



SERVICE MANUAL

Main Section

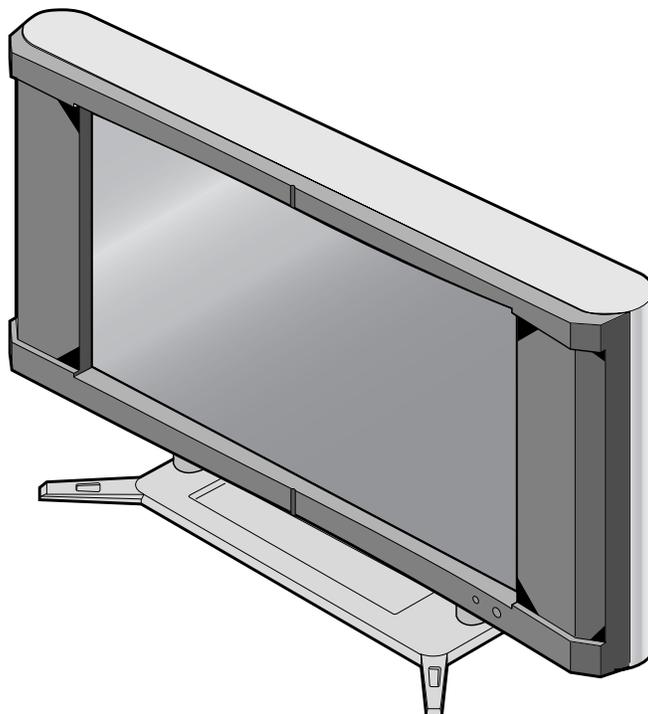
- Specifications
- Adjustment Procedures
- Troubleshooting
- Schematic Diagrams
- CBA's
- Exploded Views
- Parts List

Plasma Display Module Section

- Disassembly Procedures
- Troubleshooting
- Exploded Views
- Parts List

PLASMA DISPLAY

F42PDME



IMPORTANT SAFETY NOTICE

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

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

MAIN SECTION

PLASMA DISPLAY

F42PDME

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| Main Section <ul style="list-style-type: none">● Specifications● Adjustment Procedures● Troubleshooting● Schematic Diagrams● CBA's● Exploded Views● Parts List |
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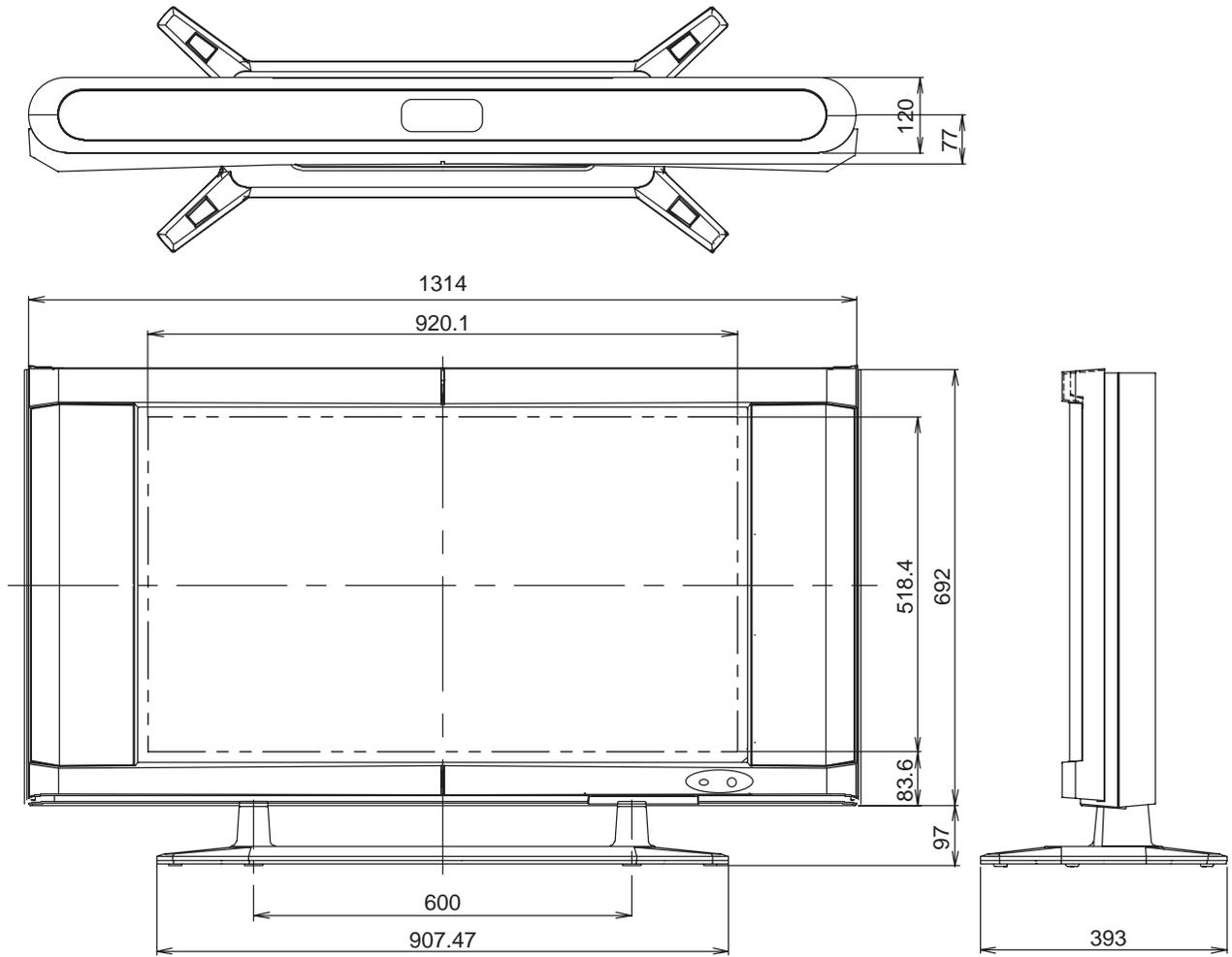
SPECIFICATIONS

Description	Condition
Display Features	
Screen Size	920.1 (W) x 518.4 (H) mm, 42 in. Wide VGA panel
Pixel Resolution	852 (H) x 480 (V)
Output Colors	16.7 million
Screen Aspect Ratio	16:9
Contrast Ratio	1000:1
Brightness	470 cd/m ² (PEAK)
Comb Filter Type	3-Dimensional Y/C Separation
Available Input Format	720p/1080i/480p/480i (720p/1080i/480p: Component 2 only)
Audio Features	
Sound Output	5W + 5W, 10% THD
Speaker	3 in Round Type x 4
Audio IN	0.5Vrms
Connectors	
Component AV Input (1)	SD component video/Y, Cb, Cr, (RCA x 3) - rear audio L/R (RCA x 2) - rear Y: 1.0Vp-p (75 Ohm), Cb/Cr: 0.7Vp-p (75 Ohm)
Component AV Input (2)	HD component video/Y, Pb, Pr, (RCA x 3) - rear audio L/R (RCA x 2) - rear Y: 1.0Vp-p (75 Ohm), Pb/Pr: 0.7Vp-p (75 Ohm)
Composite AV Input (1) S-Video (1)	Composite video (RCA x 1) - rear, 1.0Vp-p (75 Ohm) S-Video (4 pin DIN) - rear audio L/R (RCA x 2) - rear Y: 1.0Vp-p (75 Ohm), C: 0.286Vp-p (75 Ohm)
Composite AV Input (2) S-Video (2)	Composite video (RCA x 1) - rear, 1.0Vp-p (75 Ohm) S-Video (4 pin DIN) - rear audio L/R (RCA x 2) - rear Y: 1.0Vp-p (75 Ohm), C: 0.286Vp-p (75 Ohm)
Analog Audio output	audio L/R (RCA x 2) - rear
General	
Power In	120V ±10%, 60Hz/AC
Power Consumption	350 W (standby-condition 1.3W)
Operation Temperature	41F - 104F (5°C - 40°C)
Humidity	Under 80%
Dimension	1314 (W) x 692 (H) x 149.5 (D) mm 1314 (W) x 789 (H) x 393 (D) mm (Incl. Stand)
Weight	112.46 lbs (51 kg)

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)

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.

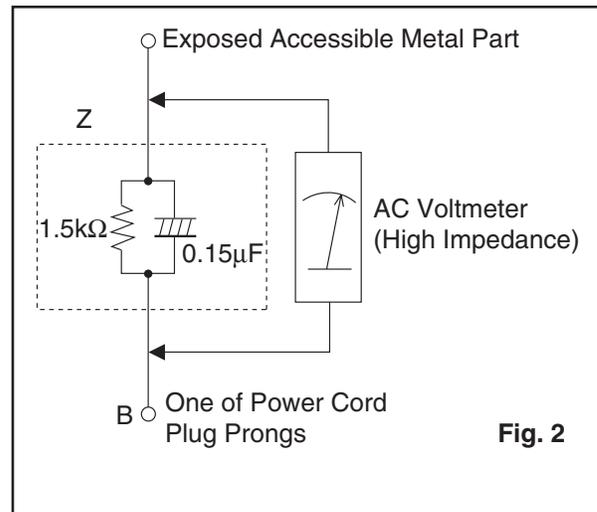
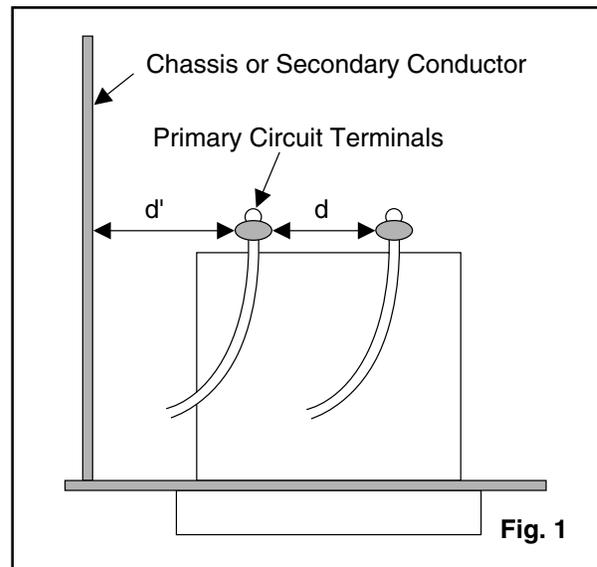
Measuring Method: (Power ON)

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	0.15 μ F CAP. & 1.5k Ω RES. connected in parallel	≤ 0.75 mA peaks	Exposed accessible parts

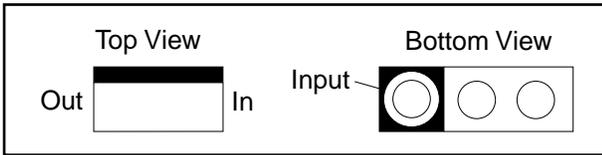
Note: This table is unofficial and for reference only. Be sure to confirm the precise values.



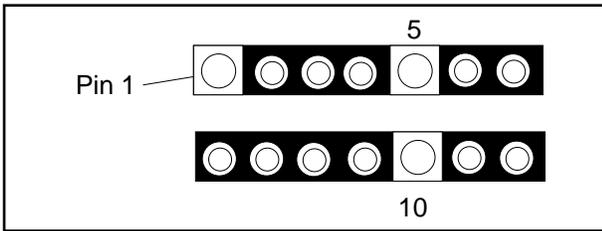
STANDARD NOTES FOR SERVICING

Circuit Board Indications

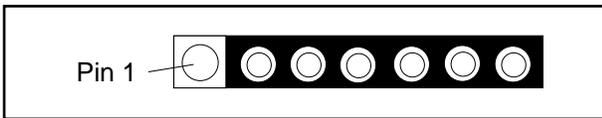
- a. The output pin of the 3 pin Regulator ICs is indicated as shown.



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

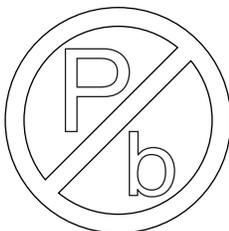


- c. The 1st pin of every male connector is indicated as shown.



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)

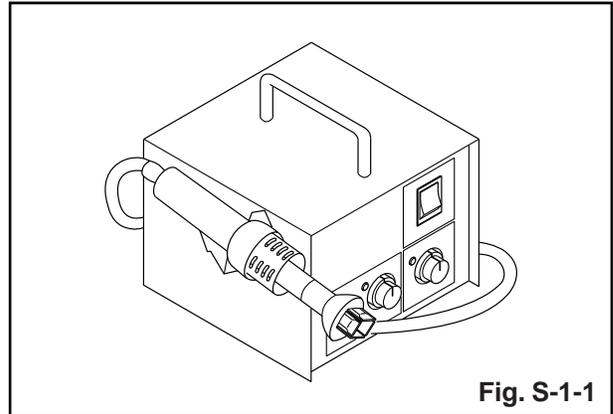


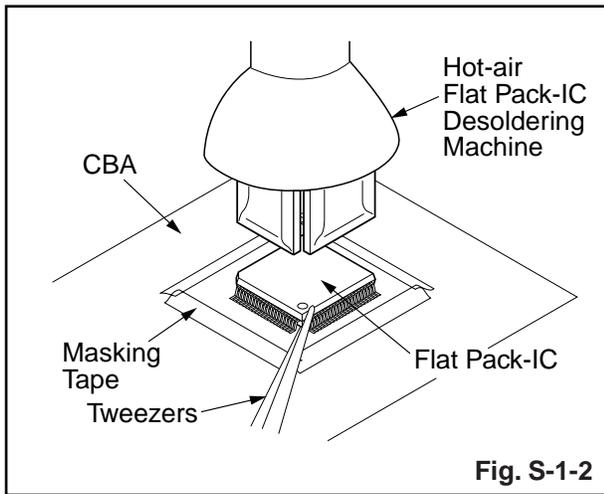
Fig. S-1-1

- (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:

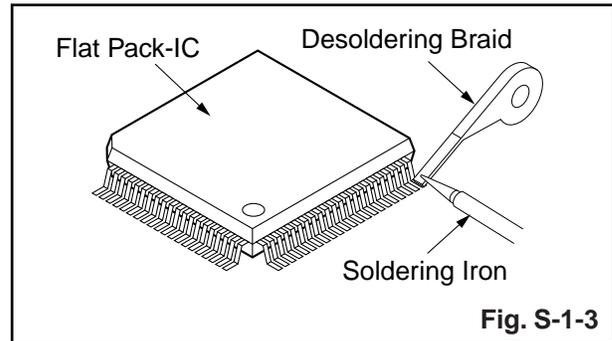
1. The Flat Pack-IC shape may differ by models. Use an appropriate hot-air flat pack-IC desoldering machine, whose shape matches that of the Flat Pack-IC.
2. Do not supply hot air to the chip parts around the flat pack-IC for over 6 seconds because damage to the chip parts may occur. Put masking tape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

