKØ5-30	F
D.J.		RKØ5-31	H
D.J.		RKØ5-32	J
D.J.		RKØ5-34	K
D.J.		RKØ5-35	L
D.J.		RKØ5-38	M
D.J.		RKØ5-39	N
D.J.		RKØ5-40	P
D.J.		RKØ5-41	R
D.J.		RKØ5-42	S
D.J.		RKØ5-45	T
D.J.		RKØ5-46	U
D.J.		RKØ5-48	V
D.J.		RKØ5-50	W
D.J.		RKØ5-51	Y
D.J.		RKØ5-52	Z
D.J.		RKØ5-53	AA
D.J.		RKØ5-54	AB
D.J.	1/75	RKØ5-55	AC
D.J.		RKØ5-56	AD

USED ON OPTION/MODEL

DRN.	J. FLEMING	DATE	1/20/72
CHK.		DATE	5-2-72
ENGR. MFG.		DATE	5/2/72
APPROV.		DATE	5/4/72
FIELD SERV.		DATE	5/4/72

TITLE: DECPACK ASSY

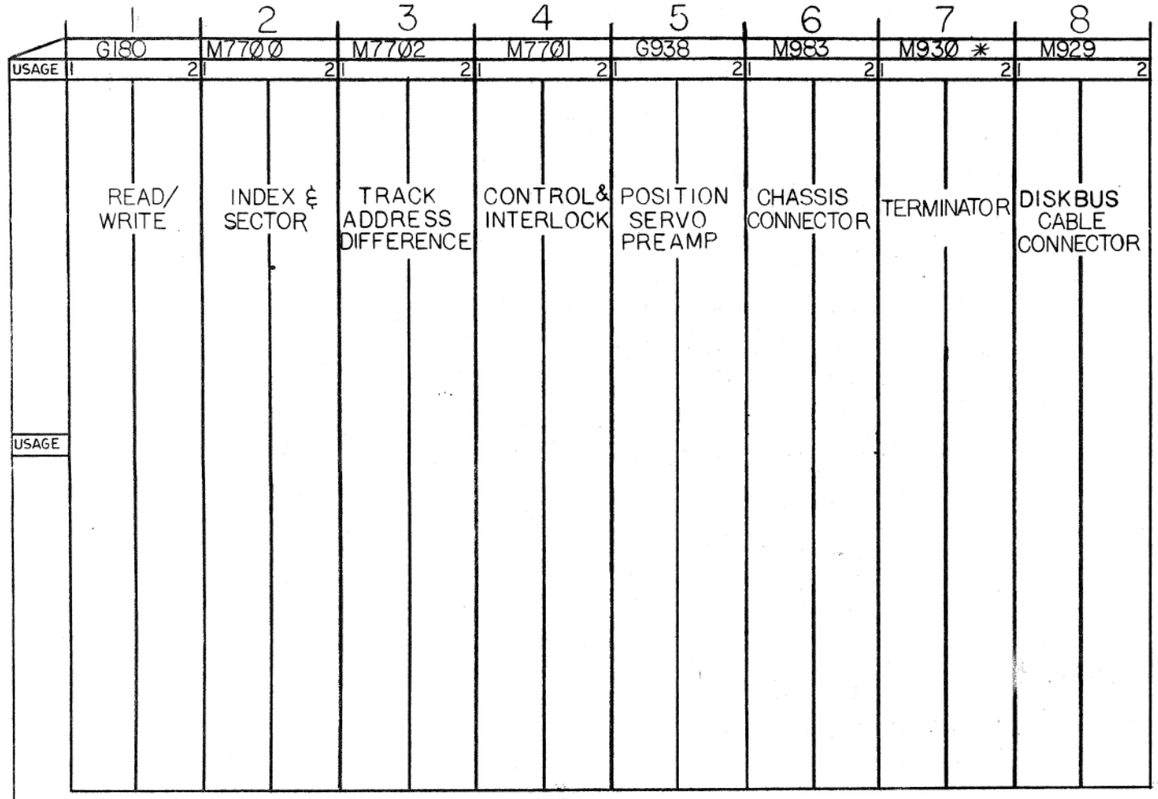
SIZE	CODE	NUMBER	REV.
B	DD	RKØ5-0	AD

DIST

DRB 106

DEC 16-17251 1062

NOTE:
TERMINATOR OR DISKBUS CABLE CONNECTOR MAY BE INTERCHANGED BETWEEN SLOTS 7 AND 8.



* IF MORE THAN ONE DRIVE IS USED, M930 IS REPLACED BY M929 (BC11A), M930 IS USED IN THE LAST DRIVE ON THE BUS.

REVISIONS			
CHK	CHANGE NO.		REV.
	RK05-00002	11-72	A
	RK05-00006	2-9-72	B
	RK05-00023	3-26-73	C
	RK05-00040	7-7-73	D

A. Tenn	DJENSEN
A. Tenn	JENSEN
G. SCHNEIDER	
E. ALLain	G. SCHNEIDER

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
RKØ5		PARTS LIST		

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES
DECIMALS: .XXX = .005, .XX = .02, X = .1 — ANGLES: ±0° 30'
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓
MATERIAL
FINISH

DRN. D. Schmidt	DATE 11-2-71	
CHK'D. J. T. Conroy	DATE 11-9-71	
ENG. Robert Hansen	DATE 24 Nov 71	
PROJ. ENG. E. L. Simmons	DATE 11-24-71	
PROD. G. A. Gibney	DATE 11-7-71	

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: MODULE UTILIZATION

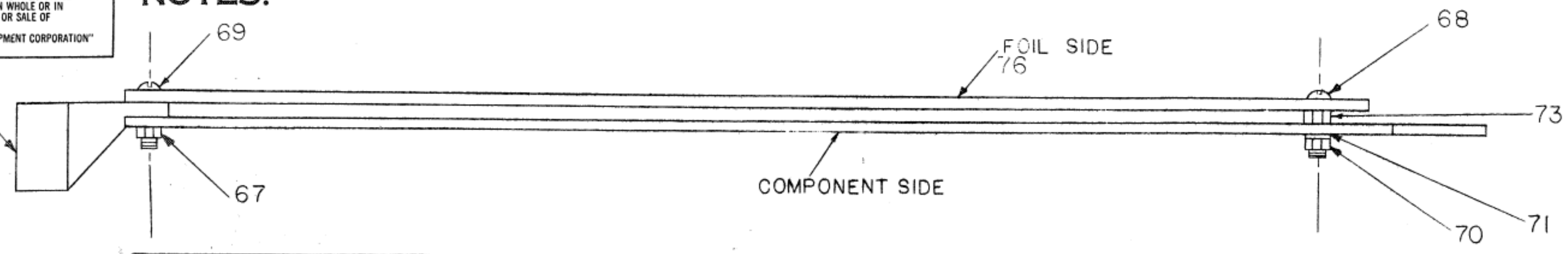
NEXT HIGHER ASSY.: B-DD-RKØ5-Ø
SCALE: NONE
SHEET: | OF |

SIZE	CODE	NUMBER	REV.
C	MU	RKØ5-Ø-2	D

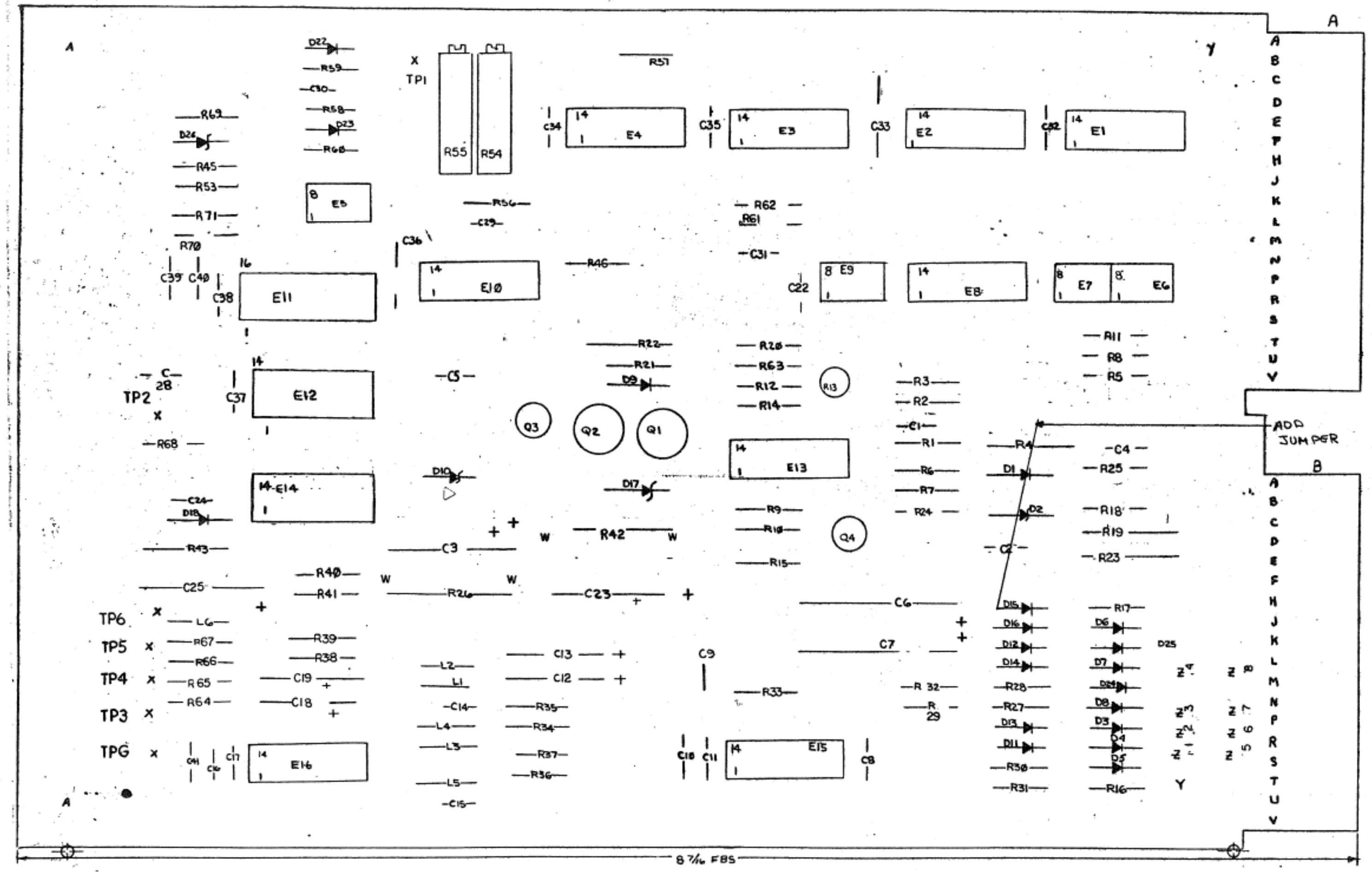
DIST.

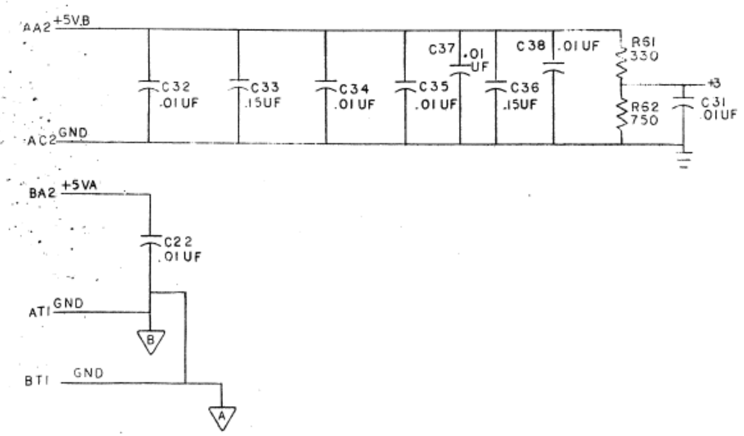
DEC FORM NO. DRC 100-A

NOTES:



NOTE:
DO NOT INSERT HANDLE HOLE EYELETS ON OUTSIDE HANDLE HOLES: (2 PLCS)





1	D26	DIODE IN748A (3.9V ZENER)	1100122	79
1	R69	RES. 180 1/4W 5%	1301322	78
2	R7,R10	RES. 100 1/4W 5%	1300229	77
1		NOISE SHIELD	5009893	76
2		HANDLE,FLIP CHIP-GREEN	9008337-01	75
7	TPG,TP1 THRU TP6	SWAGE LUG	9007791	74
2		HEX NUT,NYLON, #2-56	9007263	73
2		EYELET #GS4-7	9006732	72
2		INTERNAL LOCK WASHER #2-56	9006631	71
2		HEX NUT #2-56	9006555	70
2		SCREW 4/40X3/8	9006011-4	69
2		SCREW PAN HD #2-56X 5/16	9006002-1	68
2		KEP NUT 4/40	9006557	67

QTY	REF. DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
3	E6,E7,E9	I.C. DEC 75452	1910645	66
2	E15,16	I.C. DEC 733	1910644	65
1	E14	I.C. DEC 1414	1910337	64
1	E5	I.C. DEC 741	1910298	63
1	E1	I.C. DEC 8881	1909705	62
2	E2,E8	I.C. DEC 380	1909485	61
1	E10	I.C. DEC 9601	1909373	60
1	E13	I.C. DEC 7472	1905588	59
2	E4,E12	I.C. DEC 7400	1905575	58
1	E3	I.C DEC 7474	1905547	57
1	L6	INDUCTOR 120UH	1610663	56
2	L1,L2	INDUCTOR 56UH	1610661	55
3	L3,L4,L5	INDUCTOR 100UH	1610662	54
1	Q3	TRANSISTOR DEC 6534C	1503409-02	53
1	Q4	TRANSISTOR DEC 3009B	1503100	52
2	Q1,Q2	TRANSISTOR 2N2904	1501742	51
				50
1	R13	POT 1K 1/2W 20% 62PR	1309150-03	49
2	R54,55	POT 10K 3/4W 10% 76PR	1309143-10	48
2	R16,R17	RES. 27K 1/4W 5%	1305346	47
2	R27,R28	RES. 8.2K 1/4W 5%	1303179	46
1	R60	RES. 220K 1/4W 5%	1302092	45
1	R4	RES. 270 1/2W 5%	1300285	44
2	R40,R41	RES. 560 1/4W 5%	1301890	43
6	R6,9,45,53,70,71	RES. 5.6K 1/4W 5%	1301874	42
1	R11	RES. 1.1K 1/4W 5%	1301475	41
1	R58	RES. 3.3K 1/4W 5%	1300439	40
1	R62	RES. 750 1/4W 5%	1301401	39
2	R15,R21	RES. 1.2K 1/4W 5%	1301320	38
2	R30,R31	RES. 15K 1/4W 5%	1300496	37
6	R5,8,18,38,39,57	RES. 10K 1/4W 5%	1300479	36
1	R59	RES. 4.7K 1/4W 5%	1300447	35
1	E11	I.C. DEC 74123	1910436	34
16	R1,R2,R3,R20,R34-37 R46,R56,R63-68	RES. 1K 1/4W 5%	1300365	33
2	R24,R14	RES. 470 1/4W 5%	1300316	31
1	R43	RES. 470 1/2W 5%	1300315	30
3	R22,R25,R61	RES. 330 1/4W 5%	1300295	29
2	R29,R32	RES. 220 1/4 5%	1300271	28
2	R26,R42	RES. 180 1W 5%	1300262	27
1	R19	RES. 180 1/2W 5%	1300260	26
1	R12	RES. 150 1/4W 5%	1300250	25
1	R23	RES. 150 1/2W 5%	1300249	24
1	R33	RES. 47 1/4W 5%	1300202	23
8	1-8	GOLD WIREWRAP PINS	1210385-1	22
18	D1,D3-9,D11-16,D22-25	DIODE D672	1105275	21
1	D2	DIODE IN 751A (5.1V ZENER)	1110994	20
				19
3	D10, D17, D18	DIODE IN 753A (6.2V ZENER)	1102421	18
13	C9,C33,C36	CAP .15UF 50V 10% POLYCARBONATE	1010031	17
1	C15	CAP. 18PF 100V 5% D.M.	1002608	16
4	C12,C13,C18,C19	CAP. .15UF 35V 20% S. TANT	1002180	15
14	C4,10,11,16,17,22,24,28,31 32,34,35,37,38	CAP. .01UF 100V 20% DISC	1001610	14
2	C6,C7	CAP 10UF 35V 20% S. TANT	1000069	13
3	C3,C23,C25	CAP 6.8UF 35V 20% S. TANT	1000067	12
1	C2	CAP 680PF 100V 5% D.M.	1000026	11
2	C5,C30	CAP 470PF 100V 5% D.M.	1000024	10
1	C29	CAP 150PF 100V 5% D.M.	1000019	9
1	C41	CAP 27PF 100V 5% D.M.	1001739	8
1	C14	CAP 56PF 100V 5% D.M.	1000012	7
3	C1,C39,C40	CAP 47PF 100V 5% D.M.	1000011	6
1	C8	CAP 33PF 100V 5% D.M.	1000009	5
		ETCHED CIRCUIT BOARD	5009743	4
		MODULE ECO HISTORY	B-MH-G180-0-6	3
		ASSY/ DRILLING HOLE LAYOUT	E-AH-G180-0-5	2
		X-Y COORDINATE HOLE LOCATION	K-CO-G180-0-4	1

PARTS LIST

ETCH BOARD REV. L

IC TYPE	GND	+5V
DEC 380		8
DEC 75452	4	8

GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY EXCEPTIONS ARE STATED ABOVE

IC PIN LOCATIONS

DEC NO.	EIA NO.	DEC NO.	EIA NO.
		IN746A	SAME
2N2904	2N2118A	IN753A	SAME
DEC 3009B	2N3009	IN751A	SAME
DEC 6534C	MPS6534	D672	IN3653

SEMICONDUCTOR CONVERSION CHART

CHK	CHANGE NO.	REV.
A. Pickel 1-17-74	G180-00006	K
Dale Jensen 10-29-74 DALE JENSON	G180-00008	L
Ray Vaughn 1/6/74		
N. Field 1/27/75 N. FIELD		

REVISIONS

DRN. R. DOUCETTE DATE 10-22-71
CHK'D. NANCY MOORE DATE 11-30-71
ENG. DALE JENSEN DATE 1-22-72
PROJ. ENG. A. KARLSBERG DATE 1-22-72
PROD. DATE
NEXT HIGHER ASSY

digital

TITLE DEC PACK READ/ WRITE

SIZE D CODE CS NUMBER G18Ø-O-1 REV. L
SCALE
SHEET 1 OF 2
DIST.

