

NEC

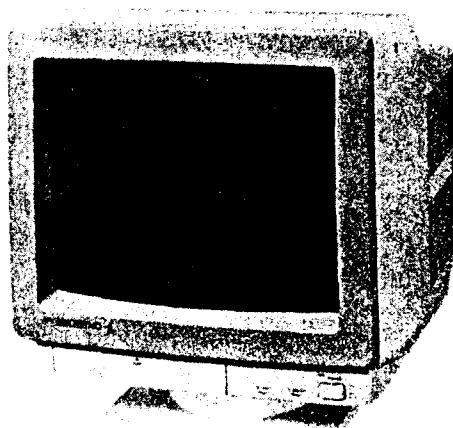
MODELS JC-1402HME/EE/ED/N/R

MULTISYNC COLOR MONITOR SERVICE MANUAL

PART NO. 599910266



Better Service
Better Reputation
Better Profit



A. Electrical Description

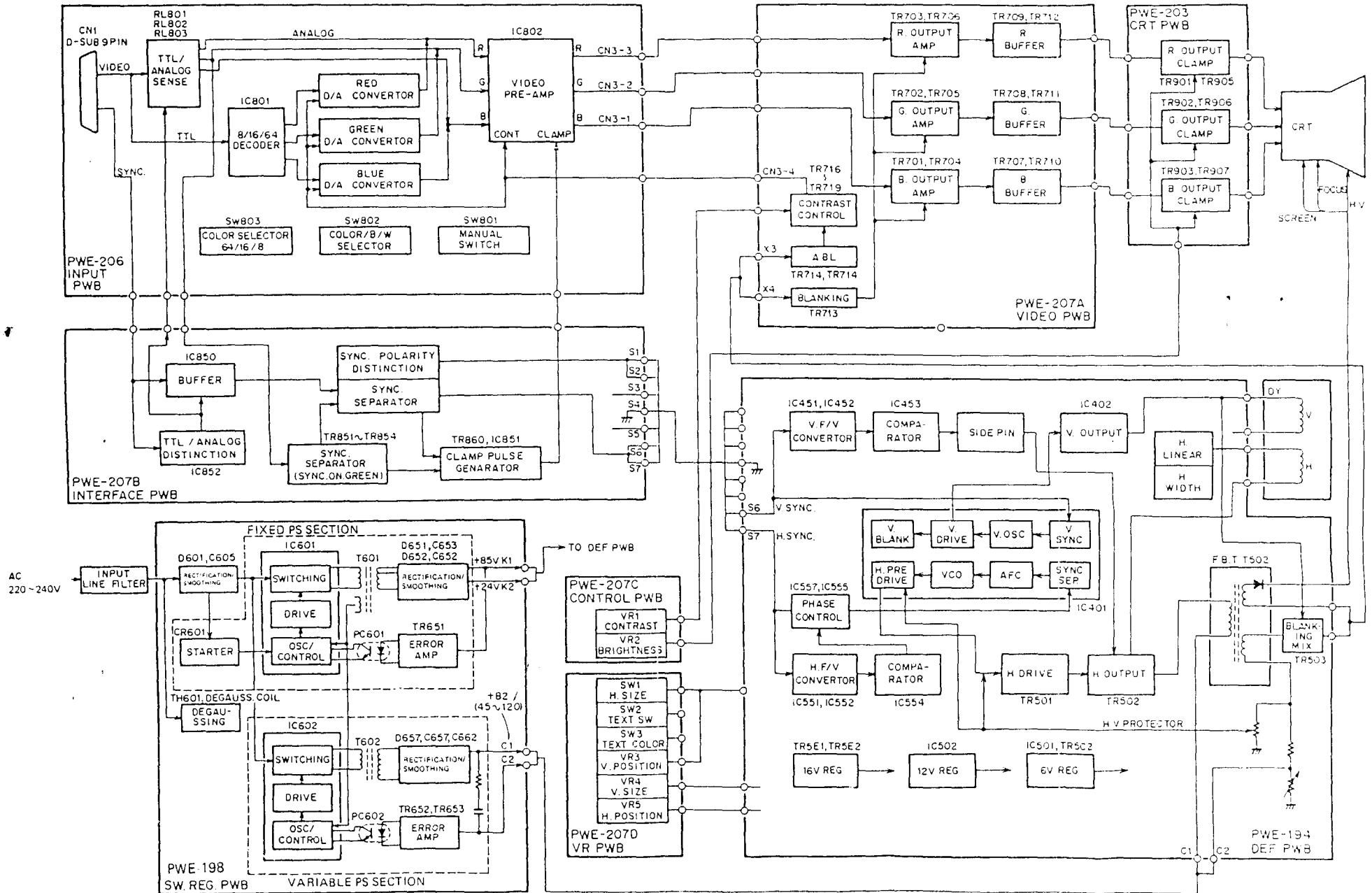
SPECIFICATIONS

Picture Tube	13 Visual inches diagonal 90 degree deflection, 0.31 mm Trio dot pitch Dot type black matrix. Non-long persistence phosphor, Dark bulb, Direct each	Misconvergence	Less than 0.6mm
Input Signal	Video : TTL Level Positive ANALOG 0.7 Vp-p/75Ω Positive Sync. : Separate sync. TTL Level Horizontal sync. Positive/Negative Vertical sync. Positive/Negative : Composite sync. TTL Level Positive/Negative : Composite sync. on Green Video sync. 0.3 Vp-p Negative (Video 0.7 Vp-p Positive)	Power Supply	AC220 ~ 240 V 50/60 Hz
Display Colors	TTL Input: 8/16/64 colors Analog Input: Unlimited colors	Power Consumption	85 W
Synchronization:	Horizontal: 15.5 kHz to 35 kHz (Automatically) Vertical: 50 Hz to 80 Hz (Automatically), Non-interlace	Environmental Considerations	Operating Temperature 0°C to +40°C Humidity 30% to 80% Storage Temperature -20°C to +60°C Humidity 10% to 90%
Resolution	Horizontal: 800 dots Vertical: 560 lines		
Video Band Width	30MHz		
Active Display Area	Horizontal: 250mm Vertical: 185mm (Active display area is changed by signal timing.)		

NOTE: The above specification are subject to change without notice for further improvement.

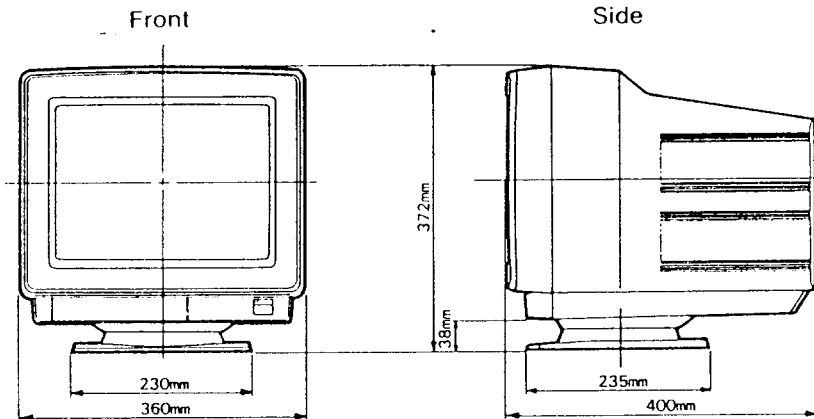
NEC Corporation
TOKYO, JAPAN

BLOCK DIAGRAM

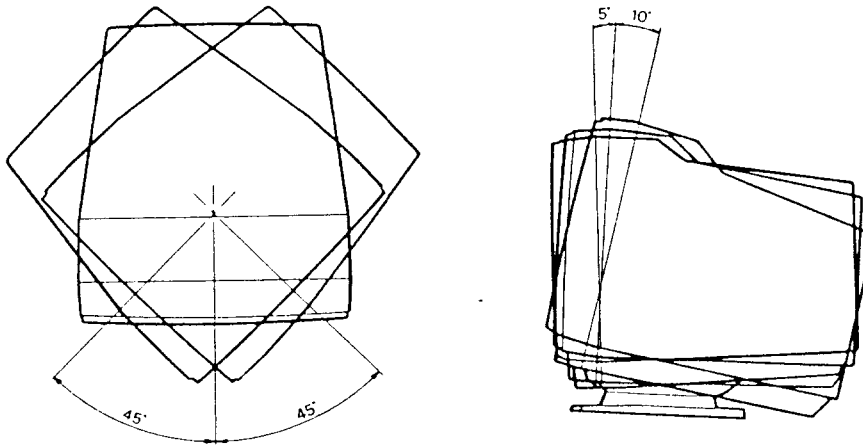


B. Mechanical Description (See below diagrams)

1. Cabinet: Molded plastic cabinet with attachable tilt swivel base.
 2. Dimensions: 360(W)×372(H)×400(D) mm



3. Tilt Swivel Range



4. Weight: 16 kg

5. Controls

Rear Controls:

MANUAL SWITCH

MODE SWITCH

COLOR MODE SWITCH

POWER SWITCH

BRIGHTNESS CONTROL

CONTRAST CONTROL

V. POSITION CONTROL

V. SIZE CONTROL

H. POSITION CONTROL

H. SIZE SWITCH

TEXT SWITCH

TEXT COLOR SWITCH

Front Controls:

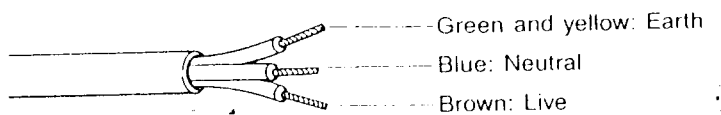
6. Input Signal Terminal:

9 PIN D-SUB CONNECTOR (FEMALE)

(SEE PAGE 2 FOR PIN ASSIGNMENTS)

7. Power cord

In case of JC-1402HMEE, the end of power cord is as follows.



GENERAL

MultiSync II, The Intelligent Monitor, from NEC, is a high resolution color monitor that automatically adjusts to graphics board scanning frequencies from 15.5kHz to 35kHz (Horizontal), 50Hz to 80Hz (Vertical). MultiSync II gives IBM PC, PC/XT, PC/AT, Personal System/2 (PS/2) and compatible computers users of crisp text and vivid color graphics displays when used with any of the IBM graphics adapters (the CGA, EGA, PGC, VGA or MCGA). MultiSync II can also be used with other IBM compatible graphics adapters to provide users with the widest range of color monitor compatibility and capability available in the market place.

FEATURES

- MultiSync II automatically scans all horizontal frequencies between 15.5kHz and 35kHz, and all vertical frequencies between 50Hz and 80Hz.
- MultiSync II is compatible with the IBM PC, PC/XT, PC/AT, PS/2 and look-alikes.
- MultiSync II is compatible with the IBM Color Graphics Adapter, the IBM Enhanced Graphics Adapter, the IBM Professional Graphics Controller, the IBM MultiColor Graphics Array, the IBM Video Graphics Array and other IBM compatible graphics adapters.
- MultiSync II's wide compatibility makes it possible to upgrade boards or software without purchasing a new monitor.
- MultiSync II has a maximum horizontal resolution of 800 dots and a maximum vertical resolution of 560 lines for superior clarity of display.
- MultiSync II offers both TTL and ANALOG signal inputs, and in the ANALOG mode can display an unlimited palette of colors depending on the graphics board and software being used. MultiSync II automatically adjusts to either a TTL signal input or an ANALOG signal input.
- MultiSync II features a TEXT SWITCH (TTL mode only) with a choice of three colors (paper white, amber and green) displaying word processing, spread sheets, databases or other software in crisp alphanumeric text on a black background.
- MultiSync II has a 14 inch diagonal display and a large, 13 inch viewing area.

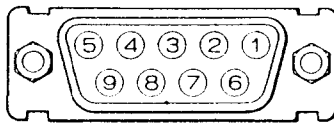
CAUTIONS

When setting up and using the MultiSync II pay special attention to these points.

- To eliminate eye fatigue, don't use the MultiSync II against a bright background or where the sun or other lights can directly shine on it.
- For optimum viewing, the MultiSync II should be just below eye level.
- Allow adequate ventilation all around the MultiSync II so that heat from the monitor can properly dissipate.
- Don't rest the MultiSync II or other heavy objects on the power cord. A damaged power cord can cause fires or electrical shocks.
- Keep the MultiSync II away from high capacity transformers, electric motors and other strong magnetic fields.
- Don't drop the MultiSync II when transporting it.
- Don't use the MultiSync II in damp, dusty, or dirty places.

PIN ASSIGNMENTS AND SIGNAL LEVELS

D—SUB Type 9-P



MANUAL SWITCH OFF

SIGNAL	TTL		ANALOG	
	CGA/EGA COMPATIBLE		PGC COMPATIBLE	VGA/MCGA COMPATIBLE
PIN NO:	16 COLORS	64 COLORS		
1	GROUND	GROUND	•RED	• RED
2	GROUND	SECONDARY RED	•GREEN	•GREEN
3	RED	PRIMARY RED	•BLUE	•BLUE
4	GREEN	PRIMARY GREEN	COMPOSITE SYNC	H.SYNC.
5	BLUE	PRIMATY BLUE	ΔMODE CONTROL	V.SYNC.
6	INTENSITY	SECONDARY GREEN	RED GROUND	RED GROUND
7	NO—CONNECTION	SECONDARY BLUE	GREEN GROUND	GREN GROUND
8	H.SYNC.	H.SYNC.	BLUE GROUND	BLUE GROUND
9	V.SYNC.	V.SYNC.	GROUND	GROUND

MANUAL SWITCH ON

SIGNAL PIN No.	TTL				ANALOG		
	GRAY SCALE	8 COLORS	16 COLORS	64 COLORS	SEPARATE SYNC	COMPOSITE SYNC.	SYNC. ON GREEN
1	GROUND				•RED		
2	---			SECONDARY RED	•GREEN		* H/V SYNC. ON GREEN
3	-	RED		PRIMARY RED	•BLUE		
4	--	GREEN		PRIMARY GREEN	H.SYNC.	H/V SYNC.	--
5	--	BLUE		PRIMARY BLUE	V.SYNC	ΔMODE CONTROL	
6	INTENSITY	---	INTENSITY	SECONDARY GREEN	GROUND		
7	VIDEO	---		SECONDARY BLUE			
8	H.SYNC.						
9	V.SYNC.						

"—" means GROUND or NO—CONNECTION

"Δ" means mode control of vertical height

Normal vertical height at TTL high level or no-connection.

Approx. 20% increased vertical height at TTL low level or grounded.

SIGNAL LEVEL

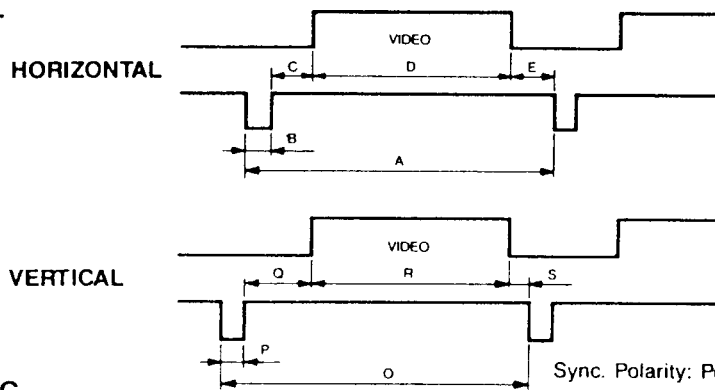
All signal levels, except for those listed below, are TTL

"•" means 0.7Vp-p (VIDEO)

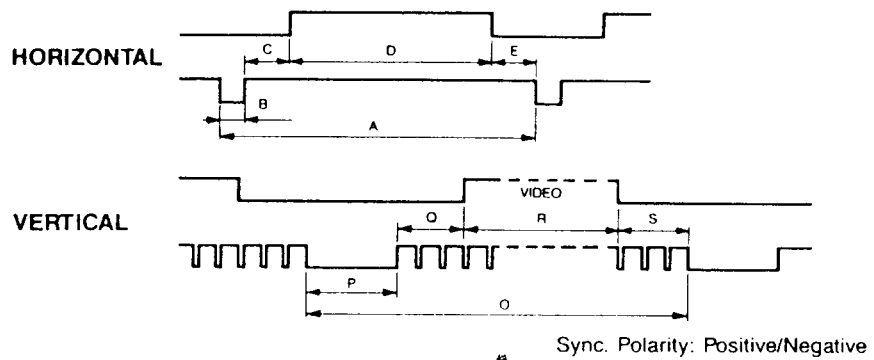
"Δ" means 0.7Vp-p (VIDEO), 0.3Vp-p (SYNC.)

TIMING CHARTS

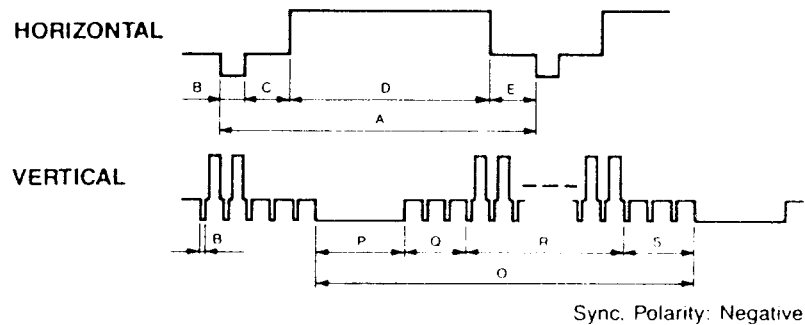
SEPARATE SYNC.



COMPOSITE SYNC.



COMPOSITE SYNC. & VIDEO (SYNC. ON GREEN)

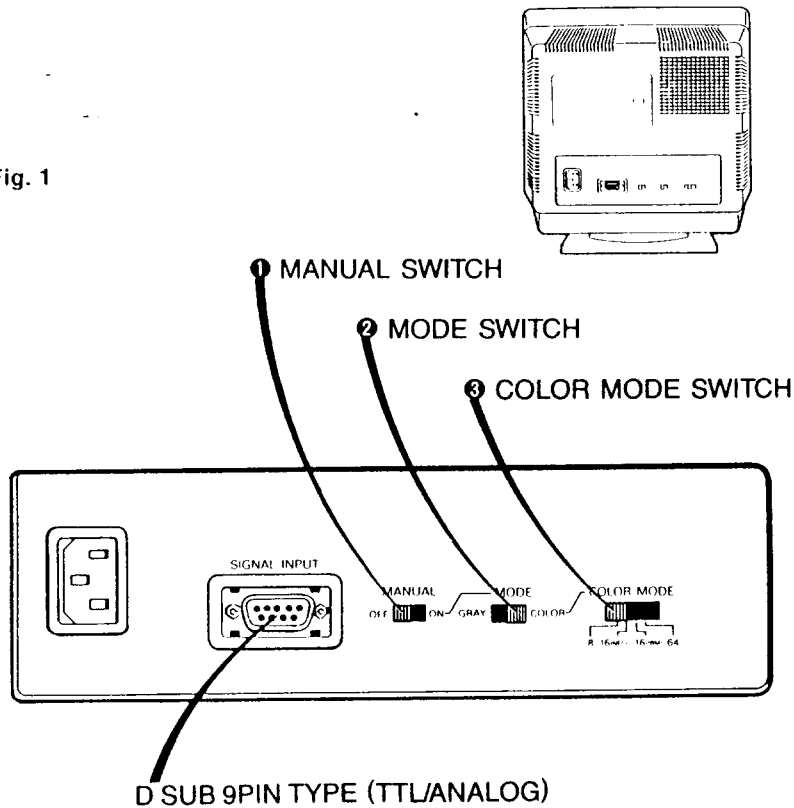


PRESET TIMING

	CGA COMPATIBLE	EGA COMPATIBLE	PGC COMPATIBLE	VGA/MCGA COMPATIBLE		
fH	15.85kHz	22kHz	30.48kHz	31.5kHz		
A μ s	63	45.5	33	31.77		
B μ s	4.2	4.9	4.5	3.77		
C μ s	7.2	1.6	2.8	1.89		
D μ s	45	39	25.6	25.17		
E μ s	6.6	0	0.1	0.94		
fV	61 Hz	60 Hz	60 Hz	70Hz		60Hz
O ms	16.4	16.68	16.6	14.27	14.27	16.68
P ms	00.75	0.6	0.07	0.064	0.064	0.064
Q ms	1.525	0.08	2.12	1.88	1.08	1.02
R ms	12.6	16	13.05	11.126	12.716	15.246
S ms	2.2	0	1.36	1.2	0.41	0.35
REMARKS	SEPARATE SYNC. H. SYNC. POSITIVE V. SYNC. POSITIVE	SEPARATE SYNC. H. SYNC. POSITIVE V. SYNC. NEGATIVE	H/V COMPOSITE SYNC.	SEPARATE SYNC. H. SYNC. POSITIVE V. SYNC. NEGATIVE	SEPARATE SYNC. H. SYNC. NEGATIVE V. SYNC. POSITIVE	SEPARATE SYNC. H. SYNC. NEGATIVE V. SYNC. NEGATIVE

ADJUSTING THE REAR CONTROLS

Fig. 1



1 MANUAL SWITCH

This switch selects either the IBM mode when OFF or the manual mode when ON. When this switch is OFF, MultiSync II automatically works in the IBM mode and adjusts itself to the scanning frequency, resolution and color requirements of the IBM compatible graphics adapter being used.

When this switch is ON, the user must manually select the mode (gray/color) and the number of colors (8/16/64) needed by the graphics adapter being used with the MODE SWITCH and COLOR MODE SWITCH. (see No. 2 3 below)

2 MODE SWITCH

This switch selects either the gray scale or color with a TTL signal input. (See APPENDIX B pin assignment of gray scale.)

Refer to the user manual accompanying the graphics adapter for information on the input signal.

3 COLOR MODE SWITCH

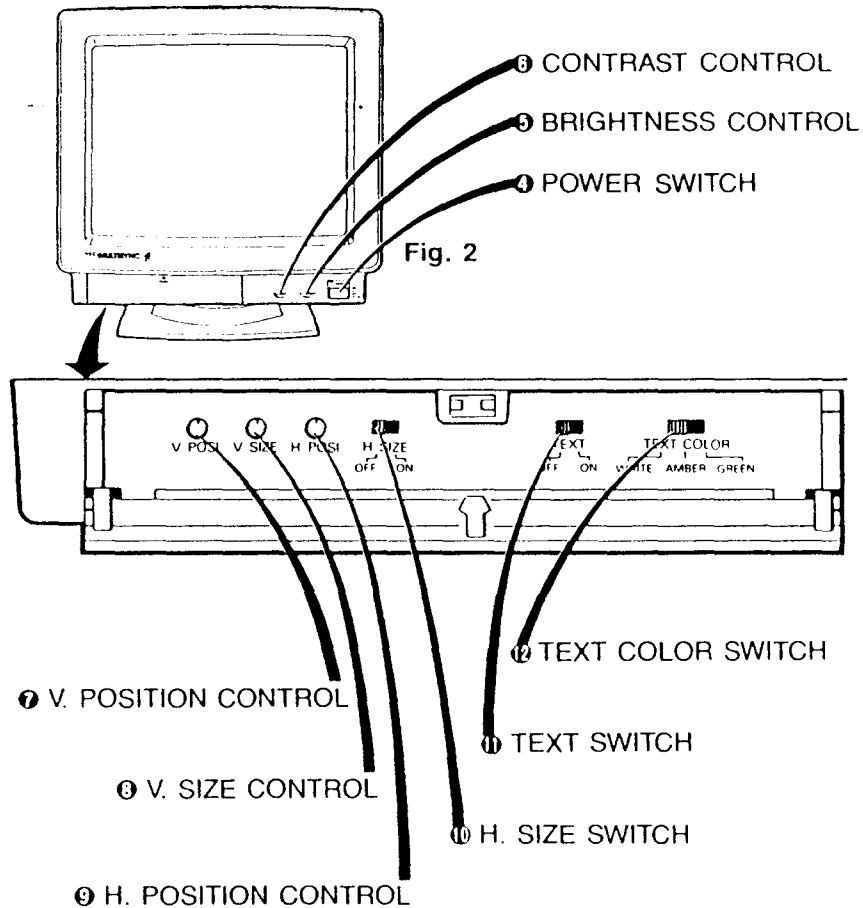
One of the four color configurations [8/16(NEC)/16(IBM)/64] must be selected when using non-IBM compatible graphics adapters. The proper configuration can be selected by using the COLOR MODE SWITCH as shown below.

COLOR MODE	COLOR MODE SWITCH
8 colors	8
16 colors with low intensity yellow	16 (NEC)
16 colors with IBM brown	16 (IBM)
64 colors	64

Note

This switch should be set correctly in relation to the input signal of the graphics adapter used. Refer to the user manual accompanying the graphics adapter for information on the input signal.

ADJUSTING THE FRONT CONTROLS



4 POWER SWITCH

Used to turn the Power ON or OFF.
When the power is ON, the power LED indicator is lit.

5 BRIGHTNESS CONTROL

Used to adjust the picture brightness of the screen.

6 CONTRAST CONTROL

Adjust the display to the contrast preferred by the user.

7 V. POSITION CONTROL

Adjust this knob for the proper vertical position of the display. Turn the knob clockwise for a higher display position; turn it counterclockwise for a lower display position.

8 V. SIZE CONTROL

Adjust this knob for the proper vertical size of the display. Turn the knob clockwise for a larger display; turn it counterclockwise for a smaller display.

9 H. POSITION CONTROL

Adjust this knob for the proper horizontal position of the display. Turn the knob clockwise to reposition display to the right; turn it counterclockwise to reposition to the left.

10 H. SIZE SWITCH

Adjust this switch for the horizontal size of display preferred. When this switch is ON, the width of the display can be made wider.

11 TEXT SWITCH

This switch controls the text mode of the MultiSync II.

When it is ON, the text will appear in the color displayed by the TEXT COLOR SWITCH (see No.12 below), regardless of the colors of the software program being used.

When it is OFF, the color of the software program being used will be displayed.

Note

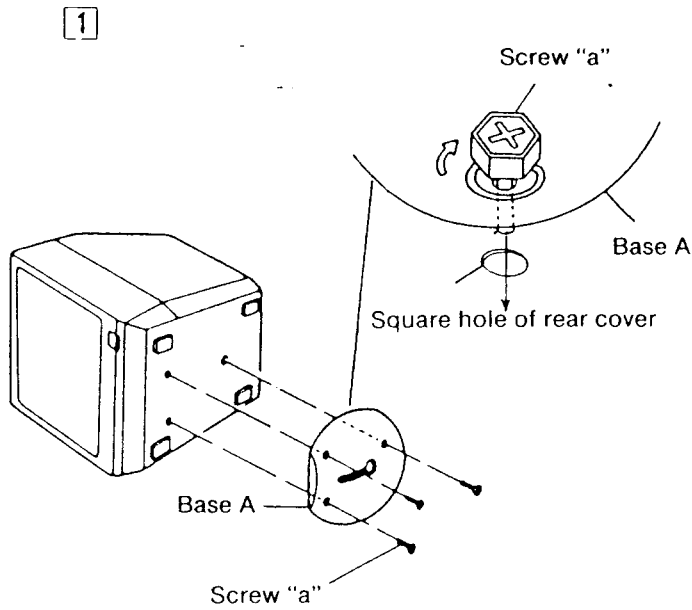
The TEXT SWITCH works only in the TTL mode.

12 TEXT COLOR SWITCH

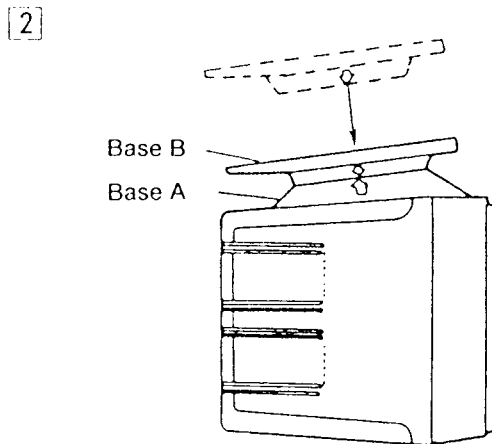
Use this switch to select the text color-green, amber or paper White-when the TEXT SWITCH is ON.

Also use this switch to select the gray scale color-green, amber or paper white-when the gray scale mode is selected (see No.2) regardless of the position of the TEXT SWITCH.

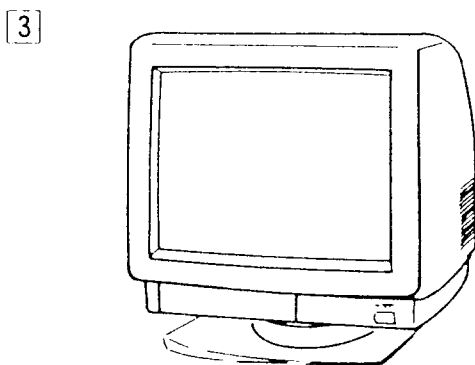
THE METHOD FOR REMOVING AND MOUNTING THE TILT SWIVEL BASE



- ① Insert 3 mounting screws "a" into holes on the turning table A.
- ② Arrange the 3 male screws "a" into the female Screws on the bottom of the Set in correct. Screw the table A to the set driving 3 screws "a" with a philips head screwdriver.



- ① Align the arrow of both tables A and B, and put the table B, into the table A as shown on the left.
- ② Both tables are fixed firmly by turning the table B 180° degrees clockwise.



After completing the attachment of the turning table in Sequence 1 → 2, place the set in its proper position. It is recommended that the Set should be used with its face coming to the printing side on the turning table.

NOTE:

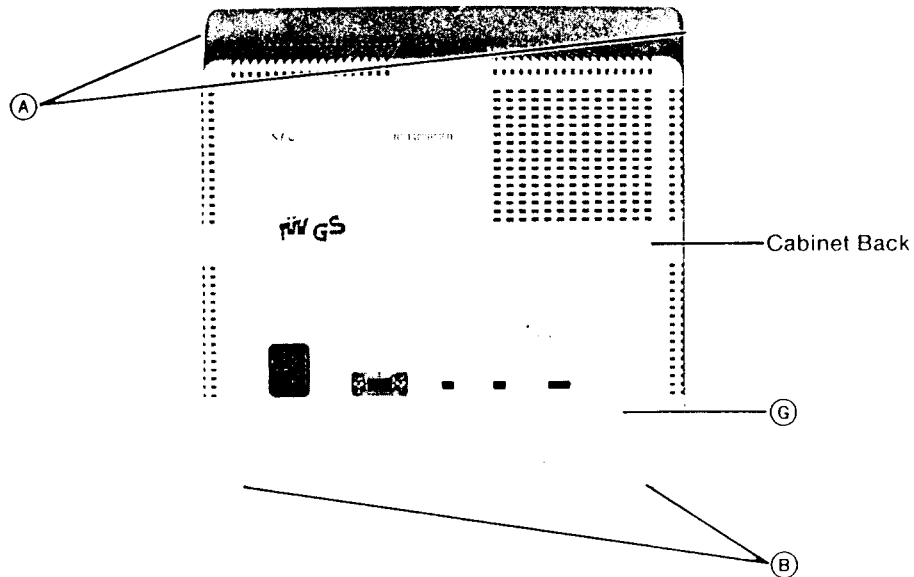
Please avoid a harsh handling to turn the Set vertically or horizontally.

- ④ In case you remove the turning table, take a reverse Sequence from 2 → 1.

DISASSEMBLY OF THESE MODELS

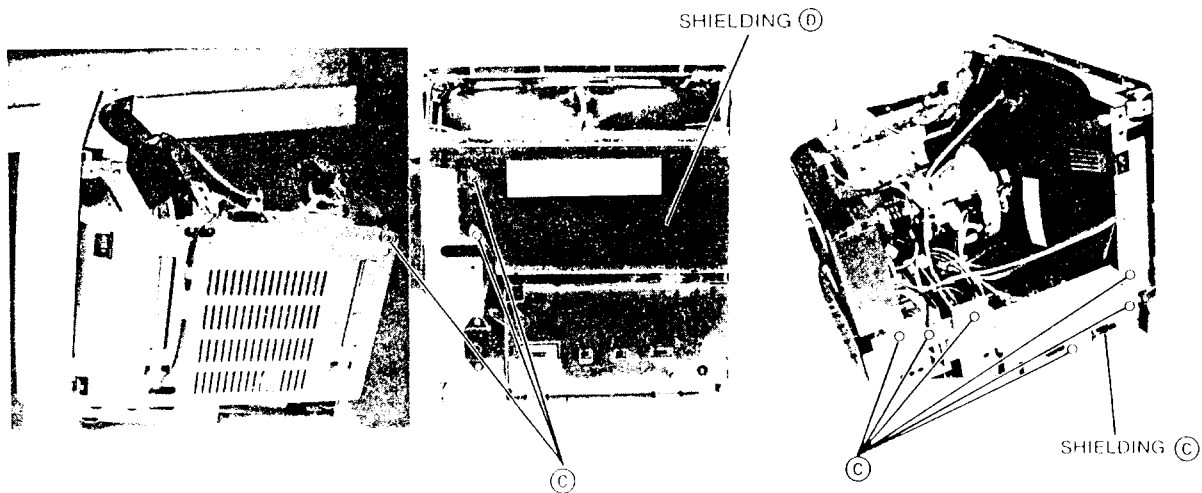
Warning; This equipment generates and used radio frequency energy and if not reconstructed properly, ie., in strict accordance with the following instruction, it may cause interference to radio or television reception.

1. Remove the two screws (A), the two screws (B) and one screw (G) pull the Cabinet Back bakcward to the rear.



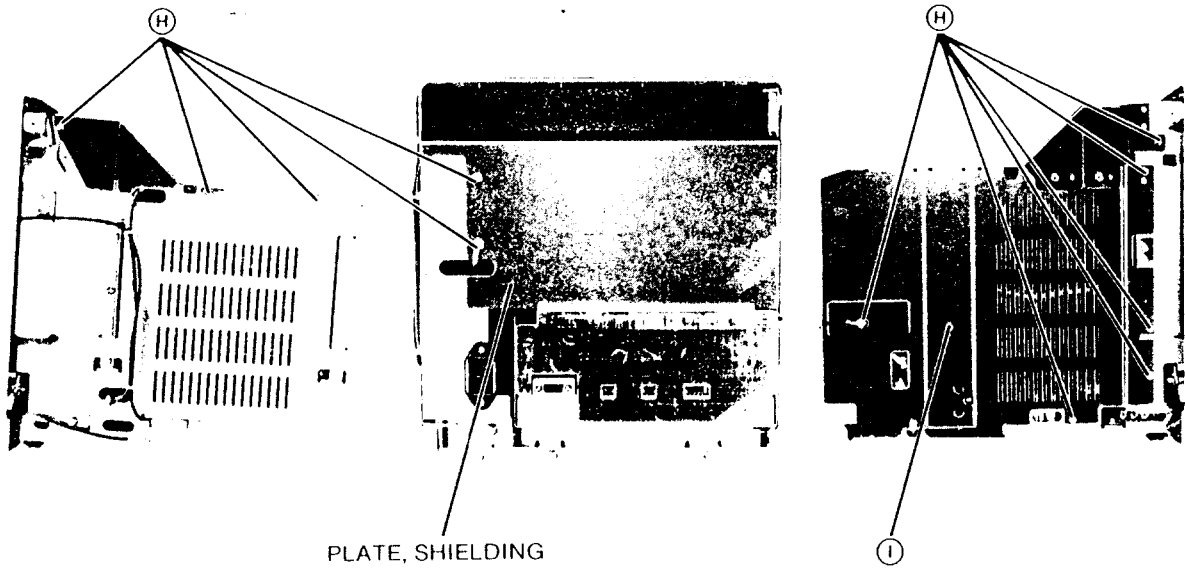
Note: To prevent the occurrence of a gap between the Cabinet Front and the Cabinet Back when attaching the Cabinet Back, be sure to tighten the screws in the order of (A) to (B).

2. Remove the 9 screws (C), then take off SHIELDING (C) and (D).



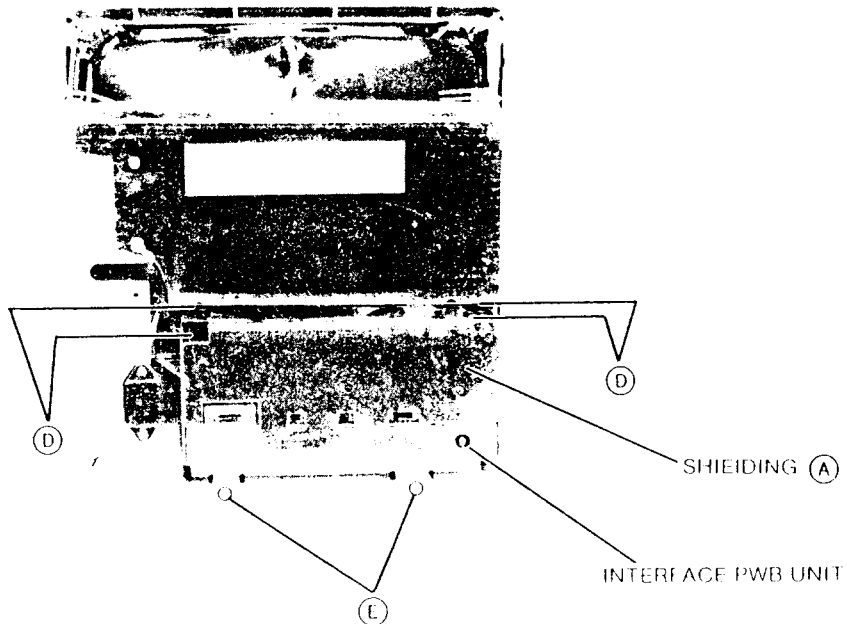
2' As for model JC-1402HMED

Remove the 11 screws (H) and one screw (I), then take off PLATE, SHIELDING.



3. INTERFACE PWB UNIT DISASSEMBLY

Remove the 4 screws (D), then take off the SHIELDING (A).
Disconnect the connectors from the INTERFACE PWB UNIT.
Remove the 2 screws, (E) then take off the INTERFACE PWB UNIT.