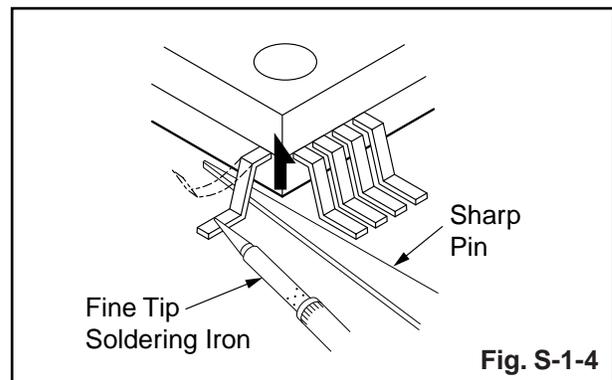


With Soldering Iron:

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



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



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

With Iron Wire:

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

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

Note:

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

2. Installation

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

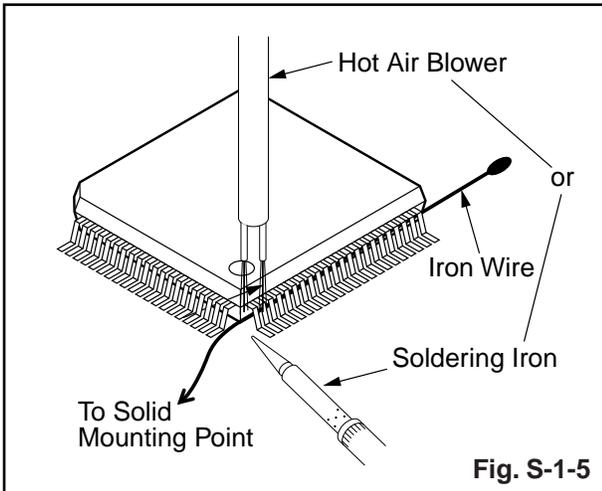


Fig. S-1-5

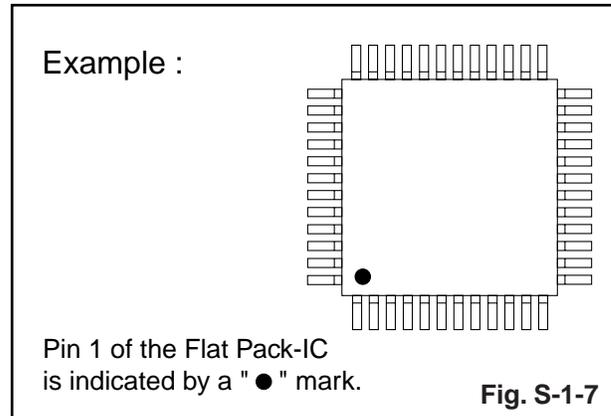


Fig. S-1-7

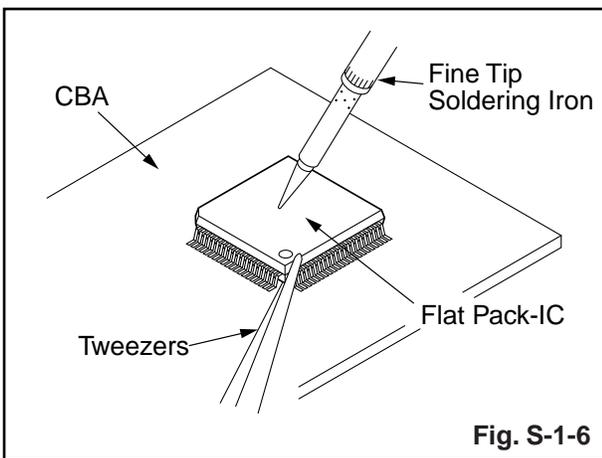


Fig. S-1-6

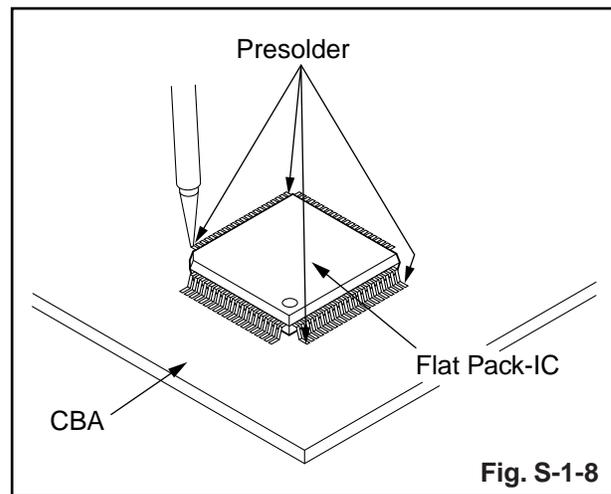


Fig. S-1-8

Instructions for Handling Semiconductors

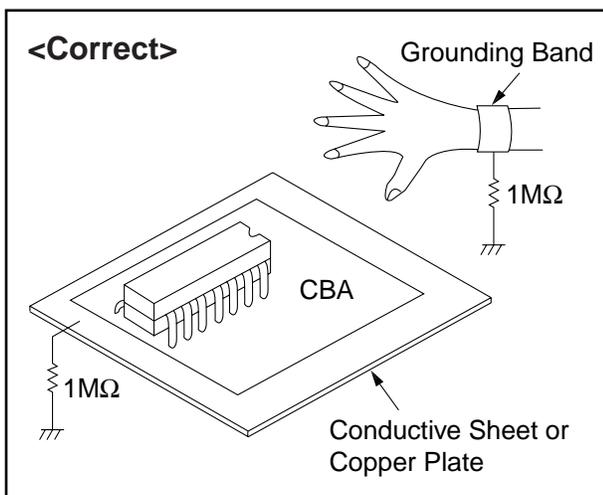
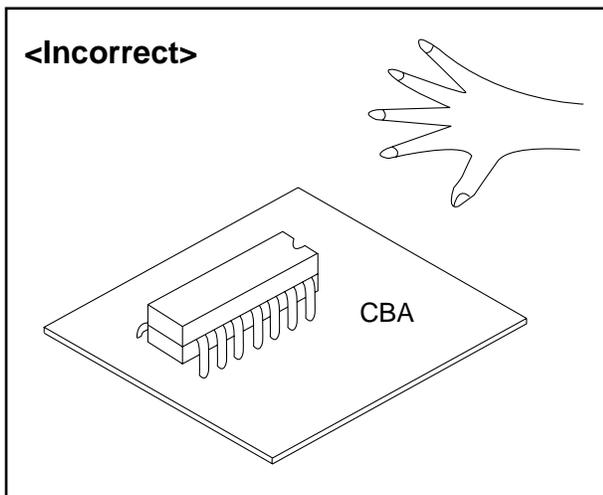
Electrostatic breakdown of the semiconductors may occur due to a potential difference caused by electrostatic charge during unpacking or repair work.

1. Ground for Human Body

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

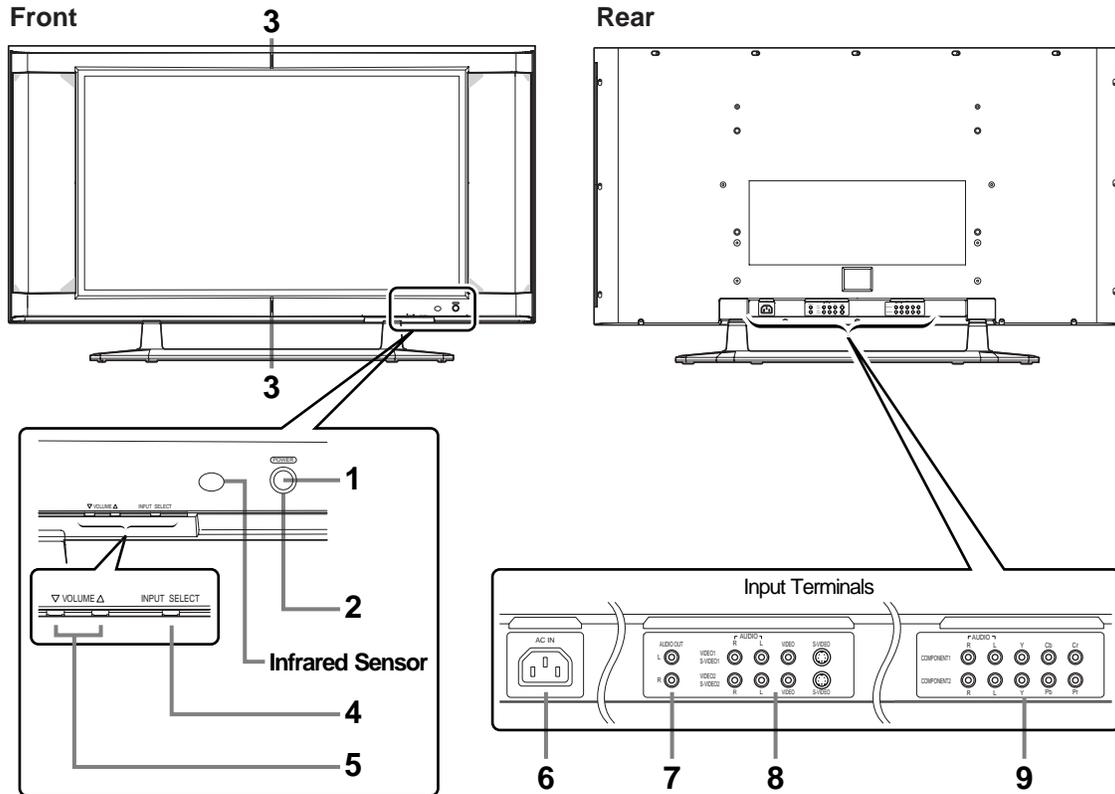
2. Ground for Workbench

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



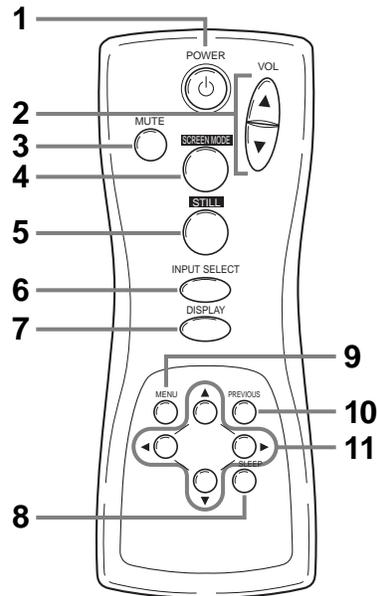
BASIC SETUP AND OPERATING GUIDE

MAIN UNIT



- 1 POWER button:** Turns the power ON or in STANDBY.
- 2 POWER indicator:** Lights up (Blue) when the power is in the standby mode. Lights up (Green) when the power is ON.
- 3 STANDBY indicator:** Lights up when the power is in the standby mode. Disappears when the power is ON.
- 4 INPUT SELECT button:** Selects input terminals.
- 5 VOLUME ▲(up) / ▼(down) button:** Increases or decreases the volume.
- 6 AC IN terminal:** Connect the supplied power cable for a standard AC outlet.
- 7 AUDIO OUT:** Output terminals for audio.
- 8 AUDIO/VIDEO/S-VIDEO:** Input terminals for an audio and video signal. You can select either VIDEO or S-VIDEO.
- 9 COMPONENT:** Input terminals for a component signal. You can make a Y-Cb-Cr interlaced connection to component 1 or Y-Pb-Pr progressive or interlaced connection to component 2.

REMOTE CONTROL



1 POWER button: Turns the main power ON or in STANDBY.

2 VOL ▲(up) / ▼(down) button: Increases or decreases the volume.

3 MUTE button: Turns the audio off or on.

4 SCREEN MODE button: Selects aspect ratios available for the screen.

5 STILL button: Pauses the image shown on the screen.

6 INPUT SELECT button: Selects input terminals.

7 DISPLAY button: Displays the name of the selected input terminal on the screen.

8 SLEEP button: Sets the sleep timer.

9 MENU button: Accesses the setup menu, allowing you to access various settings.

10 PREVIOUS button: Moves up one level in the setup menu.

11 ▲(up) / ▼(down) button: Selects the various modes in the setup menu.

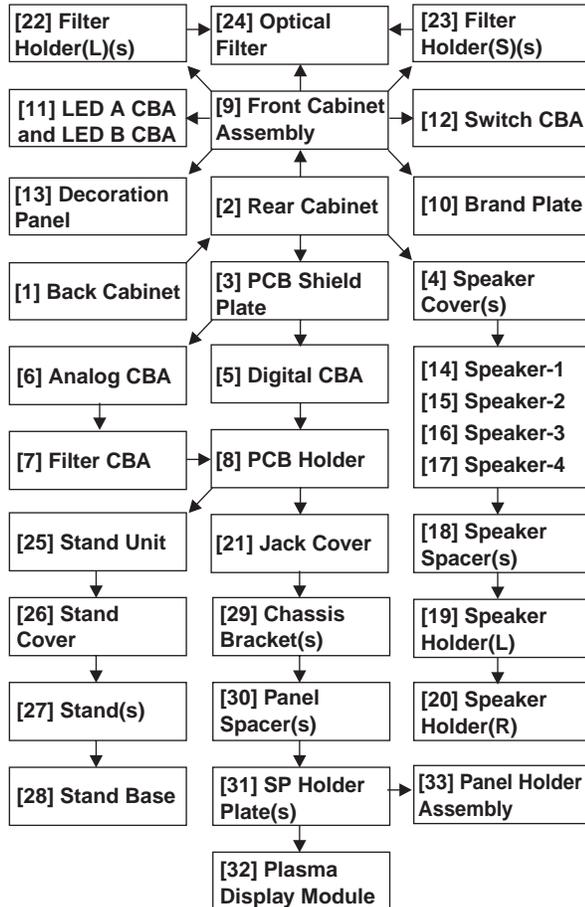
◀(left) / ▶(right) button: Selects and adjusts levels for the various settings.

▶(enter) button: Also used as the enter button.