DEC FORM NO. DRD 135.0

BUS WRITE DATA AND CLOCK L AJ1
BUS WRITE GATE L AJ2
SENT 1USec Before data
RK4-2 NO PROTECT L AN2
RK2-2 R/S/W READY L AP2
RK3-2 CYL 128 H AM2
Reduce WR. current.
BUS HD SELECT AP1
RK4-2 SEL/ READY L AH2
Sel. sp unit is ready
RK4-2 UNSAFE L AL2

RK1-2 SELECTED WT GATE H AV1

+15V A
+5V A
+6V A
-15V A
-6V A
+15V B
+5V B
+12V
-15V B
-6V B

WRITE CURRENT ADJ
ERASE CURRENT SWITCH
UPPER HEAD
LOWER HEAD
-15VA

RK1-2 FORCE UNSAFE TP BA1
RK1-2 SET UNSAFE L AU2

PREAMPLIFIER
GAIN≈100

PULSE FORMER
LOW PASS FILTER
GAIN≈10
PEAK DETECTOR
≈0.3-0.6V P-P
≈0.2-0.4V P-P

DATA SEPARATOR
E5 CONTROLS E10 DURATION
DATA WINDOW GENERATOR 250NS
DATA ONE WINDOW DELAY

BUS READ GATE L AK2

RK1-2 BUS READ DATA L AE2
RK1-2 BUS READ CLOCK L AF2
RK1-2 SELECTED READ GATE H AB1
RK2-2 SELECT H AS2
RK1-2 BUS HIGH DENSITY L AR2

TP2 150NS
TP1 420NS

RK05 - 4.19 4.14

UNLESS OTHERWISE INDICATED:
* INDICATES SWAGE LUG
A = ANALOG GND "A" BT1.
B = ANALOG GND "B" AT1
= DIGITAL GND AC2
----- = COMPONENTS NOT MOUNTED ON BOARD
ALL TIMES INDICATED ARE NOMINAL

TRANSISTOR & DIODE CONVERSION CHART

DEC	EIA	DEC	EIA
DEC 6534C	NPS 6454	D672	IN3883
DEC 3009B	2N5009	IN753A	SAME
2N2904	2N2218A	IN753A	SAME
		IN748A	SAME
		IN748A	SAME

DRN B. L. Hale 12 Nov 71
CHKD [signature] 30 Dec 71
ENG [signature]
PROD [signature] 17 Dec 71

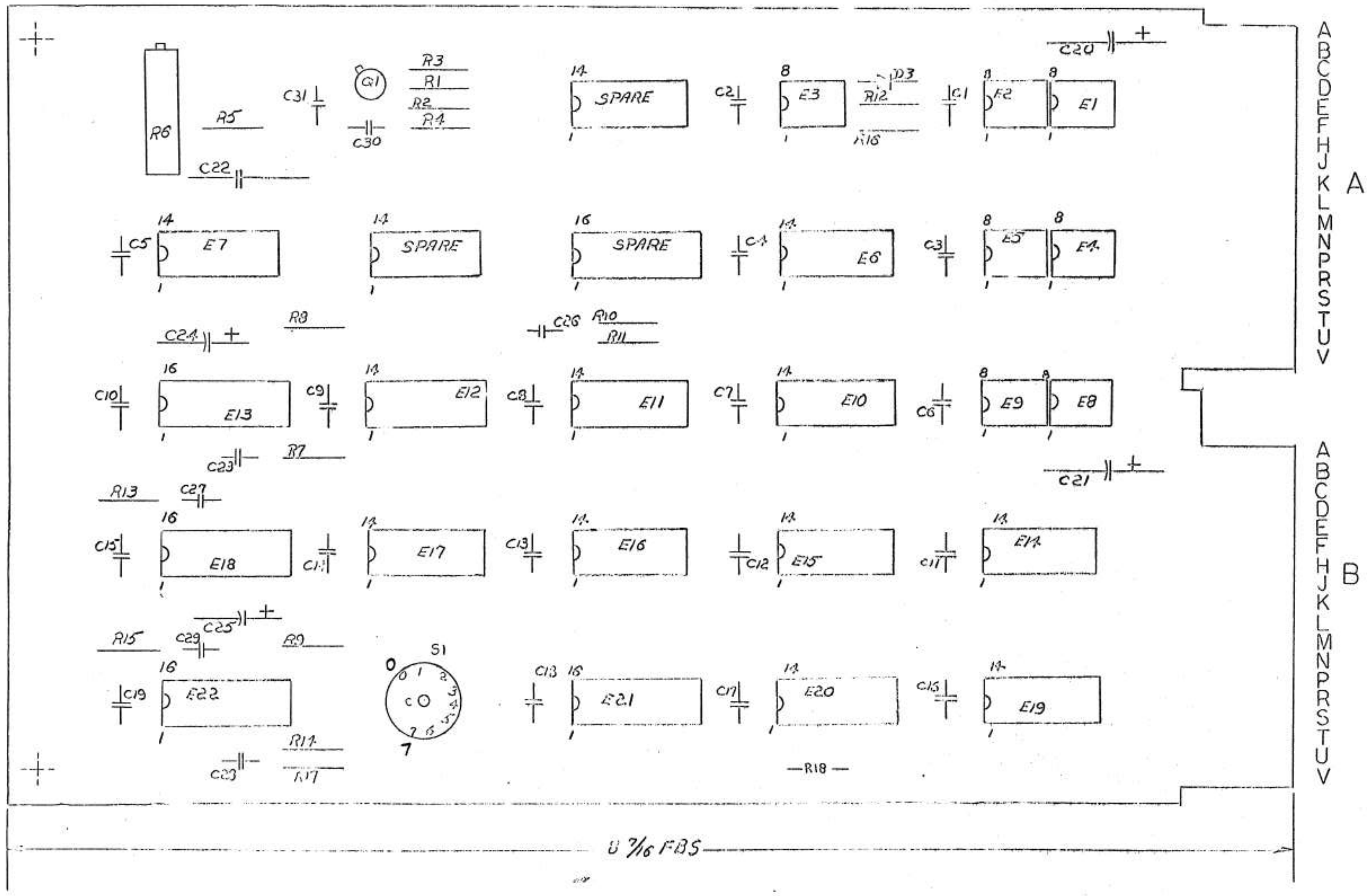
digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE DEC PACK READ/WRITE RK1-2
SIZE D | CODE CS | NUMBER GIB[illegible]-0-1 | REV L
PRINTED CIRCUIT REV. L

SLOT -1

SHEET 2 OF 2

DEC FORM NO. GRD 116



NOTES:

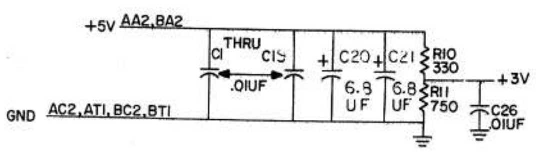
PIN7 = GND ON E2,E5,E7,E11,E13,
PIN14 = +5V ON E14,E17,E20,E21,E23

PIN4 = GND ON E1,E3,E4,E9,
PIN8 = +5V ON E10,E15,E16

PIN10 = GND ON E8,E12
PIN5 = +5V

PIN1 = GND ON E22
PIN8 = +5V

PIN8 = GND ON E6,E18,E19
PIN16 = +5V



QTY	REF. DESIGNATION	DESCRIPTION	DEC PART NO.	ITEM NO.
2	C20, 21	CAP. 6.8UF 35V 20%	1000067	40
1	R2	RESISTOR 4.7K 1/4W 5%	1300447	39
1	C22	CAP. .01UF 100V 10% MYLAR	1005784	38
				37
2		HANDLE, FLIP CHIP - MAGENTA	9008337-06	36
4		EYELET	9006732	35
1	E20	I.C. DEC 7401	1905590	34
3	E13, 18, 22	I.C. DEC 74123	1910436	33
7	E1-5, E8, E9	I.C. DEC 7452	1910645	32
1	E7	I.C. DEC 74121	1910230	31
1	E21	I.C. DEC 74145	1910047	30
1	E14	I.C. DEC 7404	1909686	29
2	E15, 19	I.C. DEC 380	1909485	28
2	E6, 11	I.C. DEC 7493	1909054	27
1	E10	I.C. DEC 7410	1905576	26
2	E12, 16	I.C. DEC 7400	1905575	25
1	E17	I.C. DEC 7474	1905547	24
1	Q1	TRANSISTOR DEC 3639C	1502762-01	23
1	R13	RES. 18K 1/4W 5%	1302465	22
3	R14, 15, 8	RES. 30K 1/4W 5%	1302394	21
1	R6	POT. 10K 3/4W 10%	1309143-10	20
1	R9	RES. 22K 1/4W 5%	1301808	19
1	R11	RES. 750 1/4W 5%	1301401	18
3	R3, R7, R18	RES. 10K 1/4W 5%	1300479	17
2	R4, 10	RES. 330 1/4W 5%	1300295	16
1	R12	RES. 150 1/4W 5%	1300250	15
1	R1	RES. 100 1/4W 5%	1300229	14
1	S1	SWITCH ROTARY 8 POS	1210042	13
1	D3	DIODE AZ5 (2.4)	1101938	12
3	R5, 16, 17	RES 1K 1/4W 5%	1300365	11
1	C24	CAP. .15UF 35V 20% S.TANT	1002180	10
1	C25	CAP. 1.0UF 35V 10% S.TANT	1001776	9
2F	C1 thru C15, C26, C31	CAP. .01UF 100V 20% DISC	1001610	8
1	C29	CAP. 470PF 100V 5% D.M.	1000024	7
2	C23, C30	CAP. 330PF 100V 5% D.M.	1000023	6
2	C28, 27	CAP. 100PF 100V 5% D.M.	1000016	5
1		ETCHED CIRCUIT BOARD	5009716	4
		MODULE ECO HISTORY	B-MH-M7700-0-6	3
		ASSY/DRILLING HOLE LAYOUT	E-AH-M7700-0-5	2
		X-Y COORDINATE HOLE LOCATION	K-CO-M7700-0-4	1

PARTS LIST

REVISIONS: CHK | CHG NO | REV — 00001 E; 00002 F; 00003 H; 00004 J; 00005 K; 00006 L; 00007 M; 00008 N; P — D. JENSEN, E. SIMMONS

DRN B.J. Weale 10/27/71 · CHK'D 11/ /71 · ENG 11/5/71 · PROD 1/24/72

TRANSISTOR & DIODE CONVERSION CHART

DEC	EIA	DEC	EIA
D664	IN3606		
DEC6531	MPS6531		
AZ5(2.4V)	IN4370		

digital EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS

TITLE: RK2-1 DEC PAK INDEX AND SECTOR

SIZE D · CODE CS · NUMBER M7700-0-1 · REV P

PRINTED CIRCUIT REV K

SHEET 1 OF 2

DEC FORM NO. DRD 116

POWER SECTOR TRANSDUCER H
CHASSIS AD1
CHASSIS AE1
SECTOR INDEX RAW H
A1 100
R2 4.7K
R3 10K
R4 330
C30 330PF
C31 .01UF
Q1 DEC3639C
+5V
R5 1K
R6 10K
C22 .01UF
E7 74121 8-80 4MS
SECTOR TIMING DELAY
C23 330
R7 10K
E13 74123 1MS
BD1 INDEX/SECTOR L RK2-2
+3V
C24 .15UF
R8 33K
E13 74123 1MS
E12 7400
AP2 INDEX PULSE L RK2-2
AS2 SECTOR PULSE L RK2-2
E2 75452 AF1 BUS SECTOR PULSE L RK2-2
E2 75452 AK1 BUS INDEX PULSE L RK2-2
E1 75452 AH1 BUS SECTOR ADDRESS ØL RK2-2
E1 75452 AJ1 BUS SECTOR ADDRESS 1L RK2-2
E5 75452 AL1 BUS SECTOR ADDRESS 2L RK2-2
E5 75452 AP1 BUS SECTOR ADDRESS 3L RK2-2
E4 75452 AM1 BUS R/W/S READY L RK2-2
E4 75452 AN1 BUS SEEK INCOMPLETE L RK2-2
E9 75452 AR1 BUS ADDRESS ACCEPTED L RK2-2
E9 75452 BA1 BUS ADDRESS INVALID L RK2-2
E8 75452 AV1 SEEK DONE INDICATOR RK2-2
E8 75452 AU1 WRITE INDICATOR RK2-2
E16 7400 AS1 ADDRESS ACCEPTED L RK2-2
E17 7474
E14 7404
INDEX PULSE TRUE CLEARS SECTOR CNTR AT NEXT SECTOR PULSE
E EG 7493 SECTOR CNTR (1) (2) (4) (8)
HEAD SETTLE DELAY
R9 22K
C25 1UF
E18 74123 6MS
R/W/S READY H RK2-2 BL1
R/W/S READY L RK2-2 BK1
RK3-2 MOVE L BP1
RK3-2 INNER LIMIT H BJ1
BUS RESTORE L BB1
RK3-2 RTZ L BC1
E16 7400
E15 380
RESTORE H RK2-2 AB1
SEEK MUST COMPLETE IN 280MS
E10 7410
E11 7493 SEEK INCOMPLETE CNTR
(1) SEEK INCOMPLETE (0)
RK4-2 READY H AC1
GOOD STROBE H
E12 7400
RK4-2 SELECT/READY L BH1
RK1-2 SELECTED WRITE GATE H AV2
BUS STROBE L BV1
To initiate an motion command.
C27 100PF R13 18K
C28 100PF R14 30K
C29 470PF R15 30K
E18 74123 150 NS
E22 74123 145
E22 74123 545
BE1 GOOD STROBE L RK2-2
RK3-2 ADDRESS INVALID L BF1
E16 7400
D3 A2.5 2.4V
R12 150
R16 1K
E3 75452
AA1 ON L RK2-2
RK1-2 SELECTED READ GATE H AF2
AE2 RK2-2 READ INDICATOR
E21 74145
S1
SELECT L
R17 1K
BUS SELECT 2L BT2
BUS SELECT 1L BS2
BUS SELECT ØL BR2
BUS SELECT 3L BU2
R18 10K
BUS RK-11D L BU1
E19 380
E20 7401
RK-11D L TRUE ALLOWS BINARY CODED SELECTION
BV2 RK2-2 SELECT H
BUS WRITE PROTECT SET L BS1
BR1 RK2-2 SELECT/WRITE PROTECT SET L

SLOT 2

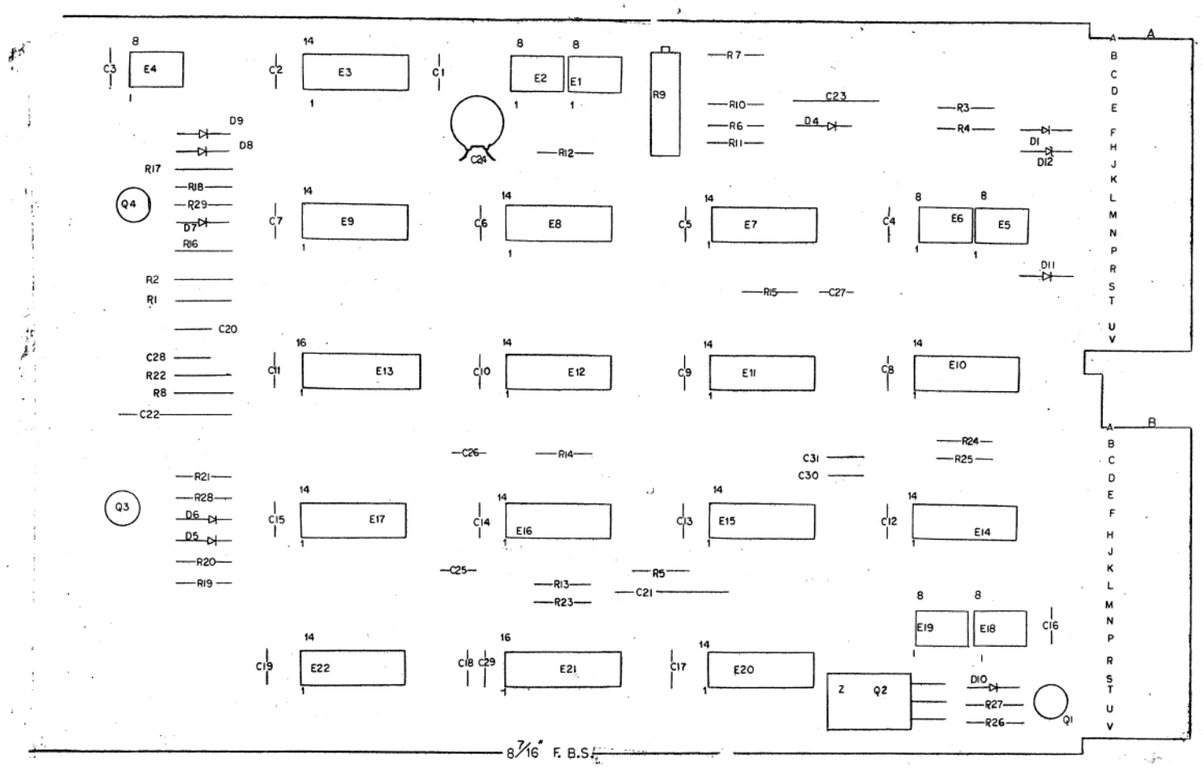
FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
		PARTS LIST		

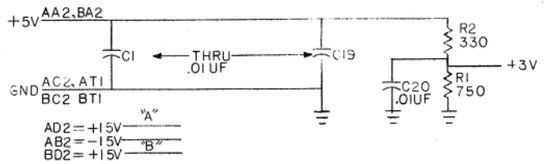
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES
DECIMALS: .XXX = .005, .XX = .02, .X = .1 — ANGLES: ±0° 30'
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓
MATERIAL
FINISH

DRN. B. Wisle	DATE 8-17-72	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS
CHK'D.	DATE 8/23/72	
ENG. K.R. Caruso	DATE 10-5-72	TITLE DEC PAK INDEX AND SECTOR RK2-2
PROJ. ENG. K.R. Caruso	DATE 10-5-72	
PROD.	DATE	
NEXT HIGHER ASSY.		SIZE D CODE CS NUMBER M7700-0-1 REV. R
SCALE		DIST.
SHEET 2 OF 2		

REVISIONS — REV / CHANGE NO. / CHK
BRUNING 40-522 18340
DEC 10mil NO
DRD 103-B
NUMBER M7700-0-1 REV P SIZE D CODE CS

NOTES:





QTY	REF. DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
1	C24	CAP. .047UF 16V DISC	1009678	50
1	D12	DIODE IN5248B 18V 5%	1110766	49
1		KEP NUT #4	9006557	48
1		SCREW 4-40 X 5/16	9006010-1	47
2		HANDLE, FLIP CHIP-MAGENTA	9008337-06	46
4		EYELET #GS4-7	9006732	45
1	E1	I.C. DEC 301	1910282	44
6	E2,4,6,5,18,19	I.C. DEC 75451	1910406	43
2	E21, E13	I.C. DEC 74123	1910436	42
2	E22, E17	I.C. DEC 7493	1909054	41
2	E9, E15	I.C. DEC 7474	1905547	40
2	E12,10	I.C. DEC 7410	1905576	39
2	E11, E8	I.C. DEC 7404	1909686	38
1	E20	I.C. DEC 7402	1909004	37
4	E3,7,16,14	IC. DEC 7400	1905575	36
1	Q2	TRANSISTOR DEC 4403	1510171	35
1	Q3	TRANSISTOR DEC 6534D	1503409-00	34
1	Q1	TRANSISTOR DEC 2219	1501881	33
1	Q4	TRANSISTOR DEC 6531	1509338	32
1	R9	RES. 10K 3/4W 10% 76PR	1309143-10	31
1	R6	RES. 10M 1/4W 5%	1302666	30
2	R7,R10	RES. 1M 1/4W 5%	1309595	29
				28
				27
5	R17,5,22,23,8	RES. 10K 1/4W 5%	1300479	26
1	R18	RES. 5.6K 1/4W 5%	1301874	25
1	R11	RES. 4.7K 1/4W 5%	1300447	24
1	R4	RES. 680 1/4W 5%	1300424	23
1	R28	RES. 1.5K 1/4W 5%	1300391	22
9	R12,13,14,15,20,24,25,26,29	RES. 1K 1/4W 5%	1300365	21
1	R1	RES. 750 1/4W 5%	1301401	20
2	R16,R19	RES. 470 1/4W 5%	1300316	19
2	R2,R3	RES. 330 1/4W 5%	1300295	18
1	R27	RES. 100 1/4W 5%	1300229	17
A/R		GRIPLETS	1210244-0	16
2	D5,D7	DIODE IN759A 12V 5%	1110643	15
1	D4	DIODE IN748 3.9V 10%	1100121	14
1	D6	DIODE IN746A 3.3V 5%	1104860	13
3	D9,D10,D11	DIODE IN4001	1102942	12
1	D1	DIODE D670	1102162	11
1	D8	DIODE D664	1100114	10
2	C28,C29	CAP. 470PF 100V 5% DM.	1000024	9
1	C23	CAP. .15UF 35V 20% TANT	1002180	8
1	C22	CAP. 10UF 20V 10% TANT	1004813	7
1	C21	CAP. .15UF 20V 10% TANT	1004812	6
25	C1-20,25-27,30,31	CAP. .01UF 100V 20% DISC.	1001610	5
1		ETCED CIRUIT BOARD	5009714	4
		MODULE ECO HISTORY	B-MH-M7701-0-6	3
		ASSY/DRILLING HOLE LAYOUT	E-AH-M7701-0-5	2
		X-Y COORDINATE HOLE LOCATION	K-CO-M7701-0-4	1

FIRST USED ON OPTION MODEL

PARTS LIST

ETCH BOARD REV. K

IC TYPE	GND	+5V
GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY EXCEPTIONS ARE STATED ABOVE		
IC PIN LOCATIONS		

REV.	CHANGE NO.	CHK
N	M7701-0-0009	DALE JENSON

SEMICONDUCTOR CONVERSION CHART

DEC NO.	EIA NO.	DEC NO.	EIA NO.
IN748 3.9V	SAME	DEC 6534D	MPS6534
IN746A 3.3V	SAME	DEC 4403	
IN4001	SAME	IN759A	SAME
D670	IN3653		
DEC6531	MPS6531		
DEC664	IN3606		
DEC2219	2N2219		

DRN. ROGER V. DUCETTE DATE 10-29-71
CHK'D. NANCY MOORE DATE 11-3-71
ENG. E. Simmons DATE 12-7-71
PROJ. ENG. Dale Nelson DATE 1-22-72
PROD. R. Gulden DATE 1/21/72
NEXT HIGHER ASSY

digital

TITLE DISK ENG. CONTROL + INTERLOCK

SIZE D | CODE | NUMBER M7701-0-1 | REV. N

SCALE

SHEET 1 OF 2

DIST.

