SYLVANIA

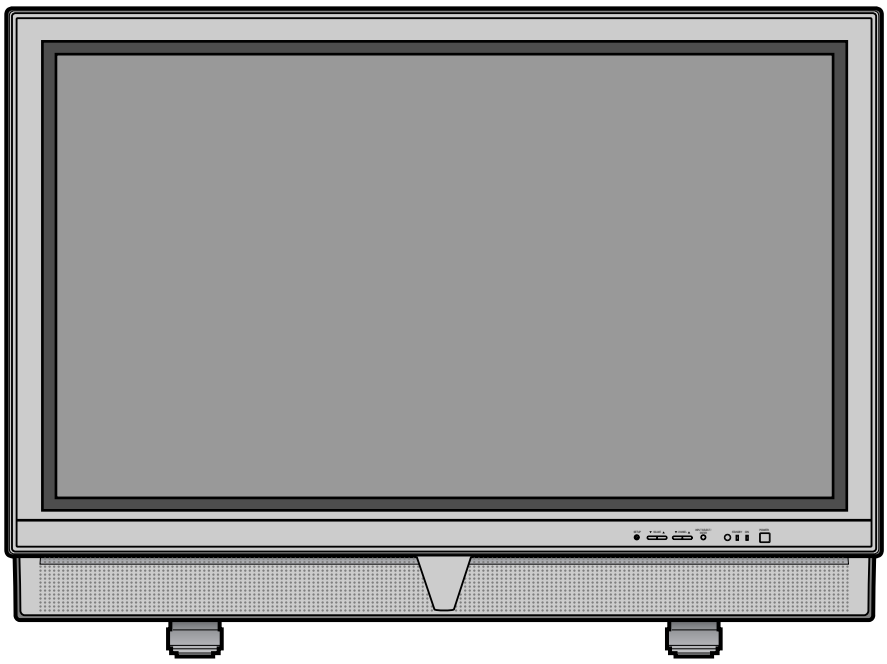
SERVICE MANUAL

Main Section
- Specifications
- Adjustment Procedures
- Troubleshooting
- Schematic Diagrams
- CBA's
- Exploded Views
- Parts List

Plasma Display Module Section
- Precautions
- Name & Function
- Disassembling / Assemblingt
- Operation Check
- Wiring Diagram

42″ DIGITAL/ANALOG PLASMA DISPLAY TV

6842THG



IMPORTANT SAFETY NOTICE

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

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

MAIN SECTION

42″ DIGITAL/ANALOG PLASMA DISPLAY TV

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- **Specifications**
- **Adjustment Procedures**
- **Troubleshooting**
- **Schematic Diagrams**
- **CBA's**
- **Exploded Views**
- **Parts List**

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SPECIFICATIONS

< PANEL >

Description	Condition	Unit	Nominal	Limit
1. Native Pixel Resolusion	Horizontal Vertical	pixels pixels	1024 768	--- ---
2. Brightness(w/ filter)		cd/m^2	70	---
3. Output Colors		---	16.7mil.	---

< TUNER / NTSC >

Description	Condition	Unit	Nominal	Limit
1. AFT Pull-in Range		MHz MHz	+2.3 -2.3	+2.1 -2.1
2. Syncronizing Sens.	ch.4 ch.10 ch.41	dBu dBu dBu	--- --- ---	20 20 23

< TUNER / ATSC >

Description	Condition	Unit	Nominal	Limit
1. Received Freq. Range (-28dBm)		kHz kHz	--- ---	+100 -100
2. ATSC Dynamic Range (min / max)	ch.4 ch.10 ch.41	dBm dBm dBm	--- --- ---	-76/0 -76/0 -74/+4

< VIDEO >

Description	Condition	Unit	Nominal	Limit
1. Over Scan	Horizontal Vertical	% %	7 5	--- ---
2. Color Temperature	x y	°K	12000 0.272 0.278	 ±10% ±10%
3. Resolution [composite video]	Horizontal Vertical	line line	400 350	--- ---

< AUDIO>

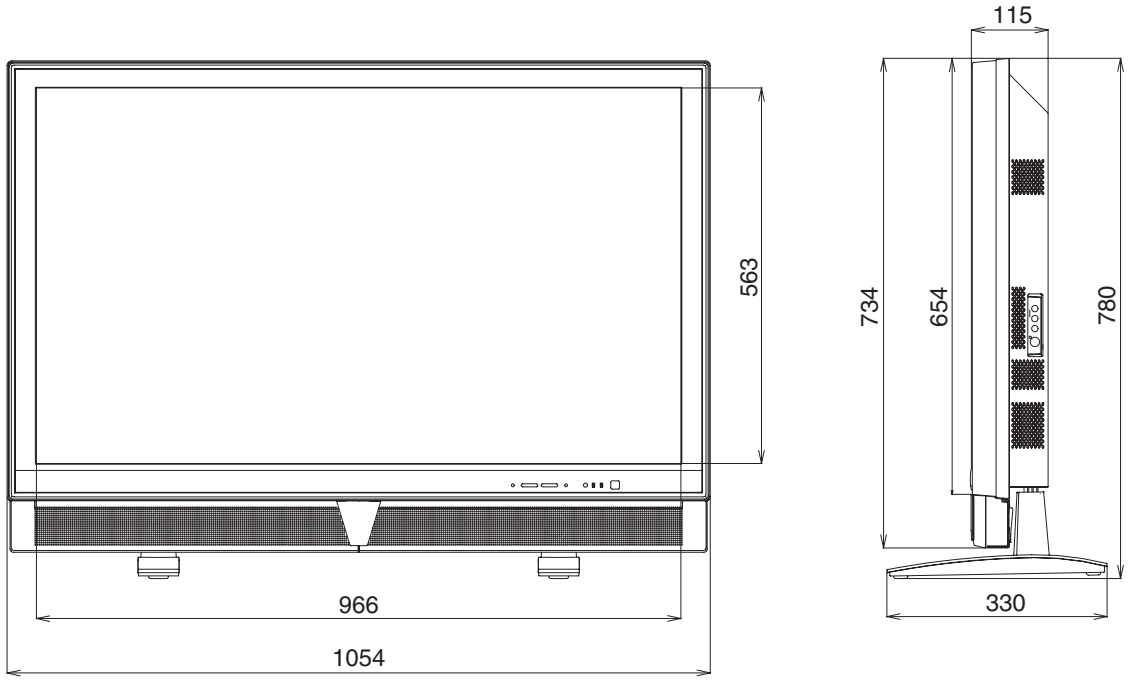
All items are measured across 8 Ω load at speaker output terminal.

Description	Condition	Unit	Nominal	Limit
1. Audio Output Power	10% THD: Lch/Rch	W	5.0/5.0	4.5/4.5
2. Audio Distortion	500mW: Lch/Rch	%	0.5/0.5	2.0/2.0
3. Audio Freq. Response (NTSC)	20 - 1kHz 1k - 11kHz *1kHz : 0dB	dB dB	-1 to +5 -8 to +1	--- ---

Description	Condition	Unit	Nominal	Limit
4. Audio Freq. Response (Others)	20 - 1kHz 1k - 20kHz *1kHz : 0dB	dB dB	-1 to +5 -3 to +1	--- ---

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.

DIMENSIONS



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 Monitor 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) excessively wide cabinet ventilation slots, and (2) an improperly fitted and/or incorrectly secured cabinet back cover.

c. **Leakage Current 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 exposed metallic cabinet part. 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 leakage current tester or a metering system that complies with American National Standards Institute (ANSI) C101.1 Leakage Current for Appliances. 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 0.75 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 cabinet, or on the chassis,

3. **Design Alteration Warning -** Do not alter or add to the mechanical or electrical design of this monitor. 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 monitor 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 monitor 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 monitor 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.

General Caution of Plasma Display

1. Since the Panel module and front filter are made of glass, sufficient care shall be taken when handling the broken module and filter in order to avoid injury.

2. If necessary to replace Panel module, this work must be started after the panel module and the AC/DC Power supply becomes sufficiently cool.

3. Special care must be taken with the display area to avoid damaging its surface.

4. The Panel Module shall not be touched with bare hands to protect its surface from stains.

5. It is recommended to use clean soft gloves during the replacing work of the Panel module in order to protect, not only the display area of the panel module but also the serviceman.

6. The Chip Tube of the panel module (located upper left of the back of the panel module) and flexible cables connecting Panel glasses to the drive circuitry Printed Wiring Boards (P.W.B.) are very weak, so sufficient care must be taken to prevent breaking or cutting any of these. If the Chip Tube breaks the panel module will never work, replacement for a new plasma panel module will be needed.

7. Signal, power supply P.W.B.'s and PDP driving circuits P.W.B.'s are assembled on the rear side of the PDP module, take special care with this fragile circuitry; particularly, Flexible Printed Circuits bonded to surrounding edges of the glass panel. They are not strong enough to withstand harsh outer mechanical forces. Avoid touching the flexible printed circuits by not only your hands, but also tools, chassis, or any other object. Extreme bending of the connectors must be avoided too. In case the flexible printed circuits are damaged, the corresponding addressed portions of the screen will not be lit and exchange of a glass panel will be required.

PDP Module Handling

When there is need to replace a broken PDP module which is the displaying device from the Plasma display unit, consider the following:

1. When carrying the PDP module, two persons should stand at both shorter-edge sides of the glass-panel and transport it with their palms. Avoid touching the Flexible Printed Circuits or the chip tube on the corner of the glass-panel. Handle only by the surface of the glass panel.
2. When carrying PDP module, watch surrounding objects, such as tables, and also do not carry it alone since it may be dangerous and it will be damaged due to excessive stress to the module (glass-panel).
3. Please do not stand the module with the edge of the glass-panel on the table since this might result in damage to the glass-panel and/or flexible printed circuits due to excessive stress to the module (glass-panel).

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. Also check areas surrounding repaired locations.

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

J. 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)

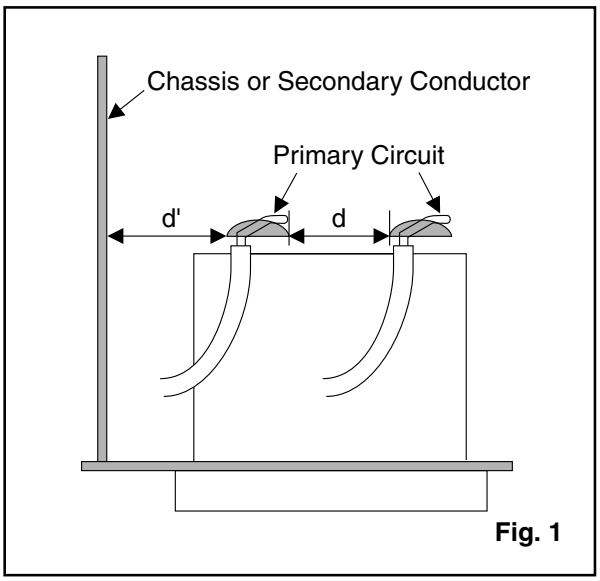


Fig. 1

Table 1 : Ratings for selected area

AC Line Voltage	Region	Clearance Distance (d) (d')
110 to 130 V	USA or CANADA	≥ 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 (any two parts or contacts, between any part or contact and either pole of the 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.

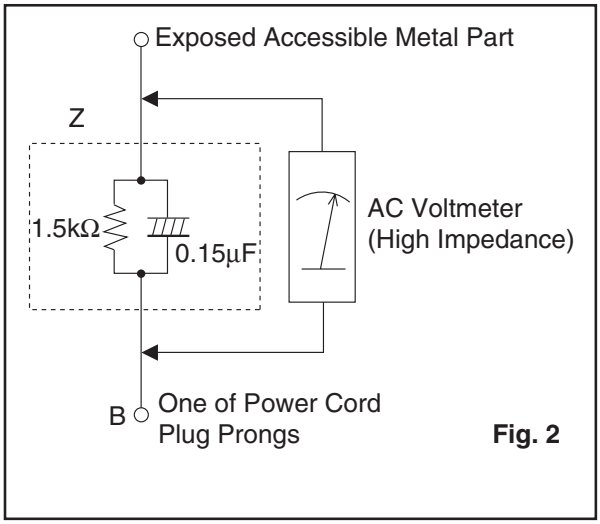


Fig. 2

Measuring Method: (Power ON)

Insert load Z between B (any two parts or contacts, between any part or contact and either pole of the 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

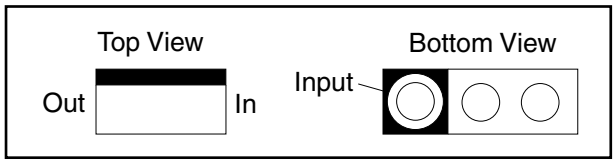
AC Line Voltage	Region	Load Z	Leakage Current (i)	Earth Ground (B) to:
110 to 130 V	USA	0.15μF CAP. & 1.5kΩ RES. connected in parallel	i≤0.75mA peaks	Exposed accessible parts

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

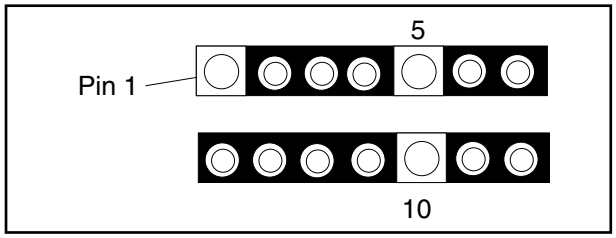
STANDARD NOTES FOR SERVICING

Circuit Board Indications

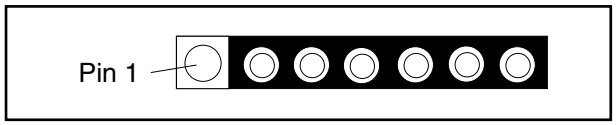
a. The output pin of the 3 pin Regulator ICs is indicated as shown.



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

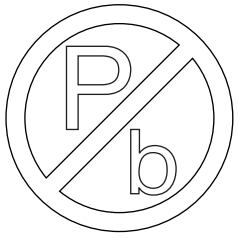


c. The 1st pin of every male connector is indicated as shown.



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)

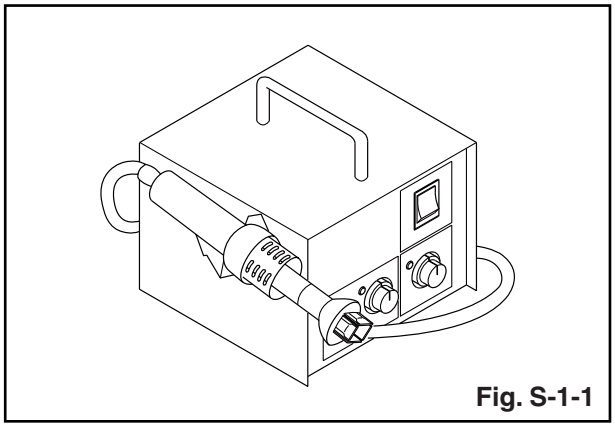


Fig. S-1-1

(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)

3. 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.

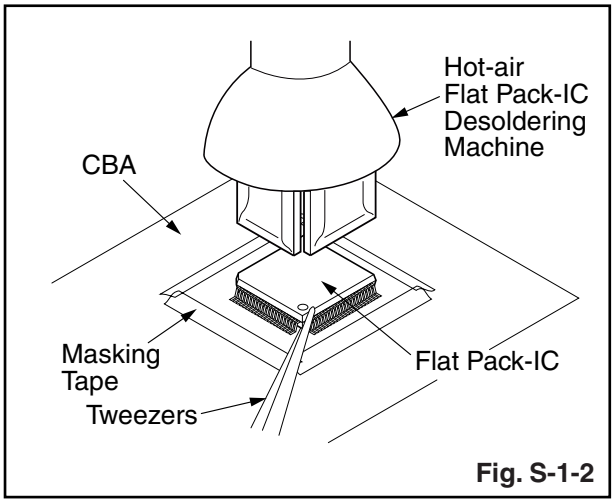


Fig. S-1-2

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)

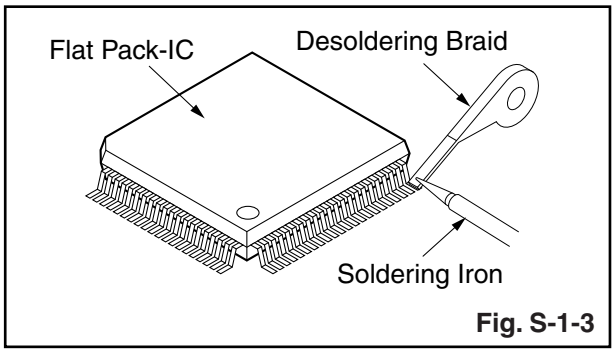


Fig. S-1-3

(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)

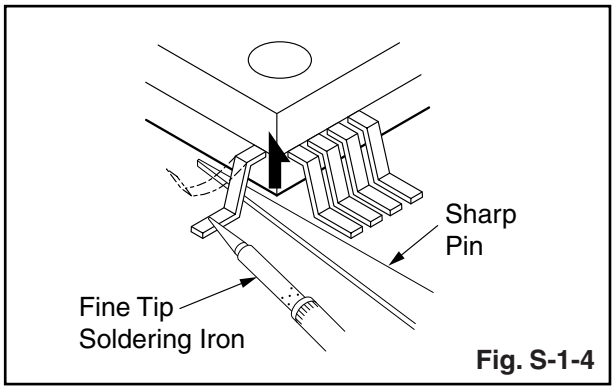


Fig. S-1-4

(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.

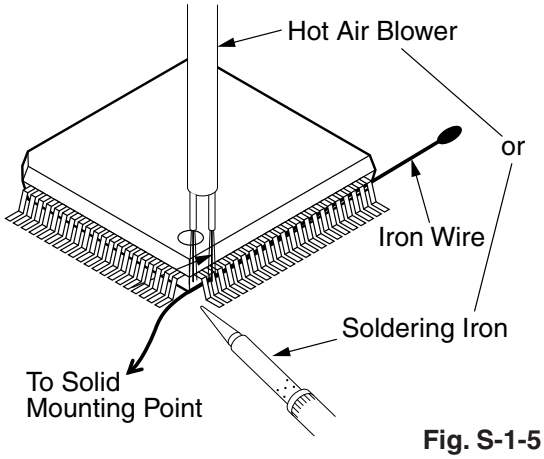


Fig. S-1-5

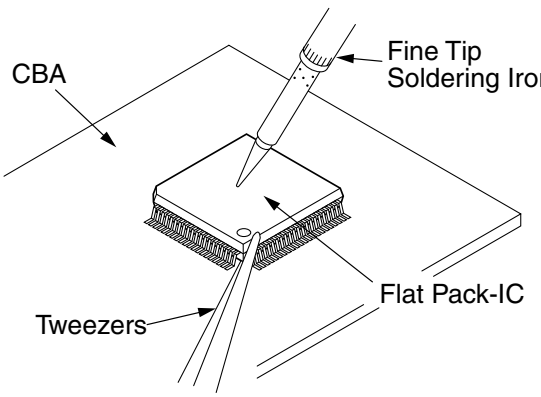


Fig. S-1-6

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.

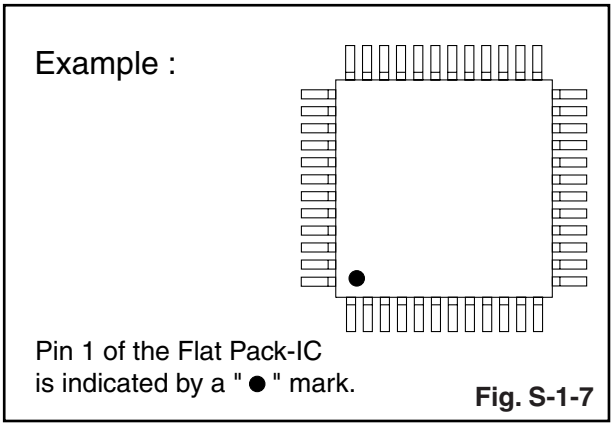


Fig. S-1-7

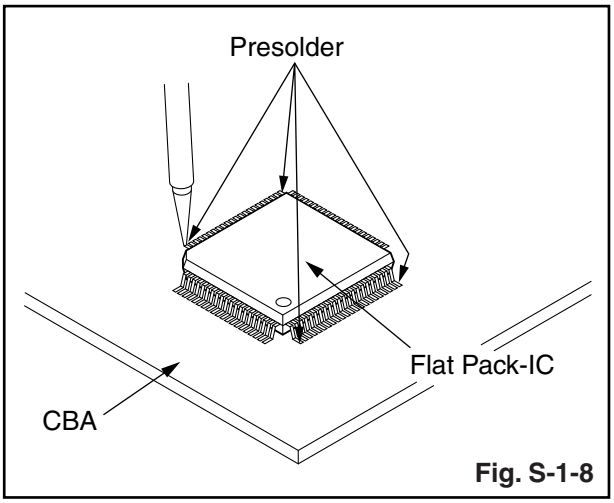


Fig. S-1-8

Instructions for Handling Semiconductors

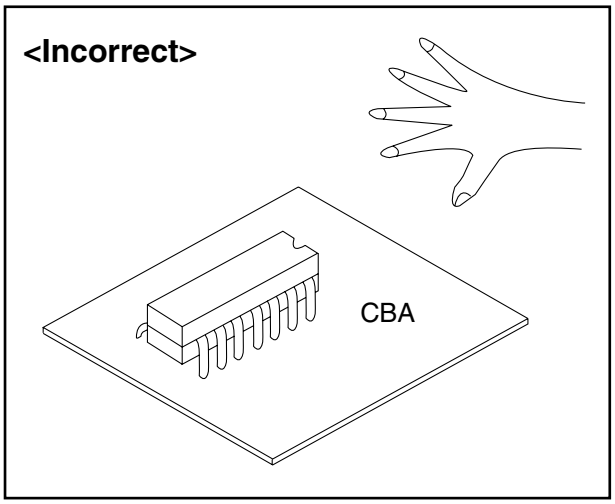
Electrostatic breakdown of the semiconductors may occur due to a potential difference caused by electrostatic charge during unpacking or repair work.

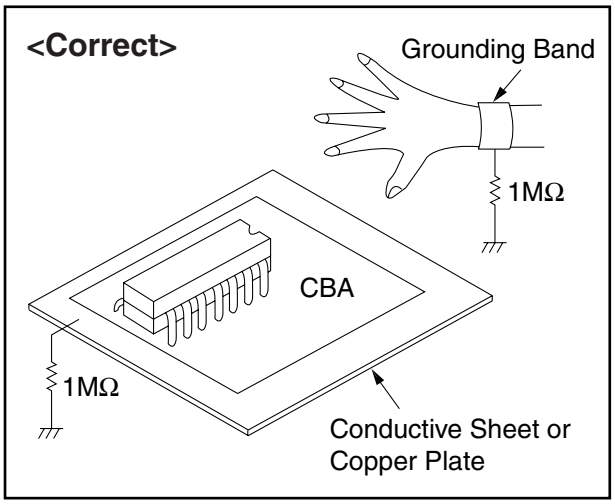
1. Ground for Human Body

Be sure to wear a grounding band (1MΩ) 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 (1MΩ) 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.





BASIC SETUP AND OPERATING GUIDE

FUNCTIONS

REMOTE CONTROL, TOP AND REAR PANEL FUNCTION

SLEEP button
To turn the power off automatically at preset time

POWER button
To turn TV on/off

Channel number buttons
To select channels

SETUP button
To display on-screen menu

◄/►/▲/▼ buttons
To move left / right / up / down through the items

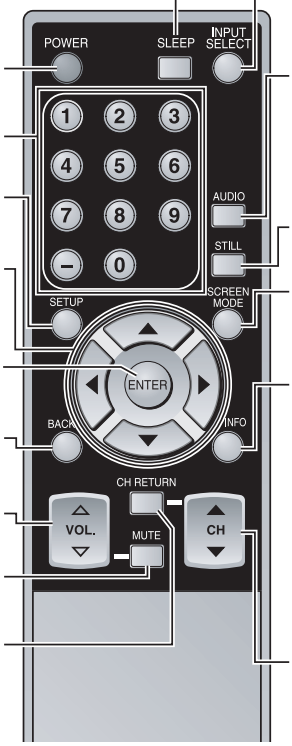
ENTER button
To decide the command of settings

BACK button
To go back to the previous operation in menu

VOL. △/▽ buttons
To adjust volume

MUTE button
To turn TV on/off

CH RETURN button
To return to previously viewed channel



INPUT SELECT button
To select TV or external input mode (to access DVD, VCR, etc.)

AUDIO button
- Analog mode (TV)
  To select audio mode
- Digital mode (DTV)
  To select audio language

STILL button
Pauses the image shown on the screen.

SCREEN MODE button
Selects aspect ratios available for the screen.

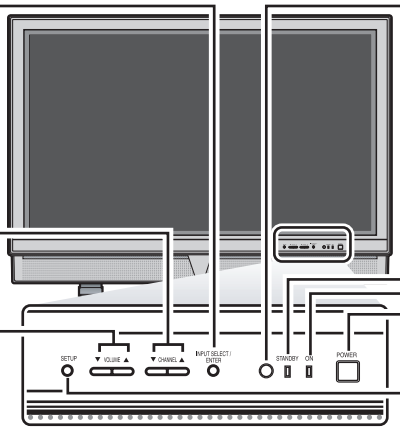
INFO button
- Analog mode (TV)
  To display channel No., signal type and TV setting.
- Digital mode (DTV)
  To display channel information, signal type and TV setting.
- External mode
  To display external mode, signal type and TV setting.

CH ▲/▼ buttons
To select channels and external input mode

INPUT SELECT/ENTER button
- To select TV or external input mode (to access DVD, VCR, etc.)
- To decide the command of setting when the menu is displayed.

CHANNEL ▲/▼ buttons
To select channels and move up/down through the menu items

VOLUME △/▽ buttons
To adjust volume and move right(△)/left(▽) through the menu items



Infrared Sensor Window
To receive the infrared rays transmitted from the remote control

STANDBY indicator
Lights up when the power is in the standby mode. Disappears when the power is ON.

ON indicator
Lights up when the power is ON.

POWER button
To turn TV on/off

SETUP button
To display on-screen menu

NOTE:
*With buttons **[VOL. △/▽]** or **[MUTE]**, you can only adjust the volume of the main unit. You cannot adjust the volume of the external devices with these buttons.*

About Interference to Infrared Devices
Please note in advance that using other infrared devices (such as infrared cordless headphones) near the plasma display may cause infrared interference to occur.

About Pixel Defects
A plasma display is created by using a collection of miniature pixels. It is possible to display more than 99.99% of valid pixels, however a small fraction of pixels over the life of the product may not illuminate or may constantly be illuminated. This is not to be considered a defect in the plasma panel.

Preventing Image Burn on the plasma display
Fixed images displayed on the plasma display for an extended period of several hours may cause uneven pixel aging causing damage to the plasma display. The panel protection mode helps reduce this phenomenon, but in general you should try to avoid displaying fixed images for extended periods on the plasma display.
Images of high luminance displayed on the plasma display for more than 60 seconds may cause lingering images to remain on the screen. These images will automatically disappear, but may take time depending on the luminance of the images and how long they were displayed on the screen.

ANT. IN jack
Connect your antenna or cable box here.

DIGITAL AUDIO OUT (COAXIAL) jack
Connect an optional coaxial digital audio cable here through the coaxial digital audio in jack of a decoder or audio receiver.

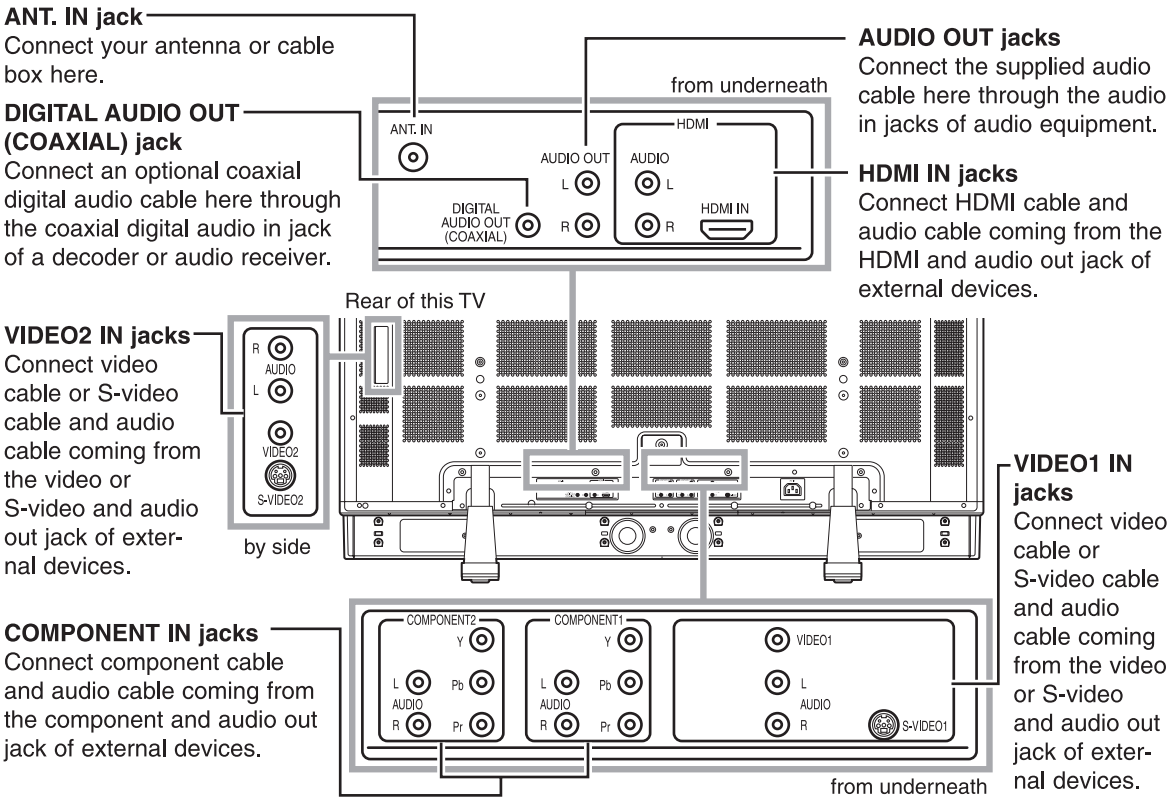
AUDIO OUT jacks
Connect the supplied audio cable here through the audio in jacks of audio equipment.

HDMI IN jacks
Connect HDMI cable and audio cable coming from the HDMI and audio out jack of external devices.

VIDEO2 IN jacks
Connect video cable or S-video cable and audio cable coming from the video or S-video and audio out jack of external devices.

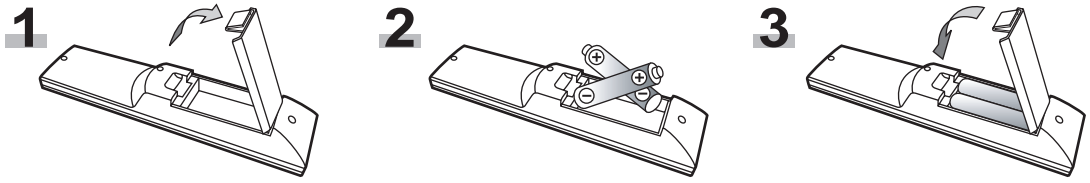
COMPONENT IN jacks
Connect component cable and audio cable coming from the component and audio out jack of external devices.

VIDEO1 IN jacks
Connect video cable or S-video cable and audio cable coming from the video or S-video and audio out jack of external devices.



INSTALLING THE BATTERIES

Install two AA batteries (supplied) matching the polarity indicated inside battery compartment of the remote control.

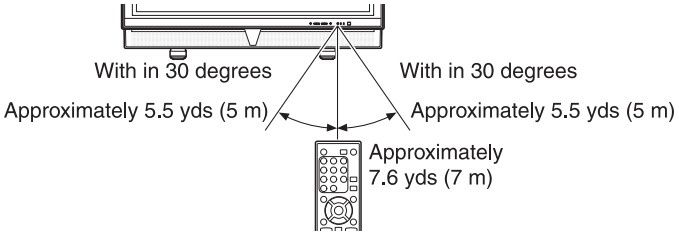


[BATTERY PRECAUTIONS]

- Be sure to follow the correct polarity as indicated in the battery compartment. Reversed batteries may cause damage to the device.
- Do not mix different types of batteries together (e.g. Alkaline and Carbon-Zinc) or old batteries with fresh ones.
- If the device is not to be used for a long period of time, remove the batteries to prevent damage or injury from possible battery leakage.
- Do not try to recharge batteries not intended to be recharged; they can overheat and rupture.

REMOTE CONTROL RANGE

Operate the remote control within a 30 degree angle on both sides of the infrared sensor on the main unit. You can operate the remote control from a distance of several yards away from the main unit.

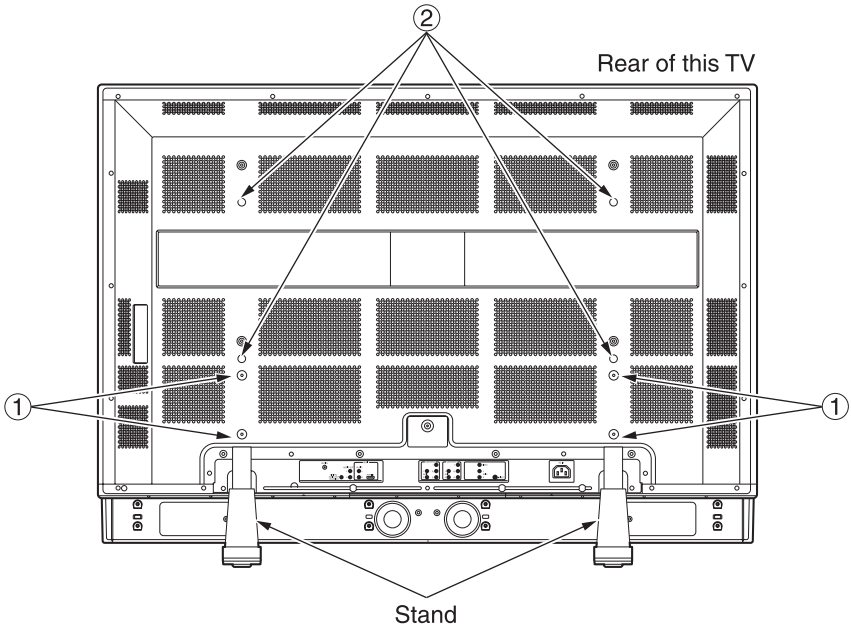


NOTE:
Other devices which use infrared beams, sunlight, fluorescent lights, etc., may affect the range and effectiveness of the remote control. Make sure the TV is positioned in a place which minimizes interference from them.

ATTACHING A WALL MOUNT BRACKET (SOLD SEPARATELY)

The following is a description of the method for attaching a wall mount to the TV.
When performing this operation, refer to the instruction manual included with the wall mount kit.

⚠ CAUTION
- Any damage caused by incorrectly attempting to mount the TV is not covered under the terms of the manufacturers warranty.
- This TV may be used only with VISIONMOUNT™ Flat Panel TV Wall Mount from SANUS SYSTEMS, for large flat panel televisions (32" to 60"). Use with other stands may result in instability causing possible injury.



1 Turn the TV over and place it screen-first onto a table which has a soft cloth draped over it. Place the TV in a way so that the stands hang over the edge of the table.

NOTES:
- *Make sure to use a table which can support the weight of the TV and is larger than the TV.*
- *Make sure the table is in a stable location.*

2 Remove the stands from the TV.

Unscrew the M5 screws indicated by ① , and remove the left and right stands.

NOTE:
- *The screws and stands you have removed are necessary for reattachment at a later date. Make sure to keep them in a safe place.*

3 Attach the left and right TV rails to the TV using the M8 screws included with the wall mount kit.

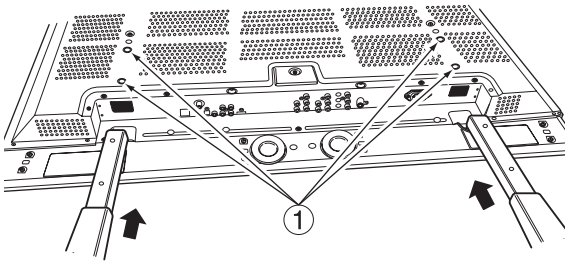
② indicates the position of the screw holes on the TV.

NOTE:
- *Only use the screw holes indicated by ② for mounting the TV.*
- *For instructions on how to attach the TV rails, refer to the instruction manual included with the mount wall kit.*

4 Attach the TV to the wall.

NOTE:
- *Refer to the instruction manual included with the mount wall when securing the TV to the wall.*

* If you want to attach the stand of this TV again, insert the stand slowly as illustrated below and drive screws in the 4 threaded holes (①).



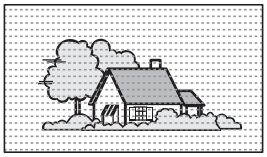
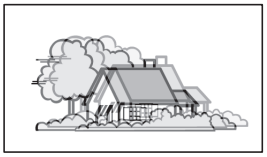
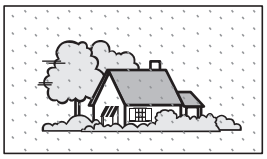
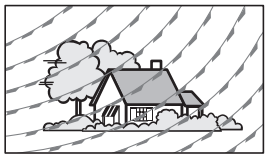
MISCELLANEOUS

TROUBLESHOOTING GUIDE

Before calling for service, check the following chart again.

Symptom	Remedy
No power	• Be sure the Power cord is connected to outlet. • If a power failure occurs, unplug the power cord for 30 minutes to allow the unit to reset itself.
No picture or sound	• Check if the power is on. • Check the outlet connection. • Check the antenna or cable connection to the main unit. • When the outside antenna is used, check the wire condition and connection. • Try to view other channels. It may be the problem on the broadcasting station. • Turn off the power and wait for about 1 minute, then turn it on again.
No color	• Check the antenna or cable connection to the main unit. • When the outside antenna is used, check the wire condition and connection. • Try to view other channels. It may be the problem on the broadcasting station. • Adjust the color in the setup screen.
Sound OK, Picture Poor	• Check the antenna or cable connection to the main unit. • When the outside antenna is used, check the wire condition and connection. • Electric waves may be interfered due to the electric appliances, etc. nearby. • Adjust Contrast and Brightness in the setup screen. • Try to view other channels. It may be the problem on the broadcasting station.
Picture Distorted	• When the outside antenna is used, check the wire condition and connection. • Try to view other channels. It may be the problem on the broadcasting station.
Weak Picture	• Check the antenna or cable connection to the main unit. • When the outside antenna is used, check the wire condition and connection. • Adjust Contrast and Brightness in the setup screen. • Try to view other channels. It may be the problem on the broadcasting station.
Lines or Streaks in Picture	• When the outside antenna is used, check the wire condition and connection. • Electric waves may be interfered due to the electric appliances, etc. nearby. • Try to view other channels. It may be the problem on the broadcasting station.
Picture blurred	• When the outside antenna is used, check the wire condition and connection. • Try to view other channels. It may be the problem on the broadcasting station.
Ghosts in picture	• Check the antenna or cable connection to the main unit. • When the outside antenna is used, check the wire condition and connection. • Electric waves may be interfered due to the electric appliances, etc. nearby. • Try to view other channels. It may be the problem on the broadcasting station.
Bars on screen	• When the outside antenna is used, check the wire condition and connection. • Electric waves may be interfered due to the electric appliances, etc. nearby.

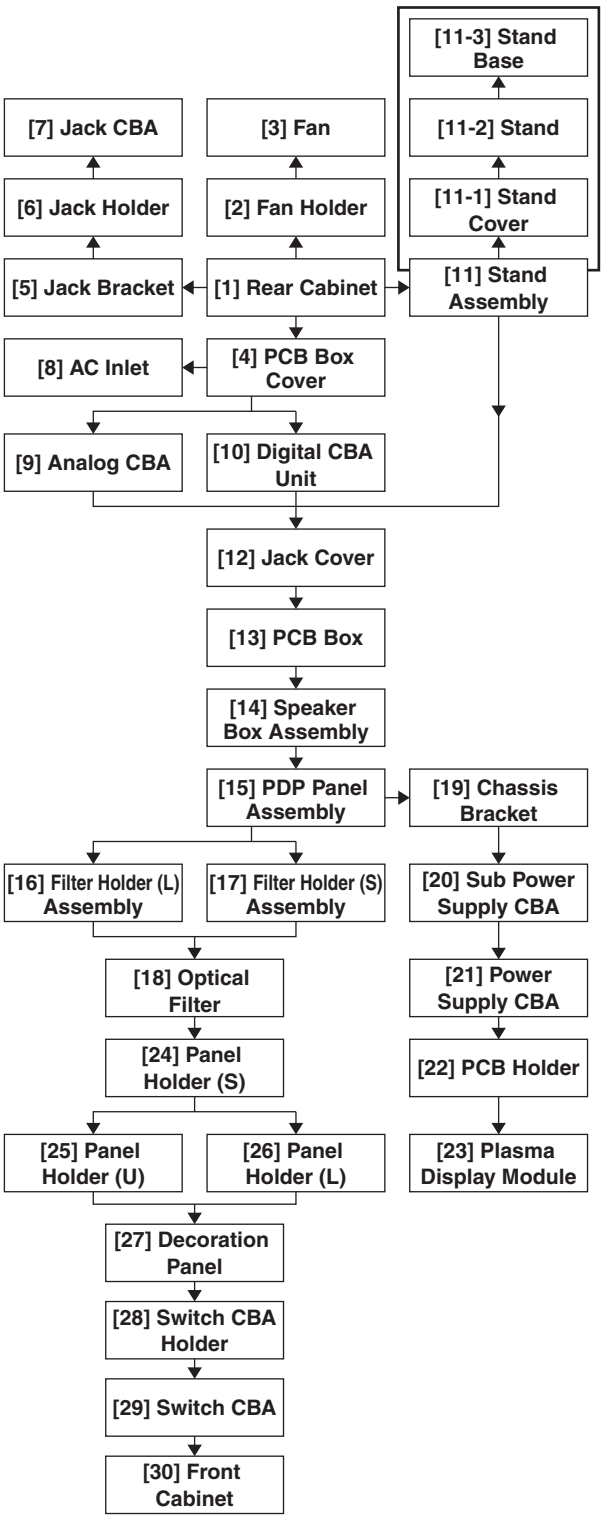
Symptom	Remedy
Picture rolls vertically	• When the outside antenna is used, check the wire condition and connection. • Electric waves may be interfered due to the electric appliances, etc. nearby. • Try to view other channels. It may be the problem on the broadcasting station.
Different color marks on screen	• Move the TV apart from electric appliances nearby. Turn off the power and wait for about 30 minutes, then turn it on again. • Try to view other channels. It may be the problem on the broadcasting station.
Poor reception on some channels	• Check the antenna or cable connection to the main unit. • When the outside antenna is used, check the wire condition and connection. • Electric waves may be interfered due to the electric appliances, etc. nearby. • Try to view other channels. It may be the problem on the broadcasting station.
Picture OK, sound poor	• Electric waves may be interfered due to the electric appliances, etc. nearby. • Try to view other channels. It may be the problem on the broadcasting station.
Burn-in on screen	• Do not display the continuous image such as video games, computer graphics, stock market quotations, and other fixed patterns. This may cause the burn-in of the display. If the problem occurs, display a motion picture such as broadcasting to reduce the problem. This continuous on-screen displays can cause permanent damage to the screen. Such burn-in caused by misuse are NOT COVERED by your warranty.
No reception of digital signals	• Make sure that Autoscan in Setup menu has been completed. It will be required when you setup TV for the first time or when TV is moved to a location where other channels are broadcast. • The selected channel does not exist at that time. There are not always minor-channels being broadcast. • When Autoscan is interrupted and not completed, some channels will not be received. Make sure to complete Autoscan in Setup menu.
The entered channel number changes automatically	• Many digital channels have alternate channel numbers. TV changes the numbers automatically to the ones signifying the broadcasting stations. These are the numbers used for analog broadcasts.
Remote control doesn't work	• Check the antenna or cable connection to the main unit. • Check the battery life of the remote control. • Check if there is an obstacle between the sensor and the remote control. • Test the signal output. If OK, then possible remote sensor trouble.
Problems on Closed Caption	
Misspelled captions are displayed.	• Closed captioning production companies may broadcast programs without correcting the misspelling in a live broadcast.
Captions are not entirely displayed, or captions are delayed behind the dialogue.	• Captions that are delayed a few seconds behind the actual dialogue are common for live broadcasts. Most captioning production companies can display a dialogue to a maximum of 220 words per minute. If a dialogue exceeds that rate, selective editing is used to insure that the captions remain up-to-date with the current TV screen dialogue.
Captions are displayed as a white box. No caption is displayed in the Closed Caption-supported program.	• When electric waves are interfered due to buildings, weather conditions etc., incomplete captions may be displayed. • Broadcasting station may shorten the program to insert the advertisement. The closed caption decoder cannot read the information of the shortened program.
No caption is displayed when playing the videotape containing captions.	• The videotape may be illegally copied, or the caption signal may fail to be read while coping.
Black box is displayed in the screen.	• [Text] mode is selected for caption. Select [CC1], [CC2] [CC3], [CC4] or [Off].

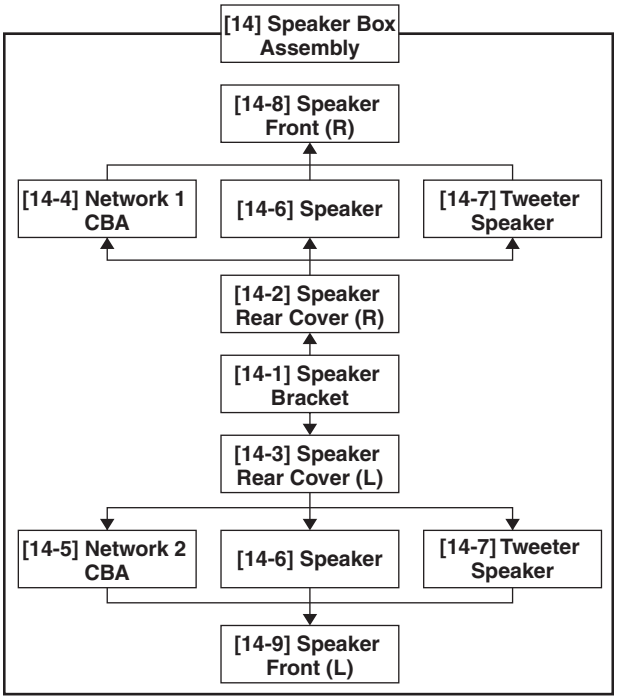
	•IGNITION NOISE: Black spots or horizontal streaks may appear, picture may flutter or drift. Usually caused by interference from automobile ignition systems, neon lamps, electrical drills and other electrical appliances.
	•GHOSTS: Ghosts are caused by the television signal following two paths. One is the direct path and the other is reflected from tall buildings, hills or some other objects. Changing the direction or position of the antenna may improve reception. Ghosting may also be caused by defects in the antenna system such as unshielded leads or connecting several sets to the same antenna without using multiple antenna couplers. Ghosting occurring when the plasma display is connected to a cable TV system may indicate a bad cable wire or loose connection. Confirm that the cable wire is properly connected.
	•SNOW: If your receiver is located in the fringe area of a television station where the signal is weak, your picture may be marred by the appearance of small dots. When the signal is extremely weak, it may be necessary to install a special antenna to improve the picture. Snowing occurring when the plasma display is connected to a cable TV system may indicate a bad cable wire or loose connection. Confirm that the cable wire is properly connected.
	•RADIO FREQUENCY INTERFERENCE: The interference produces moving ripples or diagonal streaks, and in some cases, causes loss of contrast in the picture. •PREVENTION OF AN OBSTACLE TO RADIO RECEIVERS: This monitor has been designed pursuant to the FCC class B Rules. This is to prevent a problem to Radio receivers. If this monitor causes a problem to Radio receivers, then take the following steps: - Keep the monitor away from Radio. - Adjust Radio antennas in order for the monitor not to receive interference. - The antenna cable of Radio should be kept away from the monitor. - Use a coaxial cable for antenna. You can check if this monitor influences Radio receivers by turning off all other equipment other than the monitor. If you find a problem receiving Radio when using the monitor, check the instructions mentioned above.
Vertical stripes appear, depending on the screen contents.	•The plasma display panel is lighting the phosphors by the discharge of internal radiation. Depending on the screen contents, in rare cases this may cause vertical stripes to appear because of failure to light. Please note that this is not a malfunction.

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

ID/ Loc. No.	Part	Removal		
		Fig. No.	Remove/*Unhook/ Unlock/Release/ Unplug/Desolder	Note
1	Rear Cabinet	D1	24(S-1)	---
2	Fan Holder	D2	4(S-2)	---
3	Fan	D2 D11	4(S-3), *CN2501	---
4	PCB Box Cover	D2	10(S-4)	---
5	Jack Bracket	D2	2(S-5)	---
6	Jack Holder	D2	2(S-6)	---
7	Jack CBA	D2 D10	2(S-7), (S-8), *CN701	---
8	AC Inlet	D3	2(S-9)	---
9	Analog CBA	D3 D10	7(S-10), 4(S-11), *CN702, *CN703, *CN704, *CN705, *CN708, *CN801, *CN802, *CN1111, *CN1112, *CN1113, *CN1116, *CN2000	---

ID/ Loc. No.	Part	Removal		
		Fig. No.	Remove/*Unhook/ Unlock/Release/ Unplug/Desolder	Note
10	Digital CBA Unit	D3 D10	4(S-12), (S-13), (S-14), *CN1505, *CN1121	---
11	Stand Assembly	D3	4(S-15)	---
11-1	Stand Cover	D4	4(S-A1)	---
11-2	Stand	D4	2(S-A2), 3(S-A3)	---
11-3	Stand Base	D4	----------	---
12	Jack Cover	D3	3(S-16)	---
13	PCB Box	D3	2(S-17)	---
14	Speaker Box Assembly	D3	2(S-18)	---
14-1	Speaker Bracket	D5	8(S-B1), 2(S-B2)	---
14-2	Speaker Rear Cover (R)	D5	6(S-B3)	---
14-3	Speaker Rear Cover (L)	D5	6(S-B4)	---
14-4	Network 1 CBA	D5 D11	2(S-B5), *CN902, *CN903	---
14-5	Network 2 CBA	D5 D11	2(S-B6), *CN952, *CN953	---
14-6	Speaker	D5	8(S-B7)	---
14-7	Tweeter Speaker	D5	8(S-B8)	---
14-8	Speaker Front (R)	D5	----------	---
14-9	Speaker Front (L)	D5	----------	---
15	PDP Panel Assembly	D6	8(S-19)	---
16	Filter Holder (L) Assembly	D6	6(S-20)	---
17	Filter Holder (S) Assembly	D6	6(S-21)	---
18	Optical Filter	D6	----------	---
19	Chassis Bracket	D7	8(S-22)	---
20	Sub Power Supply CBA	D7 D11	4(S-23), *CN2100, CN2101	---
21	Power Supply CBA	D7 D11	8(S-24), *CN8002, *CN8005, *CN8006, *CN8007	---
22	PCB Holder	D7	2(S-25)	---
23	Plasma Display Module	D7	----------	1
24	Panel Holder (S)	D8	6(S-26), 4(S-27)	---
25	Panel Holder (U)	D8	4(S-28)	---
26	Panel Holder (L)	D8	9(S-29)	---
27	Decoration Panel	D9	13(S-30)	---
28	Switch CBA Holder	D9	3(S-31)	---
29	Switch CBA	D9 D10	3(S-32), *CN151	---
30	Front Cabinet	D9	----------	---
↓ (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 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”.

Reference Notes in the Table

1. **Caution:** Refer to “General Caution of Plasma Display” and “PDP Module Handling” of “IMPORTANT SAFETY PRECAUTIONS” section not to injure and/or break the Plasma Display Module.

