



Service Manual

VGA

MONOCHROME MONITOR

ML2611

ML4511

ML2571

ML4571

SAMSUNG ELECTRONICS CO., LTD.

HEAD OFFICE : 416 MAETAN-DONG, SUWEON CITY, KYUNGKI-DO, KOREA
TELEX : SECONO K24580 TELEPHONE : (0331) 30-1114

CONTENTS

IMPORTANT NOTICE FOR SERVICE PERSONNEL BEFORE SERVICING	3
SAFETY PRECAUTION	3
SPECIFICATIONS	4
THEORY OF OPERATION	5
MAJOR OPERATING COMPONENTS	6
DISASSEMBLY INSTRUCTION	8
ADJUSTMENT METHOD	9
TROUBLESHOOTING GUIDE	10
PC BOARDS	14
BLOCK DIAGRAM	16
SCHEMATIC DIAGRAM	17
CIRCUIT DIAGRAM DISPLAY SYMBOLS	20
RMS MEASUREMENT RESULTS OF THE ICS	20
WAVEFORMS	20
WIRING DIAGRAM	21
EXPLODED VIEW	25
REPLACEMENT PARTS LIST	33

■ IMPORTANT NOTICE FOR SERVICE PERSONNEL BEFORE SERVICING

PLEASE READ BEFORE ATTEMPTING SERVICE

1. Line voltage must be kept within $\pm 10\%$ of the rated voltage.
2. When operating at line voltage, confirm the DC voltage at J401 is $24V \pm 0.2V$ (Adjust VR401).
3. DO NOT DISCHARGE, ARC, OR MEASURE HIGH VOLTAGE WHEN HIGH VOLTAGE LEAD IS CONNECTED TO CRT. DISCHARGE 2ND ANODE OF CRT ONLY AFTER HIGH VOLTAGE LEAD HAS BEEN DISCONNECTED. DO NOT DISCHARGE HIGH VOLTAGE LEAD AT ANY TIME, DAMAGE TO COMPONENTS MAY RESULT.
4. While the monitor is in operation, do not attempt to connect or disconnect any wires.
5. Disconnect all power before attempting any repairs.
6. When the power is on, do not attempt to short any portion of the circuit. This shorting may cause damage to the components of the circuits.

■ SAFETY PRECAUTION

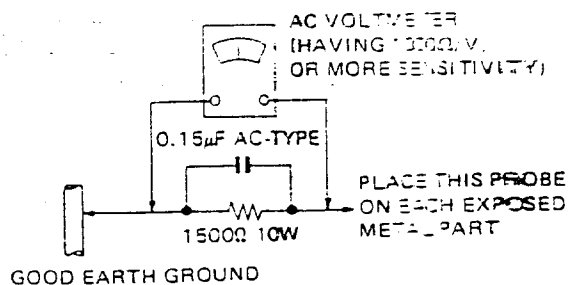
WARNING: Service should not be attempted by anyone unfamiliar with the necessary precautions on this unit. The following precautions are necessary during servicing.

1. Some parts such as a picture tube in this unit have special safety-related characteristics for X-RAY RADIATION protection. For continued safety, the parts replacement should be undertaken referring to item 2 below.
2. Many electrical and mechanical parts in this unit have special safety-related characteristics for protection against shock hazard, fire hazard and others. These characteristics are often passed unnoticed by a visual inspection and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage wattage, etc. Replacement parts which have these special safety characteristics are identified in this manual and its supplements by shading on the schematic diagram and the parts list. Before replacing any of these components, read the parts list in this manual carefully.
3. When replacing a chassis in the cabinet, always be certain that all the protective devices are installed properly, such as insulating covers, barriers, strain relief, etc.

4. Before replacing the back cover of the set, thoroughly inspect inside the cabinet to set that no stray parts or tools have been left inside.

5. Before returning the set to the customer, always perform an AC leakage current check on the exposed metallic parts of the cabinet, such as terminal screwheads, metal overlays, control shafts, etc. to be sure the set is safe to operate without danger of electrical shock. Plug the AC line cord directly into a 120V AC outlet (do not use a line isolation transformer during this check). Use an AC voltmeter having 5000 ohms per volt or more sensitivity in the following manner.

Connect a 1500 ohm, 10 watt resistor, paralleled by a $0.15\mu F$, 250V AC capacitor, between a known good earth ground (water pipe, conduit, etc.) and the exposed metallic parts, one at a time. Measure the AC voltage across the combination of 1500 ohm resistor and $0.15\mu F$ capacitor. Reverse the AC plug at the AC outlet and repeat AC voltage measurements for each exposed metallic part. Voltage measured must not exceed 0.3 volts RMS. This corresponds to 0.2mA AC. Any value exceeding this limit constitutes a potential shock hazard and must be corrected immediately.



■ SPECIFICATIONS

1. Monitor Description

This 12" CRT display monitor is operated in separate drive mode input and it is compatible with IBM PS/2.

2. Display Monitor Electrical Characteristics

- AC Power input
 - Power supply: 1) 110-120VAC 60HZ — USA version
2) 220-240VAC 50HZ — Europe version
 - Power consumption: 1) AC0.6A max. — USA version
2) AC0.4A max. — Europe version

○ Video

- Input : 0.7 Vp-p Separate ANALOG signal.
- Band width : 30 MHz at -3dB
- Video gain : 20 Vp-p min.

○ Synchronous

- Type : Separate, TTL level, 3-Mode
- Input synchronizing signals :

	Mode 1	Mode 2	Mode 3
Horizontal			
1) Frequency (kHz)	31.47	31.47	31.47
2) Polarity	+	-	-
Vertical			
1) Frequency (Hz)	70.08	70.08	59.95
2) Polarity	-	+	-
Resolution (H x V)	720 x 350	720 x 400	640 x 480

○ Recommendable display area

MODEL	Width[MM]	Height[MM]	Remark
ML2611/2571	207 ± 3	155 ± 3	
ML4511/4571	230 ± 3	170 ± 3	

○ Cathode ray tube specification

MODEL	CRT size	Face radius	Remark
ML2611	12"	645 [MM]	
ML4511	14"	770 [MM]	
ML2571	12"	1200 [MM]	
ML4571	14"	1524 [MM]	

- Deflection angle : 90°
- Implosion protection :
Shrinkage band with mounting lug.
- Phosphor : WD (paper white)
- Face : Direct etched

○ High voltage

- Anode voltage : 12.5KV ± 0.5KV at 1K = 0μA
- Voltage regulation :
300V max. (1K = 0 to 40μA)

- Tilt : ±1° max.

○ Picture linearity

- Horizontal : 6% max.
- Vertical : 6% max.

○ Geometric distortion

Any horizontal and vertical lines should be within the horizontal and vertical 3.0mm slits.

○ Brightness

- Max. brightness : 80 F/L

○ Contrast gain : 12dB min.

○ Signal cable pin connection

- Signal connector : 15 pin miniature "D" shell type.
- Connection :

- | | |
|----------------------|-------------------------|
| Pin 1 : no pin | Pin 9 : no pin |
| Pin 2 : video signal | Pin 10 : no pin |
| Pin 3 : no pin | Pin 11 : no pin |
| Pin 4 : no pin | Pin 12 : digital ground |
| Pin 5 : self test | Pin 13 : H-sync. |
| Pin 6 : no pin | Pin 14 : V-sync. |
| Pin 7 : video return | Pin 15 : no pin |
| Pin 8 : no pin. | |

3. Mechanical Characteristics

MODEL	Dimension W x H x D [MM]	Weight [Kg]	Remark
ML2611	317 x 273 x 311	7.5	
ML4511	337 x 328 x 325	8.1	
ML2571	314 x 004 x 319	7.4	
ML4571	337 x 328 x 329	8.3	

■ THEORY OF OPERATION

GENERAL

This is a high-resolution monochrome display monitor using a paper-white phosphored CRT with etched faceplate. It uses one video signal input and separate sync signals. It can operate in all of the VGA modes.

DESCRIPTION

1. Main Board

1-1. Power Supply

This is a constant-frequency switch-mode power supply using L4960 monolithic integrated circuit. The output voltage regulation is achieved by means of variable duty cycle. The output voltage of this power supply is fed back into the pin 2 of L4960. This voltage is compared to reference voltage internally. The difference of these voltages control the duty cycle of output current. D401 to D404, and C404 to C405 form input dc supplier. C408, C409, R404 are the components for frequency compensation, R403, C406 are for oscillation of saw-tooth wave. C407 is for soft start of this circuit. D405 is a flywheel diode for continuous current flowing. Output voltage is varied by adjusting VR401 potentiometer.

1-2. Horizontal Processor IC302

IC302 performs following functions.

- Horizontal oscillator
- Phase-locked loop for frequency and phase comparison.
- Phase-locked loop to compensate various delay times of the horizontal output transistor.

The sync signal from Q303 is fed into pin 3 of IC302, and flyback pulse into pin 4. This two signals are compared and the circuit is locked to a correct frequency and phase.

1-3. Horizontal Output Stage Q305

Q305 is a horizontal output switch which is closed during the scan period and opened during the flyback. It sinks a drive signal from IC302 through Q304. The flyback period is determined by the resonance of C316 and deflection yoke. C316 makes the necessary S-correction.

Because of the losses in the deflection yoke, a linearity correction is required. This is achieved by L302. The horizontal screen size can be varied by adjusting L303. The high voltage of 12.5KV for CRT anode is also generated in flyback transformer by use of flyback pulse.

1-4. Vertical Processor IC 201

IC201 performs following functions.

- Vertical, oscillator
- Ramp generator
- Linearity control
- Output amplifier

There are three vertical size control : VR202, VR203, and VR204. VR202 is for mode 3, VR203 for mode 2, and VR204 for mode 1. Each mode is automatically selected by IC301.

1-5. Dynamic Focus

Q501 is used to provide dynamic focus voltage which is added to G4 voltage of the CRT. This voltage is needed to change G4 voltage according to the angle of the beam.

2. CRT Board

IC101(M51392P) contains wide bandwidth video amplifier, gain control, pedestal clamp and brightness control circuits. Q103 and Q104 form a cascode video amplifier circuit which output is applied to cathode pin of the CRT.

3. Line Filter Board

This board contains fuse and EMI filter components.

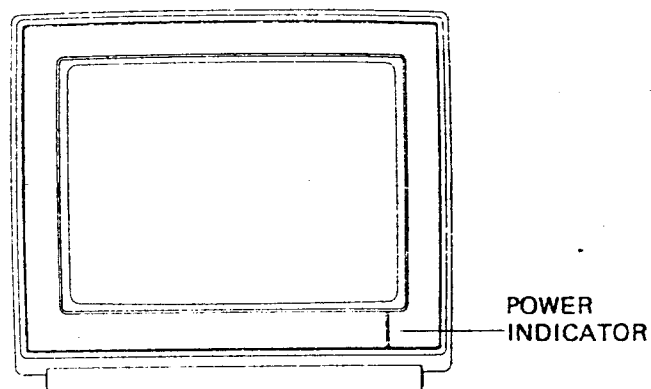
IMPORTANT : When replacing the power supply, make sure that the green/yellow ground wire is properly attached to the main chassis frame. When replacing the fuse, make sure that the fuse is of the same type and rating as the original.

***NOTE :** The adjustment requires the connection of a personal computer to the monitor. Although the monitor is adjusted before it is delivered, readjustment may be required when the setting position is changed or when a component is replaced.

■ MAJOR OPERATING COMPONENTS

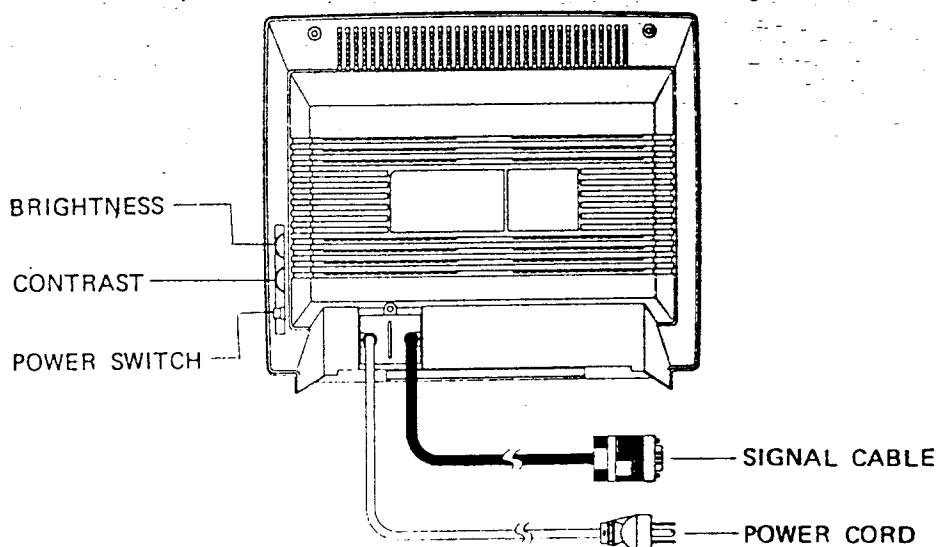
A. ML2611

1. FRONT VIEW



- 1) Power Indicator : To turn the monitor on, the power indicator (Green) light will go on.

