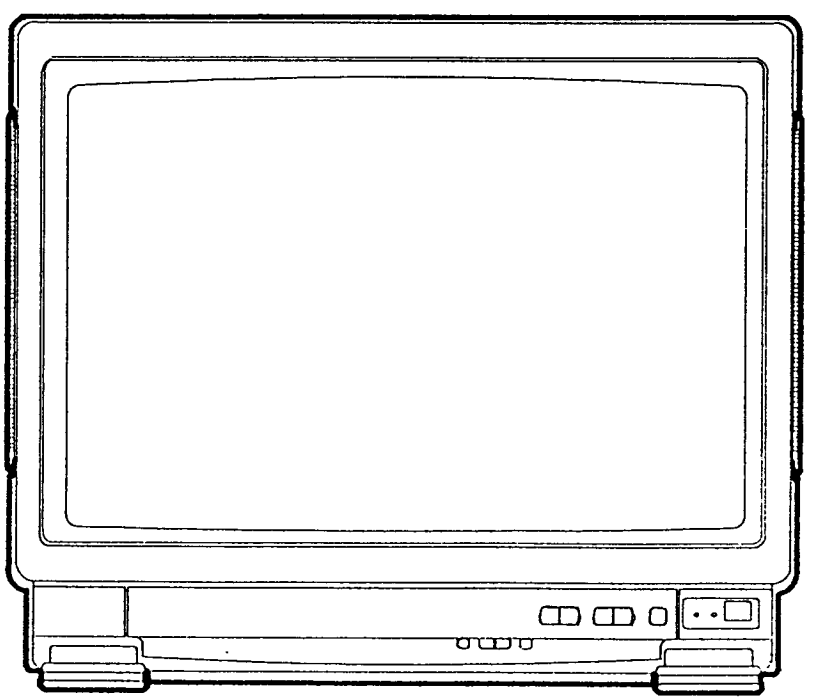
FUNAI

SERVICE MANUAL

20 Inch Color Television

TV-2000A MK5



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1. GENERAL SPECIFICATIONS

A) System

1) CRT	:20'(19V), Inline gun, 90°Def. ITC adjusted for Northern Hemisphere magnetic field.
2) Color system	:PAL-B/G, SECAM-B/G,D/K, NTSC 4.43MHz, NTSC3.58MHz (Automatic Switching)
3) Receiving channel — OIRT ch + CCIR ch —	:[VHF low] ..... R1-R5ch/E2-E4ch [VHF high] .... R6-R12ch/E5-E12ch [UHF] .....21 ~ 69ch (Can be memory 60 stations)
4) Tuning system	:Voltage synthesizer system
5) Control	
✳ Channel selector	:2-Push switch (up/down)
✳ Sound volume	:2-Push switch (up/down)
✳ Power	:Push switch
✳ Tuning	:2-Push switch (up/down)
✳ Program	:Push switch
✳ Auto memory	:Push switch
6) Connector	
✳ Antenna	:75ohm.....IEC jack
✳ Video in/out	:BNC jack
✳ Audio in/out	:RCA jack
✳ Video/Audio in/out	:Skirt jack (21pin)

7) Onscreen Display	
✳ Channel	
✳ Volume	
✳ Brightness	
✳ Contrast	
✳ Color	
✳ Clock	
✳ Timer ON/OFF	
✳ Band position	
✳ Sleep timer (10~90 Minute)	
✳ Tuning Indicator	
8) Indicator	
✳ On Timer	:LED (RED)
✳ Stand by	:LED (RED)
9) Degauss	:Automatic Degaussing
10) Speaker	:Oval 2"x3.5"

B) IR Remote Control

1) Power
2) Channel 15keys
3) Channel up
4) Channel down
5) Volume up
6) Volume down
7) Mute
8) Sleep
9) Display
10) Channel recall
11) Time select (Clock/Timer On/Off)
12) Picture select (Bright/Cont/Color)
13) Up/Down Control (Picture control/Hour/Minute)
14) Timer set
15)TV/VIDEO

C) Mechanical

1) Dimension	:(W)480x(D)458x(H)450mm
2) Cabinet	:All plastic cabinet
3) Weight	:19.5kg
4) Packing weight	:21.5kg

D) Power supply

1) Rating	:AC 220V/50Hz
2) AC cord	:6 ft PVC cord with IEC type C Plug

E) Others

1) Regulations	:IEC-65 passable

F) Accessaries

1) Remote control unit
2) 2-AAA batteries for remote control unit
3) Instruction booklet
4) Matching Adaptor
5) VHF Antenna

2. PERFORMANCE SPECIFICATIONS

<Tuner>

*ANT input .....75ohm unbal. IEC connector.
*Reference level .....300mVp-p at Video output.
*Test input signal .....400Hz, 30% modulation.

	Description	Condition	Unit	Nominal	Limit
1.	Peak picture sens.	VHF	dBμV	20	30
		UHF	dBμV	30	40
2.	AFT pull in range *Input 80dBμ		MHz	±1.0%	±0.7%
3.	Intermediate freq	Picture	MHz	38.0	
		Sound	MHz	31.5(D/K)	
			MHz	32.5(B/G)	
4.	Intercarrier freq.		MHz	6.5(D/K)	
			MHz	5.5(B/G)	

<Deflection>

	Description	Condition	Unit	Nominal	Limit
1.	Deflection freq.	Horizontal (PAL/SECAM)	kHz	15.625	
		Horizontal (NTSC)		15.75	
		Vertical (PAL/SECAM)	Hz	50	
		Vertical (NTSC)		60	
2.	Linearity	Horizontal	%		±15
		Vertical	%		±15
3.	High voltage		KV	25	

<Video & Chroma>

	Description	Condition	Unit	Nominal	Limit
1.	Misconvergence	Center	mm		0.4
		Corner	mm		2.0
		Side	mm		1.5
2.	Over scan	Horizontal	%	10	
		Vertical	%	10	
3.	Color temperature		K	8000K-10MPCD	
4.	Resolution	Horizontal	Line	300	
		Vertical	Line	300	
5.	Brightness	APL 100%	ft-L	35	25

<Audio>

*All items are measured across 16 ohm resistor at speaker output terminal.

	Description	Condition	Unit	Nominal	Limit
1.	Audio output power	10%THD	W	1.2	0.8
2.	Audio distortion	500mW	%	2	5
3.	Audio freq. response	-6dB	Hz		100-6K

3. SAFETY PRECAUTIONS

1. **Before returning a product to the customer,** always make a safety check of the entire product, including, but not limited to, the following items.

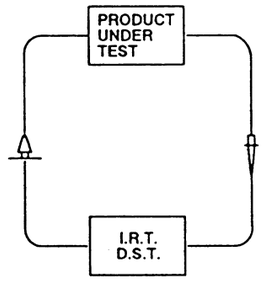
a. Be sure that no built-in protective devices are defective and/or have been defeated during servicing.
(1) Protective shields are provided on this chassis to protect both the technician and the customer. Correctly replace all missing protective shields, including any removed for servicing convenience.
(2) When reinstalling the chassis and/or other assembly in the cabinet, be sure to put back in place all protective devices, including, but not limited to, nonmetallic control knobs, insulating fishpapers, adjustment and compartment covers/shields, and isolation resistor/capacitor networks. **Do not operate this product or permit it to be operated without all protective devices correctly installed and functioning. Servicers who defeat safety features of fail to perform safety checks may be liable for any resulting damage.**

b. Be sure that there are no cabinet openings through which an adult or child might be able to insert their finger(s) and contact a hazardous voltage. Such opening(s) include, but no limited to, (1) spacing between the picture tube and the cabinet mask, (2) excessively wide cabinet ventilation slot(s), and (3) an improperly fitted and/or incorrectly secured cabinet back cover.

C-1. **Insulation Resistance Check** - With the product AC plug removed from AC source, connect an electrical jumper across the two AC plug prongs tied together and touch the Insulation Resistance Tester(I.R.T.) lead. Other I.R.T. lead contact accessible metal parts (antenna, handle bracket, metal cabinet, screw heads, metallic overlays, control shafts, etc.) If the measured resistance is less than **10.0 megohm,** an abnormality exists that must be corrected before the product is returned to the customer. Repeat this test with the product AC switch in the off. Position, if applicable.

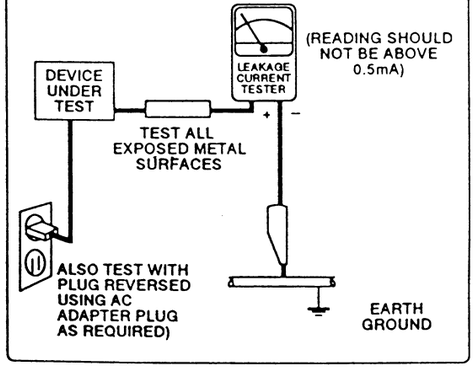
C-2. **Dielectric Strength Test** - With the product AC plug removed from AC source, connect an electrical jumper across the two AC plug prongs tied together and touch the Dielectric Strength tester (D.S.T.) lead. Other D.S.T. lead contact accessible metal parts (antenna, handle bracket, metal cabinet, screw heads, metallic overlays, control shafts, etc.) If the product does not withstand dielectric strength test under condition **AC 3,000V, 1 min., cutoff current max 10 milli-ampere,** an abnormality exists that must be corrected before the product is returned to the customer. Repeat this test with the product AC switch in the off position, if applicable.

Insulation Resistance Check or Dielectric Strength Test



d. **Leakage Current Hot Check** - With the product completely reassembled, plug the AC line cord directly into an AC outlet.(Do not use an isolation transformer during this test.) Use a leakage current tester or an appropriate metering system. With the product AC switch first in the on position and then in the off position, measure from live polarity side to all exposed metal parts of the product (antenna, handle bracket, metal cabinet, screw heads,metallic overlays, control shafts, etc.), especially any exposed metal parts that offer an electrical return path to the chassis. Any current measured must not exceed 0.5 milli-ampere. Reverse the product power cord plug in the outlet and repeat this test.

AC Leakage Test



ANY MEASUREMENTS NOT WITHIN THE LIMITS SPECIFIED HEREIN INDICATE A POTENTIAL SHOCK HAZARD THAT MUST BE ELIMINATED BEFORE RETURNING THE PRODUCT TO THE CUSTOMER OR BEFORE CONNECTING THE ANTENNA OR ACCESSARIES.

e. **X-Radiation and High Voltage Limits** - Because the picture tube is the primary potential source of X-radiation in solid-state TV receiver, it is specially constructed to prohibit X-radiation emissions. For continued X-radiation protection, the replacement picture tube must be the same type as specified parts list in this manual.Also, because the picture tube shields and mounting hardware perform an X-radiation protection function, they must be correctly in place. High voltage must be measured each time servicing is performed that involves B+, horizontal deflection or high voltage. Correct operation of the X-radiation protection circuits also must be reconfirmed each time they are serviced. (X-radiation protection circuits also may be called "horizontal disable" or "hold-down".) Read and apply the high voltage limits and, if the chassis is so equipped, the X-radiation protection circuit specifications given on product labels and in the Product Safety & X-Radiation Warning note on the service data chassis schematic.High voltage is maintained within specified limits by close-tolerance safety-related components/adjustments in the high voltage circuit. If high voltage exceeds specified limits, check each component specified on the chassis schematic and take corrective action.

2. Read and comply with all caution and safety-related notes on or inside the receiver cabinet, on the receiver chassis, or on the picture tube.

3. **Design Alteration Warning** – Do not alter or add to the mechanical or electrical design of this TV receiver. Design alterations and additions, including, but not limited to circuit modifications and the addition of items such as auxiliary audio and/or video output connections, might alter the safety characteristics of this receiver and create a hazard to the user. Any design alterations or additions may void the manufacturer's warranty and may make you, the servicer responsible for personal injury or property damage resulting therefrom.

4. **Picture Tube Implosion Protection Warning** – The picture tube in this receiver employs integral implosion protection. For continued implosion protection, replace the picture tube only with one of the same type number. Do not remove, install, or otherwise handle the picture tube in any manner without first putting on shatterproof goggles equipped with side shields. People not so equipped must be kept safely away while picture tubes are handled. Keep the picture tube away from your body. Do not handle the picture tube by its neck. Some "in-line" picture tubes are equipped with a permanently attached deflection yoke; because of potential hazard, do not try to remove such "permanently attached" yokes from the picture tube.

5. **Hot Chassis Warning** – a. Some TV receiver chassis are electrically connected directly to one conductor of the AC power cord and may be safety-serviced without an isolation transformer only if the AC power plug is inserted so that the chassis is connected to the ground side of the AC power source. To confirm that the AC power plug is inserted correctly, with an AC voltmeter measure between the chassis and a known earth ground. If a voltage reading in excess of 1.0V is obtained, remove and reinsert the AC power plug in the opposite polarity and again measure the voltage potential between the chassis and a known earth ground.
b. Some TV receiver chassis normally have 85V AC(RS) between chassis and earth ground regardless of the AC plug polarity. These chassis can be safety-serviced only with an isolation transformer inserted in the power line between the receiver and the AC power source, for both personnel and test equipment protection.
c. Some TV receiver chassis have a secondary ground system in addition to the main chassis ground. This secondary ground system is not isolated from the AC power line. The two ground systems are electrically separated by insulating material that must not be defeated or altered.

6. Observe original lead dress. Take extra care to assure correct lead dress in the following areas: a. near sharp edges. b. near thermally hot parts-be sure that leads and components do not touch thermally hot parts, c. the AC supply, d. high voltage, and e. antenna wiring. Always inspect in all areas for pinched, out of place, or trayed wiring. Do not change spacing between components, and between components and the printed-circuit board. Check AC power cord for damage.

7. Components, parts, and/or wiring that appear to have overheated or are otherwise damaged should be replaced with components, parts, or wiring that meet original specifications. Additionally, determine the cause of overheating and/or damage and, if necessary, take corrective action to remove any potential safety hazard.

8. **PRODUCT SAFETY NOTICE** – Some electrical and mechanical parts have special safety-related characteristics which are often not evident from visual inspection, nor can the protection they give necessarily be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified by a (⚠) on schematics and in parts lists. Use of a substitute replacement that does not have the same safety characteristics as the recommended replacement part might create shock, fire, and/or other hazards. Products Safety is under review continuously and new instructions are issued whenever appropriate.

Prior to shipment from the factory, our products are strictly inspected to conform with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

Precautions during Servicing

1. Parts identified by the ⚠ symbol are critical for safety.
   Replace only with parts number specified.
2. In addition to safety, other parts and assemblies are specified for conformance with regulations applying to spurious radiation. These must also be replaced only with specified replacements.
   Examples: RF converters, RF cables, noise blocking capacitors, and noise blocking filters, etc.
3. Use specified internal wiring. Note especially:
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads
4. Use specified insulating materials for hazardous live parts. Note especially:
   1) Insulation Tape
   2) PVC tubing
   3) Spacers
   4) Insulators for transistors.
5. When replacing AC primary side components (transformers, power cords. etc.), wrap ends of wires securely about the terminals before soldering.
6. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.)
7. Check that replaced wires do not contact sharp edged or pointed parts.
8. When a power cord has been replaced, check that 10 – 15 kg of force in any direction will not loosen it.
9. Also check areas surrounding repaired locations.
10. Use care that foreign objects (screws, solder droplets. etc.) do not remain inside the set.
11. Crimp type wire connector
    When replacing the power transformer in sets where the connections between the power cord and power transformer primary lead wires are performed using crimp type connectors, in order to prevent shock hazards, perform carefully and precisely the following steps.
    Replacement procedure
    1) Remove the old connector by cutting the wires at a point close to the connector.
       Important: Do not re-use a connector (discard it).
    2) Strip about 15 mm of the insulation from the ends of the wires. If the wires are stranded, twist the strands to avoid frayed conductors.
    3) Align the lengths of the wires to be connected. Insert the wires fully into the connector.
    4) Use the crimping tool to crimp the metal sleeve at the center position.
       Be sure to crimp fully to the complete closure of the tool.
12. When connecting or disconnecting the VCR connectors; First, disconnection the AC plug from AC supply socket.

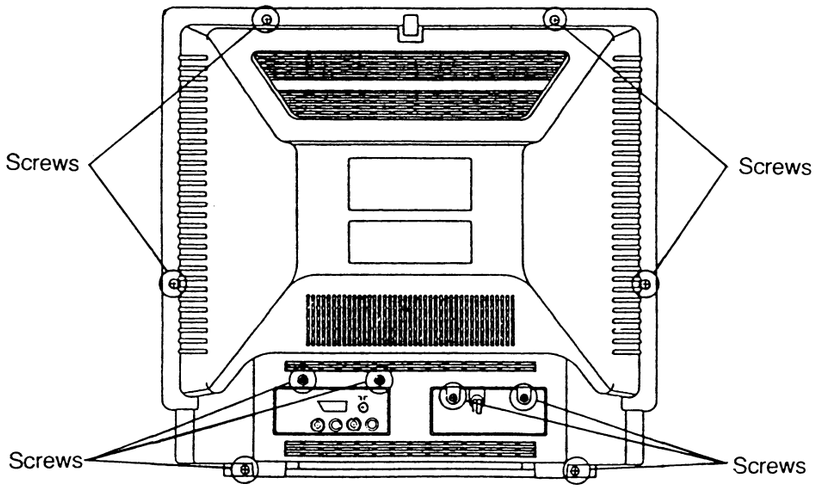
Safety Check after Servicing

1. **Insulation resistance test**
   Confirm the specified insulation resistance or greater between power cord plug prongs and externally exposed parts of the set (RF terminals, video and audio output terminals, etc.).
2. **Dielectric strength test**
   Confirm specified dielectric strength or greater between power cord plug prongs and exposed accessible parts of the set (RF terminals, antenna terminals, video and audio output terminals, etc.).
3. **Clearance distance**
   When replacing primary circuit components, confirm specified clearance distance.
4. **Leakage current test**
   Confirm specified or lower leakage ccurrent between power cord plug prongs (earth ground) and externally exposed parts (RF terminal, video and audio input and output terminals, etc.).

4. DISASSEMBLY INSTRUCTIONS

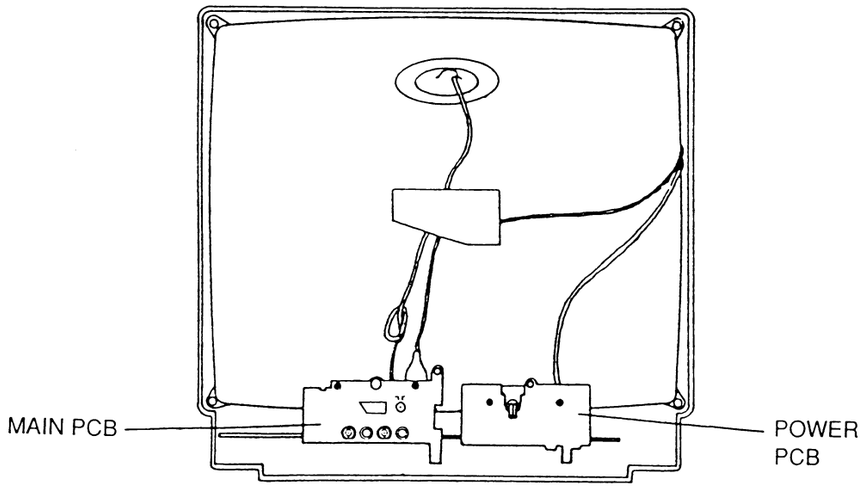
1. REAR CABINET REMOVAL

1-1. Disconnect the AC power cord.
1-2. Remove 10 screws from the rear cabinet.
1-3. To re-install, reverse the above procedure.

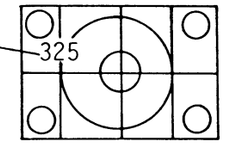
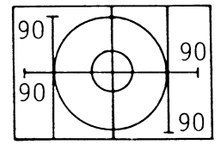
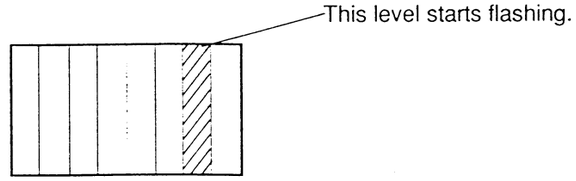


2. MAIN PCB/POWER PCB ASS'Y REMOVAL

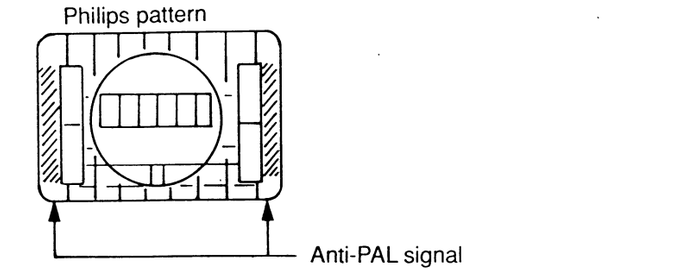
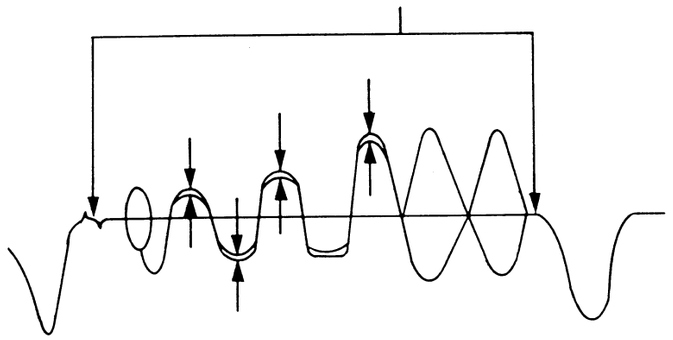
2-1. Unplug the AC power cord, remove the rear cabinet.
2-2. Disconnect all connectors from MAIN PCB to POWER PCB.
2-3. Pull the MAIN PCB and POWER PCB to back-ward.
2-4. To re-install, reverse the above procedure.