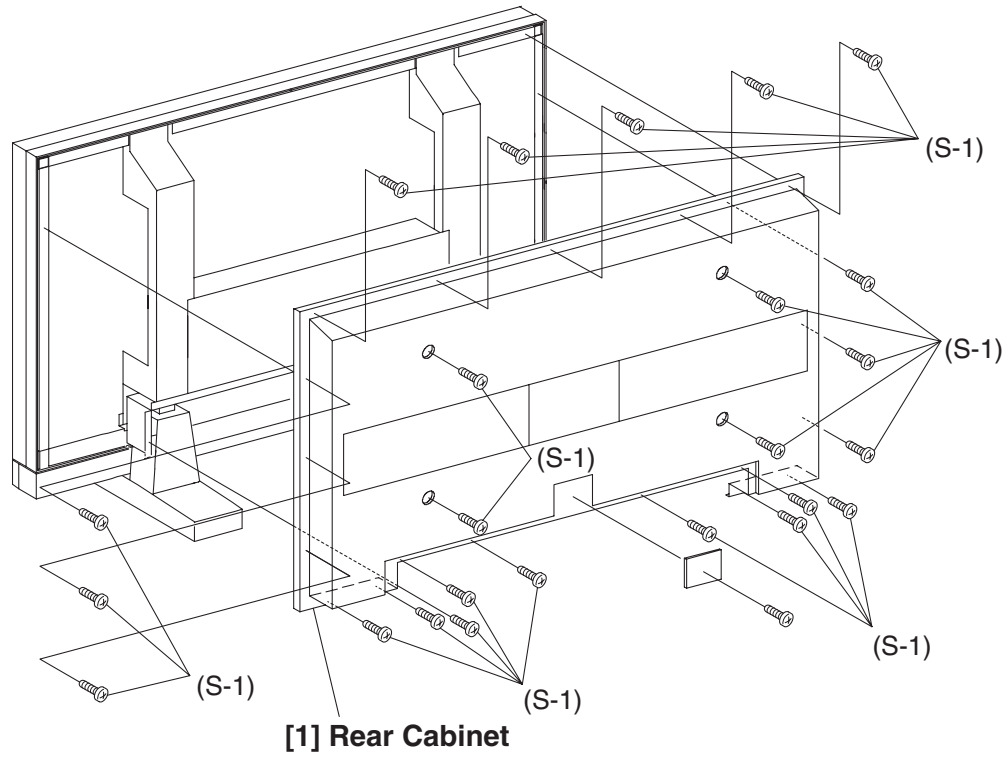


Fig. D1

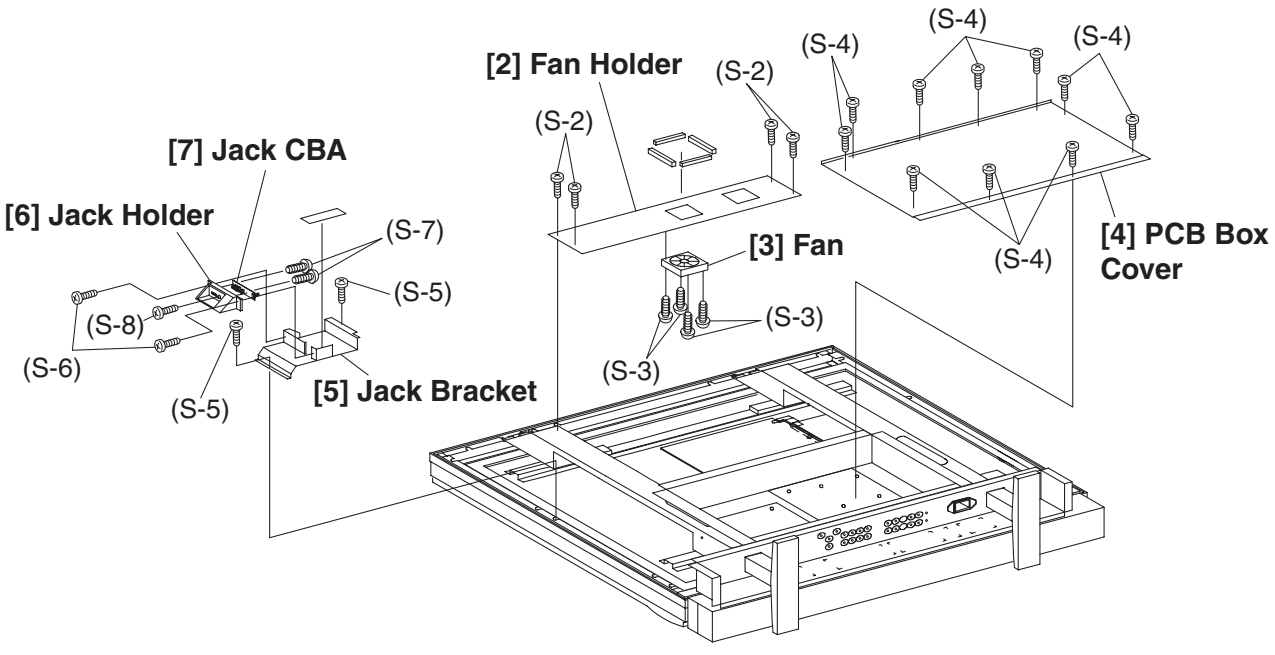


Fig. D2

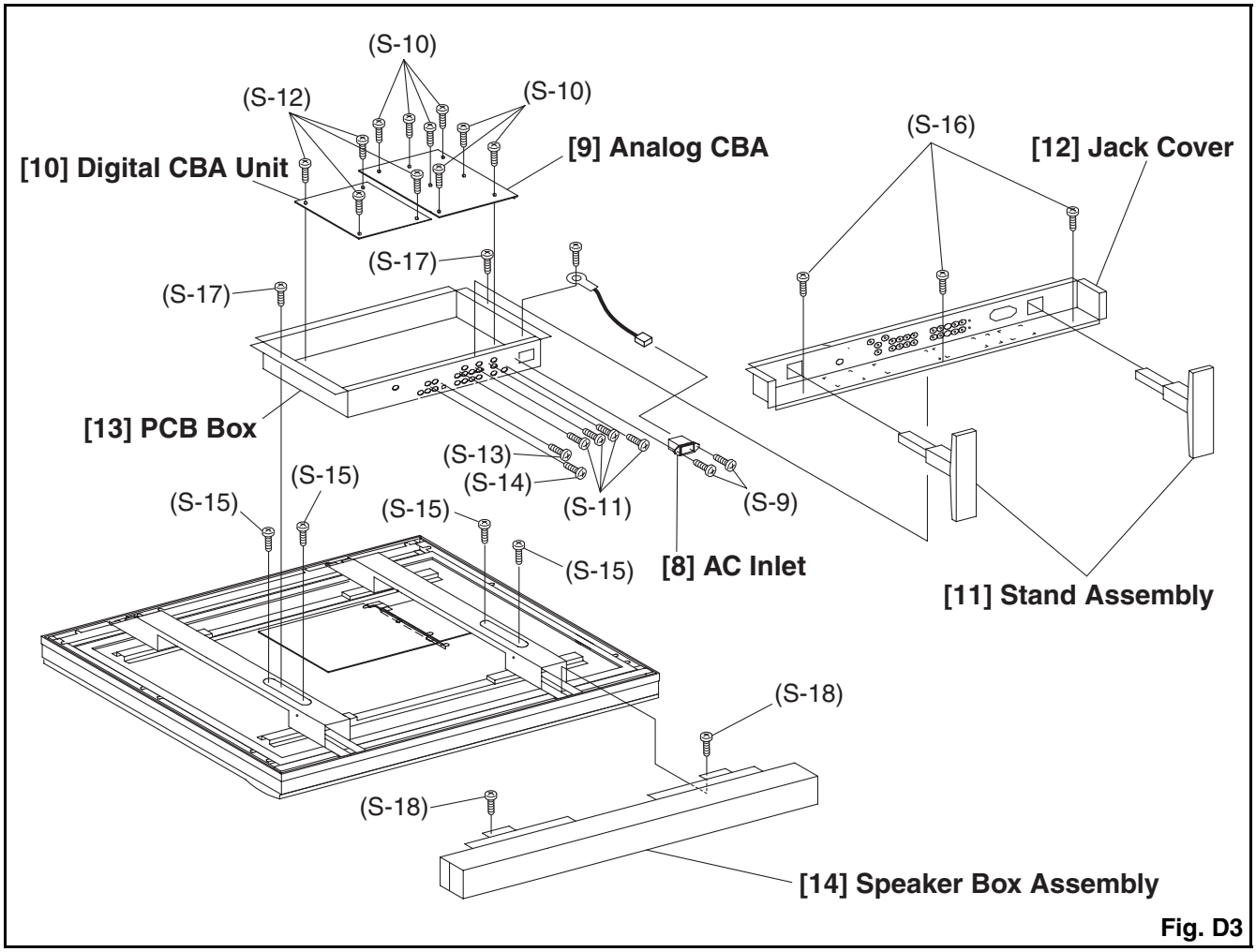

(S-10)
(S-12)
(S-10)
[10] Digital CBA Unit
[9] Analog CBA
(S-16)
[12] Jack Cover
(S-17)
(S-17)
[13] PCB Box
(S-13)
(S-14)
(S-11)
(S-9)
(S-15)
(S-15)
(S-15)
(S-15)
[8] AC Inlet
[11] Stand Assembly
(S-18)
(S-18)
[14] Speaker Box Assembly

Fig. D3

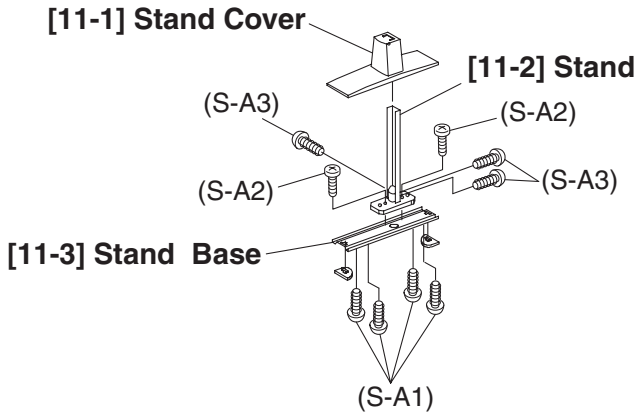

[11-1] Stand Cover
[11-2] Stand
(S-A3)
(S-A2)
(S-A2)
(S-A3)
[11-3] Stand Base
(S-A1)

Fig. D4

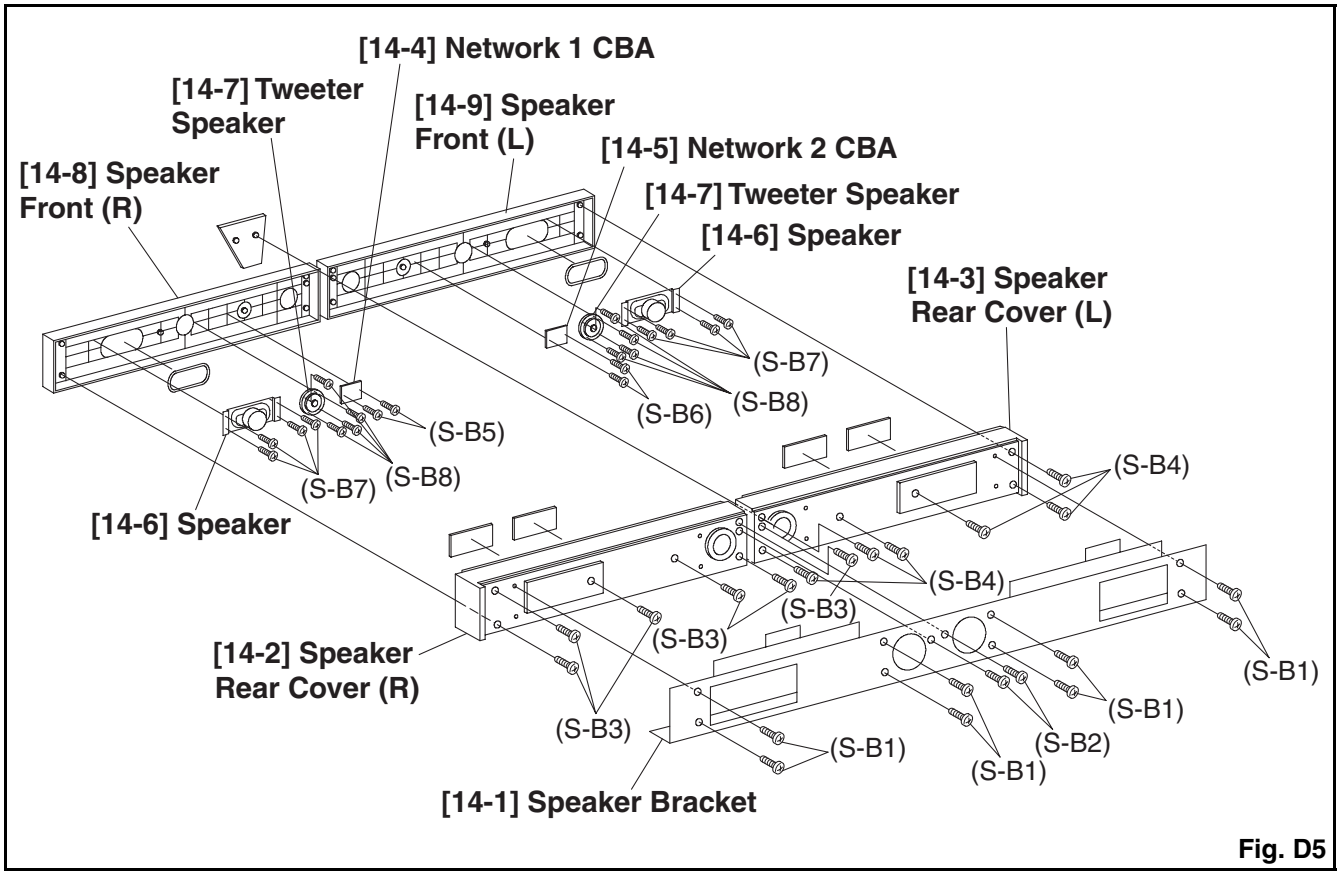

[14-4] Network 1 CBA
[14-7] Tweeter Speaker
[14-9] Speaker Front (L)
[14-5] Network 2 CBA
[14-8] Speaker Front (R)
[14-7] Tweeter Speaker
[14-6] Speaker
[14-3] Speaker Rear Cover (L)
(S-B7)
(S-B6)
(S-B8)
(S-B5)
(S-B7)
(S-B8)
[14-6] Speaker
(S-B4)
(S-B4)
(S-B3)
(S-B3)
[14-2] Speaker Rear Cover (R)
(S-B1)
(S-B1)
(S-B3)
(S-B2)
(S-B1)
(S-B1)
[14-1] Speaker Bracket

Fig. D5

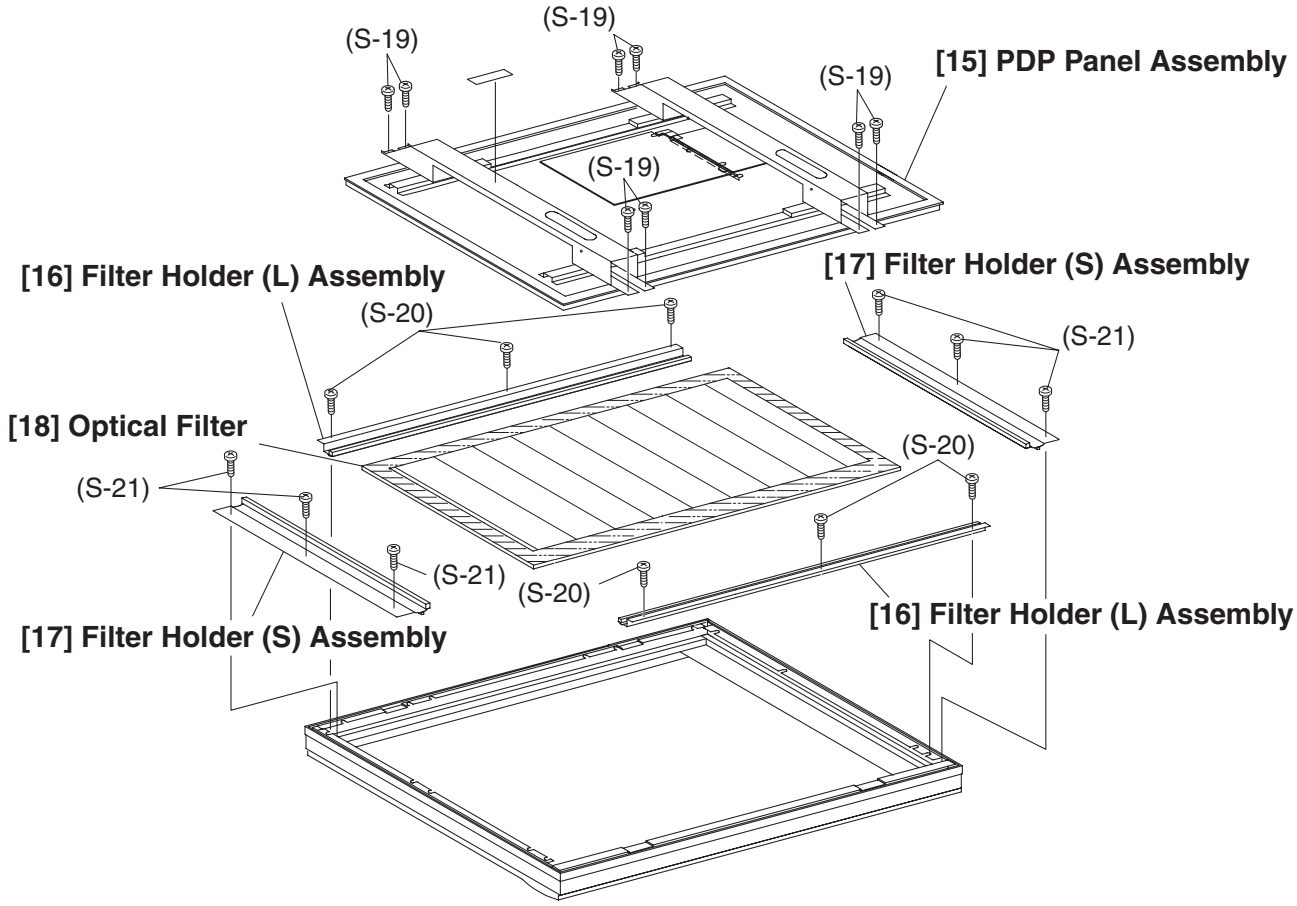

(S-19)
(S-19)
(S-19)
(S-19)
[15] PDP Panel Assembly
[16] Filter Holder (L) Assembly
[17] Filter Holder (S) Assembly
(S-20)
(S-21)
[18] Optical Filter
(S-20)
(S-21)
(S-21)
(S-20)
[16] Filter Holder (L) Assembly
[17] Filter Holder (S) Assembly

Fig. D6

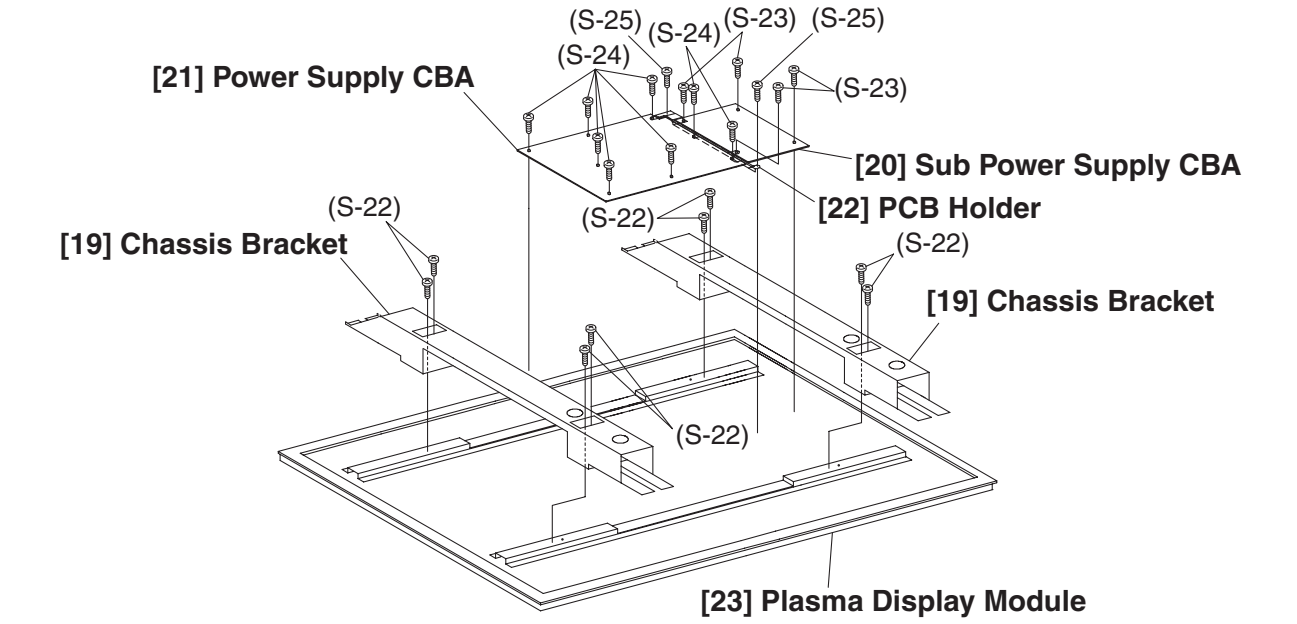

(S-25)
(S-24)
(S-23)
(S-25)
(S-24)
[21] Power Supply CBA
(S-23)
[20] Sub Power Supply CBA
(S-22)
(S-22)
[22] PCB Holder
[19] Chassis Bracket
(S-22)
[19] Chassis Bracket
(S-22)
[23] Plasma Display Module

Fig. D7

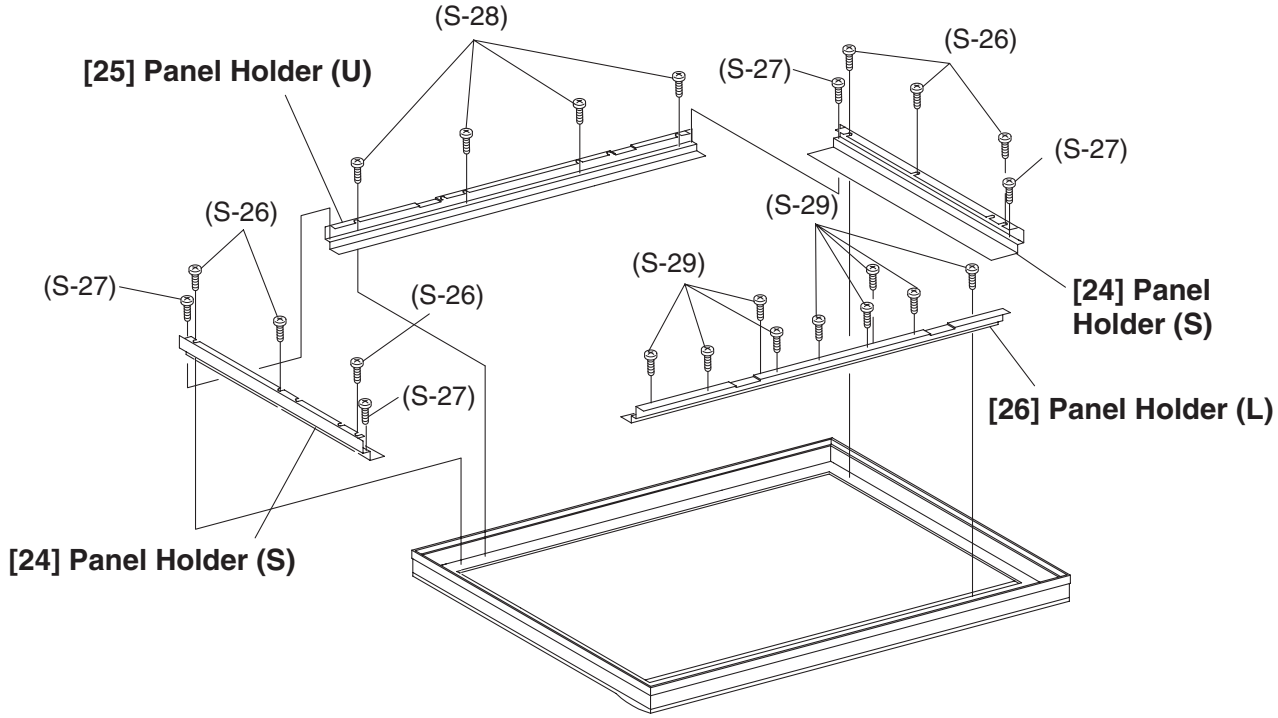

(S-28)
[25] Panel Holder (U)
(S-26)
(S-27)
(S-27)
(S-26)
(S-29)
(S-29)
(S-27)
(S-26)
[24] Panel Holder (S)
[26] Panel Holder (L)
(S-27)
[24] Panel Holder (S)

Fig. D8

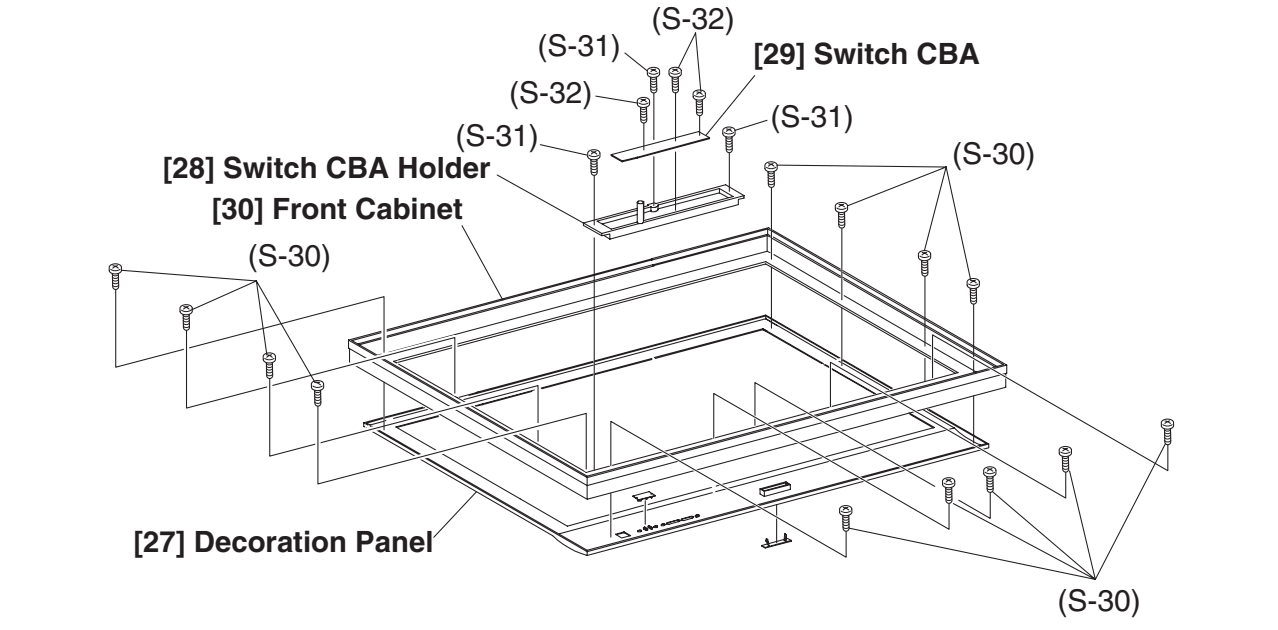

(S-32)
(S-31)
[29] Switch CBA
(S-32)
(S-31)
(S-31)
(S-30)
[28] Switch CBA Holder
[30] Front Cabinet
(S-30)
[27] Decoration Panel
(S-30)

Fig. D9

Plasma Display Cable Wiring Diagram

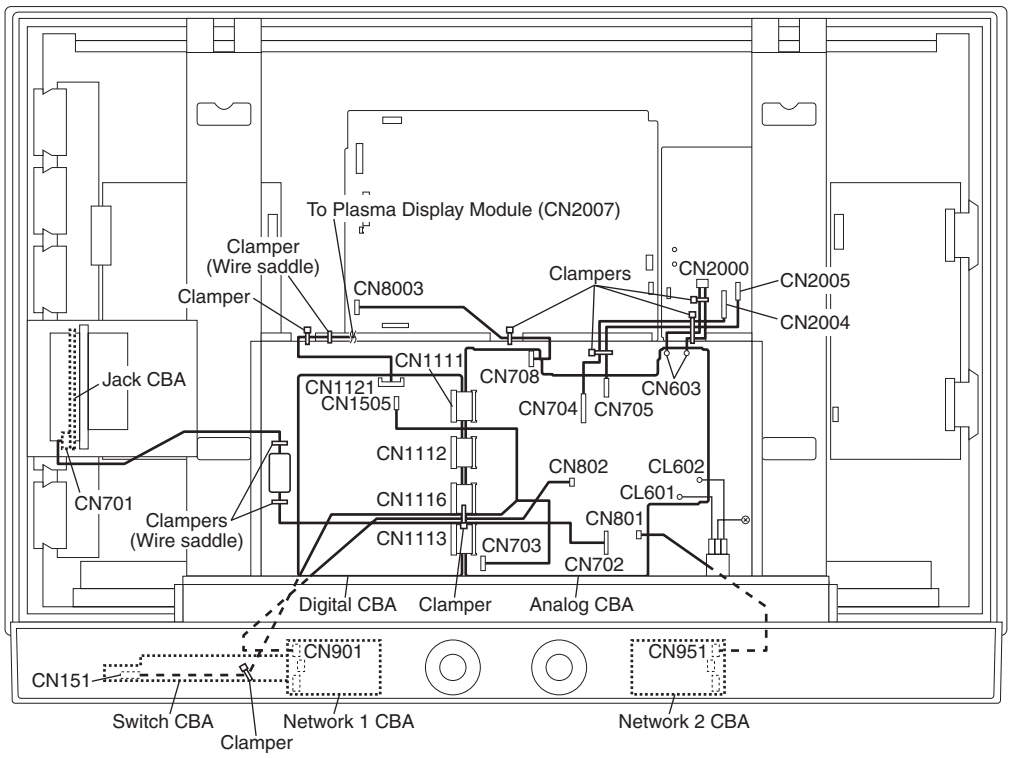


Fig. D10

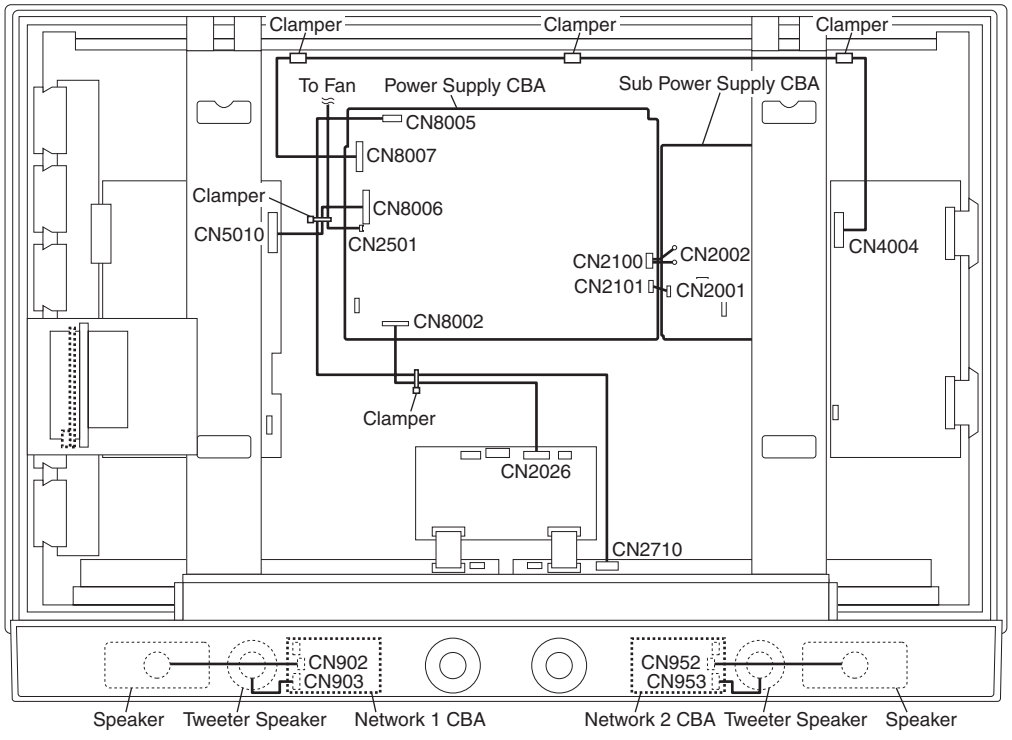


Fig. D11

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

a. DC Voltmeter
b. NTSC Pattern Generator (Color Bar W/White Window, Red Color, Gray Scale)
c. Color Analyzer
d. Plastic Tip Driver
e. Remote control unit: Part No. N0105UD, N0108UD, N0127UD or N0132UD

How to make service remote control unit:

1. Prepare normal remote control unit. (Part No. N0105UD, N0108UD, N0127UD or N0132UD) Remove 3 Screws from the back lid. (Fig. 1)

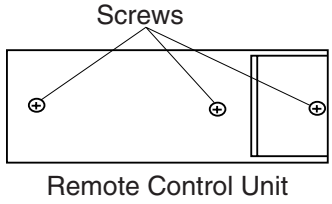


Fig. 1

2. Add J1 (Jumper Wire) to the remote control CBA. (Fig. 2)

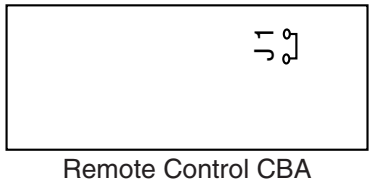


Fig. 2

How to set up the service mode:

Service mode:

1. To turn the power on, press [POWER] button on the normal remote control unit or the unit.
2. Use the service remote control unit.
3. Press [SLEEP] button button on the service remote control unit. Fig. 3 appears on the screen.

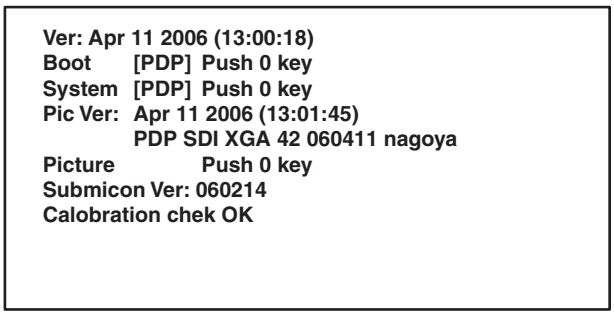


Fig. 3

4. Confirm the following
   a) Version of Software update
   b) Check sum for Serial Flash (press [0] button on the service remote control unit)
   c) Check sum for NAND Flash (press [0] button on the service remote control unit)
   d) Version of Picture File update
   e) Version of Picture File
   f) Check sum for Picture File (press [0] button on the service remote control unit)
   g) Version of sub microcontroller
   h) Calibration Check

Initial setting:

1. To turn the power on, press [POWER] button on the normal remote control unit or the unit.
2. Enter the service mode.
3. To reset to factory setting, press [DISPLAY] button on the normal remote control unit.
   - "INITIALIZE" (red) appears on the screen as shown in Fig. 4.

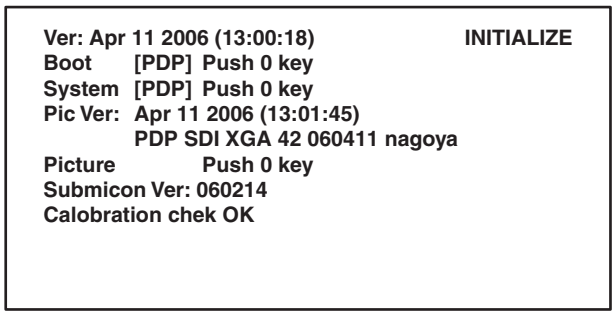


Fig. 4

   - After few seconds (completion initialization), color of "INITIALIZE" will change green.

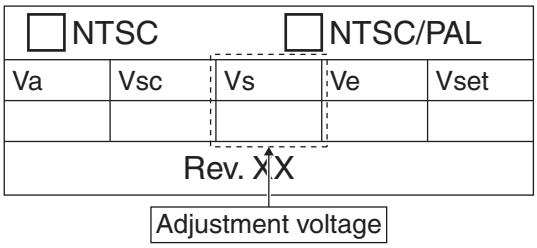
1. V-sus Adjustment

Test Point	Adj. Point
J2104 (+B), TP2250 (GND)	VR2250

M. EQ.	Condition & Remarks	Spec.
DC Voltmeter	AC input: 120V, Monitor to APL 100% white VIDEO signal	DC Vs ± 1 V Vs: See Panel Label (below)

Panel Label

Panel Label information



Location: Up-right of the back on the PDP Panel.

Fig. 5

Note: J2104 (+B), TP2250 (GND), VR2250 --- Power Supply CBA

1. Operate the unit more than 20 minutes.
2. Connect DC Voltmeter to J2104 (+B) and TP2250 (GND).
3. Input an APL 100% white VIDEO signal.
4. Adjust VR2250 so that the voltage of J2104 (+B) becomes the specified voltage as shown on the panel label.

2. V-add Adjustment

Test Point	Adj. Point
J2116 (+B), TP2250 (GND)	VR2350

M. EQ.	Condition & Remarks	Spec.
DC Voltmeter	AC input: 120V, Monitor to APL 100% white VIDEO signal	DC 65 V ± 1 V

Note: J2116 (+B), TP2250 (GND), VR2350 --- Power Supply CBA

1. Operate the unit more than 20 minutes.
2. Connect DC Voltmeter to J2116 (+B) and TP2250 (GND).
3. Input an APL 100% white VIDEO signal.
4. Adjust VR2350 so that the voltage of J2116 (+B) becomes 65 V ± 1 V.

3. V-scan Adjustment

Test Point	Adj. Point
J2135 (+B), TP2250 (GND)	VR2650

M. EQ.	Condition & Remarks	Spec.
DC Voltmeter	AC input: 120V, Monitor to APL 100% white VIDEO signal	DC Vsc ± 1 V Vsc: See Panel Label (below)

Panel Label

Panel Label information

☐ NTSC		☐ NTSC/PAL		
Va	Vsc	Vs	Ve	Vset
Rev. XX				

Adjustment voltage

Location: Up-right of the back on the PDP Panel.

Fig. 6

Note: J2135 (+B), TP2250 (GND), VR2650 --- Power Supply CBA

1. Operate the unit more than 20 minutes.
2. Connect DC Voltmeter to J2135 (+B) and TP2250 (GND).
3. Input an APL 100% white VIDEO signal.
4. Adjust VR2650 so that the voltage of J2135 (+B) becomes the specified voltage as shown on the panel label.

4. V-set Adjustment

Test Point	Adj. Point
J2117 (+B), TP2250 (GND)	VR2750

M. EQ.	Condition & Remarks	Spec.
DC Voltmeter	AC input: 120V, Monitor to APL 100% white VIDEO signal	DC 190 V ± 1 V

Note: J2117 (+B), TP22450 (GND), VR2750 --- Power Supply CBA

1. Operate the unit more than 20 minutes.
2. Connect DC Voltmeter to J2117 (+B) and TP2250 (GND).
3. Input an APL 100% white VIDEO signal.
4. Adjust VR2750 so that the voltage of J2117 (+B) becomes 190 V ± 1 V.

5. V-e Adjustment

Test Point	Adj. Point
J2111 (+B), TP2250 (GND)	VR2850

M. EQ.	Condition & Remarks	Spec.
DC Voltmeter	AC input: 120V, Monitor to APL 100% white VIDEO signal	DC Ve ± 1 V Ve: See Panel Label (below)

Panel Label

Panel Label information

☐ NTSC		☐ NTSC/PAL		
Va	Vsc	Vs	Ve	Vset
Rev. XX				

Adjustment voltage

Location: Up-right of the back on the PDP Panel.

Fig. 7

Note: J2111 (+B), TP2250 (GND), VR2850 --- Power Supply CBA

1. Operate the unit more than 20 minutes.
2. Connect DC Voltmeter to J2111 (+B) and TP2250 (GND).
3. Input an APL 100% white VIDEO signal.
4. Adjust VR2850 so that the voltage of J2111 (+B) becomes the specified voltage as shown on the panel label.

6. 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	Video 1	Gray scale pattern signal (5 scales)
M. EQ.			**Spec.**
Pattern Generator, Color analyzer			See below
Figure			

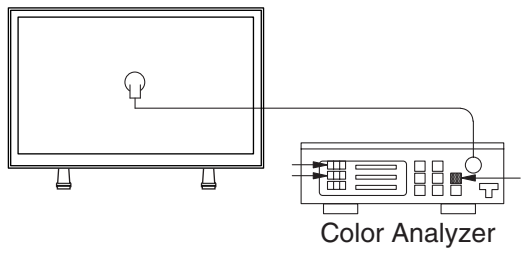


Fig. 8

Notes:

- Use service remote control unit.
- This adjustment should be performed in Video 1 mode.

1. Operate the unit more than 20 minutes.
2. Input the gray scale pattern signal (5 scales) from Composite AV Input (1) video jack (Video1).
3. Set the color analyzer to the CHROMA mode and after zero point calibration, for high light adjustment, bring the optical receptor to the 2nd scale as shown below.

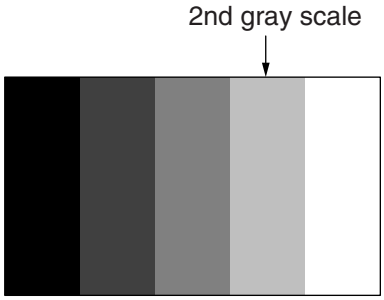


Fig. 9

4. Enter the Service mode.
5. Enter the component adjustment mode, press [VOL ▼] button once on the service remote control unit.
6. Press [4] button on the service remote control unit for Red adjustment. Press [6] button on the service remote control unit for Blue adjustment.
7. In each color mode, press [CH ▲/▼] buttons to adjust the values of color.
8. Adjust Red and Blue color so that the temperature becomes 12000°K-5MPCD (x: 272 / y: 278) ±3%.
9. For low light adjustment, bring the optical receptor to the 4th scale as shown below.

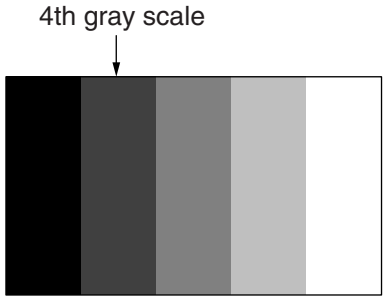


Fig. 10

10. Press [1] button on the service remote control unit for Red adjustment. Press [3] button on the service remote control unit for Blue adjustment.
11. In each color mode, press [CH ▲/▼] buttons to adjust the values of color.
12. Adjust Red and Blue color so that the temperature becomes 12000°K-5MPCD (x: 272 / y: 278) ±3%.
13. Check adjustment value in high light adjustment again. If adjustment value is not within specification, repeat steps 2 to 8.
14. To enter the adjustment mode in the Composite mode (Video 1 mode), press [VOL ▼] button once on the service remote control unit.

7. Auto Component Calibration Adjustment

Purpose: To bring the color adjustment of each component into standard alignment.

Symptom of Misadjustment: If this adjustment is incorrect, component signals do not reproduce the corresponding color.

Notes:

- Use service remote control unit.
- This adjustment should be performed in Component 1 mode.

1. Input white raster signal (10 % = 10 IRE, 100 % = 100 IRE) from Component 1 Y jack.

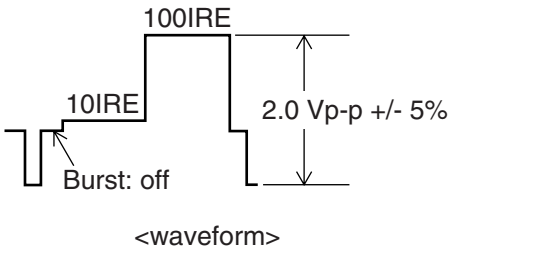


Fig. 11

2. Enter the service mode.
3. To enter the Auto Calibration adjustment mode, press [6] button on the service remote control unit.
4. To start auto adjustment, press [CH ▲] button on the service remote control unit.
   - In the auto adjustment mode, “Calibration Check” appears on the screen.
   - Upon completion, “Calibration Check OK” and “Push FCH UP key” appear on the screen.
   - If the auto adjustment failure, “Calibration Check NG” and “Push FCH UP key” appear on the screen.
5. Unplug AC cord and plug it in AC outlet again to reset then enter the service mode again.

HOW TO INITIALIZE THE PLASMA DISPLAY

To put the program back at the factory-default, initialize the Plasma Display as the following procedure.

1. To turn the power on, press "POWER" button on the normal remote control unit or the unit.
2. Use the service remote control unit.
3. To enter the service mode, press "SLEEP" button on the service remote control unit.
4. To reset to factory setting, press "DISPLAY" button on the normal remote control unit.
   - "INITIALIZE" (red) appears on the screen as shown in Fig. 1.

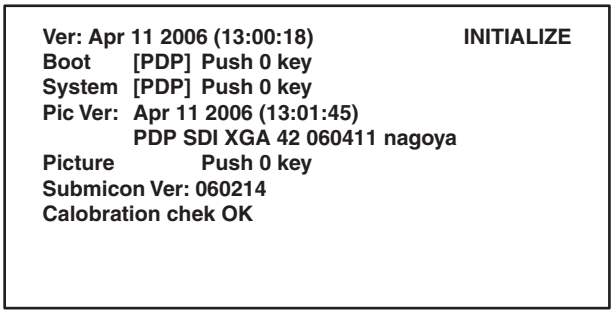


Fig. 1

   - After few seconds (completion initialization), color of "INITIALIZE" will change green.

TROUBLESHOOTING

1. POWER SUPPLY SECTION

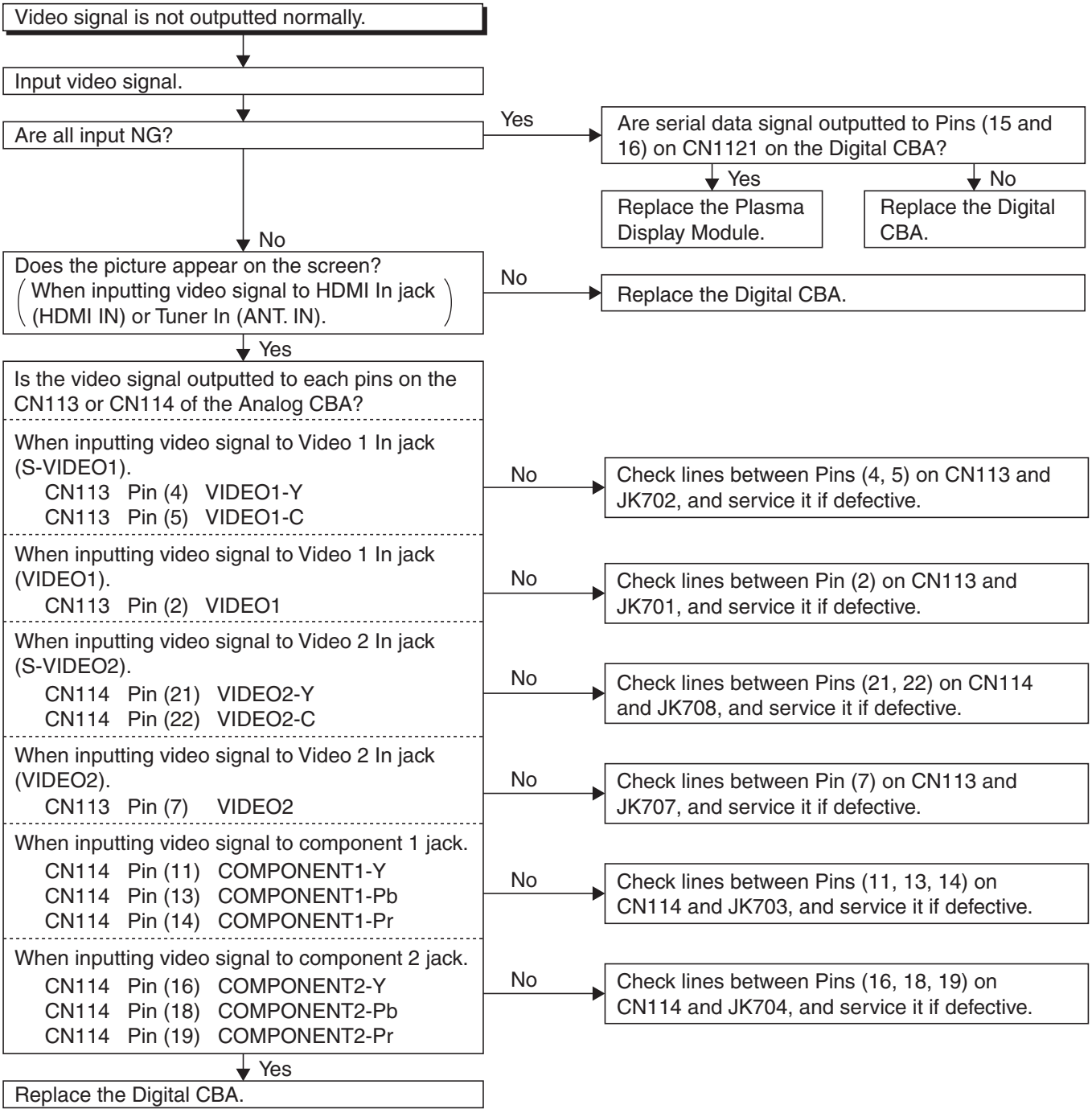
Problem	Details of Condition		Checking Parts (Ref. No.)
1. Malfunction occurs in stand-by mode.	The voltage of both ends on C2115 is 0V or lower than 170V.		F601
	F601 is cut off. R2001 and R2004 are cut off, or smoke.		IC2100, IC2200, IC2300, IC2400
			Q2101, Q2102, Q2600
			D2101, D2106, D2153
			R2105
	F2200 is cut off.		IC2200
	F2400 is cut off.		IC2400
	5V is not outputted to VSUB 5V. [After oscillating, oscillating stops. (Overvoltage latching)]		IC2403, IC2450
			F2400
			D2400, D2401, D2405, D2407, D2452, D2456, D2463
	Stand-by consumption power is too high. (Not oscillating intermittently. Abnormal oscillating.)		IC2401
			Q2400, Q2401, Q2402,Q2403, Q2404
			D2411
2. Cannot power on.	RY2000 does not turn on. (DC16V is not outputted.)		IC2401
			Q2400, Q2401, Q2402
			D2403, D2404, D2414, D2416
	PFC does not oscillate. (The voltage of both ends on C2115 does not reach for approximately 385V.)		IC2100, IC2101
			Q2100, Q2103, Q2104, Q2105, Q2106, Q2108
			D2103, D2105, D2109, D2110
3. The power turns off immediately after turning the power on. (D2506 blinks.)	Protect 1 functions.	If removing D2503, the unit turns the power on normally. (5V line is poor.)	Q2451, Q2452
		If removing D2505, the unit turns the power on normally. (15V line is poor.)	IC2451
			D2452, D2454
		If removing D2510, the unit turns the power on normally. (3.3V line is poor.)	IC2454
			Q2453, Q2454
			D2452, D2455, D2460
		If removing D2504, the unit turns the power on normally. (VE line is poor.)	Q2850, Q2851, Q2852, Q2853, Q2854, Q2855
			D2850, IC2853
		If removing D2500, the unit turns the power on normally. (Vset line is poor.)	Q2600, Q2601, Q2602, Q2750, Q2751, Q2752, Q2753, Q2754, Q2755
			IC2600, IC2601, IC2754, D2600, D2602, D2603, D2750, D2751
		If removing D2501, the unit turns the power on normally. (Vscan line is poor.)	Q2600, Q2601, Q2602, Q2650, Q2651, Q2652, Q2653
			IC2600, IC2601, IC2651, D2600, D2602, D2603, D2750, D2751
	Protect 2 functions.	If R2537 is shorted, the unit turns the power on normally.	Refer to " 2. Cannot power on" section.
	ADD-MONITOR function.	ADD-MONITOR (IC2500 : 32pin) voltage is lower than 3.5V.	Refer to "4. Vdata is poor" section.
	SUS-MONITOR function.	SUS-MONITOR (IC2500 : 31pin) voltage is over 2.5±1V.	Refer to "5. Vsus is poor" section.
4. Vdata is poor.	The waveform of T2300 stops oscillating or abnormal.		Q2300, Q2301, Q2302
			D2300, D2302, D2304, D2353
			IC2300, IC2301, IC2350
5. Vsus is poor.	The waveform of T2200 stops oscillating or abnormal.		IC2201
			Q2201
			D2202, D2204, D2205, D2211, D2212, D2213, D2214, D2215

2. SUB POWER SUPPLY SECTION

Problem	Details of Condition	Checking Parts (Ref. No.)
Malfunction occurs on the Sub Power Supply CBA.	The voltage of both ends on C2014 is 0V or lower than 170V.	F2000
		R2012
	F2000 is cut off. R2014 is cut off.	IC2000, IC2050
		Q2001, Q2003
		D2010, D2014, D2067
	3.3V is not outputted to both ends on C2055.	D2072
	5V is not outputted to both ends on C2074.	IC2051
		D2062, D2063, D2071
	A+21V is not outputted.	Q2050, Q2051, Q2052
		D2059, D2060, D2067, D2074
	The detection of decreasing voltage does not function. (The power does not turn off when the decreasing power is input.) Protect 1 functions.	Q2053
		D2061, D2069, D2070

3. VIDEO AND AUDIO SECTION

FLOW CHART NO. 1



FLOW CHART NO. 2

Audio is not outputted from speakers normally.

↓

Input audio signal.

↓

Is audio signal inputted to each pins on IC451 and IC452?

When inputting to Video 1 In jack (AUDIO(L/R)).
IC452 Pin (13) AUDIO1(L)
IC451 Pin (13) AUDIO1(R)

No → Check lines between Pin (13) on IC452 and JK701, between Pin (13) on IC451 and JK701, and service it if defective.

When inputting to Video 2 In jack (AUDIO(L/R)).
IC452 Pin (14) AUDIO2(L)
IC451 Pin (14) AUDIO2(R)

No → Check lines between Pin (14) on IC452 and JK705, between Pin (14) on IC451 and JK706, and service it if defective.

When inputting to component 1 jack (AUDIO(L/R)).
IC452 Pin (1) AUDIO3(L)
IC451 Pin (1) AUDIO3(R)

No → Check lines between Pin (1) on IC452 and JK703, between Pin (1) on IC451 and JK703, and service it if defective.

When inputting to component 2 jack (AUDIO(L/R)).
IC452 Pin (5) AUDIO4(L)
IC451 Pin (5) AUDIO4(R)

No → Check lines between Pin (5) on IC452 and JK704, between Pin (5) on IC451 and JK704, and service it if defective.

When inputting to HDMI In jack (AUDIO(L/R)).
IC452 Pin (2) AUDIO5(L)
IC451 Pin (2) AUDIO5(R)

No → Replace the Digital CBA.

When inputting to ANT. In jack.
IC452 Pin (15) AUDIO6(L)
IC451 Pin (15) AUDIO6(R)

No → Replace the Digital CBA.

↓ Yes

Is input switching signal inputted to each pins on IC451 and IC452?

	Pin (11)	Pin (10)	Pin (9)
Video 1	L	L	L
Video 2	L	L	H
Component 1	H	L	L
Component 2	H	L	H
HDMI	L	H	H
TUNER	L	H	L

No → Check lines between each pins on IC452 and each pins on CN112, between each pins on IC451 and each pins on CN112, and service it if defective.

Pin (9) on IC451,IC452 → Pin (2) on CN112
Pin (10) on IC451,IC452 → Pin (3) on CN112
Pin (11) on IC451,IC452 → Pin (4) on CN112

↓ Yes

Is audio signal outputted to each pins on IC451 and IC452?

IC452 Pin (3) L-CH
IC451 Pin (3) R-CH

No → Is +12V voltage inputted to Pin (16) on IC451 and IC452?

Yes ↓

Replace IC451 or IC452.

No ↑

Check +12V line and service it if defective.

↓ Yes

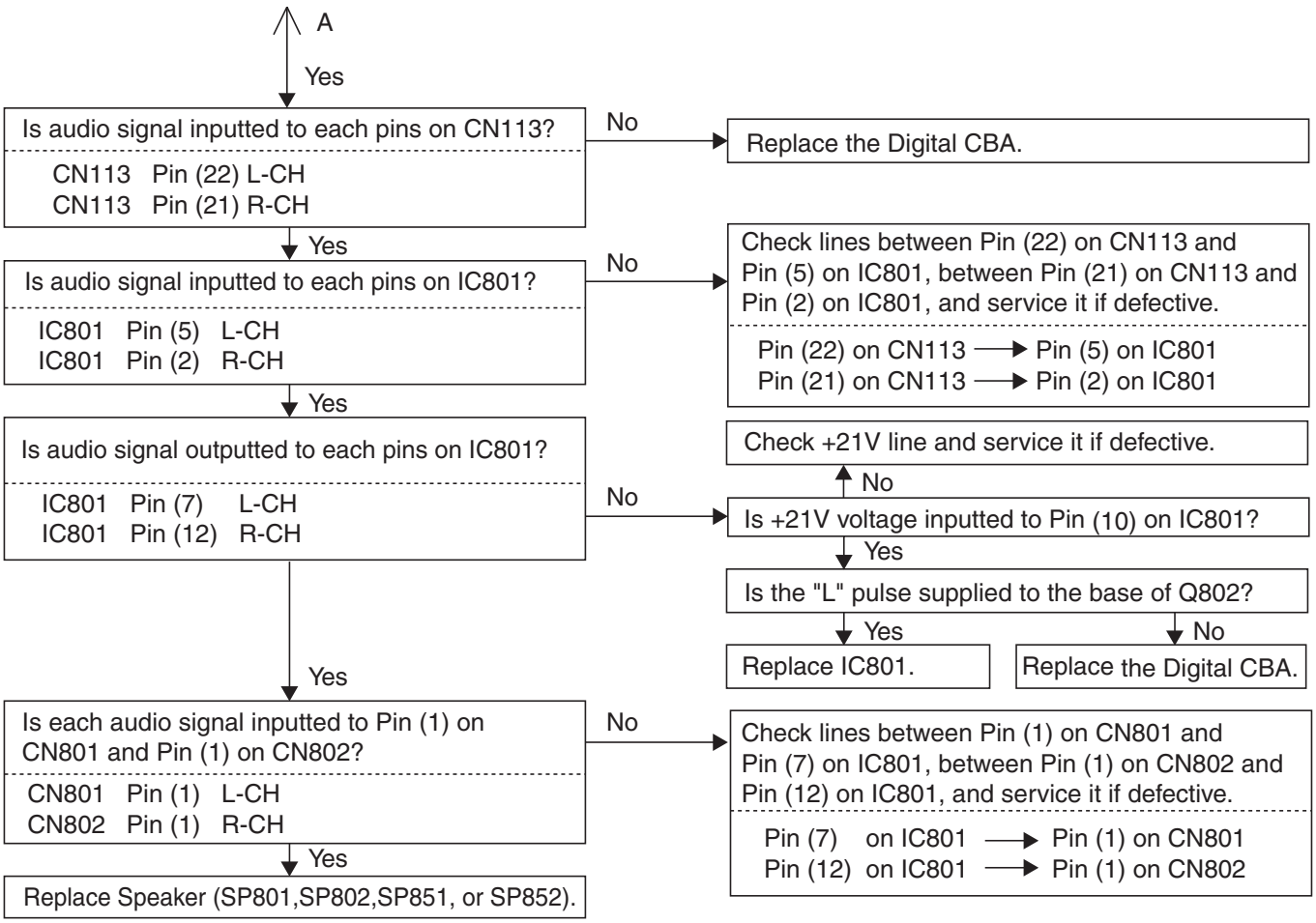
Is audio signal inputted to each pins on CN113?

CN113 Pin (19) L-CH
CN113 Pin (18) R-CH

No → Check lines between Pin (3) on IC452 and Pin (19) on CN113, between Pin (3) on IC451 and Pin (18) on CN113, and service it if defective.

Pin (3) on IC452 → Pin (19) on CN113
Pin (3) on IC451 → Pin (18) on CN113

↓ (continued to "A" on next page)


A
Yes
Is audio signal inputted to each pins on CN113?
CN113 Pin (22) L-CH
CN113 Pin (21) R-CH
No
Replace the Digital CBA.
Yes
Is audio signal inputted to each pins on IC801?
IC801 Pin (5) L-CH
IC801 Pin (2) R-CH
No
Check lines between Pin (22) on CN113 and Pin (5) on IC801, between Pin (21) on CN113 and Pin (2) on IC801, and service it if defective.
Pin (22) on CN113 → Pin (5) on IC801
Pin (21) on CN113 → Pin (2) on IC801
Yes
Is audio signal outputted to each pins on IC801?
IC801 Pin (7) L-CH
IC801 Pin (12) R-CH
No
Check +21V line and service it if defective.
No
Is +21V voltage inputted to Pin (10) on IC801?
Yes
Is the "L" pulse supplied to the base of Q802?
Yes
No
Replace IC801.
Replace the Digital CBA.
Yes
Is each audio signal inputted to Pin (1) on CN801 and Pin (1) on CN802?
CN801 Pin (1) L-CH
CN802 Pin (1) R-CH
No
Check lines between Pin (1) on CN801 and Pin (7) on IC801, between Pin (1) on CN802 and Pin (12) on IC801, and service it if defective.
Pin (7) on IC801 → Pin (1) on CN801
Pin (12) on IC801 → Pin (1) on CN802
Yes
Replace Speaker (SP801,SP802,SP851, or SP852).

