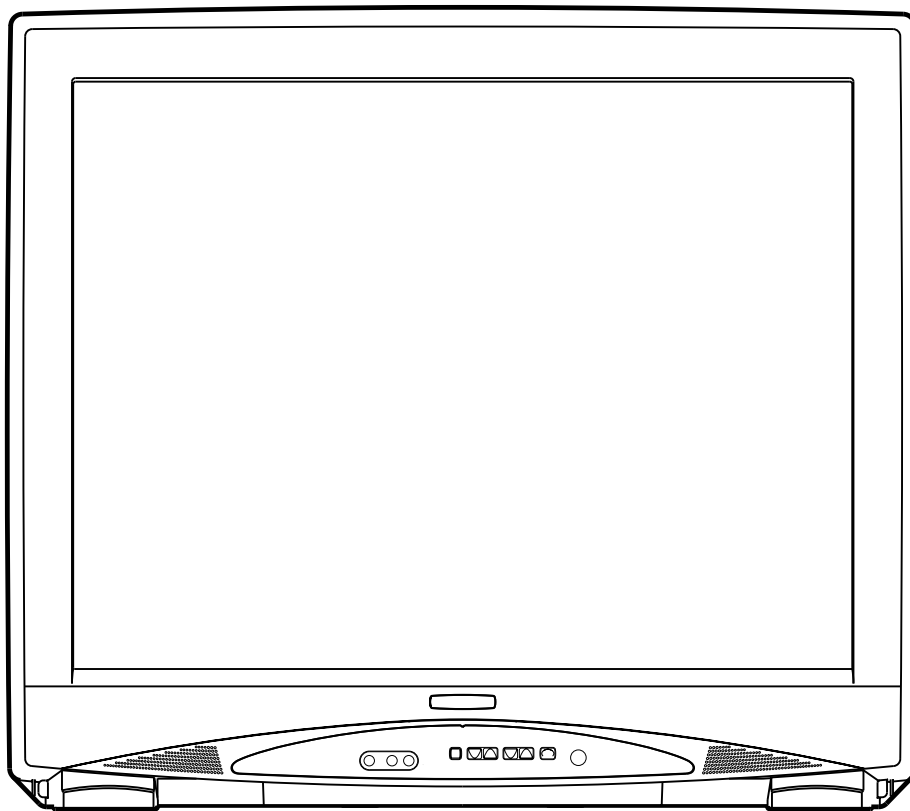


# ***SYLVANIA***

# **SERVICE MANUAL**

## **32" COLOR TELEVISION**

## **SRT2232S**



# 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 advise 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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# SPECIFICATIONS

## <TUNER>

ANT. Input ----- 75ohm Unbal., F type  
 Reference Level ----- 20Vp-p (CRT Green Cathode)  
 Test Input Signal ----- 400Hz 30% modulation

Description	Condition	Unit	Nominal	Limit
1. Intermediate Freq.	Picture	MHz	45.75	—
	Sound	MHz	41.25	—
2. Peak Picture Sens	VHF	dBμV	15	30
	CATV	dBμV	15	30
	UHF	dBμV	15	40
3. AFT Pull In Range (10mV input)	—	MHz	±2.2	±0.7

## <DEFLECTION>

Description	Condition	Unit	Nominal	Limit
1. Deflection Freq.	Horizontal	KHz	15.734	—
	Vertical	Hz	60	—
2. Linearity	Horizontal	%	—	±15
	Vertical	%	—	±10
3. Over Scan	—	%	10	—
4. High Voltage	—	KV	29	—

## <VIDEO & CHROMA>

Description	Condition	Unit	Nominal	Limit
1. Misconvergence	Center	mm	—	0.4
	Side	mm	—	1.5
	Corner	mm	—	2.1
2. Brightness	APL 100%	Ft-L	30	15
3. Color Temperature	—	°K	9200°K	—
4. Resolution	Horizontal	Line	250	—
	Vertical	Line	300	—

## <AUDIO>

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

Description	Condition	Unit	Nominal	Limit
1. Audio Output Power	10% THD	W	3	2.4
2. Audio Distortion (w/LPF)	500mW	%	2	7
3. Audio Freq. Response	-3dB	Hz	90~11K	—

### Note:

Nominal specifications represent the design specifications. All units should be able to approximate these. Some will exceed and some may drop slightly below these specifications. Limit specifications represent the absolute worst condition that still might be considered acceptable. In no case should a unit fail to meet limit specifications.

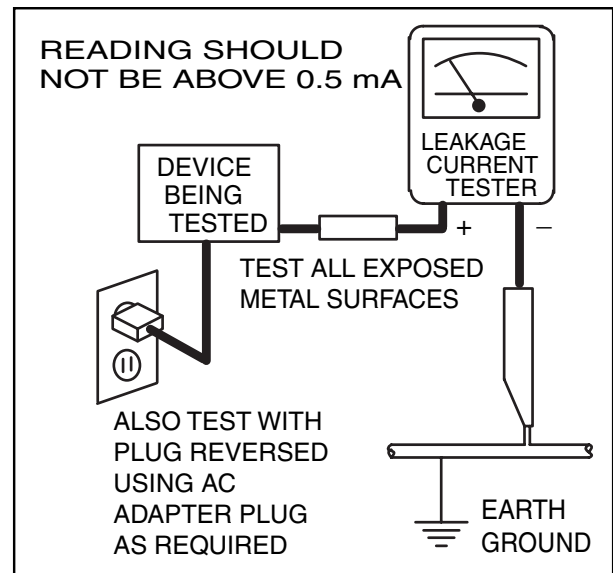
# IMPORTANT SAFETY PRECAUTIONS

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 120V AC outlet. (Do not use an isolation transformer during this test.) Use a leak-

age current tester or a metering system that complies with American National Standards Institute (ANSI) C101.1 Leakage Current for Appliances and Underwriters Laboratories (UL) 1410, (50.7). 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 milli-ampere. 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 servic-

ing 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 maybe safety-serviced without an isolation transformer only if the AC power plug is inserted so that the chassis is connected to the ground side of the AC power source. To confirm that the AC power plug is inserted correctly, with an AC voltmeter, measure between the chassis and a known

earth ground. If a voltage reading in excess of 1.0V is obtained, remove and reinsert the AC power plug in the opposite polarity and again measure the voltage potential between the chassis and a known earth ground.

b. Some TV receiver chassis normally have 85V AC(RMS) 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.

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 they comply 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 5~6 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

The power transformer uses crimp type connectors which connect the power cord and the primary side of the transformer. When replacing the transformer, follow these steps carefully and precisely to prevent shock hazards.

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 internal connectors, first, disconnect the AC plug from the AC supply outlet.

## 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 130 V	USA or CANADA	$\geq 3.2$ mm (0.126 inches)

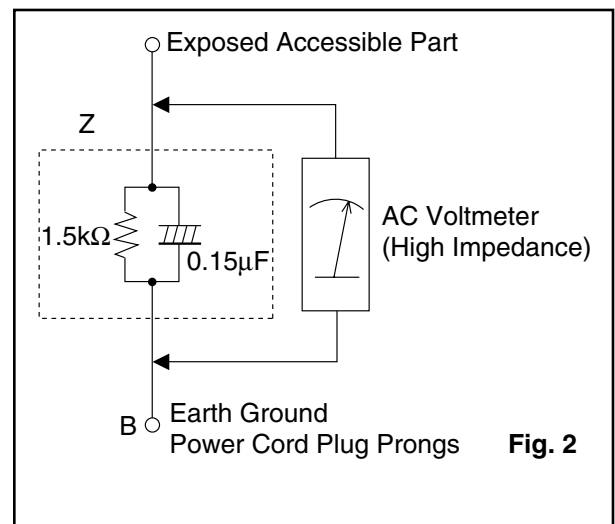
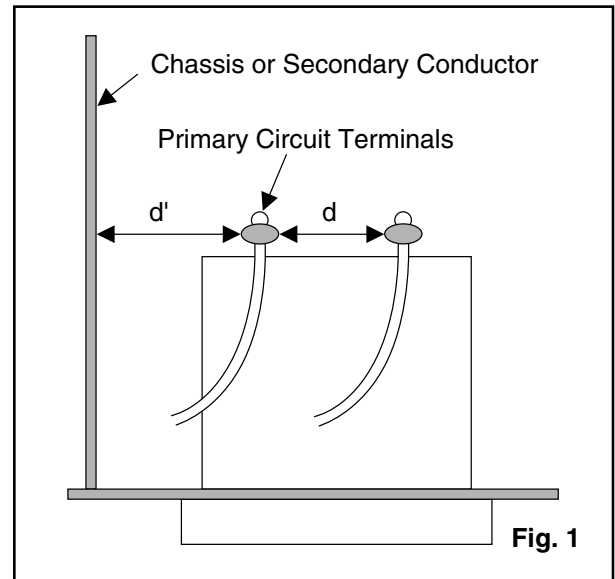
**Note:** This table is unofficial and for reference only. Be sure to confirm the precise values.

### 2. Leakage Current Test

Confirm the 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.) is lower than or equal to the specified value in the table below.

#### 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.



**Table 2 : Leakage current ratings for selected areas**

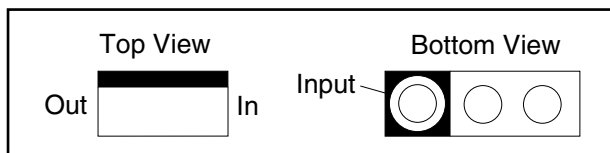
AC Line Voltage	Region	Load Z	Leakage Current (i)	Earth Ground (B) to:
110 to 130 V	USA	0.15μF CAP. & 1.5kΩ RES. connected in parallel	$i \leq 0.5$ mA rms	Exposed accessible parts

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

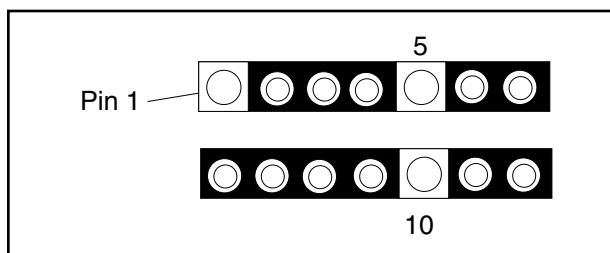
# STANDARD NOTES FOR SERVICING

## Circuit Board Indications

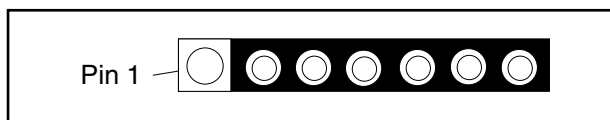
- a. The output pin of the 3 pin Regulator ICs is indicated as shown.



- b. For other ICs, pin 1 and every fifth pin are indicated as shown.



- c. The 1st pin of every male connector is indicated as shown.



## How to Remove / Install Flat Pack-IC

### 1. Removal

#### With Hot-Air Flat Pack-IC Desoldering Machine:

- (1) Prepare the hot-air flat pack-IC desoldering machine, then apply hot air to the Flat Pack-IC (about 5 to 6 seconds). (Fig. S-1-1)

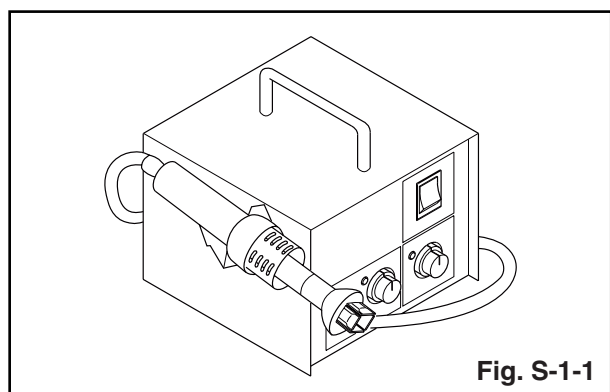


Fig. S-1-1

- (2) Remove the flat pack-IC with tweezers while applying the hot air.  
 (3) Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)  
 (4) Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

### Caution:

1. Do not supply hot air to the chip parts around the flat pack-IC for over 6 seconds because damage to the chip parts may occur. Put masking tape around the flat pack-IC to protect other parts from damage. (Fig. S-1-2)
2. The flat pack-IC on the CBA is affixed with glue, so be careful not to break or damage the foil of each pin or the solder lands under the IC when removing it.

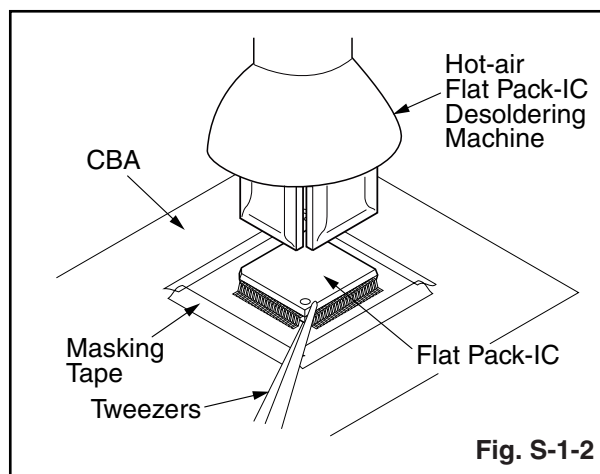
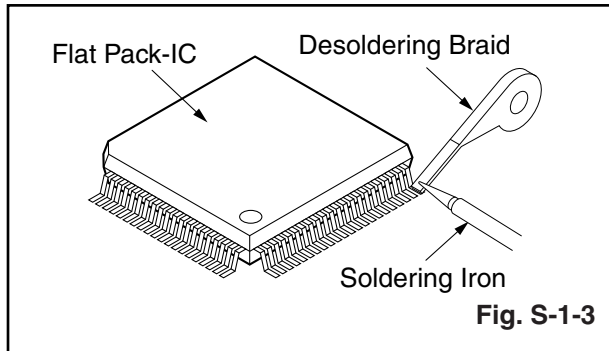


Fig. S-1-2

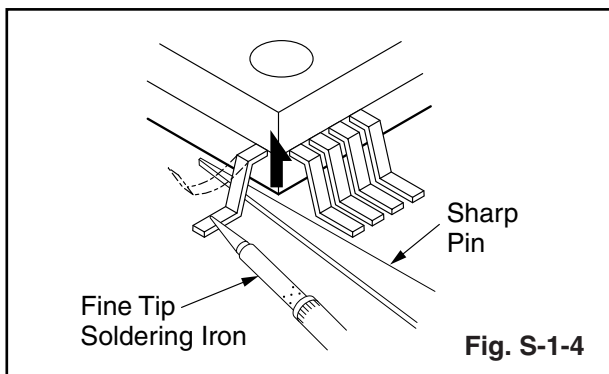


### With Soldering Iron:

- (1) Using desoldering braid, remove the solder from all pins of the flat pack-IC. When you use solder flux which is applied to all pins of the flat pack-IC, you can remove it easily. (Fig. S-1-3)



- (2) Lift each lead of the flat pack-IC upward one by one, using a sharp pin or wire to which solder will not adhere (iron wire). When heating the pins, use a fine tip soldering iron or a hot air desoldering machine. (Fig. S-1-4)



- (3) Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
- (4) Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

### With Iron Wire:

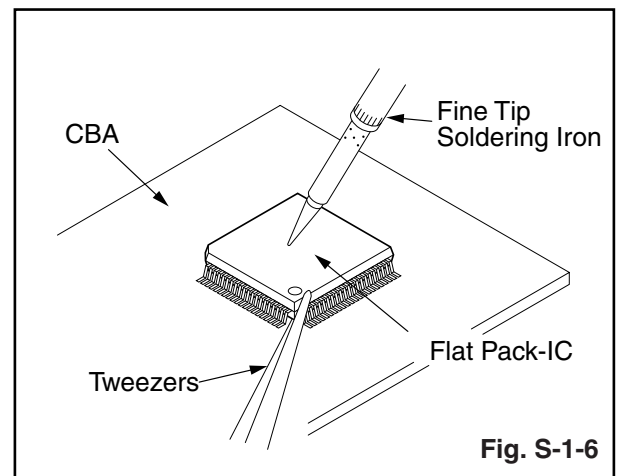
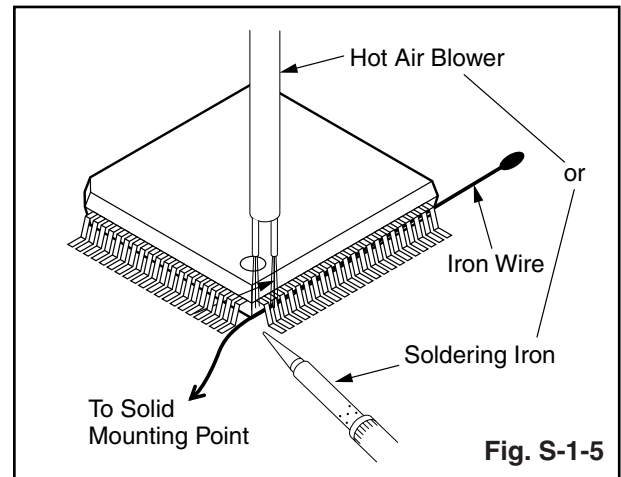
- (1) Using desoldering braid, remove the solder from all pins of the flat pack-IC. When you use solder flux which is applied to all pins of the flat pack-IC, you can remove it easily. (Fig. S-1-3)
- (2) Affix the wire to a workbench or solid mounting point, as shown in Fig. S-1-5.
- (3) While heating the pins using a fine tip soldering iron or hot air blower, pull up the wire as the solder melts so as to lift the IC leads from the CBA contact pads as shown in Fig. S-1-5.
- (4) Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply

soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)

- (5) Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

### Note:

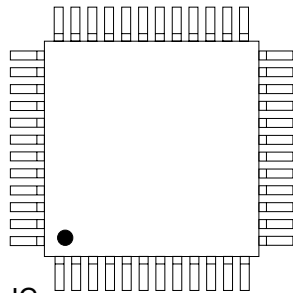
When using a soldering iron, care must be taken to ensure that the flat pack-IC is not being held by glue. When the flat pack-IC is removed from the CBA, handle it gently because it may be damaged if force is applied.



## 2. Installation

- (1) Using desoldering braid, remove the solder from the foil of each pin of the flat pack-IC on the CBA so you can install a replacement flat pack-IC more easily.
- (2) The "●" mark on the flat pack-IC indicates pin 1. (See Fig. S-1-7.) Be sure this mark matches the 1 on the PCB when positioning for installation. Then pre-solder the four corners of the flat pack-IC. (See Fig. S-1-8.)
- (3) Solder all pins of the flat pack-IC. Be sure that none of the pins have solder bridges.

Example :



Pin 1 of the Flat Pack-IC is indicated by a "●" mark.

Fig. S-1-7

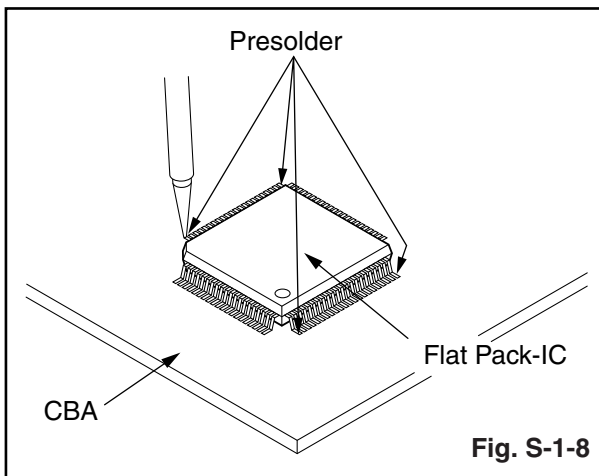


Fig. S-1-8

## Instructions for Handling Semiconductors

Electrostatic breakdown of the semiconductors may occur due to a potential difference caused by electrostatic charge during unpacking or repair work.

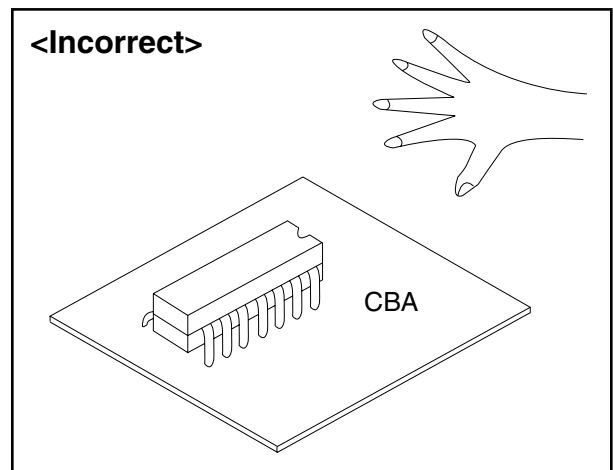
### 1. Ground for Human Body

Be sure to wear a grounding band ( $1\text{M}\Omega$ ) that is properly grounded to remove any static electricity that may be charged on the body.

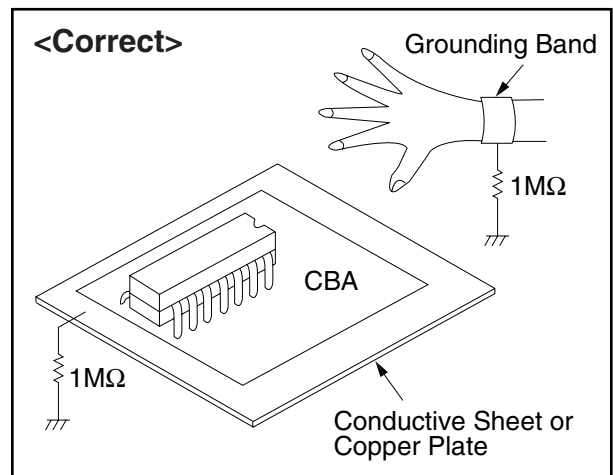
### 2. Ground for Workbench

Be sure to place a conductive sheet or copper plate with proper grounding ( $1\text{M}\Omega$ ) on the workbench or other surface, where the semiconductors are to be placed. Because the static electricity charge on clothing will not escape through the body grounding band, be careful to avoid contacting semiconductors with your clothing.

<Incorrect>



<Correct>



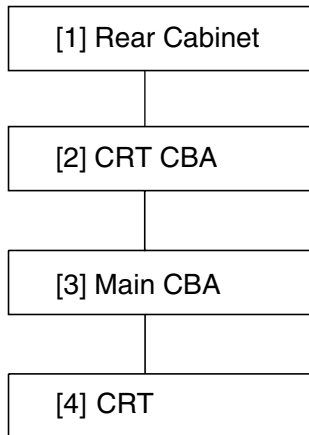
# CABINET DISASSEMBLY INSTRUCTIONS

## 1. Disassembly Flowchart

This flowchart indicates the disassembly steps for the cabinet parts, and the CBA in order to gain access to item(s) to be serviced. When reassembling, follow the steps in reverse order. Bend, route and dress the cables as they were.

### Caution !

When removing the CRT, be sure to discharge the Anode Lead of the CRT with the CRT Ground Wire 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	7(S-1), 1(S-2), 3(S-4)	1
[2]	CRT CBA	4,5	CN1501	2
[3]	Main CBA	3,5	CN571, CN801, CN802, CN691, Anode Cap	3
[4]	CRT	4	4(S-3)	4

↓      ↓      ↓      ↓      ↓  
(1)    (2)    (3)    (4)    (5)

### Note:

- (1) Order of steps in procedure. When reassembling, follow the steps in reverse order. These numbers are also used as the Identification (location) No. of parts in figures.
- (2) Parts to be removed or installed.
- (3) Fig. No. showing procedure of part location
- (4) Identification of part to be removed, unhooked, unlocked, released, unplugged, unclamped, or desoldered.  
S=Screw, P=Spring, L=Locking Tab, CN=Connector, \*=Unhook, Unlock, Release, Unplug, or Desolder  
2(S-2) = two Screws (S-2)
- (5) Refer to the following "Reference Notes in the Table."

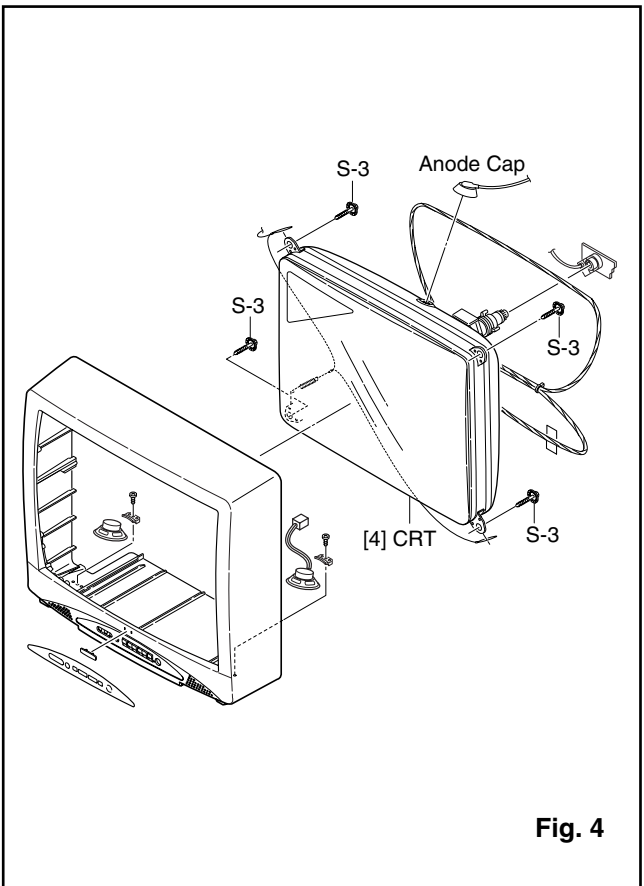
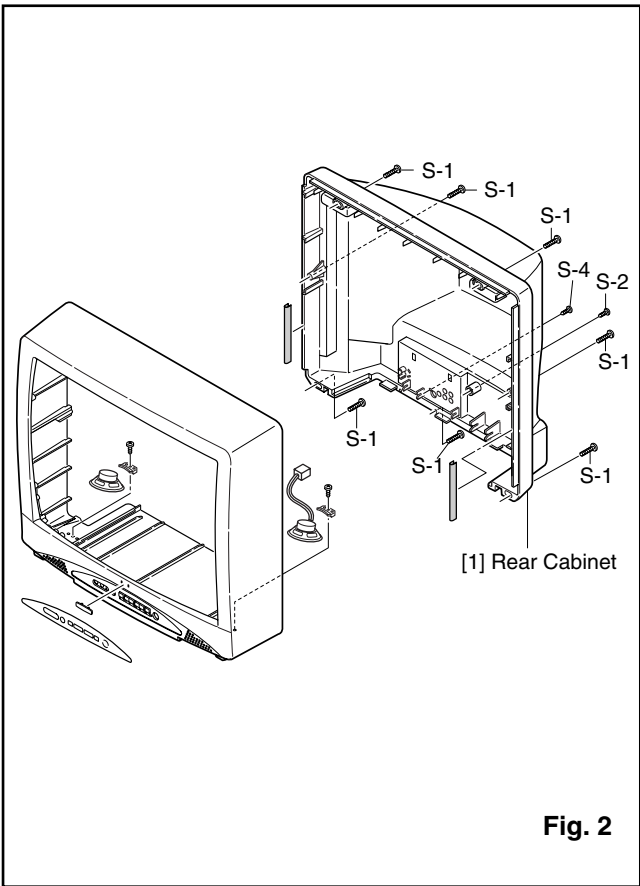
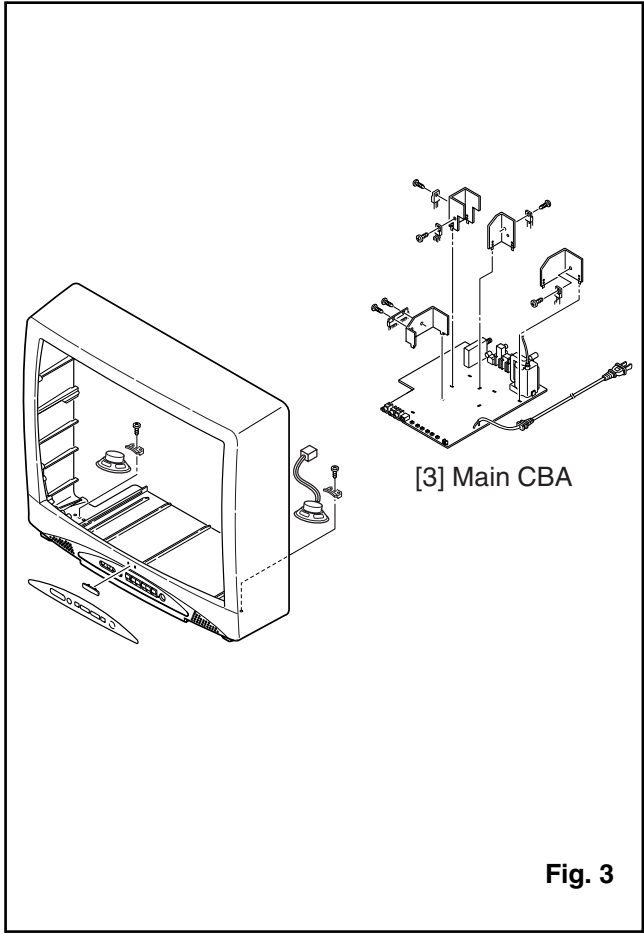
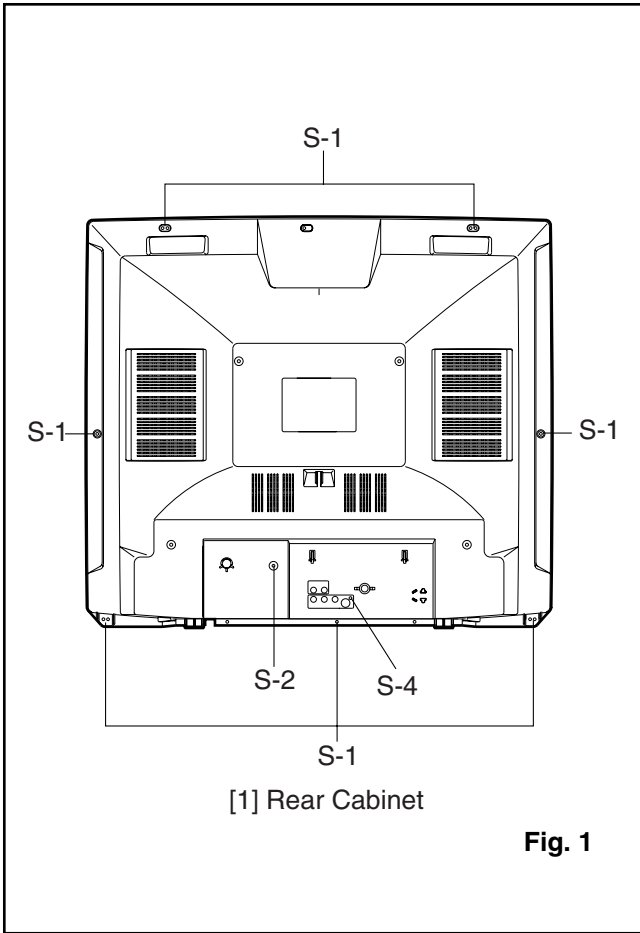
### Reference Notes in the Table

1. Removal of the Rear Cabinet. Remove screws 7(S-1), 1(S-2) and 3(S-4) then slide the Rear Cabinet backward.
2. Removal of the CRT CBA. Disconnect CN1501 then pull the CRT CBA backward.

### Caution !

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

3. Removal of the Main CBA. First, disconnect CN571, CN801, CN802, and CN691 on the Main CBA. Second, remove Anode Cap. then slide the Main CBA backward.
4. Removal of the CRT. Remove screws 4(S-3) then slide the CRT backward.



## TV Cable Wiring Diagram

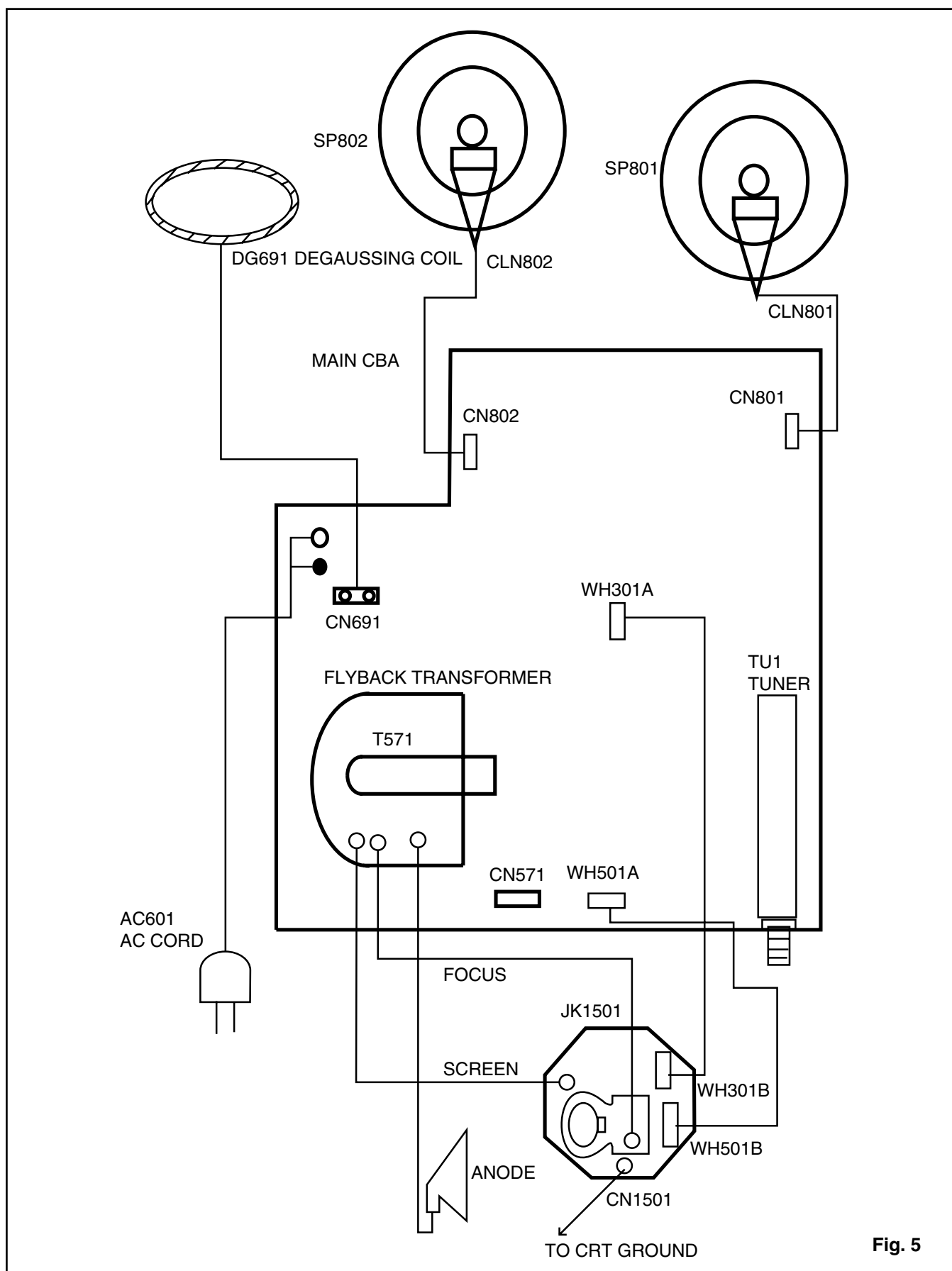


Fig. 5

# ELECTRICAL ADJUSTMENT INSTRUCTIONS

## General Note:

"CBA" is abbreviation for "Circuit Board Assembly".

