

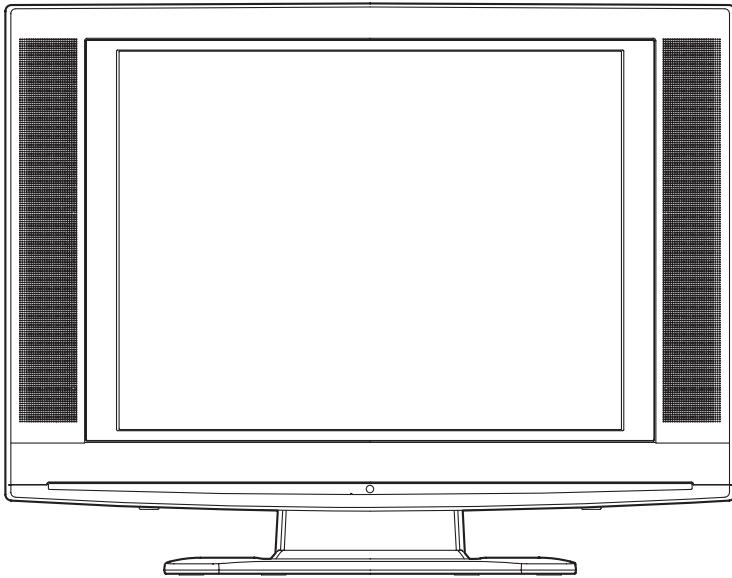
# **SYLVANIA**

# **SERVICE MANUAL**

**Model 6620LCT and 6620LG have A version and non-A version types.  
This service manual is for the 6620LCT and 6620LG non-A verion models.  
For the A version models, suffix A is added to the model number as  
6620LCT A and 6620LG A on the rating label, and for the non-A version  
models, suffix A is not added to the model number.  
Refer to the rating label on the back of the unit to make sure model types.**

## **20" COLOR LCD TELEVISION**

## **6620LCT/6620LG**



# **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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**The LCD panel is manufactured to provide many years of useful life. Occasionally a few non active pixels may appear as a tiny spec of color. This is not to be considered a defect in the LCD screen.**

# SPECIFICATIONS

## < TUNER >

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

Description	Condition	Unit	Nominal	Limit
1. Intermediate Freq.	Picture Sound	MHz MHz	45.75 41.25	--- ---
2. Color Killer Sens.	CH-2 CH-10 CH-55	dB $\mu$ V dB $\mu$ V dB $\mu$ V	15 15 15	20 20 20
3. AFT Pull In Range (10 mV input)	---	MHz	$\pm$ 2.1	$\pm$ 0.7

## < LCD PANEL >

Description	Condition	Unit	Nominal	Limit
1. Number of Pixels	Horizontal Vertical	pixels pixels	640 $\times$ 3 480	--- ---
2. Brightness		cd/m <sup>2</sup>	500	---
3. Response Time	---	msec	16	---
4. Support Color	---	-	26 mil. (6 bit)	---
5. Viewing Angle	Horizontal Vertical	° °	-80 to 80 -65 to 70	--- ---

## < VIDEO >

Description	Condition	Unit	Nominal	Limit
1. Over Scan	Horizontal Vertical	% %	7 7	--- ---
2. Color Temperature	--- x y	°K	11000 0.276 0.282	--- $\pm$ 0.005 $\pm$ 0.005
3. Resolution	Horizontal Vertical	line line	400 350	--- ---

## < AUDIO >

All items are measured across 8 Ω load at speaker output terminal with L.P.F.

Description	Condition	Unit	Nominal	Limit
1. Audio Output Power	10% THD: Lch/Rch	W	1.0/1.0	0.8/0.8
2. Audio Distortion	500mW: Lch/Rch	%	1.0/1.0	4.0/4.0
3. Audio Freq. Response	-3dB: Lch -3dB: Rch	Hz Hz	50 to 12 k 50 to 12 k	--- ---

**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.

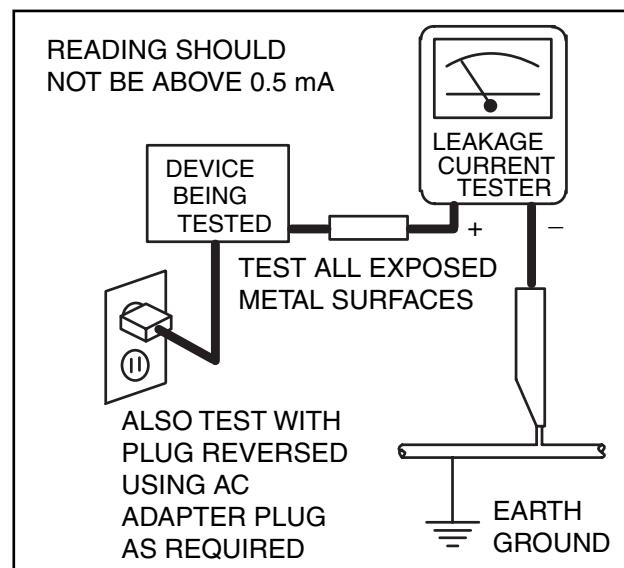
# IMPORTANT SAFETY PRECAUTIONS

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 LCD 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 Liquid Crystal Panel 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 120 V AC outlet. (Do not use an isolation transformer during this test.) Use a leakage 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.

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

**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. 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.

5. 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.

6. 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.

**7. 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 (heat sinks, 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.
- M. When installing parts or assembling the cabinet parts, be sure to use the proper screws and tighten certainly.

## 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.

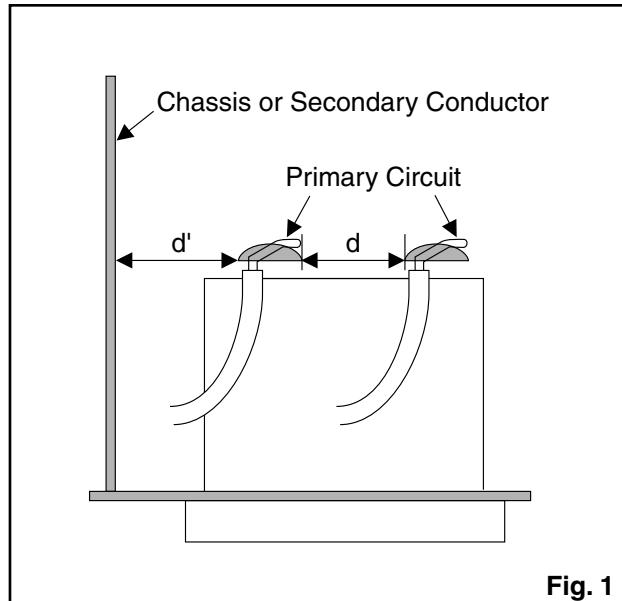
### 1. Clearance Distance

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	U.S.A. 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.



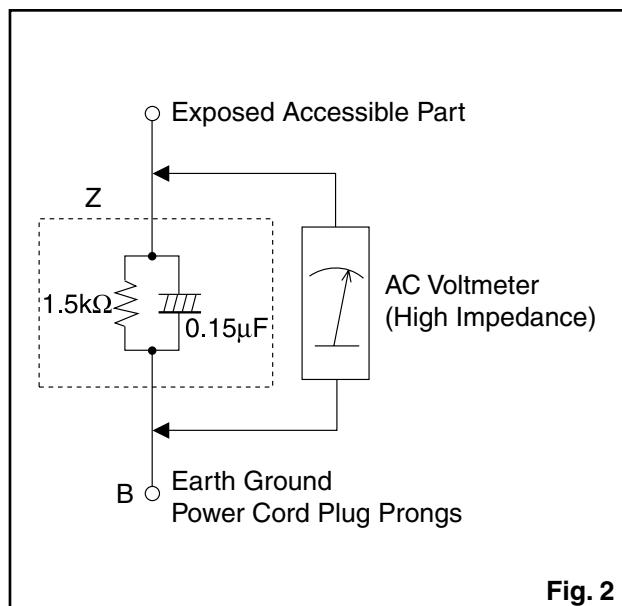
**Fig. 1**

### 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.



**Fig. 2**

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

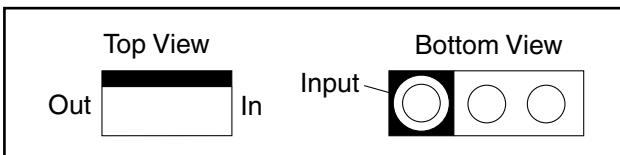
AC Line Voltage	Region	Load $Z$	Leakage Current ( $i$ )	Earth Ground (B) to:
110 to 130 V	U.S.A. or Canada	$0.15\mu\text{F}$ CAP. & $1.5\text{k}\Omega$ RES. Connected in parallel	$i \leq 0.5$ mA rms	Exposed accessible parts

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

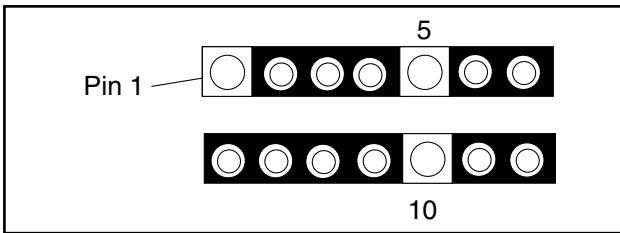
# STANDARD NOTES FOR SERVICING

## Circuit Board Indications

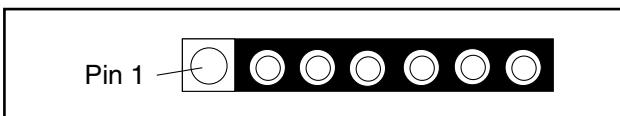
1. The output pin of the 3 pin Regulator ICs is indicated as shown.



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

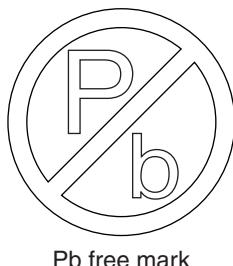


3. The 1st pin of every male connector is indicated as shown.



## Pb (Lead) Free Solder

Pb free mark will be found on PCBs which use Pb free solder. (Refer to figure.) For PCBs with Pb free mark, be sure to use Pb free solder. For PCBs without Pb free mark, use standard solder.



Pb free mark

## 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)

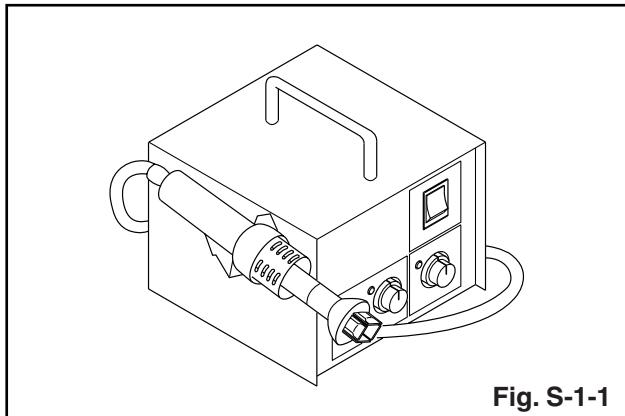


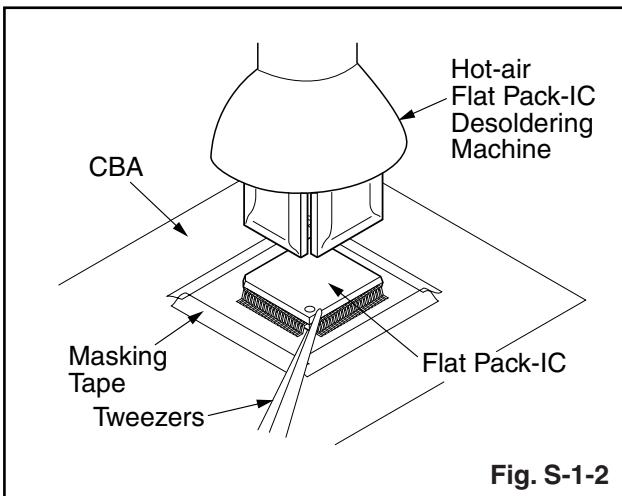
Fig. S-1-1

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:

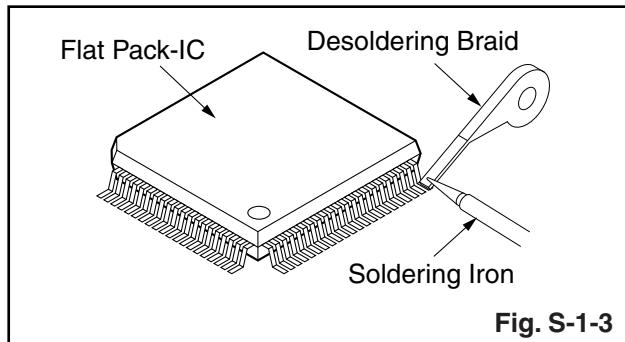
1. The Flat Pack-IC shape may differ by models. Use an appropriate hot-air flat pack-IC desoldering machine, whose shape matches that of the Flat Pack-IC.
2. Do not supply hot air to the chip parts around the flat pack-IC for over 6 seconds because damage to the chip parts may occur. Put masking tape around the flat pack-IC to protect other parts from damage. (Fig. S-1-2)

- 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.

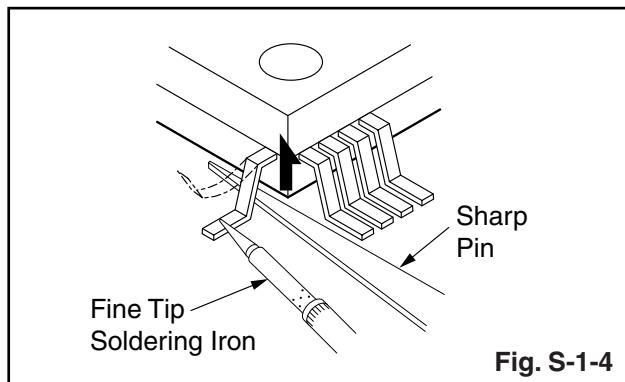


#### With Soldering Iron:

- 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)



- 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)

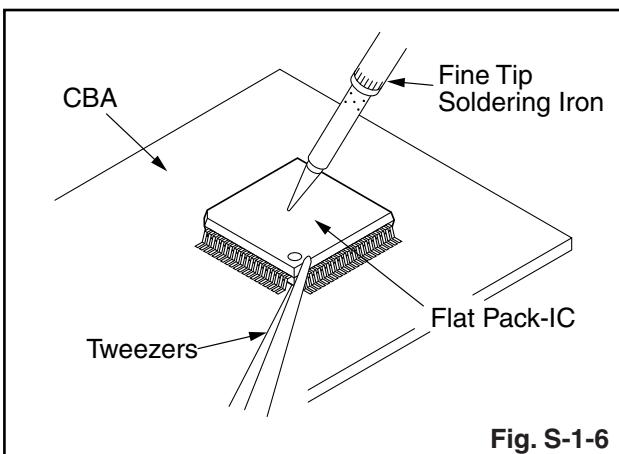
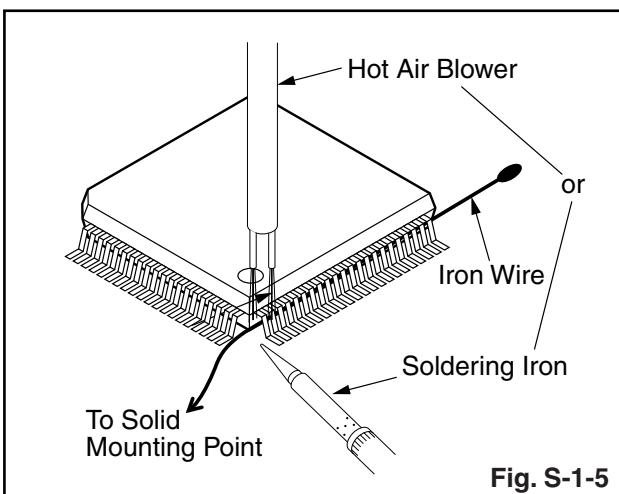


- Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
- Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

### 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 presolder 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 :

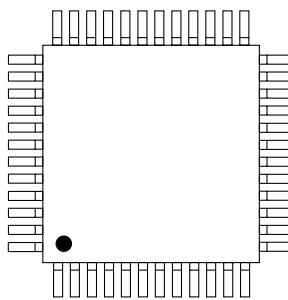
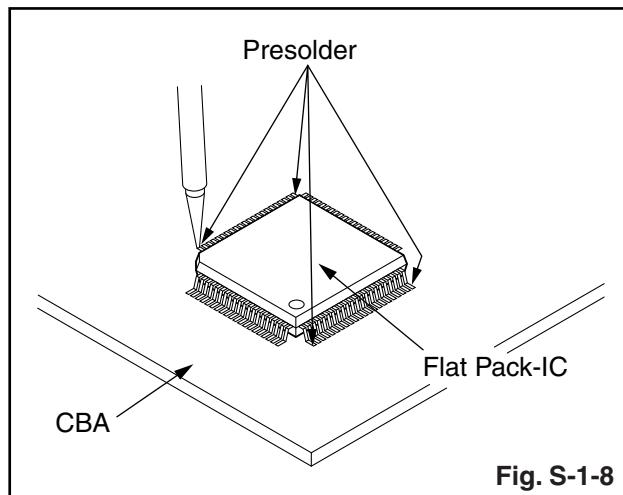


Fig. S-1-7



# Instructions for Handling Semi-conductors

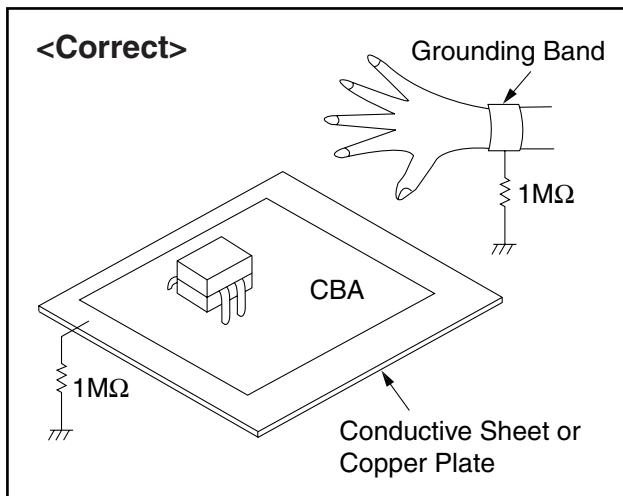
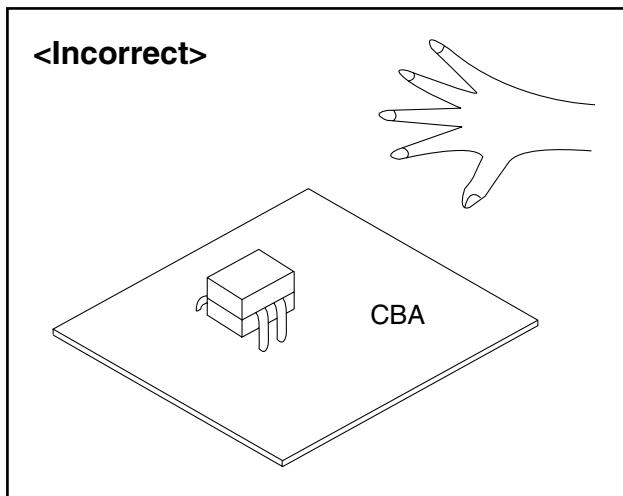
Electrostatic breakdown of the semi-conductors may occur due to a potential difference caused by electrostatic charge during unpacking or repair work.

## 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

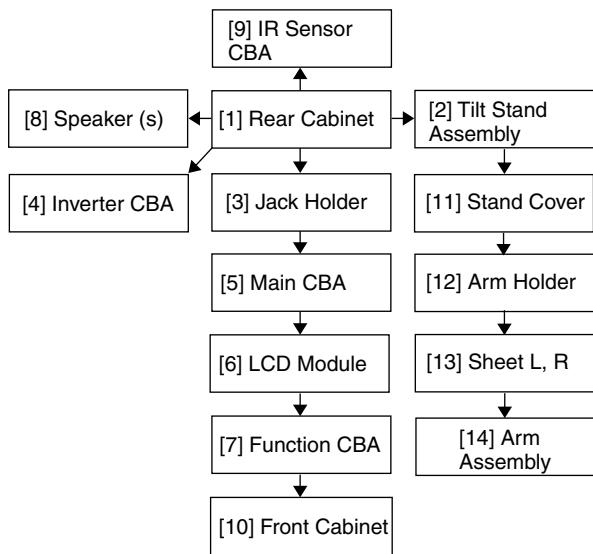
Be sure to place a conductive sheet or copper plate with proper grounding ( $1\text{ M}\Omega$ ) on the workbench or other surface, where the semi-conductors are to be placed. Because the static electricity charge on clothing will not escape through the body grounding band, be careful to avoid contacting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



# 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.



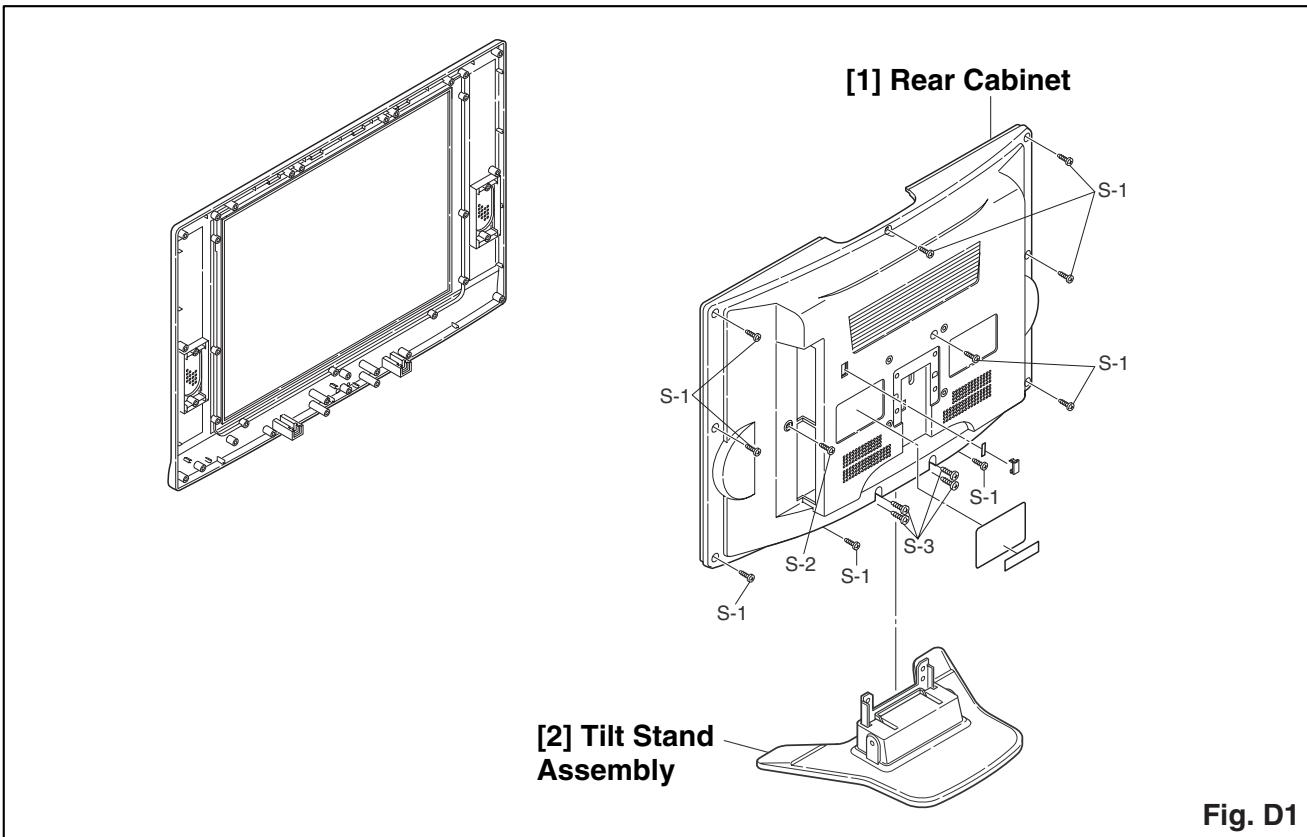
## 2. Disassembly Method

Step/ Loc. No.	Part	Removal		
		Fig. No.	Remove/*Unhook/ Unlock/Release/ Unplug/Unclamp/ Desolder	Note
[1]	Rear Cabinet	D1	10(S-1), (S-2)	---
[2]	Tilt Stand Assembly	D1	4(S-3)	---
[3]	Jack Holder	D2	3(S-4), (S-5)	---
[4]	Inverter CBA	D2 D4	4(S-6), *CN301, *CN302, *CN303, *CN304, *CN310	---
[5]	Main CBA	D2 D4	6(S-7), *CN801, *CN1201, *CN1202, *CN1205, *CN1206, *CN1207	---
[6]	LCD Module	D2	9(S-8)	---
[7]	Function CBA	D2	3(S-9)	---
[8]	Speaker (s)	D2	4(S-10), Speaker Holder (s)	---