FLOW CHART NO. 3

Audio is not outputted to audio output terminal normally.
[JK1405 (Analog audio output jack) and JK1403 (Digital audio output jack)]

↓

Input audio signal.

↓

Is audio signal inputted to each pins on IC451 and IC452?

When inputting to Video 1 In jack (AUDIO(L/R)).
IC452 Pin (13) AUDIO1(L)
IC451 Pin (13) AUDIO1(R)

No → Check lines between Pin (13) on IC452 and JK701, between Pin (13) on IC451 and JK701, and service it if defective.

When inputting to Video 2 In jack (AUDIO(L/R)).
IC452 Pin (14) AUDIO2(L)
IC451 Pin (14) AUDIO2(R)

No → Check lines between Pin (14) on IC452 and JK705, between Pin (14) on IC451 and JK706, and service it if defective.

When inputting to component 1 jack (AUDIO(L/R)).
IC452 Pin (1) AUDIO3(L)
IC451 Pin (1) AUDIO3(R)

No → Check lines between Pin (1) on IC452 and JK703, between Pin (1) on IC451 and JK703, and service it if defective.

When inputting to component 2 jack (AUDIO(L/R)).
IC452 Pin (5) AUDIO4(L)
IC451 Pin (5) AUDIO4(R)

No → Check lines between Pin (5) on IC452 and JK704, between Pin (5) on IC451 and JK704, and service it if defective.

When inputting to HDMI In jack (AUDIO(L/R)).
IC452 Pin (2) AUDIO5(L)
IC451 Pin (2) AUDIO5(R)

No → Replace the Digital CBA.

When inputting to ANT. In jack.
IC452 Pin (15) AUDIO6(L)
IC451 Pin (15) AUDIO6(R)

No → Replace the Digital CBA.

↓ Yes

Is input switching signal inputted to each pins on IC451 and IC452?

	Pin (11)	Pin (10)	Pin (9)
Video 1	L	L	L
Video 2	L	L	H
Component 1	H	L	L
Component 2	H	L	H
HDMI	L	H	H
TUNER	L	H	L

No → Check lines between each pins on IC452 and each pins on CN112, between each pins on IC451 and each pins on CN112, and service it if defective.

Pin (9) on IC451,IC452 ⟶ Pin (2) on CN112
Pin (10) on IC451,IC452 ⟶ Pin (3) on CN112
Pin (11) on IC451,IC452 ⟶ Pin (4) on CN112

↓ Yes

Is audio signal outputted to each pins on IC451 and IC452?

IC452 Pin (3) L-CH
IC451 Pin (3) R-CH

No → Is +12V voltage inputted to Pin (16) on IC451 and IC452?

Yes ↓ Replace IC451 or IC452.

No ↑ Check +12V line and service it if defective.

↓ Yes

Is audio signal inputted to each pins on CN113?

CN113 Pin (19) L-CH
CN113 Pin (18) R-CH

No → Check lines between Pin (3) on IC452 and Pin (19) on CN113, between Pin (3) on IC451 and Pin (18) on CN113, and service it if defective.

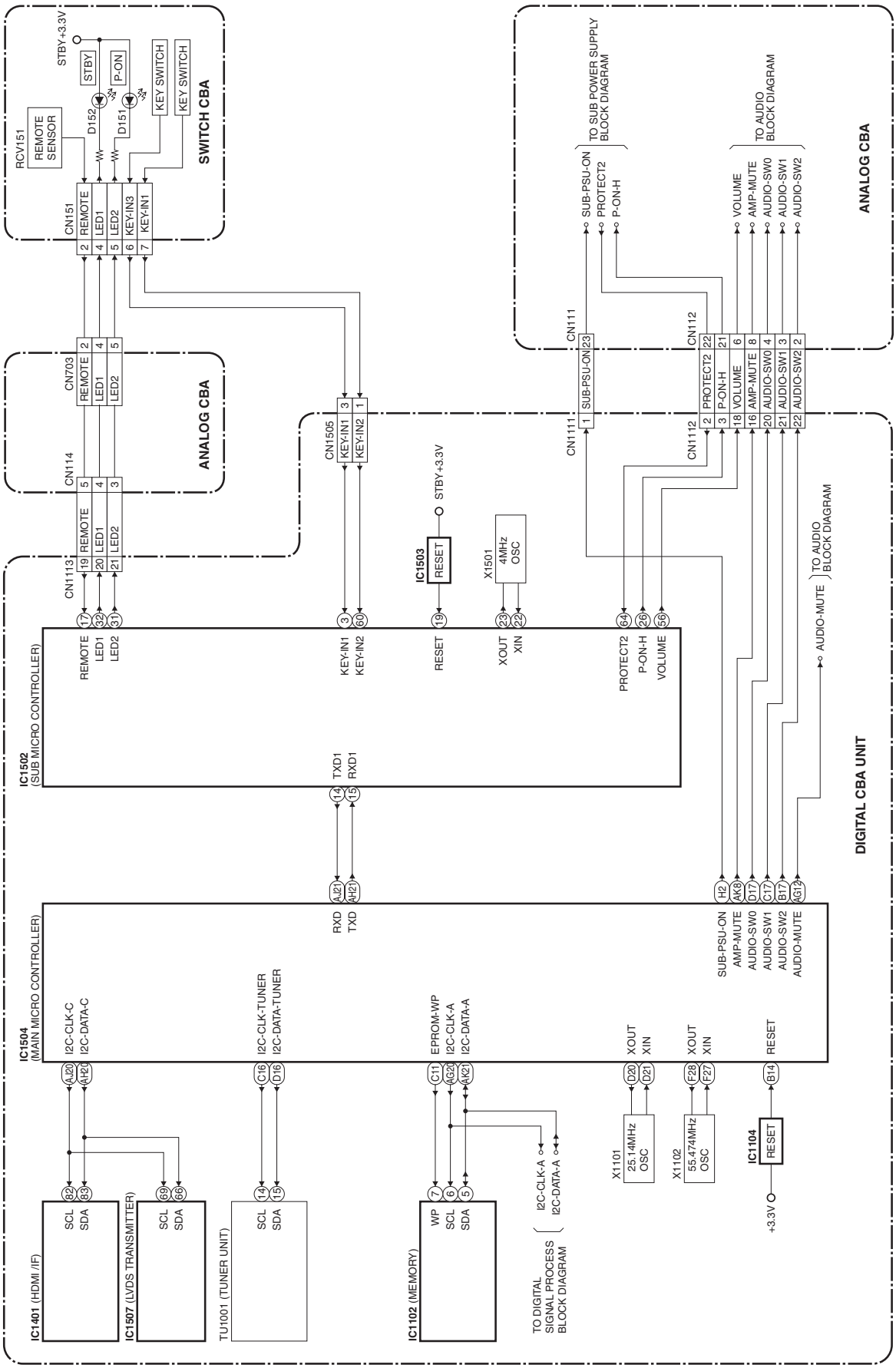
Pin (3) on IC452 ⟶ Pin (19) on CN113
Pin (3) on IC451 ⟶ Pin (18) on CN113

↓ Yes

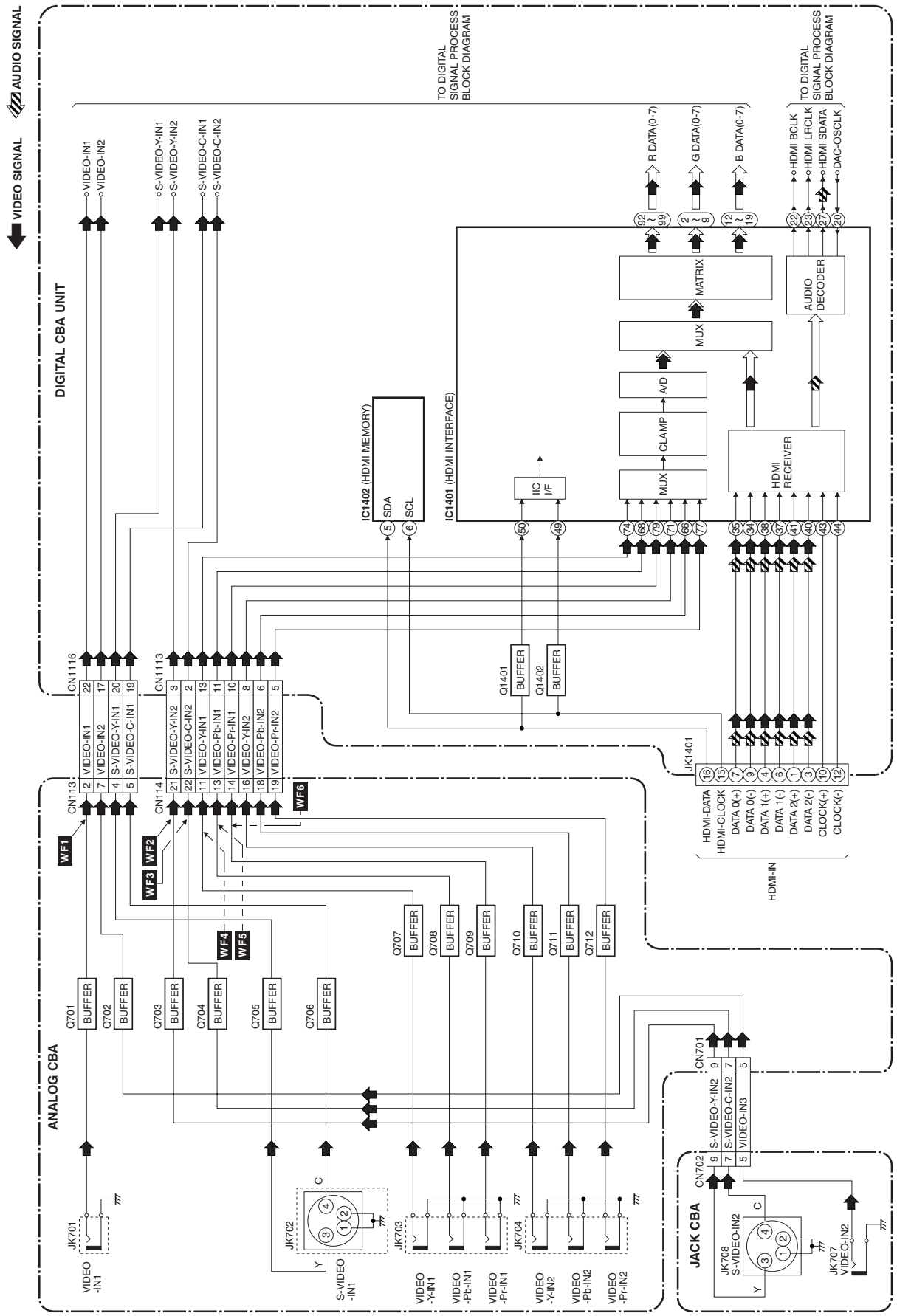
Replace the Digital CBA.

BLOCK DIAGRAMS

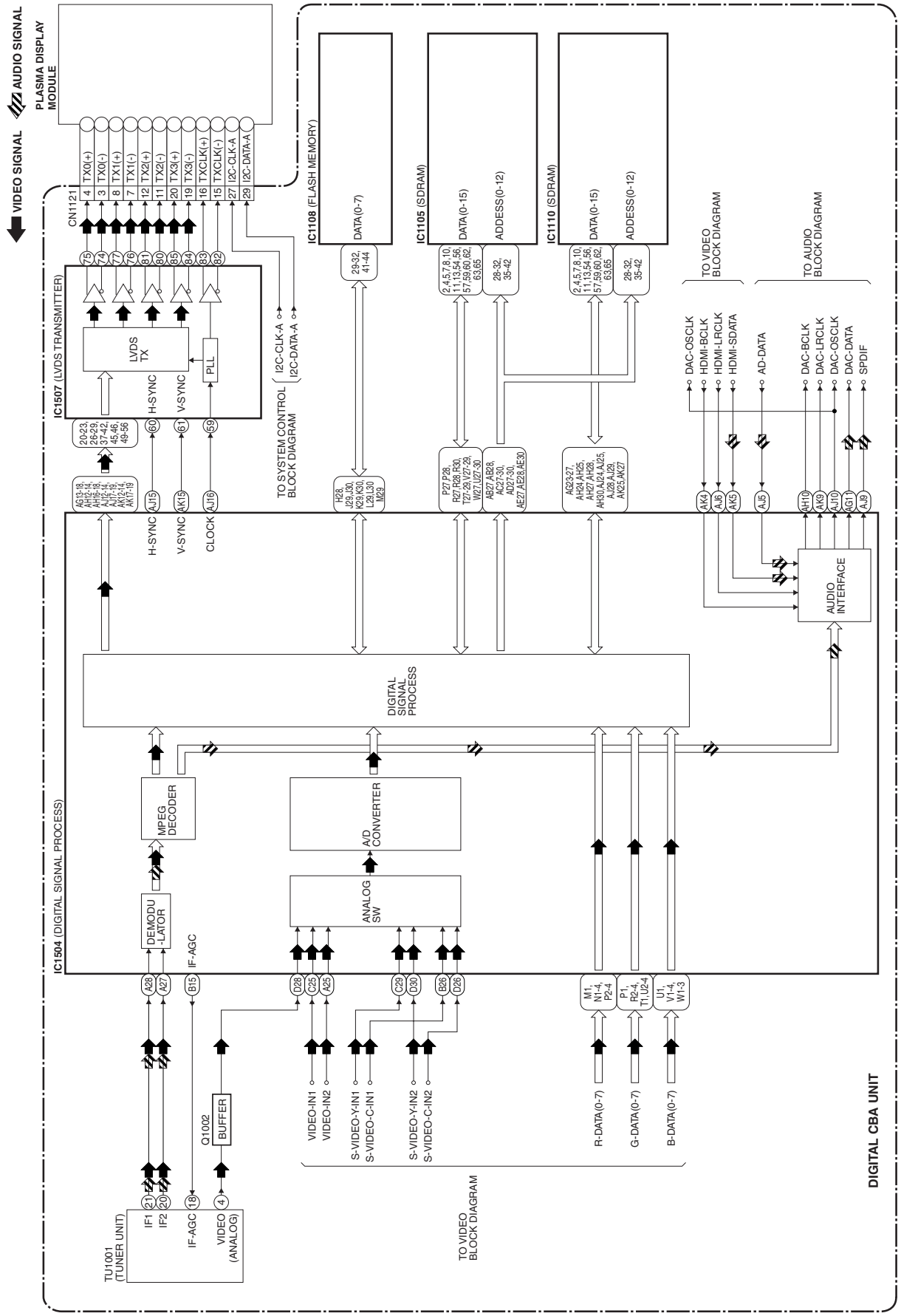
System Control Block Diagram



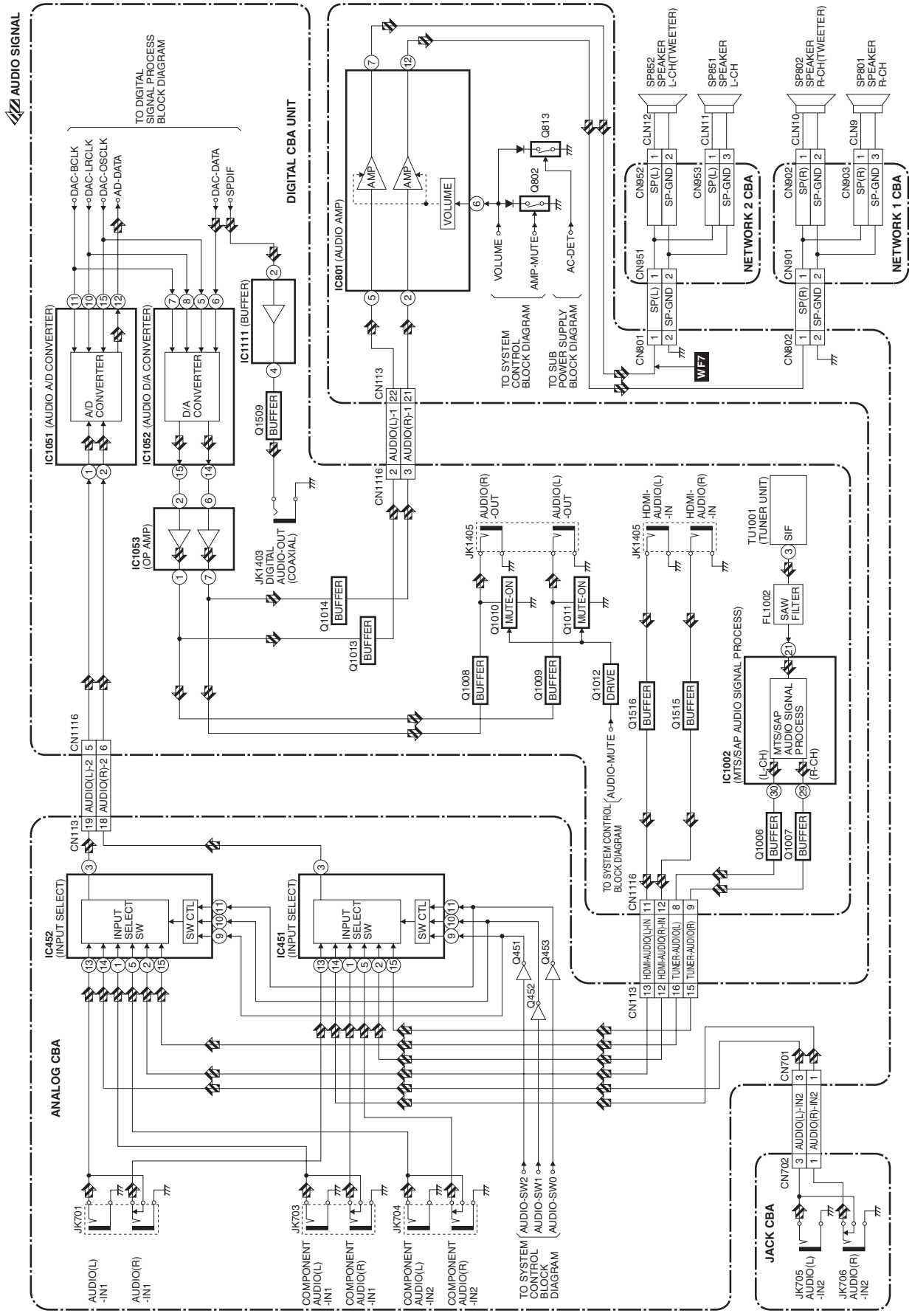
Video Block Diagram



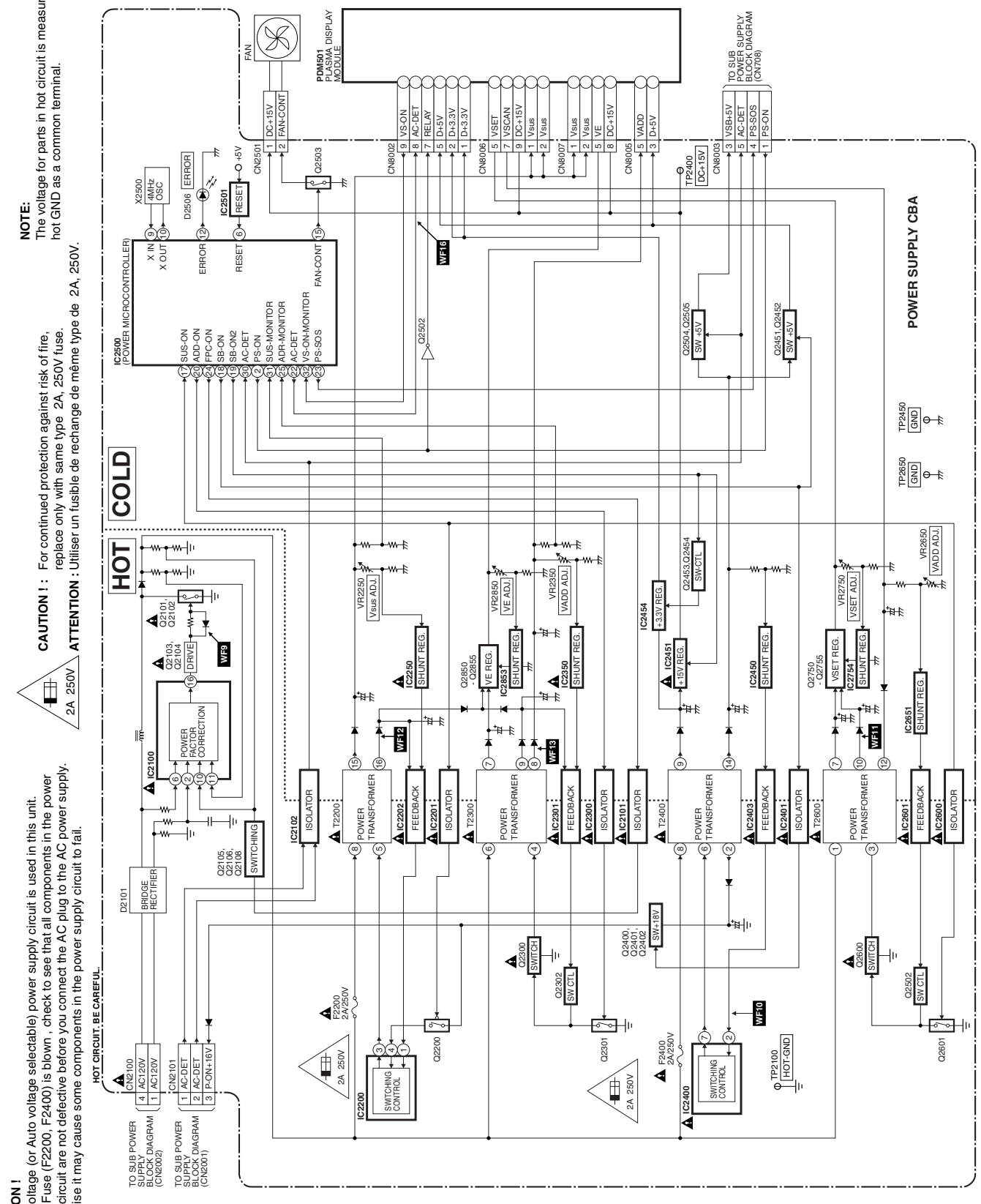
Digital Signal Process Block Diagram



Audio Block Diagram



Main Power Supply Block Diagram



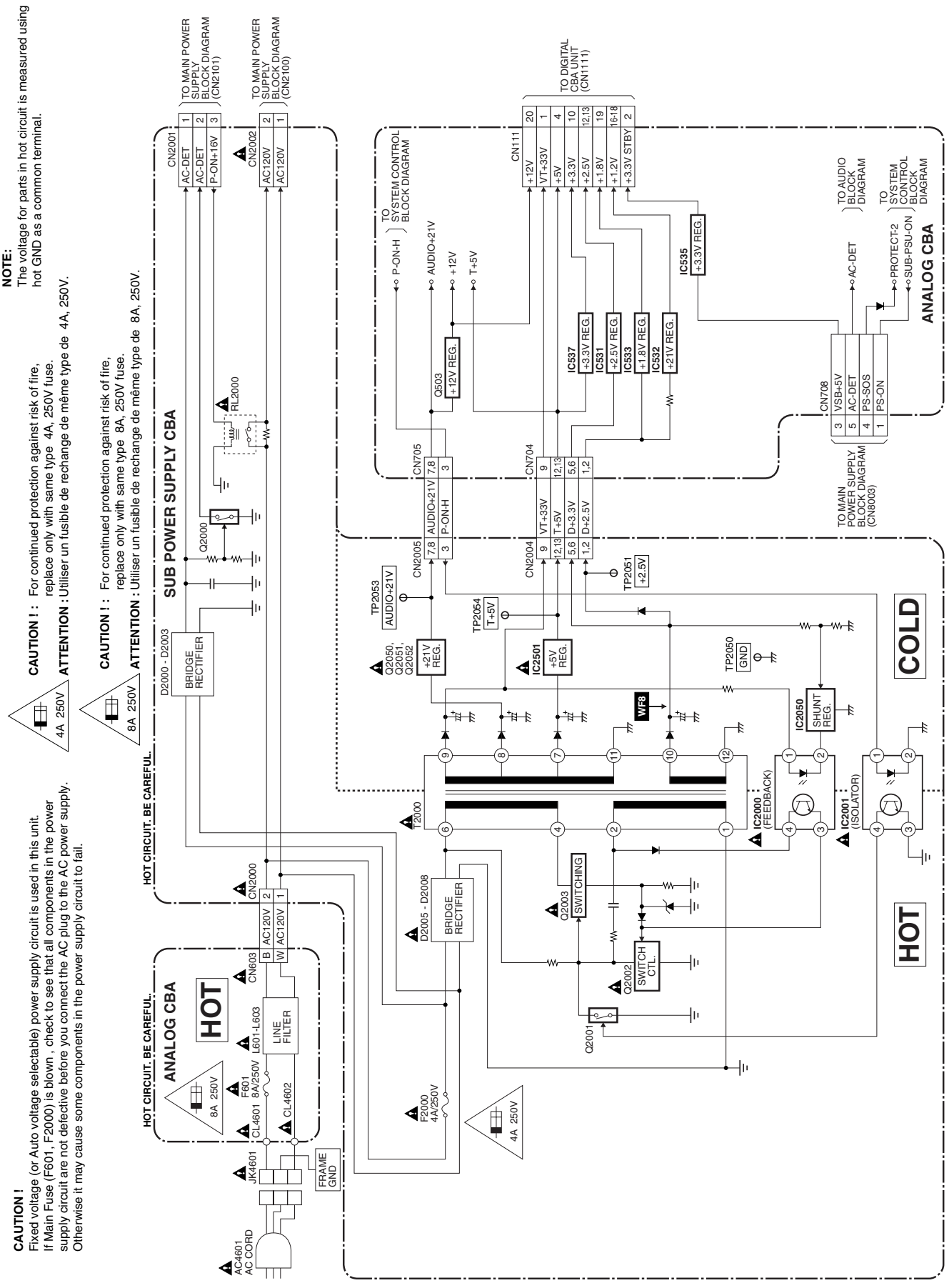
CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F2200, F2400) is blown , check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the power supply circuit to fail.

HOT CIRCUIT. BE CAREFUL.

CAUTION ! : For continued protection against risk of fire, replace only with same type 2A, 250V fuse.
ATTENTION : Utiliser un fusible de rechange de même type de 2A, 250V.

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

Sub Power Supply 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.

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 μF ($P=10^{-6}$μF).
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 --- ±10% CH --- 0±60ppm/°C CSL --- +350~-1000ppm/°C

Tolerance of Capacitors are noted with the following:

Z --- +80~-20%

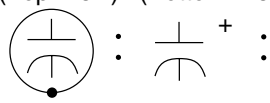
Note of Resistors:

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

Capacitors and transistors are represented by the following symbols.

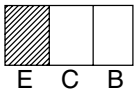
CBA Symbols

(Top View) (Bottom View)



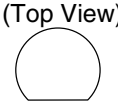
Electrolytic Capacitor

(Bottom View)



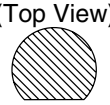
Transistor or Digital Transistor

(Top View)



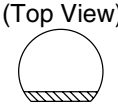
NPN Transistor

(Top View)



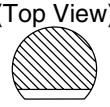
PNP Transistor

(Top View)



NPN Digital Transistor

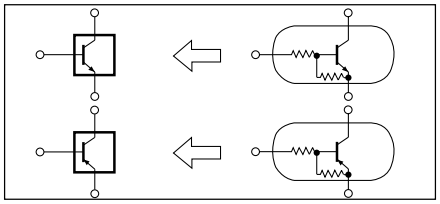
(Top View)



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 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:**

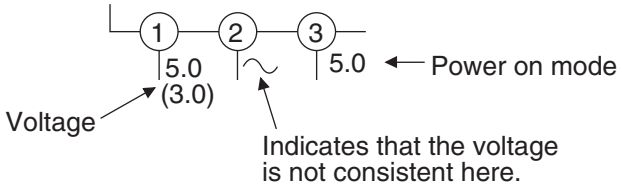
   Fixed Voltage (or Auto voltage selectable) power supply circuit is used in this unit.
   If Main Fuse (F601, F2000, F2200, F2400) is blown, first check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause 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.

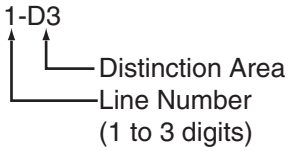
   (2) To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list section of the service manual.

4. **Voltage indications on the schematics are as shown below:**
   Plug the TV power cord into a standard AC outlet.:

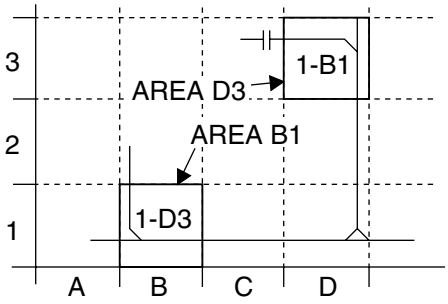


Unit: Volts

5. **How to read converged lines**



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**

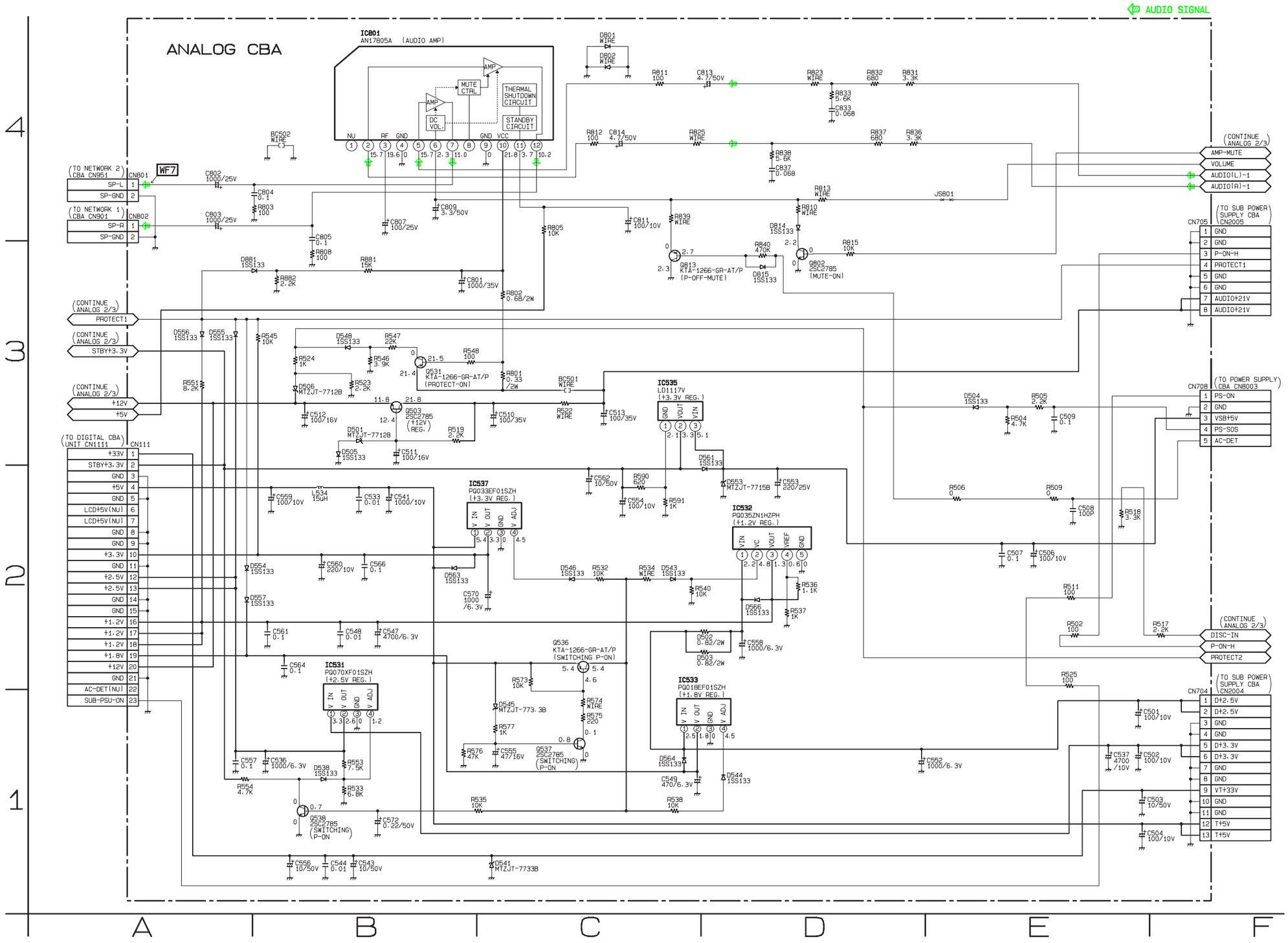
   : Indicates a test point with a jumper wire across a hole in the PCB.

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

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

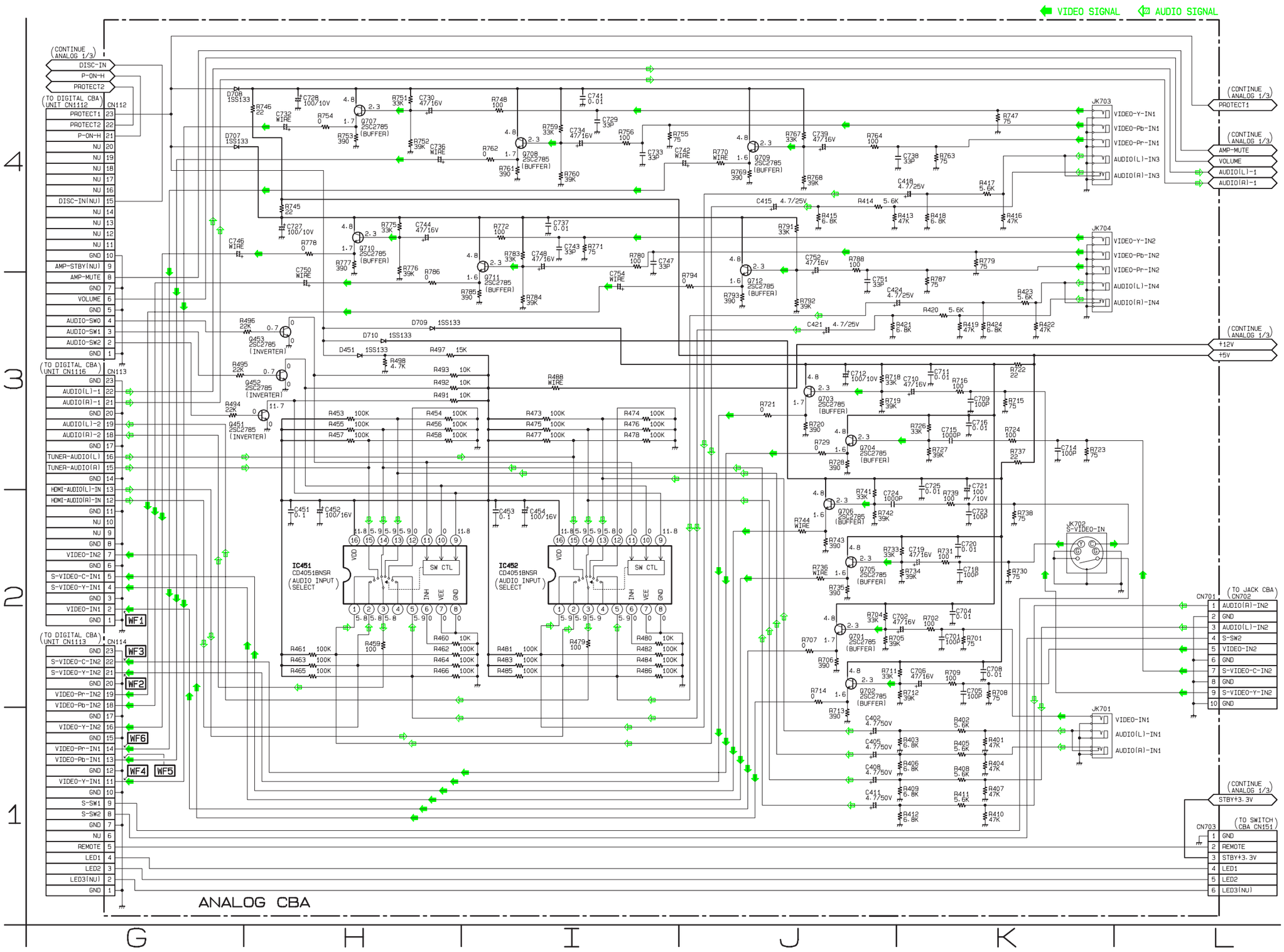
   : Used to indicate a test point with a test pin.

Analog 1/3 Schematic Diagram



L0700SCA1

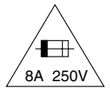
Analog 2/3 Schematic Diagram



L0700SCA2

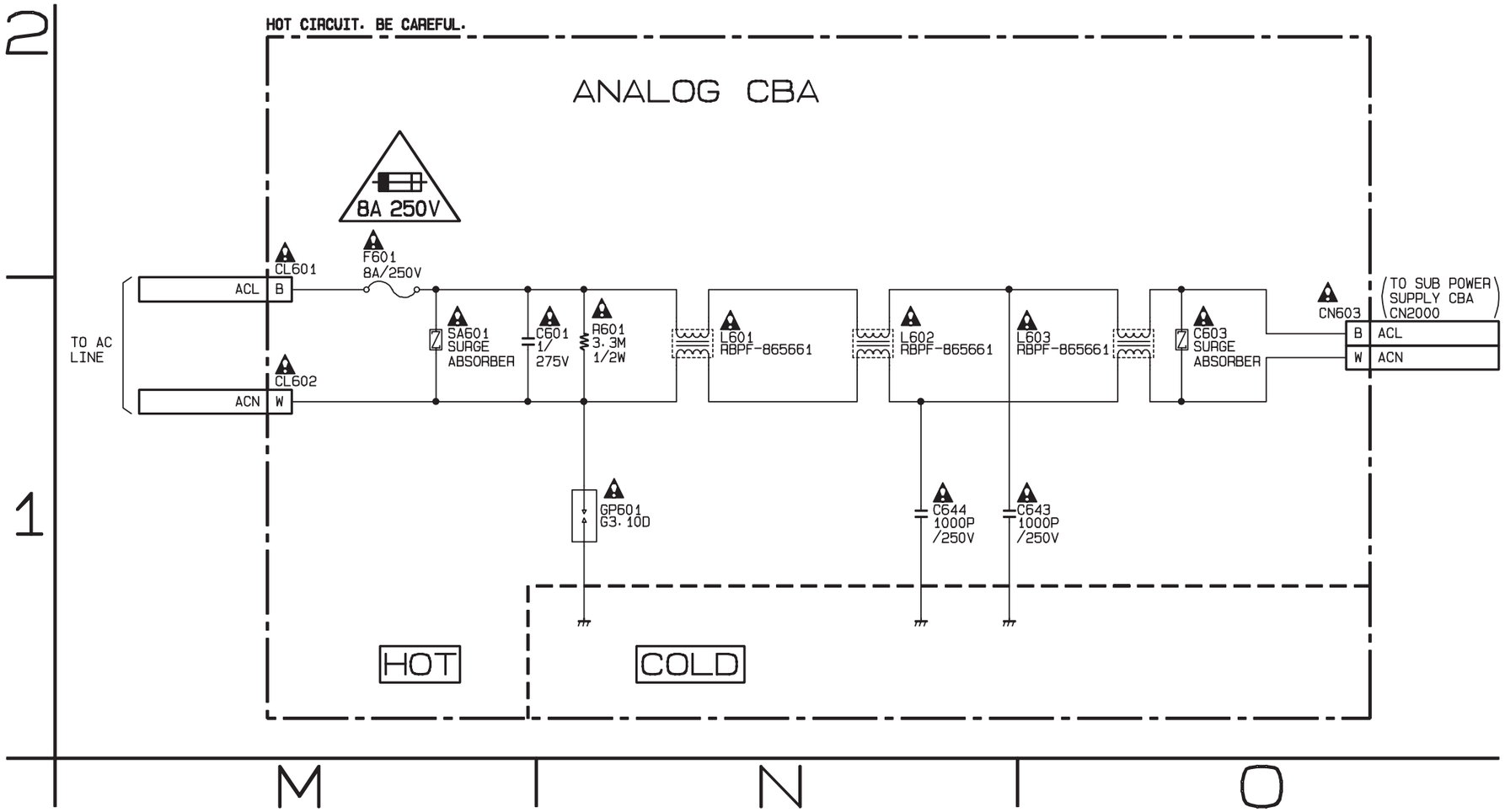
Analog 3/3 Schematic Diagram

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 8A, 250V fuse.
ATTENTION : Utiliser un fusible de rechange de même type de 8A, 250V.

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



Power Supply 1/3 Schematic Diagram

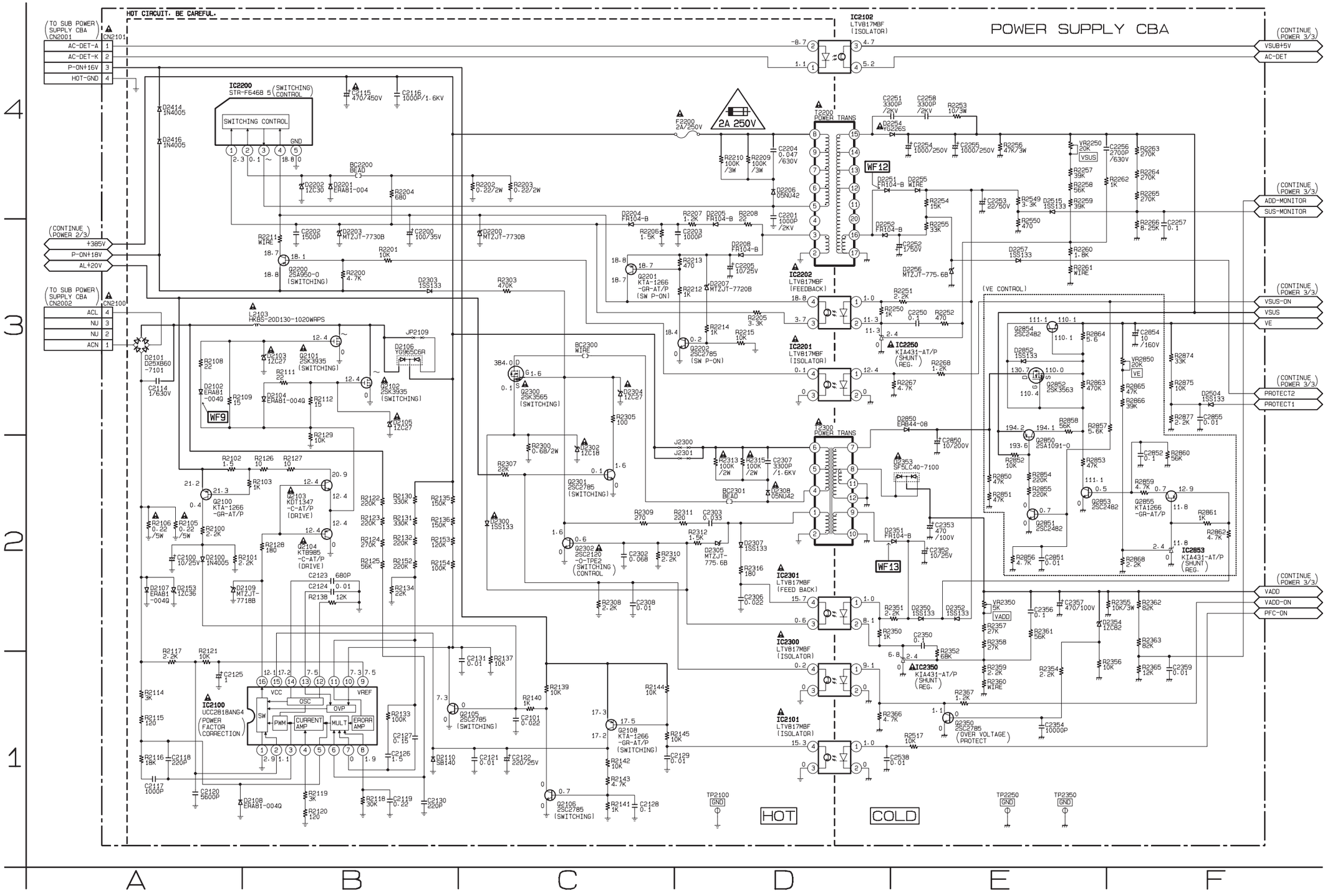
CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F2200) is blown , check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.
Otherwise it may cause some components in the power supply circuit to fail.

2A 250V

CAUTION ! : For continued protection against risk of fire, replace only with same type 2A, 250V fuse.
ATTENTION : Utiliser un fusible de rechange de même type de 2A, 250V.

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

CAUTION !
Do not measure or check pin 3~6, 11~12, 14 of IC2100 on the power supply CBA when the unit power is on. Otherwise, IC may be broken.



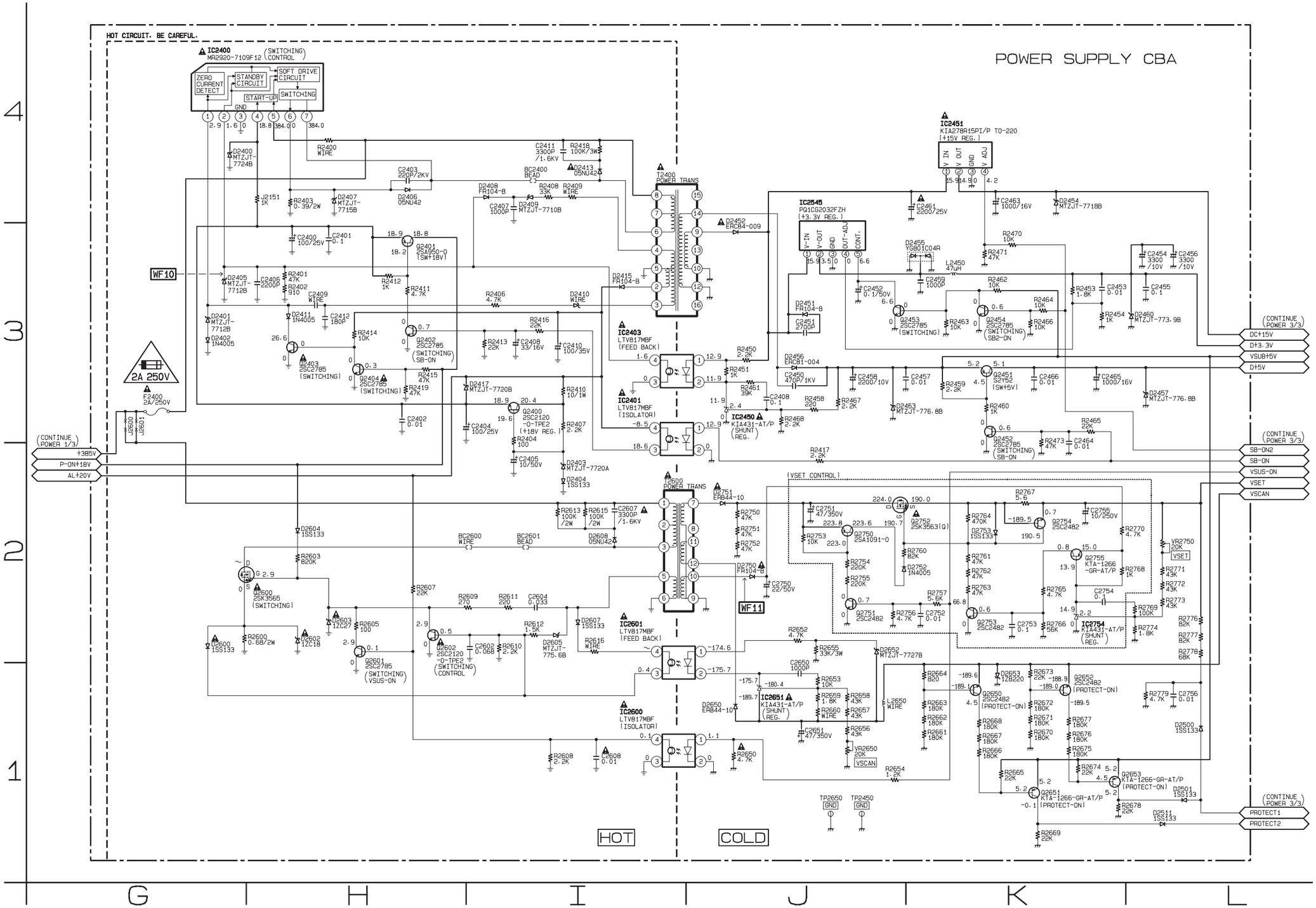
Power Supply 2/3 Schematic Diagram

CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F2400) 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.

2A 250V

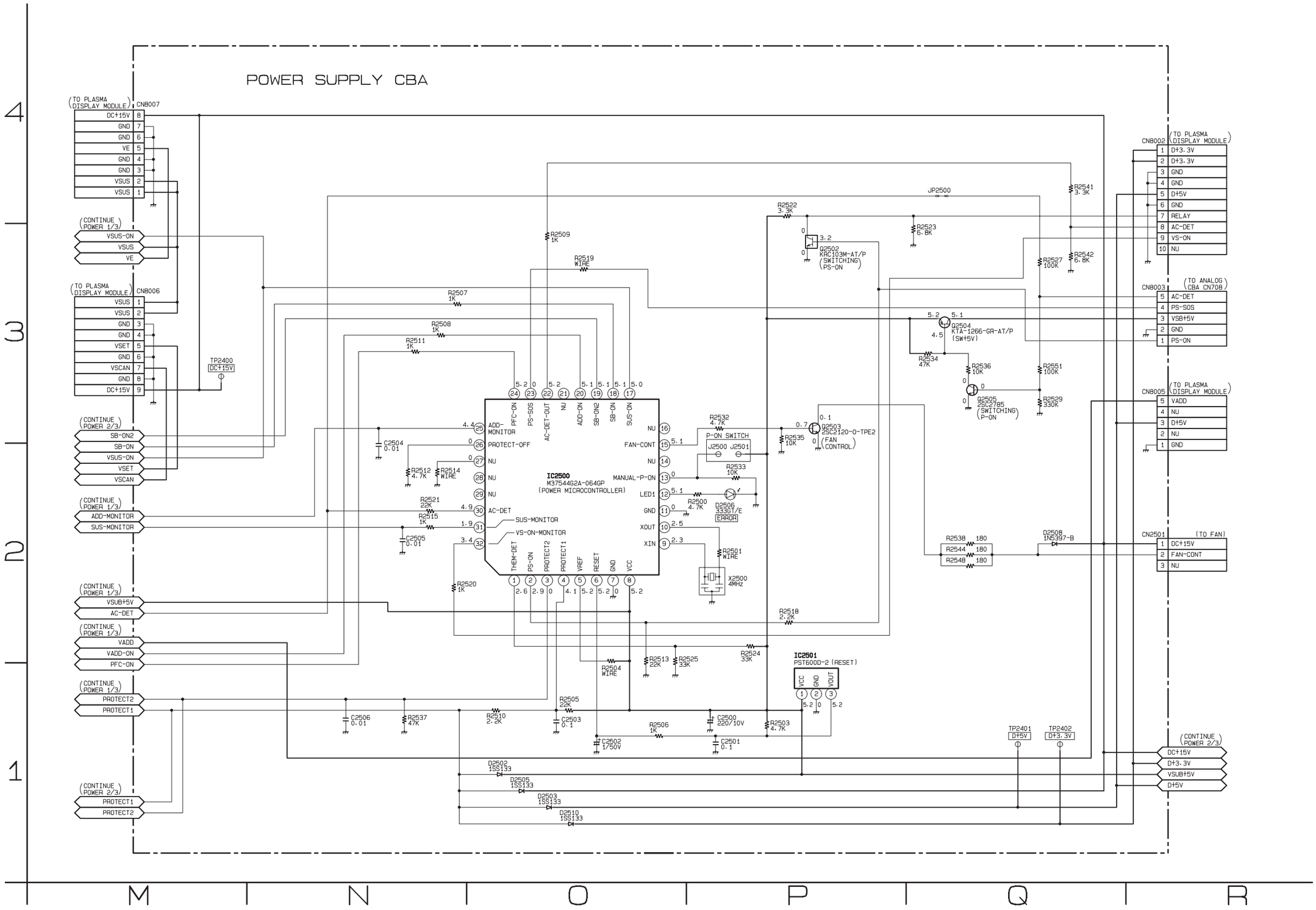
CAUTION ! : For continued protection against risk of fire, replace only with same type 2A, 250V fuse.
ATTENTION : Utiliser un fusible de rechange de même type de 2A, 250V.

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



L0700SCP2

Power Supply 3/3 Schematic Diagram



L0700SCP3

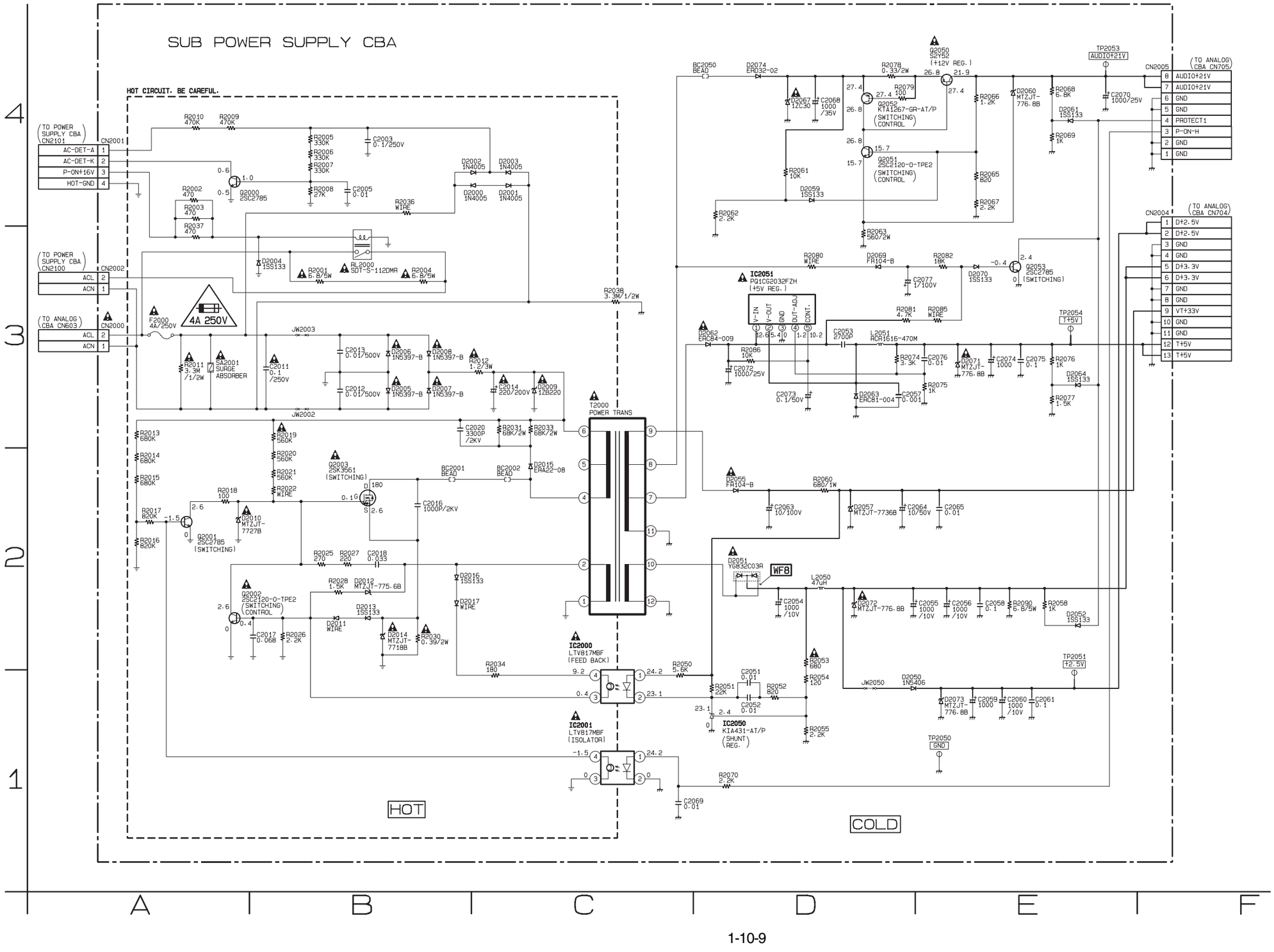
Sub Power Supply Schematic Diagram

CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F2000) 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.