CABINET DISASSEMBLY INSTRUCTIONS

1. Disassembly Flowchart

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



2. Disassembly Method

Step/ Loc. No.	Part	Removal		
		Fig. No	Remove/*unlock/release/unplug/unclamp/desolder	Note
1	Back Cabinet	1	17(S-1), 5(S-2)	1
2	Rear Cabinet	2	22(S-3)	2
3	PCB Shield Plate	3	12(S-4), CLN8	3
4	Speaker Cover(s)	3	14(S-5)	4
5	Digital CBA	4	4(S-6), 3(S-7)	5
6	Analog CBA	4	4(S-8), 4(S-9)	6
7	Filter CBA	4	2(S-10), Two connectors	7
8	PCB Holder	4	4(S-11)	8
9	Front Cabinet Assembly	5	14(S-12)	9
10	Brand Plate	5	2(S-13)	10

Step/ Loc. No.	Part	Removal		
		Fig. No	Remove/*unlock/release/unplug/unclamp/desolder	Note
11	LED A CBA and LED B CBA	5	-----	-
12	Switch CBA	5	3(S-14)	11
13	Decoration Panel	6	20(S-15), 2(S-16)	12
14	Speaker-1	7	2(S-17)	13
15	Speaker-2	7	2(S-18)	14
16	Speaker-3	7	2(S-19)	15
17	Speaker-4	7	2(S-20)	16
18	Speaker Spacer(s)	7	-----	-
19	Speaker Holder(L)	7	4(S-21)	17
20	Speaker Holder(R)	7	4(S-22)	18
21	Jack Cover	7	2(S-23)	19
22	Filter Holder(L)(s)	7	6(S-24)	20
23	Filter Holder(S)(s)	7	6(S-25)	21
24	Optical Filter	7	-----	-
25	Stand Unit	8	4(S-26)	22
26	Stand Cover	9	8(S-27), 10(S-28)	23
27	Stand(s)	9	4(S-29), 6(S-30)	24
28	Stand Base	9	-----	-
29	Chassis Bracket(s)	10	8(S-31), 8(S-32)	25
30	Panel Spacer(s)	10	8(S-33)	26
31	SP Holder Plate(s)	10	4(S-34)	27
32	Plasma Display Module	10	12(S-35)	28
33	Panel Holder Assembly	10	-----	-

↓ (1) ↓ (2) ↓ (3) ↓ (4) ↓ (5)

Note:

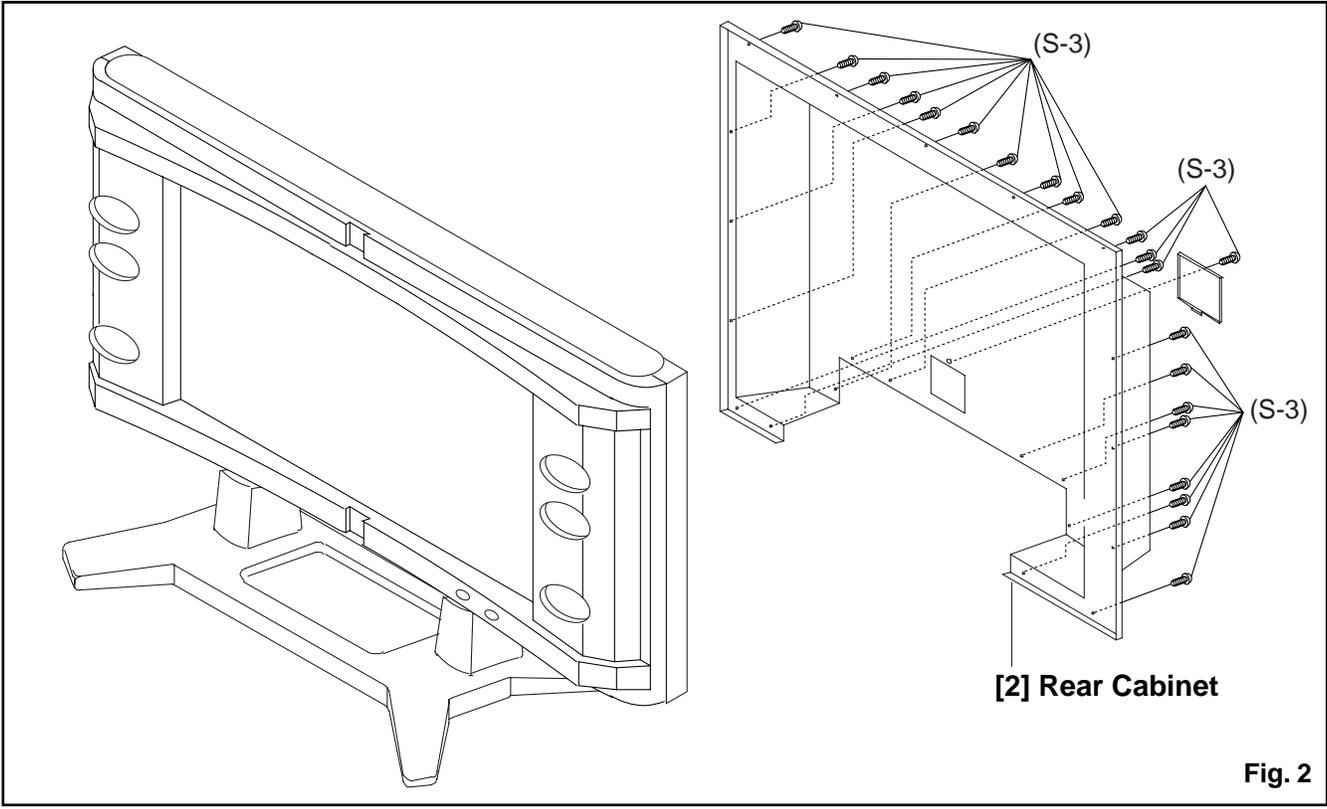
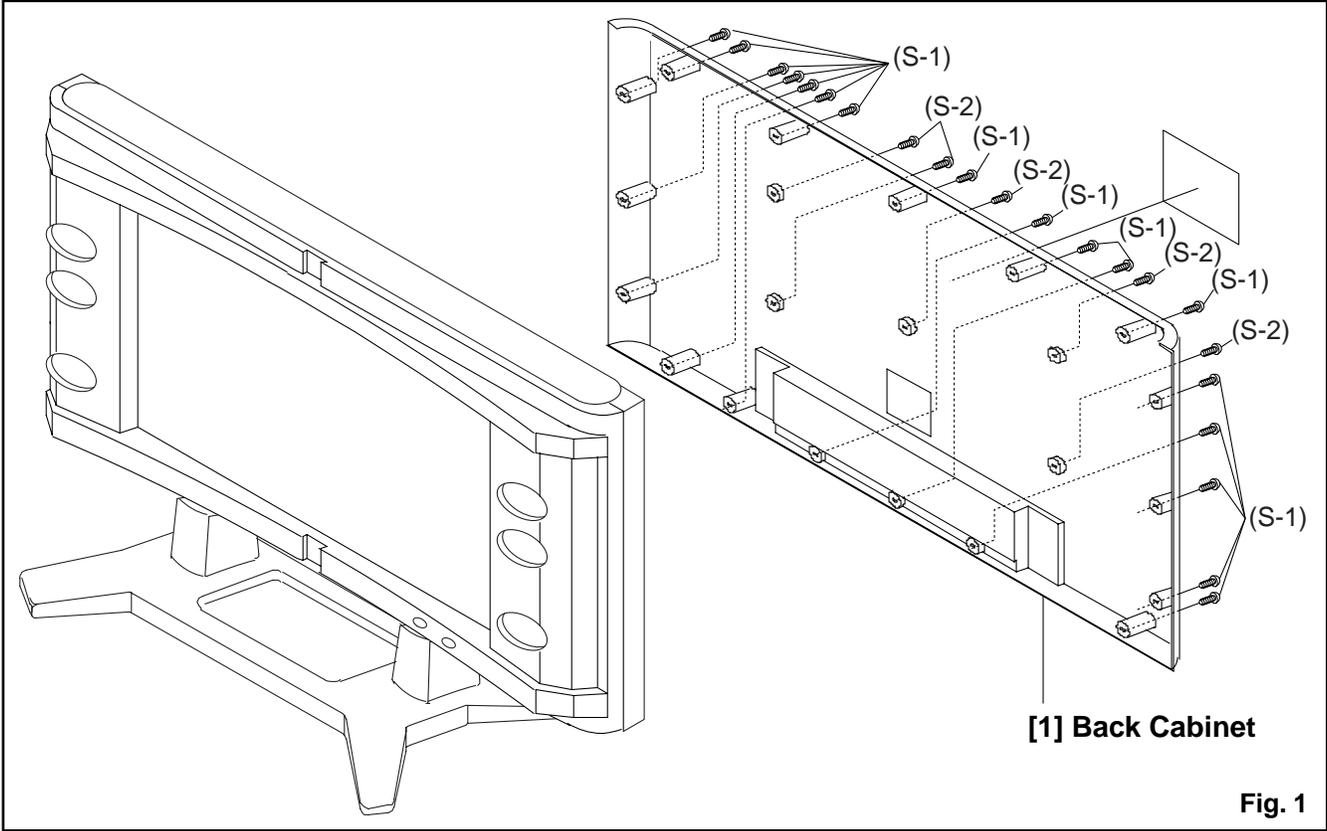
- (1) Order of steps in procedure. When reassembling, follow the steps in reverse order. These numbers are also used as the Identification (location) No. of parts in figures.
- (2) Parts to be removed or installed.
- (3) Fig. No. showing procedure of part location
- (4) Identification of part to be removed,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

Reference Notes in the Table

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.

1. Removal of the Back Cabinet. Remove screws 17(S-1) and 5(S-2).
2. Removal of the Rear Cabinet. Remove screws 22(S-3).
3. Removal of the PCB Shield Plate. Remove screws 12(S-4) and wire assembly CLN8.
4. Removal of the Speaker Cover(s). Remove screws 14(S-5).
5. Removal of the Digital CBA. Disconnect connectors *CN1701, *CN1702, *CN1703, *CN1704, and *CN1709, and remove screws 4(S-6) and 3(S-7).
6. Removal of the Analog CBA. Disconnect connectors *CN201, *CN203, *CN204, *CN501, *CN502, *CN701, *CN801, and *CN802, and remove screws 4(S-8) and 4(S-9).
7. Removal of the Filter CBA. Disconnect connector *CN801, and remove two connectors, then remove screws 2(S-10).
8. Removal of the PCB Holder. Remove screws 4(S-11).
9. Removal of the Front Cabinet Assembly. Remove screws 14(S-12).
10. Removal of the Brand Plate. Remove screws 2(S-13).
11. Removal of the Switch CBA. Remove screws 3(S-14) and disconnect connector *CN751.
12. Removal of the Decoration Panel. Remove screws 20(S-15) and 2(S-16).
13. Removal of the Speaker-1. Remove screws 8(S-17).
14. Removal of the Speaker-2. Remove screws 8(S-18).
15. Removal of the Speaker-3. Remove screws 8(S-19).
16. Removal of the Speaker-4. Remove screws 8(S-20).
17. Removal of the Speaker Holder(L). Remove screws 4(S-21).
18. Removal of the Speaker Holder(R). Remove screws 4(S-22).
19. Removal of the Jack Cover. Remove screws 2(S-23).
20. Removal of the Filter Holder(L)(s). Remove screws 6(S-24).
21. Removal of the Filter Holder(S)(s). Remove screws 6(S-25).
22. Removal of the Stand Unit. Remove screws 4(S-26).
23. Removal of the Stand Cover. Remove screws 8(S-27) and 10(S-28).
24. Removal of the Stand(s). Remove screws 4(S-29) and 6(S-30).
25. Removal of the Chassis Bracket. Remove screws 8(S-31) and 8(S-32).
26. Removal of the Panel Spacer(s). Remove screws 8(S-33).
27. Removal of the SP Holder Plate(s). Remove screws 8(S-34).
28. Removal of the Plasma Display Module. Remove screws 12(S-35).