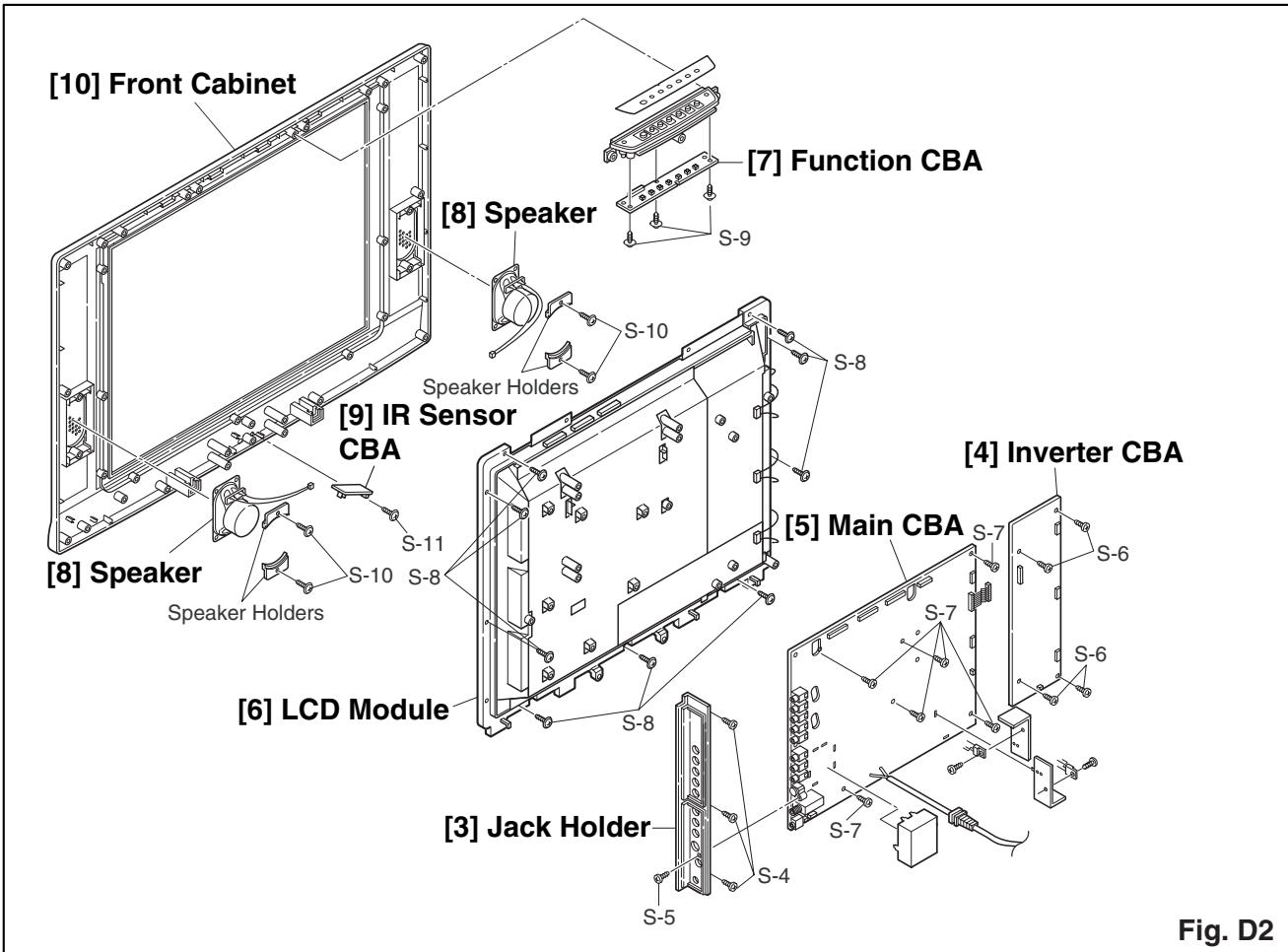
Step/ Loc. No.	Part	Removal		
		Fig. No.	Remove/*Unhook/ Unlock/Release/ Unplug/Unclamp/ Desolder	Note
[9]	IR Sensor CBA	D2	(S-11)	---
[10]	Front Cabinet	D2	-----	---
[11]	Stand Cover	D3	6(S-12)	---
[12]	Arm Holder	D3	2(S-13)	---
[13]	Sheet L, R	D3	-----	---
[14]	Arm Assembly	D3	-----	---

### 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 parts to be removed, unhooked, unlocked, released, unplugged, unclamped, or desoldered.  
P = Spring, L = Locking Tab, S = Screw,  
CN = Connector  
\* = Unhook, Unlock, Release, Unplug, or Desolder  
e.g. 2(S-2) = two Screws (S-2),  
2(L-2) = two Locking Tabs (L-2)
- (5) Refer to the following "Reference Notes in the Table."



**Fig. D1**



**Fig. D2**

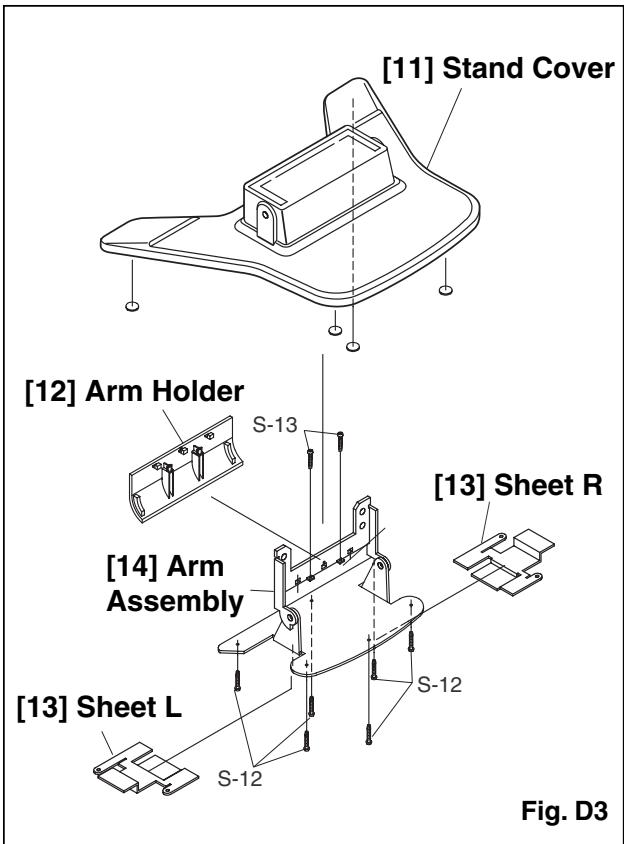


Fig. D3

## TV Cable Wiring Diagram

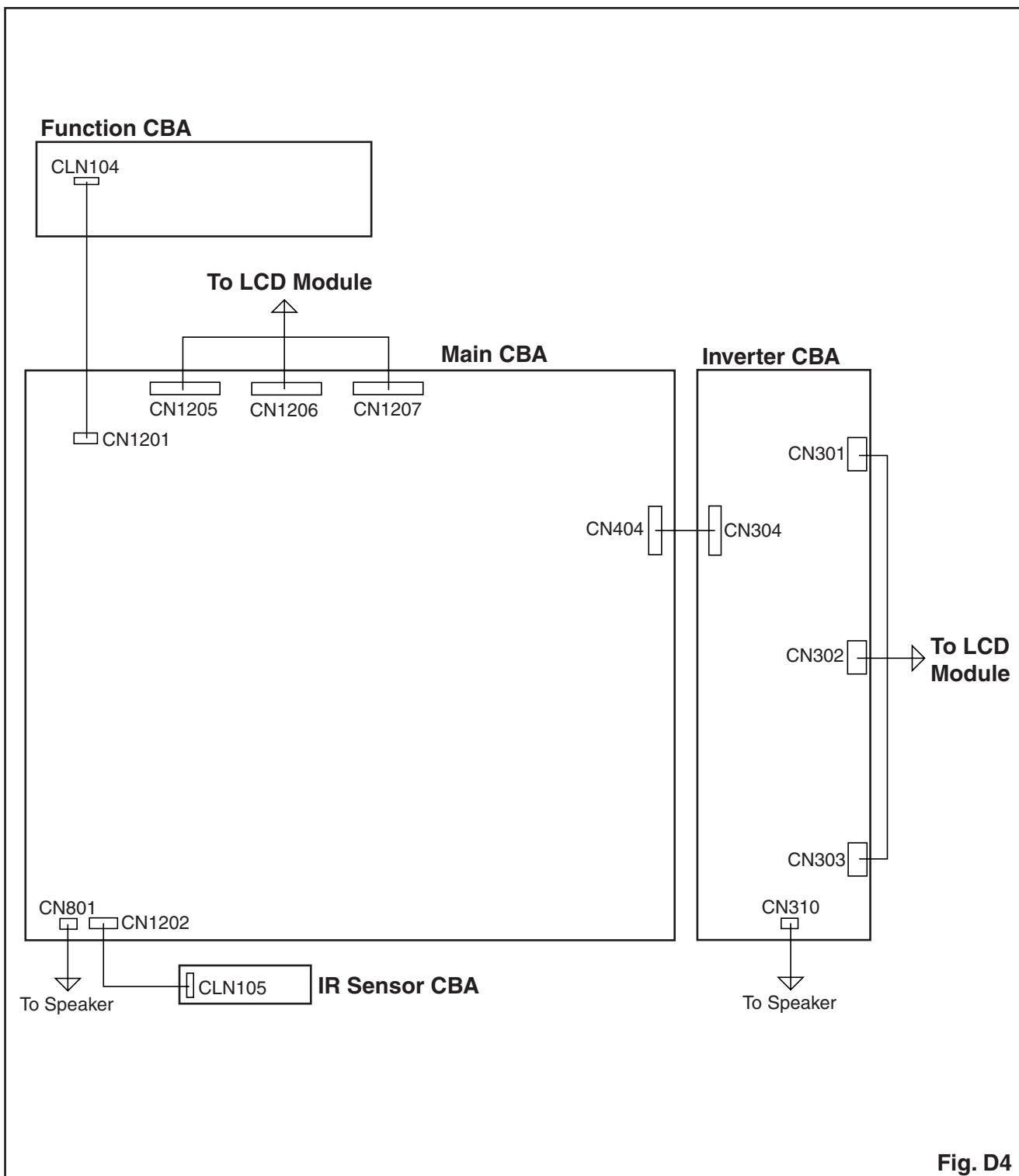


Fig. D4

# ELECTRICAL ADJUSTMENT INSTRUCTIONS

**General Note:** "CBA" is abbreviation for "Circuit Board Assembly."

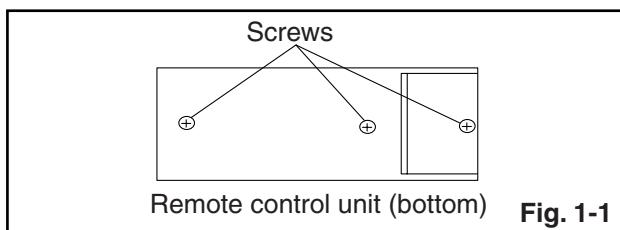
**Note:** Electrical adjustments are required after replacing circuit components and certain mechanical parts. It is important to perform these adjustments only after all repairs and replacements have been completed. Also, do not attempt these adjustments unless the proper equipment is available.

## Test Equipment Required

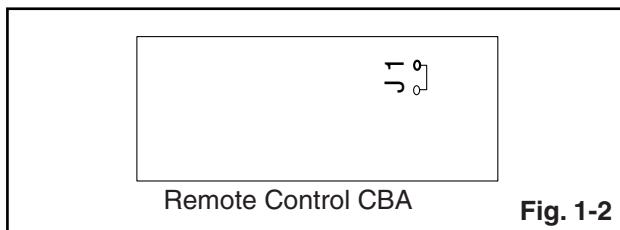
1. DC Voltmeter
2. NTSC Pattern Generator (Color Bar W/White Window, Red Color, Dot Pattern, Gray Scale, Monoscope, Multi-Burst)
3. Remote control unit: Part No. N0105UD or N0127UD
4. Color Analyzer

## How to make Service remote control unit:

1. Prepare normal remote control unit.  
(Part No. N0105UD or N0127UD)  
Remove 3 Screws from the back lid. (Fig. 1-1)



2. Added J1 (Jumper Wire) to the remote control CBA. (Fig. 1-2)



## 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 be displayed on the LCD or display. (Ex: 0008GP-0.08)

## 1. Initial Setting

**General:** Enter the Service mode. (See page 5-1.)

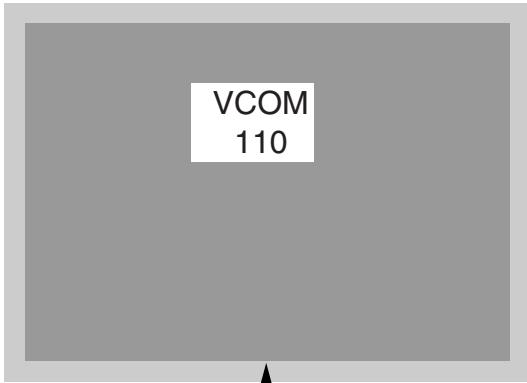
Set the each initial data as shown on table 1 below.

**Table 1: Initial Data**

Item	Button (on the service remote control)	Data Value
BRT	[MENU] → [1]	128
CNT		124
CLR-R		64
CLR-B		64
TNT		128
V-TNT		128
SHR		112
S-BRT		128
S-CNT		128
S-CLR-R		64
S-CLR-B		64
S-TNT		128
S-SHR		112
C-BRT	[MENU] → [2]	128
C-CNT		128
C-CLR-R		64
C-CLR-B		64
C-TNT		128
C-SHR		112

Item	Button (on the service remote control)	Data Value
D2-BRT	[MENU] → [5]	133
D2-CNT		140
D2-CLR-R		74
D2-CLR-B		74
D2-TNT		128
D2-SHR		112
D3-BRT	[MENU] → [6]	126
D3-CNT		138
D3-CLR-R		64
D3-CLR-B		64
D3-TNT		128
D3-SHR		112
DR(C/D1)	[VOL ▼] → [4]	177
C-DR(C/D2)		157
DB(C/D1)	[VOL ▼] → [6]	175
C-DB(C/D2)		152

3. If Flicker Adjustment is not fit, the screen become the following.

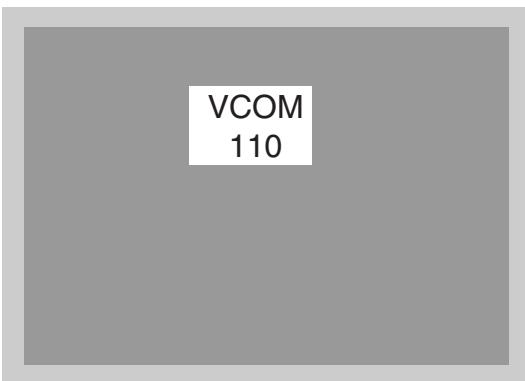


FLASH (Go and Off)

4. Press [CH ▲ / ▼] buttons on the remote control unit so that flash stops.

## 2. Flicker Adjustment

1. Enter the Service mode. (See page 5-1.)
2. Press [2] button on the remote control unit.  
The following screen appears.



**The following adjustment normally are not attempted in the field. Only when replacing the LCD Panel then adjust as a preparation.**

### 3. 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	VOL. ▼ buttons	[RF/VIDEO1] C/D1 [VIDEO2] C/D2	White Purity (APL 80%) or (APL 20%)		
M. EQ.		Spec.			
Pattern Generator, Color analyzer		x: 0.271 to 0.281, y: 0.277 to 0.287			
Figure					

**Note:** Use service remote control unit

1. Operate the unit for more than 20 minutes.
2. Input the White Purity (APL 80% or APL 20%).
3. Set the color analyzer to the CHROMA mode and bring the optical receptor to the center on the LCD-Panel surface after zero point calibration as shown above.

**Note:** The optical receptor must be set perpendicularly to the LCD Panel surface.

4. **[RF/VIDEO1]**  
Enter the Service mode. Press "VOL ▼" button on the remote control unit and select "C/D-1" mode.

#### [VIDEO2]

Enter the Service mode. Press "VOL ▼" button on the remote control unit and select "C/D-2" mode.

#### 5. [RF/VIDEO1]

When "x" value and "y" value are not within specification, adjust "DB (C/D1)" or "DR (C/D1)". Refer to "1. Initial Setting."

**Note:** "DB(C/D1)" or "DR(C/D1)" must be adjusted within ±0.01.

#### [VIDEO2]

When "x" value and "y" value are not within specification, adjust "DB(C/D2)" or "DR(C/D2)". Refer to "1. Initial Setting."

**Note:** "DB(C/D2)" or "DR(C/D2)" must be adjusted within ±0.01.

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

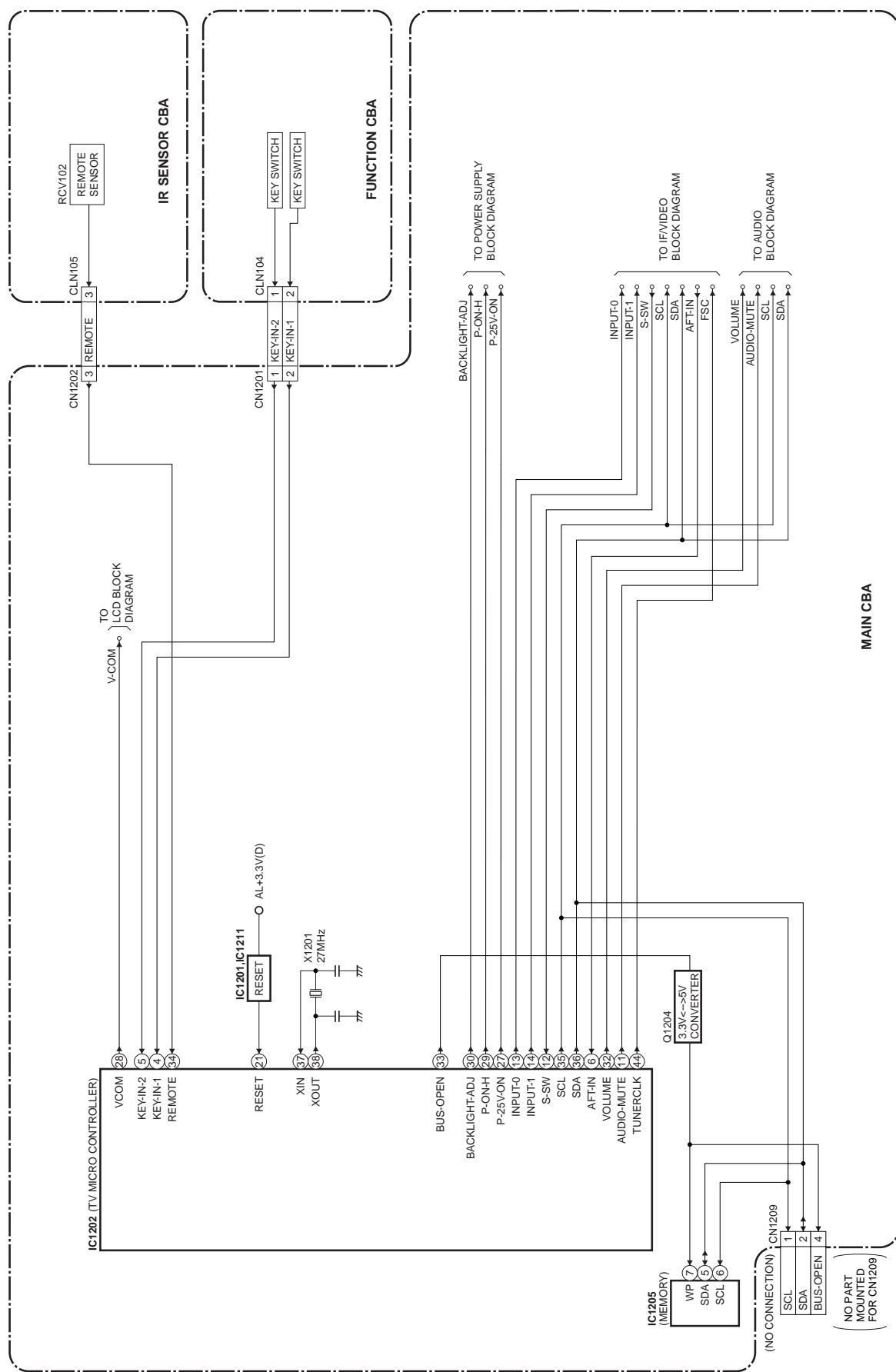
# **HOW TO INITIALIZE THE LCD TELEVISION**

## **How to initialize the LCD television:**

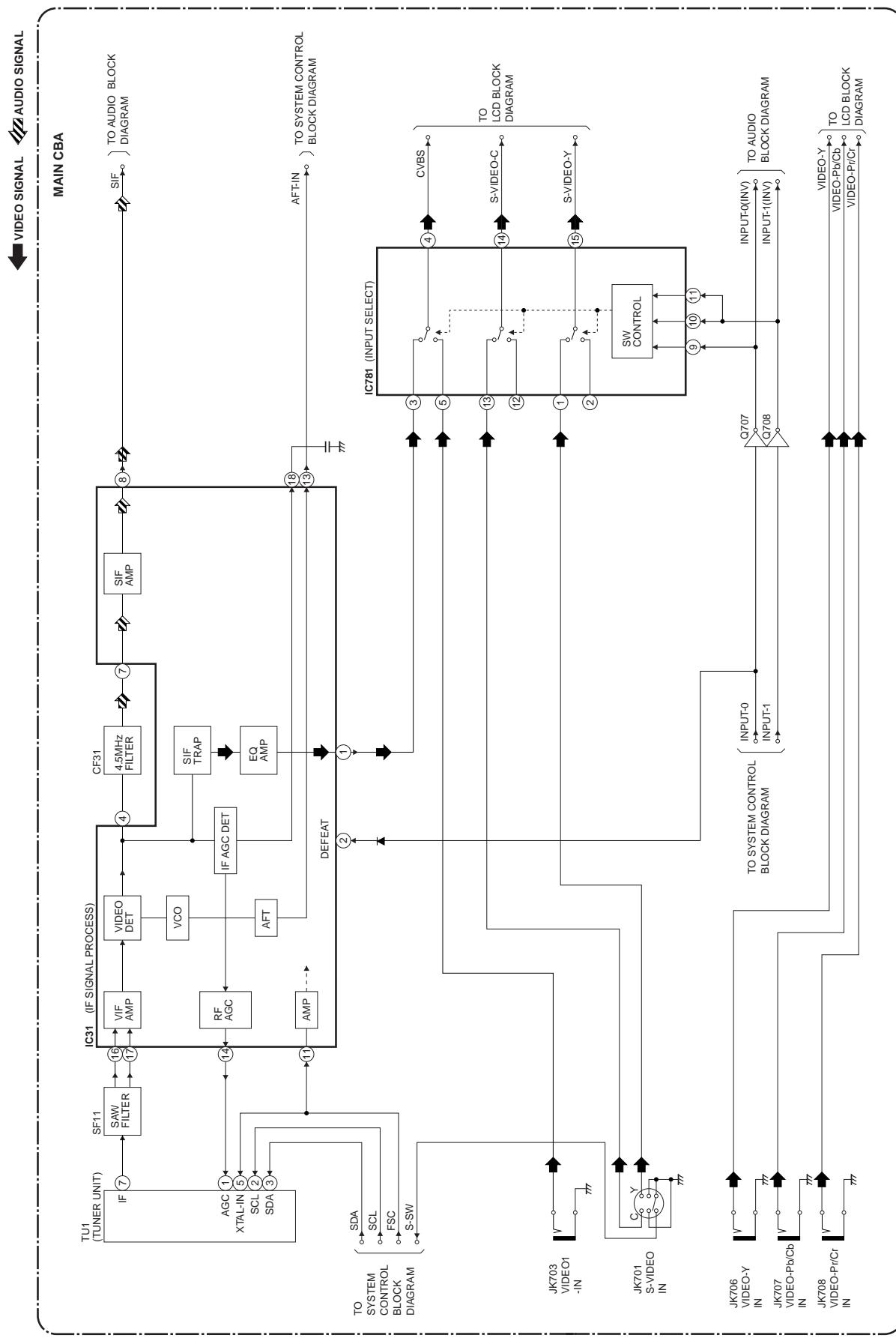
1. Turn the power on. (Use main power on the TV unit.)
2. To enter the service mode, press [SLEEP] button on the service remote control unit.
  - To cancel the service mode, press [POWER] button on the remote control.
3. To initialize the LCD television, press [DISPLAY] button on the remote control unit.
4. Confirm "FF" indication on the upper right of the screen.