REV. N | NUMBER M7701-0-1 | SIZE CODE D

DEC FORM NO. DRD 135.0

HOME L ARI
LOAD SW L BDI
RUN SW L BLI
INTERLOCK L AHI
SECTOR/INDEX L BH2
CLK KILL TP L AS2

NOTE:
THIS TP WAS ADDED PER ECO 00008 FOR AUTO - MODULE TESTING ONLY AND WILL NOT BE ON ETCH REVS A THRU J

SLOW CLOCK ≈ 1 SEC

RUN L
START DELAY COUNTER
RUN H
RUN STROBE
DISK STOPPED COUNTER
SPINDLE MOTOR LATCH
SPINDLE MOTOR RELAY
R/W/S READY H BJI
+3V READY FLOP
AUI READY H
WRITE SW ON BEI
WRITE SW OFF BFI
FAULT LATCH
OUTER LIMIT H AKI
SET UNSAFE L BAI
SELECT H ASI
AVI SELECT/READY L
AMI BUS FILE READY
AN2 FAULT INDICATOR
BPI BUS WRITE CHECK
AV2 UNSAFE L
BNI READY INDICATOR
BHI NO PROTECT L
SELECT/WRITE PROTECT SET L BBI
BUI BUS WRITE PROTECT STATUS
BU2 PROTECT INDICATOR
AFI
ADI DC LOW L
AAI SAFETY RELAY
DOOR UNLOCKING SOLENOID
ALI LOAD INDICATOR
API LOAD HEADS H
BCI LOAD HEADS L
INDEX PULSE L AJI
LOW SPEED
TIME OUT
SPINDLE SPEED OK H
ON SPEED FLOP
+30V AC AE1
AC LOW L AR2
AE2
AC LOW DETECT
SECTOR L BK1
DC OK L

UNLESS OTHERWISE INDICATED:
PIN 7 = GND
PIN 14 = +5V ON ALL IC'S EXCEPT
DEC 7493 PIN 5 = +5V, PIN 10 = GND
DEC 74123 PIN 16 = +5V, PIN 8 = GND
DEC 75451 PIN 8 = +5V, PIN 4 = GND

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

ETCH BOARD REV

CHK	REVISIONS	CHANGE NO.	REV

DEC NO.	EIA NO.	DEC NO.	EIA NO.
SEMICONDUCTOR CONVERSION CHART			

DRN. Roger V Doucette DATE 10-29-71
CHK'D Manley Moore DATE 11-2-71
ENG. E.C. Simmons DATE 12-7-71
PROJ. ENGR. Kelli Allison DATE 1-22-72
PROD. V. Malsbury DATE 1/31/72
NEXT HIGHER ASSY
SCALE
SHEET 2 OF 2

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

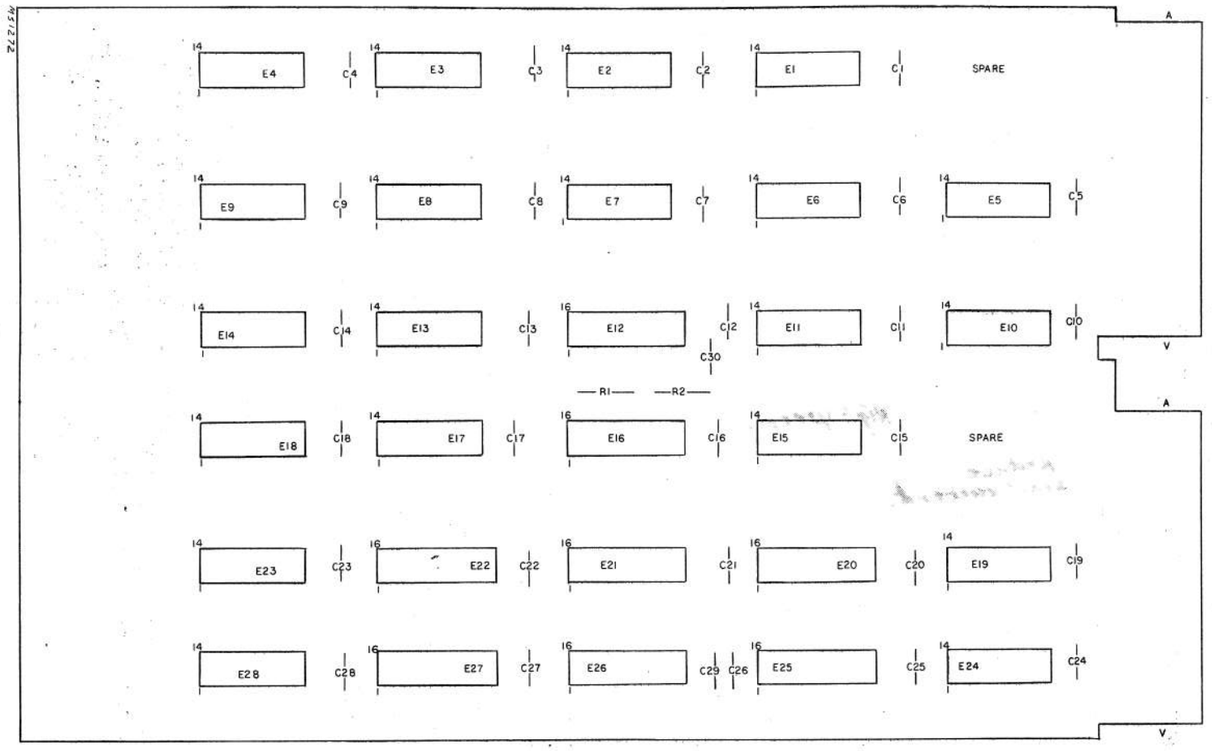
TITLE RK05 CONTROL + INTERLOCK

SIZE D | CODE CS | NUMBER M7701-0-1 | REV. N

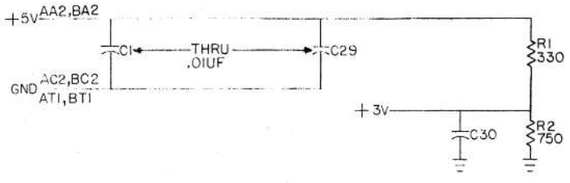
DIST.

SHEET 2 OF 2

DEC FORM NO. DRD-135



UNLESS OTHERWISE INDICATED:
PIN 8 = +5V DEC380
PIN 1 = GND
PIN 5 = +5V DEC7483
PIN12 = GND
PIN16 = +5V DEC74175
PIN8 = GND
PIN16 = +5V DEC74193
PIN8 = GND
PIN14 = +5V ALL OTHER IC'S
PIN7 = GND



QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
4		EYELET #GS4-7	9006732	22
2		HANDLE, FLIP CHIP - MAGENTA	9008337-06	21
2	E20, E25	I.C. DEC 74175	1910651	20
2	E5, E17	I.C. DEC 7437	1910091	19
2	E19, E24	I.C. DEC 380	1909485	18
2	E12, E16	I.C. DEC 74193	1910018	17
2	E23, E28	I.C. DEC 7486	1910011	16
4	E21, E22, E26, E27	I.C. DEC 7483	1909932	15
2	E7, E11	I.C. DEC 7404	1909686	14
1	E1	I.C. DEC 7402	1909004	13
1	E14	I.C. DEC 7440	1905579	12
2	E15, E18	I.C. DEC 7410	1905576	11
4	E2, E6, E10, E13	I.C. DEC 7400	1905575	10
4	E3, E4, E8, E9	I.C. DEC 7474	1905547	9
1	R2	RES. 750 ¼W 5%	1301401	8
1	R1	RES. 330 ¼W 5%	1300295	7
		GRIPLET	12102144-0	6
30	C1 - C30	CAP. .01UF 100V 20% DISC	1001610	5
1		ETCHED CIRCUIT BOARD	5009710	4
		MODULE ECO HISTORY	B-MH-M7702-0-6	3
		ASSY/DRILLING HOLE LAYOUT	E-AH-M7702-0-5	2
		X-Y COORDINATE HOLE LOCATION	K-CO-M7702-0-4	1

PARTS LIST

ETCH BOARD REV C

REV	CHK	CHANGE NO.	REVISIONS
C	Jeb Adams 5/30/73	M7702-00001	D. JENSEN 5/24/73

DEC NO.	EIA NO.	DEC NO.	EIA NO.

SEMICONDUCTOR CONVERSION CHART

DRN. Roger J. Doucette 11-17-71
CHK'D. [illegible] 11-19-71
ENG. [illegible] 12-14-71
PROJ. ENG. [illegible] 12-16-71
PROD. DATE
NEXT HIGHER ASSY
SCALE
SHEET 1 OF 2

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE DEC PACK CYL ADDR AND DIFF

RK3-1

SIZE D CODE CS NUMBER M7702-0-1 REV. C

DIST.

DEC FORM NO. DRD-135

REV C
SIZE D CODE CS NUMBER M7702-0-1

Low speed.

RK5-2 COUNT PULSE FWD H BKI — E17 7437
RK3-2 FWD H BJI
RK5-2 COUNT PULSE REV H BEI — E17 7437
RK3-2 REV H BHI

CURRENT ADDRESS REGISTER

+3V — E16 COUNTER 74193 (1) (2) (4) (8) — CAR BOR
+3V — E12 74193 (16) (32) (64) (128) — CAR BOR

ONE'S COMPLEMENT ADDER DETERMINES ADDRESS DIFFERENCE

E21 7483 ADDER — CN, CNT4
E22 7483 — CN, CNT4
E26 7483 — CN, CNT4
E27 7483 — CN, CNT4

XOR'S COMPLEMENT ADDRESS DIFFERENCE WHEN REV IS TRUE

(1) E23 7486
(2) E23 7486
(4) E23 7486
(8) E23 7486
(16) E28 7486
(32) E28 7486
(64) E28 7486
(128) E28 7486

E18 7410 — E14 7440 — E11 7404

DIFF ≤ 3 HOLDS ALL DIFF LINES H

E1 7402 — E4 7474 — E4 7474 — E9 7474 — E9 7474 — E3 7474

AAI DIFF 1 L RK3-2
ABI DIFF 2 L RK3-2
ADI DIFF 4 L RK3-2
ACI DIFF 8 L RK3-2
AEI DIFF 16 L RK3-2

+3V — E17 7437 — DIFF ≥ 32 HOLDS ALL DIFF LINES L

High speed.

BAI CYL 128H RK3-2

Reduce Head current.

CHASSIS HOME L BBI — E6 7400

BUS CYL ADD ØL BLI — E19 380
BUS CYL ADD 1 L BNI — E19 380
BUS CYL ADD 2 L BPI — E19 380
BUS CYL ADD 3 L BMI — E19 380
BUS CYL ADD 4 L BRI — E24 380
BUS CYL ADD 5 L BUI — E24 380
BUS CYL ADD 6 L BVI — E24 380
BUS CYL ADD 7 L BSI — E24 380

NEW ADDRESS REGISTER

E20 74175 — STOR REG — (4) (2) (1) (8) — CLR
E25 74175 — CLR — (64) (32) (128) (16)

H INDICATES REV TRUE AND ADD ONE TO DIFFERENCE RESULT

E10 7400 — E10 7400 — E10 7400

RK4-2 LOAD HEADS L BCI — E7 7407 — E2 7400

E15 7410 — E15 7410 — BEI ADDRESS INVALID L RK3-2

ADDRESS ≥ 203 IS NOT ALLOWED

E13 7400 — E13 7400 — E8 7474

BJI FWD H RK3-2

RK5-2 COUNT PULSE REV H BFI — E13 7400
RK2-2 ADDRESS ACCEPTED L ANI
RK5-2 COUNT PULSE FWD H BKI — E13 7400 — E14 7440
RK2-2 ON L AMI — E1 7402

REV TRUE INHIBITS FWD H

E2 7400 — BHI REV H RK3-2

E1 7402 — ALI MOVE L RK3-2
AFI RTZ L RK3-2

RK2-2 GOOD STROBE L BDI — E5 7437
INNER LIMIT H AUI — E1 7404 — RK5-2
RK2-2 RESTORE H AJI

INNER LIMIT TRUE FORCES RTZ

E8 7474

OUTER LIMIT EXTEND LATCH

E6 7400 — E6 7400 — E5 7437 — E5 7437

ADDRESS REGISTER CLEAR

RTZ TRUE FORCES REV

RK5-2 OUTER LIMIT H AKI — E7 7404
RK2-2 R/W/S READY H API — E6 7400

SLOT 3

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

ETCH BOARD REV C

REV	CHANGE NO.	DEC NO.	EIA NO.	DEC NO.	EIA NO.

REVISIONS — CHK

SEMICONDUCTOR CONVERSION CHART

DRN. Roger V. Doucette 11-17-71
CHK'D 11-29-71
ENG. 12-16-71
PROJ. ENG. 12-16-71
PROD. DATE
NEXT HIGHER ASSY
SCALE
SHEET 2 OF 2

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE DEC PACK CYL ADDR AND DIFF

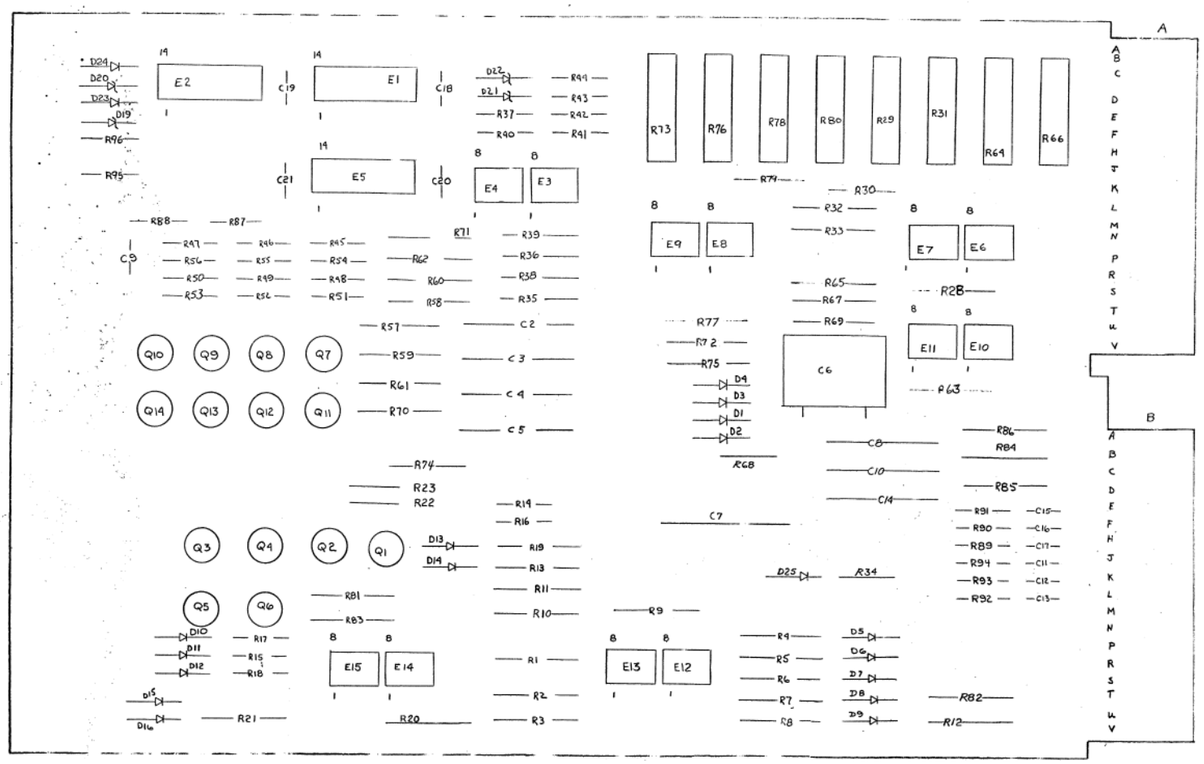
RK3-2

SIZE D CODE CS NUMBER M7702-0-1 REV. C
DIST.

DEC FORM NO. DRD-135

MS1272

M7702-0-1 REV C



UNLESS OTHERWISE INDICATED.
PIN 14 = +5V, PIN 7 = GND ON ALL IC'S.
EXCEPT LM301 + 72741.

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
3	R88, 63, 77	RES. 1.96K 1/8W 1% MF	1304833	55
1	R74	RES. 1.47 K 1/8W 1% MF	1305108	54
3	R95, 96, 34	RES. 10K ¼W 5%	1300479	53
A/R		GRIPLET	12102144-0	52
2		HANDLE, PLIP CHIP - GREEN	9006337-01	51
4		EYELET #GS14-7	9006732	50
10	E6 - E15	I.C. DEC 72741	1910298	49
2	E3, E4	I.C. DEC 301	1910282	48
1	E2,	I.C. DEC 7413	1909989	47
1	E1	I.C. DEC 7404	1909686	46
1	E5	I.C. DEC 7400	1905575	45
8	Q1-4, Q11-14	TRANSISTOR 2N5245	1509681	44
6	Q5-Q10	TRANSISTOR DEC 6534D	1503409-00	43
1	R86	RES. 2.7 ¼W 10%	1309444	42
1	R20	RES. 200 K 1/8W 1% MF	1305336	41
12	R10,11,32,33,35,36,38,39,67,69,81,83	RES. 19.6K 1/8W 1% MF	1309419	40
1	R7	RES. 11.5K 1/8W 1% MF	1309415	39
1	R21	RES. 3.83K 1/8W 1% MF	1309413	38
1	R75	RES. 24.3 K 1/8W 1% MF	1309418	37
5	R29,64,73,76,78	RES. 10K 3/4W 10% 76PR	1309443-10	36
3	R31, 66, 80	POT. 2K 3/4W 10% 76PR	1309443-08	35
1	R4	RES. 68.1K 1/8W 1% MF	1305252	34
1	R8	RES. 5.62K 1/8W 1% MF	1305128	33
2	R72, R12	RES. 6.81K 1/8W 1% MF	1304870	32
6	R41, R42, R23, 30, 65, 79	RES. 75R ¼W 5%	1304841	31
2	R13, R19	RES. 5.62K 1/8W 1% MF	1304856	30
5	R9, 57, 59, 61, 70,	RES. 10K 1/8W 1% MF	1303312	29
				28
1	R5	RES. 34.8K 1/8W 1% MF	1303156	27
1	R6	RES. 21.5K 1/8W 1% MF	1303155	26
1	R2	RES. 13.3 K 1/8W 1% MF	1302412	25
1	R3	RES. 309K 1/8W 1% MF	1304855	24
1	R22	RES. 100K ¼W 5%	1302466	23
5	R58, 60, R62, R71, R82	RES. 511 1/8W 1% MF	1302411	22
1	R88	RES. 750 ¼W 5%	1301401	21
7	R15, 17, 46, 49, 52, 55, 1	RES. 15K ¼W 5%	1300496	20
5	R18, R47, R50, 53, 56	RES. 3.9K ¼W 5%	1300444	19
9	R14, 16, 43, 44, 45, 50, 51, 54, 68	RES. 1.5K ¼W 5%	1300391	18
3	R37, 40, 87	RES. 330 ¼W 5%	1300295	17
6	R89-94	RES. 22 ¼W 10%	1300188 •	16
2	R84, R85	RES. 10 ¼W 5%	1300168	15
2	D15, D16	DIODE IN758A 10V	1100125	14
4	D19 - 22	DIODE 1N746A	1104860	13
10	D5- 14	DIODE D664	1100114	12
7	D1 - D4, 25, 23, 24	DIODE D662	1100113	11
1	C7	CAP. .022 UF 100V 10% MYLAR	1002323	10
1	C6	CAP. 2700 pf 100V MICA	1001637	9
3	C8, 10, 14	CAP. 15UF 20V 10% S.TANT	1001812	8
11	C9, 11, 12, 13, 15-21	CAP. .01UF 100V 20% DISC	1001610	7
				6
4	C2, 3, 4, 5	CAP. .015UF 50V 2% POLY CARB	1010646	5
1		ETCHED CIRCUIT BOARD	5009388	4
		MODULE ECO HISTORY	B-MH-G938-0-6	3
		ASSY/DRILLING HOLE LAYOUT	E-AH-G938-0-5	2
		X-Y COORDINATE HOLE LOCATION	K-CO-G938-0-4	1

PARTS LIST

ETCH BOARD REV K

REVISIONS REV	CHANGE NO.	CHK	
L	G938-00006		D. JENSEN 8-3-72
K	G938-00005		S. Black 12-29-72
			D. JENSEN 11-9-72
J	G938-00004		D. JENSEN 8-9-72
H	G938-00003		D. JENSEN 3-20-72
F	G938-00002		Roger J. Doucette 3-6-72

SEMICONDUCTOR CONVERSION CHART

DEC NO.	EIA NO.	DEC NO.	EIA NO.
6534D	NONE		
2N5245			
D662	IN645		
D664	IN3606		
IN746A	SAME		

DRN. Roger J. Doucette DATE 12-8-71
CHK'D. DATE 12-9-71
ENG. Dale Jensen DATE 30 Dec 71
PROJ. ENG. Dale Jensen DATE 30 Dec 71
PROD. A. Kalbacher DATE 1-5-72
NEXT HIGHER ASSY

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE DEC PACK HEAD POSITION, SERVO PREAMP RK5-1

SIZE D CODE CS NUMBER G938-0-1 REV. L

SCALE

SHEET 1 OF 2

DIST.

