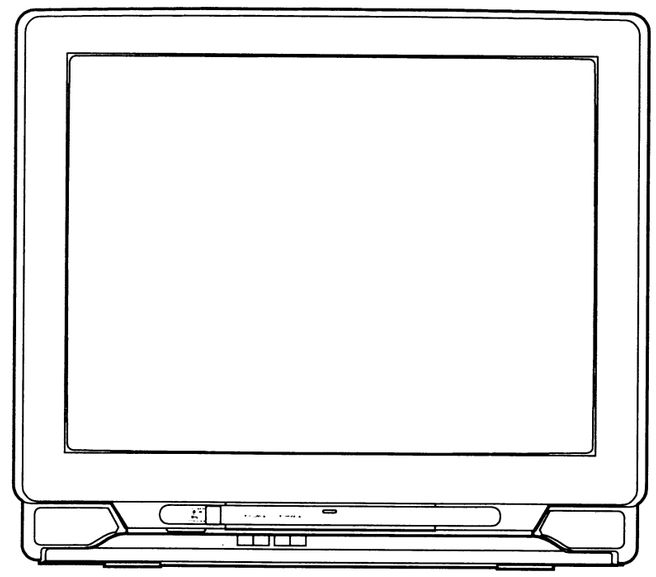
FUNAI

SERVICE MANUAL

25" COLOR TELEVISION
with TELETEXT

TV-2500T MK8



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IMPORTANT SAFETY NOTICE

Proper service and repair is important to the safe, reliable operation of all Funai Equipment. The service procedures recommended by Funai and described in this service manual are effective methods of performing service operations. Some of these service special tools should be used when and as recommended.

It is important to note that this service manual contains various CAUTIONS and NOTICES which should be carefully read in order to minimize the risk of personal injury to service personnel. The possibility exists that improper service methods may damage the equipment. It also is important to understand that these CAUTIONS and NOTICES ARE NOT EXHAUSTIVE. Funai could not possibly know, evaluate and advice the service trade of all conceivable ways in which service might be done or of the possible hazardous consequences of each way. Consequently, Funai has not undertaken any such broad evaluation. Accordingly, a servicer who uses a service procedure or tool which is not recommended by Funai must first use all precautions thoroughly so that neither his safety nor the safe operation of the equipment will be jeopardized by the service method selected.

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GENERAL SPECIFICATIONS *

Feature and Specifications

Color System:	PAL - B/G, SECAM - B/G, D/K
Tuning System:	Voltage Synthesized
Receivable Channels: (CCIR channel)	VHF-L; R1~R5 / E2~E4 ch (X-S10) VHF-H; R6~E12 E5~E12 ch (S11-S41) UHF; E21~E69 CATV(HYPER channel)
Number of Preset:	Up to 57
Antenna Impedance:	UHF/VHF 75Ω, Unbalanced
Picture Tube:	25", Tinted
Teletext:	1 page FLOF
Picture Control:	Color, Brightness, Contrast Game(ON/OFF), Sharp/Soft
Picture Control Memory:	Standard/User's Memory Select
Speaker:	90m/m x 50mm Oval Type, 8Ωx2
Output Power:	3Wx2
Other Features:	Automatic Channel Preset Automatic Degaussing
Power Source:	110~240V, 50/60Hz AC, Auto Voltage
Power Consumption:	120W
Cabinet Size:	578(W) x 475(D) x 514(H)mm
Weight:	28kg (Pending)
Regurations:	IEC-65 / GOST Passable

Control and Switches

Power:	Push (Front)
Channel Up/Down:	Push (Front)
Volume Up/Down:	Push (Front)
Tuning Up/Down:	Push (Front)
Program:	Push (Front)
Auto Memo / Band:	Push (Front)
Remote Control: (31 keys)	Standby, 0/AV, 1~9, Cannel Up, Page Up, Channel Down, Page Down, Mute, Display, Previous Picture Select (Bright / Contrast / Color / Video Mode) Control / Volume Up/Down Text/Mix, Reveal, Hold, Expand, Update, Subcode, Index, Red, Green, Yellow, Cyan, Sleep

Display

LED Indicator:	Standby (RED), Power ON (GREEN)

※ When turning on the power button stand-by LED is put off.

On Screen Display:	Channel Volume GAME ON-OFF Brightness Color Contrast Sharp-Soft Sleep Timer (10~90 Minute) Tuning Indicator V/U Band Position

Jack and Terminals

UHF/VHF Antenna:	IEC (75Ω)
Video In/Out:	RCA - 2P
Audio In/Out:	RCA - 3P (2/1)
A/V in/Out:	21-Pin Euro Scart (W/O R.G.B.)

Accessories

Remote Control Unit

Battery: (R6, UM3 x 2)

Owner's Manual

*** Specifications are subject to change without notice.**

PERFORMANCE SPECIFICATIONS

<Tuner>

Antenna Input: 75Ω Unbalanced, IEC connector

Reference Level: 300mVp-p at Video out put

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	±0.7	±0.5
3. Intermediate Frequency	Picture	MHz	38.0	—
	Sound	MHz	32.5	—
	Sound	MHz	31.5	—

<Deflection>

Description	Condition	Unit	Nominal	Limit
1. Deflection Frequency	Horizontal (PAL/SECAM)	KHz	15.625	—
	(NTSC)	KHz	15.750	—
	Vertical (PAL/SECAM)	Hz	50	—
	(NTSC)	Hz	60	—
2. Linearity	Horizontal	%	—	±15
	Vertical	%	—	±10
3. High Voltage		KV	27	—

<Video & Chroma)

Description	Condition	Unit	Nominal	Limit
1. Misconvergence	Center	mm	—	0.4
	Side	mm	—	2.5
	Corner	mm	—	1.5
2. Over scan	Horizontal	%	10	—
	Vertical	%	10	—
3. Color Temperature		°K	8000° K-10MPCD	
4. Resolution	Horizontal	Line	320	—
	Vertical	Line	320	—
5. Brightness	APL100%	Ft-L	25	18

<Audio>

All items are measured across 8Ω resistor at speaker output terminal.

Description	Condition	Unit	Nominal	Limit
1. Audio Output Power	10%THD	W	3.0	2.5
2. Audio Distortion	500mW	%	2	5
3. Audio Frequency Response	-6dB	Hz	—	100-6K

IMPORTANT SAFETY PRECAUTIONS

Prior to shipment from the factory, our products are strictly inspected for 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.

Safety Precautions for TV Circuit

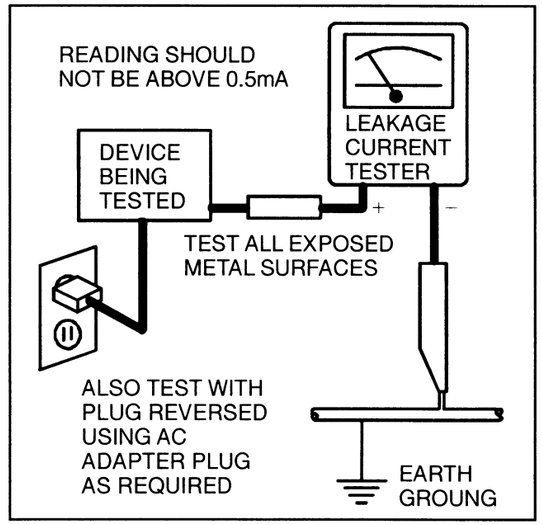
1. **Before returning an instrument to the customer,** always make a safety check of the entire instrument, including, but not limited to, the following items:

   a. Be sure that no built-in protective devices are defective and 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 instrument or permit it to be operated without all protective devices correctly installed and functioning. Servicers who defeat safety features or 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 fingers and contact a hazardous voltage. Such openings include, but are not limited to, (1) spacing between the picture tube and the cabinet mask, (2) excessively wide cabinet ventilation slots, and (3) an improperly fitted and/or incorrectly secured cabinet back cover.

   c. Antenna Cold Check - With the instrument AC plug removed from any AC source, connect an electrical jumper across the two AC plug prongs. Place the instrument AC switch in the on position. Connect one lead of an ohmmeter to the AC plug prongs tied together and touch the other ohmmeter lead in turn to each tuner antenna input exposed terminal screw and, if applicable, to the coaxial connector. If the measured resistance is less than 1.0 megohm or greater than 5.2 megohm, an abnormality exists that must be corrected before the instrument is returned to the customer. Repeat this test with the instrument AC switch in the off position.

   d. Leakage Current Hot Check - With the instrument completely reassembled, plug the AC line cord directly into a AC outlet. (Do not use an isolation transformer during this test.) Use a leakage current tester. With the instrument AC switch first in the on position and then in the off position, measure from a known earth ground (metal water pipe, conduit, etc.) to all exposed metal parts of the instrument (antennas, handle brackets, 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 milliampere. Reverse the instrument power cord plug in the outlet and repeat the test.



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

e. X-Radiation and High Voltage Limits - Because the picture tube is the primary potential source of X-radiation in solid-state TV receivers, it is specially constructed to prohibit X-radiation emissions. For continued X-radiation protection, the replacement picture tube must be the same type as the original. 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 instrument 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 will 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 have a circuit which obtain voltage about 70% of AC voltage between chassis and earth ground regardless of the AC plug polarity. This 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 insulation material that must not be defeated or altered.

Note: * In case unit has no polarity AC plug only.

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 frayed wiring. 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. The Product's Safety is under review continuously and new instructions are issued whenever appropriate. Prior to shipment from the factory, our products are strictly inspected to confirm 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

A. Parts identified by the (⚠) symbol are critical for safety.
Replace only with part number specified.

B. 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.

C. Use specified internal wiring. Note especially:
1) Wires covered with PVC tubing
2) Double insulated wires
3) High voltage leads

D. Use specified insulating materials for hazardous live parts. Note especially:
1) Insulation Tape
2) PVC tubing
3) Spacers
4) Insulators for transistors.

E. When replacing AC primary side components (transformers, power cord, etc.), wrap ends of wires securely about the terminals before soldering.

F. Observe that the wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.)

G. Check that replaced wires do not contact sharp edged or pointed parts.

H. When a power cord has been replaced, check that 10-15 kg of force in any direction will not loosen it.

I. Also check areas surrounding repaired locations.

J. Use care that foreign objects (screws, solder droplets. etc.) do not remain inside the set.

K. 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.

L. When connecting or disconnecting the VCR connectors, first, disconnect the AC plug from AC supply socket.

Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts and wires have been returned to original positions. Afterwards, perform the following tests and confirm the specified values in order to verify compliance with safety standards.

1. Clearance Distance

When replacing primary circuit components, confirm specified clearance distance (d) and (d') between soldered terminals, and between terminals and surrounding metallic parts. (See Fig. 1)

Table 1 : Ratings for selected area

AC Line Voltage	Region	Clearance Distance (d) (d')
110 to 240 V	Middle and Near East	≥ 4mm (d) ≥ 6mm (d')

Note: This table is unofficial and for reference only. Be sure to confirm the precise values.

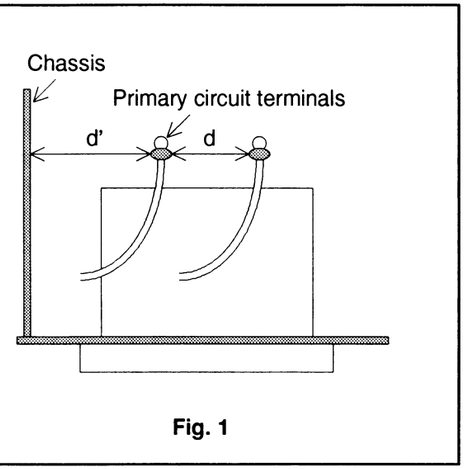


Fig. 1

2. Leakage Current Test

Confirm specified (or lower) leakage current between B (earth ground, power cord plug prongs) and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.).

Measuring Method : (Power ON)

Insert load Z between B (earth ground, power cord plug prongs) and exposed accessible parts. Use an AC voltmeter to measure across both terminals of load Z. See Fig. 2 and following table.

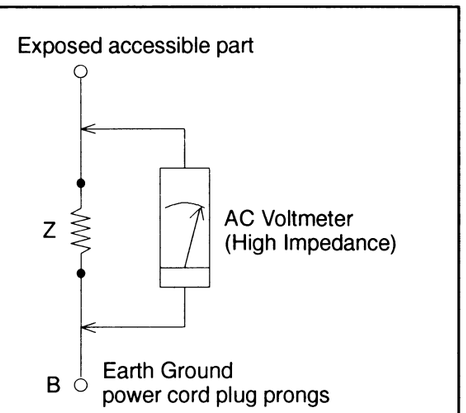


Fig. 2

Table 2 : Leakage current ratings for selected areas

AC Line Voltage	Region	Load Z	Leakage Current (i)	Earth Ground (B) to:
110 to 240 V	Middle and Near East	2kΩ RES. in connected	i≤0.7mA rms i≤2mA dc	Antenna terminals
		50kΩ RES. in connected	i≤0.7mA rms i≤2mA dc	Other terminals

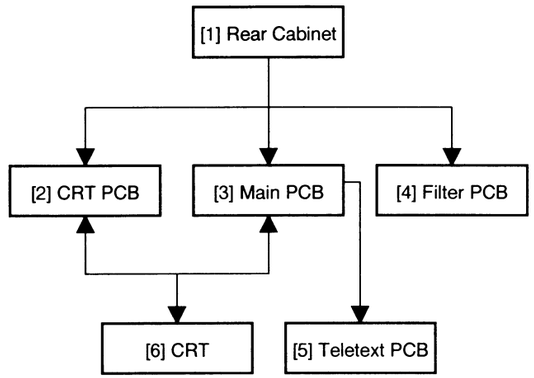
Note: This table is unofficial and for reference only. Be sure to confirm the precise values.

DISASSEMBLY INSTRUCTIONS

1. Disassembly Flow Chart

This flow chart indicates the disassembly steps of the cabinet parts and PCB in order to gain access to item(s) to be serviced. When reassembling, perform the step(s) in the reverse order. Bend, route and dress the cables as they were originally.

CAUTION ! :
When removing the CRT, make sure to discharge Anode Lead of the CRT.
Use the CRT Ground Wire to discharge the CRT before removing the Anode Cap.



2. Disassembly Method

STEP/ LOC. NO.	PART	REMOVAL		
		FIG. NO.	REMOVE/*UNLOCK/ RELEASE/UNPLUG/ UNCLAMP/ DESOLDER	NOTE
[1]	Rear Cabinet	1, 2	L2 (7pcs), L3, L4	1
[2]	CRT PCB	4, 5	CL451B, CL452B, CN453,CN454 FOCUS WIRE, SCREEN WIRE	2
[3]	Main PCB	3, 5	CL451A, CL452A, CN501,CN601,CN602, CN801,CN802 ANODE CAP, FOCUS WIRE, SCREEN WIRE	3
[4]	Filter PCB	2, 3, 4, 5	CL661	4
[5]	Teletext PCB	3	CN951B, CN952B	5
[6]	CRT	4, 5	B1 (4pcs)	6

Reference <Notes> in Table

1. (1) Remove 9 screws (L2, L3, L4) and slide the Rear Cabinet backward.
2. (1) If not already removed, first remove the Rear Cabinet.
   (2) Remove all relative wires, then pull the CRT PCB backward.
3. (1) If not already removed, first remove the Rear Cabinet.
   (2) Remove all relative wires on the Main PCB and remove the Anode Cap, then slide the Main PCB backward.
4. (1) Slide the Filter PCB backward.
5. (1) If not already removed, first remove the Rear Cabinet.
   (2) Pull the Teletext PCB backward.

Caution !
Discharge Anode Lead of the CRT with the CRT Ground Wire before removing the Anode Cap.

6. (1) If not already removed, first remove the Rear Cabinet and Main PCB.
   (2) Remove 4 screws (B1), then the CRT can be removed.

[1] Rear Cabinet

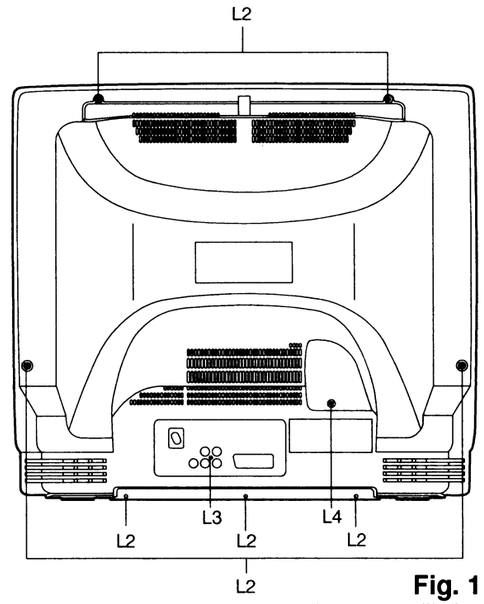


Fig. 1

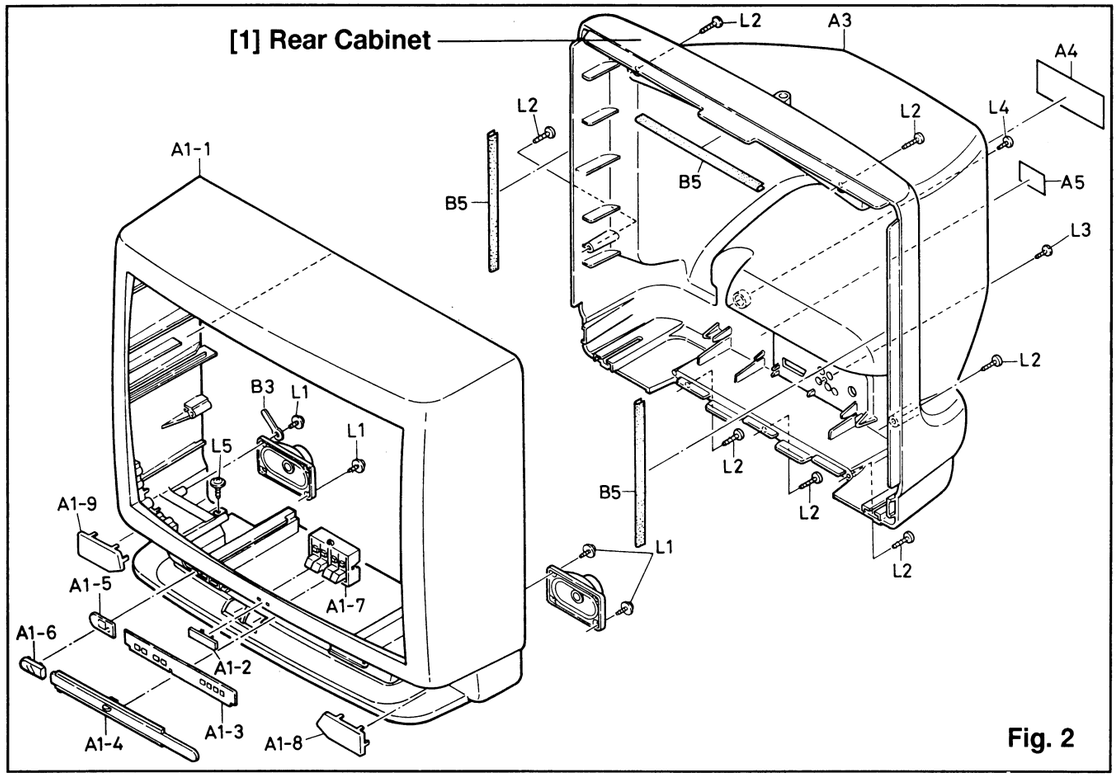


Fig. 2

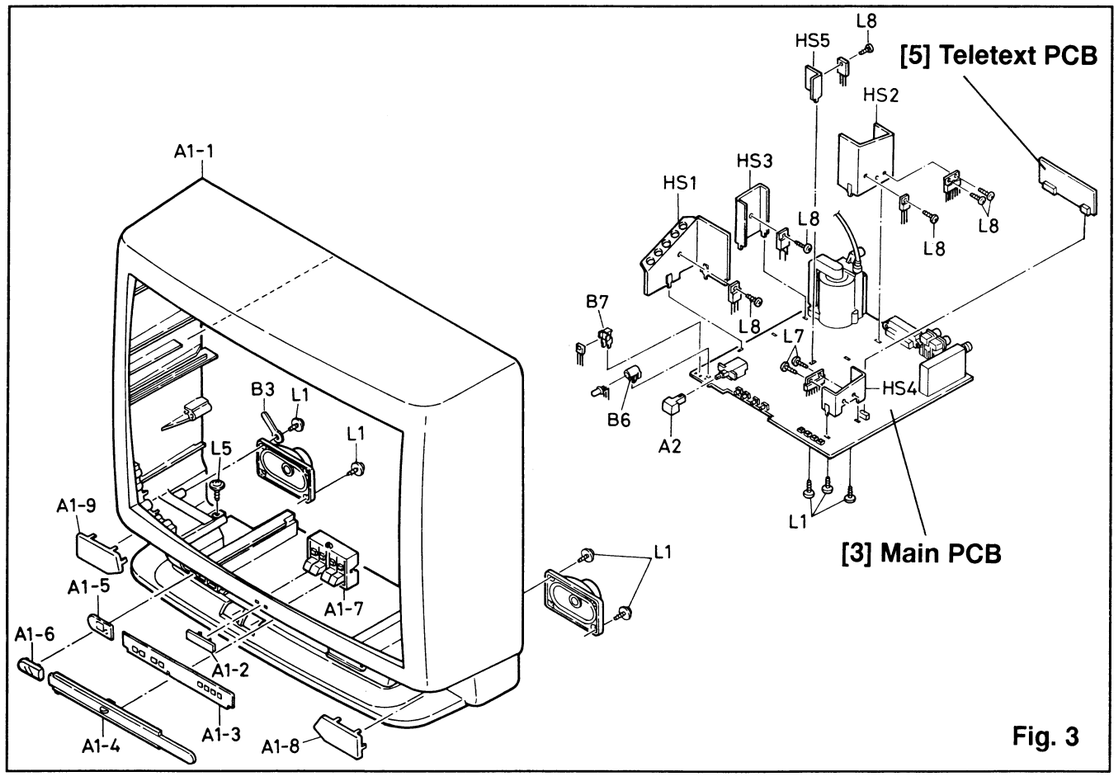


Fig. 3

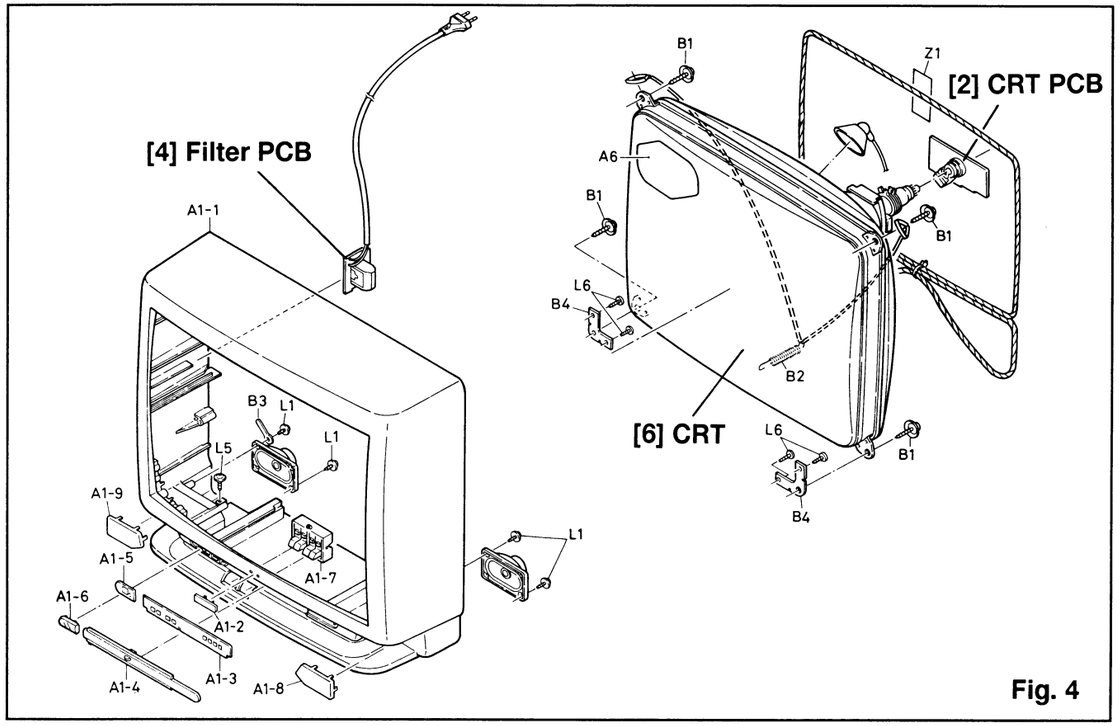


Fig. 4

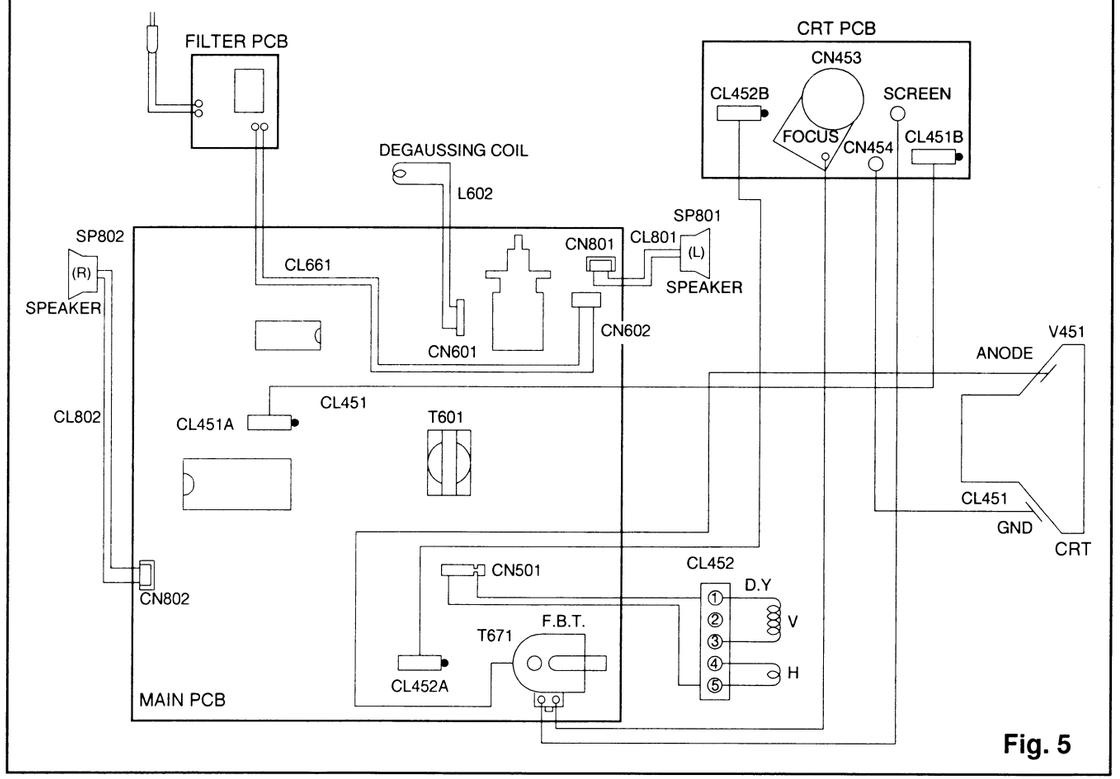


Fig. 5

ELECTRICAL ADJUSTMENT INSTRUCTIONS

Note:

Electrical adjustments are required after replacing circuit components. It is important to perform these adjustments only after all repairs and replacements have been completed. Also, do not attempt these adjustments unless the proper equipment is available.

Test Equipment Required:

1. Monoscope
2. PAL and SECAM Pattern Generator
3. IF Sweeper and Scope
4. Spectrum Analyzer
5. DC Volt Meter
6. Oscilloscope: Dual Trace with 10:1 probe
7. Color Analyzer
8. AM S.S.G. (Standard Signal Generator)

How to Set Up the Service Mode:

Preset Mode: Press Picture Select button on the remote control unit, then press the number "1" button.

Brightness -------- Center
Color ---------- Center
Contrast ---------- Approx 70%

All adjustment procedures must be performed in order of numbering.

Operate the unit more than 20 minutes.

1. Power Supply DC Voltage Adjustment

Purpose: To get correct voltage.

Symptom of Misadjustment: The picture is dark and unit does not operate correctly.

Test Point	Adjustment Point	Input
D616 Cathode TP1 (GND)	VR601	Monoscope Pattern
Equipment		**Spec.**
Monoscope DC Volt Meter		DC +120±1V

Reference Notes: D616, TP1, VR601 --- Main PCB

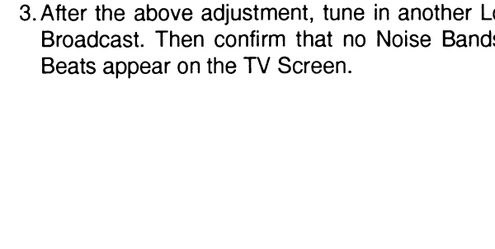
- Adjust VR621 so that the + of C623 becomes DC +120±1V.

2. VCO Adjustment

Purpose: To set the IF (Intermediate Frequency).

Symptom of Misadjustment: Proper picture cannot be obtained.

Test Point	Adjustment Point	Input
T214	T214	---
Equipment		**Spec.**
Spectrum Analyzer		38.0±0.05MHz
Connections of M. EQ.		



Reference Notes: T214 --- Main PCB

1. Short C214.
2. Set the Spectrum Analyzer as shown in the above table. (Make a loop by connecting both probes of the Spectrum Analyzer and bring the loop near T214 to pick up the leakage wave.)
3. Adjust T214 for reading 38.0±0.05MHz on the Spectrum Analyzer.