# BLOCK DIAGRAMS

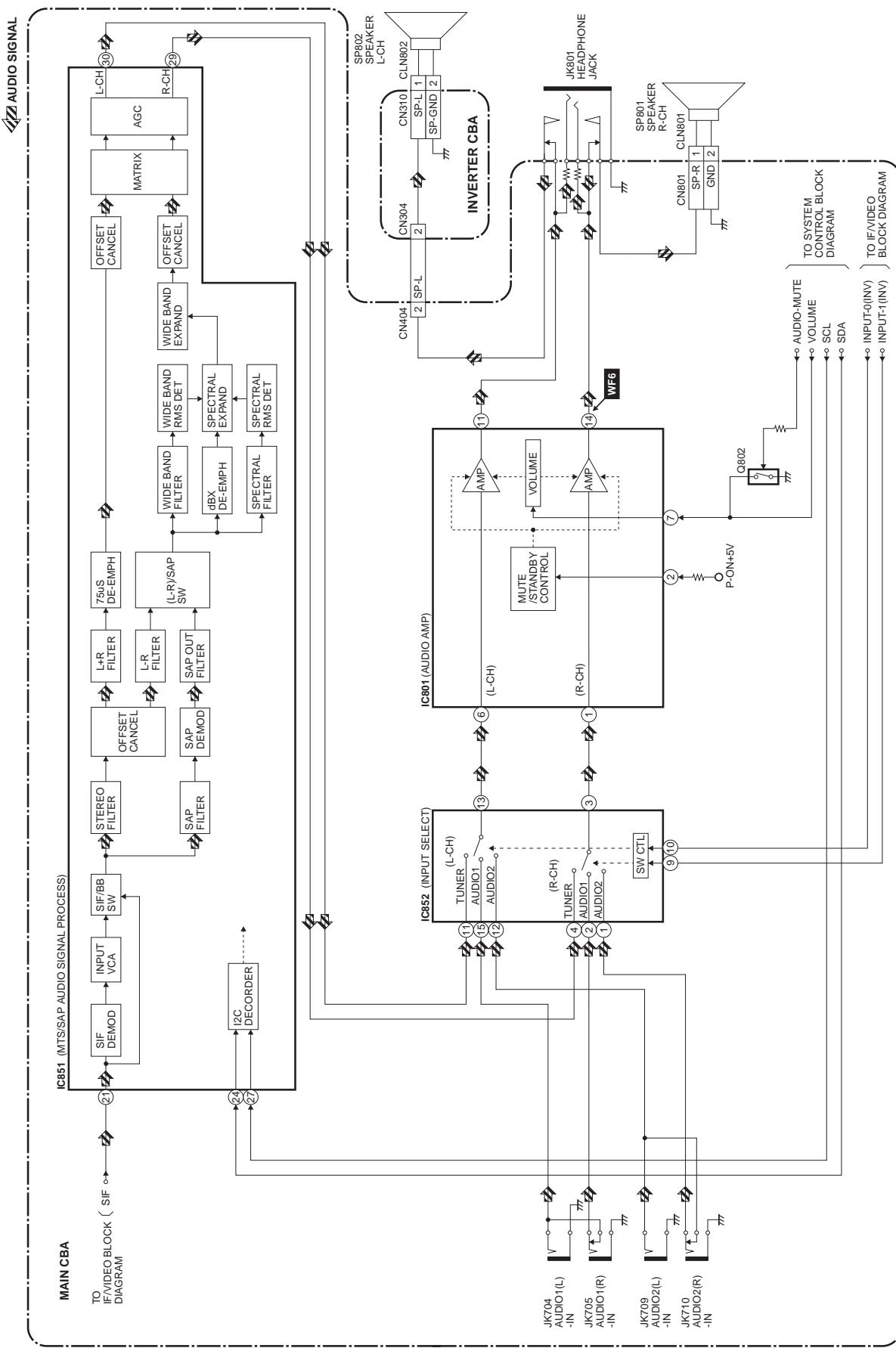
## System Control Block Diagram



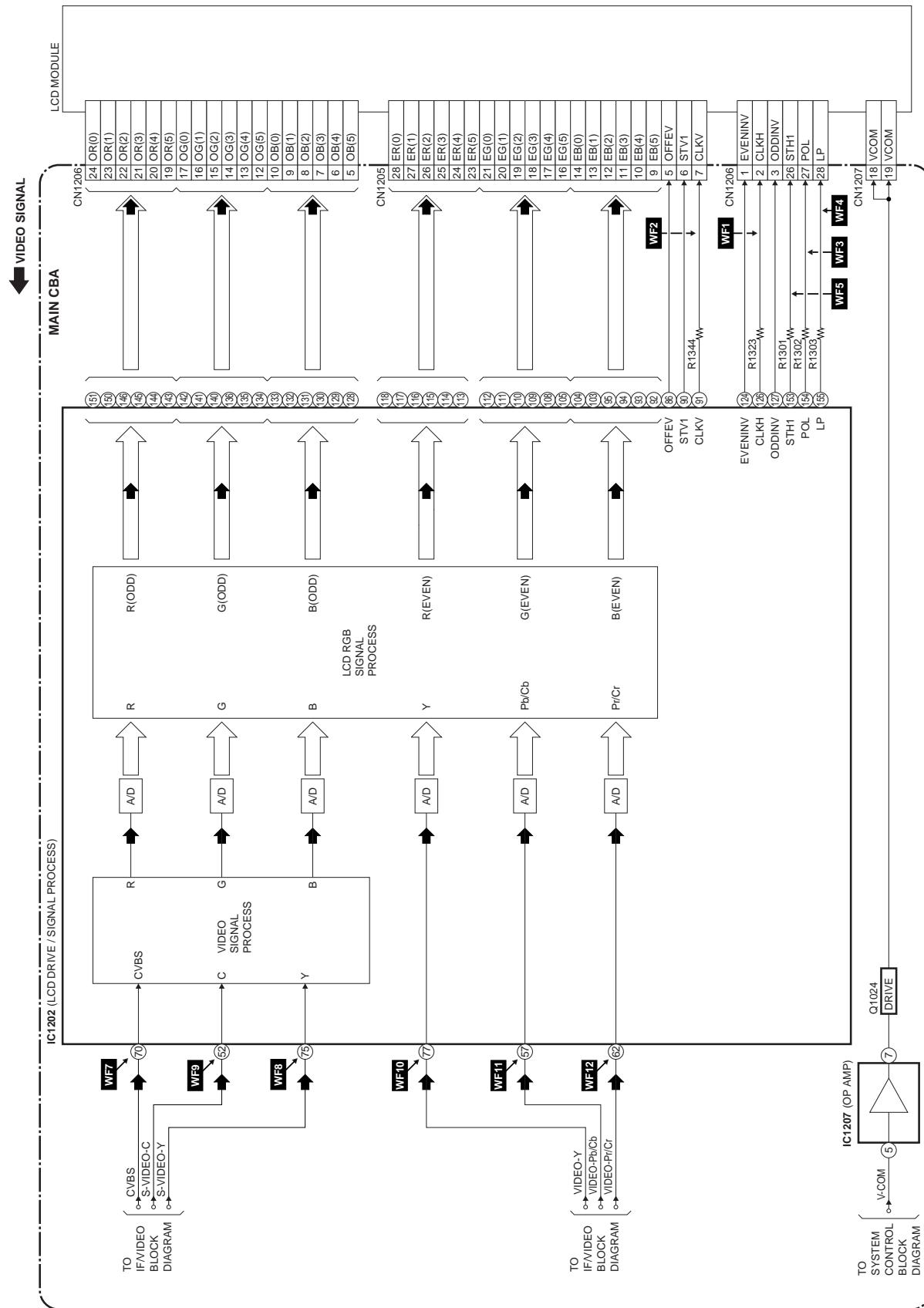
# IF/Video Block Diagram



# Audio Block Diagram

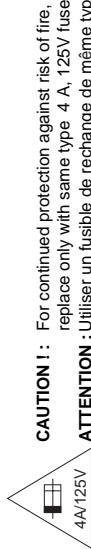


# LCD Block Diagram



# Power Supply Block Diagram

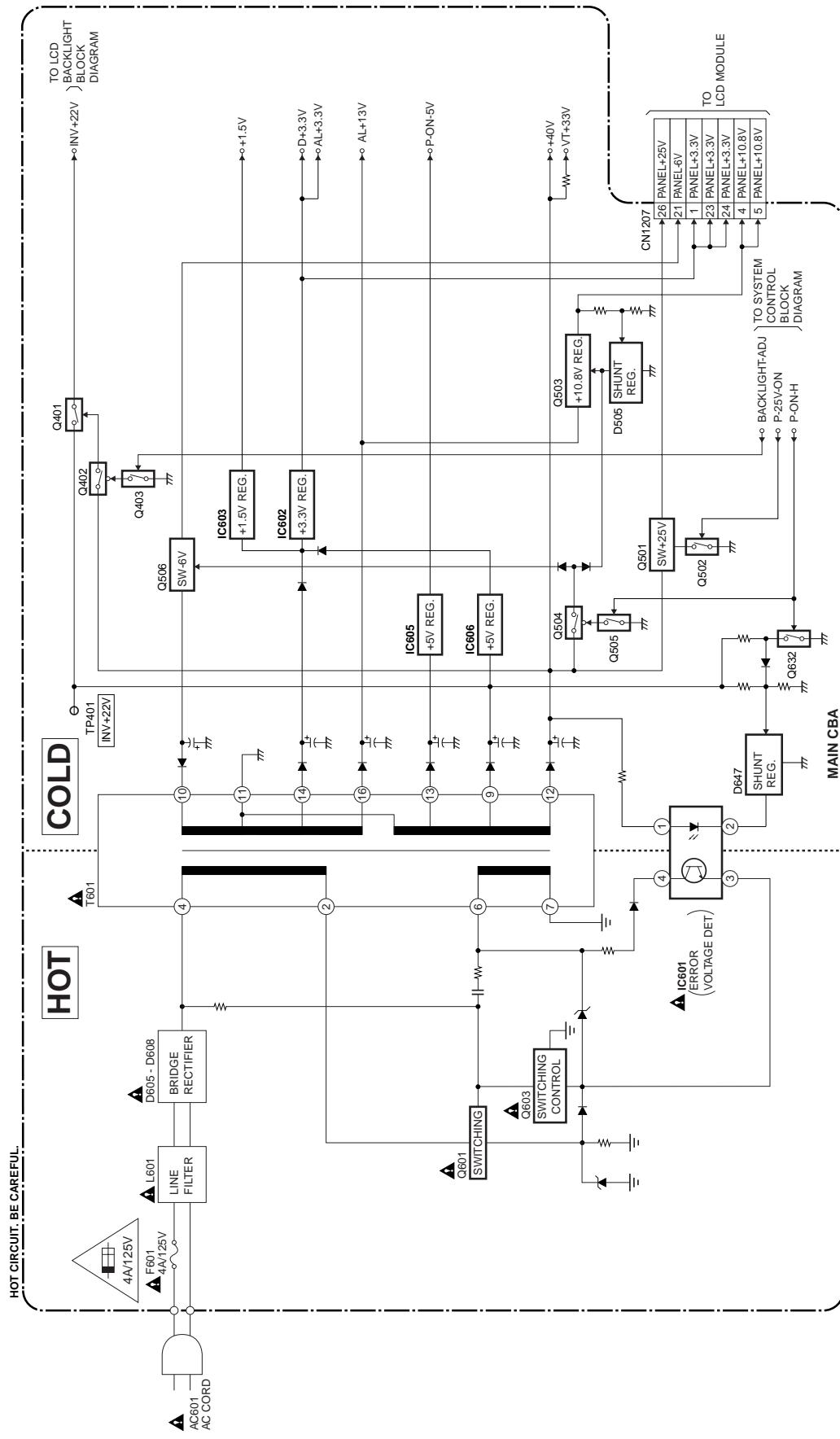
**CAUTION !**  
 Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.  
 If Main Fuse (F601) is blown , check to see that all components in the power supply  
 circuit are not defective before you connect the AC plug to the AC power supply.  
 Otherwise it may cause some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



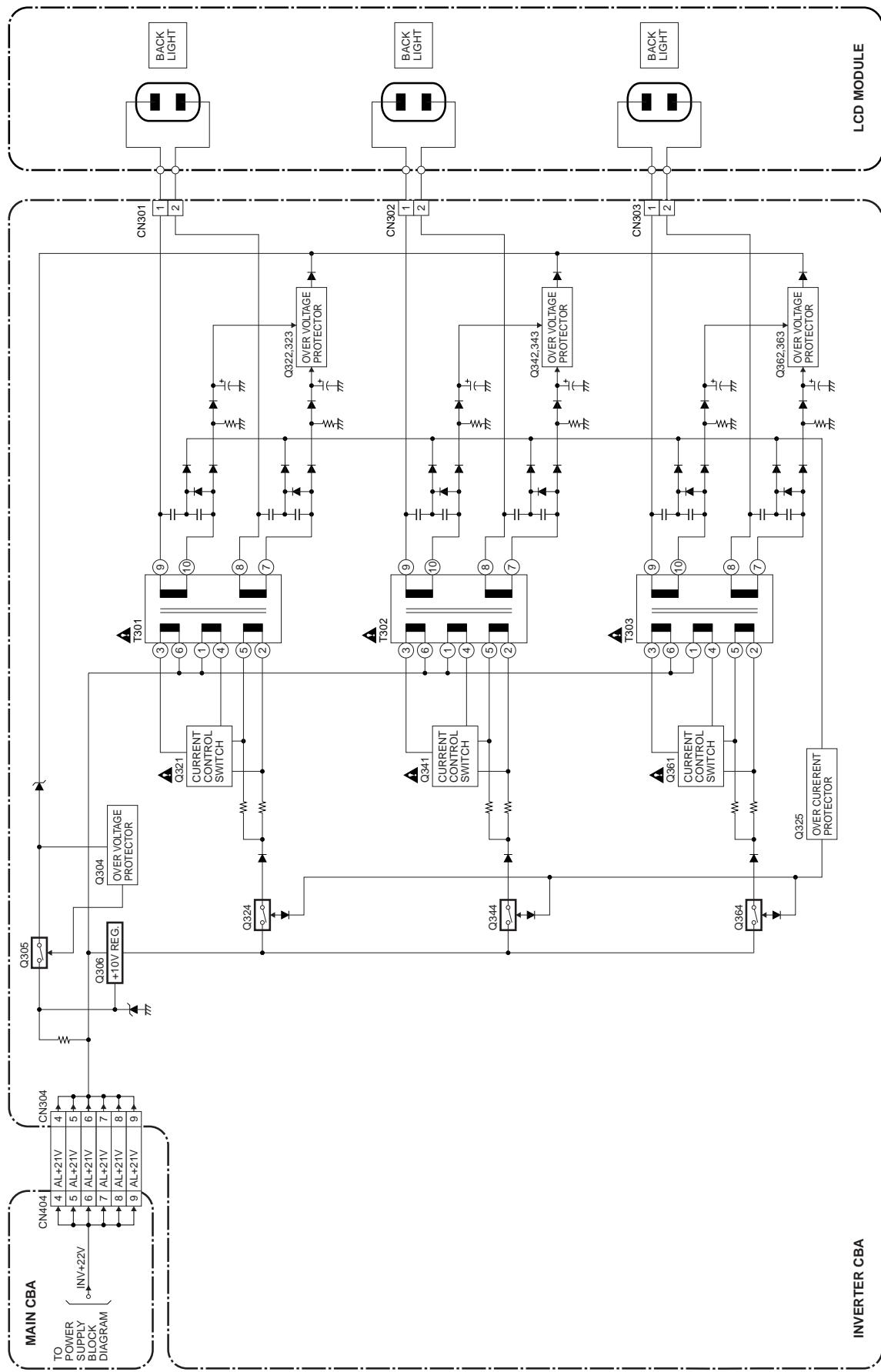
**CAUTION !** For continued protection against risk of fire,  
 replace only with same type 4 A, 125V fuse.

**ATTENTION :** Utiliser un fusible de rechange de même type de 4A, 125V.

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



# LCD Backlight Block Diagram



# 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.

### Notes:

1. Do not use the part number shown on these drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since these drawings were prepared.
2. All resistance values are indicated in ohms ( $K = 10^3$ ,  $M = 10^6$ ).
3. Resistor wattages are 1/4W 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 --- Metallized Film Cap. SC --- Semiconductor Cap. L --- Low Leakage type

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

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

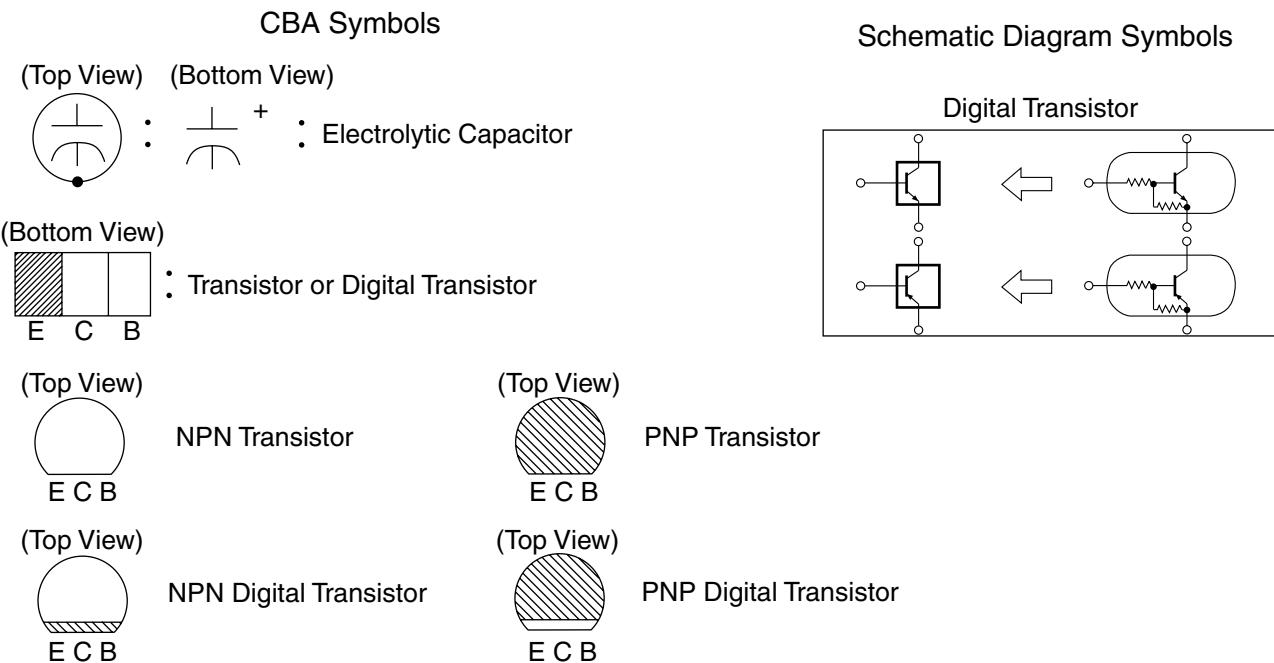
### Tolerance of Capacitors are noted with the following:

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.



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

### 1. CAUTION:

**CAUTION: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE\_A,\_V FUSE.**

**ATTENTION: UTILISER UN FUSIBLE DE RECHANGE DE MÊME TYPE DE\_A,\_V.**

### 2. CAUTION:

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

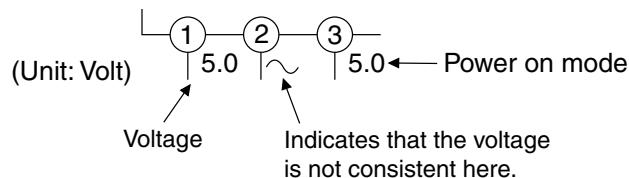
If Main Fuse (F601) is blown, first check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the power supply circuit to fail.