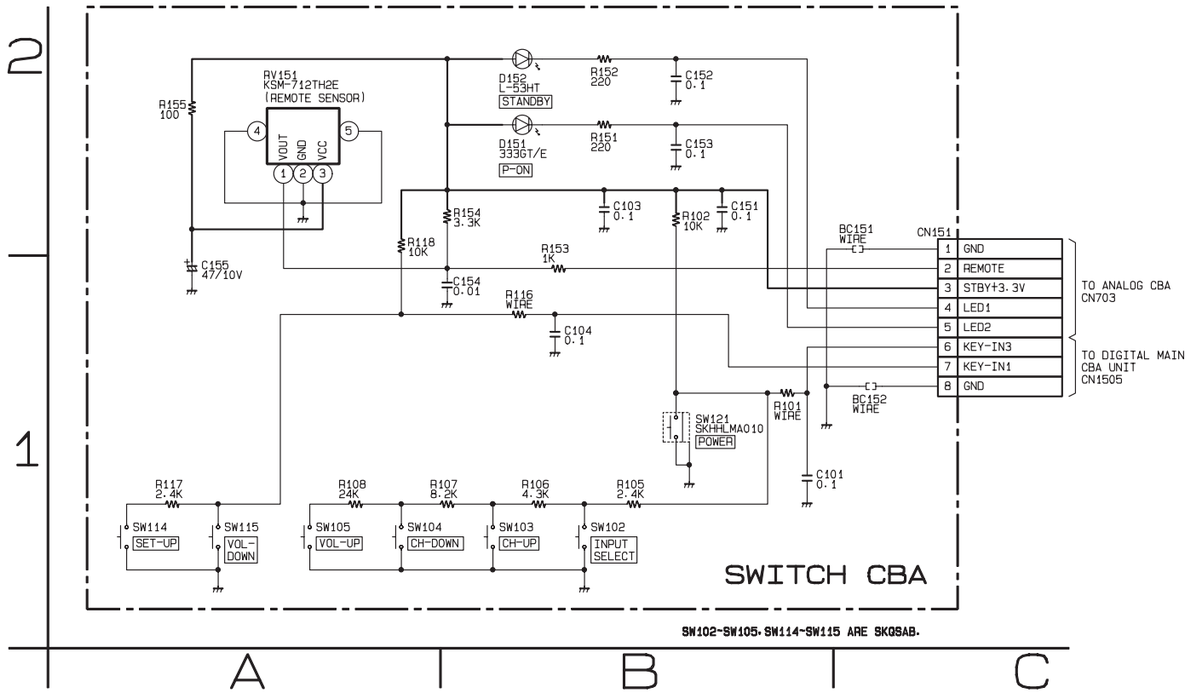
4A 250V

CAUTION ! : For continued protection against risk of fire, replace only with same type 4A, 250V fuse.
ATTENTION : Utiliser un fusible de rechange de même type de 4A, 250V.

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

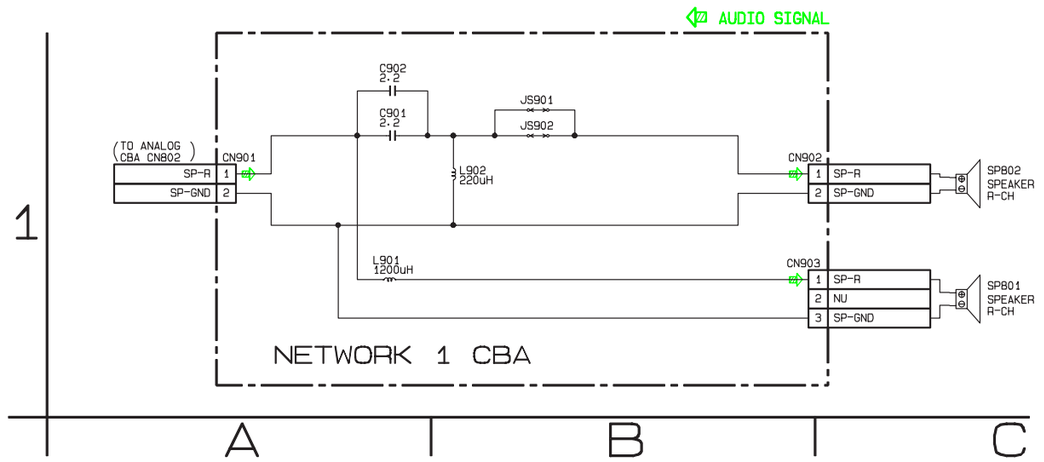


Switch Schematic Diagram



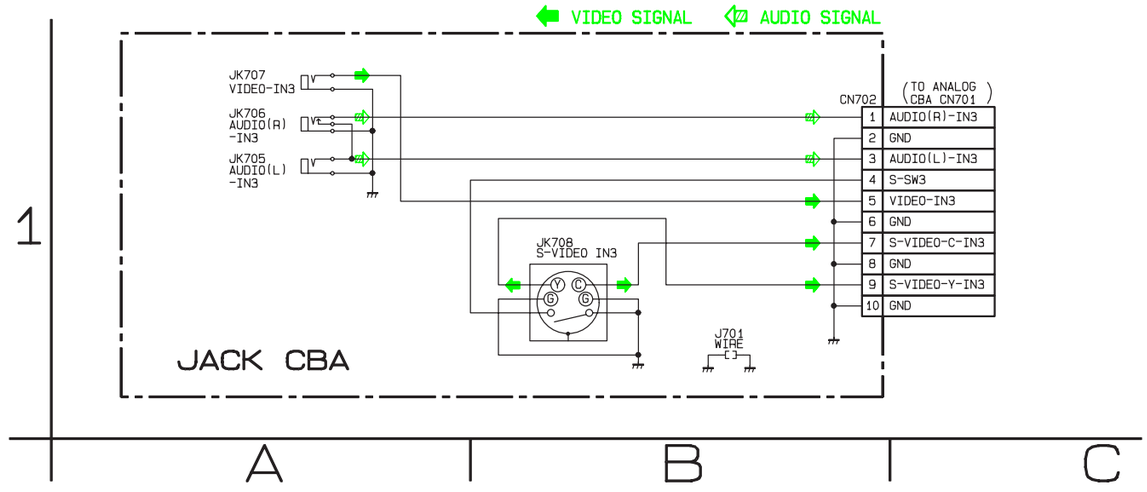
L0700SCSW

Network 1 Schematic Diagram



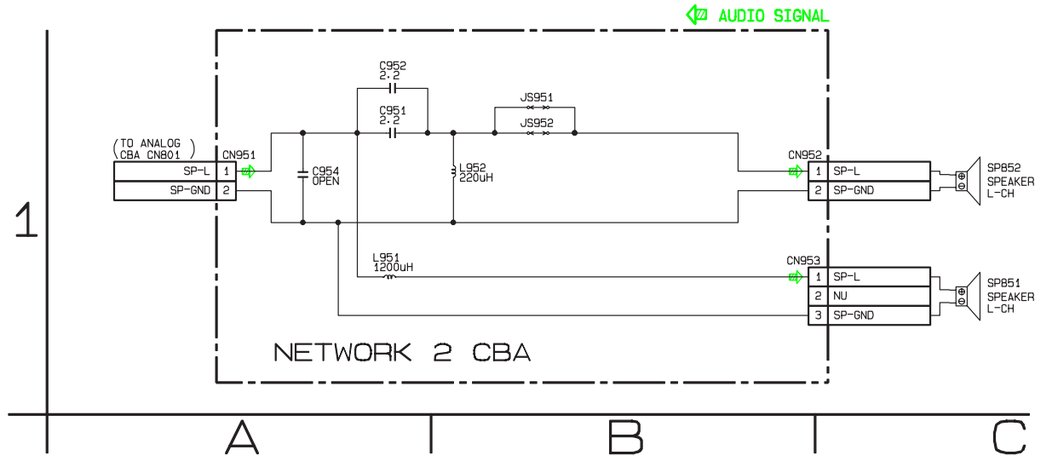
L0700SCN1

Jack Schematic Diagram



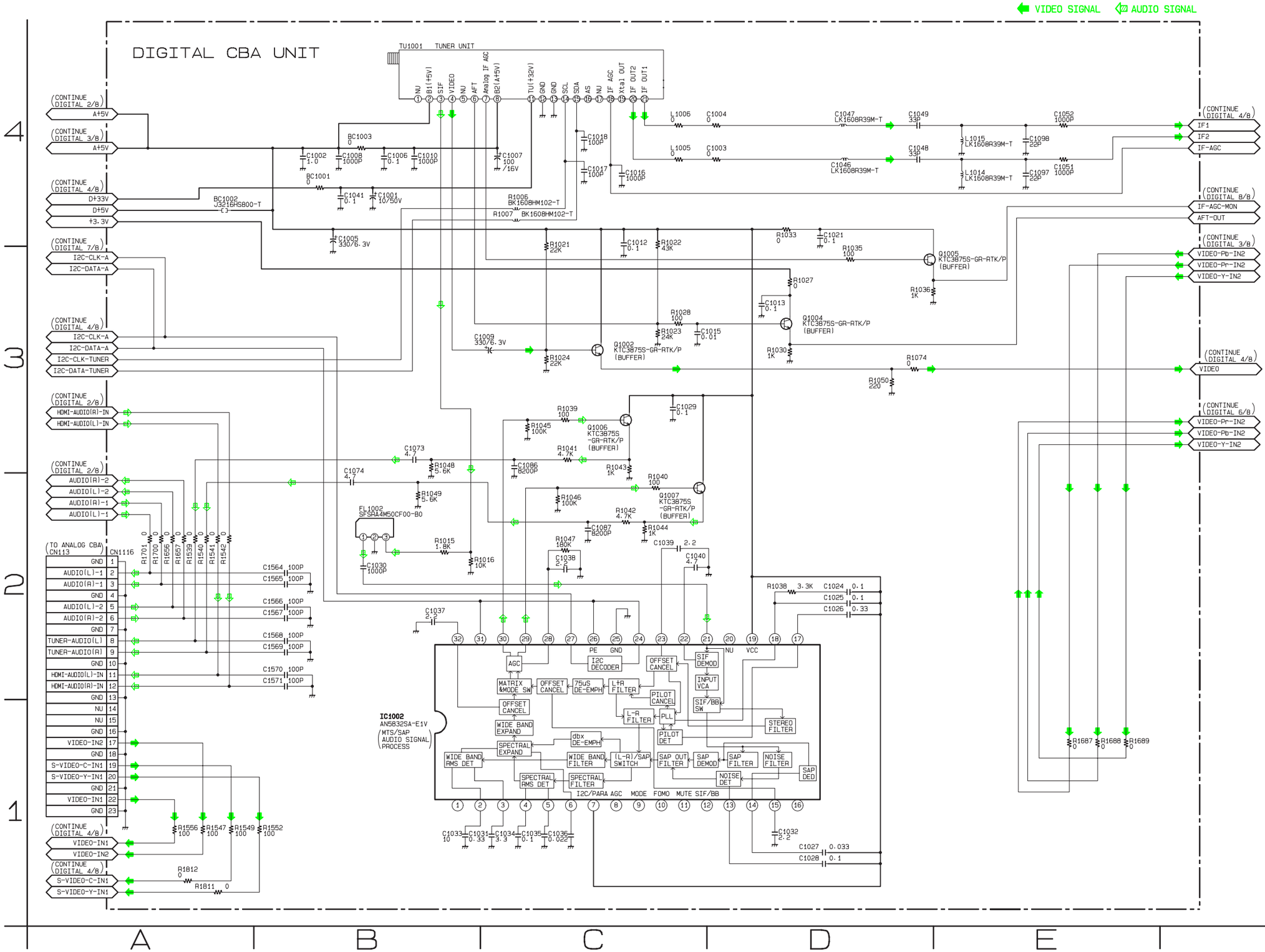
L0700SCJ

Network 2 Schematic Diagram



L0700SCN2

Digital 1/8 Schematic Diagram

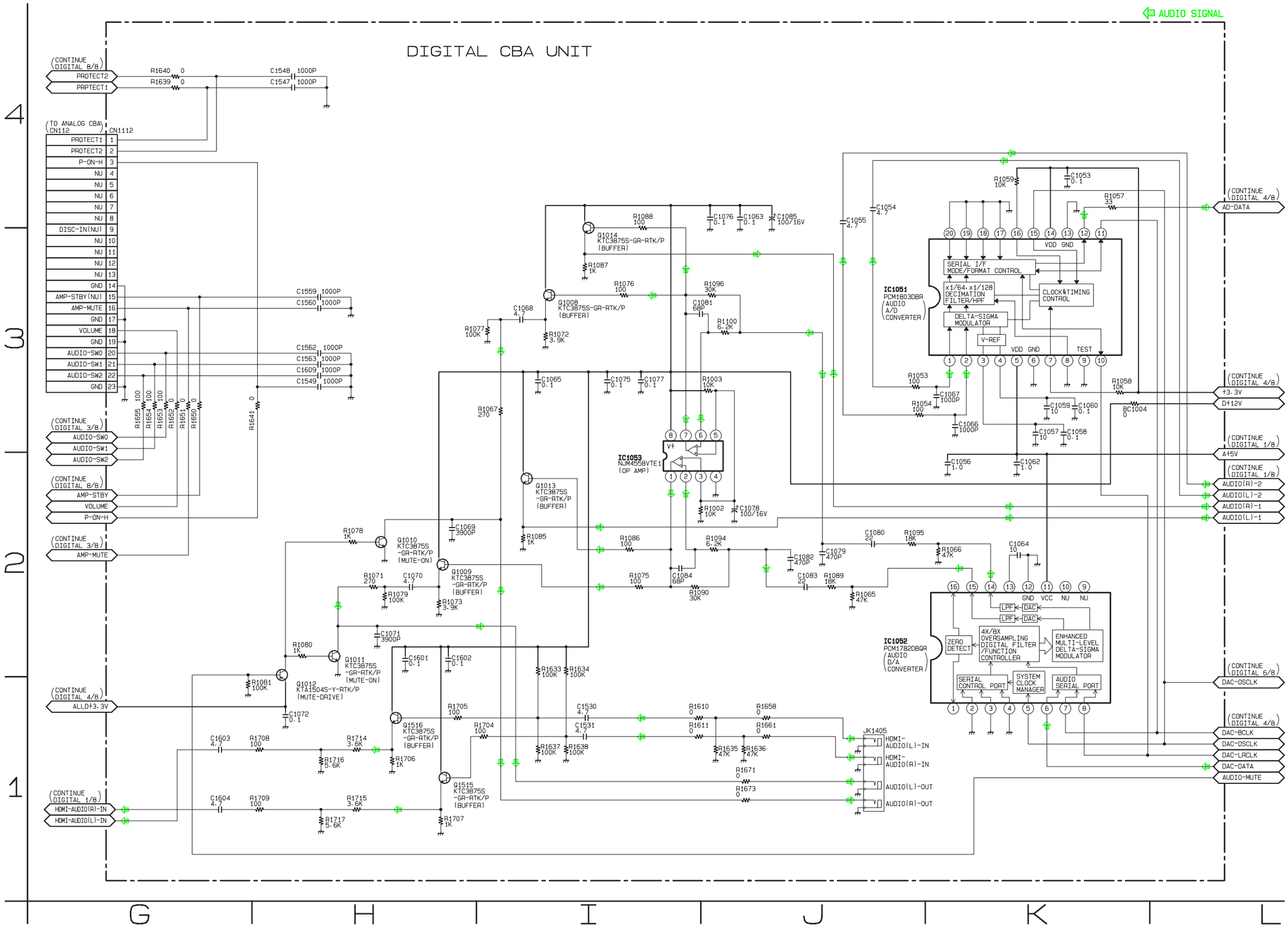


VOLTAGE CHART

CN1116

Pin No.	Voltage
1	0
2	5.2
3	5.2
4	0
5	5.9
6	5.9
7	0
8	5.9
9	5.9
10	0
11	5.9
12	5.9
13	0
14	0
15	0
16	0
17	1.6
18	0
19	1.7
20	1.6
21	0
22	1.7
23	0

Digital 2/8 Schematic Diagram



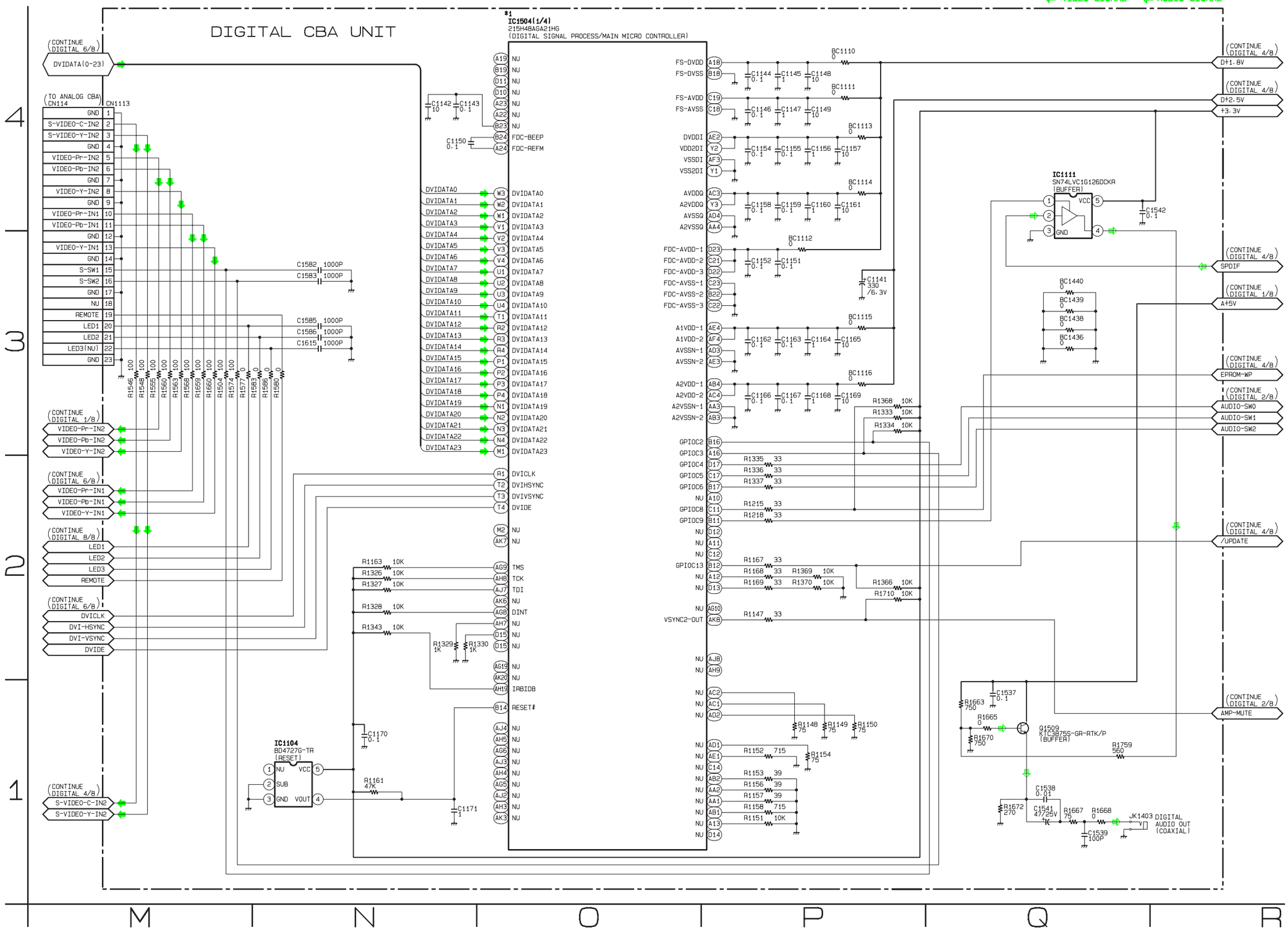
VOLTAGE CHART

CN1112

Pin No.	Voltage
1	2.4
2	0
3	3.2
4	0
5	0
6	0.8
7	0
8	0
9	0
10	0
11	0
12	0
13	0
14	0
15	0
16	0
17	0
18	2.3
19	0
20	3.3
21	3.2
22	0
23	0

Digital 3/8 Schematic Diagram

∗1 NOTE:
The order of pins shown in this diagram is different from that of actual IC1504.
IC1504 is divided into four and shown as IC1504 (1/4) ~ IC1504 (4/4) in this Digital Main Schematic Diagram Section.



VOLTAGE CHART

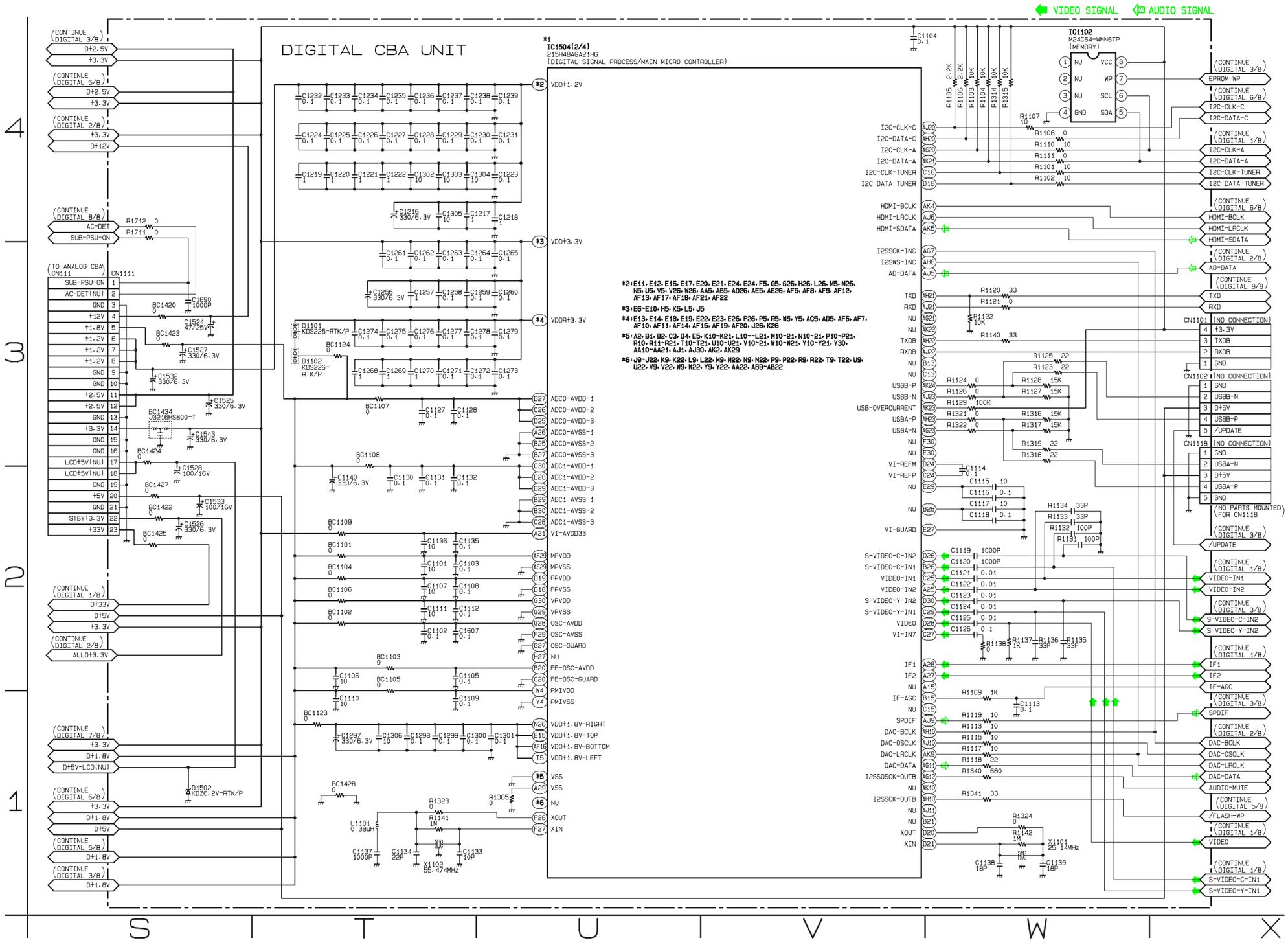
CN1113

Pin No.	Voltage
1	0
2	1.7
3	1.7
4	0
5	1.7
6	1.7
7	0
8	1.7
9	0
10	1.6
11	1.7
12	0
13	1.7
14	0
15	3.3
16	3.3
17	0
18	0
19	3.3
20	0.9
21	3.3
22	3.3
23	0

L0700SCD3

Digital 4/8 Schematic Diagram

∗1 NOTE:
The order of pins shown in this diagram is different from that of actual IC1504.
IC1504 is divided into four and shown as IC1504 (1/4) ~ IC1504 (4/4) in this Digital Main Schematic Diagram Section.



VOLTAGE CHART

CN1101

Pin No.	Voltage
1	0
2	0
3	3.3
4	3.3

CN1102

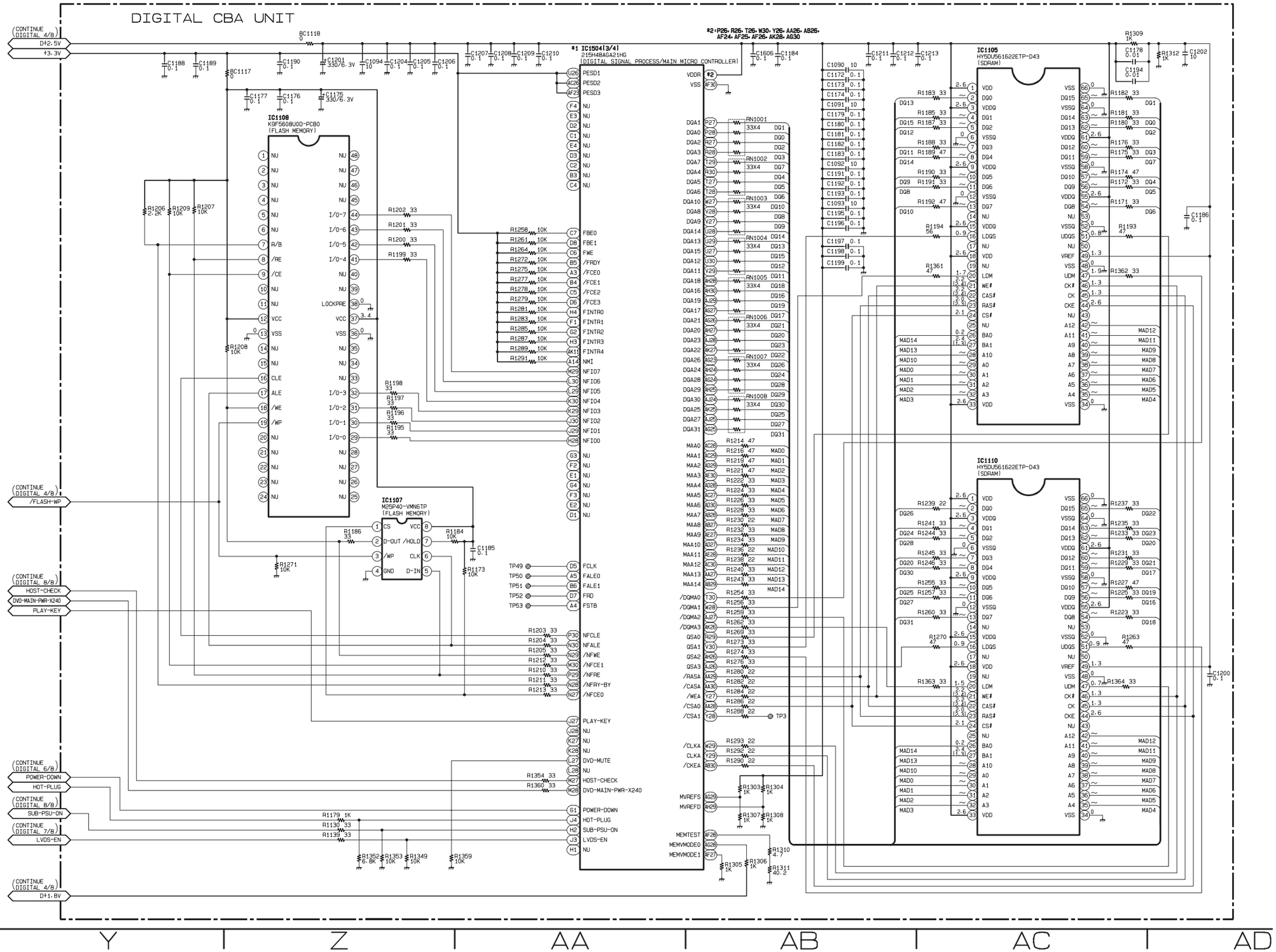
Pin No.	Voltage
1	0
2	0
3	5.0
4	0
5	3.3

CN1111

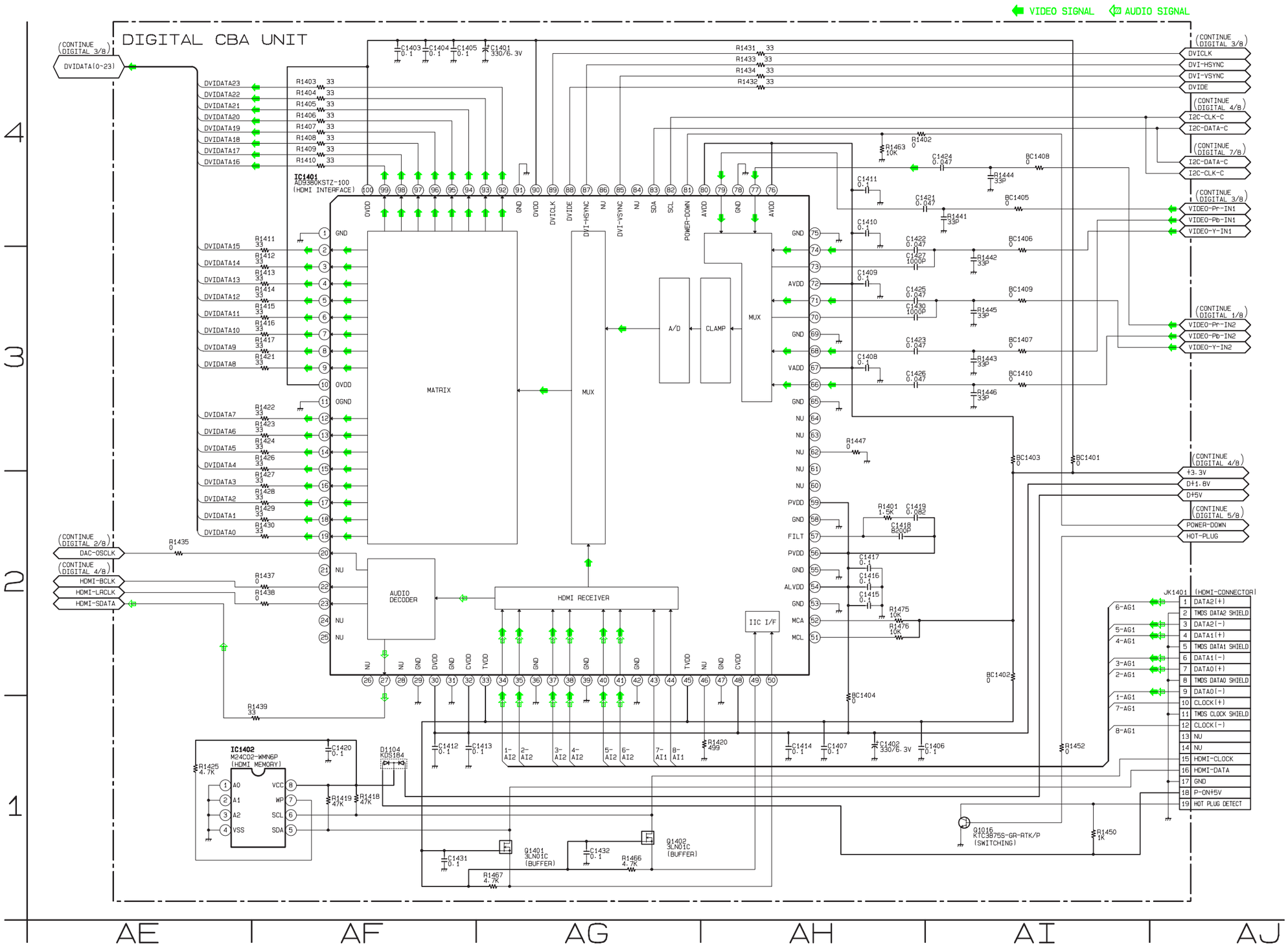
Pin No.	Voltage
1	3.2
2	2.8
3	0
4	11.8
5	1.8
6	1.3
7	1.3
8	1.3
9	0
10	0
11	2.6
12	2.6
13	0
14	3.3
15	0
16	0
17	0
18	0
19	0
20	5.1
21	0
22	3.3
23	33.6

Digital 5/8 Schematic Diagram

∗1 NOTE:
The order of pins shown in this diagram is different from that of actual IC1504.
IC1504 is divided into four and shown as IC1504 (1/4) ~ IC1504 (4/4) in this Digital Main Schematic Diagram Section.

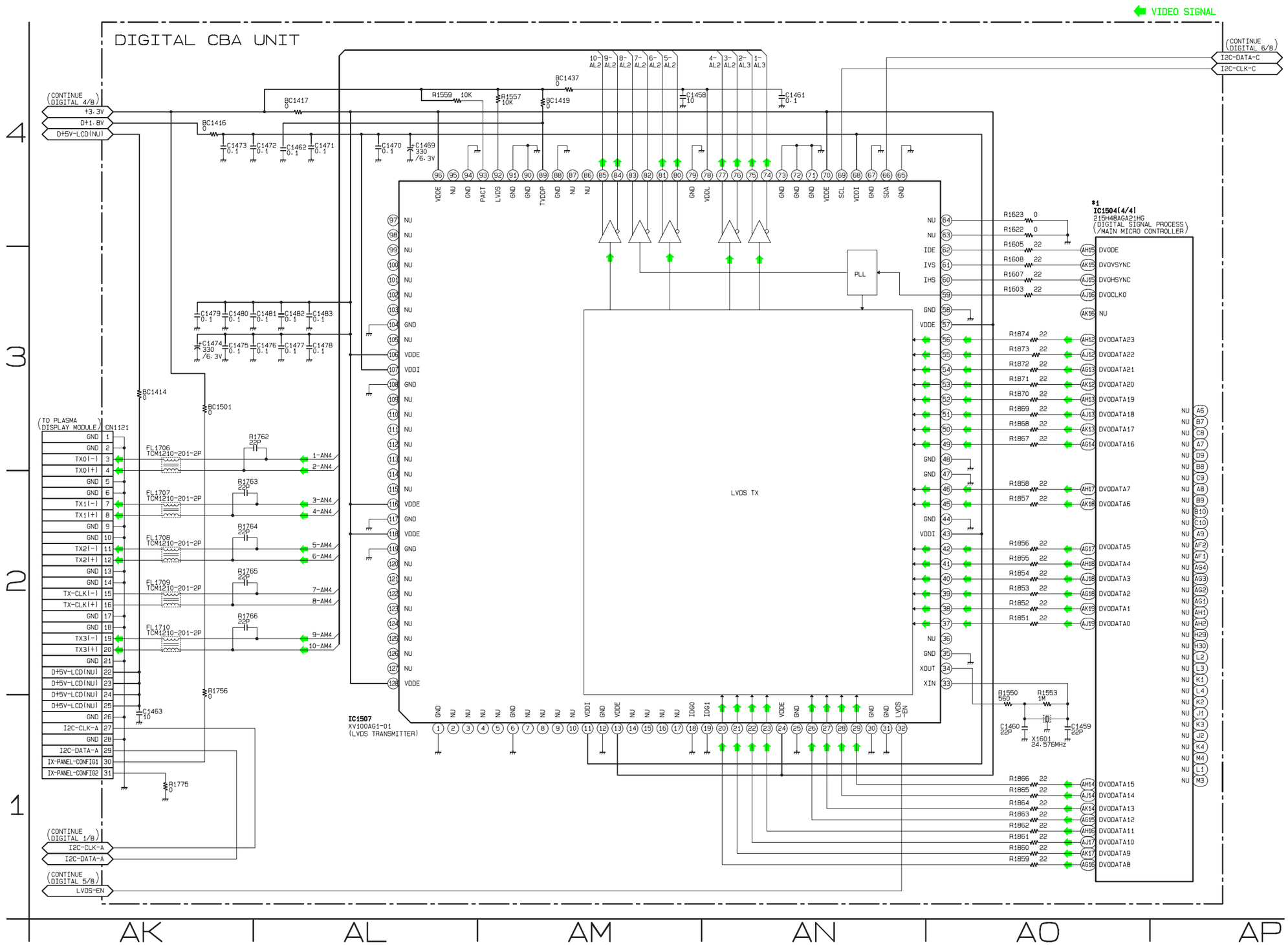


Digital 6/8 Schematic Diagram



Digital 7/8 Schematic Diagram

∗1 NOTE:
The order of pins shown in this diagram is different from that of actual IC1504.
IC1504 is divided into four and shown as IC1504 (1/4) ~ IC1504 (4/4) in this Digital Main Schematic Diagram Section.

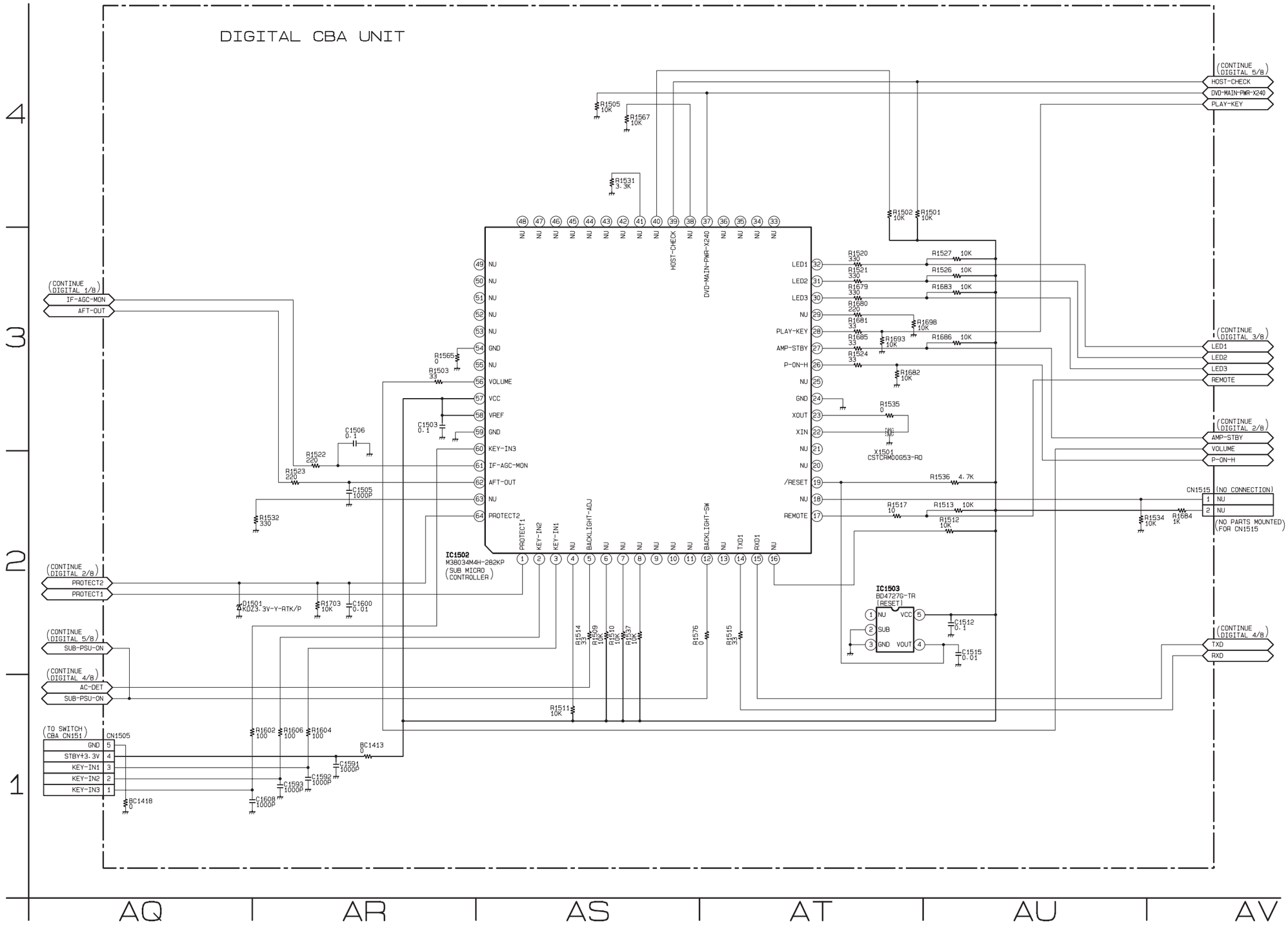


VOLTAGE CHART

CN1121

Pin No.	Voltage
1	0
2	0
3	1.3
4	1.2
5	0
6	0
7	1.2
8	1.3
9	0
10	0
11	1.2
12	1.3
13	0
14	0
15	1.2
16	1.3
17	0
18	0
19	1.2
20	1.3
21	0
22	0
23	0
24	0
25	0
26	0
27	3.3
28	0
29	3.3
30	3.3
31	0

Digital 8/8 Schematic Diagram



VOLTAGE CHART

CN1505

Pin No.	Voltage
1	0
2	3.3
3	3.3
4	0
5	3.3

Analog CBA Top View

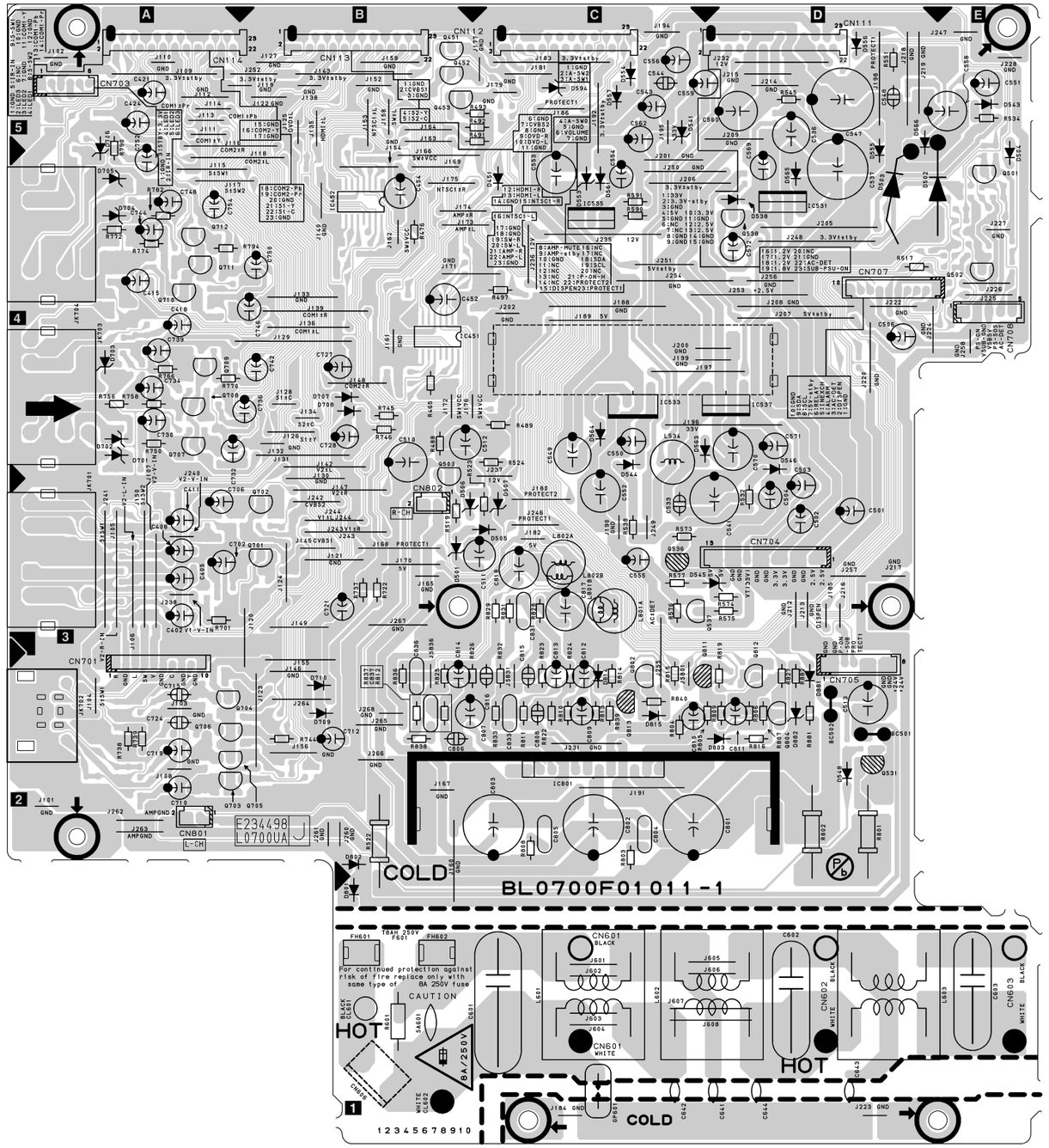
CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F601) is blown , check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.
Otherwise it may cause some components in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

8A 250V

CAUTION ! : For continued protection against risk of fire, replace only with same type 8A, 250V fuse.
ATTENTION : Utiliser un fusible de rechange de même type de 8A, 250V.

Because a hot chassis ground is present in the power supply circut, 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.



Analog CBA Bottom View

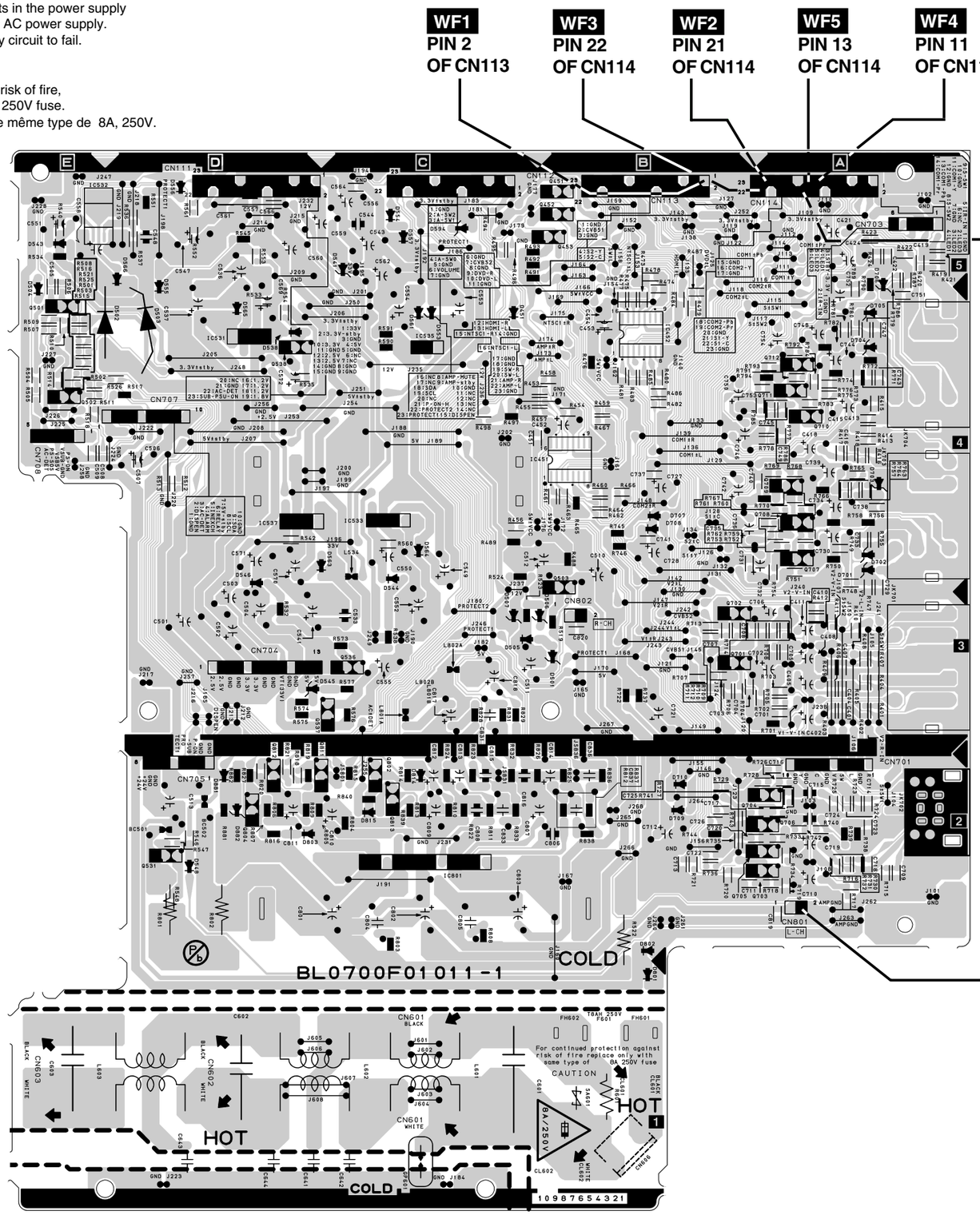
CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F601) is blown , check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.
Otherwise it may cause some components in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

8A 250V

CAUTION ! : For continued protection against risk of fire, replace only with same type 8A, 250V fuse.
ATTENTION : Utiliser un fusible de rechange de même type de 8A, 250V.

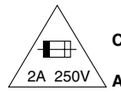
Because a hot chassis ground is present in the power supply circut, an isolation transformer must be used. Also, in order to have the ability to increase the input slowly, when troubleshooting this type power supply circuit, a variable isolation transformer is required.

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



Power Supply CBA Top View

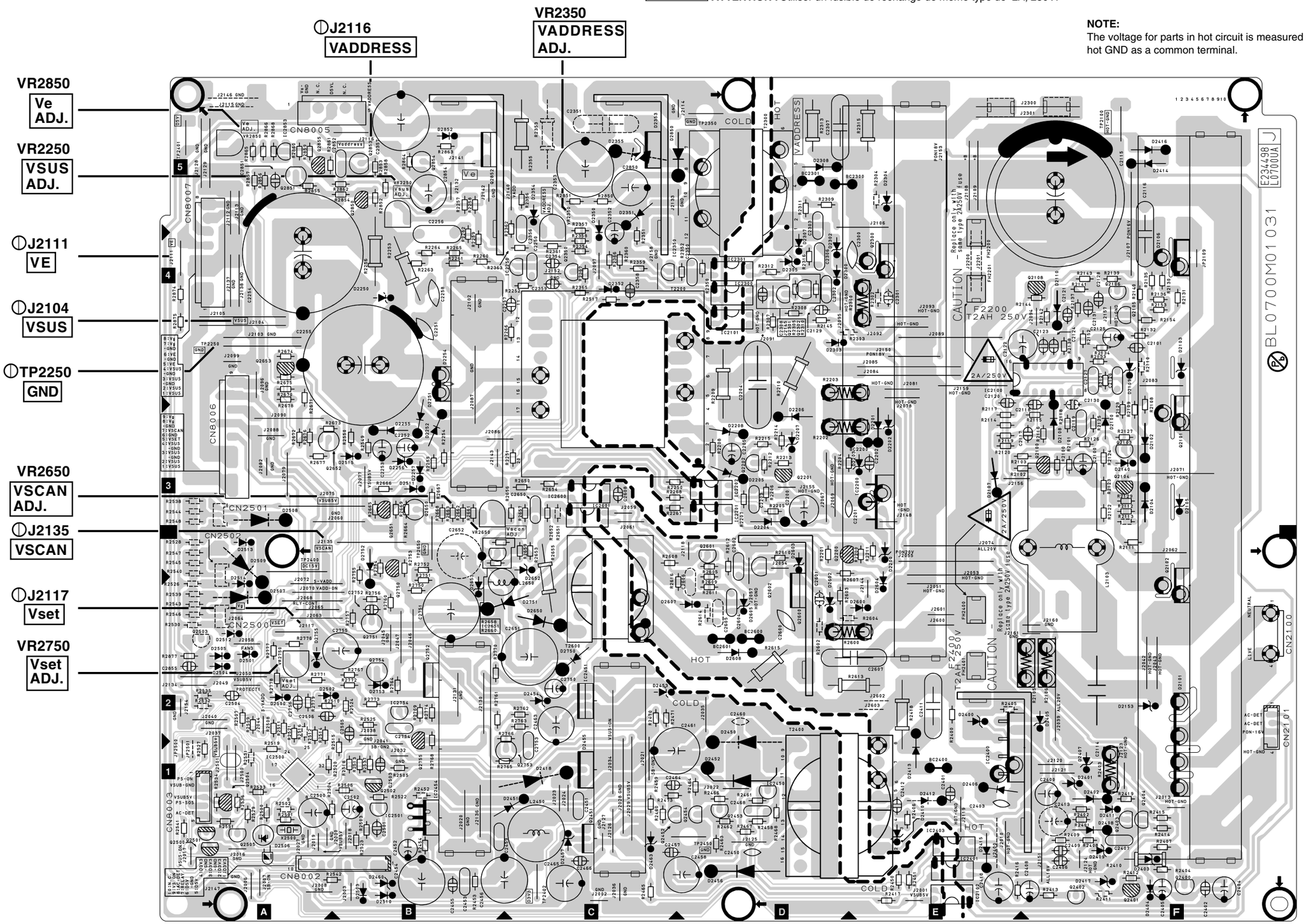
CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F2200, F2400) is blown , check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the power supply circuit to fail.



CAUTION ! : For continued protection against risk of fire, replace only with same type 2A, 250V fuse.
ATTENTION : Utiliser un fusible de rechange de même type de 2A, 250V.

Because a hot chassis ground is present in the power supply circut, 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.