<without Spectrum Analyzer>

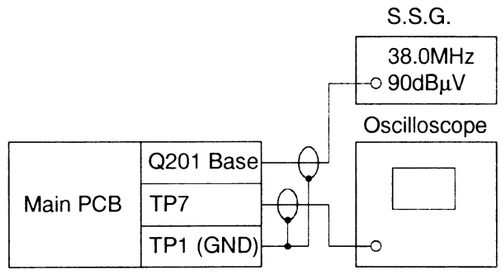
1. Turn T214 in both directions, right and left, far enough to find the point where Noise Bands or Beats appear on the TV Screen.
2. After finding those points in both directions, adjust T214 so that it is exactly half-way between those two points.
3. After the above adjustment, tune in another Local Broadcast. Then confirm that no Noise Bands or Beats appear on the TV Screen.

3. AFT Adjustment

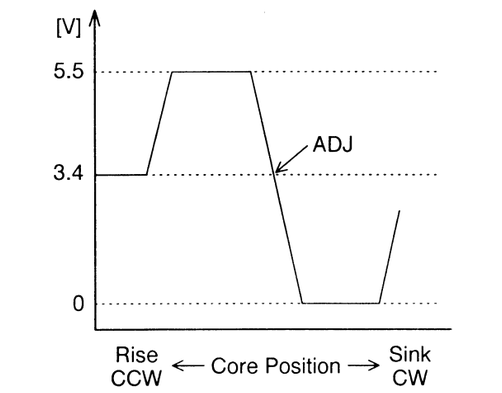
Purpose: To operate AFT correctly.

Symptom of Misadjustment: AFT does not work correctly and/or synchronization is faulty.

Test Point	Adjustment Point	Input
TP7 TP1 (GND)	T211	---
Equipment		**Spec.**
AM S.S.G. Oscilloscope		DC +3.4±0.2V
Connections of M. EQ.		



Figure



Reference Notes: Q201, T211, TP1, TP7 --- Main PCB

1. Input the 38.0MHz (90dBμV) no modulating signal from Q201 base.
2. Turn the core inside of T211 counterclockwise until the top of core is the same height as metal case.
3. Turn the core of T211 clockwise and find the point where the voltage drops from approximately 5.5V to 0V immediately on the oscilloscope.
4. Turn the core of T211 little by little and find the point where DC +3.4±0.2V is obtained between the area mentioned in step 3.

Note: Before the adjustment, confirm that the tuner output does not have any noise except white noise.

4. AGC Adjustment

Purpose: Set AGC (Auto Gain Control) Level.

Symptom of Misadjustment: AGC does not synchronize correctly when RF Input Level is too weak and picture distortion may occur if it is too strong.

Test Point	Adjustment Point	Input
TP8 TP1 (GND)	VR211	PAL Color Bar
Equipment		**Spec.**
PAL Pattern Generator DC Volt Meter		DC +4.6±0.1V

Reference Notes: TP1, TP8, VR211 --- Main PCB

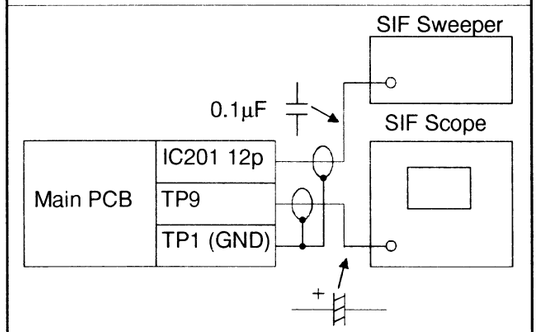
1. Receive the PAL Color Bar signal for channel 2 (48.25MHz). (RF Input Level: 80dBμV)
2. Adjust VR211 so that the voltage of TP8 becomes DC +4.6±0.1V.

5. SIF Adjustment

Purpose: To set the SIF (Sound Intermediate Frequency).

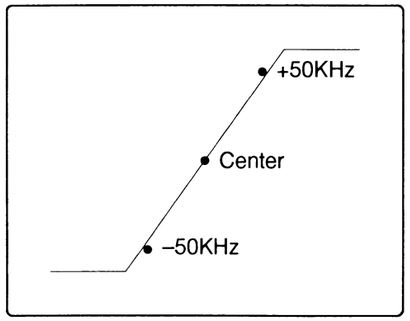
Symptom of Misadjustment: Not sound.

Test Point	Adjustment Point	Input
TP9 TP1 (GND)	T212, T213	---
Equipment		**Spec.**
SIF Sweeper & Scope		See below
Connections of M. EQ.		



Insert the Capasitor (100μF/16V)

Figure



Note:
SIF waveform (–50~+50KHz) must be straight.

Reference Notes: TP1, TP9, T212, T213 --- Main PCB

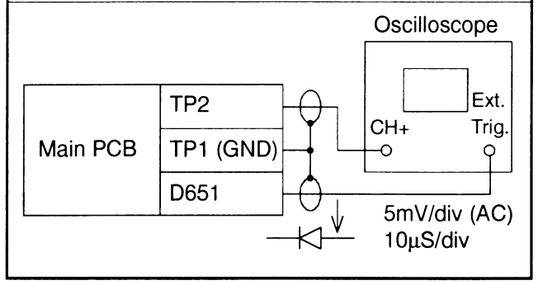
1. Connect SIF Sweeper & Scope shown in the above table.
2. Adjust T212 (SIF=6.5MHz) so that the center mark will be center of SIF waveform and its waveform is straight.
3. Adjust T213 (SIF=5.5MHz) so that the center mark will be center of SIF waveform and its waveform is straight.
4. Repeat 2 & 3.

6. Bell Filter Adjustment

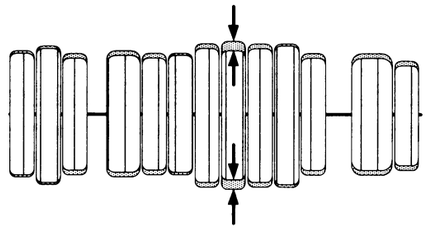
Purpose: To adjust the center frequency of SECAM bell filter.

Symptom of Misadjustment: The color will be reversed when the SECAM signal is entered.

Test Point	Adjustment Point	Input
TP2 TP1 (GND)	T404	SECAM Color Bar
Equipment		**Spec.**
SECAM Pattern Generator Oscilloscope		See below
Connections of M. EQ.		



Figure



Reference Notes: D674, TP1, TP2, T404 --- Main PCB

- Adjust T404 so that the waveform will be flat shown in the above figure.

7. SECAM Ident Coil Adjustment

Purpose: To adjust the peak value of SECAM Ident signal.

Symptom of Misadjustment: The display is not colored when the SECAM signal is entered.

Test Point	Adjustment Point	Input
TP5 TP1 (GND)	T403	SECAM Color Bar
Equipment		**Spec.**
SECAM Pattern Generator Oscilloscope		See below

Reference Notes: TP1, TP5, T403 --- Main PCB

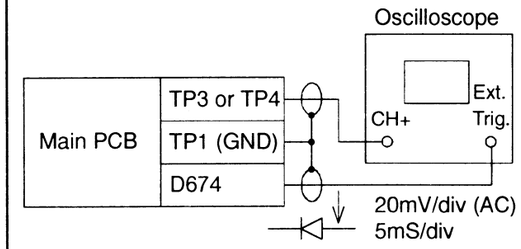
1. Set oscilloscope to 10:1 probe, 0.2V/div (DC) and Range 5μS/div.
2. Adjust T403 so that the TP5 will be peak DC Voltage.

8. SECAM Demodulate Coil Adjustment

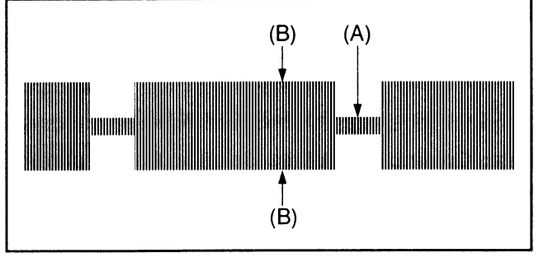
Purpose: To adjust the level of R-Y and (B-Y) color difference signal.

Symptom of Misadjustment: The Red, Green and Blue will be unbalanced.

Test Point	Adjustment Point	Input
TP3 (R-Y) TP4 (B-Y) TP1 (GND)	T402 (R-Y) T401 (B-Y)	SECAM Black Raster
Equipment		**Spec.**
SECAM Pattern Generator Oscilloscope		See below
Connections of M. EQ.		



Figure



Reference Notes:
D674, TP1, TP3, TP4, T401, T402 --- Main PCB

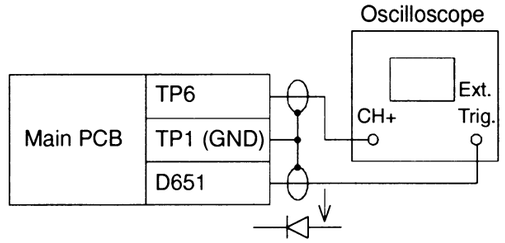
1. Adjust T402 with core driver so that (A) becomes center of (B) as shown in the above table. (TP3)
2. Adjust T401 with core driver so that (A) becomes center of (B) as shown in the above table. (TP4)

9. 1H Delay Line Adjustment

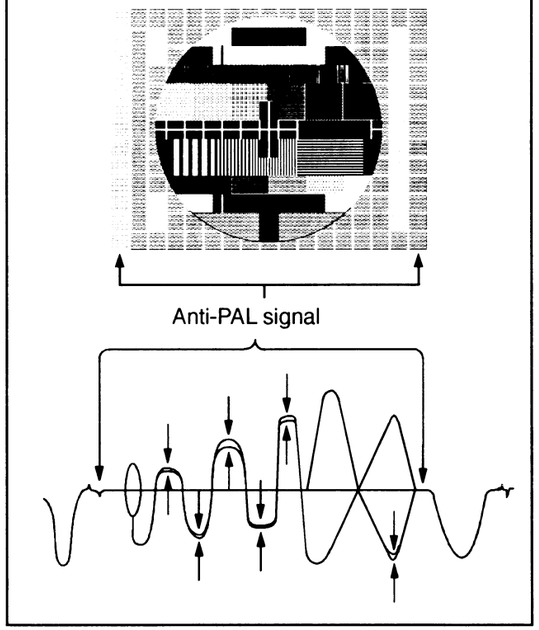
Purpose: To get correct 1H delay line when the PAL signal is entered.

Symptom of Misadjustment: The Anti-PAL signal part is colored when the Philips Pattern is entered. Each scanning line is colored on the color bar.

Test Point	Adjustment Point	Input
TP6 TP1 (GND)	T301, VR301	Philips Pattern
Equipment		Spec.
PAL Pattern Generator Oscilloscope		See below
Connections of M. EQ.		



Figure



Reference Notes:
D674, TP1, TP6, T301, VR301 --- Main PCB

- Adjust VR301 and T301 so that the amplitude at Anti-PAL signal part becomes minimum (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).

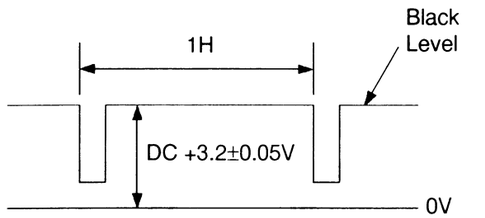
10. Black Level Adjustment

Purpose: To obtain optimum picture quality.

Symptom of Misadjustment: Black color may not be properly displayed (lighter or darker).

Test Point	Adjustment Point	Input
TP6 TP1 (GND)	VR351	Black Raster
Equipment		**Spec.**
Pattern Generator Oscilloscope		DC +3.2±0.05V

Figure



Reference Notes: TP1, TP6, VR351 --- Main PCB

1. Preset the picture control to initial position.
2. Receive the Black Raster pattern.
3. Adjust VR351 so that the TP6 becomes DC +3.2±0.05V as shown in the above table. (TP6 waveform)

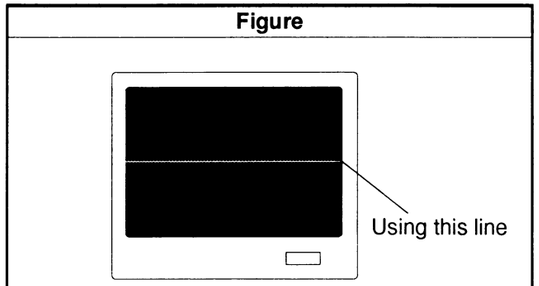
11. Cut Off Adjustment

Purpose: To adjust the beam current of Red, Green, Blue and screen voltage.

Symptom of Misadjustment: White color may be reddish, greenish or bluish. When the screen voltage is too high, the scanning line is appeared on the screen.

Test Point	Adjustment Point	Input
Screen	VR451 VR452 VR453 Screen-VR	Black Raster
Equipment		**Spec.**
Pattern Generator		See below

Figure



Reference Notes:
VR451, VR452, VR453, VR454, VR455 --- CRT PCB
Screen-VR --- Main PCB (FBT)

1. Degauss the CRT using Degaussing Coil..
2. Set the Screen-VR to minimum. (Counterclockwise)
3. Set the drive VRs (VR454, VR455) to mechanical center, and cut off VRs (VR451, VR452, VR453) to 10 o'clock position.
4. Short the Emitter and Collector of Q125. (Horizontal One Line)
5. Slowly turn the Screen-VR (FBT) to the point where horizontal line is just visible.
6. Adjust VR451 (R. Cut Off), VR452 (G. Cut Off) and VR453 (B. Cut Off) so that horizontal line becomes pure white.
7. Re-adjust the Screen-VR (FBT) to the point where horizontal line is just visible.
8. Open the Emitter and Collector of Q125.

Note: Confirm that White Balance Adj. is correct after this adjustment, and attempt White Balance Adj. if needed.

12. White Balance Adjustment

Purpose: To mix red, green and blue beams correctly for pure white.

Symptom of Misadjustment: White becomes bluish or reddish.

Test Point	Adjustment Point	Input
Screen	VR454 VR455	White Raster (APL 100%)
Equipment		**Spec.**
Pattern Generator Color Analyzer		See below

Reference Notes: VR454, VR455 --- CRT PCB

1. Degauss the CRT using Degaussing Coil..

2. Set the color analyzer to the CHROMA mode and after zero point calibration, bring the optical sensor into close contact with center on the CRT surface.
3. Adjust VR454 (R. DRIVE) and VR455 (B. DRIVE) so that the respective chroma temperatures becomes 8000K-10MPCD (x : 0.300 / y : 0.290) ±3%.

Note: Confirm that Cut Off Adj. is correct after this adjustment, and attempt Cut Off Adj. if needed.

13. Sub Bright Adjustment

Purpose: To get proper brightness.

Symptom of Misadjustment: Proper brightness cannot be obtained by adjusting the Brightness Control.

Test Point	Adjustment Point	Input
Screen	Screen-VR	Black Raster
Equipment		**Spec.**
Pattern Generator		See Below

Reference Notes: Screen-VR --- Main PCB (FBT)

- Adjust Screen-VR so that the level of screen (Black) is just visible.

  Note: Use the Black Raster Signal without set up.

14. Text VCO Adjustment

Purpose: To syncronize teletext signal.

Symptom of Misadjustment: Teletext is not displayed synchronously.

Test Point	Adjustment Point	Input
TP902 TP901 (GND)	T961	PAL color bar
Equipment		**Spec.**
Oscilloscope		DC +2.5±0.5V

Reference Note: TP901, TP902, T961
--- Teletext PCB

- Adjust T961 so that the voltage of TP902 becomes DC +2.5±0.5V.

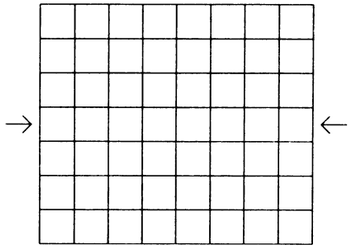
15. Pin Cushion Warp Adjustment

Purpose: To corrent the distortion on the both sides of display.

Symptom of Misadjustment: The vertical lines on the both sides of display are distorted.

Test Point	Adjustment Point	Input
Screen	VR571	Cross Hatch
Equipment		**Spec.**
Monoscope		See below

Figure



Reference Note: VR571 --- Main PCB

- Adjust VR571 so that the both side lines become to straighten.

16. Focus Adjustment

Purpose: Set the optimum Focus.

Symptom of Misadjustment: Blurred images are shown on the display.

Test Point	Adjustment Point	Input
Screen	Focus VR	Monoscope Pattern
Equipment		**Spec.**
Monoscope		See below

Reference Note: Focus VR --- Main PCB (FBT)

- Adjust Focus-VR (FBT) to be obtained clear picture.

17. V. Position & Size Adjustment

Purpose: To get correct vertical position and size of screen image.

Symptom of Misadjustment: Vertical position and size of screen image may not be properly displayed.

Test Point	Adjustment Point	Input
Screen	VR501, VR503	Monoscope Pattern
Equipment		**Spec.**
Monoscope		See below

Reference Note: VR501, VR503 --- Main PCB

1. Adjust VR503 so that the top & bottom of Monoscope pattern will be equal. (90±3%)
2. Adjust VR501 so that the vertical size will be 90±2% of Monoscope Pattern and the circle is round.

18. H. Position & Size Adjustment

Purpose: To get correct horizontal position and size of screen image.

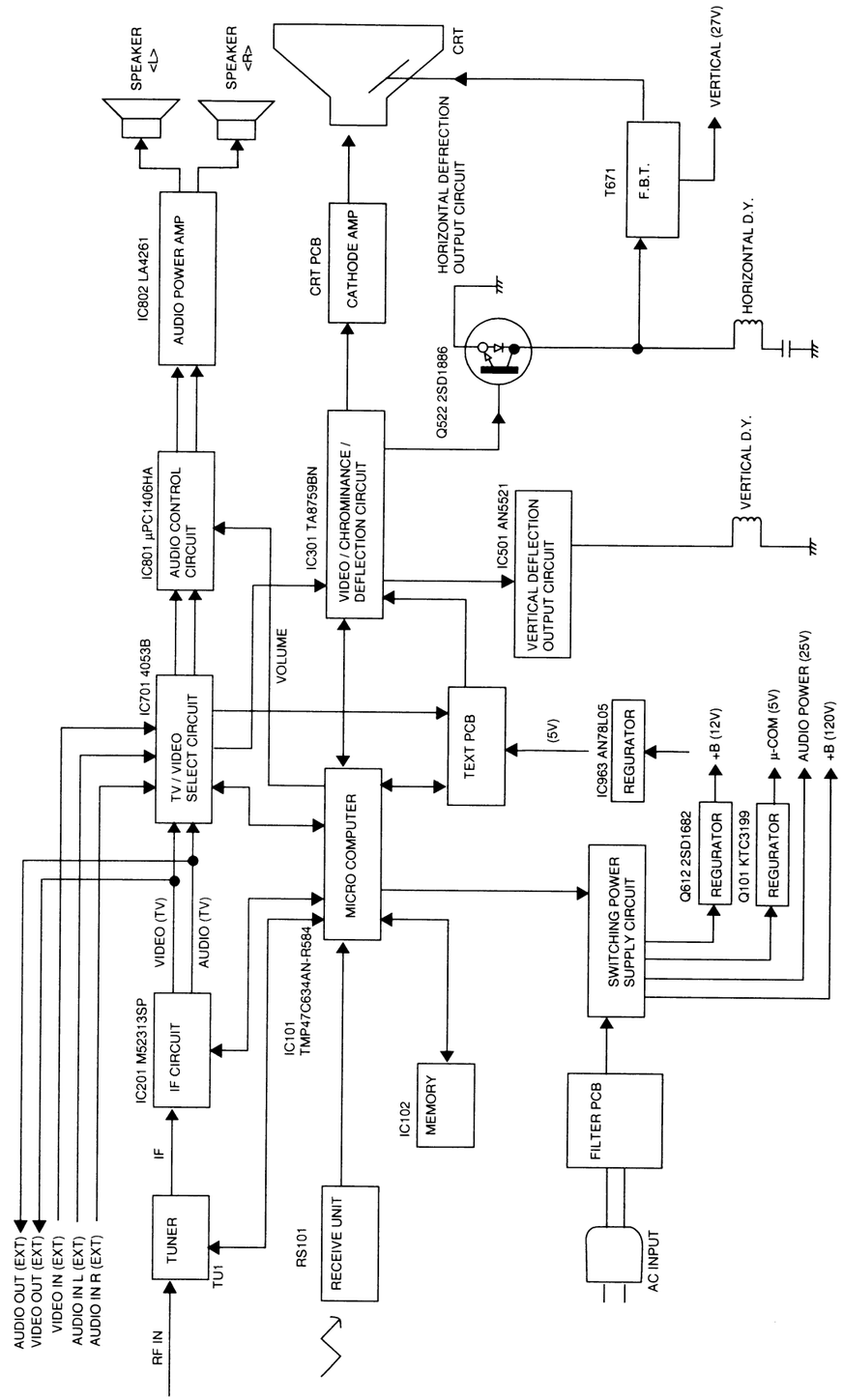
Symptom of Misadjustment: Horizontal position and size of screen image may not be properly displayed.

Test Point	Adjustment Point	Input
Screen	VR331, VR572	Monoscope Pattern
Equipment		**Spec.**
Monoscope		See below

Reference Note: VR331, VR572 --- Main PCB

1. Adjust VR331 so that the right & left of monoscope pattern will be equal. (90±2%)
2. Adjust L572 so that the horizontal size will be 90±2% of Monoscope Pattern and the circle is round.

BLOCK DIAGRAM



SCHEMATIC DIAGRAMS / PCB'S AND TEST POINTS

Standard Notes

Warning

Critical components having special safety characteristics are identified witha ⚠ by the Ref. No. in the parts list and enclosed within a broken line * (where several critical components are grouped in one area) along with the safety symbol ⚠ on the schematics or exploded views.

Use of substitute replacement parts which do not have the same specified safety characteristics may create shock, fire, or other hazards.

Under no circumstances should the original design be modified or altered without written permission from Funai Electric Company. Funai assumes no liability, express or implied, arising out of any unauthorized modification of design. Servicer assumes all liability.

Notes:

① Do not use the part number shown on these drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since these drawings were prepared.

② All resistance values are indicated in ohms ($K=10^3$, $M=10^6$).

③ Resistor wattages are 1/5W or 1/6W unless otherwise specified.

④ All capacitance values are indicated in μF ($P=10^{-6}$μF).

VOLTAGE CHART

(Unit: Volt)

Pin No.	IC101	IC102	IC201	IC501	IC601	IC701	IC801
1	2.6	0.0	2.1	0.0	63.3	1.5	10.9
2	2.8	0.0	5.3	15.1	62.2	1.5	0
3	2.4	0.0	4.7	26.9	0	1.5	3.1
4	1.6	0.0	2.5	0.7	0.6	1.5	2.9
5	3.6	5.1	1.5	0		1.6	0
6	0.0	4.1	1.5	1.6		0.0	2.8
7	0.0	0.0	0.0	26.4		0.0	3.0
8	0.0	5.1	1.9			0.0	0
9	2.9		3.2			11.9	NC
10	1.7		2.3			11.9	
11	1.7		3.2			11.9	
12	1.7		2.8			2.4	
13	0.0		5.2			2.5	
14	0.0		4.4			2.5	
15	0.0		4.4			1.5	
16	4.3		5.2			12.0	
17	0.0		2.7				
18	5.2		12.0				
19	5.9		2.7				
20	0.0		2.5				
21	0.0						
22	0.0						
23	0.0						
24	0.0						
25	0.0						
26	3.9						
27	4.8						
28	2.9						
29	3.0						
30	0.0						
31	2.2						
32	2.3						
33	5.1						
34	0.0						
35	4.8						
36	4.4						
37	0.0						
38	0.0						
39	5.1						
40	5.1						
41	4.1						
42	5.1						

Pin No.	IC301	Pin No.	IC301
1	8.5	33	6.9
2	8.0	34	3.2
3	8.5	35	1.0
4	6.5	36	7.9
5	6.5	37	6.1
6	12.0	38	7.2
7	3.0	39	2.2
8	6.5	40	9.2
9	6.5	41	3.5
10	NC	42	3.5
11	5.9	43	3.5
12	5.2	44	5.0
13	5.2	45	5.0
14	7.8	46	5.0
15	6.0	47	7.3
16	10.6	48	3.1
17	3.4	49	7.2
18	4.4	50	0.0
19	0.0	51	7.4
20	5.9	52	0.0
21	0.0	53	0.0
22	11.3	54	0.0
23	5.3	55	6.0
24	5.8	56	3.2
25	4.9	57	5.8
26	3.2	58	4.8
27	11.0	59	3.3
28	3.3	60	6.0
29	0.7	61	12.0
30	8.7	62	6.0
31	6.2	63	12.0
32	6.1	64	8.0

Input: PAL Color Bar Signal (with 1KHz Audio Signal)

Receiving Ch.: E2 ch (48.25MHz)

Preset Mode: Press Picture Select button on the remote control unit, then press the number "1" button.

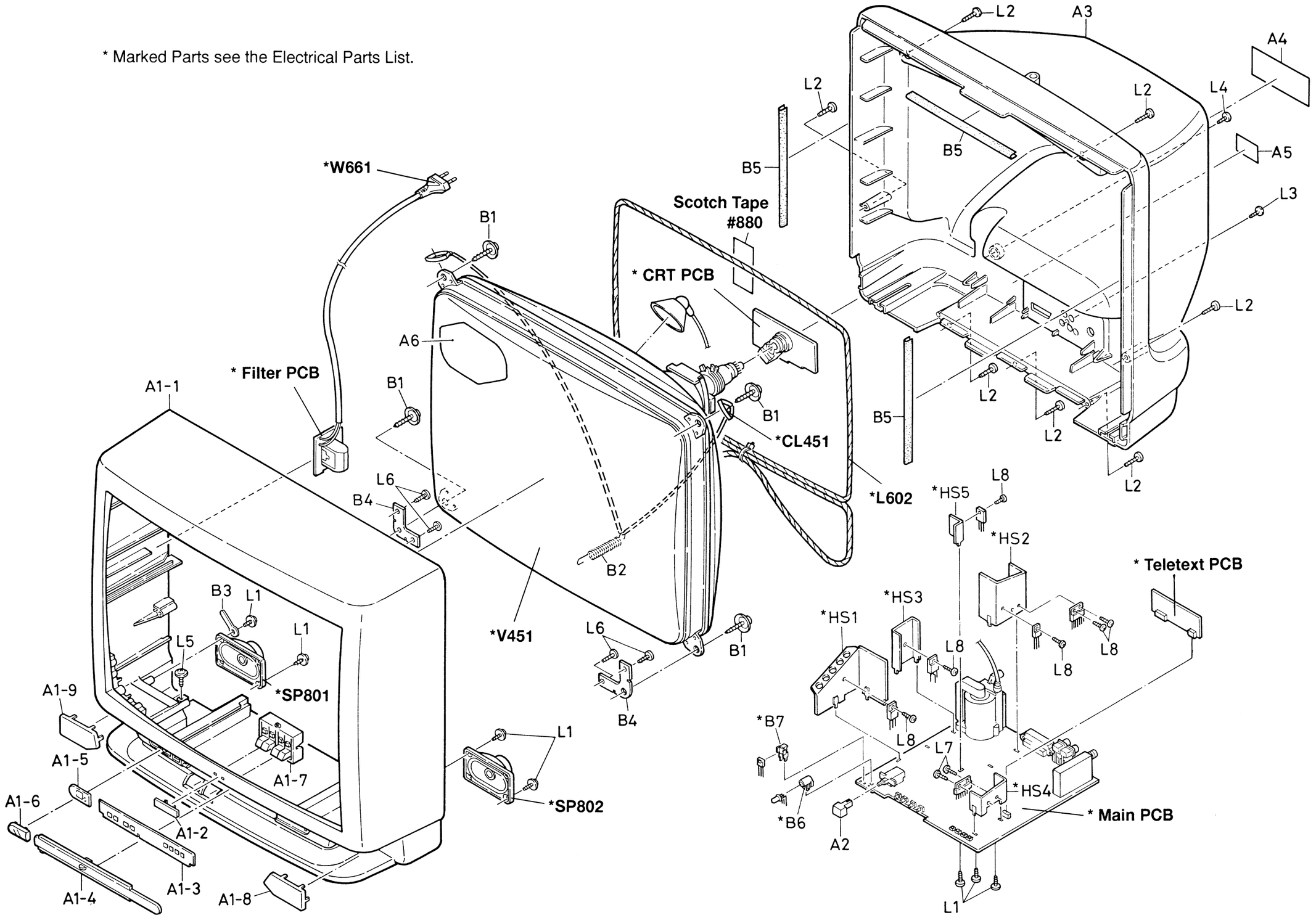
Brightness--- Center
Color--- Center
Contrast--- Approx 70%
Volume--- Minimum

Pin NO.	IC802	IC961	IC962	IC963	IC964	Pin No.	E	C	B
1	0.6	1.1	2.0	5.0	0.0	Q1	0.0	1.3	0.6
2	0.0	3.2	1.7	0.0	5.1	Q2	11.9	0.0	11.5
3	~	3.2	1.6	11.9	5.1	Q3	11.9	0.0	11.8
4	0.0	5.0	0.0			Q4	11.9	11.8	11.1
5	0.0	5.0	2.3			Q101	5.1	9.8	5.7
6	~	2.4	2.8			Q102	5.7	5.7	5.0
7	9.1	0.0	5.0			Q103	0.0	3.1	0.0
8	0.0	NC	1.4			Q104	29.0	9.8	28.7
9	18.3	5.0	0.0			Q105	0.0	28.5	0.0
10	9.1	0.0	1.7			Q106	5.1	-2.1	5.3
11		0.0	0.0			Q121	0.0	4.8	0.0
12		4.6	0.0			Q122	0.0	3.9	0.0
13		5.0	0.0			Q123	0.0	4.4	0.0
14		0.0	0.0			Q125	0.0	0.7	0.0
15		0.3	2.4			Q126	4.1	4.1	3.5
16		NC	5.0			Q127	0.0	0.0	0.6
17		4.1	0.3			Q201	0.8	9.4	1.5
18		5.1	0.0			Q223	12.0	5.2	11.9
19		0.2	4.6			Q224	0.0	12.0	0.0
20		0.2	NC			Q251	0.0	4.3	0.0
22		0.2				Q301	0.0	12.0	0.0
23		0.2				Q391	0.0	0.0	0.7
24		0.0				Q392	0.0	6.0	0.0
25		2.4				Q393	5.1	0.0	4.5
26		2.3				Q394	5.1	0.0	6.0
27		2.4				Q395	0	6.1	0
28		2.4				Q396	0	5.2	0

Pin No.	E	C	B	Pin No.	E	C	B
Q397	0.0	0.0	0.0	Q961	2.5	5.1	3.2
Q551	0.0	86.1	0.3	Q451	3.1	11.5	3.5
Q552	0.0	–	-0.1	Q452	11.5	147.1	12.0
Q571	1.6	8.5	2.1	Q453	3.1	11.5	3.5
Q572	11.0	0.6	10.5	Q454	11.5	153.9	12.0
Q573	0	10.8	0.6	Q455	3.2	11.5	3.5
Q601	0.5(G)	316(D)	0.1(S)	Q456	11.5	154.0	12.0
Q602	0.0	0.6	-0.1				
Q603	0.0	0.6	-8.5				
Q604	0.6	0.0	0.6				
Q607	6.7	62.0	7.3				
Q608	4.2	120.0	0.0				
Q609	0.0	0.0	0.6				
Q610	18.5	18.5	17.8				
Q611	0.0	0.1	0.6				
Q612	12.0	12.4	12.7				
Q702	2.4	12.0	3.0				
Q703	1.9	12.0	2.5				
Q705	0.0	11.9	0.0				
Q721	3.1	0.0	2.5				
Q802	0.0	0.0	0.6				
Q804	0.0	18.2	0.0				
Q952	0.0	1.7	0.0				

EXPLODED VIEW

* Marked Parts see the Electrical Parts List.