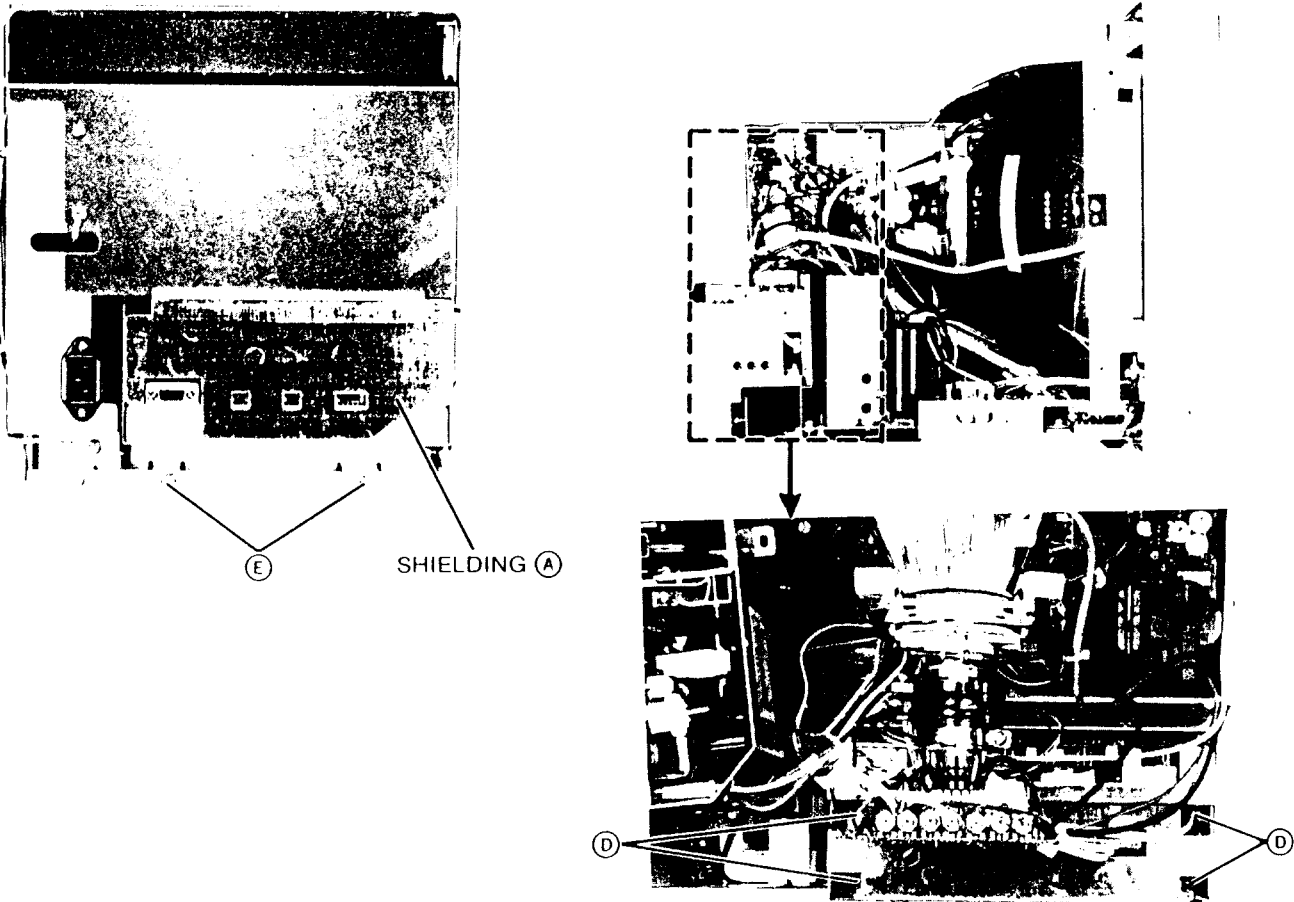
3' As for model JC-1402HMED

Remove PLATE, SHIELDING (A) and then take out the INTERFACE PWB UNIT as the instructions below.

Remove the 4 screws (D), then take off the SHIELDING (A).

Disconnect the connectors from the INTERFACE PWB UNIT.

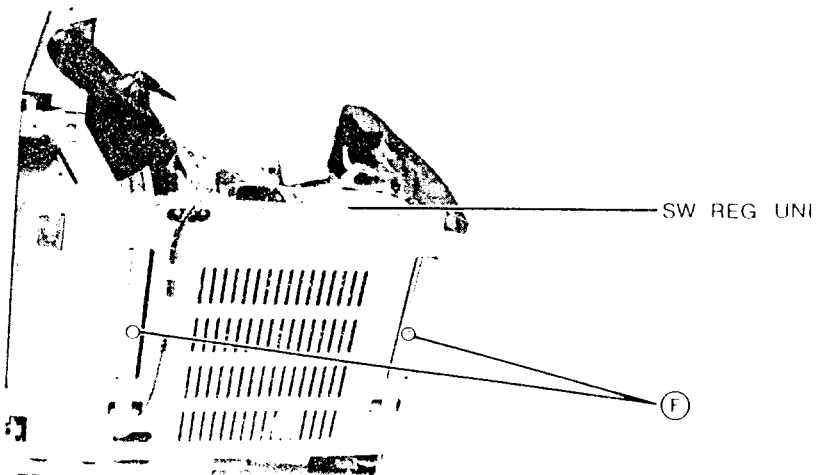
Remove the 2 screws, (E) then take off the INTERFACE PWB UNIT.



4. SW. REG. UNIT. DISASSEMBLY.

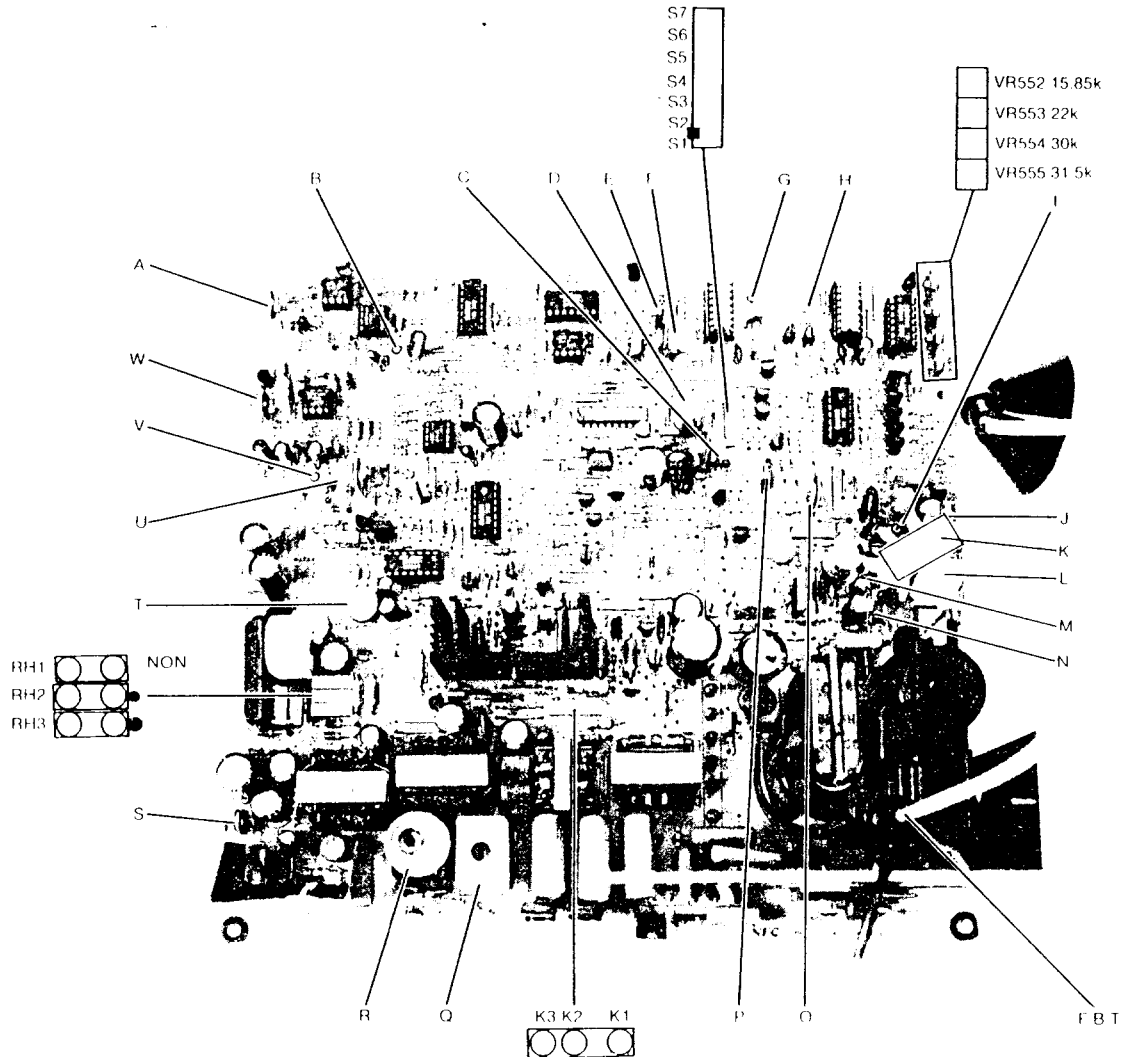
Disconnect the connectors C. K. SW and DEGAUSSING COIL from the SW. REG. UNIT.

Remove the 2 screws (F), then take off the SW. REG. UNIT.



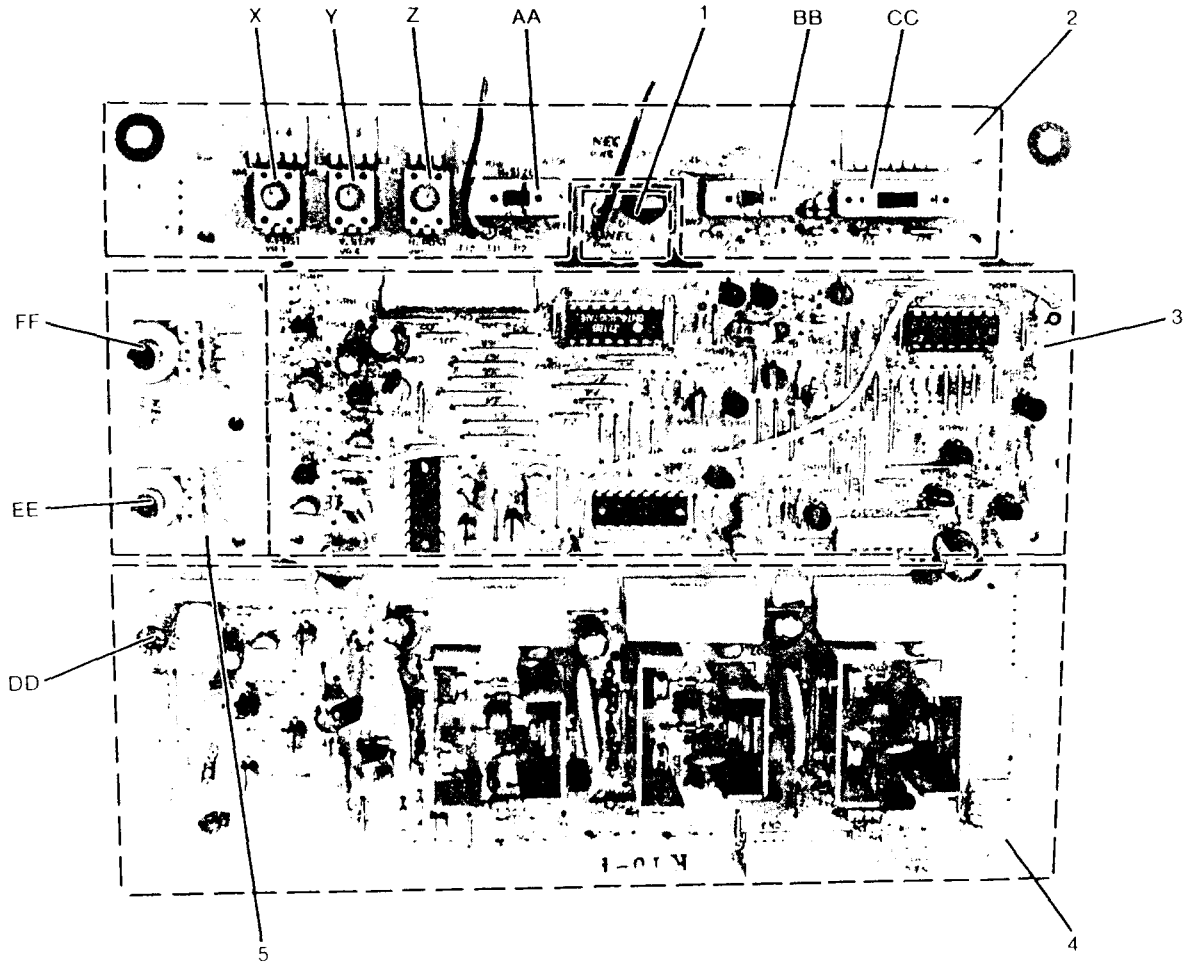
PARTS LOCATION DIAGRAMS

DEF PWB ASSY (PWE-194)



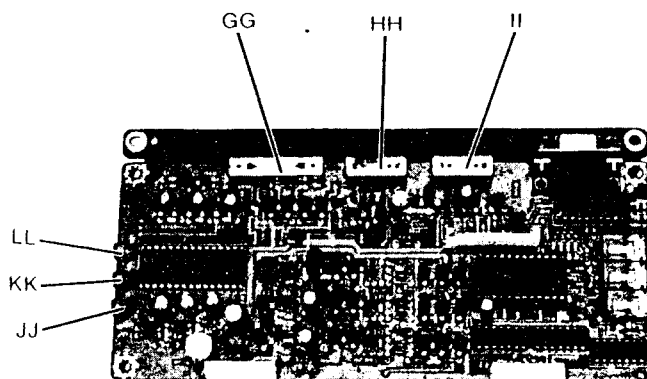
A	VR551 H. F-V ADJ	M	TP2002A
B	TP551 H. F-V	N	TP2001A
C	VR401 V.HOLD	O	VR402 SUB V. HEIGHT
D	TP501 H. HOLD	P	VR405 V. LIN
E	VR502 H. HOLD 2	Q	L506
F	VR501 H. HOLD 1	R	L505 H. WIDTH COIL
G	TP503 (GND)	S	VR5C1 TP502 6V ADJ.
H	TP5E1 (16V)	T	VR403 SIDE PIN
I	TP2001C	U	VR5E1 +16V
J	TP2002C	V	TP451 V.F-V
K	VR2001 VR2002 HV. PROTECTOR	W	VR451 V.F-V ADJ
L	VR2003 HV. ADJ.		

1	LED PWB ASSY	PWE-207E
2	VR PWB ASSY	PWE-207D
3	INTERFACE PWB ASSY	PWE-207B
4	VIDEO PWB ASSY	PWE-207A
5	CONTROL PWB ASSY	PWE-207C



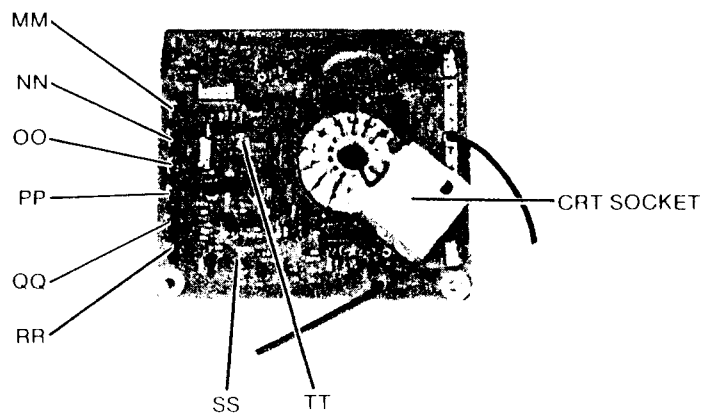
X	VR3 V. POSITION	CC	SW3 TEXT COLOR
Y	VR4 V. SIZE	DD	VR701 SUB. CONT
Z	VR5 H. POSITION	EE	VR2 BRIGHT
AA	SW1 H. SIZE	FF	VR1 CONTRAST
BB	SW2 TEXT		

INPUT PWB ASSY (PWE—206)

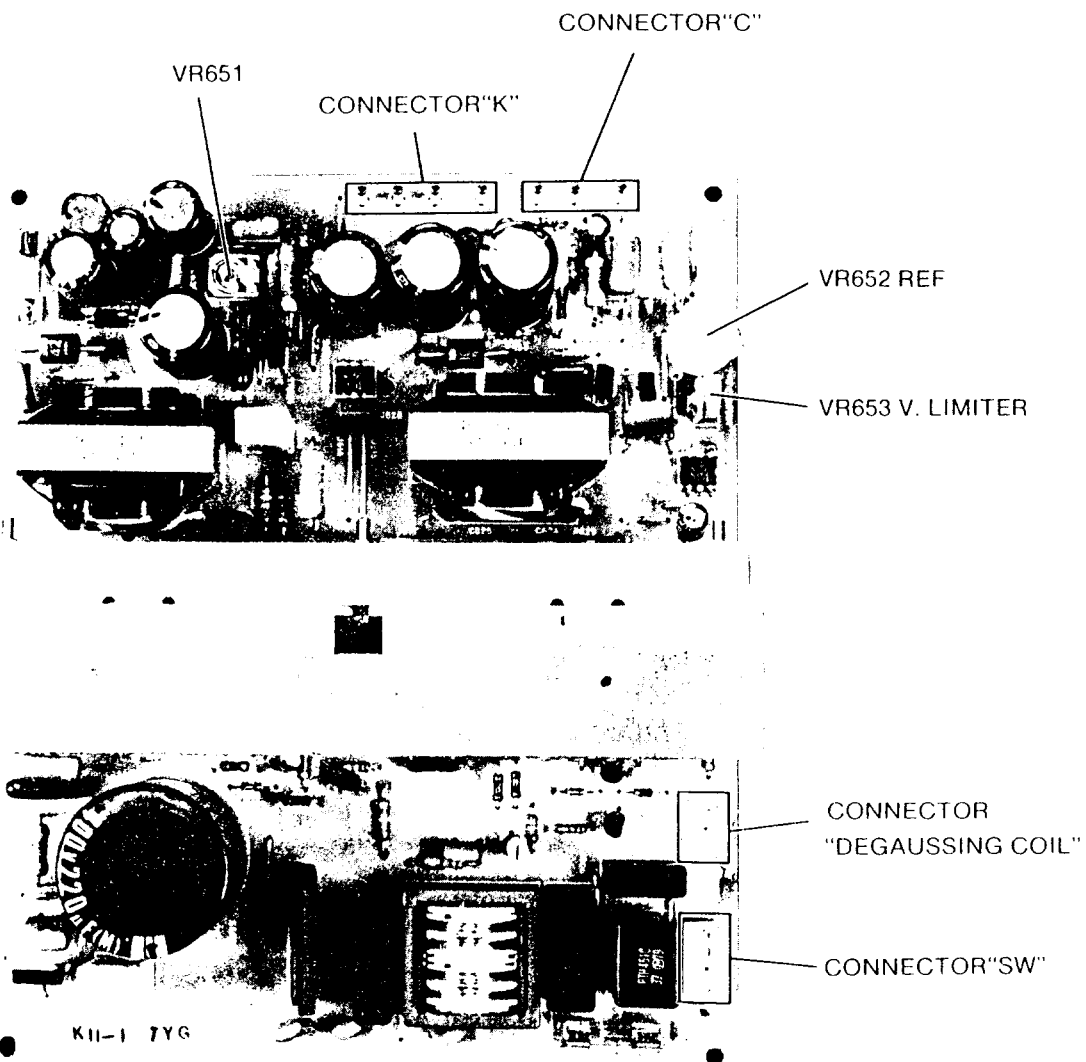


GG	SW803 COLOR MODE	JJ	VR803
HH	SW802 MODE	KK	VR802
II	SW801 MANUAL	LL	VR801

CRT PWB ASSY (PWE-203)



MM	VR904	QQ	VR902
NN	VR905	RR	VR903
OO	VR906	SS	TP901
PP	VR901	TT	TP902



ADJUSTMENT PROCEDURE

Standard Adjustment Conditions

- 1) Power source voltage: AC220V~240V 50 Hz.
- 2) Aging: Adjust after leaving power on for 20 minutes or more.
- 3) Signals:
 - Video: Analog 0.6Vp-p 75Ω terminal Positive polarity
 - Analog Sync. on green
 - Video: 0.6Vp-p
 - Synchronizing: 0.3Vp-p
 - Synchronizing: TTL level Negative polarity/positive polarity
 - Separate/composite
 - Deflection frequency: H. 15kHz - 35kHz
 - V. 50 Hz - 80 Hz

Unless otherwise specified, use signal 14 (22kHz EGA mode).

1. SW. REG. UNIT

- 1) +B₁ (VR651) +85V LINE
Adjust VR651 to be 85 VDC
- 2) +B_{LIM} (VR653) V.limit (C1-Gnd Voltage)
Remove C-connector.
Adjust VR653 to be 122 Volts.

Note: Do not operate the SW. Reg. unit itself without any load.

- 3) +B_H (VR652) High Voltage control
This control is permanently sealed at factory.
Do not attempt to readjust.

2. Pre-adjustment of DEF PWB

Apply 24V DC between K2 and K3.

For sections 3) and 4), the JC-1402HMA INTERFACE PWB ASSY S connector output can also be used as a TESTING EQUIPMENT.

- 1) +16V adjustment
Adjust VR5E1 for 16V ±0.05V DC between TP5E1 and the ground.
- 2) +6V adjustment
Apply a resistance load of 10Ω10W between HC2 and HC3.
Adjust VR5C1 for 6 ±0.05V DC between TP502 and the ground.
- 3) Horizontal F/V convertor adjustment (signal 17)
Input fH = 25kHz horizontal synchronizing negative polarity 5Vp-p between S7 and the ground.
Adjust VR551 for 10 ±0.05V DC between TP551 and the ground.

- 4) Vertical F/V convertor adjustment (signal 17)
Input fv = 60Hz vertical synchronizing positive polarity 12Vp-p between S6 and the ground.
Adjust VR45I for 5.95 ±0.05V DC between TP451 and the ground.
- 5) High voltage protector setting
High voltage protector 1
With 32.0 ±0.1V DC applied between TP2001A and the ground, adjust VR2001 for 0.3 ±0.05V DC between TP2001C and the ground.
High voltage protector 2
With 31.8 ±0.1V DC applied between TP2002A and the ground, adjust VR2002 for 0.3 ±0.05V DC between TP2002C and the ground.
Due to DHHS, after adjusting VR2001 and VR2002 seal with an adhesive (TSE-385RTV) or cap (74007891).

3. Main Adjustment

Set the external VRs and switches as follows unless otherwise specified.

Front controls (as seen from front)

VR1 CONTRAST:	Max. (fully clockwise)
VR2 BRIGHTNESS:	At point where back luster disappears.
VR3 V.POSITION:	Mechanical center
VR4 V.SIZE:	Center click position
VR5 H.POSITION:	Center click position
SW1 H.SIZE:	Off (small)(left side)
SW2 TEXT:	Off (left side)
SM3 TEXT COLOR:	Paper white (left end)

Rear controls (as seen from rear)

SW801 MANUAL:	Off (left side)
SW802 MODE:	Color (right side)
SW803 COLOR MODE:	8 colors (left end)

3-1) DEF PWB Adjustment

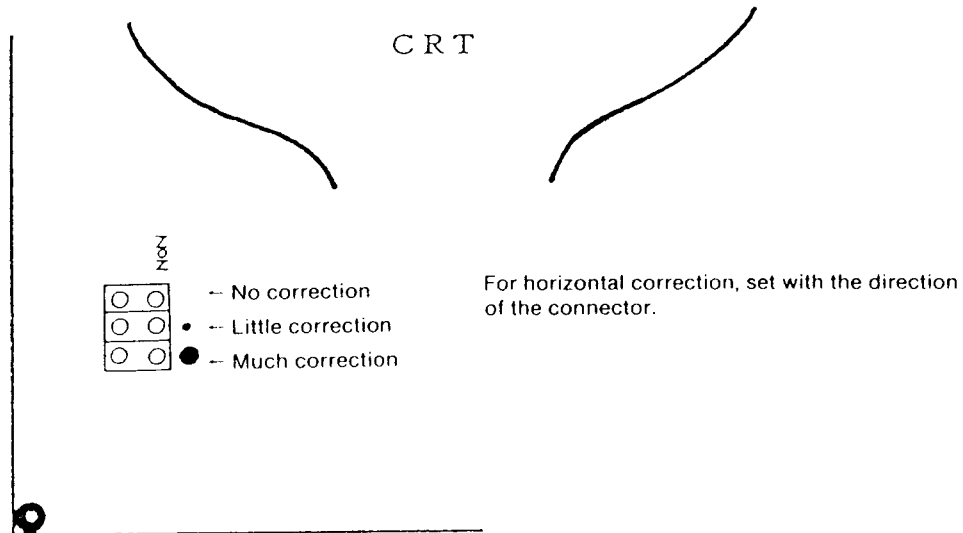
- (1) Horizontal Hold
 - a) Short TP501 and TP503 (GND).
 - b) Receive signal 16 (fH: 30kHz) and adjust horizontal hold (1) VR501 so that there is one screen.
 - c) Receive signal 18 (fH: 20kHz) and adjust horizontal hold (2) VR502 so that there is one screen.
- (2) Vertical Hold
Receive signal 14 (fv: 60Hz), turn vertical hold VR401 and set to the mechanical center within the indented range.
- (3) High Voltage Adjustment
Receive signal 16 (fH: 30.48kHz) and adjust high voltage adjustment VR2003 so that the high voltage is 23.5kV with the the CRT anode current cut off.
Due to DHHS, after adjusting seal with an adhesive (TSE—385RTV) or cap (74007891).
- (4) Horizontal Raster Centering Signal 14 (Adjust at VGA H: 31.5kHz/V: 60Hz, 350 line mode)
Check that the horizontal linearity is suitable. If it is extremely bad, adjust to a suitable point with L506.

If the screen is rolling, centering can be adjusted with horizontal position VR5, but after return VR5 to the center click position.

Turn the brightness control fully clockwise so that back raster appears, then reinsert connector RH so that the back luster is in the center of the CRT screen.

Reinsert connector RH where there is no extreme lack of or break in the raster.

Set the luster centering with the manual switch off (to the left as seen from the back) and the horizontal size switch on (widened).



NOTE: Due to overscanning, signals of fH: 18kHz or lower cannot be set.

(5) Horizontal Position (Adjust to the raster center)

Input the signals below and adjust so to the center of the raster. The order is not important.

Signal			VR
CGA fH:	15.85kHz	TTL signal 10	VR552
EGA fH:	22 kHz	TTL signal 14	VR553
PGC fH:	30.48kHz	TTL signal 16	VR554
PS/2 fH:	31.5 kHz	TTL signal 1	VR555

NOTE: The TTL/analog setting should be correct.
The manual switch should be off.

(6) Vertical Linearity

- a) Receive signal 12 (fH: 18kHz) and adjust VR402 for the suitable vertical screen size.
- b) Adjust VR405 for the optimum vertical linearity.

(7) Vertical Sub Height

Receive EGA signal 14 (fH: 22kHz) and adjust VR402 for a vertical screen size of 180mm.

(8) Side Pin Cushion
Adjust VR403 for the optimum side pin cushion distortion.

(9) Horizontal Linearity
Adjust L506 for the optimum horizontal linearity.

(10) Horizontal Width

Receive EGA signal 14 (fH: 22kHz) and adjust width coil L505 for a horizontal screen size of $250 \pm 2\text{mm}$.

The horizontal size switch should be off.

If correction is not sufficient with L505, turn the L506 linearity coil slightly and adjust within a range so that the linearity does not get worse.

3-2) Adjustment of Video Amplitude and White Balance

NOTE: Check that the video signals are as shown below before performing the main adjustment. In particular, for LVG—1600, the video signal output level varies according to the signal pattern, so check the level with the signal to be adjusted.

Video: Analog 0.6Vp-p

Synchronizing: Separate TTL level

Unless otherwise specified, use signal 10 for video adjustments.

(1) Initial Settings of Adjustment VRs

VR801 - 803	GAIN VR	Fully counterclockwise
VR701	SUB CONT VR	Fully clockwise
VR901 - 903	BIAS VR	Fully clockwise
VR904 - 906	SUB BRIGHT VR	Fully clockwise

(2) Video Contrast Adjustment (Signal 11: Window pattern)

a) GAIN VR adjustment

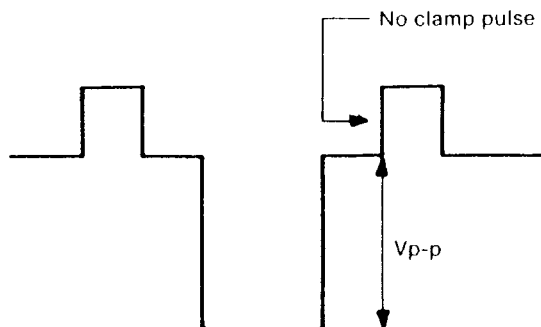
① Receive the window pattern (the video area of $1/3 - 1/2\text{H} \times 1/2\text{V}$ in which there is no ABL even with contrast at maximum is preferable).

② Contrast control Fully clockwise

Brightness control Fully counterclockwise

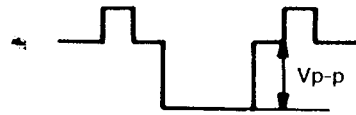
③ Adjust VR801, VR802, and VR803 so that the R, G, and B outputs on the VIDEO PWB are 40Vp-p.

After adjusting, check the Vp-ps again and readjust if they do not conform to the settings.



b) SUB-CONT. VR adjustment

- ① Contrast control Fully counterclockwise
Brightness control Fully clockwise



- ② Adjust VR701 so that the G output on the video PWB is 10Vp-p.
After adjusting, check that the R and B outputs are 10Vp-p \pm 0.5Vp-p.
If not, fine-adjust VR701 so that the R, G, and B outputs are within the range of 10Vp-p \pm 0.5Vp-p.

(3) Cut-off Adjustment (All black signal)

Set the contrast control fully counterclockwise.

- a) ① Short TP901 and TP902.

- ② Short TP401 and TP5E1 (16V) at 12k Ω .

(Be sure to perform step ① before step ②.)

As the screen VR is turned gradually clockwise, a single color will appear as a horizontal line.

Turn the bias VR for that color fully counterclockwise. Turn the screen VR further clockwise, and turn the bias VR for the next color to appear fully counterclockwise. Next turn the screen VR further clockwise and set the screen VR at the point where the third color is just slightly visible. This color is the reference color for the cut-off adjustment.

- b) Turn the bias VRs for the colors other than the reference color clockwise for that they are about as bright as the reference color.
c) Undo the shorts between TP401 and TP5E1 ② and between TP901 and TP902 ① in that order.

NOTE: Perform the cut-off adjustment in as dark a place as possible to make the white tracking which follows better.

(4) SUB—BRIGHT. VR Adjustment

- a) Receive signal 10 (15.75kHz) H gray scale (16 gradations).
b) Contrast control Fully clockwise
Brightness control Fully counterclockwise
c) Adjust SUB BRIGHT. VR905 so that the 4/16 gradation is just slightly visible.
Do not touch VR905 after this.
d) Contrast control Fully counterclockwise
Brightness control Fully clockwise
e) Receive an all black signal.
f) Turn VR904 and VR906 so that the back raster is white.

Following procedure can be used instead of above. [Regarding quantum 801C]

(4)' Adjustment of sub-brightness VR

Turn the contrast control fully counter clockwise, the brightness control fully clockwise and sub-brightness control VR905 mechanical center.

- a) Receive the signal 8 (15.75 kHz) all black signal.
b) Adjust VR904 and VR906 so that the background raster becomes white. If retrace lines appear, readjust the VR905 counter clockwise so that the retrace lines disappear, and readjust white balance.
c) Receive the all white pattern.

(5) Fine Adjustment of White Balance

Color temperature: Center $X = 0.310$

$Y = 0.325$

The color should be white with a slightly blue tinge.

a) Receive signal 11 (15.75kHz, pattern window) H gray scale (16 gradations).
(Window pattern - within a range in which there is no ABL.)

b) Contrast control Fully counterclockwise

Brightness control Fully clockwise

Check that the white balance is proper for all gradations.

If not, fine adjust the sub bright VR, VR904 and VR906 to make it white.

NOTE: Do not move VR905: G. sub bright.

c) Set the contrast control fully clockwise and the brightness control so that there is no back raster.

Check that the white balance is proper for all gradations.

If not, fine adjust the gain VR, VR801 and VR803 to make it white.

NOTE: Do not move VR802: G. gain.

(6) Focus Adjustment

(100% white or 4-dot missing signal)

Contrast control Fully clockwise

Brightness control To sufficient brightness

Turn the focus control and adjust for the optimum focus.

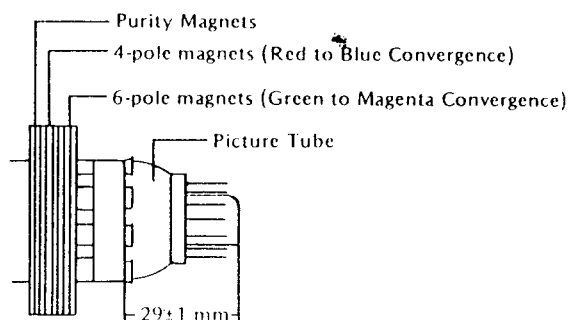
(7) Purity Adjustment

a) Be sure that the display is not being exposed to any external magnetic fields.

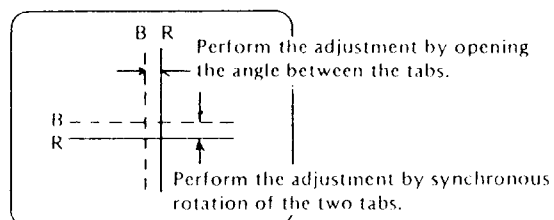
b) Ensure that the spacing between the Purity, Convergence Magnet, (PCM), assembly and the CRT stem is 29 mm \pm 1 mm. (See below diagram)

c) Produce a complete, red pattern on the display. Adjust the Purity magnet rings on the PCM assembly to obtain a complete field of the color red. This is done by moving the two tabs in such a manner that they advance in an opposite direction but at the same time to obtain the same angle between the two tabs, which should be approximately 180°.

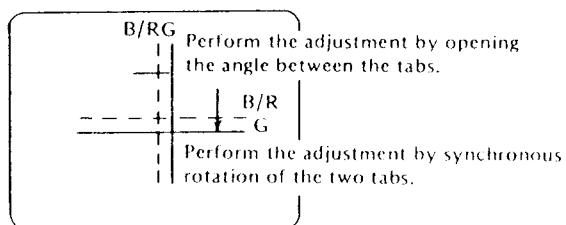
d) Check the complete blue and complete green patterns to observe their respective color purity. Make minor adjustments if needed.



Purity, Convergence Magnet Assembly (PCM)



Red to Blue Convergence
(Magenta)



Green to Magenta Convergence
(White)

(8) Convergence Adjustment

- a) Produce a magenta crosshatch on the display.
- b) Adjust the focus for the best overall focus on the display.
Also adjust the brightness to the desired condition.
- c) Vertical red and blue lines are converged by varying the angle between the two tabs of the 4-pole magnets on the PCM assembly. (See above diagrams)
- d) Horizontal red and blue lines are converged by varying the two tabs together, keeping the angle between them constant.
- e) Produce a white crosshatch pattern on the display.
- f) Vertical green and magenta lines are converged by varying the angle between the two tabs of the 6-pole magnets.
- g) Horizontal green and magenta lines are converged by varying the two tabs together, keeping the angle between them constant.