DEC FORM NO. DRD-135

D TO A CONVERTER

RK3-2 DIFF 1 L BN2 D5 DGG4 R4 68.1K
RK3-2 DIFF 2 L BP2 D6 DGG4 R5 34.8K
RK3-2 DIFF 4 L BR2 D7 DGG4 R6 21.5K
RK3-2 DIFF 8 L BS2 D8 DGG4 R7 11.5K
RK3-2 DIFF 16 L BT2 D9 DGG4 R8 5.62K

R34 10K 1/4W +15F

REFERENCE D25 D662 R2 13.3K R3 9.09K R68 1.5K 1/4W
D1 DGG2 D2 DGG2 D3 DGG2 D4 DGG2

R1 15K 1/4W VA R76 10K 1/4W

R9 10K
E12 7274I VELOCITY GENERATOR

TP1 BM2 R10 19.6K R11 19.6K BL2 TP12
E13 7274I INVERTER
R13 4.64K R19 4.64K
D13 DGG4 D14 DGG4

TP FWD
2N5245 Q1 Q2 2N5245
R20 200K
E14 7274I PREAMP
R21 3.83K

LIMITERS IN758A 10V D15 D16
R12 6.81K R82 511
BU2 RK5-2 POWER AMP DRIVE .7V P-P

RK5-2 AA1 COUNT PULSE FWD H
RK5-2 AC1 COUNT PULSE REV H
RK5-2 AD1 OUTER LIMIT H
RK5-2 AB1 INNER LIMIT H

+3V
D23 DGG2 R95 10K D19 IN746A -15F
D24, D662 D20 IN746A R96 10K -15F
E2 7413 E2 7413 SCHMITT TRIGGER
E1 7404 E1 7404 E1 7404 E1 7404

AC2, AT1, BC2, BT1 GND
C18 THRU .01UF C21
+5V BA2 R86 2.7 1/2W C8 15UF +5F
R87 330 1/4W +3V
R88 750 1/4W C9 .01UF
-15V BD2 R84 10 1/2W C10 15UF -15F
R94 22 1/4W -15A
C11 .01UF
R93 22 1/4W -15B
C12 .01UF
R92 22 1/4W -15C
C13 .01UF
+15V BD2 R85 10 1/2W C14 15UF
R91 22 1/4W +15F
C15 .01UF
R90 22 1/4W +15A
C16 .01UF
R89 22 1/4W +15B
C17 .01UF +15C

RK3-2 FWD H BJ2 R14 1.5K 1/4W
RK3-2 REV H BK2 R16 1.5K 1/4W
R15 15K 1/4W -15F
G534D Q5 G534D Q6
R17 15K 1/4W -15F
D10 DGG4 R18 3.9K, 1/4W -15F
D12 DGG4 TP REV
D11 DGG4

2N5245 Q3 Q4 2N5245
R22 100K, 1/4W BF1 TP9
R23 75K 1/4W POSITION SIGNAL

SIN POSITION TP-10VP-P
CHASSIS SIN POSITION AN1
-15A +15A E6 7274I
R28 1.96K R29 10K 3/4W SO R30 75K 1/4W R31 2K 3/4W SA -15A
TP2 AM1

45° LAG R35 19.6K R36 19.6K
-15F +15F E4 DEC301
R37 330 1/4W
R42 75K 1/4W
TP6 AF1
D21 IN746A D22 IN746A
R43 1.5K 1/4W R44 1.5K 1/4W
OVER DRIVEN AMP
E1 7404

E5 7400 R45 1.5K 1/4W
E5 7400 R48 1.5K 1/4W
E5 7400 R51 1.5K 1/4W
E5 7400 R54 1.5K 1/4W

R46 15K 1/4W -15F R47 3.9K, 1/4W 6534D Q10
R49 15K 1/4W -15F R50 3.9K, 1/4W 6534D Q9
R52 15K 1/4W -15F R53 3.9K 1/4W
R55 15K 1/4W -15F R56 3.9K, 1/4W G534D Q7

CHASSIS -COS POSITION AU1
-15A +15A E10 7274I
RG3 1.96K RG4 10K 3/4W CO RG5 75K 1/4W RG6 2K 3/4W CA -15A
TP4 AS1

ARI TP5
RG7 19.6K RG8 19.6K
-15A +15A E11 7274I INVERTER

ALI TP3
R32 19.6K R33 19.6K
-15A +15A E7 7274I INVERTER

Cos Position TP-10VP-P
R38 19.6K R39 19.6K 45° LEAD
-15F +15F E3 DEC301
R41 75K 1/4W
R40 330 1/4W
AE1 TP7

C2 .015UF R57 10K R58 511
C3 .015UF R59 10K R60 511
C4 .015UF R61 10K R62 511
C5 .015UF R70 10K R71 511
DIFFERENTIATORS

TP+SO 2N5245 Q14
TP-SO 2N5245 Q13
TP-CO 2N5245 Q12
TP+CO 2N5245 Q11
SAMPLING FET'S

FWD ORDER	SEEK ON FET
1	Q13
2	Q11
3	Q14
4	Q12

CG 2700 pf AH1 TP8 VELOCITY TP
TACHOMETER AMP
R75 24.3K
-15B +15B E9 7274I
R72 6.81K R73 10K 3/4W VO -15B
R74 1.47K
R83 19.6K R81 19.6K
-15C +15C E15 7274I INVERTER
BY2 TP11

-15B +15B E8 7274I
R77 1.96K R78 10K 3/4W LSO -15B
R79 75K 1/4W R80 2K 3/4W LSA
C7 .022 UF
CHASSIS LIMIT AK1
+5mV OUT L
-5mV in L
0V between
LIMITS TP AJ1 TP10

NOTE:
IN746A ZENER DIODES ARE 3.3V
UNLESS OTHERWISE INDICATED:
RESISTORS ARE 1/8W

SLOT 5

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

REV	CHANGE NO.	REVISIONS	CHK

DEC NO.	EIA NO.	DEC NO.	EIA NO.

SEMICONDUCTOR CONVERSION CHART

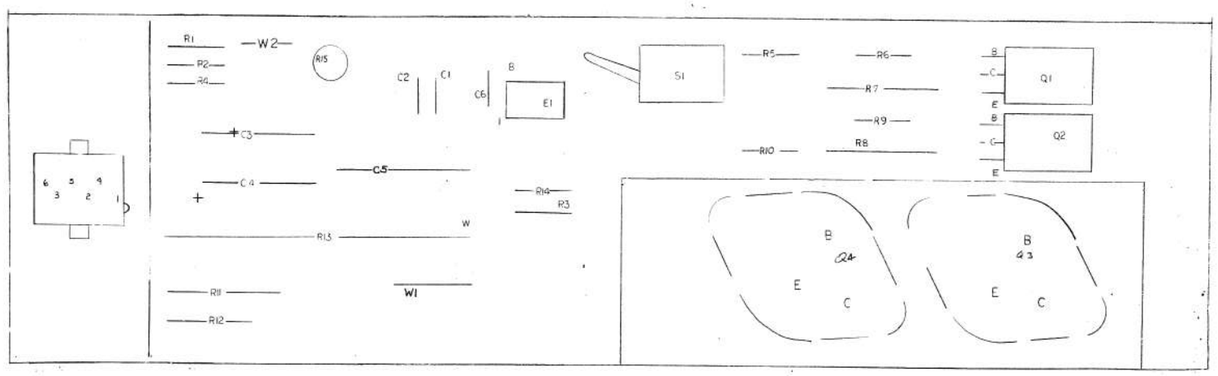
DRN. Roger V. Bucciero DATE 12-8-71
CHK'D. N. Wall DATE 12-9-71
ENG. Dale Jansen DATE 30 Dec 71
PROJ. ENG. Dale Jansen DATE 30 Dec 71
PROD. J. Rabbitt DATE 01/30/72
NEXT HIGHER ASSY
SCALE
SHEET 2 OF 2

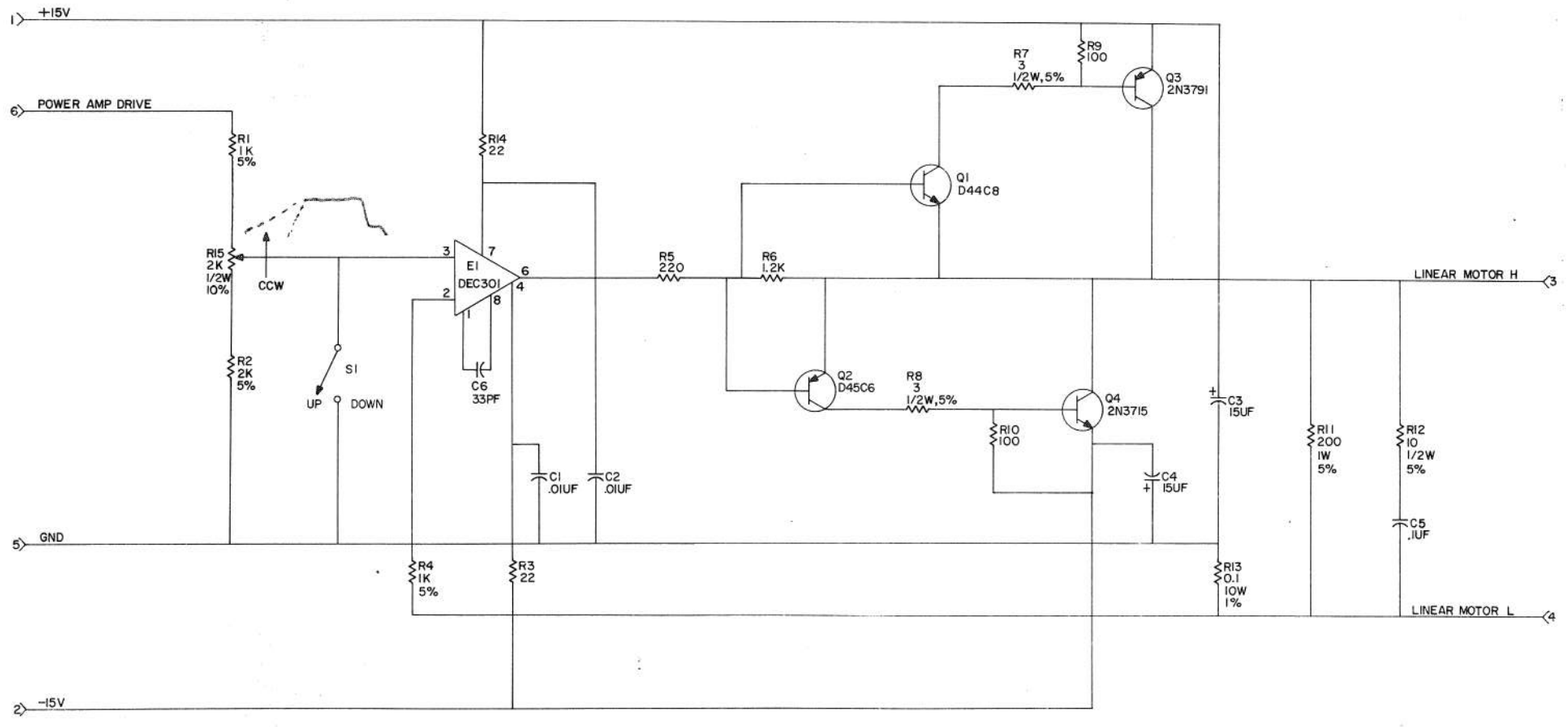
digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE DEC PACK HEAD POSITION SERVO PREAMP RK5-2

SIZE D | CODE CS | NUMBER G938-0-1 | REV. L
DIST.

DEC FORM NO. DRD-135





UNLESS OTHERWISE INDICATED:
RES. ARE 1/4W, 10%
RI3 IS A CURRENT SAMPLING RES.

REVISIONS			
CHK	CHG NO	REV	
	00001	F	
E. J. Tau	11-14-71		
D. JENSEN			
	000021	H	
Richard Jensen	12-AUG-72		
D. JENSEN			
Richard Jensen	12-JAN-73	J	
R. Richard Jensen	1-15-73		
D. JENSEN			
David Jensen	1-15-73		

DRN	R. J. Faile	DATE 11/24/71
CHK'D		DATE
ENG	Dick T Jensen	DATE 10 Jan 72
PROD		DATE

TRANSISTOR & DIODE CONVERSION CHART

DEC	EIA	DEC	EIA
2N3715			
D45C6			
D44C8			

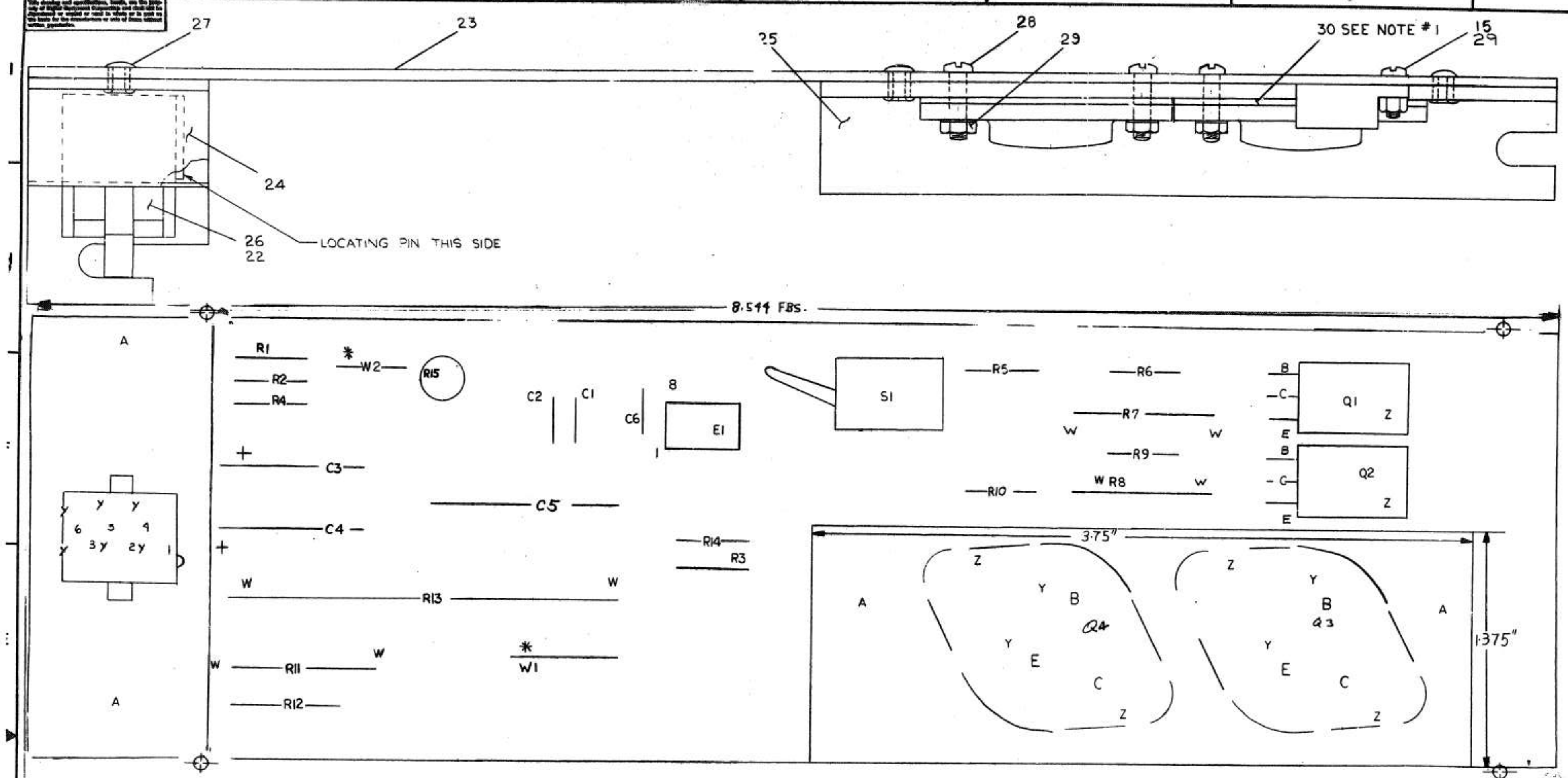
digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE DECPAK HEAD POS. SERVO PWR. AMP.

SIZE	CODE	NUMBER	REV
D	CS	H604-0-1	
PRINTED CIRCUIT REV			J

SIZE D CODE CS NUMBER H604-0-1 REV J

DEC FORM NO. DRD 118



NOTES.

1. APPLY ITEM NO 31 (THERMAL JOINT COMPOUND) BETWEEN TRANSISTORS (Q3 & Q4) AND ITEM NO 30 (WASHER), ALSO BETWEEN ITEM NO 30 (WASHER) AND ITEM NO 25 (BRACKET, HEAT SINK).

QTY.	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
REF		ASSY-HOLE DRILLING LAYOUT	D-AH-H604-0-5	33
A/R	*	# 22 AWG JUMPER WIRE	9107560-01	32
A/R		COMPOUND THERMAL JOINT	9008268	31
2		INSULATOR WASHER	9006721	30
6		KEP NUT 4-40	9006557	29
4		SCR. BINDER HD, SLOTTED # 4-40X.44	9006012-4	28
4		EYELET .1210D X .219LG	9006732	27
1	HOUSING	6 PIN MATE-N-LOCK	1209350-06	26
1		BRACKET, HEAT SINK	C-MD-5509810-0-0	25
1		BRACKET, SERVO BOARD	C-MD-5509812-0-0	24
1		ETCHED CIRCUIT BOARD	5009741	23
6		PINS FOR MATE-N-LOCK	1209456	22
1	E1	IC LM301	1910282	21
1	Q4	TRANS 2N3715	1503068	20
1	Q3	TRANS 2N3791	1509581	19
1	Q2	TRANS DEC D45C6	1510414	18
1	Q1	TRANS DEC D44C8 OR TIP 31A	1510421	17
2	R4, R1	RES 1K, .25W, 5%	1300365	16
2		SCREW, 4-40X1/4 BINDER HD, SLOTTED	9006009-4	15
1	R15	POT 2K 1/2W 10% 62PR	1309410	14
1	R6	RES 1.2K, .25W, 10%	1300386	13
1	R5	RES 220, .25W, 10%	1300275	12
1	R11	RES 200, 1W, 5%	1302382	11
2	R9, R10	RES 100, .25W, 10%	1300231	10
2	R3, R14	RES 22, .25W, 10%	1300188	9
1	R12	RES 10, .5W, 5%	1300168	8
2	R7, R8	RES 3, .5W, 5%	1301643	7
1	R13	RES .1, 10W, 1%	1309108	6
1	S1	SWITCH, TOGGL T-8001	1210209	5
2	C3, C4	CAP 15UF, 20V, 10%	1004812	4
1	C6	CAP 33PF, 100V, 5%	1000009	3
1	C5	CAP .1UF, 100V, 10%	1002342	2
2	C1, C2	CAP .01UF, 100V, 20%	1001610	1
1	R2	RES. 2K 1/4W 5%	1302388	
REF		MODULE ECO HISTORY	B-MH-H604-0-6	36
REF		X-Y CO-ORDINATE HOLE LOCATION	K-CO-H604-0-4	35
REF		CIRCUIT SCHEMATIC	D-CS-H604-0-1	34

PARTS LIST

IC TYPE	GND	+5V
GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY. EXCEPTIONS ARE STATED ABOVE		

IC PIN LOCATIONS

ITEM NO	AWG	FROM PT	TO PT

JUMPER LIST

DEC NO.	EIA NO.	DEC NO.	EIA NO.
		2N3715	—
		2N3791	—
		D45C6	—
		D44C8	—

SEMICONDUCTOR CONVERSION CHART

FIRST USED ON OPT/MOD: RKØ5

ETCH BOARD REV: J

Revisions: J — H604-00003 — D. JENSEN 4-26-72, 1-13-73, 1-24-73; H — H604-00002 — D. JENSEN 7-24-72, 3-28-72; F — H604-00001 — D. JENSEN 2-14-72

[redacted] EQUIPMENT CORPORATION. MAYNARD, MASSACHUSETTS

TITLE: HEAD POSITION SERVO POWER AMP

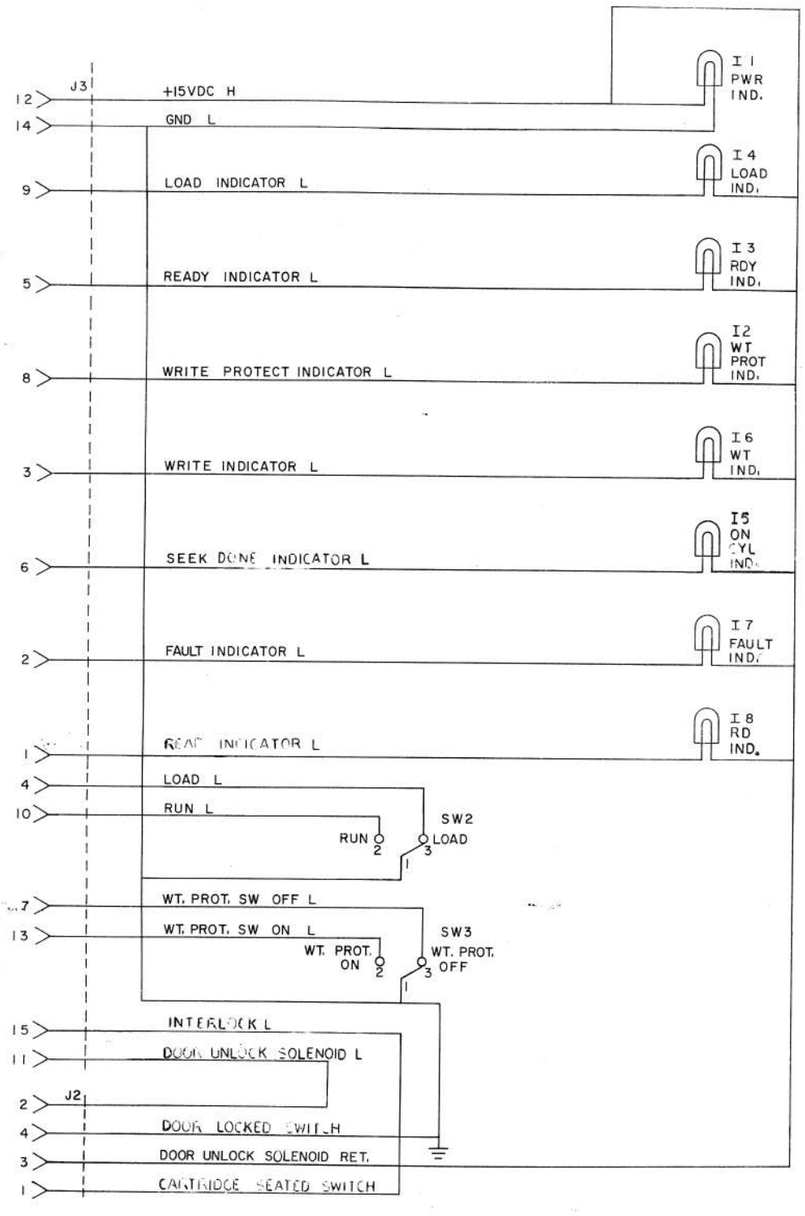
NEXT HIGHER ASSY: D-UA-RKØ5-Ø-Ø

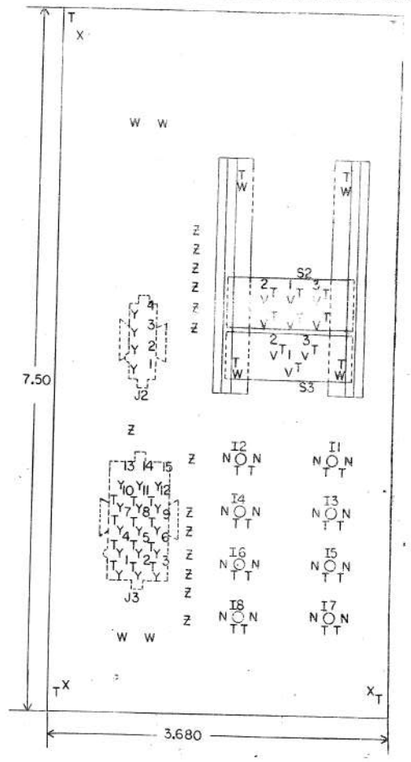
SCALE: 4/1

E UA H6Ø4-Ø-Ø REV J

DIST. C

E UA H6Ø4-Ø-Ø





REVISIONS			
CHK	CHG NO.	REV.	
D. TENCEN	100011	B	
[illegible]	100021	C	
D.JENSEN	100031	D	

DRN. S. COOPER	DATE 11-20-71	
CHK'D	DATE	
ENG. [illegible]	DATE 19 Dec 71	
PROD.	DATE	