MECHANICAL PARTS LIST

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

Ref. No.	Description	Part No.
A 1	FRONT CABINET ASSEMBLY	0EM100647
A1-1	FRONT CABINET	0EM000188
A1-2	BRAND BADGE	0EM400975
A1-3	CONTROL PLATE	0EM300803
A1-4	CONTROL DOOR	0EM300844
A1-5	SENSOR PLATE	0EM402675
A1-6	SENSOR WINDOW	0EM402847
A1-7	CHANNEL/VOLUME KNOB	0EM300743
A1-8	SPEAKER GRILLE (R)	0EM300847
A1-9	SPEAKER GRILLE (L)	0EM300848
A 2	POWER KNOB	0EM402406
A 3	REAR CABINET	0EM100608
A 4	RATING LABEL	0EM402676
A 5	MARK OF CONFORMITY LABEL	0EM402171
A 6	POP LABEL	0EM402744
B 1	CRT MOUNTING SCREW	0EM402440
B 2	TENSION SPRING	26WH006
B 3	COATING CLIP	XF01056KZ001
B 4	CRT HOLDER	0EM402556
B 5	CLOTH	TS7623
L 1	P-TIGHT SCREW 3X10 CUP+	GFMP3100
L 2	P-TIGHT SCREW 4X18 BIND+	GBMP4180
L 3	P-TIGHT SCREW 3X10 BIND+	GBKP3100
L 4	P-TIGHT SCREW 4X12 BIND+	GBKP4120
L 5	P-TIGHT SCREW 3X8 ø12 PAN+	GCMP3080
L 6	P-TIGHT SCREW 4X12 BIND+	GBMP4120
L 7	B-TIGHT SCREW 3X6 BIND+	GBMB3060
L 8	B-TIGHT SCREW 3X10 BIND+	GBMB3100
S 1	CARTON	0EM402677
S 2	STYROFOAM TOP	0EM000176
S 3	STYROFOAM BOTTOM	0EM000177
S 4	SET SHEET	0EM402590
S 5	SERIAL NO. LABEL	24LH033
S 6	FRONT PAD	0EM402561
S 7	T/B PAD	0EM402562
X 1	REMOCON UNIT	UREMT31MM006
X 2	BATTERY UM-3X2	XB0M451GW003
X 3	OWNER'S MANUAL (E)	0EMN00966
X 4	POLYETHYLENE BAG	Z220300
X 5	OWNER'S MANUAL (R)	0EMN00996

ELECTRICAL PARTS LIST

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

NOTE: Parts that not assigned part numbers (----------) are not available.

Tolerance of Capacitors and Resistors are noted with the following symbols.

C.....±0.25%	D.....±0.5%	F.....±1%
G.....±2%	J.....±5%	K.....±10%
M.....±20%	N.....±30%	Z.....+80/-20%

PCB Assembly

Ref. No.	Description	Part No.
	PCB Assembly Consists of the following:	**MMA-145**
	Main PCB CRT PCB Filter PCB	———

Main PCB

Ref. No.	Description	Part No.
	Main PCB Consists of the following:	———
	CAPACITORS	
C 1	ELECTROLYTIC CAP. 10µF/50V	126F106S
C 2	CHIP CERAMIC CAP. CH 100pF/50V or	CHE1JJ8CH101
	CHIP CERAMIC CAP. CH 100pF/50V	12CH101C
C 3	TF CAP. J 0.1µF or	125U104S
	TF CAP. J 0.1µF	122Z309S
C 4	TF CAP. J 0.1µF or	125U104S
	TF CAP. J 0.1µF	122Z309S
C 5	TF CAP. J 0.1µF or	125U104S
	TF CAP. J 0.1µF	122Z309S
C 6	ELECTROLYTIC CAP. 10µF/50V	126F106S
C 7	ELECTROLYTIC CAP. 10µF/50V	126F106S
C 8	ELECTROLYTIC CAP. 10µF/50V	126F106S
C 9	ELECTROLYTIC CAP. 1µF/50V	126F105S
C 10	CHIP CERAMIC CAP. F 0.01µF/50V or	CHE1JJ80F103
	CHIP CERAMIC CAP. F 0.01µF/50V	12F3103C
C 11	ELECTROLYTIC CAP. 10µF/50V	126F106S
C 101	ELECTROLYTIC CAP. 47µF/16V	126C476S
C 102	CHIP CERAMIC CAP. F 0.01µF/50V or	CHE1JJ80F103
	CHIP CERAMIC CAP. F 0.01µF/50V	12F3103C
C 103	CHIP CERAMIC CAP. F 0.01µF/50V or	CHE1JJ80F103
	CHIP CERAMIC CAP. F 0.01µF/50V	12F3103C
C 104	CHIP CERAMIC CAP. F 0.01µF/50V or	CHE1JJ80F103
	CHIP CERAMIC CAP. F 0.01µF/50V	12F3103C
C 105	ELECTROLYTIC CAP. 220µF/6.3V	126A227S
C 110	ELECTROLYTIC CAP. 47µF/16V	126C476S
C 111	CHIP CERAMIC CAP. F 0.022µF/50V or	CHE1JJ80F223
	CHIP CERAMIC CAP. F 0.022µF/50V	12F3223C
C 152	ELECTROLYTIC CAP. 4.7µF/25V	126D475
C 155	ELECTROLYTIC CAP. 1µF/50V	126F105S
C 171	CHIP CERAMIC CAP. SL 100pF/50V or	CHE1JJ8SL101
	CHIP CERAMIC CAP. SL 100pF/50V	1270101C
C 172	CHIP CERAMIC CAP. SL 100pF/50V or	CHE1JJ8SL101
	CHIP CERAMIC CAP. SL 100pF/50V	1270101C
C 173	CHIP CERAMIC CAP. SL 100pF/50V or	CHE1JJ8SL101
	CHIP CERAMIC CAP. SL 100pF/50V	1270101C
C 174	CHIP CERAMIC CAP. SL 100pF/50V or	CHE1JJ8SL101
	CHIP CERAMIC CAP. SL 100pF/50V	1270101C
C 175	CHIP CERAMIC CAP. CH 24pF/50V or	CHE1JJ8CH240
	CHIP CERAMIC CAP. CH 24pF/50V	12CH240C
C 176	CHIP CERAMIC CAP. CH 24pF/50V or	CHE1JJ8CH240
	CHIP CERAMIC CAP. CH 24pF/50V	12CH240C
C 185	CHIP CERAMIC CAP. SL 100pF/50V or	CHE1JJ8SL101
	CHIP CERAMIC CAP. SL 100pF/50V	1270101C
C 186	CHIP CERAMIC CAP. SL 100pF/50V or	CHE1JJ8SL101
	CHIP CERAMIC CAP. SL 100pF/50V	1270101C
C 187	CHIP CERAMIC CAP. SL 100pF/50V or	CHE1JJ8SL101
	CHIP CERAMIC CAP. SL 100pF/50V	1270101C
C 188	CHIP CERAMIC CAP. SL 100pF/50V or	CHE1JJ8SL101
	CHIP CERAMIC CAP. SL 100pF/50V	1270101C
C 204	CHIP CERAMIC CAP. F 0.01µF/50V or	CHE1JJ80F103
	CHIP CERAMIC CAP. F 0.01µF/50V	12F3103C
C 205	CHIP CERAMIC CAP. F 0.01µF/50V or	CHE1JJ80F103
	CHIP CERAMIC CAP. F 0.01µF/50V	12F3103C
C 206	CHIP CERAMIC CAP. F 0.01µF/50V or	CHE1JJ80F103
	CHIP CERAMIC CAP. F 0.01µF/50V	12F3103C
C 207	CHIP CERAMIC CAP. F 0.01µF/50V or	CHE1JJ80F103
	CHIP CERAMIC CAP. F 0.01µF/50V	12F3103C
C 209	CHIP CERAMIC CAP. UJ 39pF/50V	CHE1JJ8UJ390
C 210	CHIP CERAMIC CAP. CH 27pF/50V or	CHE1JJ8CH270
	CHIP CERAMIC CAP. CH 27pF/50V	12CH270C
C 211	CHIP CERAMIC CAP. CH 8pF/50V or	CHE1JJ8CH8R0
	CHIP CERAMIC CAP. CH 8pF/50V	12CH8R0C
C 212	CHIP CERAMIC CAP. F 0.01µF/50V or	CHE1JJ80F103
	CHIP CERAMIC CAP. F 0.01µF/50V	12F3103C
C 213	TF CAP. J 0.1µF or	125U104S
	TF CAP. J 0.1µF	122Z309S
C 214	TF CAP. J 0.47µF or	125U474S
	TF CAP. J 0.47µF	122Z317S
C 215	CHIP CERAMIC CAP. F 0.01µF/50V or	CHE1JJ80F103
	CHIP CERAMIC CAP. F 0.01µF/50V	12F3103C
C 216	ELECTROLYTIC CAP. 100µF/10V	126B107S
C 217	ELECTROLYTIC CAP. 0.47µF/50V	126F474S
C 219	CHIP CERAMIC CAP. SL 39pF/50V or	CHE1JJ8SL390
	CHIP CERAMIC CAP. SL 39pF/50V	1270390C
C 220	CHIP CERAMIC CAP. SL 47pF/50V or	CHE1JJ8SL470
	CHIP CERAMIC CAP. SL 47pF/50V	1270470C
C 221	CHIP CERAMIC CAP. SL 33pF/50V or	CHE1JJ8SL330
	CHIP CERAMIC CAP. SL 33pF/50V	1270330C
C 223	ELECTROLYTIC CAP. 100µF/16V	126C107S
C 224	CHIP CERAMIC CAP. F 0.01µF/50V or	CHE1JJ80F103
	CHIP CERAMIC CAP. F 0.01µF/50V	12F3103C
C 226	CHIP CERAMIC CAP. F 0.01µF/50V or	CHE1JJ80F103
	CHIP CERAMIC CAP. F 0.01µF/50V	12F3103C
C 227	CHIP CERAMIC CAP. F 0.01µF/50V or	CHE1JJ80F103
	CHIP CERAMIC CAP. F 0.01µF/50V	12F3103C
C 251	ELECTROLYTIC CAP. 1µF/50V	126F105S
C 302	CHIP CERAMIC CAP. F 0.047µF/50V or	CHE1JJ80F473
	CHIP CERAMIC CAP. F 0.047µF/50V	12F3473C
C 303	CHIP CERAMIC CAP. F 0.01µF/50V or	CHE1JJ80F103
	CHIP CERAMIC CAP. F 0.01µF/50V	12F3103C
C 304	CHIP CERAMIC CAP. F 0.01µF/50V or	CHE1JJ80F103
	CHIP CERAMIC CAP. F 0.01µF/50V	12F3103C
C 305	ELECTROLYTIC CAP. 0.47µF/50V	126F474S

Ref. No.	Description	Part No.
C 306	CHIP CERAMIC CAP. F 0.01µF/50V or	CHE1JJ80F103
	CHIP CERAMIC CAP. F 0.01µF/50V	12F3103C
C 307	*MYLAR CAP. K 0.056µF/50V or	1250563S
	MYLAR CAP. K 0.056µF/50V	2250563S
C 308	CHIP CERAMIC CAP. B 0.01µF/50V or	CHE1JK80B103
	CHIP CERAMIC CAP. B 0.01µF/50V	12B3103C
C 309	ELE CAP. NP 2.2µF/50V	126X225S
C 310	CHIP CERAMIC CAP. SL 13pF/50V or	CHE1JJ8SL130
	CHIP CERAMIC CAP. SL 13pF/50V	1270130C
C 311	CHIP CERAMIC CAP. CH 39pF/50V or	CHE1JJ8CH390
	CHIP CERAMIC CAP. CH 39pF/50V	12CH390C
C 312	CHIP CERAMIC CAP. CH 27pF/50V or	CHE1JJ8CH270
	CHIP CERAMIC CAP. CH 27pF/50V	12CH270C
C 313	SEMICON CAP. K 0.027µF 25V or	CDA1EKS0X273
	SEMICON CAP. K 0.027µF 25V	12Y2273S
C 314	CHIP CERAMIC CAP. F 0.01µF/50V or	CHE1JJ80F103
	CHIP CERAMIC CAP. F 0.01µF/50V	12F3103C
C 315	ELECTROLYTIC CAP. 100µF/16V	126C107S
C 317	CHIP CERAMIC CAP. SL 33pF/50V or	CHE1JJ8SL330
	CHIP CERAMIC CAP. SL 33pF/50V	1270330C
C 318	CHIP CERAMIC CAP. B 0.1µF/50V or	CHE1JJ80B104
	CHIP CERAMIC CAP. B 0.1µF/50V	12F3104C
C 320	ELECTROLYTIC CAP. 0.47µF/50V	126F474S
C 331	SEMICON CAP. K 0.015µF/25V or	CDA1EKS0X153
	SEMICON CAP. K 0.015µF/25V	12Y2153S
C 333	ELE CAP. 0.47µF/50V (L.L) or	CE1JMAULLR47
	ELE CAP. 0.47µF/50V (L.L)	CE1JMASLLR47
C 334	ELECTROLYTIC CAP. 330µF/10V	CE1AMASTL331
C 335	CHIP CERAMIC CAP. F 0.01µF/50V or	CHE1JJ80F103
	CHIP CERAMIC CAP. F 0.01µF/50V	12F3103C
C 336	SEMICON CAP. K 0.022µF 25V or	CDA1EKS0X223
	SEMICON CAP. K 0.022µF 25V	12Y2223S
C 337	ELECTROLYTIC CAP. 3.3µF/50V	126F335S
C 338	CHIP CERAMIC CAP. B 0.01µF/50V or	CHE1JK80B103
	CHIP CERAMIC CAP. B 0.01µF/50V	12B3103C
C 339	CHIP CERAMIC CAP. B 330pF/50V or	CHE1JK80B331
	CHIP CERAMIC CAP. B 330pF/50V	12B3331C
C 340	CHIP CERAMIC CAP. B 0.0022µF/50V or	CHE1JK80B222
	CHIP CERAMIC CAP. B 0.0022µF/50V	12B3222C
C 351	CHIP CERAMIC CAP. CH 180pF/50V or	CHE1JJ8CH181
	CHIP CERAMIC CAP. CH 180pF/50V	12CH181C
C 352	CHIP CERAMIC CAP. CH 180pF/50V or	CHE1JJ8CH181
	CHIP CERAMIC CAP. CH 180pF/50V	12CH181C
C 353	SEMICON CAP. K 0.1µF/25V or	CDA1EKS0X104
	SEMICON CAP. K 0.1µF/25V	12Y2104S
C 354	ELECTROLYTIC CAP. 10µF/50V	126F106S
C 355	SEMICON CAP. K 0.1µF/25V or	CDA1EKS0X104
	SEMICON CAP. K 0.1µF/25V	12Y2104S
C 356	ELECTROLYTIC CAP. 10µF/50V	126F106S
C 357	CHIP CERAMIC CAP. CH 27pF/50V or	CHE1JJ8CH270
	CHIP CERAMIC CAP. CH 27pF/50V	12CH270C
C 358	ELECTROLYTIC CAP. 1µF/50V	126F105S
C 359	CHIP CERAMIC CAP. CH 120pF/50V or	CHE1JJ8CH121
	CHIP CERAMIC CAP. CH 120pF/50V	12CH121C
C 360	CHIP CERAMIC CAP. SL 56pF/50V or	CHE1JJ8SL560
	CHIP CERAMIC CAP. SL 56pF/50V	1270560C
C 361	ELECTROLYTIC CAP. 0.1µF/50V	126F104S
C 362	ELECTROLYTIC CAP. 0.1µF/50V	126F104S
C 363	ELECTROLYTIC CAP. 1µF/50V	126F105S
C 364	ELECTROLYTIC CAP. 0.1µF/50V	126F104S
C 365	ELECTROLYTIC CAP. 0.47µF/50V	126F474S
C 366	ELECTROLYTIC CAP. 0.47µF/50V	126F474S
C 367	ELECTROLYTIC CAP. 0.47µF/50V	126F474S
C 381	CHIP CERAMIC CAP. SL 68pF/50V or	CHE1JJ8SL680
	CHIP CERAMIC CAP. SL 68pF/50V	1270680C
C 382	CHIP CERAMIC CAP. SL 33pF/50V or	CHE1JJ8SL330
	CHIP CERAMIC CAP. SL 33pF/50V	1270330C
C 383	CHIP CERAMIC CAP. SL 47pF/50V or	CHE1JJ8SL470
	CHIP CERAMIC CAP. SL 47pF/50V	1270470C
C 401	CHIP CERAMIC CAP. CH 180pF/50V or	CHE1JJ8CH181
	CHIP CERAMIC CAP. CH 180pF/50V	12CH181C
C 402	CHIP CERAMIC CAP. CH 180pF/50V or	CHE1JJ8CH181
	CHIP CERAMIC CAP. CH 180pF/50V	12CH181C
C 403	CHIP CERAMIC CAP. CH 7pF/50V or	CHE1JJ8CH7R0
	CHIP CERAMIC CAP. CH 7pF/50V	12CH7R0C
C 404	CHIP CERAMIC CAP. CH 20pF/50V or	CHE1JJ8CH200
	CHIP CERAMIC CAP. CH 20pF/50V	12CH200C
C 405	CHIP CERAMIC CAP. CH 6pF/50V or	CHE1JJ8CH6R0
	CHIP CERAMIC CAP. CH 6pF/50V	12CH6R0C
C 406	CHIP CERAMIC CAP. CH 20pF/50V or	CHE1JJ8CH200
	CHIP CERAMIC CAP. CH 20pF/50V	12CH200C
C 407	MYLAR CAP. K 0.056µF/50V or	1250563S
	MYLAR CAP. K 0.056µF/50V	2250563S
C 408	CHIP CERAMIC CAP. F 0.01µF/50V or	CHE1JJ80F103
	CHIP CERAMIC CAP. F 0.01µF/50V	12F3103C
C 409	CHIP CERAMIC CAP. F 0.01µF/50V or	CHE1JJ80F103
	CHIP CERAMIC CAP. F 0.01µF/50V	12F3103C
C 410	CHIP CERAMIC CAP. SL 27pF/50V or	CHE1JJ8SL270
	CHIP CERAMIC CAP. SL 27pF/50V	1270270C
C 412	CHIP CERAMIC CAP. F 0.01µF/50V or	CHE1JJ80F103
	CHIP CERAMIC CAP. F 0.01µF/50V	12F3103C
C 501	CHIP CERAMIC CAP. B 0.001µF or	12B3102C
	CHIP CERAMIC CAP. B 0.001µF	CHE1JJ80B102
C 502	ELE CAP. 2.2µF/50V (L.L) or	CE1JMAULL2R2
	ELE CAP. 2.2µF/50V (L.L)	CE1JMASLL2R2
C 503	MYLAR CAP. K 0.033µF/50V or	1250333S
	MYLAR CAP. K 0.033µF/50V	2250333S
C 504	CHIP CERAMIC CAP. B 470pF/50V or	CHE1JK80B471
	CHIP CERAMIC CAP. B 470pF/50V	12B3471C
C 506	TF CAP. J 0.1µF or	125U104S
	TF CAP. J 0.1µF	122Z309S
C 507	ELE CAP. 470µF/35V or	CE1GMZNEH471
	ELE CAP. 470µF/35V or	CE1GMZNDL471
	ELE CAP. 470µF/35V	CE1GMZPDL471
C 508	MYLAR CAP. K 0.056µF/50V or	1250563S
	MYLAR CAP. K 0.056µF/50V	2250563S
C 509	ELE CAP. 2200µF/16V or	CE1CMZNEH222
	ELE CAP. 2200µF/16V or	CE1CMZNDL222
	ELE CAP. 2200µF/16V	CE1CMZPDL222
C 510	ELE CAP. 2200µF/16V or	CE1CMZNEH222
	ELE CAP. 2200µF/16V or	CE1CMZNDL222
	ELE CAP. 2200µF/16V	CE1CMZPDL222
C 511	ELE CAP. 2.2µF/50V (L.L) or	CE1JMAULL2R2
	ELE CAP. 2.2µF/50V (L.L)	CE1JMASLL2R2
C 512	ELE CAP. 2.2µF/50V (L.L) or	CE1JMAULL2R2
	ELE CAP. 2.2µF/50V (L.L)	CE1JMASLL2R2
C 513	ELECTROLYTIC CAP. 100µF/35V	126E107S
C 551	CHIP CERAMIC CAP. B 330pF/50V or	CHE1JK80B331
	CHIP CERAMIC CAP. B 330pF/50V	12B3331C
C 552	CERAMIC CAP. 330pF/500V	CCD2JKD0B331
C 553	CERAMIC CAP. 1000pF 1KV or	CCD3AKP0B102
	CERAMIC CAP. 1000pF 1KV	6220574
C 555	P.P. CAP. 0.0022µF 1.6KV or	CBH3CJD00222
	P.P. CAP. 0.0022µF 1.6KV	1220492
C 556	P.P. CAP. 0.01µF 1.6KV or	CBH3CJD00103
	P.P. CAP. 0.01µF 1.6KV	1220500
C 557	P.P. CAP. 0.027µF 200V	122Z592
C 558	P.P. CAP. 0.47µF 200V or	122Z256

* Mylar is a registered trademark of E. I. DuPont de Nemours and Company.

Ref. No.	Description	Part No.
	P.P. CAP. 0.47µF 200V	1220511
C 559	CERAMIC CAP. 220pF 1KV or	CCD3AKP0B221
	CERAMIC CAP. 220pF 1KV	6220486
C 560	CERAMIC CAP. 390pF 2KV (BN)	CCD3DKA0B391
C 571	MYLAR CAP. K 0.068µF/50V or	1250683S
	MYLAR CAP. K 0.068µF/50V	2250683S
C 572	ELECTROLYTIC CAP. 47µF/35V	126E476S
C 573	ELECTROLYTIC CAP. 470µF/6.3V	126A477S
C 574	MYLAR CAP. K 0.068µF/50V or	1250683S
	MYLAR CAP. K 0.068µF/50V	2250683S
C 575	ELE CAP. NP 4.7µF/63V	126Y475S
C 576	ELECTROLYTIC CAP. 47µF/35V	126E476S
C 577	ELECTROLYTIC CAP. 4.7µF/100V	126H475S
C 601	CERAMIC CAP. 820pF/2KV	CCD3DKP0B821
C 603	TF CAP. J 0.1µF or	125U104S
	TF CAP. J 0.1µF	122Z309S
C 604	TF CAP. J 0.1µF or	125U104S
	TF CAP. J 0.1µF	122Z309S
C 608	TF CAP. J 0.12µF or	125U124S
	TF CAP. J 0.12µF	122Z310S
C 609	ELE CAP. 330µF/400V or	CA2H331SM001
	ELE CAP. 330µF/400V	CA2H331NC029
C 610	ELECTROLYTIC CAP. 47µF/16V	126C476S
C 611	MYLAR CAP. K 0.001µF/50V or	1250102S
	MYLAR CAP. K 0.001µF/50V	2250102S
C 612	MYLAR CAP. K 0.0033µF/50V or	1250332S
	MYLAR CAP. K 0.0033µF/50V	2250332S
C 614	CERAMIC CAP. 470pF/2KV or	CCD3DKP0B471
	CERAMIC CAP. 470pF/2KV	6220583
C 615 ⚠	LINE ACROSS CAP. 0.1µF/250V or	CA2E104MS010
	LINE ACROSS CAP. 0.1µF/250V or	CT2E104DT001
	LINE ACROSS CAP. 0.1µF/250V or	122Z181
	LINE ACROSS CAP. 0.1µF/250V	CA2E104MS005
C 616 ⚠	CERAMIC CAP. 0.01µF AC250V or	CCH2EZA0F103
	CERAMIC CAP. 0.01µF AC250V	CCD2EZA0F103
C 617 ⚠	CERAMIC CAP. 0.01µF AC250V or	CCH2EZA0F103
	CERAMIC CAP. 0.01µF AC250V	CCD2EZA0F103
C 618 ⚠	CERAMIC CAP. 0.01µF AC250V or	CCH2EZA0F103
	CERAMIC CAP. 0.01µF AC250V	CCD2EZA0F103
C 619 ⚠	CERAMIC CAP. 0.01µF AC250V or	CCH2EZA0F103
	CERAMIC CAP. 0.01µF AC250V	CCD2EZA0F103
C 620	CERAMIC CAP. 220pF/2KV or	CCD3DKP0B221
	CERAMIC CAP. 220pF/2KV	6220581
C 621	ELE CAP. 100µF/160V (105C)	CE2CMZNAA101
C 622	ELE CAP. 100µF/160V (105C) or	CA2C101NC009
	ELE CAP. 100µF/160V (105C)	CE2CMZDEH101
C 624	ELE CAP. 1000µF/35V or	CE1GMZNEH102
	ELE CAP. 1000µF/35V	CE1GMZNDL102
C 625	ELECTROLYTIC CAP. 33µF/16V	126C336S
C 627	ELE CAP. 1000µF/25V or	CE1EMZNEH102
	ELE CAP. 1000µF/25V or	CE1EMZNDL102
	ELE CAP. 1000µF/25V	CE1EMZPDL102
C 630 ⚠	CERAMIC CAP. 0.0033µF AC400V	CCN2HMP0E332
C 633	CERAMIC CAP. B 470pF/500V	CCD2JKS0B471
C 634	ELE CAP. 2200µF/16V or	CE1CMZNEH222
	ELE CAP. 2200µF/16V or	CE1CMZNDL222
	ELE CAP. 2200µF/16V	CE1CMZPDL222
C 635	ELECTROLYTIC CAP. 470µF/16V	CE1CMASTL471
C 672	CERAMIC CAP. B 0.0047µF 500V	CCD2JKD0B472
C 673	ELE CAP. 1000µF/35V	CE1GMZNTL102
C 674	ELE CAP. 33µF/250V	CE2EMZNDL330
C 675	CERAMIC CAP. 100pF/500V	CCD2JKD0B101
C 680	ELE CAP. 0.47µF/160V	CE2CMZNDLR47
C 701	ELECTROLYTIC CAP. 47µF/16V	126C476S
C 703	SEMICON CAP. K 0.068µF/25V or	CDA1EKS0X683
	SEMICON CAP. K 0.068µF/25V	12Y2683S
C 704	ELECTROLYTIC CAP. 47µF/16V	126C476S
C 721	ELECTROLYTIC CAP. 470µF/10V	126B477S
C 723	ELECTROLYTIC CAP. 4.7µF/50V	126F475S
C 724	ELECTROLYTIC CAP. 4.7µF/50V	126F475S
C 725	ELECTROLYTIC CAP. 1µF/50V	126F105S
C 801	ELECTROLYTIC CAP. 100µF/6.3V	126A107S
C 802	ELE CAP. 470µF/16V or	CE1CMZNEH471
	ELE CAP. 470µF/16V or	CE1CMZNDL471
	ELE CAP. 470µF/16V	CE1CMZPDL471
C 803	ELECTROLYTIC CAP. 100µF/6.3V	126A107S
C 804	TF CAP. J 0.1µF or	125U104S
	TF CAP. J 0.1µF	122Z309S
C 807	TF CAP. J 0.1µF or	125U104S
	TF CAP. J 0.1µF	122Z309S
C 809	ELECTROLYTIC CAP. 4.7µF/50V	126F475S
C 810	ELECTROLYTIC CAP. 47µF/16V	126C476S
C 811	ELECTROLYTIC CAP. 4.7µF/50V	126F475S
C 812	ELECTROLYTIC CAP. 4.7µF/50V	126F475S
C 813	ELECTROLYTIC CAP. 4.7µF/50V	126F475S
C 814	ELECTROLYTIC CAP. 100µF/25V	126D107S
C 816	ELE CAP. 470µF/16V or	CE1CMZNEH471
	ELE CAP. 470µF/16V or	CE1CMZNDL471
	ELE CAP. 470µF/16V	CE1CMZPDL471
C 817	ELECTROLYTIC CAP. 4.7µF/50V	126F475S
C 818	ELE CAP. 2200µF/25V	CE1EMZNTL222
C 819	CHIP CERAMIC CAP. F 0.01µF/50V or	CHE1JJ80F103
	CHIP CERAMIC CAP. F 0.01µF/50V	12F3103C
C 822	CHIP CERAMIC CAP. B 0.0068µF/50V or	CHE1JK80B682
	CHIP CERAMIC CAP. B 0.0068µF/50V	12B3682C
C 823	CHIP CERAMIC CAP. B 0.0068µF/50V or	CHE1JK80B682
	CHIP CERAMIC CAP. B 0.0068µF/50V	12B3682C
C 824	SEMICON CAP. K 0.022µF 25V or	CDA1EKS0X223
	SEMICON CAP. K 0.022µF 25V	12Y2223S
C 825	SEMICON CAP. K 0.022µF 25V or	CDA1EKS0X223
	SEMICON CAP. K 0.022µF 25V	12Y2223S
C 951	CHIP CERAMIC CAP. SL 220pF/50V or	CHE1JJ8SL221
	CHIP CERAMIC CAP. SL 220pF/50V	1270221C
CONNECTORS		
CN501	CONNECTOR BASE 5P or	J3RTC05JG001
	CONNECTOR BASE 5P or	1780168
	CONNECTOR BASE 5P or	1730812
	CONNECTOR BASE 5P	J3RTC05MY002
CN601	CONNECTOR BASE 2P or	J3RTC02JG001
	CONNECTOR BASE 2P or	1780165
	CONNECTOR BASE 2P or	1780276
	CONNECTOR BASE 2P	J3RTC02MY002
CN602	CONNECTOR BASE 2P	1740799
CN801	CONNECTOR BASE 2P or	J383C02UG002
	CONNECTOR BASE 2P	1770258
CN802	CONNECTOR BASE 2P or	J383C02UG002
	CONNECTOR BASE 2P	1770258
DIODES		
D 1	ZENER DIODE L5631	L5631
D 2	DIODE 1N4148M or	QDSZ01N4148M
	DIODE 1SS176 or	1SS176S
	DIODE 1SS133	1SS133S
D 3	DIODE 1N4148M or	QDSZ01N4148M
	DIODE 1SS176 or	1SS176S
	DIODE 1SS133	1SS133S
D 4	ZENER DIDOE UZ-7.5BS (B) or	QDSB0UZ7R5BS
	ZENER DIODE MTZJ7.5 (B)	QDSB0MTZJ7R5
D 5	ZENER DIDOE UZ-7.5BS (B) or	QDSB0UZ7R5BS
	ZENER DIODE MTZJ7.5 (B)	QDSB0MTZJ7R5
D 101	ZENER DIODE UZ-5.6BS (B) or	QDSB0UZ5R6BS
	ZENER DIODE MTZJ5.6 (B)	QDSB0MTZJ5R6
D 102	ZENER DIODE UZ-4.3BS (B) or	QDSB0UZ4R3BS