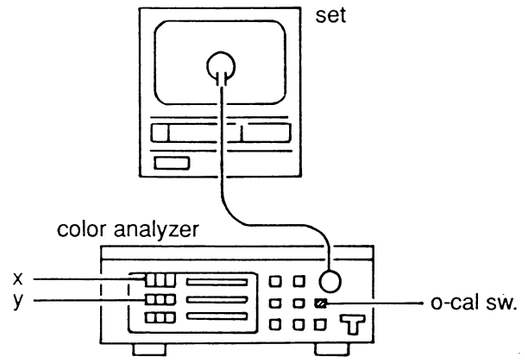


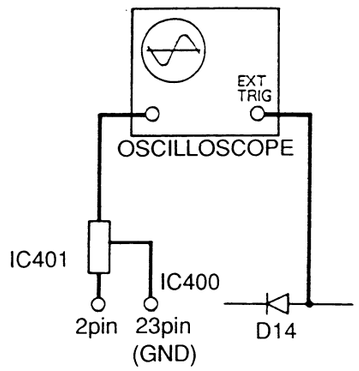
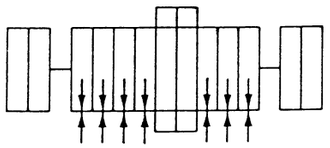
5. ELECTRICAL ADJUSTMENT

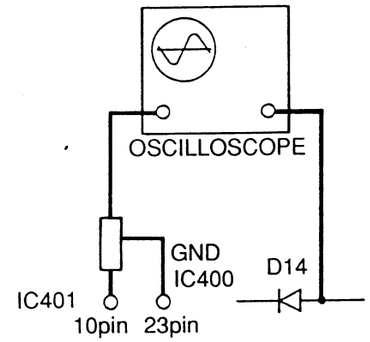
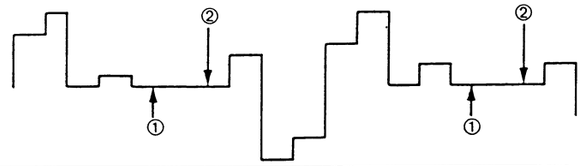
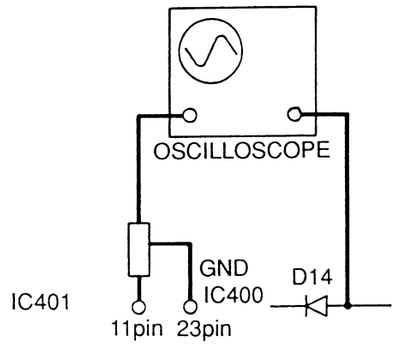
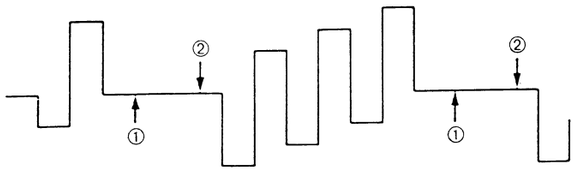
Alignment Item	Alignment Points	Alignment Method
1. Focus	FOCUS VR.	1. Input monoscope-pattern. 2. Align the focus while using the figure 325 (indicating number of the resolution) at the upper left of the monoscope pattern as reference, and check to ensure that no fading is detected in the center and all four corners. (Set the CONTRAST/BRIGHT control to center.) Align the focus with this figure serving as a standard. 
2. Cut Off	VR1, VR2, VR3, VR4, VR5 SCREEN VR.	1. Input Black signal. 2. Set the SCREEN (counter-clockwise), VR1, and VR4 (counter-clockwise) to min. 3. Turn the Service switch ON. 4. Adjust the SCREEN to a point where the horizontal GREEN line starts flashing. 5. Adjust VR1(blue) and VR4(red) till the horizontal line turn white. 6. Turn the service switch OFF. **Note:** At this time, each VOL. of R.Drive(VR2) and B.Drive(VR5) should be in center.
3. V.size	VR403	1. Input monoscope pattern. 2. Adjust VR403 so that the monoscope V.SIZE display becomes 90%. Align horizontal/vertical balance, and then adjust so that the circle in the monoscope pattern center becomes truly round. 
4. Sub Bright	VR400	1. Input the gray scale. (8 STEP) 2. Set CONT.BRIGHT to center. 3. Adjust VR400 to point where the level one step higher than the black level starts flashing. 

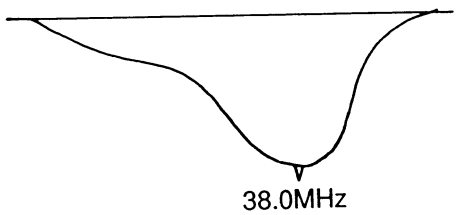
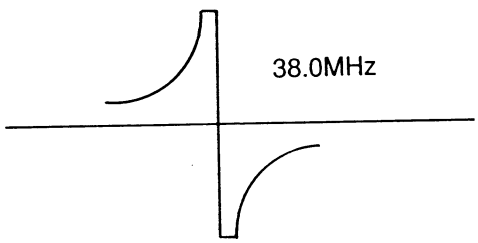
Note: The COLOR/CONTRAST/BRIGHT CONTROL, unless otherwise specified, should all be set to center.

Alignment Item	Alignment Points	Alignment Method
5. 1H delay line	VR402, VR401, L402	1. Input the Philips pattern. 2. Connect the oscilloscope to IC400 pin 37. (Synchronize the oscilloscope externally through the D14 anode.) 3. Adjust VR402, VR401, L402 so that the amplitude at Anti-PAL signal part becomes minimal (no color) and the waveform at the color bar part is not seen in double ("Venetian Blind" does not appear at the color bar signal part). Philips pattern  Anti-PAL signal 

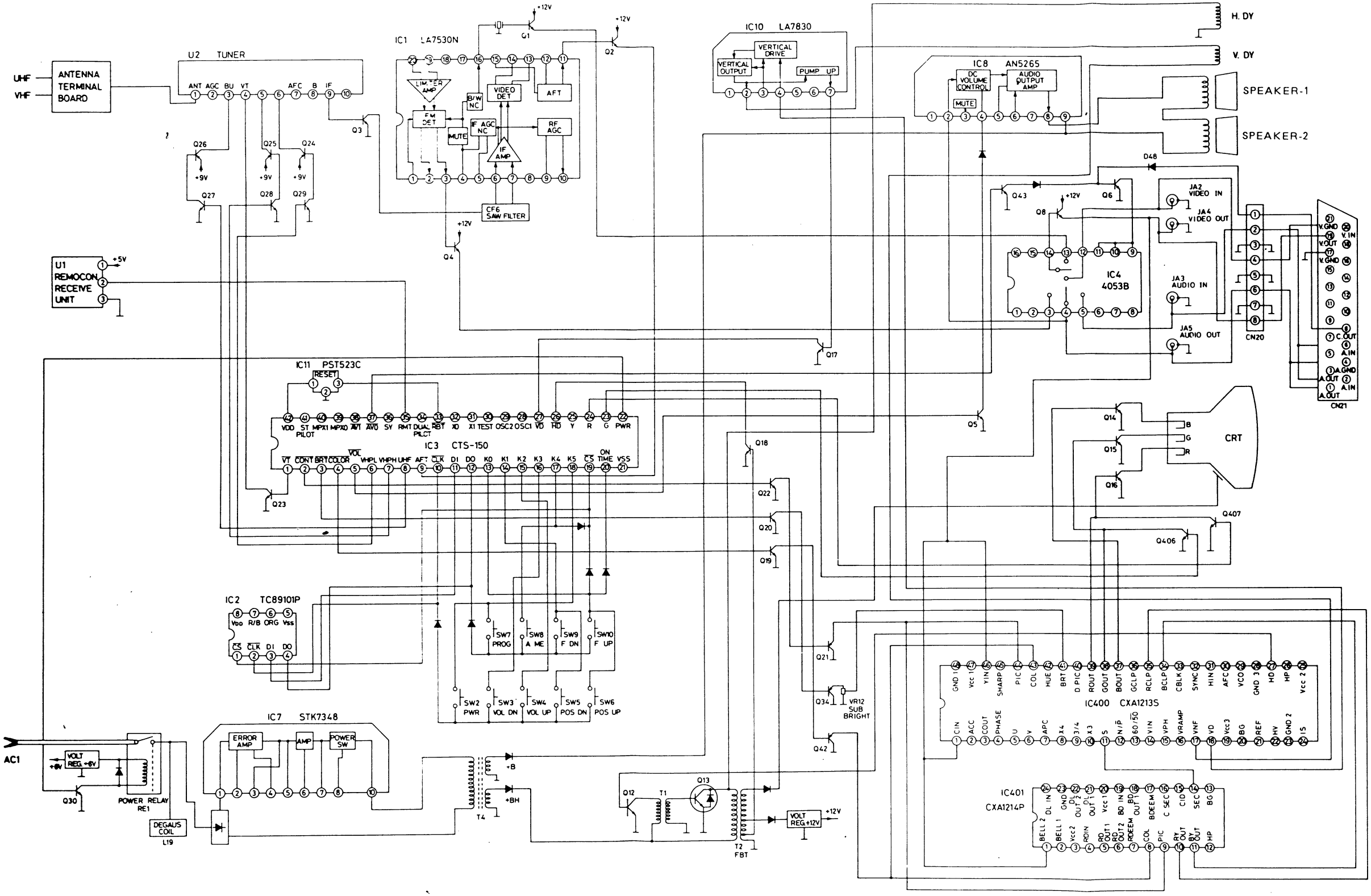
Alignment Item	Alignment Points	Alignment Method
6. White Balance	VR5, VR2, VR1, VR4	1. Input APL 100% white. 2. After aging for 20-30 minutes, demagnetize the tube (CRT) surface with a demagnetizer. 3. Set the color analyzer to the CHROMA mode, and after zero point calibration, bring the optical receptor into close contact with the center on the tube surface (CRT), and adjust R.DRIVE (VR5) and B.DRIVE (VR2) so that the respective chroma temperatures become 8000K-10MPCD (X:0.300/Y:0.290). 4. Turn the service switch ON. 5. At this time, check that the horizontal line is white. If the horizontal line is not white, adjust the CUT-OFF VR, VR1 (blue), VR4 (red) until proper alignment is reached. 6. Turn the service switch OFF, and using the color analyzer, check that the chroma temperatures read the preset values. 7. Repeat steps 3, 4, 5, 6 above, and adjust so that the setting of chroma temperature and horizontal line are at their best.  **Note 1:** Be sure the tube surface faces east. **Note 2:** Make this adjustment under European magnetic field. (Vertical: 0.4G/Horizontal: 0.2G) **Note 3:** Always adjust SUB-BRIGHT, V-SIZE, OUT-OFF, and PAL. **Note 4:** The allowable range during chroma temperature adjustment should be ±5% Max. x:0.285 to 0.315 y:0.275 to 0.305

Alignment Item	Alignment Points	Alignment Method
7. Adjusting the Frequency to 4.43MHz and 3.58MHz.	C444, C445	1. Using the same adjusting manner as in the CLOCK adjustment, adjust C444 to 4.433619 ±10Hz. 2. Using the same adjusting manner as in 4.43MHz adjustment, adjust C445 to 3.579545 ±10Hz.
8. SECAM Chroma Bell Filter	L405	1. Input the SECAM color bar signal. 2. Turn the CONTRAST, BRIGHT, COLOR control to max. 3. Connect the oscilloscope as following drawing.  4. Adjust L405 with core driver to flat wave from at arrow marked on following drawing. 

Alignment Item	Alignment Points	Alignment Method
9. R-Y Demodulate Coil	L407	1. Input the SECAM color bar signal. 2. Turn the CONTRAST, BRIGHT, COLOR control to max. 3. Connect the oscilloscope as following drawing.  4. Adjust L407 with core driver to meet same level with a(blank-ing) and i (white) as following drawing. 
10. B-Y Demodulate Coil	L404	1. Input the SECAM color bar signal. 2. Turn the CONTRAST, BRIGHT, COLOR control to max. 3. Connect the oscilloscope as following drawing.  4. Adjust L404 with core driver to meet same level with a(blank-ing) and i (white) as following drawing. 

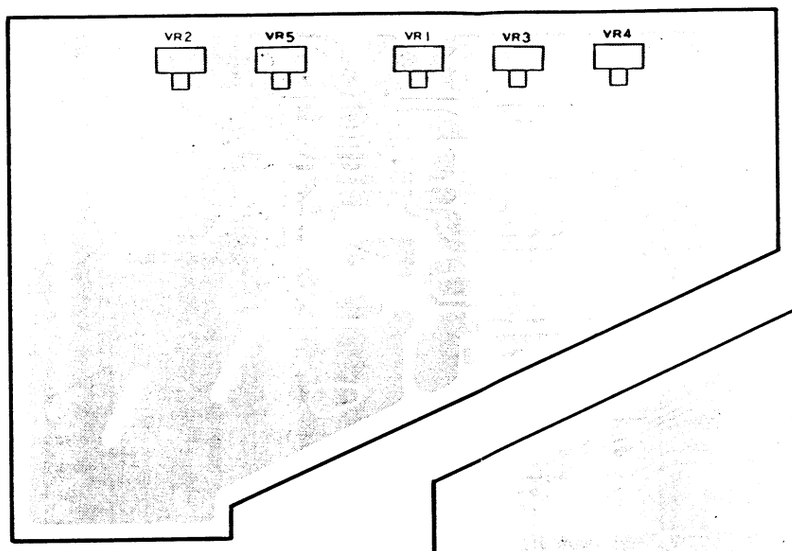
Alignment Item	Alignment Points	Alignment Method
11. 38.0MHz Peak Adjustment	L2	1. Connect "OUTPUT" of sweeper to "the 6th pin" of "IC1". Frequency set of sweeper are below; (1)31.5MHz (2)32.5MHz (3)33.57MHz (4)35.8MHz (5)38.0MHz (6)39.5MHz 2. Connect the oscilloscope to "the 10th pin" of "IC1". 3. Load DC voltage to "the 4th pin" of "IC1", as the wave of oscilloscope not to clip. 4. Adjust "L2", as the marker for 38.0MHz to be peak. 
12. AFT Curve Adjustment	L3	1. Connect the sweeper to "TEST POINT" of inside of "TUNER". Frequency set is same in case of adjustment for peak. 2. Connect oscilloscope to "the 11th pin" of "IC1". 3. Adjust "L3", as the marker for 38.0MHz to the center of "AFT" curve. 
13. RF AGC Adjustment	VR13	1. Receive the signal for 2ch (48.25MHz) 2. Set "the level of input" of "RF" to 80dBμwith color-bar. 3. Connect the digital voltmeter to the AGC terminal of "TUNER". 4. Adjust "VR13", as indication of the digital voltmeter to be 4.0V.
14. ON SCREEN Point Adjustment	L22	1. Input color-bar. 2. Indicate "ON SCREEN" as to be a bar white, "PICTURE SELECT KEY". 3. Adjust "L22" as the distance between both the ends of "ON".
15. Clock Adjustment	C143	1. Short between "the 17th pin and the 20th pin of IC3" with diode. (17) —▷|— (20) *Connect AC-cord and remove diode off. 2. Connect F-counter to from 17th pin to the 20th pin. 3. Adjust "C143" as the frequency to be 87381.3334±0.5MHz.