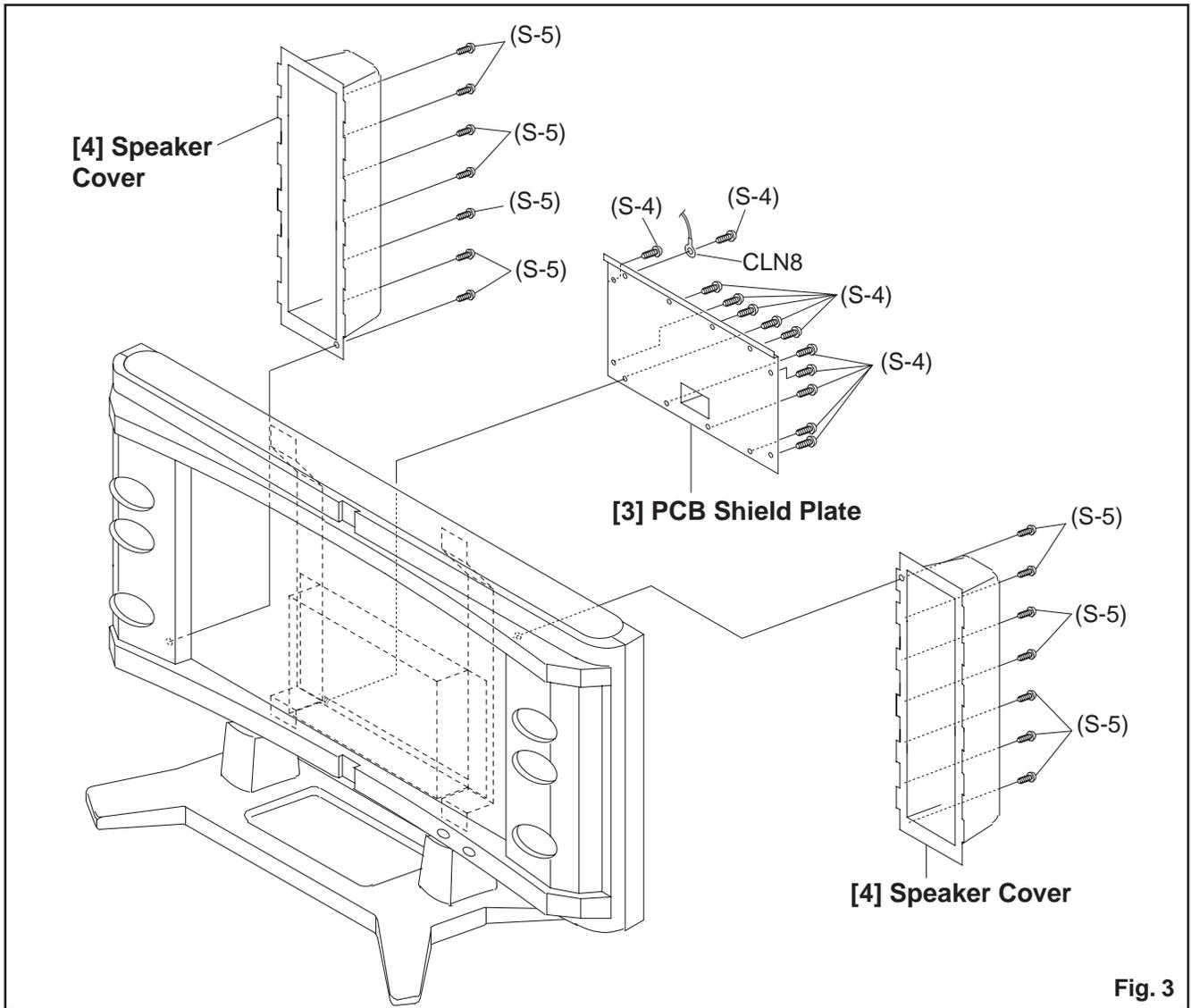


Fig. 3

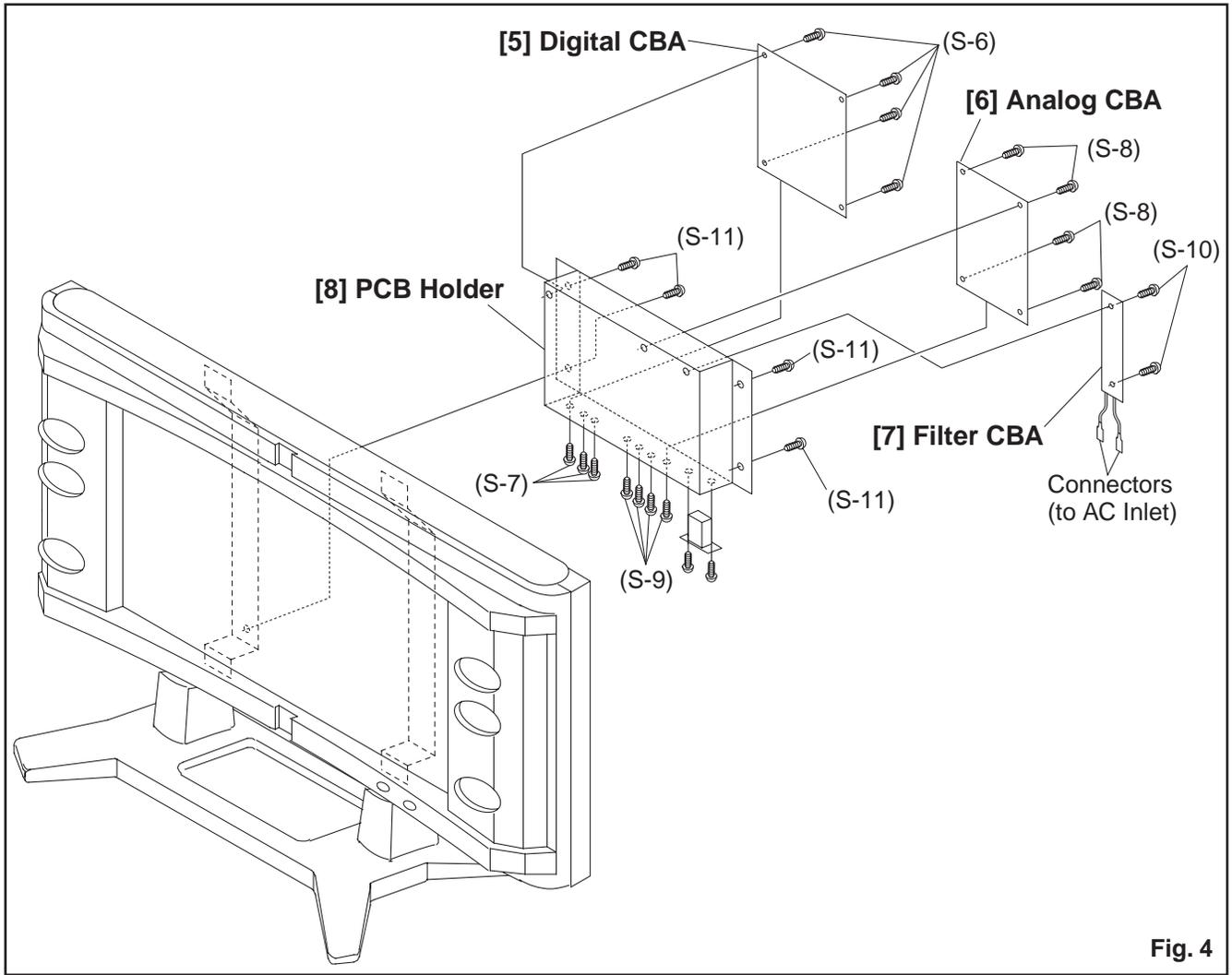


Fig. 4

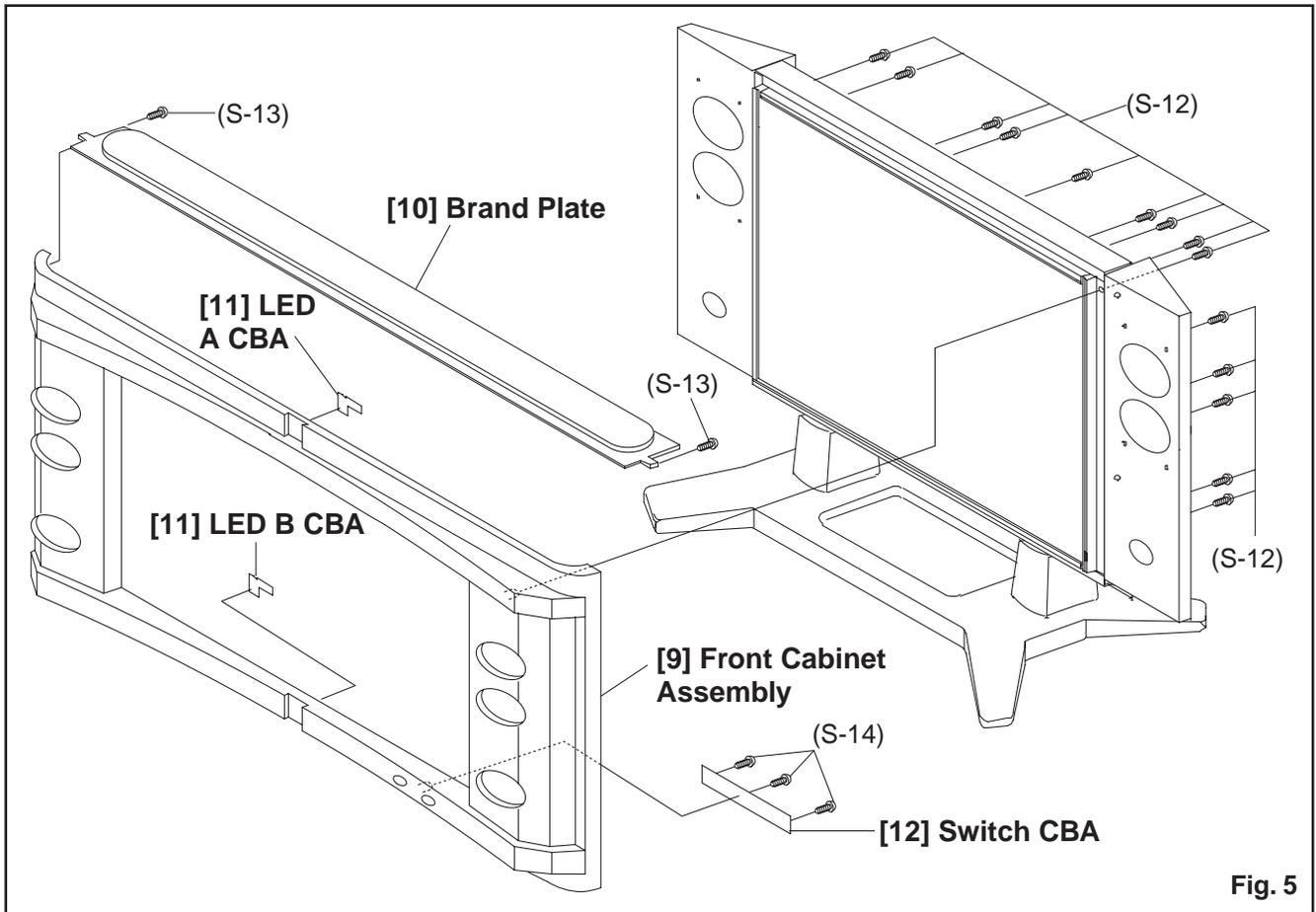


Fig. 5

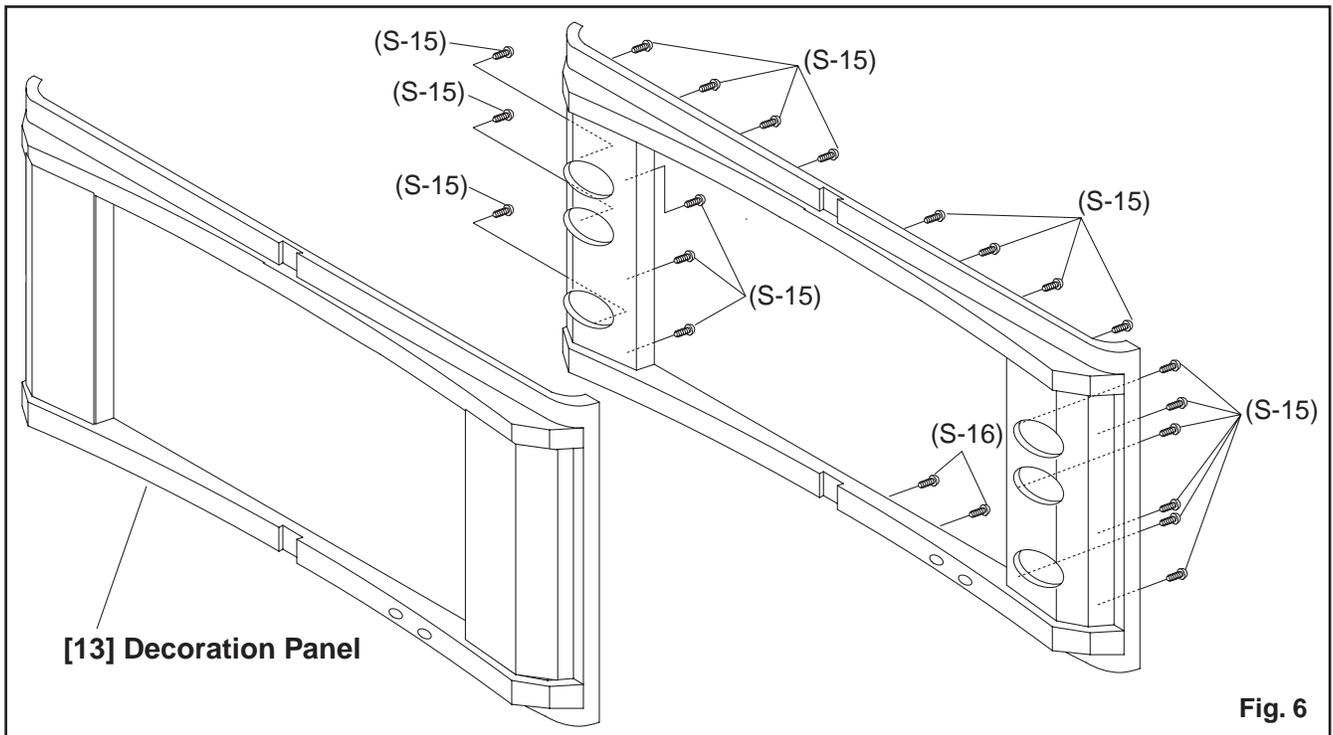


Fig. 6

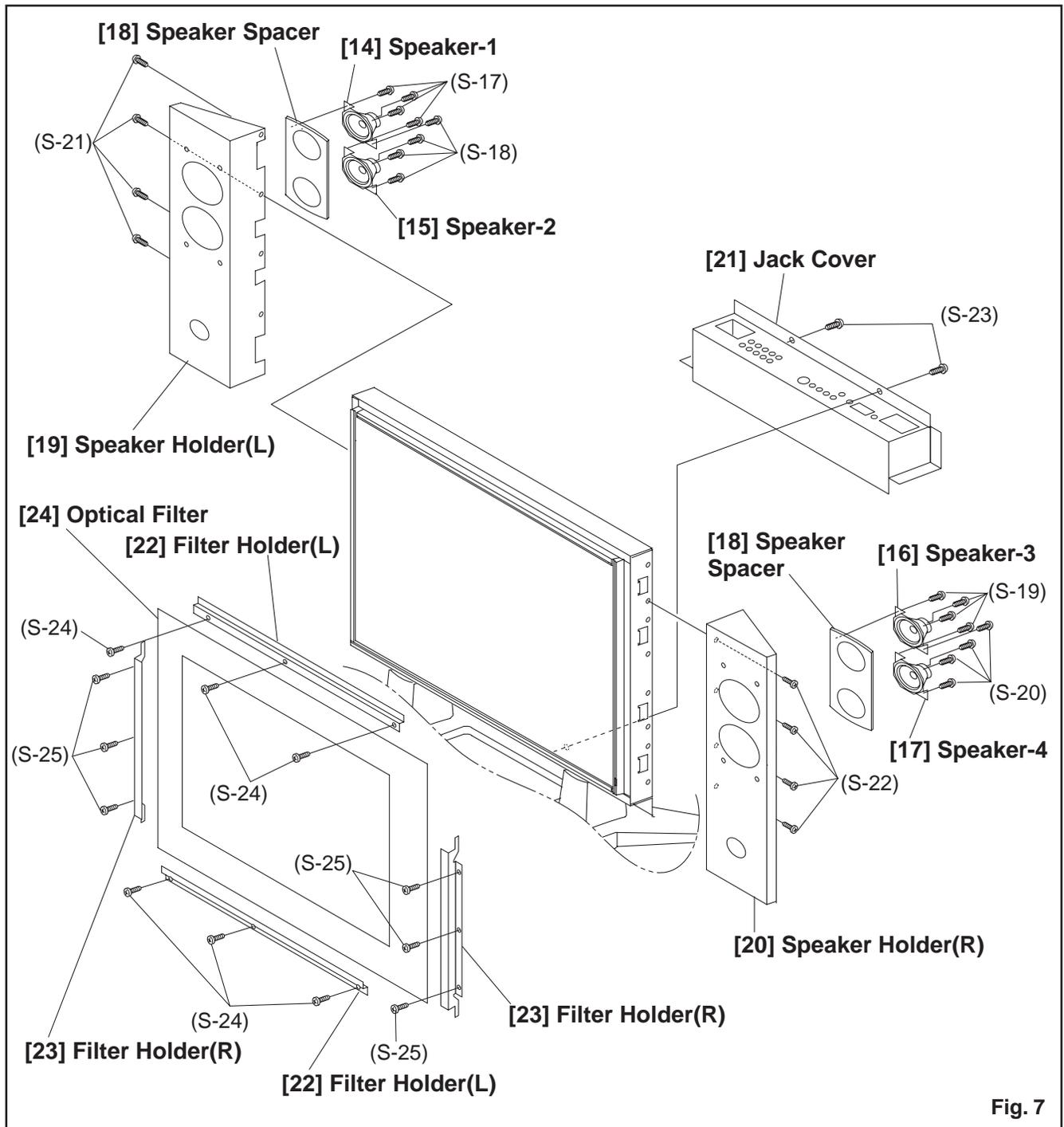