Ref. No.	Description	Part No.
	ZENER DIODE MTZJ4.3 (B)	QDSB0MTZJ4R3
D 111	LED GL5ED5	QPQZ00GL5ED5
D 171	DIODE 1N4148M or	QDSZ01N4148M
	DIODE 1SS176 or	1SS176S
	DIODE 1SS133	1SS133S
D 173	DIODE 1N4148M or	QDSZ01N4148M
	DIODE 1SS176 or	1SS176S
	DIODE 1SS133	1SS133S
D 174	DIODE 1N4148M or	QDSZ01N4148M
	DIODE 1SS176 or	1SS176S
	DIODE 1SS133	1SS133S
D 190	DIODE 1N4148M or	QDSZ01N4148M
	DIODE 1SS176 or	1SS176S
	DIODE 1SS133	1SS133S
D 191	DIODE 1N4148M or	QDSZ01N4148M
	DIODE 1SS176 or	1SS176S
	DIODE 1SS133	1SS133S
D 201	ZENER DIODE UZ-5.1BS (B) or	QDSB0UZ5R1BS
	ZENER DIODE MTZJ5.1 (B)	QDSB0MTZJ5R1
D 251	DIODE 1N4148M or	QDSZ01N4148M
	DIODE 1SS176 or	1SS176S
	DIODE 1SS133	1SS133S
D 252	ZENER DIODE UZ-11BS (B) or	QDSB00UZ11BS
	ZENER DIODE MTZJ11 (B)	QDSB00MTZJ11
D 253	DIODE 1N4148M or	QDSZ01N4148M
	DIODE 1SS176 or	1SS176S
	DIODE 1SS133	1SS133S
D 254	DIODE 1N4148M or	QDSZ01N4148M
	DIODE 1SS176 or	1SS176S
	DIODE 1SS133	1SS133S
D 255	ZENER DIODE UZ-6.8BS (B) or	QDSB0UZ6R2BS
	ZENER DIODE MTZJ6.8 (B)	QDSB0MTZJ6R2
D 256	DIODE 1N4148M or	QDSZ01N4148M
	DIODE 1SS176 or	1SS176S
	DIODE 1SS133	1SS133S
D 257	ZENER DIODE UZ-24BS (B) or	QDSB00UZ24BS
	ZENER DIODE MTZJ24 (B)	QDSB00MTZJ24
D 301	DIODE 1N4148M or	QDSZ01N4148M
	DIODE 1SS176 or	1SS176S
	DIODE 1SS133	1SS133S
D 331	ZENER DIODE UZ-9.1BS (C) or	QDSC0UZ9R1BS
	ZENER DIODE MTZJ9.1 (C)	QDSC0MTZJ9R1
D 351	DIODE 1N4148M or	QDSZ01N4148M
	DIODE 1SS176 or	1SS176S
	DIODE 1SS133	1SS133S
D 501	ZENER DIDOE UZ-7.5BS (B) or	QDSB0UZ7R5BS
	ZENER DIODE MTZJ7.5 (B)	QDSB0MTZJ7R5
D 502	DIODE ERA15-02KFRB	QDNZ0ERA1502
D 551	DIODE ERD07-15L	QD4ZERD0715L
D 552	DIODE ERD28-04L	QCPZERD2804L
D 571	DIODE 1N4148M or	QDSZ01N4148M
	DIODE 1SS176 or	1SS176S
	DIODE 1SS133	1SS133S
D 572	ZENER DIODE UZ-15BS (B) or	QDSB00UZ15BS
	ZENER DIODE MTZJ15	QDSB00MTZJ15
D 573	ZENER DIODE UZ-6.8BS (B) or	QDSB0UZ6R2BS
	ZENER DIODE MTZJ6.8 (B)	QDSB0MTZJ6R2
D 574	DIODE 1N4148M or	QDSZ01N4148M
	DIODE 1SS176 or	1SS176S
	DIODE 1SS133	1SS133S
D 575	DIODE 1N4148M or	QDSZ01N4148M
	DIODE 1SS176 or	1SS176S
	DIODE 1SS133	1SS133S
D 601	ZENER DIODE UZ-15BS (B) or	QDSB00UZ15BS
	ZENER DIODE MTZJ15	QDSB00MTZJ15
D 602	DIODE 1N4148M or	QDSZ01N4148M

Ref. No.	Description	Part No.
	DIODE 1SS176 or	1SS176S
	DIODE 1SS133	1SS133S
D 605	ZENER DIDOE UZ-7.5BS (B) or	QDSB0UZ7R5BS
	ZENER DIODE MTZJ7.5 (B)	QDSB0MTZJ7R5
D 606	DIODE 1N4148M or	QDSZ01N4148M
	DIODE 1SS176 or	1SS176S
	DIODE 1SS133	1SS133S
D 607	DIODE 1N4148M or	QDSZ01N4148M
	DIODE 1SS176 or	1SS176S
	DIODE 1SS133	1SS133S
D 611	DIODE ERC01-10L22	AERC0110L220
D 612	DIODE ERC01-10L22	AERC0110L220
D 613	DIODE ERC01-10L22	AERC0110L220
D 614	DIODE ERC01-10L22	AERC0110L220
D 615	DIODE ESAC39M-06C	QD4ZAC39M06C
D 616	DIODE 1Z150 (LC6)	QD4Z0001Z150
D 619	DIDOE ERC30-02L38	AERC3002L300
D 620	DIODE 1N4148M or	QDSZ01N4148M
	DIODE 1SS176 or	1SS176S
	DIODE 1SS133	1SS133S
D 622	DIODE ERB44-04L3	QDQZ0ERB4404
D 623	DIODE 1N4148M or	QDSZ01N4148M
	DIODE 1SS176 or	1SS176S
	DIODE 1SS133	1SS133S
D 624	ZENER DIODE UZ-4.3BS (B) or	QDSB0UZ4R3BS
	ZENER DIODE MTZJ4.3 (B)	QDSB0MTZJ4R3
D 625	DIODE GMB01U	GMB01U
D 626	DIODE GMB01U	GMB01U
D 627	ZENER DIODE UZ-6.8BS (B) or	QDSB0UZ6R2BS
	ZENER DIODE MTZJ6.8 (B)	QDSB0MTZJ6R2
D 628	DIODE ERB44-04L3	QDQZ0ERB4404
D 629	ZENER DIODE UZ-12BS (B) or	QDSB00UZ12BS
	ZENER DIODE MTZJ12 (B)	QDSB00MTZJ12
D 630	DIODE 1N4148M or	QDSZ01N4148M
	DIODE 1SS176 or	1SS176S
	DIODE 1SS133	1SS133S
D 631	DIODE 1N4148M or	QDSZ01N4148M
	DIODE 1SS176 or	1SS176S
	DIODE 1SS133	1SS133S
D 671	DIODE ERB44-04L3	QDQZ0ERB4404
D 672	ZENER DIODE UZ-20BS (B) or	QDSB00UZ20BS
	ZENER DIODE MTZJ20 (B)	QDSB00MTZJ20
D 673	ZENER DIODE UZ-20BS (C) or	QDSC00UZ20BS
	ZENER DIODE MTZJ20 (C)	QDSC00MTZJ20
D 674	DIODE ERB44-04L3	QDQZ0ERB4404
D 680	DIODE 1N4148M or	QDSZ01N4148M
	DIODE 1SS176 or	1SS176S
	DIODE 1SS133	1SS133S
D 682	ZENER DIODE UZ-15BS (B) or	QDSB00UZ15BS
	ZENER DIODE MTZJ15	QDSB00MTZJ15
D 684	DIODE 1N4148M or	QDSZ01N4148M
	DIODE 1SS176 or	1SS176S
	DIODE 1SS133	1SS133S
D 701	DIODE 1N4148M or	QDSZ01N4148M
	DIODE 1SS176 or	1SS176S
	DIODE 1SS133	1SS133S
D 702	DIODE 1N4148M or	QDSZ01N4148M
	DIODE 1SS176 or	1SS176S
	DIODE 1SS133	1SS133S
D 703	DIODE 1N4148M or	QDSZ01N4148M
	DIODE 1SS176 or	1SS176S
	DIODE 1SS133	1SS133S
D 704	DIODE 1N4148M or	QDSZ01N4148M
	DIODE 1SS176 or	1SS176S
	DIODE 1SS133	1SS133S
D 705	ZENER DIODE UZ-12BS (B) or	QDSB00UZ12BS

Ref. No.	Description	Part No.
	ZENER DIODE MTZJ12 (B)	QDSB00MTZJ12
D 706	ZENER DIODE UZ-12BS (B) or	QDSB00UZ12BS
	ZENER DIODE MTZJ12 (B)	QDSB00MTZJ12
D 731	ZENER DIODE UZ-12BS (B) or	QDSB00UZ12BS
	ZENER DIODE MTZJ12 (B)	QDSB00MTZJ12
D 801	DIODE 1N4148M or	QDSZ01N4148M
	DIODE 1SS176 or	1SS176S
	DIODE 1SS133	1SS133S
D 951	DIODE 1N4148M or	QDSZ01N4148M
	DIODE 1SS176 or	1SS176S
	DIODE 1SS133	1SS133S
D 952	DIODE 1N4148M or	QDSZ01N4148M
	DIODE 1SS176 or	1SS176S
	DIODE 1SS133	1SS133S
D 953	DIODE 1N4148M or	QDSZ01N4148M
	DIODE 1SS176 or	1SS176S
	DIODE 1SS133	1SS133S
D 954	DIODE 1N4148M or	QDSZ01N4148M
	DIODE 1SS176 or	1SS176S
	DIODE 1SS133	1SS133S
D 955	DIODE 1N4148M or	QDSZ01N4148M
	DIODE 1SS176 or	1SS176S
	DIODE 1SS133	1SS133S
D 956	DIODE 1N4148M or	QDSZ01N4148M
	DIODE 1SS176 or	1SS176S
	DIODE 1SS133	1SS133S
ICS		
IC101	IC TMP47C634AN-R584	QSMQA0ZTS045
IC102	IC AT24C01A-10PC or	NSMMA0ZAZ003
	IC 24LC01B/P or	NSMMA0SMH002
	IC X24C01AP or	NSMMA0SXC002
	IC ST24C01B1	NSMMA0ZSS002
IC201	IC M52313SP	QSBLA0SMB011
IC301	IC TA8759BN	QSBLB0ZTS042
IC501	IC AN5521	14LN468
IC601 ⚠	PHOTO COUPLER PC120	QPEZ00PC120F
IC701	IC TC4053BP or	14DW168
	IC MC14053BCP or	14D0168
	IC NJU4053BD	14D0436
IC801	IC uPC1406HA	14LV233
IC802	IC LA4261	14L0046
IC963	IC KIA78S05P or	NSBLA0ZJY026
	IC AN78L05	AN78L05
COILS		
L 171	MICRO INDUCTOR 39µH J or	LLAXJDSKA390
	MICRO INDUCTOR 39µH J	2164390S
L 201	MICRO INDUCTOR 1.0µH K or	LLAXKDSKA1R0
	MICRO INDUCTOR 1.0µH K	2165109S
L 202	MICRO INDUCTOR 2.2µH K or	LLAXKDSKA2R2
	MICRO INDUCTOR 2.2µH K	2165229S
L 212	MICRO INDUCTOR 10µH K or	LLAXKDSKA100
	MICRO INDUCTOR 10µH K	2165100S
L 213	MICRO INDUCTOR 8.2µH K or	LLAXKDSKA8R2
	MICRO INDUCTOR 8.2µH K	2165829S
L 301	MICRO INDUCTOR 8.2µH K or	LLAXKDSKA8R2
	MICRO INDUCTOR 8.2µH K	2165829S
L 351	MICRO INDUCTOR 68µH K or	LLAXKDSKA680
	MICRO INDUCTOR 68µH K	2165680S
L 352	MICRO INDUCTOR 33µH K or	LLAXKDSKA330
	MICRO INDUCTOR 33µH K	2165330S
L 353	MICRO INDUCTOR 68µH K or	LLAXKDSKA680
	MICRO INDUCTOR 68µH K	2165680S
L 381	MICRO INDUCTOR 15µH K or	LLAXKDSKA150
	MICRO INDUCTOR 15µH K	2165150S
L 382	MICRO INDUCTOR 22µH K or	LLAXKDSKA220
	MICRO INDUCTOR 22µH K	2165220S

Ref. No.	Description	Part No.
L 501	CHOKE COIL	117N696
L 552	LINEARITY COIL	LLBD00ZMS002
L 601 ⚠	LINE FILTER	LLBG00ZMS012
L 602	POT TYPE COIL 47µH or	LLARZGZSF470
	POT TYPE COIL 47µH	LLBD**DMM001
T 211	CASING COIL	LFA07V0MM041
T 212	CASING COIL or	LFA07V0MM044
	CASING COIL	LFA07V0SF099
T 213	CASING COIL or	LFA07V0MM043
	CASING COIL	LFA07V0SF098
T 214	CASING COIL or	LFA07V0MM042
	CASING COIL	LFA07V0SF096
T 301	CASING COIL or	LFA07V0MM029
	CASING COIL	LFA07V0SF100
T 401	CASING COIL or	LFA07V0MM031
	CASING COIL or	LFA07V0SF103
	CASING COIL	LFA07V0SF108
T 402	CASING COIL or	LFA07V0MM031
	CASING COIL or	LFA07V0SF103
	CASING COIL	LFA07V0SF108
T 403	CASING COIL or	LFA07V0MM030
	CASING COIL or	LFA07V0SF102
	CASING COIL	LFA07V0SF107
T 404	CASING COIL or	LFA07V0MM032
	CASING COIL or	LFA07V0SF101
	CASING COIL	LFA07V0SF106
TRANSISTORS		
Q 1	TRANSISTOR KTC3198 (GR) or	NQS10KTC3198
	TRANSISTOR KTC3199 (GR) or	NQS10KTC3199
	TRANSISTOR 2SC3331 (T) or	QSC3331TNPAA
	TRANSISTOR 2SC3331 (U) or	QSC3331UNPAA
	TRANSISTOR 2SC1815 (GR)	QQS102SC1815
Q 2	TRANSISTOR KTA1266 (GR) or	NQS40KTA1266
	TRANSISTOR KTA1267 (GR) or	NQS10KTA1267
	TRANSISTOR 2SA1318 (T) or	2SA1318TZ
	TRANSISTOR 2SA1318 (U) or	2SA1318UZ
	TRANSISTOR 2SA1015 (GR)	QQS102SA1015
Q 3	TRANSISTOR 2SA1318 (T) or	2SA1318TZ
	TRANSISTOR 2SA1318 (U) or	2SA1318UZ
	TRANSISTOR 2SA1015 (GR)	QQS102SA1015
Q 4	TRANSISTOR 2SA1318 (T) or	2SA1318TZ
	TRANSISTOR 2SA1318 (U) or	2SA1318UZ
	TRANSISTOR 2SA1015 (GR)	QQS102SA1015
Q 101	TRANSISTOR KTC3198 (GR) or	NQS10KTC3198
	TRANSISTOR KTC3199 (GR) or	NQS10KTC3199
	TRANSISTOR 2SC3331 (T) or	QSC3331TNPAA
	TRANSISTOR 2SC3331 (U) or	QSC3331UNPAA
	TRANSISTOR 2SC1815 (GR)	QQS102SC1815
Q 102	TRANSISTOR KTA1266 (GR) or	NQS40KTA1266
	TRANSISTOR KTA1267 (GR) or	NQS10KTA1267
	TRANSISTOR 2SA1318 (T) or	2SA1318TZ
	TRANSISTOR 2SA1318 (U) or	2SA1318UZ
	TRANSISTOR 2SA1015 (GR)	QQS102SA1015
Q 103	TRANSISTOR KTC3198 (GR) or	NQS10KTC3198
	TRANSISTOR KTC3199 (GR) or	NQS10KTC3199
	TRANSISTOR 2SC3331 (T) or	QSC3331TNPAA
	TRANSISTOR 2SC3331 (U) or	QSC3331UNPAA
	TRANSISTOR 2SC1815 (GR)	QQS102SC1815
Q 104	TRANSISTOR KTA1266 (GR) or	NQS40KTA1266
	TRANSISTOR KTA1267 (GR) or	NQS10KTA1267
	TRANSISTOR 2SA1318 (T) or	2SA1318TZ
	TRANSISTOR 2SA1318 (U) or	2SA1318UZ
	TRANSISTOR 2SA1015 (GR)	QQS102SA1015
Q 105	TRANSISTOR KTC3198 (GR) or	NQS10KTC3198
	TRANSISTOR KTC3199 (GR) or	NQS10KTC3199
	TRANSISTOR 2SC3331 (T) or	QSC3331TNPAA

Ref. No.	Description	Part No.
	TRANSISTOR 2SC3331 (U) or	QSC3331UNPAA
	TRANSISTOR 2SC1815 (GR)	QQS102SC1815
Q 106	TRANSISTOR KTA1266 (GR) or	NQS40KTA1266
	TRANSISTOR KTA1267 (GR) or	NQS10KTA1267
	TRANSISTOR 2SA1318 (T) or	2SA1318TZ
	TRANSISTOR 2SA1318 (U) or	2SA1318UZ
	TRANSISTOR 2SA1015 (GR)	QQS102SA1015
Q 121	TRANSISTOR KTC3198 (GR) or	NQS10KTC3198
	TRANSISTOR KTC3199 (GR) or	NQS10KTC3199
	TRANSISTOR 2SC3331 (T) or	QSC3331TNPAA
	TRANSISTOR 2SC3331 (U) or	QSC3331UNPAA
	TRANSISTOR 2SC1815 (GR)	QQS102SC1815
Q 122	TRANSISTOR KTC3198 (GR) or	NQS10KTC3198
	TRANSISTOR KTC3199 (GR) or	NQS10KTC3199
	TRANSISTOR 2SC3331 (T) or	QSC3331TNPAA
	TRANSISTOR 2SC3331 (U) or	QSC3331UNPAA
	TRANSISTOR 2SC1815 (GR)	QQS102SC1815
Q 123	TRANSISTOR KTC3198 (GR) or	NQS10KTC3198
	TRANSISTOR KTC3199 (GR) or	NQS10KTC3199
	TRANSISTOR 2SC3331 (T) or	QSC3331TNPAA
	TRANSISTOR 2SC3331 (U) or	QSC3331UNPAA
	TRANSISTOR 2SC1815 (GR)	QQS102SC1815
Q 125	TRANSISTOR KTC3198 (GR) or	NQS10KTC3198
	TRANSISTOR KTC3199 (GR) or	NQS10KTC3199
	TRANSISTOR 2SC3331 (T) or	QSC3331TNPAA
	TRANSISTOR 2SC3331 (U) or	QSC3331UNPAA
	TRANSISTOR 2SC1815 (GR)	QQS102SC1815
Q 126	TRANSISTOR KTA1266 (GR) or	NQS40KTA1266
	TRANSISTOR KTA1267 (GR) or	NQS10KTA1267
	TRANSISTOR 2SA1318 (T) or	2SA1318TZ
	TRANSISTOR 2SA1318 (U) or	2SA1318UZ
	TRANSISTOR 2SA1015 (GR)	QQS102SA1015
Q 127	TRANSISTOR KTC3198 (GR) or	NQS10KTC3198
	TRANSISTOR KTC3199 (GR) or	NQS10KTC3199
	TRANSISTOR 2SC3331 (T) or	QSC3331TNPAA
	TRANSISTOR 2SC3331 (U) or	QSC3331UNPAA
	TRANSISTOR 2SC1815 (GR)	QQS102SC1815
Q 201	TRANSISTOR 2SC3000 (D) or	2SC3000DZ
	TRANSISTOR 2SC3000 (E)	2SC3000EZ
Q 223	TRANSISTOR KTA1266 (GR) or	NQS40KTA1266
	TRANSISTOR KTA1267 (GR) or	NQS10KTA1267
	TRANSISTOR 2SA1318 (T) or	2SA1318TZ
	TRANSISTOR 2SA1318 (U) or	2SA1318UZ
	TRANSISTOR 2SA1015 (GR)	QQS102SA1015
Q 224	TRANSISTOR KTC3198 (GR) or	NQS10KTC3198
	TRANSISTOR KTC3199 (GR) or	NQS10KTC3199
	TRANSISTOR 2SC3331 (T) or	QSC3331TNPAA
	TRANSISTOR 2SC3331 (U) or	QSC3331UNPAA
	TRANSISTOR 2SC1815 (GR)	QQS102SC1815
Q 251	TRANSISTOR KTC3198 (GR) or	NQS10KTC3198
	TRANSISTOR KTC3199 (GR) or	NQS10KTC3199
	TRANSISTOR 2SC3331 (T) or	QSC3331TNPAA
	TRANSISTOR 2SC3331 (U) or	QSC3331UNPAA
	TRANSISTOR 2SC1815 (GR)	QQS102SC1815
Q 301	TRANSISTOR KTC3198 (GR) or	NQS10KTC3198
	TRANSISTOR KTC3199 (GR) or	NQS10KTC3199
	TRANSISTOR 2SC3331 (T) or	QSC3331TNPAA
	TRANSISTOR 2SC3331 (U) or	QSC3331UNPAA
	TRANSISTOR 2SC1815 (GR)	QQS102SC1815
Q 391	TRANSISTOR KTC3198 (GR) or	NQS10KTC3198
	TRANSISTOR KTC3199 (GR) or	NQS10KTC3199
	TRANSISTOR 2SC3331 (T) or	QSC3331TNPAA
	TRANSISTOR 2SC3331 (U) or	QSC3331UNPAA
	TRANSISTOR 2SC1815 (GR)	QQS102SC1815
Q 392	TRANSISTOR KTC3198 (GR) or	NQS10KTC3198
	TRANSISTOR KTC3199 (GR) or	NQS10KTC3199

Ref. No.	Description	Part No.
	TRANSISTOR 2SC3331 (T) or	QSC3331TNPAA
	TRANSISTOR 2SC3331 (U) or	QSC3331UNPAA
	TRANSISTOR 2SC1815 (GR)	QQS102SC1815
Q 393	TRANSISTOR KTA1266 (GR) or	NQS40KTA1266
	TRANSISTOR KTA1267 (GR) or	NQS10KTA1267
	TRANSISTOR 2SA1318 (T) or	2SA1318TZ
	TRANSISTOR 2SA1318 (U) or	2SA1318UZ
	TRANSISTOR 2SA1015 (GR)	QQS102SA1015
Q 394	TRANSISTOR KTA1266 (GR) or	NQS40KTA1266
	TRANSISTOR KTA1267 (GR) or	NQS10KTA1267
	TRANSISTOR 2SA1318 (T) or	2SA1318TZ
	TRANSISTOR 2SA1318 (U) or	2SA1318UZ
	TRANSISTOR 2SA1015 (GR)	QQS102SA1015
Q 395	TRANSISTOR KTC3198 (GR) or	NQS10KTC3198
	TRANSISTOR KTC3199 (GR) or	NQS10KTC3199
	TRANSISTOR 2SC3331 (T) or	QSC3331TNPAA
	TRANSISTOR 2SC3331 (U) or	QSC3331UNPAA
	TRANSISTOR 2SC1815 (GR)	QQS102SC1815
Q 396	TRANSISTOR KTC3198 (GR) or	NQS10KTC3198
	TRANSISTOR KTC3199 (GR) or	NQS10KTC3199
	TRANSISTOR 2SC3331 (T) or	QSC3331TNPAA
	TRANSISTOR 2SC3331 (U) or	QSC3331UNPAA
	TRANSISTOR 2SC1815 (GR)	QQS102SC1815
Q 397	TRANSISTOR KTC3198 (GR) or	NQS10KTC3198
	TRANSISTOR KTC3199 (GR) or	NQS10KTC3199
	TRANSISTOR 2SC3331 (T) or	QSC3331TNPAA
	TRANSISTOR 2SC3331 (U) or	QSC3331UNPAA
	TRANSISTOR 2SC1815 (GR)	QQS102SC1815
Q 551	TRANSISTOR 2SC2271 (D) or	2SC2271DZ
	TRANSISTOR 2SC2271 (E) or	2SC2271EZ
	TRANSISTOR 2SC2482	QQSZ02SC2482
Q 552	TRANSISTOR 2SD1886CA	Q2SD1886CA※※
Q 571	TRANSISTOR KTC3198 (GR) or	NQS10KTC3198
	TRANSISTOR KTC3199 (GR) or	NQS10KTC3199
	TRANSISTOR 2SC3331 (T) or	QSC3331TNPAA
	TRANSISTOR 2SC3331 (U) or	QSC3331UNPAA
	TRANSISTOR 2SC1815 (GR)	QQS102SC1815
Q 572	TRANSISTOR KTA1266 (GR) or	NQS40KTA1266
	TRANSISTOR KTA1267 (GR) or	NQS10KTA1267
	TRANSISTOR 2SA1318 (T) or	2SA1318TZ
	TRANSISTOR 2SA1318 (U) or	2SA1318UZ
	TRANSISTOR 2SA1015 (GR)	QQS102SA1015
Q 573	TRANSISTOR 2SD1407 (O) or	QQQ002SD1407
	TRANSISTOR 2SD1407 (Y)	QQQY02SD1407
Q 601	FET 2SK1464	QF4Z02SK1464
Q 602	TRANSISTOR KTC3198 (GR) or	NQS10KTC3198
	TRANSISTOR KTC3199 (GR) or	NQS10KTC3199
	TRANSISTOR 2SC3331 (T) or	QSC3331TNPAA
	TRANSISTOR 2SC3331 (U) or	QSC3331UNPAA
	TRANSISTOR 2SC1815 (GR)	QQS102SC1815
Q 603	TRANSISTOR KTC3198 (GR) or	NQS10KTC3198
	TRANSISTOR KTC3199 (GR) or	NQS10KTC3199
	TRANSISTOR 2SC3331 (T) or	QSC3331TNPAA
	TRANSISTOR 2SC3331 (U) or	QSC3331UNPAA
	TRANSISTOR 2SC1815 (GR)	QQS102SC1815
Q 604	TRANSISTOR 2SB698 (F) or	QQSF002SB698
	TRANSISTOR 2SB698 (G) or	QQSG002SB698
	TRANSISTOR 2SA950 (Y)	Q2SA950YTPE2
Q 607	TRANSISTOR 2SC2271 (D) or	2SC2271DZ
	TRANSISTOR 2SC2271 (E) or	2SC2271EZ
	TRANSISTOR 2SC2482	QQSZ02SC2482
Q 608	TRANSISTOR 2SC2271 (D) or	2SC2271DZ
	TRANSISTOR 2SC2271 (E) or	2SC2271EZ
	TRANSISTOR 2SC2482	QQSZ02SC2482
Q 609	TRANSISTOR 2SC2271 (D) or	2SC2271DZ
	TRANSISTOR 2SC2271 (E) or	2SC2271EZ