6. BLOCK DIAGRAM

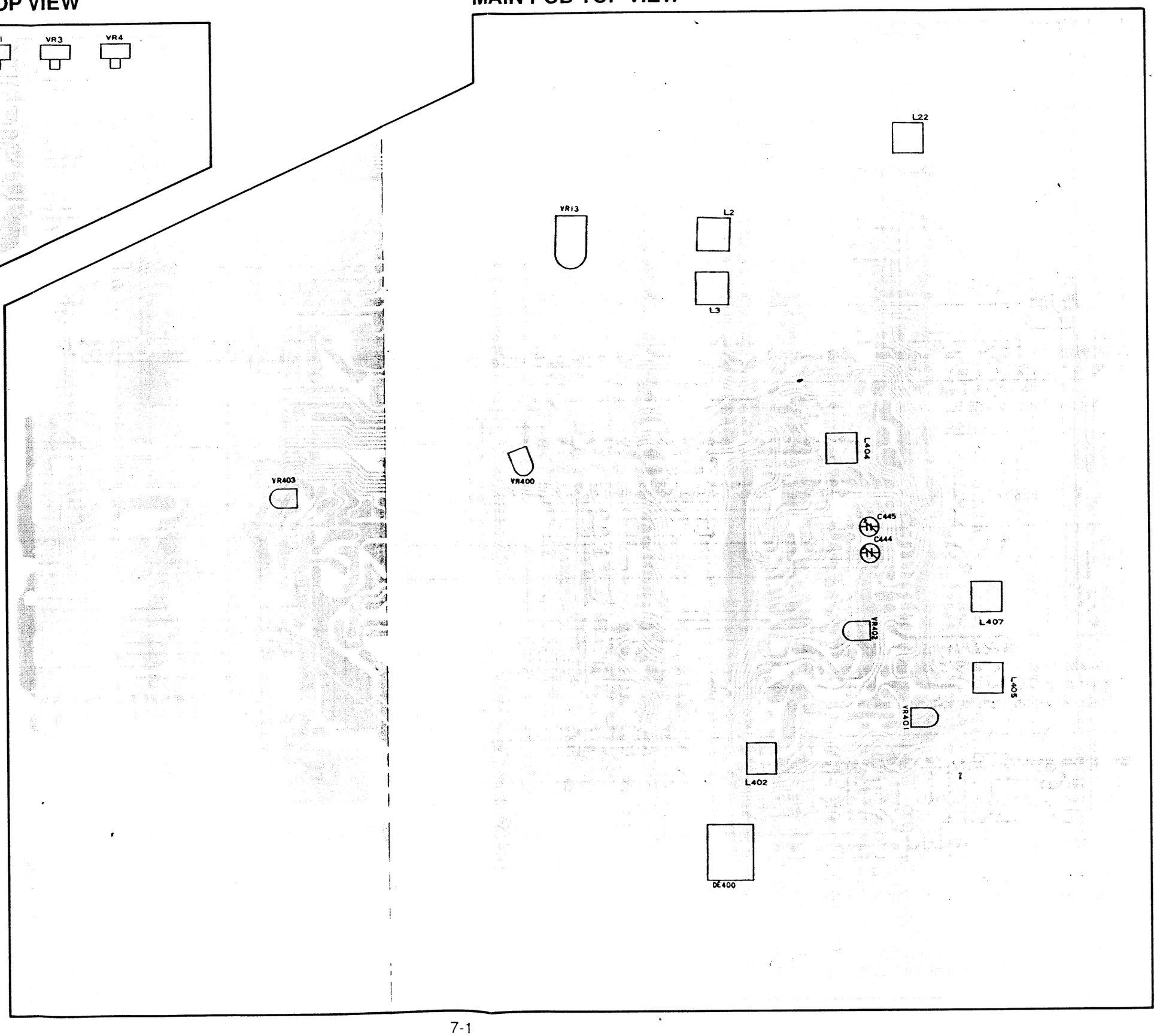


7. ADJUSTMENT POINTS

CRT PCB TOP VIEW

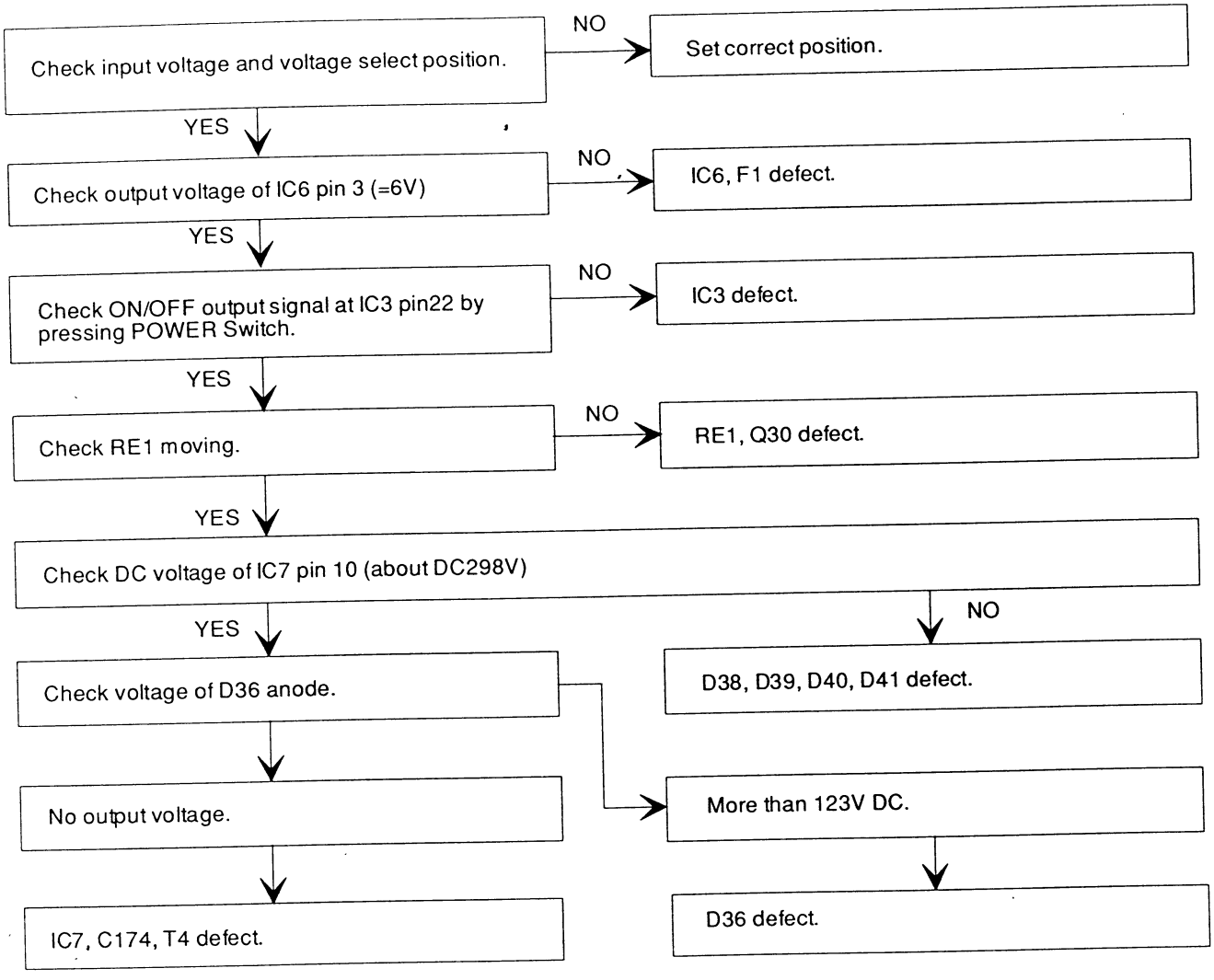


MAIN PCB TOP VIEW

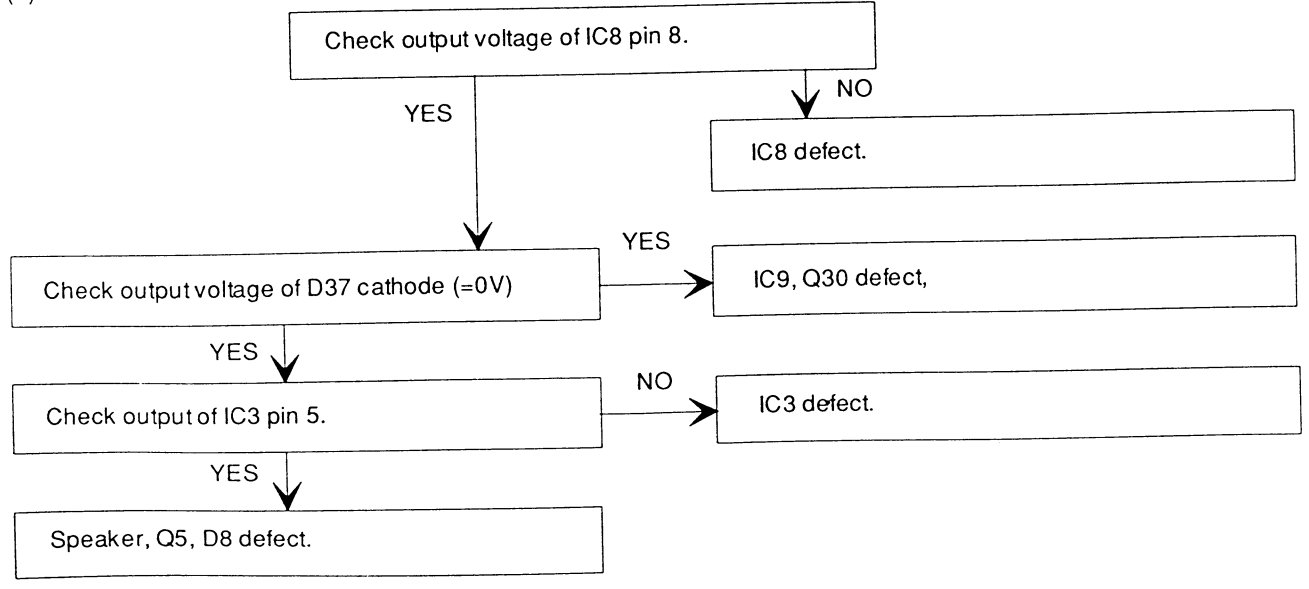


8. TROUBLESHOOTING GUIDES

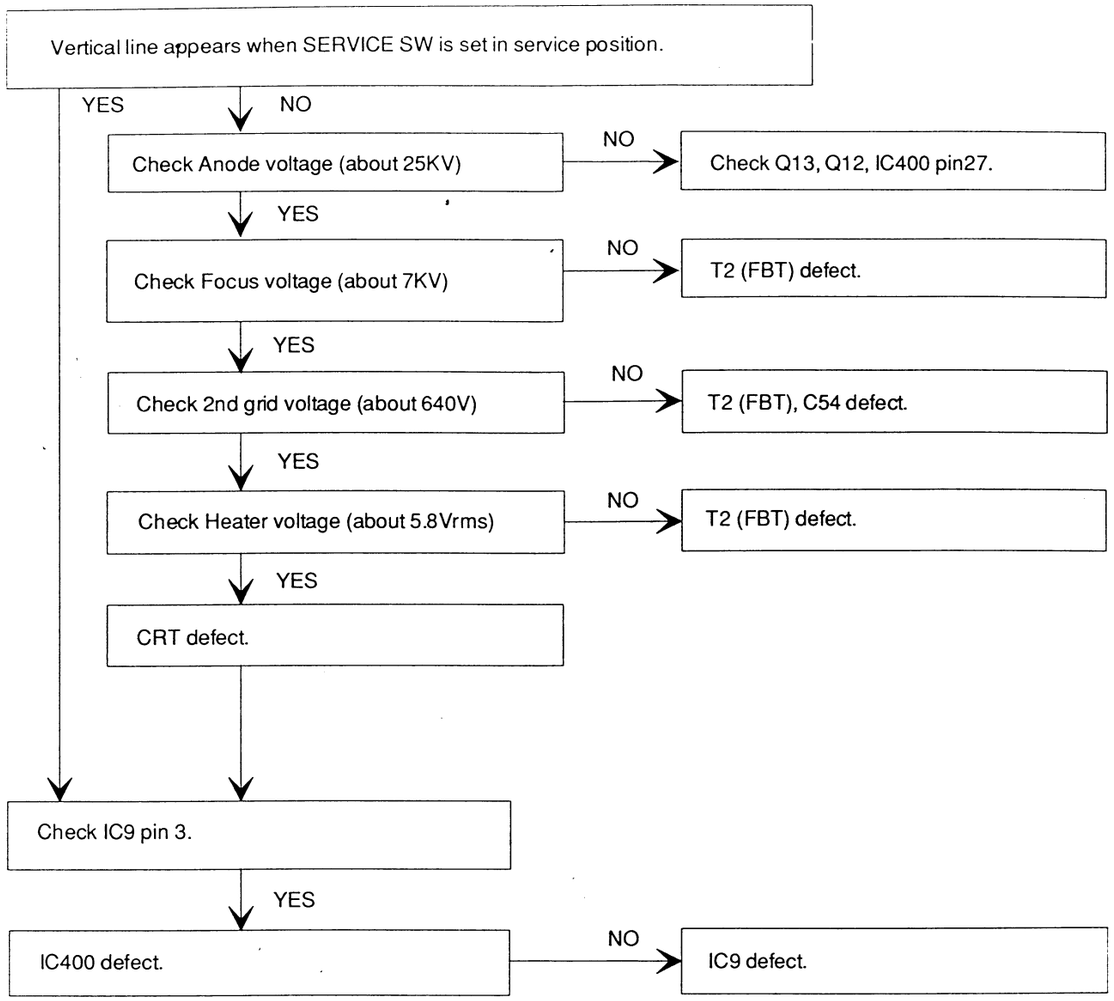
(1) NO POWER OUTPUT



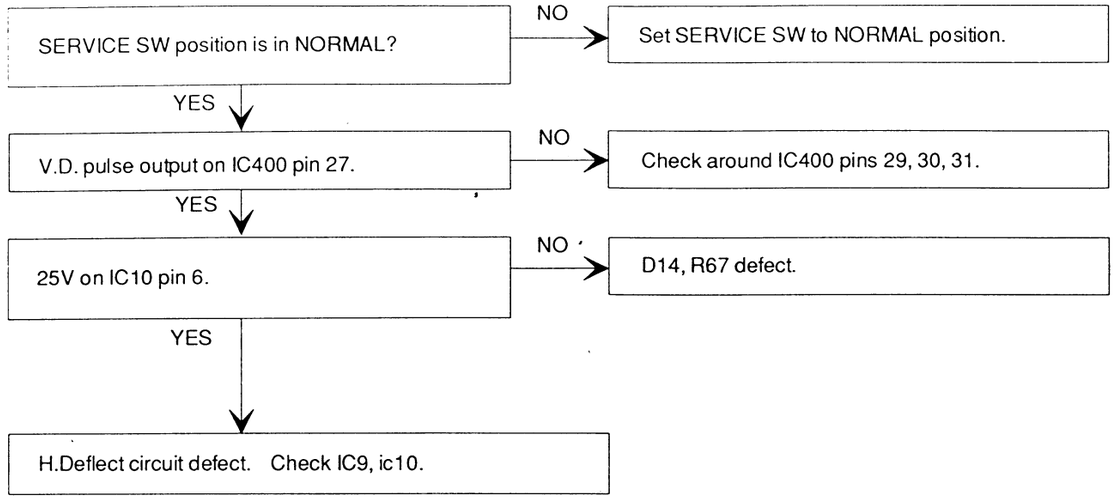
(2) NO SOUND



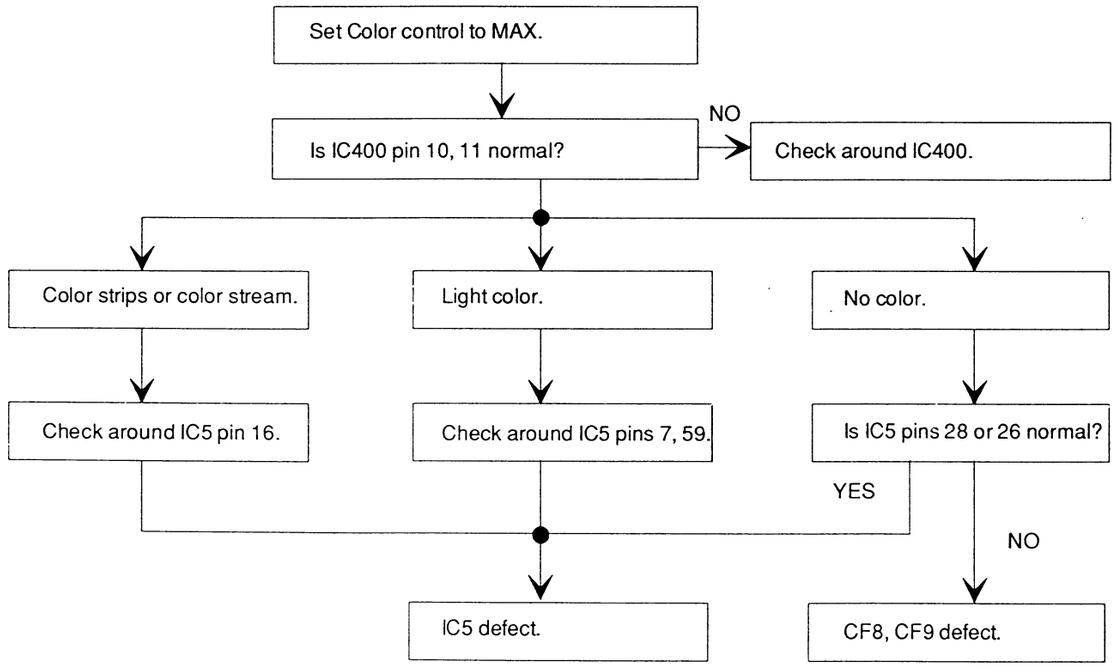
(3) NO RASTER WITH SOUND



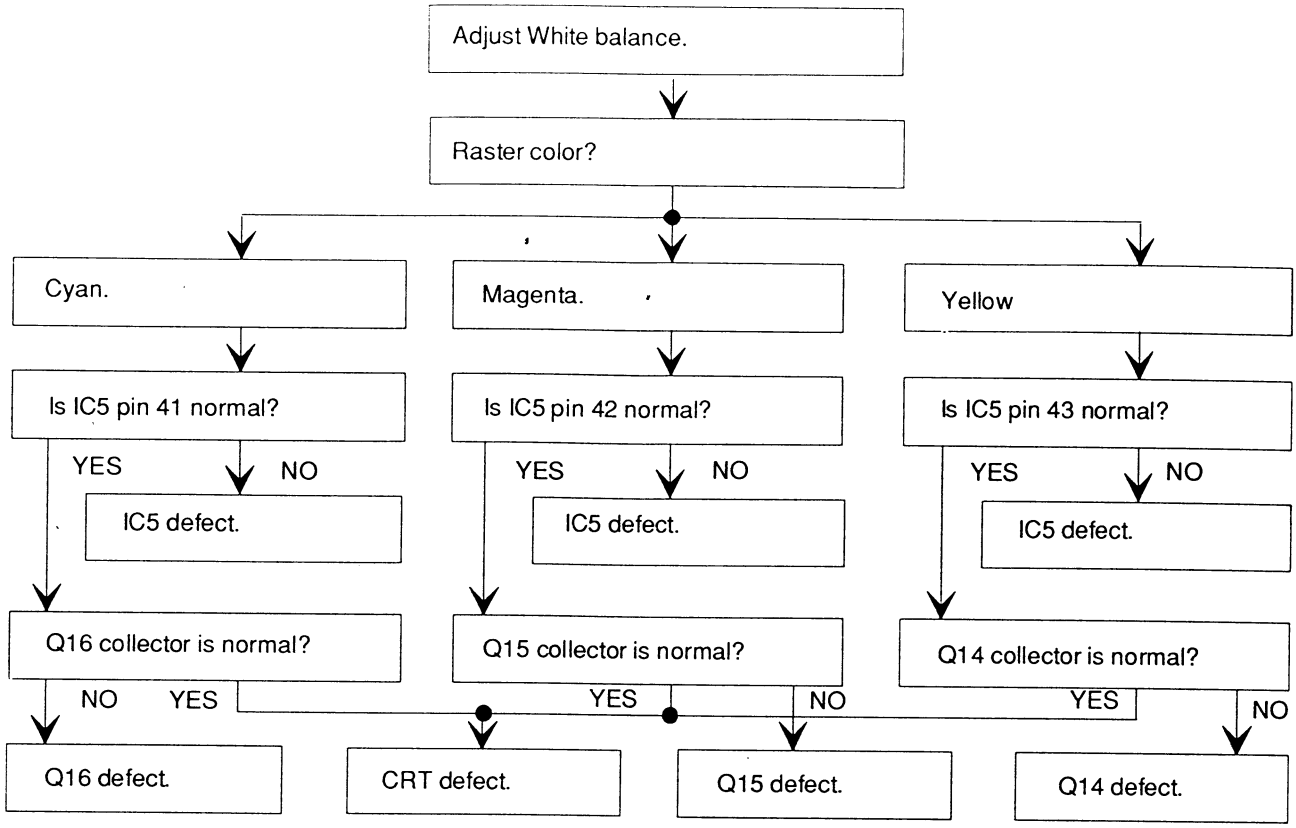
(4) NO HORIZ DEFLECT (ONLY V. LINE)