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

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

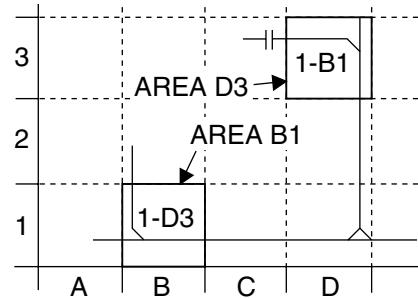


### 5. How to read converged lines

1-D3  
↑  
Distinction Area  
Line Number  
(1 to 3 digits)

Examples:

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



### 6. Test Point Information

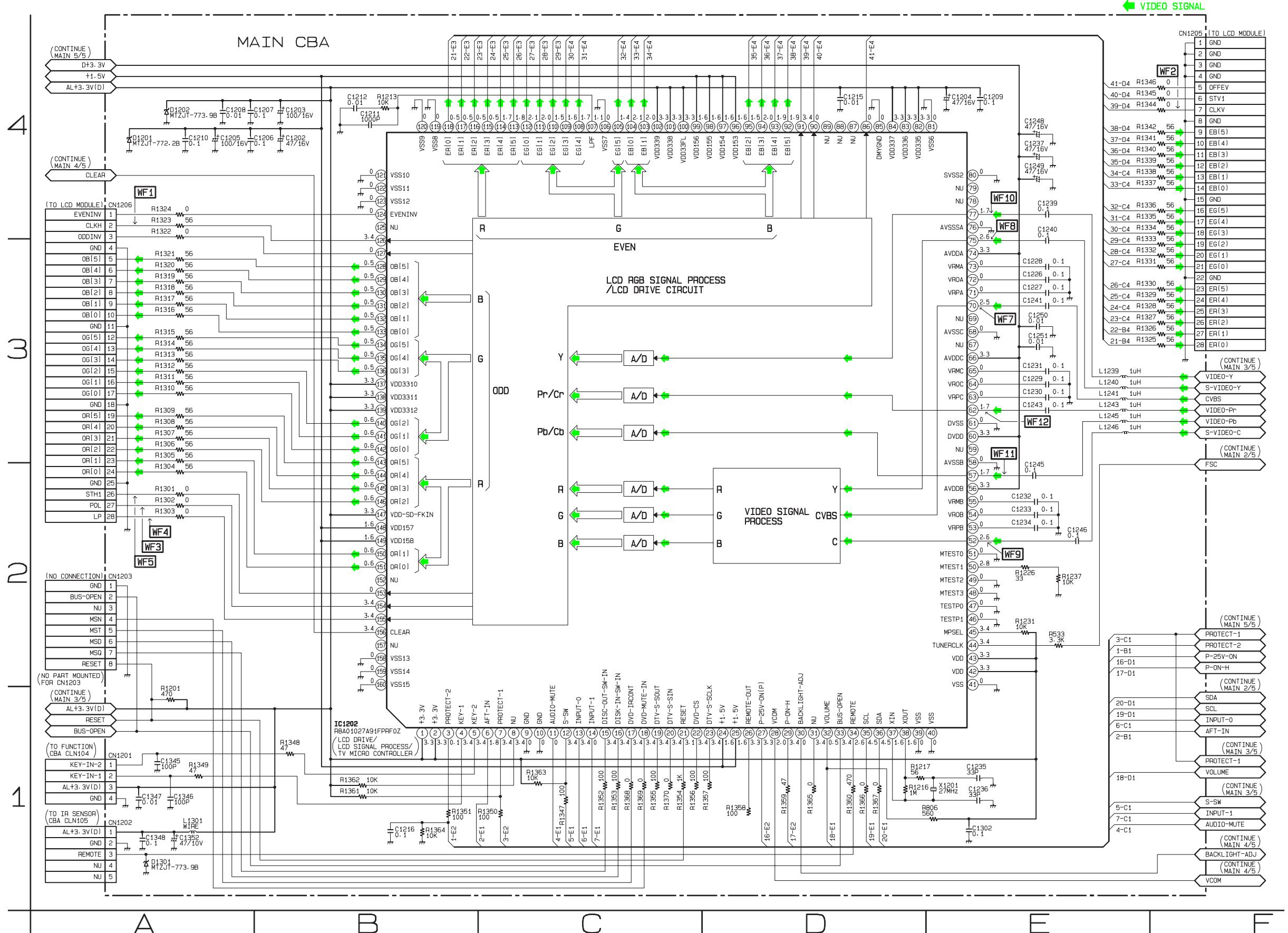
○ : Indicates a test point with a jumper wire across a hole in the PCB.

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

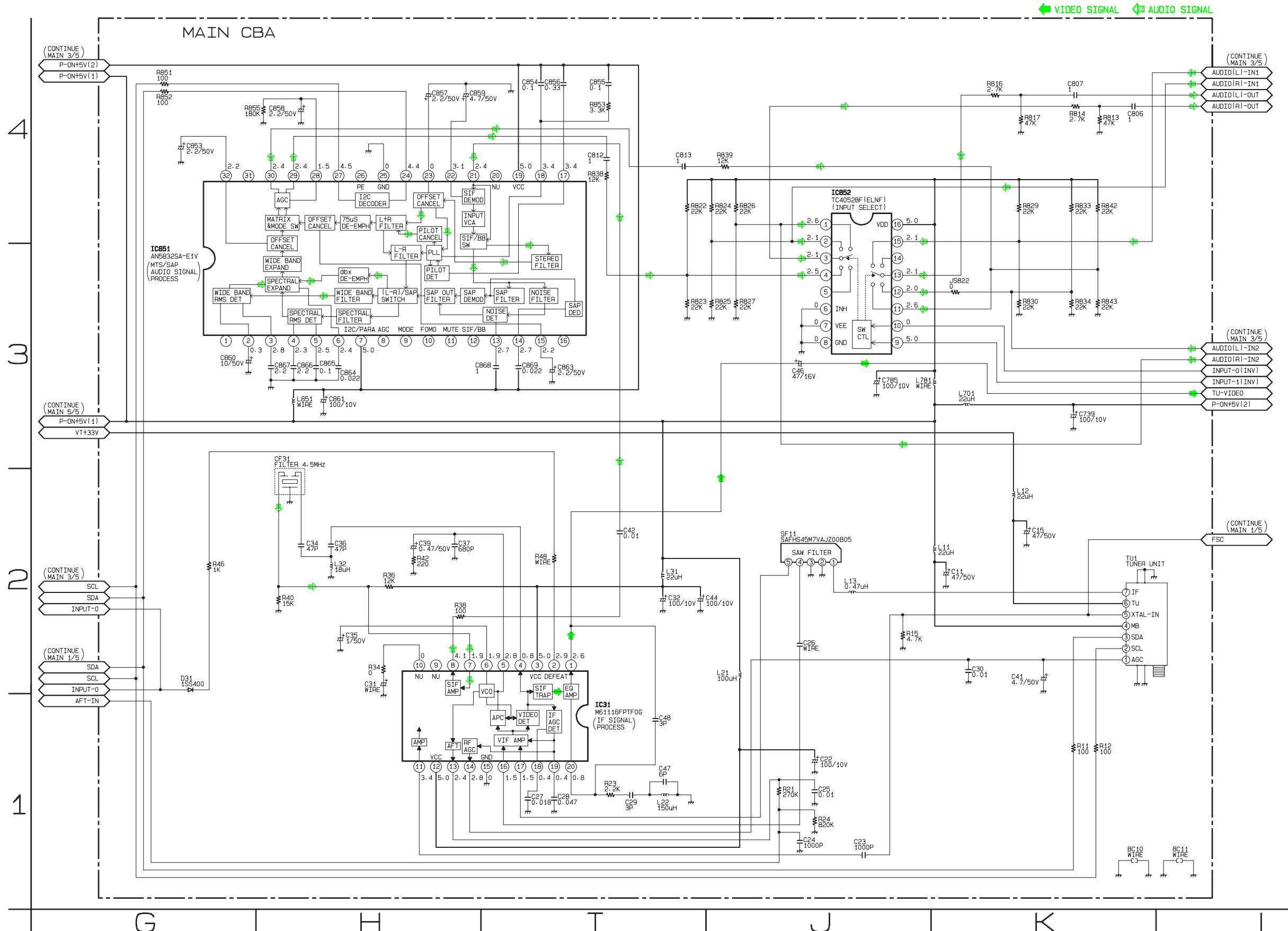
◎ : Used to indicate a test point with no test pin.

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

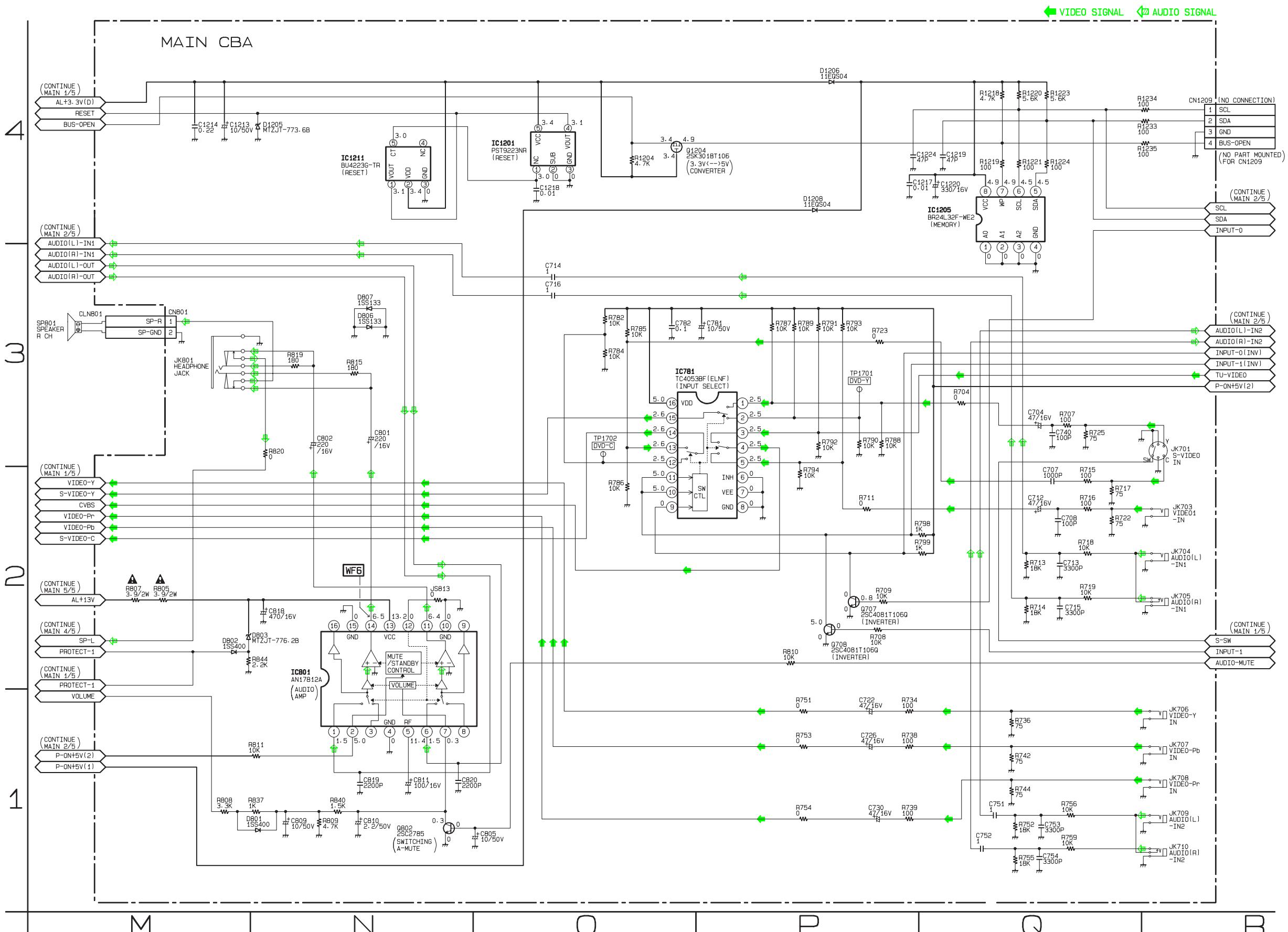
## Main 1/5 Schematic Diagram



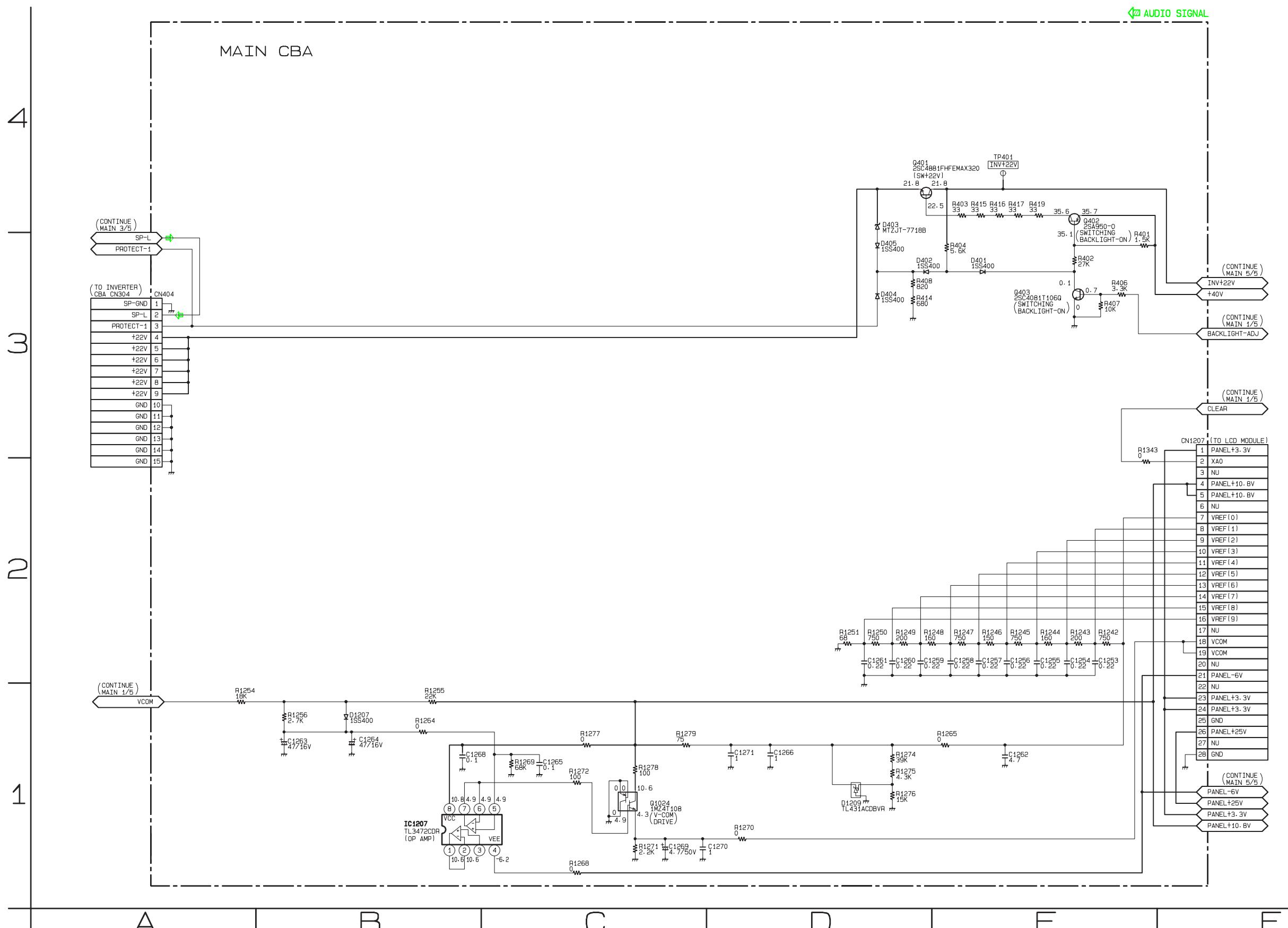
## Main 2/5 Schematic Diagram



## Main 3/5 Schematic Diagram



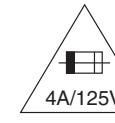
## Main 4/5 Schematic Diagram



# Main 5/5 Schematic Diagram

## CAUTION !

Fixed voltage (or Auto voltage selectable) 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.

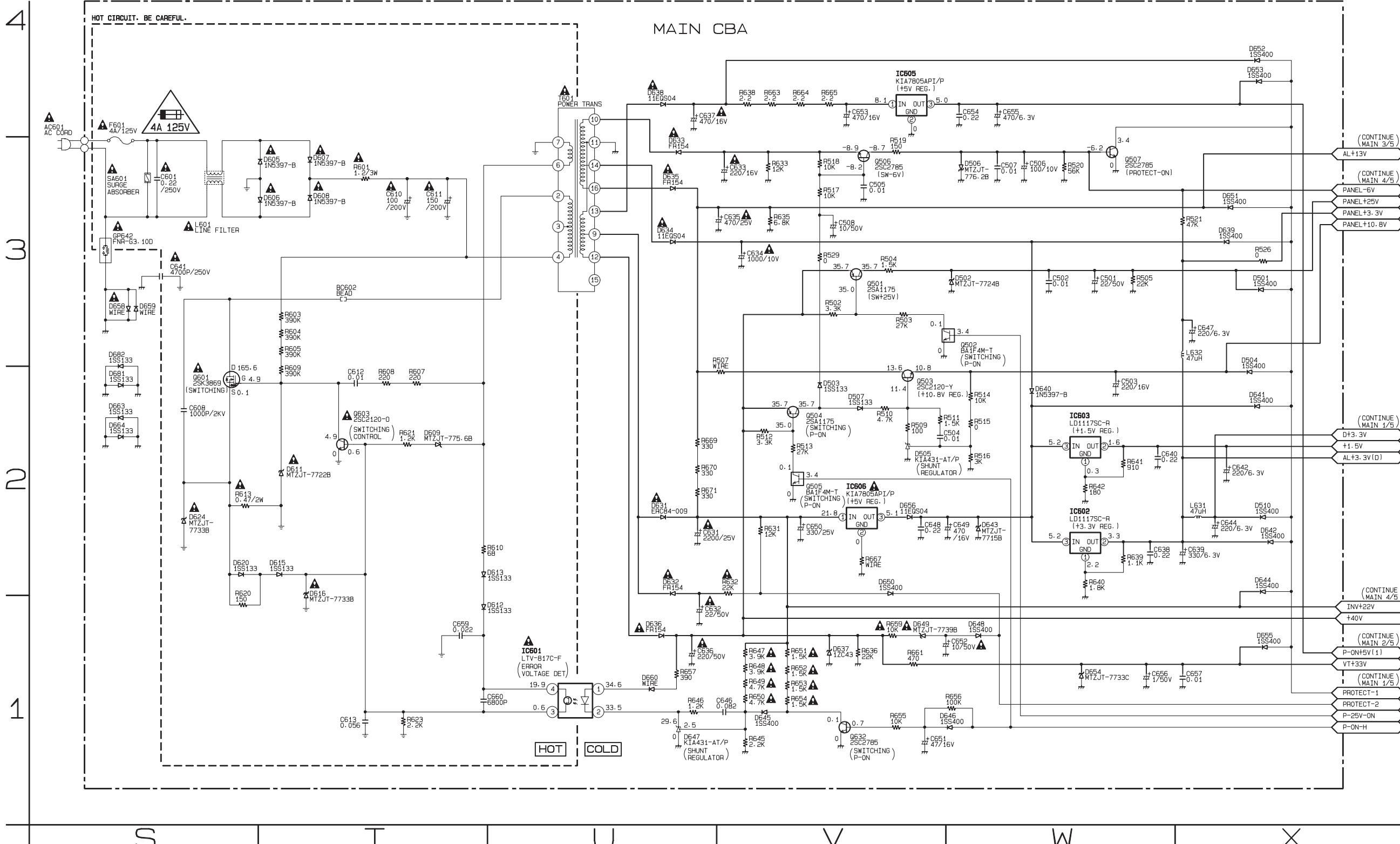


**CAUTION ! :** For continued protection against risk of fire,  
replace only with same type 4 A, 125V fuse.

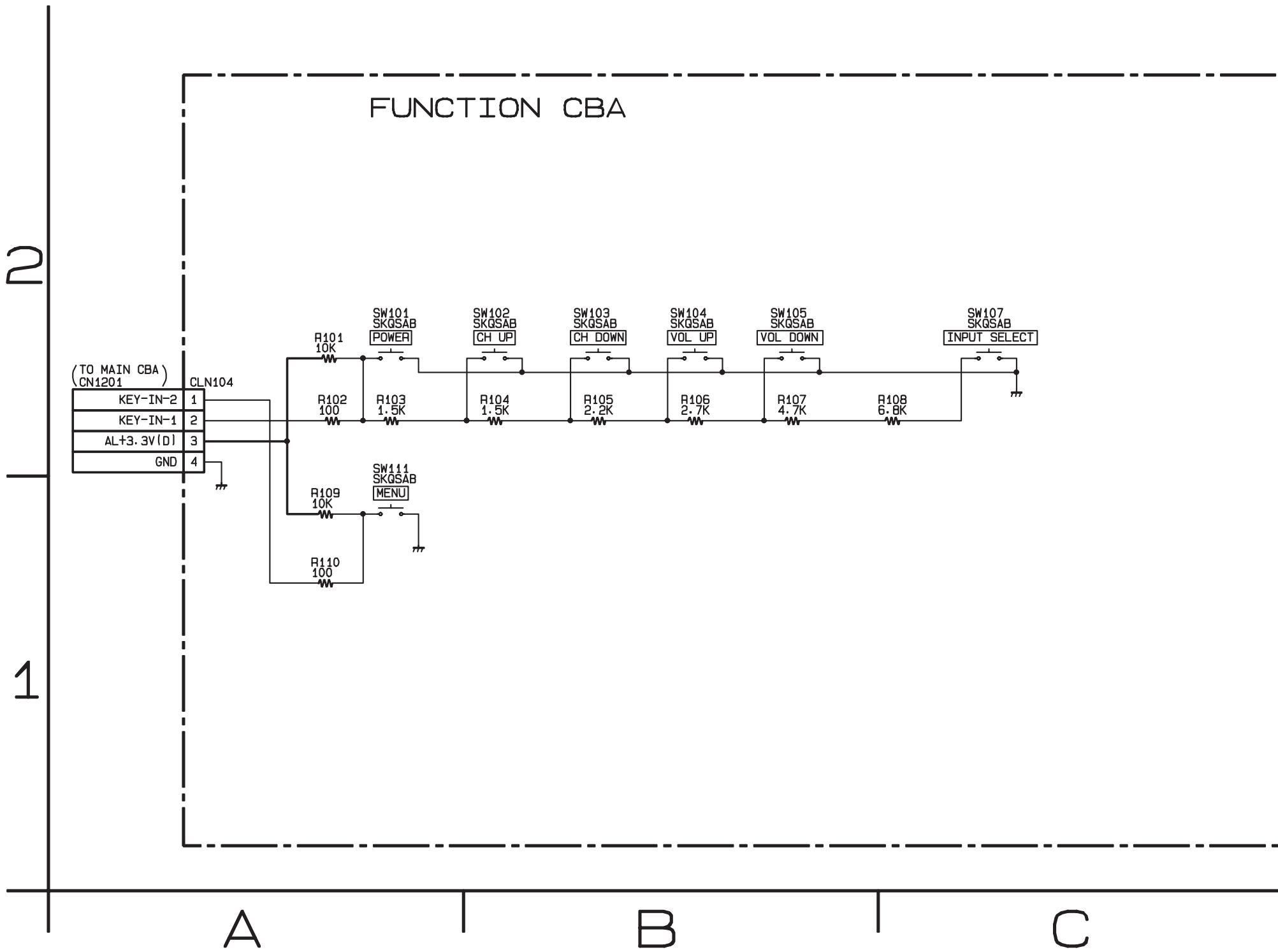
**ATTENTION :** Utiliser un fusible de rechange de même type de 4A, 125V.