Ref. No.	Description	Part No.
	TRANSISTOR 2SC2482	QQSZ02SC2482
Q 610	TRANSISTOR 2SB1274 (R) or	Q2SB1274R000
	TRANSISTOR 2SB1274 (S)	Q2SB1274S000
Q 611	TRANSISTOR KTC3198 (GR) or	NQS10KTC3198
	TRANSISTOR KTC3199 (GR) or	NQS10KTC3199
	TRANSISTOR 2SC3331 (T) or	QSC3331TNPAA
	TRANSISTOR 2SC3331 (U) or	QSC3331UNPAA
	TRANSISTOR 2SC1815 (GR)	QQS102SC1815
Q 612	TRANSISTOR 2SD1682 (S) or	QQ3S02SD1682
	TRANSISTOR 2SD1682 (T)	QQ3T02SD1682
Q 702	TRANSISTOR KTC3198 (GR) or	NQS10KTC3198
	TRANSISTOR KTC3199 (GR) or	NQS10KTC3199
	TRANSISTOR 2SC3331 (T) or	QSC3331TNPAA
	TRANSISTOR 2SC3331 (U) or	QSC3331UNPAA
	TRANSISTOR 2SC1815 (GR)	QQS102SC1815
Q 703	TRANSISTOR KTC3198 (GR) or	NQS10KTC3198
	TRANSISTOR KTC3199 (GR) or	NQS10KTC3199
	TRANSISTOR 2SC3331 (T) or	QSC3331TNPAA
	TRANSISTOR 2SC3331 (U) or	QSC3331UNPAA
	TRANSISTOR 2SC1815 (GR)	QQS102SC1815
Q 705	TRANSISTOR KTC3198 (GR) or	NQS10KTC3198
	TRANSISTOR KTC3199 (GR) or	NQS10KTC3199
	TRANSISTOR 2SC3331 (T) or	QSC3331TNPAA
	TRANSISTOR 2SC3331 (U) or	QSC3331UNPAA
	TRANSISTOR 2SC1815 (GR)	QQS102SC1815
Q 721	TRANSISTOR KTA1266 (GR) or	NQS40KTA1266
	TRANSISTOR KTA1267 (GR) or	NQS10KTA1267
	TRANSISTOR 2SA1318 (T) or	2SA1318TZ
	TRANSISTOR 2SA1318 (U) or	2SA1318UZ
	TRANSISTOR 2SA1015 (GR)	QQS102SA1015
Q 802	TRANSISTOR KTC3198 (GR) or	NQS10KTC3198
	TRANSISTOR KTC3199 (GR) or	NQS10KTC3199
	TRANSISTOR 2SC3331 (T) or	QSC3331TNPAA
	TRANSISTOR 2SC3331 (U) or	QSC3331UNPAA
	TRANSISTOR 2SC1815 (GR)	QQS102SC1815
Q 804	TRANSISTOR KTC3198 (GR) or	NQS10KTC3198
	TRANSISTOR KTC3199 (GR) or	NQS10KTC3199
	TRANSISTOR 2SC3331 (T) or	QSC3331TNPAA
	TRANSISTOR 2SC3331 (U) or	QSC3331UNPAA
	TRANSISTOR 2SC1815 (GR)	QQS102SC1815
Q 952	TRANSISTOR KTC3198 (GR) or	NQS10KTC3198
	TRANSISTOR KTC3199 (GR) or	NQS10KTC3199
	TRANSISTOR 2SC3331 (T) or	QSC3331TNPAA
	TRANSISTOR 2SC3331 (U) or	QSC3331UNPAA
	TRANSISTOR 2SC1815 (GR)	QQS102SC1815

RESISTORS

R 1	CHIP RES. 1/10W 10K Ω or	RRXAJR8Z0103
	CHIP RES. 1/10W 10K Ω	134F103C
R 2	CHIP RES. 1/10W 22K Ω or	RRXAJR8Z0223
	CHIP RES. 1/10W 22K Ω	134F223C
R 3	CHIP RES. 1/10W 22K Ω or	RRXAJR8Z0223
	CHIP RES. 1/10W 22K Ω	134F223C
R 4	CHIP RES. 1/10W 15K Ω or	RRXAJR8Z0153
	CHIP RES. 1/10W 15K Ω	134F153C
R 5	CHIP RES. 1/10W 15K Ω or	RRXAJR8Z0153
	CHIP RES. 1/10W 15K Ω	134F153C
R 6	CHIP RES. 1/10W 22K Ω or	RRXAJR8Z0223
	CHIP RES. 1/10W 22K Ω	134F223C
R 7	CHIP RES. 1/10W 22K Ω or	RRXAJR8Z0223
	CHIP RES. 1/10W 22K Ω	134F223C
R 8	CHIP RES. 1/10W 22K Ω or	RRXAJR8Z0223
	CHIP RES. 1/10W 22K Ω	134F223C
R 9	CHIP RES. 1/10W 22K Ω or	RRXAJR8Z0223
	CHIP RES. 1/10W 22K Ω	134F223C
R 10	CHIP RES. 1/10W 22K Ω or	RRXAJR8Z0223
	CHIP RES. 1/10W 22K Ω	134F223C

Ref. No.	Description	Part No.
R 11	CHIP RES. 1/10W 3.3K Ω or	RRXAJR8Z0332
	CHIP RES. 1/10W 3.3K Ω	134F332C
R 12	CHIP RES. 1/10W 3.3K Ω or	RRXAJR8Z0332
	CHIP RES. 1/10W 3.3K Ω	134F332C
R 13	CHIP RES. 1/10W 5.6K Ω or	RRXAJR8Z0562
	CHIP RES. 1/10W 5.6K Ω	134F562C
R 14	CHIP RES. 1/10W 5.6K Ω or	RRXAJR8Z0562
	CHIP RES. 1/10W 5.6K Ω	134F562C
R 15	CHIP RES. 1/10W 22K Ω or	RRXAJR8Z0223
	CHIP RES. 1/10W 22K Ω	134F223C
R 16	CHIP RES. 1/10W 10K Ω or	RRXAJR8Z0103
	CHIP RES. 1/10W 10K Ω	134F103C
R 17	CHIP RES. 1/10W 4.7 Ω or	RRXAJR8Z04R7
	CHIP RES. 1/10W 4.7 Ω	134F479C
R 18	CHIP RES. 1/10W 0 Ω or	RRXAJR8Z0000
	CHIP RES. 1/10W 0 Ω	134F000C
R 101	CARBON RES. 1/4W 10 Ω	RCX4JASZ0100
R 102	CARBON RES. 1/4W 330 Ω	RCX4JASZ0331
R 103	CHIP RES. 1/10W 1K Ω or	RRXAJR8Z0102
	CHIP RES. 1/10W 1K Ω	134F102C
R 104	CHIP RES. 1/10W 1K Ω or	RRXAJR8Z0102
	CHIP RES. 1/10W 1K Ω	134F102C
R 105	CHIP RES. 1/10W 1K Ω or	RRXAJR8Z0102
	CHIP RES. 1/10W 1K Ω	134F102C
R 106	CHIP RES. 1/10W 8.2K Ω or	RRXAJR8Z0822
	CHIP RES. 1/10W 8.2K Ω	134F822C
R 107	CHIP RES. 1/10W 10K Ω or	RRXAJR8Z0103
	CHIP RES. 1/10W 10K Ω	134F103C
R 108	CHIP RES. 1/10W 10K Ω or	RRXAJR8Z0103
	CHIP RES. 1/10W 10K Ω	134F103C
R 109	CHIP RES. 1/10W 4.7K Ω or	RRXAJR8Z0472
	CHIP RES. 1/10W 4.7K Ω	134F472C
R 110	CARBON RES. 1/4W 1K Ω	RCX4JASZ0102
R 111	CHIP RES. 1/10W 22K Ω or	RRXAJR8Z0223
	CHIP RES. 1/10W 22K Ω	134F223C
R 112	CHIP RES. 1/10W 22K Ω or	RRXAJR8Z0223
	CHIP RES. 1/10W 22K Ω	134F223C
R 113	CHIP RES. 1/10W 220 Ω or	RRXAJR8Z0221
	CHIP RES. 1/10W 220 Ω	134F221C
R 114	CHIP RES. 1/10W 220 Ω or	RRXAJR8Z0221
	CHIP RES. 1/10W 220 Ω	134F221C
R 115	CHIP RES. 1/10W 100K Ω or	RRXAJR8Z0104
	CHIP RES. 1/10W 100K Ω	134F104C
R 116	CHIP RES. 1/10W 10K Ω or	RRXAJR8Z0103
	CHIP RES. 1/10W 10K Ω	134F103C
R 117	CHIP RES. 1/10W 22K Ω or	RRXAJR8Z0223
	CHIP RES. 1/10W 22K Ω	134F223C
R 118	CHIP RES. 1/10W 4.7K Ω or	RRXAJR8Z0472
	CHIP RES. 1/10W 4.7K Ω	134F472C
R 119	CARBON RES. 1/4W 10K Ω	RCX4JASZ0103
R 121	CHIP RES. 1/10W 22K Ω or	RRXAJR8Z0223
	CHIP RES. 1/10W 22K Ω	134F223C
R 122	CHIP RES. 1/10W 10K Ω or	RRXAJR8Z0103
	CHIP RES. 1/10W 10K Ω	134F103C
R 123	CHIP RES. 1/10W 1K Ω or	RRXAJR8Z0102
	CHIP RES. 1/10W 1K Ω	134F102C
R 124	CHIP RES. 1/10W 47K Ω or	RRXAJR8Z0473
	CHIP RES. 1/10W 47K Ω	134F473C
R 125	CHIP RES. 1/10W 47K Ω or	RRXAJR8Z0473
	CHIP RES. 1/10W 47K Ω	134F473C
R 127	CHIP RES. 1/10W 10K Ω or	RRXAJR8Z0103
	CHIP RES. 1/10W 10K Ω	134F103C
R 128	CHIP RES. 1/10W 100 Ω or	RRXAJR8Z0101
	CHIP RES. 1/10W 100 Ω	134F101C
R 130	CHIP RES. 1/10W 82K Ω or	RRXAJR8Z0823
	CHIP RES. 1/10W 82K Ω	134F823C

Ref. No.	Description	Part No.
R 133	CHIP RES. 1/10W 22K Ω or	RRXAJR8Z0223
	CHIP RES. 1/10W 22K Ω	134F223C
R 135	CHIP RES. 1/10W 2.2K Ω or	RRXAJR8Z0222
	CHIP RES. 1/10W 2.2K Ω	134F222C
R 136	CHIP RES. 1/10W 10K Ω or	RRXAJR8Z0103
	CHIP RES. 1/10W 10K Ω	134F103C
R 137	CARBON RES. 1/4W 220 Ω	RCX4JASZ0221
R 138	CHIP RES. 1/10W 220 Ω or	RRXAJR8Z0221
	CHIP RES. 1/10W 220 Ω	134F221C
R 139	CHIP RES. 1/10W 22K Ω or	RRXAJR8Z0223
	CHIP RES. 1/10W 22K Ω	134F223C
R 140	CHIP RES. 1/10W 1K Ω or	RRXAJR8Z0102
	CHIP RES. 1/10W 1K Ω	134F102C
R 145	CHIP RES. 1/10W 22K Ω or	RRXAJR8Z0223
	CHIP RES. 1/10W 22K Ω	134F223C
R 146	CHIP RES. 1/10W 22K Ω or	RRXAJR8Z0223
	CHIP RES. 1/10W 22K Ω	134F223C
R 147	CARBON RES. 1/4W 220 Ω	RCX4JASZ0221
R 148	CARBON RES. 1/4W 680 Ω	RCX4JASZ0681
R 149	CHIP RES. 1/10W 22K Ω or	RRXAJR8Z0223
	CHIP RES. 1/10W 22K Ω	134F223C
R 150	CHIP RES. 1/10W 18K Ω or	RRXAJR8Z0183
	CHIP RES. 1/10W 18K Ω	134F183C
R 152	CHIP RES. 1/10W 3.9K Ω or	RRXAJR8Z0392
	CHIP RES. 1/10W 3.9K Ω	134F392C
R 153	CHIP RES. 1/10W 4.7K Ω or	RRXAJR8Z0472
	CHIP RES. 1/10W 4.7K Ω	134F472C
R 154	CHIP RES. 1/10W 6.8K Ω or	RRXAJR8Z0682
	CHIP RES. 1/10W 6.8K Ω	134F682C
R 155	CHIP RES. 1/10W 8.2K Ω or	RRXAJR8Z0822
	CHIP RES. 1/10W 8.2K Ω	134F822C
R 156	CHIP RES. 1/10W 6.8K Ω or	RRXAJR8Z0682
	CHIP RES. 1/10W 6.8K Ω	134F682C
R 158	CHIP RES. 1/10W 5.6K Ω or	RRXAJR8Z0562
	CHIP RES. 1/10W 5.6K Ω	134F562C
R 159	CARBON RES. 1/4W 10K Ω	RCX4JASZ0103
R 161	CHIP RES. 1/10W 5.6K Ω or	RRXAJR8Z0562
	CHIP RES. 1/10W 5.6K Ω	134F562C
R 162	CHIP RES. 1/10W 18K Ω or	RRXAJR8Z0183
	CHIP RES. 1/10W 18K Ω	134F183C
R 164	CHIP RES. 1/10W 68K Ω or	RRXAJR8Z0683
	CHIP RES. 1/10W 68K Ω	134F683C
R 165	CHIP RES. 1/10W 5.6K Ω or	RRXAJR8Z0562
	CHIP RES. 1/10W 5.6K Ω	134F562C
R 166	CHIP RES. 1/10W 15K Ω or	RRXAJR8Z0153
	CHIP RES. 1/10W 15K Ω	134F153C
R 167	CHIP RES. 1/10W 2.2K Ω or	RRXAJR8Z0222
	CHIP RES. 1/10W 2.2K Ω	134F222C
R 169	CHIP RES. 1/10W 56K Ω or	RRXAJR8Z0563
	CHIP RES. 1/10W 56K Ω	134F563C
R 171	CARBON RES. 1/4W 1.5K Ω	RCX4JASZ0152
R 172	CARBON RES. 1/4W 1.5K Ω	RCX4JASZ0152
R 173	CARBON RES. 1/4W 1.5K Ω	RCX4JASZ0152
R 174	CARBON RES. 1/4W 680 Ω	RCX4JASZ0681
R 175	CHIP RES. 1/10W 82K Ω or	RRXAJR8Z0823
	CHIP RES. 1/10W 82K Ω	134F823C
R 178	CHIP RES. 1/10W 1K Ω or	RRXAJR8Z0102
	CHIP RES. 1/10W 1K Ω	134F102C
R 179	CHIP RES. 1/10W 220 Ω or	RRXAJR8Z0221
	CHIP RES. 1/10W 220 Ω	134F221C
R 180	CHIP RES. 1/10W 220 Ω or	RRXAJR8Z0221
	CHIP RES. 1/10W 220 Ω	134F221C
R 181	CHIP RES. 1/10W 220 Ω or	RRXAJR8Z0221
	CHIP RES. 1/10W 220 Ω	134F221C
R 185	CHIP RES. 1/10W 22K Ω or	RRXAJR8Z0223
	CHIP RES. 1/10W 22K Ω	134F223C

Ref. No.	Description	Part No.
R 186	CHIP RES. 1/10W 22K Ω or	RRXAJR8Z0223
	CHIP RES. 1/10W 22K Ω	134F223C
R 187	CHIP RES. 1/10W 4.7K Ω or	RRXAJR8Z0472
	CHIP RES. 1/10W 4.7K Ω	134F472C
R 188	CHIP RES. 1/10W 47K Ω or	RRXAJR8Z0473
	CHIP RES. 1/10W 47K Ω	134F473C
R 189	CHIP RES. 1/10W 10K Ω or	RRXAJR8Z0103
	CHIP RES. 1/10W 10K Ω	134F103C
R 190	CHIP RES. 1/10W 47K Ω or	RRXAJR8Z0473
	CHIP RES. 1/10W 47K Ω	134F473C
R 197	CHIP RES. 1/10W 4.7K Ω or	RRXAJR8Z0472
	CHIP RES. 1/10W 4.7K Ω	134F472C
R 202	CHIP RES. 1/10W 6.8K Ω or	RRXAJR8Z0682
	CHIP RES. 1/10W 6.8K Ω	134F682C
R 203	CHIP RES. 1/10W 1.5K Ω or	RRXAJR8Z0152
	CHIP RES. 1/10W 1.5K Ω	134F152C
R 204	CHIP RES. 1/10W 330 Ω or	RRXAJR8Z0331
	CHIP RES. 1/10W 330 Ω	134F331C
R 205	CHIP RES. 1/10W 33 Ω or	RRXAJR8Z0330
	CHIP RES. 1/10W 33 Ω	134F330C
R 206	CHIP RES. 1/10W 100 Ω or	RRXAJR8Z0101
	CHIP RES. 1/10W 100 Ω	134F101C
R 207	CHIP RES. 1/10W 2.2K Ω or	RRXAJR8Z0222
	CHIP RES. 1/10W 2.2K Ω	134F222C
R 211	CHIP RES. 1/10W 3.3K Ω or	RRXAJR8Z0332
	CHIP RES. 1/10W 3.3K Ω	134F332C
R 213	CHIP RES. 1/10W 15K Ω or	RRXAJR8Z0153
	CHIP RES. 1/10W 15K Ω	134F153C
R 214	CHIP RES. 1/10W 10K Ω or	RRXAJR8Z0103
	CHIP RES. 1/10W 10K Ω	134F103C
R 215	CHIP RES. 1/10W 47 Ω or	RRXAJR8Z0470
	CHIP RES. 1/10W 47 Ω	134F470C
R 216	CHIP RES. 1/10W 560 Ω or	RRXAJR8Z0561
	CHIP RES. 1/10W 560 Ω	134F561C
R 217	CHIP RES. 1/10W 1K Ω or	RRXAJR8Z0102
	CHIP RES. 1/10W 1K Ω	134F102C
R 218	CHIP RES. 1/10W 220 Ω or	RRXAJR8Z0221
	CHIP RES. 1/10W 220 Ω	134F221C
R 219	CHIP RES. 1/10W 4.7K Ω or	RRXAJR8Z0472
	CHIP RES. 1/10W 4.7K Ω	134F472C
R 221	METAL RES. 1W 120 Ω or	RN01JZDZ0121
	METAL RES. 1W 120 Ω or	RN01121KE004
	METAL RES. 1W 120 Ω	RN01121PY001
R 222	CHIP RES. 1/10W 1.5K Ω or	RRXAJR8Z0152
	CHIP RES. 1/10W 1.5K Ω	134F152C
R 223	CHIP RES. 1/10W 270K Ω or	RRXAJR8Z0274
	CHIP RES. 1/10W 270K Ω	134F274C
R 224	CHIP RES. 1/10W 120K Ω or	RRXAJR8Z0124
	CHIP RES. 1/10W 120K Ω	134F124C
R 225	CHIP RES. 1/10W 150K Ω or	RRXAJR8Z0154
	CHIP RES. 1/10W 150K Ω	134F154C
R 226	CHIP RES. 1/10W 270K Ω or	RRXAJR8Z0274
	CHIP RES. 1/10W 270K Ω	134F274C
R 228	CHIP RES. 1/10W 22K Ω or	RRXAJR8Z0223
	CHIP RES. 1/10W 22K Ω	134F223C
R 230	CHIP RES. 1/10W 4.7K Ω or	RRXAJR8Z0472
	CHIP RES. 1/10W 4.7K Ω	134F472C
R 231	CHIP RES. 1/10W 5.6K Ω or	RRXAJR8Z0562
	CHIP RES. 1/10W 5.6K Ω	134F562C
R 232	CHIP RES. 1/10W 22K Ω or	RRXAJR8Z0223
	CHIP RES. 1/10W 22K Ω	134F223C
R 251	CARBON RES. 1/4W 1K Ω	RCX4JASZ0102
R 252	CARBON RES. 1/4W 10K Ω	RCX4JASZ0103
R 253	CHIP RES. 1/10W 47K Ω or	RRXAJR8Z0473
	CHIP RES. 1/10W 47K Ω	134F473C
R 255	CARBON RES. 1/4W 330 Ω	RCX4JASZ0331

Ref. No.	Description	Part No.
R 301	CHIP RES. 1/10W 560 Ω or	RRXAJR8Z0561
	CHIP RES. 1/10W 560 Ω	134F561C
R 302	CHIP RES. 1/10W 8.2K Ω or	RRXAJR8Z0822
	CHIP RES. 1/10W 8.2K Ω	134F822C
R 303	CHIP RES. 1/10W 10K Ω or	RRXAJR8Z0103
	CHIP RES. 1/10W 10K Ω	134F103C
R 304	CHIP RES. 1/10W 6.8K Ω or	RRXAJR8Z0682
	CHIP RES. 1/10W 6.8K Ω	134F682C
R 305	CHIP RES. 1/10W 390 Ω or	RRXAJR8Z0391
	CHIP RES. 1/10W 390 Ω	134F391C
R 306	CHIP RES. 1/10W 2.2K Ω or	RRXAJR8Z0222
	CHIP RES. 1/10W 2.2K Ω	134F222C
R 307	CHIP RES. 1/10W 330K Ω or	RRXAJR8Z0334
	CHIP RES. 1/10W 330K Ω	134F334C
R 308	CHIP RES. 1/10W 3.3K Ω or	RRXAJR8Z0332
	CHIP RES. 1/10W 3.3K Ω	134F332C
R 309	CHIP RES. 1/10W 3.3M Ω or	RRXAJR8Z0335
	CHIP RES. 1/10W 3.3M Ω	134F335C
R 310	CHIP RES. 1/10W 1.2K Ω or	RRXAJR8Z0122
	CHIP RES. 1/10W 1.2K Ω	134F122C
R 311	CHIP RES. 1/10W 1.8K Ω or	RRXAJR8Z0182
	CHIP RES. 1/10W 1.8K Ω	134F182C
R 312	CHIP RES. 1/10W 4.7K Ω or	RRXAJR8Z0472
	CHIP RES. 1/10W 4.7K Ω	134F472C
R 313	CHIP RES. 1/10W 15K Ω or	RRXAJR8Z0153
	CHIP RES. 1/10W 15K Ω	134F153C
R 314	CHIP RES. 1/10W 5.6K Ω or	RRXAJR8Z0562
	CHIP RES. 1/10W 5.6K Ω	134F562C
R 315	CHIP RES. 1/10W 1K Ω or	RRXAJR8Z0102
	CHIP RES. 1/10W 1K Ω	134F102C
R 316	CHIP RES. 1/10W 33K Ω or	RRXAJR8Z0333
	CHIP RES. 1/10W 33K Ω	134F333C
R 321	CHIP RES. 1/10W 4.7M Ω or	RRXAJR8Z0475
	CHIP RES. 1/10W 4.7M Ω	134F475C
R 323	CHIP RES. 1/10W 0 Ω or	RRXAJR8Z0000
	CHIP RES. 1/10W 0 Ω	134F000C
R 324	CHIP RES. 1/10W 330K Ω or	RRXAJR8Z0334
	CHIP RES. 1/10W 330K Ω	134F334C
R 325	CHIP RES. 1/10W 120K Ω or	RRXAJR8Z0124
	CHIP RES. 1/10W 120K Ω	134F124C
R 326	CHIP RES. 1/10W 330K Ω or	RRXAJR8Z0334
	CHIP RES. 1/10W 330K Ω	134F334C
R 331	CHIP RES. 1/10W 4.7K Ω or	RRXAJR8Z0472
	CHIP RES. 1/10W 4.7K Ω	134F472C
R 332	CHIP RES. 1/10W 8.2K Ω or	RRXAJR8Z0822
	CHIP RES. 1/10W 8.2K Ω	134F822C
R 333	CHIP RES. 1/10W 18 Ω or	RRXAJR8Z0180
	CHIP RES. 1/10W 18 Ω	134F180C
R 334	CHIP RES. 1/10W 6.8K Ω or	RRXAJR8Z0682
	CHIP RES. 1/10W 6.8K Ω	134F682C
R 335	CHIP RES. 1/10W 220 Ω or	RRXAJR8Z0221
	CHIP RES. 1/10W 220 Ω	134F221C
R 336	CHIP RES. 1/10W 1K Ω or	RRXAJR8Z0102
	CHIP RES. 1/10W 1K Ω	134F102C
R 337	CHIP RES. 1/10W 470 Ω or	RRXAJR8Z0471
	CHIP RES. 1/10W 470 Ω	134F471C
R 338	CHIP RES. 1/10W 3.3K Ω or	RRXAJR8Z0332
	CHIP RES. 1/10W 3.3K Ω	134F332C
R 339	CHIP RES. 1/10W 22K Ω or	RRXAJR8Z0223
	CHIP RES. 1/10W 22K Ω	134F223C
R 340	CHIP RES. 1/10W 150 Ω or	RRXAJR8Z0151
	CHIP RES. 1/10W 150 Ω	134F151C
R 341	CHIP RES. 1/10W 120 Ω or	RRXAJR8Z0121
	CHIP RES. 1/10W 120 Ω	134F121C
R 342	CHIP RES. 1/10W 270K Ω or	RRXAJR8Z0274
	CHIP RES. 1/10W 270K Ω	134F274C

Ref. No.	Description	Part No.
R 343	CHIP RES. 1/10W 120K Ω or	RRXAJR8Z0124
	CHIP RES. 1/10W 120K Ω	134F124C
R 351	CHIP RES. 1/10W 560 Ω or	RRXAJR8Z0561
	CHIP RES. 1/10W 560 Ω	134F561C
R 352	CHIP RES. 1/10W 8.2K Ω or	RRXAJR8Z0822
	CHIP RES. 1/10W 8.2K Ω	134F822C
R 353	CHIP RES. 1/10W 0 Ω or	RRXAJR8Z0000
	CHIP RES. 1/10W 0 Ω	134F000C
R 354	CHIP RES. 1/10W 68K Ω or	RRXAJR8Z0683
	CHIP RES. 1/10W 68K Ω	134F683C
R 355	CHIP RES. 1/10W 10K Ω or	RRXAJR8Z0103
	CHIP RES. 1/10W 10K Ω	134F103C
R 357	CHIP RES. 1/10W 1K Ω or	RRXAJR8Z0102
	CHIP RES. 1/10W 1K Ω	134F102C
R 358	CHIP RES. 1/10W 33K Ω or	RRXAJR8Z0333
	CHIP RES. 1/10W 33K Ω	134F333C
R 360	CHIP RES. 1/10W 680 Ω or	RRXAJR8Z0681
	CHIP RES. 1/10W 680 Ω	134F681C
R 361	CHIP RES. 1/10W 150 Ω or	RRXAJR8Z0151
	CHIP RES. 1/10W 150 Ω	134F151C
R 362	CHIP RES. 1/10W 150 Ω or	RRXAJR8Z0151
	CHIP RES. 1/10W 150 Ω	134F151C
R 363	CHIP RES. 1/10W 150 Ω or	RRXAJR8Z0151
	CHIP RES. 1/10W 150 Ω	134F151C
R 365	CHIP RES. 1/10W 1.2K Ω or	RRXAJR8Z0122
	CHIP RES. 1/10W 1.2K Ω	134F122C
R 366	CHIP RES. 1/10W 1.5K Ω or	RRXAJR8Z0152
	CHIP RES. 1/10W 1.5K Ω	134F152C
R 367	CHIP RES. 1/10W 12K Ω or	RRXAJR8Z0123
	CHIP RES. 1/10W 12K Ω	134F123C
R 368	CHIP RES. 1/10W 15K Ω or	RRXAJR8Z0153
	CHIP RES. 1/10W 15K Ω	134F153C
R 369	CHIP RES. 1/10W 15K Ω or	RRXAJR8Z0153
	CHIP RES. 1/10W 15K Ω	134F153C
R 370	CHIP RES. 1/10W 470 Ω or	RRXAJR8Z0471
	CHIP RES. 1/10W 470 Ω	134F471C
R 383	CHIP RES. 1/10W 270 Ω or	RRXAJR8Z0271
	CHIP RES. 1/10W 270 Ω	134F271C
R 386	CHIP RES. 1/10W 1K Ω or	RRXAJR8Z0102
	CHIP RES. 1/10W 1K Ω	134F102C
R 391	CHIP RES. 1/10W 10K Ω or	RRXAJR8Z0103
	CHIP RES. 1/10W 10K Ω	134F103C
R 392	CHIP RES. 1/10W 22K Ω or	RRXAJR8Z0223
	CHIP RES. 1/10W 22K Ω	134F223C
R 393	CHIP RES. 1/10W 10K Ω or	RRXAJR8Z0103
	CHIP RES. 1/10W 10K Ω	134F103C
R 394	CHIP RES. 1/10W 10K Ω or	RRXAJR8Z0103
	CHIP RES. 1/10W 10K Ω	134F103C
R 395	CHIP RES. 1/10W 22K Ω or	RRXAJR8Z0223
	CHIP RES. 1/10W 22K Ω	134F223C
R 396	CHIP RES. 1/10W 22K Ω or	RRXAJR8Z0223
	CHIP RES. 1/10W 22K Ω	134F223C
R 397	CHIP RES. 1/10W 120K Ω or	RRXAJR8Z0124
	CHIP RES. 1/10W 120K Ω	134F124C
R 401	CHIP RES. 1/10W 3.3K Ω or	RRXAJR8Z0332
	CHIP RES. 1/10W 3.3K Ω	134F332C
R 402	CHIP RES. 1/10W 6.8K Ω or	RRXAJR8Z0682
	CHIP RES. 1/10W 6.8K Ω	134F682C
R 403	CHIP RES. 1/10W 10K Ω or	RRXAJR8Z0103
	CHIP RES. 1/10W 10K Ω	134F103C
R 404	CHIP RES. 1/10W 150 Ω or	RRXAJR8Z0151
	CHIP RES. 1/10W 150 Ω	134F151C
R 405	CHIP RES. 1/10W 4.7M Ω or	RRXAJR8Z0475
	CHIP RES. 1/10W 4.7M Ω	134F475C
R 423	CHIP RES. 1/10W 22K Ω or	RRXAJR8Z0223
	CHIP RES. 1/10W 22K Ω	134F223C