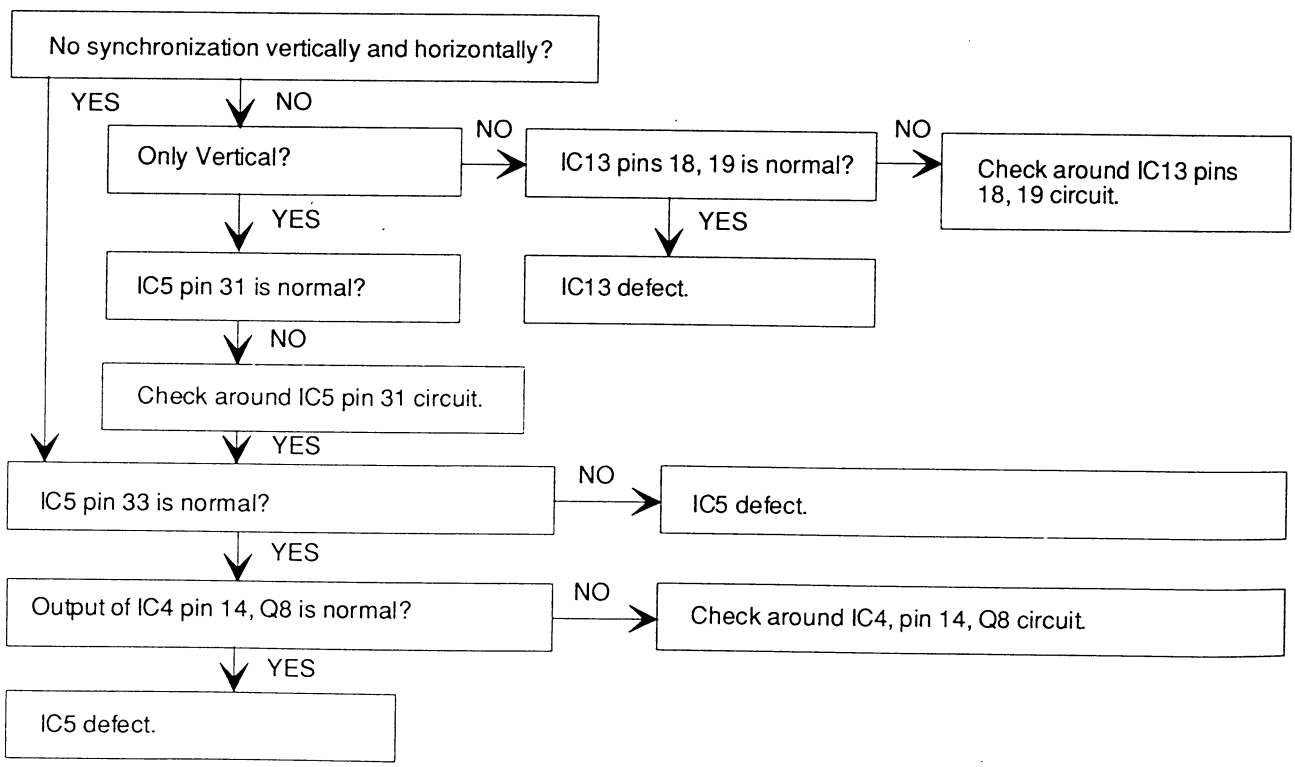
(5) NO COLOR



(6) DEFECTIVE COLOR

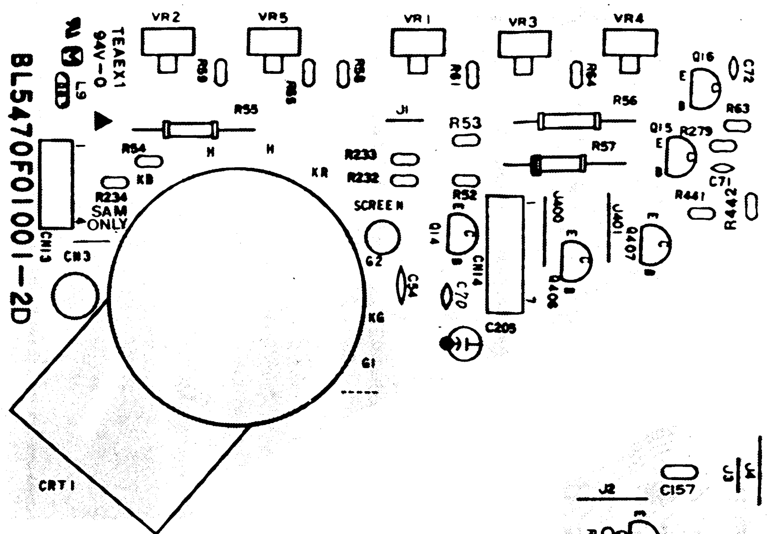


(7) NO SYNCHRONIZATION

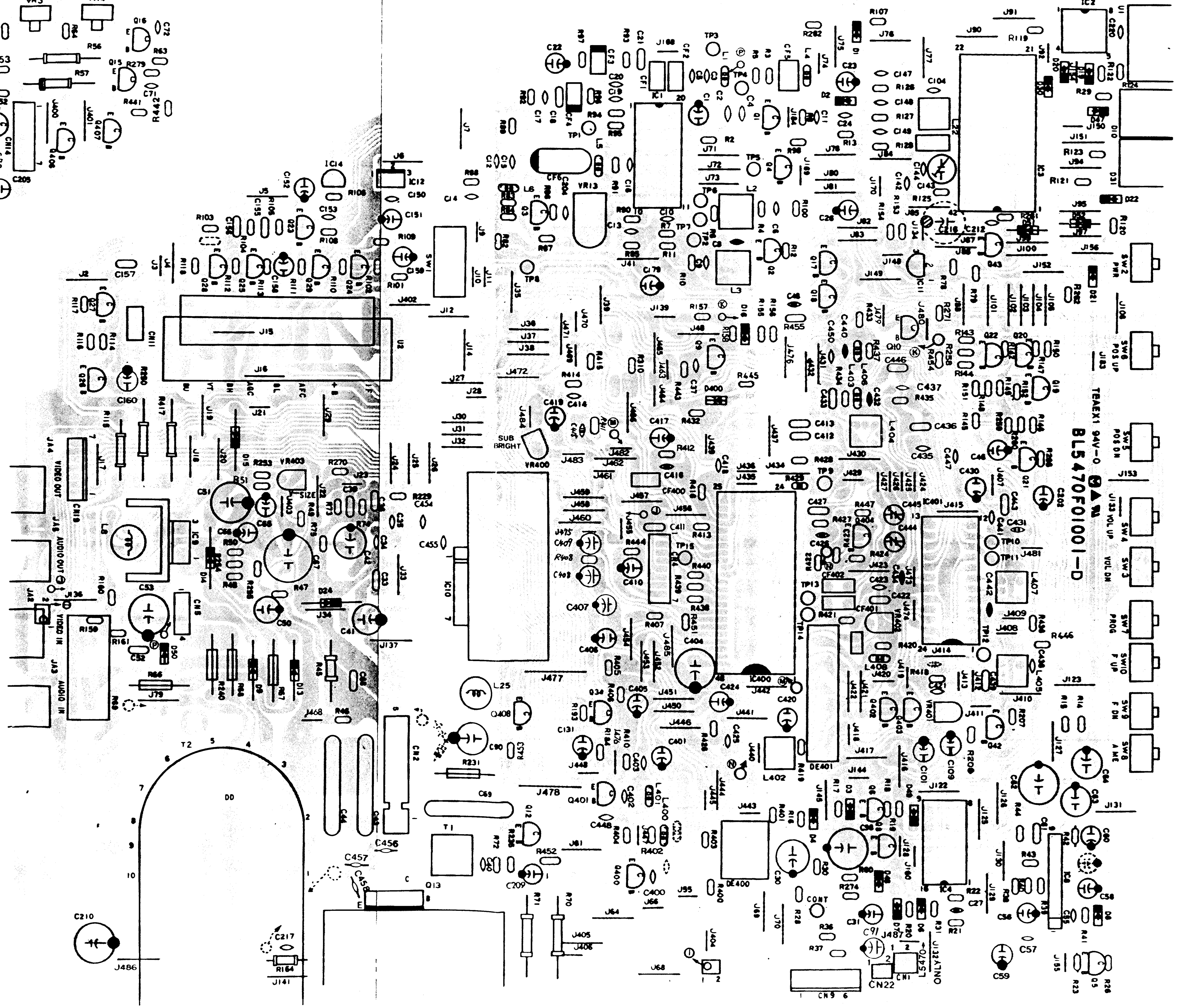


9. P.C.BOARD TOP AND BOTTOM VIEWS

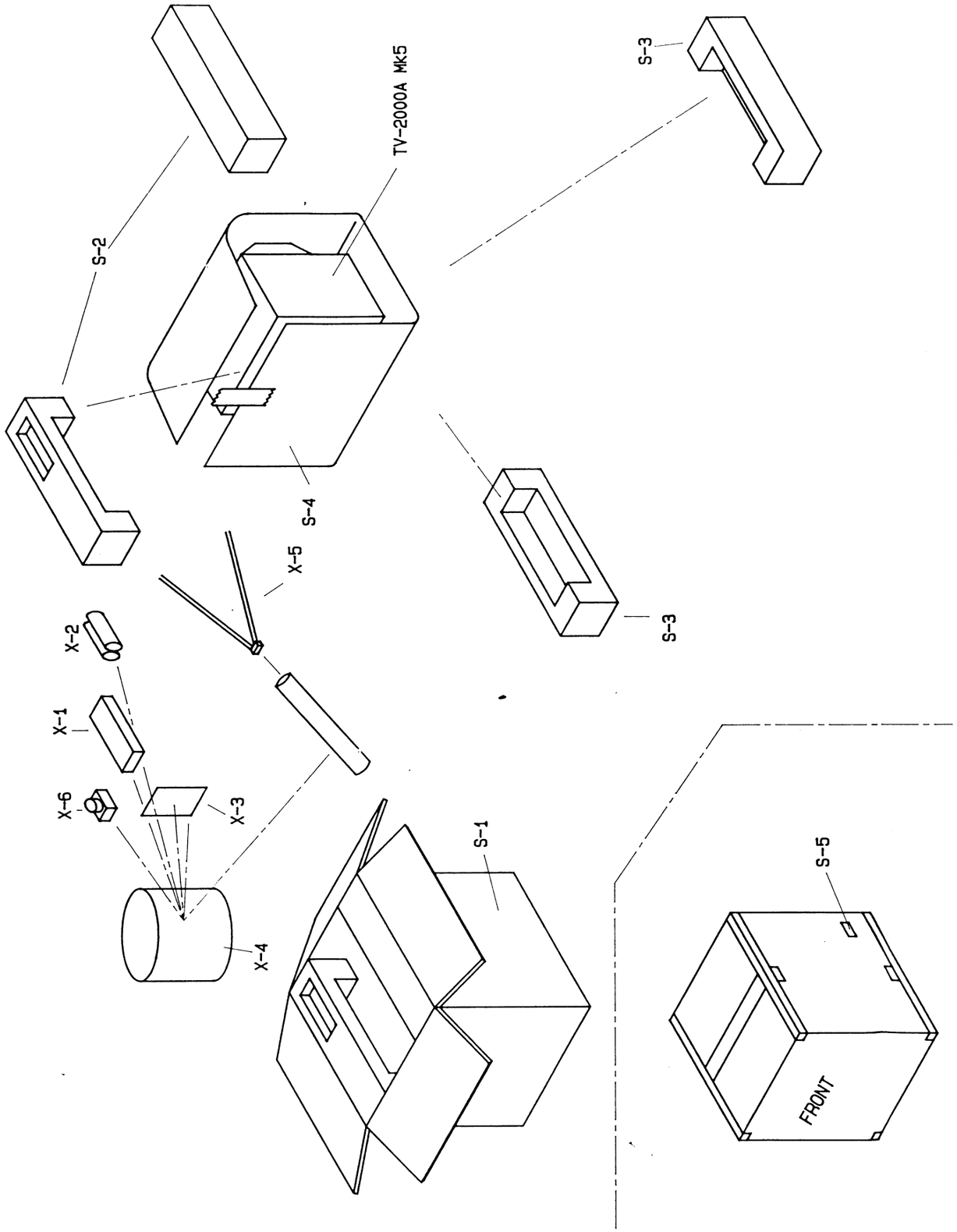
CRT PCB TOP VIEW



MAIN PCB TOP VIEW



15. COMPONENT PACKING

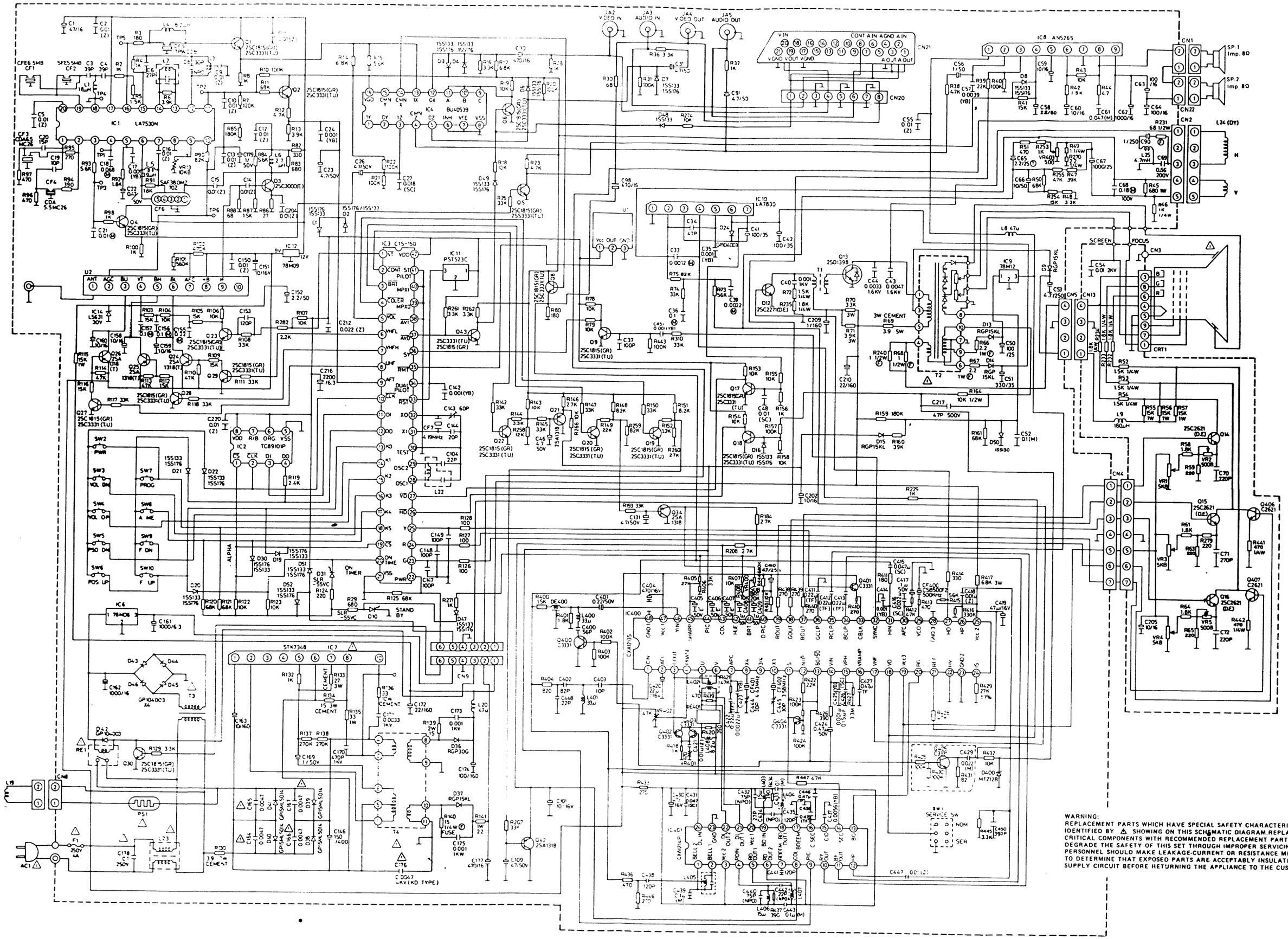


16. MECHANICAL APSRT LIST

REF. NO.	DESCRIPTION	PART NO.
A-1	FRONT CABINET ASS'Y	0EMN00474
A-1-1	FRONT CABINET	0EM100242
A-1-2	REAR CABINET MOUNTING BOSS	21WH071
A-2	CONTROL KNOB	0EM300327
A-3	INDICATOR WINDOW	0EM400801
A-4	SENSOR WINDOW	0EM400840
A-5	REAR CABINET	21CH200
A-6	RATING LABEL	0EM401055
A-7	BRAND BADGE	21WH080
A-8	ANT. JACK HOLDER	0EM300220
A-9	AC CORD HOLDER	21WH085
A-10	COVER PLATE	0EM400479
A-11	DECORATION TAPE	0EM400896
B-1	STOPPER HOLDER	23WH089
B-2	CRT MOUNTING BOSS LU,RD ASS'Y	21WH067X
B-3	CRT MOUNTING BOSS LD,RU ASS'Y	21WH068X
B-5	M6 NUT	27WH001
B-6	TENTION SPRING	26WH006
B-7	LED HOLDER	21WH065
B-9	SPACER	0EM400717
L-1	TAP TIGHT SCREW 3X8	GFMB3080
L-2	TAP TIGHT SCREW 3X10	GBMB3100
L-3	TAP TIGHT SCREW 3X16	GBMB3160
L-4	TAP TIGHT SCREW 3X10	GBMP3100
L-5	TAP TIGHT SCREW 3X12	GBKP3120
L-6	TAP TIGHT SCREW 4X20	GBMP4200
L-7	TAP TIGHT SCREW 4X16	GBMP4160
L-8	TAP TIGHT SCREW 4X18	GBKP4180
Z-5	SCOTCH TAPE #880 (for D. COIL)	0EZZ00026

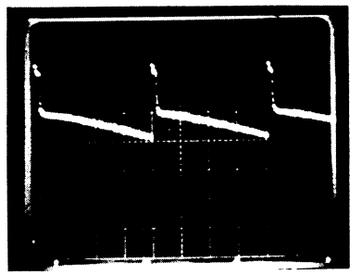
REF. NO.	DESCRIPTION	PART NO.
	ACCESSORIES	
X-1	REMOCON UNIT	UREMT30MS002
X-2	BATTERY	1813020 or 1790849 or 579W100
X-3	OWNER'S MANUAL	0EMN00473
X-4	POLYETHYLENE BAG	Z221350
X-5	VHF ANTENNA	27AH011 or 27AH012
X-6	MATCHING ADAPTOR	1813642 or 1780283
	PACKAGE	
S-1	CARTON	0EM401091
S-2	SET PAD (TOP)	0EM200152
S-3	SET PAD (BOTTOM)	0EM200153
S-4	SET SHEET	32EH014
S-5	SERIAL NO. LABEL	TS7619

11. SCHEMATIC DIAGRAM

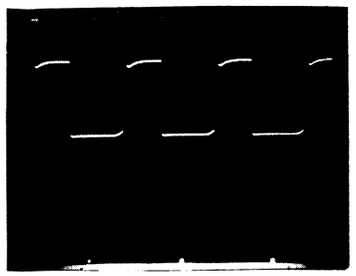


WARNING:
REPLACEMENT PARTS WHICH HAVE SPECIAL SAFETY CHARACTERISTICS ARE IDENTIFIED BY ⚠ SHOWING ON THIS SCHEMATIC DIAGRAM.REPLACE THESE CRITICAL COMPONENTS WITH RECOMMENDED REPLACEMENT PARTS. DON'T DEGRADE THE SAFETY OF THIS SET THROUGH IMPROPER SERVICING. SERVICE PERSONNEL SHOULD MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