BL0700M01031

Power Supply CBA Bottom View

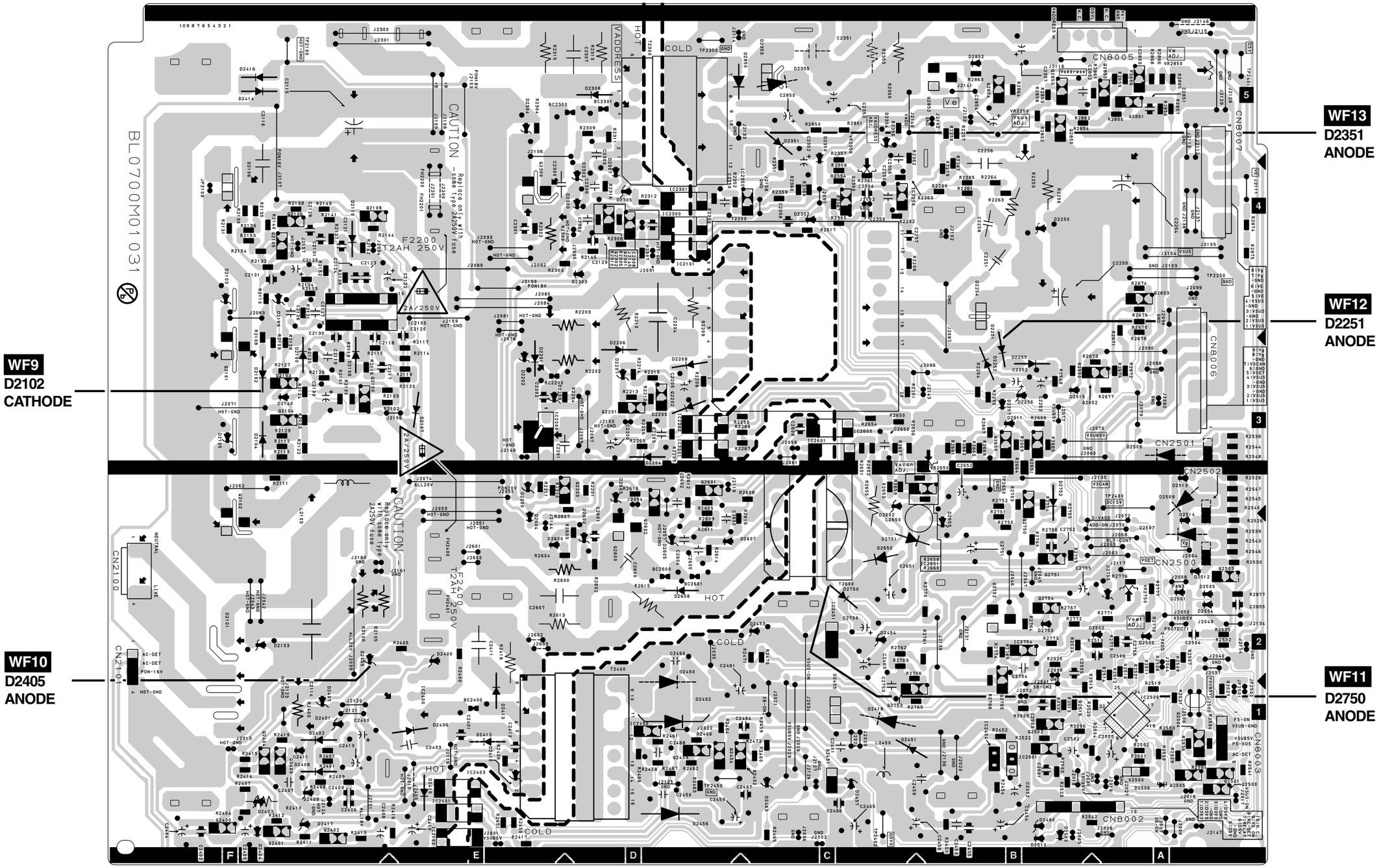
CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F2200, F2400) is blown , check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the power supply circuit to fail.

2A 250V

CAUTION ! : For continued protection against risk of fire, replace only with same type 2A, 250V fuse.
ATTENTION : Utiliser un fusible de rechange de même type de 2A, 250V.

Because a hot chassis ground is present in the power supply circut, 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.



Sub Power Supply CBA Top View

CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F2000) 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.

Sub Power Supply CBA Bottom View

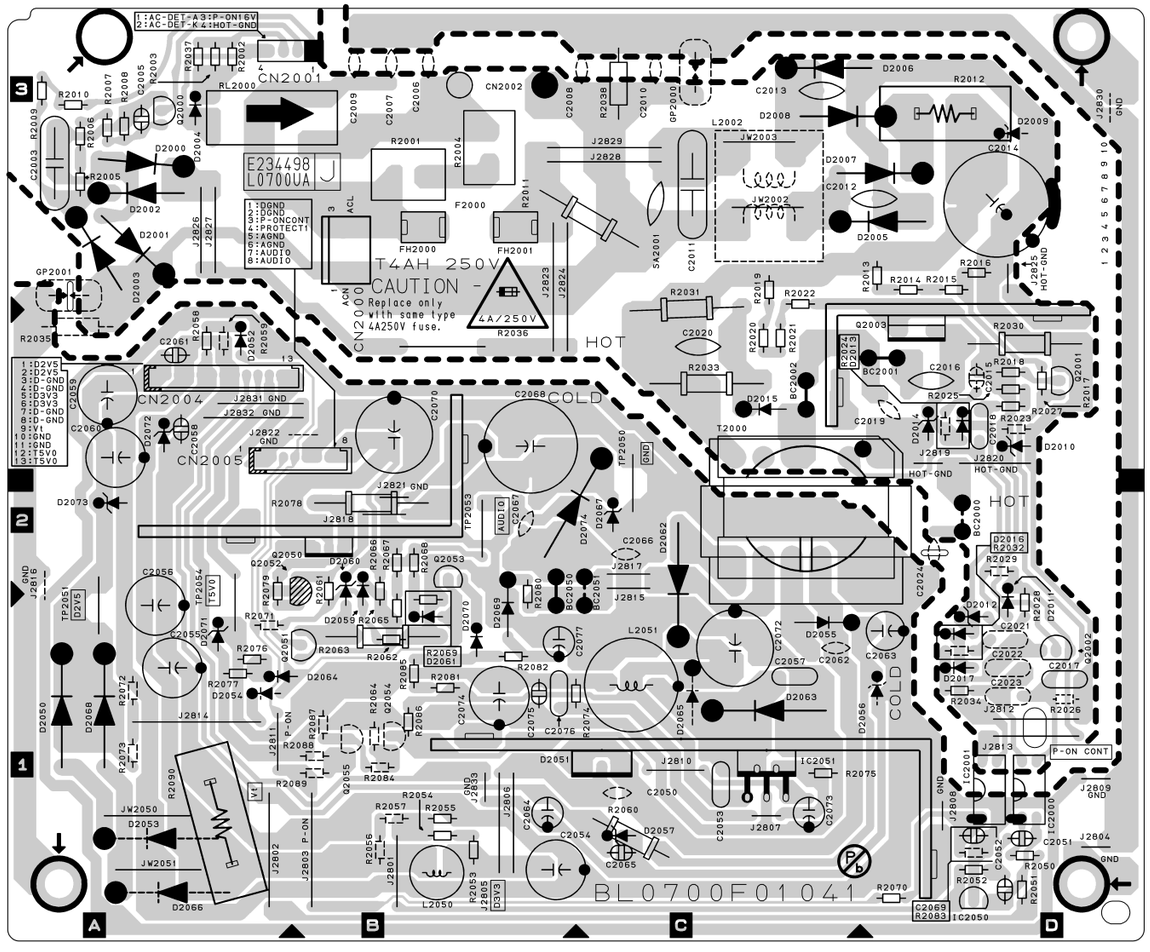
4A 250V

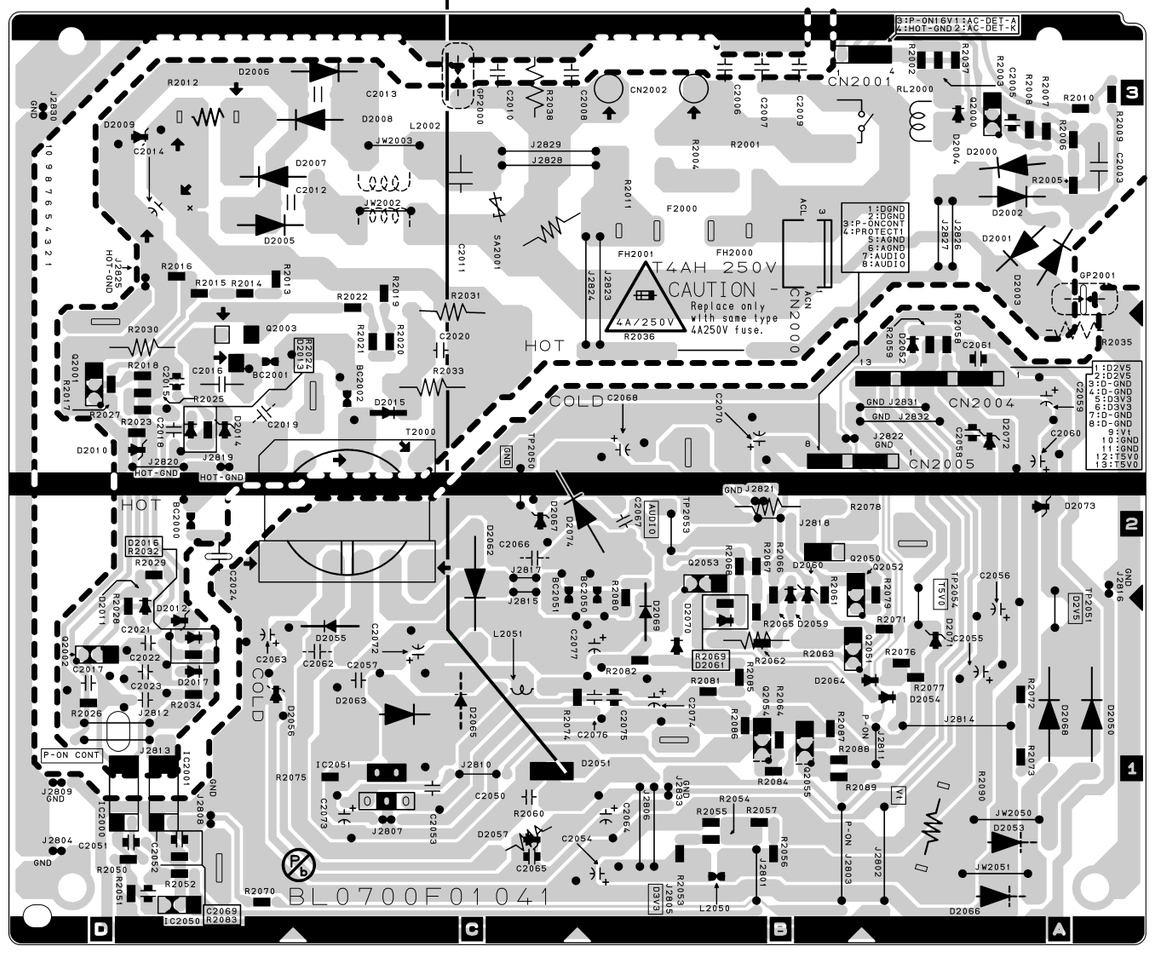
CAUTION ! : For continued protection against risk of fire, replace only with same type 4A, 250V fuse.
ATTENTION : Utiliser un fusible de rechange de même type de 4A, 250V.

Because a hot chassis ground is present in the power supply circut, 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.

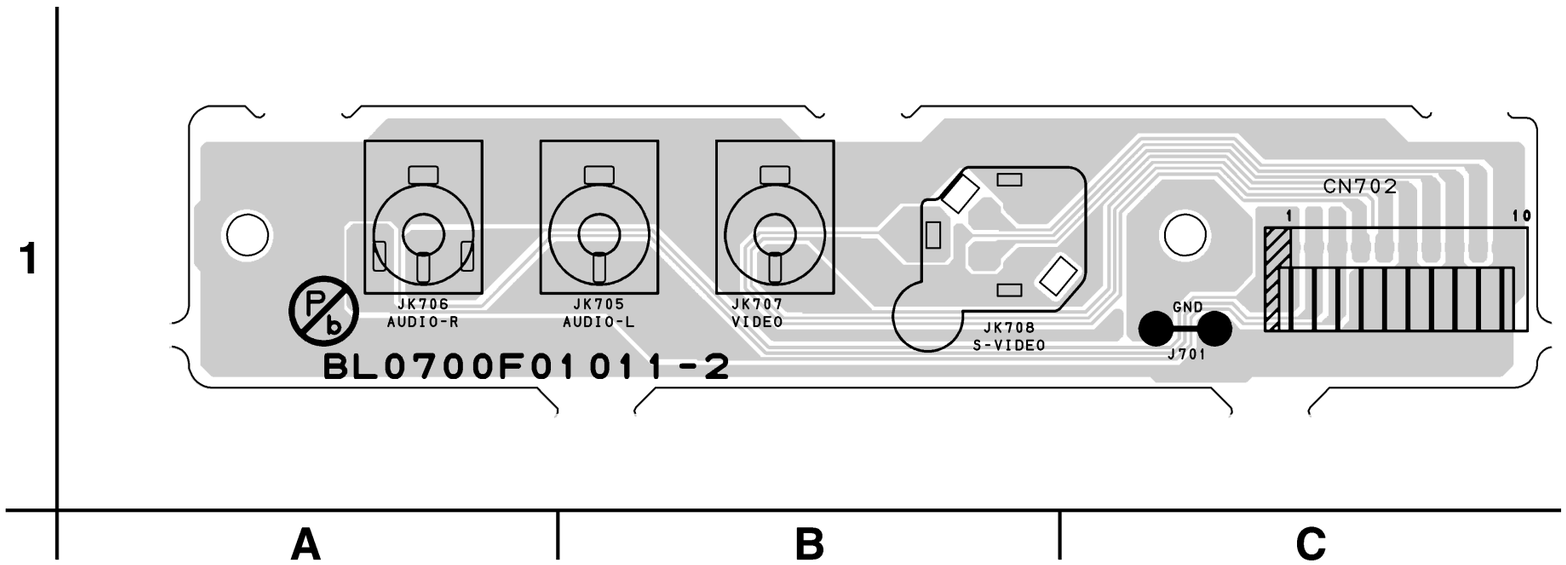
NOTE:
The voltage for parts in hot circuit is measured using hot GND as a common terminal.

WF8
D2051
ANODE

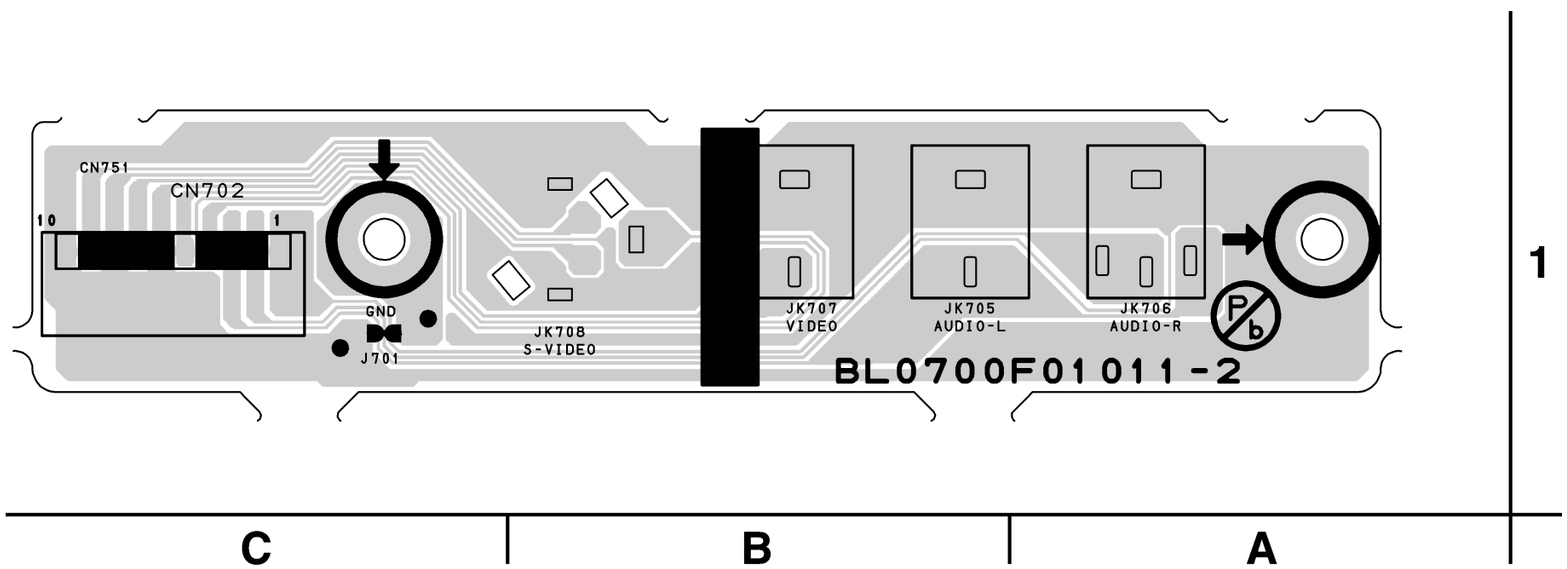




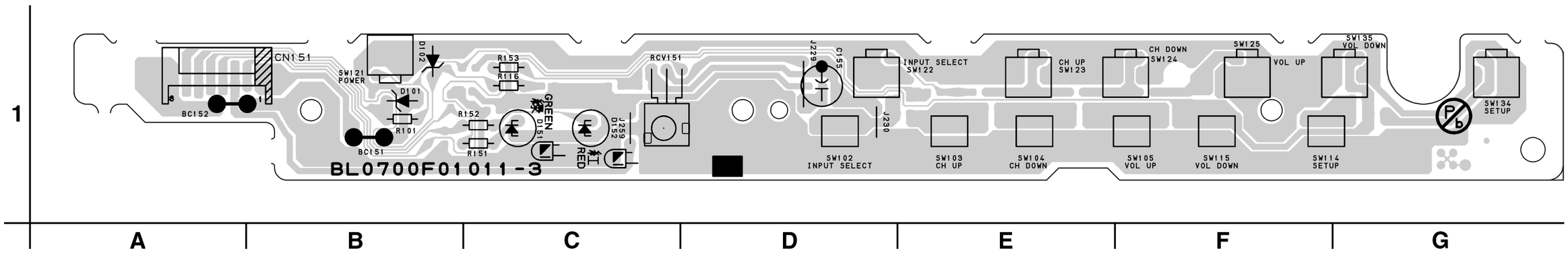
Jack CBA Top View



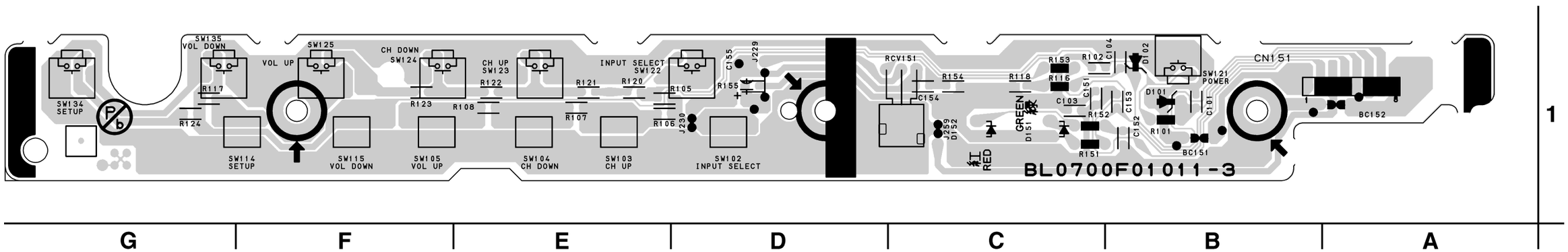
Jack CBA Bottom View



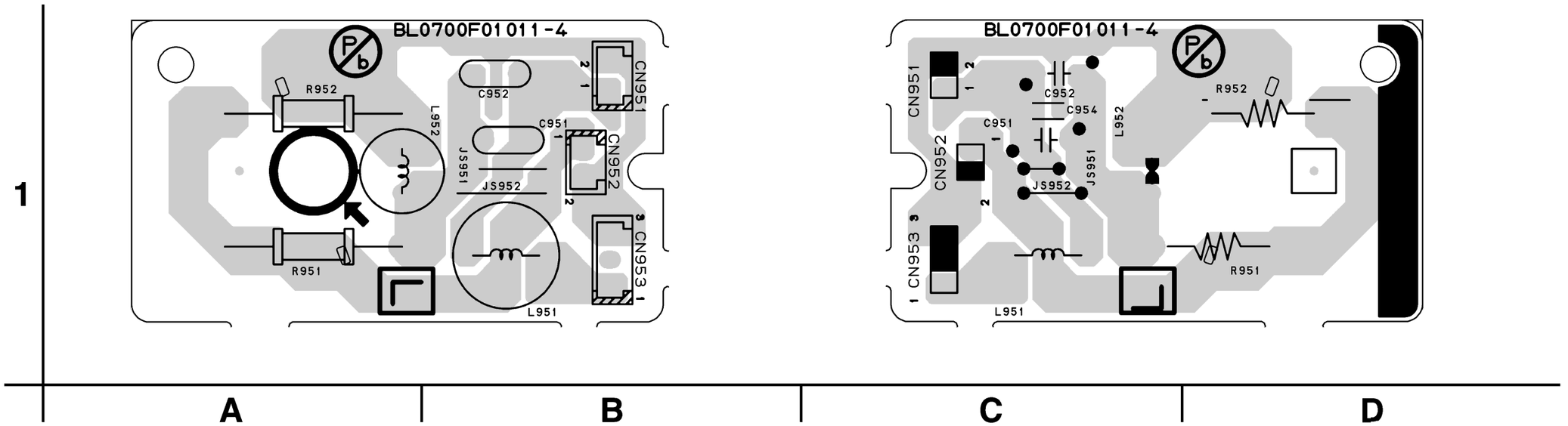
Switch CBA Top View



Switch CBA Bottom View



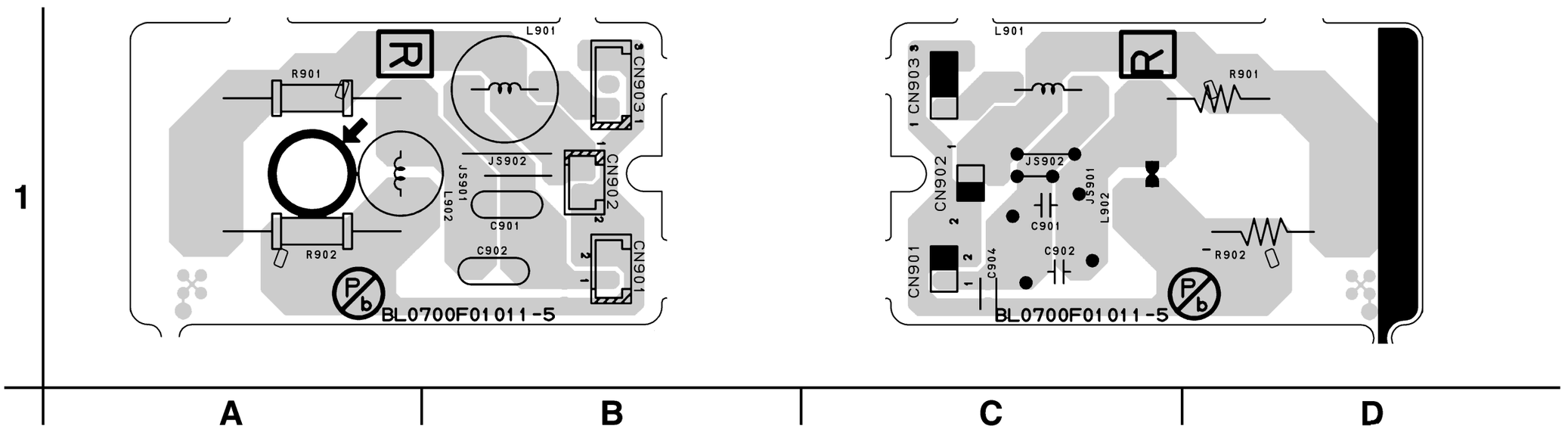
Network 1 CBA Top View



Network 1 CBA Bottom View

BL0700F01011-4

Network 2 CBA Top View

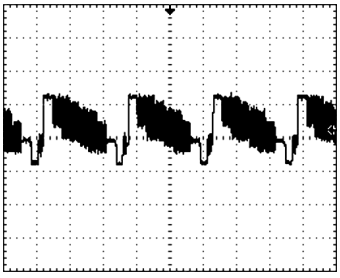


Network 2 CBA Bottom View

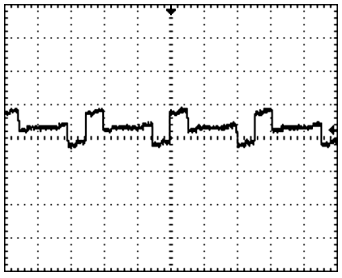
BL0700F01011-5

WAVEFORMS

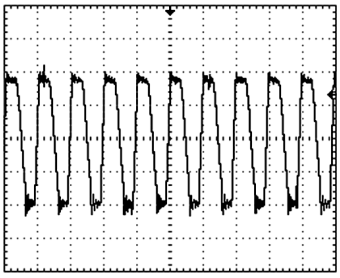
WF1 ~ WF13 = Waveforms to be observed at Waveform check points. (Shown in Schematic Diagram.)



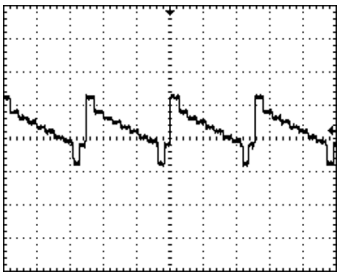
WF1 1DIV: 500mV 25µs
Pin 2 of CN113



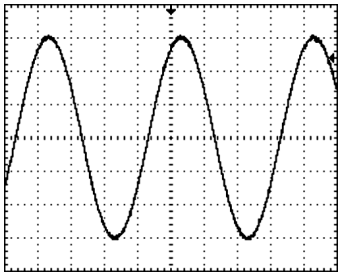
WF6 1DIV: 500mV 25µs
Pin 14 of CN114



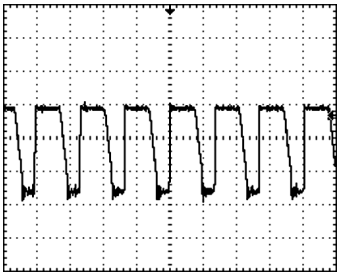
WF11 1DIV: 10V 5µs
D2750 Anode



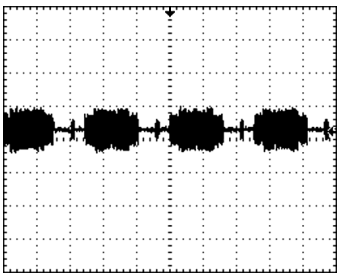
WF2 1DIV: 500mV 25µs
Pin 21 of CN114



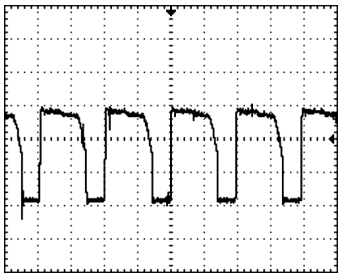
WF7 1DIV: 1V 250µs
Pin 1 of CN801



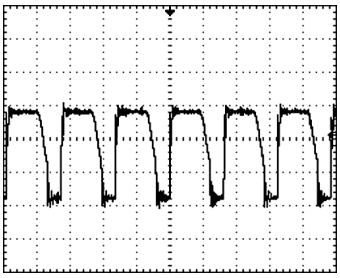
WF12 1DIV: 20V 10µs
D2251 Anode



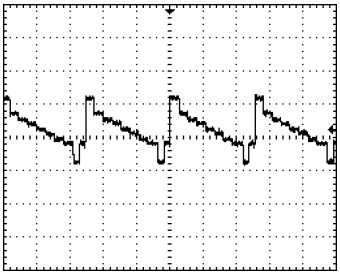
WF3 1DIV: 500mV 25µs
Pin 22 of CN114



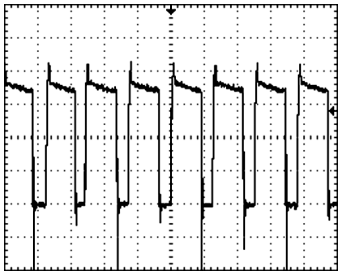
WF8 1DIV: 5V 5µs
D2051 Anode



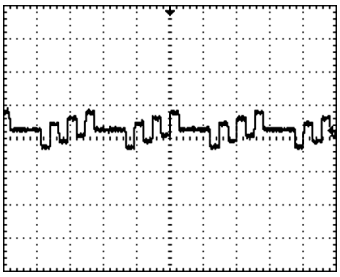
WF13 1DIV: 20V 5µs
D2351 Anode



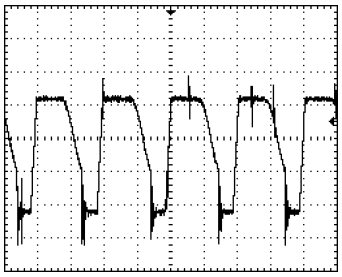
WF4 1DIV: 500mV 25µs
Pin 11 of CN114



WF9 1DIV: 5V 10µs
D2102 Cathode

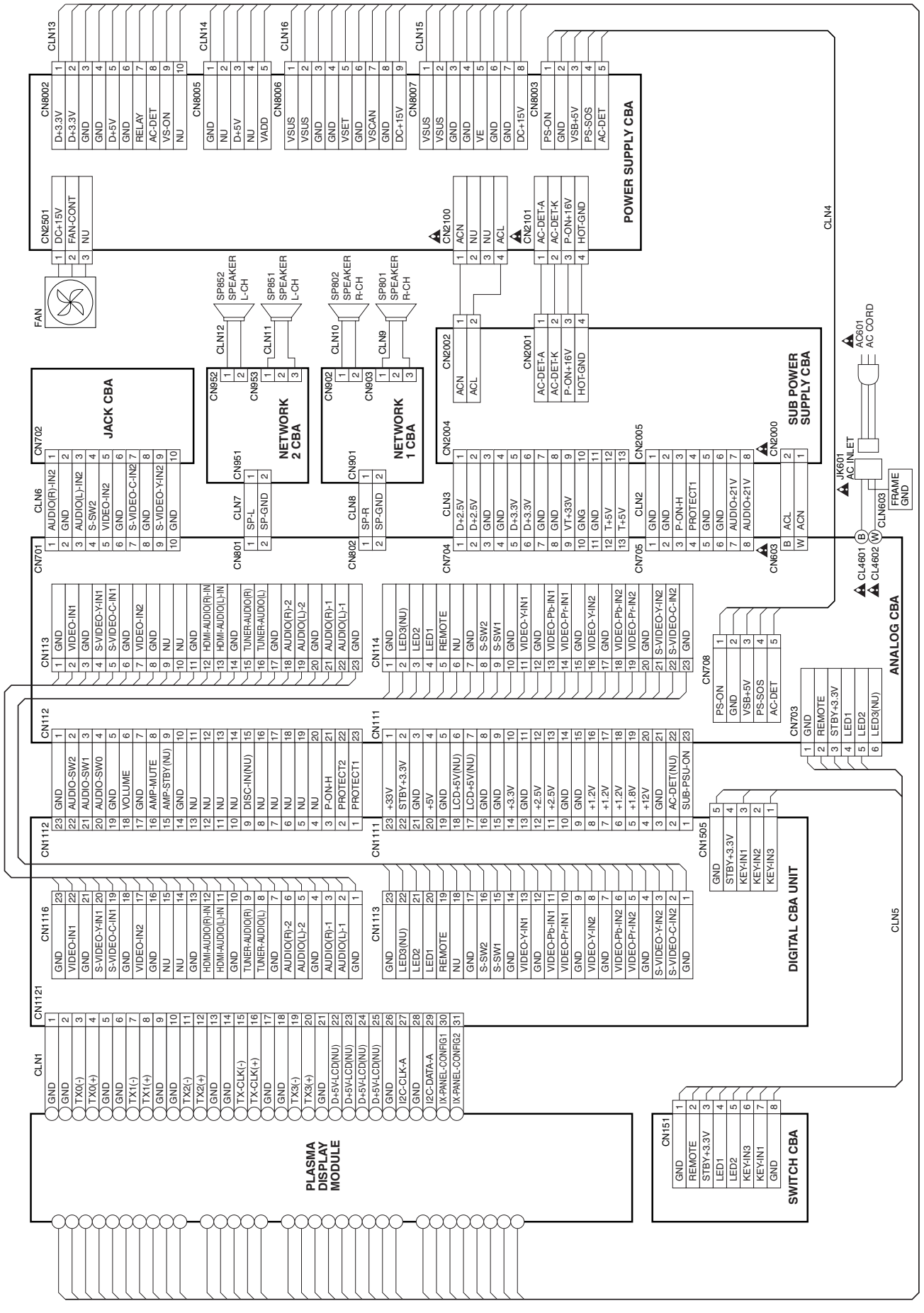


WF5 1DIV: 500mV 25µs
Pin 13 of CN114



WF10 1DIV: 5V 5µs
D2405 Cathode

WIRING DIAGRAM

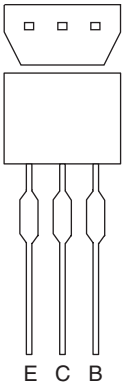


IC PIN FUNCTIONS

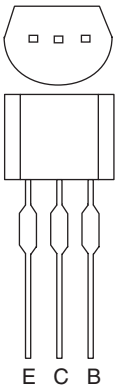
IC2500 (Micro Controller)

Pin No.	Signal Name	Function
1	THEM-DET	Temperature Sensor Signal
2	PS-ON	Power On Control Signal Output
3	PROTECT2	Power Supply Protection
4	PROTECT1	Power Supply Protection
5	VREF	Standard Voltage Input for Convert AD
6	RESET	Input Reset Signal
7	GND	GND
8	VCC	Power Supply
9	XIN	Main Clock Input (4MHz)
10	XOUT	Main Clock Output (4MHz)
11	GND	GND
12	LED1	Operation Mode LED Output Signal
13	MANUAL-P-ON	Power On Low
14	NU	Not Used
15	FAN-CONT	FAN Control Output
16	NU	Not Used
17	SUS-ON	SUS Power Supply Control Signal Output
18	SB-ON	SB Power Supply Control Signal Output
19	SB-ON2	SB-ON2 Power Supply Control Signal Output
20	ADD-ON	ADD-ON Power Supply Control Signal Output
21	NU	Not Used
22	AC-DET-OUT	AC-DET Detection Signal (AC-DET="L")
23	PS-SOS	PS-SOS Output
24	PFC-ON	Power Factor Correction On Control
25	ADD-MONITOR	ADD-Monitor
26	PROTECT-OFF	PROTECT Function Invalid Signal
27	NU	Not Used
28	NU	Not Used
29	NU	Not Used
30	AC-DET	Power Failure Detection
31	SUS-MONITOR	SUS-Monitor
32	VS-ON-MONITOR	VS-ON-Monitor

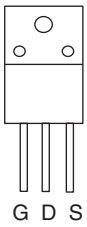
LEAD IDENTIFICATIONS



2SC2785(F)
KTA1267-GR-AT/P
KTA-1266-GR-AT/P
KTB985-C-AT/P
KTD1347-C-AT/P

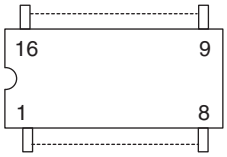


2SA950-O
2SA1091-O
2SC2120-O
2SC2482
KRA103M-AT/P
KRC103M-AT/P

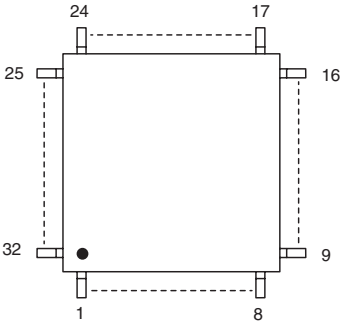


2SK3935(Q)
2SK3561
2SK3563
2SK3563(Q)
2SK3565(Q)

CD4051BNSR



M37544G2A-064GP



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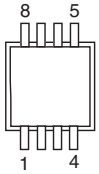
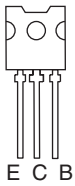


S2Y52



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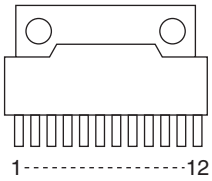
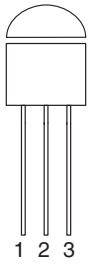
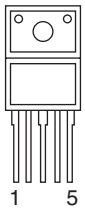


KIA431-AT/P

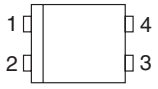


1: R
2: A
3: K

PQ1CG2032FZH

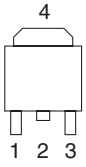


LTV817MBF



1: A
2: K
3: E
4: C

PQ035ZN1HZPH



1: Vin
2: Vo
3: GND
4: Vc

KIA278R15PI/P
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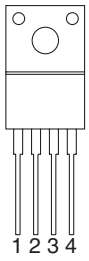
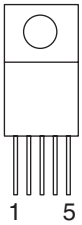
PQ033EF01SZH
PQ070XF01SZH

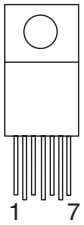


1: Vin
2: Vo
3: GND
4: Vc

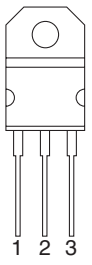
STR-F6468 5



MR2920-7109F12

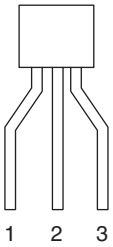


LD1117V



1: Vin
2: Vo
3: GND

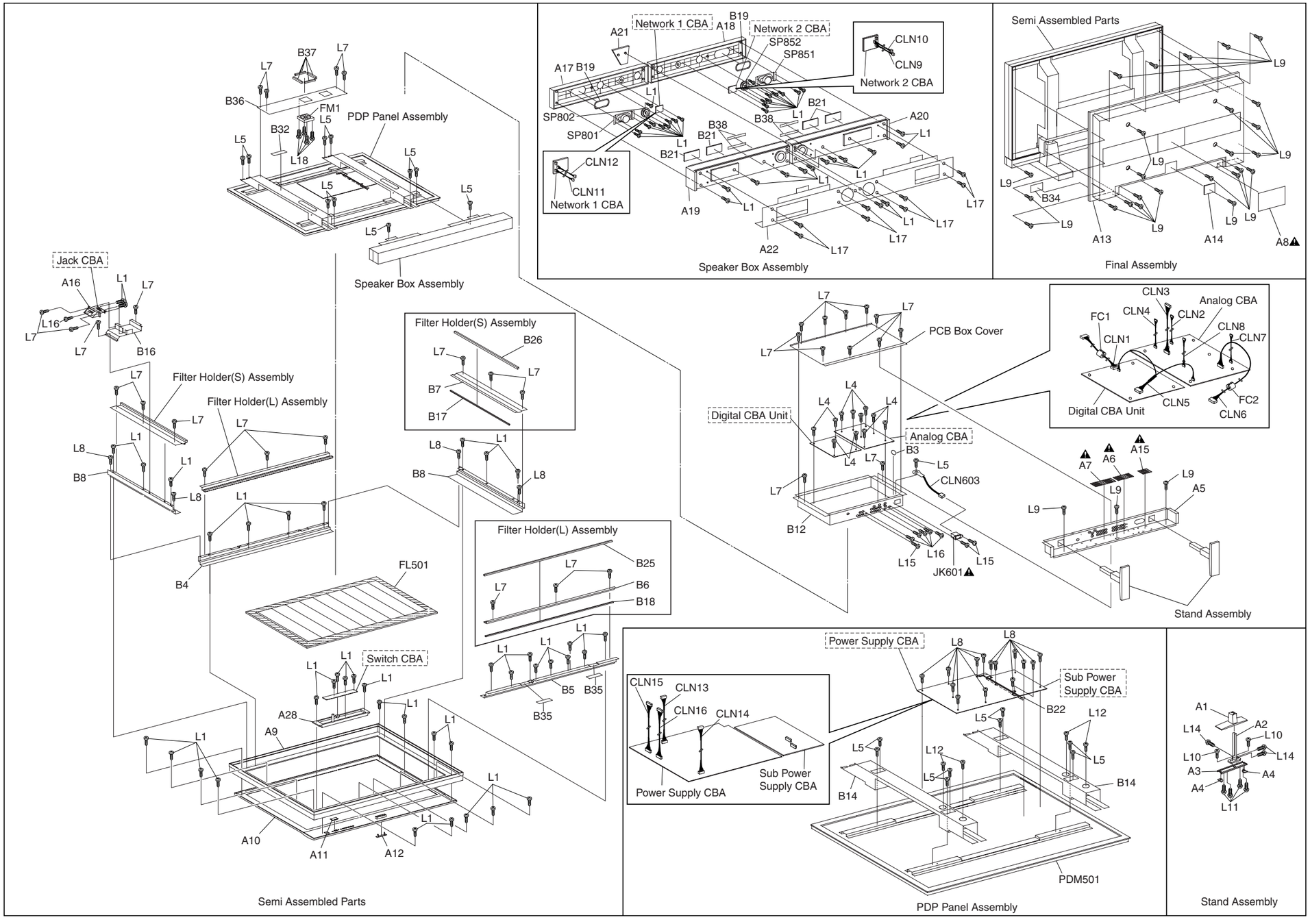
IC-PST600D-2(R59-195



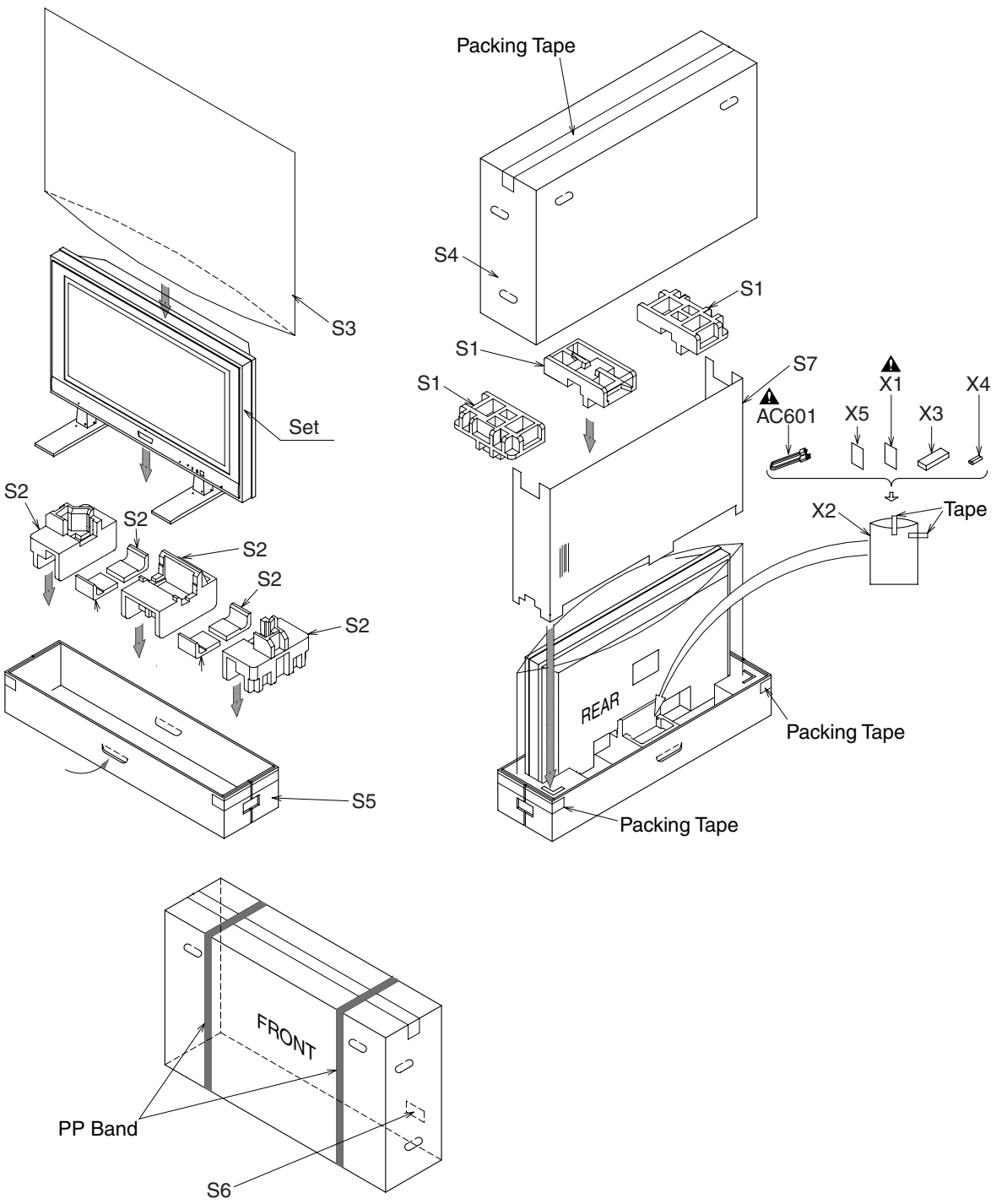
Note:
A: Anode
K: Cathode
E: Emitter
C: Collector
B: Base
R: Reference
S: Source
G: Gate
D: Drain

EXPLODED VIEWS

Cabinet



Packing


Packing Tape
S4
S1
S1
S1
S7
X1
X4
AC601
X5
X3
X2
Tape
S3
Set
S2
S2
S2
S2
S2
REAR
Packing Tape
Packing Tape
S5
FRONT
PP Band
S6

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	STAND COVER L0700UA	1EM221142
A2	STAND L0700UA	1EM221345
A3	STAND BASE L0600UA	0EM201865
A4	RUBBER FOOT L0600UA	0EM408992
A5	JACK COVER L0700UA	1EM021190
A6⚠	JACK LABEL(R) L0700UA	1EM422932
A7⚠	JACK LABEL(L) L0700UA	1EM422931
A8⚠	RATING LABEL L0700UA	---------
A9	FRONT CABINET L0700UA	1EM021196
A10	DECORATION PANEL L0700UA	1EM021197
A11	SENSOR/LED LENS L0600UA	0EM408988
A12	BRAND BADGE L0600UA	0EM409093
A13	REAR CABINET L0600UA	0EM000907
A14	REAR COVER L0600UA	0EM408989
A15⚠	AC CORD LABEL L0600UA	---------
A16	JACK HOLDER L0600UA	0EM201861
A17	SPEAKER FRONT(R) L0700UA	1EM021191
A18	SPEAKER FRONT(L) L0700UA	1EM021192
A19	SPEAKER REAR COVER(R) L0700UA	1EM021193
A20	SPEAKER REAR COVER(L) L0700UA	1EM021194
A21	SPEAKER JOINT L0700UA	1EM221141
A22	SPEAKER BRACKET L0700UA	1EM021195
A28	SW PCB HOLDER L0650UA	1EM120488
AC601⚠	AC CORD PH8F3EDGN0A-063	WBC0192LW001
B3	EARTH LABEL L0600UA	---------
B4	PANEL HOLDER(U) L0650UA	1EM020408
B5	PANEL HOLDER(L) L0650UA	1EM020407
B6	FILTER HOLDER(L) L0650UA	1EM020467
B7	FILTER HOLDER(S) L0650UA	1EM120669
B8	PANEL HOLDER(S) L0650UA	1EM120490
B12	PCB BOX L0700UA	1EM021189
B14	CHASSIS BRACKET L0700UA	1EM020895
B16	JACK BRACKET L0650UA	1EM120489A
B17	XGA-GASKET(S) L0700UA	1EM422934
B18	XGA-GASKET(L) L0700UA	1EM422933
B19	SPEAKER CUSHION(L) L0700UA	1EM423230
B21	ACOUSTIC SPONGE L0700UA	1EM422929
B22	PCB HOLDER(SDI) L0700UA	1EM321446
B25	CUSHION(L) L0650UA	1EM421666
B26	CUSHION(S) L0650UA	1EM421667
B32	SCOTCH TAPE #880 25X45 L9710UL	0EZZ00132
B34	LABEL CRITICAL PARTS WARN ING B8007C3 EM41210	---------
B35	CLOTH L1440JL 15X55XT1.0	0EM406793
B36	FAN HOLDER L0700UA	1EM121657
B37	FAN CUSHION L0700UA	1EM423478
B38	CLOTH 190X15XT0.5	TS7623
CLN1	WIRE ASSEMBLY 31P(LVDS) WX1L0700-001	WX1L0700-001
CLN2	WIRE ASSEMBLY 8P(SUBPSU-ANALOG) WX1L0700-002	WX1L0700-002
CLN3	WIRE ASSEMBLY 13P(SUBPSU-ANALOG) WX1L0700-003	WX1L0700-003
CLN4	WIRE ASSEMBLY 5P(MAINPSU-ANALOG) WX1L0700-005	WX1L0700-005
CLN5	WIRE ASSEMBLY 8P(DIGITAL/ANALOG-SW WX1L0700-006	WX1L0700-006
CLN6	WIRE ASSEMBLY 10P(ANALOG-SIDEJACK) WX1L0700-007	WX1L0700-007
CLN7	WIRE ASSEMBLY 2P(ANALOG-NETWORK L WX1L0700-008	WX1L0700-008
CLN8	WIRE ASSEMBLY 2P(ANALOG-NETWORK R) WX1L0700-009	WX1L0700-009
CLN9	WIRE ASSEMBLY 2P(FULL RANGE SPEAKE WX1L0700-010	WX1L0700-010
CLN10	WIRE ASSEMBLY 2P(TOWEETER) WX1L0700-011	WX1L0700-011
CLN11	WIRE ASSEMBLY 2P(FULL RANGE SPEAKE WX1L0700-010	WX1L0700-010
CLN12	WIRE ASSEMBLY 2P(TOWEETER) WX1L0700-011	WX1L0700-011
CLN13	WIRE ASSEMBLY 10P(MAINPSU-PANELLOG WX1L0700-101	WX1L0700-101
CLN14	WIRE ASSEMBLY 5P(MAINPSU-BUFFER) WX1L0700-102	WX1L0700-102
CLN15	WIRE ASSEMBLY 8P(MAINPSU-XMAIN) WX1L0700-103	WX1L0700-103
CLN16	WIRE ASSEMBLY 9P(MAINPSU-YMAIN) WX1L0700-104	WX1L0700-104
CLN603	WIRE ASSEMBLY 1P WX1L0600-018	WX1L0600-018
FC1	CORE FERRITE TFT102010N	XL04024X4001
FC2	FERRITE CORE RFC-8	XL06034WD002
FL501	OPTICAL FILTER PM00UZ008	XA00000SM007
FM1	MOTOR DC FAN D08R 12TL 23B(UX)	MMEZR12NH004
JK601⚠	AC INLET FILTER 10GEEG3C	JTDCFZ0DEL01
L1	SCREW P-TIGHT 3X10 BIND HEAD+	GBJP3100
L4	SCREW B-TIGHT D3X8 BIND HEAD+	GBJB3080
L5	DOUBLE SEMS SCREW M4X8 PAN HEAD+	0EM409074A
L7	BINDING HEAD SCREW M3X8	SBJ33080
L8	DOUBLE SEMS SCREW M3X8 PAN HEAD+	0EM409075A
L9	SCREW ASSEMBLED M3X6 BLACK	0EM409078A
L10	DOUBLE SEMS SCREW M5X16 PAN HEAD+	0EM409236A
L11	SCREW P-TIGHT D4X12 BIND HEAD+	GBJP4120
L12	DOUBLE SEMS SCREW M5X20 PAN HEAD+	0EM409077A
L14	DOUBLE SEMS SCREW M4X12 PAN HEAD+	1EM420188A
L15	SCREW M3X8 BIND HEAD+BLACK	SBH33080
L16	SCREW B-TIGHT M3X8 BIND HEAD+	GBHB3080
L17	SCREW P-TIGHT 4X12 BIND HEAD+BLK	GBHP4120
L18	DOUBLE SEMS SCREW M3X20	FBJ33200
PDM501	PLASMA DISPLAY MODULE S42AX-YD02	UDPUPLSSM002
SP801	SPEAKER MAGNETIC 8212 T020 1403B	DSD0405SBA01
SP802	SPEAKER MAGNETIC 8212 5712 1402B	DSD0811SBA01
SP851	SPEAKER MAGNETIC 8212 T020 1403B	DSD0405SBA01
SP852	SPEAKER MAGNETIC 8212 5712 1402B	DSD0811SBA01
PACKING		
S1	STYROFOAM TOP L0700UA	1EM021390
S2	STYROFOAM BOTTOM L0700UA	1EM021391
S3	SET BAG L0700UA	1EM322033
S4	CARTON(U) L0700UA	1EM321751
S5	CARTON (L) L0700UA	1EM322072
S6⚠	SERIAL NO. LABEL L0700UA	---------
S7	HOLD PAD L0652UC	1EM421919
ACCESSORIES		
X1⚠	OWNERS MANUAL ENGLISH/SPANISH	1EMN21782

Ref. No.	Description	Part No.
X2	BAG POLYETHYLENE 235X365XT0.03	0EM408420A
X3	REMOTE CONTROL NF000UD NF000UD	NF000UD
X4	DRY BATTERY(SUNRISE) R6SSE/2S	XB0M451MS002
X5⚠	EASY SET UP GUIDE L0700UA	1EMN21783

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%

DIGITAL CBA UNIT

Ref. No.	Description	Part No.
	DIGITAL CBA UNIT	1ESA13093

ANALOG CBA

Ref. No.	Description	Part No.
	ANALOG CBA ASSEMBLY Consists of the following:	1ESA13000
	ANALOG CBA JACK CBA SWITCH CBA NETWORK 1 CBA NETWORK 2 CBA	---------- ---------- ---------- ---------- ----------

ANALOG CBA

Ref. No.	Description	Part No.
	ANALOG CBA Consists of the following:	----------
	CAPACITORS	
C402	ELECTROLYTIC CAP. 4.7µF/50V M	CE1JMASDL4R7
C405	ELECTROLYTIC CAP. 4.7µF/50V M	CE1JMASDL4R7
C408	ELECTROLYTIC CAP. 4.7µF/50V M	CE1JMASDL4R7
C411	ELECTROLYTIC CAP. 4.7µF/50V M	CE1JMASDL4R7
C415	ELECTROLYTIC CAP. 4.7µF/25V M	CE1EMASDL4R7
C418	ELECTROLYTIC CAP. 4.7µF/25V M	CE1EMASDL4R7
C421	ELECTROLYTIC CAP. 4.7µF/25V M	CE1EMASDL4R7
C424	ELECTROLYTIC CAP. 4.7µF/25V M	CE1EMASDL4R7
C451	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V	CHD1JZ30F104
C452	ELECTROLYTIC CAP. 100µF/16V M	CE1CMASDL101
C453	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V	CHD1JZ30F104
C454	ELECTROLYTIC CAP. 100µF/16V M	CE1CMASDL101
C501	ELECTROLYTIC CAP. 100µF/10V M	CE1AMASDL101
C502	ELECTROLYTIC CAP. 100µF/10V M	CE1AMASDL101
C503	ELECTROLYTIC CAP. 10µF/50V M	CE1JMASDL100
C504	ELECTROLYTIC CAP. 100µF/10V M	CE1AMASDL101
C506	ELECTROLYTIC CAP. 100µF/10V M	CE1AMASDL101
C507	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V	CHD1JZ30F104
C508	CHIP CERAMIC CAP.(1608) CH J 100pF/50V	CHD1JJ3CH101
C509	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V	CHD1JZ30F104
C510	ELECTROLYTIC CAP. 100µF/35V M	CE1GMASDL101
C511	ELECTROLYTIC CAP. 100µF/16V M	CE1CMASDL101
C512	ELECTROLYTIC CAP. 100µF/16V M	CE1CMASDL101
C513	ELECTROLYTIC CAP. 100µF/35V M	CE1GMASDL101
C533	CERAMIC CAP.(AX) F Z 0.01µF/25V	CDA1EZT0F103
C536	ELECTROLYTIC CAP. 1000µF/6.3V M	CE0KMASDL102
C537	ELECTROLYTIC CAP. 1000µF/10V M	CE1AMASDL102
C541	ELECTROLYTIC CAP. 1000µF/10V M	CE1AMASDL102
C543	ELECTROLYTIC CAP. 10µF/50V M	CE1JMASDL100
C544	CERAMIC CAP.(AX) F Z 0.01µF/25V	CDA1EZT0F103
C547	ELECTROLYTIC CAP. 4700µF/6.3V SM	CE0KMZPDL472
C548	CERAMIC CAP.(AX) F Z 0.01µF/25V	CDA1EZT0F103
C549	ELECTROLYTIC CAP. 470µF/6.3V M	CE0KMASDL471
C552	ELECTROLYTIC CAP. 1000µF/6.3V M	CE0KMASDL102
C553	ELECTROLYTIC CAP. 220µF/25V M	CE1EMASDL221
C554	ELECTROLYTIC CAP. 100µF/10V M	CE1AMASDL101
C555	ELECTROLYTIC CAP. 47µF/16V M	CE1CMASDL470
C556	ELECTROLYTIC CAP. 10µF/50V M	CE1JMASDL100
C557	CHIP CERAMIC CAP.(1608) B K 0.1µF/50V	CHD1JK30B104
C558	ELECTROLYTIC CAP. 1000µF/6.3V M	CE0KMASDL102
C559	ELECTROLYTIC CAP. 100µF/10V M	CE1AMASDL101
C560	ELECTROLYTIC CAP. 220µF/10V M	CE1AMASDL221
C561	CHIP CERAMIC CAP.(1608) B K 0.1µF/50V	CHD1JK30B104
C562	ELECTROLYTIC CAP. 10µF/50V M	CE1JMASDL100
C564	CHIP CERAMIC CAP.(1608) B K 0.1µF/50V	CHD1JK30B104
C566	CHIP CERAMIC CAP.(1608) B K 0.1µF/50V	CHD1JK30B104
C570	ELECTROLYTIC CAP. 1000µF/6.3V M	CE0KMASDL102
C572	ELECTROLYTIC CAP. 0.22µF/50V M	CE1JMASDLR22
C601⚠	LINE ACROSS CAP. 1U/275V	CT2E105DC016
C603⚠	SURGE ABSORBER PVR-07D471KB	NVQZ07D471KB
C643⚠	CAP CERAMIC Y2 1000pF 250V E M	CCD2EMA0E102
C644⚠	CAP CERAMIC Y2 1000pF 250V E M	CCD2EMA0E102
C701	CHIP CERAMIC CAP.(1608) CH J 100pF/50V	CHD1JJ3CH101
C702	ELECTROLYTIC CAP. 47µF/16V M	CE1CMASDL470
C704	CHIP CERAMIC CAP. F Z 0.01µF/50V	CHD1JZ30F103
C705	CHIP CERAMIC CAP.(1608) CH J 100pF/50V	CHD1JJ3CH101
C706	ELECTROLYTIC CAP. 47µF/16V M	CE1CMASDL470
C708	CHIP CERAMIC CAP. F Z 0.01µF/50V	CHD1JZ30F103
C709	CHIP CERAMIC CAP.(1608) CH J 100pF/50V	CHD1JJ3CH101
C710	ELECTROLYTIC CAP. 47µF/16V M	CE1CMASDL470
C711	CHIP CERAMIC CAP. F Z 0.01µF/50V	CHD1JZ30F103
C712	ELECTROLYTIC CAP. 100µF/10V M	CE1AMASDL101
C714	CHIP CERAMIC CAP.(1608) CH J 100pF/50V	CHD1JJ3CH101
C715	CERAMIC CAP.(AX) B K 1000pF/50V	CCA1JKT0B102
C716	CHIP CERAMIC CAP. F Z 0.01µF/50V	CHD1JZ30F103
C718	CHIP CERAMIC CAP.(1608) CH J 100pF/50V	CHD1JJ3CH101
C719	ELECTROLYTIC CAP. 47µF/16V M	CE1CMASDL470
C720	CHIP CERAMIC CAP. F Z 0.01µF/50V	CHD1JZ30F103
C721	ELECTROLYTIC CAP. 100µF/10V M	CE1AMASDL101
C723	CHIP CERAMIC CAP.(1608) CH J 100pF/50V	CHD1JJ3CH101
C724	CERAMIC CAP.(AX) B K 1000pF/50V	CCA1JKT0B102
C725	CHIP CERAMIC CAP. F Z 0.01µF/50V	CHD1JZ30F103
C727	ELECTROLYTIC CAP. 100µF/10V M	CE1AMASDL101
C728	ELECTROLYTIC CAP. 100µF/10V M	CE1AMASDL101
C729	CHIP CERAMIC CAP.(1608) CH J 33pF/50V	CHD1JJ3CH330
C730	ELECTROLYTIC CAP. 47µF/16V M	CE1CMASDL470
C732	PCB JUMPER D0.6-P5.0	JW5.0T
C733	CHIP CERAMIC CAP.(1608) CH J 33pF/50V	CHD1JJ3CH330
C734	ELECTROLYTIC CAP. 47µF/16V M	CE1CMASDL470
C736	PCB JUMPER D0.6-P5.0	JW5.0T
C737	CHIP CERAMIC CAP.(1608) B K 0.01µF/50V	CHD1JK30B103
C738	CHIP CERAMIC CAP.(1608) CH J 33pF/50V	CHD1JJ3CH330