## NOTE:

Electrical adjustments are required after replacing circuit components and certain mechanical parts. 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. NTSC Pattern Generator (Color Bar W/White Window, Red Color, Dot Pattern, Gray Scale, Monoscope, Multi-Burst)
2. DC Voltmeter
3. Oscilloscope: Dual-trace with 10:1 probe, V-Range:0.001~50V/Div, F-Range: DC~AC-60MHz
4. Plastic Tip Driver
5. Remote control unit: Part No. N0121UD or N0134UD
6. DC power supply 13.2V/5A

## How to set up the service mode:

### Service mode:

1. Use the service remote control unit.
2. Turn the power on. (Use main power on the TV unit.)
3. Press " SLEEP " button on the service remote control unit. Version of micro computer will display on the CRT. (Ex: 5Z38-919)
4. Check the display on the lower left is "AE" and if it is not "AE", set it at "AE" according to "3-1 LANGUAGE, STEREO TYPE, ACCESS CODE, STABLE SOUND, COMB FILTER, COMPONENT, AV MEMORY".

## 1. +B Adjustment

**Purpose:** To obtain correct operation.

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

Test Point	Adj. Point	Mode	Input
TP601(+B) TP300(GND)	VR661	---	---
Tape	M. EQ.	Spec.	
---	DC Voltmeter	+138±0.5V DC.	

**Note:**TP601, TP300(GND), VR661 --- Main CBA

1. Connect DC Volt Meter to TP601 and TP300(GND).
2. Adjust VR661 so that the voltage of TP601 becomes +138±0.5V DC.

## 2-1. Setting for 7F, CHROMA, LANGUAGE, STEREO TYPE, ACCESS CODE, STABLE SOUND, COMB FILTER, COMPONENT and AV MEMORY data Values

### General

1. Enter the Service mode. (See page 5-1)
2. Press " VOL ▼ " button on the Service remote control unit. Display changes " C/D ", " 7F ", " CHROMA ", " LANGUAGE ", " STEREO TYPE ", " ACCESS CODE ", " STABLE SOUND ", " COMB FILTER ", " COMPONENT " and " AV MEMORY " cyclically when " VOL ▼ " button is pressed.

### 7F

Press " CH ▲ / ▼ " buttons on the Service remote control unit. Then choose " FF ".

### CHROMA

Press " CH ▲ / ▼ " buttons on the Service remote control unit. Then choose " AUTO ".

### LANGUAGE

Press " CH ▲ / ▼ " buttons on the Service remote control unit. Then choose " SPA ".

### STEREO TYPE

Press " CH ▲ / ▼ " buttons on the Service remote control unit. Then choose " MTS ".

### ACCESS CODE

Press " CH ▲ / ▼ " buttons on the Service remote control unit. Then choose " ON ".

### STABLE SOUND

Press " CH ▲ / ▼ " buttons on the Service remote control unit. Then choose " OFF ".

### COMB FILTER

Press " CH ▲ / ▼ " buttons on the Service remote control unit. Then choose " ON ".

### COMPONENT

Press " CH ▲ / ▼ " buttons on the Service remote control unit. Then choose " OFF ".

### AV MEMORY

Press " CH ▲ / ▼ " buttons on the Service remote control unit. Then choose " ON ".

**Note:** C/D data values do not need to be adjusted at this moment.

## 2-2. Setting for CONTRAST, COLOR, TINT, V-TINT, S-TINT and SHARPNESS data Values

### General

1. Enter the Service mode. (See page 5-1)
2. Press " MENU " button on the Service remote control unit. Display changes " BRT ", " CNT ", " CLR ", " TNT ", " V-TINT ", " S-TINT " and " SHARPNESS " cyclically when " MENU " button is pressed.

### CNT

1. Press " MENU " button on the Service remote control unit. Then select " CONTRAST " (CNT) display.
2. Press " CH ▲ / ▼ " buttons on the Service remote control unit so that the value of " CONTRAST " (CNT) becomes 78.

### CLR

1. Press " MENU " button on the Service remote control unit. Then select " COLOR " (CLR) display.
2. Press " CH ▲ / ▼ " buttons on the Service remote control unit so that the value of " COLOR " (CLR) becomes 60.

### TNT

1. Press " MENU " button on the Service remote control unit. Then select " TINT " (TNT) display.
2. Press " CH ▲ / ▼ " buttons on the Service remote control unit so that the value of " TINT " (TNT) becomes 68.

### V-TNT

1. Press " MENU " button on the Service remote control unit. Then select " V-TINT " (V-TNT) display.
2. Press " CH ▲ / ▼ " buttons on the Service remote control unit so that the value of " V-TINT " (V-TNT) becomes 68.

### S-TNT

1. Press " MENU " button on the Service remote control unit. Then select " S-TINT " (S-TNT) display.
2. Press " CH ▲ / ▼ " buttons on the Service remote control unit so that the value of " S-TINT " (S-TNT) becomes 62.

### SHARPNESS

1. Press " MENU " button on the Service remote control unit. Then select " SHR " (SHARPNESS) display.
2. Press " CH ▲ / ▼ " buttons on the Service remote control unit and select " 18 ".

**Note:** BRIGHT data value does not need to be adjusted at this moment.

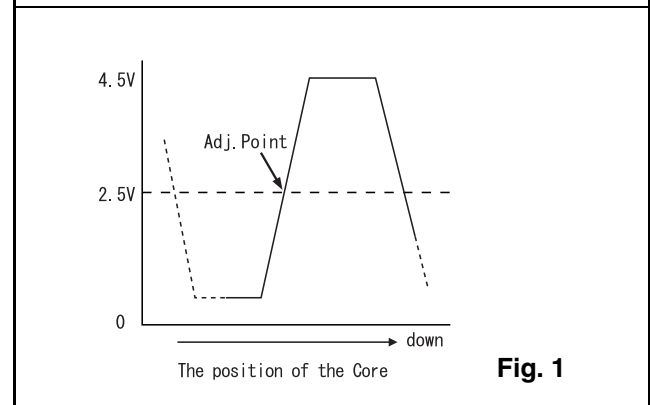
## 3. AFT Adjustment

**Purpose:** To operate AFT correctly.

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

Test Point	Adj. Point	Mode	Input
TP303 (AFT) TP300 (GND)	L33	---	USA 4ch 80dBμ Color Bar
Tape	M. EQ.	Spec.	
---	---	---	

**Figure**



**Fig. 1**

**Note:** Use service remote control unit.

1. Enter the Service mode. (See Page 5-1)
2. Put the core(L33) at the same level of the case.
3. Make the core down till the adjustment point (See Fig. 1).

## 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	Adj. Point	Mode	Input
TP301 (AGC) TP300 (GND)	CH ▲ / ▼ buttons	RF	Color Bar 67.25MHz 60dBμV
Tape	M. EQ.	Spec.	
---	Pattern Generator DC Volt Meter	+2.5±0.1VDC	

**Notes:** TP300, TP301 --- Main CBA  
Use Service remote control unit.

1. Enter the Service mode. (See Page 5-1) Then press number " 2 " button on the Service remote control unit and select TV AGC.
2. Receive the Color Bar signal for channel 4 (67.25MHz). (RF Input Level: 60dBμV)
3. Press " CH ▲ / ▼ " buttons so that the voltage of TP301 becomes +2.5±0.1V DC. If the tuner is used TEDH9-300A. (Tuner type number)
4. Turn the Power off and on again. (Main power button on the TV unit.)

## 5. V. Size Adjustment

**Purpose:** To obtain correct vertical width of screen image.

**Symptom of Misadjustment:** If V. Size is incorrect, vertical size of image on the screen may not be properly displayed.

Test Point	Adj. Point	Mode	Input
---	Screen Control CH ▲ / ▼ buttons [ V-S ] Mode	RF	Monoscope
Tape	M. EQ.	Spec.	
---	Monoscope	90±5%	

**Note:** Use service remote control unit.

1. Operate the unit for at least 20 minutes.
2. Enter the Service mode. (See page 5-1)
3. Receive the Monoscope Pattern.
4. Press " 9 " button on the Service remote control unit and select " V-S " mode. (Display changes " V-S ", " V-P ", " V-LI " and " V-SC " cyclically when " 9 " button is pressed).
5. Press " CH ▲ / ▼ " buttons on the Service remote control unit so that the monoscope pattern will be 90±5% of display size and the circle is round.

6. Turn the power off and on again. (Main power button on the TV unit.)

## 6. V. Position Adjustment

**Purpose:** To obtain correct vertical width of screen image.

**Symptom of misadjustment:** If V. Position is incorrect, vertical height of image on the screen may not be properly displayed.

Test Point	Adj. Point	Mode	Input
---	Screen Control CH ▲ / ▼ buttons [ V-P ] Mode	RF	Monoscope
Tape	M. EQ.	Spec.	
---	Monoscope	90±5%	

**Note:** Use Service remote control unit

1. Operate the unit for at least 20 minutes.
2. Enter the Service Mode. (See page 5-1)
3. Receive the Monoscope Pattern.
4. Press " 9 " button on the Service remote control unit and select " V-P " mode. (Display change " V-S ", " V-P ", " V-LI " and " V-SC " cyclically when " 9 " button is pressed).
5. Press " CH ▲ / ▼ " buttons on the Service remote control unit so that the top and bottom of the monoscope pattern will be equal of each other.
6. Turn the Power off and on again. (Main power button on the TV unit.)

## 7. H. Position Adjustment

**Purpose:** To obtain correct horizontal position of screen image.

**Symptom of Misadjustment:** If H. Position is incorrect, horizontal position of image on the screen may not be properly displayed.

Test Point	Adj. Point	Mode	Input
---	Screen Control CH ▲ / ▼ buttons [ H-P ] Mode	RF	Monoscope
Tape	M. EQ.	Spec.	
---	Monoscope	90±5%	

**Note:** Use Service remote control unit

1. Operate the unit for at least 20 minutes.
2. Enter the Service mode. (See page 5-1)
3. Receive the Monoscope Pattern.
4. Press " 8 " button on the remote control unit and select " H-P " mode.



- Press " CH ▲ / ▼ " buttons on the Service remote control unit so that the monoscope pattern will be  $90\pm5\%$  of display size and the circle is round.
- Turn the Power off and on again. (Main power button on the TV unit.)

## 8. V-LINIARITY and S CORRECTION Adjustment

**Purpose:** To obtain correct horizontal position of screen image.

**Symptom of Misadjustment:** If H. Position is incorrect, horizontal position of image on the screen may not be properly displayed.

Test Point	Adj. Point	Mode	Input
---	Screen Control CH ▲ / ▼ buttons [ H-P ] Mode	RF	Mono- scope
Tape	M. EQ.	Spec.	
---	Monoscope	---	

**Note:** Use Service remote control unit

- Operate the unit for at least 20 minutes.
- Enter the Service mode. (See page 5-1)
- Receive the Monoscope Pattern.
- Press " 9 " button on the Service remote control unit and select " V-P " mode. (Display change " V-S ", " V-P ", " V-LI " and " V-SC " cyclically when " 9 " button is pressed).
- Press " CH ▲ / ▼ " buttons on the Service remote control unit so that " V-LI " value becomes 11 and " V-SC " value becomes 20.
- Turn the Power off and on again. (Main power button on the TV unit.)

## 9. H. Size Adjustment

**Purpose:** To obtain correct horizontal size of screen image.

**Symptom of Misadjustment:** If H. Size is incorrect, horizontal size of image on the screen may not be properly displayed.

Test Point	Adj. Point	Mode	Input
---	VR561	RF	Mono- scope
Tape	M. EQ.	Spec.	
---	Monoscope	$90\pm5\%$	

**Note:** Use Service remote control unit

- Operate the unit for at least 20 minutes.
- Receive the Monoscope Pattern.
- Adjust VR561 so that the monoscope pattern will be  $90\pm5\%$  of display size and circle is round.
- Turn the Power off and on again. (Main power button on the TV unit.)

## 10. PIN Cushion Adjustment

**Purpose:** To obtain correct straight vertical line of screen image.

**Symptom of Misadjustment:** If H.Pin cushion is incorrect, vertical line of image on the screen may not be properly displayed.

Test Point	Adj. Point	Mode	Input
---	VR562	RF	Cross hatch
Tape	M. EQ.	Spec.	
---	Cross hatch		

**Note:** Use Service remote control unit

- Operate the unit for at least 20 minutes.
- Receive the Cross hatch Pattern.
- Adjust VR562 so that the cross hatch pattern will be straight line of display.
- Turn the Power off and on again. (Main power button on the TV unit.)

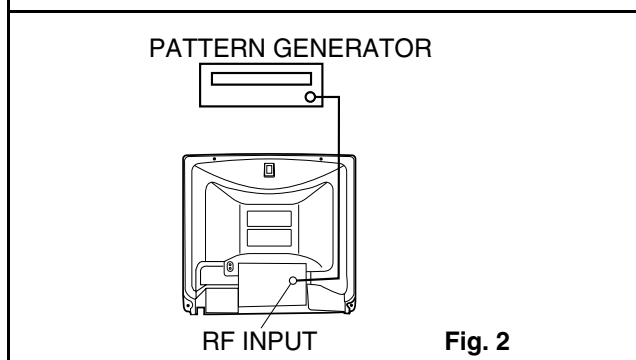
## 11. Cut-off Adjustment

**Purpose:** To adjust the beam current of R, G, B, and screen voltage.

**Symptom of Misadjustment:** White color may be reddish, greenish or bluish.

Test Point	Adj. Point	Mode	Input
---	Screen-Control CH ▲ / ▼ buttons	RF	Black Raster
Tape	M. EQ.	Spec.	
---	Pattern Generator	See Reference Notes below.	

**Figure**



**Note:** Screen Control FBT --- Main CBA

F.B.T= Fly Back Transformer

Use Service remote control unit

1. Degauss the CRT and allow CRT to operate for 20 minutes before starting the alignment.
2. Input the Black Raster Signal from RF Input.
3. Enter the Service mode. (See page 5-1)
4. Press "VOL ▼" button on the Service remote control unit and select "C/D" mode. (Display changes "C/D", "CHROMA", "7F", "LANGUAGE", "STEREO TYPE", "ACCESS CODE", "STABLE SOUND", "COMB FILTER", "COMPONENT" and "AV MEMORY" cyclically when "VOL ▼" button is pressed.) then press "1". The display will momentarily show "CUT OFF R" (R= Red). Now there should be a horizontal line across the center of the picture tube. If needed gradually turn the screen control on the flyback, clockwise until the horizontal line appears. Adjust the Red Cut off by pressing the "CH ▲ / ▼" buttons. Proceed to Step 5 when the Red Cut off adjustment is done.
5. Press the "2" button. The display will momentarily show "CUT OFF G" (G=Green). Adjust the Green Cut off by pressing the "CH ▲ / ▼" buttons. Proceed to step 6 when the Green Cut off adjustment is done.
6. Press the "3" button. The display will momentarily show "CUT OFF B" (B=Blue). Adjust the Blue cut off by pressing the "CH ▲ / ▼" buttons. When done with steps 4, 5 and 6 the horizontal line should be pure white if not, then attempt the Cut off adjustment again.

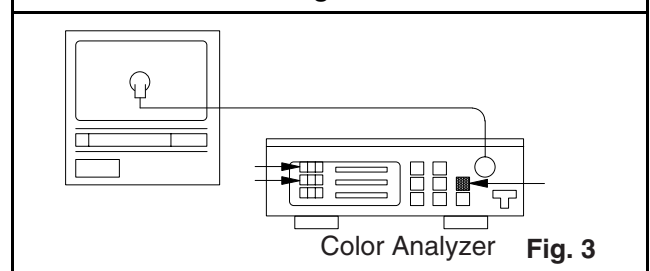
## 12. White Balance Adjustment

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

**Symptom of Misadjustment:** White becomes bluish or reddish.

Test Point	Adj. Point	Mode	Input
Screen	CH ▲ / ▼ buttons	RF	White Raster (APL 100%)
Tape	M. EQ.	Spec.	
	Pattern Generator, Color analyzer	See below	

**Figure**



**Note:** Use Service remote control unit

1. Operate the unit more than 20 minutes.
2. Face the unit to east. Degauss the CRT using De-gaussing Coil.
3. Input the White Raster (APL 100%).
4. Set the color analyzer to the CHROMA mode and after zero point calibration, bring the optical receptor to the center on the tube surface (CRT).
5. Enter the Service mode. Press "VOL ▼" button on the Service remote control unit and select "C/D" mode. (Display changes "C/D", "CHROMA", "7F", "LANGUAGE", "STEREO TYPE", "ACCESS CODE", "STABLE SOUND", "COMB FILTER", "COMPONENT" and "AV MEMORY" cyclically when "VOL ▼" button is pressed.) then Press No. 8 button on the Service remote control Unit.
6. Press No. 4 button on the service remote control unit for Red adjustment. Press No. 5 button on the Service remote control unit for Blue adjustment.
7. In each color mode, Press "CH ▲ / ▼" button to adjust the values of color.
8. Adjusting Red and Blue color so that the temperature becomes 9200K (x: 286 / y: 294)±3%.
9. At this time, Re-check that Horizontal line is white. If not, Re-adjust Cut-off Adjustment until the Horizontal Line becomes pure white.
10. Turn off and on again to return to normal mode. Receive APL 100% white signal and Check Chroma temperatures become 9200K (x: 286 / y: 294)±3%.

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

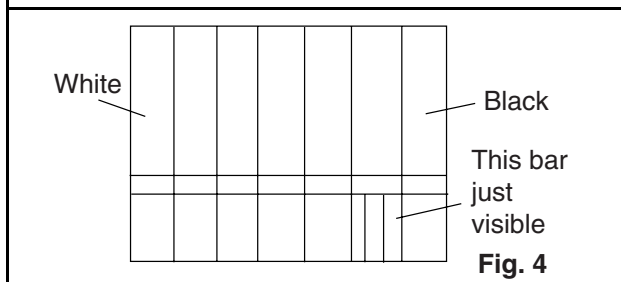
## 13. Sub-Brightness Adjustment

**Purpose:** To get proper brightness.

**Symptom of Misadjustment:** If Sub-Brightness is incorrect, proper brightness cannot be obtained by adjusting the Brightness Control.

Test Point	Adj. Point	Mode	Input
---	CH ▲ / ▼ buttons	RF	IQW
Tape	M. EQ.	Spec.	
---	Pattern Generator	See below	

**Figure**



**Note:** IQW Setup level --- 7.5 IRE  
Use Service remote control unit

1. Enter the Service mode. (See page 5-1)  
Then input IQW signal from RF Input.
2. Press "MENU" button on the Service remote control unit and Select "BRT" mode. (Display changes "BRT", "CNT", "CLR", "TNT", "V-TINT", "S-TINT" and "SHR" cyclically when MENU button is pressed). Press "CH ▲ / ▼" buttons so that the bar is just visible (See above figure).
3. Turn the power off and on again. (Main power button on the TV unit.)

## 14. Focus Adjustment

**Purpose:** Set the optimum Focus.

**Symptom of Misadjustment:** If Focus Adjustment is incorrect, blurred images are shown on the display.

Test Point	Adj. Point	Mode	Input
---	Focus Control	---	Monoscope
Tape	M. EQ.	Spec.	
---	Pattern Generator	See below	

**Note:** Focus VR (FBT) - Main CBA FBT=Fly Back Transformer

1. Operate the unit more than 30 minutes.
2. Face the unit to the East and Degauss the CRT using Degaussing Coil.
3. Input the Monoscope Pattern.
4. Adjust the Focus Control on the FBT to obtain clear picture.

**The following 2 adjustments normally are not attempted in the field. Only when replacing the CRT then adjust as a preparation.**

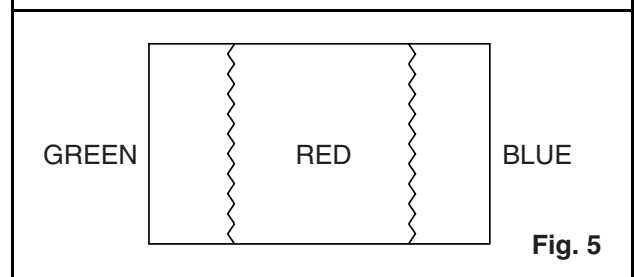
### 15-1. Purity Adjustment

**Purpose:** To obtain pure color.

**Symptom of Misadjustment:** If Color Purity Adjustment is incorrect, large areas of color may not be properly displayed.

Test Point	Adj. Point	Mode	Input
---	Deflection Yoke Purity Magnet	---	Red Color
Tape	M. EQ.	Spec.	
---	Pattern Generator	See below.	

**Figure**

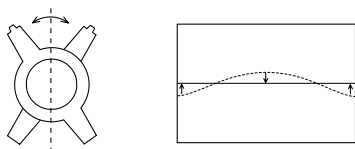


1. Set the unit facing east.
2. Operate the unit for over 30 minutes before adjusting.
3. Fully degauss the unit using an external degaussing coil.

- Loosen the screw on the Deflection Yoke Clamper and pull the Deflection Yoke back away from the screen. (See Fig. 6)
- Loosen the Ring Lock and adjust the Purity Magnets so that a red field is obtained at the center of the screen. Tighten Ring Lock. (See Fig. 5,6)
- Slowly push the Deflection Yoke toward bell of CRT and set it where a uniform red field is obtained.
- Tighten the clamp screw on the Deflection Yoke.

## 15-2. VRS Adjustment

- Connect Oscilloscope and get the cross hatch pattern.
- Adjust the two magnets for VRS adjustment like the below figure so that the cross hatch pattern becomes flat.



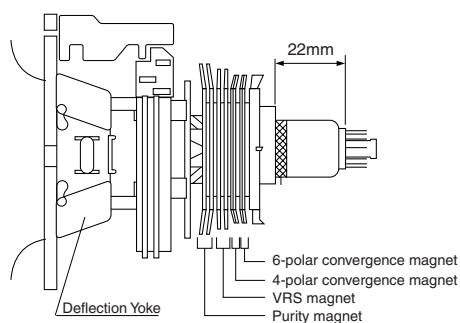
## 16-1. Convergence Adjustment

**Purpose:** To obtain proper convergence of red, green and blue beams.

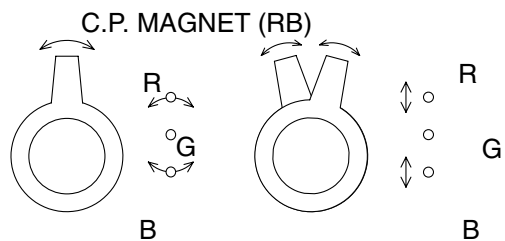
**Symptom of Misadjustment:** If Convergence Adjustment is incorrect, the edge of white letters may have color edges.

Test Point	Adj. Point	Mode	Input
---	C.P. Magnet (RB), C.P. Magnet (RB-G), Deflection Yoke	---	Dot Pattern or Crosshatch
Tape	M. EQ.	Spec.	
---	Pattern Generator	See below.	

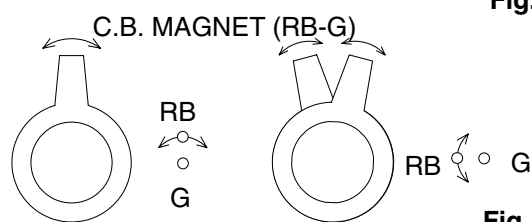
**Figures**



**Fig. 6**



**Fig. 7**

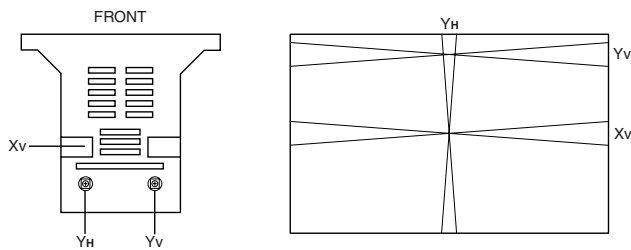


**Fig. 8**

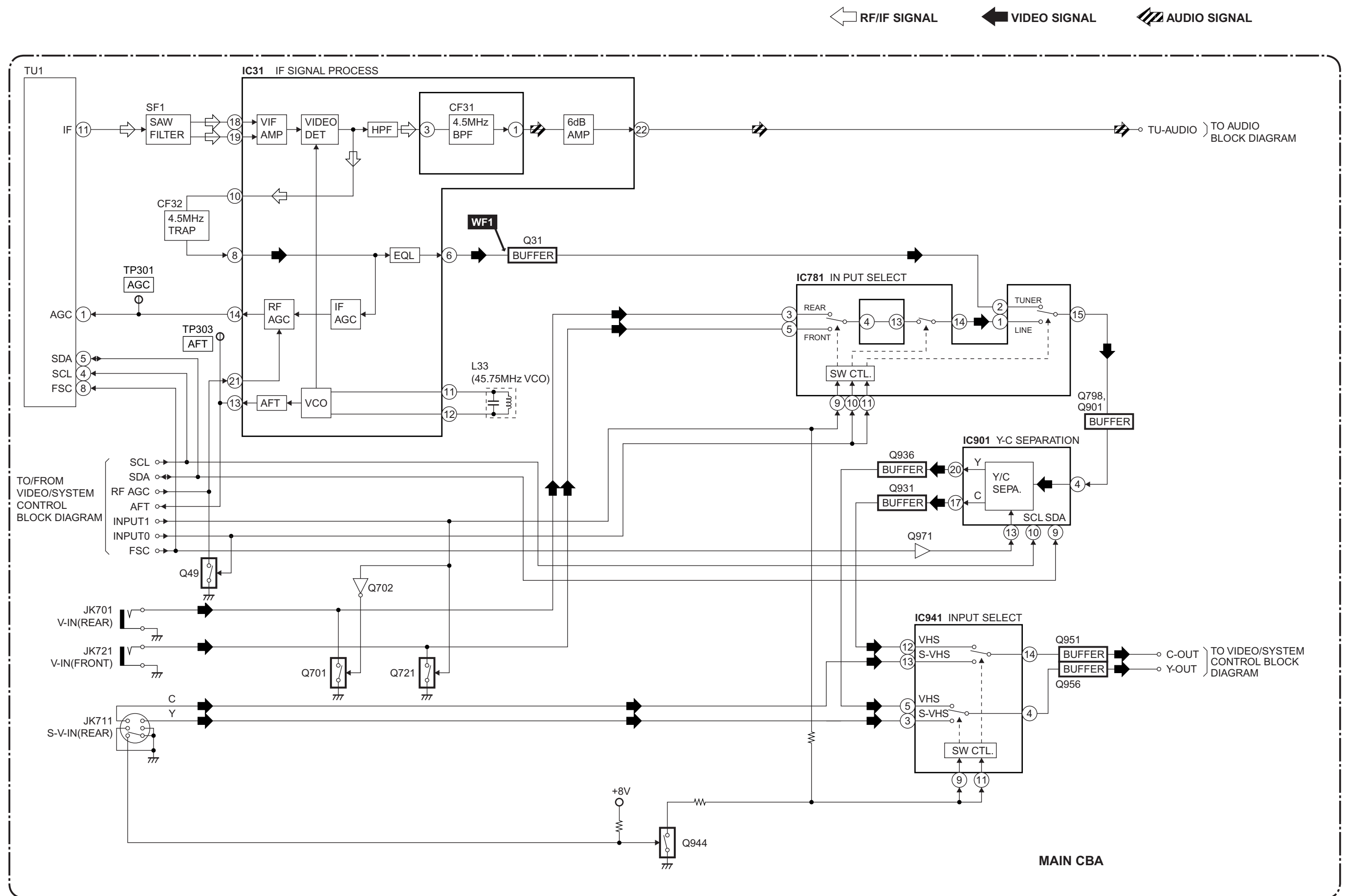
1. Loosen the Ring Lock and align red with blue dots or Crosshatch at the center of the screen by rotating (RB) C.P. Magnets. (See Fig. 7)
2. Align red / blue with green dots at the center of the screen by rotating (RB-G) C.P. Magnet. (See Fig. 8)
3. Paintlock the C.P. Magnets after adjustment.
4. Remove the DY Wedges and slightly tilt the Deflection Yoke horizontally and vertically to obtain the best overall convergence.
5. Fix the Deflection Yoke by carefully inserting the DY Wedges between CRT and Deflection Yoke.

## 16-2. Yh, Yv, Xv Adjustment

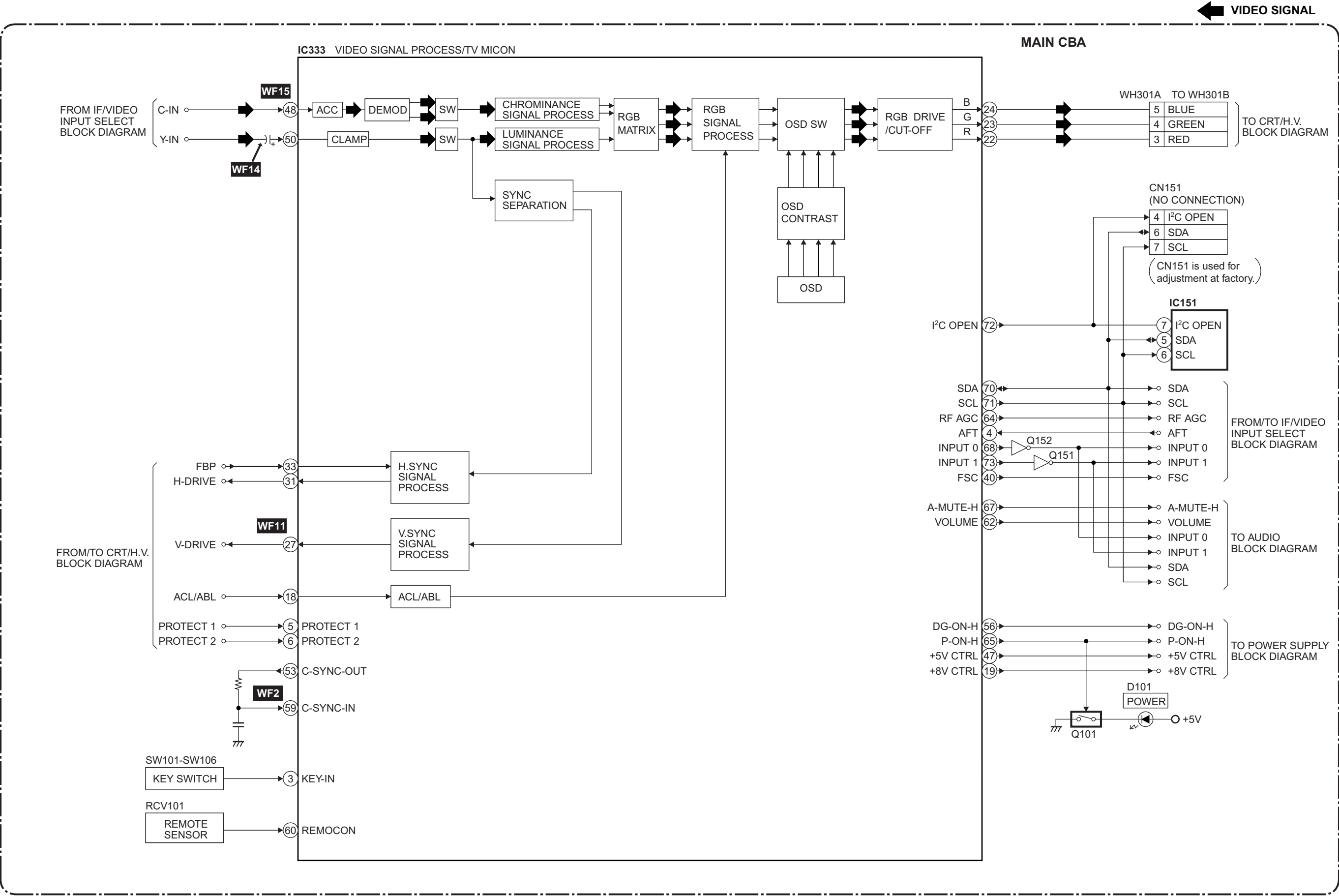
1. Adjust the volume of Deflection Yoke(Yh, Yv, Xv) to get good convergence.