Indication address	Abbreviation	Unit	ROM address	BY LVG-1600									
				01	02	03	04	05	06	07	08	09	
0	CLOCK	MHz	X00	28.320F	28.320F	28.320F	28.320F	28.320F	28.320F	28.320F	28.320F	28.320F	14.160F
1	H FREQ	kHz	X03	31.470F	31.470F	31.470F	31.470F	31.470F	31.470F	31.470F	31.470F	31.470F	31.470F
2	V FREQ	Hz	X06	50.032F	60.057F	70.089F	50.032F	60.057F	70.089F	50.032F	60.057F	60.057F	60.057F
3	CHR-SIZE	DOT	X09	09X14	09X14	09X14	09X16	09X16	09X16	09X16	09X16	09X16	09X16
4	Nht	CHR	X0B	F100	F100	F100	F100	F100	F100	F100	F100	F100	F050
5	Nhd	CHR	X0D	F080	F080	F080	F080	F080	F080	F080	F080	F080	F042
6	Nhsp	CHR	X0F	F082	F082	F082	F082	F082	F082	F082	F082	F082	F042
7	Vpw-Hpw	V.-RASTER H-CHR	X11	02X12	02X12	02X12	02X12	02X12	02X12	02X12	02X12	02X12	02X06
8	Nadj	RASTER	X13	13	07	01	05	13	01	05	13	12	
9	Nvt	LINE	X14	F044	F037	F032	F039	F032	F028	F039	F032	F032	F032
10	Nvd	LINE	X16	F025	F025	F025	F025	F025	F025	F030	F030	F030	F031
11	Nvsp	RASTER	X18	F034	F030	F027	F031	F028	F025	F033	F030	F030	F031
12	Nvspdj	RASTER	X1A	01	05	09	06	02	12	14	10	01	
13	INT		X1B	00	00	00	00	00	00	00	00	00	00
14	OUT		X1C	F00011	F00011	F00011	F10011	F10011	F10011	F00011	F00011	F00011	F00011

Indication address	Abbreviation	Unit	ROM address	BY LVG-1600								
				10	11	12	13	14	15	16	17	18
0	CLOCK	MHz	X00	14.200F	14.200F	16.255F	16.370F	16.370F	25.110F	25.110F	20.800F	16.640F
1	H FREQ	kHz	X03	15.850F	15.850F	18.432F	22.003F	22.003F	30.473F	30.473F	25.000F	20.000F
2	V FREQ	Hz	X06	60.577F	60.577F	49.817F	59.953F	59.953F	59.987F	59.987F	59.952F	60.060F
3	CHR-SIZE	DOT	X09	08X10	08X10	09X14	08X10	08X10	08X10	08X10	08X10	08X10
4	Nht	CHR	X0B	F112	F112	F098	F093	F093	F103	F103	F104	F104
5	Nhd	CHR	X0D	F080	F020	F080	F080	F080	F080	F080	F080	F080
6	Nhsp	CHR	X0F	F092	F062	F081	F080	F080	F080	F080	F088	F088
7	Vpw-Hpw	V-RASTER H-CHR	X11	01X07	01X07	15X15	13X10	13X10	02X14	02X14	03X08	03X08
8	Nadj	RASTER	X13	00	00	06	06	06	08	08	07	03
9	Nvt	LINE	X14	F026	F026	F026	F036	F036	F050	F050	F041	F033
10	Nvd	LINE	X16	F020	F010	F025	F035	F035	F040	F048	F038	F030
11	Nvsp	RASTER	X18	F023	F018	F025	F035	F035	F044	F048	F038	F030
12	Nvspdj	RASTER	X1A	05	05	00	01	01	01	01	01	01
13	INT		X1B	00	00	00	00	00	00	00	00	00
14	OUT		X1C	F10011	F10011	F00101	F10001	F00001	F11011	F11011	F00001	F00001
						CGA	MDA	EGA	400(L)PGC480(H)		25k	20k

DATA FORMAT FOR USING Quantum 801C

TIMING PARAMETERS:

Real Time Parameters

Dot Rate	MHz
Horizontal Rate	KHz
Vertical Rate	Hz

Non-Real Time Parameters

Horizontal	Vertical
Dots/Character	Lines/Character
Total	Total
Characters	Rows
Drive Delay	Drive Delay
Drive Width	Drive Width
	Step Width

Signal No.	Description
1.	H: 31.47KHz V: 50Hz (350 Lines)
2.	H: 31.47KHz V: 60Hz (350 Lines)
3.	H: 31.47KHz V: 70Hz (350 Lines)
4.	H: 31.47KHz V: 50Hz (400 Lines)
5.	H: 31.47KHz V: 60Hz (400 Lines)
6.	H: 31.47KHz V: 70Hz (400 Lines)
7.	H: 31.47KHz V: 50Hz (480 Lines)
8.	H: 31.47KHz V: 60Hz (480 Lines)
9.	H: 31.47KHz V: 60Hz (496 Lines)
10.	H: 15.85KHz
11.	H: 15.85KHz WINDOW PATTERN
12.	H: 18.43KHz
13.	H: 22KHz
14.	H: 22 KHz
15.	H: 30.48KHz (400 Lines)
16.	H: 30.48KHz (480 Lines)
17.	H: 25KHz
18.	H: 20KHz

OPTION PARAMETERS

Signal Gating

Composit Sync.	OP 1.—0=off	1=on
Vertical Step	OP 2.—0=off	1=on
Horizontal Drive	OP 3.—0=off	1=on
Vertical Drive	OP 4.—0=off	1=on

Signal Polarity

Composite Sync.	OP 5.—0=non-inverted	1=inverted
Vertical Step	OP 6.—0=non-inverted	1=inverted
Horizontal Drive	OP 7.—0=non-inverted	1=inverted
Vertical Drive	OP 8.—0=non-inverted	1=inverted
Video	OP 13.—0=non-inverted/positive	1=inverted/positive
		2=non-inverted/negative
		3=inverted/negative

Interlace Mode

OP 9.—0=non-interlace
1=interlaced sync only
3=interlaced sync & video

Video Mode

OP 10.—0=monochrome	1=color
---------------------	---------

Duty Cycle

OP 11.—0=50%	1=100%(OP 12.0)
	0 or 1=100% (OP 12.2)

Character Clocking Mode

OP 12.—0=single-phase
2=dual-phase

Horizontal Skew

OP14.—skew right 0-3 dots

Vertical Skew

OP 15.—skew down 0-9 lines

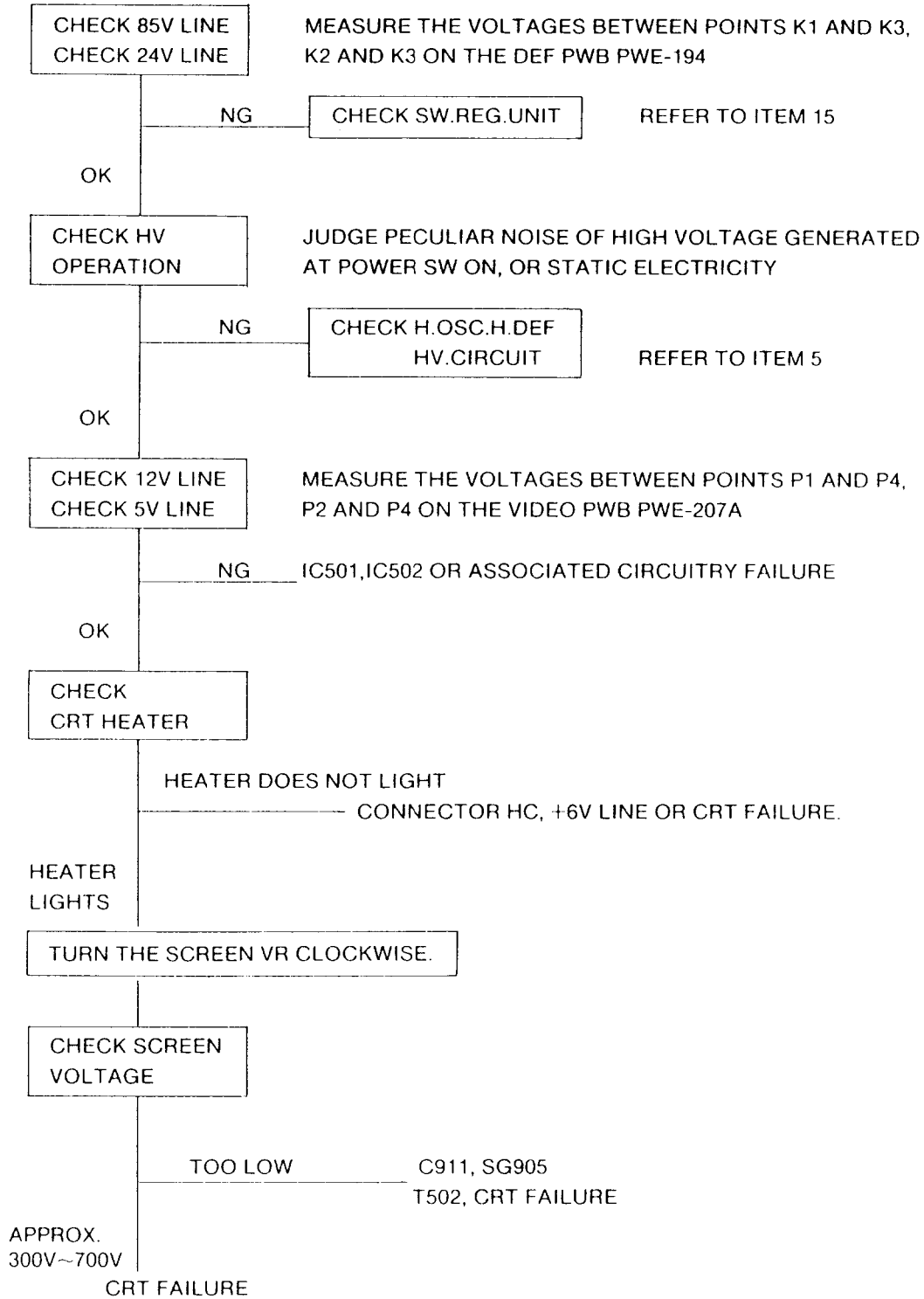
Cursor

OP 16.—0:off
1=fast blink
2=slow blink
3=on continuous

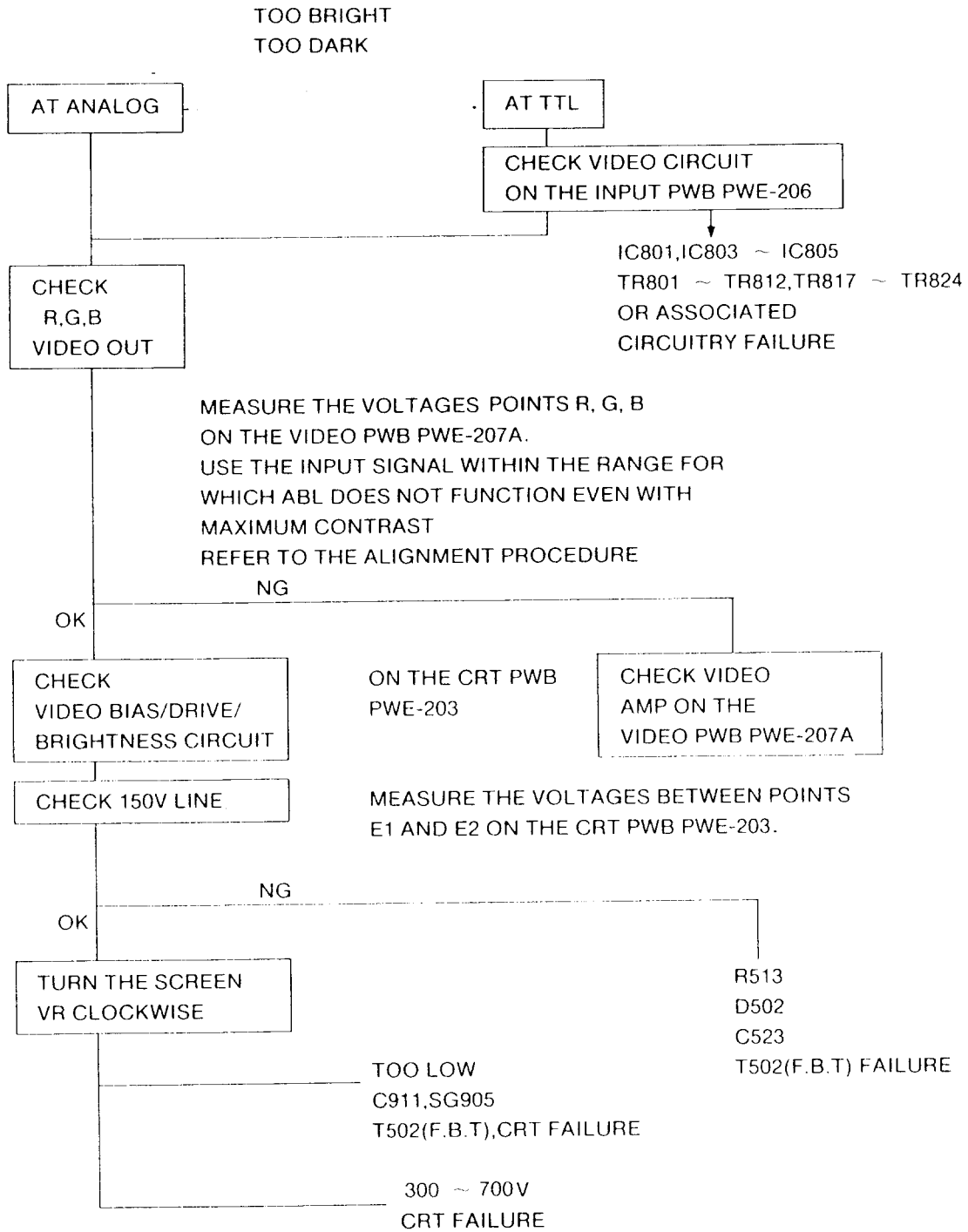
TROUBLE SHOOTING

BEFORE USING THIS CHART, PLEASE REFER TO THE TROUBLE SHOOTING THE USER'S MANUAL.

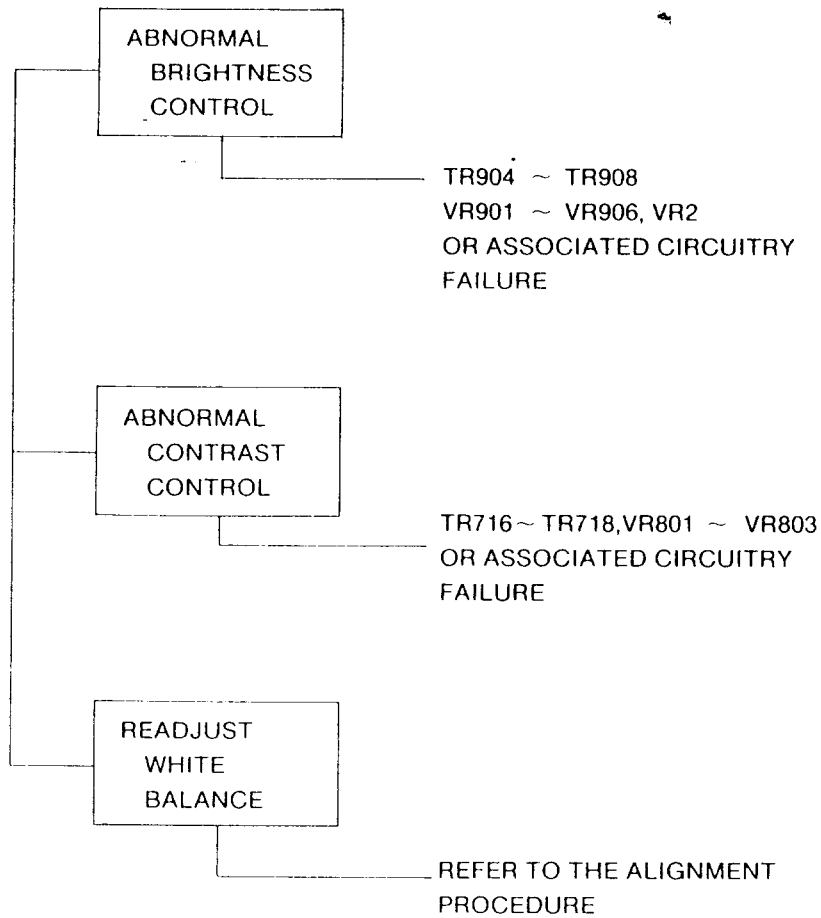
1. NO RASTER



2. ABNORMAL VIDEO ON CRT SCREEN

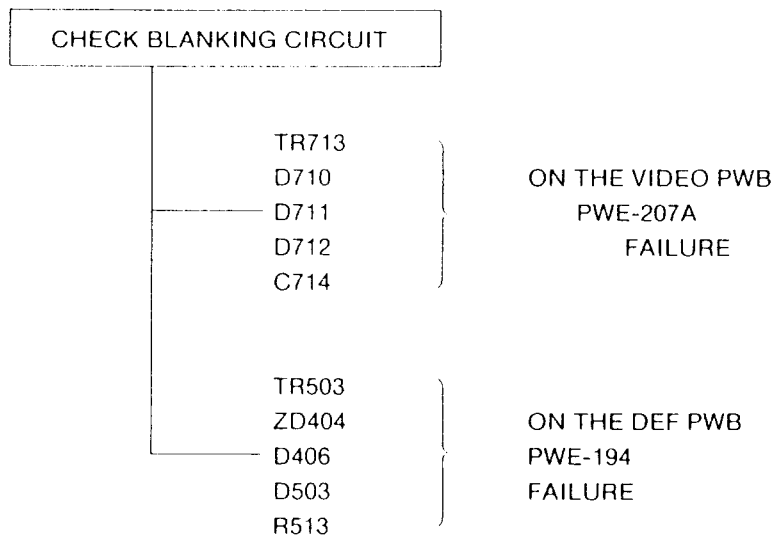


3. ABNORMAL WHITE BALANCE AND TRACKING



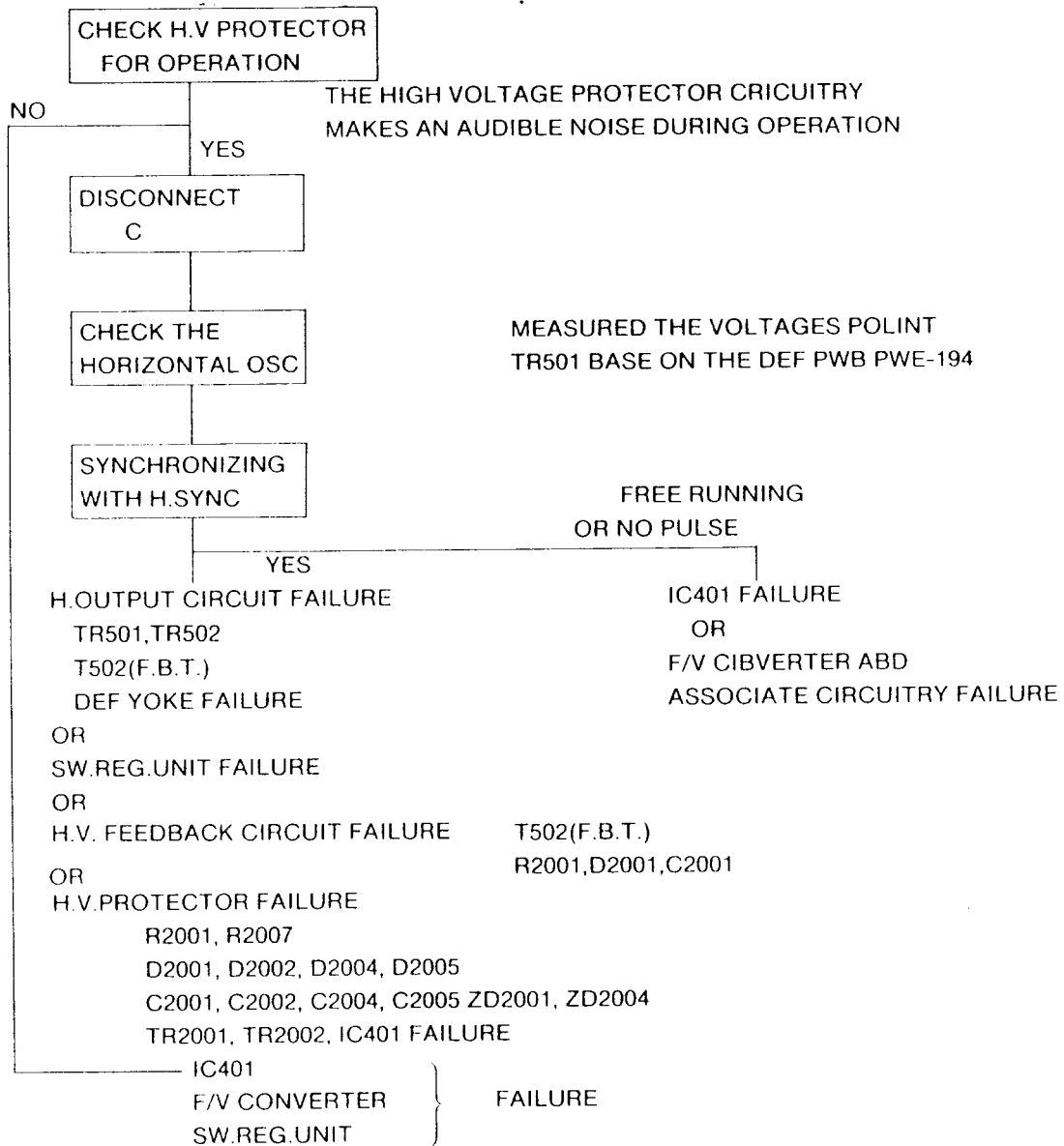
4. NO BLANKING WORKS

VISIBLE RETRACE LINE ON THE BACK RASTER

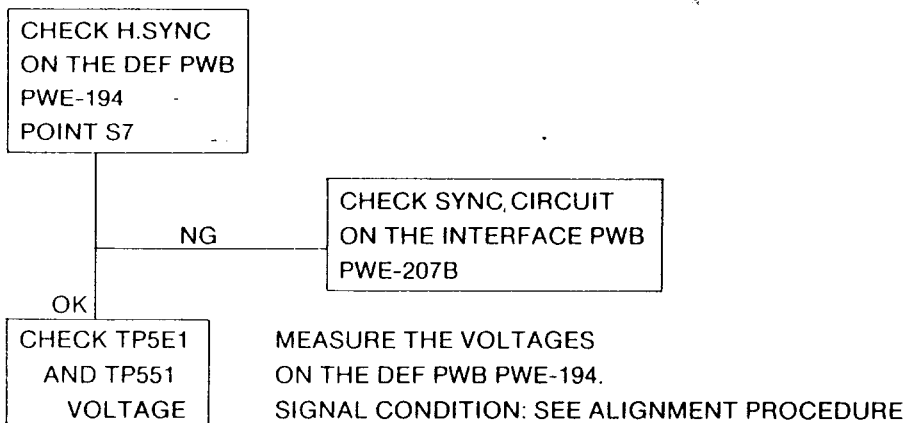


5. H.OSC/DEF/HV.CIRCUIT FAULT

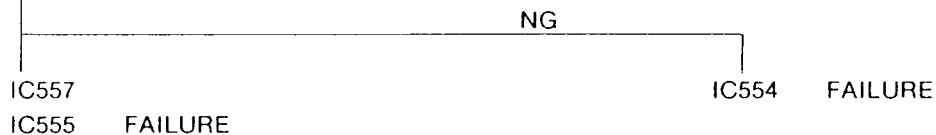
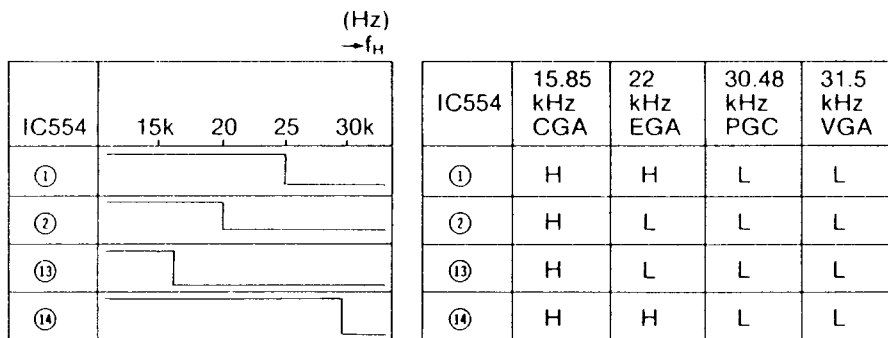
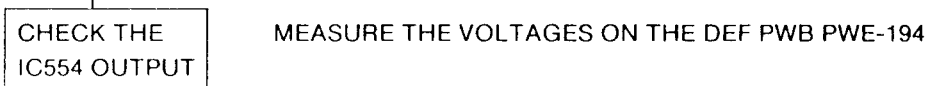
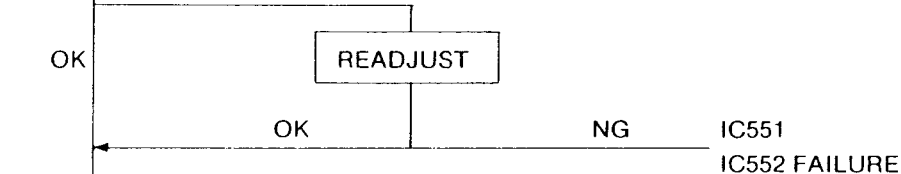
NO RASTER
 ABNORMAL PICTURE SIZE
 ABNORMAL VIDEO ON THE CRT SCREEN



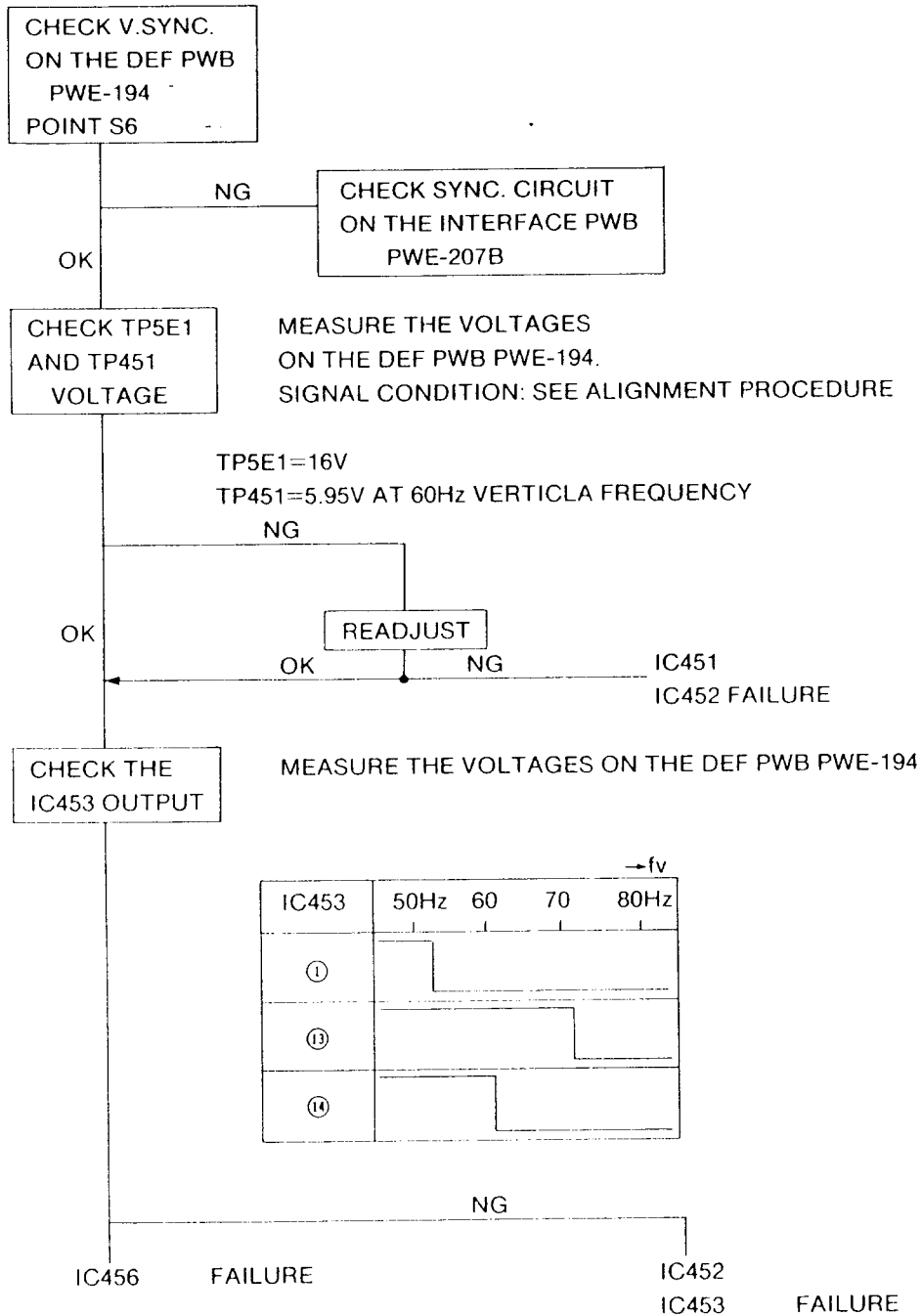
6.A H-F/V CONVERTER AND ASSOCIATED CIRCUITRY



TP5E1=16V
 TP551=10V AT 25kHz HORIZONTAL FREQUENCY

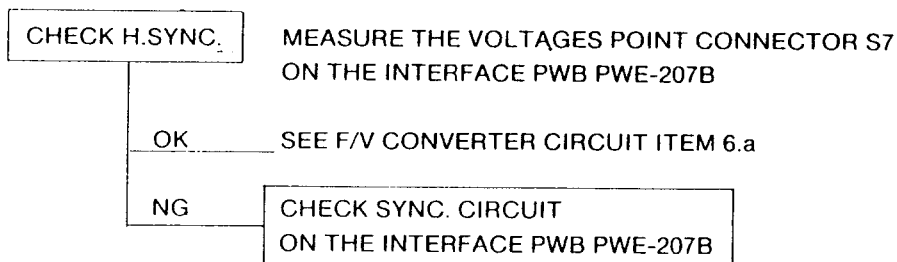


6.B V-F/V CONVERTER AND ASSOCIATED CIRCUITRY

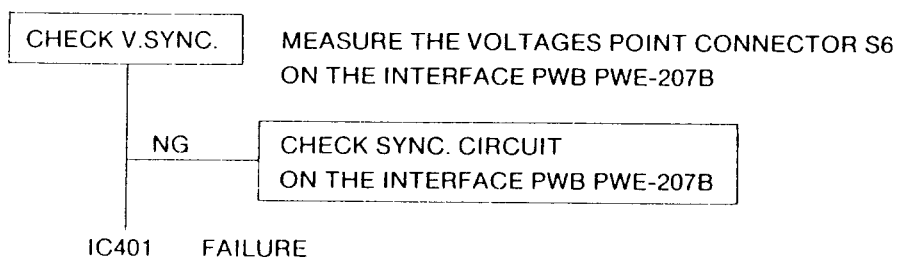


7. LACK OF STABLE SYNCHRONIZATION

• HORIZONTAL

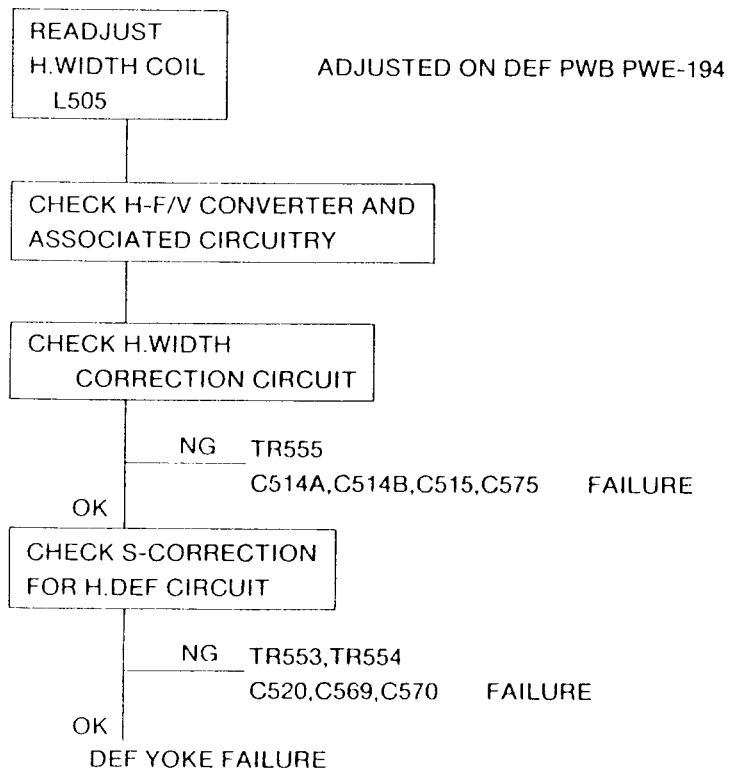


• VERTICAL



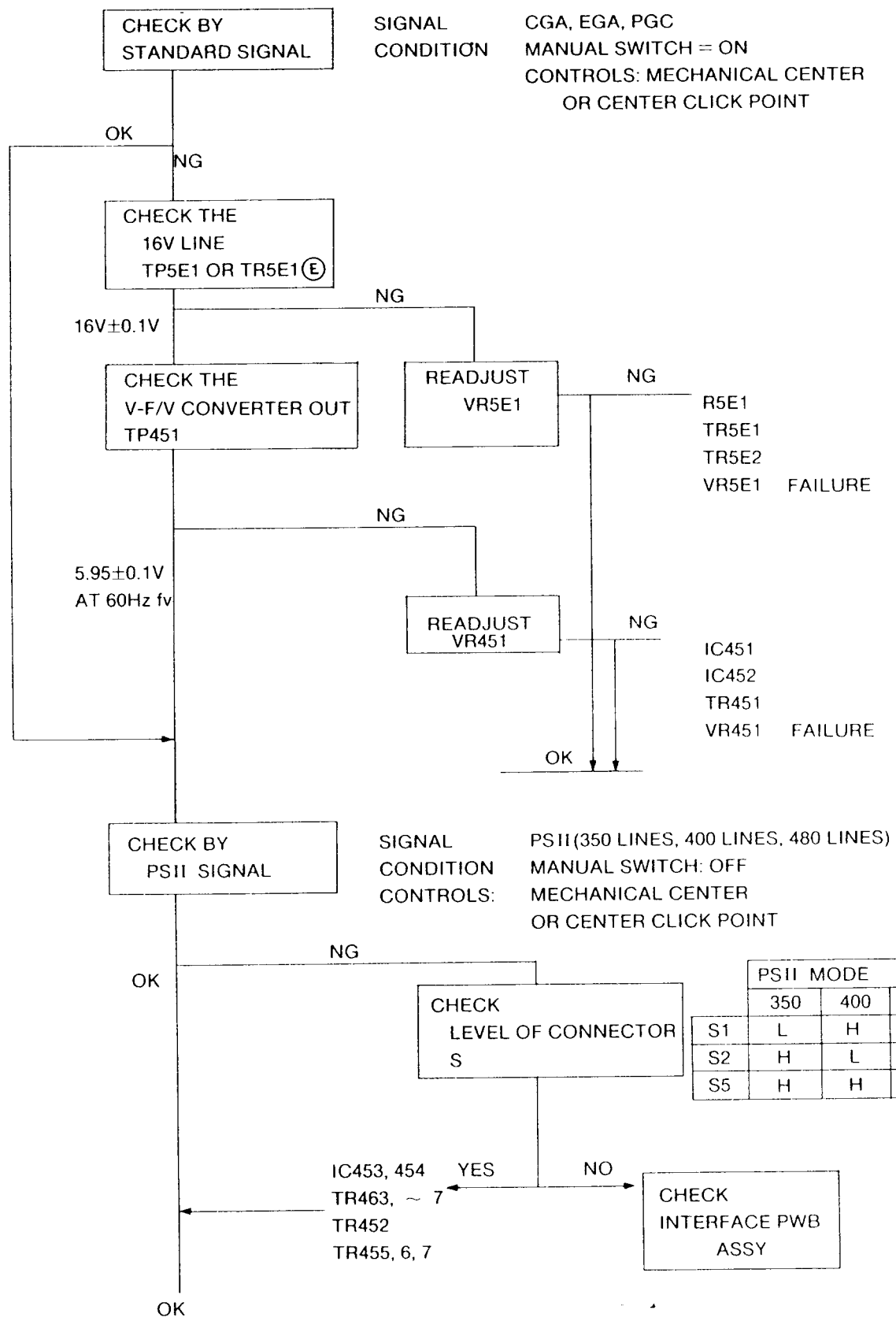
8. PICTURE SIZE

ABNORMAL HORIZONTAL WIDTH



ABNORMAL
VERTICAL HEIGHT

TOO LARGE OR SMALL
PICTURE SIZE



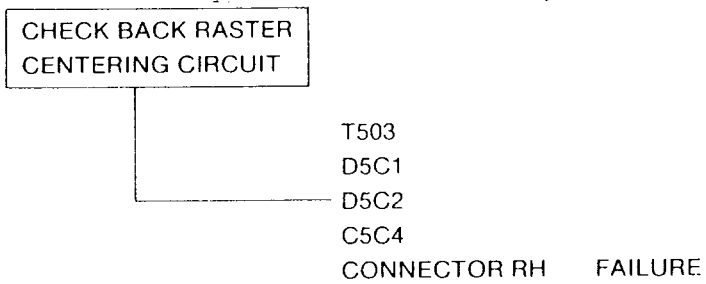
2. PARTICULAR CASE

- | | |
|--|---|
| 1) NO CHANGE
WITH V.SIZE CONTROL | LOOSE CONNECTOR L |
| 2) UNDERSCANNING OF
RASTER WITH CGA | TR453, TR459
IC551
IC552
IC554
16V LINE CIRCUIT FAILURE |
| 3) SMALL AT PGC
400 LINES MODE | TR454
TR462 FAILURE |