Ref. No.	Description	Part No.
JC 18	CHIP RES. 1/10W 0 Ω or	RRXAJR8Z0000
	CHIP RES. 1/10W 0 Ω	134F000C
JC 22	CHIP RES. 1/10W 0 Ω or	RRXAJR8Z0000
	CHIP RES. 1/10W 0 Ω	134F000C
JC 36	CHIP RES. 1/10W 0 Ω or	RRXAJR8Z0000
	CHIP RES. 1/10W 0 Ω	134F000C
JC 37	CHIP RES. 1/10W 0 Ω or	RRXAJR8Z0000
	CHIP RES. 1/10W 0 Ω	134F000C
	SWITCHES	
SW102	TACT SWITCH (V-TYPE)	SST0101AL032
SW103	TACT SWITCH (V-TYPE)	SST0101AL032
SW104	TACT SWITCH (V-TYPE)	SST0101AL032
SW105	TACT SWITCH (V-TYPE)	SST0101AL032
SW107	TACT SWITCH	5622102
SW108	TACT SWITCH	5622102
SW109	TACT SWITCH	5622102
SW110	TACT SWITCH	5622102
SW601 ⚠	MAIN SWITCH	SPP0AAZMS001
	TRANSFORMERS	
T 551	H. DRIVE TRANS	115N841
T 601 ⚠	POWER TRANS	LTT00EPMS017
	VARIABLE RESISTORS	
VR211	SEMIFIXED RES. 10KB or	138J781
	SEMIFIXED RES. 10KB	638A103
VR301	SEMIFIXED RES. 1KB or	138J777
	SEMIFIXED RES. 1KB	638A102
VR331	SEMIFIXED RES. 200B or	238J113
	SEMIFIXED RES. 200B	638A221
VR351	SEMIFIXED RES. 10KB or	138J781
	SEMIFIXED RES. 10KB	638A103
VR501	SEMIFIXED RES. 50KB or	138J784
	SEMIFIXED RES. 50KB	638A473
VR503	SEMIFIXED RES. 10KB or	138J781
	SEMIFIXED RES. 10KB	638A103
VR571	SEMIFIXED RES. 20KB or	138J782
	SEMIFIXED RES. 20KB	638A223
VR572	SEMIFIXED RES. 5KB or	138J780
	SEMIFIXED RES. 5KB	638A472
VR601	SEMIFIXED RES. 20KB or	138J782
	SEMIFIXED RES. 20KB	638A223
	CRYSTAL OSCILLATORS	
X 101	CERAMIC RESONATOR 4.19MHz or	FY0415LMS002
	CERAMIC RESONATOR 4.19MHz or	1813682
	CERAMIC RESONATOR 4.19MHz	1812885
X 301	CRYSTAL OSCILLATOR 4.43MHz	1811387
X 302	CRYSTAL OSCILLATOR 3.58MHz	1811291
X 331	CERAMIC RESONATOR CSB503F30	1813527
	MISCELLANEOUS	
B 6	LED HOLDER	0EM402341
B 7	SENSOR HOLDER	0EM402360
BC552	BEADS CORE	1190038
BC553	BEADS CORE	1190038
BC603	BEADS CORE	1190038
BC604	BEADS CORE	1190038
BC605	BEADS CORE	1190038
BC606	BEADS CORE	1190038
BC607	BEADS CORE	1190038
CF211	CERAMIC TRAP 5.5MHz+6.5MHz or	FBE655PMS002
	CERAMIC TRAP 5.5MHz+6.5MHz	FBE655PMR002
CF212	CERAMIC FILTER 5.5MHz or	1812018
	CERAMIC FILTER 5.5MHz	FBB555PMS001
CF213	CERAMIC FILTER 6.5MHz or	1813595
	CERAMIC FILTER 6.5MHz	FBB655PMS001
CL451A	CABLE HOLDER 5P or	XW01D05NF001
	CABLE HOLDER 5P	XW01B05NF001
CL452A	CABLE HOLDER 4P or	XW01D04NF001
	CABLE HOLDER 4P	XW01B04NF001
DL301	DELAY LINE	113N852
DL311	GLASS DELAY or	FD0445PXX001
	GLASS DELAY	1812056
HS 1	HEAT SINK PBC ASSEMBLY	0EM300845
HS 2	HEAT SINK PBD ASSEMBLY	0EM402679
HS 3	HEAT SINK PBE	0EM402593
HS 4	HEAT SINK PBI ASSEMBLY	0EM402680
HS 5	HEAT SINK PBM	0EM402812
JK701	RCA JACK (4 PIN) or	JXRL040JD012
	RCA JACK (4 PIN) or	JXRL040MY001
	RCA JACK (4 PIN)	JXRL040JC001
JK702	RCA JACK (1 PIN)	JYRL010JC002
JK731	21PIN JACK or	JXGL210XZ001
	21PIN JACK or	JSZZ000HD001
	21PIN JACK or	JXGL210NF001
	21PIN JACK or	1780187
	21PIN JACK	1780260
LD451	RIBBON WIRE 4P	WX1L8750-002
LD452	RIBBON WIRE 5P	WX1L8750-001
PS601 ⚠	THERMISTER (POSISTER)	QN5Z66BL200D
RS101	REMOCON RECEIVING UNIT	USESJRSKK011
SF201	SAW FILTER	FBB386PKC001
T 671 ⚠	F.B.T.	LTF00EPSM007
TP 1	TEST PIN or	1700093
	TEST PIN or	XU0C000ER001
	TEST PIN	1740354
TP 2	TEST PIN or	1700093
	TEST PIN or	XU0C000ER001
	TEST PIN	1740354
TP 5	TEST PIN or	1700093
	TEST PIN or	XU0C000ER001
	TEST PIN	1740354
TP 6	TEST PIN or	1700093
	TEST PIN or	XU0C000ER001
	TEST PIN	1740354
TP 7	TEST PIN or	1700093
	TEST PIN or	XU0C000ER001
	TEST PIN	1740354
TP 8	TEST PIN or	1700093
	TEST PIN or	XU0C000ER001
	TEST PIN	1740354
TP 9	TEST PIN or	1700093
	TEST PIN or	XU0C000ER001
	TEST PIN	1740354
TU 1	TUNER TEKE4-134A	UTUNPSDAL009

CRT PCB

Ref. No.	Description	Part No.
	CRT PCB Consists of the following:	———
	CAPACITORS	
C 451	CERAMIC CAP. B 390pF/50V	3B42391S
C 452	CERAMIC CAP. B 390pF/50V	3B42391S
C 453	CERAMIC CAP. B 470pF/50V	3B42471S
C 456	ELECTROLYTIC CAP. 100μF/16V	126C107S
C 458	CERAMIC CAP. 0.01μF 2KV or	CCD3DZP0E103
	CERAMIC CAP. 0.01μF 2KV	6220602
C 459	CERAMIC CAP. B 100pF/50V	3B42101S
	CONNECTORS	
CN454	CONNECTOR PIN 1P or	1700576
	CONNECTOR PIN 1P or	1730688
	CONNECTOR PIN 1P	JTEA000LC001
	DIODES	
D 451	DIODE 1N4148M or	QDSZ01N4148M
	DIODE 1SS176 or	1SS176S
	DIODE 1SS133	1SS133S
D 452	DIODE 1N4148M or	QDSZ01N4148M
	DIODE 1SS176 or	1SS176S
	DIODE 1SS133	1SS133S
D 453	DIODE 1N4148M or	QDSZ01N4148M
	DIODE 1SS176 or	1SS176S
	DIODE 1SS133	1SS133S
	COILS	
L 451	MICRO INDUCTOR (RD) 100μH K or	LLARKCSTU101
	MICRO INDUCTOR (RD) 100μH K or	2162101S
	MICRO INDUCTOR (RD) 100μH K	LLARKDSKA101
L 452	MICRO INDUCTOR (RD) 100μH K or	LLARKCSTU101
	MICRO INDUCTOR (RD) 100μH K or	2162101S
	MICRO INDUCTOR (RD) 100μH K	LLARKDSKA101
L 453	MICRO INDUCTOR (RD) 100μH K or	LLARKCSTU101
	MICRO INDUCTOR (RD) 100μH K or	2162101S
	MICRO INDUCTOR (RD) 100μH K	LLARKDSKA101
L 454	MICRO INDUCTOR 47μH K or	LLAXKDSKA470
	MICRO INDUCTOR 47μH K	2165470S
L 455	MICRO INDUCTOR 47μH K or	LLAXKDSKA470
	MICRO INDUCTOR 47μH K	2165470S
L 456	MICRO INDUCTOR 47μH K or	LLAXKDSKA470
	MICRO INDUCTOR 47μH K	2165470S
	TRANSISTORS	
Q 451	TRANSISTOR KTC3198 (GR) or	NQS10KTC3198
	TRANSISTOR KTC3199 (GR) or	NQS10KTC3199
	TRANSISTOR 2SC3331 (T) or	QSC3331TNPAA
	TRANSISTOR 2SC3331 (U) or	QSC3331UNPAA
	TRANSISTOR 2SC1815 (GR)	QQS102SC1815
Q 452	TRANSISTOR 2SC2621 (D) or	2SC2621D
	TRANSISTOR 2SC2621 (E)	2SC2621E
Q 453	TRANSISTOR KTC3198 (GR) or	NQS10KTC3198
	TRANSISTOR KTC3199 (GR) or	NQS10KTC3199
	TRANSISTOR 2SC3331 (T) or	QSC3331TNPAA
	TRANSISTOR 2SC3331 (U) or	QSC3331UNPAA
	TRANSISTOR 2SC1815 (GR)	QQS102SC1815
Q 454	TRANSISTOR 2SC2621 (D) or	2SC2621D
	TRANSISTOR 2SC2621 (E)	2SC2621E
Q 455	TRANSISTOR KTC3198 (GR) or	NQS10KTC3198
	TRANSISTOR KTC3199 (GR) or	NQS10KTC3199
	TRANSISTOR 2SC3331 (T) or	QSC3331TNPAA
	TRANSISTOR 2SC3331 (U) or	QSC3331UNPAA
	TRANSISTOR 2SC1815 (GR)	QQS102SC1815
Q 456	TRANSISTOR 2SC2621 (D) or	2SC2621D
	TRANSISTOR 2SC2621 (E)	2SC2621E
	RESISTORS	
R 451	METAL RES. 2W 27K Ω or	RN02JZDZ0273
	METAL RES. 2W 27K Ω or	534B273
	METAL RES. 2W 27K Ω	RN02273PY001
R 452	METAL RES. 2W 27K Ω or	RN02JZDZ0273
	METAL RES. 2W 27K Ω or	534B273
	METAL RES. 2W 27K Ω	RN02273PY001
R 453	METAL RES. 2W 27K Ω or	RN02JZDZ0273
	METAL RES. 2W 27K Ω or	534B273
	METAL RES. 2W 27K Ω	RN02273PY001
R 454	METAL RES. 2W 27K Ω or	RN02JZDZ0273
	METAL RES. 2W 27K Ω or	534B273
	METAL RES. 2W 27K Ω	RN02273PY001
R 455	METAL RES. 2W 27K Ω or	RN02JZDZ0273
	METAL RES. 2W 27K Ω or	534B273
	METAL RES. 2W 27K Ω	RN02273PY001
R 456	METAL RES. 2W 27K Ω or	RN02JZDZ0273
	METAL RES. 2W 27K Ω or	534B273
	METAL RES. 2W 27K Ω	RN02273PY001
R 460	CARBON RES. 1/4W 1.5K Ω	RCX4JASZ0152
R 461	CARBON RES. 1/4W 1.5K Ω	RCX4JASZ0152
R 462	CARBON RES. 1/4W 1.5K Ω	RCX4JASZ0152
R 463	CARBON RES. 1/4W 680 Ω	RCX4JASZ0681
R 464	CARBON RES. 1/4W 680 Ω	RCX4JASZ0681
R 465	CARBON RES. 1/4W 680 Ω	RCX4JASZ0681
R 466	CARBON RES. 1/4W 120 Ω	RCX4JASZ0121
R 467	CARBON RES. 1/4W 120 Ω	RCX4JASZ0121
R 468	CARBON RES. 1/4W 120 Ω	RCX4JASZ0121
R 469	CARBON RES. 1/4W 1K Ω	RCX4JASZ0102
R 470	CARBON RES. 1/4W 1K Ω	RCX4JASZ0102
R 471	CARBON RES. 1/4W 1K Ω	RCX4JASZ0102
R 472	CARBON RES. 1/4W 270 Ω	RCX4JASZ0271
R 473	CARBON RES. 1/4W 270 Ω	RCX4JASZ0271
R 474	CARBON RES. 1/4W 270 Ω	RCX4JASZ0271
R 475	CARBON RES. 1/4W 560 Ω	RCX4JASZ0561
R 480	CARBON RES. 1/4W 150K Ω	RCX4JASZ0154
R 481	CARBON RES. 1/4W 3.3K Ω	RCX4JASZ0332
R 482	CARBON RES. 1/4W 3.3K Ω	RCX4JASZ0332
R 483	CARBON RES. 1/4W 150K Ω	RCX4JASZ0154
R 484	CARBON RES. 1/4W 3.3K Ω	RCX4JASZ0332
R 485	CARBON RES. 1/4W 3.3K Ω	RCX4JASZ0332
R 486	CARBON RES. 1/4W 150K Ω	RCX4JASZ0154
R 487	CARBON RES. 1/4W 3.3K Ω	RCX4JASZ0332
R 489	CARBON RES. 1/4W 3.3K Ω	RCX4JASZ0332
R 490	CARBON RES. 1/4W 150 Ω	RCX4JASZ0151
R 491	CARBON RES. 1/4W 150 Ω	RCX4JASZ0151
R 492	CARBON RES. 1/4W 150 Ω	RCX4JASZ0151
	VARIABLE RESISTORS	
VR451	SEMIFIXED RES. (V) 5KB or	138J916
	SEMIFIXED RES. (V) 5KB	138A957
VR452	SEMIFIXED RES. (V) 5KB or	138J916
	SEMIFIXED RES. (V) 5KB	138A957
VR453	SEMIFIXED RES. (V) 5KB or	138J916
	SEMIFIXED RES. (V) 5KB	138A957
VR454	SEMIFIXED RES. (V) 1KB or	138J913
	SEMIFIXED RES. (V) 1KB	138A953
VR455	SEMIFIXED RES. (V) 1KB or	138J913
	SEMIFIXED RES. (V) 1KB	138A953
	MISCELLANEOUS	
CL451B	CABLE HOLDER 5P or	XW01D05NF001
	CABLE HOLDER 5P	XW01B05NF001
CL452B	CABLE HOLDER 4P or	XW01D04NF001
	CABLE HOLDER 4P	XW01B04NF001
CN453 ⚠	CRT SOCKET	JSCC290HD001

Filter PCB

Ref. No.	Description	Part No.
	Filter PCB Consists of the following:	———
	CAPACITORS	
C 661 ⚠	LINE ACROSS CAP. 0.1μF/250V or	CA2E104MS010
	LINE ACROSS CAP. 0.1μF/250V or	CT2E104DT001
	LINE ACROSS CAP. 0.1μF/250V or	122Z181
	LINE ACROSS CAP. 0.1μF/250V	CA2E104MS005
C 662 ⚠	LINE ACROSS CAP. 0.047μF 250V or	CT2E473DT001
	LINE ACROSS CAP. 0.047μF 250V or	CA2E473MS010
	LINE ACROSS CAP. 0.047μF 250V	122Z271
	RESISTOR	
R 661	SOLID RES. 1/2W 1M Ω	RSX2105KE002
	MISCELLANEOUS	
CL661	WIRE ASSEMBLY 2P	WX1L8750-004
F 661 ⚠	FUSE T4.0AH 250V	PAGC20BAG402
FH661	FUSE HOLDER or	XH01Z00DK001
	FUSE HOLDER or	1790424
	FUSE HOLDER	1790848
FH662	FUSE HOLDER or	XH01Z00DK001

Ref. No.	Description	Part No.
	FUSE HOLDER or	1790424
	FUSE HOLDER	1790848
L 661 ⚠	LINE FILTER	LLBG00ZMS012
W 661 ⚠	AC CORD	5750112

Teletext PCB

Ref. No.	Description	Part No.
	Teletext PCB Consists of the following:	**MCT-40**
	CAPACITORS	
C 961	CHIP CERAMIC CAP. F 0.01µF/50V or	CHE1JJ80F103
	CHIP CERAMIC CAP. F 0.01µF/50V	12F3103C
C 962	CHIP CERAMIC CAP. B 220pF/50V or	CHE1JK80B221
	CHIP CERAMIC CAP. B 220pF/50V	12B3221C
C 963	CHIP CERAMIC CAP. CH 15pF/50V or	CHE1JJ8CH150
	CHIP CERAMIC CAP. CH 15pF/50V	12CH150C
C 964	CHIP CERAMIC CAP. CH 15pF/50V or	CHE1JJ8CH150
	CHIP CERAMIC CAP. CH 15pF/50V	12CH150C
C 965	SEMICON CAP. 0.1µF 25V K or	CDA1EKS0X104
	SEMICON CAP. 0.1µF 25V K	12Y2104
C 966	CHIP CERAMIC CAP. B 0.001µF/50V or	CHE1JK80B102
	CHIP CERAMIC CAP. B 0.001µF/50V	12B3102C
C 967	CHIP CERAMIC CAP. B 220pF/50V or	CHE1JK80B221
	CHIP CERAMIC CAP. B 220pF/50V	12B3221C
C 968	ELECTROLYTIC CAP. 10µF/50V	126F106S
C 969	ELECTROLYTIC CAP. 1µF/50V	126F105S
C 970	CHIP CERAMIC CAP. F 0.01µF/50V or	CHE1JJ80F103
	CHIP CERAMIC CAP. F 0.01µF/50V	12F3103C
C 972	SEMICON CAP. 0.1µF 25V K or	CDA1EKS0X104
	SEMICON CAP. 0.1µF 25V K	12Y2104
C 973	CHIP CERAMIC CAP. B 0.001µF/50V or	CHE1JK80B102
	CHIP CERAMIC CAP. B 0.001µF/50V	12B3102C
C 974	CHIP CERAMIC CAP. SL 47pF/50V or	CHE1JJ8SL470
	CHIP CERAMIC CAP. SL 47pF/50V	1270470C
C 975	CHIP CERAMIC CAP. B 0.0022µF/50V or	CHE1JK80B222
	CHIP CERAMIC CAP. B 0.0022µF/50V	12B3222C
C 976	SEMICON CAP. 0.1µF 25V K or	CDA1EKS0X104
	SEMICON CAP. 0.1µF 25V K	12Y2104
C 977	CHIP CERAMIC CAP. B 270pF/50V or	CHE1JK80B271
	CHIP CERAMIC CAP. B 270pF/50V	12B3271C
C 978	CHIP CERAMIC CAP. CH 10pF/50V or	CHE1JJ8CH100
	CHIP CERAMIC CAP. CH 10pF/50V	12CH100C
C 979	CHIP CERAMIC CAP. SL 82pF/50V or	CHE1JJ8SL820
	CHIP CERAMIC CAP. SL 82pF/50V	1270820C
C 980	CHIP CERAMIC CAP. B 330pF/50V or	CHE1JK80B331
	CHIP CERAMIC CAP. B 330pF/50V	12B3331C
C 981	CHIP CERAMIC CAP. B 330pF/50V or	CHE1JK80B331
	CHIP CERAMIC CAP. B 330pF/50V	12B3331C
C 983	ELECTROLYTIC CAP. 220µF/6.3V	126A227S
C 984	CHIP CERAMIC CAP. SL 100pF/50V or	CHE1JJ8SL101
	CHIP CERAMIC CAP. SL 100pF/50V	1270101C
C 985	CHIP CERAMIC CAP. B 330pF/50V or	CHE1JK80B331
	CHIP CERAMIC CAP. B 330pF/50V	12B3331C
	CONNECTORS	
CN951B	PIN HEADER 7P	1770990
CN952B	PIN HEADER 4P	1770987
	DIODES	
D 958	ZENER DIODE UZ-5.6BS (B) or	QDSB0UZ5R6BS
	ZENER DIODE MTZJ-5.6 (B)	QDSB0MTZJ5R6
D 961	BALI. CAP. DIODE SVC201SPA	ASVC201SPACD
D 962	DIODE 1N4148M or	QDSZ01N4148M
	DIODE 1SS176 or	1SS176S
	DIODE 1SS133	1SS133S
	ICS	
IC961	IC CF70195	GC91000TY004

Ref. No.	Description	Part No.
IC962	IC CF72306	NSMFA0STY001
IC964	IC MN1380R	QSMLA0ZMS001
	COIL	
L 961	MICRO INDUCTOR 22µH K or	LLAXKDSKA220
	MICRO INDUCTOR 22µH K	2165220S
T 961	CASING COIL or	LFA07V0SF109
	CASING COIL	LFA07V0MM016
	TRANSISTOR	
Q 961	TRANSISTOR KTC3198 (GR) or	NQS10KTC3198
	TRANSISTOR KTC3199 (GR) or	NQS10KTC3199
	TRANSISTOR 2SC3331 (T) or	QSC3331TNPAA
	TRANSISTOR 2SC3331 (U) or	QSC3331UNPAA
	TRANSISTOR 2SC1815 (GR)	QQS102SC1815
	RESISTORS	
R 961	CHIP RES. 1/10W 10K Ω or	RRXAJR8Z0103
	CHIP RES. 1/10W 10K Ω	134F103C
R 962	CHIP RES. 1/10W 1K Ω or	RRXAJR8Z0102
	CHIP RES. 1/10W 1K Ω	134F102C
R 963	CHIP RES. 1/10W 1K Ω or	RRXAJR8Z0102
	CHIP RES. 1/10W 1K Ω	134F102C
R 964	CHIP RES. 1/10W 2.2K Ω or	RRXAJR8Z0222
	CHIP RES. 1/10W 2.2K Ω	134F222C
R 965	CHIP RES. 1/10W 6.8K Ω or	RRXAJR8Z0682
	CHIP RES. 1/10W 6.8K Ω	134F682C
R 966	CHIP RES. 1/10W 18K Ω or	RRXAJR8Z0183
	CHIP RES. 1/10W 18K Ω	134F183C
R 967	CHIP RES. 1/10W 47K Ω or	RRXAJR8Z0473
	CHIP RES. 1/10W 47K Ω	134F473C
R 968	CHIP RES. 1/10W 220 Ω or	RRXAJR8Z0221
	CHIP RES. 1/10W 220 Ω	134F221C
R 969	CHIP RES. 1/10W 10K Ω or	RRXAJR8Z0103
	CHIP RES. 1/10W 10K Ω	134F103C
R 970	CHIP RES. 1/10W 8.2K Ω or	RRXAJR8Z0822
	CHIP RES. 1/10W 8.2K Ω	134F822C
R 971	CHIP RES. 1/10W 33K Ω or	RRXAJR8Z0333
	CHIP RES. 1/10W 33K Ω	134F333C
R 972	CHIP RES. 1/10W 10K Ω or	RRXAJR8Z0103
	CHIP RES. 1/10W 10K Ω	134F103C
R 973	CHIP RES. 1/10W 1.5K Ω or	RRXAJR8Z0152
	CHIP RES. 1/10W 1.5K Ω	134F152C
R 974	CHIP RES. 1/10W 1.5K Ω or	RRXAJR8Z0152
	CHIP RES. 1/10W 1.5K Ω	134F152C
R 975	CHIP RES. 1/10W 1.5K Ω or	RRXAJR8Z0152
	CHIP RES. 1/10W 1.5K Ω	134F152C
R 976	CHIP RES. 1/10W 1.5K Ω or	RRXAJR8Z0152
	CHIP RES. 1/10W 1.5K Ω	134F152C
R 977	CHIP RES. 1/10W 680 Ω or	RRXAJR8Z0681
	CHIP RES. 1/10W 680 Ω	134F681C
R 978	CHIP RES. 1/10W 680 Ω or	RRXAJR8Z0681
	CHIP RES. 1/10W 680 Ω	134F681C
R 979	CHIP RES. 1/10W 680 Ω or	RRXAJR8Z0681
	CHIP RES. 1/10W 680 Ω	134F681C
R 980	CHIP RES. 1/10W 33K Ω or	RRXAJR8Z0333
	CHIP RES. 1/10W 33K Ω	134F333C
R 981	CHIP RES. 1/10W 1K Ω or	RRXAJR8Z0102
	CHIP RES. 1/10W 1K Ω	134F102C
R 982	CHIP RES. 1/10W 22K Ω or	RRXAJR8Z0223
	CHIP RES. 1/10W 22K Ω	134F223C
JC951	CHIP RES. 1/10W 0 Ω or	RRXAJR8Z0000
	CHIP RES. 1/10W 0 Ω	134F000C
JC952	CHIP RES. 1/10W 0 Ω or	RRXAJR8Z0000
	CHIP RES. 1/10W 0 Ω	134F000C
JC953	CHIP RES. 1/10W 0 Ω or	RRXAJR8Z0000
	CHIP RES. 1/10W 0 Ω	134F000C
JC961	CHIP RES. 1/10W 0 Ω or	RRXAJR8Z0000
	CHIP RES. 1/10W 0 Ω	134F000C

Ref. No.	Description	Part No.
JC955	CHIP RES. 1/10W 0 Ω or	RRXAJR8Z0000
	CHIP RES. 1/10W 0 Ω	134F000C
	CRYSTAL OSCILLATOR	
X 961	CRYSTAL OSCILLATOR 13.875MHz	FXD136LCT001
	MISCELLANEOUS	
TP901	TEST PIN or	1700093
	TEST PIN or	XU0C000ER001
	TEST PIN	1740354
TP902	TEST PIN or	1700093
	TEST PIN or	XU0C000ER001
	TEST PIN	1740354

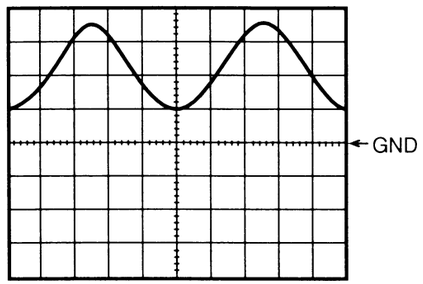
Chassis Electrical Parts

Ref. No.	Description	Part No.
V 451 ⚠	CRT A59KPR84X01	TCRT190SM006
CL451	WIRE ASSEMBLY	WX1L8750-005
CL801	WIRE ASSEMBLY	WX1L8750-006
CL802	WIRE ASSEMBLY	WX1L8700-002
L 602 ⚠	DEGAUSSING COIL	LLBH00ZTZ015
SP801	SPEAKER	DSD0809MS001
SP802	SPEAKER	DSD0809MS001
	CABLE TIE or	1790256
	CABLE TIE	1790356

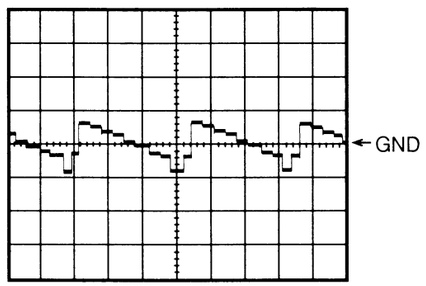
WAVEFORMS

Input: PAL Color Bar Signal (with 1KHz Audio Signal)
Receiving Ch.: E2 ch (48.25MHz)
Preset Mode: Press Picture Select button on the remote control unit, then press the number "1" button.
(Brightness---Center Color---Center Contrast---Approx 70%)

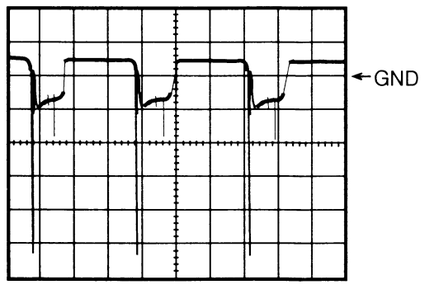
WFa ~ WFt = Waveforms to be observed at Waveform check points. (Shown in Schematic Diagram.)