TRANSISTOR & DIODE CONVERSION CHART			
DEC	EIA	DEC	EIA

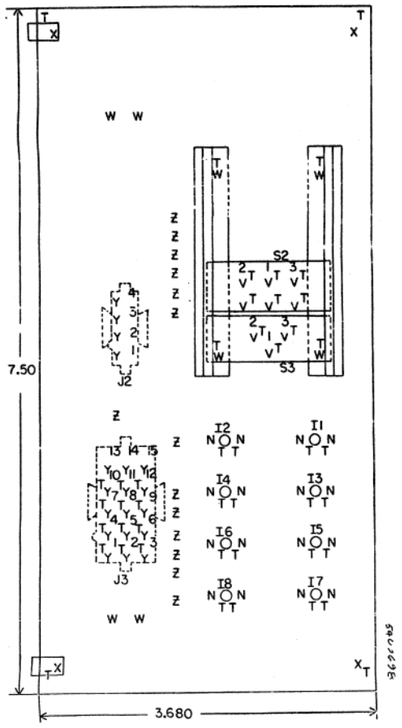
digital EQUIPMENT CORPORATION

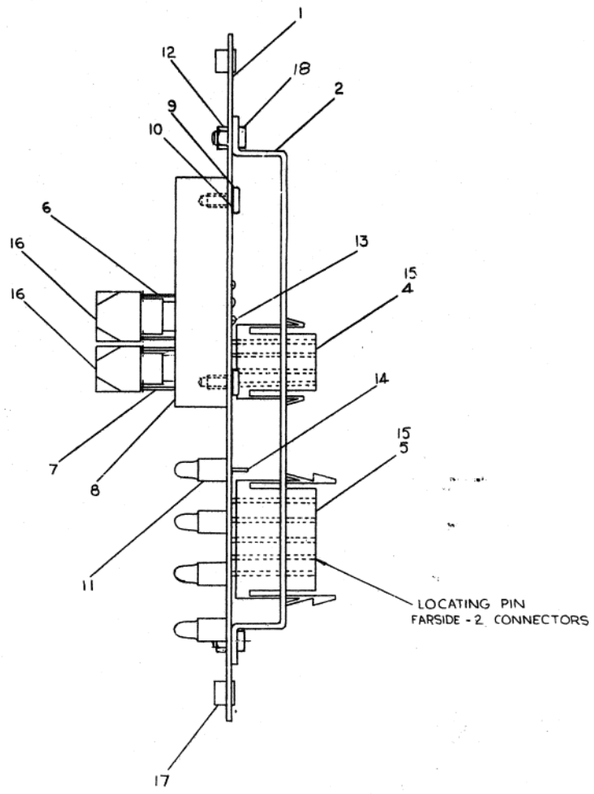
TITLE RK7-1
RK05 CONTROL PANEL

SIZE	CODE	NUMBER	REV.
C	CS	5409698-0-1	D

SIZE C | CODE CS | NUMBER 5409698-0-1 | REV. D

DEC FORM NO. DRC 102





REF		ASSY/DRILLING HOLE LAYOUT	D4H-5409699-05	19
4		SCR, PHL PAN HD #4-40 x 5/16 LG	9006010-1	18
4		NUT CLIP #6-32	9008423	17
2		SWITCH BUTTON	1205317-07	16
19		PIN SOCKET MATE-N-LOCK	1209456	15
16		TERMINAL SOLDERLESS	9007512	14
16	2	EYELET FEED THROUGH	9006761	13
4		NUT KEPS #4-40	9006557	12
8	11,12,13,14,15,16,17,18	LAMP	1209169	11
4		LOCK WASHER INTERNAL 6-32	9006633	10
4		SCREW PHL PAN HEAD 6-32 X 5/16 LG	9006021-1	9
2		SWITCH MOUNTING BAR	B-MD-5509830-0-0	8
1	S3	SWITCH, ROCKER	1205375	7
1	S2	SWITCH, ROCKER	1205941	6
1	J3	HOUSING, SOCKET MATE-N-LOCK 15 PIN	1209350-15	5
1	J2	HOUSING, SOCKET MATE-N-LOCK 4 PIN	1209350-04	4
				3
1		CONNECTOR BRACKET	C-MD-5509829-0-0	2
1		ETCHED CIRCUIT BOARD	5009697	1
REF		MODULE ECO HISTORY	B-MH-5409698-0-6	
REF		X-Y CO-ORDINATE HOLE LOCATION	X-CO-5409698-0-4	
REF		CIRCUIT SCHEMATIC	C-CS-5409698-0-1	
QTY.	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

IC TYPE	GND	+5V
GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY EXCEPTIONS ARE STATED ABOVE		

IC PIN LOCATIONS

ITEM NO	AWG	FROM PT	TO PT

JUMPER LIST

DEC NO.	EIA NO.	DEC NO.	EIA NO.

SEMICONDUCTOR CONVERSION CHART

FIRST USED ON OPT/MOD RKØ5

ETCH BOARD REV D

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	ECO 5409698-0003	11-17-71	
B	ECO 5409698-0004	12-30-71	
C	ECO 5409698-0005	1-10-72	
D	ECO 5409698-0006	1-28-72	

DRAWN D. JENSEN 6-23-71
CHECKED D. JENSEN 8-24-71
ENGINEER D. JENSEN 9-14-71
MFG APPROVAL D. JENSEN 9-14-71
QUALITY APPROVAL D. JENSEN 10-7-71
PROJECT MGR. D. JENSEN 11-17-71

NEXT HIGHER ASSY D-UA-RK8E-8-0
SCALE 2/1
SHEET 1 OF 1

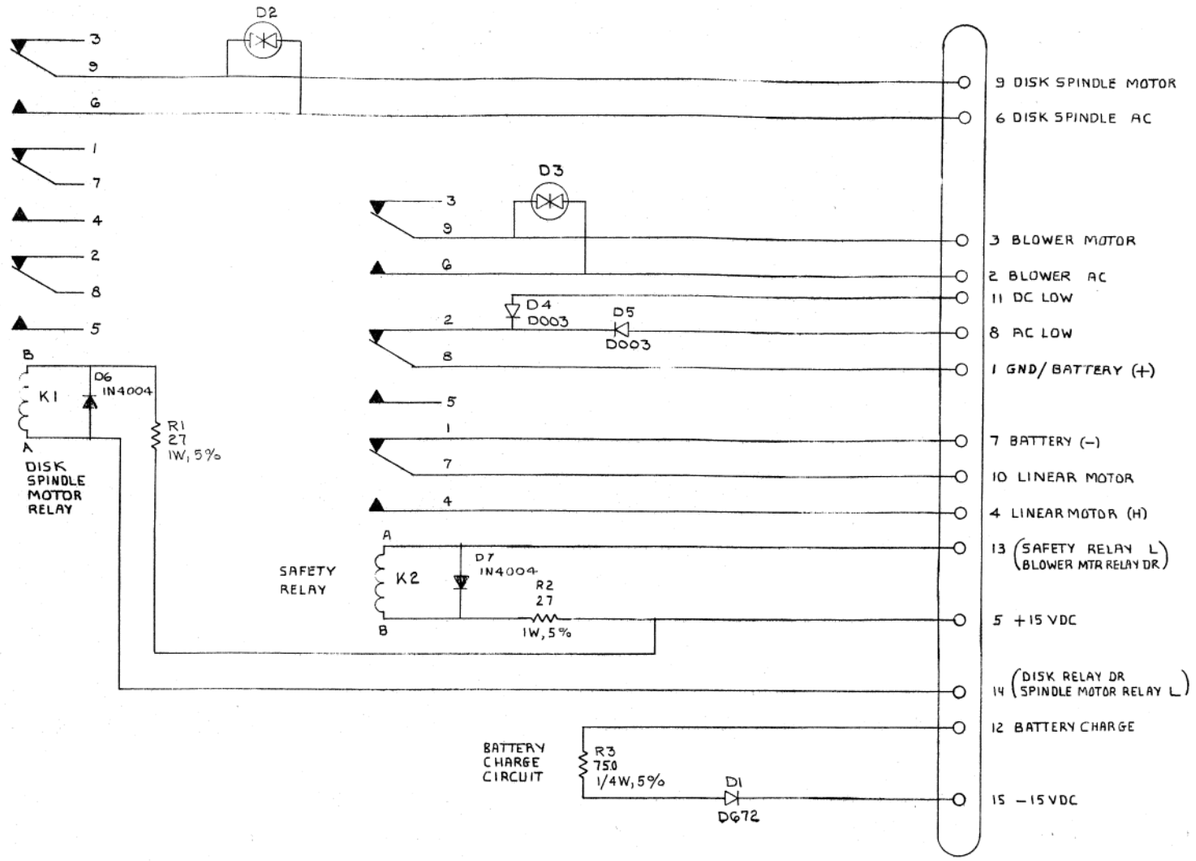
EQUIPMENT CORPORATION.

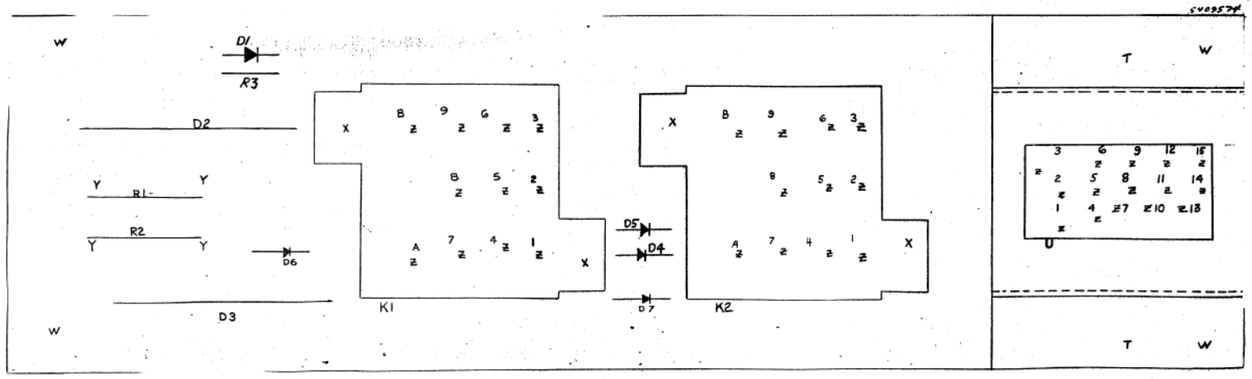
TITLE RK7-2 CONTROL PANEL (RKØ5)

SIZE E | DRAWING NO. UA 5409698-0-0 | REV D

■UA5409698-0-0 D

NOTE:
1. RELAY CONTACTS ARE SHOWN IN THE DE-ENERGIZED POSITIONS.
2. SAFETY RELAY L AND BLOWER MTR RELAY DR ARE THE SAME SIGNAL.
3. SPINDLE MOTOR RELAY L AND DISK RELAY DR ARE THE SAME SIGNAL.





QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
		PARTS LIST		
		ETCH BOARD REV F		

DEC NO.	EIA NO.	DEC NO.	EIA NO.
D003	IN994		
D672	IN3653		

SEMICONDUCTOR CONVERSION CHART

REV	CHANGE NO.	CHK
E	5409574-0000	D.JENSEN
F	5409574-0002	N. FIELD

REVISIONS

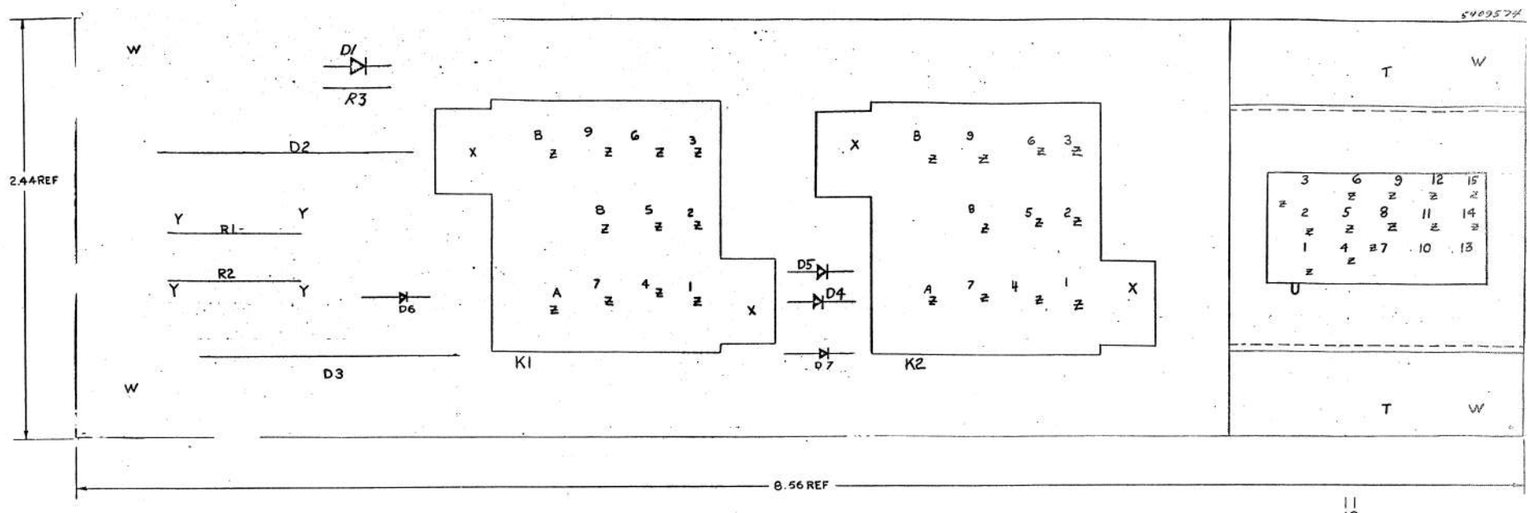
DRN. Roger J Doucette 12-9-71
CHK'D. J. Quiaia 12-15-71
ENG. Dale J. Jensen 10 Jan 72
PROJ. ENG. Dale J. Jensen 10 Jan 72
PROD. [illegible]
NEXT HIGHER ASSY
SCALE
SHEET 1 OF

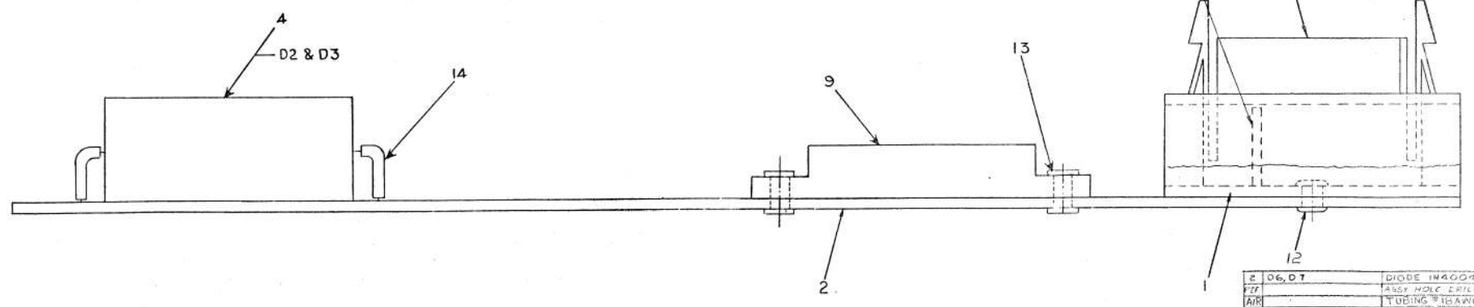
digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE
DEC PACK
MOTOR RELAYS

SIZE D | CODE CS | NUMBER 5409574-0-1 | REV F
DIST.

DEC FORM NO. DRD-135





IC TYPE	GND	+5V
GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTFULLY EXCEPTIONS ARE STATED ABOVE		

IC PIN LOCATIONS

ITEM NO	AWG	FROM PT	TO PT

JUMPER LIST

CAUTION
CHANGE COULD AFFECT U.L. LISTING

QTY.	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
2	D6, D7	DIODE IN4004	1105796	16
REF		ASSY HOLE DRILLING LAYOUT	MM5609740-15	15
AR		TUBING #18AWG TEFLON	9101278-11	14
4		EYELET .45 4-9	2007756	13
2		EYELET .121 DIA X .219 LG	9006732	12
15		PINS FOR MATE-N-LOCK	12345640-2	11
1		15 PIN MATE-N LOCK	12345645-15	10
2		RELAY SOCKET	1420784	9
2	K1 K2	RELAY VPB 12DSH-D1000	1420764	8
2	R1 R2	RESISTOR 27 1W 5%	1301516	7
1	R3	RESISTOR 750 1/4W 5%	1321401	6
1	D1	DIODE D6,7Z	1105775	5
2	D2, D3	SOCKET-IC 14 CONTACT	1400106	4
2	D4, D5	DIODE GEN DIODE	1105100	3
1		ETCHED CIRCUIT BOARD	5009772	2
REF		MODULE ECO HISTORY	SMM-5409574	1
1		BRACKET, MOTOR RELAY	MM5609740-17	17
REF		X-Y COORD HOLE LOCAT	MM5609740A	
REF		CIRCUIT SCHEMATIC	MM5609740	

PARTS LIST

ETCH BOARD REV F

DEC NO.	EIA NO.	DEC NO.	EIA NO.
		D6Z	IN3653
		D7Z	IN4934

SEMICONDUCTOR CONVERSION CHART

FIRST USED ON: RK05

Digital Equipment Corporation

TITLE: DECPACK MOTOR RELAYS

D-LIA-RK05-0-0

SCALE 4:1 SHEET 1 OF 1

SIZE C — 5409574-0-0 — REV F

NOTES:
1. SAFETY RELAY L AND BLOWER MTR RELAY DR ARE THE SAME SIGNAL.
2. SPINDLE MOTOR RELAY L AND DISK RELAY DR ARE THE SAME SIGNAL.

INTERFACE CABLE

CONTROLLER

FILE READY
HEAD SELECT L
WRITE PROTECT STATUS L
ERASE GATE
WRITE CHECK L
SEEK INCOMPLETE
R/W/S READY L
WRITE GATE L
STROBE L
SELECT ØL
ADDRESS INVALID
SELECT 1 L
ADDRESS ACCEPTED L
SELECT 2L
READ CLOCK
READ DATA
SELECT 3 L
WRITE DATA AND CLOCK L
SECTOR PULSE L
CYLINDER ADDRESS ØL
CYLINDER ADDRESS 1L
CYLINDER ADDRESS 2L
CYLINDER ADDRESS 3L
CYLINDER ADDRESS 4L
CYLINDER ADDRESS 5L
CYLINDER ADDRESS 6L
CYLINDER ADDRESS 7L
INDEX PULSE L
SECTOR ADDRESS ØL
SECTOR ADDRESS 1L
SECTOR ADDRESS 2L
SECTOR ADDRESS 3L
WRITE PROTECT SET L
RESTORE L
READ GATE L
AC LOW
DC LOW
HIGH DENSITY L

LOGIC ASSEMBLY

A06 J1 GRN
A06 H1 ORN/BLK
A06 E1 RED/WHT
A06 K1 GRN/BLK
A06 B1 BLK/WHT
A06 F1 ORN
A06 N1 BLU/BLK
A06 C1 RED
A06 A1 BLK
A06 L1 GRN/WHT
A06 P1 BLU/WHT
A06 D1 RED/BLK
A06 M1 BLU
A06 T1 WHT/BLK
A06 R1 WHT

B06 B1 BLK/WHT
B06 E1 RED/WHT
B06 D1 RED/BLK
B06 J1 GRN
B06 H1 ORN/BLK
B06 S1 WHT
B06 F1 ORN
B06 A1 BLK
B06 C1 RED

CONTROL PANEL

READ IND 1
FAULT IND 2
WRITE IND 3
LOAD SW L 4
READY IND 5
SEEK DONE (ONCYL) 6
WRITE PROT SW OFF 7
WRITE PROT IND 8
LOAD IND 9
RUN SW L 10
DOOR UNLOCK SOLENOID L 11
+15V 12
WRITE PROT SW ON 13
GND 14
INTERLOCK L 15

J2

DOOR UNLOCK SOLENOID
WHT
WHT
CARTRIDGE SEATED
GRY/ORN
GRY/YEL
DOOR LOCKED
GRY/RED
SW1
SW2

TB2

B06 K1 GRN/BLK 3 ORN
B06 L1 GRN/WHT 1 BLU
B06 T1 WHT/BLK 2 WHT
B06 M1 BLU 5 GRY
B06 N1 BLU/BLK 6 VIO
B06 P1 BLU/WHT 4 YEL
BLK 7 BLK/WHT
8 ORN/WHT
9 BLK

TB1

COS H 3 GRN
COS L 4 ORN
SIN H 1 BLU
SIN L 2 YEL
LIMIT H 5 GRY
LIMIT L 6 BRN
HOME L 7
+5 BULB 9 WHT/RED OR WHT
GND 8 WHT/BLK OR WHT

LINEAR TRANSDUCER

RED

POWER SECTOR TRANSDUCER
SECTOR INDEX RAW
GROUND
GROUND
BATTERY (-)
BATTERY (-)