Ref. No.	Description	Part No.
C739	ELECTROLYTIC CAP. 47μF/16V M	CE1CMASDL470
C741	CHIP CERAMIC CAP.(1608) B K 0.01μF/50V	CHD1JK30B103
C742	PCB JUMPER D0.6-P5.0	JW5.0T
C743	CHIP CERAMIC CAP.(1608) CH J 33pF/50V	CHD1JJ3CH330
C744	ELECTROLYTIC CAP. 47μF/16V M	CE1CMASDL470
C746	PCB JUMPER D0.6-P5.0	JW5.0T
C747	CHIP CERAMIC CAP.(1608) CH J 33pF/50V	CHD1JJ3CH330
C748	ELECTROLYTIC CAP. 47μF/16V M	CE1CMASDL470
C750	PCB JUMPER D0.6-P5.0	JW5.0T
C751	CHIP CERAMIC CAP.(1608) CH J 33pF/50V	CHD1JJ3CH330
C752	ELECTROLYTIC CAP. 47μF/16V M	CE1CMASDL470
C754	PCB JUMPER D0.6-P5.0	JW5.0T
C801	ELECTROLYTIC CAP. 1000μF/35V M	CE1GMZPDL102
C802	ELECTROLYTIC CAP. 1000μF/25V M	CE1EMZNDL102
C803	ELECTROLYTIC CAP. 1000μF/25V M	CE1EMZNDL102
C804	FILM CAP.(P) 0.1μF/50V J	CA1J104MS029
C805	FILM CAP.(P) 0.1μF/50V J	CA1J104MS029
C807	ELECTROLYTIC CAP. 100μF/25V M	CE1EMASDL101
C809	ELECTROLYTIC CAP. 3.3μF/50V M	CE1JMASDL3R3
C811	ELECTROLYTIC CAP. 100μF/10V M	CE1AMASDL101
C813	ELECTROLYTIC CAP. 4.7μF/50V M	CE1JMASDL4R7
C814	ELECTROLYTIC CAP. 4.7μF/50V M	CE1JMASDL4R7
C833	FILM CAP.(P) 0.068μF/50V J	CA1J683MS029
C837	FILM CAP.(P) 0.068μF/50V J	CA1J683MS029
	CONNECTORS	
CN111	TWG CONNECTOR 23P TWG-P23P-A1	J3TWA23TG001
CN112	TWG CONNECTOR 23P TWG-P23P-A1	J3TWA23TG001
CN113	TWG CONNECTOR 23P TWG-P23P-A1	J3TWA23TG001
CN114	TWG CONNECTOR 23P TWG-P23P-A1	J3TWA23TG001
CN603⚠	WIRE ASSEMBLY WX1L0700-013	WX1L0700-013
CN701	CONNECTOR(WHITE) 1-292161-0	J31FC10AP001
CN703	CONNECTOR PRINT OSU C S 440054-6	J344C06AP001
CN704	CONNECTOR PRINT OSU C S 1-440054-3	J344C13AP001
CN705	CONNECTOR PRINT OSU C S 440054-8	J344C08AP001
CN708	CONNECTOR PRINT OSU C S 440052-5	J344C05AP011
CN801	CONNECTOR PRINT OSU C S 440052-2	J344C02AP011
CN802	CONNECTOR PRINT OSU C S 440052-2	J344C02AP011
	DIODES	
D451	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D501	ZENER DIODE MTZJT-7712B	QDTB00MTZJ12
D502	RES METAL OXIDE FILM 2W J 0.82 Ω	RN02JZQZ0R82
D503	RES METAL OXIDE FILM 2W J 0.82 Ω	RN02JZQZ0R82
D504	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D505	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D506	ZENER DIODE MTZJT-7712B	QDTB00MTZJ12
D538	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D541	ZENER DIODE MTZJT-7733B	QDTB00MTZJ33
D543	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D544	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D545	ZENER DIODE MTZJT-773.3B	QDTB0MTZJ3R3
D546	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D548	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D553	ZENER DIODE MTZJT-7715B	QDTB00MTZJ15
D554	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D555	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D556	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D557	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D561	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D563	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D564	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D566	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D707	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D708	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D709	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D710	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D801	PCB JUMPER D0.6-P5.0	JW5.0T
D802	PCB JUMPER D0.6-P5.0	JW5.0T
D814	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D815	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D881	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
	ICS	
IC451	IC ANALOG MULTIPLEXER CD4051BNSR	NSZBA0TTY157
IC452	IC ANALOG MULTIPLEXER CD4051BNSR	NSZBA0TTY157
IC531	VOLTAGE REGULATOR PQ070XF01SZH	QSZBA0SSH054
IC532	REGULATOR IC(3.5V) PQ035ZN1HzPH	QSZBA0TSH078
IC533	REGULATOR PQ018EF01SZH	QSZBA0SSH075
IC535	IC LD1117V	NSZBA0SSS046
IC537	REGULATOR(PB FREE) PQ033EF01SZH	QSZBA0SSH060
IC801	AUDIO POWER IC AN17805A	QSZBA0SMS007
	COILS	
L534	INDUCTOR 15μH-K-5FT	LLARKBSTU150
L601⚠	TOROID COILS RBPF-865661	LLBG00ZKV015
L602⚠	TOROID COILS RBPF-865661	LLBG00ZKV015
L603⚠	TOROID COILS RBPF-865661	LLBG00ZKV015
	TRANSISTORS	
Q451	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q452	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q453	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q503	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q531	TRANSISTOR KTA-1266-GR-AT/P	NQS4KTA1266P
Q536	TRANSISTOR KTA-1266-GR-AT/P	NQS4KTA1266P
Q537	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q538	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q701	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q702	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q703	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q704	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q705	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q706	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q707	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q708	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q709	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q710	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q711	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q712	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q802	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q813	TRANSISTOR KTA-1266-GR-AT/P	NQS4KTA1266P
	RESISTORS	
R401	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
R402	CHIP RES. 1/10W J 5.6k Ω	RRXAJR5Z0562
R403	CHIP RES. 1/10W J 6.8k Ω	RRXAJR5Z0682
R404	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
R405	CHIP RES. 1/10W J 5.6k Ω	RRXAJR5Z0562
R406	CHIP RES. 1/10W J 6.8k Ω	RRXAJR5Z0682
R407	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
R408	CHIP RES. 1/10W J 5.6k Ω	RRXAJR5Z0562
R409	CHIP RES. 1/10W J 6.8k Ω	RRXAJR5Z0682
R410	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
R411	CHIP RES. 1/10W J 5.6k Ω	RRXAJR5Z0562
R412	CHIP RES. 1/10W J 6.8k Ω	RRXAJR5Z0682
R413	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
R414	CHIP RES. 1/10W J 5.6k Ω	RRXAJR5Z0562
R415	CHIP RES. 1/10W J 6.8k Ω	RRXAJR5Z0682
R416	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473

Ref. No.	Description	Part No.
R417	CHIP RES. 1/10W J 5.6k Ω	RRXAJR5Z0562
R418	CHIP RES. 1/10W J 6.8k Ω	RRXAJR5Z0682
R419	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
R420	CHIP RES. 1/10W J 5.6k Ω	RRXAJR5Z0562
R421	CHIP RES. 1/10W J 6.8k Ω	RRXAJR5Z0682
R422	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
R423	CHIP RES. 1/10W J 5.6k Ω	RRXAJR5Z0562
R424	CHIP RES. 1/10W J 6.8k Ω	RRXAJR5Z0682
R453	CHIP RES. 1/10W J 100k Ω	RRXAJR5Z0104
R454	CHIP RES. 1/10W J 100k Ω	RRXAJR5Z0104
R455	CHIP RES. 1/10W J 100k Ω	RRXAJR5Z0104
R456	CHIP RES. 1/10W J 100k Ω	RRXAJR5Z0104
R457	CHIP RES. 1/10W J 100k Ω	RRXAJR5Z0104
R458	CHIP RES. 1/10W J 100k Ω	RRXAJR5Z0104
R459	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R460	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R461	CHIP RES. 1/10W J 100k Ω	RRXAJR5Z0104
R462	CHIP RES. 1/10W J 100k Ω	RRXAJR5Z0104
R463	CHIP RES. 1/10W J 100k Ω	RRXAJR5Z0104
R464	CHIP RES. 1/10W J 100k Ω	RRXAJR5Z0104
R465	CARBON RES. 1/4W J 100k Ω	RCX4JATZ0104
R466	CHIP RES. 1/10W J 100k Ω	RRXAJR5Z0104
R473	CHIP RES. 1/10W J 100k Ω	RRXAJR5Z0104
R474	CHIP RES. 1/10W J 100k Ω	RRXAJR5Z0104
R475	CHIP RES. 1/10W J 100k Ω	RRXAJR5Z0104
R476	CARBON RES. 1/4W J 100k Ω	RCX4JATZ0104
R477	CHIP RES. 1/10W J 100k Ω	RRXAJR5Z0104
R478	CHIP RES. 1/10W J 100k Ω	RRXAJR5Z0104
R479	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R480	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R481	CHIP RES. 1/10W J 100k Ω	RRXAJR5Z0104
R482	CHIP RES. 1/10W J 100k Ω	RRXAJR5Z0104
R483	CHIP RES. 1/10W J 100k Ω	RRXAJR5Z0104
R484	CHIP RES. 1/10W J 100k Ω	RRXAJR5Z0104
R485	CHIP RES. 1/10W J 100k Ω	RRXAJR5Z0104
R486	CHIP RES. 1/10W J 100k Ω	RRXAJR5Z0104
R488	PCB JUMPER D0.6-P5.0	JW5.0T
R491	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R492	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R493	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R494	CHIP RES. 1/10W J 22k Ω	RRXAJR5Z0223
R495	CHIP RES. 1/10W J 22k Ω	RRXAJR5Z0223
R496	CHIP RES. 1/10W J 22k Ω	RRXAJR5Z0223
R497	CARBON RES. 1/4W J 15k Ω	RCX4JATZ0153
R498	CHIP RES. 1/10W J 4.7k Ω	RRXAJR5Z0472
R502	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R504	CHIP RES. 1/10W J 4.7k Ω	RRXAJR5Z0472
R505	CHIP RES. 1/10W J 2.2k Ω	RRXAJR5Z0222
R506	CHIP RES.(1608) 1/10W 0 Ω	RRXAJR5Z0000
R509	CHIP RES.(1608) 1/10W 0 Ω	RRXAJR5Z0000
R511	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R517	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R518	CHIP RES. 1/10W J 3.3k Ω	RRXAJR5Z0332
R519	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R522	PCB JUMPER D0.6-P20.0	JW20.0T
R523	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R524	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R525	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R532	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R533	CHIP RES. 1/10W F 6.8k Ω	RRXAFR5H6801
R534	PCB JUMPER D0.6-P5.0	JW5.0T
R535	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R536	CHIP RES. 1/10W F 1.1k Ω	RRXAFR5Z1101

Ref. No.	Description	Part No.
R537	CHIP RES. 1/10W F 1.0k Ω	RRXAFR5H1001
R538	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R540	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R545	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R546	CHIP RES. 1/10W J 3.9k Ω	RRXAJR5Z0392
R547	CHIP RES. 1/10W J 22k Ω	RRXAJR5Z0223
R548	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R551	CARBON RES. 1/4W J 8.2k Ω	RCX4JATZ0822
R553	CHIP RES. 1/10W F 7.5k Ω	RRXAFR5Z7501
R554	CHIP RES. 1/10W J 4.7k Ω	RRXAJR5Z0472
R573	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R574	PCB JUMPER D0.6-P5.0	JW5.0T
R575	CARBON RES. 1/4W J 220 Ω	RCX4JATZ0221
R576	CARBON RES. 1/4W J 47k Ω	RCX4JATZ0473
R577	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R590	CARBON RES. 1/4W J 620 Ω	RCX4JATZ0621
R591	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R601⚠	SOLID RES.(UL) 1/2W 3.3M Ω	RSX2335KE010
R701	CARBON RES. 1/4W J 75 Ω	RCX4JATZ0750
R702	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R704	CHIP RES. 1/10W J 33k Ω	RRXAJR5Z0333
R705	CHIP RES. 1/10W J 39k Ω	RRXAJR5Z0393
R706	CHIP RES. 1/10W J 390 Ω	RRXAJR5Z0391
R707	CHIP RES.(1608) 1/10W 0 Ω	RRXAJR5Z0000
R708	CHIP RES. 1/10W J 75 Ω	RRXAJR5Z0750
R709	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R711	CHIP RES. 1/10W J 33k Ω	RRXAJR5Z0333
R712	CHIP RES. 1/10W J 39k Ω	RRXAJR5Z0393
R713	CHIP RES. 1/10W J 390 Ω	RRXAJR5Z0391
R714	CHIP RES.(1608) 1/10W 0 Ω	RRXAJR5Z0000
R715	CHIP RES. 1/10W J 75 Ω	RRXAJR5Z0750
R716	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R718	CHIP RES. 1/10W J 33k Ω	RRXAJR5Z0333
R719	CHIP RES. 1/10W J 39k Ω	RRXAJR5Z0393
R720	CHIP RES. 1/10W J 390 Ω	RRXAJR5Z0391
R721	CHIP RES.(1608) 1/10W 0 Ω	RRXAJR5Z0000
R722	CARBON RES. 1/4W J 22 Ω	RCX4JATZ0220
R723	CHIP RES. 1/10W J 75 Ω	RRXAJR5Z0750
R724	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R726	CHIP RES. 1/10W J 33k Ω	RRXAJR5Z0333
R727	CHIP RES. 1/10W J 39k Ω	RRXAJR5Z0393
R728	CHIP RES. 1/10W J 390 Ω	RRXAJR5Z0391
R729	CHIP RES.(1608) 1/10W 0 Ω	RRXAJR5Z0000
R730	CHIP RES. 1/10W J 75 Ω	RRXAJR5Z0750
R731	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R733	CHIP RES. 1/10W J 33k Ω	RRXAJR5Z0333
R734	CHIP RES. 1/10W J 39k Ω	RRXAJR5Z0393
R735	CHIP RES. 1/10W J 390 Ω	RRXAJR5Z0391
R736	CHIP RES.(1608) 1/10W 0 Ω	RRXAJR5Z0000
R737	CARBON RES. 1/4W J 22 Ω	RCX4JATZ0220
R738	CARBON RES. 1/4W J 75 Ω	RCX4JATZ0750
R739	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R741	CHIP RES. 1/10W J 33k Ω	RRXAJR5Z0333
R742	CHIP RES. 1/10W J 39k Ω	RRXAJR5Z0393
R743	CHIP RES. 1/10W J 390 Ω	RRXAJR5Z0391
R744	PCB JUMPER D0.6-P5.0	JW5.0T
R745	CARBON RES. 1/4W J 22 Ω	RCX4JATZ0220
R746	CARBON RES. 1/4W J 22 Ω	RCX4JATZ0220
R747	CHIP RES.(1608) 1/10W F 75 Ω	RRXAFR5H75R0
R748	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R751	CHIP RES. 1/10W J 33k Ω	RRXAJR5Z0333
R752	CHIP RES. 1/10W J 39k Ω	RRXAJR5Z0393
R753	CHIP RES. 1/10W J 390 Ω	RRXAJR5Z0391

Ref. No.	Description	Part No.
R754	CHIP RES.(1608) 1/10W 0 Ω	RRXAJR5Z0000
R755	CHIP RES.(1608) 1/10W F 75 Ω	RRXAFR5H75R0
R756	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R759	CHIP RES. 1/10W J 33k Ω	RRXAJR5Z0333
R760	CHIP RES. 1/10W J 39k Ω	RRXAJR5Z0393
R761	CHIP RES. 1/10W J 390 Ω	RRXAJR5Z0391
R762	CHIP RES.(1608) 1/10W 0 Ω	RRXAJR5Z0000
R763	CHIP RES.(1608) 1/10W F 75 Ω	RRXAFR5H75R0
R764	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R767	CHIP RES. 1/10W J 33k Ω	RRXAJR5Z0333
R768	CHIP RES. 1/10W J 39k Ω	RRXAJR5Z0393
R769	CHIP RES. 1/10W J 390 Ω	RRXAJR5Z0391
R770	PCB JUMPER D0.6-P5.0	JW5.0T
R771	CHIP RES.(1608) 1/10W F 75 Ω	RRXAFR5H75R0
R772	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R775	CHIP RES. 1/10W J 33k Ω	RRXAJR5Z0333
R776	CHIP RES. 1/10W J 39k Ω	RRXAJR5Z0393
R777	CHIP RES. 1/10W J 390 Ω	RRXAJR5Z0391
R778	CHIP RES.(1608) 1/10W 0 Ω	RRXAJR5Z0000
R779	CHIP RES.(1608) 1/10W F 75 Ω	RRXAFR5H75R0
R780	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R783	CHIP RES. 1/10W J 33k Ω	RRXAJR5Z0333
R784	CHIP RES. 1/10W J 39k Ω	RRXAJR5Z0393
R785	CHIP RES. 1/10W J 390 Ω	RRXAJR5Z0391
R786	CHIP RES.(1608) 1/10W 0 Ω	RRXAJR5Z0000
R787	CHIP RES.(1608) 1/10W F 75 Ω	RRXAFR5H75R0
R788	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R791	CHIP RES. 1/10W J 33k Ω	RRXAJR5Z0333
R792	CHIP RES. 1/10W J 39k Ω	RRXAJR5Z0393
R793	CHIP RES. 1/10W J 390 Ω	RRXAJR5Z0391
R794	PCB JUMPER D0.6-P5.0	JW5.0T
R801	RES METAL OXIDE FILM 2W J 0.33 Ω	RN02R33KE009
R802	METAL OXIDE FILM RES. 2W J 0.68 Ω	RN02R68KE009
R803	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R805	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R808	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R810	PCB JUMPER D0.6-P5.0	JW5.0T
R811	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R812	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R813	PCB JUMPER D0.6-P5.0	JW5.0T
R815	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R823	PCB JUMPER D0.6-P5.0	JW5.0T
R825	PCB JUMPER D0.6-P5.0	JW5.0T
R831	CARBON RES. 1/4W J 3.3k Ω	RCX4JATZ0332
R832	CARBON RES. 1/4W J 680 Ω	RCX4JATZ0681
R833	CARBON RES. 1/4W J 5.6k Ω	RCX4JATZ0562
R836	CARBON RES. 1/4W J 3.3k Ω	RCX4JATZ0332
R837	CARBON RES. 1/4W J 680 Ω	RCX4JATZ0681
R838	CARBON RES. 1/4W J 5.6k Ω	RCX4JATZ0562
R839	PCB JUMPER D0.6-P5.0	JW5.0T
R840	CARBON RES. 1/4W J 470k Ω	RCX4JATZ0474
R881	CARBON RES. 1/4W J 15k Ω	RCX4JATZ0153
R882	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
MISCELLANEOUS		
BC501	PCB JUMPER D0.6-P5.0	JW5.0T
BC502	PCB JUMPER D0.6-P5.0	JW5.0T
CL601⚠	WIRE ASSEMBLY 1P WX1L0600-020	WX1L0600-020
CL602⚠	WIRE ASSEMBLY 1P WX1L0600-019	WX1L0600-019
F601⚠	FUSE 8A/250V(PB FREE) 0215008.MXP	PBGZ20BAG022
FH601	FUSE HOLDER MSF-015 LF (B110)	XH01Z00LY002
FH602	FUSE HOLDER MSF-015 LF (B110)	XH01Z00LY002
GP601⚠	GAP. G3.10D	FAZ000LD6004

Ref. No.	Description	Part No.
JK701	JACK SW RCA PCB L MSP 226V43 01 NI LF	JYRL030LY038
JK702	Y/C JACK 1P(SW) YKF51-5586N	JYEL040JC003
JK703	5PIN JACK MSP-226V40-03 NI FE	JYRL050LY033
JK704	5PIN JACK MSP-226V40-03 NI FE	JYRL050LY033
JS801	PCB JUMPER D0.6-P5.0	JW5.0T
PB-1	HEAT SINK (PJH) ASSEMBLY L0600UZ	0EM409007A
SA601⚠	SURGE ABSORBER PVR-07D471KB	NVQZ07D471KB

JACK CBA

Ref. No.	Description	Part No.
	JACK CBA Consists of the following:	---------
CONNECTOR		
CN702	CONNECTOR PRINT OSU C R 1-292253-0	J31FC10AP006
MISCELLANEOUS		
JK705	RCA JACK AV1-06-022 WHITE	JXRJ010RP011
JK706	RCA JACK AV1-06-023 RED	JYRJ010RP002
JK707	RCA JACK AV1-06-021 YELLOW	JXRJ010RP010
JK708	Y/C JACK YKF51-5646N	JYEJ040JC001

SWITCH CBA

Ref. No.	Description	Part No.
	SWITCH CBA Consists of the following:	---------
CAPACITORS		
C101	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C103	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C104	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C151	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C152	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C153	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C154	CHIP CERAMIC CAP. F Z 0.01μF/50V	CHD1JZ30F103
C155	ELECTROLYTIC CAP. 47μF/10V M H7	CE1AMASSM470
CONNECTOR		
CN151	CONNECTOR PRINT OSU C R 440055-8	J344C08AP006
DIODES		
D151	LED 333GT/E	NPHZ00333GTE
D152	LED L-53HT	NP4Z000L53HT
RESISTORS		
R101	PCB JUMPER D0.6-P5.0	JW5.0T
R102	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R105	CHIP RES. 1/10W J 2.4k Ω	RRXAJR5Z0242
R106	CHIP RES. 1/10W J 4.3k Ω	RRXAJR5Z0432
R107	CHIP RES. 1/10W J 8.2k Ω	RRXAJR5Z0822
R108	CHIP RES. 1/10W J 24k Ω	RRXAJR5Z0243
R116	PCB JUMPER D0.6-P5.0	JW5.0T
R117	CHIP RES. 1/10W J 2.4k Ω	RRXAJR5Z0242
R118	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R151	CARBON RES. 1/4W J 220 Ω	RCX4JATZ0221
R152	CARBON RES. 1/4W J 220 Ω	RCX4JATZ0221
R153	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R154	CHIP RES. 1/10W J 3.3k Ω	RRXAJR5Z0332
R155	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
SWITCHES		
SW102	TACT SWITCH SKQSAB	SST0101AL038
SW103	TACT SWITCH SKQSAB	SST0101AL038
SW104	TACT SWITCH SKQSAB	SST0101AL038
SW105	TACT SWITCH SKQSAB	SST0101AL038
SW114	TACT SWITCH SKQSAB	SST0101AL038
SW115	TACT SWITCH SKQSAB	SST0101AL038
SW121	TACT SWITCH SKHHLMA010	SST0101AL049

Ref. No.	Description	Part No.
	MISCELLANEOUS	
BC151	PCB JUMPER D0.6-P5.0	JW5.0T
BC152	PCB JUMPER D0.6-P5.0	JW5.0T
RCV151	PHOTO LINK MODULE KSM-712TH2E	USESJRSKK044

NETWORK 1 CBA

Ref. No.	Description	Part No.
	NETWORK 1 CBA Consists of the following:	----------
	CAPACITORS	
C901	METALIZED POLYESTER FILM CAP. 2.2μF/50V J	CT1J225DT040
C902	METALIZED POLYESTER FILM CAP. 2.2μF/50V J	CT1J225DT040
	CONNECTORS	
CN901	CONNECTOR PRINT OSU C S 440052-2	J344C02AP011
CN902	CONNECTOR PRINT OSU 2P 292161-2	J31FC02AP001
CN903	CONNECTOR PRINT OSU C S 440052-3	J344C03AP011
	COILS	
L901	COIL CHOKE ELC12D122E	LLF1220MS001
L902	COIL CHOKE ELC10D221EL	LLC221KMS003
	MISCELLANEOUS	
JS901	PCB JUMPER D0.6-P7.5	JW7.5T
JS902	PCB JUMPER D0.6-P10.0	JW10.0T

NETWORK 2 CBA

Ref. No.	Description	Part No.
	NETWORK 2 CBA Consists of the following:	----------
	CAPACITORS	
C951	METALIZED POLYESTER FILM CAP. 2.2μF/50V J	CT1J225DT040
C952	METALIZED POLYESTER FILM CAP. 2.2μF/50V J	CT1J225DT040
	CONNECTORS	
CN951	CONNECTOR PRINT OSU C S 440052-2	J344C02AP011
CN952	CONNECTOR PRINT OSU 2P 292161-2	J31FC02AP001
CN953	CONNECTOR PRINT OSU C S 440052-3	J344C03AP011
	COILS	
L951	COIL CHOKE ELC12D122E	LLF1220MS001
L952	COIL CHOKE ELC10D221EL	LLC221KMS003
	MISCELLANEOUS	
JS951	PCB JUMPER D0.6-P7.5	JW7.5T
JS952	PCB JUMPER D0.6-P10.0	JW10.0T

POWER SUPPLY CBA

Ref. No.	Description	Part No.
	POWER SUPPLY CBA Consists of the following:	1ESA13003
	CAPACITORS	
C2100	CAP ELE SML-105 10μF 25V M	CE1EMASTJ100
C2101	CERAMIC CAP.(AX) B 0.022μF/50V	CCK1JKT0B223
C2114	METALIZED PLYESTER CAP. 1μF/630V K	CT2K105MS064
C2115⚠	ELECTROLYTIC CAP. 470μF/450V (D35MM)	CA2N471NC227
C2116	PP CAP. 0.001μF/1.6KV J	CT3C102MS039
C2117	CERAMIC CAP.(AX) CH J 1000pF/50V	CA1J102TU008
C2118	CERAMIC CAP.(AX) CH J 220pF/50V	CA1J221TU008
C2119	CAP METALIZED FILM 2.2μF 50V	CT1J225MS045
C2120	CERAMIC CAP.(AX) B K 0.0056μF/50V	CA1J562TU011
C2121	CERAMIC CAP.(AX) F Z 0.01μF/25V	CCA1EZTFZ103
C2122	ELECTROLYTIC CAP. 220μF/25V M(105°C)	CE1EMASTJ221
C2123	CERAMIC CAP.(AX) B K 680pF/50V	CCA1JKT0B681
C2124	CERAMIC CAP.(AX) B K 0.01μF/50V	CA1J103TU011
C2125	ELECTROLYTIC CAP. 1μF/50V M	CE1JMASTJ1R0
C2126	CAP METALIZED FILM 1.5μF 50V J	CT1J155MS045
C2127	FILM CAP.(P) 0.15μF/50V J	CA1J154MS029
C2128	CERAMIC CAP.(AX) B K 0.1μF/50V	CA1J104TU011
C2129	CERAMIC CAP.(AX) F Z 0.01μF/25V	CCA1EZTFZ103
C2131	CERAMIC CAP.(AX) B K 0.01μF/50V	CA1J103TU011
C2200	ELECTROLYTIC CAP. 100μF/35V M	CE1GMASTJ101
C2201	CERAMIC CAP. R K 1000pF/2KV	CCD3DKA0R102
C2202	CERAMIC CAP.(AX) B K 0.0015μF/50V	CA1J152TU011
C2203	FILM CAP.(P) 0.001μF/50V J	CA1J102MS029
C2204	P.P. CAPACITOR 0.047μF/630V J	CBP2KKD00473
C2205	CAP ELE SML-105 10μF 25V M	CE1EMASTJ100
C2250	FILM CAP.(P) 0.1μF/50V J	CA1J104MS029
C2251	CAP CERAMIC HV 3300pF 2KV R K	CCD3DKA0R332
C2252	ELECTROLYTIC CAP. 1μF/50V M	CE1JMASTJ1R0
C2253	ELECTROLYTIC CAP. 22μF/50V M(105°C)	CE1JMASTJ220
C2254	ELECTROLYTIC CAPACITOR LGN2E102MELB	CA2E102NC226
C2255	ELECTROLYTIC CAPACITOR LGN2E102MELB	CA2E102NC226
C2256	CAP POLYPROPYLENE 0.0027μF 630V J	CBP2KKD00272
C2257	CERAMIC CAP.(AX) B K 0.1μF/50V	CA1J104TU011
C2258	CAP CERAMIC HV 3300pF 2KV R K	CCD3DKA0R332
C2302	FILM CAP.(P) 0.068μF/50V J	CA1J683MS029
C2303	FILM CAP.(P) 0.033μF/50V J	CA1J333MS029
C2306	FILM CAP.(P) 0.022μF/50V J	CA1J223MS029
C2307	PP CAP. 0.0033μF/1.6KV J	CT3C332MS039
C2308	CERAMIC CAP.(AX) F Z 0.01μF/25V	CCA1EZTFZ103
C2350	FILM CAP.(P) 0.1μF/50V J	CA1J104MS029
C2352	CAP ELE SML-105 10μF 25V M	CE1EMASTJ100
C2353	ELECTROLYTIC CAP. 470μF/100V M	CE2AMZNTJ471
C2354	CERAMIC CAP.(AX) F 10000pF/50V	CCK1JZT0F103
C2356	FILM CAP.(P) 0.1μF/50V J	CA1J104MS029
C2357	ELECTROLYTIC CAP. 470μF/100V M	CE2AMZNTJ471
C2358	CERAMIC CAP.(AX) F Z 0.01μF/25V	CCA1EZTFZ103
C2359	CERAMIC CAP.(AX) F Z 0.01μF/25V	CCA1EZTFZ103
C2400	ELE.CAP 100μF/25V M(105°C)	CE1EMASTJ101
C2401	CERAMIC CAP.(AX) B K 0.1μF/50V	CA1J104TU011
C2402	CERAMIC CAP.(AX) F Z 0.01μF/25V	CCA1EZTFZ103
C2403	CERAMIC CAP. R K 220pF/2KV(HR)	CCD3DKA0R221
C2404	CAP ELE 100μF 25V M 105	CA1E101SP110
C2405	ELECTROLYTIC CAP. 10μF/50V M	CE1JMASTJ100
C2406	CERAMIC CAP.(AX) B 2200pF/50V	CCK1JKT0B222
C2407	FILM CAP.(P) 0.001μF/50V J	CA1J102MS029
C2408	ELECTROLYTIC CAP. 33μF/16V M	CE1CMASTJ330
C2409	PCB JUMPER D0.6-P5.0	JW5.0T
C2410	ELECTROLYTIC CAP. 100μF/35V M	CE1GMASTJ101
C2411	PP CAP. 0.0033μF/1.6KV J	CT3C332MS039
C2412	CERAMIC CAP.(AX) B K 180pF/50V	CCA1JKT0B181
C2450	CERAMIC CAP. B K 470pF/1KV	CCD3AKD0B471
C2451	FILM CAP.(P) 0.0027μF/50V J	CA1J272MS029
C2452	ELECTROLYTIC CAP. 0.1μF/50V M	CE1JMASTJR10
C2453	FILM CAP.(P) 0.01μF/50V J	CA1J103MS029
C2454	CAP ELE SML-105 3300μF 10V M	CE1AMZNTJ332
C2455	CERAMIC CAP.(AX) F 0.1μF/50V	CCK1JZT0F104
C2456	CAP ELE SML-105 3300μF 10V M	CE1AMZNTJ332
C2457	CERAMIC CAP.(AX) F Z 0.01μF/25V	CCA1EZTFZ103
C2458	ELECTROLYTIC CAP. 2200μF/10V M	CE1AMZNTJ222
C2459	FILM CAP.(P) 0.001μF/50V J	CA1J102MS029
C2461⚠	CAP ELE SML-105 2200μF 25V M	CE1EMZPTJ222
C2463	CAP ELE SML-105 1000μF 16V M	CE1CMZPTJ102
C2464	CERAMIC CAP.(AX) F Z 0.01μF/25V	CCA1EZTFZ103
C2465	CAP ELE SML-105 1000μF 16V M	CE1CMZPTJ102

Ref. No.	Description	Part No.
C2466	CERAMIC CAP.(AX) F Z 0.01μF/25V	CCA1EZTFZ103
C2468	FILM CAP.(P) 0.1μF/50V J	CA1J104MS029
C2500	ELECTROLYTIC CAP. 220μF/10V M	CE1AMASTJ221
C2501	CERAMIC CAP.(AX) B K 0.1μF/50V	CA1J104TU011
C2502	ELECTROLYTIC CAP. 1μF/50V M	CE1JMASTJ1R0
C2503	CERAMIC CAP.(AX) F 0.1μF/50V	CCK1JZT0F104
C2504	CERAMIC CAP.(AX) F Z 0.01μF/25V	CCA1EZTFZ103
C2505	CERAMIC CAP.(AX) F Z 0.01μF/25V	CCA1EZTFZ103
C2506	CERAMIC CAP.(AX) F Z 0.01μF/25V	CCA1EZTFZ103
C2602	FILM CAP.(P) 0.068μF/50V J	CA1J683MS029
C2604	FILM CAP.(P) 0.033μF/50V J	CA1J333MS029
C2607⚠	PP CAP. 0.0033μF/1.6KV J	CT3C332MS039
C2608⚠	CERAMIC CAP.(AX) F Z 0.01μF/25V	CCA1EZTFZ103
C2650	FILM CAP.(P) 0.001μF/50V J	CA1J102MS029
C2651	CAP ELE SML-105 47μF 350V M	CE2GMZNTJ470
C2750	ELECTROLYTIC CAP. 22μF/50V M(105°C)	CE1JMASTJ220
C2751	CAP ELE SML-105 47μF 350V M	CE2GMZNTJ470
C2752	CERAMIC CAP.(AX) F Z 0.01μF/25V	CCA1EZTFZ103
C2753	FILM CAP.(P) 0.1μF/50V J	CA1J104MS029
C2754	FILM CAP.(P) 0.1μF/50V J	CA1J104MS029
C2755	CAP ELE SML-105 10μF 250V M	CE2EMZNTJ100
C2756	CERAMIC CAP.(AX) F Z 0.01μF/25V	CCA1EZTFZ103
C2850	CAP ELE SML-105 10μF 200V M	CE2DMZNTJ100
C2851	CERAMIC CAP.(AX) F Z 0.01μF/25V	CCA1EZTFZ103
C2852	FILM CAP.(P) 0.1μF/50V J	CA1J104MS029
C2854	CAP ELE SML-105 10μF 160V M	CE2CMASTJ100
C2855	CERAMIC CAP.(AX) F Z 0.01μF/25V	CCA1EZTFZ103
CONNECTORS		
CN2100⚠	CONNECTOR PRINT OSU C S 1-1565033-2	J356C02AP001
CN2101⚠	CONNECTOR PRINT OSU C S 440052-4	J344C04AP011
CN2501	CONNECTOR PRINT OSU C S 440054-3	J344C03AP001
CN8002	CONNECTOR PRINT OSU C S 440052-10	J344C10AP011
CN8003	CONNECTOR PRINT OSU C S 440052-5	J344C05AP011
CN8005	CONNECTOR PRINT OSU C S B5P-VH(LF)(SN)	J3VHC05JG011
CN8006	CONNECTOR PRINT OSU C S B9P-VH (LF)(SN)	J3VHC09JG011
CN8007	CONNECTOR 8P B8P-VH (LF)(SN)	J3VHC08JG011
DIODES		
D2100	RECTIFIER DIODE 1N4005	NDQZ001N4005
D2101	DIODE BRIDGE D25XB60-7101	QDEZD25XB607
D2102	SCHOTTKY BARRIER DIODE ERA81-004Q	QDLZRA81004Q
D2103⚠	DIODE ZENER 1ZC27(Q)	QDLZ001ZC27Q
D2104	SCHOTTKY BARRIER DIODE ERA81-004Q	QDLZRA81004Q
D2105⚠	DIODE ZENER 1ZC27(Q)	QDLZ001ZC27Q
D2106	DIODE SILICON YG965C6R	QDQZYG965C6R
D2107	SCHOTTKY BARRIER DIODE ERA81-004Q	QDLZRA81004Q
D2108	SCHOTTKY BARRIER DIODE ERA81-004Q	QDLZRA81004Q
D2109	ZENER DIODE MTZJT-7718B	QDTB00MTZJ18
D2110	SCHOTTKY BARRIER DIODE SB140	NDWZ000SB140
D2153	DIODE 1ZC36(Q)	QDLZ001ZC36Q
D2200	ZENER DIODE MTZJT-7730B	QDTB00MTZJ30
D2201	SCHOTTKY BARRIER DIODE ERA81-004Q	QDLZRA81004Q
D2202	DIODE 1ZC30(Q)	QDLZ001ZC30Q
D2203	ZENER DIODE MTZJT-7730B	QDTB00MTZJ30
D2204	DIODE FR104-B	NDLZ000FR104
D2205	DIODE FR104-B	NDLZ000FR104
D2206	DIODE 05NU42	QDTZ005NU42Q
D2207	ZENER DIODE MTZJT-7720B	QDTB00MTZJ20
D2208	DIODE FR104-B	NDLZ000FR104
D2251	DIODE FR104-B	NDLZ000FR104
D2252	DIODE FR104-B	NDLZ000FR104
D2254⚠	DIODE SILICON YG226S	QDQZ0YG226S8

Ref. No.	Description	Part No.
D2255	PCB JUMPER D0.6-P10.0	JW10.0T
D2256	ZENER DIODE MTZJT-775.6B	QDTB0MTZJ5R6
D2257	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D2300⚠	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D2302⚠	DIODE ZENER 1ZC18(Q)	QDLZ001ZC18Q
D2303	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D2304⚠	DIODE ZENER 1ZC27(Q)	QDLZ001ZC27Q
D2305	ZENER DIODE MTZJT-775.6B	QDTB0MTZJ5R6
D2307	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D2308⚠	DIODE 05NU42	QDTZ005NU42Q
D2350	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D2351	DIODE FR104-B	NDLZ000FR104
D2352	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D2353⚠	LOWLOSS DIODE SF5LC40-7100	QDEZSF5LC407
D2354	DIODE ZENER 1ZC82(Q)	QDLZ001ZC82Q
D2400	ZENER DIODE MTZJT-7724B	QDTB00MTZJ24
D2401	ZENER DIODE MTZJT-7712B	QDTB00MTZJ12
D2402	RECTIFIER DIODE 1N4005	NDQZ001N4005
D2403	ZENER DIODE MTZJT-7720A	QDTA00MTZJ20
D2404	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D2405	ZENER DIODE MTZJT-7712B	QDTB00MTZJ12
D2406	DIODE 05NU42	QDTZ005NU42Q
D2407	ZENER DIODE MTZJT-7715B	QDTB00MTZJ15
D2408	DIODE FR104-B	NDLZ000FR104
D2409	ZENER DIODE MTZJT-7710B	QDTB00MTZJ10
D2410	PCB JUMPER D0.6-P5.0	JW5.0T
D2411	RECTIFIER DIODE 1N4005	NDQZ001N4005
D2413⚠	DIODE 05NU42	QDTZ005NU42Q
D2414	RECTIFIER DIODE 1N4005	NDQZ001N4005
D2415	DIODE FR104-B	NDLZ000FR104
D2416	RECTIFIER DIODE 1N4005	NDQZ001N4005
D2417	ZENER DIODE MTZJT-7720B	QDTB00MTZJ20
D2451	DIODE FR104-B	NDLZ000FR104
D2452⚠	SCHOTTKY BARRIER DIODE ERC84-009	QDLZERC84009
D2454	ZENER DIODE MTZJT-7718B	QDTB00MTZJ18
D2455	SCHOTTKY BARRIER DIODE YG801C04R	QDWZG801C04R
D2456	SCHOTTKY BARRIER DIODE ERC81-004	QDPZERC81004
D2457	ZENER DIODE MTZJT-776.8B	QDTB0MTZJ6R8
D2460	ZENER DIODE MTZJT-773.9B	QDTB0MTZJ3R9
D2463	ZENER DIODE MTZJT-776.8B	QDTB0MTZJ6R8
D2500	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D2501	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D2502	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D2503	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D2504	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D2505	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D2506	LED 333GT/E	NPHZ00333GTE
D2508	DIODE 1N5397-B	NDLZ001N5397
D2510	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D2511	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D2515	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D2600⚠	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D2602⚠	DIODE ZENER 1ZC18(Q)	QDLZ001ZC18Q
D2603⚠	DIODE ZENER 1ZC27(Q)	QDLZ001ZC27Q
D2604	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D2605	ZENER DIODE MTZJT-775.6B	QDTB0MTZJ5R6
D2607	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D2608	DIODE 05NU42	QDTZ005NU42Q
D2650	FAST RECOVERY DIODE ERB44-10	QDLZ0ERB4410
D2652	ZENER DIODE MTZJT-7727B	QDTB00MTZJ27
D2653	DIODE ZENER 1ZB220(Q)	QDLZ01ZB220Q
D2750⚠	DIODE FR104-B	NDLZ000FR104
D2751⚠	FAST RECOVERY DIODE ERB44-10	QDLZ0ERB4410

Ref. No.	Description	Part No.
D2752	RECTIFIER DIODE 1N4005	NDQZ001N4005
D2753	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D2850	FAST RECOVERY DIODE ERB44-08	QDPZ0ERB4408
D2852	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
	ICS	
IC2100⚠	POWER FACTOR PREREGULATOR UCC2818ANG4	NSZBA0STY226
IC2101⚠	PHOTO COUPLER LTV817MBF	NPEBLTV817MF
IC2102⚠	PHOTO COUPLER LTV817MBF	NPEBLTV817MF
IC2200	IC SWITCHING REGULATOR STR-F6468 5	QSZBA0ZSQ005
IC2201⚠	PHOTO COUPLER LTV817MBF	NPEBLTV817MF
IC2202⚠	PHOTO COUPLER LTV817MBF	NPEBLTV817MF
IC2250⚠	IC SHUNT REGULATOR KIA431-AT/P	NSZBA0TJY036
IC2300⚠	PHOTO COUPLER LTV817MBF	NPEBLTV817MF
IC2301⚠	PHOTO COUPLER LTV817MBF	NPEBLTV817MF
IC2350⚠	IC SHUNT REGULATOR KIA431-AT/P	NSZBA0TJY036
IC2400⚠	POWER SUPPLY IC MODULE MR2920-7109F12	QSZBA0SSD004
IC2401⚠	PHOTO COUPLER LTV817MBF	NPEBLTV817MF
IC2403⚠	PHOTO COUPLER LTV817MBF	NPEBLTV817MF
IC2450⚠	IC SHUNT REGULATOR KIA431-AT/P	NSZBA0TJY036
IC2451⚠	IC REGULATOR KIA278R15PI/P TO-220	NSZBA0SJY051
IC2454	REGULATOR PQ1CG2032FZH	QSZBA0SSH071
IC2500	IC MICRO COMPUTER M37544G2A-064GP	QSZAA0RHT121
IC2501	IC RESET IC-PST600D-2(R59-195	QSBLA0TMM010
IC2600⚠	PHOTO COUPLER LTV817MBF	NPEBLTV817MF
IC2601⚠	PHOTO COUPLER LTV817MBF	NPEBLTV817MF
IC2651⚠	IC SHUNT REGULATOR KIA431-AT/P	NSZBA0TJY036
IC2754	IC SHUNT REGULATOR KIA431-AT/P	NSZBA0TJY036
IC2853	IC SHUNT REGULATOR KIA431-AT/P	NSZBA0TJY036
	COILS	
L2103⚠	TOROIDAL COIL HKBS-20D130-1020WRPS	LLBT00ZBF005
L2450	POWER INDUCTOR RCR1616-470M	LLC470MSF009
L2650	PCB JUMPER D0.6-P7.5	JW7.5T
	TRANSISTORS	
Q2100	TRANSISTOR KTA-1266-GR-AT/P	NQS4KTA1266P
Q2101⚠	FET 2SK3935(Q)	QFQZ2SK3935Q
Q2102⚠	FET 2SK3935(Q)	QFQZ2SK3935Q
Q2103⚠	TRANSISTOR KTD1347-C-AT/P	NQSCKTD1347P
Q2104⚠	TRANSISTOR KTB985-C-AT/P	NQSC0KTB985P
Q2105	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q2106	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q2108	TRANSISTOR KTA-1266-GR-AT/P	NQS4KTA1266P
Q2200	TRANSISTOR 2SA950-O (TE2 F T)	QQS002SA950F
Q2201	TRANSISTOR KTA-1266-GR-AT/P	NQS4KTA1266P
Q2202	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q2300⚠	POWER MOS FET 2SK3565(Q)	QFQZ2SK3565Q
Q2301	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q2302⚠	TRANSISTOR 2SC2120-O-TPE2	QQS002SC2120
Q2350	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q2400	TRANSISTOR 2SC2120-O-TPE2	QQS002SC2120
Q2401	TRANSISTOR 2SA950-O (TE2 F T)	QQS002SA950F
Q2402	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q2403⚠	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q2404⚠	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q2451	TRANSISTOR S2Y52(FUNAI Q H)	QQWZ00S2Y52Q
Q2452	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q2453	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q2454	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q2502	NPN TRANSISTOR KRC103M-AT/P	NQSZKRC103MP
Q2503	TRANSISTOR 2SC2120-O-TPE2	QQS002SC2120
Q2504	TRANSISTOR KTA-1266-GR-AT/P	NQS4KTA1266P
Q2505	TRANSISTOR 2SC2785(F)	QQSF02SC2785

Ref. No.	Description	Part No.
Q2600⚠	POWER MOS FET 2SK3565(Q)	QFQZ2SK3565Q
Q2601	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q2602⚠	TRANSISTOR 2SC2120-O-TPE2	QQS002SC2120
Q2650	NPN TRANSISTOR 2SC2482(T6FUNAIF M	QRSZ2SC2482F
Q2651	TRANSISTOR KTA-1266-GR-AT/P	NQS4KTA1266P
Q2652	NPN TRANSISTOR 2SC2482(T6FUNAIF M	QRSZ2SC2482F
Q2653	TRANSISTOR KTA-1266-GR-AT/P	NQS4KTA1266P
Q2750	PNP TRANSISTOR 2SA1091-O(TPE2 F)	QQS02SA1091F
Q2751	NPN TRANSISTOR 2SC2482(T6FUNAIF M	QRSZ2SC2482F
Q2752⚠	FET MOS 2SK3563(Q)	QFWZ2SK3563Q
Q2753	NPN TRANSISTOR 2SC2482(T6FUNAIF M	QRSZ2SC2482F
Q2754	NPN TRANSISTOR 2SC2482(T6FUNAIF M	QRSZ2SC2482F
Q2755	TRANSISTOR KTA-1266-GR-AT/P	NQS4KTA1266P
Q2850	PNP TRANSISTOR 2SA1091-O(TPE2 F)	QQS02SA1091F
Q2851	NPN TRANSISTOR 2SC2482(T6FUNAIF M	QRSZ2SC2482F
Q2852	FET MOS 2SK3563(Q)	QFWZ2SK3563Q
Q2853	NPN TRANSISTOR 2SC2482(T6FUNAIF M	QRSZ2SC2482F
Q2854	NPN TRANSISTOR 2SC2482(T6FUNAIF M	QRSZ2SC2482F
Q2855	TRANSISTOR KTA-1266-GR-AT/P	NQS4KTA1266P
	RESISTORS	
R2100	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R2101	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R2102	CARBON RES. 1/4W J 1.5 Ω	RCX4JATZ01R5
R2103	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R2105⚠	RES CEMENT 5W J 0.22 Ω	RW05R22KA050
R2106⚠	RES CEMENT 5W J 0.22 Ω	RW05R22KA050
R2108	CARBON RES. 1/4W J 22 Ω	RCX4JATZ0220
R2109	CARBON RES. 1/4W J 15 Ω	RCX4JATZ0150
R2111	CARBON RES. 1/4W J 22 Ω	RCX4JATZ0220
R2112	CARBON RES. 1/4W J 15 Ω	RCX4JATZ0150
R2114	METALIZED FILM RES. 1/4W F 3.0k Ω	RMX4FATH3001
R2115	CARBON RES. 1/4W J 120 Ω	RCX4JATZ0121
R2116	CARBON RES. 1/4W J 18k Ω	RCX4JATZ0183
R2117	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R2118	CARBON RES. 1/4W J 30k Ω	RCX4JATZ0303
R2119	METALIZED FILM RES. 1/4W F 3.0k Ω	RMX4FATH3001
R2120	CARBON RES. 1/4W J 120 Ω	RCX4JATZ0121
R2121	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R2122	CARBON RES. 1/4W J 220k Ω	RCX4JATZ0224
R2123	CARBON RES. 1/4W J 220k Ω	RCX4JATZ0224
R2124	CARBON RES. 1/4W J 270k Ω	RCX4JATZ0274
R2125	CARBON RES. 1/4W J 56k Ω	RCX4JATZ0563
R2126	CARBON RES. 1/4W J 10 Ω	RCX4JATZ0100
R2127	CARBON RES. 1/4W J 10 Ω	RCX4JATZ0100
R2128	CARBON RES. 1/4W J 180 Ω	RCX4JATZ0181
R2129	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R2130	RES METALIZED FILM 1/4W F 330k Ω	RDC3303HH001
R2131	RES METALIZED FILM 1/4W F 330k Ω	RDC3303HH001
R2132	RES METALIZED FILM 1/4W F 220k Ω	RDC2203HH001
R2133	CARBON RES. 1/4W J 100k Ω	RCX4JATZ0104
R2134	RES METALIZED FILM 1/4W F 22k Ω	RMX4FATH2202
R2135	CARBON RES. 1/4W J 150k Ω	RCX4JATZ0154
R2136	CARBON RES. 1/4W J 150k Ω	RCX4JATZ0154
R2137	METAL FILM RES. 1/4W F 10k Ω	RMX4FATH1002
R2138	CARBON RES. 1/4W J 12k Ω	RCX4JATZ0123
R2139	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R2140	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R2141	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R2142	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R2143	CARBON RES. 1/4W J 4.7k Ω	RCX4JATZ0472
R2144	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R2145	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103

Ref. No.	Description	Part No.
R2152	RES METALIZED FILM 1/4W F 220k Ω	RDC2203HH001
R2153	CARBON RES. 1/4W J 120k Ω	RCX4JATZ0124
R2154	CARBON RES. 1/4W J 100k Ω	RCX4JATZ0104
R2200	CARBON RES. 1/4W J 4.7k Ω	RCX4JATZ0472
R2201	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R2202	RES CEMENT 2W J 0.22 Ω	RW02R22KA050
R2203	RES CEMENT 2W J 0.22 Ω	RW02R22KA050
R2204	CARBON RES. 1/4W J 680 Ω	RCX4JATZ0681
R2205	CARBON RES. 1/4W J 3.3k Ω	RCX4JATZ0332
R2206	CARBON RES. 1/4W J 1.5k Ω	RCX4JATZ0152
R2207	CARBON RES. 1/4W J 1.2k Ω	RCX4JATZ0122
R2208	CARBON RES. 1/4W J 22 Ω	RCX4JATZ0220
R2209	METAL OXIDE FILM RES. 3W J 100k Ω	RN03104DP005
R2210	METAL OXIDE FILM RES. 3W J 100k Ω	RN03104DP005
R2211	PCB JUMPER D0.6-P5.0	JW5.0T
R2212	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R2213	CARBON RES. 1/4W J 470 Ω	RCX4JATZ0471
R2214	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R2215	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R2250	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R2251	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R2252	CARBON RES. 1/4W J 470 Ω	RCX4JATZ0471
R2253	METAL OXIDE FILM RES. 3W J 10 Ω	RN03100DP005
R2254	CARBON RES. 1/4W J 15k Ω	RCX4JATZ0153
R2255	CARBON RES. 1/4W J 33k Ω	RCX4JATZ0333
R2256	METAL OXIDE FILM RES. 3W J 47k Ω	RN03473KE009
R2257	METALIZED FILM RES. 1/4W F 39k Ω	RMX4FATH3902
R2258	RES METALIZED FILM 1/4W F 56k Ω	RMX4FATH5602
R2259	METALIZED FILM RES. 1/4W F 39k Ω	RMX4FATH3902
R2260	METALIZED FILM RES. 1/4W F 1.8k Ω	RMX4FATH1801
R2261	PCB JUMPER D0.6-P5.0	JW5.0T
R2262	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R2263	RES METALIZED FILM 1/4W F 270k Ω	RDC2703HH001
R2264	RES METALIZED FILM 1/4W F 270k Ω	RDC2703HH001
R2265	RES METALIZED FILM 1/4W F 270k Ω	RDC2703HH001
R2266	METALIZED FILM RES. 1/4W F 8.2k Ω	RMX4FATH8201
R2267	CARBON RES. 1/4W J 4.7k Ω	RCX4JATZ0472
R2268	CARBON RES. 1/4W J 1.2k Ω	RCX4JATZ0122
R2300	RES CEMENT 2W J 0.68 Ω	RW02R68KA050
R2303	CARBON RES. 1/4W J 470k Ω	RCX4JATZ0474
R2305	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R2307	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R2308	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R2309	CARBON RES. 1/4W J 270 Ω	RCX4JATZ0271
R2310	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R2311	CARBON RES. 1/4W J 220 Ω	RCX4JATZ0221
R2312	CARBON RES. 1/4W J 1.5k Ω	RCX4JATZ0152
R2313⚠	RES METAL OXDE FILM 2W J 100k Ω	RN02104KE009
R2315⚠	RES METAL OXDE FILM 2W J 100k Ω	RN02104KE009
R2316	CARBON RES. 1/4W J 180 Ω	RCX4JATZ0181
R2350	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R2351	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R2352	CARBON RES. 1/4W J 68k Ω	RCX4JATZ0683
R2354	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R2355	RES METAL OXIDE FILM 3W J 10k Ω	RN03103KE009
R2356	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R2357	METAL FILM RES. 1/4W F 27k Ω	RMX4FATH2702
R2358	METAL FILM RES. 1/4W F 27k Ω	RMX4FATH2702
R2359	METALIZED FILM RES. 1/4W F 2.2k Ω	RMX4FATH2201
R2360	PCB JUMPER D0.6-P5.0	JW5.0T
R2361	CARBON RES. 1/4W J 56k Ω	RCX4JATZ0563
R2362	RES METALIZED FILM 1/4W F 82k Ω	RMX4FATH8202
R2363	RES METALIZED FILM 1/4W F 82k Ω	RMX4FATH8202