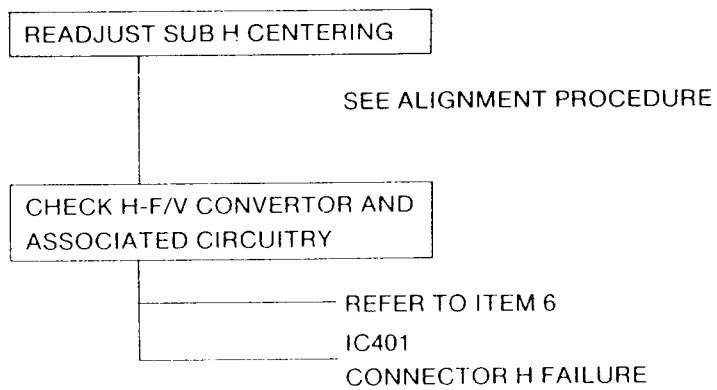
9. CENTERING

9.1. HORIZONTAL

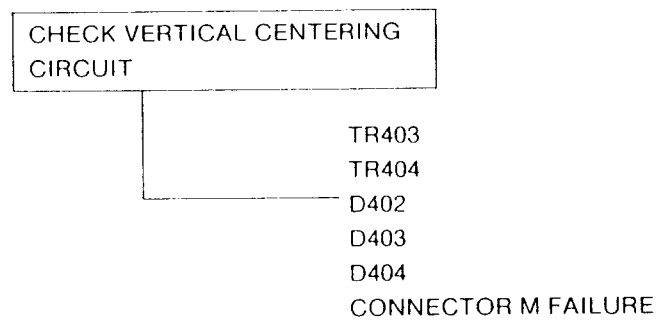
a) BACK RASTER CENTERING



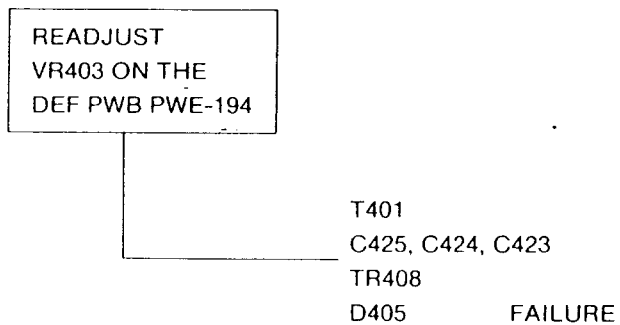
b) PICTURE CENTERING



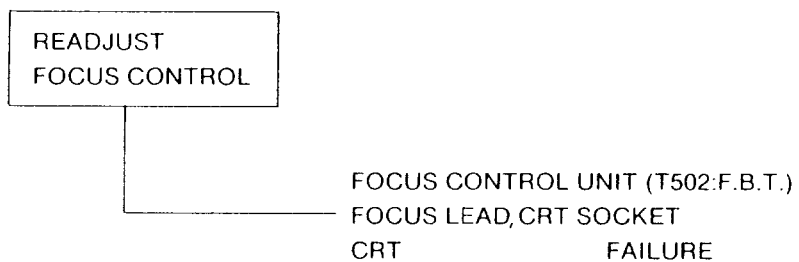
9.2. VERTICAL



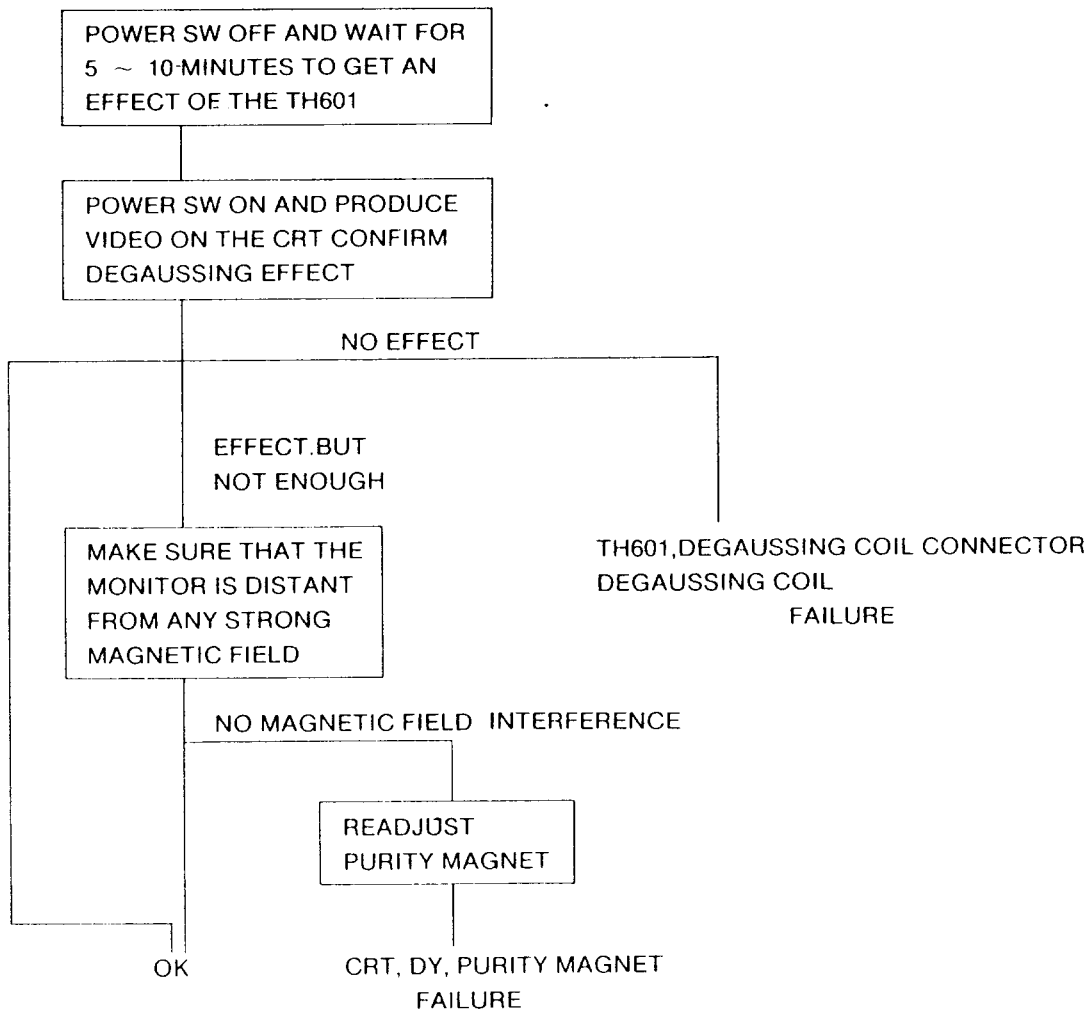
10. SIDE PINCUSHION DISTORTION FAILURE



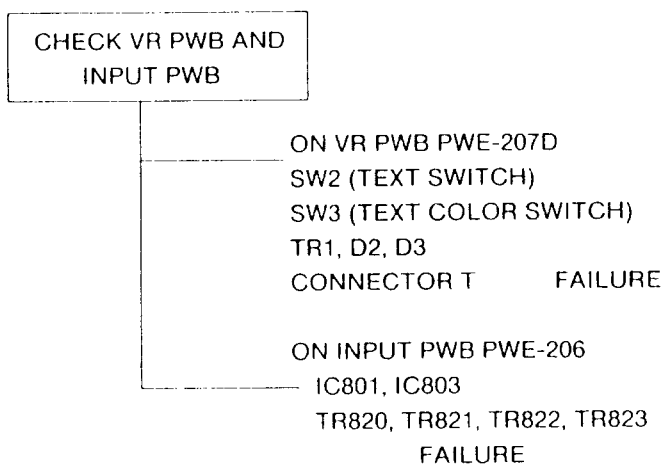
11. POOR FOCUS



12. IMPURITY ON CRT SCREEN



13. ABNORMAL TEXT MODE OPERATION



14. ABNORMAL COLOR AT TTL MODE

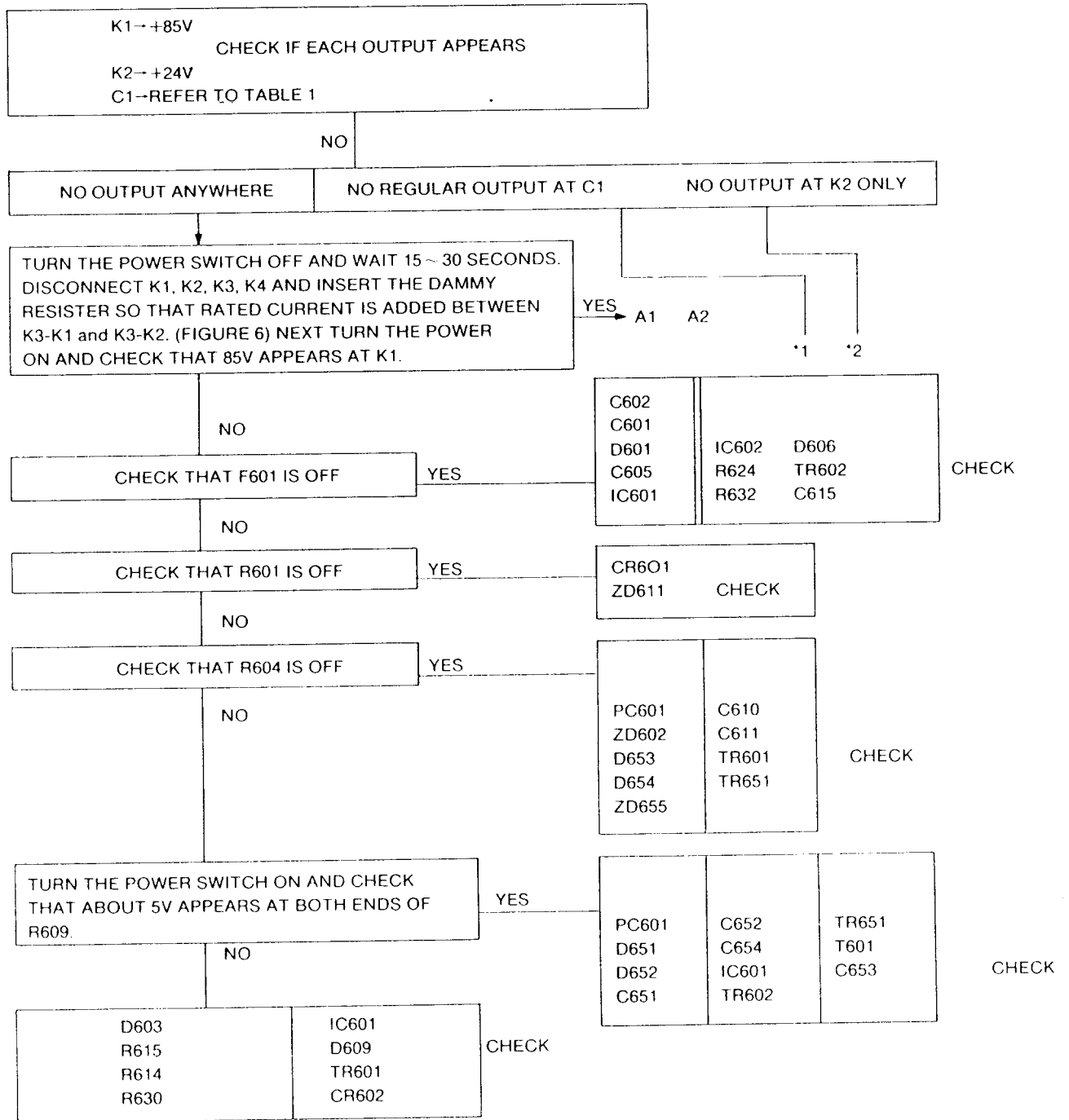
CHECK INPUT PWB
PWE-206

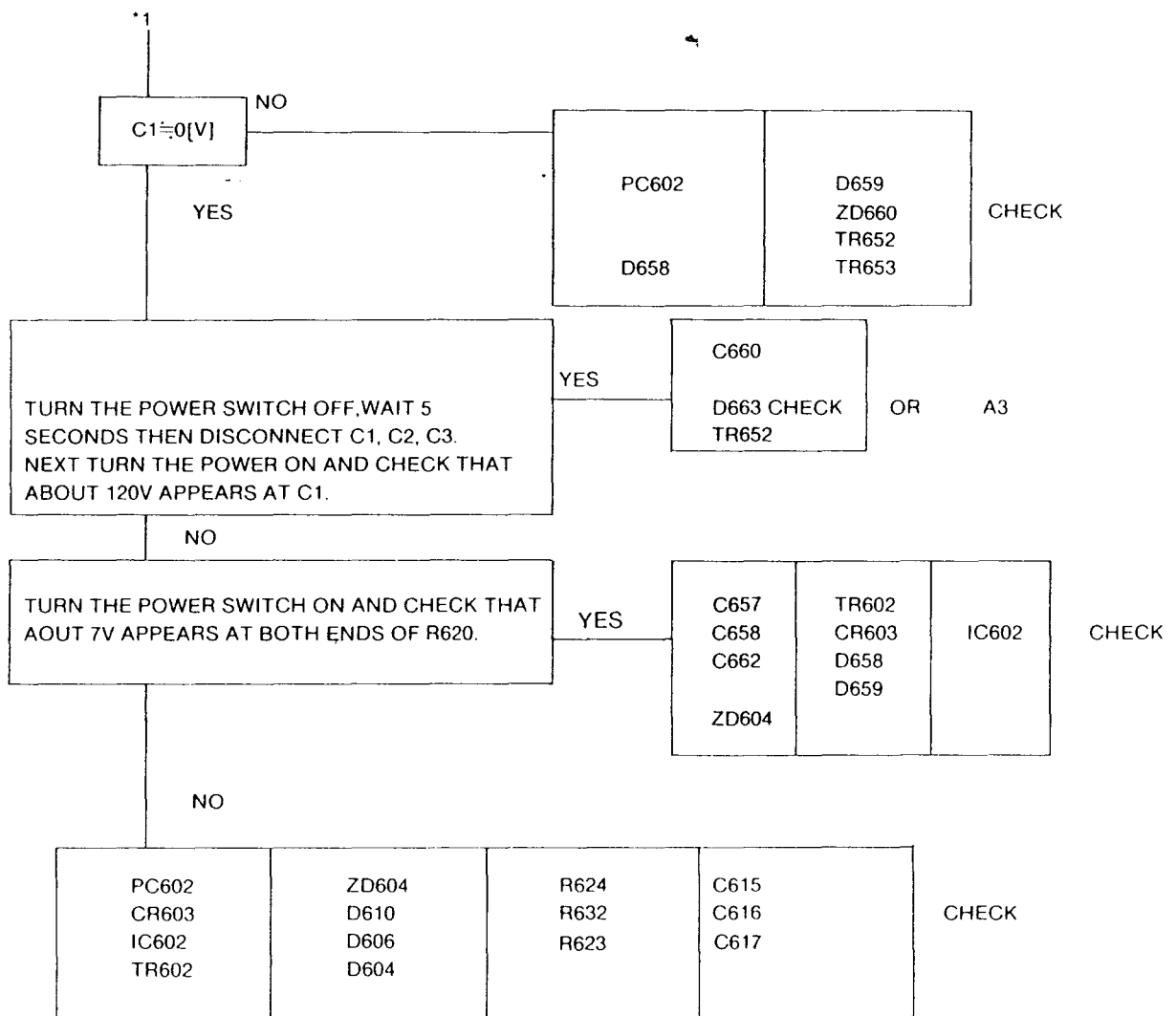
NO EFFORT BY CONTRAST CONTROL
TR801 ~ TR806 FAILURE

OTHERS

MANUAL SWITCH SW801
MODE SWITCH SW802
COLOR MODE SWITCH SW803
IC801
TR807 ~ TR812, TR817 ~ TR822 FAILURE

15. SWITCHING REGULATOR UNIT





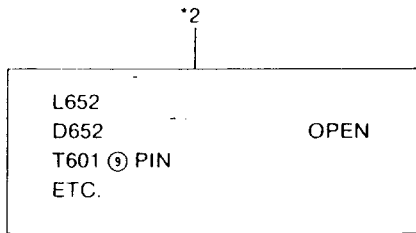
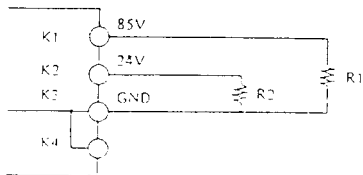


TABLE 1. C1 OUTPUT VOLTAGE

HORIZONTAL FREQUENCY [kHz]		C1 VOLTAGE [V]
15.85	(CGA)	53
22	(EGA)	65
30.48	(PGC)	94
31.5	(VGA)	98

WITH NO INPUT SIGNAL, ABOUT 45V SHOULD APPEARS AT C1.

FIGURE 6. RATED LOAD CURRENT AT K1 AND K2 TERMINAL



+85V	0.015 ~ 0.18A R1 (5.67KΩ ~ 472Ω)
+24V	0.4 ~ 1.0A R2(60Ω ~ 24Ω)

ATTENTION) DO NOT POWER ON SW.REG. UNIT ITSELF WITHOUT THE LOAD AT K1,K2,
OR IT MAY MISOPERATE PROTECTOR.

MAIN VOLTAGE LINE FAILURE EXCEPT SW.REG.UNIT

VOLTAGE LINE		FAILURE PARTS	PWB ASSY	REMARKS
85V CONNECTOR K1 ~ K3		D554,D555 TR553, TR554	DEF PWB PWE-194	
		C708 ~ C709 TR707 ~ TR712	VIDEO PWB PWE-207A	
24V K2 ~ k3 AND ASSOCI- ATED VOLTAGE LINE	24V CONNECTOR K2 ~ K3	C413, C5C3 IC402,IC502	DEF PWB PWE-194	
	16V POINT TP5E1	R5E1,C5E1,ZD5E1 TR5E1,TR5E2 IC451 ~ IC454,IC456 IC551 ~ IC557, IC559	DEF PWB PWE-194	
	12V CONNECTOR P1 ~ P4	C5C5, C5C6, C5C7 R5C9, IC502	DEF PWB PWE-194	
	6V CONNECTOR HC2 ~ HC1	C5C1 ~ C5C3 CR5C1, ZD5C1, TR5C2 IC501	DEF PWB PWE-194	
45 ~ 120V CONNECTOR C1 ~ C3		C516,C514A,C514B,C515,C575 D501, TR502, T502(F.B.T) DEFLECTION YOKE	DEF PWB PWE-194	
HIGH VOLTAGE FEEDBACK VOLTAGE CONNECTOR C2 ~ C3		R2001,D2001,C2001	DEF PWB PWE-194	

REPLACEMENT PARTS LIST

Note: The components identified by Δ mark are critical for safety. Replace only with parts Number specified.

All components are common for models: JC-1402HME/EE/N/R except for the parts identified by model name in symbol part.

SYMBOL	PARTS NO.	DESCRIPTION	QTY
*** CPT R TUNER ***			
Δ CRT(JC-1402HME/EE/N/R)	33014137	CPT M343UP23XX158	1
Δ CRT(JC-1402HMR)	33014140	CRT M343UP 23XX158 (R)	1

*** ICS ***				
IC453	IC454	IC554	37011054 IC UPC3350 (COMP)	2
IC456	IC557	IC559	37051034 MOS UPD40668C (ESD)	3
IC850			37051044 IC SN74LS367AN (PUSH)	2
IC851	IC852		37051179 IC SN74LS123N (MONO MLT)	1
IC803	IC804	IC805	37052011 IC SN74LS136N (EX-OR)	4
IC853				
IC451	IC551		37056176 IC UPC1555C	2
IC452	IC552	IC553	37056207 IC UPC258	3
IC555	IC556		37056217 MOS TC4538BP	2
IC501			37056219 IC STR2005	1
IC502			37056220 IC STR2012	1
IC802			37056245 IC M513R7P	1
Δ IC602			37056250 IC STK-7404H-105	1
Δ IC601			37056353 IC STK7406H	1
Δ IC401			37056408 IC HA11423DP-18	1
IC801			37056421 MOS PC75C-4C	1
IC402			37056427 IC UPC1498H	1

*** TRANSISTORS ***				
TR5E2			35007317 TR 25C945-T G	1
TR403	TR408		35053212 TR 25C2002-T L	2
Δ TR2002	TR401	TR405	350E6518 TR 25C1740-T R	24
TR407	TR409	TR459		
TR459	TR462	TR5E2		
TR503	TR552	TR715		
TR718	TR810	TR811		
TR812	TR851	TR852		
TR857	TR859	TR860		
TR863	TR904	TR909		
TR905	TR906	TR907	350H4417 TR 25C1473-TA G	3
TR558	TR704	TR705	350H5017 TR 25C3511-TA G	14
TR706	TR804	TR805		
TR806	TR807	TR808		
TR809	TR825	TR853		
TR854	TR858			
TR404			350K4412 TR 25A952 L	1
Δ TR2001	TR402	TR406	350K4519 TR 25A932-T R	12
TR410	TR461	TR713		

SYMBOL	PARTS NO.	DESCRIPTION	QTY	
TR714	TR716	TR717		
TR801	TR802	TR803		
TR901	TR902	TR903	350K5217 TR 25A1012-TA G	3
TR710	TR711	TR712	35006804 TR 25A153F-PA D	3
Δ TR601	Δ TR602		35047210 TR 25C945 P	2
Δ TR651	Δ TR652	Δ TR657	35053011 TR 25C1941 K	3
TR501			35056311 TR 25C2689 K	1
TR5E1			35065414 TR 25D332 P	1
TR502	TR813		35065912 TR 25D471 L	2
Δ TR502			350P2401 TR 25C3484-YE	1
TR701	TR702	TR703	35082505 TR 25C3502 E	3
TR707	TR708	TR709	35086004 TR 25C3953-PA D	3
TR453	TR454	TR455	35100500 TR AA1A4M-T	5
TR456	TR457			
TR463	TR464	TR466	35100501 TR AA1A4M-T	5
TR868	TR869			
TR452	TR465	TR466	35100531 TR AA1L4M-T	7
TR467	TR557	TR661		
TR662				
TPE17	TR818	TR819	35100600 TR DTA114ES-T	6
TR821	TR822	TR826		
TR1	TR451	TR719	35100601 TR DTC114ES-T	13
TR823	TR824	TR827		
TR828	TR829	TR855		
TR864	TR865	TR866		
TR867				
TR814	TR815	TR816	35100613 TR DTC123YS-T	3
Δ TR553	Δ TR554		35122100 TR 25X7C3	2
Δ TR555			35122200 TR 25X854	1
CR501	Δ CP602	Δ CP603	35595010 THYRISTOR C3P4M-L	3
Δ CR601			35595015 TRIAC AC1CF6M	1

*** DIODES ***				
D701	D702	D703	340X1009 DIODE S1.1S2473	9
D704	D705	D706		
D707	D708	D709		
Δ D609	Δ D610	Δ D653	360X1010 DIODE S1.1S2472	10
Δ D654	Δ D658	Δ D659		
Δ D661	Δ D662	Δ D667		
D713				
D2	D3	D402	360X1027 DIODE 1SS132	44
D403	D404	D405		
D406	D407	D451		
D452	D453	D454		
D503	D551	D552		
D553	D710	D711		
D712	D801	D802		
D803	D804	D805		

SYMBOL		FARTS NO	DESCRIPTION	QTY	
D8C6	D8C7	D8C9			
D8C9	D810	D811			
D812	D813	D814			
D815	D816	D817	360K1027	DIODE 1SS132	44
D818	D819	D820			
D821	D822	D823			
D824	D850				
△D6C7	△D6C8	D9C1	360K1032	DIODE 1SS82-TA	5
D9C2	D9C3				
ZD4C2	ZD85C	ZD851	360K3100	DIODE PD5.1EB (2)-T4	2
ZD5C1			360K3121	DIODE PD6.2EB (3)-T4	1
ZD4C4			360K3127	DIODE PD20EB (3)	1
ZD7C1			360K3124	DIODE PD6.2EB (3)-T4	1
△ZD6C4			360K3129	DIODE PD27EB (4)-T4	1
△ZD6C5			360K3137	DIODE PD7.5EB (2)-T4	1
△ZD2C01	△ZD2C02		360K3143	DIODE PD8.2JSB (1)-T4	2
△ZD6C2			360K3149	DIODE PD10EB (2)-T4	1
△ZD655	△ZD66C		360K3151	DIODE PD6.2EB (2)-T4	2
ZD5C2			360K316C	DIODE PD8.2EB (2)-T4	1
△ZD611			360K3162	DIODE PD2.7EB (1)-T4	1
ZD5C3			360K3188	DIODE PD3.9EB (2)-T4	1
ZD5C1			360K340C	DIODE PD12JSB-T4	1
ZD4C1			360K34C1	DIODE PD2CJSB-T4	1
ZD8C2			360K3635	DIODE PD5.1ESB (2)-T4	1
ZD8C1			360K366C	DIODE PD9.1ESB (3)-T4	1
ZD5E1			360K317C	RECTIFIER, SI. PD6.2JSB (2)	1
△D2C01	△D2C04	D4C1	361K716C	RECTIFIER, SI. TVR-C6G G23	8
D5C1	D5C2	D5C3			
△D554	△D555				
D5C2			361K7505	RECTIFIER, SI. ERP44-06V1	1
△D6C3	△D6C6		361Q7174	RECTIFIER, SI. RU1P	2
△D651			361Q73C5	DIODE RL2B	1
△D5C1			361Q75C9	DIODE RH4F	1
△D652			361Q7511	RECTIFIER, SI. RL4Z, LFK2	1
△D657			361Q7512	RECTIFIER, SI. RG4C, LFK2	1
FD8C2			361Q8092	DIODE ARRAY 1S2473X9A	1
FD8C1			361Q8C93	DIODE 1S2473X9K	1
△D6C1			361Q82C1	DIODE, NETWORK D55BA6CS	1
D1			368C1023	DIODE, LIGHT-E SEL132CG	1
△D2C02	△D2C05		38005011	VARIABLE, V01220	2
△TH6C1			38112C31	THERMISTOR, POSITIVE	1
△PC6C1	△PC6C2		382C0233	IC TLP634 (NHE-LF2)	2

*** TRANSFORMERS ***

T5C1	4580300P	TRANS, H. DRIVE	1
T5C3	463051C1	TRANS, CONVERTER	1

SYMBOL	FARTS NO	DESCRIPTION	QTY
△T6C1	463084C7	TRANS, SWITCHING	1
△T6C2	463084C8	TRANS, SWITCHING	1
△T5C2	47105637	F.B.T. (JC-1402HME/EE/R/N)	1
△T5C2	47105640	F.B.T. (JC-1402HME)	1
△T4C1	475C2C42	TRANS, SIDE PINCLUSION	1

*** VARIABLE RESISTORS ***

VP4		4101127C	R, VARIABLE B500-V(M)	1	
VP3		41011273	R, VARIABLE B20K-V(M)	1	
VP5		41011275	R, VARIABLE B20K-V(M)	1	
VR1	VR2	410236C3	R, VARIABLE R10K-V	2	
VR4C3		410410C9	R, VARIABLE R47K	1	
VR4C2		410670C3	R, VARIABLE 300H 0.1W	1	
VR5E1		410670C5	R, VARIABLE 1K 0.1W	1	
VR4C1	VR5C1	410670C8	R, VARIABLE 5K	2	
VR2C1	VR2C2	VR2C3	41071161	R, VARIABLE B4.7K	3
VR7C1		4107121C	R, VARIABLE B3.3K	1	
VR4C5		410850C4	R, VARIABLE B500H	1	
VR5C1		410850C5	R, VARIABLE B5K	1	
VR551		410850C9	R, VARIABLE R10K	1	
VR451	VR552	VR553	41085C10	R, VARIABLE R20K	5
VR554	VR555				
VR9C1	VR9C2	VR9C3	41085C13	R, VARIABLE R100K	6
VR9C4	VR9C5	VR9C6			
VR5C2		41085C14	R, VARIABLE B200K	1	
△VR651		41087C58	R, VARIABLE B5K	1	
△VR2C01	△VR2C02	△VR652	41505C05	R, VARIABLE B2K	3
△VR2C03	△VR653		41505C08	R, VARIABLE B10K	2

*** RELAYS & SWITCHES ***

SW3		65161021	SWITCH, SLIDE	1
SW8C3		65161029	SWITCH, SLIDE	1
SW1	SW2	65161034	SWITCH, SLIDE	2
SW8C1	SW8C2	65161035	SWITCH, SLIDE	2
△SW1		653600C6	SWITCH, PUSH BUTTON	1
△RL1		656025C1	RELAY G6E-1114P	1
RL2C2		65602551	RELAY	1
RL8C1	RL8C3	65699C12	RELAY RY120W (2T)	2

*** COILS & FILTERS ***

LC7C2		39C99C15	FILTER ZJSC-2R2-101	1
LS05		60908C43	COIL, VARIABLE WIDTH	1
△LS03		60908C47	COIL, WIDTH	1
△LS06		609181C1	COIL, H. LIN	1

SYMBOL	PARTS NO	DESCRIPTION	QTY
△L5C7	60999004	COIL, CHCKE	1
L7C1 L7C2 L7C3	610E1711	COIL, FILTER 3.3UH	6
L9C1 L9C2 L9C3			
L7C4 L7C5 L7C6	610E1712	COIL, FILTER 3.9UH	3
L8C1 L8C2	610E1714	COIL, FILTER 5.6UH	2
L5C2	610F7C10	COIL, FILTER 2.7UH	1
L5C2	61022C22	FILTER, CHCKE	1
△L6C1	61062C54	LINE FILTER	1
L5C1 L5C1	61064C06	COIL, FILTER 50UH	2
△L6C2 △L651 △L652	61099C11	COIL, CHCKE 33UH	3
△L652	61099C14	COIL 33CK1.2	1
L5C2 L5C5	61099C19	COIL, CHCKE	2
△DEG	6131421C	COIL, DEGAUSSING	1
LC7C1	61606C21	NOISE FILTER DSS-271Y	1
LC8C1	61606C23	FILTER DSS-223S	1

*** PWB ASSYS ***

	84K10C04	INPUT PWB ASSY	1
	84K10C04	DEF PWB ASSY	1
	84K10J01	CRT PWB ASSY	1
	84K10K03	INTERFACE PWB ASSY	1
	84K11A02	SW. REG. PWB ASSY	1

*** ELECTRICAL PARTS & MISCELLANEOUS PARTS ***

	32500C22	ADAPTER (9P-15P)	1
SG9C1 SG9C2 SG9C3	3299C047	ARRESTER	3
△F6C1 △F651	66699C07	FUSE ET T2A, 250V-S, B SOC	2
SG9C5	66706C01	SPARK GAP 1.2KV	1
△	70032026	SG/CRT SOCKET	1
CN1	7005635P	D SUR CONNECTOR 9PL	1
	70102147	IC SOCKET 24P	1
△	70800322	LINE CORD (JC-1402HMEE)	1
△	70800031	LINE CORD (JC-1402HMR/N)	1
△	73513006	LINE CORD SAA L2.0 (JC-1402HMR)	1
	71205C37	HOLDER, FUSE	4
CN-RH CN-RH1 CN-RH2	73721C03	CONNECTOR PIN 2P	5
CN-RH3			
	73893C29	CABLE 5P-9P	1

*** APPEARANCE PARTS ***

	24514752	COIL SPRING	1
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SYMBOL	PARTS NO	DESCRIPTION	QTY
	25307951	CABINET FRONT ASSY	1
	25307972	CABINET BACK	1
	25402441	REVOLVING STAND T	1
	25405971	REVOLVING STAND(B) ASSY	1
	25407321	CONTROL LID ASSY	1
(JC-1402HME)	25765502	NAME PLATE, INSTRUCTION	1
(JC-1402HMR)	25765681	NAME PLATE, INSTRUCTION	1
(JC-1402HMEE)	25766011	NAME PLATE, INSTRUCTION	1
(JC-1402HMN)	25766591	NAME PLATE, INSTRUCTION	1

*** KNOBS & PUSH BUTTONS ***

	25451821	KNOB, CONTROL	2
	254523C1	PUSH BUTTON	1

*** PRINTED & PACKING MATERIALS ***

(JC-1402HMEE)	24813501	BAG, POLYETHYLENE	1
(JC-1402HME/R/N)	24806961	BAG, POLYETHYLENE (270*370)	1
(JC-1402HME/R/N)	24813191	BAG, POLYETHYLENE (150*370)	1
	2528C161	GUIDE RAIL	1
	25601551	CUSHION SHEET	4
	25603511	BARRIER (SW. REG. PWB)	1
(JC-1402HMEE)	25815061	BAG, POLYETHYLENE (270*370)	1
	25605021	CUSHION SHEET	2
(JC-1402HME/R/N)	25804991	BAG, POLYETHYLENE	1
	25813912	FILLER (L), CARTON	1
	25813922	FILLER (R), CARTON	1
(JC-1402HME)	25813932	CARTON BOX	1
(JC-1402HMR)	25814182	CARTON BOX	1
(JC-1402HMEE)	25814451	CARTON BOX	1
(JC-1402HMN)	25814971	CARTON BOX	1
(JC-1402HMR)	78043392	WARRANTY CARD	1
	78034401	MONITOR SALES OFFICE LIST	1
	78120214	INSTRUCTION BOOK	1
	599910266	SERVICE MANUAL	1
	599910271	CIRCUIT DESCRIPTION	1

*** RESISTORS ***

R5B1	401C6637	R, CARBON 33H 5X 1/4W	1
R503	401C6667	R, CARBON 560H 5X 1/4W	1
R501 △R6C2 △R6C8	401C6673	R, CARBON 1.0K 5X 1/4W	6
△R611 △R619 △R663			
△R6C9 △R620	401C6675	R, CARBON 1.2K 5X 1/4W	2
△R662	401C6679	R, CARBON 1.8K 5X 1/4W	1
R5E2	401C6681	R, CARBON 2.2K 5X 1/4W	1
R527 △R631	401C6683	R, CARBON 2.7K 5X 1/4W	2

SYMBL	PARTS NO	DESCRIPTION	QTY
R5A2 R598 R599	40106625	R,CARBON 3.3K 5% 1/4W	6
△R62E △R633 △R656	40106691	R,CARBON 5.6K 5% 1/4W	4
R49C △R636 △R655	40106697	R,CARBON 6.8K 5% 1/4W	1
△R666 R585	40106701	R,CARBON 15K 5% 1/4W	1
R467	40106703	R,CARBON 18K 5% 1/4W	1
R448	40106705	R,CARBON 22K 5% 1/4W	1
△R664	40106707	R,CARBON 27K 5% 1/4W	1
△R627 R482 R488	40106721	R,CARBON 100K 5% 1/4W	2
△R657	40106723	R,CARBON 120K 5% 1/4W	1
R473	40106757	R,CARBON 3.3M 5% 1/4W	1
R47E R5A6 R574	40106761	R,CARBON 4.7M 5% 1/4W	5
R57E R582	401H5627	R,CARBON 8.2H 5% 1/2W	1
R51C R451	401H5646	R,CARBON 75H 5% 1/2W	1
R9C4 R9C5 R9C6	401H5649	R,CARBON 10CH 5% 1/2W	3
R7C4E R7C4C R7C4R	401H5651	R,CARBON 12CH 5% 1/2W	3
R823	401H5655	R,CARBON 18CH 5% 1/2W	1
R32E	401H5661	R,CARBON 33CH 5% 1/2W	1
R45C	401H5663	R,CARBON 39CH 5% 1/2W	1
R52E	401H5669	R,CARBON 68CH 5% 1/2W	1
R4A1 R4F4	401H5673	R,CARBON 1.0K 5% 1/2W	2
R5B2 R5B3	401H5683	R,CARBON 2.7K 5% 1/2W	2
R5C9 R936	401H5689	R,CARBON 4.7K 5% 1/2W	2
△R6C5 △R6C6	401H5735	R,CARBON 39CK 5% 1/2W	2
△R6C3	401H5747	R,CARBON 82CK 5% 1/2W	1
△R61E	401H5753	R,CARBON 2.2M 5% 1/2W	1
R71C R915	401K5625	R,CARBON 10H 5% 1/6W	2
R7C2E R7C2C R7C2R	401K5647	R,CARBON 82H 5% 1/6W	6
R7C5E R7C5C R7C5R	401K5649	R,CARBON 10CH 5% 1/6W	2
R413 R5C3	401K5649	R,CARBON 10CH 5% 1/6W	2
R414	401K5651	R,CARBON 12CH 5% 1/6W	1
R724 R853	401K5657	R,CARBON 22CH 5% 1/6W	2
R8C7C	401K5659	R,CARBON 27CH 5% 1/6W	1
R935	401K5661	R,CARBON 33CH 5% 1/6W	1
R5C8 R817E R917C	401K5665	R,CARBON 47CH 5% 1/6W	4
R817R	401K5665	R,CARBON 47CH 5% 1/6W	4
R417H R496 R567	401K5667	R,CARBON 56CH 5% 1/6W	6
R701E R7C1C R7C1P	401K5669	R,CARBON 68CH 5% 1/6W	2
R712 R8C7E	401K5677	R,CARBON 1.0K 5% 1/6W	20
R4A8 R4E3 R423	401K5677	R,CARBON 1.0K 5% 1/6W	20
R5C2 R5C7 R534			
R536 R720 R721			
R722 R832 R923			
R834 R835 R836			
R837 R9C1 R9C2			

SYMBL	PARTS NO	DESCRIPTION	QTY
R9C3 R934	401K5675	R,CARBON 1.2K 5% 1/6W	1
R827 R495 R516 R711	401K5677	R,CARBON 1.5K 5% 1/6W	11
R8C1E R8C1C R8C1R			
R8C2E R8C2C R8C2P			
R895 R896			
△R2C02 P447	401K5679	R,CARBON 1.8K 5% 1/6W	2
R2 R447 R436	401K5681	R,CARBON 2.2K 5% 1/6W	25
R456 R457 R458			
R5E3 R529 R814			
R852 R854 R857			
R858 R860 R861			
R867 R873 R874			
R884 R885 R886			
R888 R890 R893			
R931			
△R2C03 R411 R71E	401K5687	R,CARBON 2.7K 5% 1/6W	6
R723 R863 R881			
△R2C05 △R2C09 R437	401K5685	R,CARBON 3.3K 5% 1/6W	12
R494 R584 R812E			
R812C R812R R856	401K5685	R,CARBON 3.3K 5% 1/6W	12
R87C R922 R93C			
R439 R522 R533	401K5687	R,CARBON 3.9K 5% 1/6W	4
R557			
R4C3 P415 R424	401K5689	R,CARBON 4.7K 5% 1/6W	8
R551 R8C8E R8C8G			
R8C8R			
R1 R5B0 R5E5	401K5691	R,CARBON 5.6K 5% 1/6W	10
R5C2 R826 R865			
R866 R872 R883			
R929			
R4C2 R484 R515	401K5697	R,CARBON 6.8K 5% 1/6W	7
R7C3E R7C3C R7C3P			
R825			
△R2C04 △R2C0E R4C1	401K5695	R,CARBON 8.2K 5% 1/6W	12
R5C6 R5C6 R552			
R7C9 R715 R719			
R868 R869 R875			
△R2C06 △R2C1C R4B8	401K5697	R,CARBON 10K 5% 1/6W	23
R412 R452 R453			
R455 R5C4 R553			
R555 R556 R563			
R595 R725 R813			
R816 R832 R851			
R862 R871 R891			
R897 R92C			
△R2C11 R4C0 R449	401K5699	R,CARBON 12K 5% 1/6W	11
R514 R587 R713			
R714 R864 R877			
R882 R921			
R4E1 R4E2 R4E6	401K57C1	R,CARBON 15K 5% 1/6W	18

SYMBOL			PARTS NO	DESCRIPTION	QTY
R4E7	R416	R472			
R477	R5A7	R573			
R577	R5E1	R5E9			
R592	R717	R8C9E			
R8C9C	R8C9P	R859			
R4A6	R430	R431	401K5705	R,CARBON 22K 5% 1/6W	10
R434	R436	R5C5			
R559	R597	R87F			
R892					
R55E	R716		401K5707	R,CARBON 27K 5% 1/6W	2
R427	R596	R917	401K5709	R,CARBON 33K 5% 1/6W	6
R91E	R919	R923			
R924	R925				
△R2012			401K5711	R,CARBON 39K 5% 1/6W	1
R42C	R454	R4E5	401K5713	R,CARBON 47K 5% 1/6W	7
R486	R4E7	R8E7			
R889					
R594	R855		401K5715	R,CARBON 56K 5% 1/6W	2
R432	R926	R927	401K5717	R,CARBON 68K 5% 1/6W	4
R92E					
R5A9	R85C		401K5719	R,CARBON 82K 5% 1/6W	2
R429	R479	R4E0	401K5721	R,CARBON 100K 5% 1/6W	11
R4E1	R4E3	R4E9			
R5A8	R590	R829			
R83C	R831				
R4E5	R419	R497	401K5727	R,CARBON 180K 5% 1/6W	7
R49E	R914	R915			
R916					
R535	R591	R876	401K5729	R,CARBON 220K 5% 1/6W	6
R90E	R909	R910			
R911	R912	R913	401K5731	R,CARBON 270K 5% 1/6W	3
R593			401K5739	R,CARBON 560K 5% 1/6W	1
R51E			401K5745	R,CARBON 1.0M 5% 1/6W	1
R4E2			401K5753	R,CARBON 2.2M 5% 1/6W	1
R5C4			40175109	R,CARBON 2.2H 5% 1/4W	1
△R42E			40175133	R,CARBON 22H 5% 1/4W	1
△R7C7E	△R7C7G	△R7C7R	40175141	R,CARBON 47H 5% 1/4W	6
△R7C8E	△R7C8G	△R7C8P			
△R63C	△R632	△P634	40175143	R,CARBON 56H 5% 1/4W	3
△R626	△R671		40175157	R,CARBON 220H 5% 1/4W	2
△R65E			40175161	R,CARBON 330H 5% 1/4W	1
△R612	△R614		40175183	R,CARBON 2.7K 5% 1/4W	2
△R661			40175185	R,CARBON 3.3K 5% 1/4W	1
△R623			40175189	R,CARBON 4.7K 5% 1/4W	1
△R5C9			40178117	R,CARBON 4.7H 5% 1/2W	1
△R6C1			40299107	R,WIRE 15H 102 5W	1
R7C6B	R7C6G	R7C6R	40315179	R,METAL 1.8K 5% 5W	3
R5CE			40371135	R,METAL 27H 5% 1W	1

SYMBOL			PARTS NO	DESCRIPTION	QTY
△R667			40371137	R,METAL 33H 5% 1W	1
R5C7			40371143	R,METAL 56H 5% 1W	1
R44C			40371149	R,METAL 100H 5% 1W	1
R824			40371161	R,METAL 330H 5% 1W	1
R433			40371165	R,METAL 470H 5% 1W	1
R537			40371169	R,METAL 680H 5% 1W	1
R435			40372103	R,METAL 1.2H 5% 2W	1
△R615	△R624		40372107	R,METAL 1.8H 5% 2W	2
△R613			40372142	R,METAL 56H 5% 2W	1
△R622			40372145	R,METAL 68H 5% 2W	1
△R6C7			40372147	R,METAL 82H 5% 2W	1
△R616	△R625		40372149	R,METAL 100H 5% 2W	2
R426			40372157	R,METAL 220H 5% 2W	1
R53C			40372161	R,METAL 330H 5% 2W	1
R493			40372163	R,METAL 390H 5% 2W	1
R517			40372185	R,METAL 3.3K 5% 2W	1
△R652			40372203	R,METAL 18K 5% 2W	1
△R654			40372205	R,METAL 22K 5% 2W	1
△R665			40372217	R,METAL 68K 5% 2W	1
R511			40373163	R,METAL 390H 5% 3W	1
R512			40373165	R,METAL 470H 5% 3W	1
△R61C			40373181	R,METAL 2.2K 5% 3W	1
△R653			40373195	R,METAL 8.2K 5% 3W	1
△R66C			40373197	R,METAL 10K 5% 3W	1
△R659	△R67G		40373203	R,METAL 18K 5% 3W	2
△R617	△R629		40373221	R,METAL 100K 5% 3W	2
△R6C4			40399C34	R,METAL 2.2K 5% 2W	1
R811B	R811C	R811R	40401646	R,METAL 75H 1% 1/6W	3
R810E	R810G	R810P	40401653	R,METAL 150H 1% 1/6W	3
R82C			40401657	R,METAL 220H 1% 1/6W	1
R8C4E	R8C4G	R8C4R	40401661	R,METAL 330H 1% 1/6W	6
R8C6E	R8C6G	R8C6P			
R8C3E	R8C3G	R8C3P	40401669	R,METAL 680H 1% 1/6W	6
R8C5E	R8C5G	R8C5P			
R417I			40401677	R,METAL 1.5K 1% 1/6W	1
R417G	R422		40401681	R,METAL 2.2K 1% 1/6W	2
R41E			40401683	R,METAL 2.7K 1% 1/6W	1
R417	9421		40401687	R,METAL 3.9K 1% 1/6W	2
R4C4	9E22		40401691	R,METAL 5.6K 1% 1/6W	2
R417C	95E4		40401694	R,METAL 7.5K 1% 1/6W	2
R821			40401695	R,METAL 8.2K 1% 1/6W	1
R4E1	R818E	R812G	40401697	R,METAL 10K 1% 1/6W	7
R818R	R819E	R819G			
R815R					
R417D	R562		40401699	R,METAL 12K 1% 1/6W	2
R4A2	R4A4	R4C5	40401701	R,METAL 15K 1% 1/6W	5