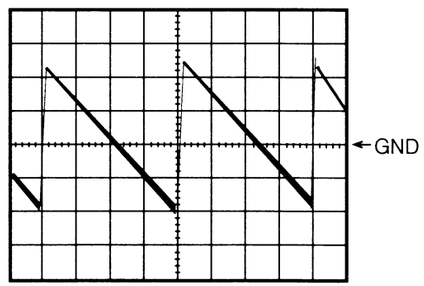
WFa 1DIV: 1V 200µsec



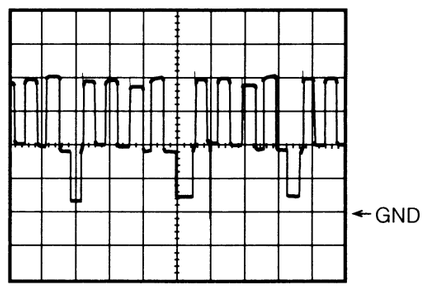
WFe 1DIV: 0.5V 10µsec



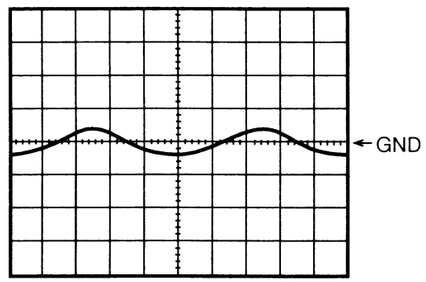
WFi 1DIV: 2V 10µsec



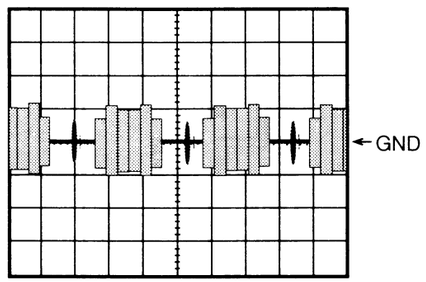
WFm 1DIV: 0.5V 5msec



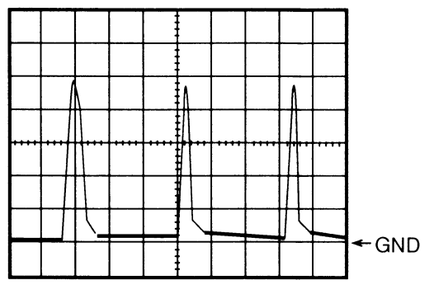
WFq 1DIV: 1V 10µsec



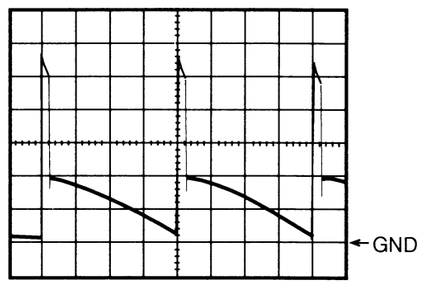
WFb 1DIV: 1V 200µsec
Set volume maximum



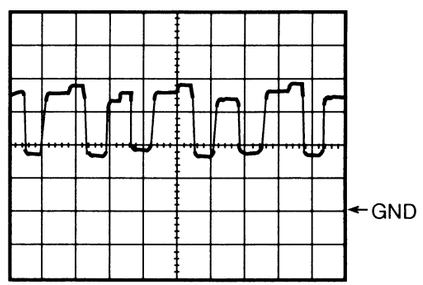
WFf 1DIV: 0.2V 10µsec



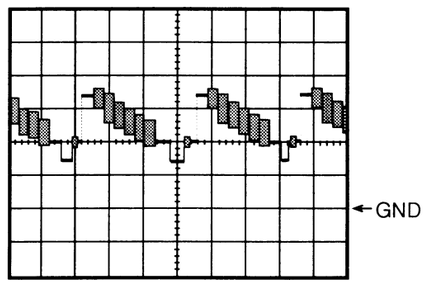
WFj 1DIV: 250V 10µsec



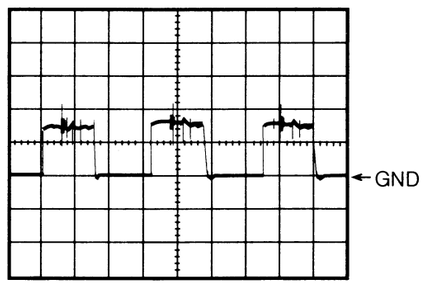
WFn 1DIV: 10V 2msec



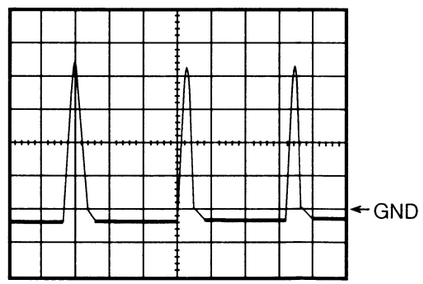
WFr 1DIV: 50V 10µsec



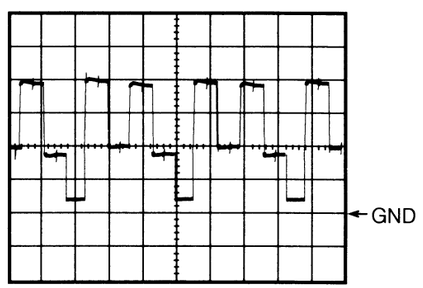
WFc 1DIV: 1V 10µsec



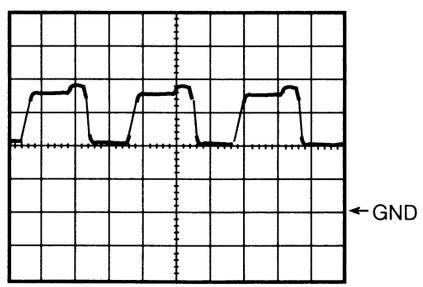
WFg 1DIV: 0.5V 10µsec



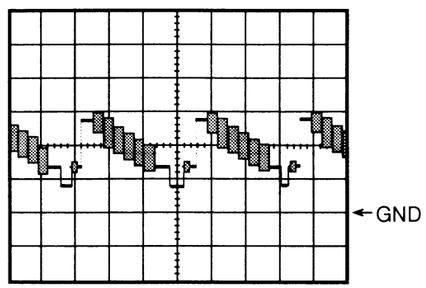
WFk 1DIV: 5V 10µsec



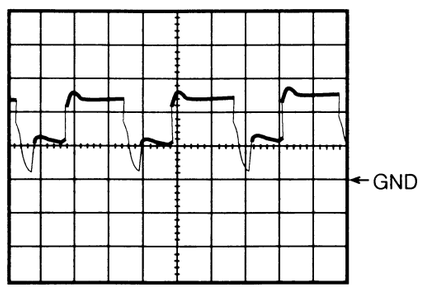
WFo 1DIV: 1V 10µsec



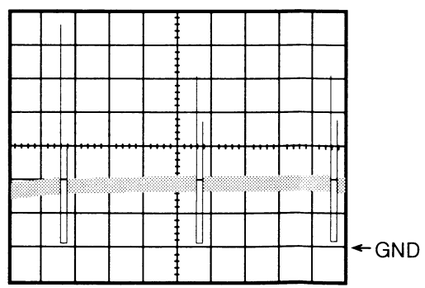
WFs 1DIV: 50V 10µsec



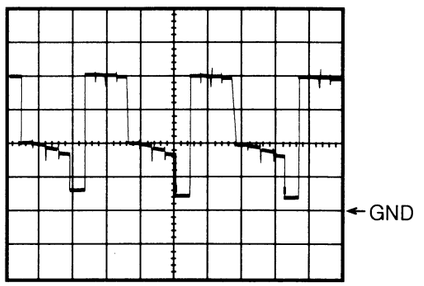
WFd 1DIV: 1V 10µsec



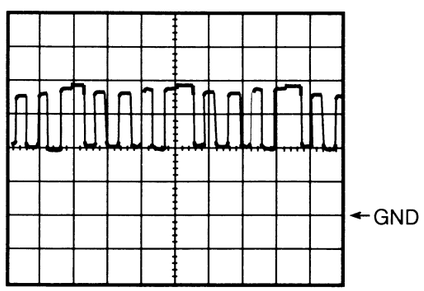
WFh 1DIV: 50V 10µsec



WFl 1DIV: 0.5V 5msec

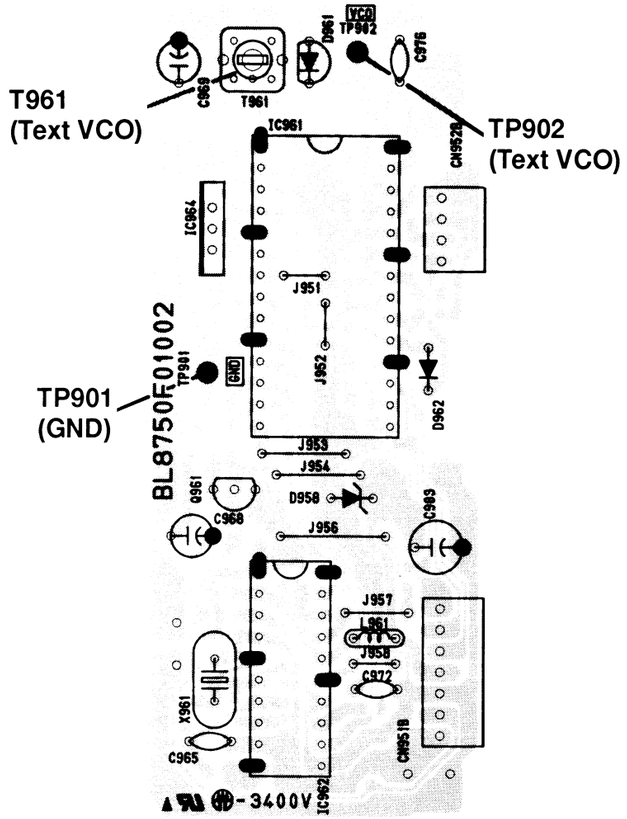


WFp 1DIV: 1V 10µsec

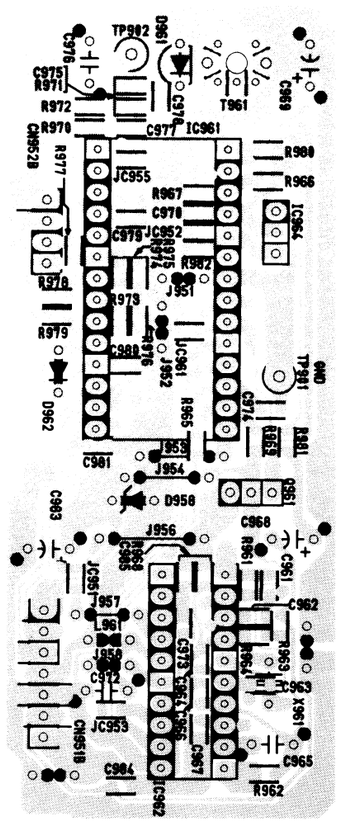


WFt 1DIV: 50V 10µsec

Teletext PCB (Top View)



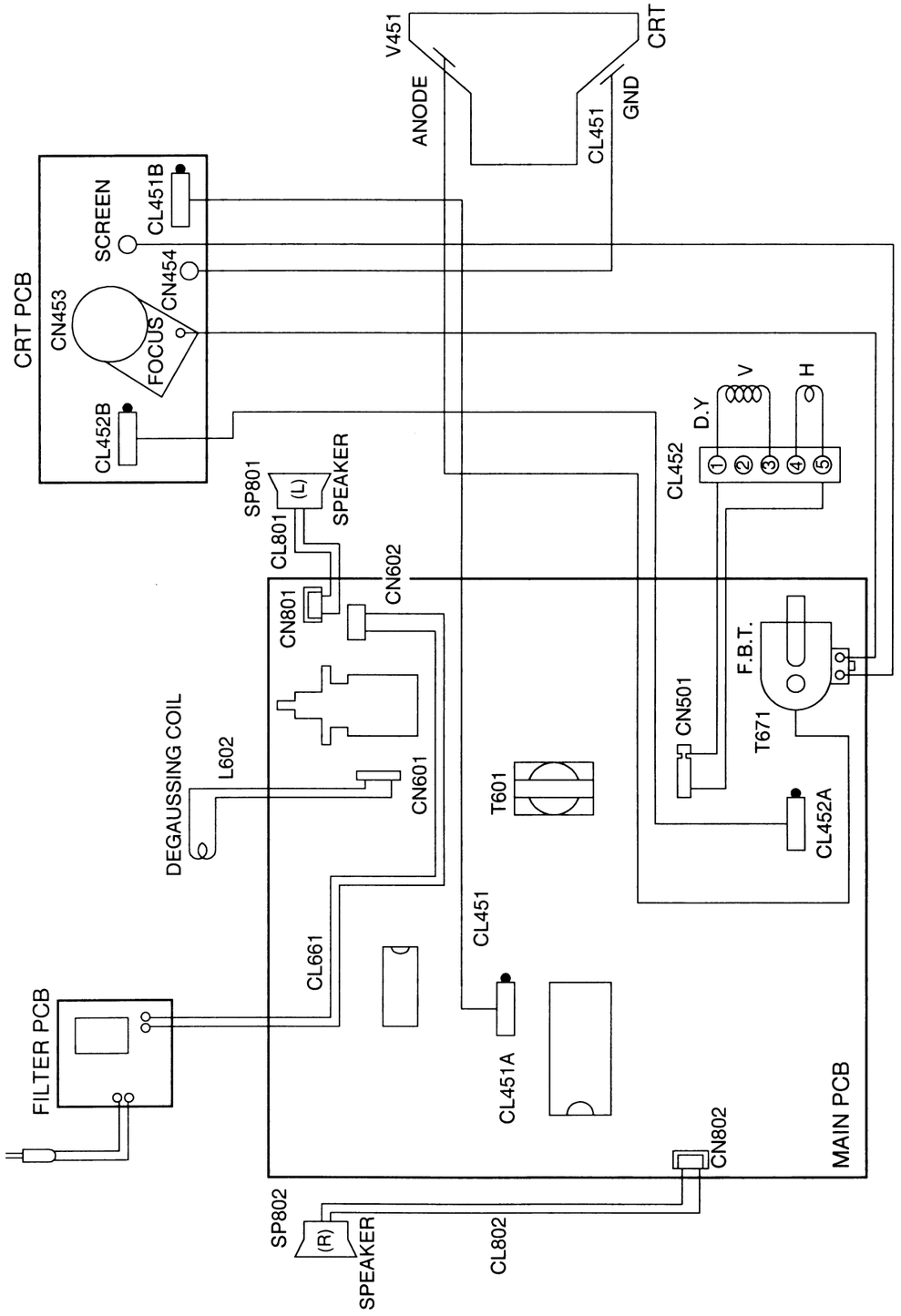
Teletext PCB (Bottom View)



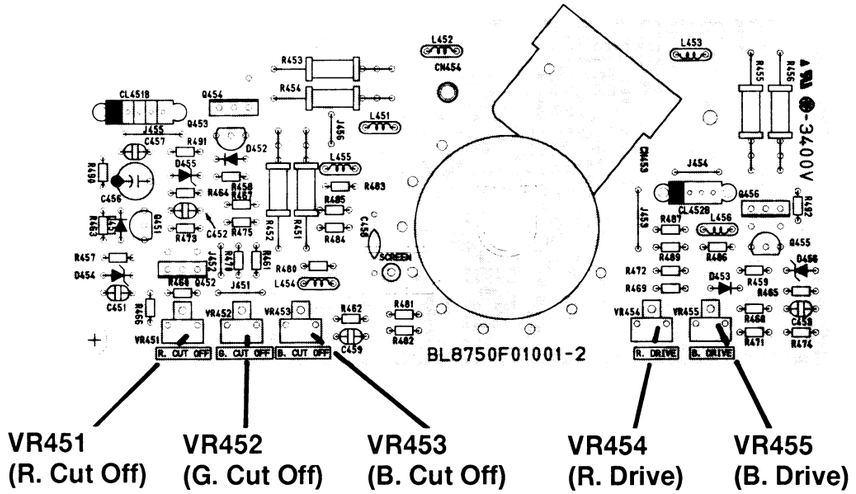
F E D C B A

1 2 3 4

WIRING DIAGRAM

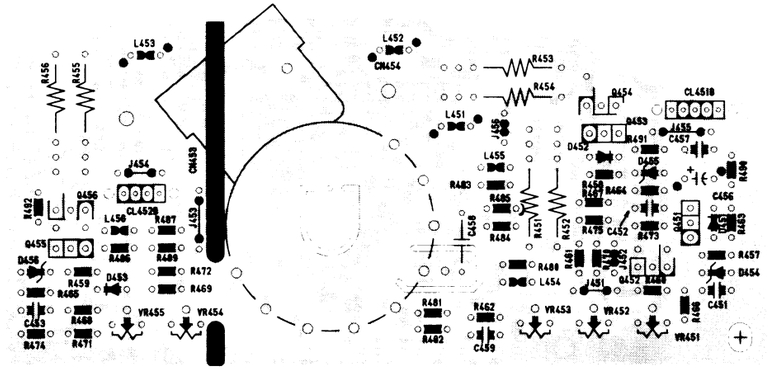


CRT PCB (Top View)



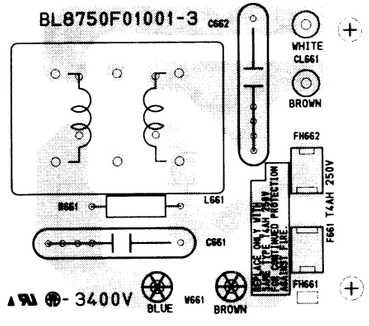
VR451 (R. Cut Off)
VR452 (G. Cut Off)
VR453 (B. Cut Off)
VR454 (R. Drive)
VR455 (B. Drive)

CRT PCB (Bottom View)

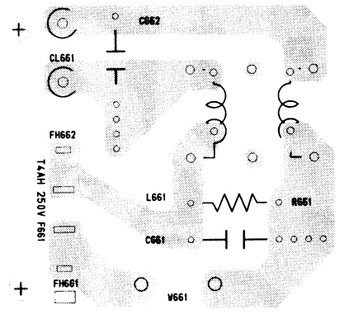


(BL8750F01001-2)

Filter PCB (Top View)

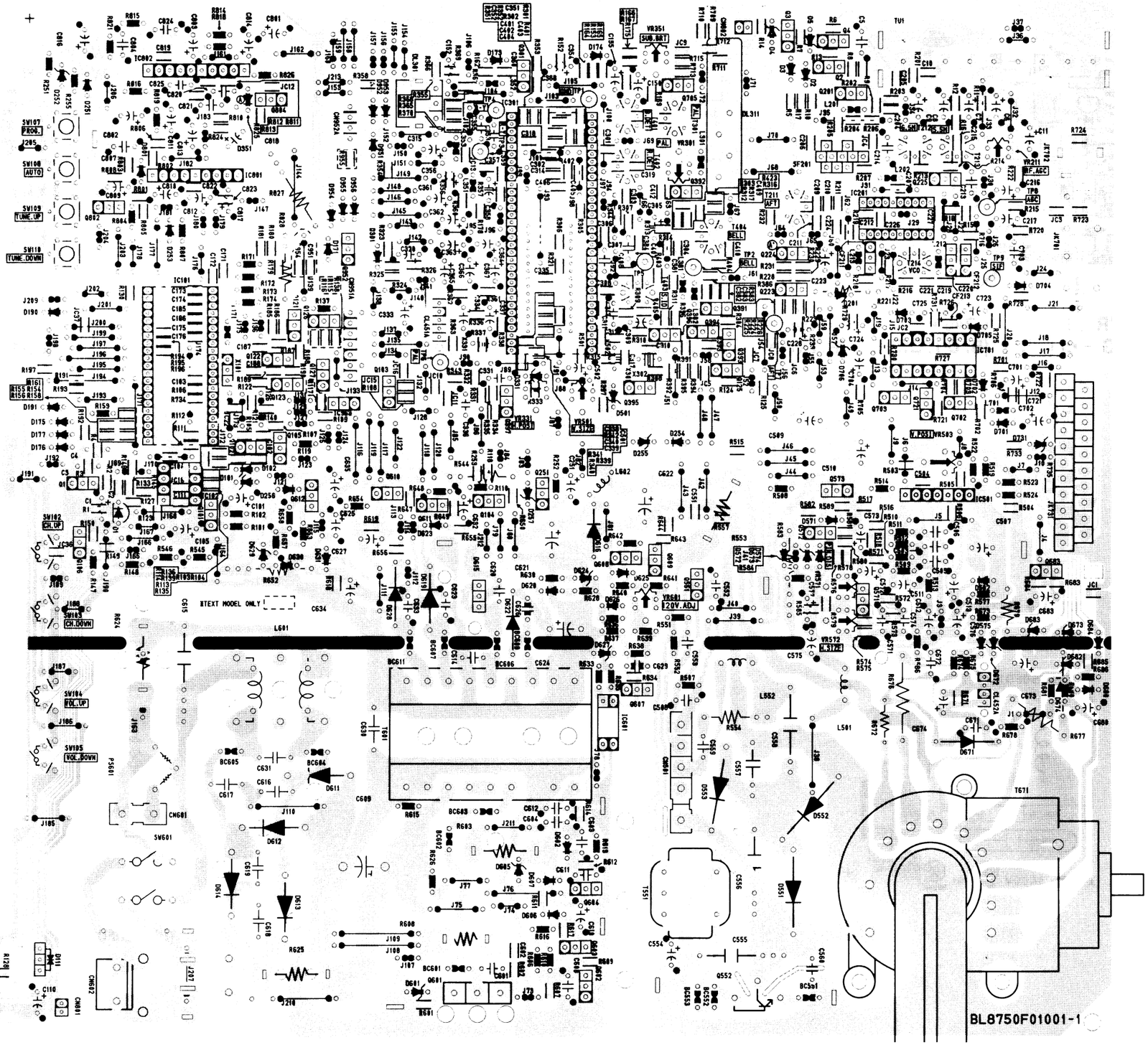


Filter PCB (Bottom View)

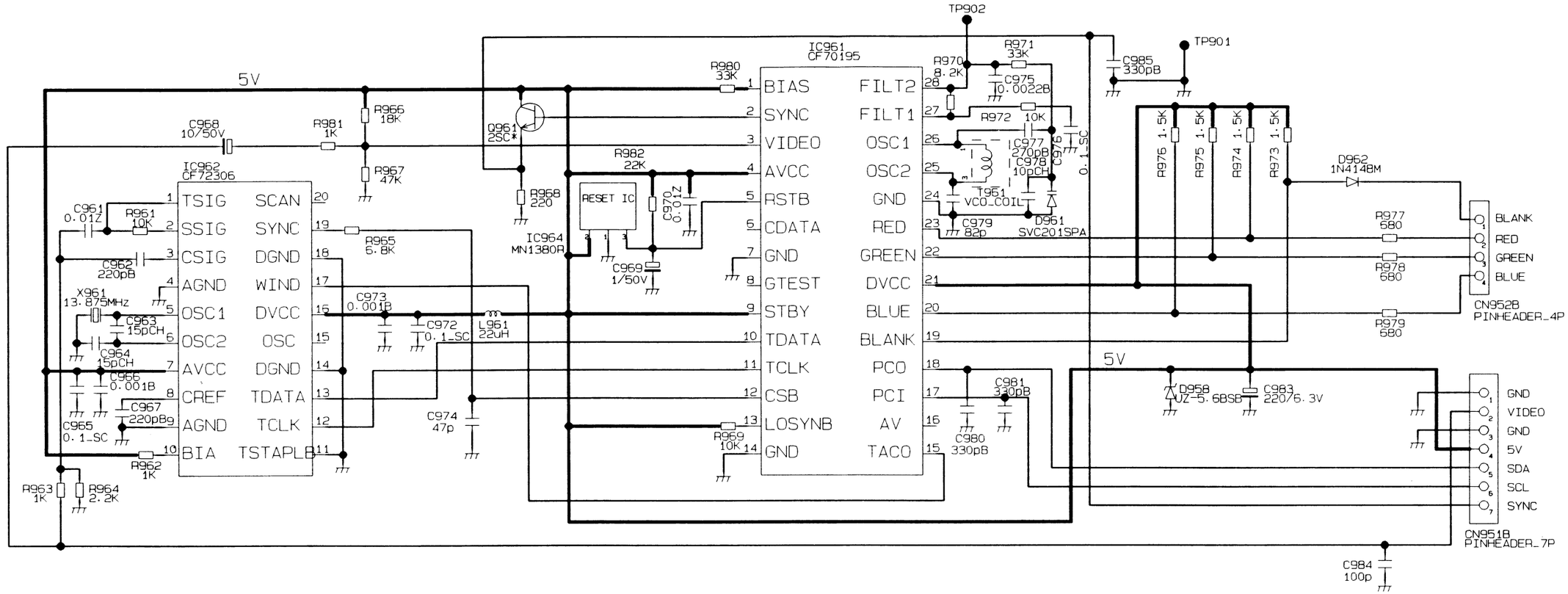


(BL8750F01001-3)

Main PCB (Bottom View)



Teletext Schematic Diagram

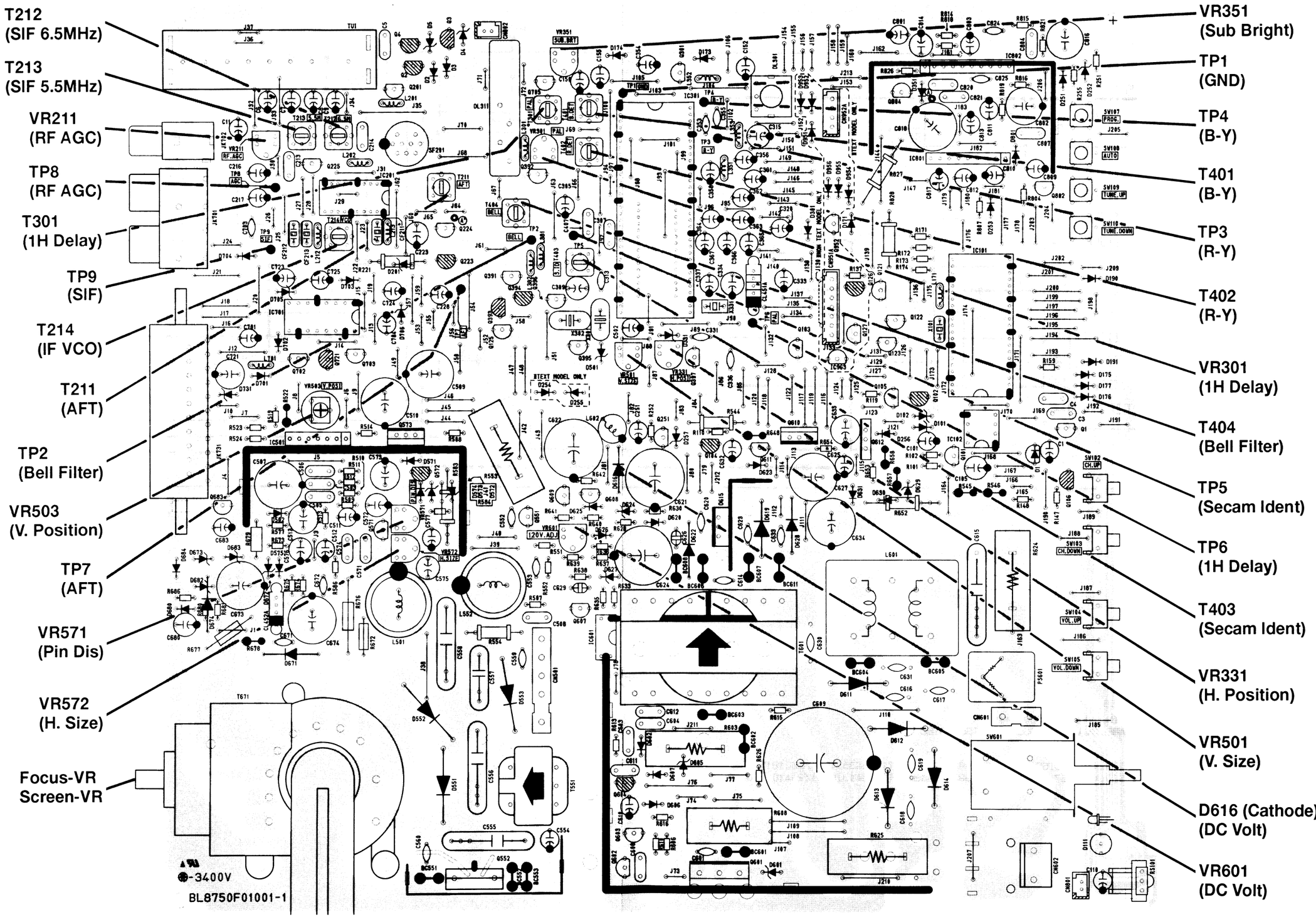


NOTES:

CHASSIS_SCHEMATIC_DIAGRAM_NOTES.

1. ALL_RESISTOR_VALUES_ARE_IN_OHMS. _K=1000. M=1000K.
2. ALL_CAPACITANCE_VALUES_ARE_IN_uF_UNLESS_OTHERWISE_NOTED. _pF=uuF.
3. ⏚ IS_COLD_GROUND.
4. NO_INDICATED_2SC*_ARE_USED_KTC3199(GR)/KTC3198(GR)/2SC3331(T)/2SC3331(U)/2SC1815(GR).
5. NO_INDICATED_2SA*_ARE_USED_KTA1267(GR)/KTA1266(GR)/2SA1318(T)/2SA1318(U)/2SA1015(GR).