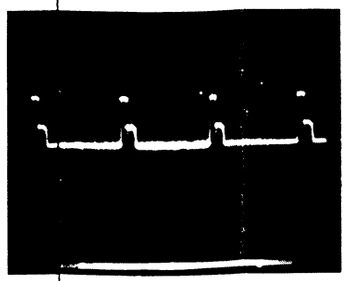
12. WAVEFORMS



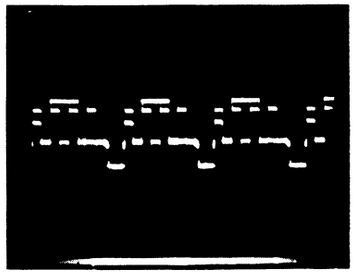
Point : A
1Div = 5ms
1Div = 20V



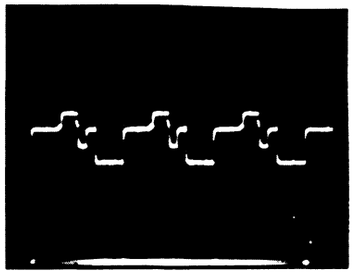
Point : E
1Div = 20us
1Div = 50V



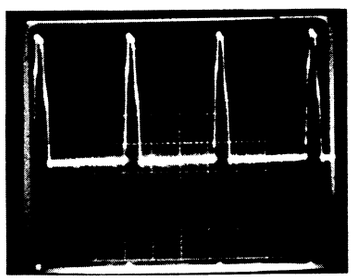
Point : I
1Div = 20us
1Div = 2V



Point : M
1Div = 20us
1Div = 2V



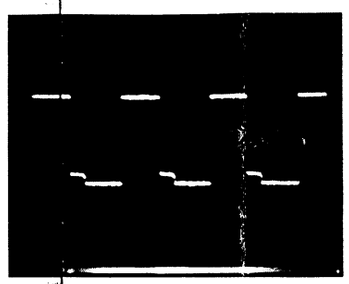
Point : Q
1Div = 20us
1Div = 50V



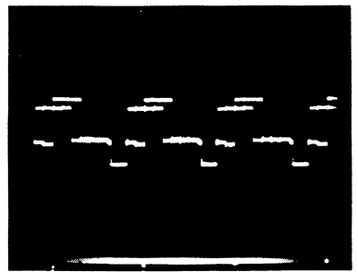
Point : B
1Div = 20us
1Div = 5V



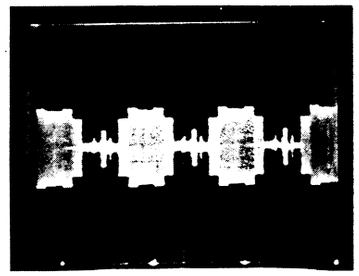
Point : F
1Div = 10us
1Div = 100V



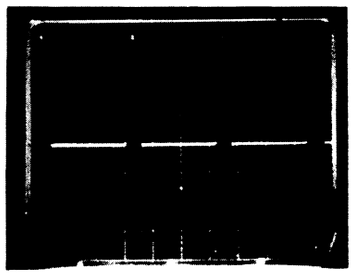
Point : J
1Div = 20us
1Div = 2V



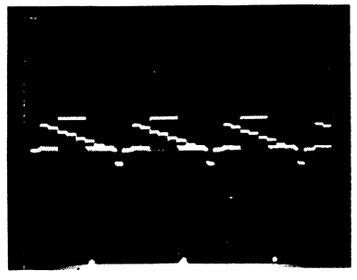
Point : N
1Div = 20us
1Div = 2V



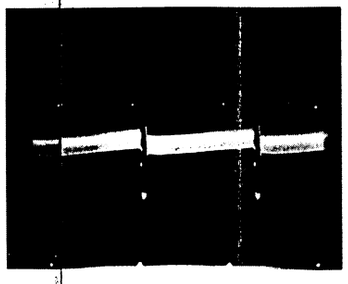
Point : R
1Div = 20us
1Div = 0.1V



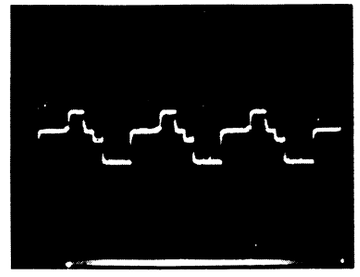
Point : C
1Div = 20us
1Div = 250V



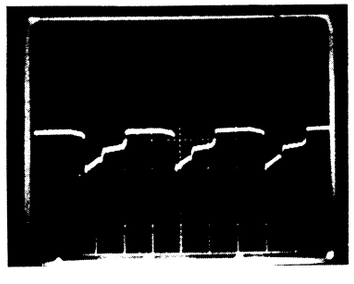
Point : G
1Div = 20us
1Div = 0.5V



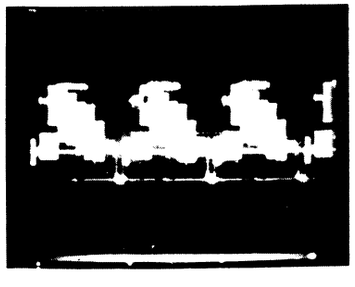
Point : K
1Div = 5ms
1Div = 0.5V



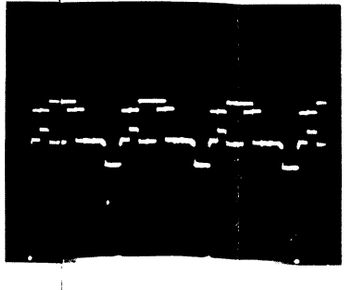
Point : O
1Div = 20us
1Div = 50V



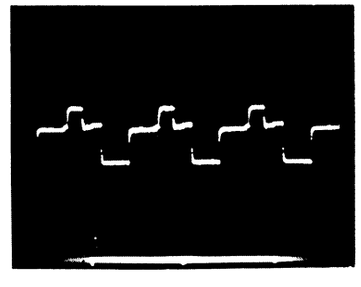
Point : D
1Div = 20us
1Div = 2V



Point : H
1Div = 20us
1Div = 0.5V

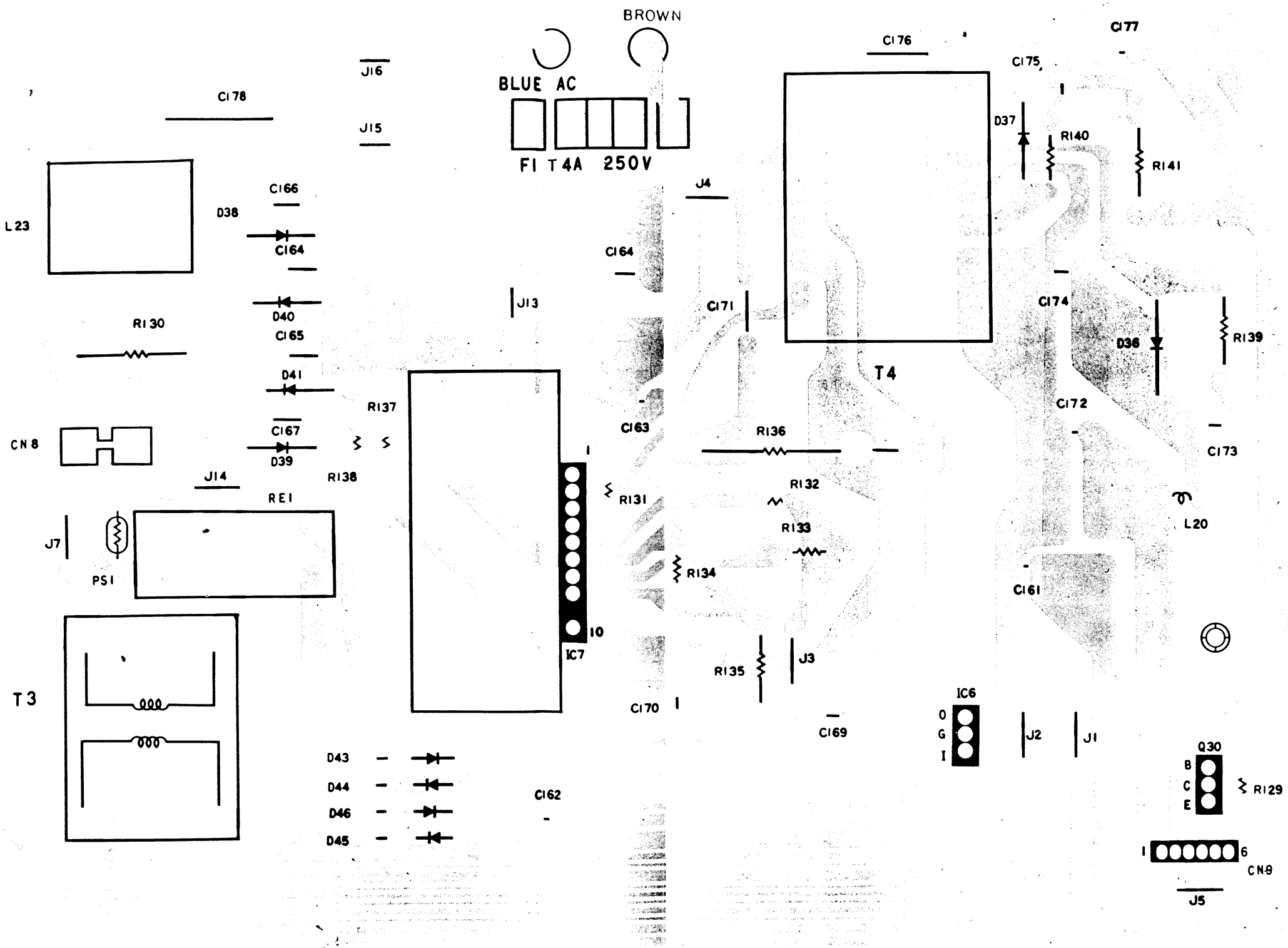


Point : L
1Div = 20us
1Div = 2V

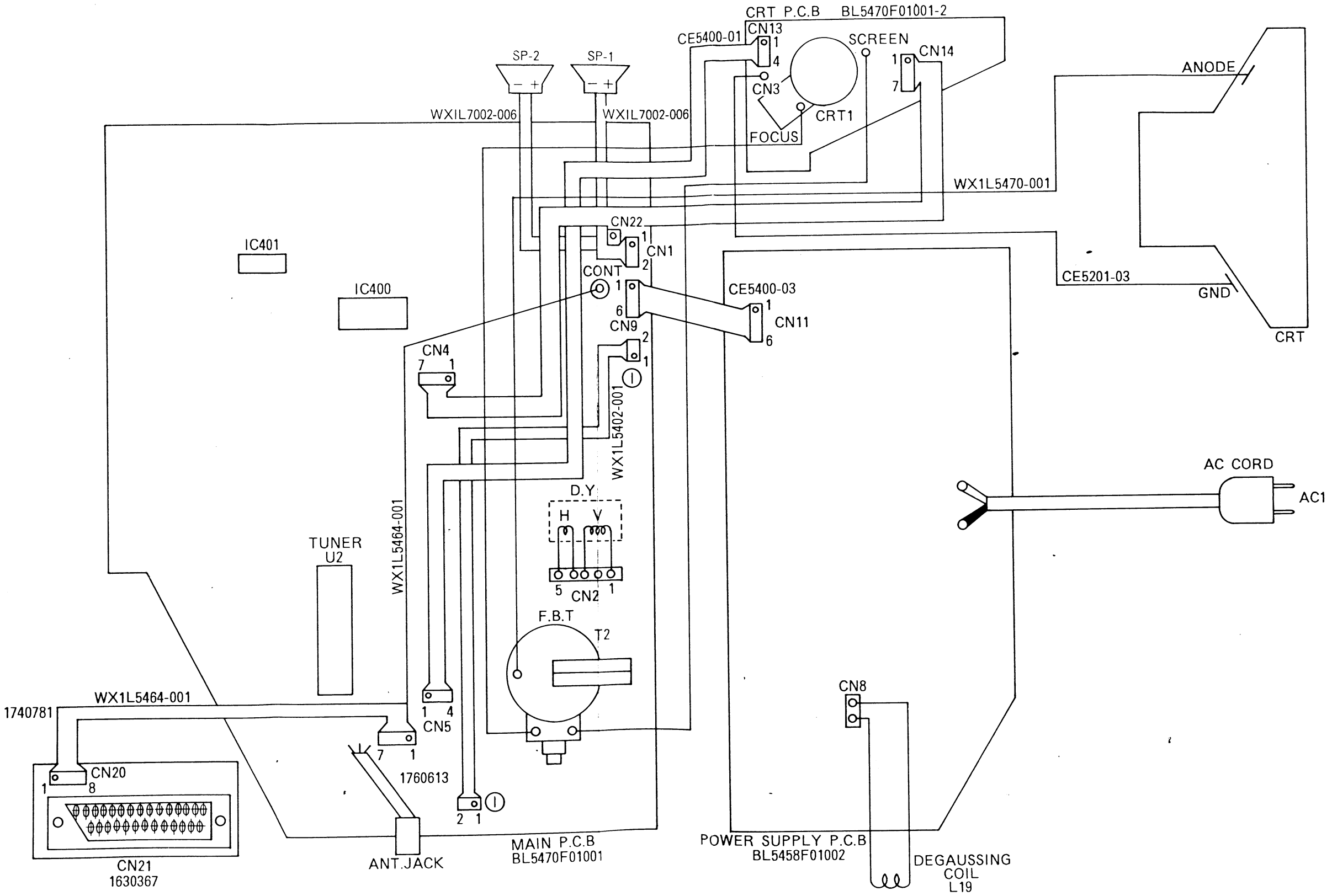


Point : P
1Div = 20us
1Div = 50V

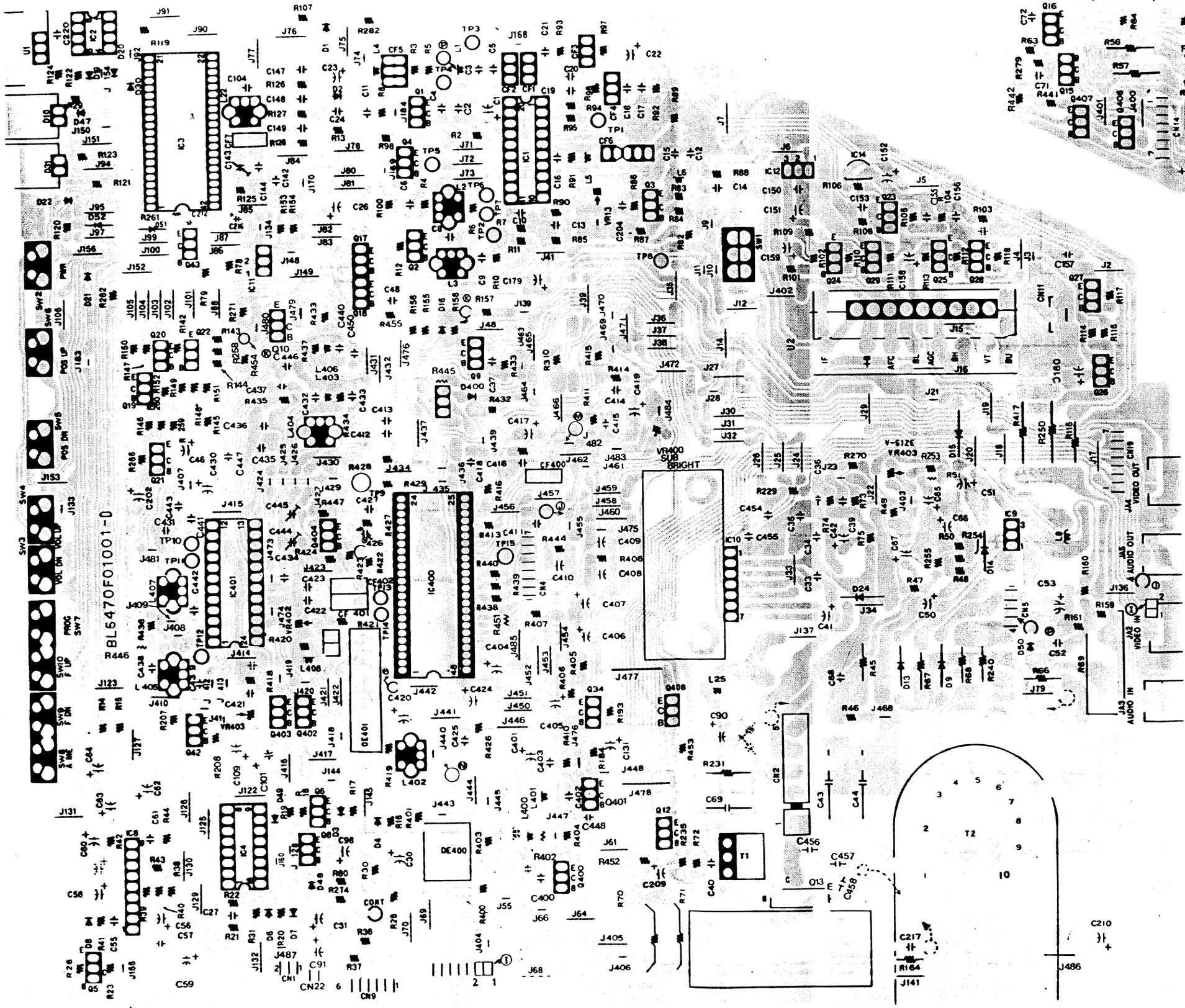
POWER SUPPLY PCB BOTTOM VIEW



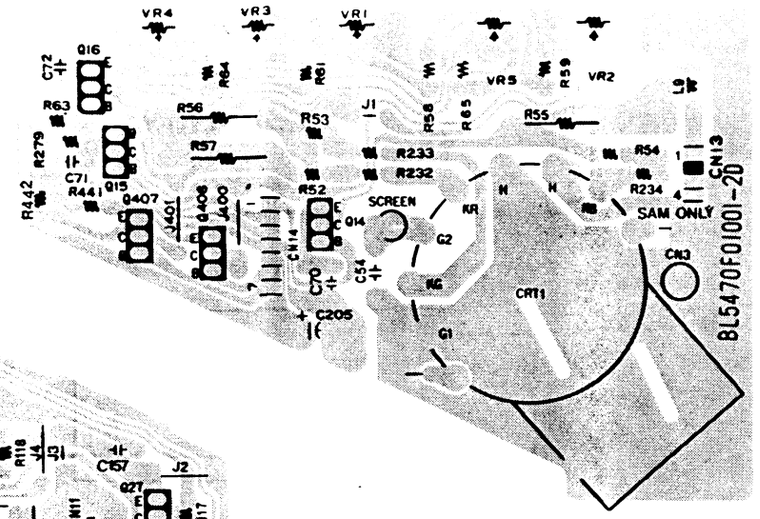
10. WIRING DIAGRAM



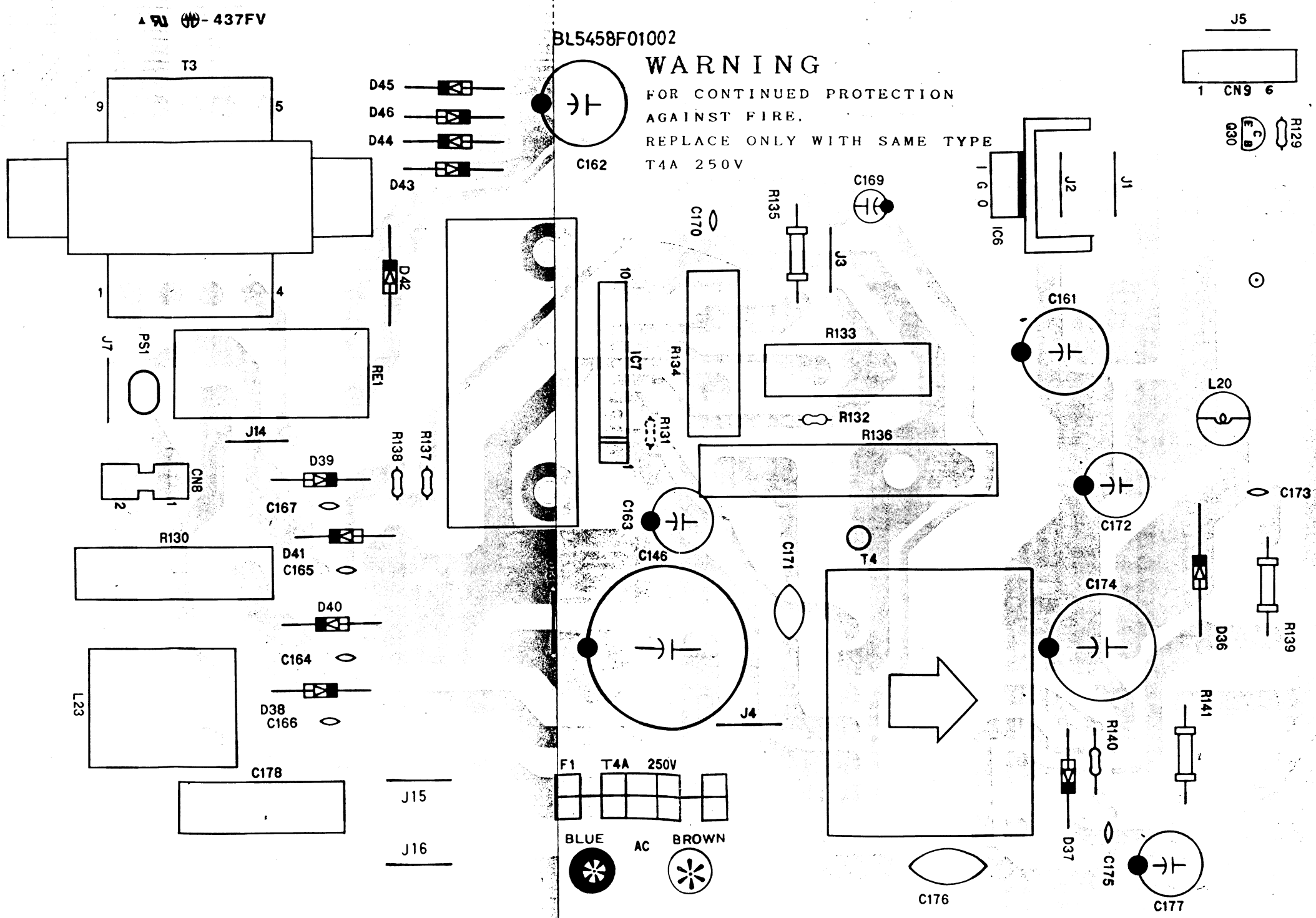
MAIN PCB BOTTOM VIEW



CRT PCB BOTTOM VIEW



POWER SUPPLY PCB TOP VIEW



17. ELECTRICAL PARTS LIST

PRODUCT SAFETY NOTE: Products marked with a ⚠ have special charactoeristics important to safety. Before replacing any of these compornents, read carefully the products safety notice of this service manual. Don't degrade the safety of the product through improper servicing.

REF. NO.	DESCRIPTION	PART NO.
	ASS'Y, PCB, MAIN CONSISTS OF THE FOLLOWING:	BL5470F01001-D
	CAPACITORS	
C 1	Electrolytic 47uF/16V ±20%	126C476S
C 2	Ceramic +80/-20% 0.01uF/50V	32F3103S or
	Ceramic +80/-20% 0.01uF/25V	3F45103S
C 3	Ceramic ±5% 39pF/50V	3270390S or
	Ceramic ±5% 39pF/50V	3S41390S
C 4	Ceramic ±5% 39pF/50V	3270390S or
	Ceramic ±5% 39pF/50V	3S41390S
C 5	Ceramic +80/-20% 0.01uF/50V	32F3103S or
	Ceramic +80/-20% 0.01uF/25V	3F45103S
C 6	Ceramic ±5% 27pF/50V	3270270S or
	Ceramic ±5% 27pF/50V	3S41270S
C 8	Ceramic NPO 130pF	12CH131S
C 9	Ceramic +80/-20% 0.01uF/50V	32F3103S or
	Ceramic +80/-20% 0.01uF/25V	3F45103S
C 10	Ceramic +80/-20% 0.01uF/50V	32F3103S or
	Ceramic +80/-20% 0.01uF/25V	3F45103S
C 11	Ceramic +80/-20% 0.01uF/50V	32F3103S or
	Ceramic +80/-20% 0.01uF/25V	3F45103S
C 12	Ceramic +80/-20% 0.01uF/50V	32F3103S or
	Ceramic +80/-20% 0.01uF/25V	3F45103S
C 13	Ceramic +80/-20% 0.01uF/50V	32F3103S or
	Ceramic +80/-20% 0.01uF/25V	3F45103S
C 14	Ceramic +80/-20% 0.01uF/50V	32F3103S or
	Ceramic +80/-20% 0.01uF/25V	3F45103S
C 15	Ceramic +80/-20% 0.01uF/50V	32F3103S or
	Ceramic +80/-20% 0.01uF/25V	3F45103S
C 16	Ceramic +80/-20% 0.01uF/50V	32F3103S or
	Ceramic +80/-20% 0.01uF/25V	3F45103S
C 17	Ceramic ±10% 0.001uF/50V	32B3102S or
	Ceramic ±10% 0.001uF/50V	3B42102S
C 18	Mylar 0.068uF/50V ±10%	2250683S or
	Mylar 0.068uF/50V ±10%	1250683S
C 19	Ceramic ±0.5% 10pF/50V	3270100S or
	Ceramic ±5% 10pF/50V	3S41100S
C 20	Ceramic ±5% 15pF/50V	3270150S or
	Ceramic ±5% 15pF/50V	3S41150S
C 21	Mylar 0.01uF/50V K	2250103S or
	Mylar 0.01uF/50V ±10%	1250103S
C 22	Electrolytic 0.47uF/50V ±20%	126F474S
C 23	Electrolytic 4.7uF/50V ±20%	126F475S
C 24	Ceramic ±10% 0.001uF/50V	32B3102S or
	Ceramic ±10% 0.001uF/50V	3B42102S
C 26	Electrolytic 4.7uF/50V ±20%	126F475S
C 27	Semiconductive ±10% 0.018uF/25V	12Y2183S
C 30	Electrolytic 470uF/16V ±20%	626C477
C 31	Electrolytic 4.7uF/50V ±20%	126F475S
C 33	Mylar 0.0012uF/50V ±10%	2250122S or
	Mylar 0.0012uF/50V ±10%	1250122S
C 34	Ceramic ±5% 47pF/50V	3270470S or
	Ceramic ±5% 47pF/50V	3S41470S
C 35	Ceramic ±10% 0.001uF/50V	32B3102S or
	Ceramic ±10% 0.001uF/50V	3B42102S

REF. NO.	DESCRIPTION	PART NO.
C 36	Mylar 0.1uF/50V ±10%	2250104S or
	Mylar 0.1uF/50V ±10%	1250104S
C 37	Ceramic ±10% 100pF/50V	32B3101S or
	Ceramic ±10% 100pF/50V	3B42101S
C 39	Mylar 0.0022uF/50V ±10%	2250222S or
	Mylar 0.0022uF/50V ±10%	1250222S
C 40	Ceramic 0.001uF/1KV	6220574
C 41	Electrolytic 100uF/35V ±20%	6.3E+109
C 42	Electrolytic 100uF/35V ±20%	6.3E+109
C 43	P.P. 0.0047uF 1.6KV	122Z183 or
	P.P. 0.0047uF 1.6KV	1220496
C 44	P.P. 0.0039/1.6KV	1220495 or
	P.P. 0.0039/1.6KV	122Z281
C 46	Electrolytic 4.7uF/50V ±20%	126F475S
C 48	Semiconductive ±10% 0.01uF/25V	12Y2103S
C 50	Electrolytic 100uF/25V ±20%	626D107
C 51	Electrolytic 330uF/35V ±20%	626E337
C 52	Mylar 0.1uF/50V ±10%	2250104S or
	Mylar 0.1uF/50V ±10%	1250104S
C 53	Electrolytic 4.7uF/250V ±20%	6220691 or
	Electrolytic 4.7uF/250V ±20%	122Z343
C 55	Ceramic +80/-20% 0.01uF/50V	32F3103S or
	Ceramic +80/-20% 0.01uF/25V	3F45103S
C 56	Electrolytic 1uF/50V ±20%	126F105S
C 57	Ceramic ±10% 0.0039uF/50V	32B3392S or
	Ceramic ±10% 0.0039uF/16V	3X4D392S
C 58	Electrolytic 2.2uF/50V ±20%	126F225S
C 59	Electrolytic 10uF/16V ±20%	626C106
C 60	Electrolytic 10uF/16V ±20%	126C106S
C 61	Mylar 0.047uF/50V ±10%	2250473S or
	Mylar 0.047uF/50V ±10%	1250473S
C 62	Electrolytic 1000uF/16V ±20%	626C108
C 63	Electrolytic 100uF/16V ±20%	126C107S
C 64	Electrolytic 100uF/16V ±20%	126C107S
C 65	Tantal Electrolytic 2.2uF/25V	122F259 or
	Tantal Electrolytic 2.2uF/25V ±10%	122F225
C 66	Electrolytic 10uF/50V ±20%	126F106S
C 67	Electrolytic 1000uF/25V ±20%	626D108
C 68	Mylar 0.18uF/100V ±10%	2251184 or
	Mylar 0.18uF/100V ±10%	1251184
C 69	P.P. 0.47uF/200V	122Z256 or
	P.P. 0.47uF/200V	1220511
C 90	Electrolytic 1uF/250V	6220690 or
	Electrolytic 1uF/250V ±20%	122Z340
C 91	Electrolytic 4.7uF/50V ±20%	126F475S
C 98	Electrolytic 470uF/16V ±20%	626C477
C 101	Electrolytic 10uF/16V ±20%	126C106S
C 104	Ceramic ±5% 22pF/50V	3270220S or
	Ceramic ±5% 22pF/50V	3S41220S
C 109	Electrolytic 4.7uF/50V ±20%	126F475S
C 131	Electrolytic 4.7uF/50V ±20%	126F475S
C 142	Ceramic ±10% 0.001uF/50V	32B3102S or
	Ceramic ±10% 0.001uF/50V	3B42102S
C 143	Torimar 60pF	1280137
C 144	Ceramic ±5% 20pF/50V	3270200S or
	Ceramic ±5% 20pF/50V	3S41200S

REF. NO.	DESCRIPTION	PART NO.
C 147	Ceramic ±10% 100pF/50V	32B3101S or
	Ceramic ±10% 100pF/50V	3B42101S
C 148	Ceramic ±10% 100pF/50V	32B3101S or
	Ceramic ±10% 100pF/50V	3B42101S
C 149	Ceramic ±10% 100pF/50V	32B3101S or
	Ceramic ±10% 100pF/50V	3B42101S
C 150	Ceramic +80/-20% 0.01uF/50V	32F3103S or
	Ceramic +80/-20% 0.01uF/25V	3F45103S
C 151	Electrolytic 10uF/16V ±20%	126C106S
C 152	Electrolytic 2.2uF/50V ±20%	126F225S
C 153	Ceramic ±10% 120pF/50V	32B3121S or
	Ceramic ±10% 120pF/50V	3B42121S
C 155	Mylar 0.22uF/50V ±10%	2250224M or
	Mylar 0.22uF/50V ±10%	1250224
C 156	Mylar 0.1uF/50V ±10%	2250104S or
	Mylar 0.1uF/50V ±10%	1250104S
C 157	Mylar 0.1uF/50V ±10%	2250104S or
	Mylar 0.1uF/50V ±10%	1250104S
C 158	Electrolytic 10uF/16V ±20%	126C106S
C 159	Electrolytic 10uF/16V ±20%	126C106S
C 160	Electrolytic 10uF/16V ±20%	126C106S
C 179	Electrolytic 1uF/50V ±20%	126F105S
C 202	Electrolytic 10uF/16V ±20%	126C106S
C 209	Electrolytic 1uF/160V	1220618 or
	Electrolytic 1uF/160V	122Z329
C 210	Electrolytic 22uF/160V	122Z334 or
	Electrolytic 22uF/160V ±20%	6220758
C 212	Ceramic +80/-20% 0.022uF/25V	32F3223
C 216	Electrolytic 2200uF/6.3V ±20%	626A228
C 217	Ceramic 47pF/500V	122Z684
C 220	Ceramic +80/-20% 0.01uF/50V	32F3103S or
	Ceramic +80/-20% 0.01uF/25V	3F45103S
C 400	Ceramic ±5% 56pF/50V	3270560S or
	Ceramic ±5% 56pF/50V	3S41560S
C 401	Electrolytic 0.22uF/50V ±20%	126F224S
C 402	Ceramic ±10% 82pF/50V	32B3820S or
	Ceramic ±10% 82pF/50V	3B42820S
C 403	Ceramic ±0.5% 10pF/50V	3270100S or
	Ceramic ±5% 10pF/50V	3S41100S
C 404	Electrolytic 470uF/16V ±20%	626C477
C 405	Electrolytic 1uF/50V ±20%	126F105S
C 406	Electrolytic 1uF/50V ±20%	126F105S
C 407	Electrolytic 1uF/50V ±20%	126F105S
C 408	Electrolytic 1uF/50V ±20%	126F105S
C 409	Electrolytic 1uF/50V ±20%	126F105S
C 410	Electrolytic 4.7uF/25V ±20%	126D475S
C 411	Film 0.22uF/50V	125U224 or
	Film 0.22uF/50V	225R224
C 412	Film 0.22uF/50V	125U224 or
	Film 0.22uF/50V	225R224
C 413	Film 0.22uF/50V	125U224 or
	Film 0.22uF/50V	225R224
C 414	Ceramic ±10% 0.001uF/50V	32B3102S or
	Ceramic ±10% 0.001uF/50V	3B42102S
C 415	Semiconductive ±10% 0.047uF/25V	12Y2473S
C 416	Semiconductive ±10% 0.022uF/25V	12Y2223S
C 417	Electrolytic 1uF/50V ±20%	126F105S
C 418	Ceramic +80/-20% 0.01uF/50V	32F3103S or
	Ceramic +80/-20% 0.01uF/25V	3F45103S
C 419	Electrolytic 220uF/16V ±20%	126C227S
C 420	Electrolytic 22uF/16V ±20%	126C226S
C 421	Ceramic +80/-20% 0.01uF/50V	32F3103S or
	Ceramic +80/-20% 0.01uF/25V	3F45103S