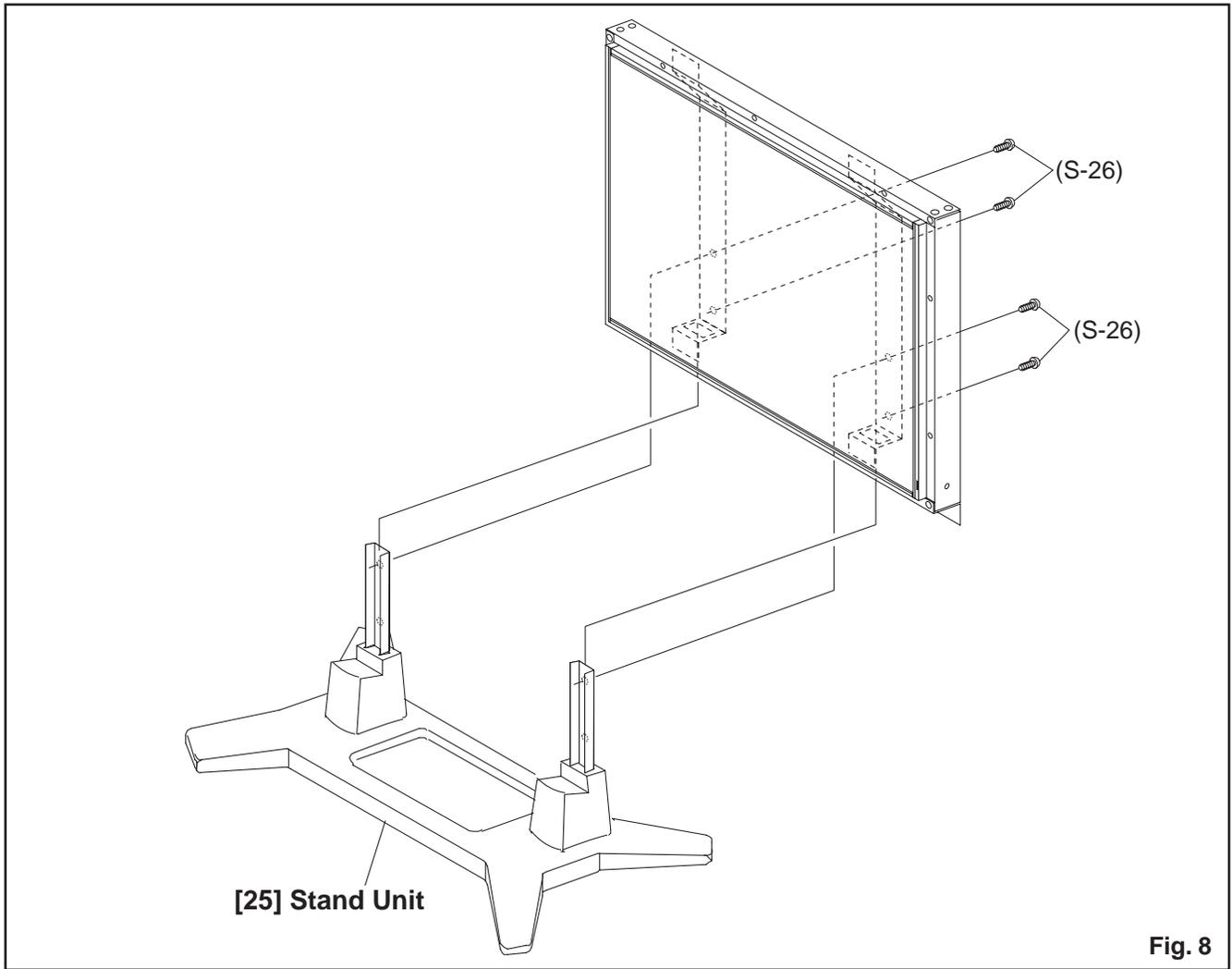


Fig. 7



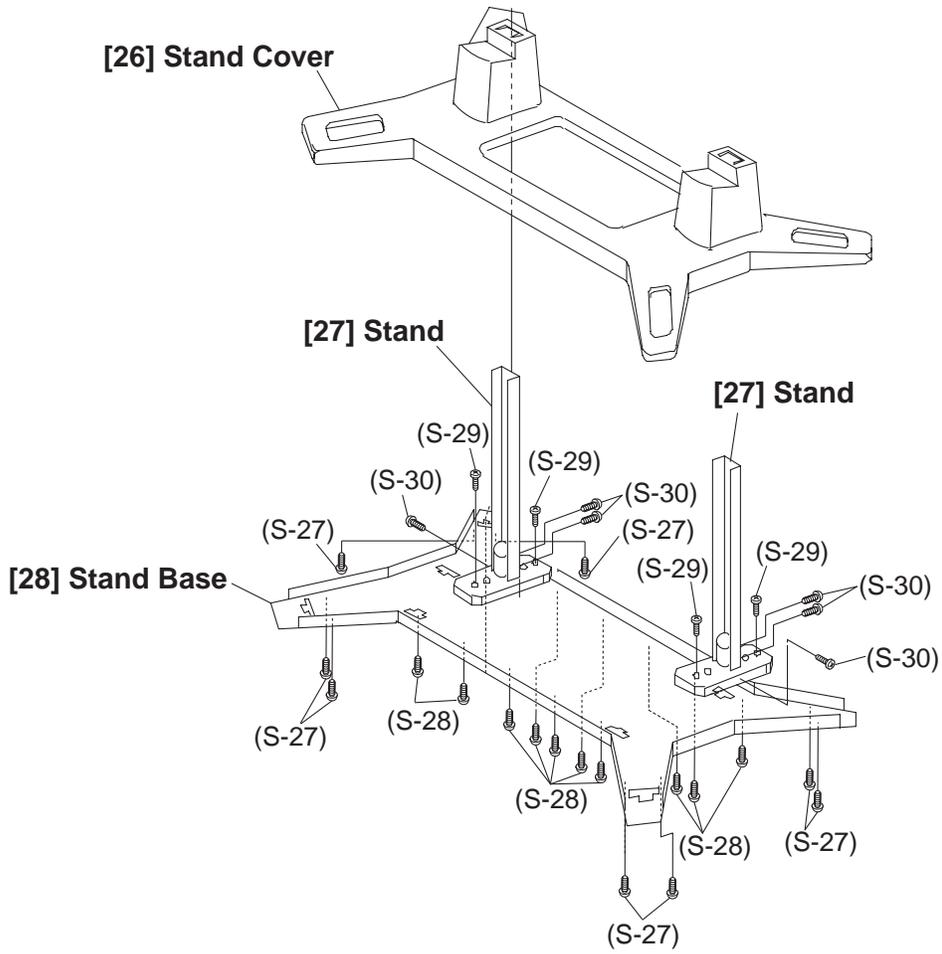


Fig. 9

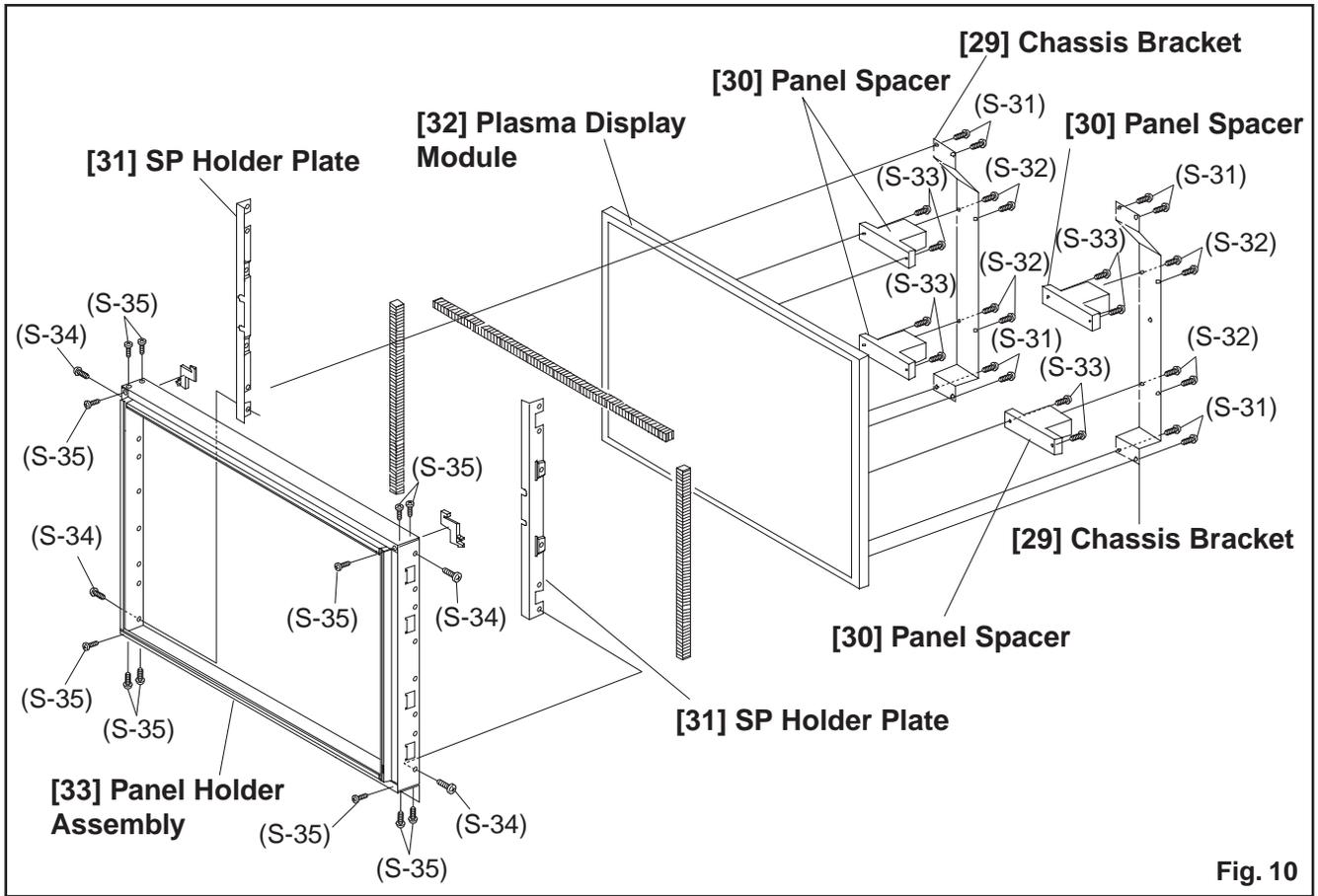
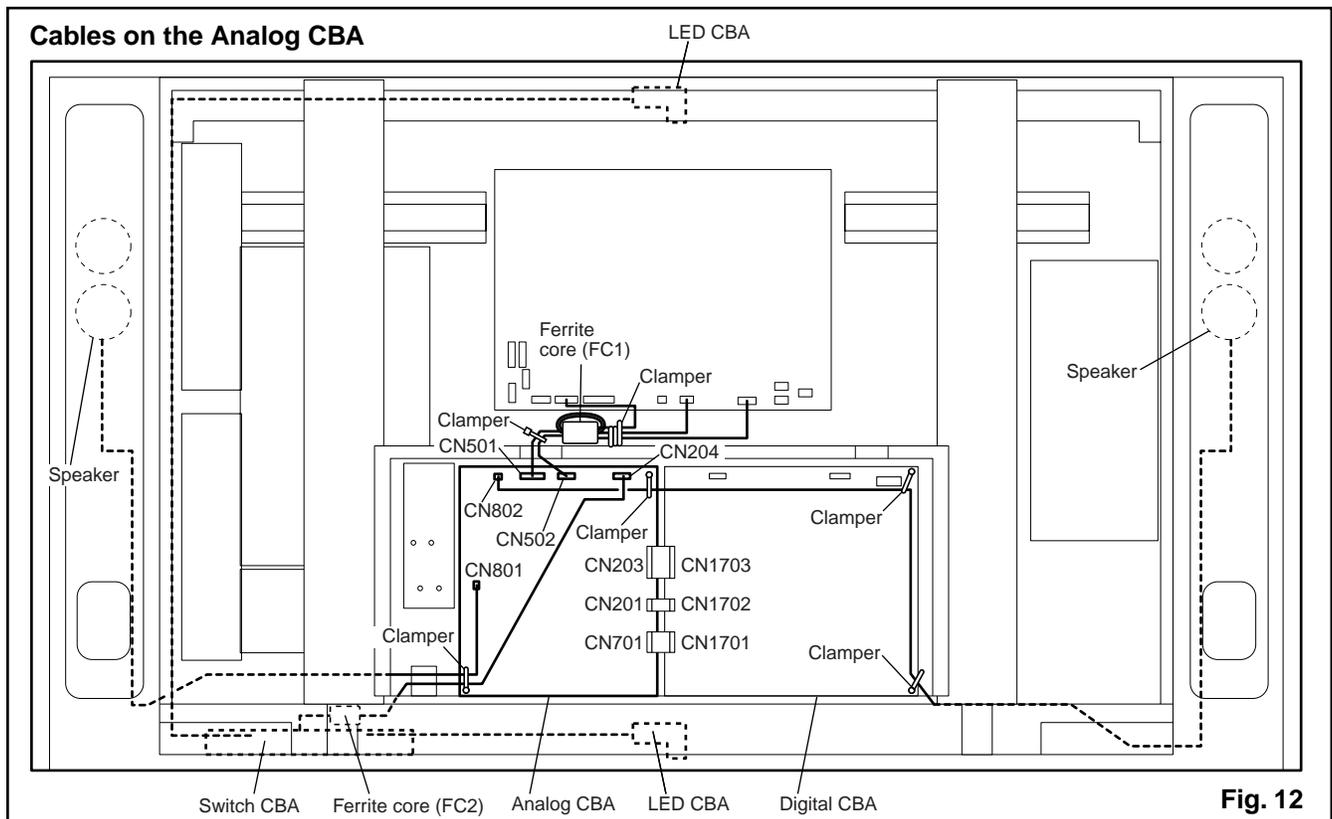
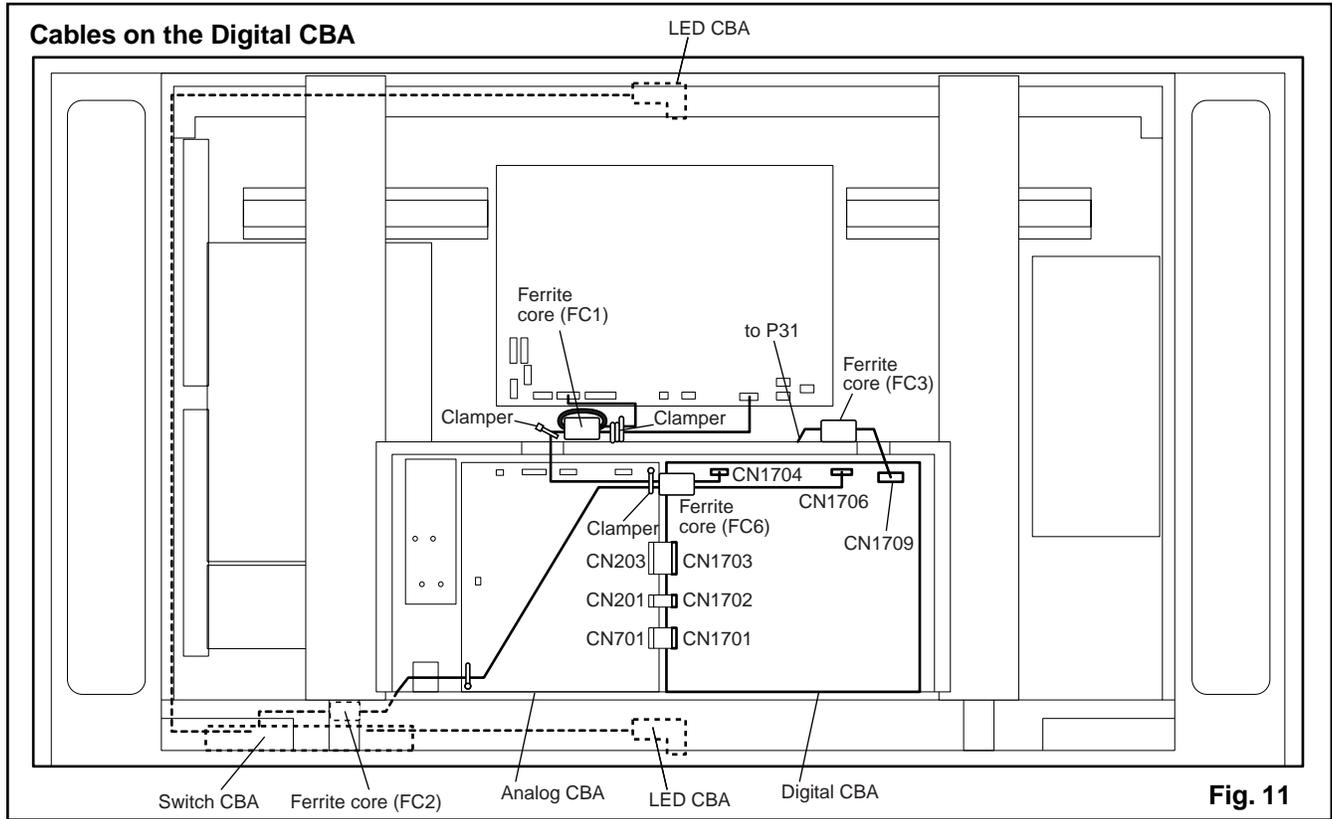