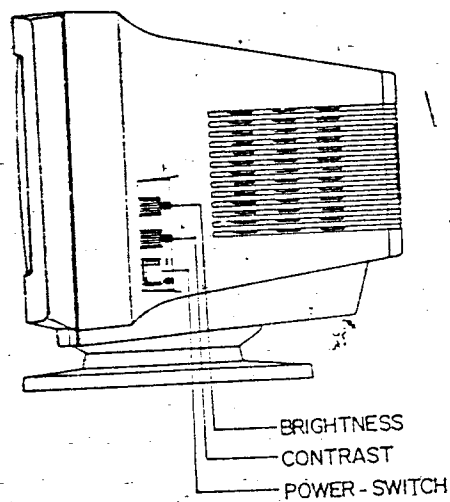
2. REAR VIEW



- 2) Brightness Control : Turning this control upper-side increases the overall brightness.
3) Contrast Control : Turning this control upper-side increases the display contrast.
4) Power Switch : Push the power switch to turn set ON.
5) Signal Cable : Connector at the terminal of CPU.
6) Power Cord : Connect with specified outlet.

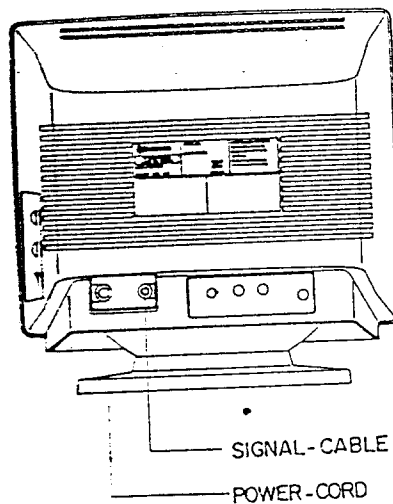
B. ML4511 / ML2571 / ML4571

1. SIDE VIEW



- 1) Brightness Control : Turning this control upper-side increases the overall brightness.
- 2) Contrast control : Turning this control upper-side increases the display contrast.
- 3) Power Switch : Push the power switch to turn set ON.

2. REAR VIEW



- 4) Signal Cable : Connector at the terminal of CPU.
- 5) Power Cord : Connect with specified outlet.

■ DISASSEMBLY INSTRUCTION

1. Fig. A (CABINET)

Loosen two screws (A) holding Cover-Rear and Cover-Front, and the screw (B) in order to release the Cover-Rear from the Chassis-Frame, and the screw (C) in order to release Cover-Rear from the Back-Holder, Cord.

Remove the Cover-Rear by pulling Cover-Rear backward while pushing the inner latches in direction of (E), using two jigs(D).

2. Fig. B (PWB's)

1) The CRT must be discharged firstly. Refer to the high voltage discharge procedure for important safety precautions.

2) Remove the CRT's anode cap(a) from the CRT.

3) Disconnect the ground lead and remove the PWB-CRT

from the Chassis-Frame.

4) Remove Chassis-Frame from the Cover-Front by loosening screws (b).

5) Loosen two screws (c) holding the Chassis-frame and Back-Holder, Cord.

6) Loosen five screws (d) from the Chassis-Frame and remove PWB-Main.

7) loosen two screws (e) from the Chassis-Frame and remove PWB-Power.

8) Loosen four screws (f) to remove Trans-Power from the Chassis-Frame.

9) Remove the lug-terminal from the Chassis-Frame by unscrewing (g).

FIGURE A. CABINET

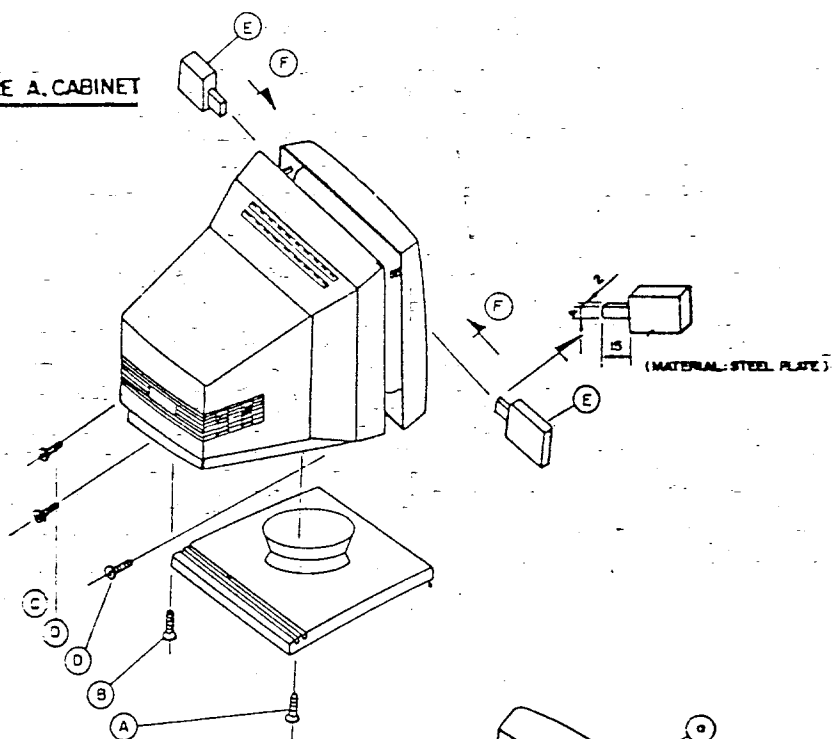
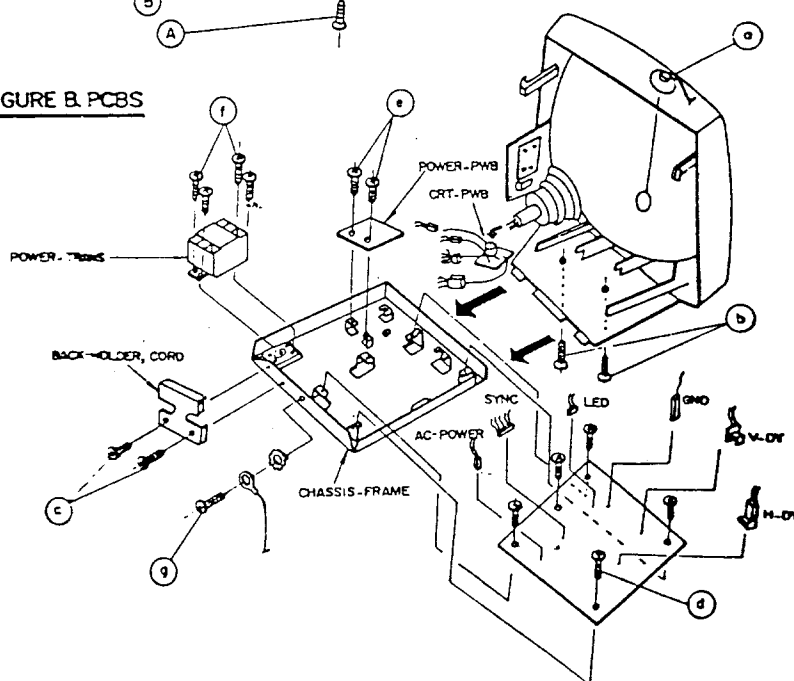


FIGURE B. PCBS



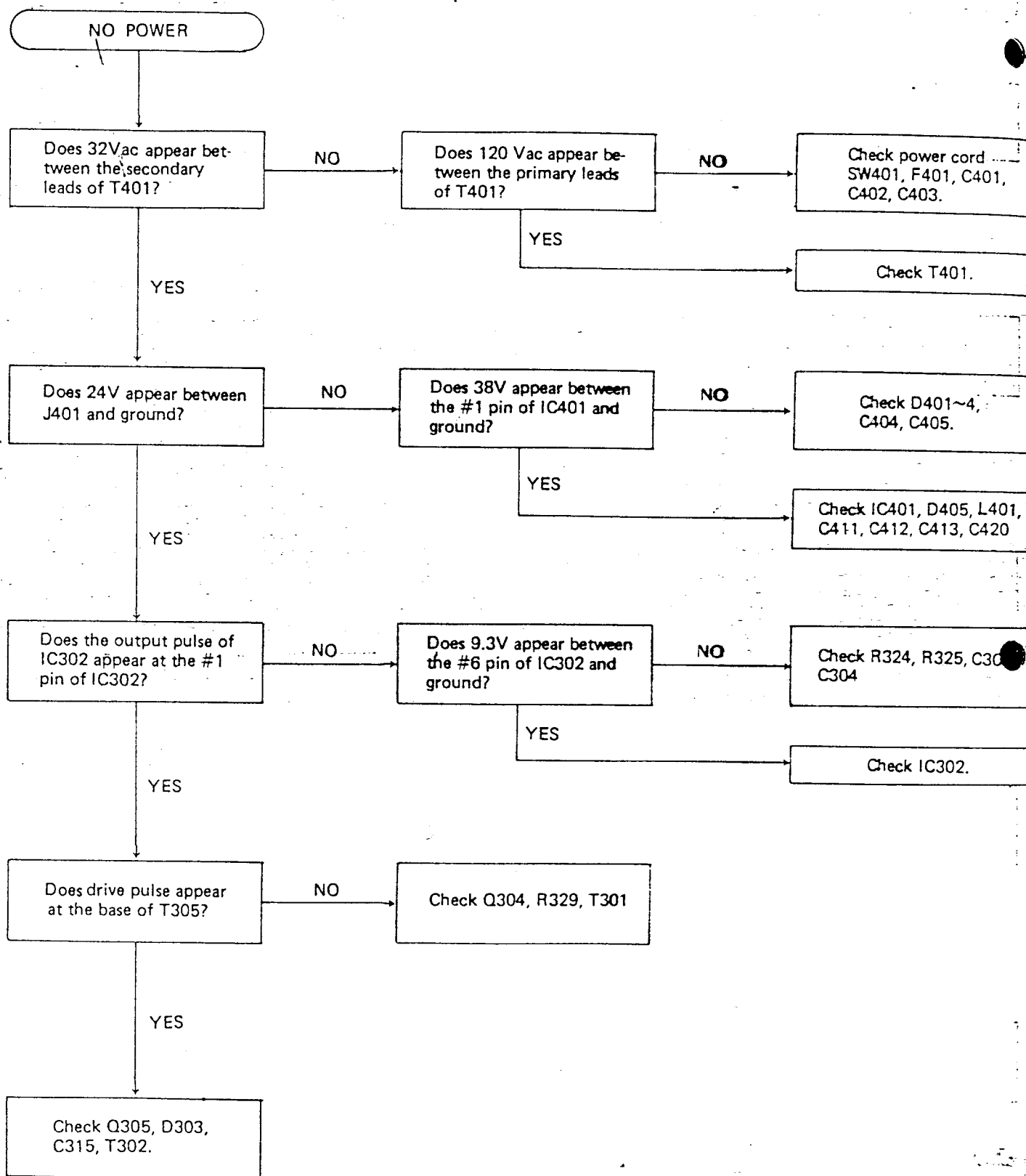
ADJUSTMENT METHOD

SEQUENCE	ITEM	ADJUSTED BY.	GOAL	ADJ. CONDITION	REMARKS
1	B+ (FBT SUPPLY VOLTAGE)	VR401 (V-ADJUST)	+24 +/-0.2V		
2	H-HOLD	VR301 (H-HOLD)	Adjust screen at horizontal center position of raster.		
3	H-LINEARITY	L302 (H-LIN.)	A same character size of Horizontal axis.	FULL CROSS HATCH PATTERN or FULL "H" PATTERN.	
4	H-WIDTH	L303	Refer to the Page 4.	(MODE3) Set FULL WHITE PATTERN and brightness 30F/L. Next, change to CROSS HATCH PATTERN.	
5	V-HOLD	VR201	Vertical free running Frequency: 54 +/-2 (Hz).	No signal.	
6	V-LINEARITY	VR205	A same character size of Vertical axis	FULL CROSS-HATCH PATTERN or FULL "H" PATTERN.	
7	V-SIZE	1) VR202 (V-SIZE1) 2) VR203 (V-SIZE2) 3) VR204 (V-SIZE3)	Refer to the page 4. (MODE 3) A same sequence 7-1. (MODE2) A same sequence 7-1. (MODE1)	A same condition as the adjustment method sequence #4.	
8	CENTERING	CENTERING MAGNET OF DEFLECTION YOKE	Adjust screen at central point.		
9	TILT	DEFLECTION YOKE	Turn the DY in order to adjust within +/-1 deg. of tilt.		
10	GEOMETRIC	G/D COMPENSATION MAGNET	Adjust G/D by magnet in order to enter within overlay jig.		
11	BRIGHTNESS	VR503 (SUB-BRT.)	Adjust VR503 in order to instantly disappear the back-raster.	Center point (detent) of VR502 (EXT-BRT.)	
12	CONTRAST	VR101 (SUB-CONT.)	Adjust VR101 in order to make brightness to 40 +/-5 F/L.	Set FULL WHITE PATTERN (MODE3). Next, set VR102 (CONTRAST) to max.	
13	FOCUS	VR501 (FOCUS)	Adjust VR501 in order to make the total focus of the screen to optimal status.	FULL "H" PATTERN	