REF. NO.	DESCRIPTION	PART NO.
C 422	Film 0.22uF/50V	125U224 or
	Film 0.22uF/50V	225R224
C 423	Ceramic ±10% 0.0022uF/50V	32B3222S or
	Ceramic 0.0022uF(YB)	3X4D222S
C 424	Electrolytic 0.47uF/50V ±20%	126F474S
C 425	Ceramic ±10% 0.001uF/50V	32B3102S or
	Ceramic ±10% 0.001uF/50V	3B42102S
C 426	Semiconductive ±10% 0.15uF/25V	12Y2154S
C 427	Film 0.47uF/50V	125U474 or
	Film 0.47uF/50V	225U474
C 430	Electrolytic 47uF/16V ±20%	126C476S
C 431	Semiconductive ±10% 0.047uF/25V	12Y2473S
C 432	Ceramic NPO 75pF	12CH750S
C 433	Mylar 0.1uF/50V ±10%	2250104S or
	Mylar 0.1uF/50V ±10%	1250104S
C 434	Ceramic ±5% 27pF/50V	32CH270S
C 435	Ceramic ±10% 120pF/50V	32B3121S or
	Ceramic ±10% 120pF/50V	3B42121S
C 436	Film 0.47uF/50V	125U474 or
	Film 0.47uF/50V	225U474
C 437	Ceramic ±10% 0.0056uF/25V	32B3562S or
	Ceramic ±10% 0.0056uF/25V	3X4D562S
C 438	Ceramic ±10% 120pF/50V	32B3121S or
	Ceramic ±10% 120pF/50V	3B42121S
C 439	Mylar 0.1uF/50V ±10%	2250104S or
	Mylar 0.1uF/50V ±10%	1250104S
C 440	Ceramic NPO 75pF	12CH750S
C 441	Ceramic ±10% 120pF/50V	32B3121S or
	Ceramic ±10% 120pF/50V	3B42121S
C 442	Ceramic ±5% 22pF/50V	32CH220S
C 443	Mylar 0.1uF/50V ±10%	2250104S or
	Mylar 0.1uF/50V ±10%	1250104S
C 444	Trimar 30pF/N750	1280123
C 445	Trimar 30pF/N750	1280123
C 446	Film 0.47uF/50V	125U474 or
	Film 0.47uF/50V	225U474
C 447	Ceramic +80/-20% 0.01uF/50V	32F3103S or
	Ceramic +80/-20% 0.01uF/25V	3F45103S
C 448	Ceramic ±5% 22pF/50V	3270220 or
	Ceramic ±5% 22pF/50V	3S41220
C 450	Ceramic ±10% 220pF/50V	32B3221 or
	Ceramic ±10% 220pF/50V	3B42221
	[for HT and GS Type CRT]	
	Ceramic ±10% 220pF/50V	32B3221 or
	Ceramic ±10% 220pF/50V	3B42221
	[for SAM Type CRT]	
C 451	Ceramic ±10% 0.001uF/50V	32B3102S
C 454	Ceramic +80/-20% 0.01uF/50V	32F3103 or
	Ceramic +80/-20% 0.01uF/25V	3F45103
C 455	Ceramic +80/-20% 0.01uF/50V	32F3103 or
	Ceramic +80/-20% 0.01uF/25V	3F45103
	DIODES	
D 1	Di. 1SS176TPA7	1SS176T or
	Di. 1SS133	1SS133T
D 2	Di. 1SS176TPA7	1SS176T or
	Di. 1SS133	1SS133T
D 3	Di. 1SS176TPA7	1SS176T or
	Di. 1SS133	1SS133T
D 4	Di. 1SS176TPA7	1SS176T or
	Di. 1SS133	1SS133T
D 6	Di. 1SS176TPA7	1SS176T or
	Di. 1SS133	1SS133T

REF. NO.	DESCRIPTION	PART NO.
D 7	Di. 1SS176TPA7	1SS176T or
	Di. 1SS133	1SS133T
D 8	Di. 1SS176TPA7	1SS176T or
	Di. 1SS133	1SS133T
D 9	Di. ERB44-08L3	AERB4408L300 or
	Di. RGP15KL5001	RGP15KL5001
D 10	Led SLR-55VC3 RED	1401273
D 13	Di. ERB44-08L3	AERB4408L300 or
	Di. RGP15KL5001	RGP15KL5001
D 14	Di. ERB44-08L3	AERB4408L300 or
	Di. RGP15KL5001	RGP15KL5001
D 15	Di. ERB44-08L3	AERB4408L300 or
	Di. RGP15KL5001	RGP15KL5001
D 16	Di. 1SS176TPA7	1SS176T or
	Di. 1SS133	1SS133T
D 19	Di. 1SS176TPA7	1SS176T or
	Di. 1SS133	1SS133T
D 20	Di. 1SS176TPA7	1SS176T or
	Di. 1SS133	1SS133T
D 21	Di. 1SS176TPA7	1SS176T or
	Di. 1SS133	1SS133T
D 22	Di. 1SS176TPA7	1SS176T or
	Di. 1SS133	1SS133T
D 24	Di. ERB12-02L3	AERB1202L300 or
	Di. GP10-4003	MPL5209
D 30	Di. 1SS176TPA7	1SS176T or
	Di. 1SS133	1SS133T
D 31	Led SLR-55VC3 RED	1401273
D 47	Di. 1SS176TPA7	1SS176T or
	Di. 1SS133	1SS133T
D 48	Di. 1SS176TPA7	1SS176T or
	Di. 1SS133	1SS133T
D 49	Di. 1SS176TPA7	1SS176T or
	Di. 1SS133	1SS133T
D 50	Di. 1SS178	1SS178T or
	Di. 1SS130	1SS130T
D 51	Di. 1SS176	1SS176 or
	Di. 1SS133	1SS133
D 52	Di. 1SS176	1SS176 or
	Di. 1SS133	1SS133
D 400	Zener Di. MTZ12B	MTZ12BT
	ICS	
IC 1	IC (LA7530N)	14LQ162 ⁄
IC 2	IC TC89101P	GTC89101P***
IC 3	IC TMP47C 634N2458	GCTS150*****
IC 4	IC BU4053B	14LF166 ⁄ or
	IC	14DW168 ⁄ or
	IC	MC14053BCP or
	IC	14L0436
IC 8	IC AN5265	14LN160 ⁄
IC 9	Voltage Regulator IC AN78M12	AM78M12F or
	Voltage Regulator IC NJM78M12FA	14L0242 ⁄
IC 10	IC LA7830	14LQ163⁄
IC 11	IC PST523C	14L0174
IC 12	Voltage Regulator IC AN78M09	AN78M09 or
	IC 78M09	L78M09
IC 14	IC L5631	L5631
IC 400	IC CXA1213S	GCXA1213S000
IC 401	IC CXA1214P	GCXA1214P000

REF. NO.	DESCRIPTION	PART NO.
	COILS	
L 1	Micro Inductor 18uH	2165180S or
	Micro Inductor 18uH-K-5FT	2162180S
L 2	Casing Coil	LFA07V*MM001
L 3	Casing Coil	LFA07V*MM002
L 4	Micro Inductor 8.2uH	2165829S or
	Micro Inductor 8.2uH	2162829S
L 5	Micro Inductor 3.9uH-K-5FT	2165399S or
	Micro Inductor 3.9uH-K-5FT	2162399S
L 6	Micro Inductor 2.7uH-K-5FT	2165279S or
	Micro Inductor 2.7uH-K-5FT	2162279S
L 8	Pot Type Coil 47uH	LLBD**DMM001 or
	Pot Type Coil 47uH	117M511
L 22	Casing Coil	113M862
L 25	Pot Type Coil 4.7MH	117M957
L 27	H-Size Coil	1140097 or
		LLBB000AE005
	[for SAM Type CRT]	
L 400	Micro Inductor 33uH-K-5FT	2165330S or
	Micro Inductor 33uH-K-5FT	2162330S
L 401	Micro Inductor 33uH-K-5FT	2165330S or
	Micro Inductor 33uH-K-5FT	2162330S
L 402	Casing Coil	LFA07V0TK008 or
	Casing Coil	LFA07V0MM011
L 403	Micro Inductor 15uH	2165150S or
	Micro Inductor 15uH-K-5FT	2162150S
L 404	Casing Coil	LFA07V0TK010 or
	Casing Coil	LFA07V0MM004
L 405	Casing Coil	LFA07V0TK009 or
	Casing Coil	LFA07V0MM003
L 406	Micro Inductor 15uH	2165150S or
	Micro Inductor 15uH-K-5FT	2162150S
L 407	Casing Coil	LFA07V0TK010 or
	Casing Coil	LFA07V0MM004
L 408	Micro Inductor 8.2uH	2165829S or
	Micro Inductor 8.2uH	2162829S
	TRANSISTORS	
Q 1	Tr. 2SC1740(R)	2SC1740RZ or
	Tr. 2SC1740(S)	2SC1740SZ or
	Tr. 2SC1815(GR)-TPE2	2SC1815GRZ or
	Tr. 2SC3331(T)-AANP	2SC3331TZ or
	Tr. 2SC3331(U)-AANP	2SC3331UZ
Q 2	Tr. 2SC1740(R)	2SC1740RZ or
	Tr. 2SC1740(S)	2SC1740SZ or
	Tr. 2SC1815(GR)-TPE2	2SC1815GRZ or
	Tr. 2SC3331(T)-AANP	2SC3331TZ or
	Tr. 2SC3331(U)-AANP	2SC3331UZ
Q 3	Tr. 2SC3000(E)	2SC3000EZ
Q 4	Tr. 2SC1740(R)	2SC1740RZ or
	Tr. 2SC1740(S)	2SC1740SZ or
	Tr. 2SC1815(GR)-TPE2	2SC1815GRZ or
	Tr. 2SC3331(T)-AANP	2SC3331TZ or
	Tr. 2SC3331(U)-AANP	2SC3331UZ
Q 5	Tr. 2SC1740(R)	2SC1740RZ or
	Tr. 2SC1740(S)	2SC1740SZ or
	Tr. 2SC1815(GR)-TPE2	2SC1815GRZ or
	Tr. 2SC3331(T)-AANP	2SC3331TZ or
	Tr. 2SC3331(U)-AANP	2SC3331UZ

REF. NO.	DESCRIPTION	PART NO.
Q 6	Tr. 2SC1740(R)	2SC1740RZ or
	Tr. 2SC1740(S)	2SC1740SZ or
	Tr. 2SC1815(GR)-TPE2	2SC1815GRZ or
	Tr. 2SC3331(T)-AANP	2SC3331TZ or
	Tr. 2SC3331(U)-AANP	2SC3331UZ
Q 8	Tr. 2SC1740(R)	2SC1740RZ or
	Tr. 2SC1740(S)	2SC1740SZ or
	Tr. 2SC1815(GR)-TPE2	2SC1815GRZ or
	Tr. 2SC3331(T)-AANP	2SC3331TZ or
	Tr. 2SC3331(U)-AANP	2SC3331UZ
Q 9	Tr. 2SC1740(R)	2SC1740RZ or
	Tr. 2SC1740(S)	2SC1740SZ or
	Tr. 2SC1815(GR)-TPE2	2SC1815GRZ or
	Tr. 2SC3331(T)-AANP	2SC3331TZ or
	Tr. 2SC3331(U)-AANP	2SC3331UZ
Q 10	Tr. 2SC1740(R)	2SC1740RZ or
	Tr. 2SC1740(S)	2SC1740SZ or
	Tr. 2SC1815(GR)-TPE2	2SC1815GRZ or
	Tr. 2SC3331(T)-AANP	2SC3331TZ or
	Tr. 2SC3331(U)-AANP	2SC3331UZ
Q 12	Tr. 2SC2271(D)-AEMP	2SC2271DZ or
	Tr. 2SC2271(E)-AEMP	2SC2271EZ
Q 13	Tr. 2SD1398	2SD1398Z
Q 17	Tr. 2SC1740(R)	2SC1740RZ or
	Tr. 2SC1740(S)	2SC1740SZ or
	Tr. 2SC1815(GR)-TPE2	2SC1815GRZ or
	Tr. 2SC3331(T)-AANP	2SC3331TZ or
	Tr. 2SC3331(U)-AANP	2SC3331UZ
Q 18	Tr. 2SC1740(R)	2SC1740RZ or
	Tr. 2SC1740(S)	2SC1740SZ or
	Tr. 2SC1815(GR)-TPE2	2SC1815GRZ or
	Tr. 2SC3331(T)-AANP	2SC3331TZ or
	Tr. 2SC3331(U)-AANP	2SC3331UZ
Q 19	Tr. 2SC1740(R)	2SC1740RZ or
	Tr. 2SC1740(S)	2SC1740SZ or
	Tr. 2SC1815(GR)-TPE2	2SC1815GRZ or
	Tr. 2SC3331(T)-AANP	2SC3331TZ or
	Tr. 2SC3331(U)-AANP	2SC3331UZ
Q 20	Tr. 2SC1740(R)	2SC1740RZ or
	Tr. 2SC1740(S)	2SC1740SZ or
	Tr. 2SC1815(GR)-TPE2	2SC1815GRZ or
	Tr. 2SC3331(T)-AANP	2SC3331TZ or
	Tr. 2SC3331(U)-AANP	2SC3331UZ
Q 21	Tr. 2SA933(R)	2SA933RZ or
	Tr. 2SA933(S)	2SA933SZ or
	Tr. 2SA1318(T)-AANP	2SA1318TZ or
	Tr. 2SA1318(U)-AANP	2SA1318UZ
Q 22	Tr. 2SC1740(R)	2SC1740RZ or
	Tr. 2SC1740(S)	2SC1740SZ or
	Tr. 2SC1815(GR)-TPE2	2SC1815GRZ or
	Tr. 2SC3331(T)-AANP	2SC3331TZ or
	Tr. 2SC3331(U)-AANP	2SC3331UZ
Q 23	Tr. 2SC1740(R)	2SC1740RZ or
	Tr. 2SC1740(S)	2SC1740SZ or
	Tr. 2SC1815(GR)-TPE2	2SC1815GRZ or
	Tr. 2SC3331(T)-AANP	2SC3331TZ or
	Tr. 2SC3331(U)-AANP	2SC3331UZ
Q 24	Tr. 2SA933(R)	2SA933RZ or
	Tr. 2SA933(S)	2SA933SZ or
	Tr. 2SA1318(T)-AANP	2SA1318TZ or
	Tr. 2SA1318(U)-AANP	2SA1318UZ

REF. NO.	DESCRIPTION	PART NO.
Q 25	Tr. 2SA933(R)	2SA933RZ or
	Tr. 2SA933(S)	2SA933SZ or
	Tr. 2SA1318(T)-AANP	2SA1318TZ or
	Tr. 2SA1318(U)-AANP	2SA1318UZ
Q 26	Tr. 2SA933(R)	2SA933RZ or
	Tr. 2SA933(S)	2SA933SZ or
	Tr. 2SA1318(T)-AANP	2SA1318TZ or
	Tr. 2SA1318(U)-AANP	2SA1318UZ
Q 27	Tr. 2SC1740(R)	2SC1740RZ or
	Tr. 2SC1740(S)	2SC1740SZ or
	Tr. 2SC1815(GR)-TPE2	2SC1815GRZ or
	Tr. 2SC3331(T)-AANP	2SC3331TZ or
	Tr. 2SC3331(U)-AANP	2SC3331UZ
Q 28	Tr. 2SC1740(R)	2SC1740RZ or
	Tr. 2SC1740(S)	2SC1740SZ or
	Tr. 2SC1815(GR)-TPE2	2SC1815GRZ or
	Tr. 2SC3331(T)-AANP	2SC3331TZ or
	Tr. 2SC3331(U)-AANP	2SC3331UZ
Q 29	Tr. 2SC1740(R)	2SC1740RZ or
	Tr. 2SC1740(S)	2SC1740SZ or
	Tr. 2SC1815(GR)-TPE2	2SC1815GRZ or
	Tr. 2SC3331(T)-AANP	2SC3331TZ or
	Tr. 2SC3331(U)-AANP	2SC3331UZ
Q 34	Tr. 2SA933(R)	2SA933RZ or
	Tr. 2SA933(S)	2SA933SZ or
	Tr. 2SA1318(T)-AANP	2SA1318TZ or
	Tr. 2SA1318(U)-AANP	2SA1318UZ
Q 42	Tr. 2SA933(R)	2SA933RZ or
	Tr. 2SA933(S)	2SA933SZ or
	Tr. 2SA1318(T)-AANP	2SA1318TZ or
	Tr. 2SA1318(U)-AANP	2SA1318UZ
Q 43	Tr. 2SC1740(R)	2SC1740RZ or
	Tr. 2SC1740(S)	2SC1740SZ or
	Tr. 2SC1815(GR)-TPE2	2SC1815GRZ or
	Tr. 2SC3331(T)-AANP	2SC3331TZ or
	Tr. 2SC3331(U)-AANP	2SC3331UZ
Q 400	Tr. 2SC1740(R)	2SC1740RZ or
	Tr. 2SC1740(S)	2SC1740SZ or
	Tr. 2SC1815(GR)-TPE2	2SC1815GRZ or
	Tr. 2SC3331(T)-AANP	2SC3331TZ or
	Tr. 2SC3331(U)-AANP	2SC3331UZ
Q 401	Tr. 2SC1740(R)	2SC1740RZ or
	Tr. 2SC1740(S)	2SC1740SZ or
	Tr. 2SC1815(GR)-TPE2	2SC1815GRZ or
	Tr. 2SC3331(T)-AANP	2SC3331TZ or
	Tr. 2SC3331(U)-AANP	2SC3331UZ
Q 402	Tr. 2SC1740(R)	2SC1740RZ or
	Tr. 2SC1740(S)	2SC1740SZ or
	Tr. 2SC1815(GR)-TPE2	2SC1815GRZ or
	Tr. 2SC3331(T)-AANP	2SC3331TZ or
	Tr. 2SC3331(U)-AANP	2SC3331UZ
Q 403	Tr. 2SC1740(R)	2SC1740RZ or
	Tr. 2SC1740(S)	2SC1740SZ or
	Tr. 2SC1815(GR)-TPE2	2SC1815GRZ or
	Tr. 2SC3331(T)-AANP	2SC3331TZ or
	Tr. 2SC3331(U)-AANP	2SC3331UZ
Q 404	Tr. 2SC1740(R)	2SC1740RZ or
	Tr. 2SC1740(S)	2SC1740SZ or
	Tr. 2SC1815(GR)-TPE2	2SC1815GRZ or
	Tr. 2SC3331(T)-AANP	2SC3331TZ or
	Tr. 2SC3331(U)-AANP	2SC3331UZ