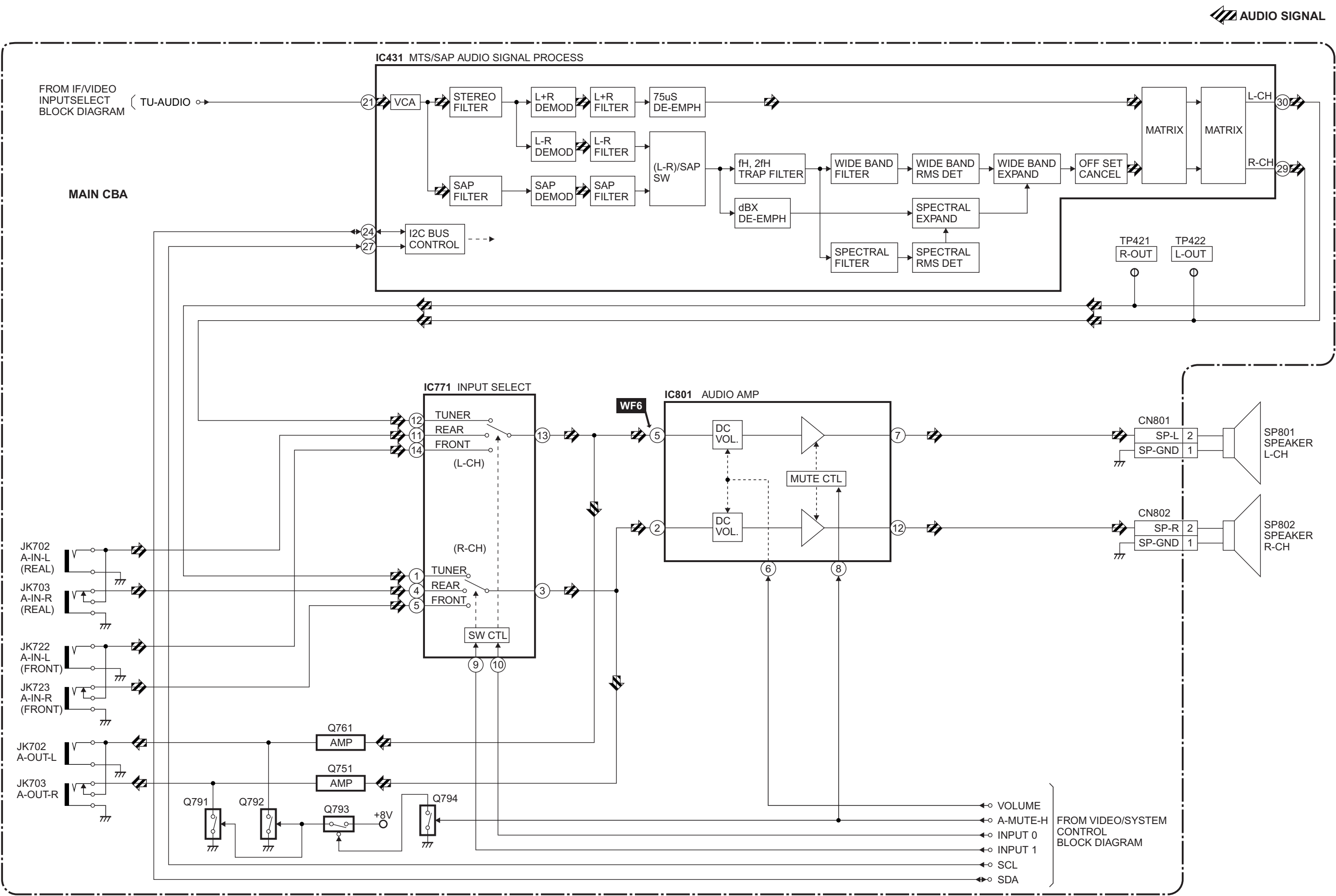
### IF/Video Input Select Block Diagram



Video/System Control Block Diagram

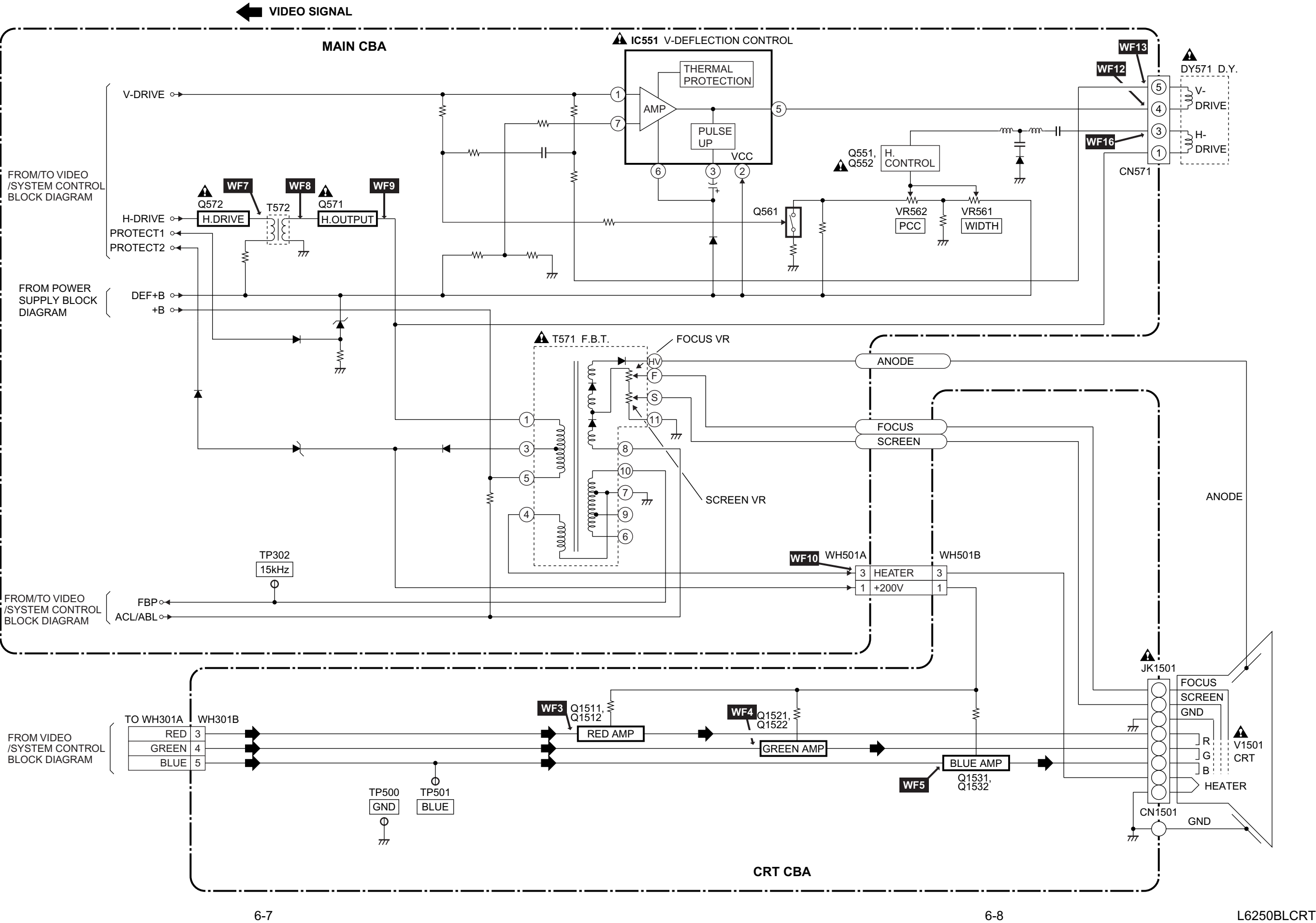


Audio Block Diagram



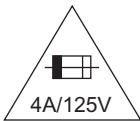


CRT/H.V. Block Diagram




Power Supply Block Diagram

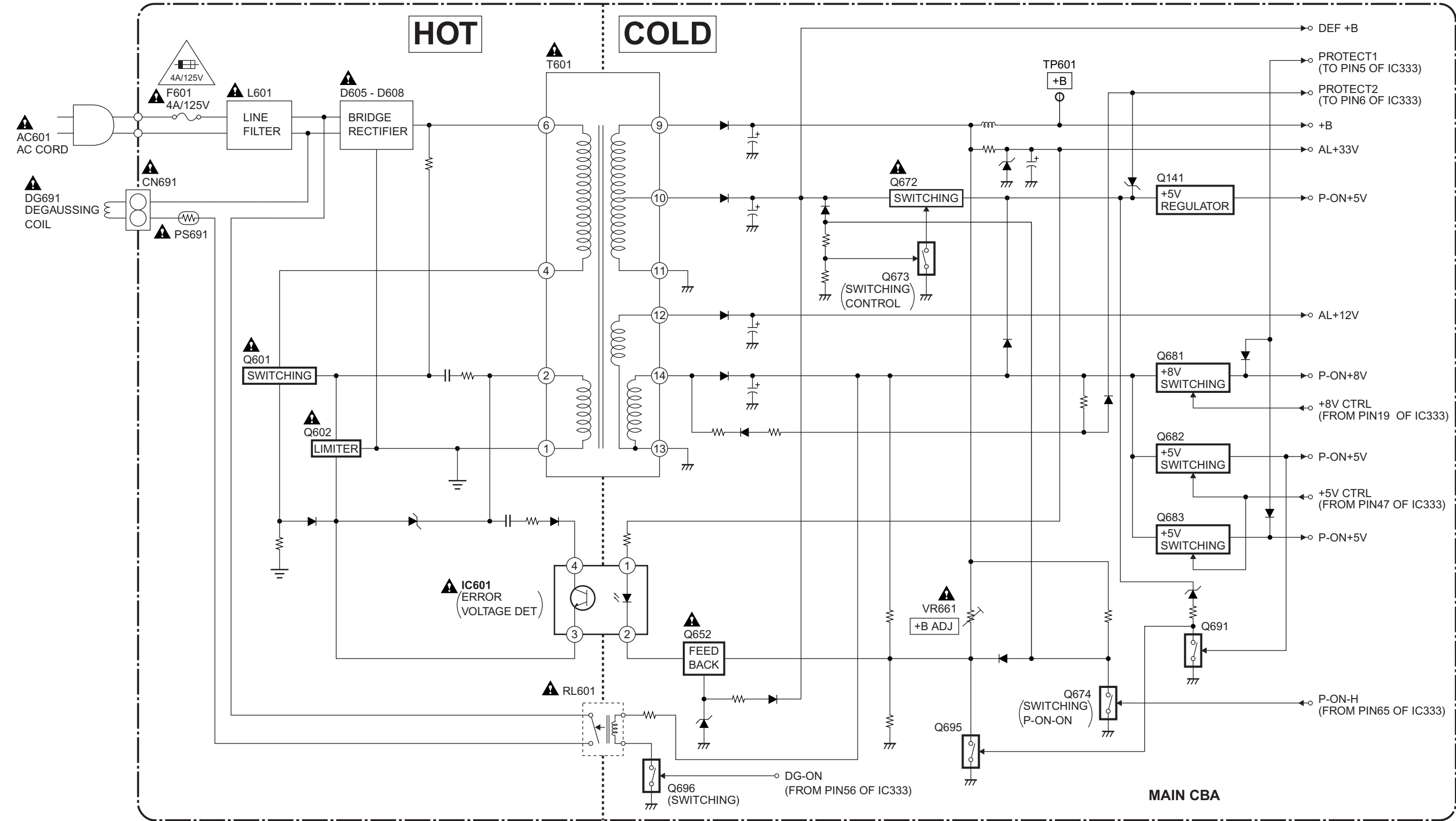
**CAUTION !**  
Fixed voltage power supply circuit is used in this unit.  
If Main Fuse (F601) is blown, check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.  
Otherwise it may cause some components in the power supply circuit to fail.



**CAUTION**  
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,  
REPLACE ONLY WITH THE SAME TYPE FUSE.  
ATTENTION : POUR UNE PROTECTION CONTINUE LES RISQUES  
D'INCELE N'UTILISER QUE DES FUSIBLE DE MEMO TYPE.  
**RISK OF FIRE-REPLACE FUSE AS MARKED.**

 "This symbol means fast operating fuse."  
"Ce symbole représente un fusible à fusion rapide."

**NOTE :**  
The voltage for parts in hot circuit is measured using  
hot GND as a common terminal.



# SCHEMATIC DIAGRAMS / CBA'S AND TEST POINTS

## Standard Notes

Many electrical and mechanical parts in this chassis have special characteristics. These characteristics often pass unnoticed and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts that have these special safety characteristics are identified in this manual and its supplements; electrical components having such features are identified by the mark "▲" in the schematic diagram and the parts list. Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts that do not have the same safety characteristics as specified in the parts list may create shock, fire, or other hazards.

### Note:

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 1/4W or 1/6W unless otherwise specified.
4. All capacitance values are indicated in  $\mu F$  ( $P=10^{-6}\mu F$ ).
5. All voltages are DC voltages unless otherwise specified.

### Note of Capacitors:

ML --- Mylar Cap. PP --- Metalized Film Cap. SC --- Semiconductor Cap. L --- Low Leakage type

### Temperature Characteristics of Capacitors are noted with the following:

B ---  $\pm 10\%$  CH ---  $0\pm 60\text{ppm}/^\circ\text{C}$  CSL ---  $+350\sim -1000\text{ppm}/^\circ\text{C}$

### Tolerance of Capacitors are noted with the following:

Z ---  $+80\sim -20\%$

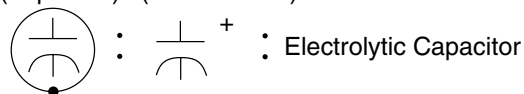
### Note of Resistors:

CEM --- Cement Res. MTL --- Metal Res. F --- Fuse Res.

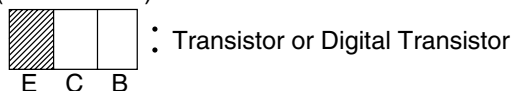
Capacitors and transistors are represented by the following symbols.

#### CBA Symbols

(Top View) (Bottom View)



(Bottom View)



(Top View)



NPN Transistor

(Top View)



PNP Transistor

(Top View)



NPN Digital Transistor

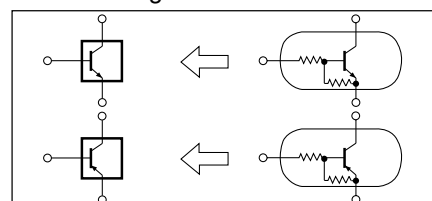
(Top View)



PNP Digital Transistor

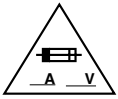
#### Schematic Diagram Symbols

Digital Transistor



## LIST OF CAUTION, NOTES, AND SYMBOLS USED IN THE SCHEMATIC DIAGRAMS ON THE FOLLOWING PAGES:

1. **CAUTION:** FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH THE



SAME TYPE FUSE. ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES D'INCELE N'UTILISER QUE DES FUSIBLE DE MEMO TYPE.

RISK OF FIRE-REPLACE FUSE AS MARKED.

2. **CAUTION:**

Fixed Voltage (or Auto voltage selectable) power supply circuit is used in this unit.

If Main Fuse (F601) is blown, first check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the power supply circuit to fail.

3. **Note:**

- (1) Do not use the part number shown on the drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since the drawings were prepared.
- (2) To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list section of the service manual.

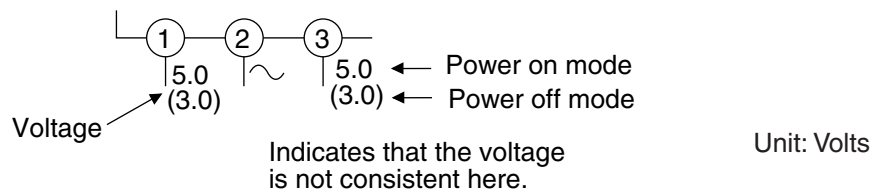
4. Wire Connectors

- (1) Prefix symbol "CN" means "connector" (can disconnect and reconnect).
- (2) Prefix symbol "CL" means "wire-solder holes of the PCB" (wire is soldered directly).

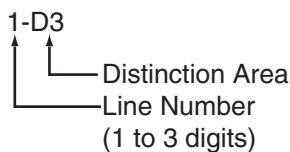
5. Note: Mark "●" is a leadless (chip) component.

6. Voltage indications on the schematics are as shown below:

Plug the TV power cord into a standard AC outlet.:

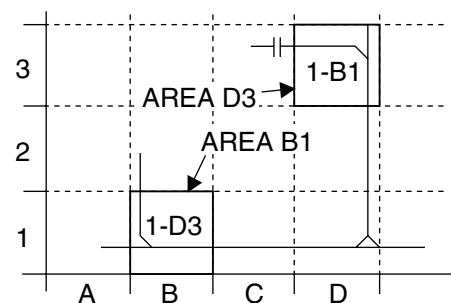


7. How to read converged lines



Examples:

1. "1-D3" means that line number "1" goes to area "D3".
2. "1-B1" means that line number "1" goes to area "B1".



8. Test Point Information

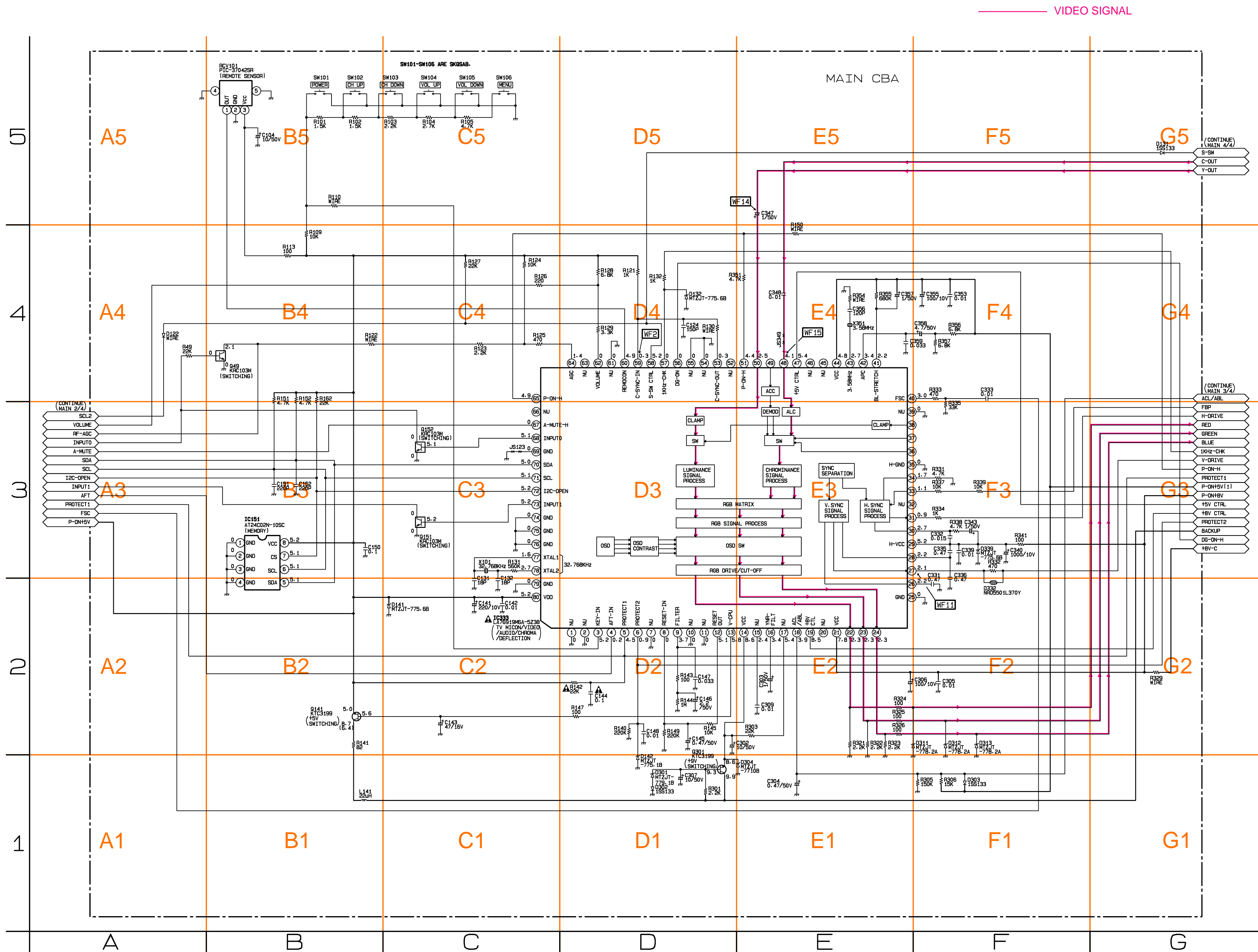
⊙ : Indicates a test point with a jumper wire across a hole in the PCB.

□→ : Used to indicate a test point with a component lead on foil side.

⊘ : Used to indicate a test point with no test pin.

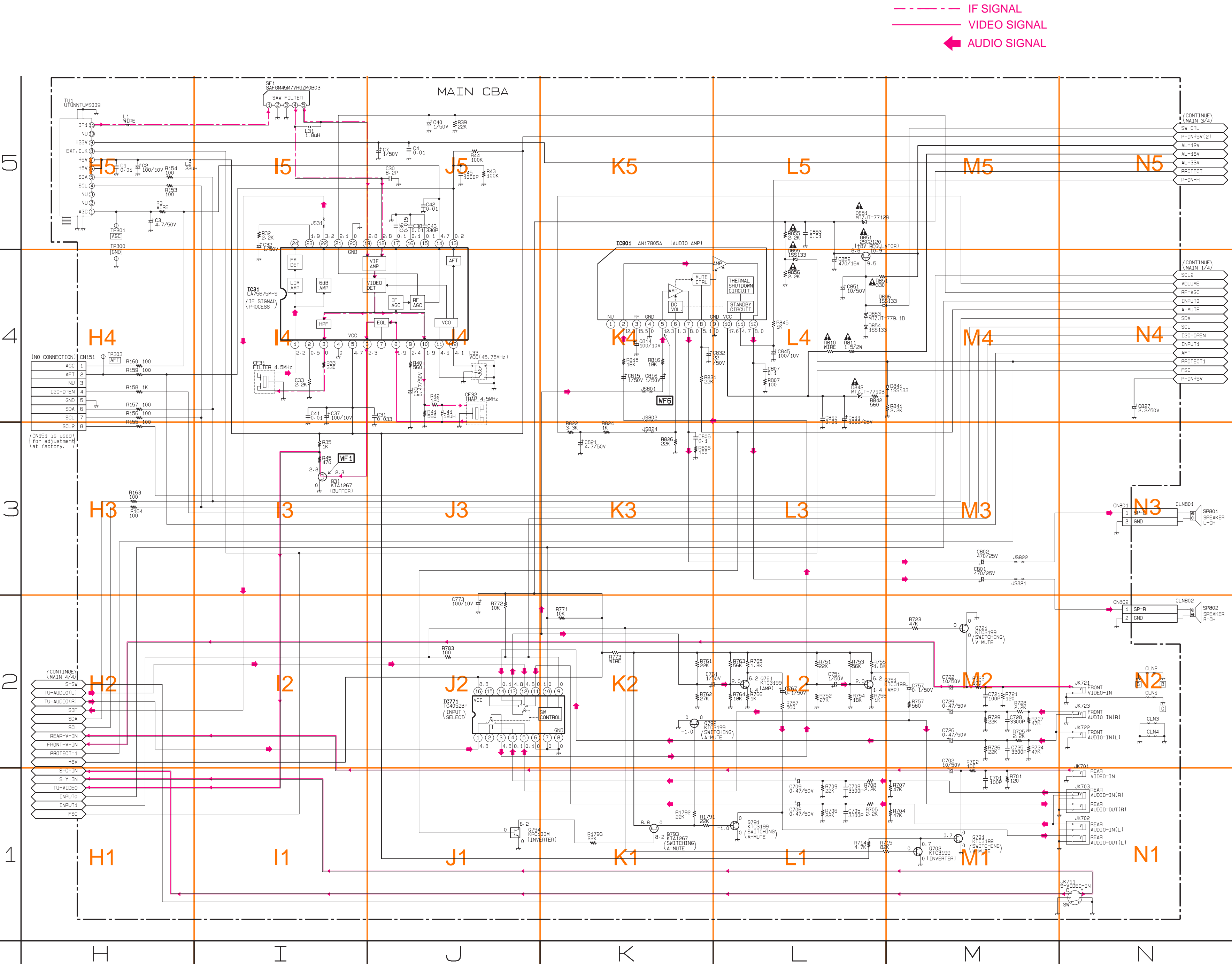
● : Used to indicate a test point with a test pin.

### Main 1/4 Schematic Diagram



Ref No.	Position
ICS	
IC151	B-3
IC333	C-2
TRANSISTORS	
Q49	B-4
Q141	B-2
Q151	C-3
Q152	C-3
Q301	D-1

Main 2/4 Schematic Diagram



MAIN 2/4	
Ref No.	Position
ICS	
IC31	I-4
IC771	J-2
IC801	K-5
TRANSISTORS	
Q31	I-3
Q701	M-1
Q702	M-1
Q721	M-2
Q751	L-2
Q791	L-1
Q792	K-2
Q793	K-1
Q794	J-1
Q851	L-5
CONNECTORS	
CN151	H-4
CN801	N-3
CN802	N-2
TEST POINTS	
TP300	H-5
TP301	H-5
TP303	H-4



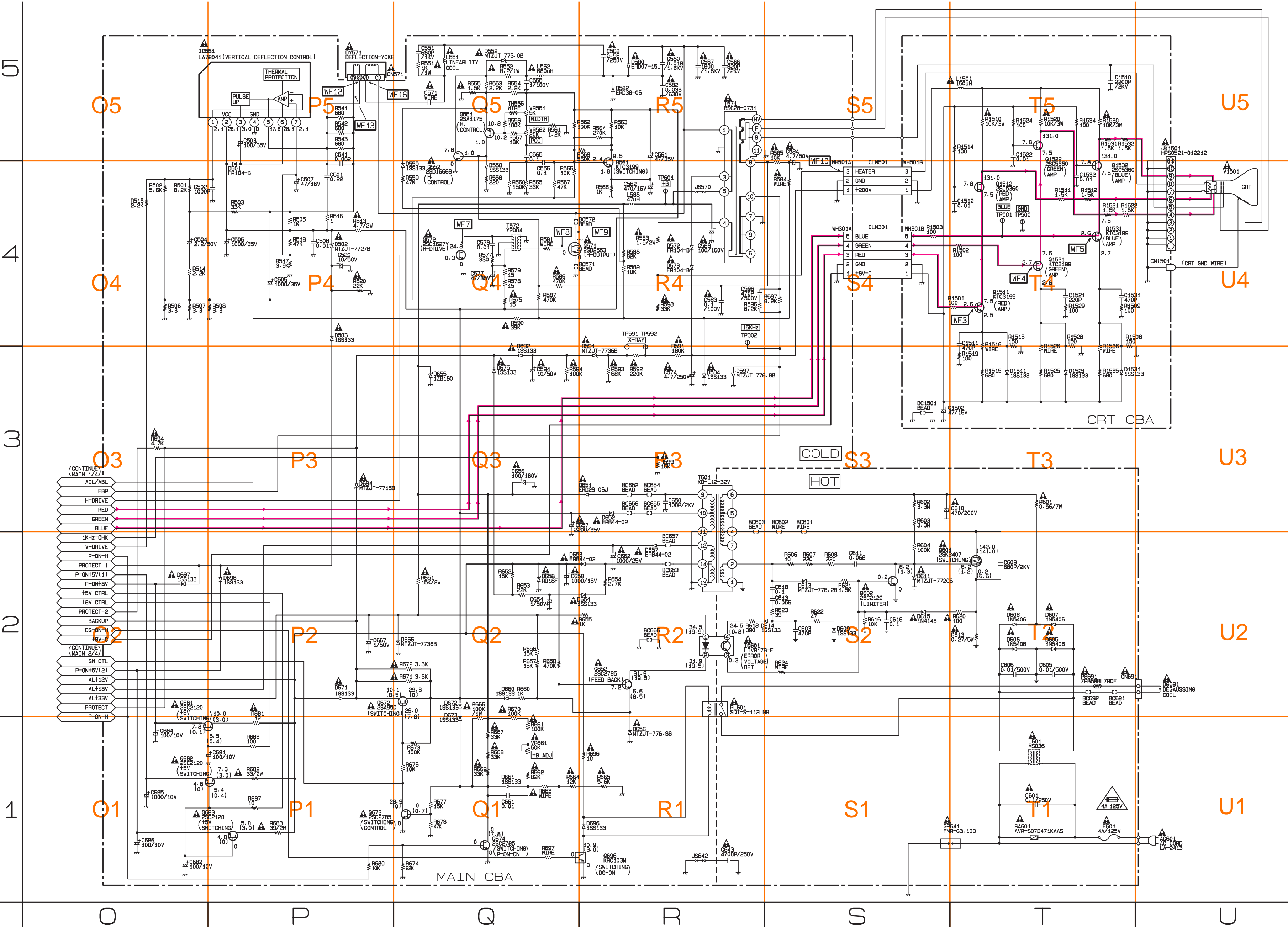
Main 3/4 & CRT Schematic Diagram

NOTE :  
THE VOLTAGE FOR PARTS IN HOT CIRCUIT IS MEASURED USING  
HOT GND AS A COMMON TERMINAL.

CAUTION !  
Fixed voltage power supply circuit is used in this unit.  
If Main Fuse (F601) is blown, check to see that all components in the power supply  
circuit are not defective before you connect the AC plug to the AC power supply.  
Otherwise it may cause some components in the power supply circuit to fail.



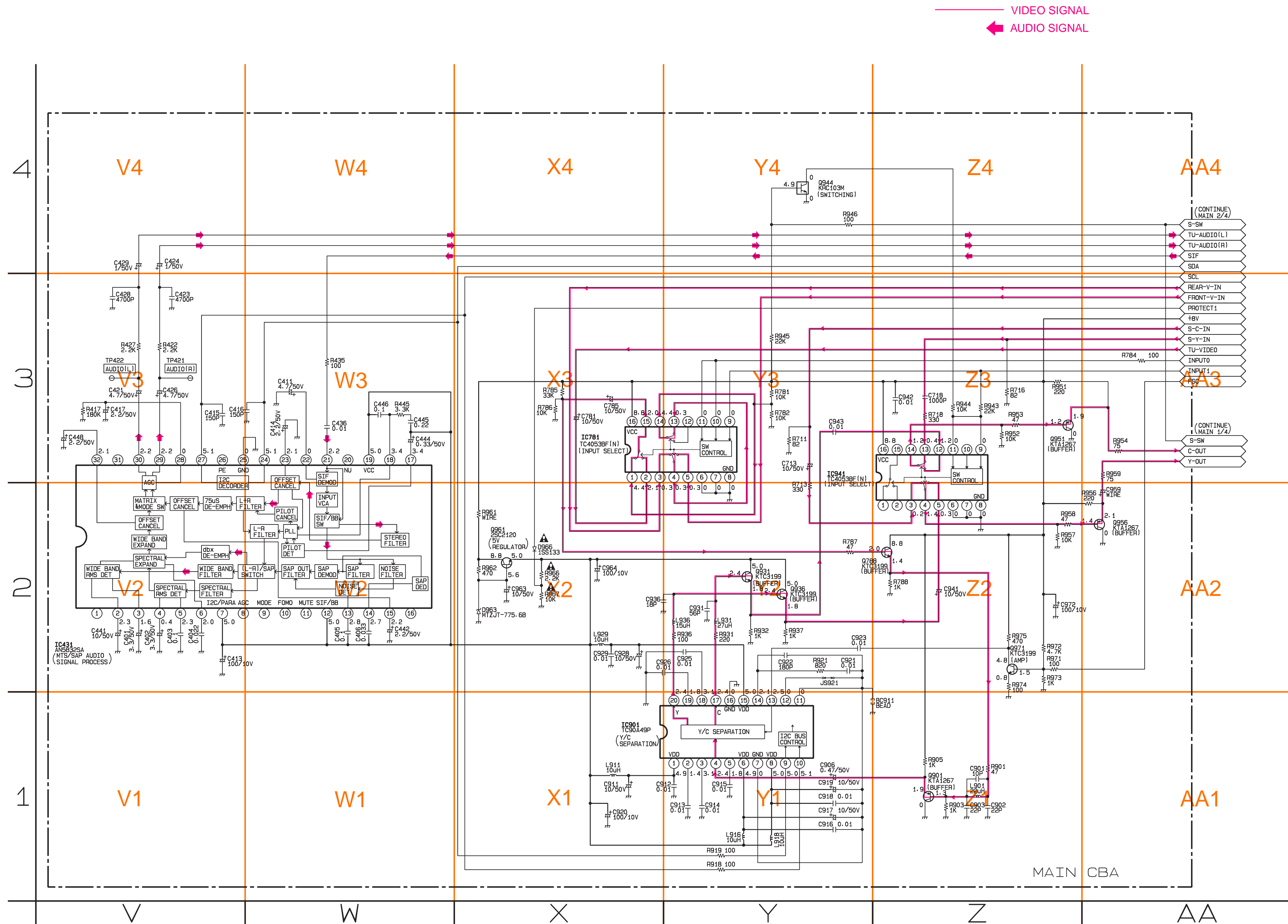
CAUTION  
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,  
REPLACE ONLY WITH THE SAME TYPE FUSE.  
ATTENTION : POUR UNE PROTECTION CONTINUE LES RISQUES  
D'INCELE N'UTILISER QUE DES FUSIBLE DE MEMO TYPE.  
RISK OF FIRE-REPLACE FUSE AS MARKED.  
This symbol means fast operating fuse.  
Ce symbole représente un fusible à fusion rapide.