Fig. 10

Plasma Display Cable Wiring Diagram



Cables on the Filter CBA

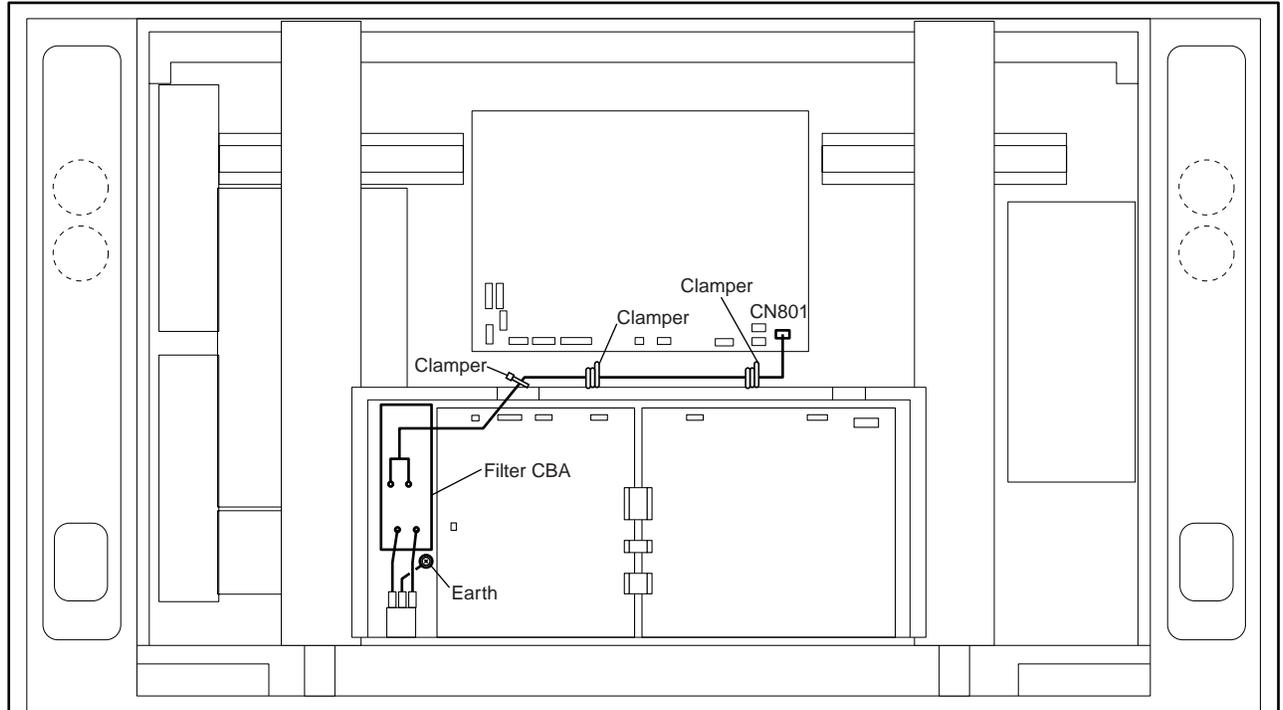


Fig. 13

ELECTRICAL ADJUSTMENT INSTRUCTIONS

General Note:

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

NOTE:

Electrical adjustments are required after replacing circuit components and certain mechanical parts. It is important to perform these adjustments only after all repairs and replacements have been completed.

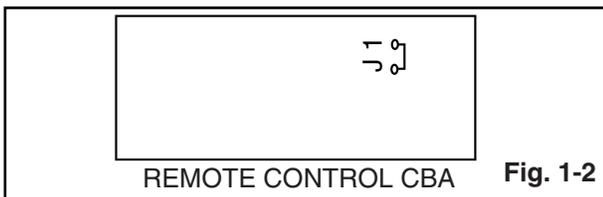
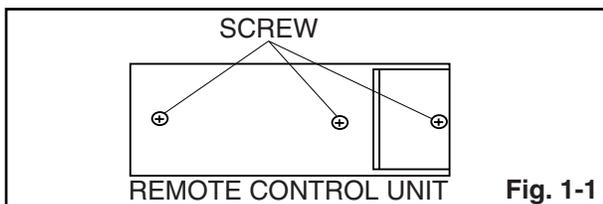
Also, do not attempt these adjustments unless the proper equipment is available.

Test Equipment Required

1. NTSC Pattern Generator (Color Bar W/White Window, Red Color, Gray Scale)
2. Plastic Tip Driver
3. Remote control unit: Part No. N0105UD, N0108UD, N0127UD or N0132UD
4. Color Analyzer

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



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 on the service remote control unit. Fig. 2 appears on the screen.

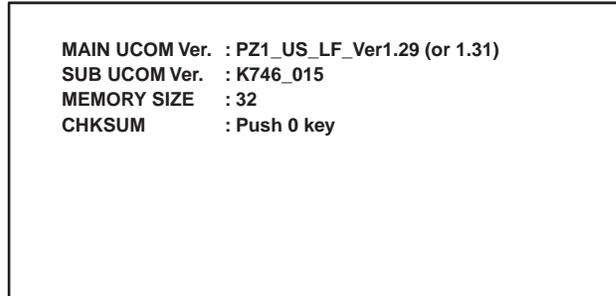


Fig. 2

4. Confirm the following
 - a. Version of main micro computer --- PZ1_US_LF_Ver1.29 (or 1.31)
 - b. Version of sub micro computer --- K746_015
 - c. Memory size --- 32
 - d. FLASH DATA Check-Sum (press "0" button on the service remote control unit) --- D2F7h (or E170h)

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 service remote control unit.
 - "INITIALIZE" (red) appears on the screen as shown in Fig. 3.

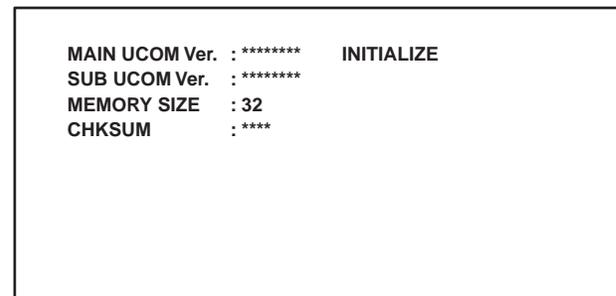


Fig. 3

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

1. Auto Calibration (Black & White)

1. Operate the unit more than 20 minutes.
2. Input black raster signal from only Component AV Input (2) video/Y jack (green). Do not input any signal to Component AV Input (2) video/Pb or Pr jack.
3. Enter the service mode.
4. To enter the Auto Calibration (Black) adjustment mode, press "2" button on the service remote control unit. If no signal, "No signal" appears on the screen.
5. To start auto adjustment, press "CH ▲" button on the service remote control unit.
6. Input white raster signal (100% or 110%) from only Component AV Input (2) video/Y jack (green). Do not input any signal to Component AV Input (2) video/Pb or Pr jack.
7. To enter the Auto Calibration (White) adjustment mode, press "3" button on the service remote control unit. If no signal, "No signal" appears on the screen.
8. To start auto adjustment, press "CH ▲" button on the service remote control unit.
9. Upon completion, wait for at least 5 seconds.
10. Unplug AC cord and plug it in AC outlet again to reset then enter the service mode again.
11. Confirm that both the "Black Calibration : Complete" and "White Calibration : Complete" are displayed on the screen as shown in Fig. 4. If "Yet" is displayed instead of "Complete", repeat above steps.

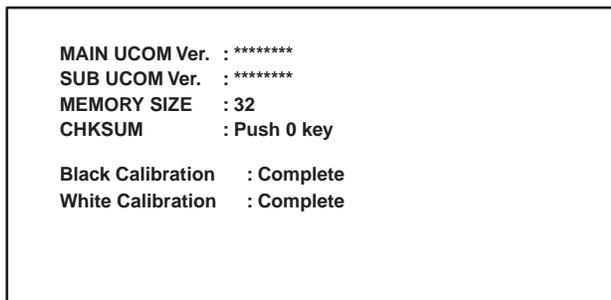


Fig. 4

2. 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 & Component 2	Gray scale pattern signal (5 scales)
M. EQ.			Spec.
Pattern Generator, Color analyzer			See below
Figure			
<p style="text-align: right;">Color Analyzer</p>			

Fig. 5

Notes:

- Use service remote control unit.
- This adjustment should be performed in both Component 2 mode and Video 1 mode. Adjustment in Component 2 mode should be performed after completion of ADC calibration adjustment.

1. Operate the unit more than 20 minutes.
2. Input the gray scale pattern signal (5 scales) from Component AV Input (2) video/Y jack.
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.

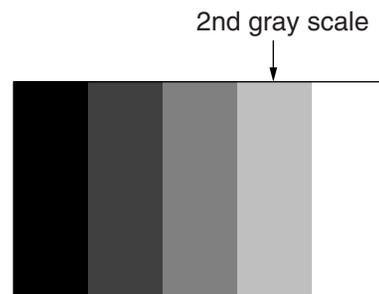


Fig. 6

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 ▲ / ▼" button to adjust the values of color.
8. Adjust Red and Blue color so that the temperature becomes 9200°K-5MPCD (x: 288 / y: 288) ±3%.
9. For low light adjustment, bring the optical receptor to the 4th scale as shown below.

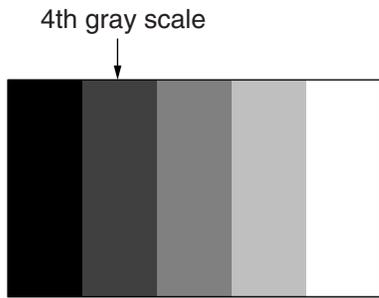


Fig. 7

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 ▲ / ▼" button to adjust the values of color.
12. Adjust Red and Blue color so that the temperature becomes 9200°K-5MPCD (x: 288 / y: 288) ±3%.
13. Check adjustment value in high light adjustment again. If adjustment value is not within specification, repeat steps 2-8.
14. To enter the adjustment mode in the Composite mode (Video 1 mode), press "VOL ▼" button once on the service remote control unit.
15. Input the gray scale pattern signal (5 scales) from Composite AV Input (1) video jack (Video 1).
16. Adjust in the same way above.