■ TROUBLE SHOOTING

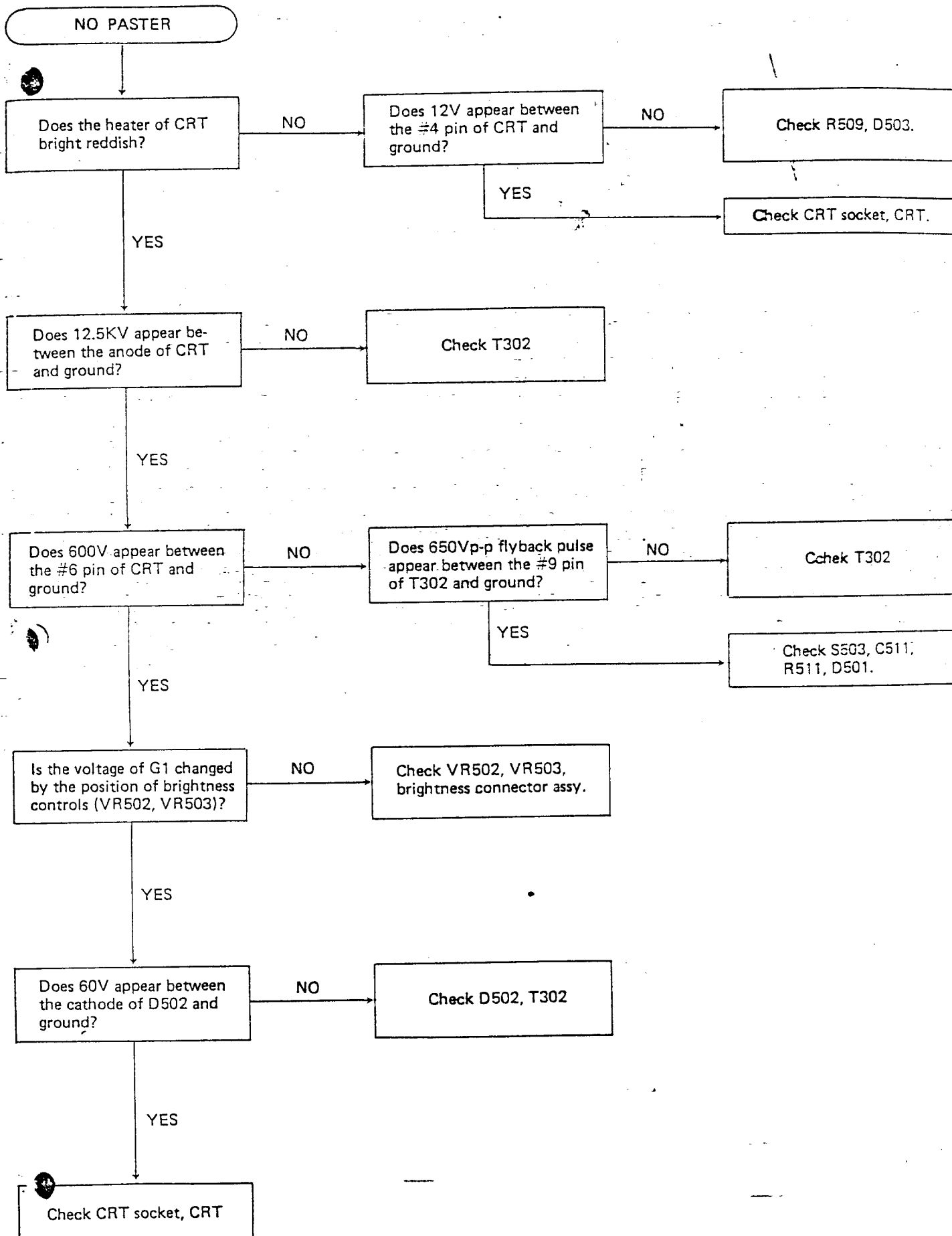
1. NO POWER

No raster appears and power indicator is not ON in spite of supplying rated AC power input.



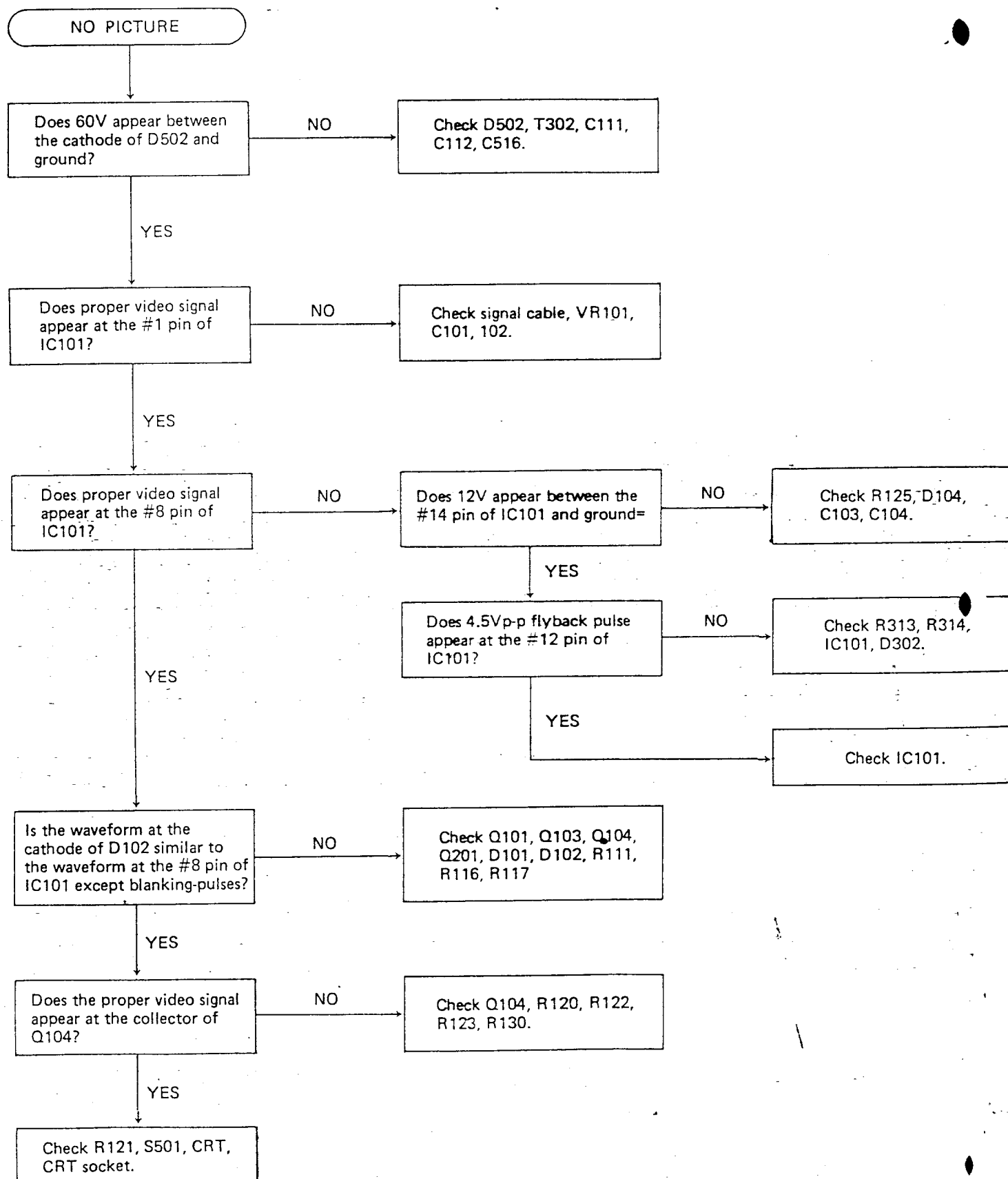
2. NO PASTER

Power supply and horizontal circuits operate normally, but there is no raster appeared.



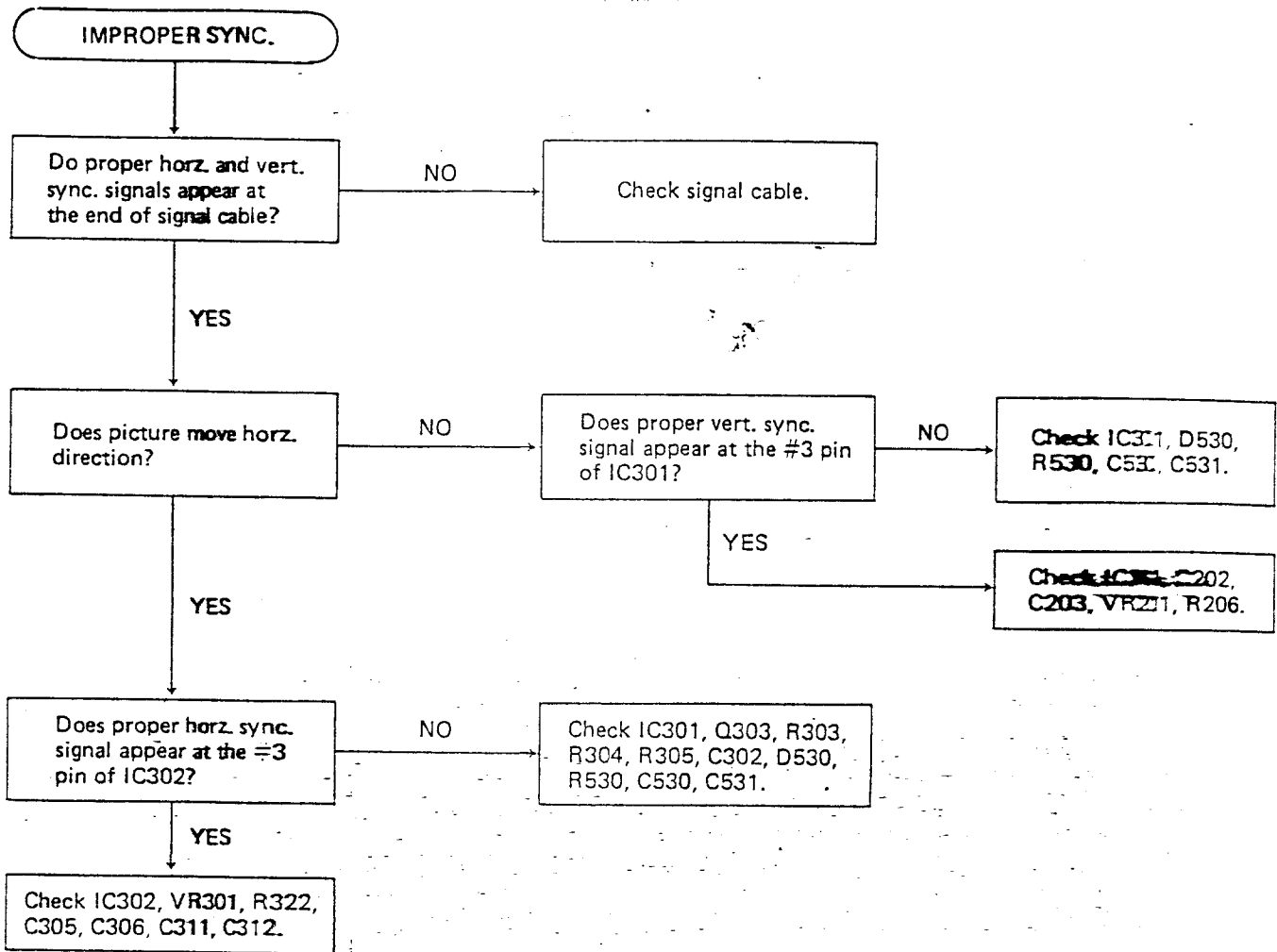
3. NO PICTURE

No picture appears on the raster in spite of connecting with proper video signal source and the other operations have no problem.