Ref No.	Position
TRANSISTORS	
Q1511	T-4
Q1512	T-4
Q1521	T-4
Q1522	T-5
Q1531	T-4
Q1532	T-4
CONNECTORS	
CN1501	U-4
WH301B	S-4
WH501A	S-4
TEST POINTS	
TP500	T-4
TP501	T-4

Ref No.	Position
ICS	
IC551	P-5
IC601	R-2
TRANSISTORS	
Q551	Q-5
Q552	Q-4
Q561	R-4
Q571	R-4
Q572	Q-4
Q601	T-2
Q602	S-2
Q652	R-2
Q672	P-2
Q673	P-1
Q674	Q-1
Q681	O-2
Q682	O-1
Q683	P-1
Q696	R-1
CONNECTORS	
CN571	P-5
CN691	T-2
WH301A	S-4
WH501A	S-4
TEST POINTS	
TP302	R-4
TP591	R-4
TP592	R-4
TP601	R-4
VARIABLE RESISTORS	
VR561	Q-5
VR562	Q-5
VR661	Q-1

### Main 4/4 Schematic Diagram



MAIN 4/4	
Ref No.	Position
ICS	
IC431	V-2
IC781	X-3
IC901	X-1
IC941	Y-3
TRANSISTORS	
Q788	Z-2
Q901	Z-1
Q931	Y-2
Q936	Y-2
Q944	Y-4
Q951	Z-3
Q956	AA-2
Q961	X-2
Q971	Z-2
TEST POINTS	
TP421	V-3
TP422	V-3



Main CBA Top View

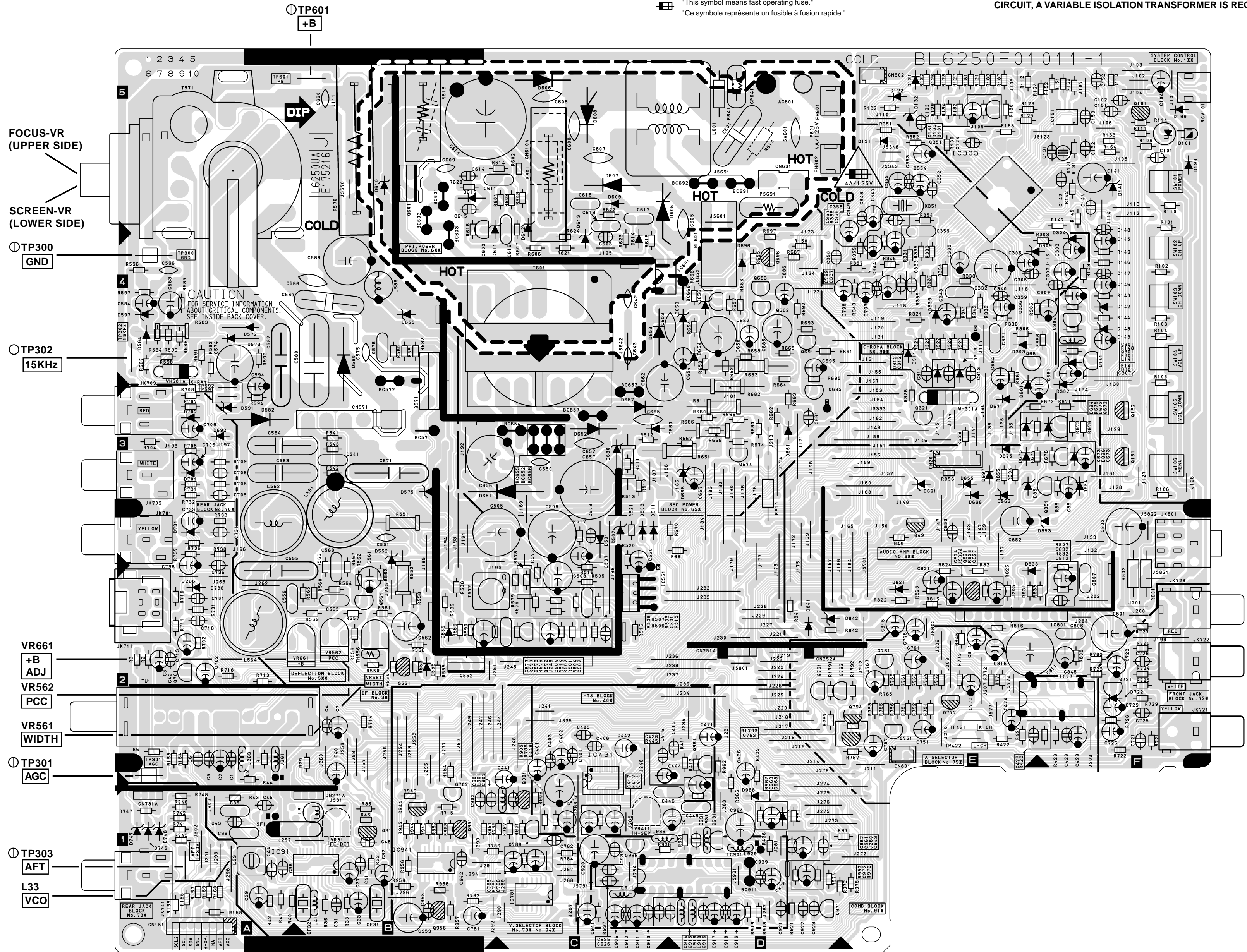
**CAUTION !**  
Fixed voltage power supply circuit is used in this unit.  
If Main Fuse (F601) is blown, check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.  
Otherwise it may cause some components in the power supply circuit to fail.



**CAUTION**  
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,  
REPLACE ONLY WITH THE SAME TYPE FUSE.  
ATTENTION : POUR UNE PROTECTION CONTINUE LES RISQUES  
D'INCELE N'UTILISER QUE DES FUSIBLE DE MEMO TYPE.  
**RISK OF FIRE-REPLACE FUSE AS MARKED.**

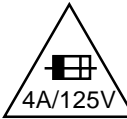
"This symbol means fast operating fuse."  
"Ce symbole représente un fusible à fusion rapide."

**BECAUSE A HOT CHASSIS GROUND IS PRESENT IN THE POWER  
SUPPLY CIRCUIT, AN ISOLATION TRANSFORMER MUST BE USED.  
ALSO, IN ORDER TO HAVE THE ABILITY TO INCREASE THE INPUT  
SLOWLY, WHEN TROUBLESHOOTING THIS TYPE POWER SUPPLY  
CIRCUIT, A VARIABLE ISOLATION TRANSFORMER IS REQUIRED.**



MAIN CBA	
Ref No.	Position
ICS	
IC31	A-1
IC151	F-5
IC333	E-5
IC431	C-2
IC551	C-2
IC601	D-4
IC771	F-2
IC781	C-1
IC801	F-2
IC901	D-1
IC941	B-1
TRANSISTORS	
Q31	B-1
Q49	E-3
Q141	F-4
Q151	F-3
Q301	F-4
Q551	B-2
Q561	B-2
Q571	B-3
Q572	C-2
Q601	B-5
Q602	B-4
Q652	D-4
Q672	F-3
Q673	F-3
Q674	D-3
Q681	E-4
Q682	D-4
Q683	D-4
Q696	D-4
Q701	A-2
Q702	B-1
Q721	F-2
Q751	E-2
Q761	E-2
Q788	C-1
Q791	D-2
Q792	E-2
Q793	D-2
Q794	E-2
Q851	F-3
Q901	C-1
Q931	D-1
Q936	C-1
Q944	B-1
Q951	B-1
Q956	B-1
Q961	D-2
Q971	D-1
CONNECTORS	
CN151	A-1
CN571	B-3
CN691	D-5
CN801	E-2
CN802	E-5
WH301A	E-3
WH501A	A-4
TEST POINTS	
TP300	A-4
TP301	A-2
TP302	A-4
TP303	A-1
TP421	E-2
TP422	E-2
TP591	A-3
TP592	A-3
TP601	A-5
VARIABLE RESISTORS	
VR561	B-2
VR562	B-2
VR661	B-2

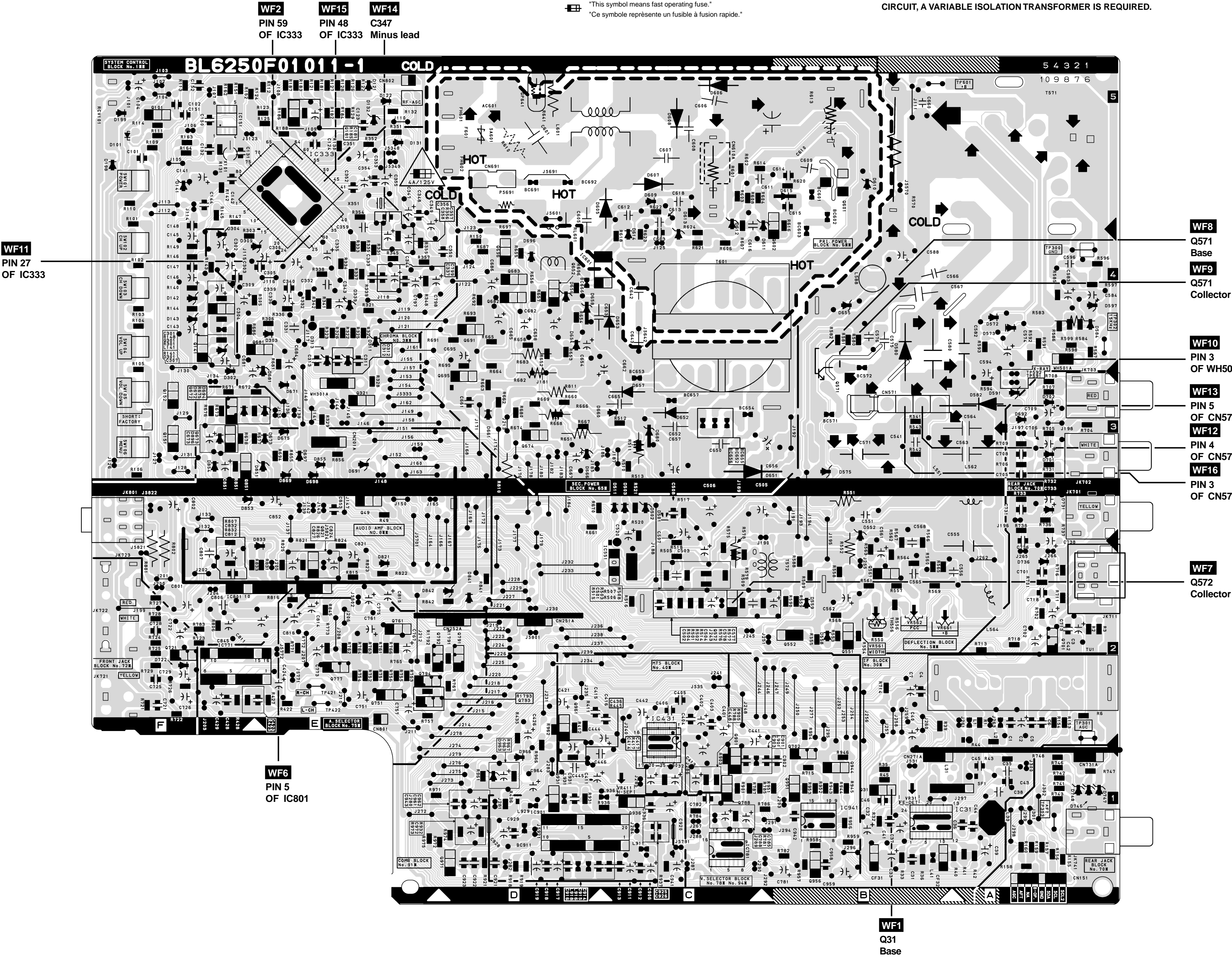
**CAUTION !**  
Fixed voltage power supply circuit is used in this unit.  
If Main Fuse (F601) is blown, check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.  
Otherwise it may cause some components in the power supply circuit to fail.



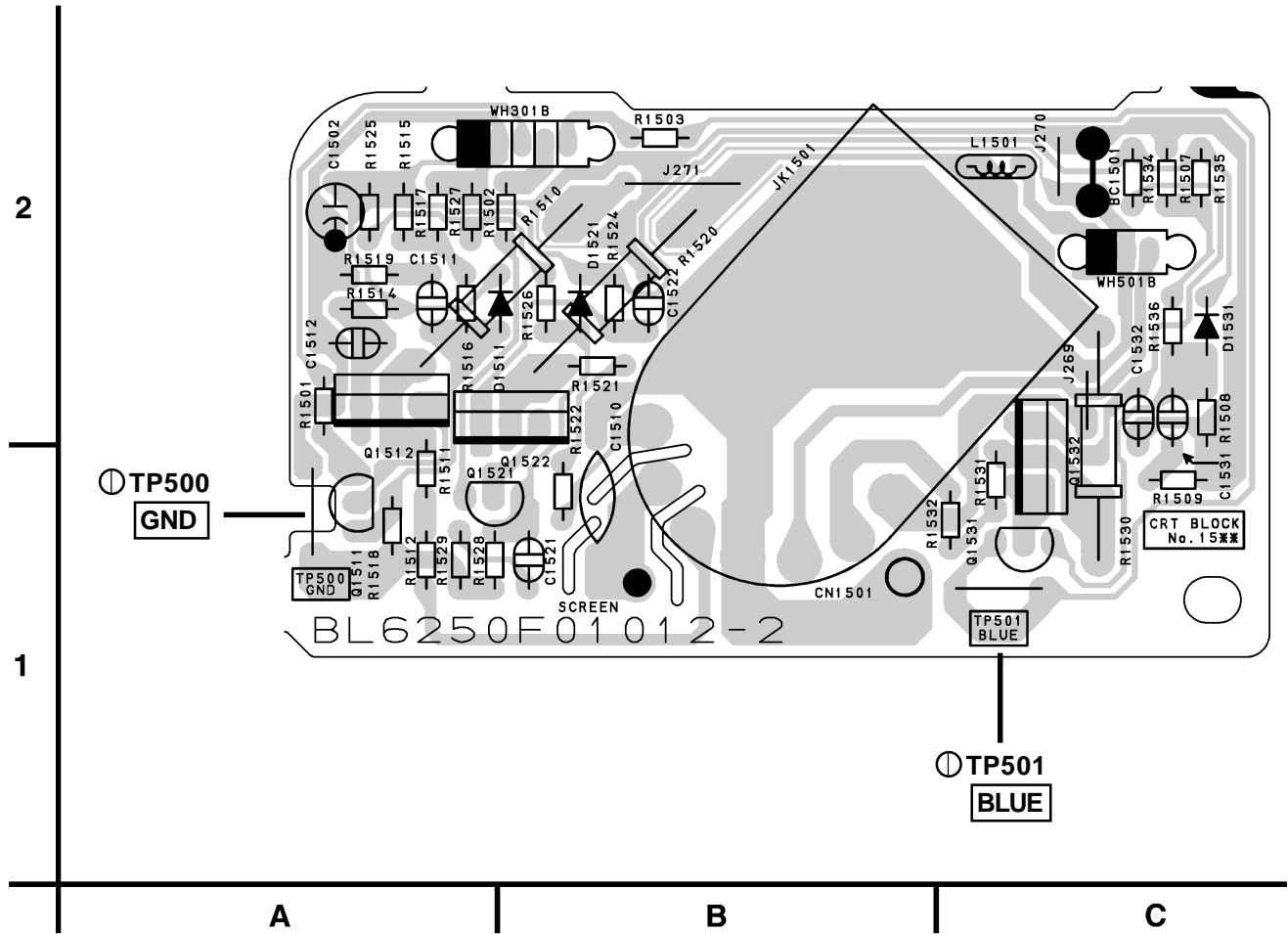
**CAUTION**  
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,  
REPLACE ONLY WITH THE SAME TYPE FUSE.  
ATTENTION : POUR UNE PROTECTION CONTINUE LES RISQUES  
D'INCELE N'UTILISER QUE DES FUSIBLE DE MEMO TYPE.  
**RISK OF FIRE-REPLACE FUSE AS MARKED.**

"This symbol means fast operating fuse."  
"Ce symbole représente un fusible à fusion rapide."

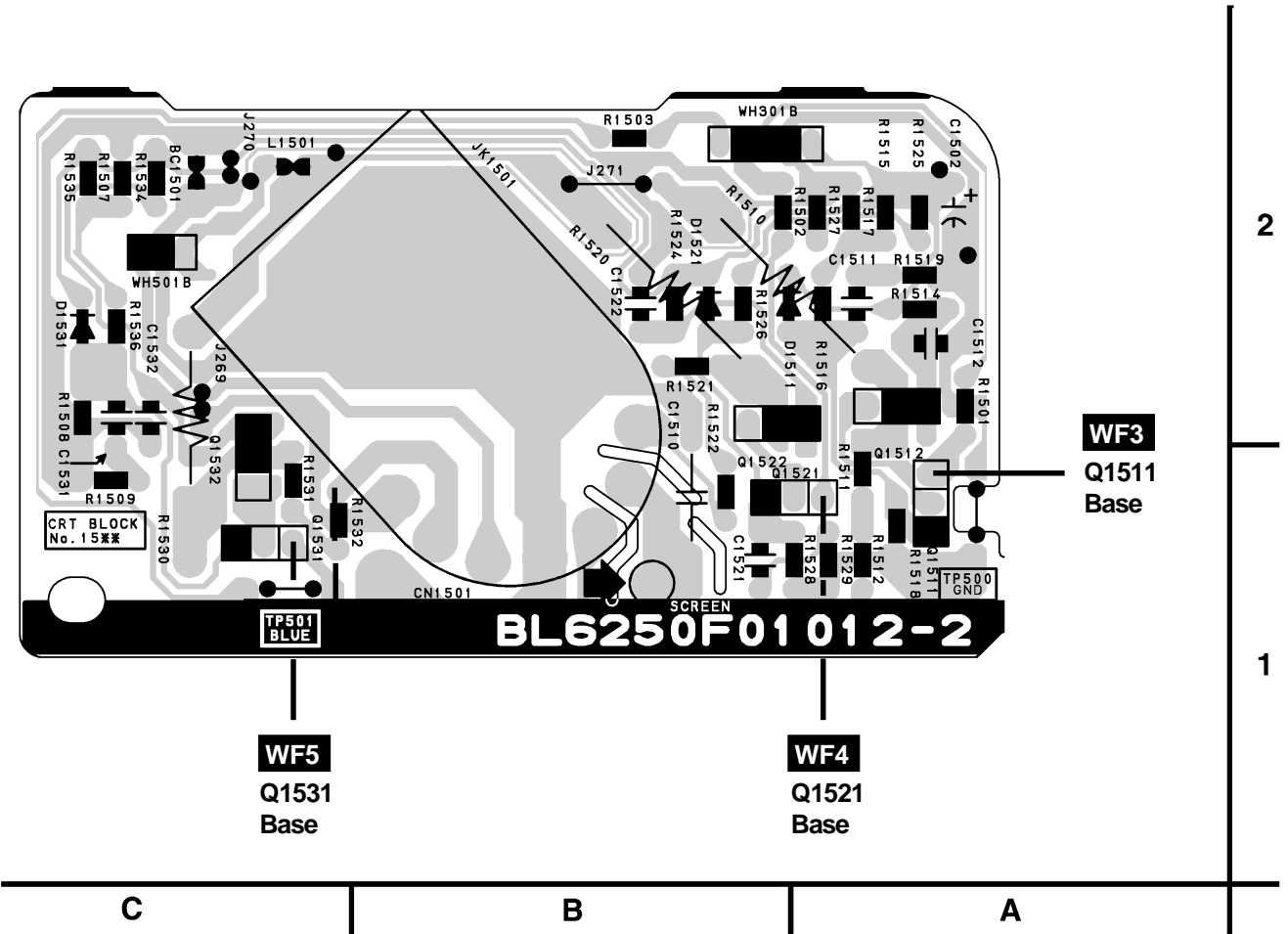
BECAUSE A HOT CHASSIS GROUND IS PRESENT IN THE POWER  
SUPPLY CIRCUIT, AN ISOLATION TRANSFORMER MUST BE USED.  
ALSO, IN ORDER TO HAVE THE ABILITY TO INCREASE THE INPUT  
SLOWLY, WHEN TROUBLESHOOTING THIS TYPE POWER SUPPLY  
CIRCUIT, A VARIABLE ISOLATION TRANSFORMER IS REQUIRED.



CRT CBA Top View



CRT CBA Bottom View



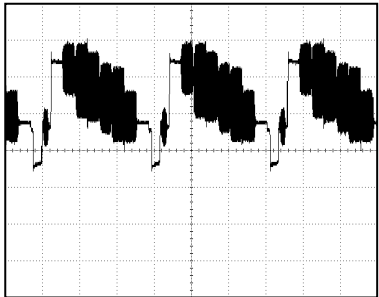
CRT	
Ref No.	Position
TRANSISTORS	
Q1511	A-1
Q1512	A-1
Q1521	A-1
Q1522	B-1
Q1531	C-1
Q1532	C-1
CONNECTORS	
CN1501	B-1
WH301B	B-2
WH501B	C-2
TEST POINTS	
TP500	A-1
TP501	C-1



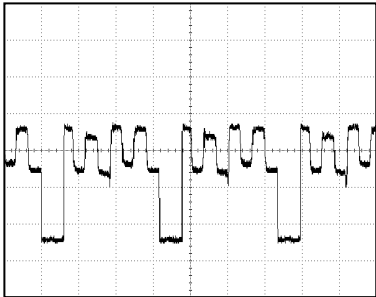
WAVEFORMS

WF1 ~ WF16 = Waveforms to be observed at Waveform check points.  
(Shown in Schematic Diagram.)

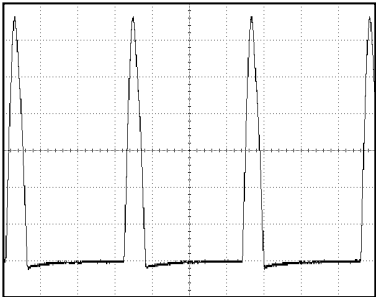
Input: NTSC Color Bar Signal (with 1kHz Audio Signal)  
INITIAL POSITION: Unplug unit from AC outlet for at least 5 minutes.  
reconnect to AC outlet and then turn power on.  
(Brightness---Center Color---Center Tint --- Center Contrast---Approx 70%)



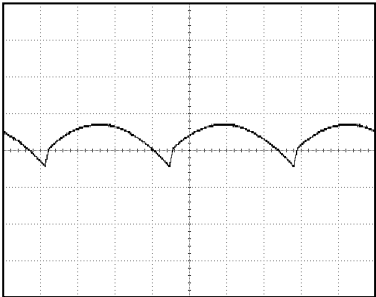
WF1 1DIV: 0.5V 20μsec  
Q31 Base



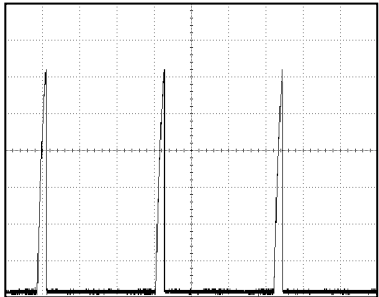
WF5 1DIV: 1V 20μsec  
Q 1531 Base



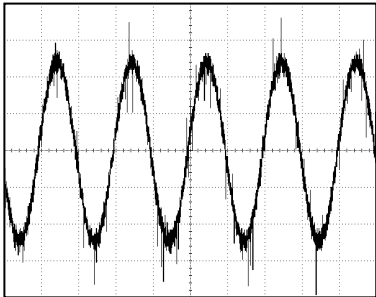
WF9 1DIV: 200V 20μsec  
Q 571 Collector



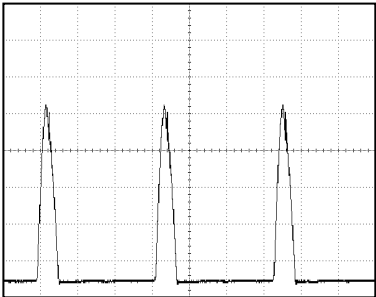
WF13 1DIV: 5V 5msec  
CN571 Pin 5



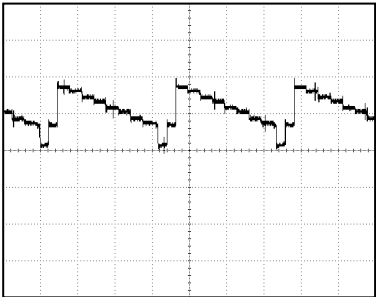
WF2 1DIV: 1V 20μsec  
IC 333 Pin 59



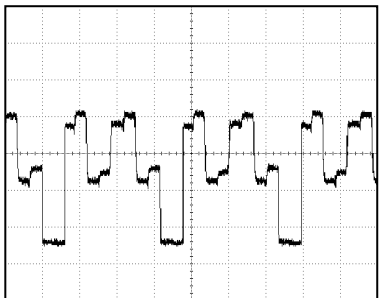
WF6 1DIV: 100mV 500μsec  
IC 801 Pin 5



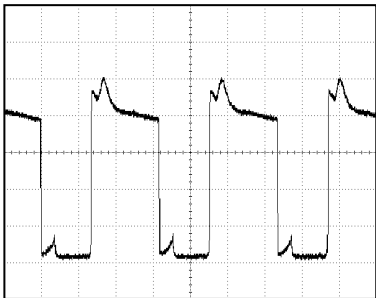
WF10 1DIV: 5V 20μsec  
WH501A Pin 3



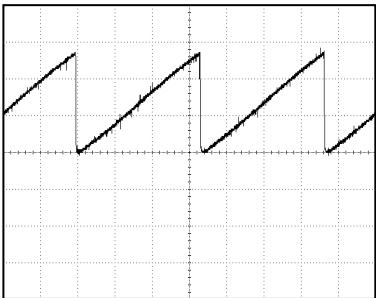
WF14 1DIV: 500mV 20μsec  
C 347 Minus lead



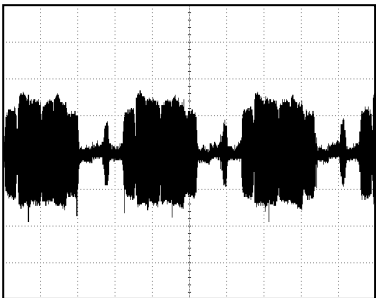
WF3 1DIV: 1V 20μsec  
Q 1511 Base



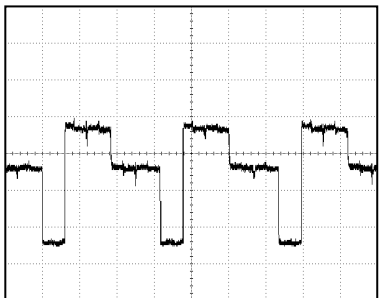
WF7 1DIV: 10V 20μsec  
Q 572 Collector



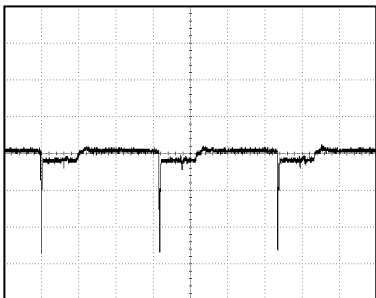
WF11 1DIV: 500mV 5msec  
IC 333 Pin 27



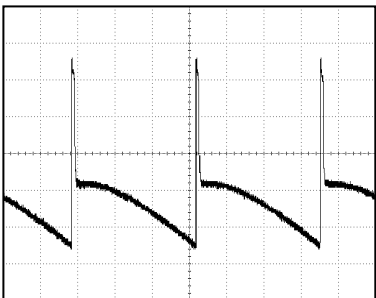
WF15 1DIV: 200mV 20μsec  
IC 333 Pin 48



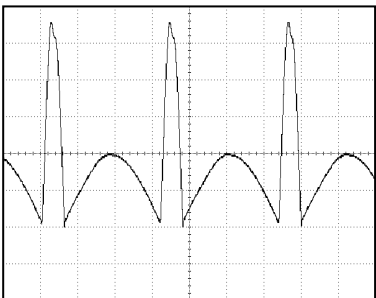
WF4 1DIV: 1V 20μsec  
Q 1521 Base



WF8 1DIV: 20V 20μsec  
Q 571 Base

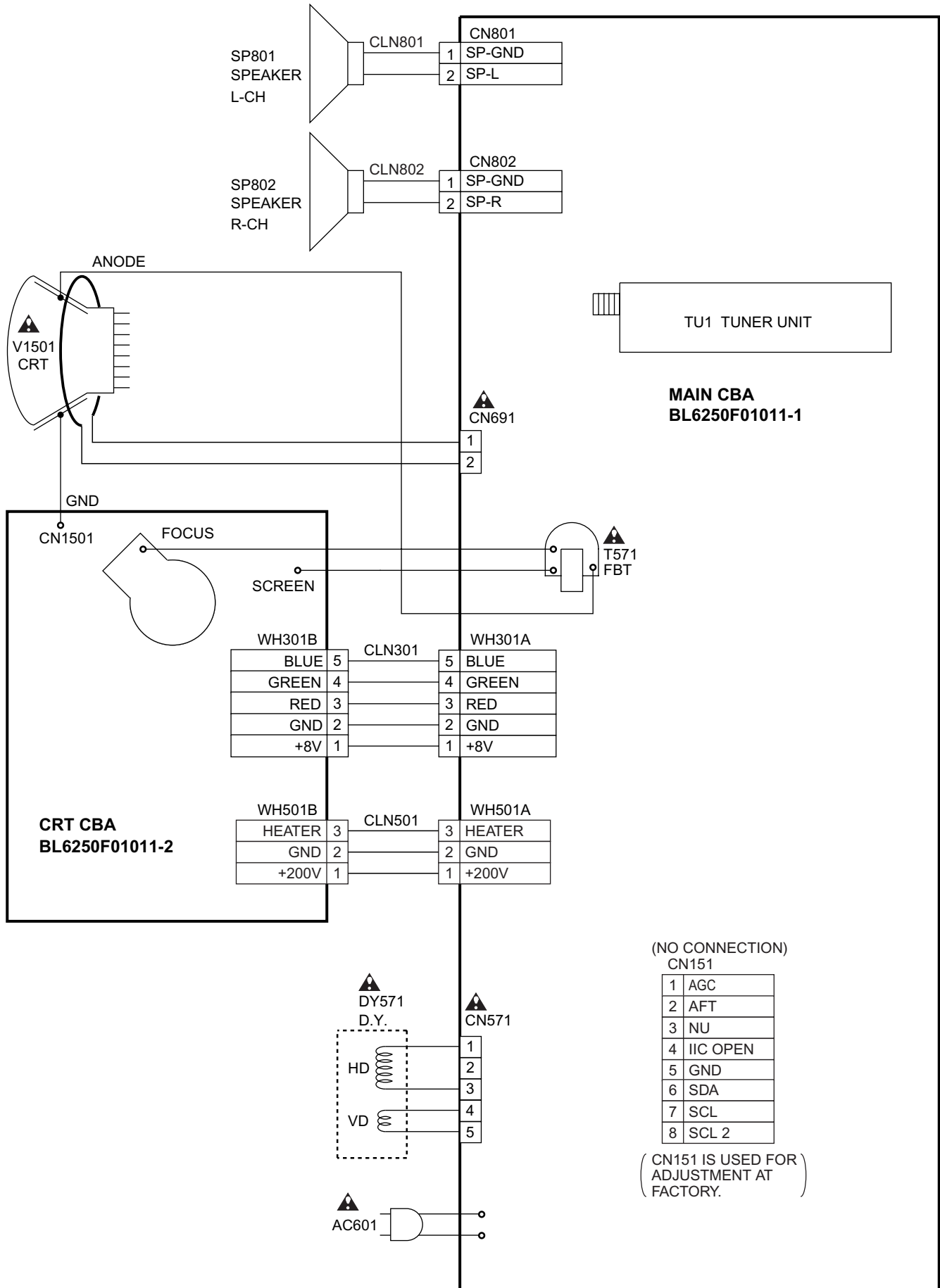


WF12 1DIV: 10V 5msec  
CN 571 Pin 4



WF16 1DIV: 50V 20μsec  
CN571 Pin 3

# WIRING DIAGRAM



# IC PIN FUNCTIONS

## IC333(TV Micro Computer)

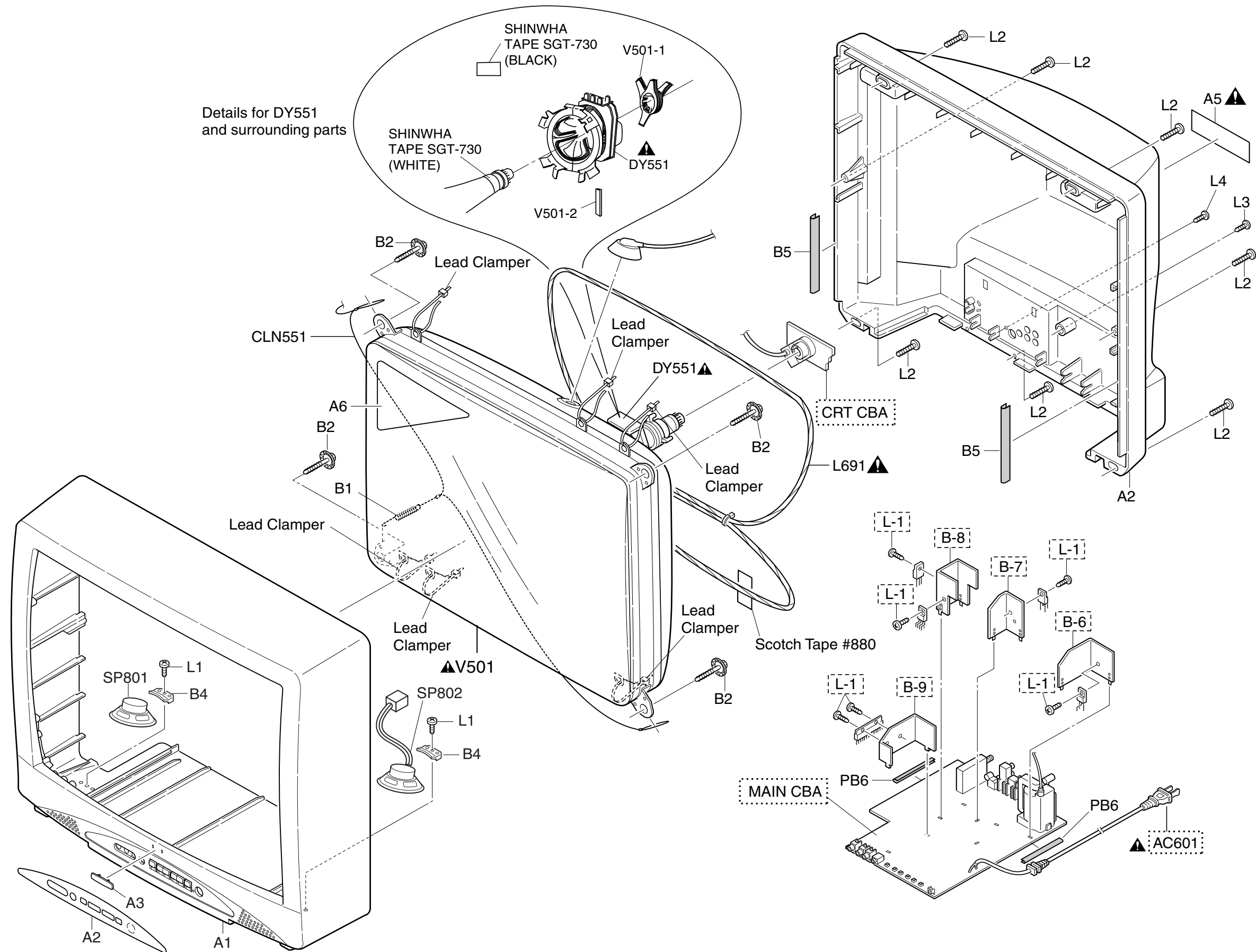
Pin No.	Signal Name	Function
1	NU	Not Used
2	NU	Not Used
3	KEY-IN	Key Input
4	AFT-IN	AFT Input
5	PROTECT 1	Power Supply Protection
6	PROTECT 2	Power Supply Protection
7	NU	Not Used
8	RESET-IN	Reset Input
9	FILTER	PLL Filter
10	NU	Not Used
11	NU	Not Used
12	RESET-OUT	Reset Output
13	V-CPU	5.6V
14	VCC	Standby VCC
15	NU	Not Used
16	YNR-FILT	YNR Filter
17	NU	Not Used
18	ACL/ABL	IB-Input
19	+8V CTL	8.5V Vcc Output
20	NU	Not Used
21	VCC	RGB VCC
22	R OUT	Red Output
23	G OUT	Green Output
24	B OUT	Blue Output
25	GND	Video/Chroma/Vertical GND
26	V RAMP AGC	V Ramp Osc. Capacitor
27	V OUT	Vertical Output
28	V RAMP	Ramp ALC Filter
29	H-VCC	Horizontal Vcc
30	AFC1	Horizontal AFC Filter
31	H OUT	Horizontal Output
32	NU	Not Used
33	FBP-IN	Flyback Pulse Input
34	H VCO REF	H VCO Iref
35	H-GND	Horizontal GND