REF. NO.	DESCRIPTION		PART NO.
Q 405	Tr.	2SC1740(R)	2SC1740RZ or
	Tr.	2SC1740(S)	2SC1740SZ or
	Tr.	2SC1815(GR)-TPE2	2SC1815GRZ or
	Tr.	2SC3331(T)-AANP	2SC3331TZ or
	Tr.	2SC3331(U)-AANP	2SC3331UZ
Q 406	Tr.	2SC2621(D)	2SC2621D or
	Tr.	2SC2621(E)	2SC2621E
Q 407	Tr.	2SC2621(D)	2SC2621D or
	Tr.	2SC2621(E)	2SC2621E
Q 408	Tr.	2SC1740(R)	2SC1740RZ or
	Tr.	2SC1740(S)	2SC1740SZ or
	Tr.	2SC1815(GR)-TPE2	2SC1815GRZ or
	Tr.	2SC3331(T)-AANP	2SC3331TZ or
	Tr.	2SC3331(U)-AANP	2SC3331UZ
	RESISTORS		
R 2	Carbon Res.	1/5W ±5% 1KΩ	1324102S or
	Carbon Res.	1/6W ±5% 1KΩ	132A102S
R 3	Carbon Res.	1/5W ±5% 180Ω	1324181S or
	Carbon Res.	1/6W ±5% 180Ω	132A181S
R 4	Carbon Res.	1/5W ±5% 1KΩ	1324102S or
	Carbon Res.	1/6W ±5% 1KΩ	132A102S
R 5	Carbon Res.	1/5W ±5% 1.5KΩ	1324152S or
	Carbon Res.	1/6W ±5% 1.5KΩ	132A152S
R 6	Carbon Res.	1/5W ±5% 3.9KΩ	1324392S or
	Carbon Res.	1/6W ±5% 3.9KΩ	132A392S
R 7	Carbon Res.	1/5W ±5% 120KΩ	1324124S or
	Carbon Res.	1/6W ±5% 120KΩ	132A124S
R 8	Carbon Res.	1/5W ±5% 1KΩ	1324102S or
	Carbon Res.	1/6W ±5% 1KΩ	132A102S
R 10	Carbon Res.	1/5W ±5% 100KΩ	1324104S or
	Carbon Res.	1/6W ±5% 100KΩ	132A104S
R 11	Carbon Res.	1/5W ±5% 68KΩ	1324683S or
	Carbon Res.	1/6W ±5% 68KΩ	132A683S
R 12	Carbon Res.	1/5W ±5% 4.7KΩ	1324472S or
	Carbon Res.	1/6W ±5% 4.7KΩ	132A472S
R 13	Carbon Res.	1/5W ±5% 3.9KΩ	1324392S or
	Carbon Res.	1/6W ±5% 3.9KΩ	132A392S
R 14	Carbon Res.	1/5W ±5% 6.8KΩ	1324682S or
	Carbon Res.	1/6W ±5% 6.8KΩ	132A682S
R 15	Carbon Res.	1/5W ±5% 5.6KΩ	1324562S or
	Carbon Res.	1/6W ±5% 5.6KΩ	132A562S
R 16	Carbon Res.	1/5W ±5% 3.3KΩ	1324332S or
	Carbon Res.	1/6W ±5% 3.3KΩ	132A332S
R 17	Carbon Res.	1/5W ±5% 6.8KΩ	1324682S or
	Carbon Res.	1/6W ±5% 6.8KΩ	132A682S
R 18	Carbon Res.	1/5W ±5% 10KΩ	1324103S or
	Carbon Res.	1/6W ±5% 10KΩ	132A103S
R 19	Carbon Res.	1/5W ±5% 10KΩ	1324103S or
	Carbon Res.	1/6W ±5% 10KΩ	132A103S
R 20	Carbon Res.	1/5W ±5% 100KΩ	1324104S or
	Carbon Res.	1/6W ±5% 100KΩ	132A104S
R 21	Carbon Res.	1/5W ±5% 100KΩ	1324104S or
	Carbon Res.	1/6W ±5% 100KΩ	132A104S
R 22	Carbon Res.	1/5W ±5% 100KΩ	1324104S or
	Carbon Res.	1/6W ±5% 100KΩ	132A104S
R 23	Carbon Res.	1/5W ±5% 4.7KΩ	1324472S or
	Carbon Res.	1/6W ±5% 4.7KΩ	132A472S
R 26	Carbon Res.	1/5W ±5% 33KΩ	1324333S or
	Carbon Res.	1/6W ±5% 33KΩ	132A333S
R 28	Carbon Res.	1/5W ±5% 1KΩ	1324102S or
	Carbon Res.	1/6W ±5% 1KΩ	132A102S

REF. NO.	DESCRIPTION		PART NO.
R 29	Carbon Res.	1/5W ±5% 680Ω	1324681S or
	Carbon Res.	1/6W ±5% 680Ω	132A681S
R 30	Carbon Res.	1/5W ±5% 68Ω	1324680S or
	Carbon Res.	1/6W ±5% 68Ω	132A680S
R 31	Carbon Res.	1/5W ±5% 100KΩ	1324104S or
	Carbon Res.	1/6W ±5% 100KΩ	132A104S
R 36	Carbon Res.	1/5W ±5% 3.3KΩ	1324332S or
	Carbon Res.	1/6W ±5% 3.3KΩ	132A332S
R 37	Carbon Res.	1/5W ±5% 1KΩ	1324102S or
	Carbon Res.	1/6W ±5% 1KΩ	132A102S
R 38	Carbon Res.	1/5W ±5% 4.7KΩ	1324472S or
	Carbon Res.	1/6W ±5% 4.7KΩ	132A472S
R 39	Carbon Res.	1/5W ±5% 22KΩ	1324223S or
	Carbon Res.	1/6W ±5% 22KΩ	132A223S
R 40	Carbon Res.	1/5W ±5% 100KΩ	1324104S or
	Carbon Res.	1/6W ±5% 100KΩ	132A104S
R 41	Carbon Res.	1/5W ±5% 15KΩ	1324153S or
	Carbon Res.	1/6W ±5% 15KΩ	132A153S
R 42	Carbon Res.	1/5W ±5% 1.5KΩ	1324152S or
	Carbon Res.	1/6W ±5% 1.5KΩ	132A152S
R 43	Carbon Res.	1/5W ±5% 10KΩ	1324103S or
	Carbon Res.	1/6W ±5% 10KΩ	132A103S
R 44	Carbon Res.	1/5W ±5% 4.7Ω	1324479S or
	Carbon Res.	1/6W ±5% 4.7Ω	132A479S
R 45	Metal Res.	680Ω 1W	534A681
R 46	Carbon Res.	1/4W ±5% 1KΩ	1345102S
	Carbon Res.	1/5W ±5% 1KΩ	1324102S
	[for HT and GS Type CRT]		
	Carbon Res.	1/4W ±5% 5.6KΩ	1345562S
	Carbon Res.	1/5W ±5% 5.6KΩ	1324562S
	[for SAM Type CRT]		
R 47	Carbon Res.	1/5W ±5% 39KΩ	1324393S or
	Carbon Res.	1/6W ±5% 39KΩ	132A393S
R 48	Carbon Res.	1/5W ±5% 3.3KΩ	1324332S or
	Carbon Res.	1/6W ±5% 3.3KΩ	132A332S
R 49	Carbon Res.	1/4W ±5% 1Ω	1345109S or
	Carbon Res.	1/5W ±5% 1Ω	1324109S
R 50	Carbon Res.	1/5W ±5% 68KΩ	1324683S or
	Carbon Res.	1/6W ±5% 68KΩ	132A683S
R 51	Carbon Res.	1/5W ±5% 1.8KΩ	1324182S or
	Carbon Res.	1/6W ±5% 1.8KΩ	132A182S
R 58	Carbon Res.	1/5W ±5% 1.8KΩ	1324182S or
	Carbon Res.	1/6W ±5% 1.8KΩ	132A182S
R 59	Carbon Res.	1/5W ±5% 220Ω	1324221S or
	Carbon Res.	1/6W ±5% 220Ω	132A221S
R 61	Carbon Res.	1/5W ±5% 1.8KΩ	1324182S or
	Carbon Res.	1/6W ±5% 1.8KΩ	132A182S
R 63	Carbon Res.	1/5W ±5% 820Ω	1324821S or
	Carbon Res.	1/6W ±5% 820Ω	132A821S
R 65	Carbon Res.	1/5W ±5% 220Ω	1324221S or
	Carbon Res.	1/6W ±5% 220Ω	132A221S
R 66	Fuse Res.	2.2Ω 1W ±5%	5363229 or
	Fuse Res.	2.2Ω 1W ±5%	5368229
R 67	Fuse Res.	2.2Ω 1W ±5%	5363229 or
	Fuse Res.	2.2Ω 1W ±5%	5368229
R 68	Fuse Res.	1/2W ±5% 1Ω	5362109 or
	Fuse Res.	1/2W ±5% 1Ω	5367109
R 69	Cement Res.	3.9Ω 5W	1330734 or
	Cement Res.	3.9Ω 5W	1330900
R 70	Metal Res.	3.3KΩ 3W	5330879 or
	Metal Res.	3.3KΩ 3W	5330667
R 71	Metal Res.	3.9KΩ 3W	5330880 or
	Metal Res.	3.9KΩ 3W	5330668

REF. NO.	DESCRIPTION		PART NO.
R 72	Carbon Res.	1/4W ±5% 1.5KΩ	1345152S or
	Carbon Res.	1/5W ±5% 1.5KΩ	1324152S
R 73	Carbon Res.	1/5W ±5% 56KΩ	1324563S or
	Carbon Res.	1/6W ±5% 56KΩ	132A563S
R 74	Carbon Res.	1/5W ±5% 33KΩ	1324333S or
	Carbon Res.	1/6W ±5% 33KΩ	132A333S
R 75	Carbon Res.	1/5W ±5% 82KΩ	1324823S or
	Carbon Res.	1/6W ±5% 82KΩ	132A823S
R 78	Carbon Res.	1/5W ±5% 10KΩ	1324103S or
	Carbon Res.	1/6W ±5% 10KΩ	132A103S
R 79	Carbon Res.	1/5W ±5% 10KΩ	1324103S or
	Carbon Res.	1/6W ±5% 10KΩ	132A103S
R 80	Carbon Res.	1/5W ±5% 180Ω	1324181S or
	Carbon Res.	1/6W ±5% 180Ω	132A181S
R 82	Carbon Res.	1/5W ±5% 330Ω	1324331S or
	Carbon Res.	1/6W ±5% 330Ω	132A331S
R 83	Carbon Res.	1/5W ±5% 680Ω	1324681S or
	Carbon Res.	1/6W ±5% 680Ω	132A681S
R 84	Carbon Res.	1/5W ±5% 5.6KΩ	1324562S or
	Carbon Res.	1/6W ±5% 5.6KΩ	132A562S
R 85	Carbon Res.	1/5W ±5% 180KΩ	1324184S or
	Carbon Res.	1/6W ±5% 180KΩ	132A184S
R 86	Carbon Res.	1/5W ±5% 27Ω	1324270S or
	Carbon Res.	1/6W ±5% 27Ω	132A270S
R 87	Carbon Res.	1/5W ±5% 1.5KΩ	1324152S or
	Carbon Res.	1/6W ±5% 1.5KΩ	132A152S
R 88	Carbon Res.	1/5W ±5% 68Ω	1324680S or
	Carbon Res.	1/6W ±5% 68Ω	132A680S
R 90	Carbon Res.	1/5W ±5% 82KΩ	1324823S or
	Carbon Res.	1/6W ±5% 82KΩ	132A823S
R 91	Carbon Res.	1/5W ±5% 1.8KΩ	1324182S or
	Carbon Res.	1/6W ±5% 1.8KΩ	132A182S
R 92	Carbon Res.	1/5W ±5% 1.8KΩ	1324182S or
	Carbon Res.	1/6W ±5% 1.8KΩ	132A182S
R 93	Carbon Res.	1/5W ±5% 5.6KΩ	1324562S or
	Carbon Res.	1/6W ±5% 5.6KΩ	132A562S
R 94	Carbon Res.	1/5W ±5% 390Ω	1324391S or
	Carbon Res.	1/6W ±5% 390Ω	132A391S
R 95	Carbon Res.	1/5W ±5% 270Ω	1324271S or
	Carbon Res.	1/6W ±5% 270Ω	132A271S
R 96	Carbon Res.	1/5W ±5% 470Ω	1324471S or
	Carbon Res.	1/6W ±5% 470Ω	132A471S
R 97	Carbon Res.	1/5W ±5% 470Ω	1324471S or
	Carbon Res.	1/6W ±5% 470Ω	132A471S
R 98	Carbon Res.	1/5W ±5% 1KΩ	1324102S or
	Carbon Res.	1/6W ±5% 1KΩ	132A102S
R 100	Carbon Res.	1/5W ±5% 1KΩ	1324102S or
	Carbon Res.	1/6W ±5% 1KΩ	132A102S
R 101	Carbon Res.	1/5W ±5% 560KΩ	1324564S or
	Carbon Res.	1/6W ±5% 560KΩ	132A564S
R 102	Carbon Res.	1/5W ±5% 470KΩ	1324474S or
	Carbon Res.	1/6W ±5% 470KΩ	132A474S
R 103	Carbon Res.	1/5W ±5% 15KΩ	1324153S or
	Carbon Res.	1/6W ±5% 15KΩ	132A153S
R 104	Carbon Res.	1/5W ±5% 10KΩ	1324103S or
	Carbon Res.	1/6W ±5% 10KΩ	132A103S
R 105	Carbon Res.	1/5W ±5% 15KΩ	1324153S or
	Carbon Res.	1/6W ±5% 15KΩ	132A153S
R 106	Carbon Res.	1/5W ±5% 10KΩ	1324103S or
	Carbon Res.	1/6W ±5% 10KΩ	132A103S
R 107	Carbon Res.	1/5W ±5% 10KΩ	1324103S or
	Carbon Res.	1/6W ±5% 10KΩ	132A103S

REF. NO.	DESCRIPTION		PART NO.
R 108	Carbon Res.	1/5W ±5% 33KΩ	1324333S or
	Carbon Res.	1/6W ±5% 33KΩ	132A333S
R 109	Carbon Res.	1/5W ±5% 15KΩ	1324153S or
	Carbon Res.	1/6W ±5% 15KΩ	132A153S
R 110	Carbon Res.	1/5W ±5% 47KΩ	1324473S or
	Carbon Res.	1/6W ±5% 47KΩ	132A473S
R 111	Carbon Res.	1/5W ±5% 33KΩ	1324333S or
	Carbon Res.	1/6W ±5% 33KΩ	132A333S
R 112	Carbon Res.	1/5W ±5% 15KΩ	1324153S or
	Carbon Res.	1/6W ±5% 15KΩ	132A153S
R 113	Carbon Res.	1/5W ±5% 47KΩ	1324473S or
	Carbon Res.	1/6W ±5% 47KΩ	132A473S
R 114	Carbon Res.	1/5W ±5% 47KΩ	1324473S or
	Carbon Res.	1/6W ±5% 47KΩ	132A473S
R 115	Metal Res.	1W ±5% 15KΩ	534A153
R 116	Carbon Res.	1/5W ±5% 15KΩ	1324153S or
	Carbon Res.	1/6W ±5% 15KΩ	132A153S
R 117	Carbon Res.	1/5W ±5% 33KΩ	1324333S or
	Carbon Res.	1/6W ±5% 33KΩ	132A333S
R 118	Carbon Res.	1/5W ±5% 33KΩ	1324333S or
	Carbon Res.	1/6W ±5% 33KΩ	132A333S
R 119	Carbon Res.	1/5W ±5% 2.4KΩ	1324242S or
	Carbon Res.	1/6W ±5% 2.4KΩ	132A242S
R 120	Carbon Res.	1/5W ±5% 68KΩ	1324683S or
	Carbon Res.	1/6W ±5% 68KΩ	132A683S
R 121	Carbon Res.	1/5W ±5% 68KΩ	1324683S or
	Carbon Res.	1/6W ±5% 68KΩ	132A683S
R 122	Carbon Res.	1/5W ±5% 10KΩ	1324103S or
	Carbon Res.	1/6W ±5% 10KΩ	132A103S
R 123	Carbon Res.	1/5W ±5% 10KΩ	1324103S or
	Carbon Res.	1/6W ±5% 10KΩ	132A103S
R 124	Carbon Res.	1/5W ±5% 220Ω	1324221S or
	Carbon Res.	1/6W ±5% 220Ω	132A221S
R 125	Carbon Res.	1/5W ±5% 68KΩ	1324683S or
	Carbon Res.	1/6W ±5% 68KΩ	132A683S
R 126	Carbon Res.	1/5W ±5% 100Ω	1324101S or
	Carbon Res.	1/6W ±5% 100Ω	132A101S
R 127	Carbon Res.	1/5W ±5% 100Ω	1324101S or
	Carbon Res.	1/6W ±5% 100Ω	132A101S
R 128	Carbon Res.	1/5W ±5% 100Ω	1324101S or
	Carbon Res.	1/6W ±5% 100Ω	132A101S
R 142	Carbon Res.	1/5W ±5% 33KΩ	1324333S or
	Carbon Res.	1/6W ±5% 33KΩ	132A333S
R 143	Carbon Res.	1/5W ±5% 10KΩ	1324103S or
	Carbon Res.	1/6W ±5% 10KΩ	132A103S
R 144	Carbon Res.	1/5W ±5% 3.3KΩ	1324332S or
	Carbon Res.	1/6W ±5% 3.3KΩ	132A332S
R 145	Carbon Res.	1/5W ±5% 33KΩ	1324333S or
	Carbon Res.	1/6W ±5% 33KΩ	132A333S
R 146	Carbon Res.	1/5W ±5% 2.7KΩ	1324272S or
	Carbon Res.	1/6W ±5% 2.7KΩ	132A272S
R 147	Carbon Res.	1/5W ±5% 33KΩ	1324333S or
	Carbon Res.	1/6W ±5% 33KΩ	132A333S
R 148	Carbon Res.	1/5W ±5% 8.2KΩ	1324822S or
	Carbon Res.	1/6W ±5% 8.2KΩ	132A822S
R 149	Carbon Res.	1/5W ±5% 22KΩ	1324223S or
	Carbon Res.	1/6W ±5% 22KΩ	132A223S
R 150	Carbon Res.	1/5W ±5% 33KΩ	1324333S or
	Carbon Res.	1/6W ±5% 33KΩ	132A333S
R 151	Carbon Res.	1/5W ±5% 8.2KΩ	1324822S or
	Carbon Res.	1/6W ±5% 8.2KΩ	132A822S
R 152	Carbon Res.	1/5W ±5% 1.2KΩ	1324122S or
	Carbon Res.	1/6W ±5% 1.2KΩ	132A122S

REF. NO.	DESCRIPTION	PART NO.
R 153	Carbon Res. 1/5W ±5% 10KΩ	1324103S or
	Carbon Res. 1/6W ±5% 10KΩ	132A103S
R 154	Carbon Res. 1/5W ±5% 10KΩ	1324103S or
	Carbon Res. 1/6W ±5% 10KΩ	132A103S
R 155	Carbon Res. 1/5W ±5% 10KΩ	1324103S or
	Carbon Res. 1/6W ±5% 10KΩ	132A103S
R 156	Carbon Res. 1/5W ±5% 1KΩ	1324102S or
	Carbon Res. 1/6W ±5% 1KΩ	132A102S
R 157	Carbon Res. 1/5W ±5% 100KΩ	1324104S or
	Carbon Res. 1/6W ±5% 100KΩ	132A104S
R 158	Carbon Res. 1/5W ±5% 10KΩ	1324103S or
	Carbon Res. 1/6W ±5% 10KΩ	132A103S
R 159	Carbon Res. 1/5W ±5% 180KΩ	1324184S or
	Carbon Res. 1/6W ±5% 180KΩ	132A184S
R 160	Carbon Res. 1/5W ±5% 39KΩ	1324393S or
	Carbon Res. 1/6W ±5% 39KΩ	132A393S
R 161	Carbon Res. 1/5W ±5% 68KΩ	1324683S or
	Carbon Res. 1/6W ±5% 68KΩ	132A683S
R 164	Carbon Res. 1/2W ±5% 10KΩ	1322103
R 184	Carbon Res. 1/5W ±5% 2.7KΩ	1324272S or
	Carbon Res. 1/6W ±5% 2.7KΩ	132A272S
R 193	Carbon Res. 1/5W ±5% 33KΩ	1324333S or
	Carbon Res. 1/6W ±5% 33KΩ	132A333S
R 207	Carbon Res. 1/5W ±5% 33KΩ	1324333S or
	Carbon Res. 1/6W ±5% 33KΩ	132A333S
R 208	Carbon Res. 1/5W ±5% 2.7KΩ	1324272S or
	Carbon Res. 1/6W ±5% 2.7KΩ	132A272S
R 211	Carbon Res. 1/5W ±5% 2.2KΩ	1324222S or
	Carbon Res. 1/6W ±5% 2.2KΩ	132A222S
R 229	Carbon Res. 1/5W ±5% 1KΩ	1324102S or
	Carbon Res. 1/6W ±5% 1KΩ	132A102S
R 231	Fuse Res. 68Ω 1/2W	5362680 or
	Fuse Res. 68Ω 1/2W	5367680
R 235	Carbon Res. 1/4W ±5% 1.8KΩ	1345182S or
	Carbon Res. 1/5W ±5% 1.8KΩ	1324182S
R 240	Fuse Res. 1/2W ±5% 1Ω	5362109 or
	Fuse Res. 1/2W ±5% 1Ω	5367109
R 253	Carbon Res. 1/5W ±5% 1.5KΩ	1324152S or
	Carbon Res. 1/6W ±5% 1.5KΩ	132A152S
R 254	Carbon Res. 1/5W ±5% 10KΩ	1324103S or
	Carbon Res. 1/6W ±5% 10KΩ	132A103S
R 255	Carbon Res. 1/5W ±5% 47KΩ	1324473S or
	Carbon Res. 1/6W ±5% 47KΩ	132A473S
R 258	Carbon Res. 1/5W ±5% 12KΩ	1324123S or
	Carbon Res. 1/6W ±5% 12KΩ	132A123S
R 259	Carbon Res. 1/5W ±5% 82KΩ	1324823S or
	Carbon Res. 1/6W ±5% 82KΩ	132A823S
R 260	Carbon Res. 1/5W ±5% 2.7KΩ	1324272S or
	Carbon Res. 1/6W ±5% 2.7KΩ	132A272S
R 261	Carbon Res. 1/5W ±5% 3.3KΩ	1324332S or
	Carbon Res. 1/6W ±5% 3.3KΩ	132A332S
R 262	Carbon Res. 1/5W ±5% 3.3KΩ	1324332S or
	Carbon Res. 1/6W ±5% 3.3KΩ	132A332S
R 266	Carbon Res. 1/5W ±5% 10KΩ	1324103S or
	Carbon Res. 1/6W ±5% 10KΩ	132A103S
R 270	Carbon Res. 1/4W ±5% 2.2Ω	1345229S or
	Carbon Res. 1/5W ±5% 2.2Ω	1324229S
R 271	Carbon Res. 1/5W ±5% 1KΩ	1324102S or
	Carbon Res. 1/6W ±5% 1KΩ	132A102S
R 274	Carbon Res. 1/5W ±5% 10KΩ	1324103S or
	Carbon Res. 1/6W ±5% 10KΩ	132A103S
R 279	Carbon Res. 1/5W ±5% 220Ω	1324221S or
	Carbon Res. 1/6W ±5% 220Ω	132A221S