SYMECL	PARTS NO	DESCRIPTION	QTY
R417A R417E	404C17C4	R,METAL 20K 1% 1/6W	1
R561	404C17C7	R,METAL 27K 1% 1/6W	1
R407 P532	404C1711	R,METAL 39K 1% 1/6W	2
R417E R531 R568	404C1717	R,METAL 68K 1% 1/6W	3
R464	404C1719	R,METAL 82K 1% 1/6W	1
R4C6 P564 R565	404C1721	R,METAL 100K 1% 1/6W	4
R566			
R409 R460 R466	404C1723	R,METAL 120K 1% 1/6W	8
R570 R571 R572			
R575 R579			
R5A5	404C1725	R,METAL 150K 1% 1/6W	1
R469	404C1727	R,METAL 180K 1% 1/6W	1
R4A9 R459 R5A4	404C1728	R,METAL 200K 1% 1/6W	4
R576			
R408 R474	404C1729	R,METAL 220K 1% 1/6W	2
R58C	404C1731	R,METAL 270K 1% 1/6W	1
R569	404C1737	R,METAL 470K 1% 1/6W	1
R462	404C1739	R,METAL 560K 1% 1/6W	1
R476	404K2717	R,METAL 68K 1% 1/4W	1
R471	404K2723	R,METAL 120K 1% 1/4W	1
△R2CC1 △R2C07 △R5C5	40405109	R,METAL 2.2H 5% 1/4W	4
△R513	40405109	R,METAL 2.2H 5% 1/4W	4
R5E1	40405117	R,METAL 4.7H 5% 1/4W	1
△R5C1	40812649	R,FUSE 100H 5% 1/2W	1
△R524	40812661	R,FUSE 330H 5% 1/2W	1
△R525 △R528	40812665	R,FUSE 470H 5% 1/2W	2

*** CAPACITORS ***

△C867	42099519	C,CERAMIC 50V 3300PF	1
△C518	42099557	C,CERAMIC 500V 330UF	1
C511 △C517 △C519	42099560	C,CERAMIC 500V 560PF	2
C513 C912 C913	42099563	C,CERAMIC 500V 0.001UF	4
C914			
C905 C906 C907	42099567	C,CERAMIC 500V 2200PF	4
C908			
C512	4201J575	C,CERAMIC 500V 0.01UF	1
C911	42019175	C,CERAMIC 2KV 0.01UF	1
C521 △C626	4203J554	C,CERAMIC 500V 180PF	2
C710 C711 C712	4203J575	C,CERAMIC 500V 0.01UF	3
△C603 △C604	42053C13	C,CERAMIC 400V 1000PF	2
△C606	42053C67	C,CERAMIC 400V 2200PF	1
△C663	42099C82	C,CERAMIC 2KV 1500PF	1
△C622 △C623 △C624	42099C85	C,CERAMIC 2KV 560PF	4
△C625			
△C612 △C618	42099C89	C,CERAMIC 2KV 220PF	2
C453 C454 C554	421A0425	C,CERAMIC 50V 0.01UF	11

SYMBOL	PARTS NO	DESCRIPTION	QTY
C564 C567 △C571			
C809B C809G C809R			
C817 C818			
C855 C866	421C0213	C,CERAMIC 50V 1000PF	2
C854	421C0215	C,CERAMIC 50V 1500PF	1
C2	421C0225	C,CERAMIC 50V 0.01UF	1
C414 C510 △C525	421J9CC1	C,CERAMIC 50V 0.1UF	16
C572 C701 C702			
C703 C717 C802			
C804 C806 C811			
C812 C819 C820			
C916			
C904 C909	421J9C35	C,CERAMIC 16V 0.1UF	2
C410	423A1039	C,CERAMIC 50V 56PF	1
C704 C705 C706	423A1041	C,CERAMIC 50V 68PF	3
C561 C565	423A1053	C,CERAMIC 50V 220PF	2
C408 C551 C562	423A1101	C,CERAMIC 50V 470PF	4
C566			
C556	423A1104	C,CERAMIC 50V 680PF	1
C856	423A2027	C,CERAMIC 50V 18PF	1
C503 C552	427A7005	C,FILM 100V 0.0022UF	2
C502	427A7007	C,FILM 100V 0.0033UF	1
C857	427F4001	C,FILM 50V 1000PF	1
C452	427F4025	C,FILM 50V 0.1UF	1
C405	427F4051	C,FILM 50V 1000PF	1
C505	427F4058	C,FILM 50V 3900PF	1
C425 C451	427F4059	C,FILM 50V 4700PF	2
C427	427F4060	C,FILM 50V 5600PF	1
C403	427F4061	C,FILM 50V 6800PF	1
C409	427F4064	C,FILM 50V 0.012UF	1
C507	427F4065	C,FILM 50V 0.015UF	1
△C608 △C614	427F4069	C,FILM 50V 0.033UF	2
C501 C506	427F4071	C,FILM 50V 0.047UF	2
△C656	427F4073	C,FILM 50V 0.068UF	1
△C607 C715 C852	427F4075	C,FILM 50V 0.1UF	3
△C515	42703863	C,MYLAR 400V 0.01UF	1
△C575	42703865	C,FILM 400V 0.15UF	1
C522	42754267	C,FILM 200V 0.022UF	1
△C628	42760C17	C,FILM 50V 0.022UF	1
C401	42760C55	C,FILM 50V 2200PF	1
△C655	4279JC58	C,FILM 100V 5600PF	1
△C613 △C619 △C659	42799C99	C,MYLAR 400V 0.033UF	3
△C514E	42807519	C,METAL FILM 1.6KV 5600PF	1
△C514A	42808591	C,METAL FILM 1.6KV 2500PF	1
C404	4282CC25	C,METAL FILM 50V 1UF	1
△C602	42824325	C,FILM 250V 0.1UF	1

SYMBOL	PARTS NO	DESCRIPTION	QTY
△C601	42224329	C,FILM 250V 0.22UF	1
△C661	42240131	C,METAL FILM 250V 0.068UF	1
C9C1 C902 C903	42299010	C,METAL FILM 250V 0.22UF	3
△C627	42299029	C,METAL FILM 250V 0.1UF	1
△C520 △C569 △C570	42299042	C,METAL FILM 400V 0.64UF	3
C402	430A4105	C,ELEC 50V 1UF	1
C810E C810G C810R	430A4107	C,ELEC 50V 2.2UF	3
C853 C860 C861	430A9062	C,ELEC 50V 2.2UF	3
C807E C807G	430B3049	C,ELEC 16V 47UF	2
C412	430B3090	C,ELEC 35V 100UF	1
C413	430B3091	C,ELEC 35V 220UF	1
△C660	430B3101	C,ELEC 50V 0.47UF	1
C707 C708 C709	430B3182	C,ELEC 160V 1UF	3
△C611 △C617	430B5051	C,ELEC 16V 220UF	2
△C610 △C616	430B5053	C,ELEC 16V 470UF	2
△C609 △C615	430B5105	C,ELEC 50V 4.7UF	2
△C620 △C621	430B5107	C,ELEC 50V 22UF	2
△C2002 △C2005 C719	430B6015	C,ELEC 10V 47UF	4
C815			
C503	430B6016	C,ELEC 10V 100UF	1
C504 C814	430B6017	C,ELEC 10V 220UF	2
C502	430B6020	C,ELEC 10V 1000UF	1
C5E2 C801 C816	430B6025	C,ELEC 16V 10UF	7
C858 C862 C864	430B6025	C,ELEC 16V 10UF	7
C423 C455 C456	430B6026	C,ELEC 16V 22UF	4
C457			
C713	430B6027	C,ELEC 16V 33UF	1
C803 C807R C808R	430B6028	C,ELEC 16V 47UF	6
C808G C808R C851			
C714 C805	430B6029	C,ELEC 16V 100UF	2
C429 C509 C813	430B6030	C,ELEC 16V 220UF	3
C416 C506 C507	430B6031	C,ELEC 16V 330UF	3
C553 C563	430B6032	C,ELEC 25V 10UF	2
C5E1	430B6041	C,ELEC 25V 47UF	1
C419 C505	430B6054	C,ELEC 25V 100UF	2
C501	430B6054	C,ELEC 35V 330UF	1
△C2004	430B6065	C,ELEC 50V 10UF	1
C421 C422	430B6066	C,ELEC 50V 22UF	2
△C2001	430B6068	C,ELEC 50V 47UF	1
C523	430B6536	C,ELEC 200V 10UF	1
C863 C865	4301J029	C,ELEC 16V 100UF	2
△C653	43020170	C,ELEC 100V 100UF	1
△C651	43020172	C,ELEC 100V 330UF	1
△C664	43020182	C,ELEC 160V 1UF	1
C516 △C657 △C658	43020190	C,ELEC 160V 100UF	4

SYMBOL	PARTS NO	DESCRIPTION	QTY
△C662			
△C654	43020090	C,ELEC 35V 100UF	1
△C652	4302J058	C,ELEC 35V 1000UF	1
C718	43026032	C,ELEC 16V 470UF	1
C420	43026073	C,ELEC 50V 1000UF	1
△C605	4310B105	C,ELEC 400V 220UF	1
C850	433A3022	C,ELEC 16V 10UF	1
C424	433A3023	C,ELEC 16V 22UF	1
C415	433A3025	C,ELEC 16V 47UF	1
C716	433A3043	C,ELEC 35V 4.7UF	1
C428	435A5053	C,TANTALUM 16V 4.7UF	1
C418	435A5055	C,TANTALUM 16V 10UF	1
C504	435A5071	C,TANTALUM 35V 1UF	1
C859	435A5073	C,TANTALUM 35V 2.2UF	1
C555 C557	435A8254	C,TANTLM 25V 3.3UF	2

REPLACEMENT PARTS LIST

The components specified for Model JC-1402HMED

Note: The components identified by Δ mark are critical for safety.
Replace only with parts Number specified.

SYMBOL	PARTS NO	DESCRIPTION	QTY
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*** CPT & TUNER ***

Δ CRT	33014147	CPT M34JUP23XX15E (2)	1
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*** ICS ***

IC453	IC454	IC554	37011054	IC UPC339C (COMP)	3
IC456	IC557	IC559	37051036	MOS UPD40668C (ESD)	3
IC850			37051096	IC SN74LS367AN (BUFF)	1
IC851	IC852		37051179	IC SN74LS123N (MONO MLT)	2
IC803	IC804	IC805	37052011	IC SN74LS136N (EX-OP)	4
IC853					
IC451	IC551		37056178	IC UPC1555C	2
IC452	IC552	IC553	37056207	IC UPC35E	3
IC555	IC556		37056217	MOS TC4538BP	2
IC501			37056219	IC STR200E	1
IC502			37056220	IC STR2012	1
IC802			37056245	IC MS1387P	1
Δ IC602			37056259	IC STK-74C4H-10S	1
Δ IC601			37056353	IC STK74CAH	1
Δ IC401			37056408	IC HA11423DP-1E	1
IC801			37056421	MOS PC28C-40	1
IC402			37056427	IC UPC149FH	1

*** TRANSISTORS ***

TR5E2			350D7217	TR,2SC945-T G	1
TR403	TR408		350E3212	TR,2SC2002-T L	2
Δ TR2002	TR401	TR405	350E651F	TR,2SC1740-T P	23
TR407	TR409	TR45E			
TR459	TR462	TR5E2			
TR503	TR552	TR715			
TR71E	TR810	TR811			
TR812	TR851	TR852			
TR857	TR859	TR860			
TR863	TR908				
TR905	TR906	TR907	350H4417	TR,2SC1473-TA G	3
TR558	TR704	TR705	350H5017	TR,2SC3811-TA G	14
TR706	TR804	TR805			
TR806	TR807	TR808			
TR809	TR825	TR853			
TR854	TR858				
TR404			350K4412	TR,2SA952 L,AT	1
Δ TR2001	TR402	TR406	350K451E	TR,2SA933-T R	12
TR410	TR461	TR713			
TR714	TR716	TR717			
TR801	TR802	TR803			

SYMBOL	PARTS NO	DESCRIPTION	QTY		
TR901	TR902	TR903	350K5217	TR,2SA1018-TA Q	3
TR904			350K521E	TR,2SA1018-TA R	1
TR710	TR711	TR712	35006PC4	TR,2SA153E-PA D	3
Δ TR601	Δ TR602		35047216	TR,2SC945 P	2
Δ TR651	Δ TR652	Δ TR653	35053011	TR,2SC1941 K	3
TR501			35056311	TR,2SC2688 K	1
TR5E1			35065416	TR,2SD882 P	1
TR502	TR813		35065912	TR,2SD471 L	2
Δ TR502			35082401	TR,2SC3486-YB	1
TR701	TR702	TR703	35082505	TR,2SC3502 E	3
TR707	TR708	TR709	35086004	TR,2SC3953-PA D	3
TR453	TR454	TR455	351G0500	TR,AA1A4M-T	5
TR456	TR457				
TR463	TR464	TR856	351G0501	TR,AA1A4M-T	7
TR861	TR862	TR868			
TR869					
TR452	TR465	TR466	351G0531	TR,AA1L4M-T	5
TR467	TR557				
TR817	TR818	TR819	351G0600	TR,DTA114ES-T	6
TR821	TR822	TR826			
TR1	TR451	TR719	351G0601	TR,CTC114ES-T	13
TR823	TR824	TR827			
TR828	TR829	TR855			
TR864	TR865	TR866			
TR867					
TR814	TR815	TR816	351G0613	TR,DTC123YS-T	3
Δ TR553	Δ TR554		35122100	TR,2SK703	2
Δ TR555			35122200	TR,2SK854	1
CP5C1	Δ CR602	Δ CR603	35595010	THYRISTOR C3F4M-L	3
Δ CR601			35595015	TPIAC AC10FGM	1

*** DIODES ***

D701	D702	D703	360K1009	DIODE,SI,1S2473	9
D704	D705	D706			
D707	D708	D709			
Δ D609	Δ D610	Δ D653	360K1010	DIODE,SI,1S2472	10
Δ D654	Δ D658	Δ D659			
Δ D661	Δ D662	Δ D663			
D713					
D2	D3	D402	360K1027	DIODE 1SS132	44
D403	D404	D405			
D406	D407	D451			
D452	D453	D454			
D503	D551	D552			
D553	D710	D711			
D712	D801	D802			
D803	D804	D805			
D806	D807	D808			
D809	D810	D811			

SYMBOL			PARTS NO	DESCRIPTION	QTY
D812	D813	D814	360K1027	DIODE 1SS132	44
D815	D816	D817			
D818	D819	D820			
D821	D822	D823			
D824	D850				
△D607	△D608	D9C1	360K1032	DIODE 1SS82-TA	5
D9C2	D9C3				
ZD4C2	ZD85C	ZD851	360K3100	DIODE RD5.1EB (2)-T4	3
ZD5C1			360K3121	DIODE RD6.8EB(3)-T4	1
ZD4C4			360K3123	DIODE RD2CEB(3)	1
ZD7C1			360K3124	DIODE RD8.2EB (3)-T4	1
△ZD6C4			360K3129	DIODE RD27EB(4)-T4	1
△ZD6C5			360K3137	DIODE RD7.5EB(2)-T4	1
△ZD2C01	△ZD2C02		360K3143	DIODE RD8.2JSB(1)-T4	2
△ZD6C2			360K3149	DIODE RD1CEB(2)-T4	1
△ZD655	△ZD66C		360K3151	DIODE RD6.8EB(2)-T4	2
ZD5C2			360K3160	DIODE RD8.2EB(2)-T4	1
△ZD611			360K3162	DIODE RD2.7EB(1)-T4	1
ZD5C3			360K3188	DIODE RD3.9EB(2)-T4	1
ZD5C1			360K3400	DIODE RD12JSB-T4	1
ZD4C1			360K3401	DIODE PD2CJSE-T4	1
ZD8C2			360K3635	DIODE RD5.1FSE(2)-T4	1
ZD8C1			360K3660	DIODE RD9.1ESE(3)-T4	1
ZD5E1			36003170	RECTIFIER, SI, RD6.2JSB(2)	1
△D2C01	△D2C04	D4C1	361K7160	RECTIFIER, SI, TVR-C6G G23	8
D5C1	D5C2	D5C7			
△D554	△D555		361K7505	RECTIFIER, SI, ERB44-C6V1	1
D5C2			36107174	RECTIFIER, SI, RU1P	2
△D6C3	△D6C6				
△D651			36107305	DIODE RU2F	1
△D5C1			36107509	DIODE RH4F	1
△D652			36107511	RECTIFIER, SI, RL4Z, LFK2	1
△D657			36107512	RECTIFIER, SI, RG4C, LFK2	1
FD8C2			36108092	DIODE ARRAY 1S2473X9A	1
FD8C1			36108093	DIODE 1S2473X9K	1
△D6C1			36108201	DIODE NETWORK D55BA6CS	1
D1			36801023	DIODE, LIGHT-E SEL1320G	1
△D2C02	△D2C05		32005011	VARIATER, VD1220	2
△TH6C1			38112031	THERMISTOR, POSITIVE	1
△PC6C1	△PC6C2		38200233	IC TLP634(NHE-LF2)	2

*** TRANSFORMERS ***

T5C1	458C3008	TRANS, H. DRIVE	1
T5C3	46305101	TRANS, CONVERTER	1
△T6C1	4630P4C7	TRANS, SWITCHING	1
△T6C2	4630E4C8	TRANS, SWITCHING	1

SYMBOL	PARTS NO	DESCRIPTION	QTY
△T5C2	47105640	F.E.T	1
△T4C1	47502042	TRANS, SIDE PINCLSHION	1

*** VARIABLE RESISTORS ***

VR4	41011270	R, VARIABLE B500-V(M)	1		
VR3	41011273	R, VARIABLE B20K-V(M)	1		
VR5	41011275	R, VARIABLE B20K-V(M)	1		
VR1	41C23603	R, VARIABLE B10K-V	2		
VR4C3	41061C09	R, VARIABLE B47K	1		
VR4C2	41067C03	R, VARIABLE 300H 0.1W	1		
VR5E1	41067C05	R, VARIABLE 1K 0.1W	1		
VR4C1	41067C08	R, VARIABLE 5K	2		
VR8C1	41071161	R, VARIABLE B4.7K	3		
VR7C2	41071163	R, VARIABLE B10K	1		
VR7C1	41071215	R, VARIABLE B22K	1		
VR4C5	41085C04	R, VARIABLE B500H	1		
VR5C1	410P5C08	R, VARIABLE B5K	1		
VR551	41085C09	R, VARIABLE B10K	1		
VR451	41085C10	R, VARIABLE B20K	5		
VR554	VR555				
VR9C7	41085C11	R, VARIABLE B30K	1		
VR9C1	410P5C13	R, VARIABLE B100K	6		
VR9C4	VR905	VR9C6			
VR5C2	41085C14	R, VARIABLE B200K	1		
△VR651	41087C58	R, VARIABLE B5K	1		
△VR2C01	△VR2002	△VR652	41505C05	R, VARIABLE B2K	3
△VR2C03	△VR653		41505C08	R, VARIABLE B10K	2

*** RELAYS & SWITCHES ***

SW3	65161021	SWITCH, SLIDE	1
SW8C3	65161029	SWITCH, SLIDE	1
SW1	65161C34	SWITCH, SLIDE	2
SW8C1	65161C35	SWITCH, SLIDE	2
△SW1	65360C06	SWITCH, PUSH BUTTON	1
△RL1	656025C1	RELAY G6P-1114P	1
RL8C2	65602551	RELAY	1
RL8C1	65699C12	RELAY RY120W (2T)	2

*** COILS & FILTERS ***

LC7C2	39099C15	FILTER ZJSC-2R2-101	1
△L503	60908047	COIL, WIDTH	1
L505	60908062	COIL	1
△L506	60918101	COIL, H. LIN	1

SYMBOL	PARTS NO	DESCRIPTION	QTY
△L5C7	60999004	COIL, CHOKE	1
L7C1 L7C2 L7C3	610E1711	COIL, FILTER 3.3UH	6
L9C1 L9C2 L9C3	610E1712	COIL, FILTER 3.9UH	3
L7C4 L7C5 L7C6	610E1714	COIL, FILTER 5.6UH	2
L8C1 L8C2	610F7C10	COIL, FILTER 2.7UH	1
L5C2	61022C82	FILTER CHOKE	1
L5C2	61022C82	FILTER CHOKE	1
△L6C1	61062C40	LINE FILTER (12MH-1.3A)	1
	61062C97	LINE FILTER GL-2C30F	1
L5C1 L501	61064C06	COIL, FILTER 50UH	2
△L6C2 △L651 △L657	61099C11	COIL, CHOKE 33UH	3
△L652	61099C14	COIL 33CK1.E	1
L5C3 L5C5	61099C19	COIL, CHOKE	2
△LC7C1	61314210	COIL, DEGAUSSING	1
LC8C1	61606C21	NOISE FILTER DSS-271M	1
LC8C1	61606C22	FILTER DSS-223S	1

*** PWB ASSYS ***

	84K10C04	INPUT PWB ASSY	1
	84K29AC1	SW. REG. PWB ASSY	1
	84K290C1	DEF PWB ASSY	1
	84K29JC1	CRT PWB ASSY	1
	84K29KC1	INTERFACE PWB ASSY	1

*** ELECTRICAL PARTS & MISCELLANEOUS PARTS ***

HS-4C2	317092C1	INSULATOR SHEET	1
HS-5C2	317092C2	SHEET, INSULATOR	1
	317095C3	SHEET, INSULATOR	1
	32500C2E	ADAPTER (9P-15P)	1
SG9C1 SG9C2 SG9C3	32990C47	ARRESTER	3
△F6C1 △F651	66699C07	FUSE ET T2A, 250V-S, R SOC	2
SG9C5	66796C01	SPARK GAP 1.2KV	1
△	70032G26	SG/CRT SOCKET	1
	70102147	IC SOCKET 24P	1
△	70800C31	LINE CORD	1
	71205C37	HOLDER, FUSE	4
CN-RH CN-RH1 CN-RH2	73721C03	CONNECTOR PIN 2P	5
CN-RH3	73893C29	CABLE 9P-9P	1
	70056358	D SUB CONNECTOR 9PL	1

*** APPEARANCE PARTS ***

	24514792	COIL SPRING	1
	25307972	CABINET BACK	1
	25402441	REVOLVING STAND T	1
	25308811	CABINET, FRONT	1

SYMBOL	PARTS NO	DESCRIPTION	QTY
	25405971	REVOLVING STAND(B) ASSY	1
	25407381	CONTROL LID ASSY	1
	25766741	NAME PLATE, INSTRUCTION	1

*** KNOBS & PUSH BUTTONS ***

	25451881	KNOB, CONTROL	2
	25452301	PUSH BUTTON	1

*** PRINTED & PACKING MATERIALS ***

	24806961	BAG, POLYETHYLENE (270*370)	1
	24813191	BAG, POLYETHYLENE (150*370)	1
	25280161	GUIDE RAIL	1
	25601551	CUSHION SHEET	4
	25603511	BARRIER (SW. REG. FWB)	1
	25605021	CUSHION SHEET	2
	25605361	PLATE, SHIELDING	1
	25804991	BAG, POLYETHYLENE	1
	25813912	FILLER (L), CARTON	1
	25813922	FILLER (R), CARTON	1
	599910271	CIRCUIT DESCRIPTION	1
	25815081	CARTON BOX	1
	78046231	PTE CARD	1
	78120214	INSTRUCTION BOOK	1
	78034401	MONITOR SALES OFFICE LIST	1
	599910266	SERVICE MANUAL	1

*** RESISTORS ***

R5B1	4C106637	R, CARBON 33H 5% 1/4W	1
R503	4C106667	R, CARBON 560H 5% 1/4W	1
R501	4C106673	R, CARBON 1.0K 5% 1/4W	6
△R611 △R602 △R6CF			
△R609 △R619 △R663			
△R662	4C106675	R, CARBON 1.2K 5% 1/4W	2
	4C106679	R, CARBON 1.8K 5% 1/4W	1
R5E2	4C106681	R, CARBON 2.2K 5% 1/4W	1
R527	4C106683	R, CARBON 2.7K 5% 1/4W	2
R5A2 R592 R599	4C106685	R, CARBON 3.3K 5% 1/4W	6
△R62E △R633 △R656			
R49C △R636 △R655	4C106691	R, CARBON 5.6K 5% 1/4W	4
△R666			
R585	4C106693	R, CARBON 6.8K 5% 1/4W	1
R467	4C106701	R, CARBON 15K 5% 1/4W	1
R44E	4C106703	R, CARBON 18K 5% 1/4W	1
△R664	4C106705	R, CARBON 22K 5% 1/4W	1
△R627	4C106707	R, CARBON 27K 5% 1/4W	1
R482 R488	4C106721	R, CARBON 100K 5% 1/4W	2
△R657	4C106723	R, CARBON 120K 5% 1/4W	1

SYMBOL			PARTS NO	DESCRIPTION	QTY
R473			401C6757	R,CARBON 3.3M 5% 1/4W	1
R478	R5A6	R574	401C6761	R,CARBON 4.7M 5% 1/4W	5
R578	R5E2				
R51C			401H5623	R,CARBON 8.2H 5% 1/2W	1
R451			401H5646	R,CARBON 75H 5% 1/2W	1
R904	R9C5	R9C6	401H5649	R,CARBON 100H 5% 1/2W	3
R704E	R704G	R704R	401H5651	R,CARBON 12CH 5% 1/2W	3
R823			401H5655	R,CARBON 18CH 5% 1/2W	1
R828			401H5661	R,CARBON 33CH 5% 1/2W	1
R45C			401H5663	R,CARBON 39CH 5% 1/2W	1
R526			401H5669	R,CARBON 62CH 5% 1/2W	1
R4A1	R4B4		401H5673	R,CARBON 1.0K 5% 1/2W	2
R5B2	R5F3		401H5683	R,CARBON 2.7K 5% 1/2W	2
R5C9	R936		401H5689	R,CARBON 4.7K 5% 1/2W	2
ΔR6C5	ΔR6C6		401H5735	R,CARBON 39CK 5% 1/2W	2
ΔR6C3			401H5743	R,CARBON 82CK 5% 1/2W	1
ΔR61E			401H5753	R,CARBON 2.2M 5% 1/2W	1
R71C	R815		401K5625	R,CARBON 10H 5% 1/6W	2
R702E	R702G	R702R	401K5647	R,CARBON 82H 5% 1/6W	6
R705E	R705G	R705R			
R413	R5C3		401K5649	R,CARBON 100H 5% 1/6W	2
R414			401K5651	R,CARBON 12CH 5% 1/6W	1
R724	R853		401K5657	R,CARBON 22CH 5% 1/6W	2
R8C7G			401K5659	R,CARBON 27CH 5% 1/6W	1
R935			401K5661	R,CARBON 33CH 5% 1/6W	1
R5C8	R817E	R817G	401K5665	R,CARBON 47CH 5% 1/6W	4
R817R					
R417H	R496	R567	401K5667	R,CARBON 56CH 5% 1/6W	6
R701E	R701G	R701P			
R712	R8C7F		401K5669	R,CARBON 68CH 5% 1/6W	2
R4A8	R4E3	R423	401K5673	R,CARBON 1.0K 5% 1/6W	20
R5C2	R5C7	R534			
R536	R720	R721			
R722	R832	R833			
R834	R835	R836			
R837	R9C1	R9C2			
R9C3	R934				
R827			401K5675	R,CARBON 1.2K 5% 1/6W	1
R495	R516	R711	401K5677	R,CARBON 1.5K 5% 1/6W	11
R8C1E	R8C1G	R8C1P			
R8C2E	R8C2G	R8C2P			
R895	R896				
ΔR2C2	R447		401K5679	R,CARBON 1.8K 5% 1/6W	2
R2	R4A7	R436	401K5681	R,CARBON 2.2K 5% 1/6W	26
R456	R457	R458			
R5E3	R529	R814			
R852	R854	R857			
R858	R860	R861			
R862	R867	R873			

SYMBOL			PARTS NO	DESCRIPTION	QTY
R874	R884	R885	401K5681	R,CARBON 2.2K 5% 1/6W	26
R886	R888	R890			
R893	R931				
ΔR2C3	R411	R718	401K5683	R,CARBON 3.7K 5% 1/6W	6
R723	R863	R881			
ΔR2C5	ΔR2C09	R437	401K5685	R,CARBON 3.3K 5% 1/6W	12
R494	R584	R726			
R812E	R812G	R812R			
R856	R870	R922			
R439	R522	R533	401K5687	R,CARBON 3.9K 5% 1/6W	4
R557					
R403	R415	R424	401K5689	R,CARBON 4.7K 5% 1/6W	8
R551	R8C8B	R8C8G			
R8C8R	R879				
R1	R5B0	R5E5	401K5691	R,CARBON 5.6K 5% 1/6W	10
R5C2	R826	R865			
R866	R872	R883			
R929					
R402	R484	R515	401K5693	R,CARBON 6.8K 5% 1/6W	7
R7C3E	R7C3G	R7C3R			
R825					
ΔR2004	ΔR2C0E	R4C1	401K5695	R,CARBON 8.2K 5% 1/6W	11
R5C6	R5C6	R552			
R7C9	R715	R868			
R869	R875				
ΔR2C6	ΔR2C1C	R4E8	401K5697	R,CARBON 10K 5% 1/6W	21
R412	R452	R457			
R455	R504	R553			
R555	R556	R563			
R595	R725	R813			
R816	R838	R851			
R871	R891	R897			
ΔR2C11	R4C0	R449	401K5699	R,CARBON 12K 5% 1/6W	11
R514	R587	R713			
R714	R864	R877			
R882	R921				
R4B1	R4B2	R4E6	401K5701	R,CARBON 15K 5% 1/6W	19
R4E7	R416	R472			
R477	R5A7	R573			
R577	R581	R589			
R592	R717	R8C9E			
R8C9G	R8C9R	R859			
R92C					
R4A6	R470	R431	401K5705	R,CARBON 22K 5% 1/6W	10
R434	R438	R5C5			
R559	R597	R878			
R892					
R558	R716		401K5707	R,CARBON 27K 5% 1/6W	2
R427	R596	R917	401K5709	R,CARBON 33K 5% 1/6W	8
R918	R919	R923			
R924	R925				
ΔR2C12			401K5711	R,CARBON 39K 5% 1/6W	1

SYMBOL			PARTS NO	DESCRIPTION	QTY
R42C	R454	R485	401K5713	R,CARBON 47K 5% 1/6W	7
R486	R487	R887			
R889					
R594	R855		401K5715	R,CARBON 56K 5% 1/6W	2
R432	R926	R927	401K5717	R,CARBON 68K 5% 1/6W	4
R928					
R5A9	R850		401K5719	R,CARBON 82K 5% 1/6W	2
R429	R479	R480	401K5721	R,CARBON 100K 5% 1/6W	11
R481	R483	R489			
R5A2	R590	R829			
R830	R831				
R4B5	R419	R457	401K5727	R,CARBON 180K 5% 1/6W	7
R49F	R514	R915			
R916					
R535	R591	R876	401K5729	R,CARBON 220K 5% 1/6W	6
R908	R909	R910			
R911	R912	R913	401K5731	R,CARBON 270K 5% 1/6W	2
R593			401K5739	R,CARBON 560K 5% 1/6W	1
R518			401K5745	R,CARBON 1.0M 5% 1/6W	1
R46E			401K5753	R,CARBON 2.2M 5% 1/6W	1
R504			40175109	R,CARBON 2.2H 5% 1/4W	1
△R42E			40175133	R,CARBON 22H 5% 1/4W	1
△R707E	△R707C	△R707P	40175141	R,CARBON 47H 5% 1/4W	6
△R708E	△R708C	△R708R			
△R63C	△R632	△R634	40175143	R,CARBON 56H 5% 1/4W	3
△R626	△R671		40175157	R,CARBON 220H 5% 1/4W	2
△R658			40175161	R,CARBON 330H 5% 1/4W	1
△R612	△R614		40175183	R,CARBON 2.7K 5% 1/4W	2
△R661			40175185	R,CARBON 3.3K 5% 1/4W	1
△R623			40175189	R,CARBON 4.7K 5% 1/4W	1
△R509			40178117	R,CARBON 4.7H 5% 1/2W	1
△R601			40299107	R,WIRE 15H 10% 5W	1
R706E	R706C	R706R	40318179	R,METAL 1.8K 5% 5W	3
R50P			40371135	R,METAL 27H 5% 1W	1
△R667			40371137	R,METAL 33H 5% 1W	1
R507			40371143	R,METAL 56H 5% 1W	1
R44C			40371149	R,METAL 100H 5% 1W	1
R824			40371161	R,METAL 330H 5% 1W	1
R437			40371165	R,METAL 470H 5% 1W	1
R537			40371169	R,METAL 680H 5% 1W	1
R435			40372103	R,METAL 1.2H 5% 2W	1
△R615	△R624		40372107	R,METAL 1.8H 5% 2W	2
△R613			40372143	R,METAL 56H 5% 2W	1
△R622			40372145	R,METAL 68H 5% 2W	1
△R607			40372147	R,METAL 82H 5% 2W	1
△R616	△R625		40372149	R,METAL 100H 5% 2W	2
R426			40372157	R,METAL 220H 5% 2W	1
R53C			40372161	R,METAL 330H 5% 2W	1

SYMBOL			PARTS NO	DESCRIPTION	QTY
R493			40372163	R,METAL 390H 5% 2W	1
R517			40372185	R,METAL 3.3K 5% 2W	1
△R652			40372203	R,METAL 18K 5% 2W	1
△R654			40372205	R,METAL 22K 5% 2W	1
△R665			40372217	R,METAL 68K 5% 2W	1
R511			40373163	R,METAL 390H 5% 3W	1
R512			40373165	R,METAL 470H 5% 3W	1
△R610			40373181	R,METAL 2.2K 5% 3W	1
△R653			40373195	R,METAL 8.2K 5% 3W	1
△R660			40373197	R,METAL 10K 5% 3W	1
△R659	△R670		40373203	R,METAL 18K 5% 3W	2
△R617	△R629		40373221	R,METAL 100K 5% 3W	2
△R604			40399034	R,METAL 2.2K 5% 2W	1
R811E	R811G	R811R	404C1646	R,METAL 75H 1% 1/6W	3
R810E	R810G	R810R	404C1653	R,METAL 150H 1% 1/6W	3
R82C			404C1657	R,METAL 220H 1% 1/6W	1
R804E	R804G	R804R	404C1661	R,METAL 330H 1% 1/6W	6
R806E	R806G	R806R			
R803E	R803G	R803R	404C1669	R,METAL 680H 1% 1/6W	6
R805E	R805G	R805R			
R417I			404C1677	R,METAL 1.5K 1% 1/6W	1
R417E	R422		404C1681	R,METAL 2.2K 1% 1/6W	2
R41E			404C1683	R,METAL 2.7K 1% 1/6W	1
R417	R421		404C1687	R,METAL 3.9K 1% 1/6W	2
R404	R822		404C1691	R,METAL 5.6K 1% 1/6W	2
R417C	R5E4		404C1694	R,METAL 7.5K 1% 1/6W	2
R821			404C1695	R,METAL 8.2K 1% 1/6W	1
R461	R818E	R818G	404C1697	R,METAL 10K 1% 1/6W	7
R818R	R819E	R819G			
R819R					
R417D	R562		404C1699	R,METAL 12K 1% 1/6W	2
R4A2	R4A4	R4C5	404C1701	R,METAL 15K 1% 1/6W	5
R417A	R417E				
R561			404C1704	R,METAL 20K 1% 1/6W	1
R41C			404C1707	R,METAL 27K 1% 1/6W	1
R407	R532		404C1711	R,METAL 39K 1% 1/6W	2
R417E	R531	R56F	404C1717	R,METAL 68K 1% 1/6W	3
R464			404C1719	R,METAL 82K 1% 1/6W	1
R406	R564	R565	404C1721	R,METAL 100K 1% 1/6W	4
R566					
R409	R460	R466	404C1723	R,METAL 120K 1% 1/6W	8
R57C	R571	R572			
R575	R579				
R5A5			404C1725	R,METAL 150K 1% 1/6W	1
R469			404C1727	R,METAL 180K 1% 1/6W	1
R4A9	R459	R5A4	404C1728	R,METAL 200K 1% 1/6W	4
R576					

SYMBOL	PARTS NO	DESCRIPTION	QTY
R408	R474	404C1729 R,METAL 220K 1X 1/6W	2
R580		404C1731 R,METAL 270K 1X 1/6W	1
R569		404C1737 R,METAL 470K 1X 1/6W	1
R462		404C1739 R,METAL 560K 1X 1/6W	1
R476		404K2717 R,METAL 68K 1X 1/4W	1
R471		404K2723 R,METAL 120K 1X 1/4W	1
△R2001	△R2007 △R505	40405109 R,METAL 2.2H 5X 1/4W	4
△R513			
R5E1		40405117 R,METAL 4.7H 5X 1/4W	1
△R501		40812649 R,FUSE 100H 5X 1/2W	1
△R524		40812661 R,FUSE 330H 5X 1/2W	1
△R525	△R528	40812665 R,FUSE 470H 5X 1/2W	2