Pin No.	Signal Name	Function
36	NU	Not Used
37	NU	Not Used
38	NU	Not Used
39	NU	Not Used
40	FSC	fsc(3.85MHz) Output
41	BL-STRETCH	Black Stretch & DC Rest Filter
42	APC	Chroma APC Filter
43	3.58MHZ	3.58MHz Crystal
44	VCC	Video/Chroma/Vertical VCC
45	NU	Not Used
46	NU	Not Used
47	+5V CTRL	5.7V VCC Output
48	C3	C-Chrpma Input (C3)
49	NU	Not Used
50	V3	Y-Chroma Input (y input, V3)
51	P-ON-H	Power Output H
52	NU	Not Used
53	C-SYNC-OUT	Composite Sync Output
54	NU	Not Used
55	NU	Not Used
56	DG-ON	Degauss Output
57	1KHZ-CHK	Horizontal Output Check
58	S-SW CTRL	S Control
59	C-SYNC-IN	Composit Sync Input
60	REMOCON	Remocon Signal Input
61	NU	GND
62	VOLUME	Volume PWM Output
63	NU	Not Used
64	AGC	AGC PWM Output
65	P-ON-H	Power Output
66	NU	Not Used
67	A-MUTE-H	Audio Mute Output
68	INPUT-0	Video Control
69	GND	GND
70	SDA	Serial Data Line
71	SCL	Serial Clock Line 1

Pin No.	Signal Name	Function
72	I2C-OPEN	Bus-Open-Line
73	INPUT-1	Video Control
74	GND	GND
75	GND	VSS
76	GND	GND
77	XTAL1	XT1
78	XTAL2	XT2
79	GND	GND
80	VDD	VDD

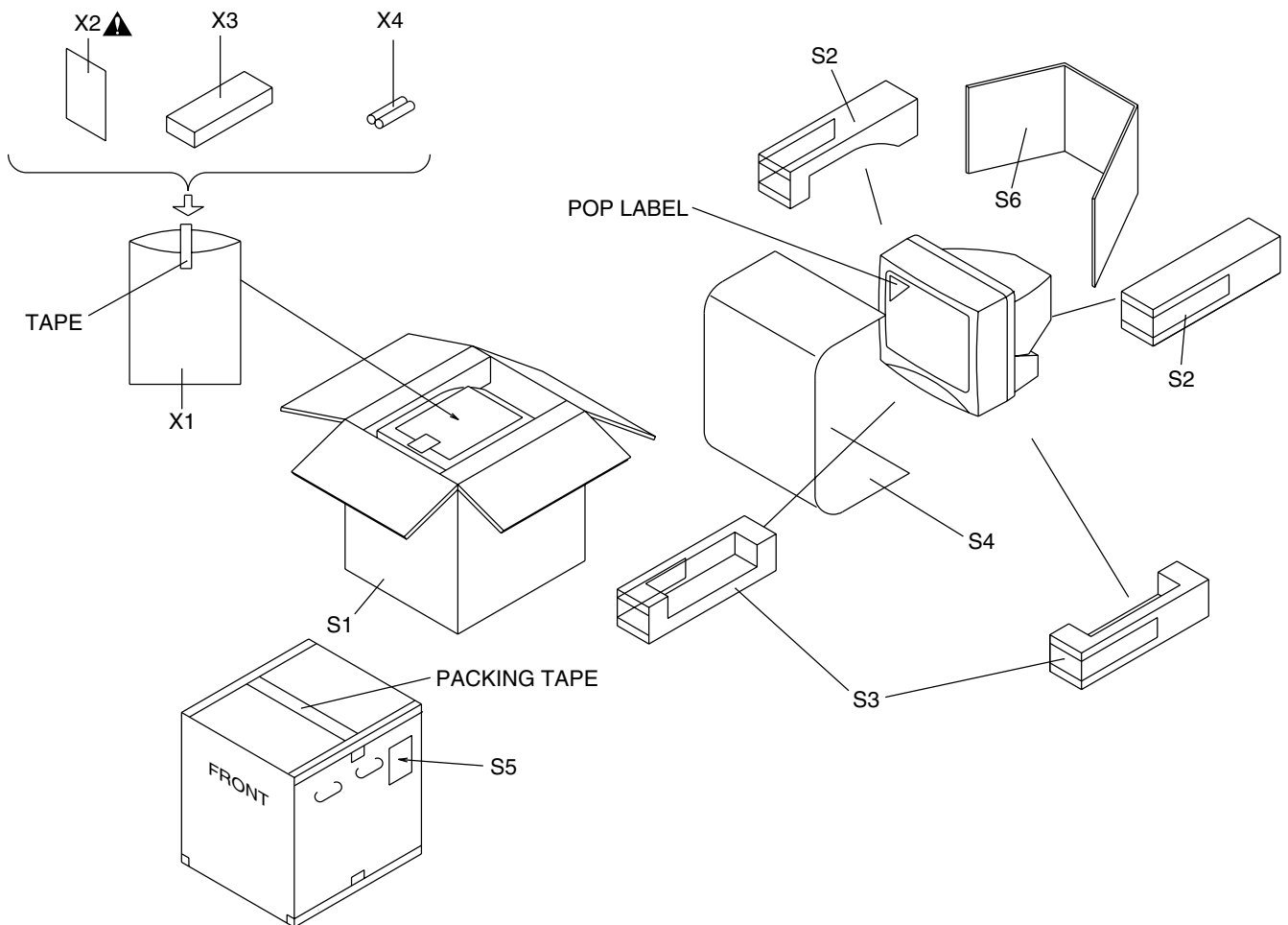
## Cabinet

## EXPLODED VIEWS






## Packing










# 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.

**NOTE:**

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

Ref. No.	Description	Part No.
A1	FRONT CABINET L6250UA	0EM000625
A2	CONTROL PLATE L6250UA	0EM201570
A3	BRAND PLATE T5307UH:SYLVANIA	0EM407053
A4	REAR CABINET L6250UA	0EM000626
A5 	RATING LABEL L6250UA	-----
A6	POP LABEL L6250UA	0EM407002
B1	TENSION SPRING B0080B0:EM40808	26WH006
B2	M7 CRT SCREW(D22) T7205UF	0EM406573
B4	SPEAKER HOLDER L1200UA	0EM405691
B5	CLOTH 190X15XT0.5	TS7623
CLN551	CRT GND WIRE CRT GND WIRE	WX1L6250-005
L1	SCREW, P-TIGHT 3X12 BIND HEAD+	GBMP3120
L2	SCREW, P-TIGHT 4X18 BIND HEAD +	GBMP4180
L3	SCREW TAPPING M4X14	DBU14140
L4	SCREW, P-TIGHT 3X10 BIND HEAD+	GBKP3100
L691 	DEGAUSSING COIL F-L1232V	LLBH00ZTM047
PB6	CLOTH(65) L7735TR:65X10X0.5T	0EM402149
SP801	SPEAKER S08F16-J	DSD0808XQ009
SP802	SPEAKER S08F26-J	DSD0808XQ008
<b>PACKING</b>		
S1	CARTON L6250UA	0EM407006
S2	STYROFOAM TOP ASSEMBLY L6250UA	0EM407000
S3	STYROFOAM BOTTOM ASSEMBLY L6250UA	0EM407001
S4	SET SHEET PCEC:003502019816	0EM403887
S5	SERIAL NO. LABEL L6250UA	0EM407004
S6	HOLD PAD L6250UA	0EM407005
<b>ACCESSORIES</b>		
X1	POLYETHYLENE BAG F8626B5	Z325350
X2 	OWNER'S MANUAL L6250UA	0EMN01918
X3	REMOCON UNIT 130/ERC001/N0147UD	N0147UD
X4	DRY BATTERY R6P UM3 or	XB0M451GH001
	DRY BATTERY R6P/2S or	XB0M451T0001
	DRY BATTERY(SUNRISE) R6SSE/2S or	XB0M451MS002
	DRY BATTERY R6P(AR)2PX or	XB0M451HU002
	DRY BATTERY R6P(AR)2P X ICI	XB0M451HU003
<b>Note:</b>		
1. V501 (CRT) HAS COUPLE OF SUBSTITUTIONAL PARTS AND EACH PARTS ALSO HAS MATCHING COMBINATION WITH DY551. PLEASE SEE TABLE 1 FOR DETAILS OF MATCHING COMBINATION.		
2. DY551 (DEFLECTION YOKE) HAS MATCHING COMBINATION WITH V501. PLEASE SEE TABLE 1 FOR DETAILS OF MATCHING COMBINATION.		
<b>CRT TYPE A</b>		
DY551 	DEFLECTION YOKE 6150Z-1050M	LLBY00ZGS006
V501 	CRT A80QCF340X	TCRT190GS041
V501-1	PCM 325LT-022	XM04000BV014
V501-2	WEDGE FT-00110W or	XV10000T4001

Ref. No.	Description	Part No.
	WEDGE DB25SR	XV10000D9001
<b>CRT TYPE B</b>		
V501 	CRT A80QCF340X03	TCRT190GS042
<b>CRT TYPE C</b>		
V501 	CRT A80LJF30X11(CT)	TCRT190SEG01

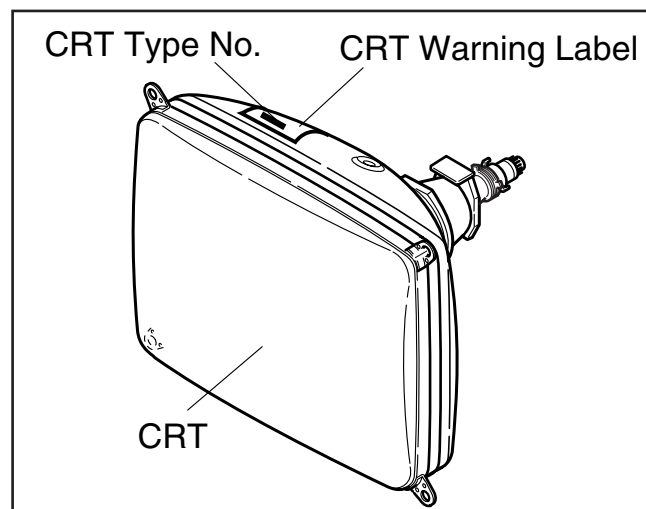
## Table 1 (V501 and DY551 Combination)

**Note 1:** Purity and Convergence Adjustments must be performed following CRT replacement. Refer to Electrical Adjustment Instructions.


**Note 2:** Please confirm CRT Type No. on the CRT Warning Label which is located on the CRT. Then See the Table 1 for V501 and DY551 combination chart. Please refer this CRT, Deflection Yoke combination chart for parts order.

V501: CRT Type No.	V501: CRT Part No.	DY551: Deflection Yoke Part No.
CRT A80QCF340X	TCRT190GS041	LLBY00ZGS006
CRT A80QCF340X03	TCRT190GS042	-----
CRT A80LJF30X11(CT)	TCRT190SEG01	-----

## CRT Warning Label Location



# 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.

## NOTES:

- Parts that are 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%

## MMA-366 CBA

Ref. No.	Description	Part No.
	MMA-366 CBA Consists of the following:	0ESA04758
	MAIN CBA	-----
	CRT CBA	-----

## MAIN CBA

Ref. No.	Description	Part No.
	MAIN CBA Consists of the following:	-----
<b>CAPACITORS</b>		
C1	CERAMIC CAP.(AX) F Z 0.01µF/25V	CDA1EZT0F103
C2	ELECTROLYTIC CAP. 100µF/10V M or	CE1AMASTL101
	ELECTROLYTIC CAP. 100µF/10V M	CE1AMASDL101
C3	ELECTROLYTIC CAP. 4.7µF/50V M or	CE1JMASTL4R7
	ELECTROLYTIC CAP. 4.7µF/50V M	CE1JMASDL4R7
C4	CERAMIC CAP.(AX) F Z 0.01µF/50V	CA1J103TU014
C7	ELECTROLYTIC CAP. 1µF/50V M or	CE1JMASTL1R0
	ELECTROLYTIC CAP. 1µF/50V M or	CE1JMASTL010
	ELECTROLYTIC CAP. 1µF/50V M or	CE1JMASDL1R0
	ELECTROLYTIC CAP. 1µF/50V M	CE1JMASDL010
C30	CERAMIC CAP.(AX) CH K 8.2pF/50V	CCA1JKTCH8R2
C31	CERAMIC CAP.(AX) B K 0.033µF/50V	CA1J333TU011
C32	ELECTROLYTIC CAP. 1µF/50V M or	CE1JMASTL1R0
	ELECTROLYTIC CAP. 1µF/50V M or	CE1JMASTL010
	ELECTROLYTIC CAP. 1µF/50V M or	CE1JMASDL1R0
	ELECTROLYTIC CAP. 1µF/50V M	CE1JMASDL010
C33	CARBON RES. 1/4W J 2.2k Ω or	RCX4JATZ0222
	CARBON RES. 1/6W J 2.2k Ω	RCX6JATZ0222
C35	FILM CAP.(P) 0.015µF/50V J or	CMA1JJS00153
	FILM CAP.(P) 0.015µF/50V J or	CA1J153MS029
	FILM CAP.(P) 0.015µF/50V J TV or	CMB1JJS00153
	MYLAR CAP. 0.015µF/50V K	2250153S
C37	ELECTROLYTIC CAP. 100µF/10V M or	CE1AMASTL101
	ELECTROLYTIC CAP. 100µF/10V M	CE1AMASDL101
C38	FILM CAP.(P) 0.01µF/50V J or	CMA1JJS00103

Ref. No.	Description	Part No.
	FILM CAP.(P) 0.01µF/50V J or	CA1J103MS029
	FILM CAP.(P) 0.01µF/50V J TV or	CMB1JJS00103
	MYLAR CAP. 0.01µF/50V K	2250103S
C39	ELECTROLYTIC CAP. 0.47µF/50V M or	CE1JMASTLR47
	ELECTROLYTIC CAP. 0.47µF/50V M	CE1JMASDLR47
C40	ELECTROLYTIC CAP. 1µF/50V M or	CE1JMASTL1R0
	ELECTROLYTIC CAP. 1µF/50V M or	CE1JMASTL010
	ELECTROLYTIC CAP. 1µF/50V M or	CE1JMASDL1R0
	ELECTROLYTIC CAP. 1µF/50V M	CE1JMASDL010
C41	CERAMIC CAP.(AX) F Z 0.01µF/25V	CDA1EZT0F103
C42	CERAMIC CAP.(AX) F Z 0.01µF/25V	CDA1EZT0F103
C43	CERAMIC CAP.(AX) B K 330pF/50V	CCA1JKT0B331
C45	CERAMIC CAP.(AX) B K 1000pF/50V	CCA1JKT0B102
C104	ELECTROLYTIC CAP. 10µF/50V M or	CE1JMASTL100
	ELECTROLYTIC CAP. 10µF/50V M	CE1JMASDL100
C124	CERAMIC CAP.(AX) B K 150pF/50V	CCA1JKT0B151
C131	CERAMIC CAP.(AX) CH J 18pF/50V	CCA1JJTCH180
C132	CERAMIC CAP.(AX) CH J 18pF/50V	CCA1JJTCH180
C141	ELECTROLYTIC CAP. 220µF/10V M or	CE1AMASTL221
	ELECTROLYTIC CAP. 220µF/10V M	CE1AMASDL221
C142	CERAMIC CAP.(AX) F Z 0.01µF/25V	CDA1EZT0F103
C143	ELECTROLYTIC CAP. 47µF/16V M or	CE1CMASTL470
	ELECTROLYTIC CAP. 47µF/16V M	CE1CMASDL470
C144 	CERAMIC CAP.(AX) F Z 0.1µF/50V or	CA1J104TU014
	CERAMIC CAP.(AX) F Z 0.1µF/50V	CCA1JZT0F104
C145	ELECTROLYTIC CAP. 0.47µF/50V M or	CE1JMASTLR47
	ELECTROLYTIC CAP. 0.47µF/50V M	CE1JMASDLR47
C146	ELECTROLYTIC CAP. 2.2µF/50V M or	CE1JMASTL2R2
	ELECTROLYTIC CAP. 2.2µF/50V M	CE1JMASDL2R2
C147	CERAMIC CAP.(AX) B K 0.033µF/50V	CA1J333TU011
C148	CERAMIC CAP.(AX) F Z 0.01µF/25V	CDA1EZT0F103
C150	CERAMIC CAP. F Z 0.1µF/25V	CDA1EZT0F104
C151	CERAMIC CAP.(AX) B K 220pF/50V	CCA1JKT0B221
C152	CERAMIC CAP.(AX) B K 220pF/50V	CCA1JKT0B221
C302	ELECTROLYTIC CAP. 10µF/50V M or	CE1JMASTL100
	ELECTROLYTIC CAP. 10µF/50V M	CE1JMASDL100
C303	ELECTROLYTIC CAP. 1µF/50V M or	CE1JMASTL1R0
	ELECTROLYTIC CAP. 1µF/50V M or	CE1JMASTL010
	ELECTROLYTIC CAP. 1µF/50V M or	CE1JMASDL1R0
	ELECTROLYTIC CAP. 1µF/50V M	CE1JMASDL010
C304	ELECTROLYTIC CAP. 0.47µF/50V M or	CE1JMASTLR47
	ELECTROLYTIC CAP. 0.47µF/50V M	CE1JMASDLR47
C305	CERAMIC CAP.(AX) F Z 0.01µF/25V	CDA1EZT0F103
C306	ELECTROLYTIC CAP. 100µF/10V M or	CE1AMASTL101
	ELECTROLYTIC CAP. 100µF/10V M	CE1AMASDL101
C307	ELECTROLYTIC CAP. 10µF/50V M or	CE1JMASTL100
	ELECTROLYTIC CAP. 10µF/50V M	CE1JMASDL100
C309	CERAMIC CAP.(AX) F Z 0.01µF/25V	CDA1EZT0F103
C331	FILM CAP. 0.47µF/50V J or	122Z317S
	TF CAP. 0.47µF/50V J	CT1J474MS045
C332	FILM CAP.(P) 0.015µF/50V J or	CMA1JJS00153
	FILM CAP.(P) 0.015µF/50V J or	CA1J153MS029
	FILM CAP.(P) 0.015µF/50V J TV or	CMB1JJS00153
	MYLAR CAP. 0.015µF/50V K	2250153S
C333	CERAMIC CAP.(AX) F Z 0.01µF/25V	CDA1EZT0F103
C335	FILM CAP. 0.47µF/50V J or	122Z317S
	TF CAP. 0.47µF/50V J	CT1J474MS045

Ref. No.	Description	Part No.
C336	FILM CAP. 0.47μF/50V J or TF CAP. 0.47μF/50V J	122Z317S CT1J474MS045
C339	CERAMIC CAP.(AX) F Z 0.01μF/25V	CDA1EZT0F103
C340	ELECTROLYTIC CAP. 1000μF/10V M or ELECTROLYTIC CAP. 1000μF/10V M	CE1AMASTL102 CE1AMASDL102
C343	ELECTROLYTIC CAP. 1μF/50V M or ELECTROLYTIC CAP. 1μF/50V M or ELECTROLYTIC CAP. 1μF/50V M or ELECTROLYTIC CAP. 1μF/50V M	CE1JMASTL1R0 CE1JMASTL010 CE1JMASDL1R0 CE1JMASDL010
C347	ELECTROLYTIC CAP. 1μF/50V M or ELECTROLYTIC CAP. 1μF/50V M or ELECTROLYTIC CAP. 1μF/50V M or ELECTROLYTIC CAP. 1μF/50V M	CE1JMASTL1R0 CE1JMASTL010 CE1JMASDL1R0 CE1JMASDL010
C348	CERAMIC CAP.(AX) F Z 0.01μF/25V	CDA1EZT0F103
C353	CERAMIC CAP.(AX) F Z 0.01μF/25V	CDA1EZT0F103
C355	ELECTROLYTIC CAP. 100μF/10V M or ELECTROLYTIC CAP. 100μF/10V M	CE1AMASTL101 CE1AMASDL101
C356	CERAMIC CAP.(AX) CH J 120pF/50V	CA1J121TU008
C357	ELECTROLYTIC CAP. 1μF/50V M or ELECTROLYTIC CAP. 1μF/50V M or ELECTROLYTIC CAP. 1μF/50V M or ELECTROLYTIC CAP. 1μF/50V M	CE1JMASTL1R0 CE1JMASTL010 CE1JMASDL1R0 CE1JMASDL010
C358	ELECTROLYTIC CAP. 4.7μF/50V M or ELECTROLYTIC CAP. 4.7μF/50V M	CE1JMASTL4R7 CE1JMASDL4R7
C359	CERAMIC CAP.(AX) B K 0.033μF/50V	CA1J333TU011
C401	ELECTROLYTIC CAP. 3.3μF/50V M or ELECTROLYTIC CAP. 3.3μF/50V M	CE1JMASTL3R3 CE1JMASDL3R3
C402	ELECTROLYTIC CAP. 3.3μF/50V M or ELECTROLYTIC CAP. 3.3μF/50V M	CE1JMASTL3R3 CE1JMASDL3R3
C403	CERAMIC CAP.(AX) F Z 0.1μF/50V or CERAMIC CAP.(AX) F Z 0.1μF/50V	CA1J104TU014 CCA1JZT0F104
C404	CERAMIC CAP.(AX) B K 0.022μF/50V	CA1J223TU011
C405	CERAMIC CAP. F Z 0.1μF/25V	CDA1EZT0F104
C406	CERAMIC CAP.(AX) B K 0.033μF/50V	CA1J333TU011
C411	ELECTROLYTIC CAP. 4.7μF/50V M or ELECTROLYTIC CAP. 4.7μF/50V M	CE1JMASTL4R7 CE1JMASDL4R7
C413	ELECTROLYTIC CAP. 100μF/10V M or ELECTROLYTIC CAP. 100μF/10V M	CE1AMASTL101 CE1AMASDL101
C414	ELECTROLYTIC CAP. 2.2μF/50V M or ELECTROLYTIC CAP. 2.2μF/50V M	CE1JMASTL2R2 CE1JMASDL2R2
C415	CERAMIC CAP.(AX) B K 150pF/50V	CCA1JKT0B151
C416	CERAMIC CAP.(AX) B K 150pF/50V	CCA1JKT0B151
C417	ELECTROLYTIC CAP. 2.2μF/50V M or ELECTROLYTIC CAP. 2.2μF/50V M	CE1JMASTL2R2 CE1JMASDL2R2
C421	ELECTROLYTIC CAP. 4.7μF/50V M or ELECTROLYTIC CAP. 4.7μF/50V M	CE1JMASTL4R7 CE1JMASDL4R7
C423	CERAMIC CAP.(AX) X K 4700pF/16V	CDA1CKT0X472
C424	ELECTROLYTIC CAP. 1μF/50V M or ELECTROLYTIC CAP. 1μF/50V M or ELECTROLYTIC CAP. 1μF/50V M or ELECTROLYTIC CAP. 1μF/50V M	CE1JMASTL1R0 CE1JMASTL010 CE1JMASDL1R0 CE1JMASDL010
C426	ELECTROLYTIC CAP. 4.7μF/50V M or ELECTROLYTIC CAP. 4.7μF/50V M	CE1JMASTL4R7 CE1JMASDL4R7
C428	CERAMIC CAP.(AX) X K 4700pF/16V	CDA1CKT0X472
C429	ELECTROLYTIC CAP. 1μF/50V M or ELECTROLYTIC CAP. 1μF/50V M or ELECTROLYTIC CAP. 1μF/50V M or ELECTROLYTIC CAP. 1μF/50V M	CE1JMASTL1R0 CE1JMASTL010 CE1JMASDL1R0 CE1JMASDL010
C436	CERAMIC CAP.(AX) F Z 0.01μF/25V	CDA1EZT0F103
C441	ELECTROLYTIC CAP. 10μF/50V M or ELECTROLYTIC CAP. 10μF/50V M	CE1JMASTL100 CE1JMASDL100

Ref. No.	Description	Part No.
C442	ELECTROLYTIC CAP. 2.2μF/50V M or ELECTROLYTIC CAP. 2.2μF/50V M	CE1JMASTL2R2 CE1JMASDL2R2
C444	ELECTROLYTIC CAP. 0.33μF/50V M or ELECTROLYTIC CAP. 0.33μF/50V M	CE1JMASTL3R3 CE1JMASDL3R3
C445	FILM CAP. 0.22μF/50V J or TF CAP. 0.22μF/50V J	122Z313S CT1J224MS045
C446	FILM CAP.(P) 0.1μF/50V J or FILM CAP.(P) 0.1μF/50V J or FILM CAP.(P) 0.1μF/50V J TV or MYLAR CAP. 0.1μF/50V K	CMA1JJS00104 CA1J104MS029 CMB1JJS00104 2250104S
C448	ELECTROLYTIC CAP. 2.2μF/50V M or ELECTROLYTIC CAP. 2.2μF/50V M	CE1JMASTL2R2 CE1JMASDL2R2
C501	FILM CAP. 0.22μF/50V J or TF CAP. 0.22μF/50V J	122Z313S CT1J224MS045
C502	CERAMIC CAP.(AX) B K 1000pF/50V	CCA1JKT0B102
C503	ELECTROLYTIC CAP. 100μF/35V M or ELECTROLYTIC CAP. 100μF/35V M	CE1GMASTL101 CE1GMASDL101
C504	ELECTROLYTIC CAP. 2.2μF/50V M LL or ELECTROLYTIC CAP. 2.2μF/50V LL	CE1JMASLL2R2 CE1JMASLH2R2
C505	ELECTROLYTIC CAP. 1000μF/35V M or ELECTROLYTIC CAP. 1000μF/35V M or ELECTROLYTIC CAP. 1000μF/35V M	CE1GMZNTL102 CE1GMZNDL102 CE1GMZADL102
C506	ELECTROLYTIC CAP. 1000μF/35V M or ELECTROLYTIC CAP. 1000μF/35V M or ELECTROLYTIC CAP. 1000μF/35V M	CE1GMZNTL102 CE1GMZNDL102 CE1GMZADL102
C507	ELECTROLYTIC CAP. 47μF/16V M or ELECTROLYTIC CAP. 47μF/16V M	CE1CMASTL470 CE1CMASDL470
C508	CERAMIC CAP.(AX) F Z 0.01μF/25V	CDA1EZT0F103
C520	ELECTROLYTIC CAP. 10μF/50V M or ELECTROLYTIC CAP. 10μF/50V M	CE1JMASTL100 CE1JMASDL100
C541	FILM CAP.(P) 0.082μF/50V J or FILM CAP.(P) 0.082μF/50V J or FILM CAP.(P) 0.082μF/50V J TV or MYLAR CAP. 0.082μF/50V K	CMA1JJS00823 CA1J823MS029 CMB1JJS00823 2250823S
C551	CERAMIC CAP. B K 680pF/1KV or CERAMIC CAP. B K 680pF/1KV or CERAMIC CAP. B K 680pF/1KV	CCD3AKD0B681 CCD3AKP0B681 CA3A681MR028
C555	METALIZED PLYESTER CAP. 1μF/100V J	CT2A105MS065
C556	FILM CAP.(P) 0.1μF/50V J or FILM CAP.(P) 0.1μF/50V J or FILM CAP.(P) 0.1μF/50V J TV or MYLAR CAP. 0.1μF/50V K	CMA1JJS00104 CA1J104MS029 CMB1JJS00104 2250104S
C561	ELECTROLYTIC CAP. 47μF/35V M or ELECTROLYTIC CAP. 47μF/35V M	CE1GMASTL470 CE1GMASDL470
C562	ELECTROLYTIC CAP. 470μF/16V M or ELECTROLYTIC CAP. 470μF/16V M	CE1CMASTL471 CE1CMASDL471
C563▲	P.P. CAP 0.56μF/200V J or ▲ PP CAP. 0.56μF/250V J	CA2D564VC012 CT2E564MS041
C565	FILM CAP.(P) 0.1μF/50V J or FILM CAP.(P) 0.1μF/50V J or FILM CAP.(P) 0.1μF/50V J TV or MYLAR CAP. 0.1μF/50V K	CMA1JJS00104 CA1J104MS029 CMB1JJS00104 2250104S
C566▲	CERAMIC CAP. LB 820pF/2KV or ▲ CERAMIC CAP. BN 820pF/2KV or ▲ CERAMIC CAP. 820pF/2KV	CA3D821KG004 CCD3DKA0B821 CA3D821PAN04
C567▲	PP CAP. 0.0018μF/1.6KV J or ▲ PP CAP. 0.0018μF/1.6KV J	CA3C182VC010 CT3C182MS039
C571▲	PCB JUMPER D0.6-P7.5	JW7.5T
C574▲	ELECTROLYTIC CAP. 4.7μF/250V M or ▲ ELECTROLYTIC CAP. 4.7μF/250V M	CE2EMASTL4R7 CE2EMASDL4R7
C577	ELECTROLYTIC CAP. 47μF/35V M or	CE1GMASTL470

Ref. No.	Description	Part No.
	ELECTROLYTIC CAP. 47μF/35V M	CE1GMASDL470
C578	FILM CAP.(P) 0.01μF/50V J or	CMA1JJS00103
	FILM CAP.(P) 0.01μF/50V J or	CA1J103MS029
	FILM CAP.(P) 0.01μF/50V J TV or	CMB1JJS00103
	MYLAR CAP. 0.01μF/50V K	2250103S
C580▲	PP CAP. 0.018μF/1.6KV J or	CA3C183VC010
▲	PP CAP. 0.018μF/1.6KV J	CT3C183MS039
C582▲	P.P. CAPACITOR 0.033μF/630V J or	CBP2KJD00333
▲	P.P. CAPACITOR 0.033μF/630V J or	CT2K333KF011
▲	P.P. CAPACITOR 0.033μF/630V J	CBP2KKD00333
C583▲	FILM CAP.(P) 0.1μF/100V J or	CMA2AJ00104
▲	FILM CAP.(P) 0.1μF/100V J TV	CMB2AJ00104
C584▲	ELECTROLYTIC CAP. 4.7μF/50V M or	CE1JMASTL4R7
▲	ELECTROLYTIC CAP. 4.7μF/50V M	CE1JMASDL4R7
C588▲	ELECTROLYTIC CAP. 100μF/160V M W/F or	CE2CMZNTL101
▲	ELECTROLYTIC CAP. 100μF/160V M	CE2CMZPDL101
C594▲	ELECTROLYTIC CAP. 10μF/50V M or	CE1JMASTL100
▲	ELECTROLYTIC CAP. 10μF/50V M	CE1JMASDL100
C596	CERAMIC CAP. B K 470pF/500V	CCD2JKS0B471
C601▲	METALLIZED FILM CAP. 0.1μF/250V or	CT2E104MS037
▲	FILM CAP.(MP) 0.1μF/250V M or	CT2E104DC009
▲	FILM CAP.(MP) 0.1μF/250V K	CT2E104DC011
C603	CERAMIC CAP.(AX) B K 470pF/50V	CCA1JKT0B471
C605	CERAMIC CAP. F Z 0.01μF/500V or	CCD2JZD0F103
	CERAMIC CAP. 0.01μF/AC250V	CCD2EZA0F103
C606	CERAMIC CAP. F Z 0.01μF/500V or	CCD2JZD0F103
	CERAMIC CAP. 0.01μF/AC250V	CCD2EZA0F103
C609	CERAMIC CAP. B K 680pF/2KV or	CCD3DKD0B681
	CERAMIC CAP. B K 680pF/2KV	CCD3DKP0B681
C610▲	ELECTROLYTIC CAP. 470μF/200V M or	CE2DMZNTL471
▲	ELECTROLYTIC CAP. 470μF/200V M or	CE2DMZNDL471
▲	ELECTROLYTIC CAP. 470μF/200V	CA2D471NC013
C611	FILM CAP.(P) 0.068μF/50V J or	CMA1JJS00683
	FILM CAP.(P) 0.068μF/50V J or	CA1J683MS029
	FILM CAP.(P) 0.068μF/50V J TV or	CMB1JJS00683
	MYLAR CAP. 0.068μF/50V K	2250683S
C613	FILM CAP.(P) 0.056μF/50V J or	CMA1JJS00563
	FILM CAP.(P) 0.056μF/50V J or	CA1J563MS029
	FILM CAP.(P) 0.056μF/50V J TV or	CMB1JJS00563
	MYLAR CAP. 0.056μF/50V KT	2250563S
C616	FILM CAP.(P) 0.1μF/50V J or	CMA1JJS00104
	FILM CAP.(P) 0.1μF/50V J or	CA1J104MS029
	FILM CAP.(P) 0.1μF/50V J TV or	CMB1JJS00104
	MYLAR CAP. 0.1μF/50V K	2250104S
C618	FILM CAP.(P) 0.1μF/50V J or	CMA1JJS00104
	FILM CAP.(P) 0.1μF/50V J or	CA1J104MS029
	FILM CAP.(P) 0.1μF/50V J TV or	CMB1JJS00104
	MYLAR CAP. 0.1μF/50V K	2250104S
C643▲	SAFETY CAP. 4700pF/250V or	CCG2EMA0F472
▲	SAFETY CAP. E M 4700pF/250V KH or	CCG2EMP0E472
▲	CERAMIC CAP. 0.0047μF F CS	CCG2HMN0F472
C650	CERAMIC CAP. LB 100pF/2KV or	CA3D101KG004
	CERAMIC CAP. BN J 100pF/2KV or	CCD3DKA0B101
	CERAMIC CAP. 100pF/2KV	CA3D101PAN04
C654	ELECTROLYTIC CAP. 1μF/50V M or	CE1JMASTL1R0
	ELECTROLYTIC CAP. 1μF/50V M or	CE1JMASTL010
	ELECTROLYTIC CAP. 1μF/50V M or	CE1JMASDL1R0
	ELECTROLYTIC CAP. 1μF/50V M	CE1JMASDL010
C656▲	ELECTROLYTIC CAP. 100μF/160V M W/F or	CE2CMZNTL101
▲	ELECTROLYTIC CAP. 100μF/160V M	CE2CMZPDL101
C657▲	ELECTROLYTIC CAP. 2200μF/35V M or	CE1GMZNTL222