ORN
BLU
RED DOT
BLK DOT
LED
WHT
SECTOR TRANSDUCER

LINEAR MOTOR
POSITIONER COIL
RED
BLK
HEADS
MAGNET AND HOUSING
ORN/WHT NC1
SW3
NO4
HOME
BLK NC2
BLK/WHT NO3
RED

LINEAR MOTOR H
LINEAR MOTOR L
BLOWER MOTOR
BLOWER AC
DISK SPINDLE MOTOR
DISK SPINDLE AC

(DISK RELAY DR (SPINDLE MTR RELAY))
(SAFETY RELAY L (BLOWER MTR RELAY DR))
POWER AMP DR

A1-D2 ORN +15
A1-B2 BLU -15
A1-E2 RED +5
A1-K2 BLK GND LUG
A4-E1 VIO +30 VAC
A4-F2 GRN AC LOW
A4-F1 YEL DC LOW

GRY/WHT
GRY/RED

JUMPER AC HI

J1 1 2 3 4 5 6 7 8 9
J5 1 2 3
J4 3 1 2
J3 1 2 3 4 5 6 7 8 9

D1

TB4
RED 1
WHT 2
RED 3
4
5
6
GRN
C1 5 μf
BLK
WHT
GRY/GRN
3.
2.
RI 4
RI ONLY CLOSES DURING START
D2
RED
BLU
YEL
MAIN
M1
START DISK SPINDLE MOTOR

BLU
GRN
ORN
BLK
M2
BLOWER MOTOR

LINE CORD AC INPUT
WHT
GRN
BLK
AC LOW 1
DC LOW 2
3
4
J6

POWER SUPPLY ASSY, H743

FOR 115V JUMPER 1&2 (RED), 3&4 (WHT)
FOR 230V JUMPER 2&3 (RED)

GROUND
BATTERY (+)
BLOWER AC
BLOWER MOTOR
DISK SPINDLE AC
BATTERY (-)
AC LOW
DISK SPINDLE MOTOR
LINEAR MOTOR H
DC LOW
BATTERY CHARGE

(SPINDLE MTR RELAY L, DISK RELAY DR)
(SAFETY RELAY L, BLOWER MTR RELAY DR)

P6 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
BLK BLK RED RED GRY/ORN ORN RED BRN RED GRY/WHT GRY/YEL GRY/BLU WHT/RED VIO YEL BLU
LINEAR MOTOR H +15 -15

MOTOR RELAY BOARD 5409474

P7 1 2 3 4 5 6
ORN BLU GRY/ORN GRN BLK GRY
+15 -15 LINEAR MOTOR L GROUND POWER AMP DRIVE

POWER AMPLIFIER BOARD H604

REVISIONS	CHK	CHANGE NO.	REV
		RKØ5-00032	A
	D. JENSEN 2-23-73		
		RKØ5-00034	B
	D. JENSEN 4-5-73		

FIRST USED ON OPTION/MODEL	RKØ5
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES	
DECIMALS	ANGLES
.XXX = .005 .XX = .02 .X = .1	±0° 30'
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓	
MATERIAL	
FINISH	

QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST			

DRN. [illegible] DATE 9-24-71
CHK'D [illegible] DATE 12-8-71
ENG. [illegible] DATE 3/30/72
PROJ. ENG. [illegible] DATE 3/30/72
PROD. [illegible] DATE 3/30/72

NEXT HIGHER ASSY. B-DD - RKØ5-Ø
SCALE NONE
SHEET OF

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE CHASSIS WIRING RKØ5

SIZE D CODE BD NUMBER RKØ5 – Ø – 1 REV. B
DIST.

DEC FORM NO DRD 102-B

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ACCESSORY LIST

MADE BY DATE G. Schneider	CHECKED DATE 8/17/72	SECTION
ENG DATE 8/17/72	PROD Alex Karlsberg DATE 8/17/72	ISSUED SECT.

LEGEND

D DOCUMENT
DN DOCUMENT CHANGE NOTICE
PA PAPER TAPE ASCII
PB PAPER TAPE BINARY
PM PAPER TAPE READ-IN-MODE

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QUANTITY/VARIATION: All RK11's for all RK05's	All RK05's, for all RK8E's
1	RK05-0	Customer Print Set (B-DD-RK05-0 Sheet one only)	1	1
~~2~~	~~DEC-RK05-1PB-1~~	~~ILLUSTRATED PARTS BREAK DOWN FOR RK05~~	~~1~~	~~1~~
3	DEC-00-RK05-DA	Maintenance Manual	1	1
4	BC 11A-6	Unibus Cable 6 feet	1	1
5	2200007	Head Cleaning Kit	1	1
6	3010350-00	Disk Cartridge 12 Sector	1	0
7	3010350-02	Disk Cartridge 16 Sector	0	1
8*	A-AD-7009276-0-0	Mounting Hardware KIT	1	1
9*	1209152-0-2 REF	Slide Chassis (Use set that was issued to Assy Line)	1	1
	NOTE: The following	items are additionally required when unit is shipped in a rack.		
10	749691-1	Shipping Bracket (Left Hand)	1	1
11	749691-2	Shipping Bracket (Right Hand)	1	1
12**	3611382	Drive Identification Numbers	1	1
	*NOTE: If unit is shipped in a rack, Items 8 and 9 are mounted to the rack.			
	**NOTE: Attach the drive identification number set to the instruction sheet #DEC-16-(379)-1094-N573 using transparent adhesive tape. Insert sheet behind front cover of maintenance manual			

QUANTITY/VARIATION — KIT CHECK BY _____ DATE _____ — INSTALLATION CHECK BY _____ DATE _____

TITLE	ASSY. NO.	SIZE	CODE	NUMBER	REV.	ECO NO
DECpack Assembly	SHEET 1 OF 1	A	AL	RK05-0-17	E	RK05-00052
		DIST.				

DEC 16-(325)-1075-N172 DRA 121

digital EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

THIS IS PRINT SET

	SEQUENCE	SEQUENCE
DRAWING DIRECTORY	B-DD-H743-Ø	SHEET #1 ONLY
CIRCUIT SCHEMATIC	D-CS-H743-Ø-1	
±5V REGULATOR	E-IA-5409503-0-0	
CIRCUIT SCHEMATIC	D-CS-5409503-0-1	
±15V REGULATOR	E-IA-5409484-0-0	
CIRCUIT SCHEMATIC	D-CS-5409484-0-1	

MFG PRINTS

POWER SUPPLY	D-UA-H743-0-0
POWER SUPPLY (PL)	A-PL-H743-0-0
DRAWING DIRECTORY	B-DD-H743-Ø
PACKAGING INSTRUCTION	A-PI-3700130-0-0

UNIT VARIATIONS

VARIATION	TITLE	PRINT SET TYPE
H743-AA	POWER SUPPLY 115V	X
H743-AB	POWER SUPPLY 230V	X

REVISIONS		
DATE	CHG. NO.	REV
8/71	RK05-19	A
8/72	H743-1	B
2-14-73	H743-2	C
	H743-3	D
	H743-4	E
	H743-5	F
2-74	H743-6	H
6-74	H743-7	J
3-75	H743-10	K

USED ON OPTION/MODEL: RKØ5

DRN. J. FLEMING	DATE 12/16/71	TITLE: POWER SUPPLY (H743)	
CHK'D.	DATE 4-7-72		
PROJ ENG.	DATE 4/21/72		
PROD.	DATE 4/19/72	SIZE B	CODE DD
FIELD SERV.	DATE	NUMBER H743-Ø	REV K
SHEET 1 OF 3		DIST 6	

DRB 106

DEC 16-(325)-1062-1-N871

P2 SHOWN FOR 115V OPERATION. FOR 230V OPERATION REMOVE JUMPERS BETWEEN PINS 1 & 2 AND 3 & 4 AND INSTALL JUMPERS SHOWN DOTTED BETWEEN PINS 2 & 3.

P1 · TS1 · LF1 · CB1 5A · BLK · GRN · WHT · BLU · BRN · RED

P2 J2 · T1 · C1 6000uF 50V · C2 6000uF 50V · D1 · D2 · BT1 · C3 6000 uf 10 V DC

-15V REGULATOR (INPUT OUTPUT GND) · +15V REGULATOR (INPUT GND OUTPUT) · +5V REGULATOR (INPUT GND OUTPUT)

P3 · P4 · P5 · P6 · P7

P4 J4 · J3 · J5 · J1 · J6

HOME SWITCH · BATTERY · SPINDLE · BLOWER SPINDLE · LOGIC · BLOWER · LINEAR MOTOR · +15V · -15V · +5V · GND · +30V AC · AC LOW · DC LOW

MOTOR RELAY BOARD 5409474

POWER AMPLIFIER BOARD H604

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
1	P1	POWER CORD 230V	1700016-09	22
1	C3	CAP 6000 uF 10 VDC	1010704	21
1	P4	JUMPER AC - H1	B-1A-7008729-3-0	20
1	P2	JUMPER 230V	B-1A-7008729-2-0	19
1	P2	JUMPER 115V	B-1A-7008729-1-0	18
3	P3,P4,P5	CONN, MATE-N-LOCK, 8 PIN	1209340-01	17
1	TS1	TERMINAL STRIP (6POS)	9006906	16
1	T1	TRANSFORMER	1610511	15
~~1~~	~~BT1~~	~~BATTERY, TIME DELAY, 6000 MFD~~	~~1210641~~	~~14~~
1	P7	CONN, MATE-N-LOCK, 6 PIN	1209351-06	13
1	P6	CONN, MATE-N-LOCK, 15 PIN	1209351-15	12
1		+5V REGULATOR	E-1A-5409503-0-0	11
2		±15V REGULATOR	E-1A-5409484-00	10
1	BT1	BATTERY	1210641	9
1	P1	POWER CORD 115V	1700006-09	8
2	J4,J5	CONN, MATE-N-LOCK, 3 PIN	1209350-03	7
2	J2,J6	CONN, MATE-N-LOCK, 4 PIN	1209350-04	6
2	J1, J3	CONN, MATE-N-LOCK, 9 PIN	1209350-09	5
1	LF1	LINE FILTER	1010585	4
2	C1,C2	CAP 6000 MF, 50V	1010510	3
2	D1,D2	RECTIFIER (MDA980-3)	1110051	2
1	CB1	CIRCUIT BREAKER 5A	1209283	1

PARTS LIST

FIRST USED ON OPTION/MODEL H743

ETCH BOARD REV

SEMICONDUCTOR CONVERSION CHART

REV	CHANGE NO.	REVISIONS
A	RK05-00019	
B	H743-00001	
C	H743-00002	
D	H743-00004	
E	H743-00006	

DRN. M. Rivera 10/6/72 · CHK'D. 11-5-71 · ENG. 11-24-71 · PROJ. ENG. 11-24-71 · PROD. L. Kaufberg 9/30/72 · NEXT HIGHER ASSY B-DD-H743-0 · SCALE NONE · SHEET 1 OF 1

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: CIRCUIT SCHEMATIC H743

SIZE D · CODE CS · NUMBER H743-0-1 · REV. E · DIST.

DEC FORM NO. DRD-135

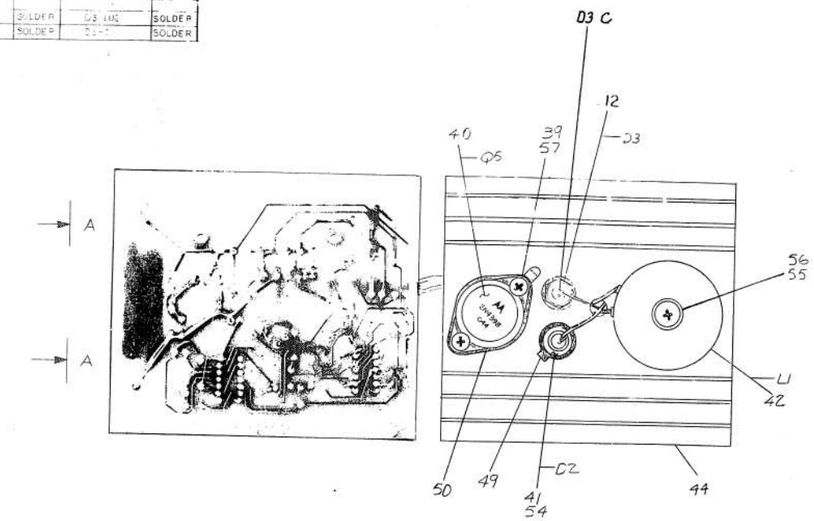
WIRE TABLE

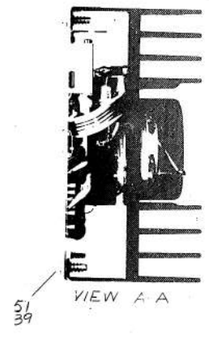
ITEM NO	DESCRIPTION WIRE SIZE AWG	COLOR	FROM CONNECTION	WITH	TO CONNECTION	WITH
39	—	WHT	SPECIAL A	SOLDER	Q5-E	SOLDER
40	—	GRY	" B		Q5-B	
57	—	VIO	" B		Q5-C	
54	—	BLU	" C		" C	
53	—	GRN	" D		TS-1	
58	—	YEL	SPECIAL A		R21-T1	
58	—	"	" C		D2-LUG	
61	—	RED	TS-2		R21-T2	
62	22	WHT/GRN	TS-1	SOLDER	D2	
43	—	BLK	L1	—	D2-LUG	
43	—	BLK	L1	—	TS-2	SOLDER
59	—	GRN				
59	—	GRN	TS-1	SOLDER	D3 LUG	SOLDER
59	—	YEL	R21-T1	SOLDER	D1-T	SOLDER

EXTERNAL COMPONETS LIST

ITEM NO	DESCRIPTION	VOL	FROM	TO	POL
45	RES TO SUPPLY		Q5-E	Q5-B	
46	CAP 1 uf 100V	+	Q5-E	TS-1	−

NOTES:
1. R15 IS USED FOR OUTPUT VOLTAGE ADJUSTMENT.
   R7 IS USED FOR OUTPUT CURRENT ADJUSTMENT.
2. * INDICATES JUMPERS TO BE INSTALLED.





QTY	REF DESIGNATION	DESCRIPTION	PART NO	ITEM NO
1		SOLDER LUG	9006784	66
1		1/4 FLAT WASHER	9006874	65
1	C9	CAP 330UF 10V	1009809	64
A/R		WIRE 22 AWG TRACER WHT/GRN	9107400-95	63
2		WASHER INT TOOTH LOCK #2	9006837	61
A/R		BUS WIRE 22 AWG	9107560-01	60
A/R		20 CONNECTOR CABLE	9107575	59
2		SCR BINDING HD 2-56X3/16 SS	9006000-4	58
2		SCR PHIL PAN HD 6-32X1/2 SST	9006024-1	57
1		SCR PHIL TRUSS HD 10-32X1 SST	9006077-3	56
1		WASHER INT TOOTH LOCK #10	9006635	55
1		BUSHING	9009441	54
1		SOLDER LUG	9008150	53
1		NUT HEX#10-32	9006564	52
4		SCR PHIL PAN HD#6-32X3/8 S T	9008407	51
1		THERMAL INSULATOR	9008419	50
2	TS1,TS2	THERMAL INSULATOR	9008424	49
1		INSULATED TERM STANDOFF	9009060	48
1		TRANSISTOR SOCKET	1210130	47
1	C11	CAP 1 UF 100-10	1005507	46
2	R22, R23	RES 100 5 1/4 W	1300229	45
1		HEAT SINK	D-IA-5309543-0-0	44
1	R21	RES 0 05.5A 2	1310507	43
1	L1	120 UH CHOKE	1610611	42
1	D2	1N 3889 DIODE	1110481	41
1	Q5	2N 4398 TRANSISTOR	1505870	40
6		WASHER INT TOOTH #6	9006633	39
1	R11	RES 27 1/4W 5	1301522	38
1	R16	RES 1 5K 1/4W 5	1300301	37
2		EYELETS #A 1733 STIMPSON	9006745	36
6		SPLIT LUGS	9006735	35
2		WASHER NYLON	9006707	34
1	E1 E2	IC 723C D P REGULATOR	1910415	33
1	Q1	TRANSISTOR D45C5 C E	1510414	32
				31
2	D2,D3	TRANSISTOR DEC 6534D	1503409-00	30
1	R8	RES 2 7W 1/4W 5	1309880	29
1	R9,R15	RES 3 83K 1/8W 1	1309413	28
1	R7	RES 1K 1/2W 20	1309150-3	27
1	R13	RES 1K 10 78PR	1309142-07	26
1	R20	RES 2 74K 1/8W 1 MF	1304868	25
1	R6	RES 2 61K 1/8W 1 MF	1303303	24
1	R19	RES 1K 1/8W 1 MF	1303114	23
1	R14	RES 56 1/4W 5	1302802	22
1	R10	RES 4 7K 1/2W 5	1300445	21
1	R5	RES 270 1/4W 5	1301972	20
1	R4	RES 4 7K 1/4W 5	1300447	19
3	R1 R2 R12	RES 1K 1/4W 5	1300265	18
1	R18	RES 330 1/4W 5	1300235	17
1	R24	RES 82 F 1/4W 10%	1303187	16
8		CONNECTOR PIN	1209456	15
1	J1	CONN 8 PIN AMP	1209340-01	14
1	F1	FUSE 5 AMPS	1209810	13
1	D5	DIODE IN4553B 5.6V	1111241	12
1	C8	CAP 02 UF 100V-0+20% DISC	1000094	11
3	C3	CAP 330 UF 30V-10+75% ELEC	1010509	10
1	C1 C5, C10	CAP 01 UF 100V 20% DISC	1001610	9
1	C7	CAP 1000 PF 100V 5% MICA	1000042	8
1	C2	CAP 100 PV 100V 5% DM	1009016	7
1	C6	CAP 68 PF 100V 5% DM	1000014	6
1		ETCH CIRCUIT BOARD	5009502	5
		MODULE ECO HISTORY	B-MH-5409503-0-0	4
		ASSY-DRILLING HOLE LAYOUT	D-AH-5409503-0-0	3
		X-Y COORDINATE HOLE LOCATION	A-CD-5409503-0-0	2
		CIRCUIT SCHEMATIC	D-CS-5409503-0-1	1

PARTS LIST

ETCH BOARD REV E
FIRST USED ON OPTION MODEL

DEC NO	EIA NO	DEC NO	EIA NO
		1N3889	SAME
		2N4398	"
		045C6	"
		2N4441	"
		DEC 6534 D	045,65M
		1N752A	SAME

SEMICONDUCTOR CONVERSION CHART

REV	DESCRIPTION	CHANGE NO	CHK	DATE
A	ORIGINATED	0	M Pate	2-13-75
B	ECO 5409503-00001	1	M Pate	2-13-75
C	ECO 5409503-00002	1	Richard Sargeant	2-13-75
D	ECO 5409503-00003	1	D.W. SERGEANT	4-23-75
E	ECO 5409503-00004	1	Richard Sargeant	6-16-75
F	ECO 5409503-00005	1	D.W. SERGEANT	8-25-75
G	ECO 5409503-00006	1	Richard Sargeant	11-17-75
H	ECO 5409503-00007	1	Richard Sargeant	2-17-76
J	ECO 5409503-00008	1	D.W. SERGEANT	4-13-76
K	ECO 5409503-00009	1	D.W. SERGEANT	6-15-76
L	ECO 5409503-00010	1	D.W. SERGEANT	11-1-76
M	ECO 5409503-00011	1	D.W. SERGEANT	2-22-77

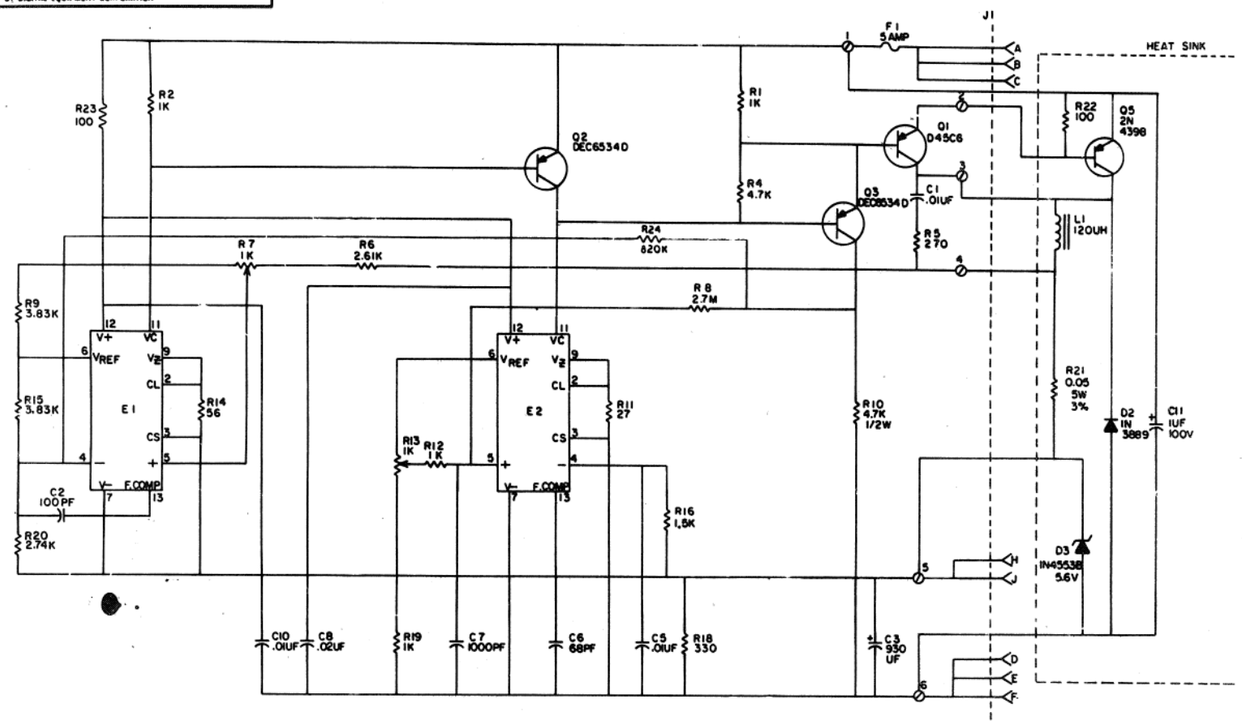
UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY √ REMOVE BURRS AND BREAK SHARP CORNERS
MATERIAL
FINISH

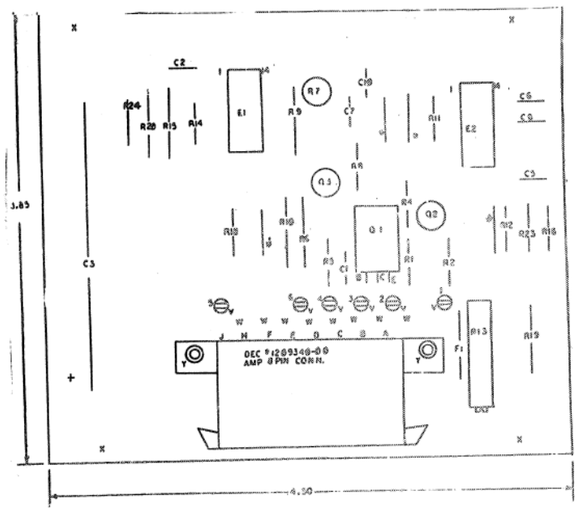
DRN M Pate 6-6-72
CHK Richard Sargeant 6-6-72
ENG M Pate 6-6-72
PROJ D.W. SERGEANT 6-6-72

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE
+5 VOLT
POWER REGULATOR

SIZE E | CODE | NUMBER 5409503-0-0 | REV M
SCALE | SHEET 1 OF 1 | DIST.