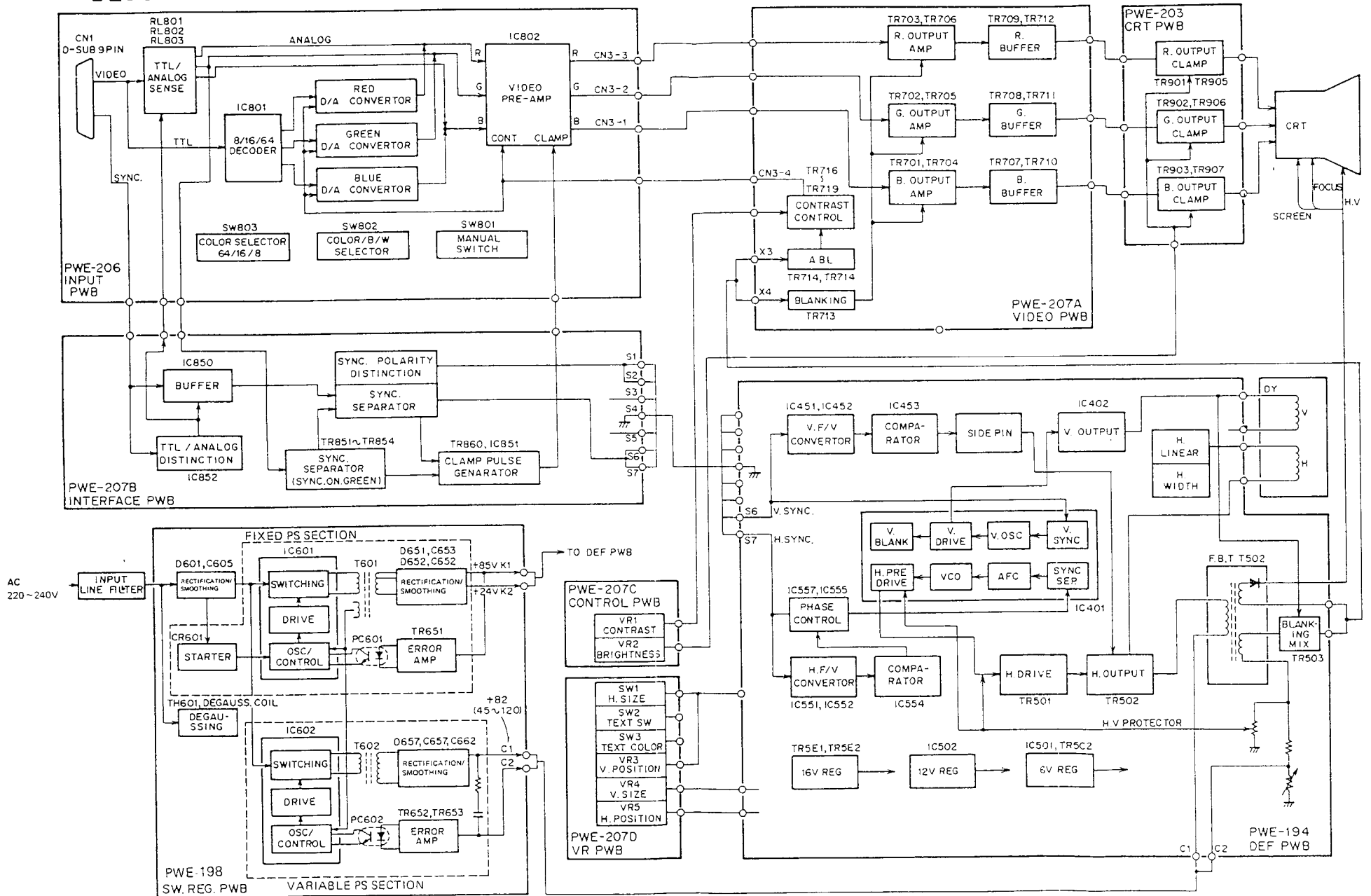
*** CAPACITORS ***

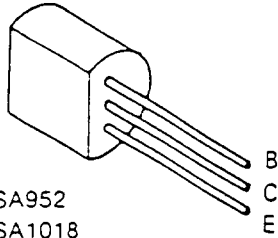
C867		420R9519 C,CERAMIC 50V 3300PF	1
△C518		420C9557 C,CERAMIC 500V 330UF	1
C511	△C517 △C510	420C9560 C,CERAMIC 500V 560PF	3
C513	C912 C913	420C9563 C,CERAMIC 500V 0.001UF	4
C914			
C905	C906 C907	420C9567 C,CERAMIC 500V 2200PF	4
C908			
C512		4201J575 C,CERAMIC 500V 0.01UF	1
C911		42019175 C,CERAMIC 2KV 0.01UF	1
C521	△C626	4203J554 C,CERAMIC 500V 180PF	2
C710	C711 C712	4203J575 C,CERAMIC 500V 0.01UF	3
△C603	△C604	42053C13 C,CERAMIC 400V 1000PF	2
△C606		42053C67 C,CERAMIC 400V 2200PF	1
△C663		42099C82 C,CERAMIC 2KV 1500PF	1
△C622	△C623 △C624	42099C85 C,CERAMIC 2KV 560PF	4
△C625			
△C612	△C618	42099C88 C,CERAMIC 2KV 220PF	2
C453	C454 C554	421A0425 C,CERAMIC 50V 0.01UF	11
C564	C567 △C571		
C809E	C809G C809P		
C817	C818		
C855	C866	42100213 C,CERAMIC 50V 1000PF	2
C854		42100215 C,CERAMIC 50V 1500PF	1
C2		42100225 C,CERAMIC 50V 0.01UF	1
C414	C510 △C525	421J9CC1 C,CERAMIC 50V 0.1UF	16
C572	C701 C702		
C703	C717 C802		
C804	C806 C811		
C812	C819 C820		
C916			
C904	C909	421J9C35 C,CERAMIC 16V 0.1UF	2
C410		423A1C39 C,CERAMIC 50V 56PF	1
C704	C705 C706	423A1C41 C,CERAMIC 50V 68PF	3

SYMBOL	PARTS NO	DESCRIPTION	QTY
C561	C565	423A1C53 C,CERAMIC 50V 220PF	2
C408	C551 C562	423A11C1 C,CERAMIC 50V 470PF	4
C566			
C556		423A11C4 C,CERAMIC 50V 680PF	1
C856		423A2C27 C,CERAMIC 50V 18PF	1
C503	C552	427A7C05 C,FILM 100V 0.0022UF	2
C502		427A7C07 C,FILM 100V 0.0033UF	1
C857		427F4C01 C,FILM 50V 1000PF	1
C452		427F4C25 C,FILM 50V 0.1UF	1
C405		427F4C51 C,FILM 50V 1000PF	1
C505		427F4C58 C,FILM 50V 3900PF	1
C425	C451	427F4C59 C,FILM 50V 4700PF	2
C427		427F4C60 C,FILM 50V 5600PF	1
C409		427F4C64 C,FILM 50V 0.012UF	1
C507		427F4C65 C,FILM 50V 0.015UF	1
C501	C506	427F4C71 C,FILM 50V 0.047UF	2
C715	C852	427F4C75 C,FILM 50V 0.1UF	2
△C515		42703863 C,MYLAR 400V 0.01UF	1
△C575		42703865 C,FILM 400V 0.15UF	1
C522		42754267 C,FILM 200V 0.022UF	1
△C628		42760C17 C,FILM 50V 0.022UF	1
C401		42760C55 C,FILM 50V 2200PF	1
C403		42760C61 C,FILM 50V 6800PF	1
△C608	△C614	42760C69 C,FILM 50V 0.033UF	2
△C656		42760C73 C,FILM 50V 0.068UF	1
△C607		42760C75 C,FILM 50V 0.1UF	1
△C655		4279JC58 C,FILM 100V 5600PF	1
△C613	△C619 △C659	42799C99 C,MYLAR 400V 0.033UF	3
△C514E		42807519 C,METAL FILM 1.6K 5600PF	1
△C514A		42808591 C,METAL FILM 1.6KV 2500PF	1
C404		4282CC25 C,METAL FILM 50V 1UF	1
△C602		42824325 C,FILM 250V 0.1UF	1
△C601		42824329 C,FILM 250V 0.22UF	1
△C661		42840131 C,METAL FILM 250V 0.068UF	1
C901	C902 C903	42899C10 C,METAL FILM 250V 0.22UF	3
△C627		42899C28 C,METAL FILM 250V 0.1UF	1
△C520	△C569 △C570	42899C42 C,METAL FILM 400V 0.64UF	3
C402		430A4105 C,ELEC 50V 1UF	1
C810E	C810G C810R	430A4107 C,ELEC 50V 2.2UF	3
C807E	C807G	430B3049 C,ELEC 16V 47UF	2
C412		430B3090 C,ELEC 35V 100UF	1
C413		430B3091 C,ELEC 35V 220UF	1
C707	C708 C709	430B3182 C,ELEC 160V 1UF	3
△C2002	△C2005 C719	430B6C15 C,ELEC 10V 47UF	4
C815			
C503		430B6C16 C,ELEC 10V 100UF	1

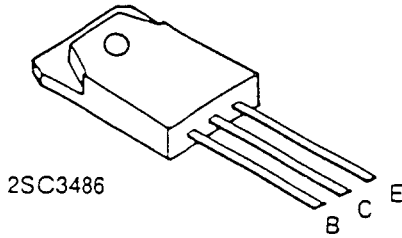
SYMBOL		PARTS NO	DESCRIPTION	QTY
C5C4	C814	430B6C17	C,ELEC 10V 220UF	2
C5C2		430B6C20	C,ELEC 10V 1000UF	1
C5E2	C8C1 C816	430B6C25	C,ELEC 16V 10UF	7
C858	C8e2 C864			
C868				
C423	C455 C456	430B6C26	C,ELEC 16V 22UF	4
C457				
C713		430B6C27	C,ELEC 16V 33UF	1
C8C3	C8C7R C8C8B	430B6C28	C,ELEC 16V 47UF	6
C8C8G	C8C8R C851			
C714	C8C5	430B6C29	C,ELEC 16V 100UF	2
C429	C5C9 C813	430B6C30	C,ELEC 16V 220UF	3
C416	C5C6 C5C7	430B6C31	C,ELEC 16V 330UF	3
C553	C563	430B6C38	C,ELEC 25V 10UF	2
C5E1		430B6C41	C,ELEC 25V 47UF	1
C419	C5C5	430B6C54	C,ELEC 35V 100UF	2
C5C1		430B6C56	C,ELEC 35V 330UF	1
C853	C859 C86C	430B6C62	C,ELEC 50V 2.2UF	4
C861				
△C2C04		430B6C65	C,ELEC 50V 10UF	1
C421	C422	430B6C66	C,ELEC 50V 22UF	2
△C2C01		430B6C68	C,ELEC 50V 47UF	1
C523		430B6536	C,ELEC 200V 10UF	1
△C66C		4302C101	C,ELEC 50V C.47UF	1
△C653		4302C17C	C,ELEC 100V 100UF	1
△C651		4302C172	C,ELEC 100V 330UF	1
△C664		4302C182	C,ELEC 160V 1UF	1
C516	△C657 △C658	4302C19C	C,ELEC 160V 100UF	4
△C667				
△C611	△C617	4302EC51	C,ELEC 16V 220UF	2
△C61C	△C616	4302EC53	C,ELEC 50V 470UF	2
△C654		4302EC9C	C,ELEC 35V 100UF	1
△C609	△C615	4302E1C5	C,ELEC 50V 4.7UF	2
△C62C	△C621	4302E1C7	C,ELEC 50V 22UF	2
C863	C865	4302FC29	C,ELEC 16V 100UF	2
△C652		4302JC58	C,ELEC 35V 1000UF	1
C718		43026C32	C,ELEC 16V 470UF	1
C42C		43026C73	C,ELEC 50V 1000UF	1
△C6C5		431081C5	C,ELEC 400V 220UF	1
C85C		433A3C22	C,ELEC 16V 10UF	1
C424		433A3C23	C,ELEC 16V 22UF	1
C415		433A3C25	C,ELEC 16V 47UF	1
C716		433A3C43	C,ELEC 35V 4.7UF	1
C428		435A5C53	C,TANTALUM 16V 4.7UF	1
C418		435A5C55	C,TANTALUM 16V 10UF	1
C5C4		435A5C71	C,TANTALUM 35V 1UF	1
C555	C557	435A8254	C,TANTLM 25V 3.3UF	2

BLOCK DIAGRAM

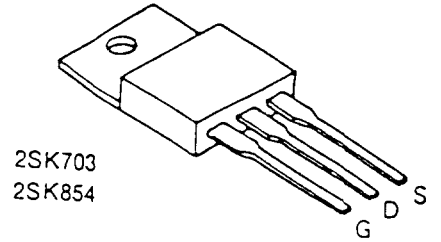




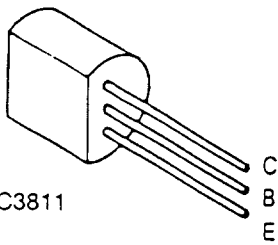
2SA952
 2SA1018
 2SC945
 2SC1473
 2SC2002
 AA1A4M
 AA1L4M
 AN1A4M
 2SA933
 2SC1740



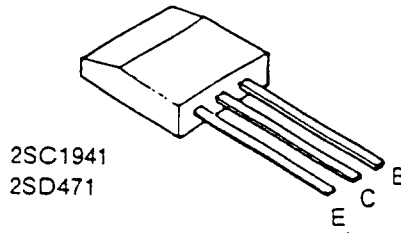
2SC3486



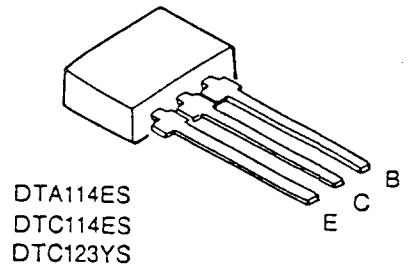
2SK703
 2SK854



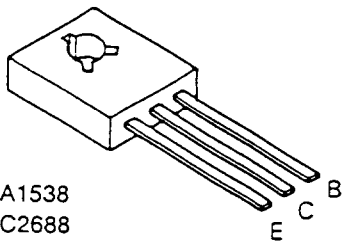
2SC3811



2SC1941
 2SD471



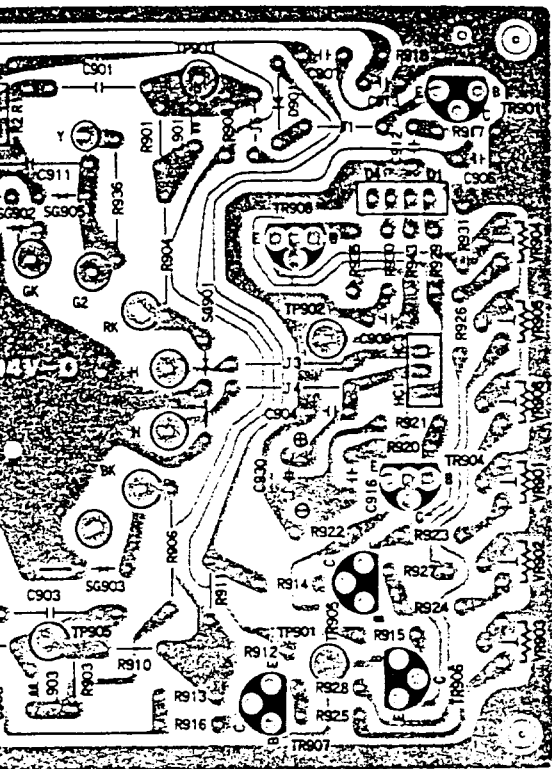
DTA114ES
 DTC114ES
 DTC123YS



2SA1538
 2SC2688
 2SC3502
 2SC3953

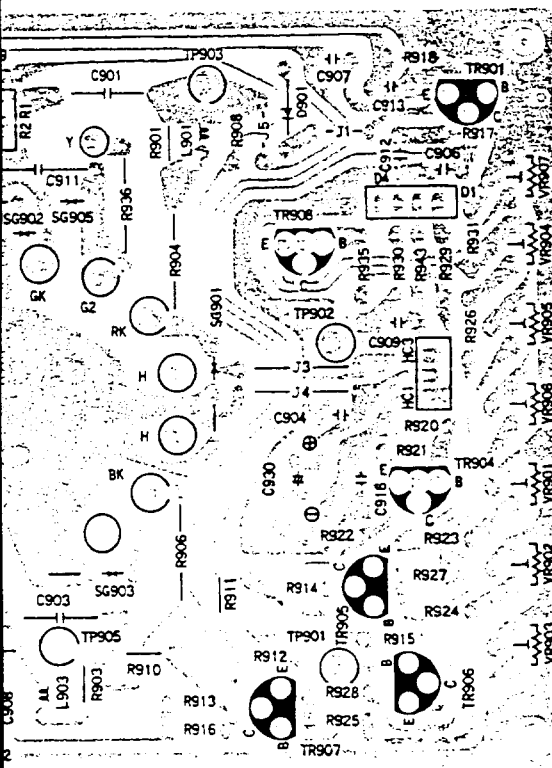
NOTE:

E: EMITTER
 B: BASE
 C: COLLECTOR
 G: GATE
 D: DRAIN
 S: SOURCE



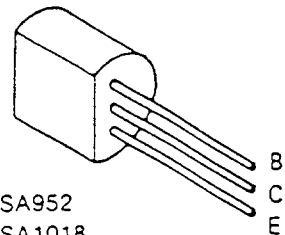
PWB ASSY (PWE-203)

—Solder Side—



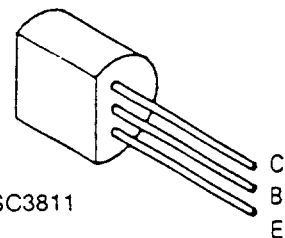
PWB ASSY (PWE-231)

—Solder Side—



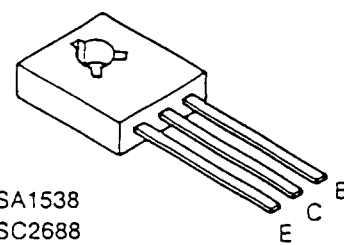
- 2SA952
- 2SA1018
- 2SC945
- 2SC1473
- 2SC2002
- AA1A4M
- AA1L4M
- AN1A4M
- 2SA933
- 2SC1740

23

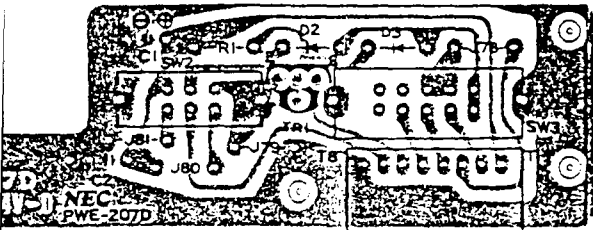


2SC3811

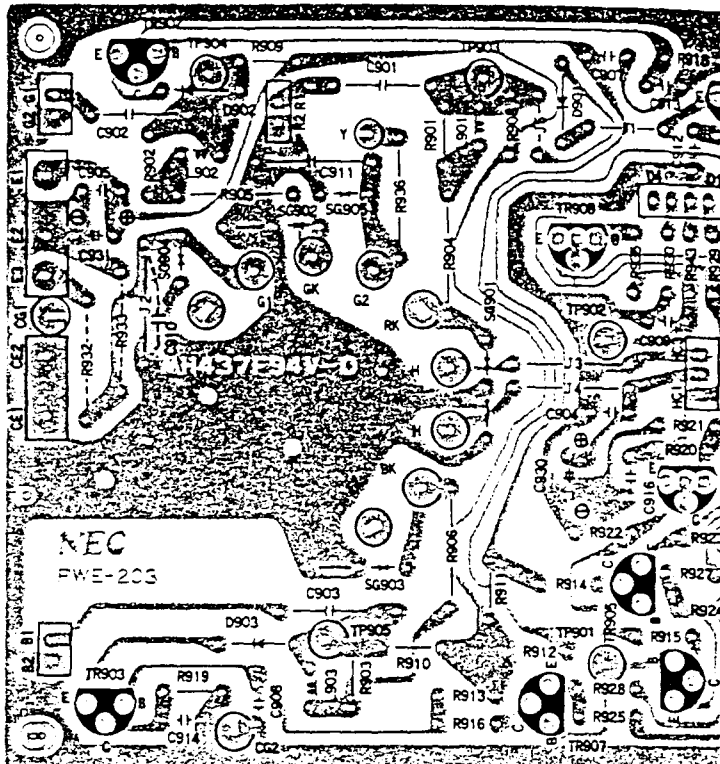
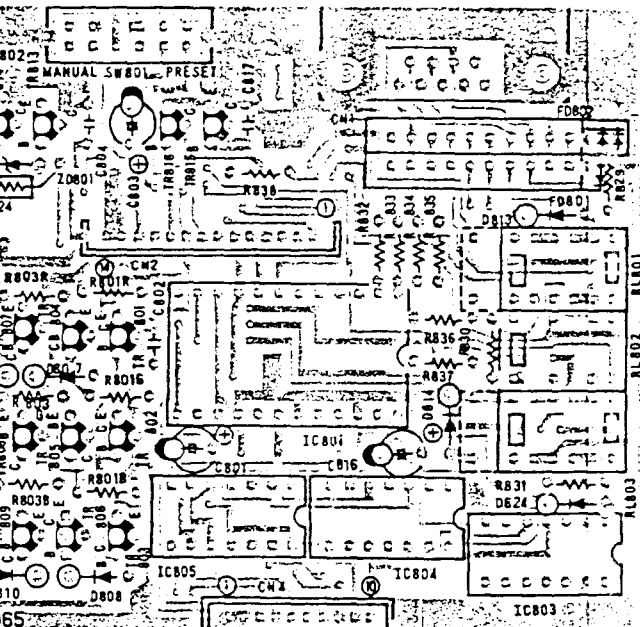
2S
2S



- 2SA1538
- 2SC2688
- 2SC3502
- 2SC3953

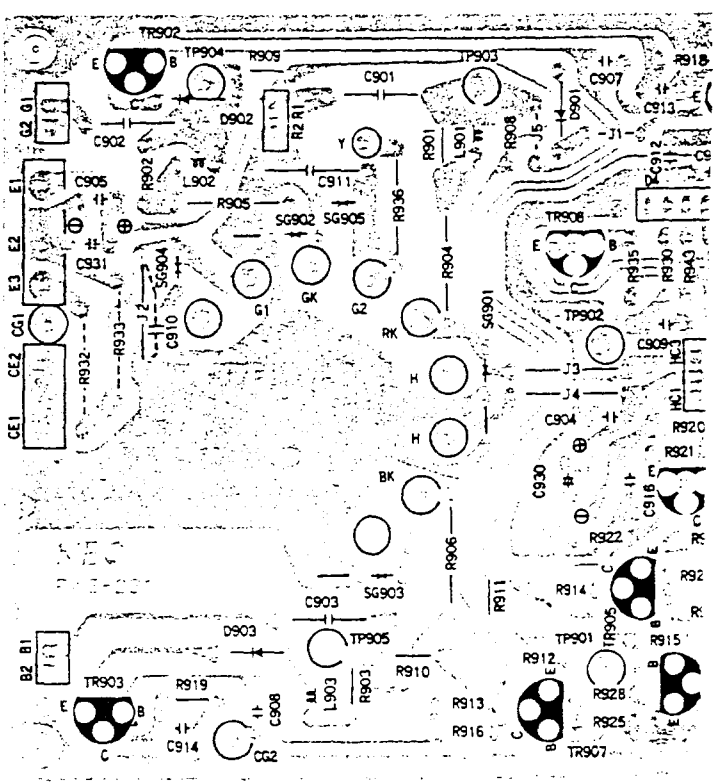
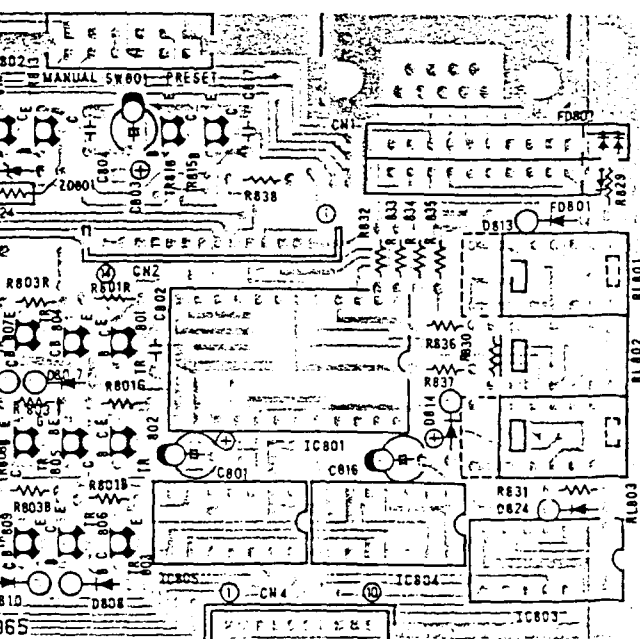


WE-207D)
de—



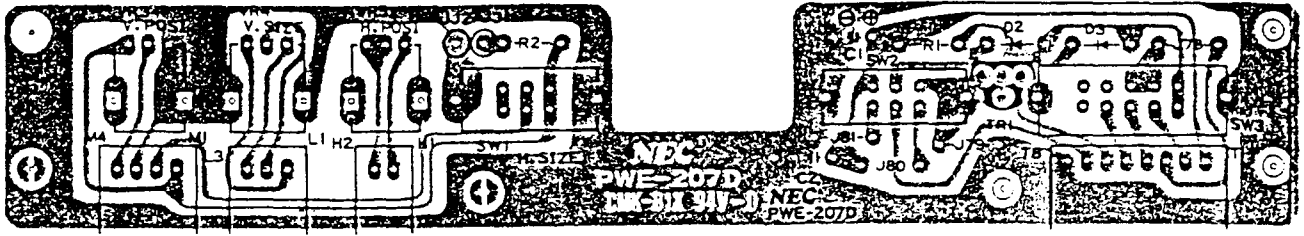
CRT PWB ASSY (PWE-203)
—Solder Side—

(PWE-206)
side—

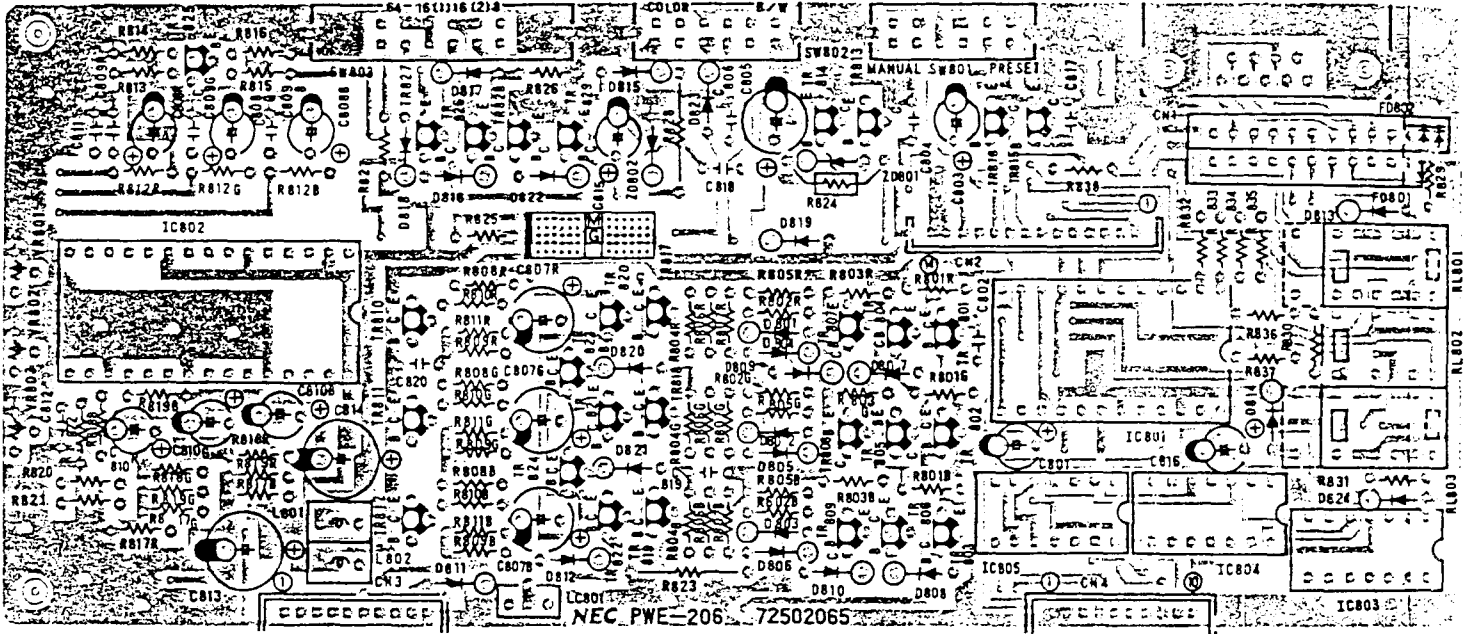


CRT PWB ASSY (PWE-231)
—Solder Side—

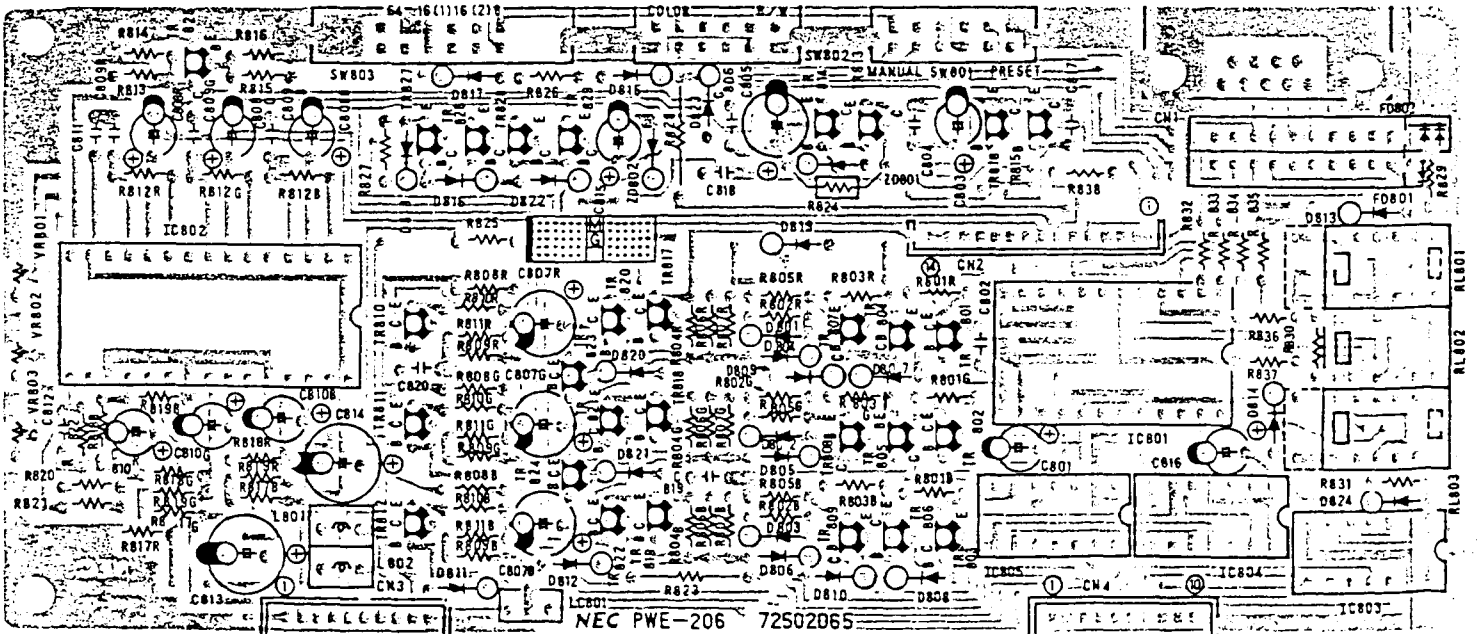
side components



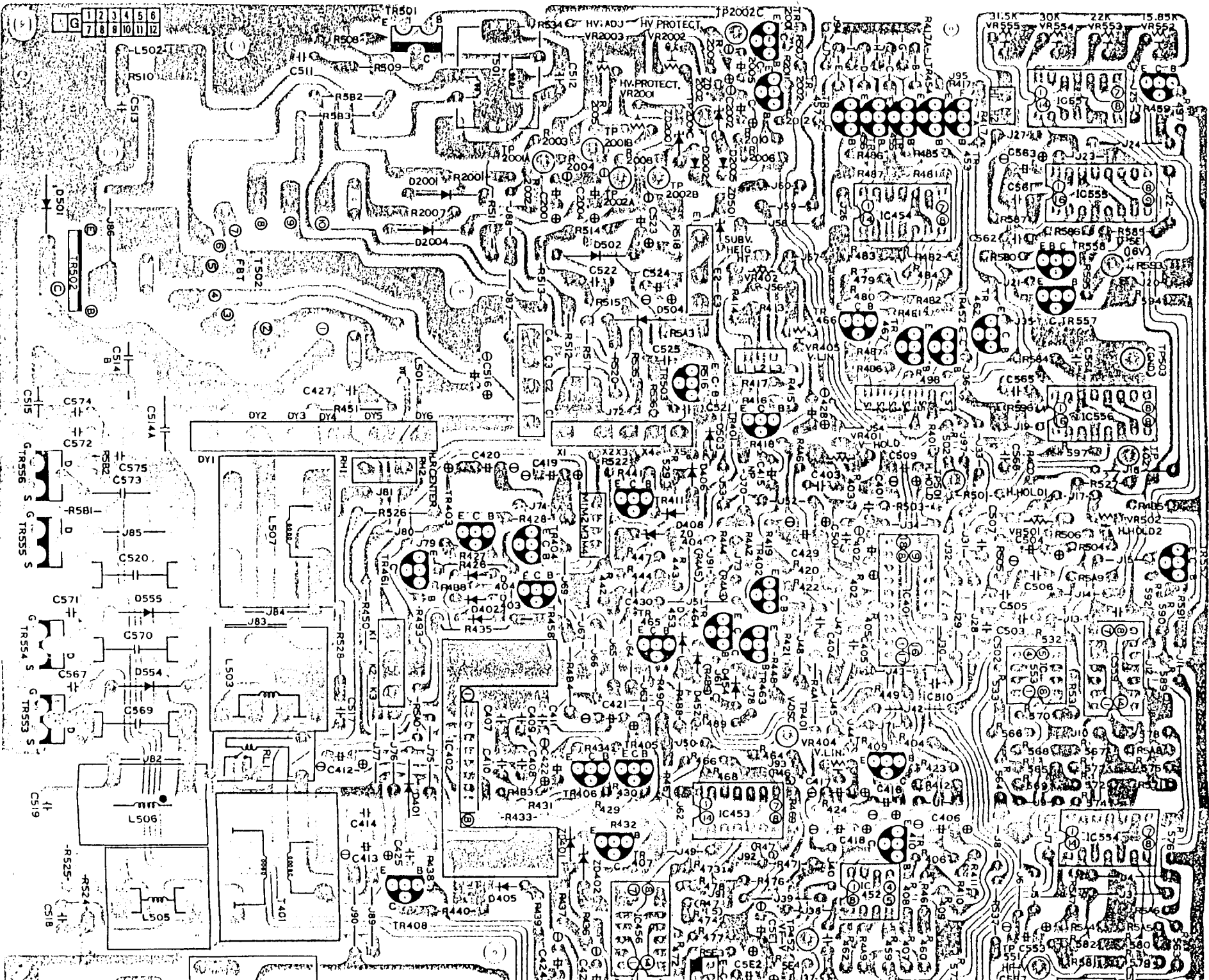
VR PWB ASSY (PWE-207D)
—Solder Side—



INPUT PWB ASSY (PWE-206)
—Component Side—

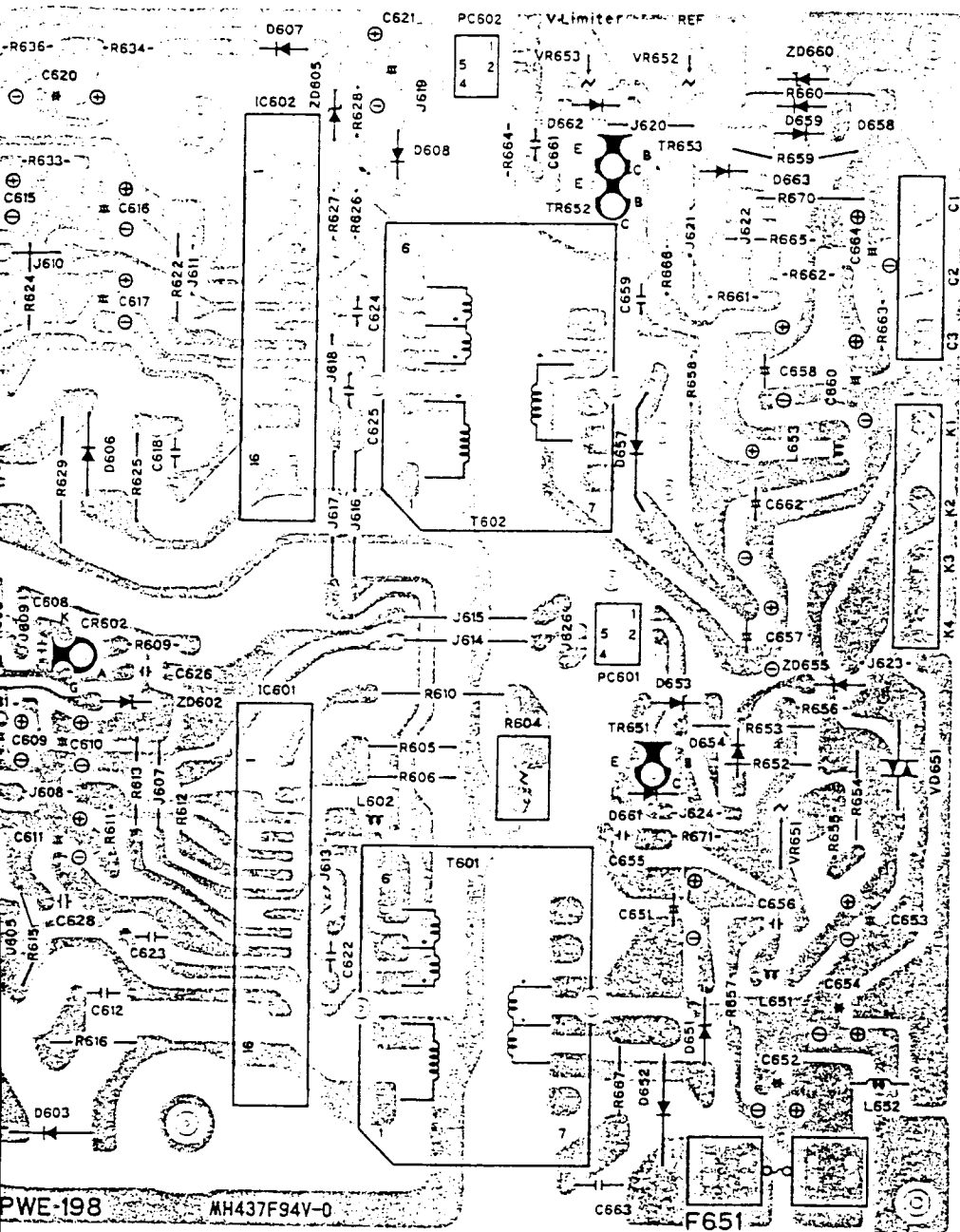


See-through view of reverse-side components

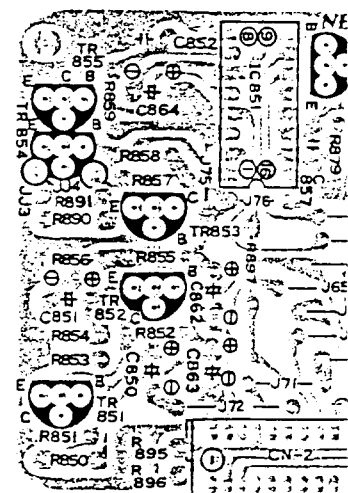
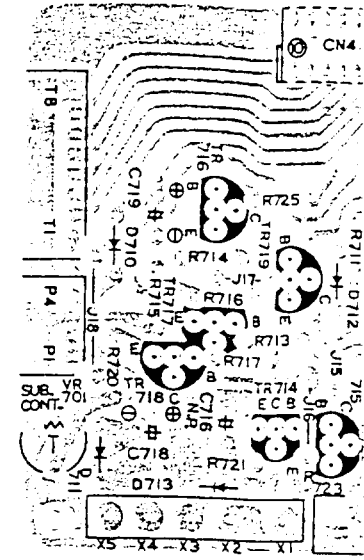


DEFLECTION PWB ASSY (PWE-194)