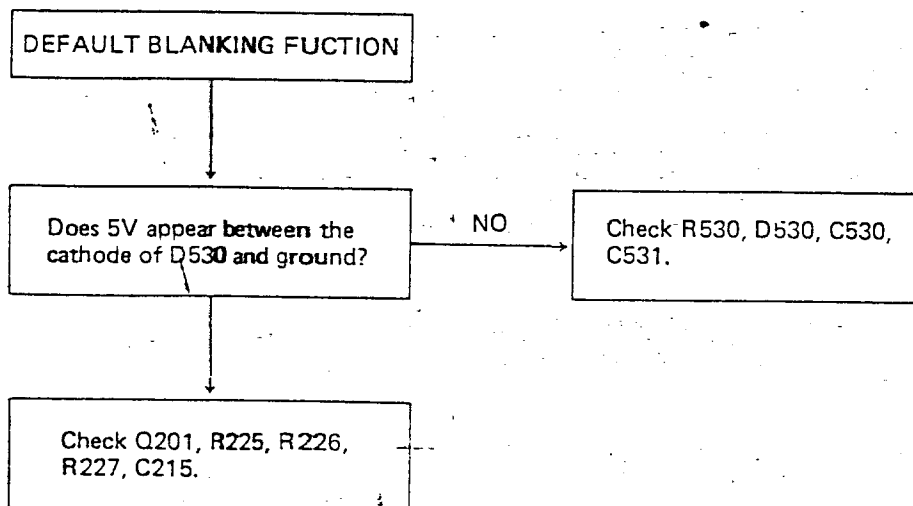
4. IMPROPER HORIZONTAL OR VERTICAL SYNCHRONIZATION

There is no **stable** picture. It moves horizontal or vertical direction.



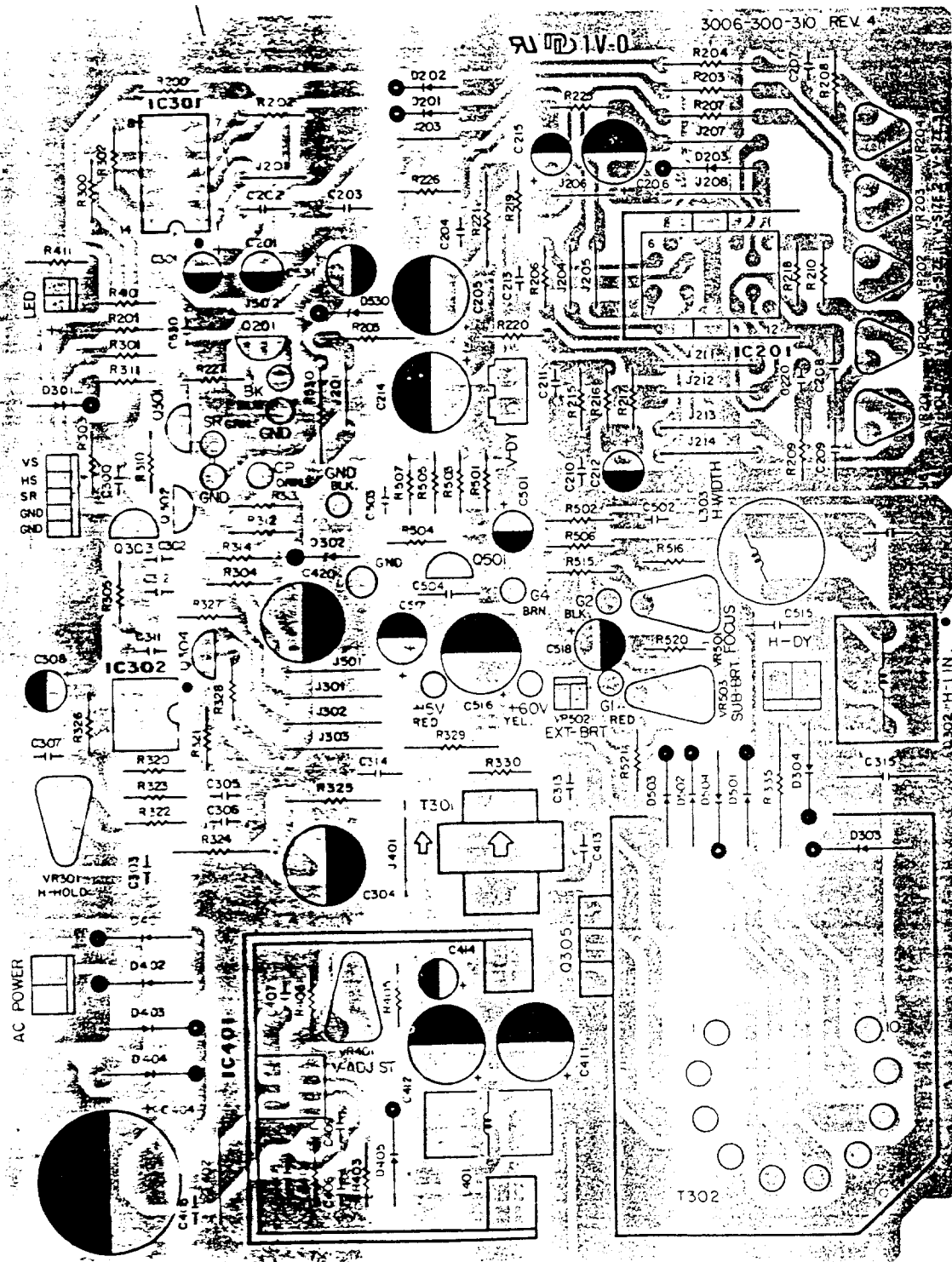
5. DEFAULT BLANKING FUNCTION

Vertical retrace line appears on the raster when the external brightness control (VR502) posits high range.

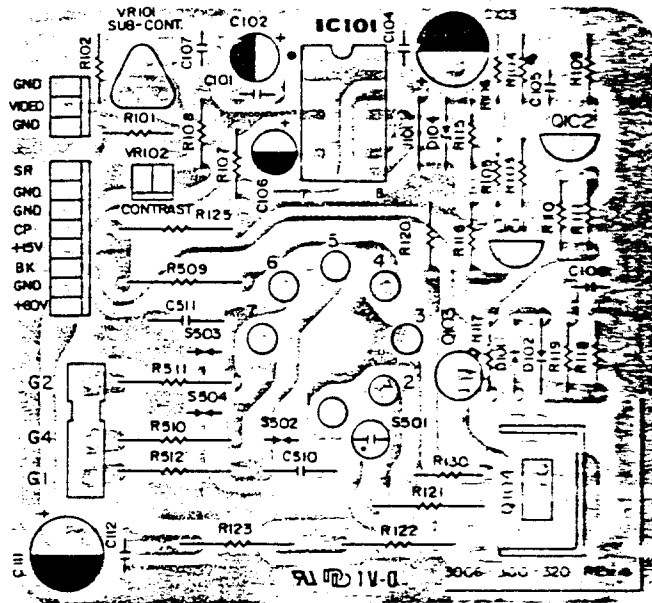


■ PC BOARDS (COMPONENT SIDE)

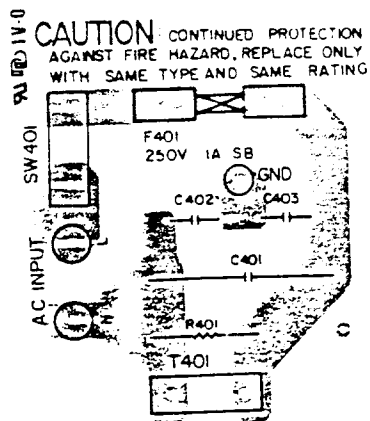
A. MAIN PCB



B. CRT SOCKET PCB

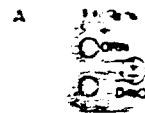


C. AC POWER FILTER PCB

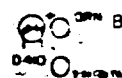


D. LED PCB

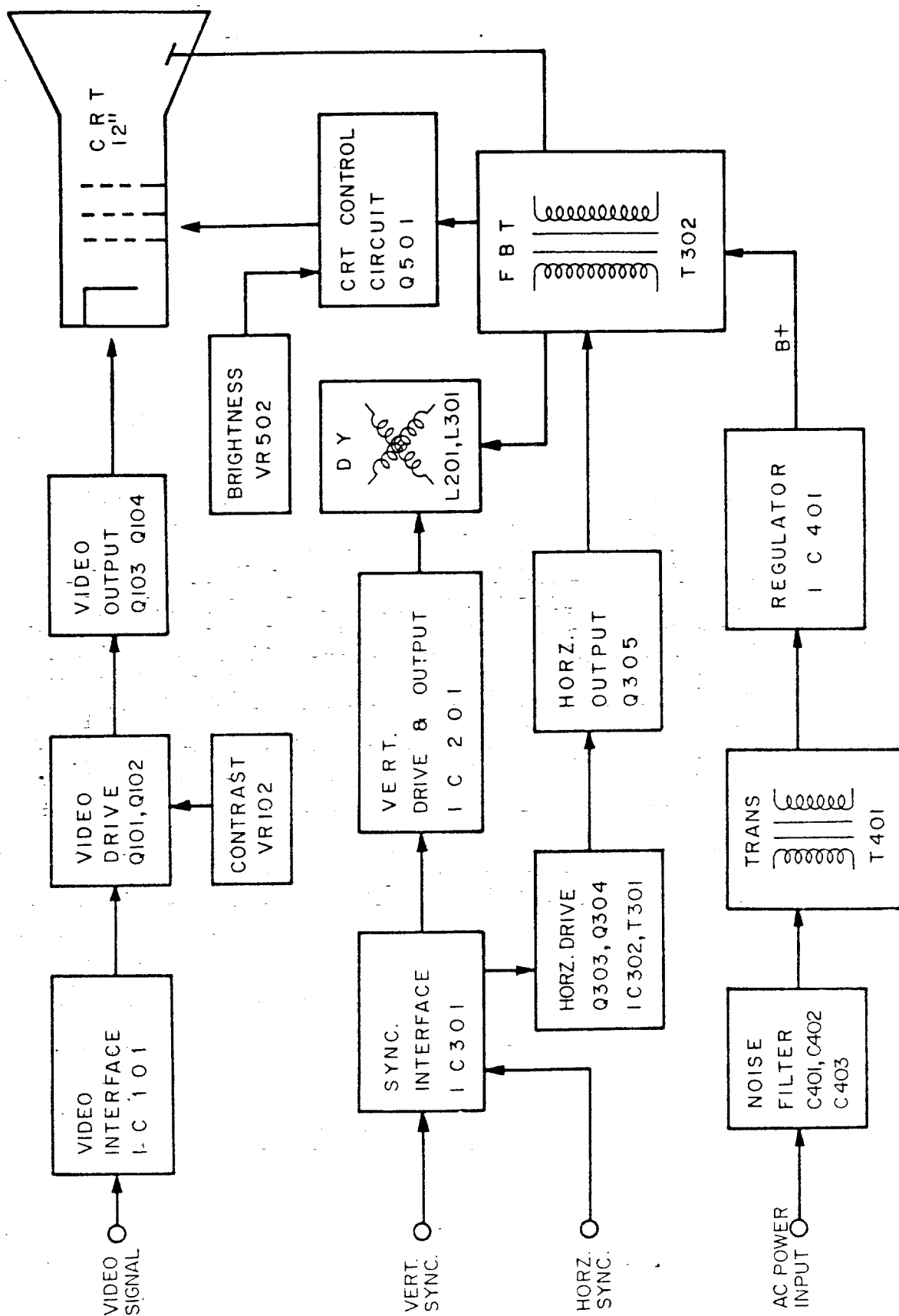
(1) For ML26:1



(2) For ML4511/2571/4571

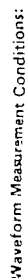


■ BLOCK DIAGRAM

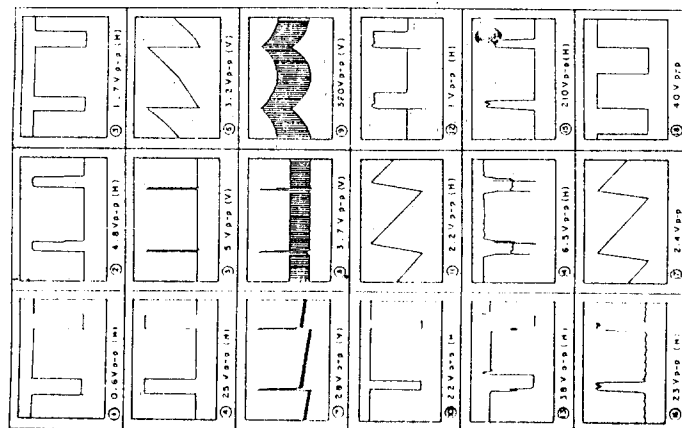


• CIRCUIT DIAGRAM DISPLAY SYMBOLS

WAVEFORMS



1. The voltage level and waveform at each point are given below on 100V AC power when this set is connected to a personal computer with a video signal input at a white panel with contrast max.
2. $\odot \rightarrow$ indicates the waveform check points. (In the chart, waveforms are measured from the point indicated to chassis ground.)