3. Sub-Brightness Adjustment

Purpose: To get proper brightness.

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

Adj. Point	Mode	Input
CH ▲ / ▼ buttons	Video 1 & Component 2	IQW
M. EQ.	Spec.	
Pattern Generator	See below	

Figure

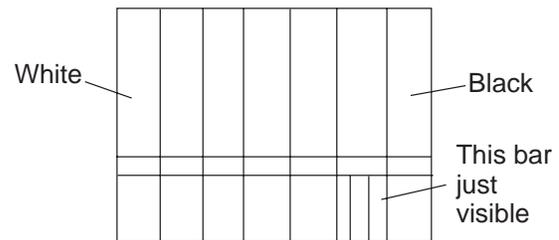


Fig. 8

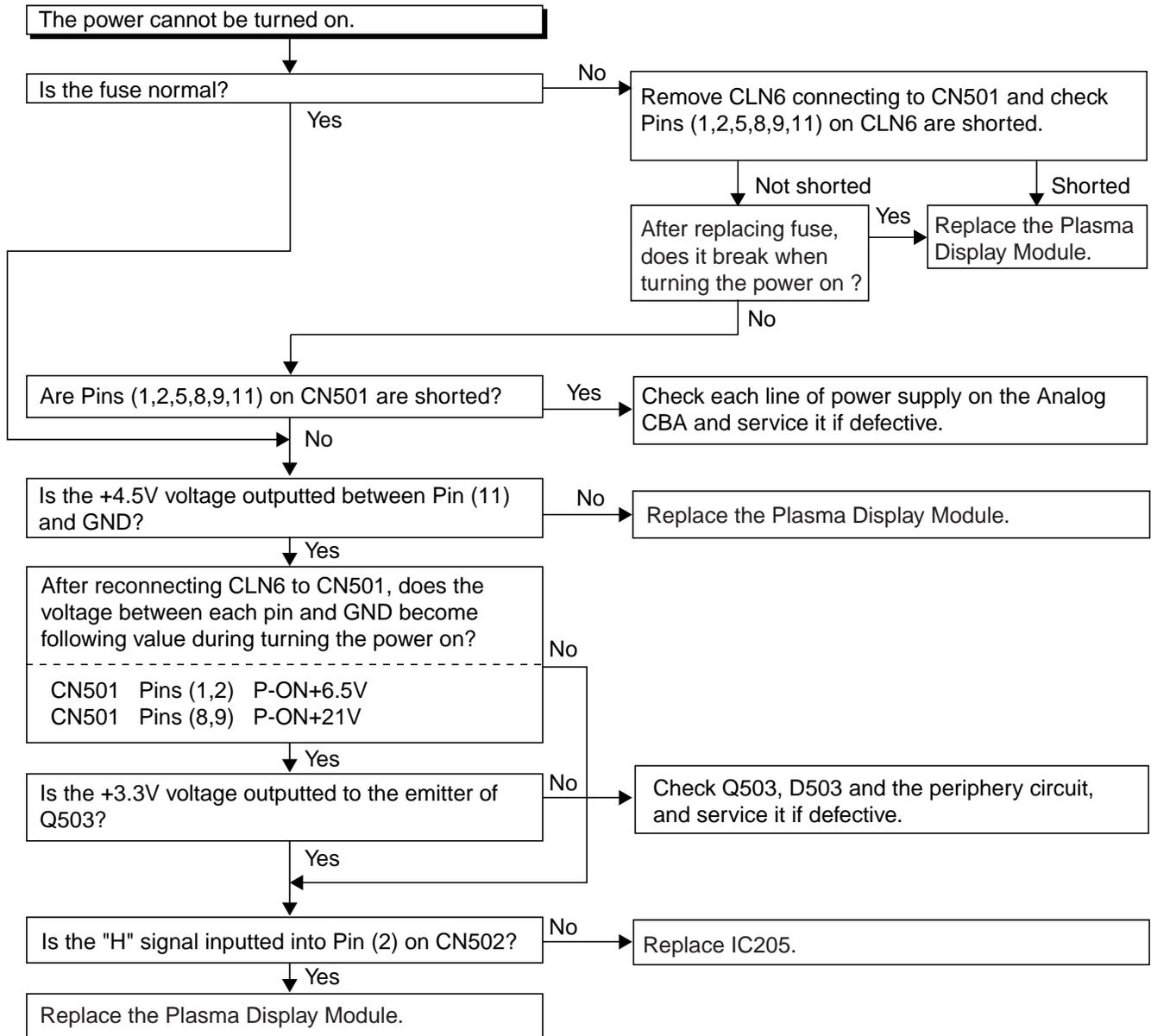
Notes:

- IQW Setup level --- 7.5 IRE
- Use service remote control unit.
- This adjustment should be performed in both Component 2 mode and Video 1 mode. Adjustment in Component 2 mode should be performed after completion of ADC calibration adjustment.

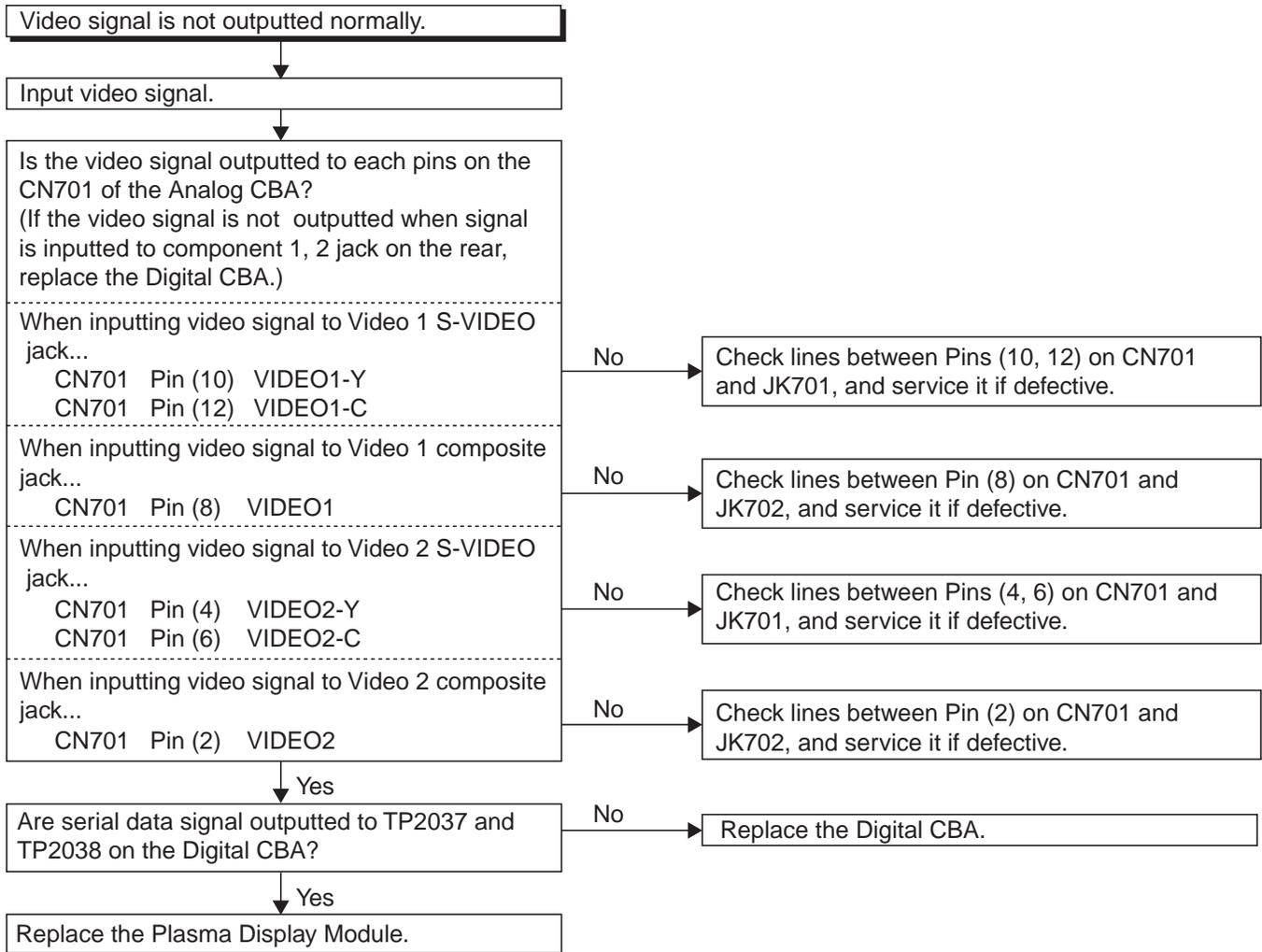
1. Enter the Service mode. Then input IQW signal from Component AV Input (2) video.
2. Press "VOL ▼" button on the service remote control unit.
3. Press "7" on the service remote control unit.
4. Press "CH ▲ / ▼" buttons so that the bar is just visible. (Refer to Fig. 8.)
5. Input IQW signal from Composite AV Input (1) video jack (Video 1).
6. To adjust in Composite mode (Video 1 mode), repeat steps 2 - 4.
7. Turn the power off and on again, using the main power button on the TV unit.

TROUBLESHOOTING

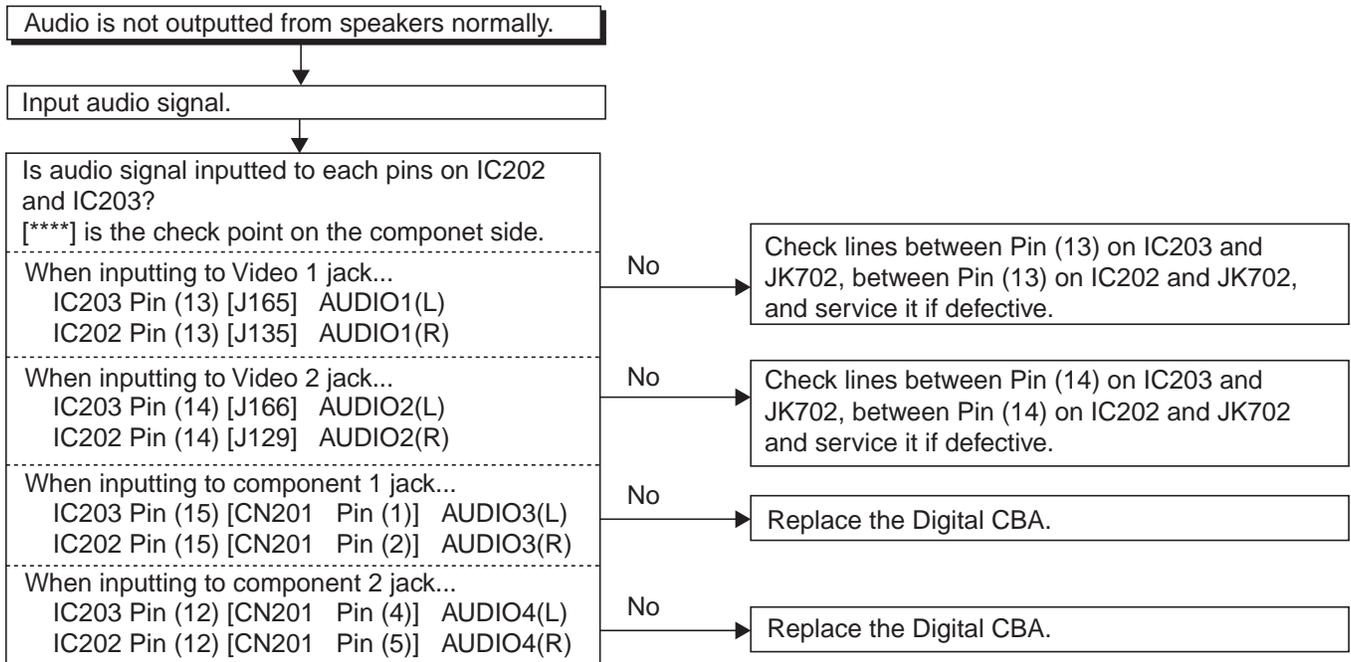
FLOW CHART NO.1



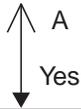
FLOW CHART NO. 2



FLOW CHART NO. 3



√ (continued to "A" on next page)



Is input switching signal inputted to each pins on IC202 and IC203?
 [****] is the check point on the componet side.

	Pin (9) [Q205-C]	Pin (10) [Q204-C]	Pin (11) [Q203-C]
Video 1	L	L	L
Video 2	L	L	H
Component 1	L	H	L
Component 2	L	H	H

Check lines between each pins on IC203 and each pins on IC205, between each pins on IC202 and each pins on IC205 and service it if defective.

Pin (9) on IC202,IC203 → Pin (30) on IC205
 Pin (10) on IC202,IC203 → Pin (29) on IC205
 Pin (11) on IC202,IC203 → Pin (28) on IC205

Check +6.5 V line and service it if defective.

Is audio signal outputted to each pins on IC202 and IC203?
 [****] is the check point on the componet side.

IC203 Pin (3) [J148] L-CH
 IC202 Pin (3) [J142] R-CH

Is +6.5V signal inputted to Pin (16) on IC202 and Pin (16) on IC203?

Replace IC202 or IC203.

Is audio signal inputted to each pins on IC801?

IC801 Pin (5) L-CH
 IC801 Pin (2) R-CH

Check lines between each pins on IC203 and each pins on IC801, between each pins on IC202 and each pins on IC801 and service it if defective.

Pin (3) on IC203 → Pin (5) on IC801
 Pin (3) on IC202 → Pin (2) on IC801

Check +21 V line and service it if defective.

Is audio signal outputted to each pins on IC801?

IC801 Pin (7) L-CH
 IC801 Pin (12) R-CH

Is +21V signal inputted to Pin (10) on IC801?

Is the "L" pulse supplied to the base of Q801?

Replace IC801.

Replace IC205.

Is each audio signal inputted to Pin (1) on CN801 and Pin (1) on CN802?

CN802 Pin (1) L-CH
 CN801 Pin (1) R-CH

Check lines between Pin (1) on CN801 and each pins on IC801, between Pin (1) on CN802 and each pins on IC801 and service it if defective.