Ref. No.	Description	Part No.
▲	ELECTROLYTIC CAP. 2200μF/35V M	CE1GMZNDL222
C658▲	ELECTROLYTIC CAP. 1000μF/16V M(VR/HC) or	CE1CMZNTL102
▲	ELECTROLYTIC CAP. 1000μF/16V M or	CE1CMZNDL102
▲	ELECTROLYTIC CAP. 1000μF/16V M	CE1CMZADL102
C661	CERAMIC CAP.(AX) F Z 0.01μF/25V	CDA1EZT0F103
C662▲	ELECTROLYTIC CAP. 1000μF/25V M or	CE1EMZNTL102
▲	ELECTROLYTIC CAP. 1000μF/25V M	CE1EMZPDL102
C667	ELECTROLYTIC CAP. 1μF/50V M or	CE1JMASTL1R0
	ELECTROLYTIC CAP. 1μF/50V M or	CE1JMASTL010
	ELECTROLYTIC CAP. 1μF/50V M or	CE1JMASDL1R0
	ELECTROLYTIC CAP. 1μF/50V M	CE1JMASDL010
C681	ELECTROLYTIC CAP. 100μF/10V M or	CE1AMASTL101
	ELECTROLYTIC CAP. 100μF/10V M	CE1AMASDL101
C682	ELECTROLYTIC CAP. 100μF/10V M or	CE1AMASTL101
	ELECTROLYTIC CAP. 100μF/10V M	CE1AMASDL101
C684	ELECTROLYTIC CAP. 100μF/10V M or	CE1AMASTL101
	ELECTROLYTIC CAP. 100μF/10V M	CE1AMASDL101
C685	ELECTROLYTIC CAP. 1000μF/10V M or	CE1AMASTL102
	ELECTROLYTIC CAP. 1000μF/10V M	CE1AMASDL102
C686	ELECTROLYTIC CAP. 100μF/10V M or	CE1AMASTL101
	ELECTROLYTIC CAP. 100μF/10V M	CE1AMASDL101
C701	CERAMIC CAP.(AX) B K 100pF/50V	CCA1JKT0B101
C702	ELECTROLYTIC CAP. 10μF/50V M or	CE1JMASTL100
	ELECTROLYTIC CAP. 10μF/50V M	CE1JMASDL100
C705	CERAMIC CAP.(AX) X K 3300pF/16V	CDA1CKT0X332
C706	ELECTROLYTIC CAP. 0.47μF/50V M or	CE1JMASTL4R7
	ELECTROLYTIC CAP. 0.47μF/50V M	CE1JMASDL4R7
C708	CERAMIC CAP.(AX) X K 3300pF/16V	CDA1CKT0X332
C709	ELECTROLYTIC CAP. 0.47μF/50V M or	CE1JMASTL4R7
	ELECTROLYTIC CAP. 0.47μF/50V M	CE1JMASDL4R7
C713	ELECTROLYTIC CAP. 10μF/50V M or	CE1JMASTL100
	ELECTROLYTIC CAP. 10μF/50V M	CE1JMASTL100
C718	CERAMIC CAP.(AX) B K 1000pF/50V	CCA1JKT0B102
C721	CERAMIC CAP.(AX) B K 100pF/50V	CCA1JKT0B101
C722	ELECTROLYTIC CAP. 10μF/50V M or	CE1JMASTL100
	ELECTROLYTIC CAP. 10μF/50V M	CE1JMASDL100
C725	CERAMIC CAP.(AX) X K 3300pF/16V	CDA1CKT0X332
C726	ELECTROLYTIC CAP. 0.47μF/50V M or	CE1JMASTL4R7
	ELECTROLYTIC CAP. 0.47μF/50V M	CE1JMASDL4R7
C728	CERAMIC CAP.(AX) X K 3300pF/16V	CDA1CKT0X332
C729	ELECTROLYTIC CAP. 0.47μF/50V M or	CE1JMASTL4R7
	ELECTROLYTIC CAP. 0.47μF/50V M	CE1JMASDL4R7
C751	ELECTROLYTIC CAP. 1μF/50V M or	CE1JMASTL1R0
	ELECTROLYTIC CAP. 1μF/50V M or	CE1JMASTL010
	ELECTROLYTIC CAP. 1μF/50V M or	CE1JMASDL1R0
	ELECTROLYTIC CAP. 1μF/50V M	CE1JMASDL010
C757	ELECTROLYTIC CAP. 0.1μF/50V M or	CE1JMASTL1R0
	ELECTROLYTIC CAP. 0.1μF/50V M	CE1JMASDL1R0
C761	ELECTROLYTIC CAP. 1μF/50V M or	CE1JMASTL1R0
	ELECTROLYTIC CAP. 1μF/50V M or	CE1JMASTL010
	ELECTROLYTIC CAP. 1μF/50V M or	CE1JMASDL1R0
	ELECTROLYTIC CAP. 1μF/50V M	CE1JMASDL010
C767	ELECTROLYTIC CAP. 0.1μF/50V M or	CE1JMASTL1R0
	ELECTROLYTIC CAP. 0.1μF/50V M	CE1JMASDL1R0
C773	ELECTROLYTIC CAP. 100μF/10V M or	CE1AMASTL101
	ELECTROLYTIC CAP. 100μF/10V M	CE1AMASDL101
C781	ELECTROLYTIC CAP. 10μF/50V M or	CE1JMASTL100
	ELECTROLYTIC CAP. 10μF/50V M	CE1JMASDL100
C785	ELECTROLYTIC CAP. 10μF/50V M or	CE1JMASTL100
	ELECTROLYTIC CAP. 10μF/50V M	CE1JMASDL100
C801	ELECTROLYTIC CAP. 470μF/25V M or	CE1EMASTL471

Ref. No.	Description	Part No.
	ELECTROLYTIC CAP. 470µF/25V M	CE1EMASDL471
C802	ELECTROLYTIC CAP. 470µF/25V M or	CE1EMASTL471
	ELECTROLYTIC CAP. 470µF/25V M	CE1EMASDL471
C806	FILM CAP.(P) 0.1µF/50V J or	CMA1JJS00104
	FILM CAP.(P) 0.1µF/50V J or	CA1J104MS029
	FILM CAP.(P) 0.1µF/50V J TV or	CMB1JJS00104
	MYLAR CAP. 0.1µF/50V K	2250104S
C807	FILM CAP.(P) 0.1µF/50V J or	CMA1JJS00104
	FILM CAP.(P) 0.1µF/50V J or	CA1J104MS029
	FILM CAP.(P) 0.1µF/50V J TV or	CMB1JJS00104
	MYLAR CAP. 0.1µF/50V K	2250104S
C811	ELECTROLYTIC CAP. 1000µF/25V M or	CE1EMZNTL102
	ELECTROLYTIC CAP. 1000µF/25V M	CE1EMZPDL102
C812	CERAMIC CAP.(AX) F Z 0.01µF/25V	CDA1EZT0F103
C814	ELECTROLYTIC CAP. 100µF/10V M or	CE1AMASTL101
	ELECTROLYTIC CAP. 100µF/10V M	CE1AMASDL101
C815	ELECTROLYTIC CAP. 1µF/50V M or	CE1JMASTL1R0
	ELECTROLYTIC CAP. 1µF/50V M or	CE1JMASTL010
	ELECTROLYTIC CAP. 1µF/50V M or	CE1JMASDL1R0
	ELECTROLYTIC CAP. 1µF/50V M	CE1JMASDL010
C816	ELECTROLYTIC CAP. 1µF/50V M or	CE1JMASTL1R0
	ELECTROLYTIC CAP. 1µF/50V M or	CE1JMASTL010
	ELECTROLYTIC CAP. 1µF/50V M or	CE1JMASDL1R0
	ELECTROLYTIC CAP. 1µF/50V M	CE1JMASDL010
C821	ELECTROLYTIC CAP. 4.7µF/50V M or	CE1JMASTL4R7
	ELECTROLYTIC CAP. 4.7µF/50V M	CE1JMASDL4R7
C827	ELECTROLYTIC CAP. 2.2µF/50V M or	CE1JMASTL2R2
	ELECTROLYTIC CAP. 2.2µF/50V M	CE1JMASDL2R2
C832	ELECTROLYTIC CAP. 22µF/50V M or	CE1JMASTL220
	ELECTROLYTIC CAP. 22µF/50V M	CE1JMASDL220
C845	ELECTROLYTIC CAP. 100µF/10V M or	CE1AMASTL101
	ELECTROLYTIC CAP. 100µF/10V M	CE1AMASDL101
C851	ELECTROLYTIC CAP. 10µF/50V M or	CE1JMASTL100
	ELECTROLYTIC CAP. 10µF/50V M	CE1JMASDL100
C852	ELECTROLYTIC CAP. 470µF/16V M or	CE1CMASL471
	ELECTROLYTIC CAP. 470µF/16V M	CE1CMASDL471
C853	CERAMIC CAP.(AX) F Z 0.01µF/25V	CDA1EZT0F103
C901	CERAMIC CAP.(AX) SL J 10pF/50V	CCA1JJTSL100
C902	CERAMIC CAP.(AX) CH J 22pF/50V	CA1J220TU008
C903	CERAMIC CAP.(AX) CH J 22pF/50V	CA1J220TU008
C906	ELECTROLYTIC CAP. 0.47µF/50V M or	CE1JMASTLR47
	ELECTROLYTIC CAP. 0.47µF/50V M	CE1JMASDLR47
C911	ELECTROLYTIC CAP. 10µF/50V M or	CE1JMASTL100
	ELECTROLYTIC CAP. 10µF/50V M	CE1JMASDL100
C912	CERAMIC CAP.(AX) F Z 0.01µF/25V	CDA1EZT0F103
C913	CERAMIC CAP.(AX) B K 0.01µF/50V	CA1J103TU011
C914	CERAMIC CAP.(AX) B K 0.01µF/50V	CA1J103TU011
C915	CERAMIC CAP.(AX) B K 0.01µF/50V	CA1J103TU011
C916	CERAMIC CAP.(AX) F Z 0.01µF/25V	CDA1EZT0F103
C917	ELECTROLYTIC CAP. 10µF/50V M or	CE1JMASTL100
	ELECTROLYTIC CAP. 10µF/50V M	CE1JMASDL100
C918	CERAMIC CAP.(AX) F Z 0.01µF/25V	CDA1EZT0F103
C919	ELECTROLYTIC CAP. 10µF/50V M or	CE1JMASTL100
	ELECTROLYTIC CAP. 10µF/50V M	CE1JMASDL100
C920	ELECTROLYTIC CAP. 100µF/10V M or	CE1AMASTL101
	ELECTROLYTIC CAP. 100µF/10V M	CE1AMASDL101
C921	CERAMIC CAP.(AX) B K 0.01µF/50V	CA1J103TU011
C922	CERAMIC CAP.(AX) B K 180pF/50V	CCA1JKT0B181
C923	CERAMIC CAP.(AX) F Z 0.01µF/25V	CDA1EZT0F103
C925	CERAMIC CAP.(AX) B K 0.01µF/50V	CA1J103TU011
C926	CERAMIC CAP.(AX) B K 0.01µF/50V	CA1J103TU011

Ref. No.	Description	Part No.
C928	ELECTROLYTIC CAP. 10µF/50V M or	CE1JMASTL100
	ELECTROLYTIC CAP. 10µF/50V M	CE1JMASDL100
C929	CERAMIC CAP.(AX) F Z 0.01µF/25V	CDA1EZT0F103
C931	CERAMIC CAP.(AX) CH J 56pF/50V	CA1J560TU008
C936	CERAMIC CAP.(AX) CH J 18pF/50V	CCA1JJTCH180
C941	ELECTROLYTIC CAP. 10µF/50V M or	CE1JMASTL100
	ELECTROLYTIC CAP. 10µF/50V M	CE1JMASDL100
C942	CERAMIC CAP.(AX) F Z 0.01µF/25V	CDA1EZT0F103
C943	CERAMIC CAP.(AX) F Z 0.01µF/25V	CDA1EZT0F103
C959	PCB JUMPER D0.6-P5.0	JW5.0T
C963	ELECTROLYTIC CAP. 10µF/50V M or	CE1JMASTL100
	ELECTROLYTIC CAP. 10µF/50V M	CE1JMASDL100
C964	ELECTROLYTIC CAP. 100µF/10V M or	CE1AMASTL101
	ELECTROLYTIC CAP. 100µF/10V M	CE1AMASDL101
C972	ELECTROLYTIC CAP. 100µF/10V M or	CE1AMASTL101
	ELECTROLYTIC CAP. 100µF/10V M	CE1AMASDL101
<b>CONNECTORS</b>		
CN151	CONNECTOR BASE 8P TUC-P08P-B1	J3TUA08TG001
CN571▲	CONNECTOR BASE, 5P TV-50P-05-V3 or	J3TVC05TG002
▲	CONNECTOR BASE, 5P RTB-1.5-5P or	J3RTC05JG001
▲	CONNECTOR BASE, 5P W-P3005-02	1730812
CN691▲	CONNECTOR BASE, 2P TV-50P-02-V3 or	J3TVC02TG002
▲	CONNECTOR BASE, 2P RTB-1.5-2P	J3RTC02JG001
CN801	STRAIGHT CONNECTOR BASE 00 8283 0212 00 000 or	J383C02UG002
	STRAIGHT PIN HEADER, 2P 173981-2	1770258
CN802	STRAIGHT CONNECTOR BASE 00 8283 0212 00 000 or	J383C02UG002
	STRAIGHT PIN HEADER, 2P 173981-2	1770258
<b>DIODES</b>		
D122	PCB JUMPER D0.6-P5.0	JW5.0T
D131	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	DIODE 1SS176TPA7	1SS176T
D132	ZENER DIODE MTZJT-775.6B	QDTB0MTZJ5R6
D141	ZENER DIODE MTZJT-775.6B	QDTB0MTZJ5R6
D142	ZENER DIODE MTZJT-775.1B	QDTB0MTZJ5R1
D301	ZENER DIODE MTZJT-779.1B	QDTB0MTZJ9R1
D302	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	DIODE 1SS176TPA7	1SS176T
D303	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	DIODE 1SS176TPA7	1SS176T
D304	ZENER DIODE MTZJT-7710B	QDTB00MTZJ10
D311	ZENER DIODE MTZJT-778.2A	QDTA0MTZJ8R2
D312	ZENER DIODE MTZJT-778.2A	QDTA0MTZJ8R2
D313	ZENER DIODE MTZJT-778.2A	QDTA0MTZJ8R2
D332	THERMISTOR NRD5501L370Y	QNWLNDRD55013
D339	ZENER DIODE MTZJT-775.6B	QDTB0MTZJ5R6
D501	DIODE FR104-B	NDLZ000FR104
D502▲	ZENER DIODE MTZJT-7724B	QDTB00MTZJ24
D503▲	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
▲	SWITCHING DIODE 1N4148 or	NDTZ001N4148
▲	DIODE 1SS176TPA7	1SS176T
D552▲	ZENER DIODE MTZJT-773.0B	QDTB0MTZJ3R0
D558	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	DIODE 1SS176TPA7	1SS176T
D559	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1N4148 or	NDTZ001N4148

Ref. No.	Description	Part No.
	DIODE 1SS176TPA7	1SS176T
D572▲	DIODE FR104-B	NDLZ000FR104
D573▲	DIODE FR104-B	NDLZ000FR104
D580▲	DIODE ERD07-15L	QD4ZERD0715L
D582	FAST RECOVERY DIODE ERD38-06	QDQZ00ERD3806
D584▲	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
▲	SWITCHING DIODE 1N4148 or	NDTZ001N4148
▲	DIODE 1SS176TPA7	1SS176T
D591▲	ZENER DIODE MTZJT-7736B	QDTB00MTZJ36
D597	ZENER DIODE MTZJT-776.8B	QDTB00MTZJ6R8
D605▲	DIODE 1N5406	NDLZ001N5406
D606▲	DIODE 1N5406	NDLZ001N5406
D607▲	DIODE 1N5406	NDLZ001N5406
D608▲	DIODE 1N5406	NDLZ001N5406
D609	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	DIODE 1SS176TPA7	1SS176T
D611▲	ZENER DIODE MTZJT-7720B	QDTB00MTZJ20
D613	ZENER DIODE MTZJT-778.2B	QDTB00MTZJ8R2
D614	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	DIODE 1SS176TPA7	1SS176T
D615▲	SWITCHING DIODE 1N4148 T-77	QDTZ001N4148
D651▲	FAST RECOVERY DIODE 30DF6 or	QDWZ00030DF6
▲	DIODE ERD29-06J	QD4ZOERD2906
D652▲	DIODE FR154 or	NDLZ000FR154
▲	FAST RECOVERY DIODE ERB44-02	QDPZ00ERB4402
D653▲	DIODE FR154 or	NDLZ000FR154
▲	FAST RECOVERY DIODE ERB44-02	QDPZ00ERB4402
D654▲	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
▲	SWITCHING DIODE 1N4148 or	NDTZ001N4148
▲	DIODE 1SS176TPA7	1SS176T
D655	ZENER DIODE 1ZB180	QDQZ001ZB180
D656▲	ZENER DIODE MTZJT-776.8B	QDTB00MTZJ6R8
D657▲	DIODE FR154 or	NDLZ000FR154
▲	FAST RECOVERY DIODE ERB44-02	QDPZ00ERB4402
D658▲	DIODE 1ZC18 or	QDQZ0001ZC18
▲	ZENER DIODE RD18F	QDQZ000RD18F
D660	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	DIODE 1SS176TPA7	1SS176T
D661	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	DIODE 1SS176TPA7	1SS176T
D666	ZENER DIODE MTZJT-7736B	QDTB00MTZJ36
D671▲	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
▲	SWITCHING DIODE 1N4148 or	NDTZ001N4148
▲	DIODE 1SS176TPA7	1SS176T
D672	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	DIODE 1SS176TPA7	1SS176T
D673	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	DIODE 1SS176TPA7	1SS176T
D675▲	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
▲	SWITCHING DIODE 1N4148 or	NDTZ001N4148
▲	DIODE 1SS176TPA7	1SS176T
D692▲	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
▲	SWITCHING DIODE 1N4148 or	NDTZ001N4148
▲	DIODE 1SS176TPA7	1SS176T
D694▲	ZENER DIODE MTZJT-7715B	QDTB00MTZJ15

Ref. No.	Description	Part No.
D696	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	DIODE 1SS176TPA7	1SS176T
D697▲	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
▲	SWITCHING DIODE 1N4148 or	NDTZ001N4148
▲	DIODE 1SS176TPA7	1SS176T
D698▲	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
▲	SWITCHING DIODE 1N4148 or	NDTZ001N4148
▲	DIODE 1SS176TPA7	1SS176T
D841	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	DIODE 1SS176TPA7	1SS176T
D842▲	ZENER DIODE MTZJT-7710B	QDTB00MTZJ10
D851▲	ZENER DIODE MTZJT-7712B	QDTB00MTZJ12
D853	ZENER DIODE MTZJT-779.1B	QDTB00MTZJ9R1
D854	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	DIODE 1SS176TPA7	1SS176T
D855▲	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
▲	SWITCHING DIODE 1N4148 or	NDTZ001N4148
▲	DIODE 1SS176TPA7	1SS176T
D896	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	DIODE 1SS176TPA7	1SS176T
D963	ZENER DIODE MTZJT-775.6B	QDTB00MTZJ5R6
D966▲	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
▲	SWITCHING DIODE 1N4148 or	NDTZ001N4148
▲	DIODE 1SS176TPA7	1SS176T
<b>ICS</b>		
IC31	IC:VIF/SIF DETECTOR LA75675M-S	QSZBA0TSY009
IC151	IC:MEMORY AT24C02N-10SC or	NSMMA0SAZ012
	IC(EEPROM) M24C02-MN6 or	NSMMA0SSS028
	IC:MEMORY BR24C02F-W or	QSMBA0SRM003
	IC:MEMORY BR24C02F or	QSMMA0SRM003
	IC:MEMORY S524C20D21	NSZBA0SSM028
IC333▲	IC:MICON/CHROMA LA76919M6B-5Z38	QSZAA0RSY007
IC431	IC:MTS DECODER AN5832SA	QSZBA0TMS003
IC551▲	IC:VERTICAL OUTPUT LA78041	QSZBA0SSY006
IC601▲	PHOTOCOUPLER LTV-817B-F or	NPEB0LTV817F
▲	PHOTOCOUPLER LTV-817C-F	NPEC0LTV817F
IC771	IC:4CHANNEL MULTIPLEXER TC4052BP	QSZBA0STS051
IC781	IC:SWITCH TC4053BF(N)	QSMBA0STS002
IC801	AUDIO POWER IC AN17805A	QSZBA0SMS007
IC901	IC:NTSC 3LINE COMB FILTER TC90A49P	QSZBA0STS090
IC941	IC:SWITCH TC4053BF(N)	QSMBA0STS002
<b>COILS</b>		
L1	PCB JUMPER D0.6-P5.0	JW5.0T
L2	INDUCTOR 22μH-K-5FT or	LLARKBSTU220
	INDUCTOR 22μH-K	LLARKDQKA220
L31	INDUCTOR ELFO50RA-1R8K-3	LLARKESTE1R8
L33	VCO COIL R4199-KHIC-856543	LFA08V0KV005
L41	INDUCTOR 12μH-J-26T or	LLAXJATTU120
	INDUCTOR 12μH-K-26T	LLAXKDTKA120
L141	INDUCTOR 22μH-J-26T or	LLAXJATTU220
	INDUCTOR 22μH-K-26T	LLAXKDTKA220
L551▲	LINEARITY COIL ***	LLBD00PMS008
L562▲	CHOKE COIL ELC13B681L	LLC681KMS001
L588	CHOKE COIL 47μH-K or	LLBD00PKV007
	POT COIL 47μH K	LLBD**DMM001
L601▲	LINE FILTER MS036 or	LLBG00ZY2009



Ref. No.	Description	Part No.
▲	LINE FILTER JLB2808	LLBG00ZXB004
L901	INDUCTOR 22μH-J-26T or	LLAXJATTU220
	INDUCTOR 22μH-K-26T	LLAXKDTKA220
L911	INDUCTOR 10μH-J-26T or	LLAXJATTU100
	INDUCTOR 10μH-K-26T	LLAXKDTKA100
L916	INDUCTOR 10μH-J-26T or	LLAXJATTU100
	INDUCTOR 10μH-K-26T	LLAXKDTKA100
L918	INDUCTOR 10μH-J-26T or	LLAXJATTU100
	INDUCTOR 10μH-K-26T	LLAXKDTKA100
L929	INDUCTOR 10μH-J-26T or	LLAXJATTU100
	INDUCTOR 10μH-K-26T	LLAXKDTKA100
L931	INDUCTOR 27μH-J-26T or	LLAXJATTU270
	INDUCTOR 27μH-K-26T	LLAXKDTKA270
L936	INDUCTOR 15μH-J-26T or	LLAXJATTU150
	INDUCTOR 15μH-K-26T	LLAXKDTKA150
<b>TRANSISTORS</b>		
Q31	TRANSISTOR 2SA1175(F) or	QQSF02SA1175
	TRANSISTOR KTA1267(GR) or	NQS10KTA1267
	TRANSISTOR KTA1266(GR) or	NQS40KTA1266
	TRANSISTOR 2SA1318(T)-AANP or	2SA1318TZ
	TRANSISTOR 2SA1318(U)-AANP or	2SA1318UZ
	TRANSISTOR 2SA1015-GR(TPE2)	QQS102SA1015
Q49	RES. BUILT-IN TRANSISTOR BA1F4M-T or	QQSZ00BA1F4M
	RES. BUILT-IN TRANSISTOR KRC103M	NQSZ0KRC103M
Q141	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR 2SC2785(H) or	QQSH02SC2785
	TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR KTC3198(GR) or	NQS40KTC3198
	TRANSISTOR 2SC3331(T)-AANP or	2SC3331TZ
	TRANSISTOR 2SC3331(U)-AANP or	2SC3331UZ
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q151	RES. BUILT-IN TRANSISTOR BA1F4M-T or	QQSZ00BA1F4M
	RES. BUILT-IN TRANSISTOR KRC103M	NQSZ0KRC103M
Q152	RES. BUILT-IN TRANSISTOR BA1F4M-T or	QQSZ00BA1F4M
	RES. BUILT-IN TRANSISTOR KRC103M	NQSZ0KRC103M
Q301	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR 2SC2785(H) or	QQSH02SC2785
	TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR KTC3198(GR) or	NQS40KTC3198
	TRANSISTOR 2SC3331(T)-AANP or	2SC3331TZ
	TRANSISTOR 2SC3331(U)-AANP or	2SC3331UZ
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q551	TRANSISTOR 2SA1175(F) or	QQSF02SA1175
	TRANSISTOR KTA1267(GR) or	NQS10KTA1267
	TRANSISTOR KTA1266(GR) or	NQS40KTA1266
	TRANSISTOR 2SA1318(T)-AANP or	2SA1318TZ
	TRANSISTOR 2SA1318(U)-AANP or	2SA1318UZ
	TRANSISTOR 2SA1015-GR(TPE2)	QQS102SA1015
Q552▲	TRANSISTOR KTD2059(O) or	NQ400KTD2059
▲	TRANSISTOR KTD2059(Y) or	NQ4Y0KTD2059
▲	TRANSISTOR 2SD1666S	QQES02SD1666
Q561	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR 2SC2785(H) or	QQSH02SC2785
	TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR KTC3198(GR) or	NQS40KTC3198
	TRANSISTOR 2SC3331(T)-AANP or	2SC3331TZ
	TRANSISTOR 2SC3331(U)-AANP or	2SC3331UZ

Ref. No.	Description	Part No.
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q571▲	TRANSISTOR 2SD2553	QQWZ02SD2553
Q572▲	TRANSISTOR 2SC1627Y-TPE2	QQSY02SC1627
Q601▲	FET 2SK3407	QFFZ02SK3407
Q602▲	TRANSISTOR 2SC2120-O-TPE2 or	QQS002SC2120
▲	TRANSISTOR 2SC2120-Y(TPE2)	QQSY02SC2120
Q652▲	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
▲	TRANSISTOR 2SC2785(H) or	QQSH02SC2785
▲	TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
▲	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
▲	TRANSISTOR KTC3198(GR) or	NQS40KTC3198
▲	TRANSISTOR 2SC3331(T)-AANP or	2SC3331TZ
▲	TRANSISTOR 2SC3331(U)-AANP or	2SC3331UZ
▲	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q672▲	TRANSISTOR 2SA950(O)	Q2SA9500TPE2
Q673▲	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
▲	TRANSISTOR 2SC2785(H) or	QQSH02SC2785
▲	TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
▲	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
▲	TRANSISTOR KTC3198(GR) or	NQS40KTC3198
▲	TRANSISTOR 2SC3331(T)-AANP or	2SC3331TZ
▲	TRANSISTOR 2SC3331(U)-AANP or	2SC3331UZ
▲	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q674	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR 2SC2785(H) or	QQSH02SC2785
	TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR KTC3198(GR) or	NQS40KTC3198
	TRANSISTOR 2SC3331(T)-AANP or	2SC3331TZ
	TRANSISTOR 2SC3331(U)-AANP or	2SC3331UZ
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q681▲	TRANSISTOR 2SC2120-O-TPE2 or	QQS002SC2120
▲	TRANSISTOR 2SC2120-Y(TPE2) or	QQSY02SC2120
▲	TRANSISTOR KTC3203(Y)	NQSY0KTC3203
Q682▲	TRANSISTOR 2SC2120-O-TPE2 or	QQS002SC2120
▲	TRANSISTOR 2SC2120-Y(TPE2) or	QQSY02SC2120
▲	TRANSISTOR KTC3203(Y)	NQSY0KTC3203
Q683▲	TRANSISTOR 2SC2120-O-TPE2 or	QQS002SC2120
▲	TRANSISTOR 2SC2120-Y(TPE2) or	QQSY02SC2120
▲	TRANSISTOR KTC3203(Y)	NQSY0KTC3203
Q696	RES. BUILT-IN TRANSISTOR BA1F4M-T or	QQSZ00BA1F4M
	RES. BUILT-IN TRANSISTOR KRC103M	NQSZ0KRC103M
Q701	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR 2SC2785(H) or	QQSH02SC2785
	TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR KTC3198(GR) or	NQS40KTC3198
	TRANSISTOR 2SC3331(T)-AANP or	2SC3331TZ
	TRANSISTOR 2SC3331(U)-AANP or	2SC3331UZ
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q702	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR 2SC2785(H) or	QQSH02SC2785
	TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR KTC3198(GR) or	NQS40KTC3198
	TRANSISTOR 2SC3331(T)-AANP or	2SC3331TZ
	TRANSISTOR 2SC3331(U)-AANP or	2SC3331UZ
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q721	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR 2SC2785(H) or	QQSH02SC2785
	TRANSISTOR 2SC2785(J) or	QQSJ02SC2785

Ref. No.	Description	Part No.
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR KTC3198(GR) or	NQS40KTC3198
	TRANSISTOR 2SC3331(T)-AANP or	2SC3331TZ
	TRANSISTOR 2SC3331(U)-AANP or	2SC3331UZ
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q751	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR 2SC2785(H) or	QQSH02SC2785
	TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR KTC3198(GR) or	NQS40KTC3198
	TRANSISTOR 2SC3331(T)-AANP or	2SC3331TZ
	TRANSISTOR 2SC3331(U)-AANP or	2SC3331UZ
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q761	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR 2SC2785(H) or	QQSH02SC2785
	TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR KTC3198(GR) or	NQS40KTC3198
	TRANSISTOR 2SC3331(T)-AANP or	2SC3331TZ
	TRANSISTOR 2SC3331(U)-AANP or	2SC3331UZ
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q788	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR 2SC2785(H) or	QQSH02SC2785
	TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR KTC3198(GR) or	NQS40KTC3198
	TRANSISTOR 2SC3331(T)-AANP or	2SC3331TZ
	TRANSISTOR 2SC3331(U)-AANP or	2SC3331UZ
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q791	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR 2SC2785(H) or	QQSH02SC2785
	TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR KTC3198(GR) or	NQS40KTC3198
	TRANSISTOR 2SC3331(T)-AANP or	2SC3331TZ
	TRANSISTOR 2SC3331(U)-AANP or	2SC3331UZ
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q792	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR 2SC2785(H) or	QQSH02SC2785
	TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR KTC3198(GR) or	NQS40KTC3198
	TRANSISTOR 2SC3331(T)-AANP or	2SC3331TZ
	TRANSISTOR 2SC3331(U)-AANP or	2SC3331UZ
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q793	TRANSISTOR 2SA1175(F) or	QQSF02SA1175
	TRANSISTOR KTA1267(GR) or	NQS10KTA1267
	TRANSISTOR KTA1266(GR) or	NQS40KTA1266
	TRANSISTOR 2SA1318(T)-AANP or	2SA1318TZ
	TRANSISTOR 2SA1318(U)-AANP or	2SA1318UZ
	TRANSISTOR 2SA1015-GR(TPE2)	QQS102SA1015
Q794	RES. BUILT-IN TRANSISTOR BA1F4M-T or	QQSZ00BA1F4M
	RES. BUILT-IN TRANSISTOR KRC103M	NQSZ0KRC103M
Q851▲	TRANSISTOR 2SC2120-O-TPE2 or	QQS002SC2120
	TRANSISTOR 2SC2120-Y(TPE2) or	QQSY02SC2120
▲	TRANSISTOR KTC3203(Y)	NQSY0KTC3203
Q901	TRANSISTOR 2SA1175(F) or	QQSF02SA1175
	TRANSISTOR KTA1267(GR) or	NQS10KTA1267
	TRANSISTOR KTA1266(GR) or	NQS40KTA1266
	TRANSISTOR 2SA1318(T)-AANP or	2SA1318TZ
	TRANSISTOR 2SA1318(U)-AANP or	2SA1318UZ