REVISIONS				
ECO#	DWG NO	REV	BY	DATE
00001		D		
00003		E		
00031		F		
00037		K		
00041		L		
00108		M		

DRN S. Cooper 6-2-71
CHK'D Maxy Mintz 6-7-71
ENG. [illegible] 7/6/71
PROD DATE

TRANSISTOR & DIODE CONVERSION CHART

DEC	EIA	DEC	EIA
DEC6534C	NPN6512	IN752A	SAME
D45C6		IN3889	SAME
2N4441			
2N4398			

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: +5 VOLT REGULATOR

SIZE D | CODE CS | NUMBER 5409503-0-1 | REV M

PRINTED CIRCUIT REV. F

DEC FORM NO. DRD 118

PINK.

WIRE TABLE

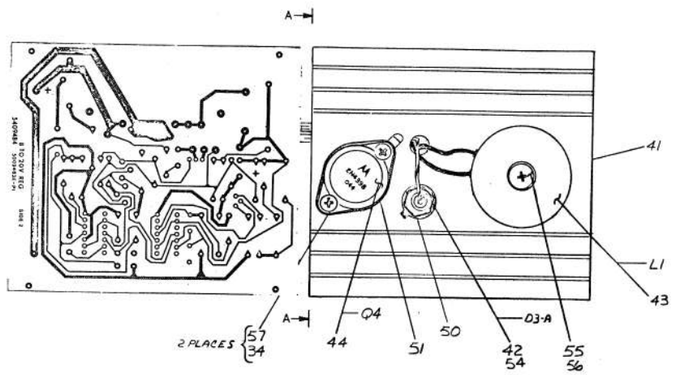
ITEM NO.	DESCRIPTION AWG	COLOR	LENGTH INCHES +-1/8	STRIP LENGTH X	STRIP LENGTH Y	CONNECTIONS FROM	CONNECTIONS TO
43	—	BLK	2 7/8	—	1/2	L1	Q3-B (EMITTER)
44	—	BLK	2 7/8	—	1/2	L1	TS-2
65	18	BLU	6 7/8	1/2	1/2	Q4-C	Q3-C (COLLECTOR)
67	18	GRY	3 3/8	1/2	1/2	Q4-E	R24-72
66	18	GRN	4 1/2	1/2	1/2	R24-71 (HEATSINK)	TS-1
68	18	WHT	7 3/8	1/2	1/2	SPLIT BUS*	R24-71
62	18	GRY	4 7/8	1/2	1/2	"	Q3-E
60	18	W.O	5 7/8	1/2	1/2	"	Q3-B
63	18	BLU	5 7/8	1/2	1/2	"	Q3-C
64	18	GRN	5 1/2	1/2	1/2	"	TS-1
61	18	YEL	6 7/8	1/2	1/2	"	TS-2

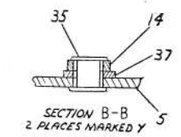
EXTERNAL COMPONENTS

ITEM NO	LENGTH	DESCRIPTION	POL	CONNECTIONS FROM	CONNECTIONS TO	POL
45	SEE NOTE 2	RES 100 OHM 5% 1/4 W		Q4-E	Q3-B	
47	SEE NOTE 3	CAPACITOR 35V 10 MFD	+	Q4-E	TS-1	—

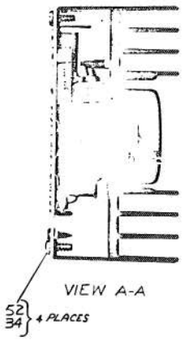
NOTES

1. R17 IS USED FOR OUTPUT VOLTAGE ADJUSTMENT. R2 IS USED FOR OUTPUT POWER ADJUSTMENT.
2. CUT LEADS OF RES. (R25) SO THERE IS 3/8 OF A LEAD LEFT AT BOTH ENDS. — R25 —
3. CUT LEADS OF CAP. (C9) SO THERE IS 1/2" OF A LEAD LEFT AT BOTH ENDS. — C9 —
4. THERMAL COMPOUND (ITEM #39) IS TO BE APPLIED TO BOTH SIDES OF ALL THERMAL INSULATORS (ITEM #50 + 51) BOTH SIDES OF EACH INSULATOR SHOULD BE COMPLETELY COVERED, LEAVING NO VOIDS WHEN INSTALLED. CARE MUST BE EXERCISED SO THAT NO EXTRA COMPOUND INTERFERES WITH ANY ELECTRICAL CONNECTION MADE TO ANY DEVICE.

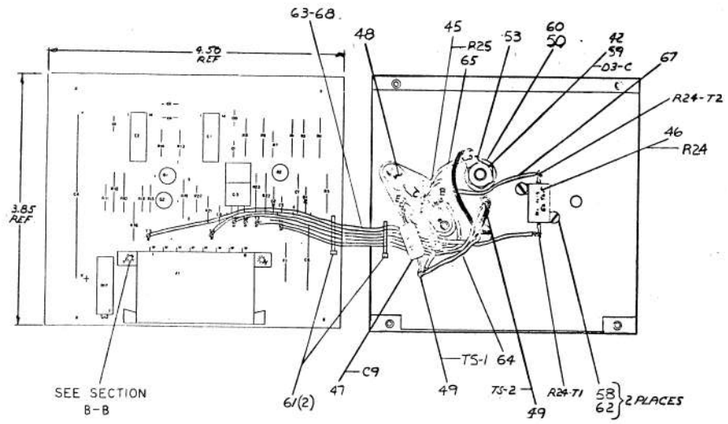




SECTION B-B
2 PLACES MARKED Y



VIEW A-A



QTY.	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINISH SURFACE QUALITY
REMOVE BURRS AND BREAK SHARP CORNERS

		DATE
DRN		
CHK		
ENGR		
PROJ ENG		
MFG		

MATERIAL —

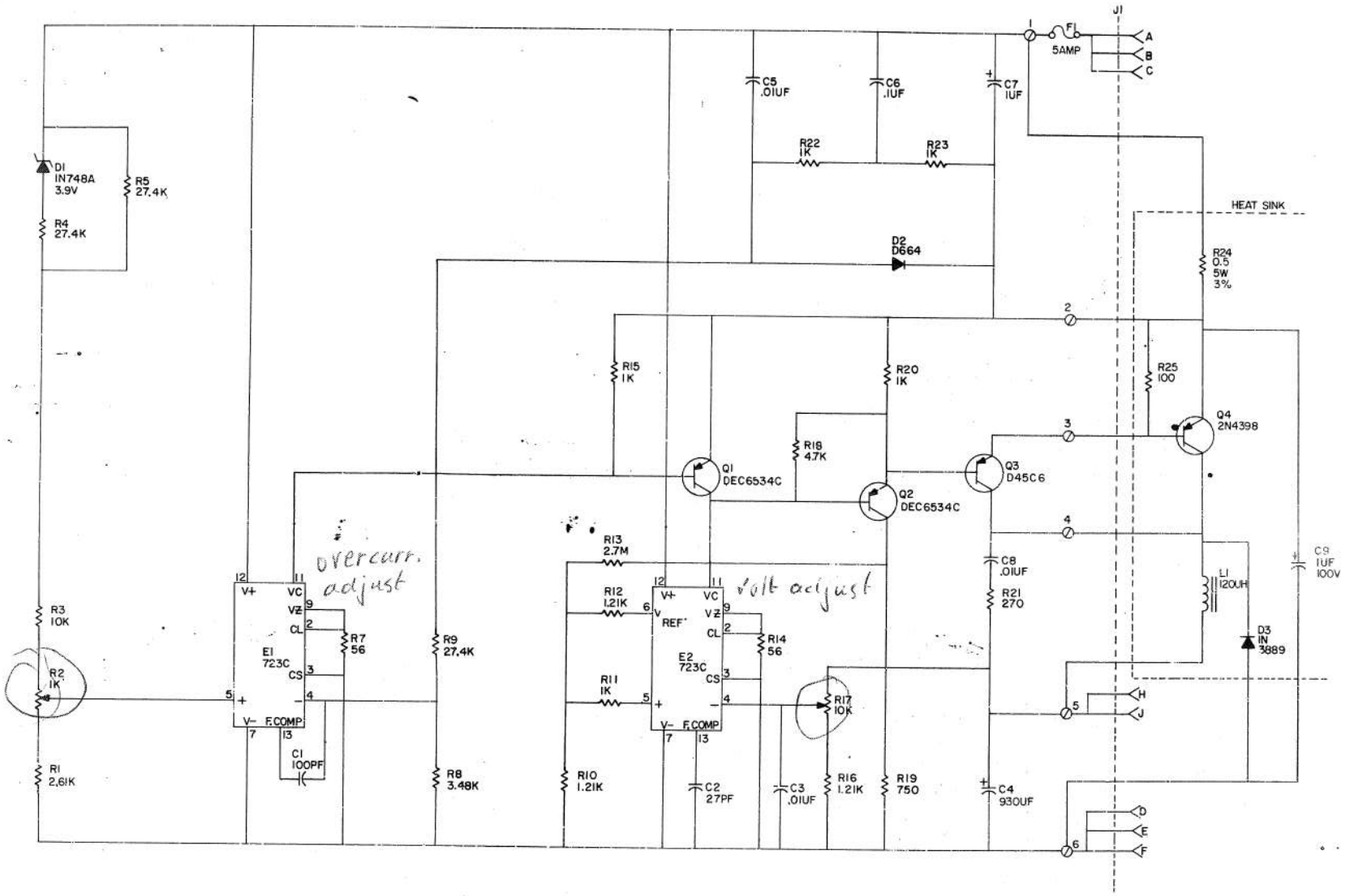
FINISH —

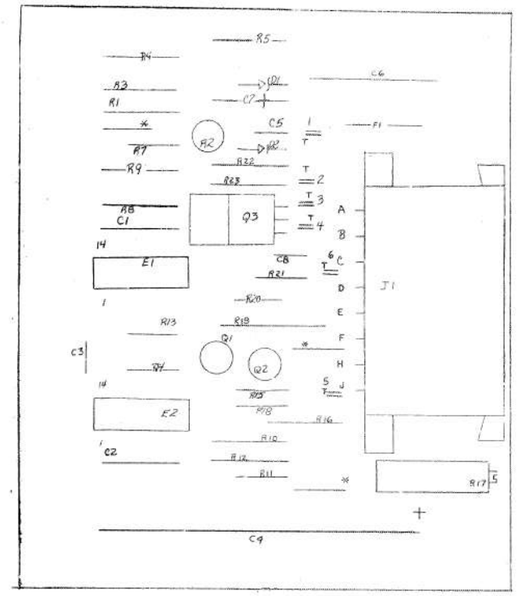
DIGITAL EQUIPMENT CORPORATION

TITLE: 8 TO 20V REGULATOR

SIZE	NUMBER	REV.
E	5109454-0-0	F

DWG	3-UA-4737-0-0
SCALE	NONE
SHEET	1 OF 1
DIST.	





1	R6	FOR FUTURE USE		27
8		CONNECTOR PINS	1209456	37
1	J1	AMP 8 PIN CONNECTOR (MATE & LOCK)	1209340-00	36
1	F1	FUSE 5 AMPS	1209070	35
2		EYELET	9006745	34
6		SPLIT LUGS	9006735	33
2		WASHER, NYLON	9006707	32
2	E1, 2	DIP REGULATOR 723C	1510615	31
1	Q3	TRANSISTOR D45C6	1510414	30
1	Q1, 2	TRANSISTOR DEC 6534C	1503409-02	29
1	R13	RES. 2.7M 5W 5%	1309680	28
1	R6	RES. 0	1309492	27
3	R4, 9, 5	RES. 27.4K 1/8W 1% MF	1309413	26
1	R2	RES. VARIABLE 1K 4W	1309150-03	25
1	R17	RES. VARIABLE 10K 3/5W	1309142-10	24
1	R5	RES. 27.4K 1/8W 1% MF	1309413	23
1	R8	RES. 3.48K 1/8W 1% MF	1305113	22
1	R3	RES. 10K 1/8W 1% MF	1303312	21
2	R22, 23	RES. 1K 1/8W 1% MF	1303113	20
1	R1	RES. 2.61K 1/8W 1% MF	1303303	19
3	R10, 17, 16	RES. 1.21K 1/8W 1% MF	1302873	18
2	R7, 14	RES. 56 1/4W 5%	1302602	17
1	R19	RES. 750 1W 5%	1302385	16
1	R21	RES. 270 1/4W 5%	1301972	15
1	R18	RES. 4.7K 1/4W 5%	1300487	14
3	R11, 15, 20	RES. 1K 1/4W 5%	1300365	13
1	D1	DIODE ZENER 1N748A 3.9V	1100132	12
1	D2	DIODE D664	1100114	11
1	C4	CAP. 930UF 30V -10+75%	1010509	10
1	C6	CAP. .1UF 100V 10% MYLAR	1002342	9
1	C7	CAP. 1UF 35V 10% S. TANT	1001776	8
1	C2	CAP. 27PF 100V 5% C	1001739	7
3	C3, 5, 4	CAP. .01UF 100V 20% CER	1001630	6
1	C1	CAP. 100PF 100V 5% MICA	1000016	5
1		ETCHED CIRCUIT BOARD	5009483	4
		MODULE ECO HISTORY	B-MA-5409484-0-B	3
		ASSY/DRILLING HOLE LAYOUT	D-AD-5409484-0-S	2
		X-Y COORDINATE HOLE LOCATION	X-CO-5409484-0-A	1
QTY.	REF. DESIGNATION	DESCRIPTION / PARTS LIST	DEC PART NO.	FIND NO.

2		THERMAL INSULATOR	9008696	47
-		STAND OFF (STUD TYPE)	9009060	46
1		TRANSISTOR SOCKET	1210130	45
1	C9	CAP. 1UF 100V	1005567	44
1	R24	RES. 0.5 3% 5W	1310508	43
1	R25	RES. 100 5% 4W	1309329	42
1	Q4	TRANSISTOR 2N4398	1505870	41
1	L1	120UH CHOKE	1210573	40
1	D3	DIODE 1N3889	1100491	39
1		HEAT SINK	5305993	38
QTY.		DESCRIPTION / PARTS LIST	DEC PART NO.	FIND NO.

AR		8 TO 20V REGULATOR	E-IA-5409484-0-0	58
		20 CONDUCTOR CABLE	93-07575	57
1		#10-32 HEX NUT	9006584	56
2		2/56 X 3/16'' SCREW	9006000-4	55
2		6/32 X 3/8'' PAN HD SCREW	9006036-3	54
1		10/32 X 1'' TRUSS HD SCREW	9006077-3	53
1		#10 INTERNAL LOCK WASHER	9006635	52
1		BUSHING (DIODE)	9006841	51
1		SOLDER LUG	9008150	50
4		#6 SELF TAPING SCREW	9008701	49
1		THERMAL INSULATOR	9008819	48

TRANSISTOR & DIODE CONVERSION CHART			
DEC	EIA	DEC	EIA
DEC6534C	MPS6534	DEC664	IN3606
D45C6		IN748A	SAME
2N4398			
IN3889	SAME		

REVISIONS			
CHK	CHG NO	REV	
	00001	D	
	00002	E	

DRN B. J. Hale 6/2/71
CHK'D Nancy Moore 6-7-71
ENG Ed Swanson 6/20/71
PROJ
DATE
DATE
DATE

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE: 8 TO 20 V REGULATOR
SIZE D | CODE CS | NUMBER 5409484-0-1 | REV E
PRINTED CIRCUIT REV D

DEC FORM NO. DRD 1-8

DRWG NO	REVLTR
K-WL-RKØ5-Ø-3	B

REVISIONS				
REV LTR	ECO NO	DATE	ENG	
A	RK05-00014	7/72		
B	RK05-00031	2/73		

DRAWN RE Hellen	DATE 11/8/71	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	TITLE WIRE LIST (RKØ5)
CHECKED	DATE 11-7-71		FOR TAPE* FILE*
ENG Dale Jensen	DATE 24 Nov 71		
PROJ ENG EC Simmons	DATE 11-24-71	ASSY NO D-AD-7008696-0-0	SIZE K / CODE WL / DWG. NO. RKØ5-Ø-3 / REV LTR B
PROD Alan Kaalberg	DATE 11/29/71	SCALE NONE / SHEET 1 OF 1	DIST.

+15VDC	H	A05D2	1=01		D05=9	1						1
+15VDC	H	A06D1	1=02		D05=9							1
+15VDC			1								2=6/8	1
+5VDC BUSB	H	B06A1	1=01		D05=9	1						2
+5VDC BUSB	H	B06A2	1=02		D05=9							2
+5VDC BUSB			1								2=6/8	2
12B	H	A01M2	1=01		D05=1	1						3
12B	H	B03A1	1=02		D05=1							3
12B			1								5=2/8	3
AC LOW	H	A04R2	1=01		D05=8	1						4
AC LOW	H	A08RF1	1=02		D05=8	2						4
AC LOW	H	B07F1	1=03		D05=8							4
AC LOW			1								9=0/8	4
ADDR ACCEPTED	L	A02S1	1=01		D05=5	1						5
ADDR ACCEPTED	L	A03N1	1=02		D05=5							5
ADDR ACCEPTED			1								3=6/8	5
ADDRESS INVALID	L	A02F1	1=01		D05=2	1						6
ADDRESS INVALID	L	B03E1	1=02		D05=2							6
ADDRESS INVALID			1								2=7/8	6
BLOWER MTR RELAY DR	H	A04A1	1=01		D05=9	1						7
BLOWER MTR RELAY DR	H	A06N1	1=02		D05=9							7
BLOWER MTR RELAY DR			1								8=2/8	7
BUS ADDR ACCEPTED	L	A02H1	1=01		D05=4	1						8
BUS ADDR ACCEPTED	L	A07H2	1=02		D05=4	2						8
BUS ADDR ACCEPTED	L	A08H2	1=03		D05=4							8
BUS ADDR ACCEPTED			1								9=2/8	8
BUS ADDR INVALID	L	A08T2	1=01		D05=4	2						9
BUS ADDR INVALID	L	A07T2	1=02		D05=4	1						9
BUS ADDR INVALID	L	H02A1	1=03		D05=4							9
BUS ADDR INVALID			1								10=2/8	9
BUS FILE READY	L	A04M1	1=01		D05=7	1						10
BUS FILE READY	L	B08N1	1=02		D05=7	2						10
BUS FILE READY	L	R07N1	1=03		D05=7							10
BUS FILE READY			1								10=7/8	10

RUN NAME	A/P	PIN NAME	ORDER PIN	BAY - ORDER	Q	DRAW	RV	PG	Y	X	Z	REMARKS	LENGTH	EXCEPTIONS	RUN NUMBER
BUS WRITE CK	H	R04P1	1-01			D05=9					1				20
BUS WRITE CK	H	R07K1	1-02			D05=8					2				20
BUS WRITE CK	H	B08K1	1-03			D05=8									20
BUS WRITE CK			1										8=4/8		20
COS POSITION	H	A05U1	1-01			D05=9					1				21
COS POSITION	H	B06B1	1-02			D05=9									21
COS POSITION			1										4=1/8		21
COUNT PULSE FWD	H	A05A1	1-01			D05=5					1				22
COUNT PULSE FWD	H	B03K1	1-02			D05=5									22
COUNT PULSE FWD			1										7=6/8		22
COUNT PULSE REV	H	A05C1	1-01			D05=5					1				23
COUNT PULSE REV	H	B03F1	1-02			D05=5									23
COUNT PULSE REV			1										7=0/8		23
CYC ADDR 0	L	A07K1	1-01			D05=5					2				24
CYC ADDR 0	L	A08K1	1-02			D05=5					1				24
CYC ADDR 0	L	R03L1	1-03			D05=5									24
CYC ADDR 0			1										10=5/8		24
CYC ADDR 1	L	A07D1	1-01			D05=6					2				25
CYC ADDR 1	L	A08D1	1-02			D05=6					1				25
CYC ADDR 1	L	R03N1	1-03			D05=6									25
CYC ADDR 1			1										11=3/8		25
CYC ADDR 2	L	A08L1	1-01			D05=6					2				26
CYC ADDR 2	L	A07L1	1-02			D05=6					1				26
CYC ADDR 2	L	R03P1	1-03			D05=6									26
CYC ADDR 2			1										10=5/8		26
CYC ADDR 3	L	A07C1	1-01			D05=6					2				27
CYC ADDR 3	L	A08C1	1-02			D05=6					1				27
CYC ADDR 3	L	B03M1	1-03			D05=6									27
CYC ADDR 3			1										11=3/8		27
CYC ADDR 4	L	A07F1	1-01			D05=6					2				28
CYC ADDR 4	L	A08F1	1-02			D05=6					1				28
CYC ADDR 4	L	B03H1	1-03			D05=6									28
CYC ADDR 4			1										11=3/8		28
CYC ADDR 5	L	A07J1	1-01			D05=6					2				29
CYC ADDR 5	L	A08J1	1-02			D05=6					1				29
CYC ADDR 5	L	B03U1	1-03			D05=6									29
CYC ADDR 5			1										11=4/8		29