Ref. No.	Description	Part No.
R2365	RES METALIZED FILM 1/4W F 12k Ω	RMX4FATH1202
R2366	CARBON RES. 1/4W J 4.7k Ω	RCX4JATZ0472
R2367	CARBON RES. 1/4W J 1.2k Ω	RCX4JATZ0122
R2400	PCB JUMPER D0.6-P5.0	JW5.0T
R2401	CARBON RES. 1/4W J 47k Ω	RCX4JATZ0473
R2402	CARBON RES. 1/4W J 910 Ω	RCX4JATZ0911
R2403	RES CEMENT 2W J 0.39 Ω	RW02R39KA050
R2404	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R2406	CARBON RES. 1/4W J 4.7k Ω	RCX4JATZ0472
R2407	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R2408	CARBON RES. 1/4W J 33k Ω	RCX4JATZ0333
R2409	PCB JUMPER D0.6-P5.0	JW5.0T
R2410	METAL OXIDE FILM RES. 1W J 10 Ω	RN01100ZU001
R2411	CARBON RES. 1/4W J 4.7k Ω	RCX4JATZ0472
R2412	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R2413	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R2414	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R2415	CARBON RES. 1/4W J 47k Ω	RCX4JATZ0473
R2416	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R2417	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R2418	METAL OXIDE FILM RES. 3W J 100k Ω	RN03104ZU001
R2419	CARBON RES. 1/4W J 47k Ω	RCX4JATZ0473
R2450	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R2451	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R2453	CARBON RES. 1/4W J 1.8k Ω	RCX4JATZ0182
R2454	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R2458	CARBON RES. 1/4W J 220 Ω	RCX4JATZ0221
R2459	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R2460	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R2461	CARBON RES. 1/4W J 39k Ω	RCX4JATZ0393
R2462	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R2463	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R2464	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R2465	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R2466	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R2467	METALIZED FILM RES. 1/4W F 2.2k Ω	RMX4FATH2201
R2468	METALIZED FILM RES. 1/4W F 2.2k Ω	RMX4FATH2201
R2470	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R2471	CARBON RES. 1/4W J 47k Ω	RCX4JATZ0473
R2473	CARBON RES. 1/4W J 47k Ω	RCX4JATZ0473
R2500	CARBON RES. 1/4W J 4.7k Ω	RCX4JATZ0472
R2501	PCB JUMPER D0.6-P5.0	JW5.0T
R2503	CARBON RES. 1/4W J 4.7k Ω	RCX4JATZ0472
R2504	PCB JUMPER D0.6-P5.0	JW5.0T
R2505	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R2506	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R2507	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R2508	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R2509	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R2510	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R2511	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R2512	CARBON RES. 1/4W J 4.7k Ω	RCX4JATZ0472
R2513	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R2514	PCB JUMPER D0.6-P5.0	JW5.0T
R2515	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R2517	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R2518	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R2519	PCB JUMPER D0.6-P5.0	JW5.0T
R2520	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R2521	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R2522	CARBON RES. 1/4W J 3.3k Ω	RCX4JATZ0332
R2523	CARBON RES. 1/4W J 6.8k Ω	RCX4JATZ0682
R2524	CARBON RES. 1/4W J 33k Ω	RCX4JATZ0333

Ref. No.	Description	Part No.
R2525	CARBON RES. 1/4W J 33k Ω	RCX4JATZ0333
R2527	CARBON RES. 1/4W J 100k Ω	RCX4JATZ0104
R2529	CARBON RES. 1/4W J 330k Ω	RCX4JATZ0334
R2532	CARBON RES. 1/4W J 4.7k Ω	RCX4JATZ0472
R2533	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R2534	CARBON RES. 1/4W J 47k Ω	RCX4JATZ0473
R2535	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R2536	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R2537	CARBON RES. 1/4W J 47k Ω	RCX4JATZ0473
R2538	CARBON RES. 1/4W J 180 Ω	RCX4JATZ0181
R2541	CARBON RES. 1/4W J 3.3k Ω	RCX4JATZ0332
R2542	CARBON RES. 1/4W J 6.8k Ω	RCX4JATZ0682
R2544	CARBON RES. 1/4W J 180 Ω	RCX4JATZ0181
R2548	CARBON RES. 1/4W J 180 Ω	RCX4JATZ0181
R2549	CARBON RES. 1/4W J 3.3k Ω	RCX4JATZ0332
R2550	CARBON RES. 1/4W J 470 Ω	RCX4JATZ0471
R2551	CARBON RES. 1/4W J 100k Ω	RCX4JATZ0104
R2600	RES CEMENT 2W J 0.68 Ω	RW02R68KA050
R2603	CARBON RES. 1/4W J 820k Ω	RCX4JATZ0824
R2605	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R2607	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R2608	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R2609	CARBON RES. 1/4W J 270 Ω	RCX4JATZ0271
R2610	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R2611	CARBON RES. 1/4W J 220 Ω	RCX4JATZ0221
R2612	CARBON RES. 1/4W J 1.5k Ω	RCX4JATZ0152
R2613	RES METAL OXDE FILM 2W J 100k Ω	RN02104KE009
R2615	RES METAL OXDE FILM 2W J 100k Ω	RN02104KE009
R2616	PCB JUMPER D0.6-P5.0	JW5.0T
R2650⚠	CARBON RES. 1/4W J 4.7k Ω	RCX4JATZ0472
R2652	CARBON RES. 1/4W J 4.7k Ω	RCX4JATZ0472
R2653	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R2654	CARBON RES. 1/4W J 1.2k Ω	RCX4JATZ0122
R2655	METAL OXIDE RES. 3W 33k Ω(J)	RN03333DP005
R2656	RES METALIZED FILM 1/4W F 43k Ω	RMX4FATH4302
R2657	RES METALIZED FILM 1/4W F 43k Ω	RMX4FATH4302
R2658	RES METALIZED FILM 1/4W F 43k Ω	RMX4FATH4302
R2659	METALIZED FILM RES. 1/4W F 1.8k Ω	RMX4FATH1801
R2660	PCB JUMPER D0.6-P5.0	JW5.0T
R2661	CARBON RES. 1/4W J 180k Ω	RCX4JATZ0184
R2662	CARBON RES. 1/4W J 180k Ω	RCX4JATZ0184
R2663	CARBON RES. 1/4W J 180k Ω	RCX4JATZ0184
R2664	CARBON RES. 1/4W J 820 Ω	RCX4JATZ0821
R2665	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R2666	CARBON RES. 1/4W J 180k Ω	RCX4JATZ0184
R2667	CARBON RES. 1/4W J 180k Ω	RCX4JATZ0184
R2668	CARBON RES. 1/4W J 180k Ω	RCX4JATZ0184
R2669	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R2670	CARBON RES. 1/4W J 180k Ω	RCX4JATZ0184
R2671	CARBON RES. 1/4W J 180k Ω	RCX4JATZ0184
R2672	CARBON RES. 1/4W J 180k Ω	RCX4JATZ0184
R2673	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R2674	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R2675	CARBON RES. 1/4W J 180k Ω	RCX4JATZ0184
R2676	CARBON RES. 1/4W J 180k Ω	RCX4JATZ0184
R2677	CARBON RES. 1/4W J 180k Ω	RCX4JATZ0184
R2678	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R2750	CARBON RES. 1/4W J 47k Ω	RCX4JATZ0473
R2751	CARBON RES. 1/4W J 47k Ω	RCX4JATZ0473
R2752	CARBON RES. 1/4W J 47k Ω	RCX4JATZ0473
R2753	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R2754	CARBON RES. 1/4W J 220k Ω	RCX4JATZ0224
R2755	CARBON RES. 1/4W J 220k Ω	RCX4JATZ0224

Ref. No.	Description	Part No.
R2756	CARBON RES. 1/4W J 4.7k Ω	RCX4JATZ0472
R2757	CARBON RES. 1/4W J 5.6k Ω	RCX4JATZ0562
R2760	CARBON RES. 1/4W J 82k Ω	RCX4JATZ0823
R2761	CARBON RES. 1/4W J 47k Ω	RCX4JATZ0473
R2762	CARBON RES. 1/4W J 47k Ω	RCX4JATZ0473
R2763	CARBON RES. 1/4W J 47k Ω	RCX4JATZ0473
R2764	CARBON RES. 1/4W J 470k Ω	RCX4JATZ0474
R2765	CARBON RES. 1/4W J 4.7k Ω	RCX4JATZ0472
R2766	CARBON RES. 1/4W J 56k Ω	RCX4JATZ0563
R2767	CARBON RES. 1/4W J 5.6 Ω	RCX4JATZ05R6
R2768	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R2769	CARBON RES. 1/4W J 100k Ω	RCX4JATZ0104
R2770	CARBON RES. 1/4W J 4.7k Ω	RCX4JATZ0472
R2771	RES METALIZED FILM 1/4W F 43k Ω	RMX4FATH4302
R2772	RES METALIZED FILM 1/4W F 43k Ω	RMX4FATH4302
R2773	RES METALIZED FILM 1/4W F 43k Ω	RMX4FATH4302
R2774	METALIZED FILM RES. 1/4W F 1.8k Ω	RMX4FATH1801
R2776	RES METALIZED FILM 1/4W F 82k Ω	RMX4FATH8202
R2777	RES METALIZED FILM 1/4W F 82k Ω	RMX4FATH8202
R2778	RES METALIZED FILM 1/4W F 68k Ω	RMX4FATH6802
R2779	METAL FILM RES. 1/4W F 4.7k Ω	RMX4FATH4701
R2850	CARBON RES. 1/4W J 47k Ω	RCX4JATZ0473
R2851	CARBON RES. 1/4W J 47k Ω	RCX4JATZ0473
R2852	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R2853	CARBON RES. 1/4W J 47k Ω	RCX4JATZ0473
R2854	CARBON RES. 1/4W J 220k Ω	RCX4JATZ0224
R2855	CARBON RES. 1/4W J 220k Ω	RCX4JATZ0224
R2856	CARBON RES. 1/4W J 4.7k Ω	RCX4JATZ0472
R2857	CARBON RES. 1/4W J 5.6k Ω	RCX4JATZ0562
R2858	CARBON RES. 1/4W J 56k Ω	RCX4JATZ0563
R2859	CARBON RES. 1/4W J 4.7k Ω	RCX4JATZ0472
R2860	CARBON RES. 1/4W J 56k Ω	RCX4JATZ0563
R2861	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R2862	CARBON RES. 1/4W J 4.7k Ω	RCX4JATZ0472
R2863	CARBON RES. 1/4W J 470k Ω	RCX4JATZ0474
R2864	CARBON RES. 1/4W J 5.6 Ω	RCX4JATZ05R6
R2865	RES METALIZED FILM 1/4W F 47k Ω	RMX4FATH4702
R2866	METALIZED FILM RES. 1/4W F 39k Ω	RMX4FATH3902
R2868	METALIZED FILM RES. 1/4W F 2.2k Ω	RMX4FATH2201
R2874	RES METALIZED FILM 1/4W F 33k Ω	RMX4FATH3302
R2875	METAL FILM RES. 1/4W F 10k Ω	RMX4FATH1002
R2877	METALIZED FILM RES. 1/4W F 2.2k Ω	RMX4FATH2201
	MISCELLANEOUS	
BC2200	BEADS INDUCTOR FBR07HA121SB-00	LLBF00STU030
BC2300	PCB JUMPER D0.6-P5.0	JW5.0T
BC2301	BEADS INDUCTOR FBR07HA121SB-00	LLBF00STU030
BC2400	BEADS INDUCTOR FBR07HA121SB-00	LLBF00STU030
BC2600	PCB JUMPER D0.6-P5.0	JW5.0T
BC2601	BEADS INDUCTOR FBR07HA121SB-00	LLBF00STU030
CLN18	WIRE 030/BLA/AWG26#1007	WX3001A63303
F2200⚠	FUSE (2.0A/250V) 0215002.MXP	PBGZ20BAG012
F2400⚠	FUSE (2.0A/250V) 0215002.MXP	PBGZ20BAG012
FH2200	FUSE HOLDER MSF-015 LF (B110)	XH01Z00LY002
FH2201	FUSE HOLDER MSF-015 LF (B110)	XH01Z00LY002
FH2400	FUSE HOLDER MSF-015 LF (B110)	XH01Z00LY002
FH2401	FUSE HOLDER MSF-015 LF (B110)	XH01Z00LY002
J2151	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
JP2109	PCB JUMPER D0.6-P5.0	JW5.0T
JP2500	PCB JUMPER D0.6-P5.0	JW5.0T
PB-2	HEAT SINK EAC ASSEMBLY L0700UZ	1EM423291
PB-3	HEAT SINK EAD ASSEMBLY L0700UZ	1EM423292
PB-4	HEAT SINK EAE ASSEMBLY L0700UZ	1EM423294

Ref. No.	Description	Part No.
PB-5	HEAT SINK PLT ASSEMBLY L0700UZ	1EM423290
PB-8	EYELET L0700UZ	1EM423448
PB-9	EYELET L0700UZ	1EM423449
T2200⚠	TRANS POWER ETS49BP16KAD	LTT5PC0MS001
T2300⚠	TRANS POWER 6723	LTT3PC0KT007
T2400⚠	TRANS POWER 6724	LTT3PC0KT008
T2600⚠	TRANS POWER 6726	LTT2PC0KT010
TP2100	PCB JUMPER D0.6-P10.0	JW10.0T
TP2250	PCB JUMPER D0.6-P22.5	JW22.5T
TP2350	PCB JUMPER D0.6-P10.0	JW10.0T
TP2400	PCB JUMPER D0.6-P17.5	JW17.5T
TP2401	PCB JUMPER D0.6-P10.0	JW10.0T
TP2402	PCB JUMPER D0.6-P10.0	JW10.0T
TP2450	PCB JUMPER D0.6-P10.0	JW10.0T
TP2650	PCB JUMPER D0.6-P12.5	JW12.5T
VR2250	CARBON P.O.T. VZ067TL1 B203 PB(F)	VRCB203HH014
VR2350	CARBON P.O.T. VZ067TL1 B502 PB(F)	VRCB502HH014
VR2650	CARBON P.O.T. VZ067TL1 B203 PB(F)	VRCB203HH014
VR2750	CARBON P.O.T. VZ067TL1 B203 PB(F)	VRCB203HH014
VR2850	CARBON P.O.T. VZ067TL1 B203 PB(F)	VRCB203HH014
X2500	CERAMIC RESONATOR Q4.0MT(QCR-4.0MT05)	FY0405PQUA01

SUB POWER SUPPLY CBA

Ref. No.	Description	Part No.
	SUB POWER SUPPLY CBA Consists of the following:	1ESA13006
	CAPACITORS	
C2003	CAP METALLIZED FILM 0.1μF 250V J	CT2E104MS057
C2005	CERAMIC CAP.(AX) F Z 0.01μF/25V	CCA1EZTFZ103
C2011⚠	METALIZED FILM CAP. 0.1μF/250V	CT2E104MS037
C2012	CERAMIC CAP. F Z 0.01μF/500V	CCD2JZD0F103
C2013	CERAMIC CAP. F Z 0.01μF/500V	CCD2JZD0F103
C2014⚠	ELECTROLYTIC CAP. 220μF/200V M	CE2DMZNTJ221
C2016	CERAMIC CAP. R K 1000pF/2KV	CCD3DKA0R102
C2017	FILM CAP.(P) 0.068μF/50V J	CA1J683MS029
C2018	FILM CAP.(P) 0.033μF/50V J	CA1J333MS029
C2020	CAP CERAMIC HV 3300pF 2KV R K	CCD3DKA0R332
C2051	CERAMIC CAP.(AX) B K 0.01μF/50V	CA1J103TU011
C2052	CERAMIC CAP.(AX) B K 0.01μF/50V	CA1J103TU011
C2053	FILM CAP.(P) 0.0027μF/50V J	CA1J272MS029
C2054	CAP ELE SML-105 1000μF/10V M	CE1AMASTJ102
C2055	CAP ELE SML-105 1000μF/10V M	CE1AMASTJ102
C2056	CAP ELE SML-105 1000μF/10V M	CE1AMASTJ102
C2057	FILM CAP.(P) 0.001μF/50V J	CA1J102MS029
C2058	CERAMIC CAP.(AX) F 0.1μF/50V	CCK1JZT0F104
C2059	CAP ELE SML-105 1000μF/10V M	CE1AMASTJ102
C2060	CAP ELE SML-105 1000μF/10V M	CE1AMASTJ102
C2061	CERAMIC CAP.(AX) F 0.1μF/50V	CCK1JZT0F104
C2063	ELECTROLYTIC CAP. 10μF/100V M	CE2AMASTJ100
C2064	ELECTROLYTIC CAP. 10μF/50V M	CE1JMASTJ100
C2065	CERAMIC CAP.(AX) B K 0.01μF/50V	CCA1JKT0B103
C2068	ELECTROLYTIC CAP 1000μF/35V	CE1GMZNTJ102
C2069	CERAMIC CAP.(AX) F Z 0.01μF/25V	CCA1EZTFZ103
C2070	ELECTROLYTIC CAP. 1000μF/25V M	CE1EMZNTJ102
C2072	ELECTROLYTIC CAP. 1000μF/25V M	CE1EMZNTJ102
C2073	ELECTROLYTIC CAP. 0.1μF/50V M	CE1JMASTJR10
C2074	CAP ELE SML-105 1000μF/10V M	CE1AMASTJ102
C2075	CERAMIC CAP.(AX) F 0.1μF/50V	CCK1JZT0F104
C2076	FILM CAP.(P) 0.01μF/50V J	CA1J103MS029
C2077	CAP ELE SML-105 1μF/100V M	CE2AMASTJ1R0

Ref. No.	Description	Part No.
	CONNECTORS	
CN2000⚠	CONNECTOR PRINT OSU C S 1-1123724-2	J311C02AP001
CN2001	WIRE ASSEMBLY WX1L0700-105	WX1L0700-105
CN2002	WIRE ASSEMBLY WX1L0700-012	WX1L0700-012
CN2004	CONNECTOR PRINT OSU C S 1-440054-3	J344C13AP001
CN2005	CONNECTOR PRINT OSU C S 440054-8	J344C08AP001
	DIODES	
D2000	RECTIFIER DIODE 1N4005	NDQZ001N4005
D2001	RECTIFIER DIODE 1N4005	NDQZ001N4005
D2002	RECTIFIER DIODE 1N4005	NDQZ001N4005
D2003	RECTIFIER DIODE 1N4005	NDQZ001N4005
D2004	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D2005⚠	DIODE 1N5397-B	NDLZ001N5397
D2006⚠	DIODE 1N5397-B	NDLZ001N5397
D2007⚠	DIODE 1N5397-B	NDLZ001N5397
D2008⚠	DIODE 1N5397-B	NDLZ001N5397
D2009⚠	DIODE ZENER 1ZB220(Q)	QDLZ01ZB220Q
D2010⚠	ZENER DIODE MTZJT-7727B	QDTB00MTZJ27
D2011	PCB JUMPER D0.6-P5.0	JW5.0T
D2012	ZENER DIODE MTZJT-775.6B	QDTB0MTZJ5R6
D2013	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D2014⚠	ZENER DIODE MTZJT-7718B	QDTB00MTZJ18
D2015	DIODE RECTIFIER ERA22-08	AERA2208V3**
D2016	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D2017	PCB JUMPER D0.6-P5.0	JW5.0T
D2050	DIODE 1N5406	NDLZ001N5406
D2051⚠	SCHOTTKY BARRIER DIODE YG832C03R	QDWZG832C03R
D2052	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D2055⚠	DIODE FR104-B	NDLZ000FR104
D2057	ZENER DIODE MTZJT-7736B	QDTB00MTZJ36
D2059	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D2060	ZENER DIODE MTZJT-776.8B	QDTB0MTZJ6R8
D2061	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D2062⚠	SCHOTTKY BARRIER DIODE ERC84-009	QDLZERC84009
D2063	SCHOTTKY BARRIER DIODE ERC81-004	QDPZERC81004
D2064	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D2067⚠	DIODE 1ZC30(Q)	QDLZ001ZC30Q
D2069	DIODE FR104-B	NDLZ000FR104
D2070	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D2071⚠	ZENER DIODE MTZJT-776.8B	QDTB0MTZJ6R8
D2072⚠	ZENER DIODE MTZJT-776.8B	QDTB0MTZJ6R8
D2073	ZENER DIODE MTZJT-776.8B	QDTB0MTZJ6R8
D2074	FAST RECOVERY DIODE ERD32-02	QDWZ0ERD3202
	ICS	
IC2000⚠	PHOTO COUPLER LTV817MBF	NPEBLTV817MF
IC2001⚠	PHOTO COUPLER LTV817MBF	NPEBLTV817MF
IC2050	IC SHUNT REGULATOR KIA431-AT/P	NSZBA0TJY036
IC2051⚠	REGULATOR PQ1CG2032FZH	QSZBA0SSH071
	COILS	
L2050	PCB JUMPER D0.6-P5.0	JW5.0T
L2051	POWER INDUCTOR RCR1616-470M	LLC470MSF009
	TRANSISTORS	
Q2000	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q2001	TRANSISTOR 2SC2785(F)	QQSF02SC2785
Q2002⚠	TRANSISTOR 2SC2120-O-TPE2	QQS002SC2120
Q2003⚠	FET MOS 2SK3561(Q) IDSS100UA	QFWZ2SK3561Q
Q2050⚠	TRANSISTOR S2Y52(FUNAI Q H)	QQWZ00S2Y52Q
Q2051	TRANSISTOR 2SC2120-O-TPE2	QQS002SC2120
Q2052	TRANSISTOR KTA1267-GR-AT/P	NQS1KTA1267P
Q2053	TRANSISTOR 2SC2785(F)	QQSF02SC2785
	RESISTORS	
R2001⚠	CEMENT RES.(PB FREE) 5W K 6.8 Ω	RW056R8KA049

Ref. No.	Description	Part No.
R2002	CARBON RES. 1/4W J 470 Ω	RCX4JATZ0471
R2003	CARBON RES. 1/4W J 470 Ω	RCX4JATZ0471
R2004⚠	CEMENT RES.(PB FREE) 5W K 6.8 Ω	RW056R8KA049
R2005	CARBON RES. 1/4W J 330k Ω	RCX4JATZ0334
R2006	CARBON RES. 1/4W J 330k Ω	RCX4JATZ0334
R2007	CARBON RES. 1/4W J 330k Ω	RCX4JATZ0334
R2008	CARBON RES. 1/4W J 27k Ω	RCX4JATZ0273
R2009	CARBON RES. 1/4W J 470k Ω	RCX4JATZ0474
R2010	CARBON RES. 1/4W J 470k Ω	RCX4JATZ0474
R2011⚠	SOLID RES.(UL) 1/2W 3.3M Ω	RSX2335KE010
R2012⚠	CEMENT RES. 3W K 1.2 Ω	RW031R2PG007
R2013	CARBON RES. 1/4W J 680k Ω	RCX4JATZ0684
R2014	CARBON RES. 1/4W J 680k Ω	RCX4JATZ0684
R2015	CARBON RES. 1/4W J 680k Ω	RCX4JATZ0684
R2016	CARBON RES. 1/4W J 820k Ω	RCX4JATZ0824
R2017	CARBON RES. 1/4W J 820k Ω	RCX4JATZ0824
R2018	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R2019⚠	CARBON RES. 1/4W J 560k Ω	RCX4JATZ0564
R2020	CARBON RES. 1/4W J 560k Ω	RCX4JATZ0564
R2021	CARBON RES. 1/4W J 560k Ω	RCX4JATZ0564
R2022	PCB JUMPER D0.6-P5.0	JW5.0T
R2025	CARBON RES. 1/4W J 270 Ω	RCX4JATZ0271
R2026	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R2027	CARBON RES. 1/4W J 220 Ω	RCX4JATZ0221
R2028	CARBON RES. 1/4W J 1.5k Ω	RCX4JATZ0152
R2030⚠	METAL OXIDE FILM RES. 2W J 0.39 Ω	RN02R39ZU001
R2031	METAL OXIDE FILM RES. 2W J 68k Ω	RN02683ZU001
R2033	METAL OXIDE FILM RES. 2W J 68k Ω	RN02683ZU001
R2034	CARBON RES. 1/4W J 180 Ω	RCX4JATZ0181
R2036	PCB JUMPER D0.6-P15.0	JW15.0T
R2037	CARBON RES. 1/4W J 470 Ω	RCX4JATZ0471
R2038	SOLID RES.(UL) 1/2W 3.3M Ω	RSX2335KE010
R2050	CARBON RES. 1/4W J 5.6k Ω	RCX4JATZ0562
R2051	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R2052	CARBON RES. 1/4W J 820 Ω	RCX4JATZ0821
R2053⚠	METALIZED FILM RES. 1/4W F 680 Ω	RMX4FATH6800
R2054	MATALIZED FILM RES. 1/4W F 120 Ω	RMX4FATH1200
R2055	METALIZED FILM RES. 1/4W F 2.2k Ω	RMX4FATH2201
R2058	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R2060	METAL OXIDE FILM RES. 1W J 680 Ω	RN01681ZU001
R2061	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R2062	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R2063	METAL OXIDE FILM RES. 2W J 560 Ω	RN02561ZU001
R2065	CARBON RES. 1/4W J 820 Ω	RCX4JATZ0821
R2066	CARBON RES. 1/4W J 1.2k Ω	RCX4JATZ0122
R2067	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R2068	CARBON RES. 1/4W J 6.8k Ω	RCX4JATZ0682
R2069	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R2070	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R2074	CARBON RES. 1/4W J 3.3k Ω	RCX4JATZ0332
R2075	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R2076	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R2077	CARBON RES. 1/4W J 1.5k Ω	RCX4JATZ0152
R2078	METAL OXIDE FILM RES. 2W J 0.33 Ω	RN02R33ZU001
R2079	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R2080	PCB JUMPER D0.6-P5.0	JW5.0T
R2081	METAL FILM RES. 1/4W F 4.7k Ω	RMX4FATH4701
R2082	RES METALIZED FILM 1/4W F 18k Ω	RMX4FATH1802
R2085	PCB JUMPER D0.6-P5.0	JW5.0T
R2086	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R2090	CEMENT RESISTOR 5W J 6.8 Ω	RW056R8PAK10

Ref. No.	Description	Part No.
MISCELLANEOUS		
BC2001	BEAD INDUCTORS FBR07HA121TB-00	LLBF00ZTU021
BC2002	BEAD INDUCTORS FBR07HA121TB-00	LLBF00ZTU021
BC2050	BEAD INDUCTORS FBR07HA121TB-00	LLBF00ZTU021
F2000⚠	FUSE 4A/250V(PB FREE) 0215004.MXP	PBGZ20BAG021
FH2000	FUSE HOLDER MSF-015 LF (B110)	XH01Z00LY002
FH2001	FUSE HOLDER MSF-015 LF (B110)	XH01Z00LY002
JW2002	PCB JUMPER D0.6-P12.5	JW12.5T
JW2003	PCB JUMPER D0.6-P12.5	JW12.5T
JW2050	PCB JUMPER D0.6-P15.0	JW15.0T
PB-5	HEAT SINK PLT ASSEMBLY L0700UZ	1EM423290
PB-6	HEAT SINK PLU ASSEMBLY L0700UZ	1EM423288
PB-7	HEAT SINK PKH ASSEMBLY L3201UB	1EM420648
RL2000⚠	POWER RELAY SDT-S-112DMR	MRNDC12QN016
SA2001⚠	SURGE ABSORBER PVR-07D471KB	NVQZ07D471KB
T2000⚠	TRANS POWER 6725	LTT2PC0KT009
TP2050	PCB JUMPER D0.6-P10.0	JW10.0T
TP2051	PCB JUMPER D0.6-P10.0	JW10.0T
TP2053	PCB JUMPER D0.6-P10.0	JW10.0T
TP2054	PCB JUMPER D0.6-P10.0	JW10.0T

PLASMA DISPLAY MODULE SECTION

42″ DIGITAL/ANALOG PLASMA DISPLAY TV

6842THG

Plasma Display Module Section
- **Precautions**
- **Name & Function**
- **Disassembling / Assemblingt**
- **Operation Check**
- **Wiring Diagram**

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PRECAUTIONS

**** To prevent the risks of unit damage, electrical shock and radiation, take the following safety, service, and ESD precautions.**

Handling Precautions for Plasma Display

- PDP module use high voltage that is dangerous to human. Before operating PDP, always check the dust to prevent circuit short. Be careful touching the circuit device when power is on.
- PDP module is sensitive to dust and humidity. Therefore, assembling and disassembling must be done in no dust place.
- PDP module has a lot of electric devices. Service engineer must wear equipment (for example, earth ring) to prevent electric shock and working clothes to prevent electrostatic.
- PDP module use a fine pitch connector which is only working by exactly connecting with flat cable. Operator must pay attention to a complete connection when connector is reconnected after repairing.
- The capacitor's remaining voltage in the PDP module's circuit board temporarily remains after power is off. Operator must wait for discharging of remaining voltage during at least 1 minute.

Safety Precautions for Service (Handling, prevention of a electrical shock, measure against power outage, etc.)

(Safety Precautions)

- Before replacing a board, discharge forcibly The remaining electricity from board.
- When connecting FFC and TCPs to the module, recheck that they are perfectly connected.
- To prevent electrical shock, be careful not to touch leads during circuit operations.
- To prevent the Logic circuit from being damaged due to wrong working, do not connect/disconnect signal cables during circuit operations.
- Do thoroughly adjustment of a voltage label and voltage-insulation.
- Before reinstalling the chassis and the chassis assembly, be sure to use all protective stuffs including a nonmetal controlling handle and the covering of partitioning type.
- Caution for design change: Do not install any additional devices to the module, and do not change the electrical circuit design.
- For example: Do not insert a subsidiary audio or video connector. If you insert It, It cause danger on safety. And, If you change the design or insert, Manufacture guarantee will be not effect.
- If any parts of wire is overheats of damaged, replace it with a new specified one immediately, and identify the cause of the problem and remove the possible dangerous factors.
- Examine carefully the cable status if it is twisted or damaged or displaced. Do not change the space between parts and circuit board. Check the cord of AC power preparing damage.
- Product Safety Mark: Some of electric or implement material have special characteristics invisible that was related on safety. In case of the parts are changed with new one, even though the Voltage and Watt is higher than before, the Safety and Protection function will be lost.
- The AC power always should be turned off, before next repair.
- Check assembly condition of screw, parts and wire arrangement after repairing. Check whether the material around the parts get damaged.

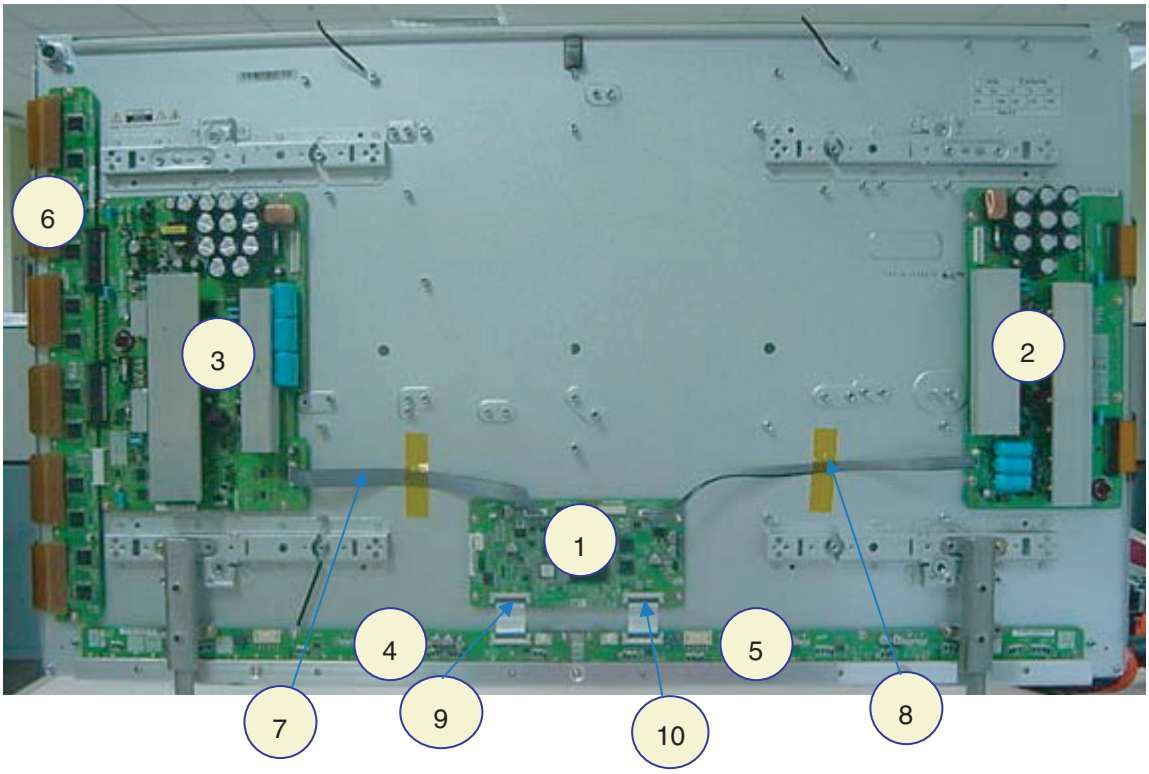
(Precaution when repairing ESD)

- There is ESD which is easily damaged by electrostatics. (for example Integrated circuit, FET) Electrostatic damage rate of product will be reduced by the following technics
- Before handling semiconductor parts/assembly, must remove positive electric by ground connection, or must wear the antistatic wrist-belt and ring. (It must be operated after removing dust on it – It comes under precaution of electric shock.)
- After removing ESD assembly, put on it with aluminum stuff on the conductive surface to prevent charging.
- Do not use chemical stuff using Freon. It generates positive electric that can damage ESD.

– Must use a soldering device for ground-tip when soldering or de-soldering ESD.
– Must use anti-static solder removal device. Most removal device do not have antistatic which can charge a enough positive electric enough damaging ESD.
– Before removing the protective material from the lead of a new ESD, bring the protective material into contact with the chassis or assembly that the ESD is to be installed on.
– When handing an unpacked ESD for replacement, do not move around too much. Moving (legs on the carpet, for example) generates enough electrostatic to damage the ESD.
– Do not take a new ESD from the protective case until the ESD is ready to be installed. Most ESD have a lead, which is easily short-circuited by conductive materials (such as conductive foam and aluminum).

NAME & FUNCTION

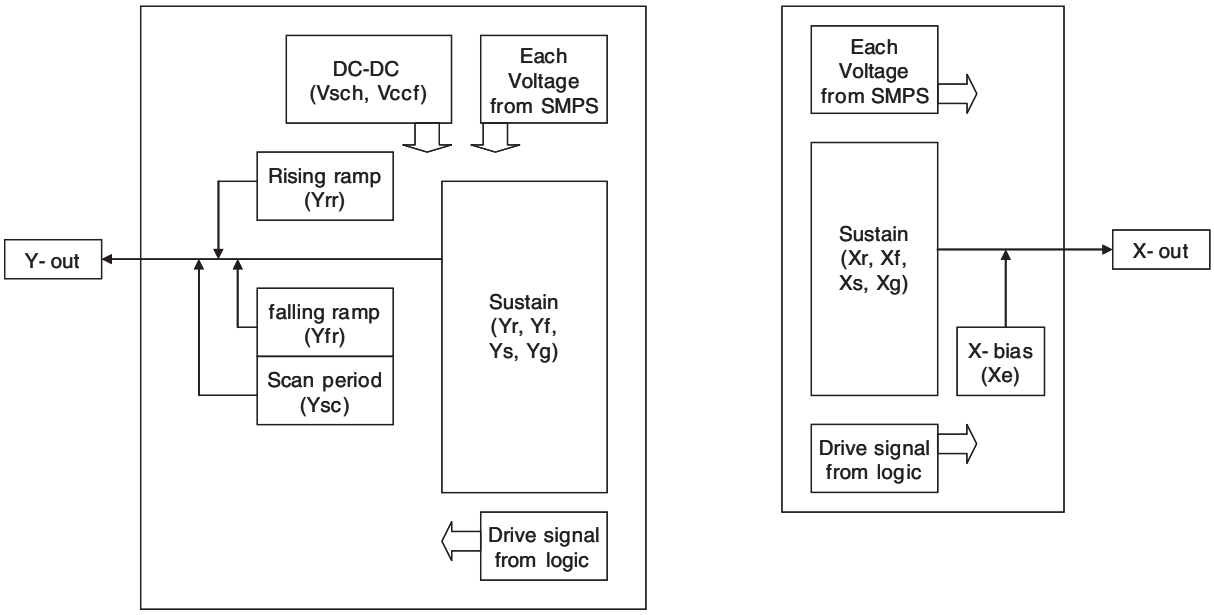
Layout of Assemblies



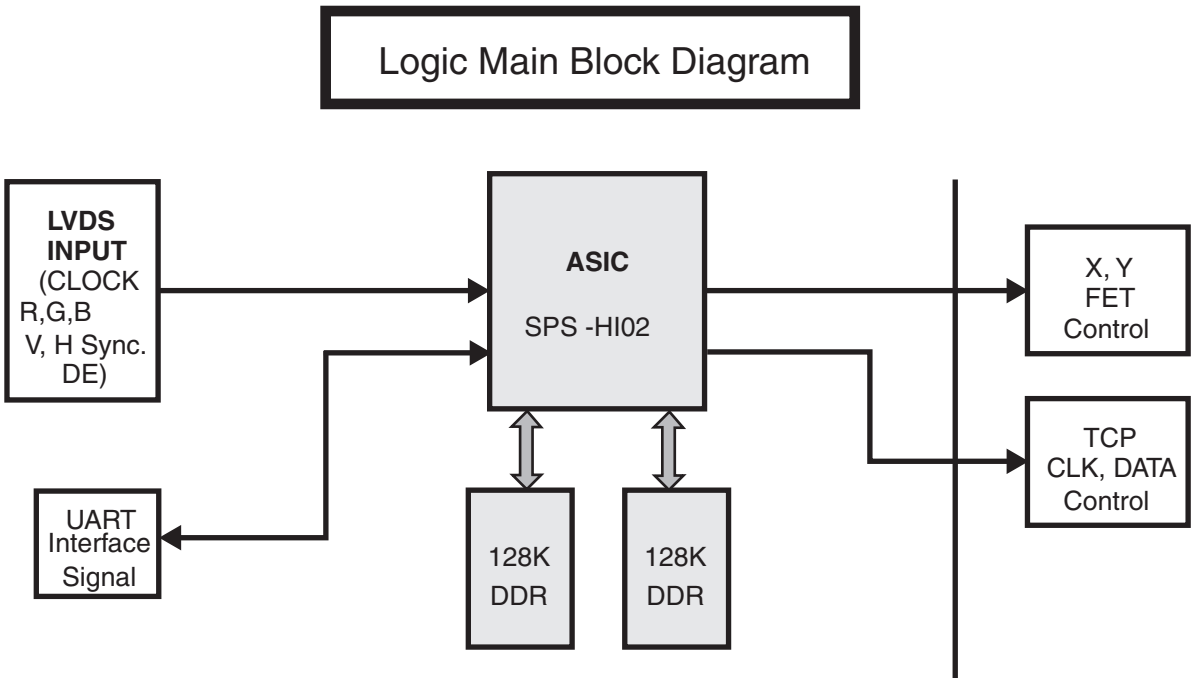
No.	Location	Name	Part No.
1	LOGIC-MAIN Board	ASSY PCB LOGIC MAIN	1ESA13498
2	X-MAIN Driving Board	ASSY PCB X MAIN	1ESA13496
3	Y-MAIN Driving Board	ASSY PCB Y MAIN	1ESA13497
4	LOGIC E BUFFER Board	ASSY PCB BUFFER	1ESA13500
5	LOGIC F BUFFER Board	ASSY PCB BUFFER	1ESA13501
6	Y-BUFFER Board	ASSY PCB BUFFER	1ESA13499
7	LOGIC + Y-MAIN	LEAD CONNECTOR	1ESA13571
8	LOGIC + X-MAIN	LEAD CONNECTOR	1ESA13570
9	LOGIC + LOGIC BUF(E)	FFC CABLE	1ESA13572
10	LOGIC + LOGIC BUF(F)	FFC CABLE	1ESA13572

BLOCK DIAGRAM

BLOCK DIAGRAM FOR DRIVE CIRCUIT OPERATION



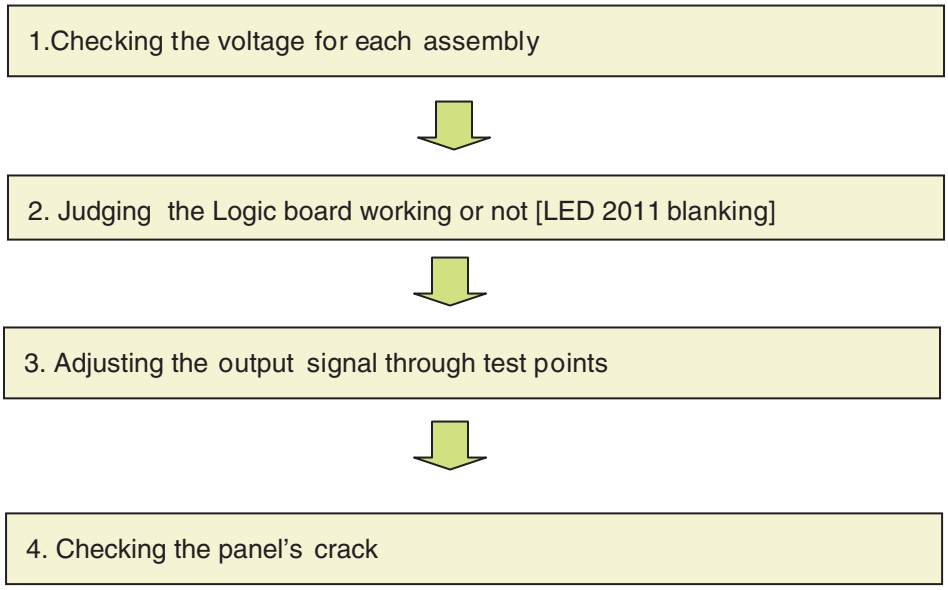
Block Diagram for Logic circuit



OPERATION CHECKING AFTER RECTIFICATION

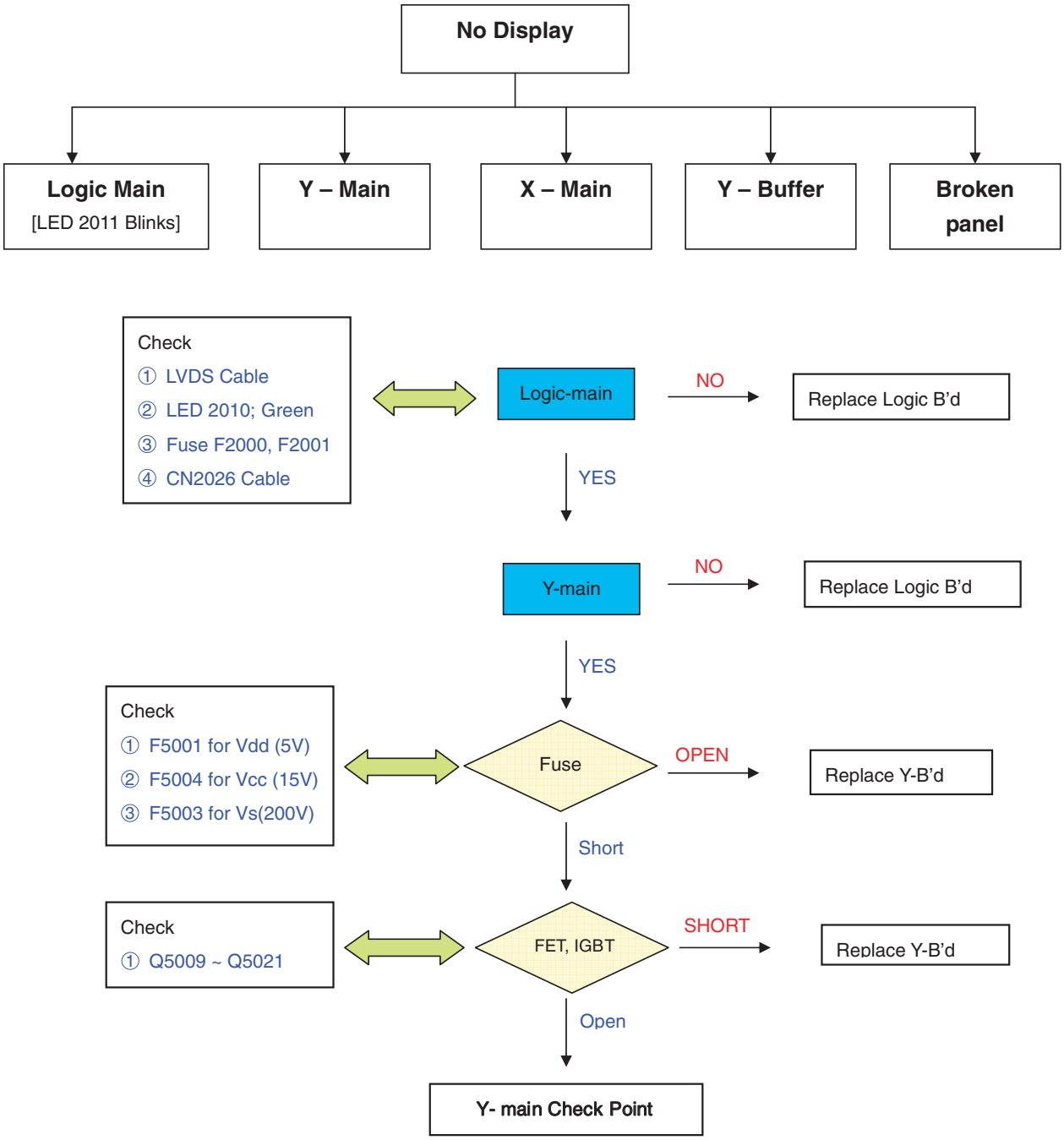
Flow chart

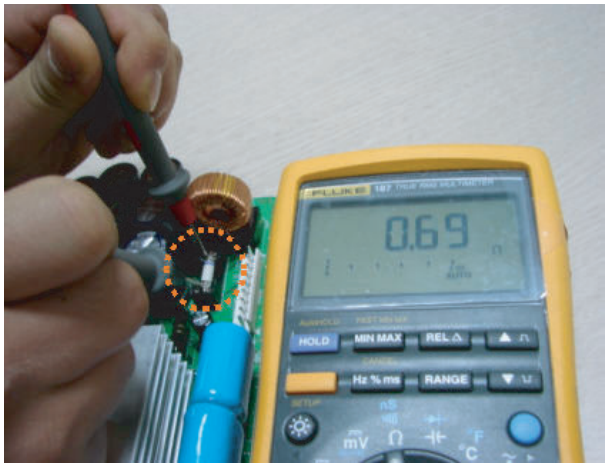
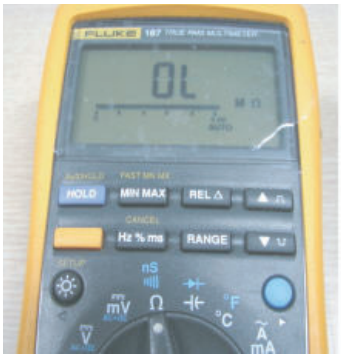
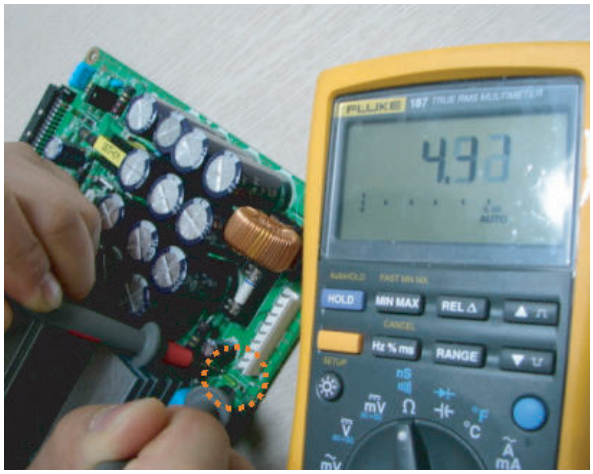
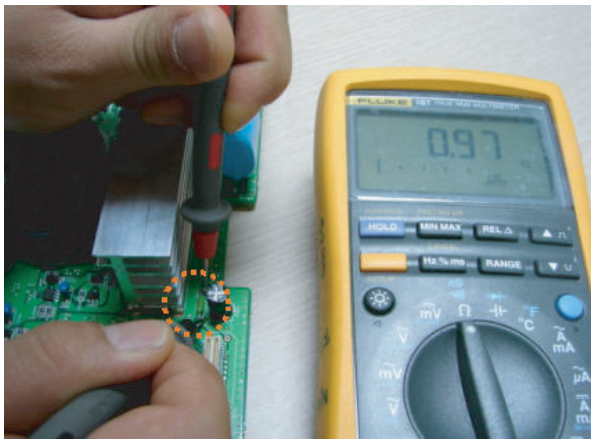
* A/S Check Point *



NO display (operating Voltage but an image doesn't exist on Screen)

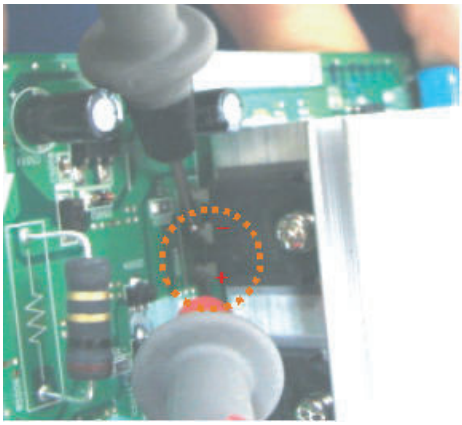
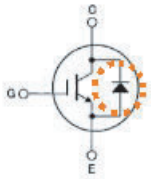
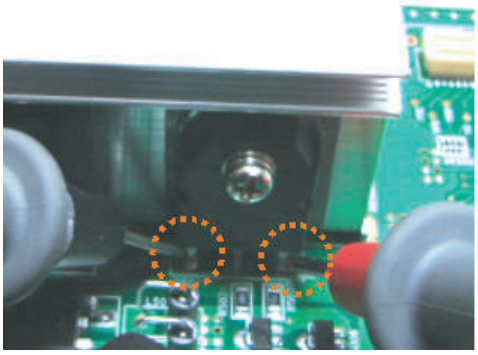
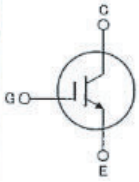
–> No Display is related with Y-MAIN, X-MAIN, Logic Main and so on.
This page shows you how to check the boards, and the following pages show you how to find the defective board.