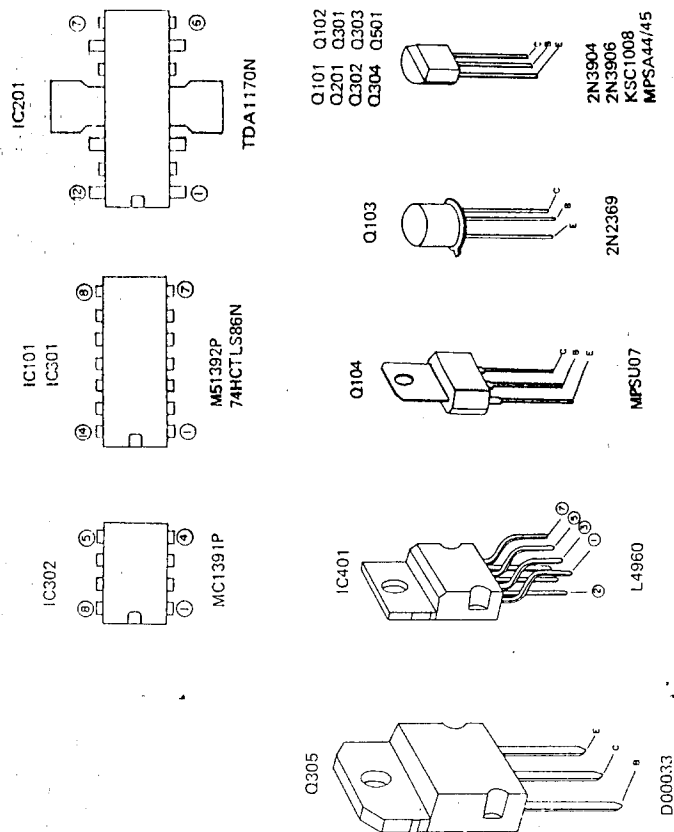


RMS MEASUREMENT RESULTS OF THE IC'S

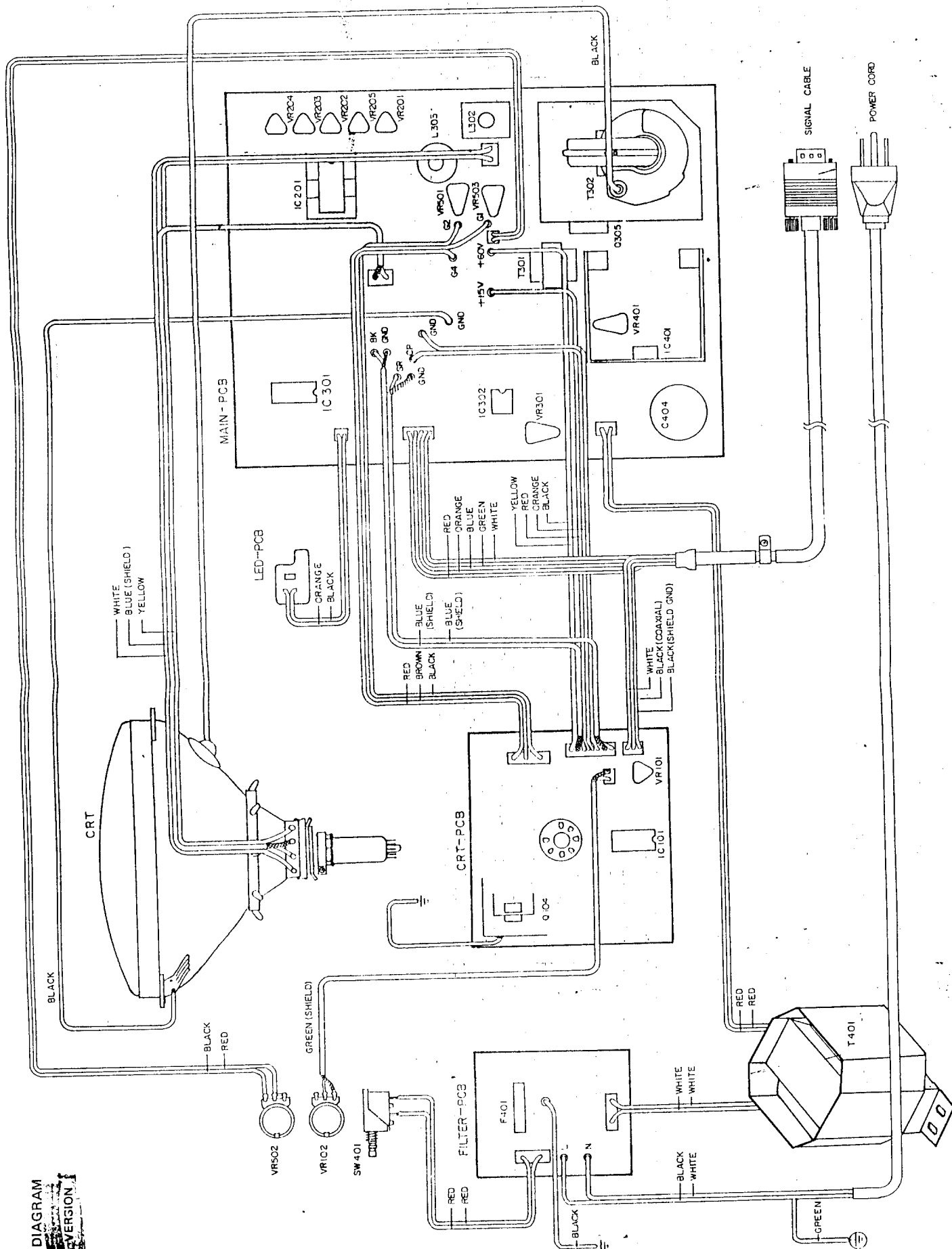
Measured with high impedance V.T.V.M. or circuit tester under line voltage 120V AC. Voltage reading may vary $\pm 10\%$. Video signal is a white pattern and mode 3.

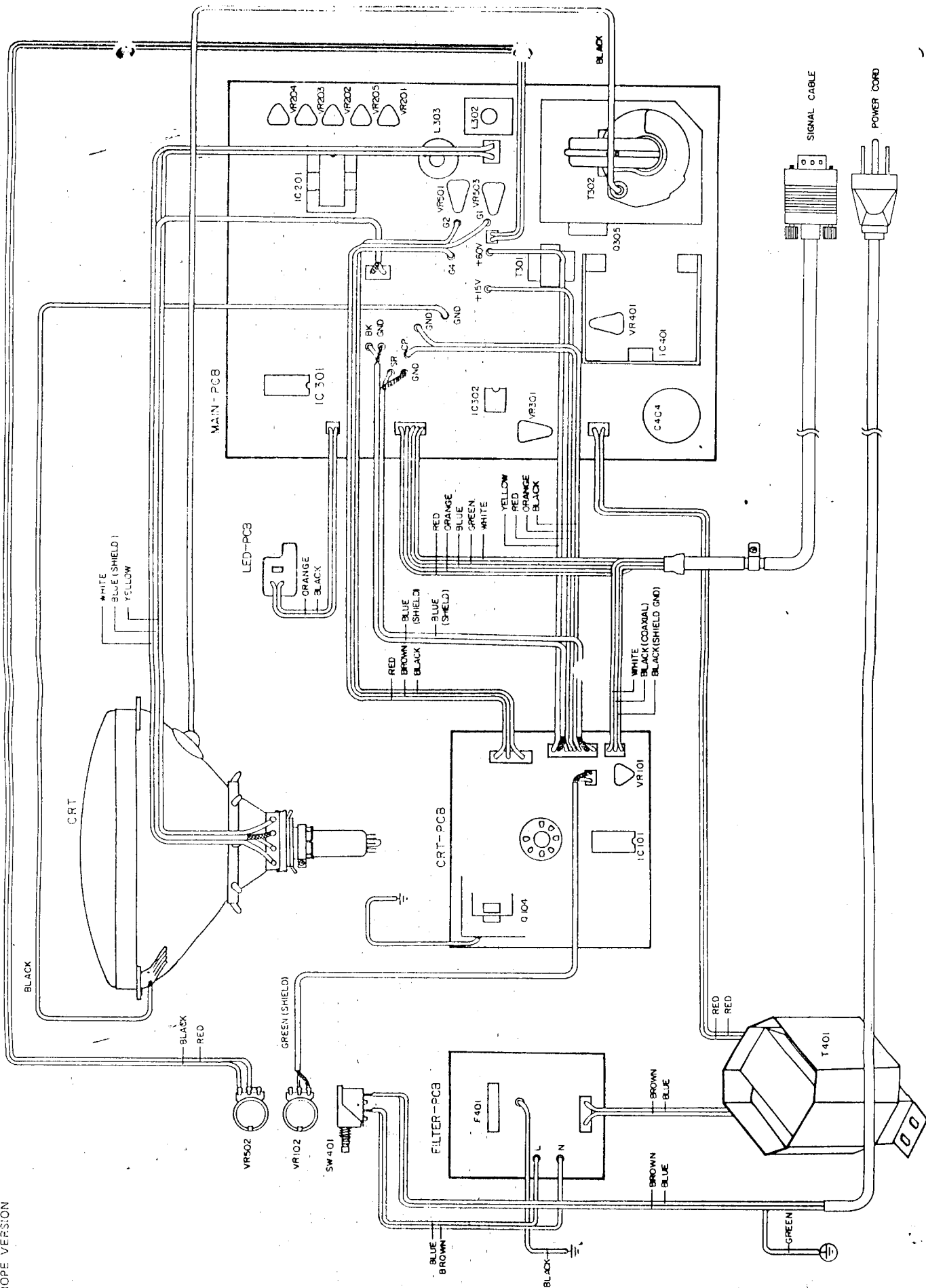
ICS		IC201	IC301	IC302	IC401
PIN	NO.	M51392P	741LS86	MCI381P	L4960
1	3.8	2.3	4.8	0.2	38.5
2	0	14.5	4.7	0	5.0
3	2.3	1.8	0.4	2.6	2.6
4	6.7	7.6	4.7	2.3	0
5	0	14.0	0	2.9	2.0
6	3.7	6.5	4.8	9.3	4.8
7	0	6.8	0	4.1	51.0
8	3.1	0.4	4.5	3.1	*
9	6.0	2.9	0	*	*
10	0	2.0	3.7	*	*
11	4.8	0.6	1.3	*	*
12	1.4	1.5	3.7	*	*
13	0	*	4.2	*	*
14	11.8	*	4.8	*	*