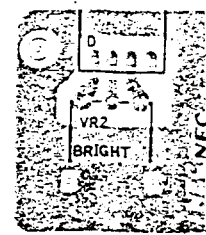
—Solder Side—



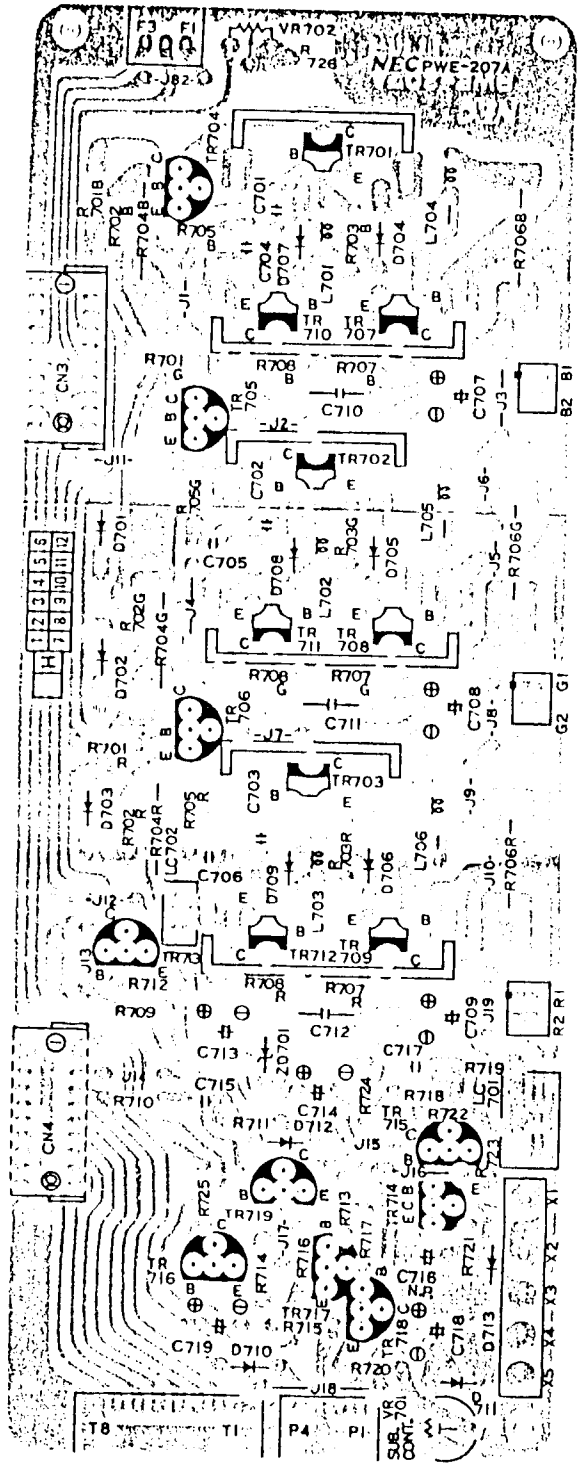
PWE-198 MH437F94V-0



REGULATOR POWER SUPPLY PWB ASSY (PWE-198)
—Solder Side—

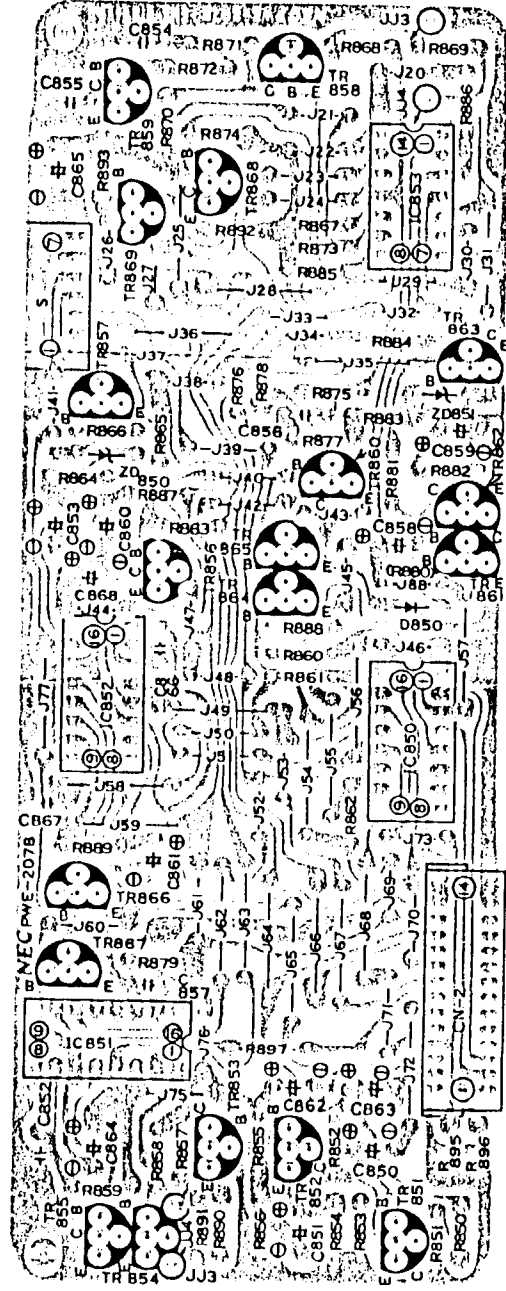


CONTROL PWB



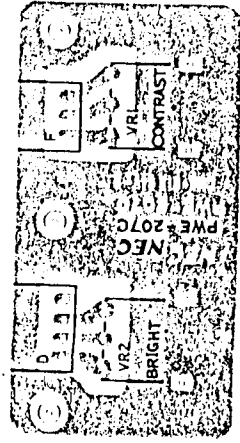
VIDEO PWB ASSY (PWE-207A)

—Solder Side—



INTERFACE PWB ASSY (PWE 207B)

—Solder side—

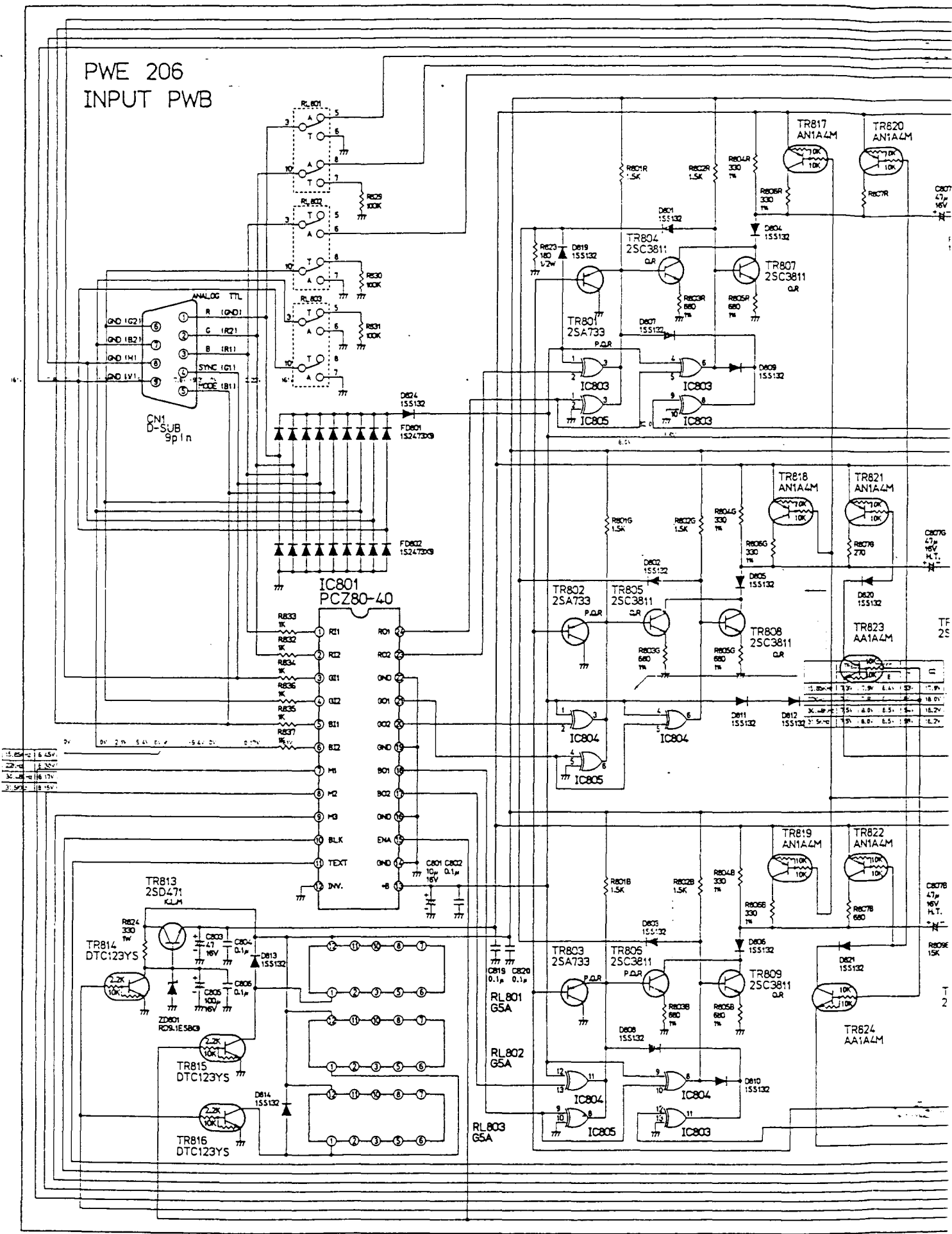


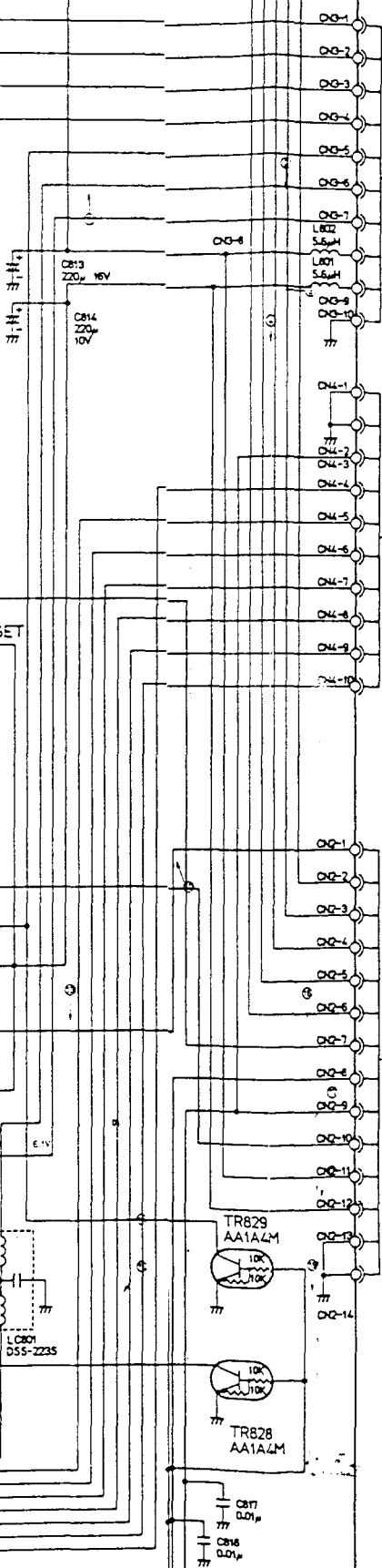
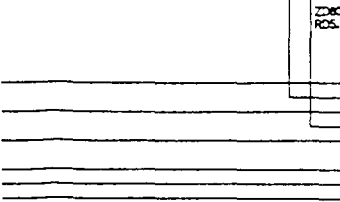
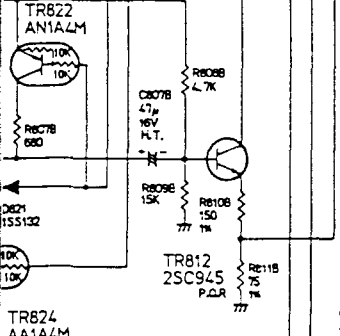
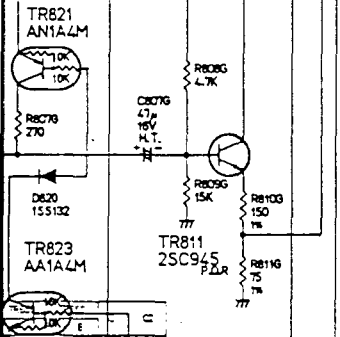
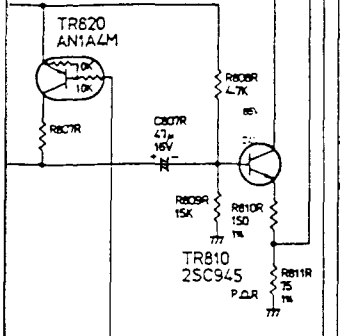
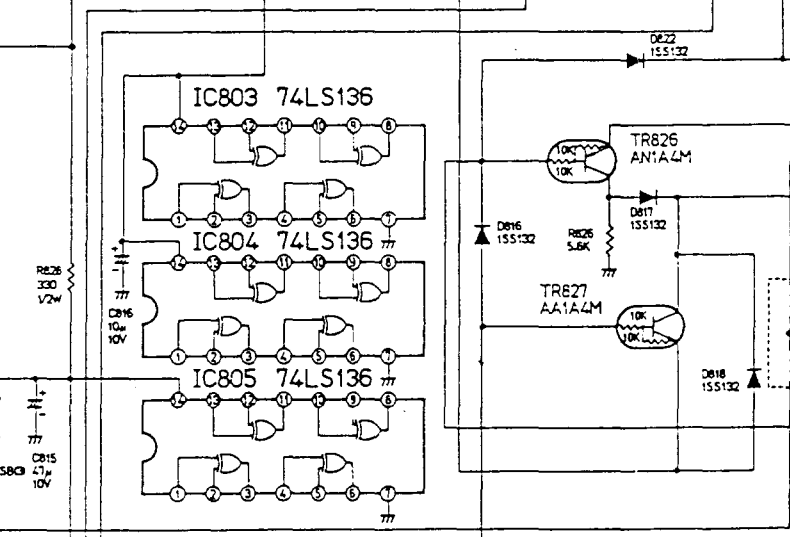
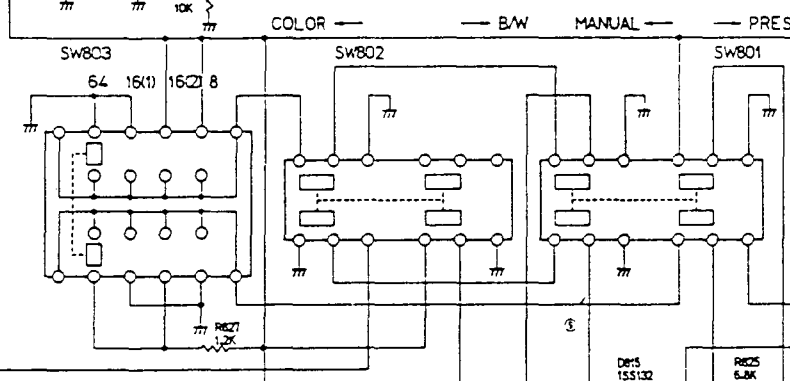
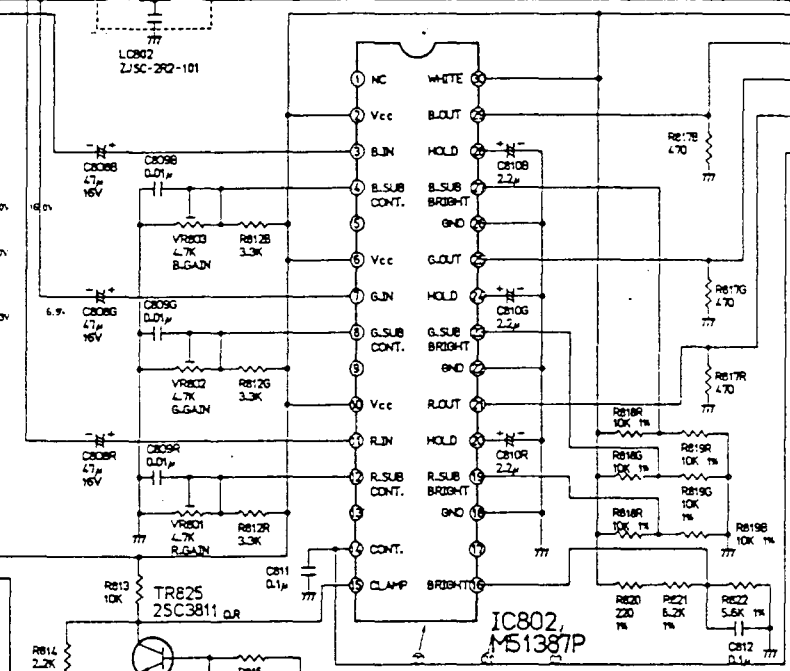
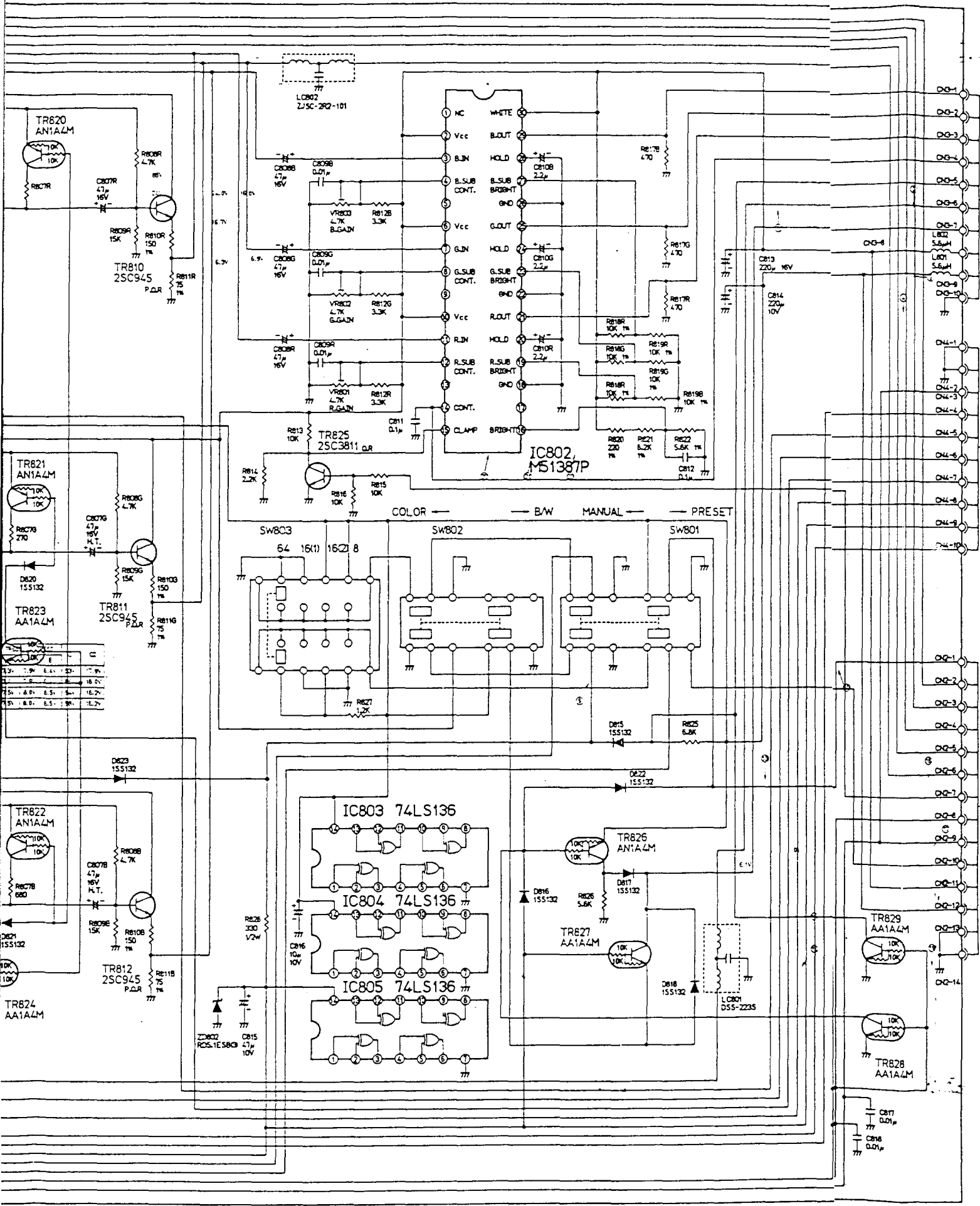
CONTROL PWB ASSY (PWE-207C)

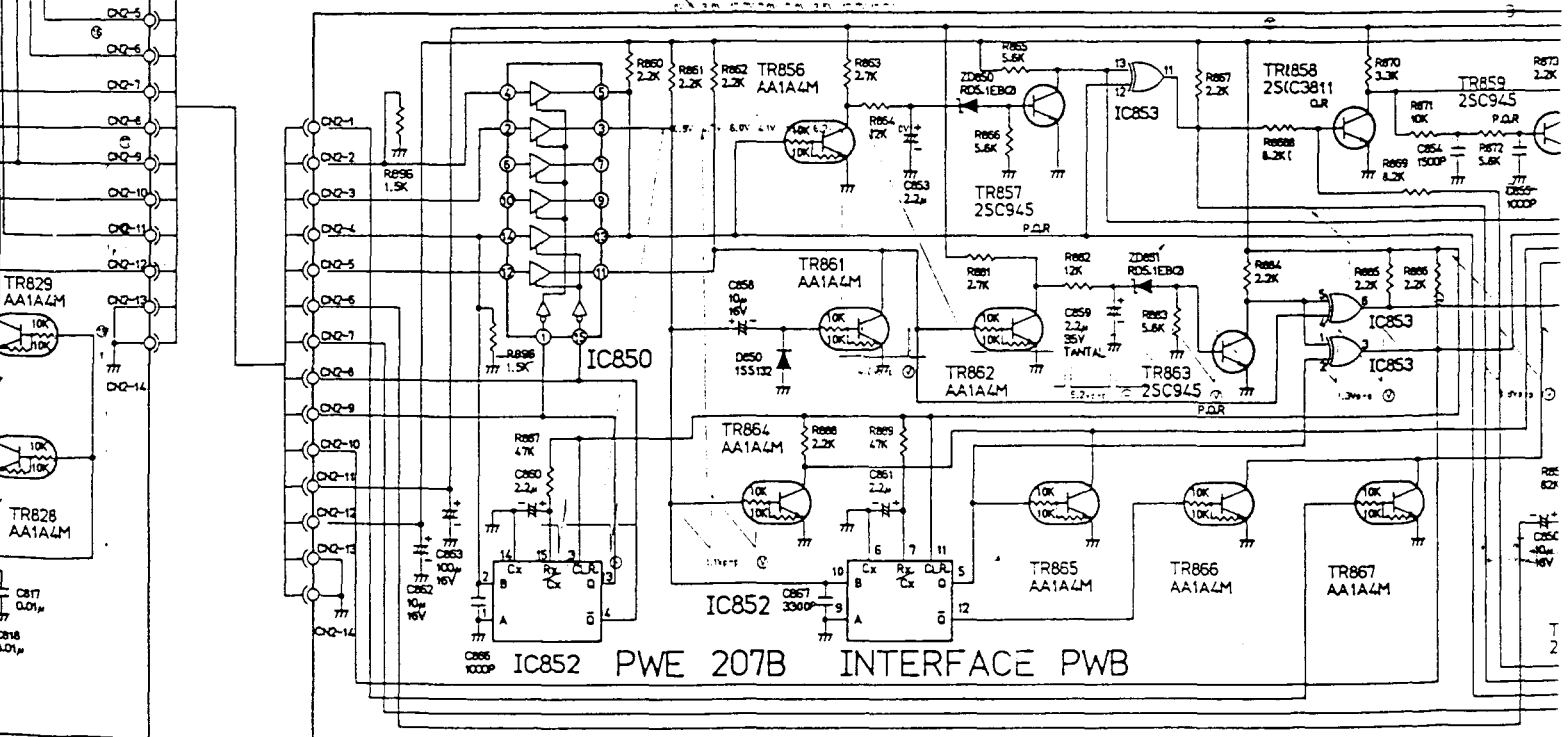
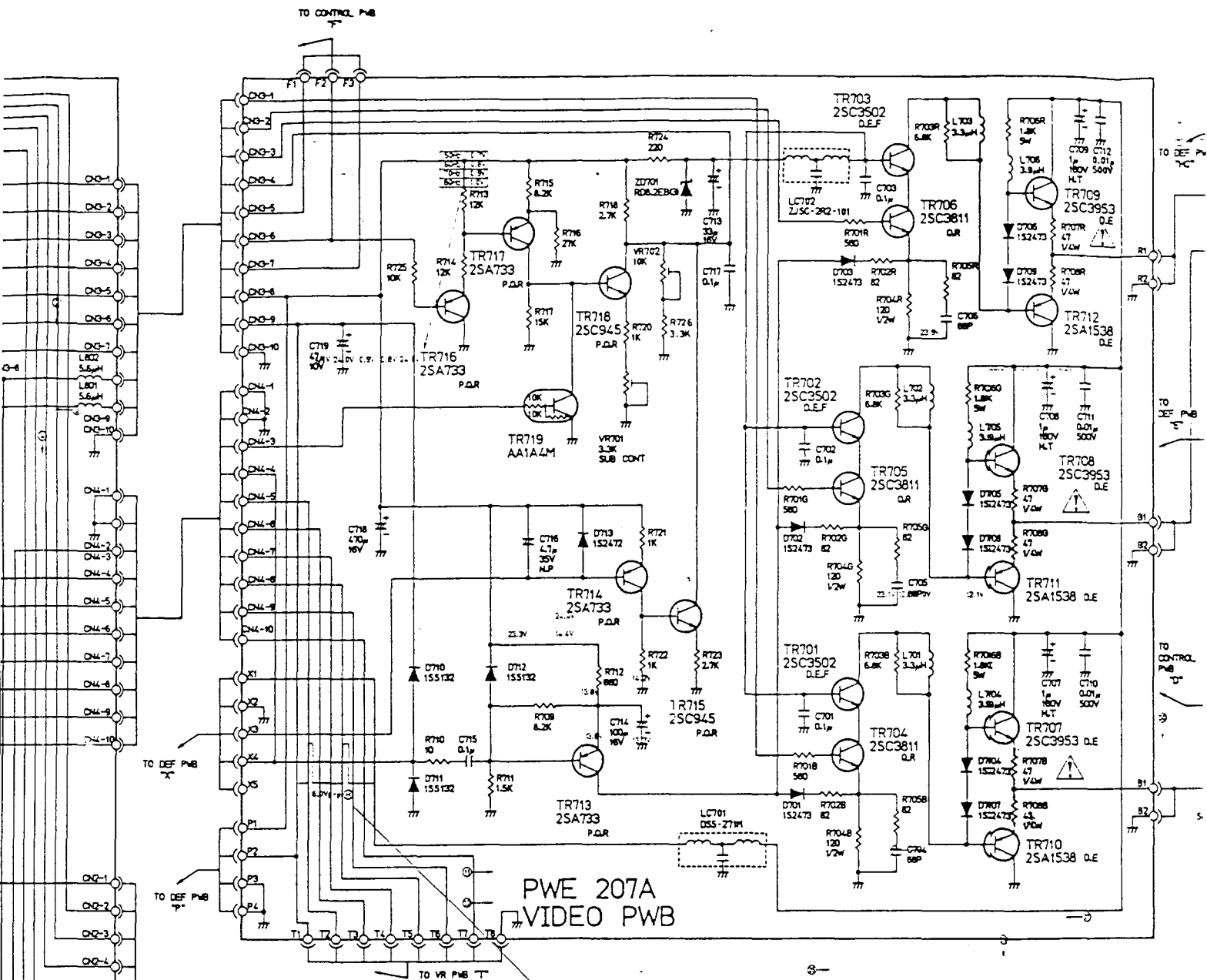
—Solder Side—

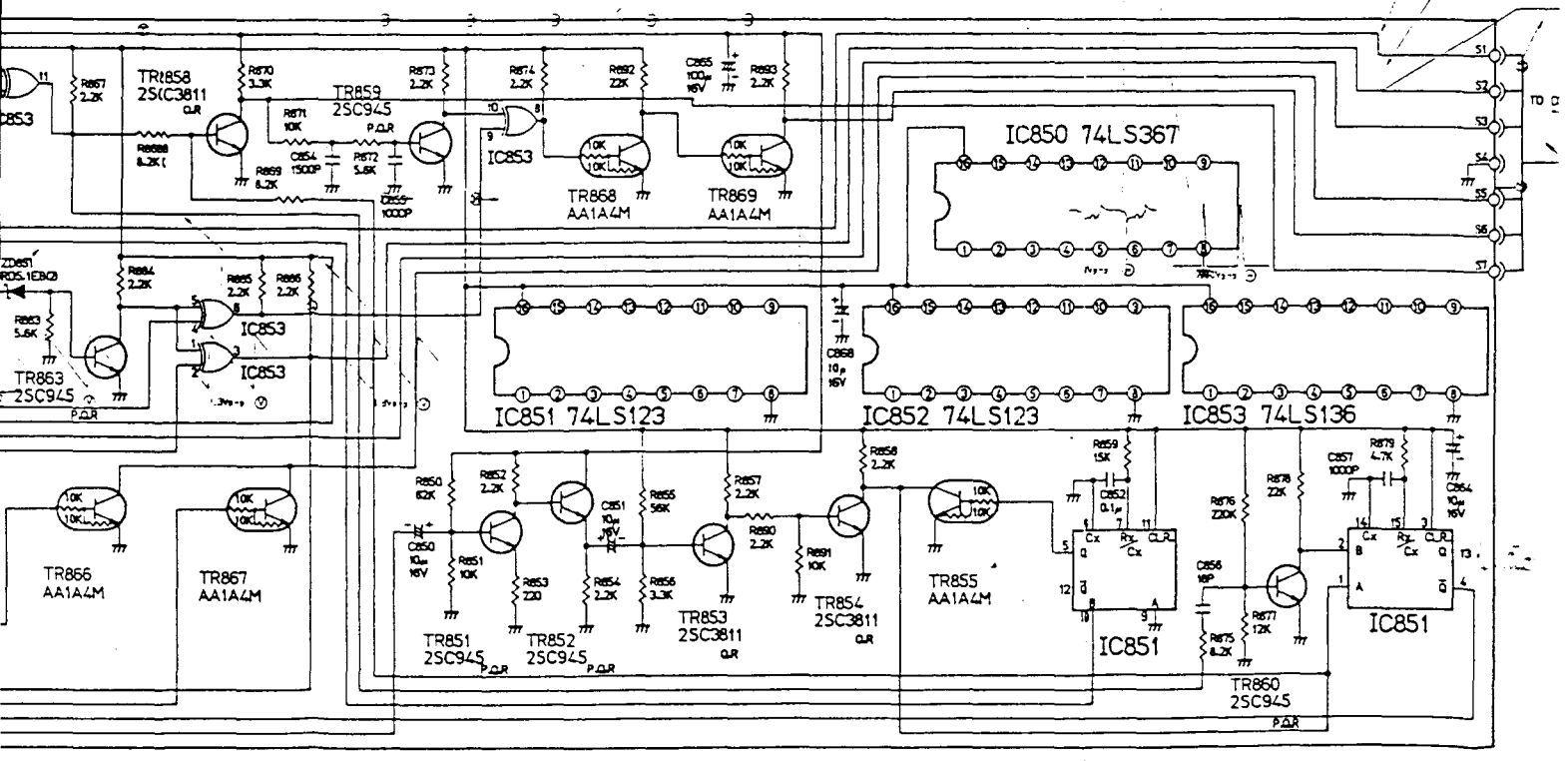
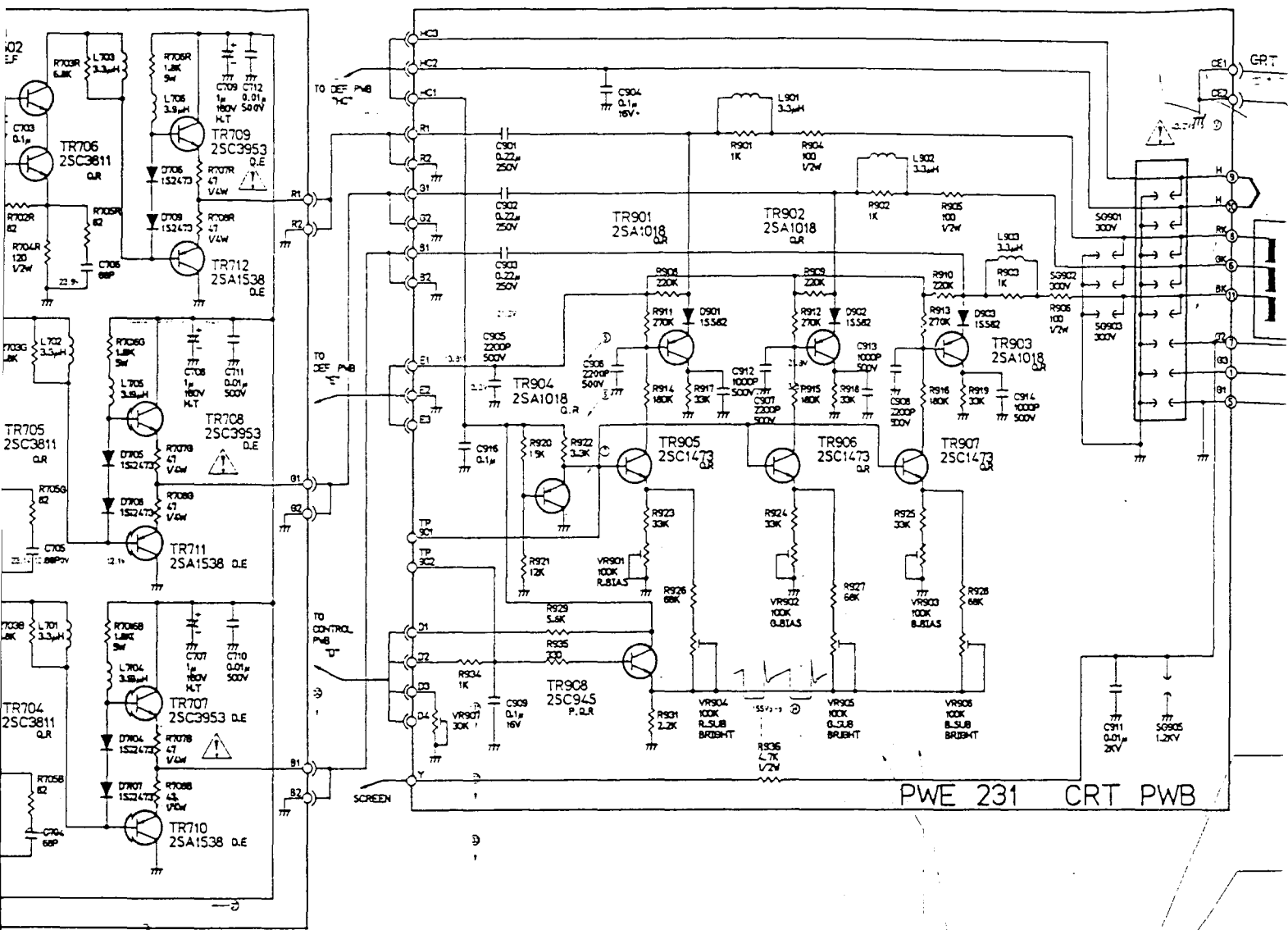