Ref. No.	Description	Part No.
	TRANSISTOR 2SA1015-GR(TPE2)	QQS102SA1015
Q931	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR 2SC2785(H) or	QQSH02SC2785
	TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR KTC3198(GR) or	NQS40KTC3198
	TRANSISTOR 2SC3331(T)-AANP or	2SC3331TZ
	TRANSISTOR 2SC3331(U)-AANP or	2SC3331UZ
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q936	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR 2SC2785(H) or	QQSH02SC2785
	TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR KTC3198(GR) or	NQS40KTC3198
	TRANSISTOR 2SC3331(T)-AANP or	2SC3331TZ
	TRANSISTOR 2SC3331(U)-AANP or	2SC3331UZ
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q944	RES. BUILT-IN TRANSISTOR BA1F4M-T or	QQSZ00BA1F4M
	RES. BUILT-IN TRANSISTOR KRC103M	NQSZ0KRC103M
Q951	TRANSISTOR 2SA1175(F) or	QQSF02SA1175
	TRANSISTOR KTA1267(GR) or	NQS10KTA1267
	TRANSISTOR KTA1266(GR) or	NQS40KTA1266
	TRANSISTOR 2SA1318(T)-AANP or	2SA1318TZ
	TRANSISTOR 2SA1318(U)-AANP or	2SA1318UZ
	TRANSISTOR 2SA1015-GR(TPE2)	QQS102SA1015
Q956	TRANSISTOR 2SA1175(F) or	QQSF02SA1175
	TRANSISTOR KTA1267(GR) or	NQS10KTA1267
	TRANSISTOR KTA1266(GR) or	NQS40KTA1266
	TRANSISTOR 2SA1318(T)-AANP or	2SA1318TZ
	TRANSISTOR 2SA1318(U)-AANP or	2SA1318UZ
	TRANSISTOR 2SA1015-GR(TPE2)	QQS102SA1015
Q961	TRANSISTOR 2SC2120-O-TPE2 or	QQS002SC2120
	TRANSISTOR 2SC2120-Y(TPE2) or	QQSY02SC2120
	TRANSISTOR KTC3203(Y)	NQSY0KTC3203
Q971	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR 2SC2785(H) or	QQSH02SC2785
	TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR KTC3198(GR) or	NQS40KTC3198
	TRANSISTOR 2SC3331(T)-AANP or	2SC3331TZ
	TRANSISTOR 2SC3331(U)-AANP or	2SC3331UZ
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
<b>RESISTORS</b>		
R3	PCB JUMPER D0.6-P5.0	JW5.0T
R32	CARBON RES. 1/4W J 2.2k Ω or	RCX4JATZ0222
	CARBON RES. 1/6W J 2.2k Ω	RCX6JATZ0222
R33	CARBON RES. 1/4W J 330 Ω or	RCX4JATZ0331
	CARBON RES. 1/6W J 330 Ω	RCX6JATZ0331
R35	CARBON RES. 1/4W J 1k Ω or	RCX4JATZ0102
	CARBON RES. 1/6W J 1k Ω	RCX6JATZ0102
R39	CARBON RES. 1/4W J 22k Ω or	RCX4JATZ0223
	CARBON RES. 1/6W J 22k Ω	RCX6JATZ0223
R40	CARBON RES. 1/4W J 560 Ω or	RCX4JATZ0561
	CARBON RES. 1/6W J 560 Ω	RCX6JATZ0561
R41	CARBON RES. 1/4W J 560 Ω or	RCX4JATZ0561
	CARBON RES. 1/6W J 560 Ω	RCX6JATZ0561
R42	CARBON RES. 1/4W J 120 Ω or	RCX4JATZ0121
	CARBON RES. 1/6W J 120 Ω	RCX6JATZ0121
R43	CARBON RES. 1/4W J 100k Ω or	RCX4JATZ0104
	CARBON RES. 1/6W J 100k Ω	RCX6JATZ0104

Ref. No.	Description	Part No.
R44	CARBON RES. 1/4W J 100k $\Omega$ or	RCX4JATZ0104
	CARBON RES. 1/6W J 100k $\Omega$	RCX6JATZ0104
R45	CARBON RES. 1/4W J 470 $\Omega$ or	RCX4JATZ0471
	CARBON RES. 1/6W J 470 $\Omega$	RCX6JATZ0471
R49	CARBON RES. 1/4W J 22k $\Omega$ or	RCX4JATZ0223
	CARBON RES. 1/6W J 22k $\Omega$	RCX6JATZ0223
R101	CARBON RES. 1/4W J 1.5k $\Omega$ or	RCX4JATZ0152
	CARBON RES. 1/6W J 1.5k $\Omega$	RCX6JATZ0152
R102	CARBON RES. 1/4W J 1.5k $\Omega$ or	RCX4JATZ0152
	CARBON RES. 1/6W J 1.5k $\Omega$	RCX6JATZ0152
R103	CARBON RES. 1/4W J 2.2k $\Omega$ or	RCX4JATZ0222
	CARBON RES. 1/6W J 2.2k $\Omega$	RCX6JATZ0222
R104	CARBON RES. 1/4W J 2.7k $\Omega$ or	RCX4JATZ0272
	CARBON RES. 1/6W J 2.7k $\Omega$	RCX6JATZ0272
R105	CARBON RES. 1/4W J 4.7k $\Omega$ or	RCX4JATZ0472
	CARBON RES. 1/6W J 4.7k $\Omega$	RCX6JATZ0472
R109	CARBON RES. 1/4W J 10k $\Omega$ or	RCX4JATZ0103
	CARBON RES. 1/6W J 10k $\Omega$	RCX6JATZ0103
R110	PCB JUMPER D0.6-P5.0	JW5.0T
R113	CARBON RES. 1/4W J 100 $\Omega$ or	RCX4JATZ0101
	CARBON RES. 1/6W J 100 $\Omega$	RCX6JATZ0101
R121	CARBON RES. 1/4W J 22k $\Omega$ or	RCX4JATZ0223
	CARBON RES. 1/6W J 22k $\Omega$	RCX6JATZ0223
R122	PCB JUMPER D0.6-P5.0	JW5.0T
R123	CARBON RES. 1/4W J 2.2k $\Omega$ or	RCX4JATZ0222
	CARBON RES. 1/6W J 2.2k $\Omega$	RCX6JATZ0222
R124	CARBON RES. 1/4W J 10k $\Omega$ or	RCX4JATZ0103
	CARBON RES. 1/6W J 10k $\Omega$	RCX6JATZ0103
R125	CARBON RES. 1/4W J 470 $\Omega$ or	RCX4JATZ0471
	CARBON RES. 1/6W J 470 $\Omega$	RCX6JATZ0471
R126	CARBON RES. 1/4W J 220 $\Omega$ or	RCX4JATZ0221
	CARBON RES. 1/6W J 220 $\Omega$	RCX6JATZ0221
R127	CARBON RES. 1/4W J 22k $\Omega$ or	RCX4JATZ0223
	CARBON RES. 1/6W J 22k $\Omega$	RCX6JATZ0223
R128	CARBON RES. 1/4W J 6.8k $\Omega$ or	RCX4JATZ0682
	CARBON RES. 1/6W J 6.8k $\Omega$	RCX6JATZ0682
R129	CARBON RES. 1/4W J 3.3k $\Omega$ or	RCX4JATZ0332
	CARBON RES. 1/6W J 3.3k $\Omega$	RCX6JATZ0332
R130	PCB JUMPER D0.6-P5.0	JW5.0T
R131	CARBON RES. 1/4W J 560k $\Omega$ or	RCX4JATZ0564
	CARBON RES. 1/6W J 560k $\Omega$	RCX6JATZ0564
R132	CARBON RES. 1/4W J 1k $\Omega$ or	RCX4JATZ0102
	CARBON RES. 1/6W J 1k $\Omega$	RCX6JATZ0102
R140	CARBON RES. 1/4W J 220k $\Omega$ or	RCX4JATZ0224
	CARBON RES. 1/6W J 220k $\Omega$	RCX6JATZ0224
R141	CARBON RES. 1/4W J 82 $\Omega$ or	RCX4JATZ0820
	CARBON RES. 1/6W J 82 $\Omega$	RCX6JATZ0820
R142▲	CARBON RES. 1/4W J 22k $\Omega$ or	RCX4JATZ0223
▲	CARBON RES. 1/6W J 22k $\Omega$	RCX6JATZ0223
R143	CARBON RES. 1/4W J 100 $\Omega$ or	RCX4JATZ0101
	CARBON RES. 1/6W J 100 $\Omega$	RCX6JATZ0101
R144	CARBON RES. 1/4W J 1M $\Omega$ or	RCX4JATZ0105
	CARBON RES. 1/6W J 1M $\Omega$	RCX6JATZ0105
R145	CARBON RES. 1/4W J 10k $\Omega$ or	RCX4JATZ0103
	CARBON RES. 1/6W J 10k $\Omega$	RCX6JATZ0103
R147	CARBON RES. 1/4W J 100 $\Omega$ or	RCX4JATZ0101
	CARBON RES. 1/6W J 100 $\Omega$	RCX6JATZ0101
R149	CARBON RES. 1/4W J 220k $\Omega$ or	RCX4JATZ0224
	CARBON RES. 1/6W J 220k $\Omega$	RCX6JATZ0224
R150	PCB JUMPER D0.6-P5.0	JW5.0T
R151	CARBON RES. 1/4W J 4.7k $\Omega$ or	RCX4JATZ0472

Ref. No.	Description	Part No.
	CARBON RES. 1/6W J 4.7k $\Omega$	RCX6JATZ0472
R152	CARBON RES. 1/4W J 4.7k $\Omega$ or	RCX4JATZ0472
	CARBON RES. 1/6W J 4.7k $\Omega$	RCX6JATZ0472
R153	CARBON RES. 1/4W J 100 $\Omega$ or	RCX4JATZ0101
	CARBON RES. 1/6W J 100 $\Omega$	RCX6JATZ0101
R154	CARBON RES. 1/4W J 100 $\Omega$ or	RCX4JATZ0101
	CARBON RES. 1/6W J 100 $\Omega$	RCX6JATZ0101
R155	CARBON RES. 1/4W J 100 $\Omega$ or	RCX4JATZ0101
	CARBON RES. 1/6W J 100 $\Omega$	RCX6JATZ0101
R156	CARBON RES. 1/4W J 100 $\Omega$ or	RCX4JATZ0101
	CARBON RES. 1/6W J 100 $\Omega$	RCX6JATZ0101
R157	CARBON RES. 1/4W J 100 $\Omega$ or	RCX4JATZ0101
	CARBON RES. 1/6W J 100 $\Omega$	RCX6JATZ0101
R158	CARBON RES. 1/4W J 1k $\Omega$ or	RCX4JATZ0102
	CARBON RES. 1/6W J 1k $\Omega$	RCX6JATZ0102
R159	CARBON RES. 1/4W J 100 $\Omega$ or	RCX4JATZ0101
	CARBON RES. 1/6W J 100 $\Omega$	RCX6JATZ0101
R160	CARBON RES. 1/4W J 100 $\Omega$ or	RCX4JATZ0101
	CARBON RES. 1/6W J 100 $\Omega$	RCX6JATZ0101
R162	CARBON RES. 1/4W J 22k $\Omega$ or	RCX4JATZ0223
	CARBON RES. 1/6W J 22k $\Omega$	RCX6JATZ0223
R163	CARBON RES. 1/4W J 100 $\Omega$ or	RCX4JATZ0101
	CARBON RES. 1/6W J 100 $\Omega$	RCX6JATZ0101
R164	CARBON RES. 1/4W J 100 $\Omega$ or	RCX4JATZ0101
	CARBON RES. 1/6W J 100 $\Omega$	RCX6JATZ0101
R301	CARBON RES. 1/4W J 2.2k $\Omega$ or	RCX4JATZ0222
	CARBON RES. 1/6W J 2.2k $\Omega$	RCX6JATZ0222
R303	CARBON RES. 1/4W J 22k $\Omega$ or	RCX4JATZ0223
	CARBON RES. 1/6W J 22k $\Omega$	RCX6JATZ0223
R305	CARBON RES. 1/4W J 150k $\Omega$ or	RCX4JATZ0154
	CARBON RES. 1/6W J 150k $\Omega$	RCX6JATZ0154
R306	CARBON RES. 1/4W J 15k $\Omega$ or	RCX4JATZ0153
	CARBON RES. 1/6W J 15k $\Omega$	RCX6JATZ0153
R321	CARBON RES. 1/4W J 2.2k $\Omega$ or	RCX4JATZ0222
	CARBON RES. 1/6W J 2.2k $\Omega$	RCX6JATZ0222
R322	CARBON RES. 1/4W J 2.2k $\Omega$ or	RCX4JATZ0222
	CARBON RES. 1/6W J 2.2k $\Omega$	RCX6JATZ0222
R323	CARBON RES. 1/4W J 2.2k $\Omega$ or	RCX4JATZ0222
	CARBON RES. 1/6W J 2.2k $\Omega$	RCX6JATZ0222
R324	CARBON RES. 1/4W J 100 $\Omega$ or	RCX4JATZ0101
	CARBON RES. 1/6W J 100 $\Omega$	RCX6JATZ0101
R325	CARBON RES. 1/4W J 100 $\Omega$ or	RCX4JATZ0101
	CARBON RES. 1/6W J 100 $\Omega$	RCX6JATZ0101
R326	CARBON RES. 1/4W J 100 $\Omega$ or	RCX4JATZ0101
	CARBON RES. 1/6W J 100 $\Omega$	RCX6JATZ0101
R329	PCB JUMPER D0.6-P5.0	JW5.0T
R331	METAL FILM RES. 1/6W F 4.7k $\Omega$ or	RMX6FATH4701
	METAL FILM RES. 1/4W F 4.7k $\Omega$	RMX4FATH4701
R332	CARBON RES. 1/4W J 470 $\Omega$ or	RCX4JATZ0471
	CARBON RES. 1/6W J 470 $\Omega$	RCX6JATZ0471
R333	CARBON RES. 1/4W J 470 $\Omega$ or	RCX4JATZ0471
	CARBON RES. 1/6W J 470 $\Omega$	RCX6JATZ0471
R334	CARBON RES. 1/4W J 1k $\Omega$ or	RCX4JATZ0102
	CARBON RES. 1/6W J 1k $\Omega$	RCX6JATZ0102
R335	CARBON RES. 1/4W J 33k $\Omega$ or	RCX4JATZ0333
	CARBON RES. 1/6W J 33k $\Omega$	RCX6JATZ0333
R337	CARBON RES. 1/4W J 10k $\Omega$ or	RCX4JATZ0103
	CARBON RES. 1/6W J 10k $\Omega$	RCX6JATZ0103
R338	CARBON RES. 1/4W J 4.7k $\Omega$ or	RCX4JATZ0472
	CARBON RES. 1/6W J 4.7k $\Omega$	RCX6JATZ0472
R339	CARBON RES. 1/4W J 10k $\Omega$ or	RCX4JATZ0103

Ref. No.	Description	Part No.
	CARBON RES. 1/6W J 10k $\Omega$	RCX6JATZ0103
R341	CARBON RES. 1/4W J 100 $\Omega$ or	RCX4JATZ0101
	CARBON RES. 1/6W J 100 $\Omega$	RCX6JATZ0101
R351	CARBON RES. 1/4W J 4.7k $\Omega$ or	RCX4JATZ0472
	CARBON RES. 1/6W J 4.7k $\Omega$	RCX6JATZ0472
R354	PCB JUMPER D0.6-P5.0	JW5.0T
R355	CARBON RES. 1/4W J 680k $\Omega$ or	RCX4JATZ0684
	CARBON RES. 1/6W J 680k $\Omega$	RCX6JATZ0684
R356	CARBON RES. 1/4W J 6.8k $\Omega$ or	RCX4JATZ0682
	CARBON RES. 1/6W J 6.8k $\Omega$	RCX6JATZ0682
R357	CARBON RES. 1/4W J 6.8k $\Omega$ or	RCX4JATZ0682
	CARBON RES. 1/6W J 6.8k $\Omega$	RCX6JATZ0682
R417	CARBON RES. 1/4W J 180k $\Omega$ or	RCX4JATZ0184
	CARBON RES. 1/6W J 180k $\Omega$	RCX6JATZ0184
R422	CARBON RES. 1/4W J 2.2k $\Omega$ or	RCX4JATZ0222
	CARBON RES. 1/6W J 2.2k $\Omega$	RCX6JATZ0222
R427	CARBON RES. 1/4W J 2.2k $\Omega$ or	RCX4JATZ0222
	CARBON RES. 1/6W J 2.2k $\Omega$	RCX6JATZ0222
R435	CARBON RES. 1/4W J 100 $\Omega$ or	RCX4JATZ0101
	CARBON RES. 1/6W J 100 $\Omega$	RCX6JATZ0101
R445	CARBON RES. 1/4W J 3.3k $\Omega$ or	RCX4JATZ0332
	CARBON RES. 1/6W J 3.3k $\Omega$	RCX6JATZ0332
R501	CARBON RES. 1/4W J 8.2k $\Omega$ or	RCX4JATZ0822
	CARBON RES. 1/6W J 8.2k $\Omega$	RCX6JATZ0822
R502	CARBON RES. 1/4W J 5.6k $\Omega$ or	RCX4JATZ0562
	CARBON RES. 1/6W J 5.6k $\Omega$	RCX6JATZ0562
R503	CARBON RES. 1/4W J 33k $\Omega$ or	RCX4JATZ0333
	CARBON RES. 1/6W J 33k $\Omega$	RCX6JATZ0333
R505	CARBON RES. 1/4W J 1k $\Omega$ or	RCX4JATZ0102
	CARBON RES. 1/6W J 1k $\Omega$	RCX6JATZ0102
R506	CARBON RES. 1/4W J 3.3 $\Omega$ or	RCX4JATZ03R3
	CARBON RES. 1/6W J 3.3 $\Omega$	RCX6JATZ03R3
R507	CARBON RES. 1/4W J 3.3 $\Omega$ or	RCX4JATZ03R3
	CARBON RES. 1/6W J 3.3 $\Omega$	RCX6JATZ03R3
R508	CARBON RES. 1/4W J 3.3 $\Omega$ or	RCX4JATZ03R3
	CARBON RES. 1/6W J 3.3 $\Omega$	RCX6JATZ03R3
R513▲	METAL OXIDE FILM RES. 2W J 4.7 $\Omega$ or	RN024R7ZU001
▲	METAL OXIDE FILM RES. 2W J 4.7 $\Omega$	RN024R7DP004
R514	CARBON RES. 1/4W J 2.2k $\Omega$ or	RCX4JATZ0222
	CARBON RES. 1/6W J 2.2k $\Omega$	RCX6JATZ0222
R515	CARBON RES. 1/4W J 1 $\Omega$ or	RCX4JATZ01R0
	CARBON RES. 1/6W J 1 $\Omega$	RCX6JATZ01R0
R516	CARBON RES. 1/4W J 2.2k $\Omega$ or	RCX4JATZ0222
	CARBON RES. 1/6W J 2.2k $\Omega$	RCX6JATZ0222
R517	CARBON RES. 1/4W J 3.9k $\Omega$ or	RCX4JATZ0392
	CARBON RES. 1/6W J 3.9k $\Omega$	RCX6JATZ0392
R518	CARBON RES. 1/4W J 47k $\Omega$ or	RCX4JATZ0473
	CARBON RES. 1/6W J 47k $\Omega$	RCX6JATZ0473
R520▲	CARBON RES. 1/4W J 22k $\Omega$ or	RCX4JATZ0223
▲	CARBON RES. 1/6W J 22k $\Omega$	RCX6JATZ0223
R541	CARBON RES. 1/4W J 680 $\Omega$ or	RCX4JATZ0681
	CARBON RES. 1/6W J 680 $\Omega$	RCX6JATZ0681
R542	CARBON RES. 1/4W J 680 $\Omega$ or	RCX4JATZ0681
	CARBON RES. 1/6W J 680 $\Omega$	RCX6JATZ0681
R543	CARBON RES. 1/4W J 680 $\Omega$ or	RCX4JATZ0681
	CARBON RES. 1/6W J 680 $\Omega$	RCX6JATZ0681
R551▲	METAL OXIDE FILM RES. 1W J 1k $\Omega$ or	RN01102ZU001
▲	METAL OXIDE FILM RES. 1W J 1k $\Omega$	RN01102DP003
R552▲	METAL OXIDE FILM RES. 1W J 8.2 $\Omega$ or	RN018R2ZU001
▲	METAL OXIDE FILM RES. 1W J 8.2 $\Omega$	RN018R2DP003
R553	CARBON RES. 1/4W J 2.2k $\Omega$ or	RCX4JATZ0222

Ref. No.	Description	Part No.
	CARBON RES. 1/6W J 2.2k $\Omega$	RCX6JATZ0222
R554	CARBON RES. 1/4W J 2.2k $\Omega$ or	RCX4JATZ0222
	CARBON RES. 1/6W J 2.2k $\Omega$	RCX6JATZ0222
R555▲	CARBON RES. 1/4W J 1.5k $\Omega$ or	RCX4JATZ0152
▲	CARBON RES. 1/6W J 1.5k $\Omega$	RCX6JATZ0152
R556	CARBON RES. 1/4W J 100k $\Omega$ or	RCX4JATZ0104
	CARBON RES. 1/6W J 100k $\Omega$	RCX6JATZ0104
R557	CARBON RES. 1/4W J 18k $\Omega$ or	RCX4JATZ0183
	CARBON RES. 1/6W J 18k $\Omega$	RCX6JATZ0183
R558	CARBON RES. 1/4W J 220 $\Omega$ or	RCX4JATZ0221
	CARBON RES. 1/6W J 220 $\Omega$	RCX6JATZ0221
R559	CARBON RES. 1/4W J 47k $\Omega$ or	RCX4JATZ0473
	CARBON RES. 1/6W J 47k $\Omega$	RCX6JATZ0473
R560	CARBON RES. 1/4W J 150k $\Omega$ or	RCX4JATZ0154
	CARBON RES. 1/6W J 150k $\Omega$	RCX6JATZ0154
R561	CARBON RES. 1/4W J 1.2k $\Omega$ or	RCX4JATZ0122
	CARBON RES. 1/6W J 1.2k $\Omega$	RCX6JATZ0122
R562	CARBON RES. 1/4W J 100k $\Omega$ or	RCX4JATZ0104
	CARBON RES. 1/6W J 100k $\Omega$	RCX6JATZ0104
R563	CARBON RES. 1/4W J 10k $\Omega$ or	RCX4JATZ0103
	CARBON RES. 1/6W J 10k $\Omega$	RCX6JATZ0103
R564	CARBON RES. 1/4W J 270k $\Omega$ or	RCX4JATZ0274
	CARBON RES. 1/6W J 270k $\Omega$	RCX6JATZ0274
R565	CARBON RES. 1/4W J 33k $\Omega$ or	RCX4JATZ0333
	CARBON RES. 1/6W J 33k $\Omega$	RCX6JATZ0333
R566	CARBON RES. 1/4W J 10k $\Omega$ or	RCX4JATZ0103
	CARBON RES. 1/6W J 10k $\Omega$	RCX6JATZ0103
R567	CARBON RES. 1/4W J 47k $\Omega$ or	RCX4JATZ0473
	CARBON RES. 1/6W J 47k $\Omega$	RCX6JATZ0473
R568	CARBON RES. 1/4W J 1k $\Omega$ or	RCX4JATZ0102
	CARBON RES. 1/6W J 1k $\Omega$	RCX6JATZ0102
R569	CARBON RES. 1/4W J 560k $\Omega$ or	RCX4JATZ0564
	CARBON RES. 1/6W J 560k $\Omega$	RCX6JATZ0564
R575▲	CARBON RES. 1/4W J 15 $\Omega$ or	RCX4JATZ0150
▲	CARBON RES. 1/6W J 15 $\Omega$	RCX6JATZ0150
R577	CARBON RES. 1/4W J 330 $\Omega$ or	RCX4JATZ0331
	CARBON RES. 1/6W J 330 $\Omega$	RCX6JATZ0331
R578	CARBON RES. 1/4W J 15 $\Omega$ or	RCX4JATZ0150
	CARBON RES. 1/6W J 15 $\Omega$	RCX6JATZ0150
R579	CARBON RES. 1/4W J 15 $\Omega$ or	RCX4JATZ0150
	CARBON RES. 1/6W J 15 $\Omega$	RCX6JATZ0150
R581	PCB JUMPER D0.6-P5.0	JW5.0T
R583▲	METAL OXIDE FILM RES. 2W J 1.5 $\Omega$ or	RN021R5ZU001
▲	METAL OXIDE FILM RES. 2W J 1.5 $\Omega$	RN021R5DP004
R584▲	PCB JUMPER D0.6-P5.0	JW5.0T
R585▲	CARBON RES. 1/4W J 10k $\Omega$ or	RCX4JATZ0103
▲	CARBON RES. 1/6W J 10k $\Omega$	RCX6JATZ0103
R586▲	CARBON RES. 1/4W J 470k $\Omega$ or	RCX4JATZ0474
▲	CARBON RES. 1/6W J 470k $\Omega$	RCX6JATZ0474
R587	CARBON RES. 1/4W J 470k $\Omega$ or	RCX4JATZ0474
	CARBON RES. 1/6W J 470k $\Omega$	RCX6JATZ0474
R588	CARBON RES. 1/4W J 82k $\Omega$ or	RCX4JATZ0823
	CARBON RES. 1/6W J 82k $\Omega$	RCX6JATZ0823
R589	CARBON RES. 1/4W J 10k $\Omega$ or	RCX4JATZ0103
	CARBON RES. 1/6W J 10k $\Omega$	RCX6JATZ0103
R590▲	CARBON RES. 1/4W J 39k $\Omega$ or	RCX4JATZ0393
▲	CARBON RES. 1/6W J 39k $\Omega$	RCX6JATZ0393
R591▲	CARBON RES. 1/4W J 180k $\Omega$ or	RCX4JATZ0184
▲	CARBON RES. 1/6W J 180k $\Omega$	RCX6JATZ0184
R592▲	CARBON RES. 1/4W J 220k $\Omega$ or	RCX4JATZ0224
▲	CARBON RES. 1/6W J 220k $\Omega$	RCX6JATZ0224

Ref. No.	Description	Part No.
R593▲	CARBON RES. 1/4W J 68k Ω or	RCX4JATZ0683
▲	CARBON RES. 1/6W J 68k Ω	RCX6JATZ0683
R594▲	CARBON RES. 1/4W J 100k Ω or	RCX4JATZ0104
▲	CARBON RES. 1/6W J 100k Ω	RCX6JATZ0104
R596	CARBON RES. 1/4W J 8.2k Ω or	RCX4JATZ0822
	CARBON RES. 1/6W J 8.2k Ω	RCX6JATZ0822
R597	CARBON RES. 1/4W J 8.2k Ω or	RCX4JATZ0822
	CARBON RES. 1/6W J 8.2k Ω	RCX6JATZ0822
R598▲	CARBON RES. 1/4W J 33k Ω or	RCX4JATZ0333
▲	CARBON RES. 1/6W J 33k Ω	RCX6JATZ0333
R599▲	CARBON RES. 1/4W J 15k Ω or	RCX4JATZ0153
▲	CARBON RES. 1/6W J 15k Ω	RCX6JATZ0153
R601▲	CEMENT RES. 7W K 0.56 Ω or	RW07R56DP007
▲	CEMENT RESISTOR 7W J 0.56 Ω H=10MM	RW07R56PG001
R602	CARBON RES. 1/4W J 3.3M Ω or	RCX4JATZ0335
	CARBON RES. 1/6W J 3.3M Ω	RCX6JATZ0335
R603	CARBON RES. 1/4W J 3.3M Ω or	RCX4JATZ0335
	CARBON RES. 1/6W J 3.3M Ω	RCX6JATZ0335
R604	CARBON RES. 1/4W J 100k Ω or	RCX4JATZ0104
	CARBON RES. 1/6W J 100k Ω	RCX6JATZ0104
R606	CARBON RES. 1/4W J 10 Ω or	RCX4JATZ0100
	CARBON RES. 1/6W J 10 Ω	RCX6JATZ0100
R607	CARBON RES. 1/4W J 220 Ω or	RCX4JATZ0221
	CARBON RES. 1/6W J 220 Ω	RCX6JATZ0221
R608	CARBON RES. 1/4W J 220 Ω or	RCX4JATZ0221
	CARBON RES. 1/6W J 220 Ω	RCX6JATZ0221
R613▲	CEMENT RES. 5W K 0.27 Ω or	RW05R27DP005
▲	CEMENT RESISTOR 5W K 0.27 Ω	RW05R27PG001
R616	CARBON RES. 1/4W J 10k Ω or	RCX4JATZ0103
	CARBON RES. 1/6W J 10k Ω	RCX6JATZ0103
R618	CARBON RES. 1/4W J 390 Ω or	RCX4JATZ0391
	CARBON RES. 1/6W J 390 Ω	RCX6JATZ0391
R620▲	CARBON RES. 1/4W J 100 Ω or	RCX4JATZ0101
▲	CARBON RES. 1/6W J 100 Ω	RCX6JATZ0101
R621	CARBON RES. 1/4W J 1.5k Ω or	RCX4JATZ0152
	CARBON RES. 1/6W J 1.5k Ω	RCX6JATZ0152
R622	CARBON RES. 1/4W J 47 Ω or	RCX4JATZ0470
	CARBON RES. 1/6W J 47 Ω	RCX6JATZ0470
R623	CARBON RES. 1/4W J 39 Ω or	RCX4JATZ0390
	CARBON RES. 1/6W J 39 Ω	RCX6JATZ0390
R624	PCB JUMPER D0.6-P5.0	JW5.0T
R651▲	METAL OXIDE FILM RES. 2W J 15k Ω or	RN02153ZU001
▲	METAL OXIDE FILM RES. 2W J 15k Ω	RN02153DP004
R652	CARBON RES. 1/4W J 15k Ω or	RCX4JATZ0153
	CARBON RES. 1/6W J 15k Ω	RCX6JATZ0153
R653	CARBON RES. 1/4W J 22k Ω or	RCX4JATZ0223
	CARBON RES. 1/6W J 22k Ω	RCX6JATZ0223
R654	CARBON RES. 1/4W J 2.7k Ω or	RCX4JATZ0272
	CARBON RES. 1/6W J 2.7k Ω	RCX6JATZ0272
R655▲	CARBON RES. 1/4W J 1k Ω or	RCX4JATZ0102
▲	CARBON RES. 1/6W J 1k Ω	RCX6JATZ0102
R656	CARBON RES. 1/4W J 15k Ω or	RCX4JATZ0153
	CARBON RES. 1/6W J 15k Ω	RCX6JATZ0153
R657	CARBON RES. 1/4W J 15k Ω or	RCX4JATZ0153
	CARBON RES. 1/6W J 15k Ω	RCX6JATZ0153
R658	CARBON RES. 1/4W J 470k Ω or	RCX4JATZ0474
	CARBON RES. 1/6W J 470k Ω	RCX6JATZ0474
R660	CARBON RES. 1/4W J 1k Ω or	RCX4JATZ0102
	CARBON RES. 1/6W J 1k Ω	RCX6JATZ0102
R661▲	CARBON RES. 1/4W J 100k Ω or	RCX4JATZ0104
▲	CARBON RES. 1/6W J 100k Ω	RCX6JATZ0104

Ref. No.	Description	Part No.
R662▲	CARBON RES. 1/4W J 82k Ω or	RCX4JATZ0823
▲	CARBON RES. 1/6W J 82k Ω	RCX6JATZ0823
R663▲	PCB JUMPER D0.6-P5.0	JW5.0T
R664▲	CARBON RES. 1/4W J 12k Ω or	RCX4JATZ0123
▲	CARBON RES. 1/6W J 12k Ω	RCX6JATZ0123
R665▲	CARBON RES. 1/4W J 5.6k Ω or	RCX4JATZ0562
▲	CARBON RES. 1/6W J 5.6k Ω	RCX6JATZ0562
R666▲	METAL OXIDE FILM RES. 1W J 100k Ω or	RN01104ZU001
▲	METAL OXIDE FILM RES. 1W J 100k Ω	RN01104DP003
R667▲	CARBON RES. 1/4W J 33k Ω or	RCX4JATZ0333
▲	CARBON RES. 1/6W J 33k Ω	RCX6JATZ0333
R668▲	CARBON RES. 1/4W J 33k Ω or	RCX4JATZ0333
▲	CARBON RES. 1/6W J 33k Ω	RCX6JATZ0333
R669▲	CARBON RES. 1/4W J 33k Ω or	RCX4JATZ0333
▲	CARBON RES. 1/6W J 33k Ω	RCX6JATZ0333
R670▲	CARBON RES. 1/4W J 100k Ω or	RCX4JATZ0104
▲	CARBON RES. 1/6W J 100k Ω	RCX6JATZ0104
R671▲	CARBON RES. 1/4W J 3.3k Ω or	RCX4JATZ0332
▲	CARBON RES. 1/6W J 3.3k Ω	RCX6JATZ0332
R672▲	CARBON RES. 1/4W J 3.3k Ω or	RCX4JATZ0332
▲	CARBON RES. 1/6W J 3.3k Ω	RCX6JATZ0332
R673	CARBON RES. 1/4W J 100k Ω or	RCX4JATZ0104
	CARBON RES. 1/6W J 100k Ω	RCX6JATZ0104
R674	CARBON RES. 1/4W J 22k Ω or	RCX4JATZ0223
	CARBON RES. 1/6W J 22k Ω	RCX6JATZ0223
R676	CARBON RES. 1/4W J 10k Ω or	RCX4JATZ0103
	CARBON RES. 1/6W J 10k Ω	RCX6JATZ0103
R677	CARBON RES. 1/4W J 15k Ω or	RCX4JATZ0153
	CARBON RES. 1/6W J 15k Ω	RCX6JATZ0153
R678	CARBON RES. 1/4W J 47k Ω or	RCX4JATZ0473
	CARBON RES. 1/6W J 47k Ω	RCX6JATZ0473
R680	CARBON RES. 1/4W J 10k Ω or	RCX4JATZ0103
	CARBON RES. 1/6W J 10k Ω	RCX6JATZ0103
R681▲	CARBON RES. 1/4W J 12 Ω or	RCX4JATZ0120
▲	CARBON RES. 1/6W J 12 Ω	RCX6JATZ0120
R682▲	METAL OXIDE FILM RES. 2W J 33 Ω or	RN02330ZU001
▲	METAL OXIDE FILM RES. 2W J 33 Ω	RN02330DP004
R683▲	METAL RESISTOR 2W J 39 Ω or	RN02390ZU001
▲	METAL OXIDE FILM RES. 2W J 39 Ω	RN02390DP004
R686	CARBON RES. 1/4W J 100 Ω or	RCX4JATZ0101
	CARBON RES. 1/6W J 100 Ω	RCX6JATZ0101
R687	CARBON RES. 1/4W J 10 Ω or	RCX4JATZ0100
	CARBON RES. 1/6W J 10 Ω	RCX6JATZ0100
R694▲	CARBON RES. 1/4W J 4.7k Ω or	RCX4JATZ0472
▲	CARBON RES. 1/6W J 4.7k Ω	RCX6JATZ0472
R696▲	CARBON RES. 1/4W J 10 Ω or	RCX4JATZ0100
▲	CARBON RES. 1/6W J 10 Ω	RCX6JATZ0100
R697	PCB JUMPER D0.6-P5.0	JW5.0T
R701	CARBON RES. 1/4W J 120 Ω or	RCX4JATZ0121
	CARBON RES. 1/6W J 120 Ω	RCX6JATZ0121
R702	CARBON RES. 1/4W J 100 Ω or	RCX4JATZ0101
	CARBON RES. 1/6W J 100 Ω	RCX6JATZ0101
R704	CARBON RES. 1/4W J 47k Ω or	RCX4JATZ0473
	CARBON RES. 1/6W J 47k Ω	RCX6JATZ0473
R705	CARBON RES. 1/4W J 2.2k Ω or	RCX4JATZ0222
	CARBON RES. 1/6W J 2.2k Ω	RCX6JATZ0222
R706	CARBON RES. 1/4W J 22k Ω or	RCX4JATZ0223
	CARBON RES. 1/6W J 22k Ω	RCX6JATZ0223
R707	CARBON RES. 1/4W J 47k Ω or	RCX4JATZ0473
	CARBON RES. 1/6W J 47k Ω	RCX6JATZ0473
R708	CARBON RES. 1/4W J 2.2k Ω or	RCX4JATZ0222