Unit: Volts



WIRING DIAGRAM REVISION 1



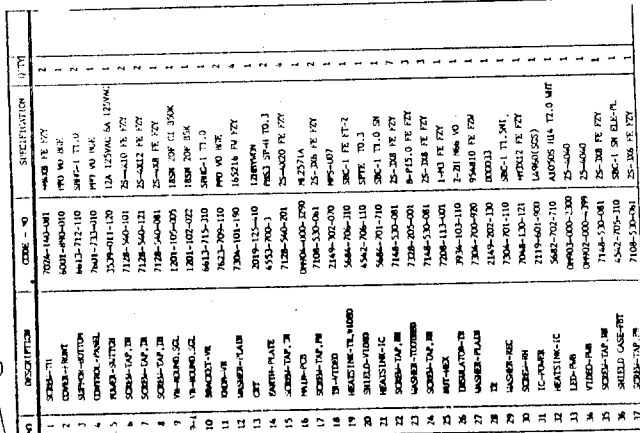


EXPLODED VIEW

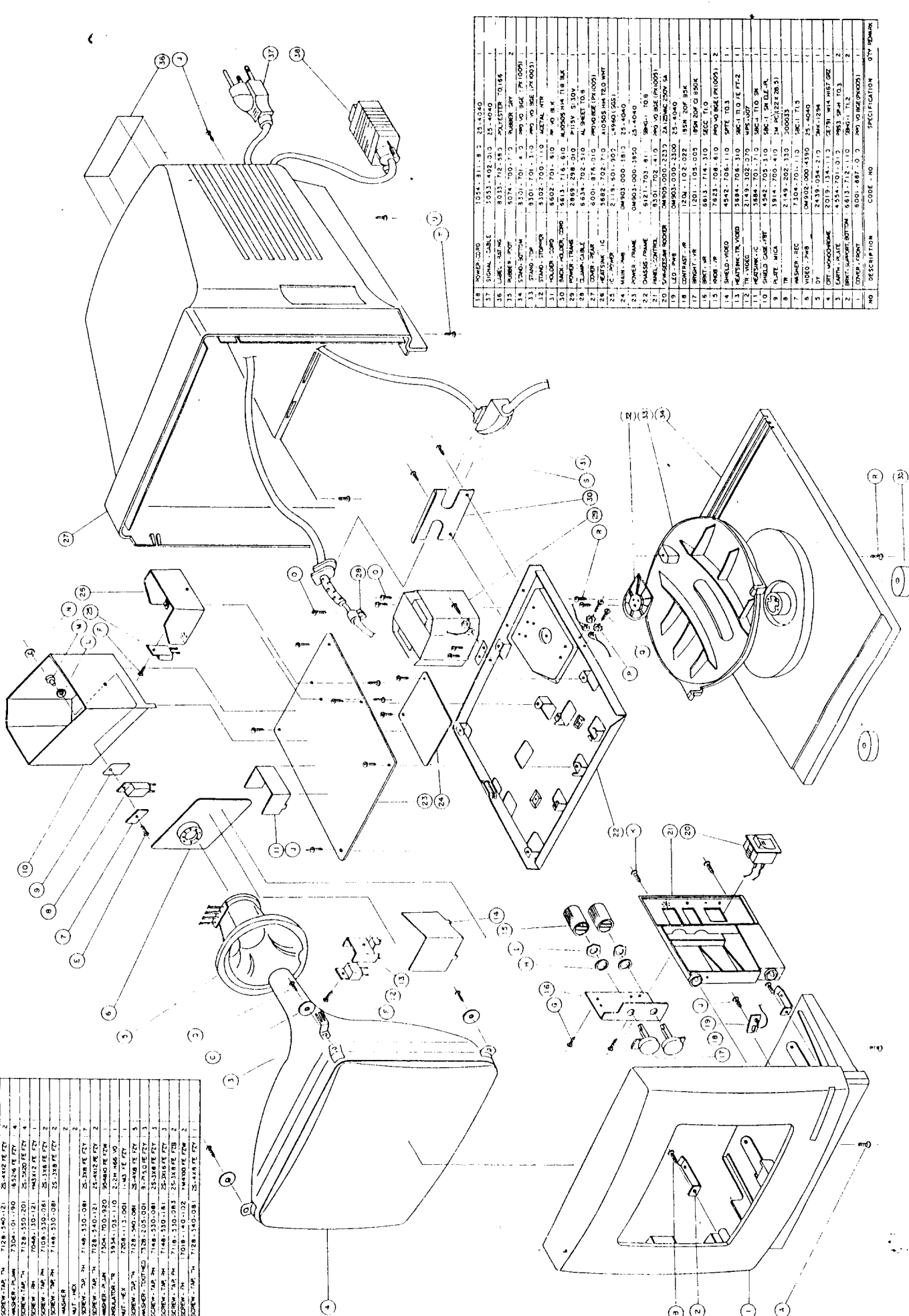
A. ML2611

31	7623-708-610	KNOB-VR	2
32	7128-540-121	SCREW-TAP TH	2
33	6121-703-710	CHASSIS-FRAME	1
34	6812-707-510	BRKT-CONTROL	1
35	3529-702-210	SWITCH-RGN	1
36	1201-105-005	VR-ROUND SOL	1
37	1201-102-022	VR-ROUND SOL	2
38	7320-200-001	WASHER-TOOTHED	1
39	7048-440-081	SCREW-RN	1
40	7148-530-101	SCREW-TAP RH	1
41	2309-110-090	LED	1
42	7128-540-121	SCREW-TAP TH	2
43	6813-712-110	SWITCH-BOTTOM	1
44	7128-540-081	SCREW-TAP TH	1
45	7048-130-081	SCREW-RN	2
46	5682-702-710	FEATHR-IC	1
47	7108-126-041	SCREW-TAP RH	1
48	2659-129-310	TRANS-FLYBACK	1
49	4542-705-310	SHIELD-PT	1
50	7128-540-081	SCREW-TAP TH	2
51	3934-103-110	INSULATOR-R	1
52	7008-113-001	MUT-KEE	1
53	1914-700-410	PLATE-MICA	1
54	7304-701-110	WASHER-2PC	1
55	8101-702-310	TRANS-BOTTOM	1
56	8101-700-310	TRANS-TOP	1
57	8102-700-110	TRANS-TOPPER	1
58	7148-530-101	SCREW-TAP RH	2
59	4074-700-720	FOOT	1
60	3809-020-029	SNOW-IRON ALPHA	1

10	3053-402-310	CABLE-SIGNAL	1
11	1602-701-610	WASHER-2PC	1
12	3054-810-210	POWER-2PC AC	1
13	8813-716-610	BRKT-CORD HOLD	1
14	7118-530-081	SCREW-TAP RH	2
15	7018-440-021	SCREW-RN	1
16	823-709-210	KNOB-POWER	1
17	7148-530-102	SCREW-TAP RH	1
18	8033-716-310	LABEL-PRODUCT	1
19	7148-540-131	SCREW-TAP RH	1
20	8001-895-310	CABINET-BACK	1
21	7128-540-081	SCREW-TAP TH	1
22	3889-286-000	TRANS-POWER ASSY	1
23	7118-540-081	SCREW-TAP TH	1
24	5534-702-310	CLAMP-CABLE	1
25	7148-530-081	SCREW-TAP RH	1
26	7108-126-041	SCREW-TAP RH	1
27	3008-500-320	WEL-1/2 SOCKET	1
28	7108-530-081	SCREW-TAP RH	1
29	6463-703-610	WEL-1/2 SOCKET	1
30	5684-701-710	HEATSHK-IC LTD	1
31	5684-716-310	BRKT-KEE HOLDER	1
32	5534-700-910	SOCKET-OUT	1
33	5684-708-330	HEATSHK-VIBRO	1
34	2439-054-200	DIOL-TIME	1
35	4554-701-010	EARTH-PLATE	1
36	7128-540-210	SCREW-TAP TH	1
37	7304-101-190	WASHER-2PC	1
38	2019-125-010	OPT-MONOCROME	1
39	8001-893-010	CABINET-FRONT	1
40	CODE-NO	DESCRIPTION	REMARK



NO.	DESCRIPTION	CODE NO.	SPECIFICATION	QTY	REMARK
A	SCREEN-CH	7048-40-03H	25-4040	2	
B	SCREEN-CH	7128-540-12	25-4040	2	
C	SCREEN-CH	7128-540-12	25-4040	2	
D	SCREEN-CH	7128-540-12	25-4040	2	
E	SCREEN-CH	7128-540-12	25-4040	2	
F	SCREEN-CH	7128-540-12	25-4040	2	
G	SCREEN-CH	7128-540-12	25-4040	2	
H	SCREEN-CH	7128-540-12	25-4040	2	
I	SCREEN-CH	7128-540-12	25-4040	2	
J	SCREEN-CH	7128-540-12	25-4040	2	
K	SCREEN-CH	7128-540-12	25-4040	2	
L	SCREEN-CH	7128-540-12	25-4040	2	
M	SCREEN-CH	7128-540-12	25-4040	2	
N	SCREEN-CH	7128-540-12	25-4040	2	
O	SCREEN-CH	7128-540-12	25-4040	2	
P	SCREEN-CH	7128-540-12	25-4040	2	
Q	SCREEN-CH	7128-540-12	25-4040	2	
R	SCREEN-CH	7128-540-12	25-4040	2	
S	SCREEN-CH	7128-540-12	25-4040	2	
T	SCREEN-CH	7128-540-12	25-4040	2	
U	SCREEN-CH	7128-540-12	25-4040	2	



NO.	DESCRIPTION	CODE NO.	SPECIFICATION	QTY	REMARK
1	SCREEN-CH	7048-40-03H	25-4040	2	
2	SCREEN-CH	7128-540-12	25-4040	2	
3	SCREEN-CH	7128-540-12	25-4040	2	
4	SCREEN-CH	7128-540-12	25-4040	2	
5	SCREEN-CH	7128-540-12	25-4040	2	
6	SCREEN-CH	7128-540-12	25-4040	2	
7	SCREEN-CH	7128-540-12	25-4040	2	
8	SCREEN-CH	7128-540-12	25-4040	2	
9	SCREEN-CH	7128-540-12	25-4040	2	
10	SCREEN-CH	7128-540-12	25-4040	2	
11	SCREEN-CH	7128-540-12	25-4040	2	
12	SCREEN-CH	7128-540-12	25-4040	2	
13	SCREEN-CH	7128-540-12	25-4040	2	
14	SCREEN-CH	7128-540-12	25-4040	2	
15	SCREEN-CH	7128-540-12	25-4040	2	
16	SCREEN-CH	7128-540-12	25-4040	2	
17	SCREEN-CH	7128-540-12	25-4040	2	
18	SCREEN-CH	7128-540-12	25-4040	2	
19	SCREEN-CH	7128-540-12	25-4040	2	
20	SCREEN-CH	7128-540-12	25-4040	2	
21	SCREEN-CH	7128-540-12	25-4040	2	
22	SCREEN-CH	7128-540-12	25-4040	2	
23	SCREEN-CH	7128-540-12	25-4040	2	
24	SCREEN-CH	7128-540-12	25-4040	2	
25	SCREEN-CH	7128-540-12	25-4040	2	
26	SCREEN-CH	7128-540-12	25-4040	2	
27	SCREEN-CH	7128-540-12	25-4040	2	
28	SCREEN-CH	7128-540-12	25-4040	2	
29	SCREEN-CH	7128-540-12	25-4040	2	
30	SCREEN-CH	7128-540-12	25-4040	2	
31	SCREEN-CH	7128-540-12	25-4040	2	

REPLACEMENT PARTS LIST

PRODUCT SAFETY SHOULD BE CONSIDERED WHEN A COMPONENT REPLACEMENT IS MADE IN ANY AREA OF A UNIT COMPONENTS INDICATED BY A MARK*
IN THIS PARTS LIST AND THE SCHEMATIC DIAGRAM SHOW COMPONENTS WHOSE VALUE HAVE SPECIAL SIGNIFICANCE TO PRODUCT SAFETY. IT IS PARTICULARLY RECOMMENDED THAT ONLY PARTS SPECIFIED ON THE FOLLOWING PARTS LIST BE USED FOR COMPONENT REPLACEMENT POINTED OUT BY THE MARK.

Location No.	Part No.	Description	Remark
ASSY-PWB, MAIN			
	0509-400-116	WIRE-SQ COPPER;TA 0.6 SN	
8P	3053-605-310	CONN-8P ASSY;MD-1261 L	
C201	1416-318-471	C-CERAMIC,HK;CK45 B 50V 470-K	
C202	1509-121-260	C-POLYESTER;CQ921M 100V 0.1M-J	
C203	1509-121-750	C-POLYESTER;CQ921M 100V 0.15M-J	
C204	1417-344-104	C-CERAMIC,HK;CK45(T) F 50V 0.1M-Z	
C205	1609-401-510	C-ELECTROLYTIC;CE04W 16V 1000M	
C206	1609-402-100	C-ELECTROLYTIC;CE04W 35V 100M	
C207	1505-724-332	C-POLYESTER;CQ921M(T) 100V 0.0033-K	
C208	1517-383-104	C-M,POLYESTER;CF922M 250V 0.1M-J	
C209	1517-383-104	C-M,POLYESTER;CF922M 250V 0.1M-J	
C210	1608-904-470	C-ELECTROLYTIC;CE04W(T) 25V 47M	
C211	1417-318-101	C-CERAMIC,HK;CK45(T) B 50V 100-K	
C212	1608-905-220	C-ELECTROLYTIC;CE04W(T) 35V 22M	
C213	1505-723-104	C-POLYESTER;CQ921M(T) 100V 0.1M-J	
C214	1609-401-510	C-ELECTROLYTIC;CE04W 16V 1000M	
C215 ALT	1608-905-479	C-ELECTROLYTIC;CE04W(T) 35V 4.7M	FOR ML2611 ONLY
ALT	1608-908-068	C-ELECTROLYTIC;CE04W(T) 100V 0.68M	FOR ML4511 / 2571 / 4571
C220	1417-318-221	C-CERAMIC,HK;CK45(T) B 50V 220-K	
C300	1417-318-101	C-CERAMIC,HK;CK45(T) B 50V 100-K	
C301	1608-906-047	C-ELECTROLYTIC;CE04W(T) 50V 0.47M	
C302	1509-121-070	C-POLYESTER;CQ921M 100V 0.0027M-J	
C303	1417-344-104	C-CERAMIC,HK;CK45(T) F 50V 0.1M-Z	
C304	1609-402-120	C-ELECTROLYTIC;CE04W 35V 330M	
*C305	1509-452-180	C-POLYSYTRENE;CQ09S 50V 1500-J	
*C306	1505-725-102	C-POLYESTER;CQ921M(T) 100V 0.001-K	
C307	1505-724-332	C-POLYESTER;CQ921M(T) 100V 0.0033-K	
C308	1608-906-109	C-ELECTROLYTIC;CE04W(T) 50V 1M	
C311	1509-121-260	C-POLYESTER;CQ921M 100V 0.1M-J	
C312	1505-723-103	C-POLYESTER;CQ921M(T) 100V 0.01-J	
C313	1509-121-070	C-POLYESTER;CQ921M 100V 0.0027M-J	
*C314	1509-121-260	C-POLYESTER;CQ921M 100V 0.1M-J	
*C315	1507-553-183	C-POLYPROPYLENE;CQ922M 630V 0.018M-J	
*C316	1539-001-250	C-M,PAPER;CH021H 250V 2.5M-K	
*C404	1603-907-222	C-ELECTROLYTIC;CE04W 63V 2200UF(22X40)	
C405	1417-344-104	C-CERAMIC,HK;CK45(T) F 50V 0.1M-Z	
C406	1505-723-222	C-POLYESTER;CQ921M(T) 100V 0.0022 J	
C407	1417-329-102	C-CERAMIC,HK;CK45(T) D 50V 1000-M	
C408	1417-318-331	C-CERAMIC,HK;CK45(T) B 50V 330-K	
C409	1505-723-103	C-POLYESTER;CQ921M(T) 100V 0.01-J	