RUN NAME	A/P	PIN NAME	ORDER PIN	BAY - ORDER	Q	DRAW	RV	PG	Y	X	Z	REMARKS	LENGTH	EXCEPTIONS	RUN NUMBER
BUS INDEX PUL	L	A02N1	1-01			D05=3					1				11
BUS INDEX PUL	L	B08M1	1-02			D05=3					2				11
BUS INDEX PUL	L	B07M1	1-03			D05=3									11
BUS INDEX PUL			1										10=7/8		11
BUS R/W/S READY	L	A02M1	1-01			D05=4					1				12
BUS R/W/S READY	L	A07H2	1-02			D05=4					2				12
BUS R/W/S READY	L	A08H2	1-03			D05=4									12
BUS R/W/S READY			1										9=6/8		12
BUS SECTOR ADDR	L	A02H1	1-01			D05=3					1				13
BUS SECTOR ADDR	L	R08L1	1-02			D05=3					2				13
BUS SECTOR ADDR	L	B07L1	1-03			D05=3									13
BUS SECTOR ADDR			1										11=0/8		13
BUS SECTOR ADDR 1	L	A02J1	1-01			D05=4					1				14
BUS SECTOR ADDR 1	L	A07P2	1-02			D05=4					2				14
BUS SECTOR ADDR 1	L	A08P2	1-03			D05=4									14
BUS SECTOR ADDR 1			1										9=6/8		14
BUS SECTOR ADDR 2	L	A02L1	1-01			D05=4					1				15
BUS SECTOR ADDR 2	L	R07K2	1-02								2				15
BUS SECTOR ADDR 2	L	R08K2	1-03			D05=4									15
BUS SECTOR ADDR 2			1										10=2/8		15
BUS SECTOR ADDR 3	L	A02P1	1-01			D05=4					1				16
BUS SECTOR ADDR 3	L	B07J1	1-02			D05=4					2				16
BUS SECTOR ADDR 3	L	B08J1	1-03			D05=4									16
BUS SECTOR ADDR 3			1										10=2/8		16
BUS SECTOR PULSE	L	A02F1	1-01			D05=3					1				17
BUS SECTOR PULSE	L	B08N2	1-02			D05=3					2				17
BUS SECTOR PULSE	L	B07N2	1-03			D05=3									17
BUS SECTOR PULSE			1										11=2/8		17
BUS SHFX INCOMPLETE	L	A02N1	1-01			D05=4					1				18
BUS SHFX INCOMPLETE	L	A07S2	1-02			D05=4					2				18
BUS SHFX INCOMPLETE	L	A08S2	1-03			D05=4									18
BUS SHFX INCOMPLETE			1										9=4/8		18
BUS WR PROTECT STATUS	H	R04U1	1-01			D05=8					1				19
BUS WR PROTECT STATUS	H	R07P1	1-02			D05=8					2				19
BUS WR PROTECT STATUS	H	B08P1	1-03			D05=8									19
BUS WR PROTECT STATUS			1										8=4/8		19

	A/P	PIN NAME	ORDER PIN	BAY - ORDER	Q	DRAW	RV	PG	Y	X	Z	REMARKS	LENGTH	EXCEPTIONS	RUN NUMBER
FWD	H	B03J1	1=01			D05=5					1				41
FWD	H	B05J2	1=02			D05=5									41
FWD			1										4=2/8		41
GND 01		A01C2	1=01								1				42
GND 01		A01T1	1=02								2				42
GND 01		B01C2	1=03								1				42
GND 01		R01I1	1=04												42
GND 01			1										13=6/8		42
GND 02		A02C2	1=01								1				43
GND 02		A02T1	1=02								2				43
GND 02		R02C2	1=03								1				43
GND 02		R02T1	1=04												43
GND 02			1										13=6/8		43
GND 03		A03C2	1=01								1				44
GND 03		A03T1	1=02								2				44
GND 03		R03C2	1=03								1				44
GND 03		R03T1	1=04												44
GND 03			1										13=6/8		44
GND 04		A04C2	1=01								1				45
GND 04		A04T1	1=02								2				45
GND 04		B04C2	1=03								1				45
GND 04		R04T1	1=04												45
GND 04			1										13=6/8		45
GND 05		A05C2	1=01								1				46
GND 05		A05T1	1=02								2				46
GND 05		R05C2	1=03								1				46
GND 05		R05T1	1=04												46
GND 05			1										13=6/8		46
GND 06		A06C2	1=01								1				47
GND 06		A06T1	1=02								2				47
GND 06		R06C2	1=03			D05=9					1				47
GND 06		R06C1	1=04			D05=9					2				47
GND 06		R06I1	1=05			D05=9					1				47
GND 06		H06J1	1=06			D05=9					2				47
GND 06		H06T1	1=07			D05=9					1				47
GND 06		R06S1	1=08			D05=9									47
GND 06			1										23=6/8		47

	A/P	PIN NAME	ORDER PIN	BAY - ORDER	Q	DRAW	RV	PG	Y	X	Z	REMARKS	LENGTH	EXCEPTIONS	RUN NUMBER
CYC ADDR 0	L	A08E1	1=01			D05=6					2				30
CYC ADDR 0	L	A07E1	1=02			D05=6					1				30
CYC ADDR 0	L	B03V1	1=03			D05=6									30
CYC ADDR 0			1										12=6/8		30
CYC ADDR 7	L	A07H1	1=01			D05=6					2				31
CYC ADDR 7	L	A08H1	1=02			D05=6					1				31
CYC ADDR 7	L	B03S1	1=03			D05=6									31
CYC ADDR 7			1										11=3/8		31
DC LOW	H	A04D1	1=01			D05=8					1				32
DC LOW	H	B08F2	1=02			D05=8					2				32
DC LOW	H	B07F2	1=03			D05=8									32
DC LOW			1										11=1/8		32
DIFF 1	L	A03A1	1=01			D05=7					1				33
DIFF 1	L	B05N2	1=02			D05=7									33
DIFF 1			1										8=4/8		33
DIFF 16	L	A03E1	1=01			D05=7					1				34
DIFF 16	L	B05I2	1=02			D05=7									34
DIFF 16			1										8=4/8		34
DIFF 2	L	A03B1	1=01			D05=7					1				35
DIFF 2	L	B05P2	1=02			D05=7									35
DIFF 2			1										8=2/8		35
DIFF 4	L	A03D1	1=01			D05=7					1				36
DIFF 4	L	B05R2	1=02			D05=7									36
DIFF 4			1										8=2/8		36
DIFF 8	L	A03C1	1=01			D05=7					1				37
DIFF 8	L	B05S2	1=02			D05=7									37
DIFF 8			1										8=4/8		37
DISK RELAY DR	H	A04N1	1=01			D05=8					1				38
DISK RELAY DR	H	B06P1	1=02			D05=8									38
DISK RELAY DR			1										6=6/8		38
DR UNLOCKING SOLENOID	L	A06P1	1=01			D05=8					1				39
DR UNLOCKING SOLENOID	L	B04V1	1=02			D05=8									39
DR UNLOCKING SOLENOID			1										7=2/8		39
FAULT IND	H	A04N2	1=01			D05=8					1				40
FAULT IND	H	A06H1	1=02			D05=8									40
FAULT IND			1										4=0/8		40

	A/P	PIN NAME	ORDER PIN	BAY - ORDER	Q	DRAW RV PG	Y	X	Z	REMARKS	LENGTH	EXCEPTIONS	RUN NUMBER
GND 07		A07B2		1-01									
GND 07		A07C2		1-02					1				48
GND 07		A07N1		1-03					2				48
GND 07		A07P1		1-04					1				48
GND 07		A07R1		1-05					2				48
GND 07		A07S1		1-06					1				48
GND 07		A07T1		1-07					2				48
GND 07		A07V1		1-08					1				48
GND 07		B07B2		1-09					2				48
GND 07		B07C2		1-10					1				48
GND 07		B07D1		1-11					2				48
GND 07		B07E1		1-12					1				48
GND 07		B07T1		1-13					2				48
GND 07		B07V2		1-14					1				48
				1									48
GND 08		A08B2		1-01							37-2/8		48
GND 08		A08C2		1-02					1				49
GND 08		A08N1		1-03					2				49
GND 08		A08P1		1-04					1				49
GND 08		A08R1		1-05					2				49
GND 08		A08S1		1-06					1				49
GND 08		A08T1		1-07					2				49
GND 08		A08V1		1-08					1				49
GND 08		B08B2		1-09					2				49
GND 08		B08C2		1-10					1				49
GND 08		B08D1		1-11					2				49
GND 08		B08E1		1-12					1				49
GND 08		B08T1		1-13					2				49
GND 08		B08V2		1-14					1				49
				1									49
GOOD STROBE	L	B02E1		1-01		D05-5			1		37-2/8		49
GOOD STROBE	L	B03D1		1-02		D05-5							50
GOOD STROBE				1									50
HEAD SELECT	L	A01P1		1-01		D05-1			1		3-6/8		50
HEAD SELECT	L	B07M2		1-02		D05-1			2				51
HEAD SELECT	L	B08M2		1-03		D05-1							51
HEAD SELECT				1									51
HIGH DENSITY	L	A01R2		1-01		D05-4			1		11-3/8		51
HIGH DENSITY	L	B07P2		1-02		D05-4			2				52
HIGH DENSITY	L	B08P2		1-03		D05-4							52
HIGH DENSITY				1									52
											10-3/8		52

	A/P	PIN NAME	ORDER PIN	BAY - ORDER	Q	DRAW RV PG	Y	X	Z	REMARKS	LENGTH	EXCEPTIONS	RUN NUMBER
HOME	L	A04R1		1-01		D05-7			2				
HOME	L	B03B1		1-02		D05-7			1				53
HOME	L	B06F1		1-03		D05-7							53
HOME				1									53
INDEX PULSE	L	A02R2		1-01		D05-3			1		9-6/8		53
INDEX PULSE	L	A04J1		1-02		D05-3							54
INDEX PULSE				1									54
INDEX/SECTOR	L	B02D1		1-01		D05-5			1		4-1/8		54
INDEX/SECTOR	L	B04H2		1-02		D05-5							55
INDEX/SECTOR				1									55
INNER LIMIT	H	A05B1		1-01		D05-2			1		4-4/8		55
INNER LIMIT	H	A03U1		1-02		D05-2			2				56
INNER LIMIT	H	B02J1		1-03		D05-2							56
INNER LIMIT				1									56
INTERLOCK	L	A04H1		1-01		D05-7			1		11-0/8		56
INTERLOCK	L	A06R1		1-02		D05-7							57
INTERLOCK				1									57
LIMIT	H	A05K1		1-01		D05-9			1		4-3/8		57
LIMIT	H	B06H1		1-02		D05-9							58
LIMIT				1									58
LOAD HEADS	L	B03C1		1-01		D05-6			1		6-0/8		58
LOAD HEADS	L	B04C1		1-02		D05-6							59
LOAD HEADS				1									59
LOAD IND	H	A04L1		1-01		D05-8			1		3-4/8		59
LOAD IND	H	A06A1		1-02		D05-8							60
LOAD IND				1									60
LOAD SW	L	A06K1		1-01		D05-7			1		4-3/8		60
LOAD SW	L	B04D1		1-02		D05-7							61
LOAD SW				1									61
MOVE	L	A03L1		1-01		D05-2			1		6-0/8		61
MOVE	L	B02P1		1-02		D05-2							62
MOVE				1									62
NO PROTECT	L	A01N2		1-01		D05-1			1		6-6/8		62
NO PROTECT	L	B04H1		1-02		D05-1							63
NO PROTECT				1									63
											6-2/8		63

RUN NAME	A/P	PIN NAME	ORDER PIN	BAY - ORDER	Q	DRAW RV PG	Y	X	Z	REMARKS	LENGTH	EXCEPTIONS	RUN NUMBER
ON	L	A02A1		1-01		D05-5			1				64
ON	L	A03M1		1-02		D05-5							64
ON				1							4-6/8		64
OUTER LIMIT	H	A03K1		1-01		D05-6			2				65
OUTER LIMIT	H	A04K1		1-02		D05-6			1				65
OUTER LIMIT	H	A05D1		1-03		D05-6							65
OUTER LIMIT				1							7-4/8		65
POWER AMP DR	H	B05U2		1-01		D05-9			1				66
POWER AMP DR	H	B06M1		1-02		D05-9							66
POWER AMP DR				1							4-0/8		66
PROTECT IND	H	A06C1		1-01		D05-8			1				67
PROTECT IND	H	B04U2		1-02		D05-8							67
PROTECT IND				1							8-2/8		67
PWR SEC XNSDUR	H	A02D1		1-01		D05-2			1				68
PWR SEC XNSDUR	H	B06K1		1-02		D05-2							68
PWR SEC XNSDUR				1							8-2/8		68
R/W/S READY	H	A03P1		1-01		D05-5			1				69
R/W/S READY	H	B04J1		1-02		D05-5			2				69
R/W/S READY	H	B02L1		1-03		D05-5							69
R/W/S READY				1							10-0/8		69
R/W/S READY	L	A01P2		1-01		D05-1			1				70
R/W/S READY	L	B02K1		1-02		D05-1							70
R/W/S READY				1							5-4/8		70
READ CLOCK	L	A01F2		1-01		D05-2			1				71
READ CLOCK	L	B07S1		1-02		D05-2			2				71
READ CLOCK	L	B08S1		1-03		D05-2							71
READ CLOCK				1							11-4/8		71
READ DATA	L	A01E2		1-01		D05-2			1				72
READ DATA	L	B07S2		1-02		D05-2			2				72
READ DATA	L	B08S2		1-03		D05-2							72
READ DATA				1							11-7/8		72
READ GATE	L	A01K2		1-01		D05-1			1				73
READ GATE	L	B08R1		1-02		D05-1			2				73
READ GATE	L	B07R1		1-03		D05-1							73
READ GATE				1							11-3/8		73

RUN NAME	A/P	PIN NAME	ORDER PIN	BAY - ORDER	Q	DRAW RV PG	Y	X	Z	REMARKS	LENGTH	EXCEPTIONS	RUN NUMBER
READ IND	H	A02E2		1-01		D05-9			1				74
READ IND	H	A06J1		1-02		D05-9							74
READ IND				1							5-2/8		74
READY	H	A02C1		1-01		D05-3			1				75
READY	H	A04U1		1-02		D05-3							75
READY				1							5-6/8		75
READY IND	H	A06B1		1-01		D05-8			1				76
READY IND	H	B04N1		1-02		D05-8							76
READY IND				1							8-0/8		76
RESTORE	H	A02B1		1-01		D05-4			1				77
RESTORE	H	A03J1		1-02		D05-4							77
RESTORE				1							3-7/8		77
RESTORE	L	A08M1		1-01		D05-2			2				78
RESTORE	L	A07M1		1-02		D05-2			1				78
RESTORE	L	B02B1		1-03		D05-2							78
RESTORE				1							10-2/8		78
REV	H	B03H1		1-01		D05-5			1				79
REV	H	B05K2		1-02		D05-5							79
REV				1							4-4/8		79
RK-11D	L	A08U1		1-01					2				80
RK-11D	L	A07U1		1-02					1				80
RK-11D	L	B02U1		1-03									80
RK-11D				1							10-2/8		80
RTZ	L	A03F1		1-01		D05-2			1				81
RTZ	L	B02C1		1-02		D05-2							81
RTZ				1							6-0/8		81
RUN SW	L	A06L1		1-01		D05-7			1				82
RUN SW	L	B04L1		1-02		D05-7							82
RUN SW				1							6-6/8		82
SECTOR	L	A02S2		1-01		D05-9			1				83
SECTOR	L	B04K1		1-02		D05-9							83
SECTOR				1							5-6/8		83
SECTOR/INDEX RAW	H	A02E1		1-01		D05-2			1				84
SECTOR/INDEX RAW	H	B06L1		1-02									84
SECTOR/INDEX RAW				1							8-4/8		84

RUN NAME	A/P	PIN NAME	ORDER PIN	BAY - ORDER	Q	DRAW RV PG	Y	X	Z	REMARKS	LENGTH	EXCEPTIONS	RUN NUMBER
SEEK DONE IND	H	A02V1		1-01		D05-5			1				
SEEK DONE IND	H	A06F1		1-02		D05-5							85
SEEK DONE IND				1									85
											5-7/8		85
SEL/WRITE PROTECT SET	L	B02R1		1-01		D05-5			1				
SEL/WRITE PROTECT SET	L	B04B1		1-02		D05-5							86
SEL/WRITE PROTECT SET				1									86
											5-2/8		86
SELECT	H	A01S2		1-01		D05-2			2				
SELECT	H	A04S1		1-02		D05-2			1				87
SELECT	H	B02V2		1-03		D05-2							87
SELECT				1									87
											11-0/8		87
SELECT 1	L	A08J2		1-01		D05-3			2				
SELECT 1	L	A07J2		1-02		D05-3			1				88
SELECT 1	L	B02R2		1-03		D05-3							88
SELECT 1				1									88
											11-1/8		88
SELECT 2	L	A08K2		1-01		D05-3			2				
SELECT 2	L	A07K2		1-02		D05-3			1				89
SELECT 2	L	B02S2		1-03		D05-3							89
SELECT 2				1									89
											11-1/8		89
SELECT 3	L	A08L2		1-01		D05-3			2				
SELECT 3	L	A07L2		1-02		D05-3			1				90
SELECT 3	L	B02T2		1-03		D05-3							90
SELECT 3				1									90
											11-1/8		90
SELECT 4	L	A08M2		1-01		D05-3			2				
SELECT 4	L	A07M2		1-02		D05-3			1				91
SELECT 4	L	B02U2		1-03		D05-3							91
SELECT 4				1									91
											11-1/8		91
SELECT/READY	L	A01H2		1-01		D05-1			1				
SELECT/READY	L	A04V1		1-02					2				92
SELECT/READY	L	B02H1		1-03		D05-1							92
SELECT/READY				1									92
											9-6/8		92
SELECTED READ GATE	H	A01B1		1-01		D05-9			1				
SELECTED READ GATE	H	A02F2		1-02		D05-9							93
SELECTED READ GATE				1									93
											3-7/8		93
SELECTED WRITE GATE	H	A01V1		1-01		D05-1			1				
SELECTED WRITE GATE	H	A02V2		1-02		D05-1							94
SELECTED WRITE GATE				1									94
											3-6/8		94

RUN NAME	A/P	PIN NAME	ORDER PIN	BAY - ORDER	Q	DRAW RV PG	Y	X	Z	REMARKS	LENGTH	EXCEPTIONS	RUN NUMBER
SET UNSAFE	L	A01U2		1-01		D05-1			1				
SET UNSAFE	L	B04A1		1-02		D05-1							95
SET UNSAFE				1									95
											4-7/8		95
SIN POSITION	H	A05N1		1-01		D05-9			1				
SIN POSITION	H	B06D1		1-02		D05-9							96
SIN POSITION				1									96
											5-2/8		96
STROBE	L	B02V1		1-01		D05-2			1				
STROBE	L	B07H1		1-02		D05-2			2				97
STROBE	L	B08H1		1-03		D05-2							97
STROBE				1									97
											10-2/8		97
UNSAFE	L	A01L2		1-01		D05-1			1				
UNSAFE	L	A04V2		1-02		D05-1							98
UNSAFE				1									98
											5-2/8		98
WRITE DATA + CLK	H	A01J1		1-01		D05-1			1				
WRITE DATA + CLK	H	A07F2		1-02		D05-1			2				99
WRITE DATA + CLK	H	A08F2		1-03		D05-1							99
WRITE DATA + CLK				1									99
											10-0/8		99
WRITE GATE	L	A01J2		1-01		D05-1			1				
WRITE GATE	L	B07L2		1-02		D05-1			2				100
WRITE GATE	L	B08L2		1-03		D05-1							100
WRITE GATE				1									100
											10-7/8		100
WRITE PROTECT SET	L	B02S1		1-01		D05-3			1				
WRITE PROTECT SET	L	B07R2		1-02		D05-3			2				101
WRITE PROTECT SET	L	B08R2		1-03		D05-3							101
WRITE PROTECT SET				1									101
											9-4/8		101
WRITE SW OFF	L	A06N1		1-01		D05-7			1				
WRITE SW OFF	L	B04F1		1-02		D05-7							102
WRITE SW OFF				1									102
											6-0/8		102
WRITE SW ON	L	A06M1		1-01		D05-7			1				
WRITE SW ON	L	B04E1		1-02		D05-7							103
WRITE SW ON				1									103
											6-0/8		103
WRITING IND	H	A02U1		1-01		D05-5			1				
WRITING IND	H	A06E1		1-02		D05-5							104
WRITING IND				1									104
											5-7/8		104