Main PCB (Top View)



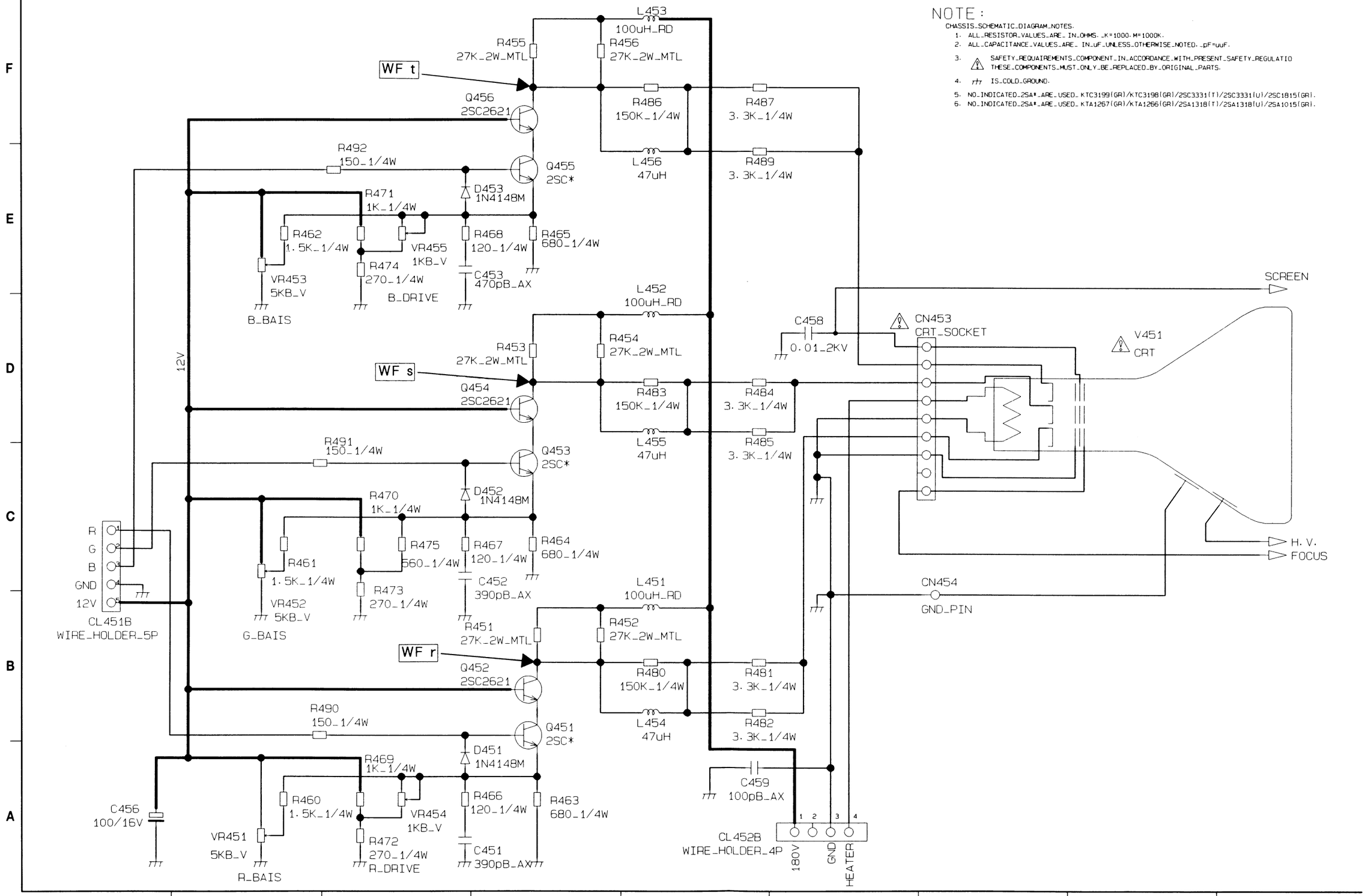
(BL8750F01001-1)

CRT Schematic Diagram

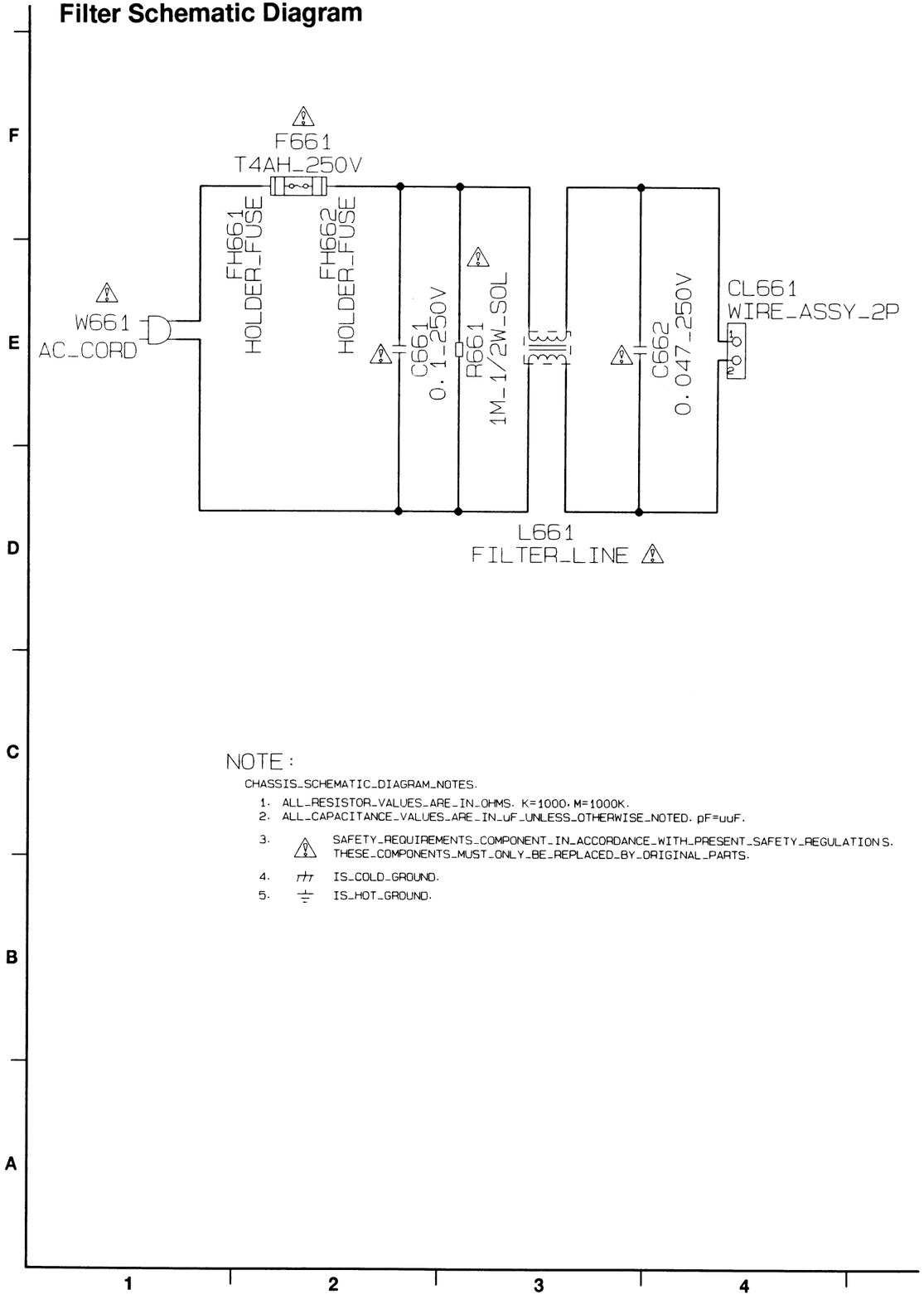
NOTE :

CHASSIS_SCHEMATIC_DIAGRAM_NOTES.

1. ALL_RESISTOR_VALUES_ARE_ IN_OHMS. _K=1000. M=1000K.
2. ALL_CAPACITANCE_VALUES_ARE_ IN_uF_UNLESS_OTHERWISE_NOTED. _pF=uuF.
3. ⚠ SAFETY_REQUAIREMENTS_COMPONENT_IN_ACCORDANCE_WITH_PRESENT_SAFETY_REGULATIO THESE_COMPONENTS_MUST_ONLY_BE_REPLACED_BY_ORIGINAL_PARTS.
4. ⏚ IS_COLD_GROUND.
5. NO_INDICATED_2SA*_ARE_USED_ KTC3199(GR)/KTC3198(GR)/2SC3331(T)/2SC3331(U)/2SC1815(GR).
6. NO_INDICATED_2SA*_ARE_USED_ KTA1267(GR)/KTA1266(GR)/2SA1318(T)/2SA1318(U)/2SA1015(GR).



Filter Schematic Diagram



NOTE :

CHASSIS_SCHEMATIC_DIAGRAM_NOTES.

1. ALL_RESISTOR_VALUES_ARE_IN_OHMS. K=1000, M=1000K.
2. ALL_CAPACITANCE_VALUES_ARE_IN_uF_UNLESS_OTHERWISE_NOTED. pF=uuF.
3. ⚠ SAFETY_REQUIREMENTS_COMPONENT_IN_ACCORDANCE_WITH_PRESENT_SAFETY_REGULATIONS. THESE_COMPONENTS_MUST_ONLY_BE_REPLACED_BY_ORIGINAL_PARTS.
4. ⏚ IS_COLD_GROUND.
5. ⏚ IS_HOT_GROUND.

CH-DOWN SW103 TACT_SW_V
VOL-UP SW104 TACT_SW_V
VOL-DOWN SW105 TACT_SW_V
PROGRAM SW107 TACT_SW_H
AUTO SW108 TACT_SW_H
TUNE-UP SW109 TACT_SW_H
TUNE-DOWN SW110 TACT_SW_H

D191 1N4148M R197 4.7K

IC801 UPC1406HA
REGULATOR
ATT1
ATT2
VCC GND
1 2 3 4 5 6 7 8 9

R807 100_1/4W
R801 5.6K
C810 47/16V
R802 10K
R806 10K
D801 1N4148M
C811 4.7/50V
C813 4.7/50V
Q802 2SC*
R803 12K
R808 8.2K
C809 2.2/50V
C822 0.0068B
C823 0.0068B
C812 4.7/50V
C817 4.7/50V
R804 47K_1/4W
AUDIO_L
AUDIO_R

IC802 LA4261
WFb
RIPPLE FILTER
PROTECTOR
Pre Gnd
Power Gnd Vcc
1 2 3 4 5 6 7 8 9 10
R810 1.5K
R813 1.5K
C801 100/6.3V
C814 100/25V
C803 100/6.3V
C819 0.01Z
C824 0.022_SC
R815 22K_1/4W
C802 470/16V
C818 2200/25V_VR
C815 470/16V
C825 0.022_SC
R816 22K_1/4W
R814 180_1/4W
R811 3.3K
R812 3.3K
R826 120_1/4W
R818 180_1/4W
R819 3.3_1/4W
R821 3.3_1/4W
C807 0.1_TF
C804 0.1_TF
CN801 CN2P
SPB01 SPEAKER L
CL801 WIRE_ASSY2P
CN802 CN2P
SPB02 SPEAKER R
CL802 WIRE_ASSY2P

R824 10K
Q804 2SC*
R825 10K

*TEXT_MODEL_ONLY
TEXT_UNIT
SCL 5V
SYNC SDA VIDEO
CN951A PINHEADER_B_7P
B G R BLK
CN952A PINHEADER_B_4P
R138 220
R137 220_1/4W
Q126 2SA*
R115 100K
R117 22K
Q127 2SC*
R116 10K
IC963 AN78L05
in out com
D951 1N4148M
D952 1N4148M
D953 1N4148M
D956 1N4148M
D955 1N4148M
D954 1N4148M
C951 220p
Q952 2SC*
R954 10K
R955 0

*NON_TEXT_MODEL_ONLY
J130
12.5mm_JUMPER

R155 8.2K
R154 6.8K
R167 2.2K
R166 15K
R169 56K (BRIGHT)
VR351 10KB_H SUB-BRIGHT
D190 1N4148M
D173 1N4148M
R156 6.8K
R158 5.6K
R152 3.9K
R162 18K
R353 0
R164 68K (CONTRAST)
R159 10K_1/4W
D174 1N4148M
R161 5.6K
R153 4.7K
R165 5.6K
R175 82K
(COLOR)
C155 1/50V
(P-TONE)
R130 82K
R369 15K
C152 4.7/25V
R367 12K
R368 15K

C111 0.022Z
C104 0.01Z
R127 10K
R133 22K
R145 22K
R146 22K
BAND 1
BAND 0
POWER SAFETY
KI
KO
DO2
DO1
DO0
AFT
AFT DEF.
MUTE
SERVICE
VOLUME
COLOR
BRIGHT
CONT.
VT

L171 39UH_J
C175 24pCH
C176 24pCH
X101 4.19MHz
R734 10K
R173 1.5K_1/4W
R174 680_1/4W
TXT-Y
C103 0.01Z
R105 1K
C102 0.01Z
R106 8.2K
C185 100p
R186 22K
Q122 2SC*
C188 100p
C186 100p
Q121 2SC*
C187 100p
R189 10K
R190 47K
R187 4.7K
R188 47K
H-SYNK
V-SYNK
R253 47K
D257 UZ-24BSB
R121 22K
Q123 2SC*
R122 10K
IC102 X24C01AP
R139 22K
R136 10K
R135 2.2K
C105 220/6.3V
R114 220
R111 22K
R112 22K
R140 10K
C113 220/6.3V

R301 560
C315 100/16V
R302 8.2K
C318 0.1Z
C401 180pCH
C314 0.01Z
R401 3.3K
C403 7pCH
C402 180pCH
C404 20pCH
T401 DET.COIL B-Y_MM031
R402 6.8K
C405 6pCH
T402 DET.COIL R-Y_MM031
C406 20pCH
R304 6.8K
R303 10K
Q391 2SC*
C302 0.047Z
R313 15K
R314 5.6K
R312 4.7K
Q392 2SC*
R423 22K
C412 0.01Z
R305 330
C303 0.01Z
C304 0.01Z
R306 2.2K
C305 0.47/50V
R307 330K
C306 0.01Z
C307 0.056_ML
R321 4.7M
C408 0.01Z
C311 39pCH
C312 27pCH
X301 4.43MHz
X302 3.58MHz
MM030
T403 IDENT_COIL
C308 0.018
C309 2.2/50V_NP
C310 13p
C313 0.027_SC
R308 3.3K
R309 3.3M
C502 2.2/50V_L
D501 UZ-7.5BSB
R501 22K
R310 1K
R311 1.8K
R397 120K
V-SIZE VR501 50KB_H
C317 33p
R315 1K
C501 0.001B
R403 10K
C407 TP5
C409 0.01Z
R316 33K
C383 47p
R383 270
C382 33p
L381 15UH
R386 1K
L382 22UH
T404 BELL_FILTER_COIL MM032
R405 4.7M
R391 10K
R393 10K
Q394 2SA*
Q395 2SC*
R395 22K
R396 22K
Q396 2SC*
R394 10K
60HZ:H
50HZ:L

R326 330K
C320 0.47/50V
R324 330K
R325 120K
C331 0.015_SC
C333 0.47/50V_L
R333 18
VR331 200B_H H-POSI
Q397 2SC*
R334 6.8K
R331 4.7K
C336 0.022_SC
R332 8.2K
D331 UZ-9.1BSC
R335 220
C334 330/10V_VR
C335 0.01Z

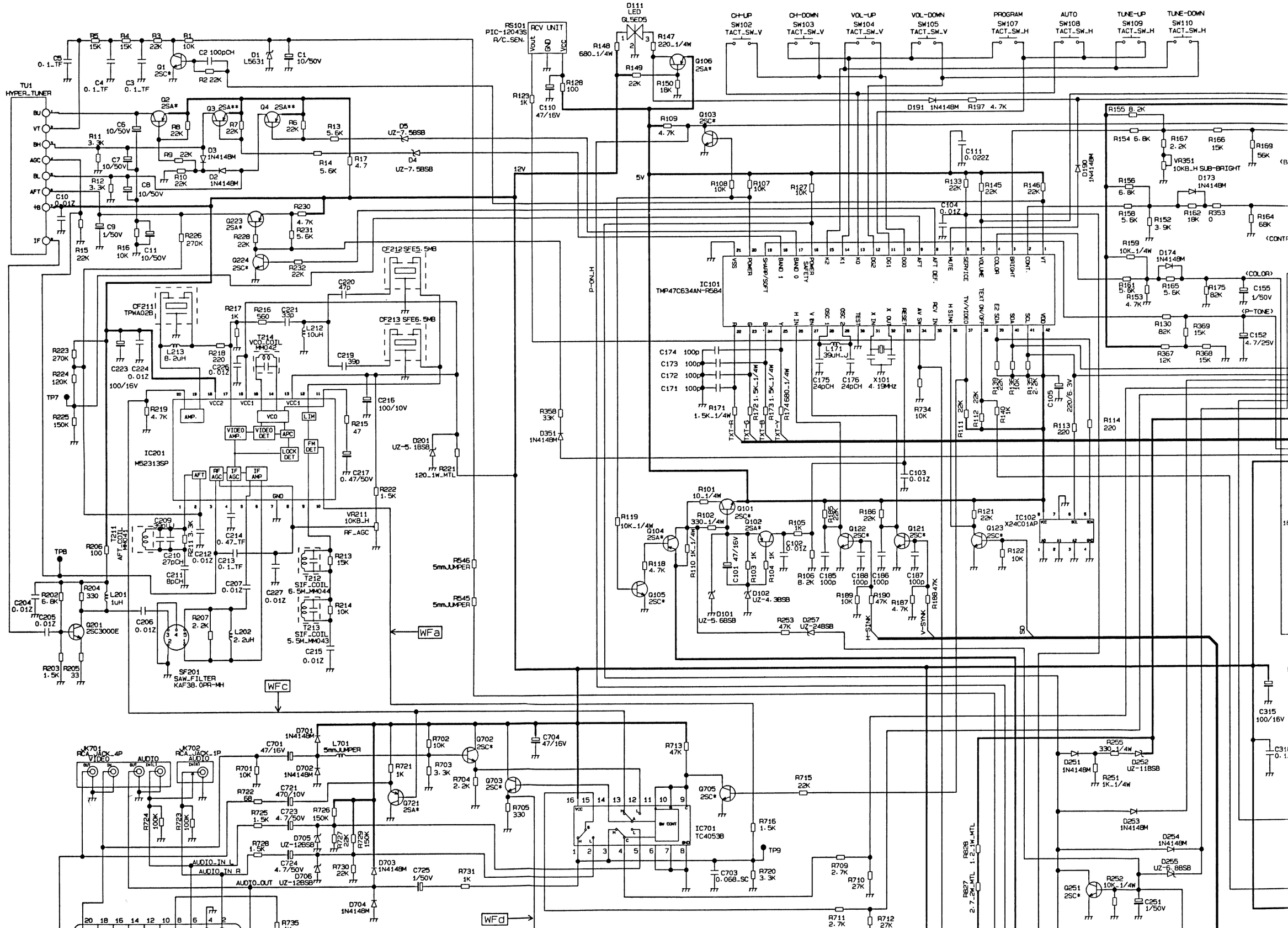
WFo
TP6
R
G
B
GND
12V
WFp
WFq
CL451A WIRE_HOLDER_5P

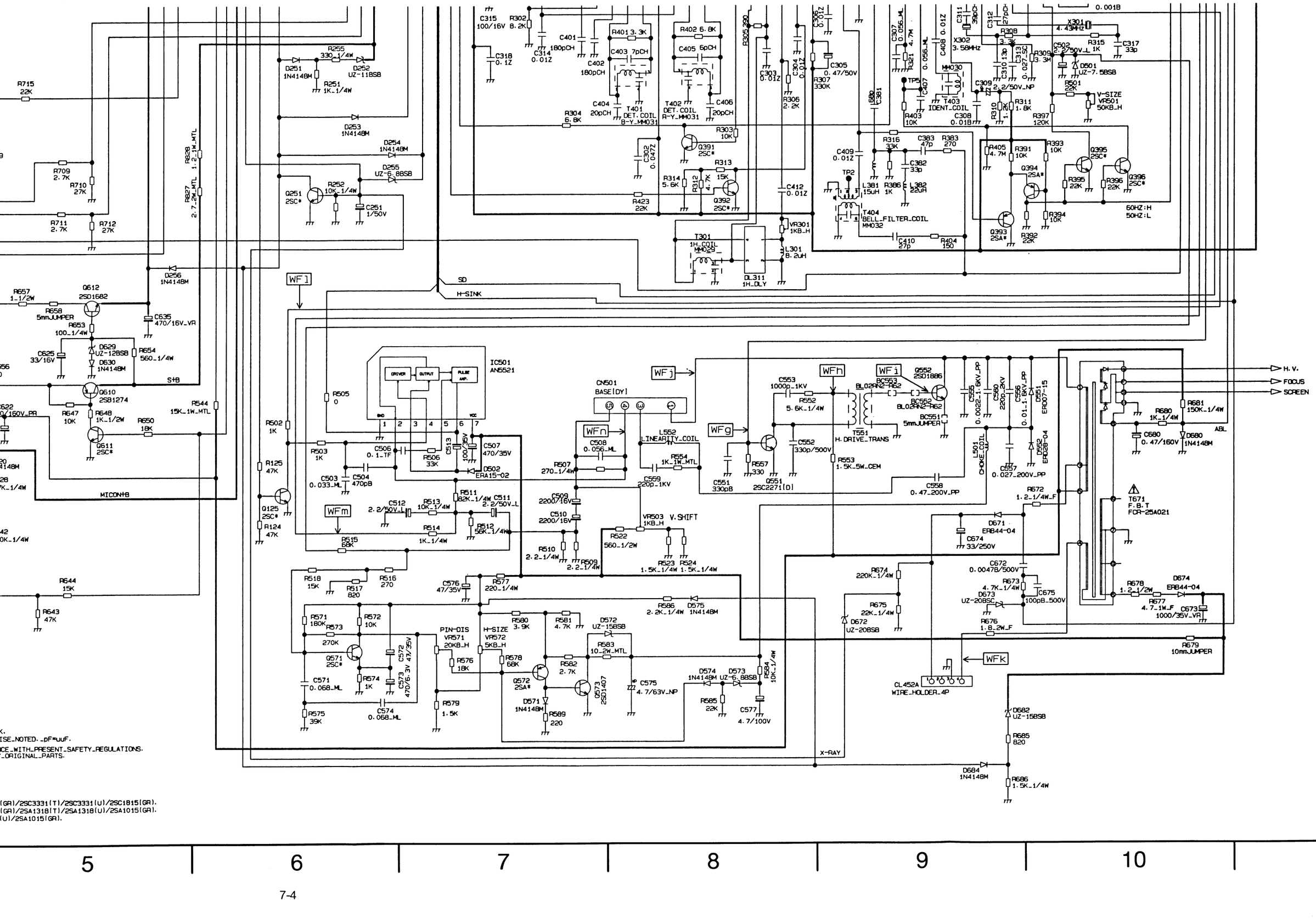
R354 68K
C355 0.1_SC
TP4
C352 180pCH
R351 560
C353 0.1_SC
R352 8.2K
C351 180pCH
TP3
C354 10/50V
C357 27pCH
C359 120pCH
C358 1/50V
L351 68UH
L352 33UH
L353 68UH
R360 680
C356 10/50V
R365 1.2K
Q301 2SC*
R370 470
DL301 DELAY_LINE
R366 1.5K
C360 56p
R355 10K
R357 1K
R178 1K
C361 0.1/50V
C363 0.1/50V
C362 0.1/50V
C364 0.1/50V
C365 0.47/50V
C366 0.47/50V
C367 0.47/50V
R361 150
R362 150
R363 150
R336 1K
R337 470
C350 330
X331 3.58MHz
C337 3.3/50V
R338 3.3K
C338 0.01B
R339 22K
R343 120K
C339 330pB
R340 150
R341 120
R342 270K
C340 0.0022B
TXT-Y
TXT-G
TXT-B
R179 220
R180 220
R181 220
D171 1N4148M
D301 1N4148M
R323 0
WFe
WFf
TP1 GND

IC301 TA8759BN
S DE EMP
R/Y OUT
S DEEMP
S DET
S DET
VCC
COLOR
S DET
S DET
SW1
SW2
DL IN
DC BIAS
DL OUT
TINT
ACC FIL
DC FB
S IN
GND
P/N IN
SW3
P IDENT
S IDENT
S REF
APC
3.58 IN
N IDENT
4.43 IN
V DRIVE
VCO OUT
V RAMP
V NFB

R715 22K
R709 2.7K
R710 27K
R711 2.7K
R712 27K
R828 2.7_2W_MTL
R827 2.7_2W_MTL
R255 330_1/4W
D251 1N4148M
D252 UZ-11BSB
R251 1K_1/4W
D253 1N4148M
D254 1N4148M
D255 UZ-6.8BSB
Q251 2SC*
R252 10K_1/4W
C251 1/50V

Main Schematic Diagram



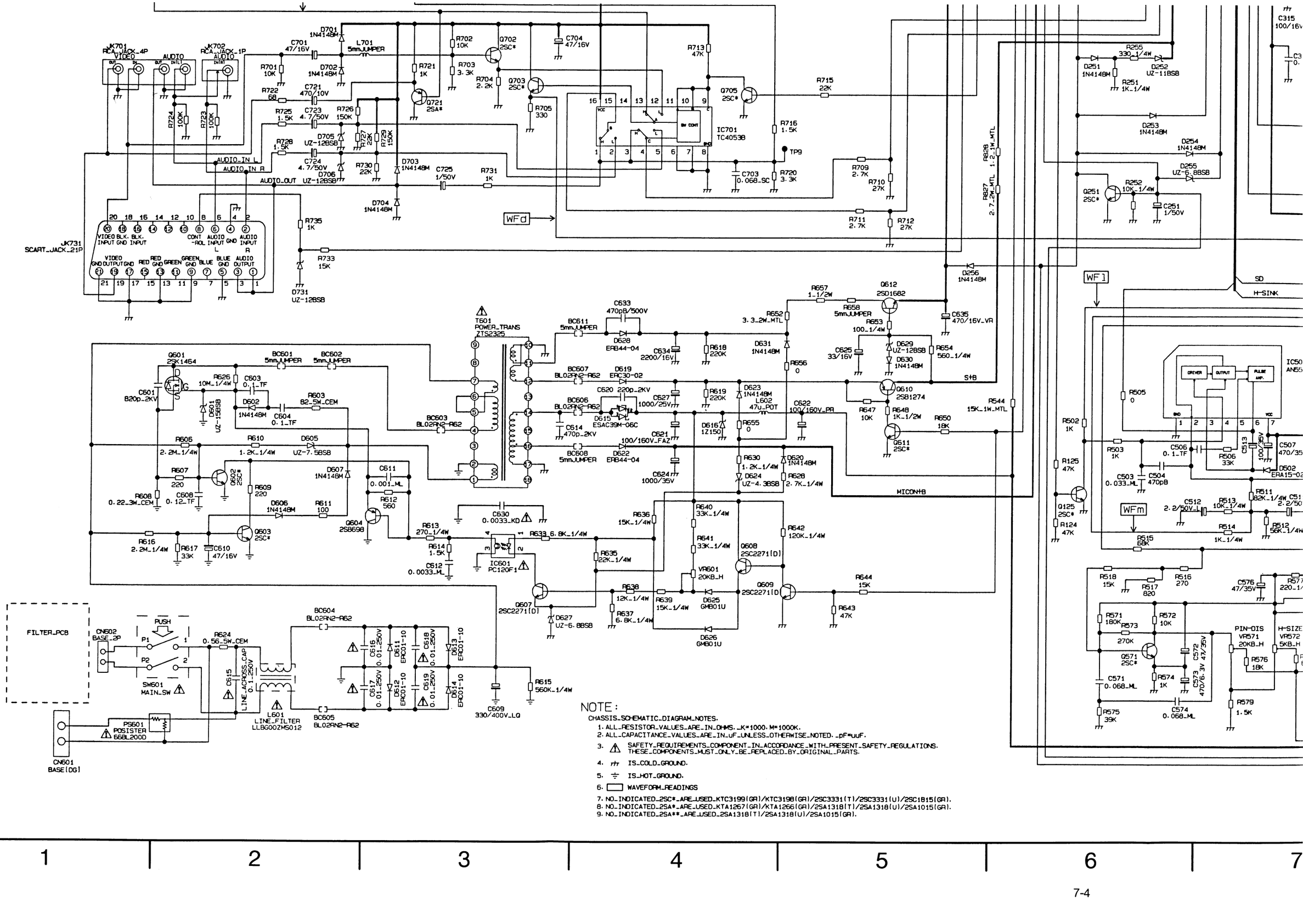


K.
ISE_NOTED._pF=uuF.
CE_WITH_PRESENT_SAFETY_REGULATIONS.
_ORIGINAL_PARTS.

(GR)/2SC3331(T)/2SC3331(U)/2SC1815(GR).
(GR)/2SA1318(T)/2SA1318(U)/2SA1015(GR).
(U)/2SA1015(GR).

5 | 6 | 7 | 8 | 9 | 10 | 11

(L8750SC-



NOTE :

CHASSIS_SCHEMATIC_DIAGRAM_NOTES.

1. ALL_RESISTOR_VALUES_ARE_IN_OHMS. _K=*1000. M=*1000K.
2. ALL_CAPACITANCE_VALUES_ARE_IN_uF_UNLESS_OTHERWISE_NOTED. _pF=uuF.
3. ⚠ SAFETY_REQUIREMENTS_COMPONENT_IN_ACCORDANCE_WITH_PRESENT_SAFETY_REGULATIONS. THESE_COMPONENTS_MUST_ONLY_BE_REPLACED_BY_ORIGINAL_PARTS.
4. ⏚ IS_COLD_GROUND.
5. ⏚ IS_HOT_GROUND.
6. ▭ WAVEFORM_READINGS
7. NO_INDICATED_2SC*_ARE_USED_KTC3199(GR)/KTC3198(GR)/2SC3331(T)/2SC3331(U)/2SC1815(GR).
8. NO_INDICATED_2SA*_ARE_USED_KTA1267(GR)/KTA1266(GR)/2SA1318(T)/2SA1318(U)/2SA1015(GR).
9. NO_INDICATED_2SA**_ARE_USED_2SA1318(T)/2SA1318(U)/2SA1015(GR).