REF. NO.	DESCRIPTION	PART NO.
R 282	Carbon Res. 1/5W ±5% 2.2KΩ	1324222S or
	Carbon Res. 1/6W ±5% 2.2KΩ	132A222S
R 310	Carbon Res. 1/5W ±5% 33KΩ	1324333S or
	Carbon Res. 1/6W ±5% 33KΩ	132A333S
R 400	Carbon Res. 1/5W ±5% 1.5KΩ	1324152S or
	Carbon Res. 1/6W ±5% 1.5KΩ	132A152S
R 401	Carbon Res. 1/5W ±5% 1.8KΩ	1324182S or
	Carbon Res. 1/6W ±5% 1.8KΩ	132A182S
R 402	Carbon Res. 1/5W ±5% 100KΩ	1324104 or
	Carbon Res. 1/6W ±5% 100KΩ	132A104
R 403	Carbon Res. 1/5W ±5% 100KΩ	1324104S or
	Carbon Res. 1/6W ±5% 100KΩ	132A104S
R 404	Carbon Res. 1/5W ±5% 820Ω	1324821S or
	Carbon Res. 1/6W ±5% 820Ω	132A821S
R 405	Carbon Res. 1/5W ±5% 2.7KΩ	1324272S or
	Carbon Res. 1/6W ±5% 2.7KΩ	132A272S
R 406	Carbon Res. 1/5W ±5% 3.3KΩ	1324332S or
	Carbon Res. 1/6W ±5% 3.3KΩ	132A332S
R 407	Carbon Res. 1/5W ±5% 10KΩ	1324103S or
	Carbon Res. 1/6W ±5% 10KΩ	132A103S
R 408	Carbon Res. 1/5W ±5% 10KΩ	1324103S or
	Carbon Res. 1/6W ±5% 10KΩ	132A103S
R 410	Carbon Res. 1/5W ±5% 270Ω	1324271S or
	Carbon Res. 1/6W ±5% 270Ω	132A271S
R 411	Carbon Res. 1/5W ±5% 180Ω	1324181S or
	Carbon Res. 1/6W ±5% 180Ω	132A181S
R 412	Carbon Res. 1/5W ±5% 4.7KΩ	1324472S or
	Carbon Res. 1/6W ±5% 4.7KΩ	132A472S
R 413	Carbon Res. 1/5W ±5% 470Ω	1324471S or
	Carbon Res. 1/6W ±5% 470Ω	132A471S
R 414	Carbon Res. 1/5W ±5% 330Ω	1324331S or
	Carbon Res. 1/6W ±5% 330Ω	132A331S
R 415	Carbon Res. 1/5W ±5% 5.6KΩ	1324562S or
	Carbon Res. 1/6W ±5% 5.6KΩ	132A562S
R 416	Carbon Res. 1/5W ±5% 330KΩ	1324334S or
	Carbon Res. 1/6W ±5% 330KΩ	132A334S
R 417	Metal Res. 6.8KΩ 3W	RN03682KE002 or
	Metal Res. 6.8KΩ 3W	RN03682KA001
R 418	Carbon Res. 1/5W ±5% 1KΩ	1324102S or
	Carbon Res. 1/6W ±5% 1KΩ	132A102S
R 419	Carbon Res. 1/5W ±5% 470Ω	1324471S or
	Carbon Res. 1/6W ±5% 470Ω	132A471S
R 420	Carbon Res. 1/5W ±5% 390Ω	1324391S or
	Carbon Res. 1/6W ±5% 390Ω	132A391S
R 421	Carbon Res. 1/5W ±5% 47KΩ	1324473S or
	Carbon Res. 1/6W ±5% 47KΩ	132A473S
R 422	Carbon Res. 1/5W ±5% 22KΩ	1324223S or
	Carbon Res. 1/6W ±5% 22KΩ	132A223S
R 423	Carbon Res. 1/5W ±5% 100KΩ	1324104S or
	Carbon Res. 1/6W ±5% 100KΩ	132A104S
R 424	Carbon Res. 1/5W ±5% 100KΩ	1324104S or
	Carbon Res. 1/6W ±5% 100KΩ	132A104S
R 425	Carbon Res. 1/5W ±5% 100KΩ	1324104S or
	Carbon Res. 1/6W ±5% 100KΩ	132A104S
R 426	Carbon Res. 1/5W ±5% 390Ω	1324391S or
	Carbon Res. 1/6W ±5% 390Ω	132A391S
R 427	Carbon Res. 1/5W ±5% 3.3MΩ	1324335S or
	Carbon Res. 1/6W ±5% 3.3MΩ	132A335S
R 428	Carbon Res. 1/5W ±5% 47KΩ	1324473S or
	Carbon Res. 1/6W ±5% 47KΩ	132A473S
R 429	Metallzed Film Res. 1/5W F 27KΩ	13C2702
R 430	Carbon Res. 1/5W ±5% 100KΩ	1324104S or
	Carbon Res. 1/6W ±5% 100KΩ	132A104S

REF. NO.	DESCRIPTION	PART NO.
R 432	Carbon Res. 1/5W ±5% 10KΩ	1324103S or
	Carbon Res. 1/6W ±5% 10KΩ	132A103S
R 433	Carbon Res. 1/5W ±5% 270Ω	1324271S or
	Carbon Res. 1/6W ±5% 270Ω	132A271S
R 434	Carbon Res. 1/5W ±5% 390Ω	1324391S or
	Carbon Res. 1/6W ±5% 390Ω	132A391S
R 436	Carbon Res. 1/5W ±5% 470Ω	1324471S or
	Carbon Res. 1/6W ±5% 470Ω	132A471S
R 437	Carbon Res. 1/5W ±5% 390Ω	1324391S or
	Carbon Res. 1/6W ±5% 390Ω	132A391S
R 438	Carbon Res. 1/5W ±5% 270Ω	1324271S or
	Carbon Res. 1/6W ±5% 270Ω	132A271S
R 439	Carbon Res. 1/5W ±5% 270Ω	1324271S or
	Carbon Res. 1/6W ±5% 270Ω	132A271S
R 440	Carbon Res. 1/5W ±5% 270Ω	1324271S or
	Carbon Res. 1/6W ±5% 270Ω	132A271S
R 441	Carbon Res. 1/4W ±5% 470Ω	1345471S
R 442	Carbon Res. 1/4W ±5% 470Ω	1345471S
R 443	Carbon Res. 1/5W ±5% 100KΩ	1324104S or
	Carbon Res. 1/6W ±5% 100KΩ	132A104S
R 444	Carbon Res. 1/5W ±5% 680KΩ	1324684S or
	Carbon Res. 1/6W ±5% 680KΩ	132A684S
R 445	Carbon Res. 1/5W ±5% 3.3KΩ	1324332S or
	Carbon Res. 1/6W ±5% 3.3KΩ	132A332S
R 446	Carbon Res. 1/5W ±5% 270Ω	1324271S or
	Carbon Res. 1/6W ±5% 270Ω	132A271S
R 447	Carbon Res. 1/5W ±5% 4.7KΩ	1324472S or
	Carbon Res. 1/6W ±5% 4.7KΩ	132A472S
R 449	Carbon Res. 1/5W ±5% 10KΩ	1324103S or
	Carbon Res. 1/6W ±5% 10KΩ	132A103S
R 450	Carbon Res. 1/5W ±5% 10KΩ	1324103S or
	Carbon Res. 1/6W ±5% 10KΩ	132A103S
R 451	Carbon Res. 1/5W ±5% 10KΩ	1324103 or
	Carbon Res. 1/6W ±5% 10KΩ	132A103
R 452	Carbon Res. 1/5W ±5% 10KΩ	1324103S or
	Carbon Res. 1/6W ±5% 10KΩ	132A103S
R 453	Carbon Res. 1/5W ±5% 10KΩ	1324103S or
	Carbon Res. 1/6W ±5% 10KΩ	132A103S
	SWITCHES	
SW 1	Slide	1621654 or
	Slide	SSS0202WM001
SW 2	Tact	5622172
SW 3	Tact	5622172
SW 4	Tact	5622172
SW 5	Tact	5622172
SW 6	Tact	5622172
SW 7	Tact	5622172
SW 8	Tact	5622172
SW 9	Tact	5622172
SW 10	Tact	5622172
	VOLUMES	
VR 13	P.O.T 10KOHM B	638A103 or
	Semi Fixed Res. 10KΩ B	1380707
VR 400	Semi Fixed Res. KVSF637AO-B203	638A223 or
	P.O.T. 20KΩ B	1380709
VR 401	P.O.T. 470Ω B	638A471 or
	P.O.T. 500Ω B	1380712
VR 402	P.O.T. 47KΩ B	638A473 or
	Semi Fixed Res. 50KΩ B	1380704
VR 403	P.O.T. 470Ω B	638A471 or
	P.O.T. 500Ω B	1380712

REF. NO.	DESCRIPTION	PART NO.
	MISCELLANEOUS	
T 1	H.Drive Trans	1150325
T 2 ⚠	F.B.T. FCM-20B010	1813481
U 1	Remocon Receive Unit	USESJRSKK001 or
	Remocon Receive Unit	1813042
U 2	Tuner Unit TUFNF3H-291	1813591
CF 1	Ceramic Filter SFE6.5MB	1813595
CF 2	Ceramic Filter SFE5.5MBF	1812018
CF 3	Ceramic Discre CDA6.5MC26	1813594
CF 4	Ceramic Discre CDA5.5MC26	1812020
CF 5	Ceramic Trap TPW02B	1813593
CF 6	Saw Filter SAF38.0MZ70Z	1813592
CF 7	X'tal 4.194304MHz	1811369 or
	X'tal 4.194304MHz	1811214
CF 400	Ceramic Resonator (CSB500F2)	1812039
CF 401	X'tal 4.43MHz	1811387
CF 402	X'tal 3.58MHz	1811291
CN 1	Connector Base 2P	1770258
CN 2	Connector Base 5P RTB-1.5-5V	1780168 or
	Connector Base 5P TV-50P-05-V1	1730813 or
	Connector Base 5P W-P3005-02	1730812
CN 3	Connector Pin 1P	1730688
CN 9	Connector Base 6P	5700108
CN 11	Pin Plug Cord	1760613
CN 20	Angle Pin Header 8P IL-S- 8P-S2L2-EF	1740781
CN 21	Connector Base 21P	1630367 or
	Connector Base 21P	JGZJ210SR001
DE 400	Delay Line	113N852 or
	Delay Line	LFB10V0SF001
DE 401	Glass Delay	1813554 or
	Glass Delay	1812056
JA 1	IEC Antenna Jack	1780292 or
	IEC Ant.Jack TCR-RCA-2VW	1780284
JA 2	BNC Jack	1780202
JA 3	RCA Jack YKB11-0478	1780237
JA 4	BNC Jack	1780202
JA 5	RCA Jack YKB11-0478	1780237
	Wire Ass'y CE5400-01	CE5400-01
	Wire Ass'y WX1L5402-001	WX1L5402-001
	Wire Ass'y WX1L5464-001	WX1L5464-001
	Wire Ass'y WX1L5470-001	WX1L5470-001
	Wire Lead WX3301A6FF10	WX3301A6FF10
	Wire Lead WX3901A6FF08	WX3901A6FF08
	Wire Lead WX3601A63316	WX3601A63316
	Heat Sink Sheet	XJ0Z000DB001
	Heat Sink A EM41434	0EM400378
	Heat Sink D EM41436	0EM400380
	Heat Sink B K42428	8S00362
	Lead Clamper	1790256
	Lead Clamper	1790356
	PIN (Test)	1700093
	PIN (Test)	1740354

REF. NO.	DESCRIPTION	PART NO.
	ASS'Y, PCB, CRT CONSISTS OF THE FOLLOWING:	BL5470F01001-B
	CAPACITORS	
C 54	Ceramic 0.01uF/2KV	6220602
C 70	Ceramic ±10% 220pF/50V	32B3221S or
	Ceramic ±10% 220pF/50V	3B42221S
C 71	Ceramic ±10% 270pF/50V	32B3271S or
	Ceramic ±10% 270pF/50V	3B42271S
C 72	Ceramic ±10% 220pF/50V	32B3221S or
	Ceramic ±10% 220pF/50V	3B42221S
C 205	Electrolytic 10uF/16V ±20%	126C106S
	COILS	
L 9	Micro Inductor 180uH	2165181S or
	Micro Inductor 180uH-K-5FT	2162181S
	TRANSISTORS	
Q 14	Tr. 2SC2621(D)	2SC2621D or
	Tr. 2SC2621(E)	2SC2621E
Q 15	Tr. 2SC2621(D)	2SC2621D or
	Tr. 2SC2621(E)	2SC2621E
Q 16	Tr. 2SC2621(D)	2SC2621D or
	Tr. 2SC2621(E)	2SC2621E
	RESISTORS	
R 52	Carbon Res. 1/4W ±5% 1.5KΩ	1345152S or
	Carbon Res. 1/5W ±5% 1.5KΩ	1324152S
R 53	Carbon Res. 1/4W ±5% 1.5KΩ	1345152S or
	Carbon Res. 1/5W ±5% 1.5KΩ	1324152S
R 54	Carbon Res. 1/4W ±5% 1.5KΩ	1345152S or
	Carbon Res. 1/5W ±5% 1.5KΩ	1324152S
R 55	Metal Res. 1W ±5% 15KΩ	534A153
R 56	Metal Res. 1W ±5% 15KΩ	534A153
R 57	Metal Res. 1W ±5% 15KΩ	534A153
R 58	Carbon Res. 1/5W ±5% 1.8KΩ	1324182S or
	Carbon Res. 1/6W ±5% 1.8KΩ	132A182S
R 59	Carbon Res. 1/5W ±5% 220Ω	1324221S or
	Carbon Res. 1/6W ±5% 220Ω	132A221S
R 61	Carbon Res. 1/5W ±5% 1.8KΩ	1324182S or
	Carbon Res. 1/6W ±5% 1.8KΩ	132A182S
R 63	Carbon Res. 1/5W ±5% 220Ω	1324221S or
	Carbon Res. 1/6W ±5% 220Ω	132A221S
R 64	Carbon Res. 1/5W ±5% 1.8KΩ	1324182S or
	Carbon Res. 1/6W ±5% 1.8KΩ	132A182S
R 65	Carbon Res. 1/5W ±5% 220Ω	1324221S or
	Carbon Res. 1/6W ±5% 220Ω	132A221S
R 232	Carbon Res. 1/4W ±5% 1.8KΩ	1345182S or
	Carbon Res. 1/5W ±5% 1.8KΩ	1324182S
R 233	Carbon Res. 1/4W ±5% 1.8KΩ	1345182S or
	Carbon Res. 1/5W ±5% 1.8KΩ	1324182S
R 234	Carbon Res. 1/4W ±5% 1.8KΩ	1345182S or
	Carbon Res. 1/5W ±5% 1.8KΩ	1324182S
R 279	Carbon Res. 1/5W ±5% 220Ω	1324221S or
	Carbon Res. 1/6W ±5% 220Ω	132A221S
	VOLUMES	
VR 1	P.O.T. 4.7KΩ B	138A957 or
	P.O.T. 5KΩ B	1380851
VR 2	P.O.T. 470Ω B	138A951 or
	Semi Fixed Res. 500(B)	1380849

REF. NO.	DESCRIPTION	PART NO.
VR 3	P.O.T. 4.7KΩ B	138A957 or
	P.O.T. 5KΩ B	1380851
VR 4	P.O.T. 4.7KΩ B	138A957 or
	P.O.T. 5KΩ B	1380851
VR 5	P.O.T. 470Ω B	138A951 or
	Semi Fixed Res. 500(B)	1380849
	MISCELLANOUS	
CRT 1	CRT Socket	JSCC290HD003 or
	CRT Socket	1780246
CN 3	Connector Pin 1P RT-01N-2.3A	1730688
⚠	ASS'Y, PCB, POWER CONSISTS OF THE FOLLOWING:	BL5410F01002
	CAPACITORS	
C146	Electrolytic 150uF/400V	122Z020 or
	Electrolytic 150uF/400V	1220891 or
	Electrolytic 150uF/400V	1220893
C 161	Electrolytic 1000uF/6.3V ±20%	626A108
C 162	Electrolytic 1000uF/16V ±20%	626C108
C 163	Electrolytic 10uF 160V	122Z333 or
	Electrolytic 10uF/160V	6220759
C 164 ⚠	Ceramic 0.0047uF AC400V F	6220353
C 165 ⚠	Ceramic 0.0047uF AC400V F	6220353
C 166 ⚠	Ceramic 0.0047uF AC400V F	6220353
C 167 ⚠	Ceramic 0.0047uF AC400V F	6220353
C 169	Electrolytic 1uF/50V ±20%	126F105S
C 170	Ceramic 470pF/1KV	6220487
C 171	Ceramic 0.0033uF/1KV	6220577
C 172	Electrolytic 22uF/160V	122Z334 or
	Electrolytic 22uF/160V ±20%	6220758
C 173	Ceramic 0.001uF/1KV	6220574
C 174	Electrolytic 100uF/160V ±20%	122Z337 or
	Electrolytic 100uF/160V	6220688 or
	Electrolytic 100uF/160V	1220601
C 175	Ceramic 0.001uF/1KV	6220574
C 176 ⚠	Ceramic ±20% 4700pF/4KV	122Z013
C 177	Electrolytic 470uF/16V ±20%	626C477
C 178 ⚠	Line Across 0.1uF/250V	1220756 or
⚠	Line Across 0.1uF/250V	122Z181 or
⚠	Line Across 0.1uF/250V	622Z631
	DIODES	
D 36	Di. ERD28-06L	AERD2806L000 or
	Di. RGP30GL	RGP30G5001L
D 37	Di. ERB44-08L3	AERB4408L300 or
	Di. RGP15KL5001	RGP15KL5001
D 38	Di. ERC05-10L3	AERC0510L300 or
	Di. GP15ML5014	GP15ML5014
D 39	Di. ERC05-10L3	AERC0510L300 or
	Di. GP15ML5014	GP15ML5014
D 40	Di. ERC05-10L3	AERC0510L300 or
	Di. GP15ML5014	GP15ML5014
D 41	Di. ERC05-10L3	AERC0510L300 or
	Di. GP15ML5014	GP15ML5014
D 42	Di. ERA15-02PNRB	AERA1502PNRB or
	Di. GP104003EG16	GP104003EG16

REF. NO.	DESCRIPTION	PART NO.
D 43	Di. ERA15-02PNRB	AERA1502PNRB or
	Di. GP104003EG16	GP104003EG16
D 44	Di. ERA15-02PNRB	AERA1502PNRB or
	Di. GP104003EG16	GP104003EG16
D 45	Di. ERA15-02PNRB	AERA1502PNRB or
	Di. GP104003EG16	GP104003EG16
D 46	Di. ERA15-02PNRB	AERA1502PNRB or
	Di. GP104003EG16	GP104003EG16
	ICS	
IC 6	IC 78M06	AN78M06 or
	IC 78M06	L78M06
IC 7 ⚠	Power IC (STK7348)	14LQ203 or
⚠	IC STK7348	STK7348
	COILS	
L 20	Pot Type Coil 47uH	LLBD**DMM001
L 23 ⚠	Line Filter	1812745 or
⚠	Line Filter	LLBG000TE002
	TRANSISTORS	
Q 30	Tr. 2SC1740(R)	2SC1740RZ or
	Tr. 2SC1740(S)	2SC1740SZ or
	Tr. 2SC1815(GR)-TPE2	2SC1815GRZ or
	Tr. 2SC3331(T)-AANP	2SC3331TZ or
	Tr. 2SC3331(U)-AANP	2SC3331UZ
	RESISTORS	
R 129	Carbon Res. 1/4W ±5% 3.3KΩ	1345332S or
	Carbon Res. 1/5W ±5% 3.3KΩ	1324332S
R 130	Cement Res. 3.9Ω 7W	1330954
R 131	Carbon Res. 1/4W ±5% 56KΩ	1345563 or
	Carbon Res. 1/5W ±5% 56KΩ	1324563
	[for SAM and CPT Type CRT]	
R 132	Carbon Res. 1/4W ±5% 1KΩ	1345102S or
	Carbon Res. 1/5W ±5% 1KΩ	1324102S
R 133	Cement Res. BGR3X-270(27/3W)	1330703 or
		RW03270UB001
R 134	Cement Res. 3W ±10% 1.5Ω	1330702 or
		RW03159UB001
R 135	Metal Res. 1W ±5% 33Ω	534A330
R 136	Cement Res. 33Ω 10W	1330955
R 137	Carbon Res. 270KΩ 1/4W	1345274S or
	Carbon Res. 1/5W ±5% 270KΩ	1324274S
R 138	Carbon Res. 270KΩ 1/4W	1345274S or
	Carbon Res. 1/5W ±5% 270KΩ	1324274S
R 139	Metal Res. 2W ±5% 15Ω	534B150
R 140	Fuse Res. 1/4W ±5% 15Ω	5366150
R 141	Metal Res. 2.2Ω 1W	534A229
	MISCELLANEOUS	
RE 1 ⚠	Power Relay	1680167 or
⚠	Power Relay	1680178 or
⚠	Power Relay	MRPDC9ZQN001
T 3 ⚠	Back Up Trans	LTT35EPSB007 or
⚠	Back Up Trans EI-35X15	115M984
T 4 ⚠	Switching Trans ETS39K533A	115N977
AC 1 ⚠	AC Cord	5750112
CN 8	Connector Base 2P RTB-1.5-2V	1780165
F 1 ⚠	Fuse T4.00A/250V	1790998 or
⚠	Fuse T4.00A/250V	1790487
PS 1 ⚠	Posistor	5790117

REF. NO.	DESCRIPTION	PART NO.
⚠	Wire Ass'Y CE5400-03	CE5400-03 or
	Heat Sink C	0EM400379 or
	Heat Sink B K42428	8S00362
	Cord Stoper SR-4N-4	1790173 or
	Fuse Holder	1790424
	CAHSSIS ELECTRICAL PARTS	
L 19 ⚠	Degaussing Coil	1120174
SP 1	Speaker	1520612
CRT ⚠	CRT [for HT Type CRT]	1833133
	CRT [for GS Type CRT]	TCRT190GS004
	CRT [for SAM Type CRT]	TCRT190SM005
	CRT [for CPT Type CRT]	UMNT020CP001
	Wire Ass'y (Main PCB to Speaker)	WX1L7002-006
W 1	Wire Ass'y (CRT GRU Wire)	CE5201-03