Ref. No.	Description	Part No.
	CARBON RES. 1/6W J 2.2k $\Omega$	RCX6JATZ0222
R709	CARBON RES. 1/4W J 22k $\Omega$ or	RCX4JATZ0223
	CARBON RES. 1/6W J 22k $\Omega$	RCX6JATZ0223
R711	CARBON RES. 1/4W J 82 $\Omega$ or	RCX4JATZ0820
	CARBON RES. 1/6W J 82 $\Omega$	RCX6JATZ0820
R713	CARBON RES. 1/4W J 330 $\Omega$ or	RCX4JATZ0331
	CARBON RES. 1/6W J 330 $\Omega$	RCX6JATZ0331
R714	CARBON RES. 1/4W J 4.7k $\Omega$ or	RCX4JATZ0472
	CARBON RES. 1/6W J 4.7k $\Omega$	RCX6JATZ0472
R715	CARBON RES. 1/4W J 82k $\Omega$ or	RCX4JATZ0823
	CARBON RES. 1/6W J 82k $\Omega$	RCX6JATZ0823
R716	CARBON RES. 1/4W J 82 $\Omega$ or	RCX4JATZ0820
	CARBON RES. 1/6W J 82 $\Omega$	RCX6JATZ0820
R718	CARBON RES. 1/4W J 330 $\Omega$ or	RCX4JATZ0331
	CARBON RES. 1/6W J 330 $\Omega$	RCX6JATZ0331
R721	CARBON RES. 1/4W J 120 $\Omega$ or	RCX4JATZ0121
	CARBON RES. 1/6W J 120 $\Omega$	RCX6JATZ0121
R722	CARBON RES. 1/4W J 100 $\Omega$ or	RCX4JATZ0101
	CARBON RES. 1/6W J 100 $\Omega$	RCX6JATZ0101
R723	CARBON RES. 1/4W J 47k $\Omega$ or	RCX4JATZ0473
	CARBON RES. 1/6W J 47k $\Omega$	RCX6JATZ0473
R724	CARBON RES. 1/4W J 47k $\Omega$ or	RCX4JATZ0473
	CARBON RES. 1/6W J 47k $\Omega$	RCX6JATZ0473
R725	CARBON RES. 1/4W J 2.2k $\Omega$ or	RCX4JATZ0222
	CARBON RES. 1/6W J 2.2k $\Omega$	RCX6JATZ0222
R726	CARBON RES. 1/4W J 22k $\Omega$ or	RCX4JATZ0223
	CARBON RES. 1/6W J 22k $\Omega$	RCX6JATZ0223
R727	CARBON RES. 1/4W J 47k $\Omega$ or	RCX4JATZ0473
	CARBON RES. 1/6W J 47k $\Omega$	RCX6JATZ0473
R728	CARBON RES. 1/4W J 2.2k $\Omega$ or	RCX4JATZ0222
	CARBON RES. 1/6W J 2.2k $\Omega$	RCX6JATZ0222
R729	CARBON RES. 1/4W J 22k $\Omega$ or	RCX4JATZ0223
	CARBON RES. 1/6W J 22k $\Omega$	RCX6JATZ0223
R751	CARBON RES. 1/4W J 22k $\Omega$ or	RCX4JATZ0223
	CARBON RES. 1/6W J 22k $\Omega$	RCX6JATZ0223
R752	CARBON RES. 1/4W J 27k $\Omega$ or	RCX4JATZ0273
	CARBON RES. 1/6W J 27k $\Omega$	RCX6JATZ0273
R753	CARBON RES. 1/4W J 56k $\Omega$ or	RCX4JATZ0563
	CARBON RES. 1/6W J 56k $\Omega$	RCX6JATZ0563
R754	CARBON RES. 1/4W J 18k $\Omega$ or	RCX4JATZ0183
	CARBON RES. 1/6W J 18k $\Omega$	RCX6JATZ0183
R755	CARBON RES. 1/4W J 1.8k $\Omega$ or	RCX4JATZ0182
	CARBON RES. 1/6W J 1.8k $\Omega$	RCX6JATZ0182
R756	CARBON RES. 1/4W J 1k $\Omega$ or	RCX4JATZ0102
	CARBON RES. 1/6W J 1k $\Omega$	RCX6JATZ0102
R757	CARBON RES. 1/4W J 560 $\Omega$ or	RCX4JATZ0561
	CARBON RES. 1/6W J 560 $\Omega$	RCX6JATZ0561
R761	CARBON RES. 1/4W J 22k $\Omega$ or	RCX4JATZ0223
	CARBON RES. 1/6W J 22k $\Omega$	RCX6JATZ0223
R762	CARBON RES. 1/4W J 27k $\Omega$ or	RCX4JATZ0273
	CARBON RES. 1/6W J 27k $\Omega$	RCX6JATZ0273
R763	CARBON RES. 1/4W J 56k $\Omega$ or	RCX4JATZ0563
	CARBON RES. 1/6W J 56k $\Omega$	RCX6JATZ0563
R764	CARBON RES. 1/4W J 18k $\Omega$ or	RCX4JATZ0183
	CARBON RES. 1/6W J 18k $\Omega$	RCX6JATZ0183
R765	CARBON RES. 1/4W J 1.8k $\Omega$ or	RCX4JATZ0182
	CARBON RES. 1/6W J 1.8k $\Omega$	RCX6JATZ0182
R766	CARBON RES. 1/4W J 1k $\Omega$ or	RCX4JATZ0102
	CARBON RES. 1/6W J 1k $\Omega$	RCX6JATZ0102
R767	CARBON RES. 1/4W J 560 $\Omega$ or	RCX4JATZ0561
	CARBON RES. 1/6W J 560 $\Omega$	RCX6JATZ0561

Ref. No.	Description	Part No.
R771	CARBON RES. 1/4W J 10k $\Omega$ or	RCX4JATZ0103
	CARBON RES. 1/6W J 10k $\Omega$	RCX6JATZ0103
R772	CARBON RES. 1/4W J 10k $\Omega$ or	RCX4JATZ0103
	CARBON RES. 1/6W J 10k $\Omega$	RCX6JATZ0103
R773	PCB JUMPER D0.6-P5.0	JW5.0T
R781	CARBON RES. 1/4W J 10k $\Omega$ or	RCX4JATZ0103
	CARBON RES. 1/6W J 10k $\Omega$	RCX6JATZ0103
R782	CARBON RES. 1/4W J 10k $\Omega$ or	RCX4JATZ0103
	CARBON RES. 1/6W J 10k $\Omega$	RCX6JATZ0103
R783	CARBON RES. 1/4W J 100 $\Omega$ or	RCX4JATZ0101
	CARBON RES. 1/6W J 100 $\Omega$	RCX6JATZ0101
R784	CARBON RES. 1/4W J 100 $\Omega$ or	RCX4JATZ0101
	CARBON RES. 1/6W J 100 $\Omega$	RCX6JATZ0101
R785	CARBON RES. 1/4W J 33k $\Omega$ or	RCX4JATZ0333
	CARBON RES. 1/6W J 33k $\Omega$	RCX6JATZ0333
R786	CARBON RES. 1/4W J 10k $\Omega$ or	RCX4JATZ0103
	CARBON RES. 1/6W J 10k $\Omega$	RCX6JATZ0103
R787	CARBON RES. 1/4W J 47 $\Omega$ or	RCX4JATZ0470
	CARBON RES. 1/6W J 47 $\Omega$	RCX6JATZ0470
R788	CARBON RES. 1/4W J 1k $\Omega$ or	RCX4JATZ0102
	CARBON RES. 1/6W J 1k $\Omega$	RCX6JATZ0102
R806	CARBON RES. 1/4W J 100 $\Omega$ or	RCX4JATZ0101
	CARBON RES. 1/6W J 100 $\Omega$	RCX6JATZ0101
R807	CARBON RES. 1/4W J 100 $\Omega$ or	RCX4JATZ0101
	CARBON RES. 1/6W J 100 $\Omega$	RCX6JATZ0101
R810▲	PCB JUMPER D0.6-P15.0	JW15.0T
R811▲	METAL OXIDE FILM RES. 2W J 1.5 $\Omega$ or	RN021R5ZU001
▲	METAL OXIDE FILM RES. 2W J 1.5 $\Omega$	RN021R5DP004
R815	CARBON RES. 1/4W J 18k $\Omega$ or	RCX4JATZ0183
	CARBON RES. 1/6W J 18k $\Omega$	RCX6JATZ0183
R816	CARBON RES. 1/4W J 18k $\Omega$ or	RCX4JATZ0183
	CARBON RES. 1/6W J 18k $\Omega$	RCX6JATZ0183
R822	CARBON RES. 1/4W J 3.3k $\Omega$ or	RCX4JATZ0332
	CARBON RES. 1/6W J 3.3k $\Omega$	RCX6JATZ0332
R824	CARBON RES. 1/4W J 1k $\Omega$ or	RCX4JATZ0102
	CARBON RES. 1/6W J 1k $\Omega$	RCX6JATZ0102
R826	CARBON RES. 1/4W J 22k $\Omega$ or	RCX4JATZ0223
	CARBON RES. 1/6W J 22k $\Omega$	RCX6JATZ0223
R831	CARBON RES. 1/4W J 22k $\Omega$ or	RCX4JATZ0223
	CARBON RES. 1/6W J 22k $\Omega$	RCX6JATZ0223
R841	CARBON RES. 1/4W J 2.2k $\Omega$ or	RCX4JATZ0222
	CARBON RES. 1/6W J 2.2k $\Omega$	RCX6JATZ0222
R842	CARBON RES. 1/4W J 560 $\Omega$ or	RCX4JATZ0561
	CARBON RES. 1/6W J 560 $\Omega$	RCX6JATZ0561
R845	CARBON RES. 1/4W J 1k $\Omega$ or	RCX4JATZ0102
	CARBON RES. 1/6W J 1k $\Omega$	RCX6JATZ0102
R851▲	CARBON RES. 1/4W J 330 $\Omega$ or	RCX4JATZ0331
▲	CARBON RES. 1/6W J 330 $\Omega$	RCX6JATZ0331
R855▲	CARBON RES. 1/4W J 2.2k $\Omega$ or	RCX4JATZ0222
▲	CARBON RES. 1/6W J 2.2k $\Omega$	RCX6JATZ0222
R856▲	CARBON RES. 1/4W J 2.2k $\Omega$ or	RCX4JATZ0222
▲	CARBON RES. 1/6W J 2.2k $\Omega$	RCX6JATZ0222
R901	CARBON RES. 1/4W J 47 $\Omega$ or	RCX4JATZ0470
	CARBON RES. 1/6W J 47 $\Omega$	RCX6JATZ0470
R903	CARBON RES. 1/4W J 1k $\Omega$ or	RCX4JATZ0102
	CARBON RES. 1/6W J 1k $\Omega$	RCX6JATZ0102
R905	CARBON RES. 1/4W J 1k $\Omega$ or	RCX4JATZ0102
	CARBON RES. 1/6W J 1k $\Omega$	RCX6JATZ0102
R918	CARBON RES. 1/4W J 100 $\Omega$ or	RCX4JATZ0101
	CARBON RES. 1/6W J 100 $\Omega$	RCX6JATZ0101
R919	CARBON RES. 1/4W J 100 $\Omega$ or	RCX4JATZ0101

Ref. No.	Description	Part No.
	CARBON RES. 1/6W J 100 Ω	RCX6JATZ0101
R921	CARBON RES. 1/4W J 820 Ω or	RCX4JATZ0821
	CARBON RES. 1/6W J 820 Ω	RCX6JATZ0821
R931	CARBON RES. 1/4W J 220 Ω or	RCX4JATZ0221
	CARBON RES. 1/6W J 220 Ω	RCX6JATZ0221
R932	CARBON RES. 1/4W J 1k Ω or	RCX4JATZ0102
	CARBON RES. 1/6W J 1k Ω	RCX6JATZ0102
R936	CARBON RES. 1/4W J 100 Ω or	RCX4JATZ0101
	CARBON RES. 1/6W J 100 Ω	RCX6JATZ0101
R937	CARBON RES. 1/4W J 1k Ω or	RCX4JATZ0102
	CARBON RES. 1/6W J 1k Ω	RCX6JATZ0102
R943	CARBON RES. 1/4W J 22k Ω or	RCX4JATZ0223
	CARBON RES. 1/6W J 22k Ω	RCX6JATZ0223
R944	CARBON RES. 1/4W J 10k Ω or	RCX4JATZ0103
	CARBON RES. 1/6W J 10k Ω	RCX6JATZ0103
R945	CARBON RES. 1/4W J 22k Ω or	RCX4JATZ0223
	CARBON RES. 1/6W J 22k Ω	RCX6JATZ0223
R946	CARBON RES. 1/4W J 100 Ω or	RCX4JATZ0101
	CARBON RES. 1/6W J 100 Ω	RCX6JATZ0101
R951	CARBON RES. 1/4W J 220 Ω or	RCX4JATZ0221
	CARBON RES. 1/6W J 220 Ω	RCX6JATZ0221
R952	CARBON RES. 1/4W J 10k Ω or	RCX4JATZ0103
	CARBON RES. 1/6W J 10k Ω	RCX6JATZ0103
R953	CARBON RES. 1/4W J 47 Ω or	RCX4JATZ0470
	CARBON RES. 1/6W J 47 Ω	RCX6JATZ0470
R954	CARBON RES. 1/4W J 75 Ω or	RCX4JATZ0750
	CARBON RES. 1/6W J 75 Ω	RCX6JATZ0750
R956	CARBON RES. 1/4W J 220 Ω or	RCX4JATZ0221
	CARBON RES. 1/6W J 220 Ω	RCX6JATZ0221
R957	CARBON RES. 1/4W J 10k Ω or	RCX4JATZ0103
	CARBON RES. 1/6W J 10k Ω	RCX6JATZ0103
R958	CARBON RES. 1/4W J 47 Ω or	RCX4JATZ0470
	CARBON RES. 1/6W J 47 Ω	RCX6JATZ0470
R959	CARBON RES. 1/4W J 75 Ω or	RCX4JATZ0750
	CARBON RES. 1/6W J 75 Ω	RCX6JATZ0750
R961	PCB JUMPER D0.6-P5.0	JW5.0T
R962	CARBON RES. 1/4W J 470 Ω or	RCX4JATZ0471
	CARBON RES. 1/6W J 470 Ω	RCX6JATZ0471
R966▲	CARBON RES. 1/4W J 2.2k Ω or	RCX4JATZ0222
▲	CARBON RES. 1/6W J 2.2k Ω	RCX6JATZ0222
R967▲	CARBON RES. 1/4W J 10k Ω or	RCX4JATZ0103
▲	CARBON RES. 1/6W J 10k Ω	RCX6JATZ0103
R971	CARBON RES. 1/4W J 100 Ω or	RCX4JATZ0101
	CARBON RES. 1/6W J 100 Ω	RCX6JATZ0101
R972	CARBON RES. 1/4W J 4.7k Ω or	RCX4JATZ0472
	CARBON RES. 1/6W J 4.7k Ω	RCX6JATZ0472
R973	CARBON RES. 1/4W J 1k Ω or	RCX4JATZ0102
	CARBON RES. 1/6W J 1k Ω	RCX6JATZ0102
R974	CARBON RES. 1/4W J 100 Ω or	RCX4JATZ0101
	CARBON RES. 1/6W J 100 Ω	RCX6JATZ0101
R975	CARBON RES. 1/4W J 470 Ω or	RCX4JATZ0471
	CARBON RES. 1/6W J 470 Ω	RCX6JATZ0471
R1791	CARBON RES. 1/4W J 22k Ω or	RCX4JATZ0223
	CARBON RES. 1/6W J 22k Ω	RCX6JATZ0223
R1792	CARBON RES. 1/4W J 22k Ω or	RCX4JATZ0223
	CARBON RES. 1/6W J 22k Ω	RCX6JATZ0223
R1793	CARBON RES. 1/4W J 22k Ω or	RCX4JATZ0223
	CARBON RES. 1/6W J 22k Ω	RCX6JATZ0223
<b>SWITCHES</b>		
SW101	TACT SWITCH SKQSAB or	SST0101AL038

Ref. No.	Description	Part No.
	TACT SWITCH KSM0612B or	SST0101HH003
	TACT SWITCH SKHHAM	SST0101AL029
SW102	TACT SWITCH SKQSAB or	SST0101AL038
	TACT SWITCH KSM0612B or	SST0101HH003
	TACT SWITCH SKHHAM	SST0101AL029
SW103	TACT SWITCH SKQSAB or	SST0101AL038
	TACT SWITCH KSM0612B or	SST0101HH003
	TACT SWITCH SKHHAM	SST0101AL029
SW104	TACT SWITCH SKQSAB or	SST0101AL038
	TACT SWITCH KSM0612B or	SST0101HH003
	TACT SWITCH SKHHAM	SST0101AL029
SW105	TACT SWITCH SKQSAB or	SST0101AL038
	TACT SWITCH KSM0612B or	SST0101HH003
	TACT SWITCH SKHHAM	SST0101AL029
SW106	TACT SWITCH SKQSAB or	SST0101AL038
	TACT SWITCH KSM0612B or	SST0101HH003
	TACT SWITCH SKHHAM	SST0101AL029
<b>MISCELLANEOUS</b>		
AC601▲	AC CORD LA-2413	WAC0172LW007
B-6	HEAT SINK(PGM)ASSEMBLY L6250UA	0EM407156
B-7	HEAT SINK(PFN)ASSEMBLY L1520UZ	0EM406353
B-8	HEAT SINK(PGN)ASSEMBLY L6250UA	0EM407158
B-9	HEAT SINK(PGO) L6250UA	0EM407159
BC571	BEAD INDUCTORS FBA04HA600VB-00	LLBF00STU026
BC572	BEAD INDUCTORS FBA04HA600VB-00	LLBF00STU026
BC601	PCB JUMPER D0.6-P5.0	JW5.0T
BC602	PCB JUMPER D0.6-P5.0	JW5.0T
BC603	BEAD INDUCTORS FBR07HA121TB-00	LLBF00ZTU021
BC652	BEAD INDUCTORS FBR07HA121TB-00	LLBF00ZTU021
BC653	BEAD INDUCTORS FBR07HA121TB-00	LLBF00ZTU021
BC654	BEAD INDUCTORS FBR07HA121TB-00	LLBF00ZTU021
BC655	BEAD INDUCTORS FBR07HA121TB-00	LLBF00ZTU021
BC656	BEAD INDUCTORS FBR07HA121TB-00	LLBF00ZTU021
BC657	BEAD INDUCTORS FBR07HA121TB-00	LLBF00ZTU021
BC666	BEAD INDUCTORS FBA04HA600VB-00	LLBF00STU026
BC691	BEAD INDUCTORS FBR07HA121TB-00	LLBF00ZTU021
BC692	BEAD INDUCTORS FBR07HA121TB-00	LLBF00ZTU021
BC911	BEAD INDUCTORS FBR07HA121TB-00	LLBF00ZTU021
CF31	CERAMIC FILTER SFSRA4M50CF00-B0 or	FBB455PMR004
	CERAMIC FILTER 4.5MHz	FBB455PMS001
CF32	CERAMIC TRAP 4.5MHz or	FBE455PMR003
	CERAMIC TRAP 4.5MHz	FBE455PMS001
CLN1	WIRE UL1007 AWG26 ±170MM	WX3001A6FF17
CLN2	WIRE UL1007 AWG22 ±130MM	WX3001A2FF13
CLN3	WIRE 040/BLA/AWG26#1007	WX3001A6FF04
CLN4	WIRE 040/BLA/AWG28#1007	WX3001A85504
CLN301	WIRE ASSEMBLY WX1L1520-103	WX1L1520-103
CLN501	WIRE ASSEMBLY WX1L1520-101	WX1L1520-101
F601▲	FUSE 4A/125V 237 TYPE or	PAGJ20CAG402
▲	FUSE TDS4A125VU/C or	PAGD20CW3402
▲	FUSE STC4A125V U/CT or	PAGE20CW3402
▲	FUSE 4.00A/125V	PAGG20CNG402
FH601	FUSE HOLDER MSF-015 or	XH01Z00LY001
	FUSE HOLDER FH-V-03078 or	XH01Z00DK001
	HOLDER, FUSE CNT41-0014	1790424
FH602	FUSE HOLDER MSF-015 or	XH01Z00LY001
	FUSE HOLDER FH-V-03078 or	XH01Z00DK001
	HOLDER, FUSE CNT41-0014	1790424
GP641▲	GAP. FNR-G3.10D	FAZ000LD6005
JK701	RCA JACK(YELLOW) MSP-281V4-B	JXRL010LY003



Ref. No.	Description	Part No.
JK702	RCA JACK 2P MSP-282V13 PBSN	JXRL020LY045
JK703	RCA JACK 2P(SW) MSP-292V07 PBSN	JYRL020LY011
JK711	Y/C JACK 1P(SW) MDC-070V1-A	JYEL040LY002
JK721	RCA JACK(YELLOW) MTJ-032-06B-20 or	JXRL010LY050
	RCA JACK 1P AV-8.4-9Y	JXRL010RP010
JK722	RCA JACK(WHITE) MTJ-032-06B-22 or	JXRL010LY052
	RCA JACK 1P AV-8.4-9W	JXRL010RP011
JK723	RCA JACK(RED) MTJ-032-06A-21 or	JYRL010LY014
	RCA JACK 1P(RED)WITH SW ITCH AV1-09S-2	JYRL010RP008
JS31	PCB JUMPER D0.6-P5.0	JW5.0T
JS123	PCB JUMPER D0.6-P5.0	JW5.0T
JS349	PCB JUMPER D0.6-P5.0	JW5.0T
JS570	PCB JUMPER D0.6-P5.0	JW5.0T
JS642	PCB JUMPER D0.6-P10.0	JW10.0T
JS801	PCB JUMPER D0.6-P5.0	JW5.0T
JS802	PCB JUMPER D0.6-P5.0	JW5.0T
JS821	PCB JUMPER D0.6-P5.0	JW5.0T
JS822	PCB JUMPER D0.6-P5.0	JW5.0T
JS824	PCB JUMPER D0.6-P5.0	JW5.0T
JS921	PCB JUMPER D0.6-P5.0	JW5.0T
L-1	SCREW, B-TIGHT M3X8 BIND HEAD+ or	GBMB3080
	SCREW, B-TIGHT M3X8 BIND HEAD+ or	GBMB3080
	SCREW, B-TIGHT M3X8 BIND HEAD+ or	GBMB3080
	SCREW, B-TIGHT M3X8 BIND HEAD+	GBMB3080
PS691▲	THERMISTOR ZPB58BL7R0F	QNZQZ58BL7R0F
RCV101	REMOCON RECEIVE UNIT MIM-93M8DKL or	USESJRSUNT02
	REMOCON RECEIVE UNIT PIC-37042SR or	USESJRSKK034
	REMOCON RECEIVE UNIT PIC-26042SR-2	USESJRSKK032
RL601▲	POWER RELAY SDT-S-112LMR or	MRNDC12QN014
▲	POWER RELAY RPEF-12-901 or	MRNDC12KB002
▲	RELAY GD12D1-O(M)-II	MRNDC12DEC02
SA601▲	SURGE ABSORBER AVR-S07D471KAAS or	QVQZ0AVRS07D
▲	SURGE ABSORBER JVR-07N471K or	NVQZVR07N471
▲	SURGE ABSORBER CNR-10D471K or	NVQZR10D471K
▲	SURGE ABSORBER CNR-07D471K or	NVQZR07D471K
▲	SURGE ABSORBER PVR-07D471KB	NVQZ07D471KB
SF1	SAW FILTER SAFGM45M7VHGZM0B03	FBB456PMR007
T571▲	FLYBACK TRANS BSC28-0731	LTF00CPP1019
T572	HORIZONTAL DRAIVE TRANS Y2004	LTH00CPY2004
T601	SWITCHING TRANS KD-L12-32V	LTT00CPKT095
TH556	PCB JUMPER D0.6-P5.0	JW5.0T
TP300	PCB JUMPER D0.6-P10.0	JW10.0T
TP301	PCB JUMPER D0.6-P7.5	JW7.5T
TP302	PCB JUMPER D0.6-P7.5	JW7.5T
TP303	PCB JUMPER D0.6-P7.5	JW7.5T
TP421	PCB JUMPER D0.6-P7.5	JW7.5T
TP422	PCB JUMPER D0.6-P7.5	JW7.5T
TP500	PCB JUMPER D0.6-P7.5	JW7.5T
TP501	PCB JUMPER D0.6-P7.5	JW7.5T
TP591	PCB JUMPER D0.6-P5.0	JW5.0T
TP592	PCB JUMPER D0.6-P5.0	JW5.0T
TP601	PCB JUMPER D0.6-P7.5	JW7.5T
TU1	TUNER ENV56DB3G3 or	UTUNNTUMS009
	TUNER UNIT TEDH9-309A	UTUNNTUAL031
VR561	CARBON P.O.T. 5k Ω B or	VRCB502KA011
	CARBON P.O.T. 5k Ω B	VRCB502HH014
VR562	CARBON P.O.T. 20k Ω B or	VRCB203KA011
	CARBON P.O.T. 20k Ω B	VRCB203HH014
VR661▲	CARBON P.O.T. 50k Ω B or	VRCB503KA011
▲	CARBON P.O.T. 50k Ω B	VRCB503HH014
X101	X'TAL 32.768kHz	FXB323LDS002

Ref. No.	Description	Part No.
X351	X'TAL 3.579545 MHz	FXD355LLN003

## CRT CBA

Ref. No.	Description	Part No.
	CRT CBA Consists of the following:	-----
<b>CAPACITORS</b>		
C1502	ELECTROLYTIC CAP. 47μF/16V M or	CE1CMASL470
	ELECTROLYTIC CAP. 47μF/16V M	CE1CMASDL470
C1510	CERAMIC CAP. B K 2200pF/2KV or	CCD3DKD0B222
	CERAMIC CAP. B K 2200pF/2KV or	CCD3DKP0B222
	CERAMIC CAP. B K 2200pF/2KV	CA3D222MR030
C1511	CERAMIC CAP.(AX) B K 470pF/50V	CCA1JKT0B471
C1512	CERAMIC CAP.(AX) B K 0.01μF/50V	CA1J103TU011
C1521	CERAMIC CAP.(AX) B K 220pF/50V	CCA1JKT0B221
C1522	CERAMIC CAP.(AX) B K 0.01μF/50V	CA1J103TU011
C1531	CERAMIC CAP.(AX) B K 470pF/50V	CCA1JKT0B471
C1532	CERAMIC CAP.(AX) B K 0.01μF/50V	CA1J103TU011
<b>CONNECTOR</b>		
CN1501	PIN CONNECTOR 005P-5100	JTEA001TG001
<b>COILS</b>		
L1501▲	INDUCTOR 150μH-J-5FT or	LLARJCSTU151
▲	INDUCTOR 150μH-K	LLARKDQKA151
<b>TRANSISTORS</b>		
Q1511	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR 2SC2785(H) or	QQSH02SC2785
	TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR KTC3198(GR) or	NQS40KTC3198
	TRANSISTOR 2SC3331(T)-AANP or	2SC3331TZ
	TRANSISTOR 2SC3331(U)-AANP or	2SC3331UZ
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q1512	TRANSISTOR 2SC5360 or	QQ9Z02SC5360
	TRANSISTOR 2SC4544	QQ9Z02SC4544
Q1521	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR 2SC2785(H) or	QQSH02SC2785
	TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR KTC3198(GR) or	NQS40KTC3198
	TRANSISTOR 2SC3331(T)-AANP or	2SC3331TZ
	TRANSISTOR 2SC3331(U)-AANP or	2SC3331UZ
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q1522	TRANSISTOR 2SC5360 or	QQ9Z02SC5360
	TRANSISTOR 2SC4544	QQ9Z02SC4544
Q1531	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR 2SC2785(H) or	QQSH02SC2785
	TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR KTC3198(GR) or	NQS40KTC3198
	TRANSISTOR 2SC3331(T)-AANP or	2SC3331TZ
	TRANSISTOR 2SC3331(U)-AANP or	2SC3331UZ
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q1532	TRANSISTOR 2SC5360 or	QQ9Z02SC5360
	TRANSISTOR 2SC4544	QQ9Z02SC4544
<b>RESISTORS</b>		
R1501	CARBON RES. 1/4W J 100 Ω or	RCX4JATZ0101
	CARBON RES. 1/6W J 100 Ω	RCX6JATZ0101
R1502	CARBON RES. 1/4W J 100 Ω or	RCX4JATZ0101
	CARBON RES. 1/6W J 100 Ω	RCX6JATZ0101

Ref. No.	Description	Part No.
R1503	CARBON RES. 1/4W J 100 $\Omega$ or	RCX4JATZ0101
	CARBON RES. 1/6W J 100 $\Omega$	RCX6JATZ0101
R1508	CARBON RES. 1/4W J 150 $\Omega$ or	RCX4JATZ0151
	CARBON RES. 1/6W J 150 $\Omega$	RCX6JATZ0151
R1509	CARBON RES. 1/4W J 100 $\Omega$ or	RCX4JATZ0101
	CARBON RES. 1/6W J 100 $\Omega$	RCX6JATZ0101
R1510▲	METAL RESISTOR 3W J 10k $\Omega$ or	RN03103ZU001
▲	FIXED METAL OXIDE FILM RES. 3W J 10k $\Omega$	RN03103DP005
R1511	CARBON RES. 1/4W J 1.5k $\Omega$ or	RCX4JATZ0152
	CARBON RES. 1/6W J 1.5k $\Omega$	RCX6JATZ0152
R1512	CARBON RES. 1/4W J 1.5k $\Omega$ or	RCX4JATZ0152
	CARBON RES. 1/6W J 1.5k $\Omega$	RCX6JATZ0152
R1514	CARBON RES. 1/4W J 100 $\Omega$ or	RCX4JATZ0101
	CARBON RES. 1/6W J 100 $\Omega$	RCX6JATZ0101
R1515	CARBON RES. 1/4W J 680 $\Omega$ or	RCX4JATZ0681
	CARBON RES. 1/6W J 680 $\Omega$	RCX6JATZ0681
R1516	PCB JUMPER D0.6-P5.0	JW5.0T
R1518	CARBON RES. 1/4W J 150 $\Omega$ or	RCX4JATZ0151
	CARBON RES. 1/6W J 150 $\Omega$	RCX6JATZ0151
R1519	CARBON RES. 1/4W J 100 $\Omega$ or	RCX4JATZ0101
	CARBON RES. 1/6W J 100 $\Omega$	RCX6JATZ0101
R1520▲	METAL RESISTOR 3W J 10k $\Omega$ or	RN03103ZU001
▲	FIXED METAL OXIDE FILM RES. 3W J 10k $\Omega$	RN03103DP005
R1521	CARBON RES. 1/4W J 1.5k $\Omega$ or	RCX4JATZ0152
	CARBON RES. 1/6W J 1.5k $\Omega$	RCX6JATZ0152
R1522	CARBON RES. 1/4W J 1.5k $\Omega$ or	RCX4JATZ0152
	CARBON RES. 1/6W J 1.5k $\Omega$	RCX6JATZ0152
R1524	CARBON RES. 1/4W J 100 $\Omega$ or	RCX4JATZ0101
	CARBON RES. 1/6W J 100 $\Omega$	RCX6JATZ0101
R1525	CARBON RES. 1/4W J 680 $\Omega$ or	RCX4JATZ0681
	CARBON RES. 1/6W J 680 $\Omega$	RCX6JATZ0681
R1526	PCB JUMPER D0.6-P5.0	JW5.0T
R1528	CARBON RES. 1/4W J 150 $\Omega$ or	RCX4JATZ0151
	CARBON RES. 1/6W J 150 $\Omega$	RCX6JATZ0151
R1529	CARBON RES. 1/4W J 100 $\Omega$ or	RCX4JATZ0101
	CARBON RES. 1/6W J 100 $\Omega$	RCX6JATZ0101
R1530▲	METAL RESISTOR 3W J 10k $\Omega$ or	RN03103ZU001
▲	FIXED METAL OXIDE FILM RES. 3W J 10k $\Omega$	RN03103DP005
R1531	CARBON RES. 1/4W J 1.5k $\Omega$ or	RCX4JATZ0152
	CARBON RES. 1/6W J 1.5k $\Omega$	RCX6JATZ0152
R1532	CARBON RES. 1/4W J 1.5k $\Omega$ or	RCX4JATZ0152
	CARBON RES. 1/6W J 1.5k $\Omega$	RCX6JATZ0152
R1534	CARBON RES. 1/4W J 100 $\Omega$ or	RCX4JATZ0101
	CARBON RES. 1/6W J 100 $\Omega$	RCX6JATZ0101
R1535	CARBON RES. 1/4W J 680 $\Omega$ or	RCX4JATZ0681
	CARBON RES. 1/6W J 680 $\Omega$	RCX6JATZ0681
R1536	PCB JUMPER D0.6-P5.0	JW5.0T
<b>MISCELLANEOUS</b>		
BC1501	BEAD INDUCTORS FBR07HA121TB-00	LLBF00ZTU021
JK1501▲	CRT SOCKET ISHS40ST or	JSCC290PK006
▲	CRT SOCKET HPS0521-012212	JSCC290HD012