Location No.	Part No.	Description	Remark
C411	1603-905-471	C-ELECTROLYTIC;CE04W 35V 470M	
C412	1603-905-471	C-ELECTROLYTIC;CE04W 35V 470M	
C413	1417-344-104	C-CERAMIC,HK;CK45(T) F 50V 0.1M-Z	
C414	1608-904-100	C-ELECTROLYTIC;CE04W(T) 25V 10M	
C420	1603-905-471	C-ELECTROLYTIC;CE04W 35V 470M	
C501	1609-402-250	C-ELECTROLYTIC;CE04W 50V 10M	
C502	1505-723-104	C-POLYESTER;CQ921M(T) 100V 0.1M-J	
C503	1505-723-562	C-POLYESTER;CQ921M(T) 100V 0.0056-1-J	
C504	1517-353-223	C-M,POLYESTER;CF922M 630V 0.022M-J	
C515	1419-901-100	C-CERAMIC,HK;CK45 B 1KV 0.01M-K	
C516	1609-403-100	C-ELECTROLYTIC;CE04W 100V 100M	
C517	1609-401-700	C-ELECTROLYTIC;CE04W 25V 330M	
C518	1609-403-180	C-ELECTROLYTIC;CE04W 160V 2.2M	
C530	1417-344-104	C-CERAMIC,HK;CK45(T) F 50V 0.1M-Z	
C531	1608-903-101	C-ELECTROLYTIC;CE04W(T) 16V 100M	
D201	2169-301-410	DIODE;1N4148	
D202	2169-301-410	DIODE;1N4148	
D203	2169-208-030	DIODE;FR104(400V 1A)	
D301	2169-301-410	DIODE;1N4148	
D302	2169-403-697	DIODE-ZENER;RD 6.8EB1(T)	
*D303	2169-206-280	DIODE;RP304(400V 3A)	
D304	2169-208-030	DIODE;FR104(400V 1A)	
*D401	2169-201-240	DIODE;IN5402(200V 3A)	
*D402	2169-201-240	DIODE;IN5402(200V 3A)	
*D403	2169-201-240	DIODE;IN5402(200V 3A)	
*D404	2169-201-240	DIODE;IN5402(200V 3A)	
D405	2169-206-040	DIODE;SR108(80V 1A)	
D501	2169-208-040	DIODE;FR107(1000V 1A)	
D502	2169-208-030	DIODE;FR104(400V 1A)	
D503	2169-208-030	DIODE;FR104(400V 1A)	
D504	2169-208-030	DIODE;FR104(400V 1A)	
D530	2169-403-557	DIODE-ZENER;RD 5.1EB1(T)	
EX-BRT	3344-153-010	CONNECTOR-PIN,BASE;B2B-XH-A(JST)	
G1G2G4	3054-614-910	CONNECTOR-3P ASSY;JST HOUS 3P-SVF(300MM)	
H+IC	7108-530-061	SCREW-TAP PH;2S-3X6 FE FZY	
H-DY	3344-112-010	CONNECTOR-WAFER;5273-02A MOLEX	
H/V	3344-153-040	CONNECTOR-PIN,BASE;B5B XH-A(JST)	
*IC201	2119-101-270	IC;TDA 1170N	
*IC301	2109-104-700	IC;KS74HCTLS86N	
*IC302	2119-103-130	IC;MC1391P	
*IC401	2119-601-900	IC-POWER;L4960	
IC401	5682-702-710	HEATSINK-IC;A1050S H14 T2.0 WHT	
*L302	2449-733-210	COIL-H.LINEARITY;5.0-18.3UH	
*L303	2449-433-310	COIL-H.WIDTH;7.0-29.9UH	
*L401	2429-060-110	COIL-CHOKE;200 UH	
LED	3344-153-010	CONNECTOR-PIN,BASE;B2B-XH-A(JST)	
PCB	3006-300-310	PCB-MAIN(MD-1261L);197X153X1.6T	
POWER	3344-131-010	CONNECTOR-WAFER;B2P-VH (2P 3.96MM)	

Location No.	Part No.	Description	Remark
Q201	2139-301-070	TRANSISTOR;2N3904	
Q301	2139-301-070	TRANSISTOR;2N3904	
Q302	2139-301-070	TRANSISTOR;2N3904	
Q303	2139-301-070	TRANSISTOR;2N3904	
*Q304	2149-301-437	TRANSISTOR;KSC1008-Y(T)	
*Q305	2149-202-330	TRANSISTOR;D00033	
Q305	3914-700-410	PLATE MICA;3M PC(22X28.50	
Q305	3934-103-110	INSULATOR;TR;4.5-8D 2-2H N66 C-0	
Q305	4542-705-310	SHIELD;F&T;SBC-1 SN ELECTRO-PLATING	
*Q501	2139-204-070	TRANSISTOR;MPS A45	
R200	1018-277-331	R-CARBON;RD 1/4T 330-J	
R201	1018-277-273	R-CARBON;RD 1/4T 27K-J	
R202	1018-277-331	R-CARBON;RD 1/4T 330-J	
R203	1018-277-274	R-CARBON;RD 1/4T 270K-J	
R204	1018-277-103	R-CARBON;TD 1/4T 10K-J	
R205	1018-377-100	R-CARBON;RD 1/2T 10-J	
R206	1018-277-563	R-CARBON;RD 1/4T 56K-J	
R207	1018-277-304	R-CARBON;RD 1/4T 270K-J	
R208	1018-277-274	R-CARBON;RD 1/4T 270K-J	
R209	1018-277-125	R-CARBON;RD 1/4T 1.2M-J	
R210	1018-277-563	R-CARBON;RD 1/4T 56K-J	
R215	1018-277-823	R-CARBON;RD 1/4T 82K-J	
R216	1018-277-272	R-CARBON;RD 1/4T 2.7K-J	
R217	1018-277-273	R-CARBON;RD 1/4T 27K-J	
R218	1018-277-473	R-CARBON;RD 1/4T 47K-J	
R219	1018-277-339	R-CARBON;RD 1/4T 3-3-J	
R220	1018-277-123	R-CARBON;RD 1/4T 12K-J	
R221	1018-377-109	R-METAL;FILM;RM 1/2T 1-J	
R225	1018-277-222	R-CARBON;TD 1/4T 2.2K-J	
R226	2028-377-182	R-CARBON;TD 1/4T 1.8K-J	
R227	1018-277-100	R-CARBON;RD 1/4T 10-J	
R240	1018-277-683	R-CARBON;RD 1/4T 68K-J	
R300	1018-277-331	R-CARBON;RD 1/4T 330-J	
R301	1018-277-273	R-CARBON;RD 1/4T 27K-J	
R302	1018-277-331	R-CARBON;TD 1/4T 330-J	
R303	1018-277-103	R-CARBON;RD 1/4T 10K-J	
R304	1018-277-222	R-CARBON;RD 1/4T 2.2K-J	
R305	1018-277-273	R-CARBON;RD 1/4T 27K-J	
R310	1018-277-272	R-CARBON;RD 1/4T 2.7K-J	
R312	1018-277-472	R-CARBON;TD 1/4T 4.7K-J	
R313	1018-277-472	R-CARBON;TD 1/4T 4.7K-J	
R314	1018-277-102	R-CARBON;RD 1/4T 1K-J	
R320	1018-277-182	R-CARBON;RD 1/4T 1.8K-J	
R321	1018-277-102	R-CARBON;RD 1/4T 1K-J	
*R322	1018-277-153	R-CARBON;RD 1/4T 15K-J	
R323	1018-277-104	R-CARBON;TD 1/4T 100K-J	
R324	1018-377-331	R-CARBON;RD 1/2T 330-J	

Location No.	Part No.	Description	Remark
R325	1018-377-331	R-CARBON;RD 1/2T 330-J	
R326	1018-277-123	R-CARBON;RD 1/4T 12K-J	
R327	1018-277-332	R-CARBON;RD 1/4T 3.3K-J	
*R328	1018-277-103	R-CARBON;RD 1/4T 10K-J	
*R329	1018-377-100	R-CARBON;RD 1/2T 10-J	
R330	1018-277-101	R-CARBON;RD 1/4T 100-J	
R331	1018-277-471	R-CARBON;RD 1/4T 470-J	
R355	1045-527-391	R-METAL,OXIDE;RS2P 390-J	
R403	1018-277-152	R-CARBON;RD 1/4T 1.5K-J	
R404	1018-277-153	R-CARBON;RD 1/4T 15K-J	
*R405	1018-277-392	R-CARBON;RD 1/4T 3.9K-J	
*R406	1018-277-122	R-CARBON;RD 1/4T 1.2K-J	
R410	1018-277-331	R-CARBON;RD 1/4T 330-J	
R411	1018-277-102	R-CARBON;RD 1/4T 1K-J	
R501	1018-277-332	R-CARBON;RD 1/4T 3.3K-J	
R502	1018-277-103	R-CARBON;RD 1/4T 10K-J	
R503	1018-277-472	R-CARBON;RD 1/4T 4.7K-J	
R504	1018-277-685	R-CARBON;RD 1/4T 6.8M-J	
R505	1018-277-124	R-CARBON;RD 1/4T 120K-J	
R506	1018-277-334	R-CARBON;RD 1/4T 330K-J	
R507	1018-277-182	R-CARBON;RD 1/4T 1.8K-J	
R515	1018-277-125	R-CARBON;RD 1/4T 1.2M-J	
R516	1018-277-225	R-CARBON;RD 1/4T 2.2M-J	
R520	1018-277-823	R-CARBON;RD 1/4T 82K-J	
R521	1018-277-103	R-CARBON;RD 1/4T 10K-J	
R530	1049-427-227	R-METAL,OXIDE;RS1P 220-J	
*T301	2849-031-610	TRANS-H,DRIVE;19X7.6M/M	
TR	7304-701-110	WASHER REC.;SBC-1 T1.5 NI	
TR	7208-113-001	NUT-HEX;1 M3 FE FZY	
TR	7048-130-127	SCREW-RH;+M3Z12 FE FZY	
TR	7304-700-920	WASHER-PLAIN;954810 FE PZW	
V-DY	3344-127-710	CONNECTOR-PIN,BASE;JST RT8-1.5-2F	
VR201	1241-110-010	VR-SEMI;CET 117A B100K	
VR202	1241-110-014	VR-SEMI;CET 117A B200K	
VR203	1241-110-006	VR-SEMI;CET 117A B500K	
VR204	1241-110-006	VR-SEMI;CET 117A B500K	
VR205	1241-110-005	VR-SEMI;CET 117A B50K	
*VR301	1241-108-003	VR-SEMI;CET 92A B5K	
*VR401	1241-108-011	VR-SEMI;CET 92A B1K	
VR501	1241-108-012	VR-SEMI;CET 92A B2.5M	
VR503	1241-108-010	VR-SEMI;CET 92A B250K	

ASSY-PCB CRT/FILTER

		0509-400-116	WIRE-SO,COPPER;TA 0.6 SN
*AC	ALT	3054-811-810	POWER CORD,AC,ASSY;MO-1256A
C101		1509-121-260	C-POLYESTER;CQ921M 100V 0.1M-J
C102		1609-401-680	C-ELECTROLYTIC;CE04W 25V 100M
C103		1609-401-480	C-ELECTROLYTIC;CE04W 16V 220M