## NOTE:

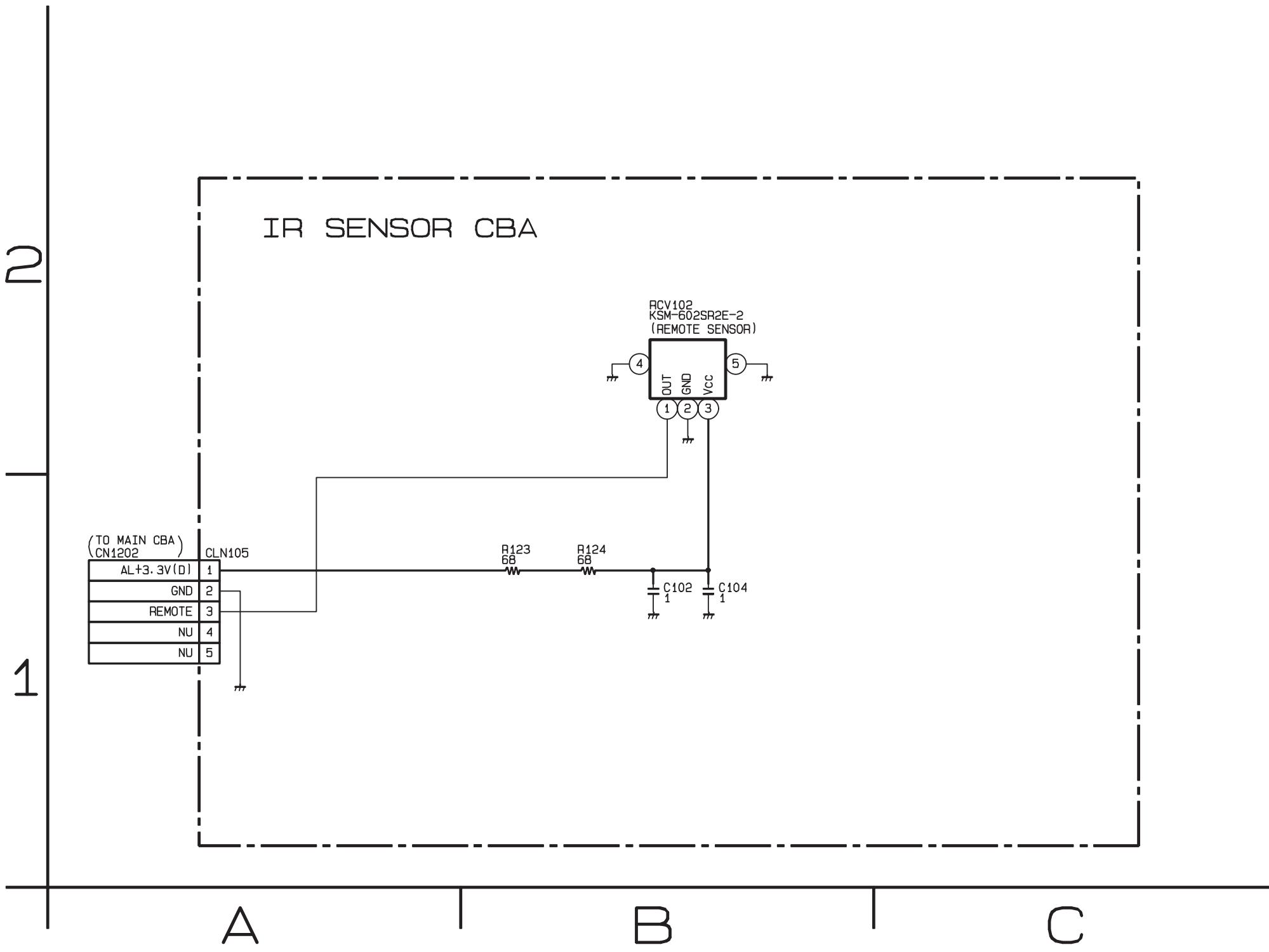
The voltage for parts in hot circuit is measured using hot GND as a common terminal.



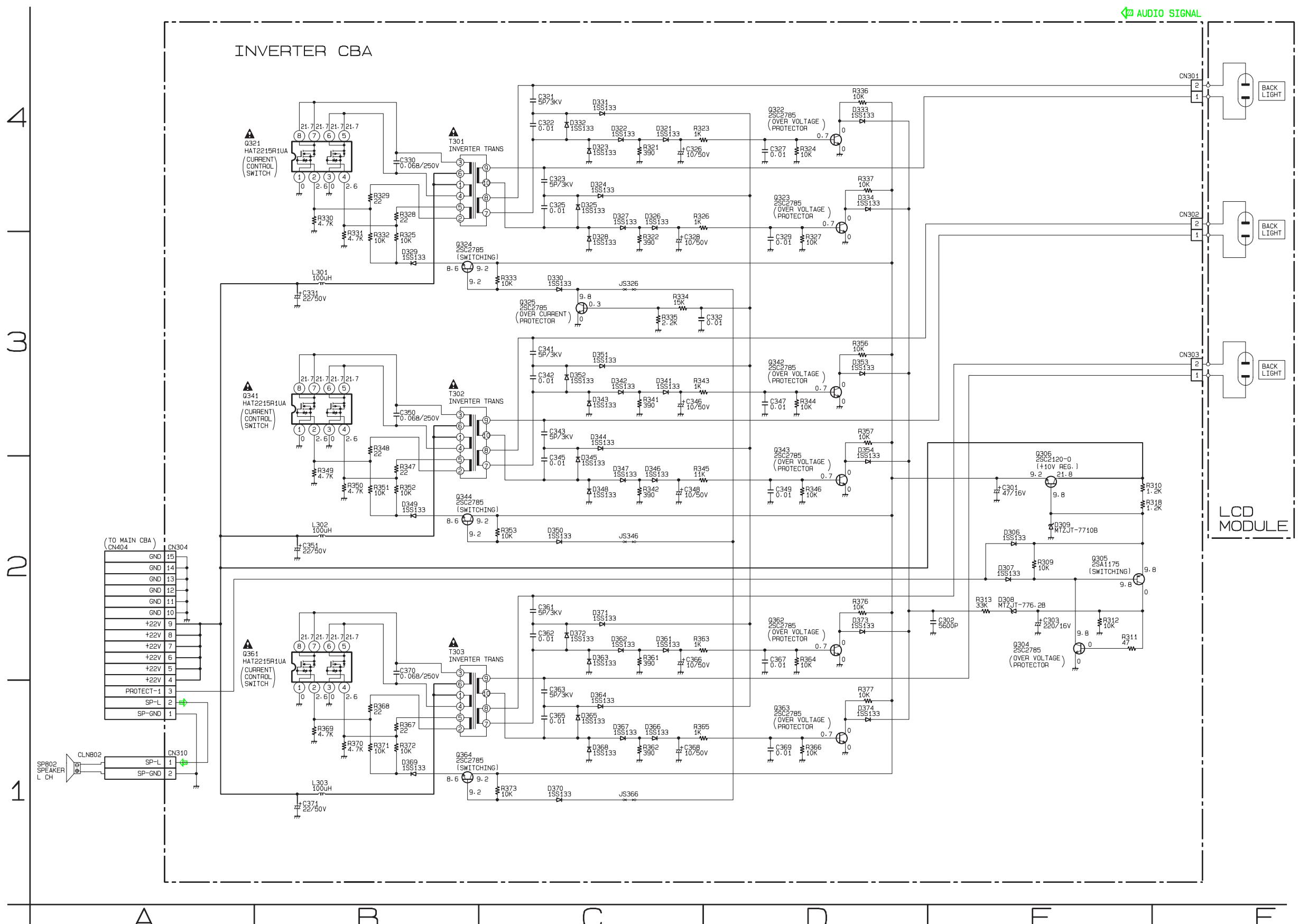
## Function Schematic Diagram



## IR Sensor Schematic Diagram



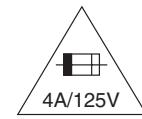
# Inverter Schematic Diagram



## Main CBA Top View

### CAUTION !

Fixed voltage (or Auto voltage selectable) 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.



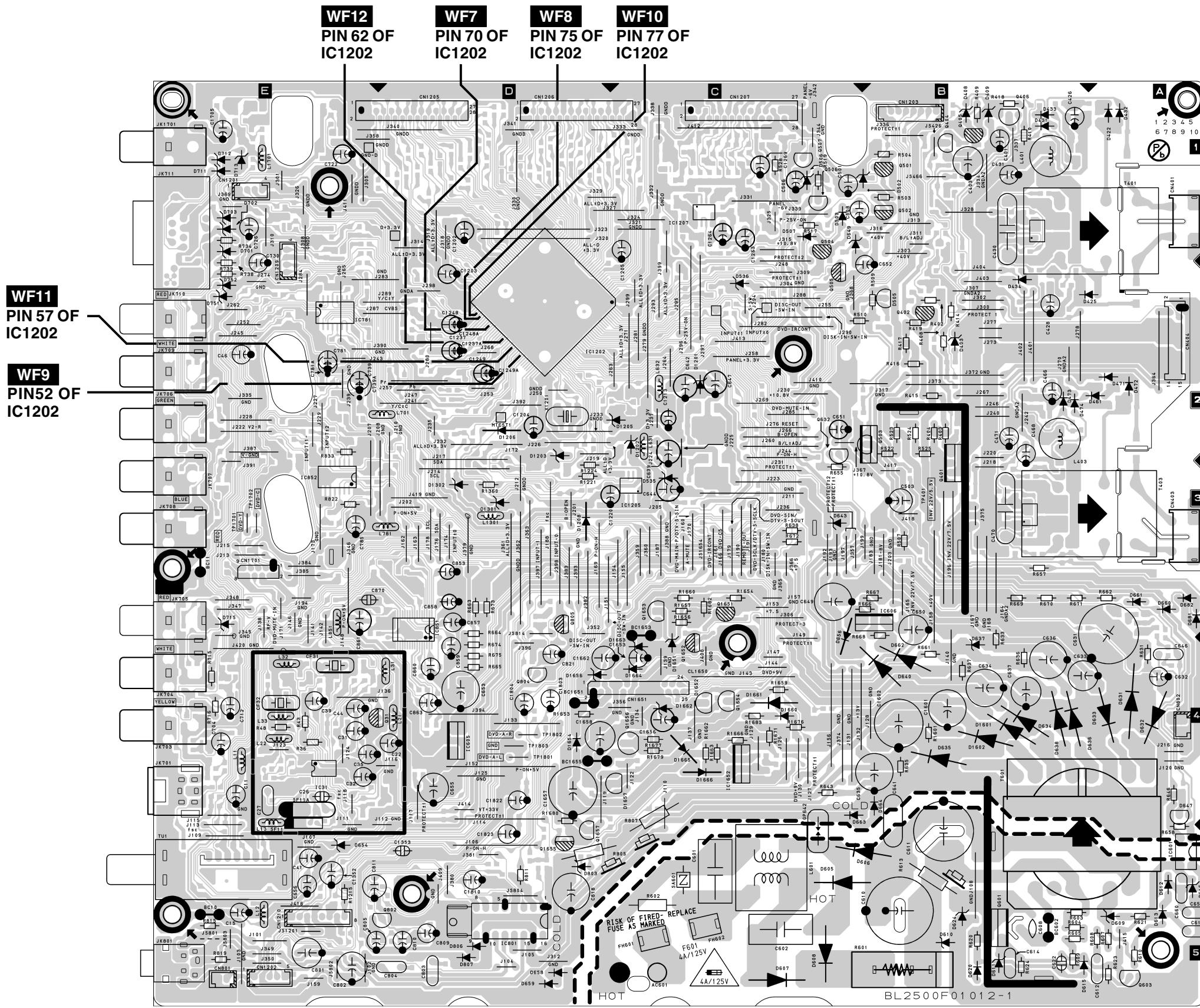
**CAUTION ! :** For continued protection against risk of fire,  
replace only with same type 4 A, 125V fuse.

**ATTENTION :** Utiliser un fusible de rechange de même type de 4A, 125V.

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.

### NOTE:

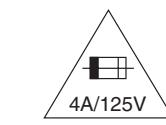
The voltage for parts in hot circuit is measured using hot GND as a common terminal.



## Main CBA Bottom View

### CAUTION !

Fixed voltage (or Auto voltage selectable) 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.



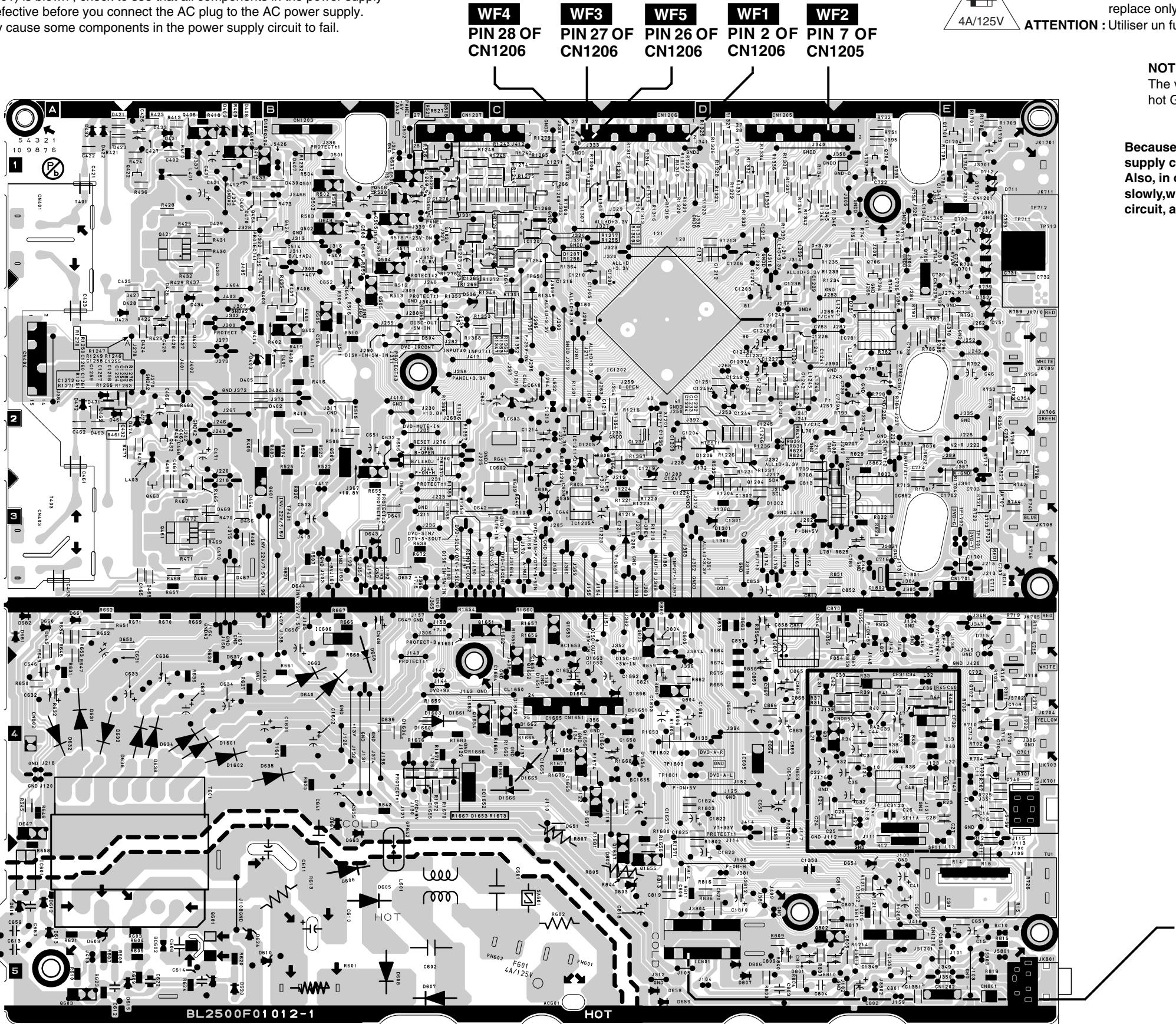
**CAUTION ! :** For continued protection against risk of fire, replace only with same type 4 A, 125V fuse.

**ATTENTION :** Utiliser un fusible de rechange de même type de 4A, 125V.

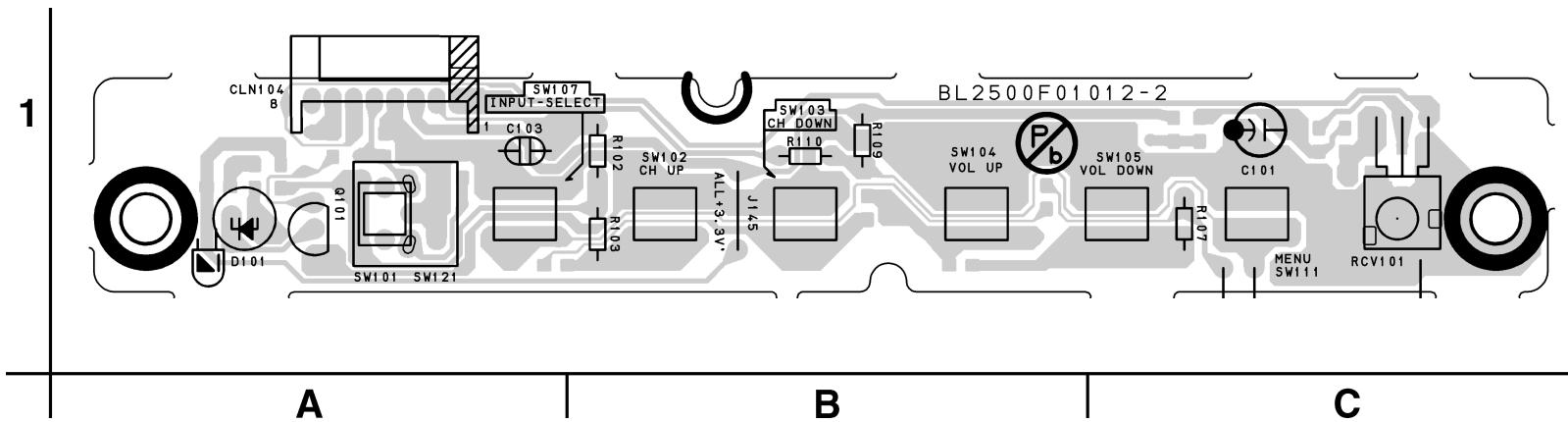
### NOTE:

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

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.