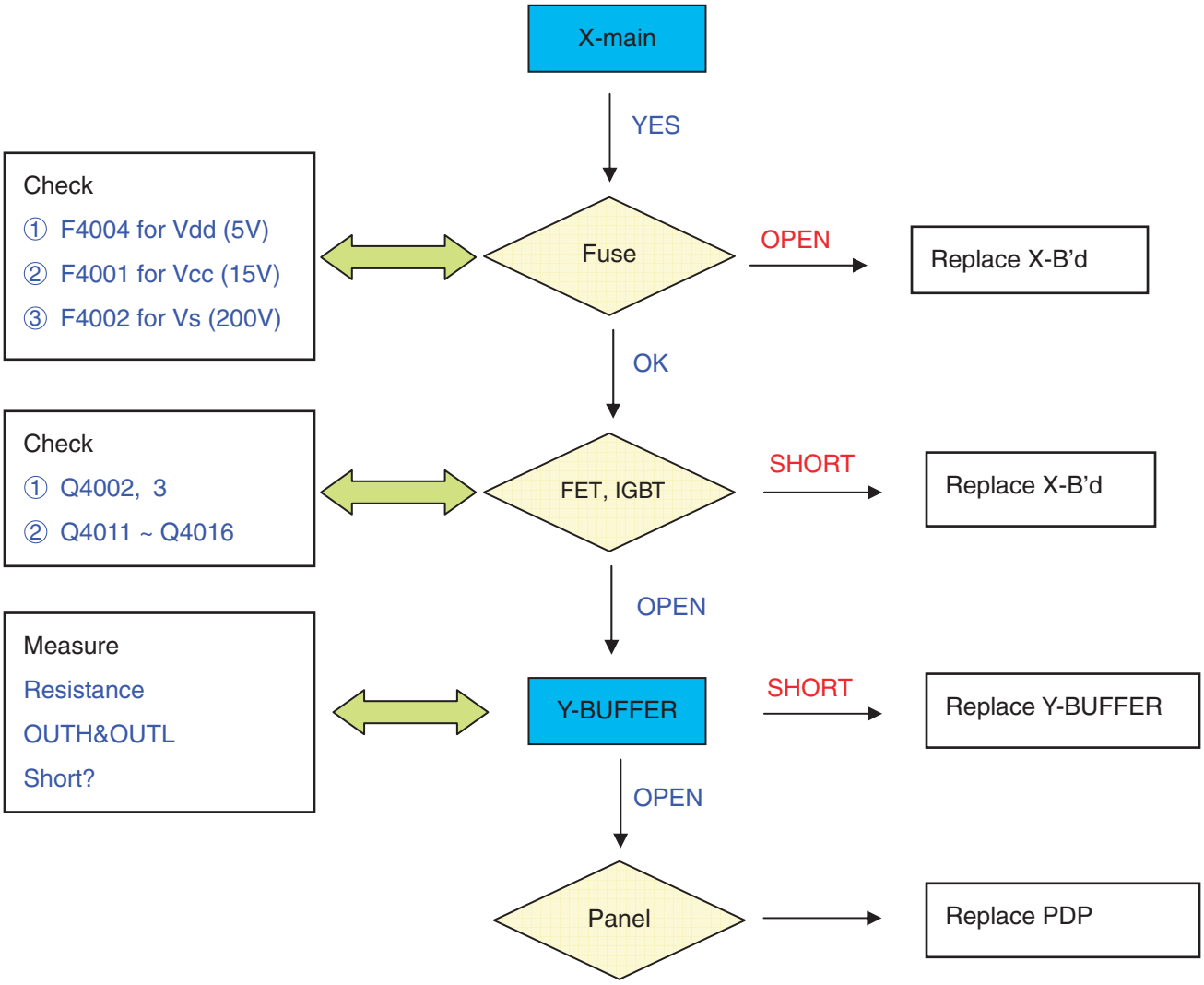
	OR  
Vs fuse (F5003) – OK (0.x ~ x.x ohm)	**Vs fuse (F5003) – OPEN** (x.x Mohm)
	OR  
15V fuse (F5004) – OK (0.x ~ x.x ohm)	**15V fuse (F5004) – OPEN** (x.x Mohm)
	OR  
5V fuse (F5001) – OK (0.x ~ x.x ohm)	**5V fuse (F5001) – OPEN** (x.x Mohm)

	OR  
Vs fuse (F5006) – OK (0.x ~ x.x ohm)	**Vs fuse (F5006) – OPEN** (x.x Mohm)

IGBT, FET Check Point

  	  **OK** **Short**
FET,IGBT (contain the inner diode) **[Ys, Yg, Ypn, Yscan, Yfr, Yrr, Xs, Xg, Xe)**	**OK** (0.3 ~ 0.9 V) / **Short** (0.000 ~ 0.00x V)
 	  **OK** **Short**
IGBT (do not contain the inner diode) **(Yr, Yf, Xr, Xf)**	**OK** (xx.x kohm) / **Short** (x.x ohm)

Ys (Q5013, 14), Yg (Q5009, 10), Ypn (Q5016, 17, 18), Yscan (Q5020, 21), Yfr (Q5019), Yrr (Q5015),
Xs (Q4002, 03), Xg (Q4011, 12), Xe (Q4013, 14)
Yr (Q5011), Yf (Q5012), Xr (Q4016), Xf (Q4015)

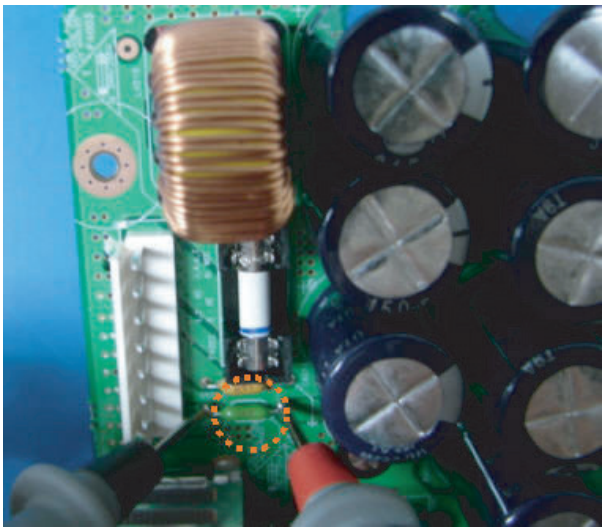
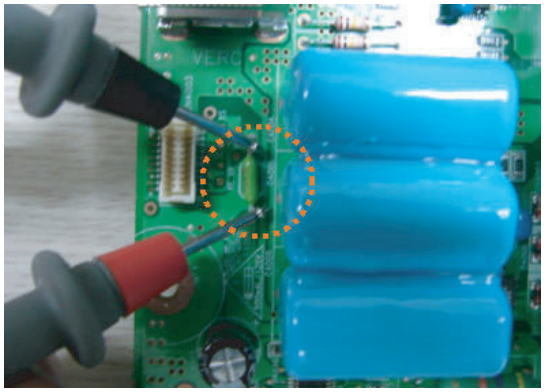


X-main Check Point

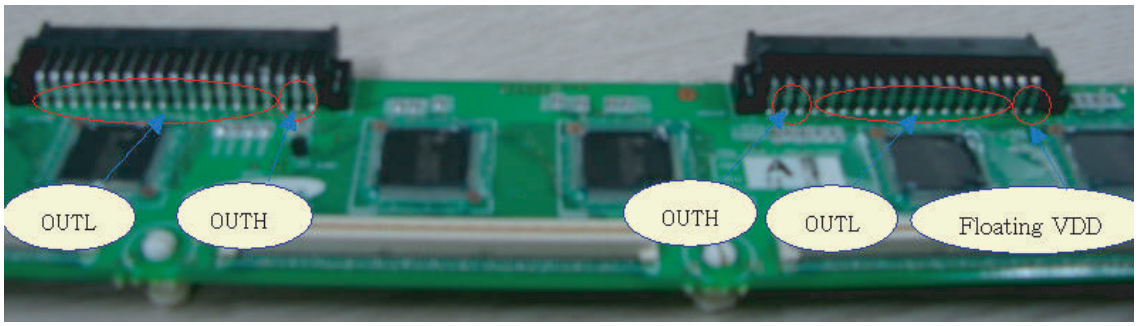
Vs fuse (F4003) – OK (0.x ~ x.x ohm)

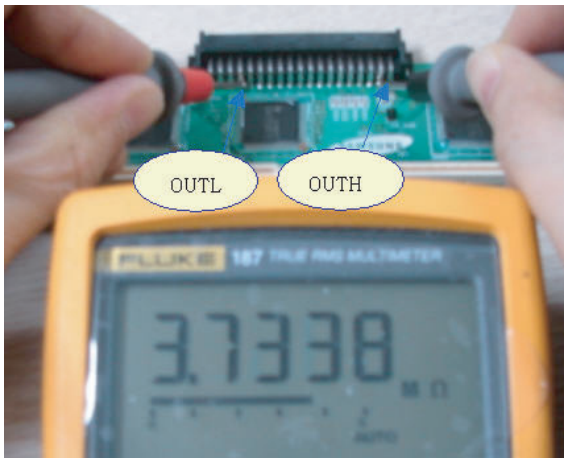
OR

Vs fuse (F4003) – OPEN (x.x Mohm)

	OR  
Ve fuse (F4005) – OK (0.x ~ x.x ohm)	**Vs fuse (F4005) – OPEN** (x.x Mohm)
	OR  
15V fuse (F4001) – OK (0.x ~ x.x ohm)	**Vs fuse (F4001) – OPEN** (x.x Mohm)
	OR  
5V fuse (F4004) – OK (0.x ~ x.x ohm)	**5V fuse (F4004) – OPEN** (x.x Mohm)

Y-buffer Check Point



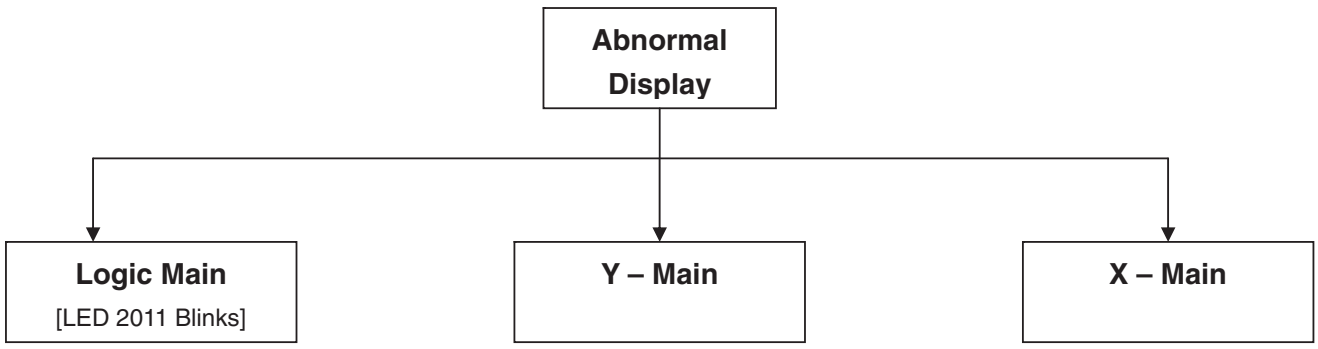


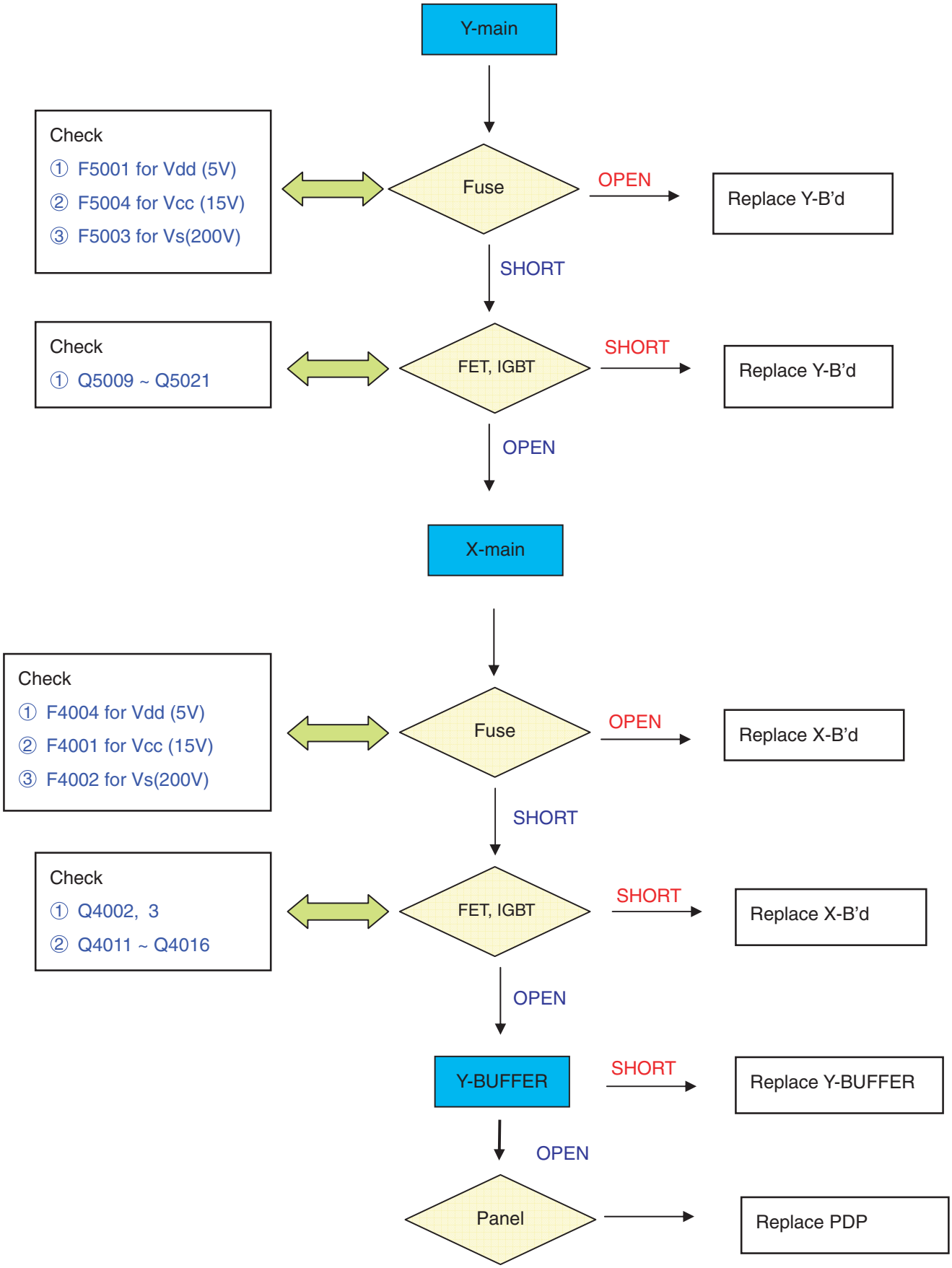
OUTL<–>OUTH – OK (x.x Mohm)

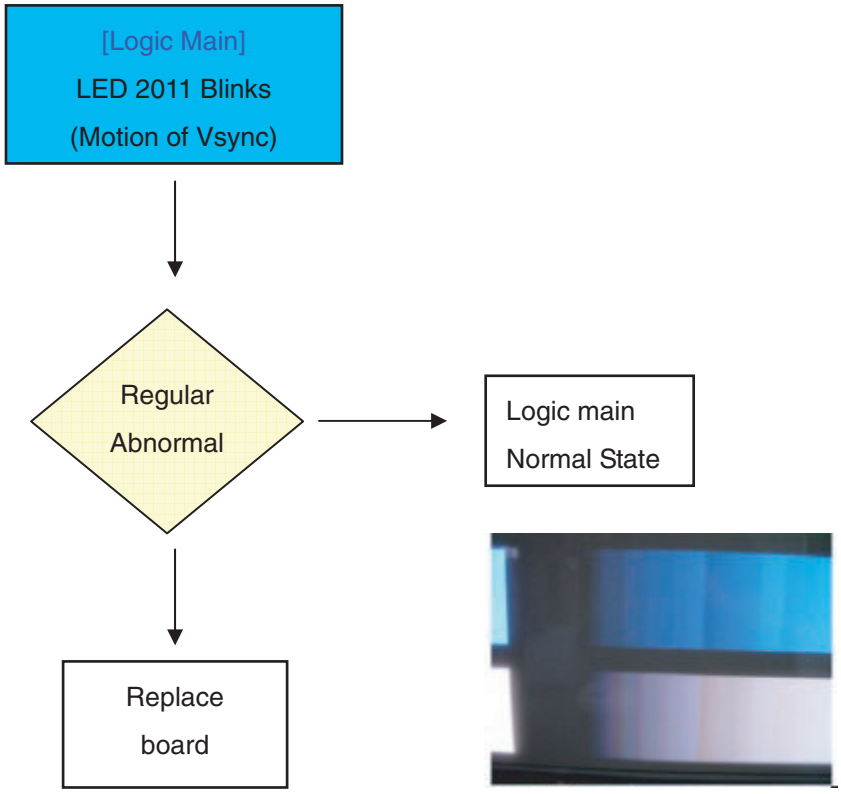
OUTL<–>OUTH – Short (x.x ohm)

Abnormal Display (Abnormal Image) is on Screen. (except abnormality in Sustain or Address)

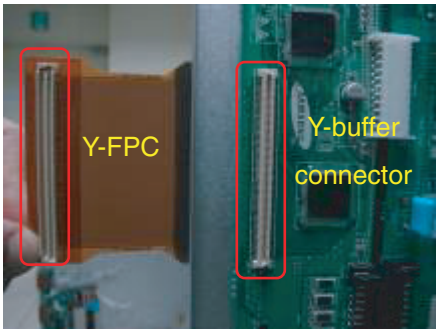
–> Abnormal Display is related with Y-MAIN, X-MAIN, Logic Main and so on.
This page shows you how to check the boards, and the following pages show you how to find the defective board.

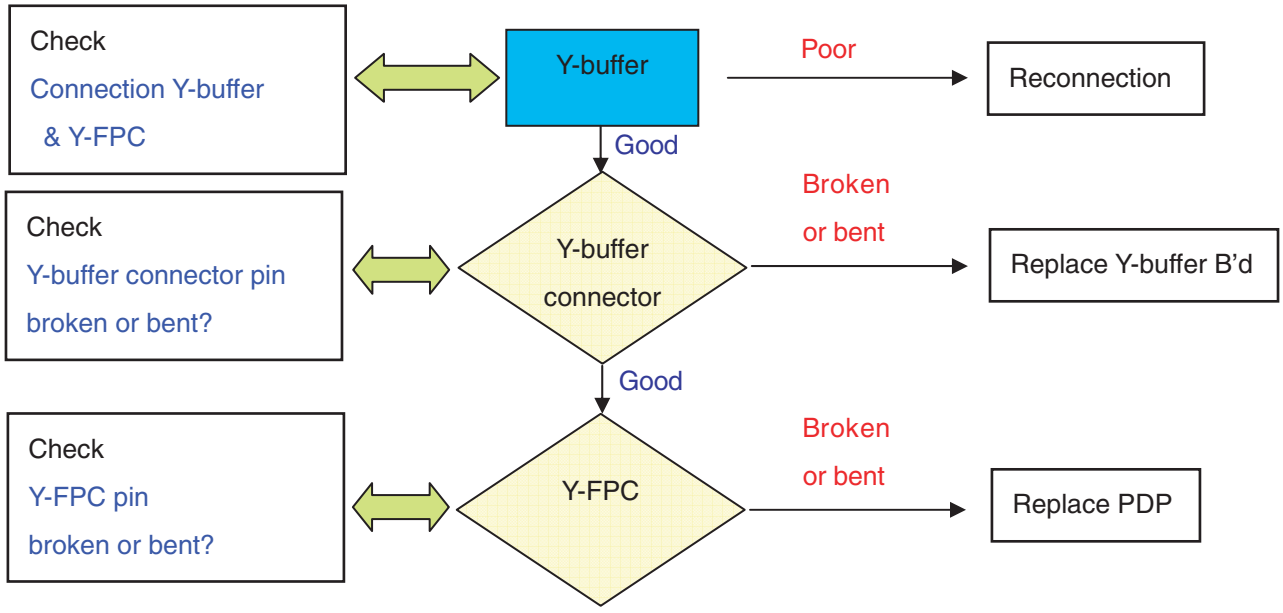



Y-main
Check
① F5001 for Vdd (5V)
② F5004 for Vcc (15V)
③ F5003 for Vs(200V)
Fuse
OPEN
Replace Y-B'd
SHORT
Check
① Q5009 ~ Q5021
FET, IGBT
SHORT
Replace Y-B'd
OPEN
X-main
Check
① F4004 for Vdd (5V)
② F4001 for Vcc (15V)
③ F4002 for Vs(200V)
Fuse
OPEN
Replace X-B'd
SHORT
Check
① Q4002, 3
② Q4011 ~ Q4016
FET, IGBT
SHORT
Replace X-B'd
OPEN
Y-BUFFER
SHORT
Replace Y-BUFFER
OPEN
Panel
Replace PDP



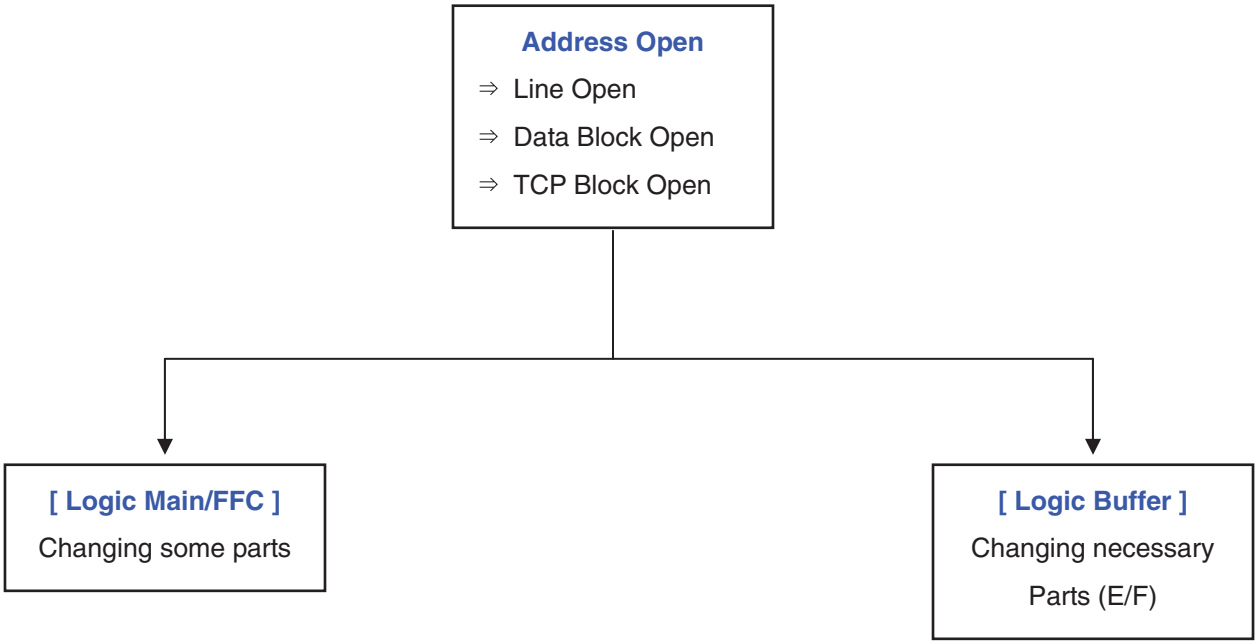
Horizontal line or block Open

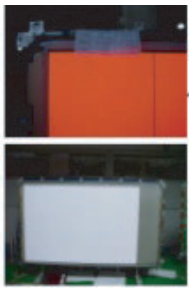




Address Open (some vertical lines don't exist on screen)

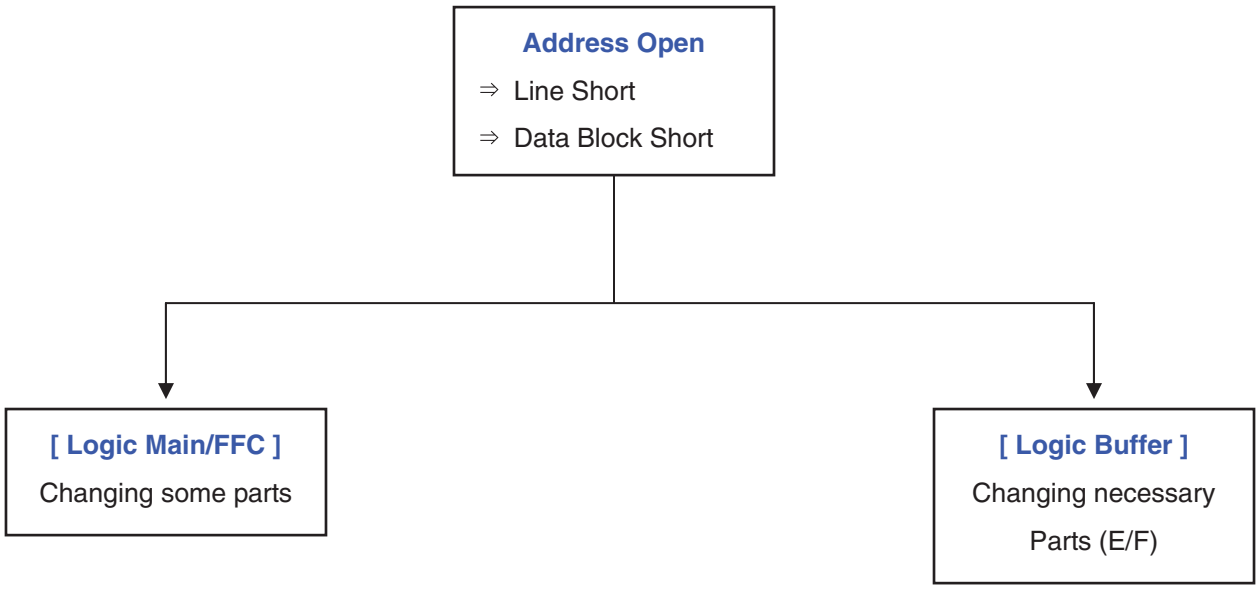
–> Address Open is related with Logic Main, Logic Buffer, FFC, TCP and so on.
This page shows you how to check the boards, and the following pages show you how to find the defective board.

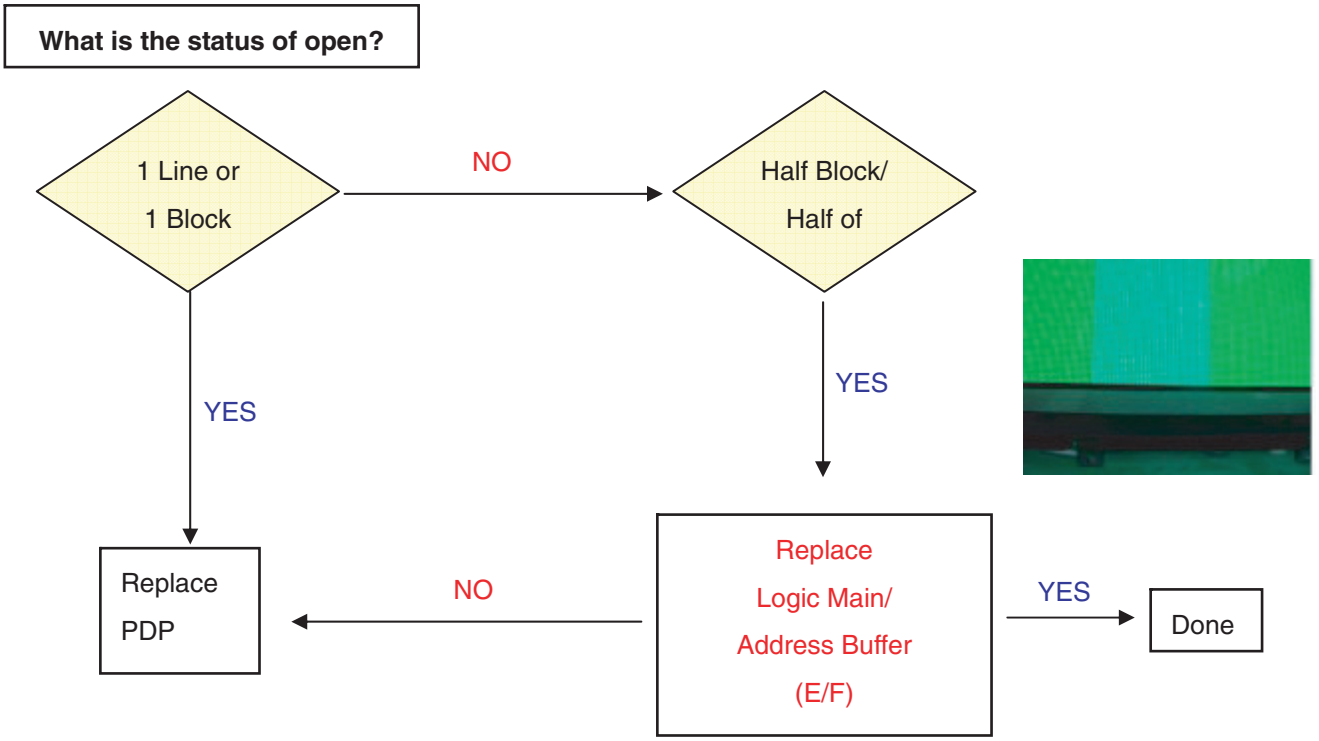




Address Short (some vertical lines appear to be linked on screen

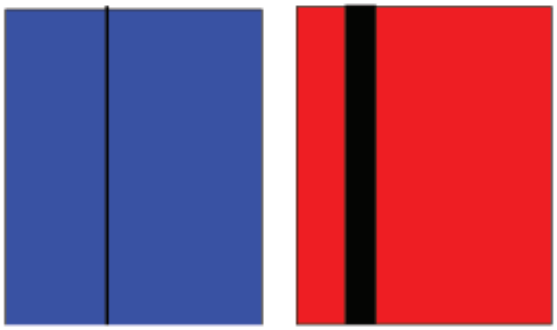
–> Address Short is related with Logic Main, Logic Buffer, FFC, TCP and so on.
This page shows you how to check the boards, and the following pages show you how to find the defective board.



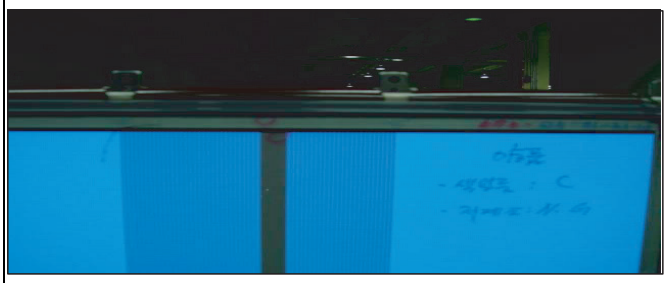


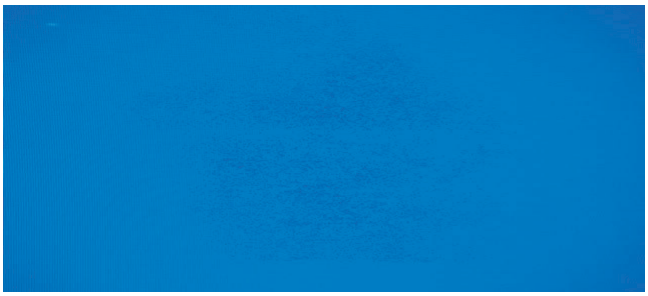
DEFECTS, SYMPTONS AND DETECTIVE PARTS

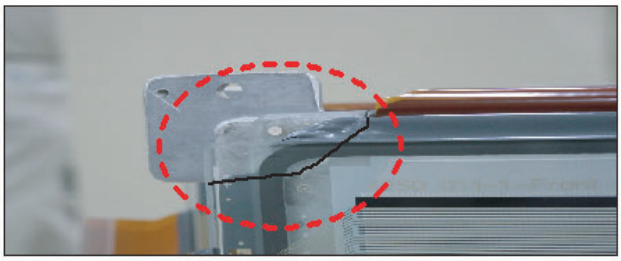
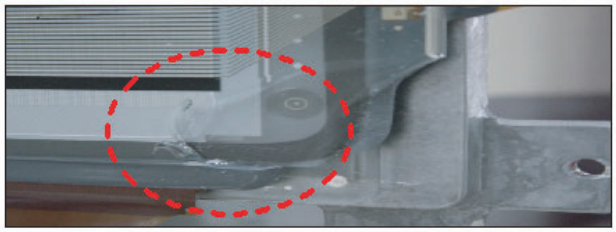
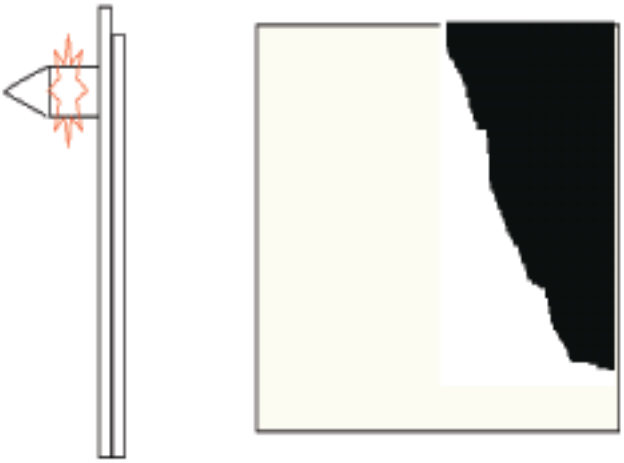
Condition Name	Description	Related Board
– No Voltage Output	Operating Voltages don't exist.	Power supply unit of Funai Elec.
– No Display	Operating Voltages exist, but an Image doesn't exist on screen	Y-MAIN, X-MAIN, Logic Main, Cables
– Abnormal Display	Abnormal Image (not open or short) is on screen.	Y-MAIN, X-MAIN, Logic Main
– Sustain Open	some horizontal lines don't exist on screen	Scan Buffer, FPC of X / Y
– Sustain Short	some horizontal lines appear to be linked on screen	Scan Buffer, FPC of X / Y
– Address Open	some vertical lines don't exist on screen	Logic Main, Logic Buffer, FFC,TCP
– Address Short	some vertical lines appear to be linked on screen	Logic Main, Logic Buffer, FFC,TCP

Defect: Address (vertical stripe) Open	Defect: Address (vertical stripe) Short
– **Symptom:** A line or block does not light up in address electrode direction.(1 line, block open)  – **Cause:** 1) **Manufacturing:** Panel electrode single line/ foreign material./electrostatic/TCP defect 2) **Parts:** TCP, Board connection defect 3) **Operation:** Assembly error / Film damage	– **Symptom:** Another color simultaneously appears because adjacent data recognizes the single pattern signal – **Cause:** 1) **Manufacturing:** Panel electrode short / Foreign material conductive foreign object inside TCP 2) **Part:** TCP/buffer defect lighting electrode cutting defect

Defect: Address output error	Defect: Sustain (horizontal stripe) Open
– **Symptom:** A defect other than address open and short Data printout signal error occurring at certain Gradation or pattern  	– **Symptom:** One or more line do not light up in Sustain direction  – **Cause:** 1) **Manufacturing:** Panel bus electrode single line FPC pressure defect 2) **Parts:** FPC/board/connection disconnection 3) **Operation:** assembly error.

Defect: Sustain (horizontal stripe) Short	Defect: Dielectric material layer damage
– **Symptom:** Combined or adjacent lines are short in sustain direction. The line appear brighter than other at Ramp gradation pattern or low gradation patter   – **Cause:** 1) **Manufacturing:** Panel electrode short/ Foreign material. 2) **Parts:** Board/ connector/ pin error 3) **Operation:** connector/ assembling error	– **Symptom:** Burn caused by the damage of address bus dielectric layer appears in the panel discharge/ non discharge area. sustain also open/short occurs by the damage of address sustain printout  <Add Block and Line Open>  <Add and Sustain Open> – **Cause:** layer uneven/ abnormal voltage/ foreign material repair failed

Defect: F/White low discharge	Defect: Weak discharge
– **Symptom:** Low discharge caused by unstable cells occurring at full white pattern if high (60 degree) or normal temperature.   – **Cause:** 1) **Panel:** MgO source/dielectric thickness cell pitch/phosphor 2) **Circuit:** drive waveform/ voltage condition	– **Symptom:** Normal discharge but cells appear darker due to weak light emission occurring mainly at low (5 degree) Full white/Red/Green/Blue pattern or gradation pattern   – **Cause:** 1) **Panel:** MgO deposition count and thinckness/ aging condition 2) **Circuit:** drive waveform/voltage condition

Defect: panel damage	Defect: Exhaust pipe damage
– **Symptom:** Panel crack or break. No image appears in some cause depending on the damaged parts and damage level.   – **Cause:** 1) **Manufacturing:** Flatness/palette pin interruption 2) **Operation:** overload of panel corner/careless handling 3) **Panel:** Flatness/assembly error	– **Symptom:** Crack in break if exhaust pipe an image is partially lacking or the panel noise occurs depending on the damaged parts and with the passage of time  – **Cause:** Careless panel handling

DISASSEMBLING / ASSEMBLING

Tools and measurement equipment

Tools

1) (+) type Screw Drivers: to screw the screws
2) Air Blower
3) Earth Ring
4) Small Driver: to adjust potentiometer
5) Dummy Discharge Resistor: 2.4 kΩ / 10 W

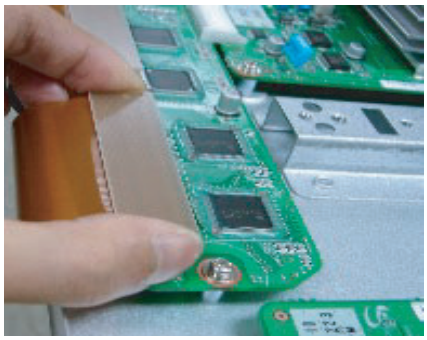
Measuring Equipment

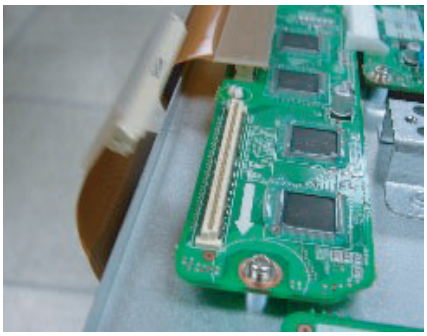
1) Oscilloscope: 500 MHz sampling
2) Probe: 10:1
3) Digital Multi-meter
4) Signal Generator

Disassembling & Re-assembling

Disassembling & Re-assembling of FPC (Flexible Printed Circuit) and Y-Buffer

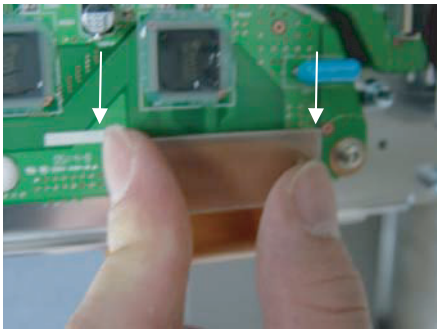
1. Removal procedures

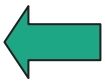


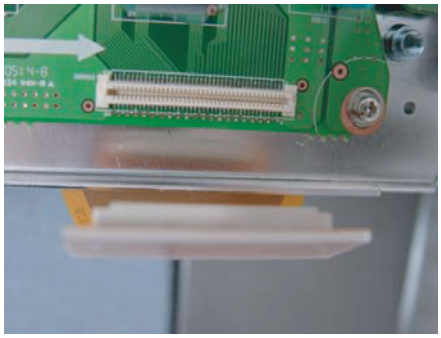


1) Full out the FPC from Connector by holding the lead of the FPC with hands.

2. Assembling Procedures





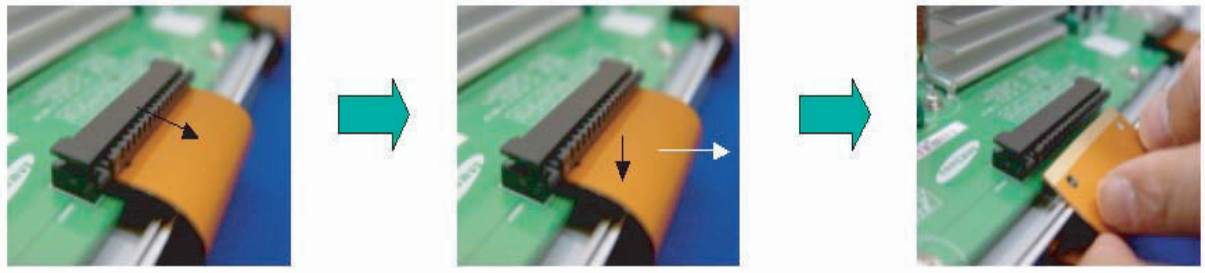


1) Push the lead of FPC with same strength until to be connected completely.

   * Notice: Be careful do not get a damage on the connector pin during connecting by mistake.

Assembling & Disassembling of Flat Cable Connector of X-Main Board

1. Disassembling Procedure

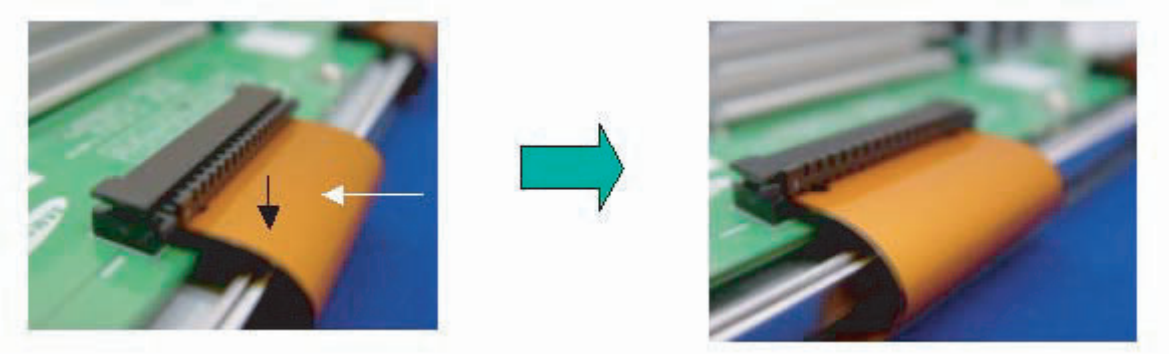


1) Pull out the clamp of connector.

2) Pull Flat cable out press down lightly.

3) Turn the Flat cable reversely.

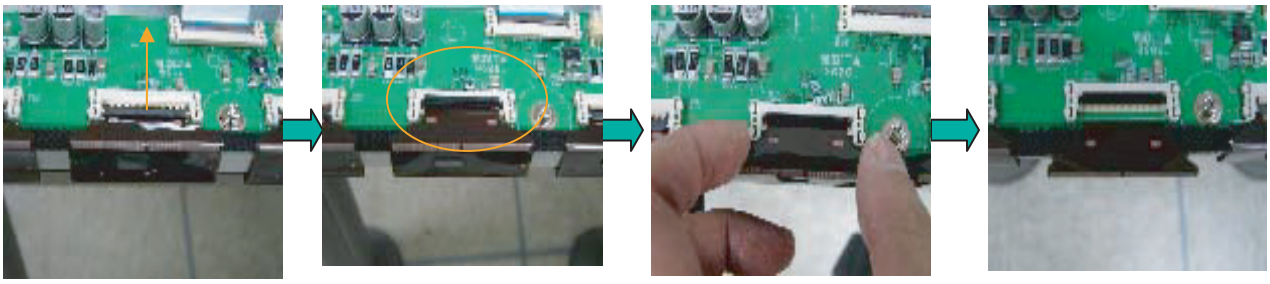
2. Assembling Procedure



1) Put the Flat cable into the connector press down lightly until locking sound (“Dack”) comes out.

Assembling & Disassembling the FFC and TCP from Connector

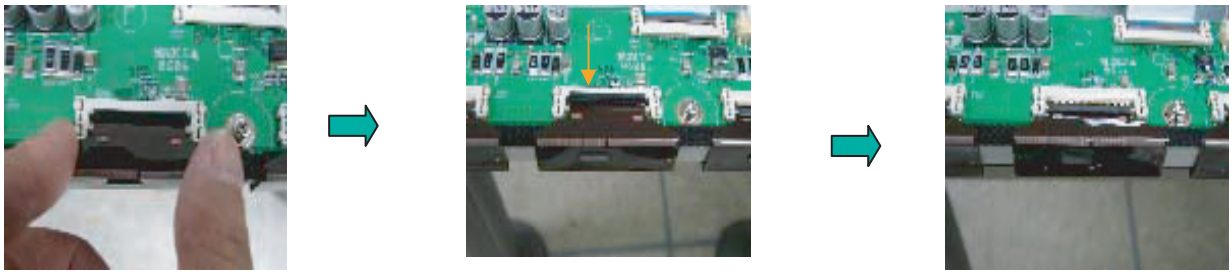
Disassembling of TCP



1) Open the clamp carefully.

2) Pull the TCP out from Connector.

Assembling of TCP



1) Put the TCP into the Connector carefully

2) Close the clamp completely.
(The sound (“Dack”) comes out.)

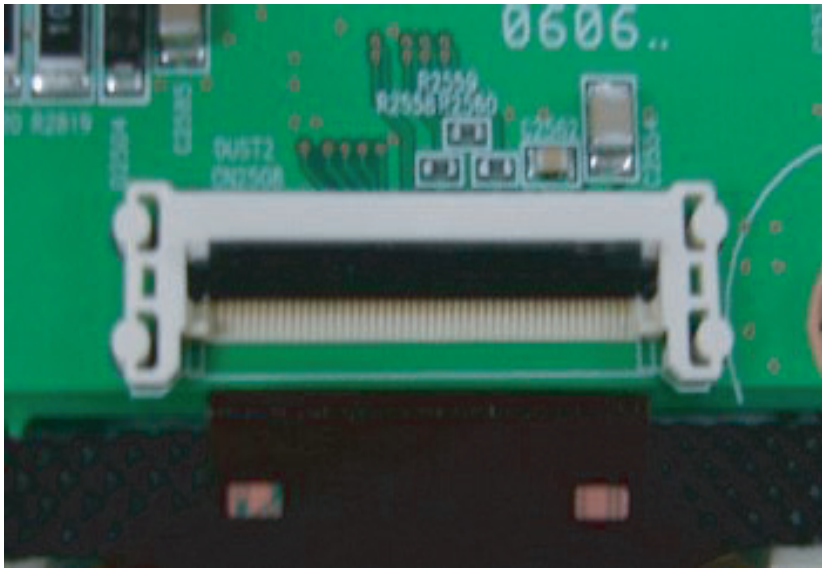
* Notice: TCP and Connector was connected surely.

* Notice:

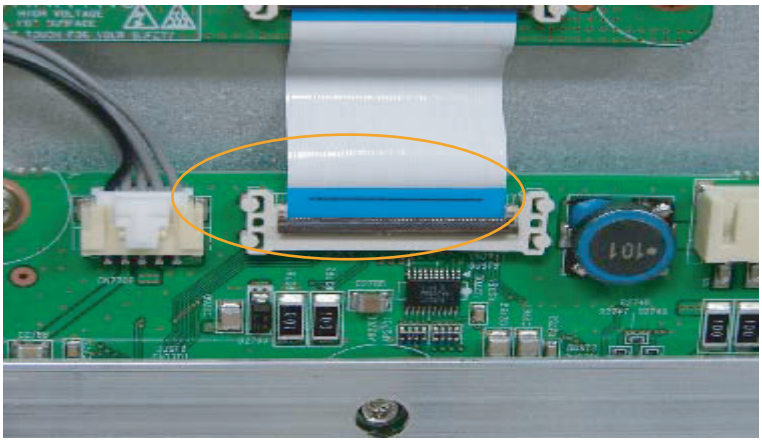
1) Checking whether the foreign material is on the Connector inside before assembling of TCP.
2) Be careful do not get a damage on the board by ESD during handling of TCP.

Misassembling of TCP

1. The misassembling of TCP is the cause of defect.



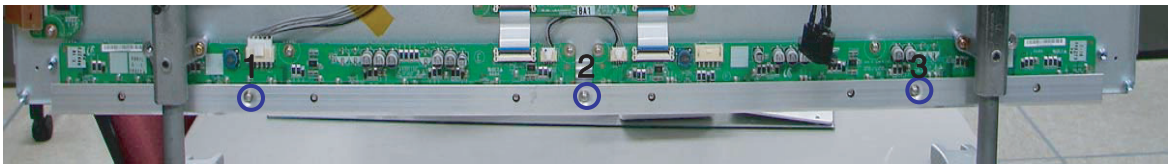
Assembling & Disassembling of FFC



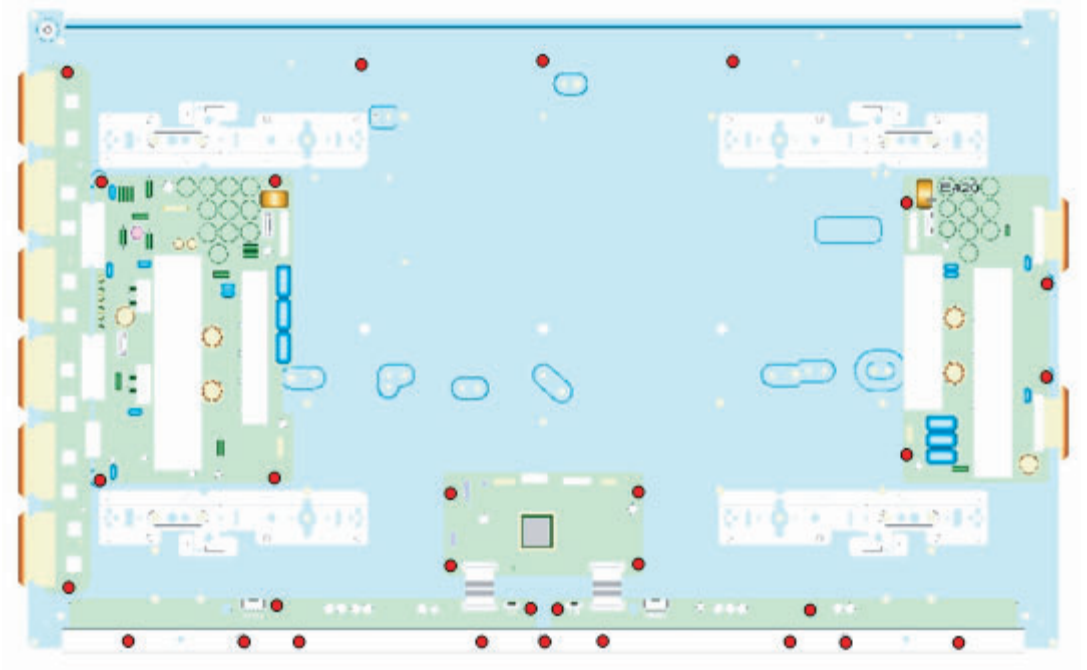
(This is the photo of the assembling of FFC)

The procedure of assembling and disassembling of FFC is the same as TCP.

Exchange of LBE, LBF board



(Photo 1)

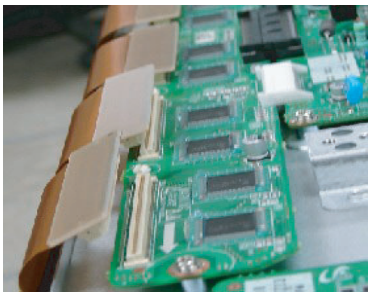


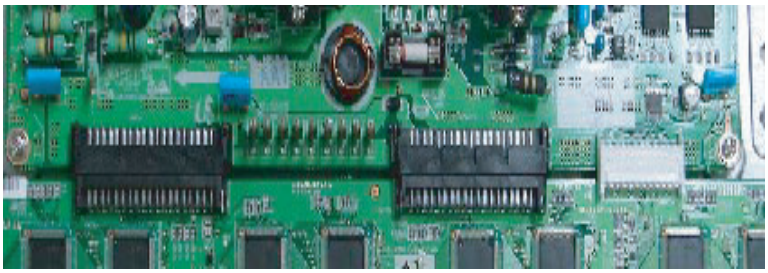
(Photo 2)

1. Remove the screws in order of 1-3-2 from heat sink and then get rid of heat sink. (Photo 1)
2. Remove the TPC, FFC and power cable from the connectors.
3. Remove all of the screws from defected board.
4. Remove the defected board.
5. Replace the new board and then screw tightly.
6. Get rid of the foreign material from the connector.
7. Connect the TCP, FFC and power cable to the connector.
8. Reassemble the TCP heat sink.
9. Screw in order of 2-1-3. (Photo 2)
   If you screw too tightly, it is possible to get damage on the Driver IC of TCP.

Exchange YB and YM board

1. Separate all of the FPC connector of YB. (Photo 1)
2. Loosen all of the screws of YB and YM.
3. Remove the board from chassis.
4. Remove the connector of CN5004, CN5011, CN5012 among YB and YM.
5. Remove the YB from Y-main.





6. Replace the defected board.
7. Reassemble the YB to the Y-Main.
8. Connect the connector of CN5004, CN5011, CN5012 among YB and YM.
9. Arrange the board on the chassis and then screw to fix.
10. Connect the FPC and YM of panel to the connector.
11. Supply the electric power to the module and then check the waveform of board.
12. Turn off the power after the waveform is adjusted.

OPERATION CHECK AFTER REPAIR SERVICE

Check Item

	Check Item	Specification	Remarks
Module assemble check	TCP Assembling condition	Securely connected or tightened	
	Drive board		
	Y BUFFER		
	Logic & Logic Buffer		
	Harness	Securely connected	
	Material Mixing	No material mixing	

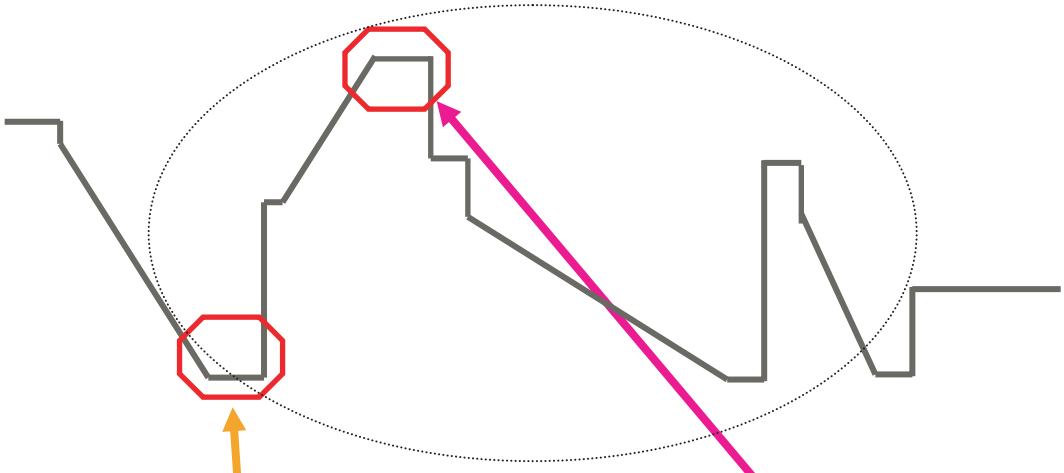
Check Procedure

1. Visual check as following
   a) Assembling condition of module.
   b) No problem on the connection of module.
   c) The grounding and easily short-circuited parts are not damaged.
2. Turn on the power to PDP module, and then check that LED lights up and the SET is working well.
3. Check the power voltage after turn on the power, and then check the Display condition by tapping slightly the Y-FPC 2 or 3 times.
4. Check whether something wrong during Full White Pattern period.
5. If something wrong, each voltage should be set to the standard voltage by using Multi-Tester and adjusting tools.
6. Adjust the waveform, using Oscilloscope for the waveform adjusting point.
7. Check the discharge of front panel by changing the image for each pattern.
8. Check the Low-discharge, Over-discharge and panel condition by adjusting the Pattern Generator Level.
9. Discharge still remain send back to SDI.

OPERATION CHECK

Adjustment Specification, Checking Position etc.

W1 Ramp Waveform Inclination Adjustment (Y-Board)

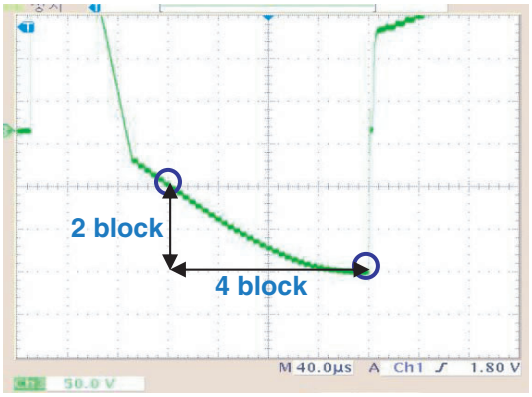


Adjust VR5002 to set the time of Yfr (Main Reset Falling Ramp) like the below picture.

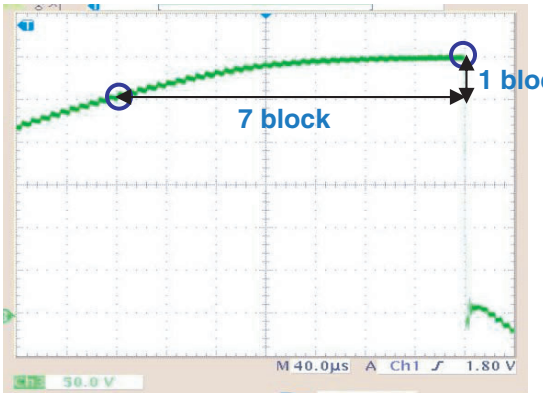
Oscilloscope Setting : 50V / 40us

Adjust VR5001 to set the time of Yrr (Main Reset Rising Ramp) like the below picture.

Oscilloscope Setting : 50V / 40us

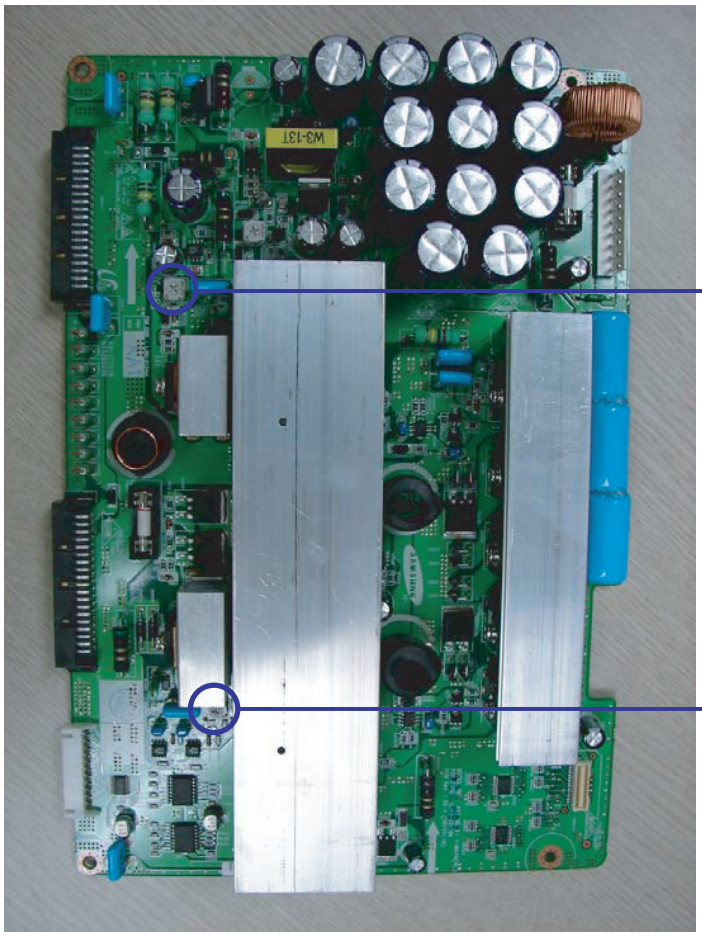


< Falling Ramp >



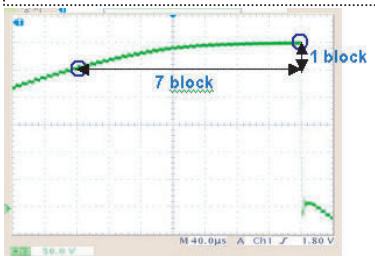
<Rising Ramp>

Adjusting procedure



VR5001 Adjustment : Rising Ramp

Oscilloscope Setting : 50V / 40us



VR5002 Adjustment : Falling Ramp

Oscilloscope Setting : 50V / 40us

1. Get Pattern to be Full White.
2. Check the waveform using Oscilloscope
   1) Triggering through V_TOGG of LOGIC Board.
   2) Connect the OUT240 Test Point at the center of Y_buffer to other channel, and then check the 1st SF operating waveform of 1TV-Field.
   3) Check the waveform as before by adjusting Horizontal Division.
   4) Check the Reset waveform when the V_TOGG Level is changed.
      Set the Rising Ramp like upper picture by adjusting VR5001.
   5) Set the Falling Ramp like upper picture by adjusting VR5002.

WIRING DIAGRAM