MODEL JC-1402H MED SCHEMATIC DIAGRAM

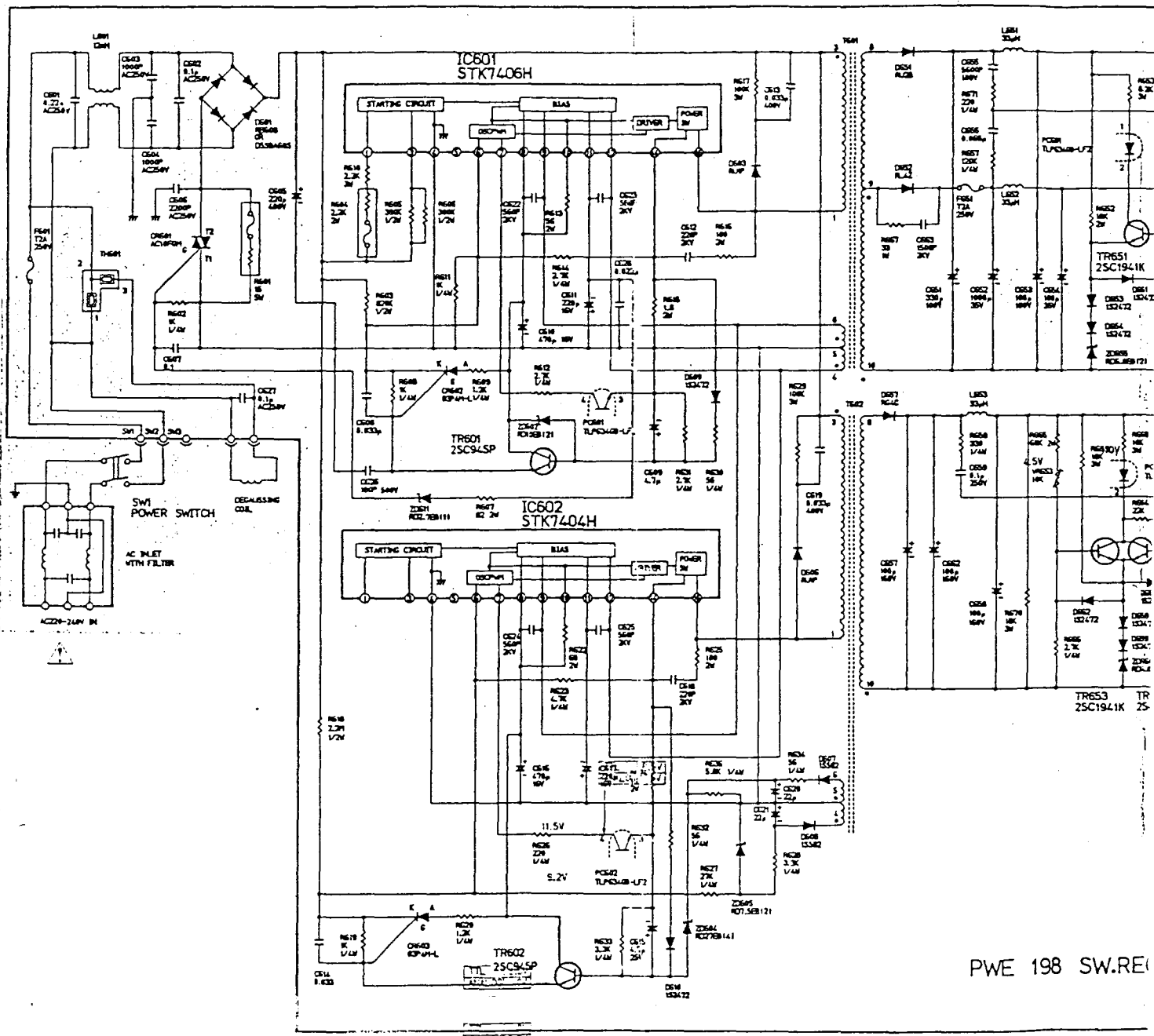




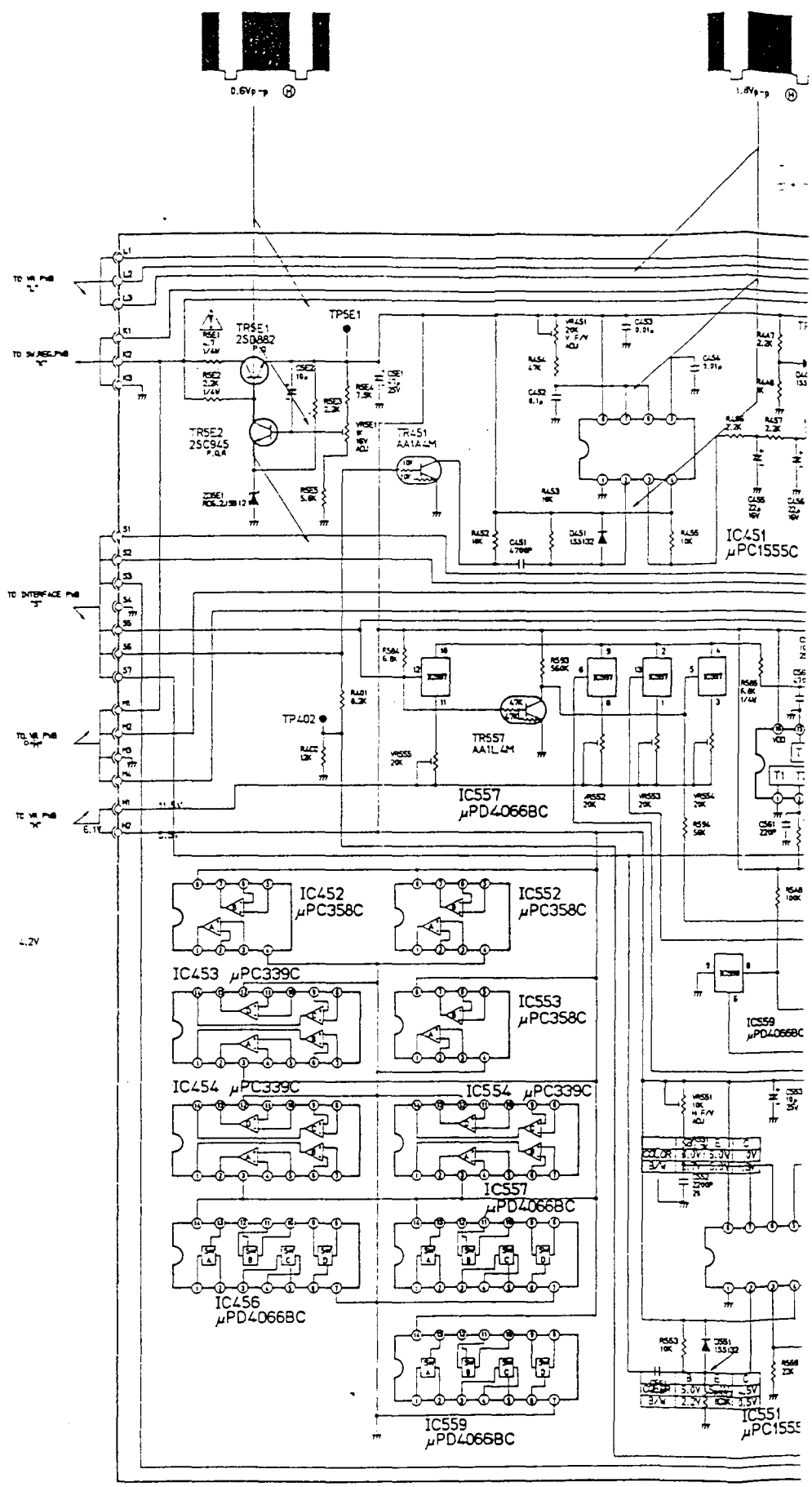
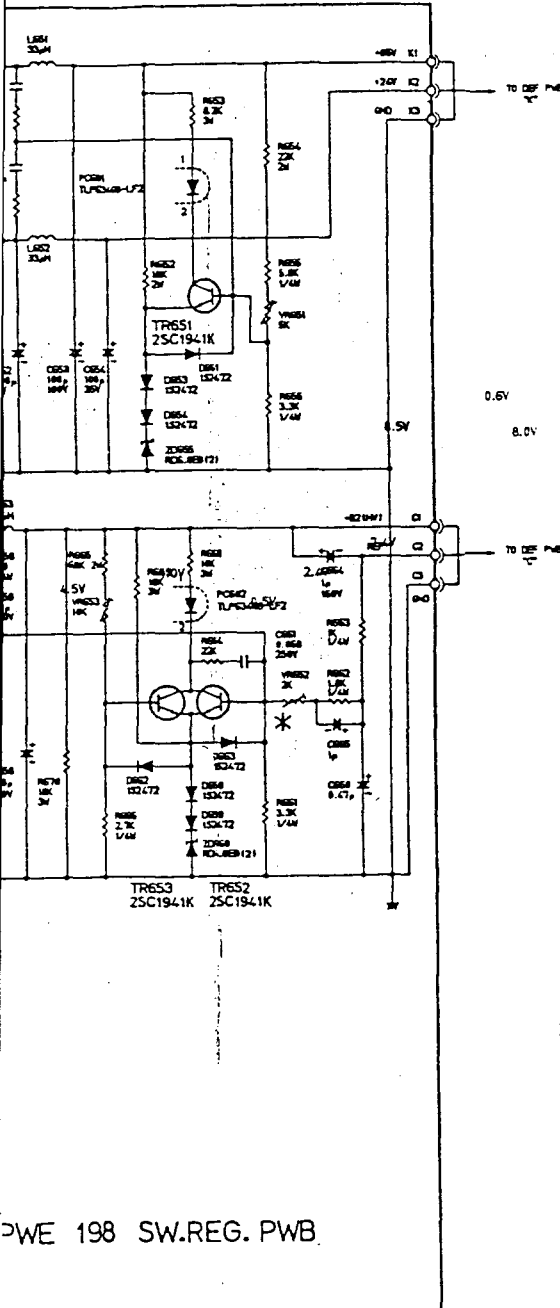




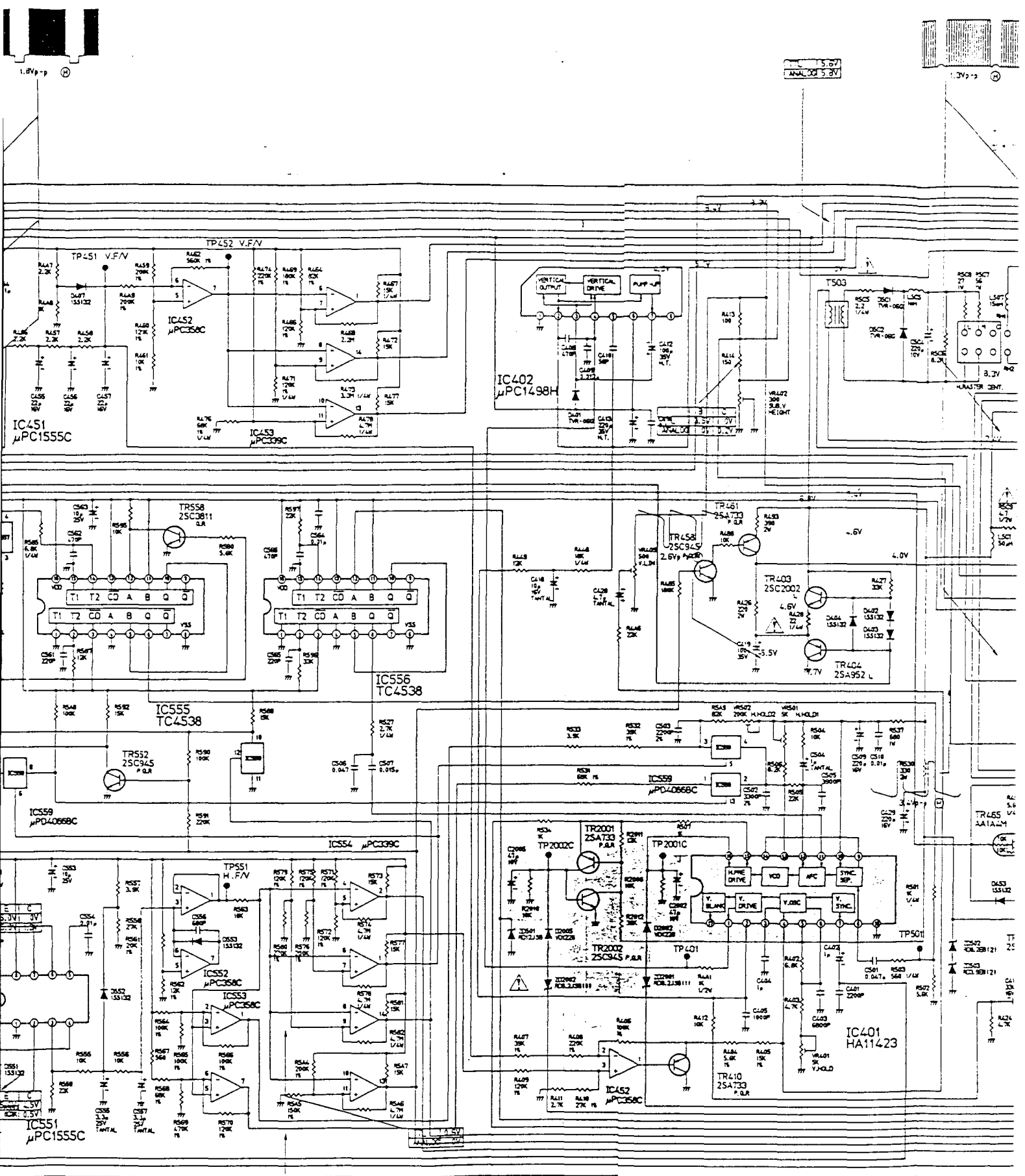
MODEL JC-1402HMED SCHEMATIC DIAGRAM



PWE 198 SW.REI



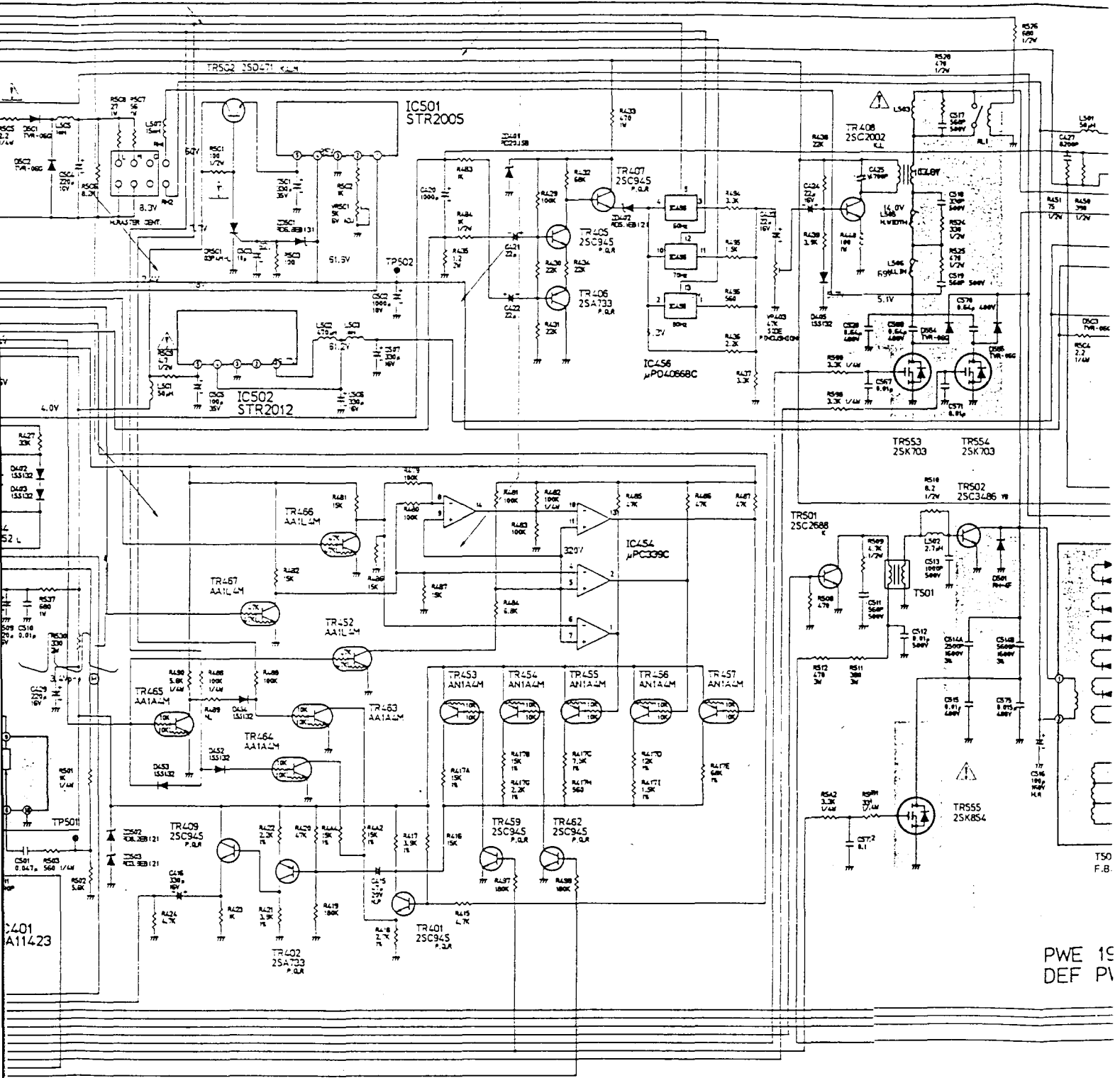
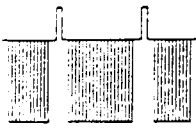
PWE 198 SW.REG. PWB



5.0V
ANALOG 5.0V

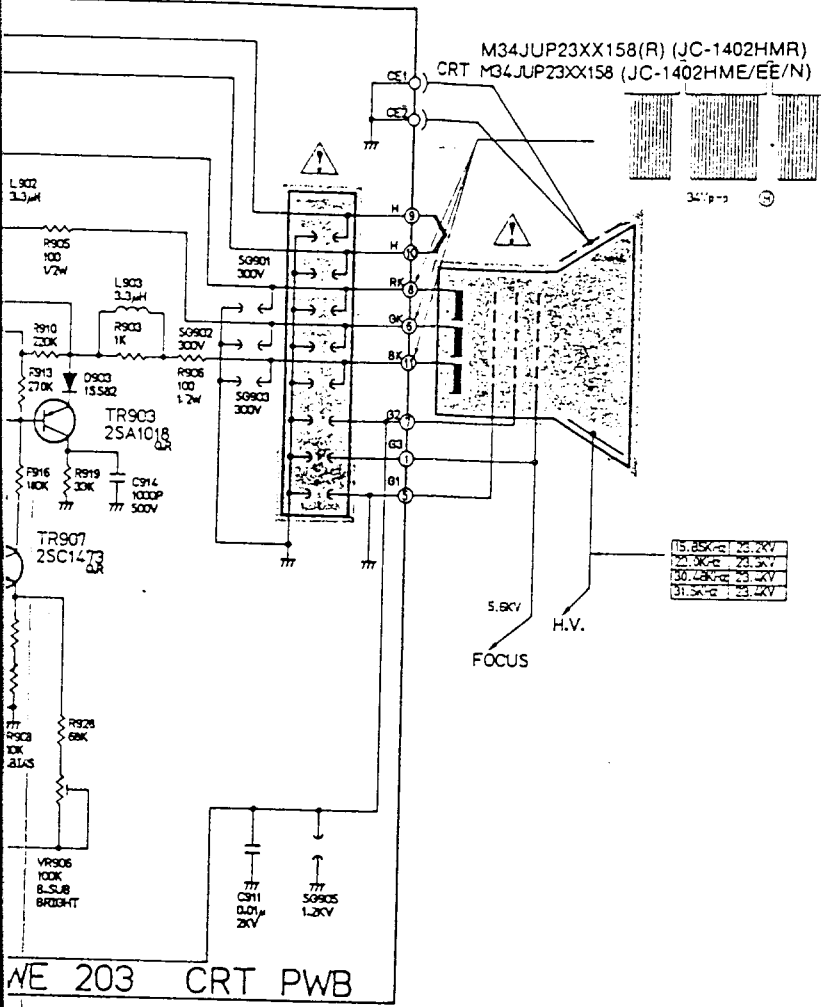
5.0V
ANALOG 5.0V

FORM NO. 771 AXAL 28
13 A L
4 L 4



C401
A11423

PWE 1S
DEF PV



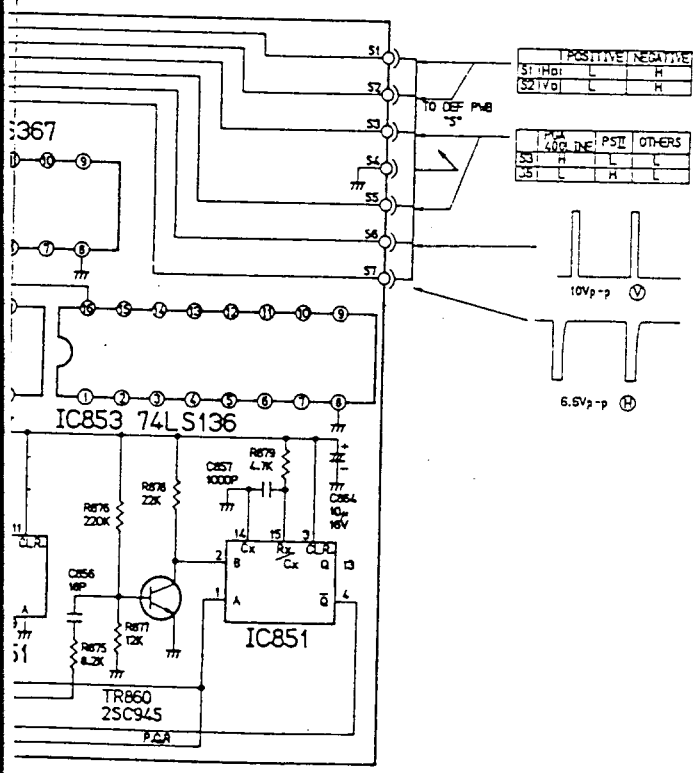
Y0801		Y0802		Y0803	
0.0V	0.0V	0.0V	0.0V	0.0V	0.0V
0.2V	0.2V	0.2V	0.2V	0.2V	0.2V
2.0V	2.0V	2.0V	2.0V	2.0V	2.0V
4.8V	4.8V	4.8V	4.8V	4.8V	4.8V
2.0V	2.0V	2.0V	2.0V	2.0V	2.0V
0V	0V	0V	0V	0V	0V
5.0V	5.0V	5.0V	5.0V	5.0V	5.0V
0.0V	0.0V	0.0V	0.0V	0.0V	0.0V
2.3V	2.3V	2.3V	2.3V	2.3V	2.3V
0V	0V	0V	0V	0V	0V
5.0V	5.0V	5.0V	5.0V	5.0V	5.0V
0V	0V	0V	0V	0V	0V

Y0801		Y0802		Y0803	
0.0V	0.0V	0.0V	0.0V	0.0V	0.0V
0.2V	0.2V	0.2V	0.2V	0.2V	0.2V
2.0V	2.0V	2.0V	2.0V	2.0V	2.0V
4.8V	4.8V	4.8V	4.8V	4.8V	4.8V
2.0V	2.0V	2.0V	2.0V	2.0V	2.0V
0V	0V	0V	0V	0V	0V
5.0V	5.0V	5.0V	5.0V	5.0V	5.0V
0.0V	0.0V	0.0V	0.0V	0.0V	0.0V
2.3V	2.3V	2.3V	2.3V	2.3V	2.3V
0V	0V	0V	0V	0V	0V
5.0V	5.0V	5.0V	5.0V	5.0V	5.0V
0V	0V	0V	0V	0V	0V

INPUT VIDEO SIGNAL
TTL SCOPES WITH INTENSITY
ALL INPUTS IN PATTERN
H.SYNC 2KHz

Y0801		Y0802		Y0803	
0.0V	0.0V	0.0V	0.0V	0.0V	0.0V
0.2V	0.2V	0.2V	0.2V	0.2V	0.2V
2.0V	2.0V	2.0V	2.0V	2.0V	2.0V
4.8V	4.8V	4.8V	4.8V	4.8V	4.8V
2.0V	2.0V	2.0V	2.0V	2.0V	2.0V
0V	0V	0V	0V	0V	0V
5.0V	5.0V	5.0V	5.0V	5.0V	5.0V
0.0V	0.0V	0.0V	0.0V	0.0V	0.0V
2.3V	2.3V	2.3V	2.3V	2.3V	2.3V
0V	0V	0V	0V	0V	0V
5.0V	5.0V	5.0V	5.0V	5.0V	5.0V
0V	0V	0V	0V	0V	0V

NE 203 CRT PWB



	POSITIVE	NEGATIVE
S1 (Hot)	L	H
S2 (Y0)	L	H

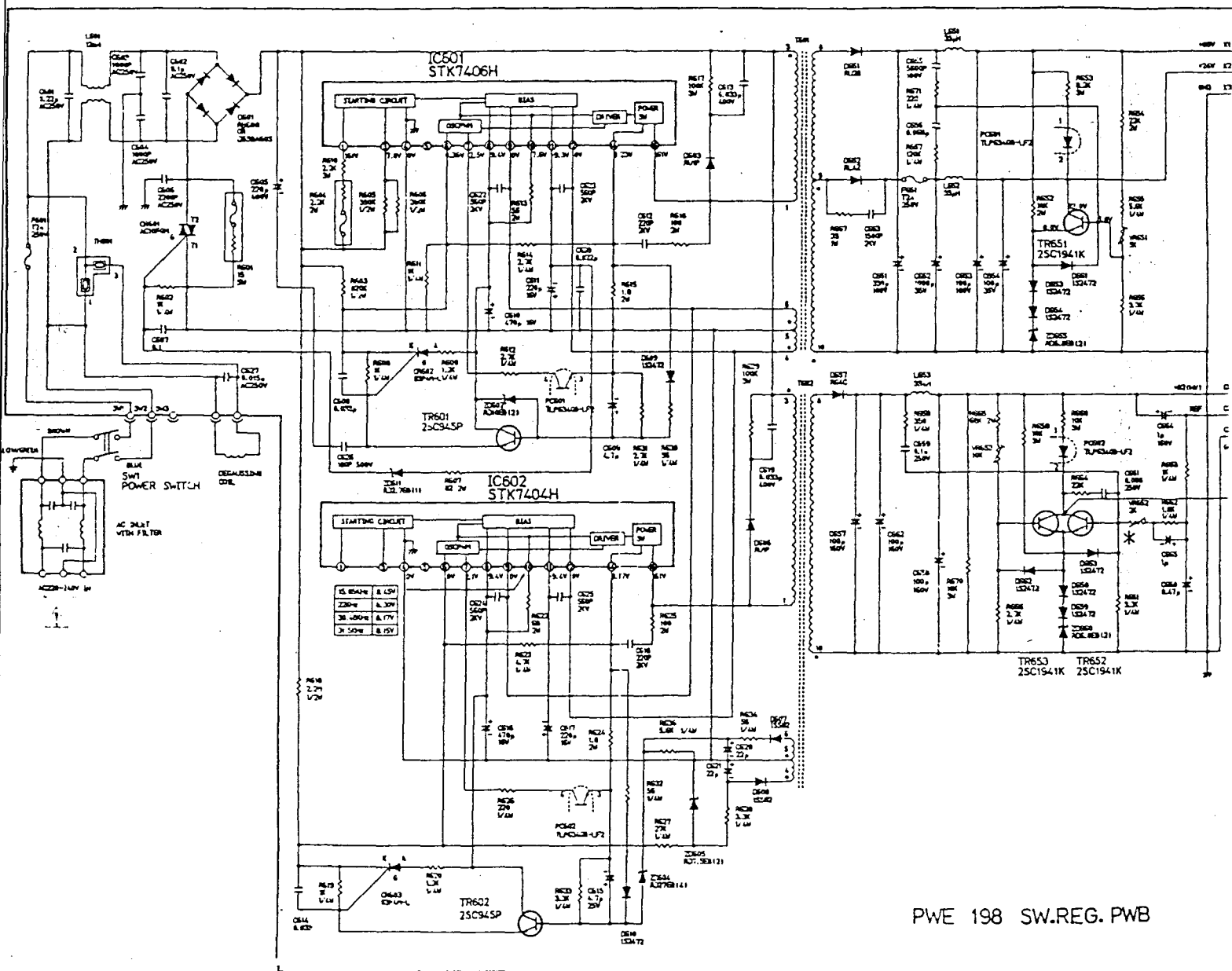
	POS	NEG	OTHERS
S3	H	L	L
S5	L	H	L

NOTES

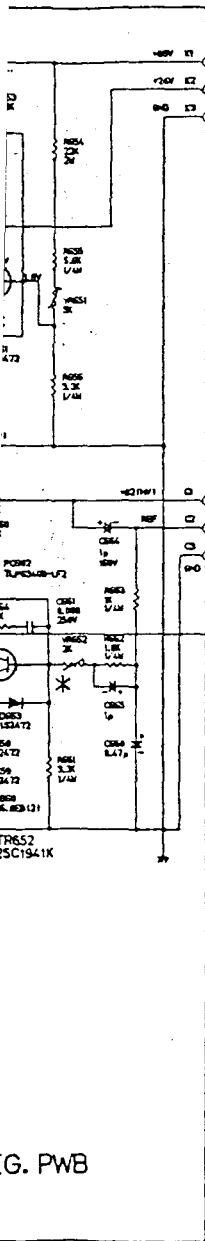
1. RESISTOR VALUES ARE IN Ω 100M K = 1,000 Ω M = 1,000,000 Ω
2. ALL RESISTORS ARE 1/8WATT EXCEPT WHERE OTHERWISE INDICATED.
3. CAPACITOR VALUES ARE IN μF UNLESS OTHERWISE INDICATED. P = PF
4. ALL CAPACITORS ARE 50VOLTS EXCEPT WHERE OTHERWISE INDICATED.
5. VOLTAGES AND WAVEFORMS ARE MEASURED UNDER THE CHARACTER SIGNALS IN THE CONDITIONS OF CONTRAST AND BRIGHTNESS CONTROLS ARE MAXIMUM AND ALL OTHER CONTROLS ARE NORMAL OPERATION.
6. ⊕-----HORIZONTAL RATE. ⊙-----VERTICAL RATE.
7. VOLTAGES AND WAVEFORMS ARE MEASURED UNDER THE FOLLOWING SYNC AND VIDEO. EXCEPT WHERE OTHERWISE INDICATED.
SYNC: HORIZONTAL RATE = 220Hz SEPARATE SYNC TTL LEVEL POSITIVE
VIDEO: TTL LEVEL POSITIVE

WARNING
REPLACEMENT PARTS WHICH HAVE SPECIAL SAFETY CHARACTERISTICS ARE IDENTIFIED BY A SHADING ON SOME SCHEMATICS. REPLACE OTHER CRITICAL COMPONENTS WITH THE RECOMMENDED REPLACEMENT PARTS. THE SAFETY OF THE USER IS NOT TO BE COMPROMISED BY THE SAFETY OF THE SET THROUGH IMPROPER SERVICING.
CONTROL IS PERMANENTLY FROZEN.
DO NOT ATTEMPT TO REPAIR OR REPLACE.

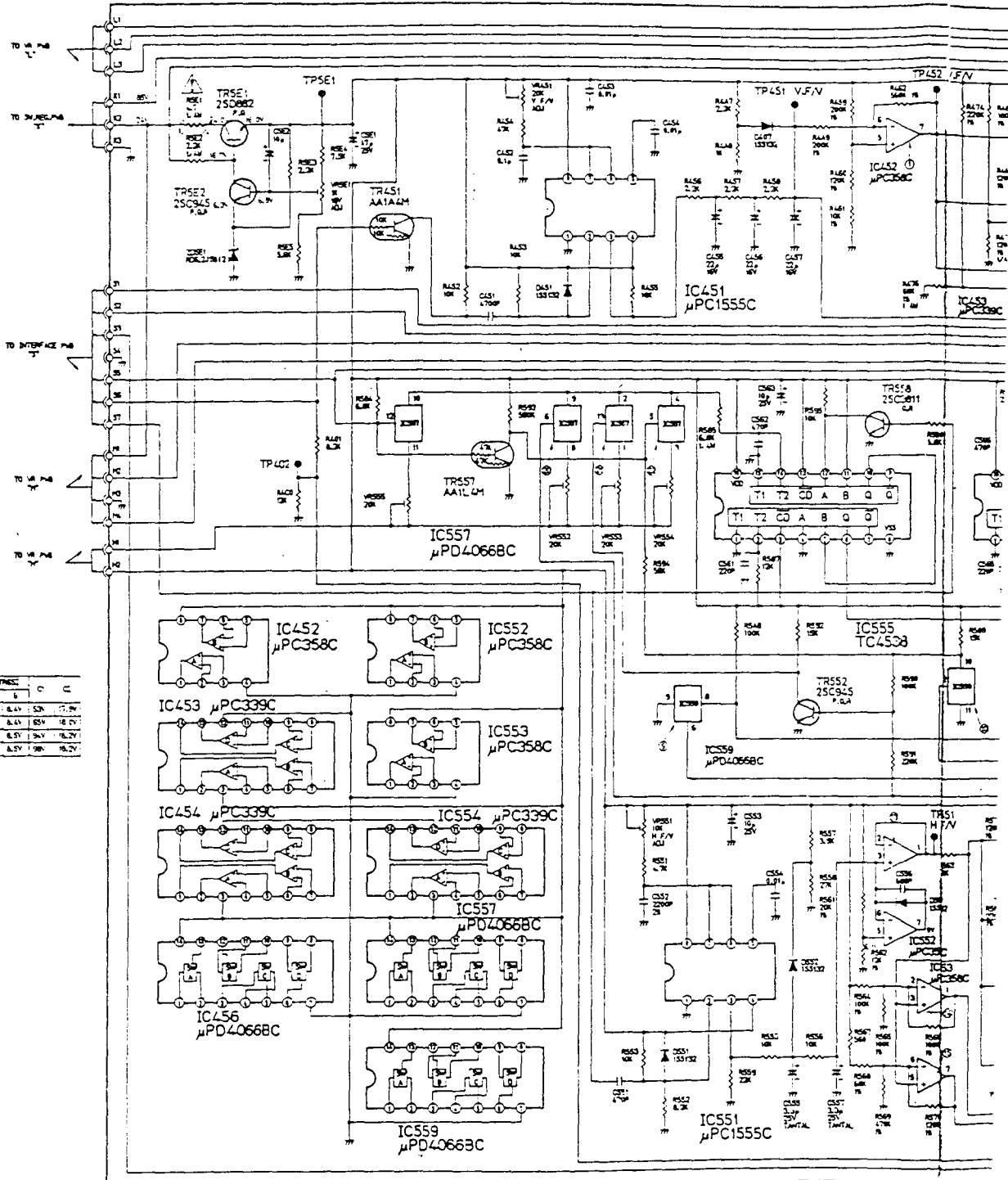
MODELS JC-1402HME/EE/N/R (DEF PWB) SCHEMATIC DIAGRAM



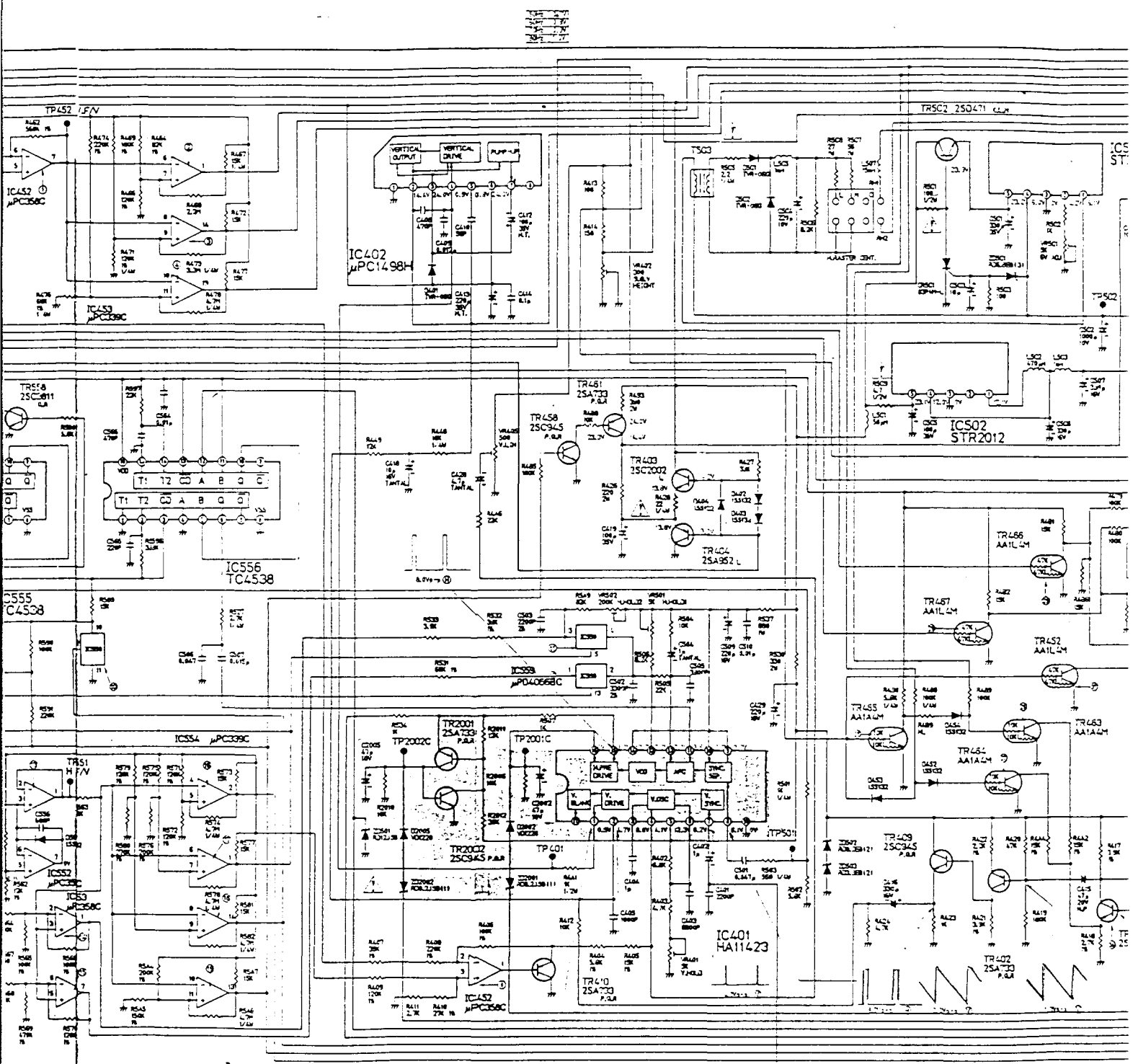
PWE 198 SW.REG. PWB



U1	U2	U3	U4	U5	U6	U7	U8	U9	U10	U11	U12	U13	U14	U15	U16	U17	U18	U19	U20
IC451	IC452	IC453	IC454	IC455	IC551	IC552	IC553	IC554	IC555	IC557	IC559	TP451	TP452	TP453	TP454	TP455	TP456	TP457	TP458



G. PWB



TP452 LFV

TR502 250471

IC402 PC1498

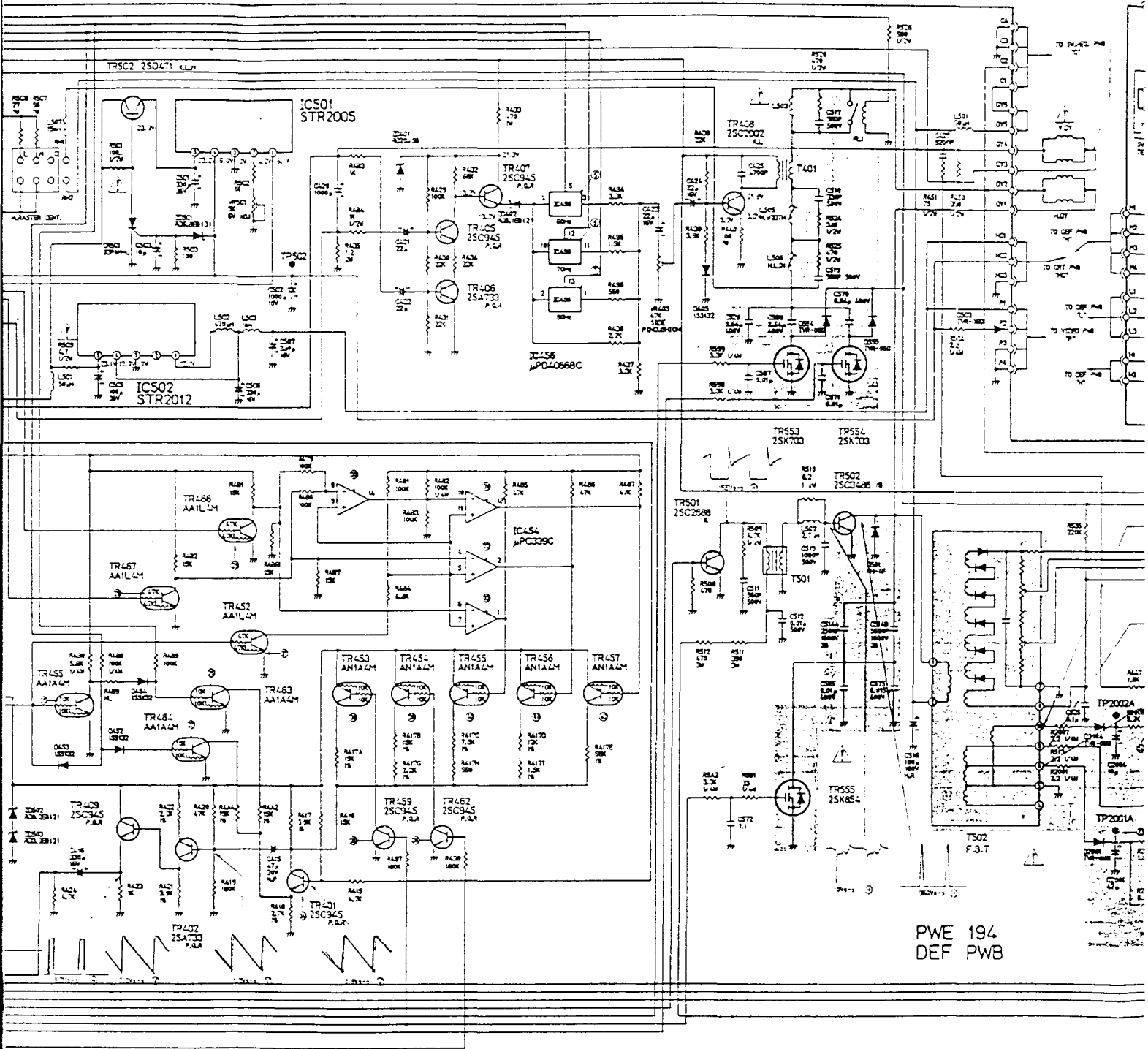
IC502 STR2012

IC556 TC4538

IC555 C4538

IC35A PC39C

IC401 HA11423



PWE 194
DEF PWB