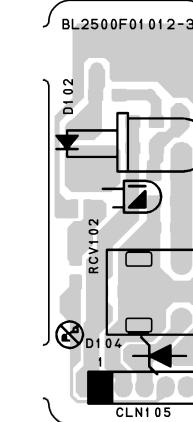


**Function CBA Top View**



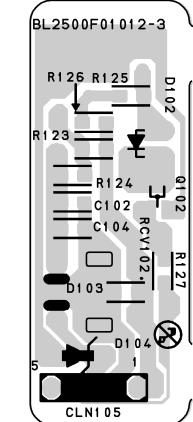
**IR Sensor CBA**

**Top View**



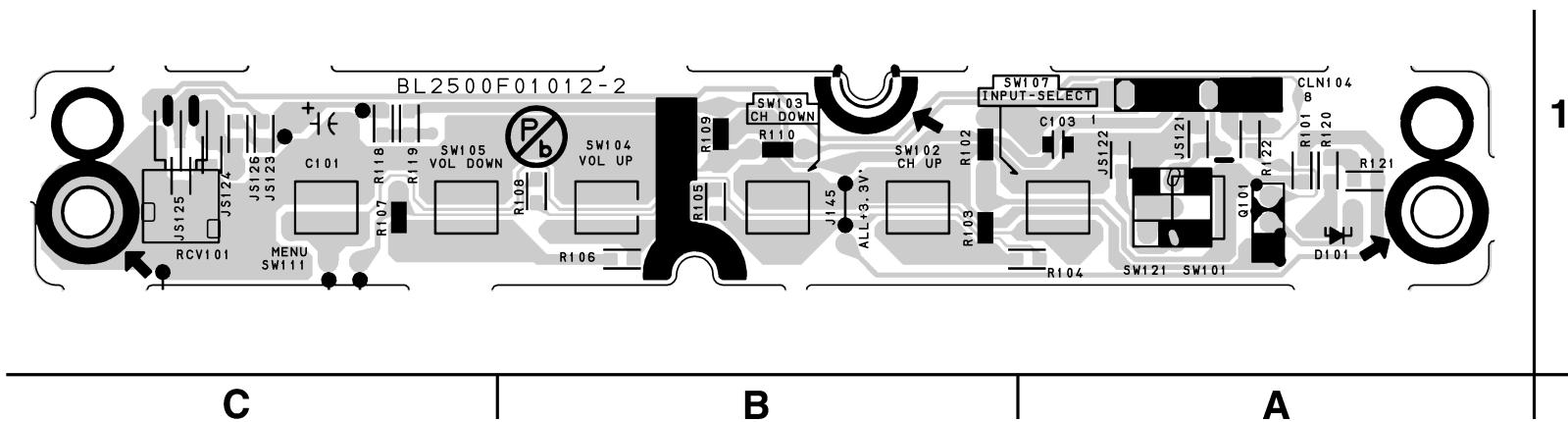
**IR Sensor CBA**

**Bottom View**



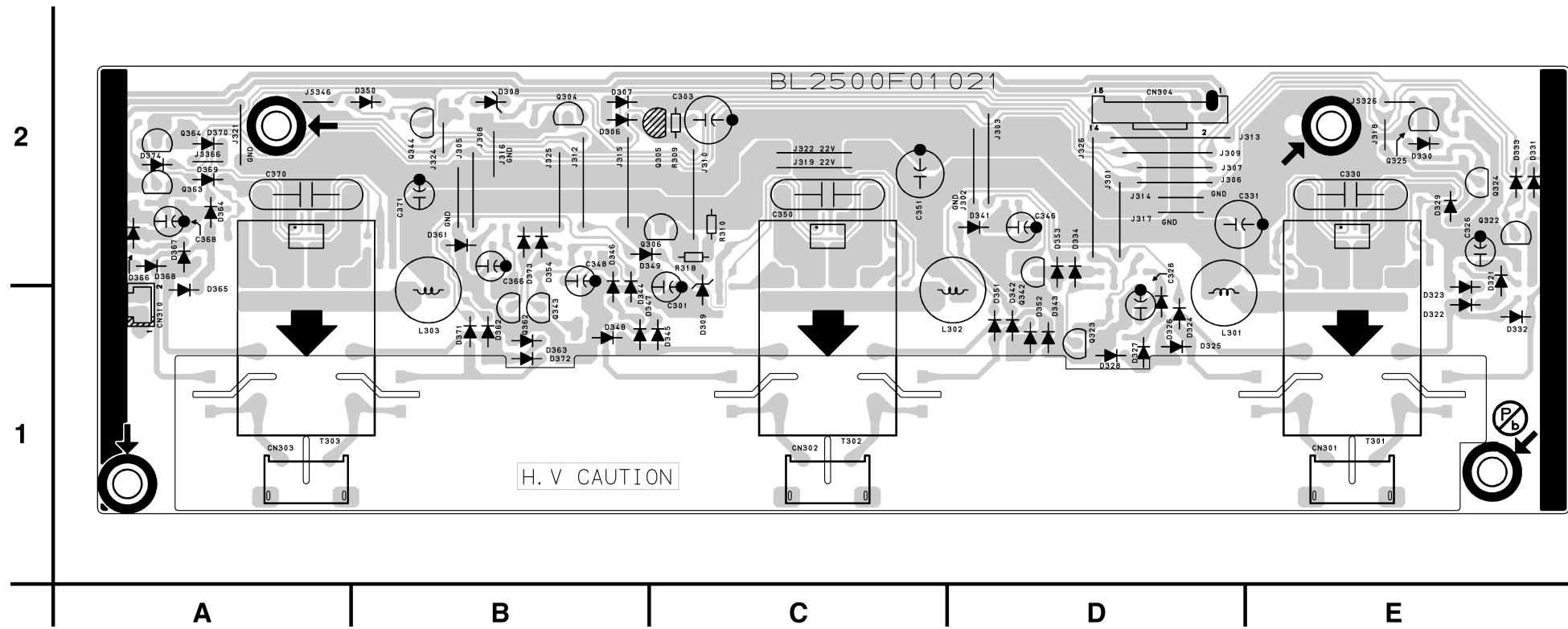
BL2500F01012-3

**Function CBA Bottom View**

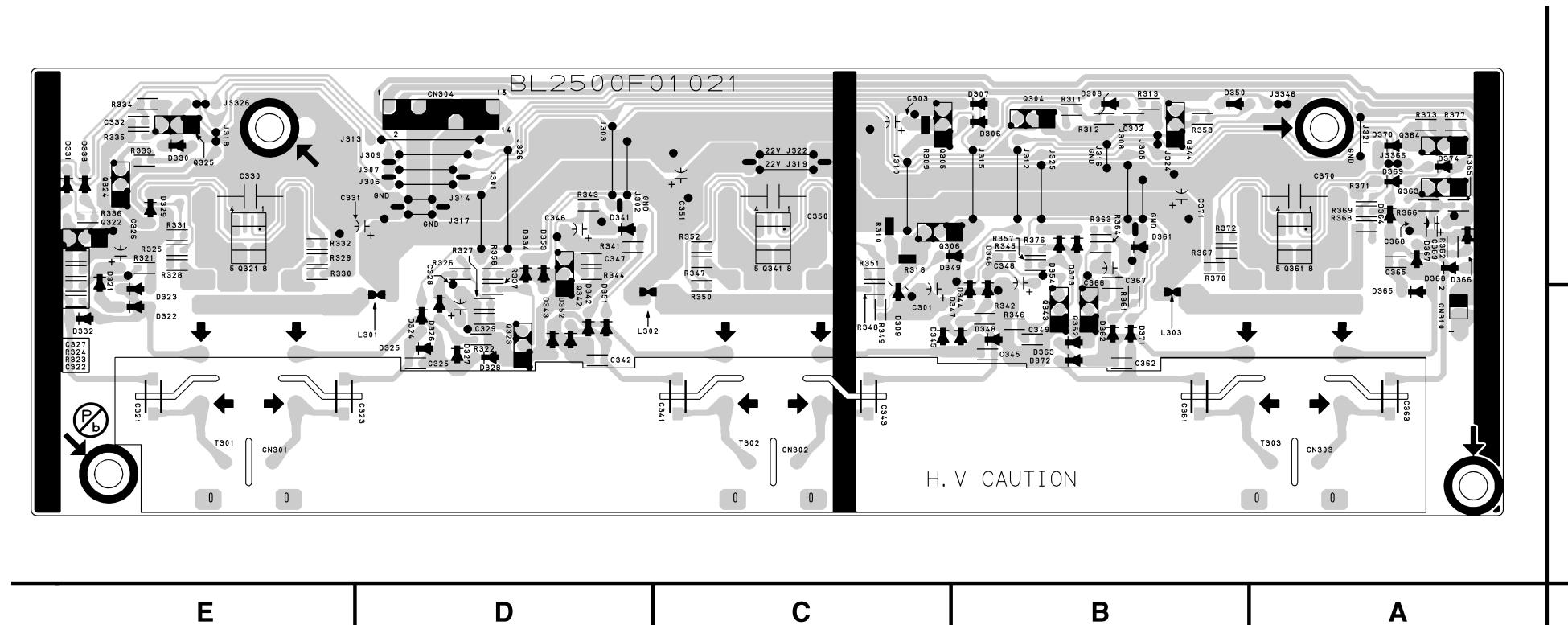


BL2500F01012-2

## Inverter CBA Top View



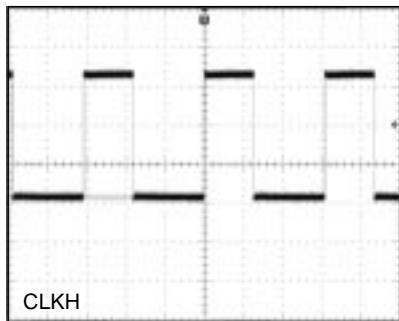
## Inverter CBA Bottom View



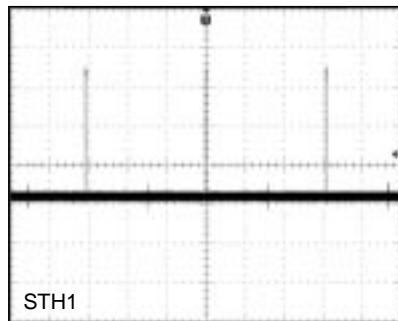
# WAVEFORMS

**WF1 ~ WF12 =** Waveforms to be observed at  
Waveform check points.  
(Shown in Schematic Diagram.)

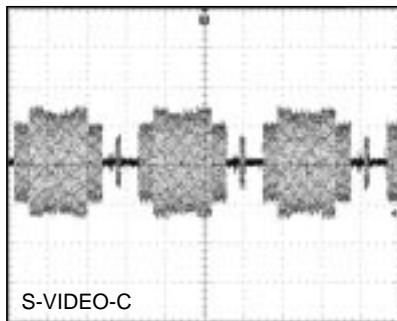
**Input:** NTSC Color Bar Signal (with 1kHz Audio Signal)



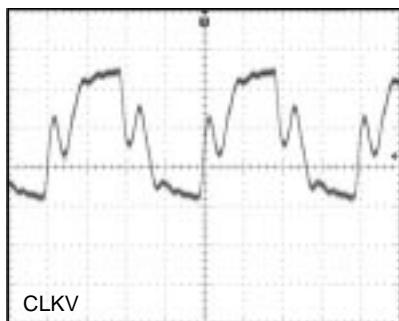
**WF1** 1DIV: 1.0V 10 $\mu$ s  
Pin 2 of CN1206



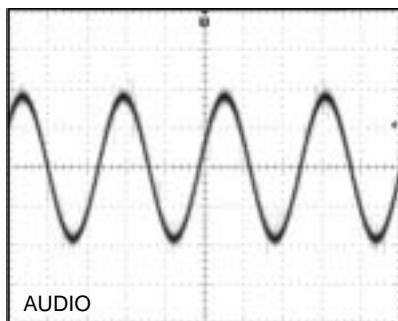
**WF5** 1DIV: 1.0V 10 $\mu$ s  
Pin 26 of CN1206



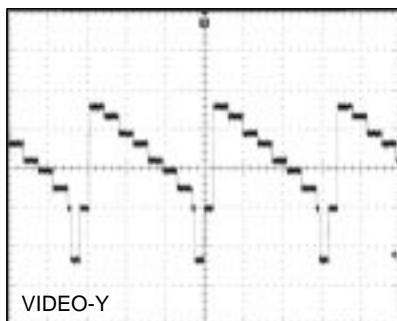
**WF9** 1DIV: 200mV 20 $\mu$ s  
Pin 52 of IC1202



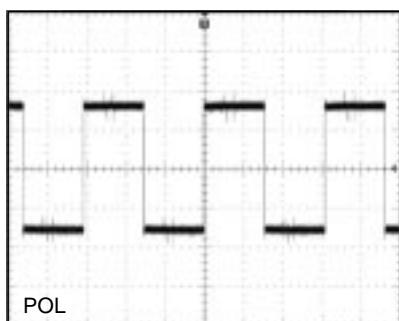
**WF2** 1DIV: 1.0V 20ns  
Pin 7 of CN1205



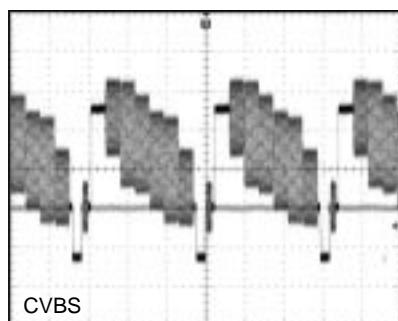
**WF6** 1DIV: 100mV 400  $\mu$ s  
Pin 14 of IC801



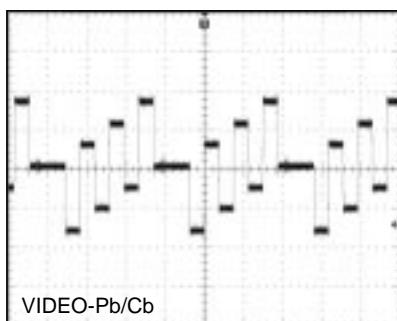
**WF10** 1DIV: 200mV 20 $\mu$ s  
Pin 77 of IC1202



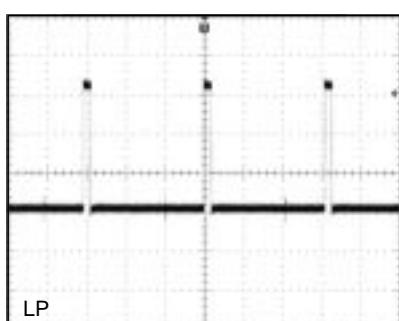
**WF3** 1DIV: 1.0V 20 $\mu$ s  
Pin 27 of CN1206



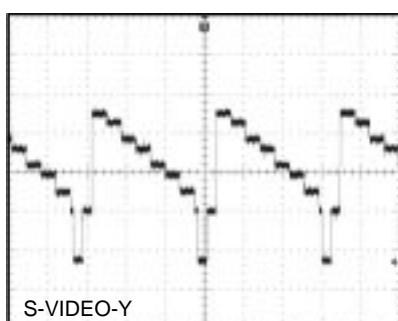
**WF7** 1DIV: 200mV 20 $\mu$ s  
Pin 70 of IC1202



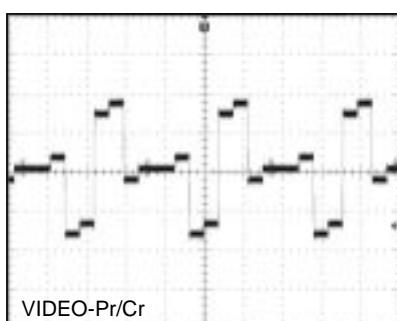
**WF11** 1DIV: 200mV 20 $\mu$ s  
Pin 57 of IC1202



**WF4** 1DIV: 1.0V 10 $\mu$ s  
Pin 28 of CN1206

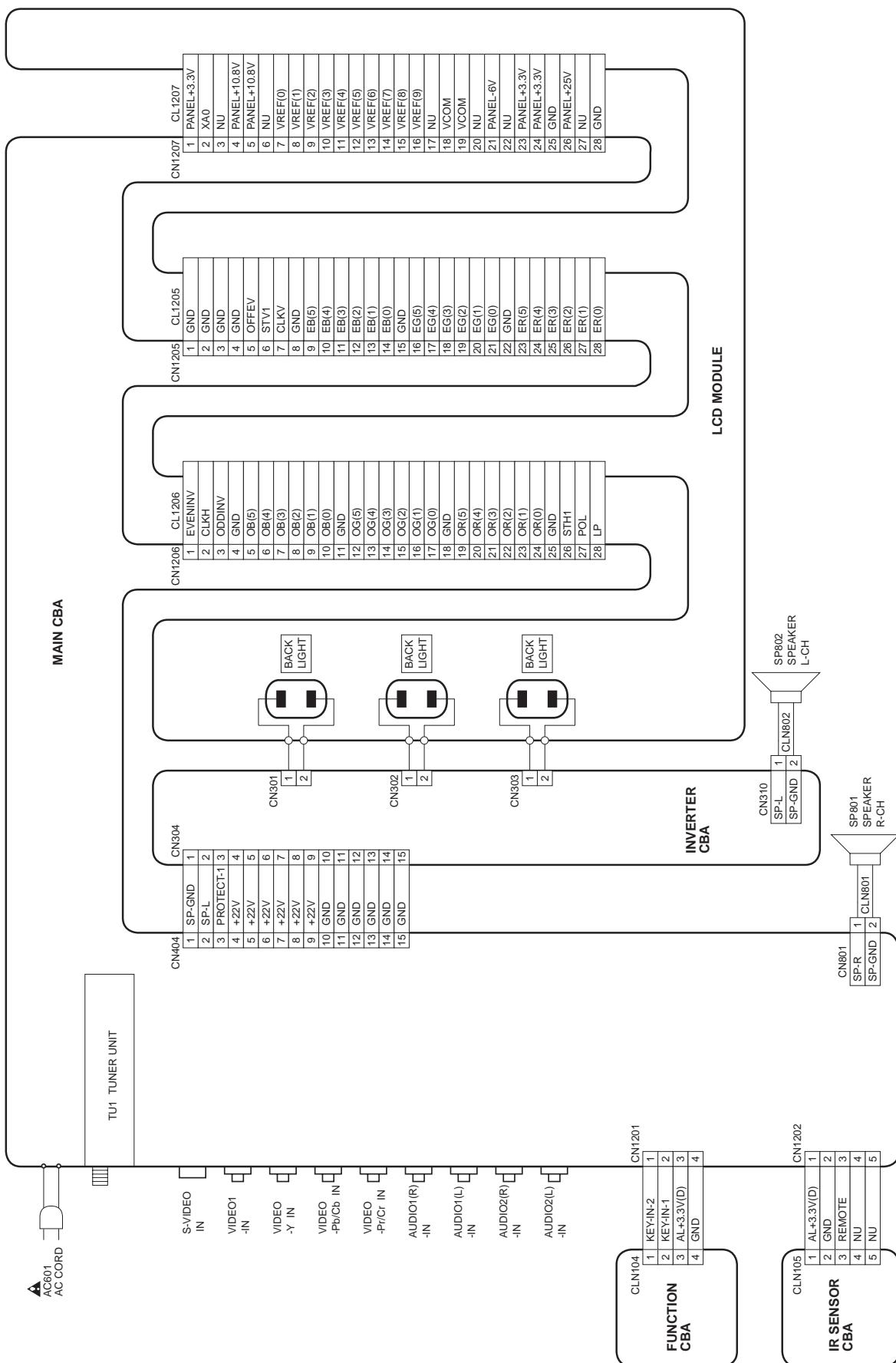


**WF8** 1DIV: 200mV 20 $\mu$ s  
Pin 75 of IC1202



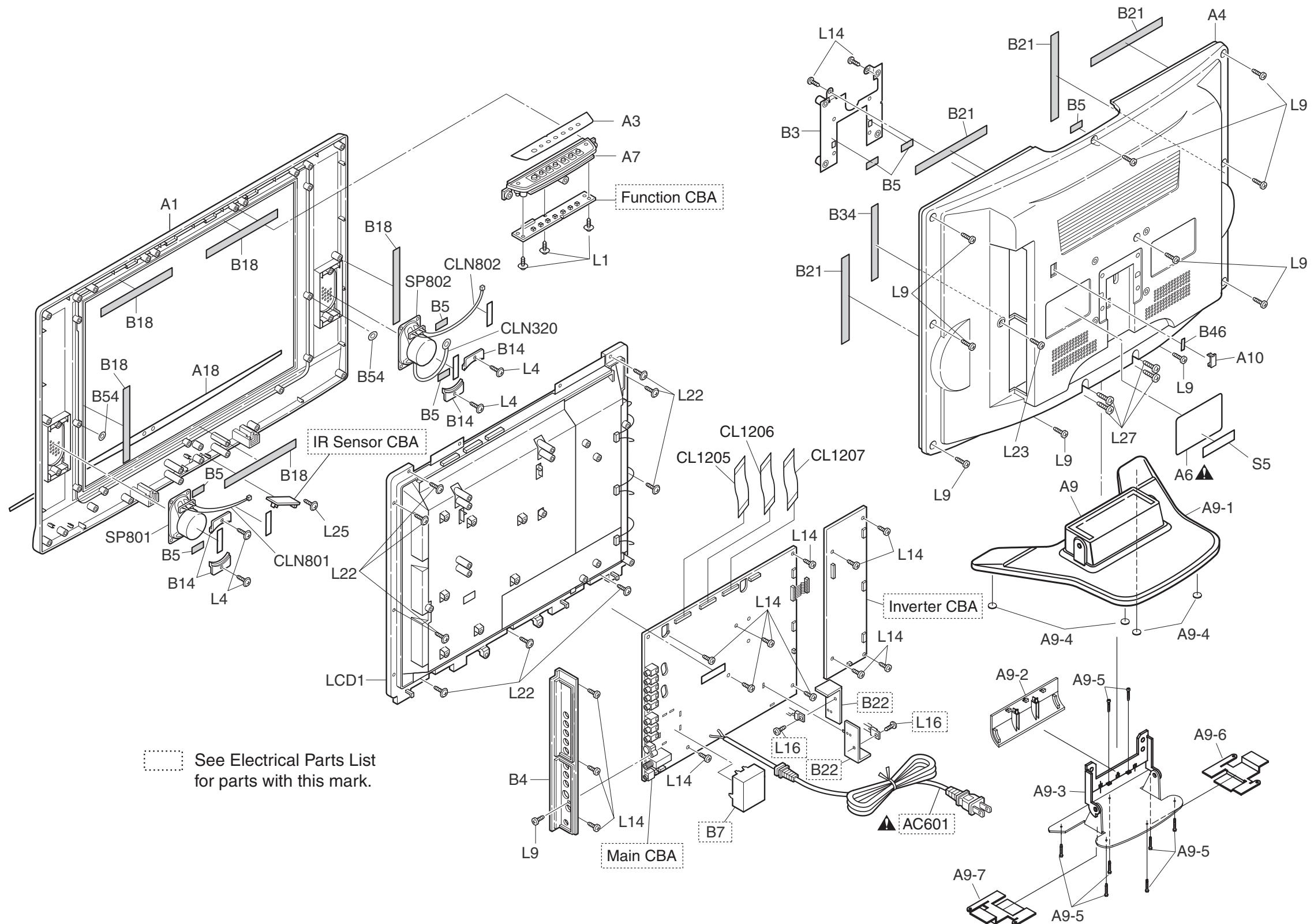
**WF12** 1DIV: 200mV 20 $\mu$ s  
Pin 62 of IC1202

# WIRING DIAGRAM



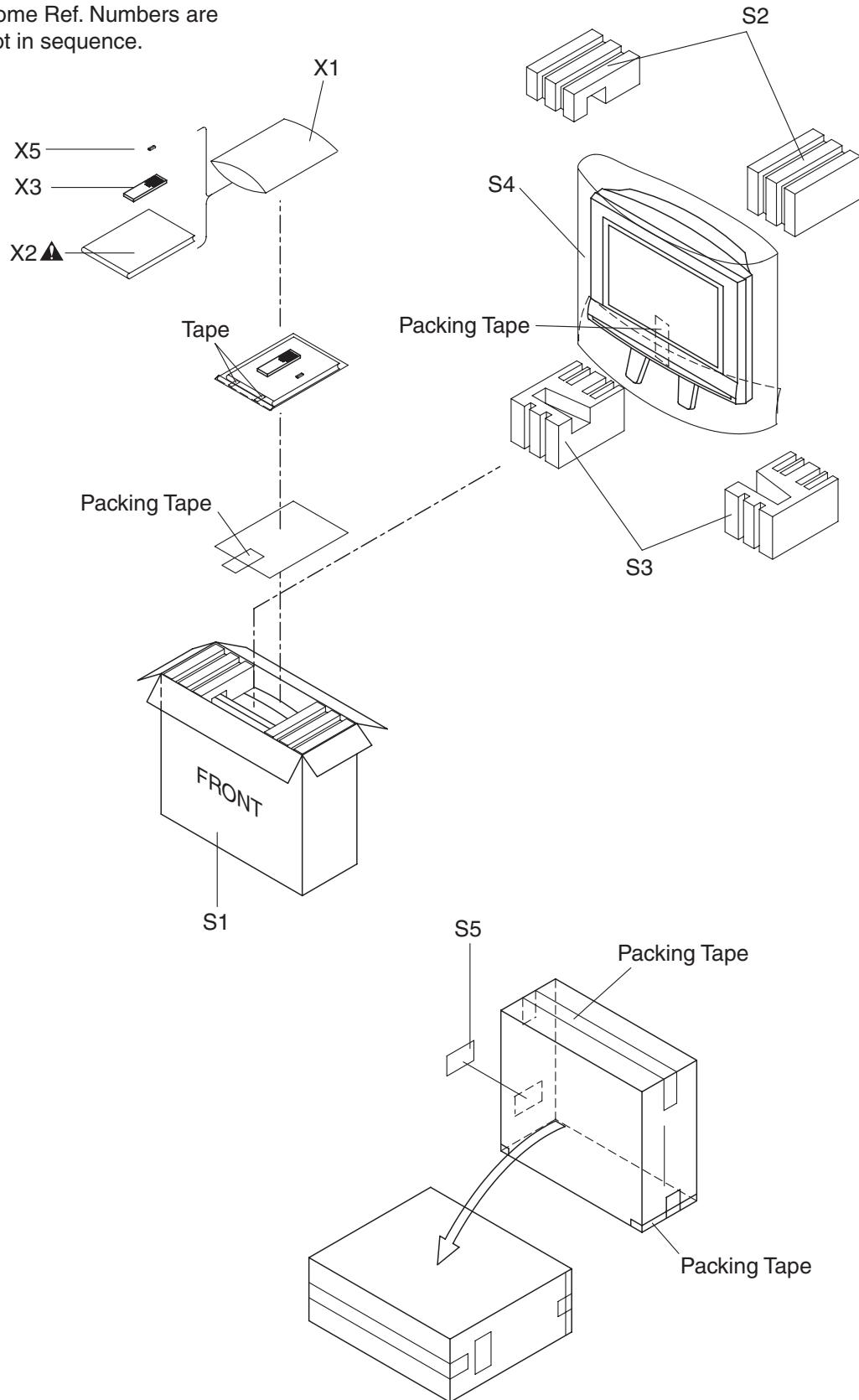
## EXPLODED VIEWS

### Cabinet



## Packing

Some Ref. Numbers are  
not in sequence.