USA STANDARD VERSION

Location No.	Part No.	Description	Remark
C104	1419-204-820	C-CERAMIC,HK,CK45 F 50V 0.1M-Z	
C105	1419-204-820	C-CERAMIC,HK,CK45 F 50V 0.1M-Z	
C106	1609-402-230	C-ELECTROLYTIC,CE04W 50V 3.3M	
C107	1419-109-140	C-CERAMIC,HK,CK45 B 50V 0.01M-Z	
C108	1417-318-101	C-CERAMIC,HK,CK45(T) B 50V 100-K	
C111	1609-403-080	C-ELECTROLYTIC,CE04W 100V 47M	
C112	1419-204-820	C-CERAMIC,HK,CK45 F 50V 0.1M-Z	
*C401	1566-513-224	C-M POLYESTER,AC,CQS 922M 250V 0.22M-M(U/C)	
*C402	1461-137-806	C-CERAMIC,AC,DE 7100F 222MVAI	
*C403	1461-137-806	C-CERAMIC,AC,DE 7100F 222MVAI	
C510	1419-106-250	C-CERAMIC,HK,CK45 B 500V 0.01M-K	
C511	1419-901-100	C-CERAMIC,HK,CK45 B 1KV 0.01M-K	
CONTRAST	3344-153-010	CONNECTOR-PIN,BASE,B2B-XH-A(JST)	
D101	2169-301-410	DIODE,1N4148	
D102	2169-301-410	DIODE,1N4148	
D104	2169-403-800	DIODE-ZENER,RD12 EB2	
F401	3364-700-210	HOLDER-FUSE,FC51E,20M/M FUSE	
*F401	ALT 4709-088-050	FUSE,B1S,250V 1A 20MM	FOR 110-120VAC VERSION
	ALT 4709-030-020	FUSE,T250V 315MA 20MM SEMKO	FOR 220-240VAC VERSION
G1G2G4	3344-120-810	PIN-BASE,JST RTB-1.5-3 VO WHT	
GND	3054-223-020	GND-WIRE,ASSY,BLK,L-100MM	
H+V	7108-530-061	SCREW-TAP PH,2S-3X6 FE FZY	
*IC101	2109-104-610	IC,M51392P	
IN-SIGNAL	3344-120-060	CONNECTOR-PIN,BASE,B8B-XH-A	
LED	2309-110-090	LED,KLG208E	
LED	3054-640-810	CONNECTOR-2P,ASSY,JST XHP-2,B+	
PCB	3006-300-320	PCB-F,SOCKET(M)-1261(L);139X80X1.6T	
Q101	2139-401-750	TRANSISTOR,2N3906(SST)	
Q102	2139-301-070	TRANSISTOR,2N3904	
*Q103	2149-301-360	TRANSISTOR,2N2369	
Q104	5684-706-310	HEAT-SINK,VIDEO,SBC-1 T1.0 FE FT-2	
*Q104	2149-302-070	TRANSISTOR,MPS-U07	
R101	1018-277-561	R-CARBON,RD 1/4T 560-J	
R102	1018-277-121	R-CARBON,RD 1/4T 120-J	
R103	1018-277-302	R-CARBON,RD 1/4T 3K-J	
R104	1018-277-332	R-CARBON,RD 1/4T 3.3K-J	
R105	1018-277-222	R-CARBON,RD 1/4T 2.2K-J	
R106	1018-277-333	R-CARBON,RD 1/4T 33K-J	
R107	1018-277-472	R-CARBON,RD 1/4T 4.7K-J	
R108	1018-277-222	R-CARBON,RD 1/4T 2.2K-J	
R109	1018-277-102	R-CARBON,RD 1/4T 1K-J	
R110	1018-277-222	R-CARBON,RD 1/4T 2.2K-J	
R111	1018-277-471	R-CARBON,RD 1/4T 470-J	
R115	1018-277-472	R-CARBON,RD 1/4T 4.7K-J	
R116	1018-277-470	R-CARBON,RD 1/4T 47-J	
R117	1018-277-470	R-CARBON,RD 1/4 47-J	
R118	1018-277-560	R-CARBON,TD 1/4T 56-J	
R119	1018-277-101	R-CARBON,RD 1/4T 100-J	

Location No.	Part No.	Description	Remark
R120	1018-277-102	R-CARBON;RD 1/4T 1K-J	
R121	1018-277-820	R-CARBON;RD 1/4T 82-J	
R122	1045-527-471	R-METAL,OXIDE;2P 470-J	
R123	1045-527-471	R-METAL,OXIDE;2P 470-J	
R125	1045-427-680	R-METAL,OXIDE;RS 1P 68-J	
R130	1018-277-102	R-CARBON;RD 1/4T 1K-J	
R401	1018-377-684	R-CARBON;RD 1/2T 680K-J	
R509	1045-427-680	R-METAL,OXIDE;RS 1P 68-J	
R510	1018-377-102	R-CARBON;RD 1/2T 1K-J	
R511	1018-377-473	R-CARBON;RD 1/2T 47K-J	
R512	1018-377-102	R-CARBON;RD 1/2T 1K-J	
S501	2029-010-010	LAMP-NEON;DMS 90-130V DC	
S502	4569-001-110	SPARK-GAP;S-23(1KV)	
S503	4569-001-110	SPARK-GAP;S 23(1KV)	
S504	4569-001-110	SPARK-GAP;S-23(1KV)	
SOCKET	3353-700-910	SOCKET-CRT;7PIN	
T401	3124-700-810	PIN-GT,14.2MM 2.35PI	
VIDEO	3344-120-020	CONNECTOR-PIN,BASE;B2B-XH-A(JST)	
VR101	1241-110-004	VR-SEMI;CET 117A B200	

THE OTHERS

		3053-402-020	CABLE-SIGNAL;MD-1261L(A)	
*CRT	ALT	2019-125-010	CRT-MONOCHROME;12ABYWDN	FOR ML2611 ONLY
	ALT	2019-132-710	CRT-MONOCHROME;14BBYWDN	FOR ML5411 ONLY
	ALT	2019-125-410	CRT-MONOCHROME;12HBYWDN	FOR ML2571 ONLY
	ALT	2019-132-610	CRT-MONOCHROME;14HBYWDN	FOR ML4571 ONLY
CRT-G		3054-223-020	END-WIRE, ASSY; BLK,L-100MM.	
CRT-G		3054-640-020	CONNECTOR 1P ASSY; CONNECTOR CRT ASSY	
CRT-G		4554-701-010	EARTH-PLATE; PBS3 SP-H T0.3	
*T401	ALT	2869-298-010	TRANS-POWER, ASSY; P:115V, MD-1261L	FOR 110-120VAC VERSION
	ALT	2869-298-020	TRANS-POWER, ASSY; P:230V, MD-1261L	FOR 220-240VAC VERSION
*DY	ALT	2439-054-210	DEFL-YOKE; DMK-1294EL	FOR ML2611 ONLY
	ALT	2439-054-230	DEFL-YOKE; DMK-1294EL(3)	FOR ML4511 / 2571 / 4571
V-DY		3054-613-750	CONNECTOR-DY,ASSY; CONNECTOR	
H-DY		3054-618-810	CONN-HORZ DY ASSY; 2*22AWG	
SW401	ALT	3529-702-210	SWITCH PUSH; ES88213V	FOR ML2611 110-120VAC VERSION
	ALT	3529-703-610	SWITCH PUSH; ES890702V	FOR ML2611 220-240VAC VERSION
	ALT	3539-011-120	S/W SEESAW,ROCKER;12A 125VAC 250V 6A	FOR ML4511 / 2571 / 4571
				110-120VAC VERSION
	ALT	3539-011-110	SWITCH ROCKER;SDDJIS 250V 3A	FOR ML4511 / 2571 / 4571
				220-240VAC VERSION
VR102		1201-102-022	VR-ROUND, SGL; 18SN 20F B5K	
CONTRA		3054-642-210	CONNECTOR,2P,ASSY; JST HOUS XHP-2P,L300	
VR502		1201-105-005	VR-ROUND SGL;18SN 20FC1 B50K	
BRT		3051-640-610	CONNECTOR,2P,ASSY; JST HOUS XHP-2(2.5) BRT.	

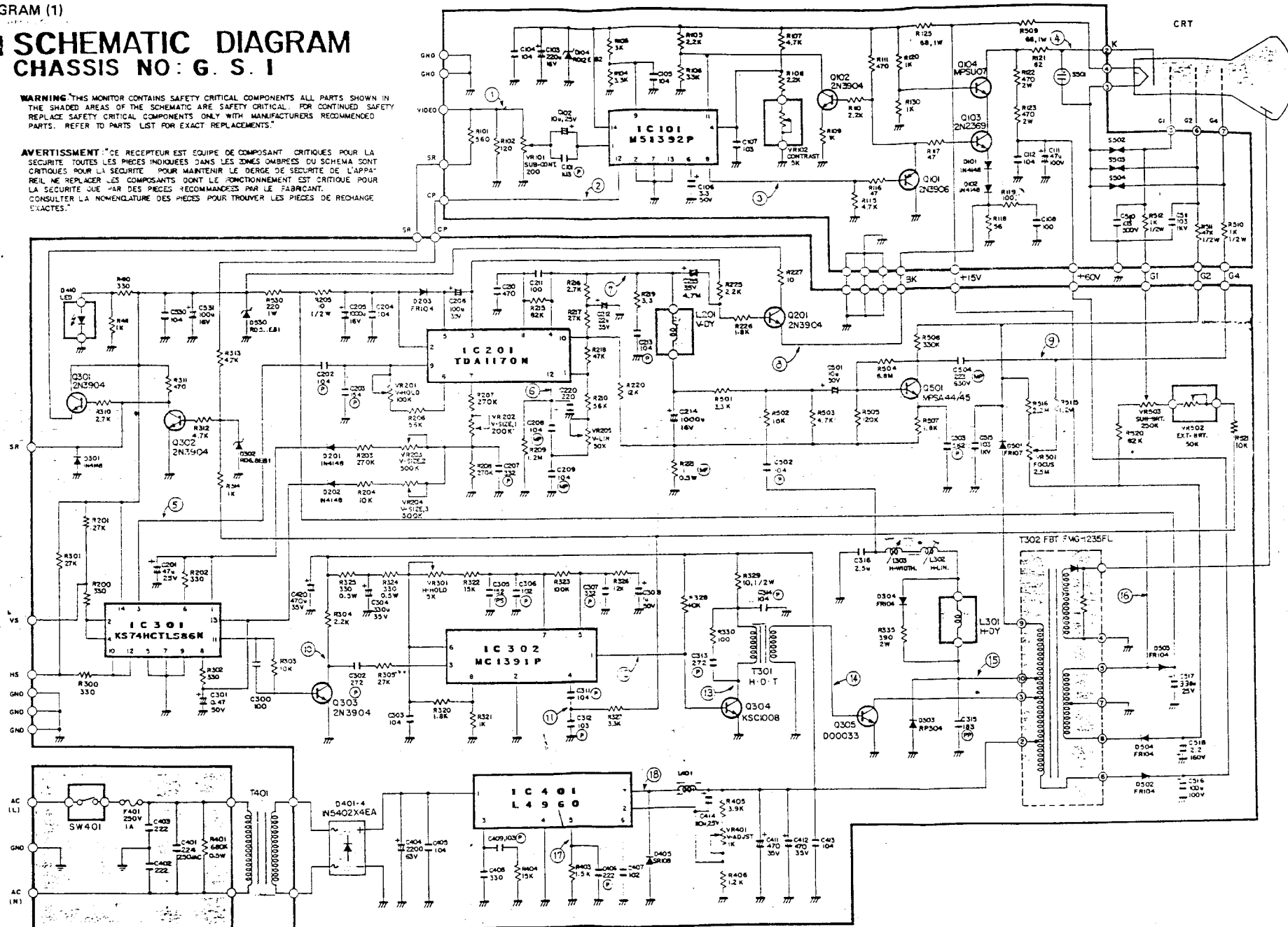
■ SCHEMATIC DIAGRAM (1)

USA VERSION

SCHEMATIC DIAGRAM CHASSIS NO: G. S. I

WARNING THIS MONITOR CONTAINS SAFETY CRITICAL COMPONENTS. ALL PARTS SHOWN IN THE SHADED AREAS OF THE SCHEMATIC ARE SAFETY CRITICAL. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS. REFER TO PARTS LIST FOR EXACT REPLACEMENTS.

AVERTISSEMENT "CE RECEPTEUR EST EQUIPE DE COMPOSANTS CRITIQUES POUR LA SECURITE. TOUTES LES PIECES INDIQUEES DANS LES ZONES OMBREES DU SCHEMA SONT CRITIQUES POUR LA SECURITE. POUR MAINTENIR LE DEGRÉ DE SECURITE DE L'APPAREIL, NE REMPLACEZ LES COMPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SECURITE QUE PAR DES PIECES RECOMMANDEES PAR LE FABRICANT. CONSULTER LA NOMENCLATURE DES PIECES POUR TROUVER LES PIECES DE RECHANGE EXACTES."



■ SCHEMATIC DIAGRAM (1)

OLD VERSION

SCHEMATIC DIAGRAM CHASSIS NO: G. S. I

WARNING: THIS MONITOR CONTAINS SAFETY CRITICAL COMPONENTS. ALL PARTS SHOWN IN THE SHADED AREAS OF THE SCHEMATIC ARE SAFETY CRITICAL. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS. REFER TO PARTS LIST FOR EXACT REPLACEMENTS.

AVERTISSEMENT: "CE RECEPTEUR EST EQUIPE DE COMPOSANT CRITIQUES POUR LA SECURITE. TOUTES LES PIECES INDIQUEES DANS LES ZONES OMBREES DU SCHEMA SONT CRITIQUES POUR LA SECURITE. POUR MAINTENIR LE DEGRÉ DE SECURITE DE L'APPAREIL, NE REMPLACEZ LES COMPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SECURITE QUE PAR DES PIECES RECOMMANDEES PAR LE FABRICANT. CONSULTER LA NOMENCLATURE DES PIECES POUR TROUVER LES PIECES DE RECHANGE EXACTES."