# 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.

## Comparison Chart of Models and Marks

Model	Mark
6620LCT	A
6620LG	B

Ref. No.	Mark	Description	Part No.
A1	A	FRONT CABINET L2600UA	1EM020908A
A1	B	FRONT CABINET L3223UD	1EM121534
A3		CONTROL PLATE L2500UA	1EM321811
A4		REAR CABINET L2600UA	1EM020948
A6▲	A	RATING LABEL L2600UA	-----
A6▲	B	RATING LABEL L2604UE	-----
A7		FUNCTION KNOB L2500UA	1EM220762
A9	A	TILT STAND ASSEMBLY L3219UK	1ESA12971
A9	B	TILT STAND ASSEMBLY L3223UD	1ESA13060
A9-1	A	STAND COVER L3219UK	1EM021330
A9-1	B	STAND COVER L3124UG	1EM221329
A9-2		ARM HOLDER L3219UK	1EM221304
A9-3		ARM ASSEMBLY L3219UK	1EM221283
A9-5		SCREW P-TIGHT M3X8 BIND HEAD+ BLK	GBHP3080
A9-6		SHEET R L3219UK	1EM322093
A9-7		SHEET L L3219UK	1EM322098
A10		CONNECTOR CAP L2600UA	1EM423029
A18	A	FRONT PLATE L2600UA	1EM221201
A18	B	FRONT PLATE L3223UD	1EM221391
B3		STAND HOLDER L2500UA	1EM321428
B4		JACK HOLDER L3201UB	1EM120107
B5		CLOTH(10X30XT0.5) B5900UA	0EM404486
B14		SPEAKER HOLDER L2600UA	1EM423052
B18		CLOTH(10X190XT0.3) L0200UA	1EM420019
B21		CLOTH(10X180XT0.5) L0336JG	0EM408827
B34		CLOTH 10X150XT1.0	1EM421092
B46		CLOTH(4X7X0.3T) TD250UA	0EM407578
B54		WASHER 10X5XT1.0 L4400UA	1EM423431
CL1205		WIRE ASSEMBLY 28PIN 28PIN/92MM/ WHITE	WX1L2600-001
CL1206		WIRE ASSEMBLY 28PIN 28PIN/92MM/ WHITE	WX1L2600-001
CL1207		WIRE ASSEMBLY 28PIN 28PIN/92MM/ WHITE	WX1L2600-001
CLN320		WIRE ASSEMBLY 1PIN 110MM BLACK	WX1L2600-015
CLN801		WIRE ASSEMBLY 2PIN SPEAKER 2PIN/ 325MM	WX1L2600-009
CLN802		WIRE ASSEMBLY 2PIN SPEAKER 2PIN/ 325MM	WX1L2600-009
L1		SCREW P-TIGHT 3X12 WASHER HEAD+	GCJP3120
L4		SCREW P-TIGHT M3*10 WASHERHEAD+	GCJP3100
L9		SCREW P-TIGHT 3X10 BIND HEAD+	GBHP3100
L14		SCREW P-TIGHT M3X8 BIND HEAD+	GBJP3080

Ref. No.	Mark	Description	Part No.
L22		SCREW P-TIGHT 3X14 WASHER HEAD+	GCJP3140
L23		SCREW P-TIGHT M3X8 BIND HEAD+ BLK	GBHP3080
L25		ASSEMBLED SCREW M3X10	1EM420633A
L27		SCREW P-TIGHT M4X18 BIND HEAD+	GBHP4180
LCD1		LCD MODULE ASSEMBLY UE200XA	1FSA10129
SP801		SPEAKER S0407F10	DSD0807XQ002
SP802		SPEAKER S0407F10	DSD0807XQ002

## PACKING

S1	A	CARTON L3219UK	1EM423033A
S1	B	CARTON L3223UD	1EM423214A
S2		STYROFOAM TOP L2600UA	1EM121396A
S3		STYROFOAM BOTTOM L2600UA	1EM121397A
S4		SET BAG L0301UB	1EM320014A
S5		SERIAL NO. LABEL L9750UA	-----

## ACCESSORIES

X1		BAG POLYETHYLENE 235X365XT0.03	0EM408420A
X2▲	A	OWNERS MANUAL L2600UA	1EMN21765
X2▲	B	OWNERS MANUAL L2604UE	1EMN21875
X3	A	REMOTE CONTROL 170/ECNL301/ NE903UD	NE903UD
X3	B	REMOTE CONTROL 170/ECNL301/ NE900UD	NE900UD
X5		DRY BATTERY R03/2S	XB0M451T0006

# 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:

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

Ref. No.	Description	Part No.
	MMA CBA Consists of the following:	1ESA12649
	MAIN CBA FUNCTION CBA IR SENSOR CBA	----- ----- -----

## MAIN CBA

Ref. No.	Description	Part No.
	MAIN CBA Consists of the following:	-----
<b>CAPACITORS</b>		
C11	ELECTROLYTIC CAP. 47μF/50V M	CE1JMASDL470
C15	ELECTROLYTIC CAP. 47μF/50V M	CE1JMASDL470
C22	ELECTROLYTIC CAP. 100μF/10V M	CE1AMASDL101
C23	CHIP CERAMIC CAP.(1608) CH J 1000pF/50V	CHD1JJ3CH102
C24	CHIP CERAMIC CAP.(1608) CH J 1000pF/50V	CHD1JJ3CH102
C25	CHIP CERAMIC CAP.(1608) B K 0.01μF/50V	CHD1JK30B103
C26	PCB JUMPER D0.6-P5.0	JW5.0T
C27	FILM CAP.(P) 0.018μF/50V J	CA1J183MS029
C28	CHIP CERAMIC CAP.(1608) B K 0.047μF/50V	CHD1JK30B473
C29	CHIP CERAMIC CAP. CH D 3pF/50V	CHD1JD3CH3R0
C30	CHIP CERAMIC CAP.(1608) B K 0.01μF/50V	CHD1JK30B103
C31	PCB JUMPER D0.6-P5.0	JW5.0T
C32	ELECTROLYTIC CAP. 100μF/10V M	CE1AMASDL101
C34	CHIP CERAMIC CAP.(1608) CH J 47pF/50V	CHD1JJ3CH470
C35	ELECTROLYTIC CAP. 1μF/50V M	CE1JMASDL1R0
C36	CHIP CERAMIC CAP.(1608) CH J 47pF/50V	CHD1JJ3CH470
C37	CHIP CERAMIC CAP. CH J 680pF/50V	CHD1JJ3CH681
C39	ELECTROLYTIC CAP. 0.47μF/50V M	CE1JMASDLR47
C41	ELECTROLYTIC CAP. 4.7μF/50V M	CE1JMASDL4R7
C42	CHIP CERAMIC CAP.(1608) B K 0.01μF/50V	CHD1JK30B103
C44	ELECTROLYTIC CAP. 100μF/10V M	CE1AMASDL101
C46	ELECTROLYTIC CAP. 47μF/16V M	CE1CMASDL470
C47	CHIP CERAMIC CAP. CH D 6pF/50V	CHD1JD3CH6R0
C48	CHIP CERAMIC CAP. CH D 3pF/50V	CHD1JD3CH3R0
C501	ELECTROLYTIC CAP. 22μF/50V M	CE1JMASDL220
C502	CHIP CERAMIC CAP.(1608) B K 0.01μF/50V	CHD1JK30B103
C503	ELECTROLYTIC CAP. 220μF/16V M	CE1CMASDL221
C504	CHIP CERAMIC CAP.(1608) B K 0.01μF/50V	CHD1JK30B103

Ref. No.	Description	Part No.
C505	CHIP CERAMIC CAP.(1608) B K 0.01μF/50V	CHD1JK30B103
C506	ELECTROLYTIC CAP. 100μF/10V M	CE1AMASDL101
C507	CHIP CERAMIC CAP.(1608) B K 0.01μF/50V	CHD1JK30B103
C508	ELECTROLYTIC CAP. 10μF/50V M	CE1JMASDL100
C601▲	METALIZED FILM CAP. 0.22μF/250V	CT2E224MS037
C608	CERAMIC CAP. B K 1000pF/2KV	CCD3DKP0B102
C610	ELECTROLYTIC CAP. 100μF/200V M	CE2DMZPDL101
C611	ELECTROLYTIC CAPACITOR 150μF/200V	CA2D151S6012
C612	FILM CAP.(P) 0.01μF/50V J	CMA1JJS00103
C613	FILM CAP.(P) 0.056μF/50V J	CMA1JJS00563
C631	ELECTROLYTIC CAP. 2200μF/25V M	CE1EMZPDL222
C632▲	ELECTROLYTIC CAP. 22μF/100V M	CE2AMASDL220
C633	ELECTROLYTIC CAP. 220μF/16V M	CE1CMASDL221
C634	ELECTROLYTIC CAP. 1000μF/10V M	CE1AMASDL102
C635	ELECTROLYTIC CAP. 470μF/25V M	CE1EMASDL471
C636	ELECTROLYTIC CAP. 220μF/50V M	CE1JMASDL221
C637	ELECTROLYTIC CAP. 470μF/16V M	CE1CMASDL471
C638	CHIP CERAMIC CAP.(1608) B K 0.22μF/16V	CHD1CK30B224
C639	ELECTROLYTIC CAP. 330μF/6.3V M	CE0KMASDL331
C640	CHIP CERAMIC CAP.(1608) B K 0.22μF/16V	CHD1CK30B224
C641	SAFETY CAP. 4700pF/250V KX	CA2E472MR050
C642	ELECTROLYTIC CAP. 220μF/6.3V M H7	CE0KMASSL221
C644	ELECTROLYTIC CAP. 220μF/6.3V M H7	CE0KMASSL221
C646	FILM CAP.(P) 0.082μF/50V J	CMA1JJS00823
C647	ELECTROLYTIC CAP. 220μF/6.3V M H7	CE0KMASSL221
C648	CHIP CERAMIC CAP.(1608) B K 0.22μF/16V	CHD1CK30B224
C649	ELECTROLYTIC CAP. 470μF/16V M	CE1CMASDL471
C650	ELECTROLYTIC CAP. 330μF/25V M	CE1EMASDL331
C651	ELECTROLYTIC CAP. 47μF/16V M H7	CE1CMASSL470
C652	ELECTROLYTIC CAP. 10μF/50V M	CE1JMASDL100
C653	ELECTROLYTIC CAP. 470μF/16V M	CE1CMASDL471
C654	CHIP CERAMIC CAP.(1608) B K 0.22μF/16V	CHD1CK30B224
C655	ELECTROLYTIC CAP. 470μF/6.3V M	CE0KMASDL471
C656	ELECTROLYTIC CAP. 1μF/50V M	CE1JMASDL1R0
C657	CHIP CERAMIC CAP.(1608) B K 0.01μF/50V	CHD1JK30B103
C659	FILM CAP.(P) 0.022μF/50V J	CMA1JJS00223
C660	FILM CAP.(P) 0.0068μF/50V J	CMA1JJS00682
C704	ELECTROLYTIC CAP. 47μF/16V M	CE1CMASDL470
C707	CHIP CERAMIC CAP.(1608) CH J 1000pF/50V	CHD1JJ3CH102
C708	CHIP CERAMIC CAP.(1608) CH J 100pF/50V	CHD1JJ3CH101
C712	ELECTROLYTIC CAP. 47μF/16V M	CE1CMASDL470
C713	CHIP CERAMIC CAP.(1608) B K 3300pF/50V	CHD1JK30B332
C714	CHIP CERAMIC CAP. F Z 1μF/10V	CHD1AZ30F105
C715	CHIP CERAMIC CAP.(1608) B K 3300pF/50V	CHD1JK30B332
C716	CHIP CERAMIC CAP. F Z 1μF/10V	CHD1AZ30F105
C722	ELECTROLYTIC CAP. 47μF/16V M	CE1CMASDL470
C726	ELECTROLYTIC CAP. 47μF/16V M	CE1CMASDL470
C730	ELECTROLYTIC CAP. 47μF/16V M	CE1CMASDL470
C739	ELECTROLYTIC CAP. 100μF/10V M	CE1AMASDL101
C740	CHIP CERAMIC CAP.(1608) CH J 100pF/50V	CHD1JJ3CH101
C751	CHIP CERAMIC CAP. F Z 1μF/10V	CHD1AZ30F105
C752	CHIP CERAMIC CAP. F Z 1μF/10V	CHD1AZ30F105
C753	CHIP CERAMIC CAP.(1608) B K 3300pF/50V	CHD1JK30B332
C754	CHIP CERAMIC CAP.(1608) B K 3300pF/50V	CHD1JK30B332
C781	ELECTROLYTIC CAP. 10μF/50V M	CE1JMASDL100
C782	CHIP CERAMIC CAP.(1608) B K 0.1μF/50V	CHD1JK30B104
C785	ELECTROLYTIC CAP. 100μF/10V M	CE1AMASDL101
C801	ELECTROLYTIC CAP. 220μF/16V M	CE1CMASDL221
C802	ELECTROLYTIC CAP. 220μF/16V M	CE1CMASDL221
C805	ELECTROLYTIC CAP. 10μF/50V M	CE1JMASDL100



Ref. No.	Description	Part No.
D611▲	ZENER DIODE MTZJT-772B	QDTB00MTZJ22
D612▲	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D613	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D615	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D616	ZENER DIODE MTZJT-773B	QDTB00MTZJ33
D620	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D624	ZENER DIODE MTZJT-773B	QDTB00MTZJ33
D631	SCHOTTKY BARRIER DIODE ERC84-009	QDLZERC84009
D632▲	DIODE FR154	NDLZ000FR154
D633	DIODE FR154	NDLZ000FR154
D634	SCHOTTKY BARRIEA DIODE 11EQS04	QD4Z011EQS04
D635	DIODE FR154	NDLZ000FR154
D636▲	DIODE FR154	NDLZ000FR154
D637▲	DIODE 1ZC43(Q)	QDLZ001ZC43Q
D638▲	SCHOTTKY BARRIEA DIODE 11EQS04	QD4Z011EQS04
D639▲	SWITCHING DIODE 1SS400	QD1Z001SS400
D640▲	DIODE 1N5397-B	NDLZ001N5397
D641▲	SWITCHING DIODE 1SS400	QD1Z001SS400
D642▲	SWITCHING DIODE 1SS400	QD1Z001SS400
D643	ZENER DIODE MTZJT-7715B	QDTB00MTZJ15
D644	SWITCHING DIODE 1SS400	QD1Z001SS400
D645	SWITCHING DIODE 1SS400	QD1Z001SS400
D646	SWITCHING DIODE 1SS400	QD1Z001SS400
D647	IC SHUNT REGULATOR KIA431-AT/P	NSZBA0TJY036
D648	SWITCHING DIODE 1SS400	QD1Z001SS400
D649	ZENER DIODE MTZJT-7739B	QDTB00MTZJ39
D650	SWITCHING DIODE 1SS400	QD1Z001SS400
D651	SWITCHING DIODE 1SS400	QD1Z001SS400
D652	SWITCHING DIODE 1SS400	QD1Z001SS400
D653	SWITCHING DIODE 1SS400	QD1Z001SS400
D654	ZENER DIODE MTZJT-7733C	QDTC00MTZJ33
D655	SWITCHING DIODE 1SS400	QD1Z001SS400
D656	SCHOTTKY BARRIEA DIODE 11EQS04	QD4Z011EQS04
D658	PCB JUMPER D0.6-P5.0	JW5.0T
D659	PCB JUMPER D0.6-P5.0	JW5.0T
D660	PCB JUMPER D0.6-P5.0	JW5.0T
D663	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D664	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D681	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D682	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D801	SWITCHING DIODE 1SS400	QD1Z001SS400
D802	SWITCHING DIODE 1SS400	QD1Z001SS400
D803	ZENER DIODE MTZJT-776.2B	QDTB0MTZJ6R2
D806	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D807	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1201	ZENER DIODE MTZJT-772.2B	QDTB0MTZJ2R2
D1202	ZENER DIODE MTZJT-773.9B	QDTB0MTZJ3R9
D1205	ZENER DIODE MTZJT-773.6B	QDTB0MTZJ3R6
D1206	SCHOTTKY BARRIEA DIODE 11EQS04	QD4Z011EQS04
D1207	SWITCHING DIODE 1SS400	QD1Z001SS400
D1208	SCHOTTKY BARRIEA DIODE 11EQS04	QD4Z011EQS04
D1209	IC TL431ACDBVR	NSZBA0TTY116
D1301	ZENER DIODE MTZJT-773.9B	QDTB0MTZJ3R9
<b>ICS</b>		
IC31	IC VIF/SIF M61116FP TF0G	QSZBA0SHT034
IC601▲	PHOTOCOUPLER LTV-817C-F	NPEC0LT817F
IC602	VOLTAGE REGULATOR LD1117SC-R	NSZBA0TSS229
IC603	VOLTAGE REGULATOR LD1117SC-R	NSZBA0TSS229
IC605	IC VOLTAGE REGULATOR 5V KIA7805API/P	NSZBA0SJY041
IC606	IC VOLTAGE REGULATOR 5V KIA7805API/P	NSZBA0SJY041
IC781	IC SWITCH TC4053BF(EL N F)	QSZBA0TTS163
IC801	IC AN17812A	QSZBA0SMS017

Ref. No.	Description	Part No.
IC851	IC MTS DECODER AN5832SA-E1V	QSZBA0TMS003
IC852	IC SWITCHING TC4052BF(ELNF)	QSZBA0TTS162
IC1201	RESET IC IC-PST9223NR	QSZBA0TMM006
IC1202	IC DVP R8A01027A91FP RF0Z	QSZAA0RHT116
IC1205	IC EEPROM(32K) BR24L32F-WE2	QSZBA0TRM067
IC1207	IC TL3472CDR	NSZBA0TTY115
IC1211	IC RESET BU4223G-TR 5PIN	QSZBA0TRM103
<b>COILS</b>		
L11	INDUCTOR 22 $\mu$ H-K-5FT	LLARKBSTU220
L12	INDUCTOR 22 $\mu$ H-K-5FT	LLARKBSTU220
L13	INDUCTOR 0.47 $\mu$ H-J-26T	LLAXJATTU47
L21	INDUCTOR 100 $\mu$ H-K-5FT	LLARKBSTU101
L22	INDUCTOR 150 $\mu$ H-J-26T	LLAXJATTU151
L31	INDUCTOR 22 $\mu$ H-K-5FT	LLARKBSTU220
L32	INDUCTOR 18 $\mu$ H-J-26T	LLAXJATTU180
L601▲	LINE FILTER 5.0MH 6Y075	LLBG00ZKT004
L631	INDUCTOR 47 $\mu$ H-K-5FT	LLARKBSTU470
L632	INDUCTOR 47 $\mu$ H-K-5FT	LLARKBSTU470
L701	INDUCTOR 22 $\mu$ H-K-5FT	LLARKBSTU220
L781	PCB JUMPER D0.6-P5.0	JW5.0T
L851	PCB JUMPER D0.6-P5.0	JW5.0T
L1239	INDUCTOR CHIP LK16081R0K-T 1.0 $\mu$ H	LLACKB3TU1R0
L1240	INDUCTOR CHIP LK16081R0K-T 1.0 $\mu$ H	LLACKB3TU1R0
L1241	INDUCTOR CHIP LK16081R0K-T 1.0 $\mu$ H	LLACKB3TU1R0
L1243	INDUCTOR CHIP LK16081R0K-T 1.0 $\mu$ H	LLACKB3TU1R0
L1245	INDUCTOR CHIP LK16081R0K-T 1.0 $\mu$ H	LLACKB3TU1R0
L1246	INDUCTOR CHIP LK16081R0K-T 1.0 $\mu$ H	LLACKB3TU1R0
L1301	PCB JUMPER D0.6-P5.0	JW5.0T
<b>TRANSISTORS</b>		
Q401	NPN TRANSISTOR POWER 2SC4881F HFE MAX320	QQWZ2SC4881F
Q402	TRANSISTOR 2SA950-O (TE2 F T)	QQS002SA950F
Q403	TRANSISTOR 2SC4081 T106 Q	QQ1Q02SC4081
Q501	TRANSISTOR 2SA1175(F)	QQSF02SA1175
Q502	RES. BUILT-IN TRANSISTOR BA1F4M-T	QQSZ00BA1F4M
Q503	TRANSISTOR 2SC2120-Y(TE2 F T)	QQSY2SC2120F
Q504	TRANSISTOR 2SA1175(F)	QQSF02SA1175
Q505	RES. BUILT-IN TRANSISTOR BA1F4M-T	QQSZ00BA1F4M
Q506	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q507	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q601▲	FET 2SK3869(Q)	QFWZ2SK3869Q
Q603	TRANSISTOR 2SC2120-O(TE2 F T)	QQS02SC2120F
Q632▲	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q707	TRANSISTOR 2SC4081 T106 Q	QQ1Q02SC4081
Q708	TRANSISTOR 2SC4081 T106 Q	QQ1Q02SC4081
Q802	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q1024	TRANSISTOR IMZ4T108	QQ1Z00001MZ4
Q1204	FET 2SK3018 T106	QF1Z02SK3018
<b>RESISTORS</b>		
R11	CHIP RES. 1/10W J 100 $\Omega$	RRXAJR5Z0101
R12	CHIP RES. 1/10W J 100 $\Omega$	RRXAJR5Z0101
R15	CHIP RES. 1/10W J 4.7k $\Omega$	RRXAJR5Z0472
R21	CHIP RES. 1/10W J 270k $\Omega$	RRXAJR5Z0274
R23	CHIP RES. 1/10W J 2.2k $\Omega$	RRXAJR5Z0222
R24	CHIP RES. 1/10W J 820k $\Omega$	RRXAJR5Z0824
R34	CHIP RES.(1608) 1/10W 0 $\Omega$	RRXAZR5Z0000
R36	CARBON RES. 1/4W J 12k $\Omega$	RCX4JATZ0123
R38	CHIP RES. 1/10W J 100 $\Omega$	RRXAJR5Z0101
R40	CHIP RES. 1/10W J 15k $\Omega$	RRXAJR5Z0153
R42	CHIP RES. 1/10W J 220 $\Omega$	RRXAJR5Z0221
R46	CHIP RES. 1/10W J 1k $\Omega$	RRXAJR5Z0102
R48	PCB JUMPER D0.6-P5.0	JW5.0T
R401	CHIP RES. 1/10W J 1.5k $\Omega$	RRXAJR5Z0152

Ref. No.	Description	Part No.
R402	CARBON RES. 1/4W J 27k Ω	RCX4JATZ0273
R403	CARBON RES. 1/4W J 33 Ω	RCX4JATZ0330
R404	CARBON RES. 1/4W J 5.6k Ω	RCX4JATZ0562
R406	CHIP RES. 1/10W J 3.3k Ω	RRXAJR5Z0332
R407	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R408	CARBON RES. 1/4W J 820 Ω	RCX4JATZ0821
R414	CARBON RES. 1/4W J 680 Ω	RCX4JATZ0681
R415	CARBON RES. 1/4W J 33 Ω	RCX4JATZ0330
R416	CARBON RES. 1/4W J 33 Ω	RCX4JATZ0330
R417	CARBON RES. 1/4W J 33 Ω	RCX4JATZ0330
R419	CARBON RES. 1/4W J 33 Ω	RCX4JATZ0330
R502	CHIP RES. 1/10W J 3.3k Ω	RRXAJR5Z0332
R503	CARBON RES. 1/4W J 27k Ω	RCX4JATZ0273
R504	CARBON RES. 1/4W J 1.5k Ω	RCX4JATZ0152
R505	CHIP RES. 1/10W J 22k Ω	RRXAZR5Z0223
R507	PCB JUMPER D0.6-P5.0	JW5.0T
R509	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R510	CARBON RES. 1/4W J 4.7k Ω	RCX4JATZ0472
R511	CHIP RES. 1/10W J 1.5k Ω	RRXAJR5Z0152
R512	CHIP RES. 1/10W J 3.3k Ω	RRXAJR5Z0332
R513	CHIP RES. 1/10W J 27k Ω	RRXAJR5Z0273
R514	CHIP RES. 1/10W F 10k Ω	RRXAFR5H1002
R515	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R516	CHIP RES. 1/10W F 3k Ω	RRXAFR5H3001
R517	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R518	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R519	CARBON RES. 1/4W J 150 Ω	RCX4JATZ0151
R520	CHIP RES. 1/10W J 56k Ω	RRXAJR5Z0563
R521	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
R526	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R529	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R533	CHIP RES. 1/10W J 3.3k Ω	RRXAJR5Z0332
R601▲	CEMENT RES. 3W K 1.2 Ω	RW031R2PG007
R603▲	CARBON RES. 1/4W J 390k Ω	RCX4JATZ0394
R604	CARBON RES. 1/4W J 390k Ω	RCX4JATZ0394
R605	CARBON RES. 1/4W J 390k Ω	RCX4JATZ0394
R607▲	CARBON RES. 1/4W J 220 Ω	RCX4JATZ0221
R608	CARBON RES. 1/4W J 220 Ω	RCX4JATZ0221
R609	CARBON RES. 1/4W J 390k Ω	RCX4JATZ0394
R610	CARBON RES. 1/4W J 68 Ω	RCX4JATZ0680
R613	METAL OXIDE FILM RES. 2W J 0.47 Ω	RN02R47ZU001
R620▲	CARBON RES. 1/4W J 150 Ω	RCX4JATZ0151
R621	CARBON RES. 1/4W J 1.2k Ω	RCX4JATZ0122
R623	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R631▲	CARBON RES. 1/4W J 12k Ω	RCX4JATZ0123
R632	CHIP RES. 1/10W J 22k Ω	RRXAJR5Z0223
R633	CARBON RES. 1/4W J 12k Ω	RCX4JATZ0123
R635	CARBON RES. 1/4W J 6.8k Ω	RCX4JATZ0682
R636	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R638	CARBON RES. 1/4W J 2.2 Ω	RCX4JATZ02R2
R639	CHIP RES. 1/10W F 1.1k Ω	RRXAFR5H1101
R640	CHIP RES. 1/10W F 1.8k Ω	RRXAFR5H1801
R641	CHIP RES. 1/10W F 910 Ω	RRXAFR5H100
R642	CHIP RES. 1/10W F 180 Ω	RRXAFR5H1800
R645	CHIP RES. 1/10W F 2.2k Ω	RRXAFR5H2201
R646	CARBON RES. 1/4W J 1.2k Ω	RCX4JATZ0122
R647	CHIP RES. 1/10W F 3.9k Ω	RRXAFR5H3901
R648	CHIP RES. 1/10W F 3.9k Ω	RRXAFR5H3901
R649	CHIP RES.(1608) 1/10W F 4.7k Ω	RRXAFR5H0472
R650	CHIP RES.(1608) 1/10W F 4.7k Ω	RRXAFR5H0472
R651	CHIP RES. 1/10W F 1.5k Ω	RRXAFR5H1501
R652	CHIP RES. 1/10W F 1.5k Ω	RRXAFR5H1501
R653	CHIP RES. 1/10W F 1.5k Ω	RRXAFR5H1501

Ref. No.	Description	Part No.
R654	CHIP RES. 1/10W F 1.5k Ω	RRXAFR5H1501
R655	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R656	CHIP RES. 1/10W J 100k Ω	RRXAJR5Z0104
R657	CARBON RES. 1/4W J 390 Ω	RCX4JATZ0391
R659	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R661	CARBON RES. 1/4W J 470 Ω	RCX4JATZ0471
R663	CARBON RES. 1/4W J 2.2 Ω	RCX4JATZ02R2
R664	CARBON RES. 1/4W J 2.2 Ω	RCX4JATZ02R2
R665	CARBON RES. 1/4W J 2.2 Ω	RCX4JATZ02R2
R667	PCB JUMPER D0.6-P5.0	JW5.0T
R669	CARBON RES. 1/4W J 330 Ω	RCX4JATZ0331
R670	CARBON RES. 1/4W J 330 Ω	RCX4JATZ0331
R671	CARBON RES. 1/4W J 330 Ω	RCX4JATZ0331
R704	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R707	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R708	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R709	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R711	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R713	CHIP RES. 1/10W J 18k Ω	RRXAJR5Z0183
R714	CHIP RES. 1/10W J 18k Ω	RRXAJR5Z0183
R715	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R716	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R717	CHIP RES. 1/10W J 75 Ω	RRXAJR5Z0750
R718	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R719	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R722	CHIP RES. 1/10W J 75 Ω	RRXAJR5Z0750
R723	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R725	CHIP RES. 1/10W J 75 Ω	RRXAJR5Z0750
R734	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R736	CHIP RES. 1/10W J 75 Ω	RRXAJR5Z0750
R738	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R739	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R742	CHIP RES. 1/10W J 75 Ω	RRXAJR5Z0750
R744	CHIP RES. 1/10W J 75 Ω	RRXAJR5Z0750
R751	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R752	CHIP RES. 1/10W J 18k Ω	RRXAJR5Z0183
R753	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R754	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R755	CHIP RES. 1/10W J 18k Ω	RRXAJR5Z0183
R756	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R759	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R782	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R784	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R785	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R786	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R787	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R788	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R789	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R790	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R791	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R792	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R793	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R794	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R798	CHIP RES. 1/10W J 1k Ω	RRXAJR5Z0102
R799	CHIP RES. 1/10W J 1k Ω	RRXAJR5Z0102
R805	METAL OXIDE FILM RES. 2W J 3.9 Ω	RN023R9ZU001
R806	CHIP RES. 1/10W J 560 Ω	RRXAJR5Z0561
R807	METAL OXIDE FILM RES. 2W J 3.9 Ω	RN023R9ZU001
R808	CHIP RES. 1/10W J 3.3k Ω	RRXAJR5Z0332
R809	CHIP RES. 1/10W J 4.7k Ω	RRXAJR5Z0472
R810	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R811	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R813	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473

Ref. No.	Description	Part No.
R814	CHIP RES. 1/10W J 2.7kΩ	RRXAJR5Z0272
R815	CARBON RES. 1/4W J 180Ω	RCX4JATZ0181
R816	CHIP RES. 1/10W J 2.7kΩ	RRXAJR5Z0272
R817	CHIP RES. 1/10W J 47kΩ	RRXAJR5Z0473
R819	CARBON RES. 1/4W J 180Ω	RCX4JATZ0181
R820	CHIP RES.(1608) 1/10W 0Ω	RRXAZR5Z0000
R822	CARBON RES. 1/4W J 22kΩ	RCX4JATZ0223
R823	CHIP RES. 1/10W J 22kΩ	RRXAJR5Z0223
R824	CHIP RES. 1/10W J 22kΩ	RRXAJR5Z0223
R825	CHIP RES. 1/10W J 22kΩ	RRXAJR5Z0223
R826	CHIP RES. 1/10W J 22kΩ	RRXAJR5Z0223
R827	CHIP RES. 1/10W J 22kΩ	RRXAJR5Z0223
R829	CHIP RES. 1/10W J 22kΩ	RRXAJR5Z0223
R830	CHIP RES. 1/10W J 22kΩ	RRXAJR5Z0223
R833	CARBON RES. 1/4W J 22kΩ	RCX4JATZ0223
R834	CHIP RES. 1/10W J 22kΩ	RRXAJR5Z0223
R837	CHIP RES. 1/10W J 1kΩ	RRXAJR5Z0102
R838	CHIP RES. 1/10W J 12kΩ	RRXAJR5Z0123
R839	CHIP RES. 1/10W J 12kΩ	RRXAJR5Z0123
R840	CHIP RES. 1/10W J 1.5kΩ	RRXAJR5Z0152
R842	CHIP RES. 1/10W J 22kΩ	RRXAJR5Z0223
R843	CHIP RES. 1/10W J 22kΩ	RRXAJR5Z0223
R844	CHIP RES. 1/10W J 2.2kΩ	RRXAJR5Z0222
R851	CHIP RES. 1/10W J 100Ω	RRXAJR5Z0101
R852	CHIP RES. 1/10W J 100Ω	RRXAJR5Z0101
R853	CHIP RES. 1/10W J 3.3kΩ	RRXAJR5Z0332
R855	CHIP RES. 1/10W J 180kΩ	RRXAJR5Z0184
R1201	CHIP RES. 1/10W J 470Ω	RRXAJR5Z0471
R1204	CHIP RES. 1/10W J 4.7kΩ	RRXAJR5Z0472
R1213	CHIP RES. 1/10W J 10kΩ	RRXAJR5Z0103
R1216	CHIP RES. 1/10W J 1MΩ	RRXAJR5Z0105
R1217	CHIP RES. 1/10W J 56Ω	RRXAJR5Z0560
R1218	CHIP RES. 1/10W J 4.7kΩ	RRXAJR5Z0472
R1219	CHIP RES. 1/10W J 100Ω	RRXAJR5Z0101
R1220	CHIP RES. 1/10W J 5.6kΩ	RRXAJR5Z0562
R1221	CARBON RES. 1/4W J 100Ω	RCX4JATZ0101
R1223	CHIP RES. 1/10W J 5.6kΩ	RRXAJR5Z0562
R1224	CARBON RES. 1/4W J 100Ω	RCX4JATZ0101
R1226	CHIP RES. 1/10W J 33Ω	RRXAJR5Z0330
R1231	CHIP RES. 1/10W J 10kΩ	RRXAJR5Z0103
R1233	CHIP RES. 1/10W J 100Ω	RRXAJR5Z0101
R1234	CHIP RES. 1/10W J 100Ω	RRXAJR5Z0101
R1235	CHIP RES. 1/10W J 100Ω	RRXAJR5Z0101
R1237	CHIP RES. 1/10W J 10kΩ	RRXAJR5Z0103
R1242	CHIP RES. 1/10W F 750Ω	RRXAFR5H7500
R1243	CHIP RES. 1/10W F 200Ω	RRXAFR5H2000
R1244	CHIP RES. 1/10W F 160Ω	RRXAFR5H1600
R1245	CHIP RES. 1/10W F 750Ω	RRXAFR5H7500
R1246	CHIP RES. 1/10W F 150Ω	RRXAFR5H1500
R1247	CHIP RES. 1/10W F 750Ω	RRXAFR5H7500
R1248	CHIP RES. 1/10W F 160Ω	RRXAFR5H1600
R1249	CHIP RES. 1/10W F 200Ω	RRXAFR5H2000
R1250	CHIP RES. 1/10W F 750Ω	RRXAFR5H7500
R1251	CHIP RES.(1608) 1/10W F 68Ω	RRXAFR5H68R0
R1254	CHIP RES. 1/10W J 18kΩ	RRXAJR5Z0183
R1255	CHIP RES. 1/10W J 22kΩ	RRXAJR5Z0223
R1256	CHIP RES. 1/10W J 2.7kΩ	RRXAJR5Z0272
R1264	CHIP RES.(1608) 1/10W 0Ω	RRXAZR5Z0000
R1265	CHIP RES.(1608) 1/10W 0Ω	RRXAZR5Z0000
R1268	CHIP RES.(1608) 1/10W 0Ω	RRXAZR5Z0000
R1269	CHIP RES. 1/10W J 68kΩ	RRXAJR5Z0683
R1270	CHIP RES.(1608) 1/10W 0Ω	RRXAZR5Z0000
R1271	CHIP RES. 1/10W J 2.2kΩ	RRXAJR5Z0222

Ref. No.	Description	Part No.
R1272	CHIP RES. 1/10W J 100Ω	RRXAJR5Z0101
R1274	CHIP RES. 1/10W J 39kΩ	RRXAJR5Z0393
R1275	CHIP RES. 1/10W J 4.3kΩ	RRXAJR5Z0432
R1276	CHIP RES. 1/10W J 15kΩ	RRXAJR5Z0153
R1277	CHIP RES.(1608) 1/10W 0Ω	RRXAZR5Z0000
R1278	CHIP RES. 1/10W J 100Ω	RRXAJR5Z0101
R1279	CHIP RES. 1/10W J 75Ω	RRXAJR5Z0750
R1301	CHIP RES.(1608) 1/10W 0Ω	RRXAZR5Z0000
R1302	CHIP RES.(1608) 1/10W 0Ω	RRXAZR5Z0000
R1303	CHIP RES.(1608) 1/10W 0Ω	RRXAZR5Z0000
R1304	CHIP RES. 1/10W J 56Ω	RRXAJR5Z0560
R1305	CHIP RES. 1/10W J 56Ω	RRXAJR5Z0560
R1306	CHIP RES. 1/10W J 56Ω	RRXAJR5Z0560
R1307	CHIP RES. 1/10W J 56Ω	RRXAJR5Z0560
R1308	CHIP RES. 1/10W J 56Ω	RRXAJR5Z0560
R1309	CHIP RES. 1/10W J 56Ω	RRXAJR5Z0560
R1310	CHIP RES. 1/10W J 56Ω	RRXAJR5Z0560
R1311	CHIP RES. 1/10W J 56Ω	RRXAJR5Z0560
R1312	CHIP RES. 1/10W J 56Ω	RRXAJR5Z0560
R1313	CHIP RES. 1/10W J 56Ω	RRXAJR5Z0560
R1314	CHIP RES. 1/10W J 56Ω	RRXAJR5Z0560
R1315	CHIP RES. 1/10W J 56Ω	RRXAJR5Z0560
R1316	CHIP RES. 1/10W J 56Ω	RRXAJR5Z0560
R1317	CHIP RES. 1/10W J 56Ω	RRXAJR5Z0560
R1318	CHIP RES. 1/10W J 56Ω	RRXAJR5Z0560
R1319	CHIP RES. 1/10W J 56Ω	RRXAJR5Z0560
R1320	CHIP RES. 1/10W J 56Ω	RRXAJR5Z0560
R1321	CHIP RES. 1/10W J 56Ω	RRXAJR5Z0560
R1322	CHIP RES.(1608) 1/10W 0Ω	RRXAZR5Z0000
R1323	CHIP RES. 1/10W J 56Ω	RRXAJR5Z0560
R1324	CHIP RES.(1608) 1/10W 0Ω	RRXAZR5Z0000
R1325	CHIP RES. 1/10W J 56Ω	RRXAJR5Z0560
R1326	CHIP RES. 1/10W J 56Ω	RRXAJR5Z0560
R1327	CHIP RES. 1/10W J 56Ω	RRXAJR5Z0560
R1328	CHIP RES. 1/10W J 56Ω	RRXAJR5Z0560
R1329	CHIP RES. 1/10W J 56Ω	RRXAJR5Z0560
R1330	CHIP RES. 1/10W J 56Ω	RRXAJR5Z0560
R1331	CHIP RES. 1/10W J 56Ω	RRXAJR5Z0560
R1332	CHIP RES. 1/10W J 56Ω	RRXAJR5Z0560
R1333	CHIP RES. 1/10W J 56Ω	RRXAJR5Z0560
R1334	CHIP RES. 1/10W J 56Ω	RRXAJR5Z0560
R1335	CHIP RES. 1/10W J 56Ω	RRXAJR5Z0560
R1336	CHIP RES. 1/10W J 56Ω	RRXAJR5Z0560
R1337	CHIP RES. 1/10W J 56Ω	RRXAJR5Z0560
R1338	CHIP RES. 1/10W J 56Ω	RRXAJR5Z0560
R1339	CHIP RES. 1/10W J 56Ω	RRXAJR5Z0560
R1340	CHIP RES. 1/10W J 56Ω	RRXAJR5Z0560
R1341	CHIP RES. 1/10W J 56Ω	RRXAJR5Z0560
R1342	CHIP RES. 1/10W J 56Ω	RRXAJR5Z0560
R1343	CHIP RES.(1608) 1/10W 0Ω	RRXAZR5Z0000
R1344	CHIP RES.(1608) 1/10W 0Ω	RRXAZR5Z0000
R1345	CHIP RES.(1608) 1/10W 0Ω	RRXAZR5Z0000
R1346	CHIP RES.(1608) 1/10W 0Ω	RRXAZR5Z0000
R1347	CHIP RES. 1/10W J 100Ω	RRXAJR5Z0101
R1348	CHIP RES. 1/10W J 47Ω	RRXAJR5Z0470
R1349	CHIP RES. 1/10W J 47Ω	RRXAJR5Z0470
R1350	CHIP RES. 1/10W J 100Ω	RRXAJR5Z0101
R1351	CHIP RES. 1/10W J 100Ω	RRXAJR5Z0101
R1352	CHIP RES. 1/10W J 100Ω	RRXAJR5Z0101
R1353	CHIP RES. 1/10W J 100Ω	RRXAJR5Z0101
R1354	CHIP RES. 1/10W J 1kΩ	RRXAJR5Z0102
R1355	CHIP RES. 1/10W J 100Ω	RRXAJR5Z0101
R1356	CHIP RES. 1/10W J 100Ω	RRXAJR5Z0101



Ref. No.	Description	Part No.
C365	CHIP CERAMIC CAP.(1608) B K 0.01μF/50V	CHD1JK30B103
C366	ELECTROLYTIC CAP. 10μF/50V M	CE1JMASDL100
C367	CHIP CERAMIC CAP.(1608) B K 0.01μF/50V	CHD1JK30B103
C368	ELECTROLYTIC CAP. 10μF/50V M	CE1JMASDL100
C369	CHIP CERAMIC CAP.(1608) B K 0.01μF/50V	CHD1JK30B103
C370	CAP METALIZED FILM 0.068μF/250V/J	CT2E663MS041
C371	ELECTROLYTIC CAP. 22μF/50V M	CE1JMASDL220
<b>CONNECTORS</b>		
CN301	BACK LIGHT CONNECTOR 1717369-1	JB17D02AP001
CN302	BACK LIGHT CONNECTOR 1717369-1	JB17D02AP001
CN303	BACK LIGHT CONNECTOR 1717369-1	JB17D02AP001
CN304	CONNECTOR PRINT MES C/15/S/ 127301115K2	JCTWA15TG004
CN310	CONNECTOR PRINT OSU 00828302120000S+	J383C02UG004
<b>DIODES</b>		
D306	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D307	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D308	ZENER DIODE MTZJT-776.2B	QDTB0MTZJ6R2
D309	ZENER DIODE MTZJT-7710B	QDTB00MTZJ10
D321	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D322	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D323	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D324	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D325	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D326	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D327	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D328	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D329	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D330	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D331	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D332	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D333	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D334	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D341	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D342	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D343	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D344	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D345	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D346	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D347	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D348	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D349	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D350	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D351	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D352	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D353	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D354	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D361	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D362	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D363	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D364	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D365	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D366	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D367	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D368	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D369	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D370	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D371	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D372	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D373	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D374	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133

Ref. No.	Description	Part No.
<b>COILS</b>		
L301	COIL CHOKE ELC10D101EL	LLC101KMS003
L302	COIL CHOKE ELC10D101EL	LLC101KMS003
L303	COIL CHOKE ELC10D101EL	LLC101KMS003
<b>TRANSISTORS</b>		
Q304	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q305	TRANSISTOR 2SA1175(F)	QQSF02SA1175
Q306	TRANSISTOR 2SC2120-O(TE2 F T)	QQS02SC2120F
Q321	FET MOS SMD HAT2215R 1UA	QF2ZHAT2215R
Q322	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q323	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q324	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q325	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q341	FET MOS SMD HAT2215R 1UA	QF2ZHAT2215R
Q342	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q343	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q344	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q361	FET MOS SMD HAT2215R 1UA	QF2ZHAT2215R
Q362	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q363	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q364	TRANSISTOR 2SC2785(F)	QQSF02SC2785
<b>RESISTORS</b>		
R309	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R310	CARBON RES. 1/4W J 1.2k Ω	RCX4JATZ0122
R311	CHIP RES. 1/10W J 47 Ω	RRXAJR5Z0470
R312	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R313	CHIP RES. 1/10W J 33k Ω	RRXAJR5Z0333
R318	CARBON RES. 1/4W J 1.2k Ω	RCX4JATZ0122
R321	CHIP RES. 1/10W J 390 Ω	RRXAJR5Z0391
R322	CHIP RES. 1/10W J 390 Ω	RRXAJR5Z0391
R323	CHIP RES. 1/10W J 1k Ω	RRXAJR5Z0102
R324	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R325	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R326	CHIP RES. 1/10W J 1k Ω	RRXAJR5Z0102
R327	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R328	CHIP RES. 1/10W J 22 Ω	RRXAJR5Z0220
R329	CHIP RES. 1/10W J 22 Ω	RRXAJR5Z0220
R330	CHIP RES. 1/10W J 4.7k Ω	RRXAJR5Z0472
R331	CHIP RES. 1/10W J 4.7k Ω	RRXAJR5Z0472
R332	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R333	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R334	CHIP RES. 1/10W J 15k Ω	RRXAJR5Z0153
R335	CHIP RES. 1/10W J 2.2k Ω	RRXAJR5Z0222
R336	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R337	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R341	CHIP RES. 1/10W J 390 Ω	RRXAJR5Z0391
R342	CHIP RES. 1/10W J 390 Ω	RRXAJR5Z0391
R343	CHIP RES. 1/10W J 1k Ω	RRXAJR5Z0102
R344	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R345	CHIP RES. 1/10W J 1k Ω	RRXAJR5Z0102
R346	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R347	CHIP RES. 1/10W J 22 Ω	RRXAJR5Z0220
R348	CHIP RES. 1/10W J 22 Ω	RRXAJR5Z0220
R349	CHIP RES. 1/10W J 4.7k Ω	RRXAJR5Z0472
R350	CHIP RES. 1/10W J 4.7k Ω	RRXAJR5Z0472
R351	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R352	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R353	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R356	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R357	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R361	CHIP RES. 1/10W J 390 Ω	RRXAJR5Z0391
R362	CHIP RES. 1/10W J 390 Ω	RRXAJR5Z0391

<b>Ref. No.</b>	<b>Description</b>	<b>Part No.</b>
R363	CHIP RES. 1/10W J 1k $\Omega$	RRXAJR5Z0102
R364	CHIP RES. 1/10W J 10k $\Omega$	RRXAJR5Z0103
R365	CHIP RES. 1/10W J 1k $\Omega$	RRXAJR5Z0102
R366	CHIP RES. 1/10W J 10k $\Omega$	RRXAJR5Z0103
R367	CHIP RES. 1/10W J 22 $\Omega$	RRXAJR5Z0220
R368	CHIP RES. 1/10W J 22 $\Omega$	RRXAJR5Z0220
R369	CHIP RES. 1/10W J 4.7k $\Omega$	RRXAJR5Z0472
R370	CHIP RES. 1/10W J 4.7k $\Omega$	RRXAJR5Z0472
R371	CHIP RES. 1/10W J 10k $\Omega$	RRXAJR5Z0103
R372	CHIP RES. 1/10W J 10k $\Omega$	RRXAJR5Z0103
R373	CHIP RES. 1/10W J 10k $\Omega$	RRXAJR5Z0103
R376	CHIP RES. 1/10W J 10k $\Omega$	RRXAJR5Z0103
R377	CHIP RES. 1/10W J 10k $\Omega$	RRXAJR5Z0103
<b>MISCELLANEOUS</b>		
JS326	PCB JUMPER D0.6-P5.0	JW5.0T
JS346	PCB JUMPER D0.6-P5.0	JW5.0T
JS366	PCB JUMPER D0.6-P5.0	JW5.0T
T301	TRANS INVERTER ETJV27ZJ24AC	LTZ2PC0MS003
T302	TRANS INVERTER ETJV27ZJ24AC	LTZ2PC0MS003
T303	TRANS INVERTER ETJV27ZJ24AC	LTZ2PC0MS003

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L2600UA/L2604UE  
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