Pin (7) on IC801 → Pin (1) on CN802
 Pin (12) on IC801 → Pin (1) on CN801

Replace Speaker (SP801 or SP802).

FLOW CHART NO. 4

Audio is not outputted from audio output terminal normally.

Input audio signal.

Is audio signal inputted to each pins on IC202 and IC203?
[****] is the check point on the componet side.

When inputting to Video 1 jack...
IC203 Pin (13) [J165] AUDIO1(L)
IC202 Pin (13) [J135] AUDIO1(R)

When inputting to Video 2 jack...
IC203 Pin (14) [J166] AUDIO2(L)
IC202 Pin (14) [J129] AUDIO2(R)

When inputting to component 1 jack...
IC203 Pin (15) [CN201 Pin (1)] AUDIO3(L)
IC202 Pin (15) [CN201 Pin (2)] AUDIO3(R)

When inputting to component 2 jack...
IC203 Pin (12) [CN201 Pin (4)] AUDIO4(L)
IC202 Pin (12) [CN201 Pin (5)] AUDIO4(R)

No → Check lines between Pin (13) on IC203 and JK702, between Pin (13) on IC202 and JK702, and service it if defective.

No → Check lines between Pin (14) on IC203 and JK702, between Pin (14) on IC202 and JK702 and service it if defective.

No → Replace the Digital CBA.

No → Replace the Digital CBA.

Yes

Is input switching signal inputted to each pins on IC202 and IC203?
[****] is the check point on the componet side.

	Pin (9) [Q205-C]	Pin (10) [Q204-C]	Pin (11) [Q203-C]
Video 1	L	L	L
Video 2	L	L	H
Component 1	L	H	L
Component 2	L	H	H

No → Check lines between each pins on IC203 and each pins on IC205, between each pins on IC202 and each pins on IC205 and service it if defective.

Pin (9) on IC202,IC203 → Pin (30) on IC205
Pin (10) on IC202,IC203 → Pin (29) on IC205
Pin (11) on IC202,IC203 → Pin (28) on IC205

Check +6.5 V line and service it if defective.

Yes

Is audio signal outputted to each pins on IC202 and IC203?
[****] is the check point on the componet side.

IC203 Pin (3) [J148] L-CH
IC202 Pin (3) [J142] R-CH

No → Is +6.5V signal inputted to Pin (16) on IC202 and Pin (16) on IC203?
Yes → Replace IC202 or IC203.

Yes

Is audio signal outputted to the collector of Q707 (L-CH) and the collector of Q708 (R-CH)?

No → Check Q707, Q708 and the periphery circuit, and service it if defective.

Yes

Is the "L" pulse supplied to the base of Q711 and the base of Q712?

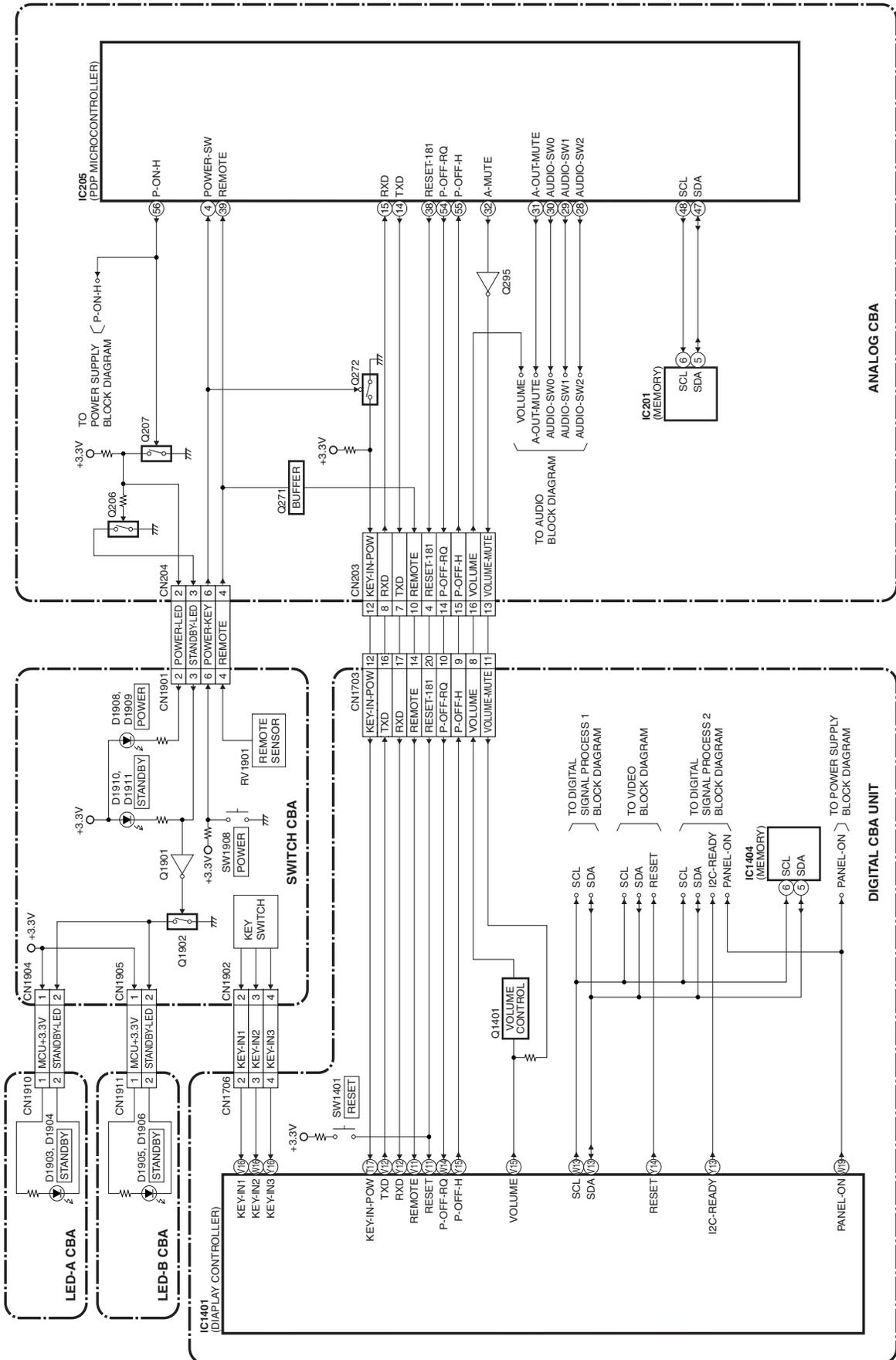
No → Is the "L" pulse supplied to the base of Q710?
Yes → Check Q709 and the periphery circuit, and service it if defective.
No → Replace IC205.

Yes

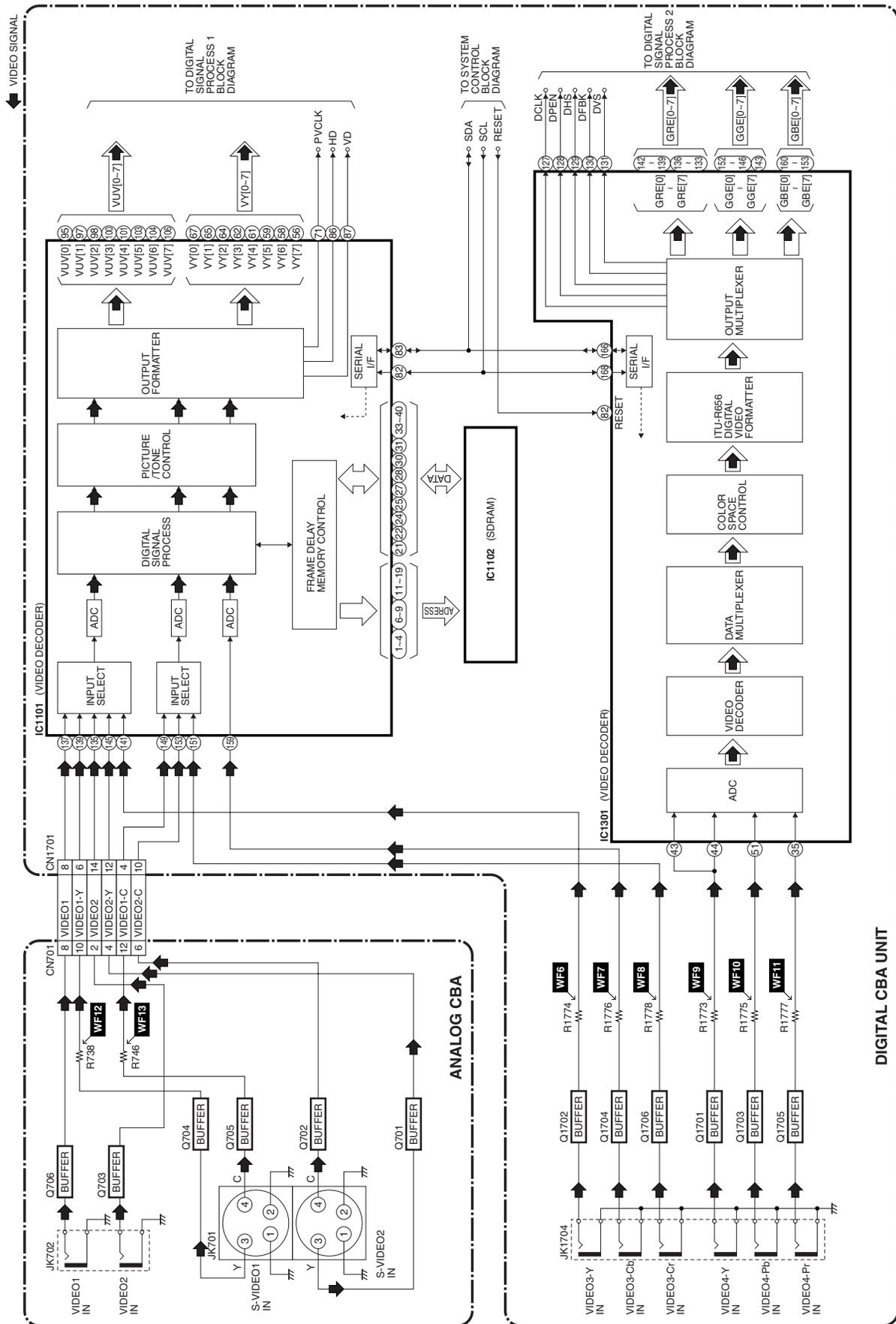
Check lines between Q707 and JK703, between Q708 and JK703 and service it if defective.

BLOCK DIAGRAMS

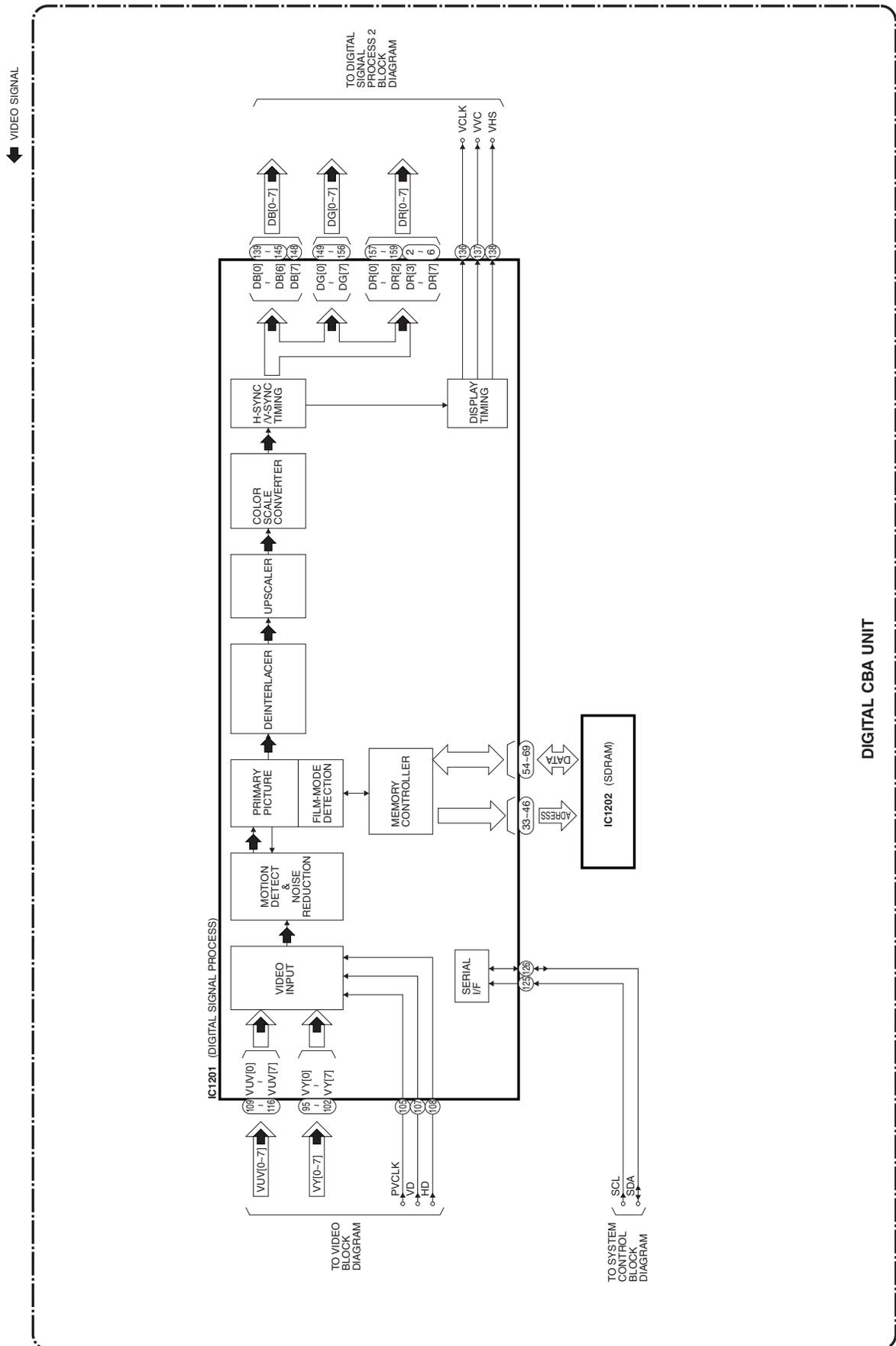
System Control Block Diagram



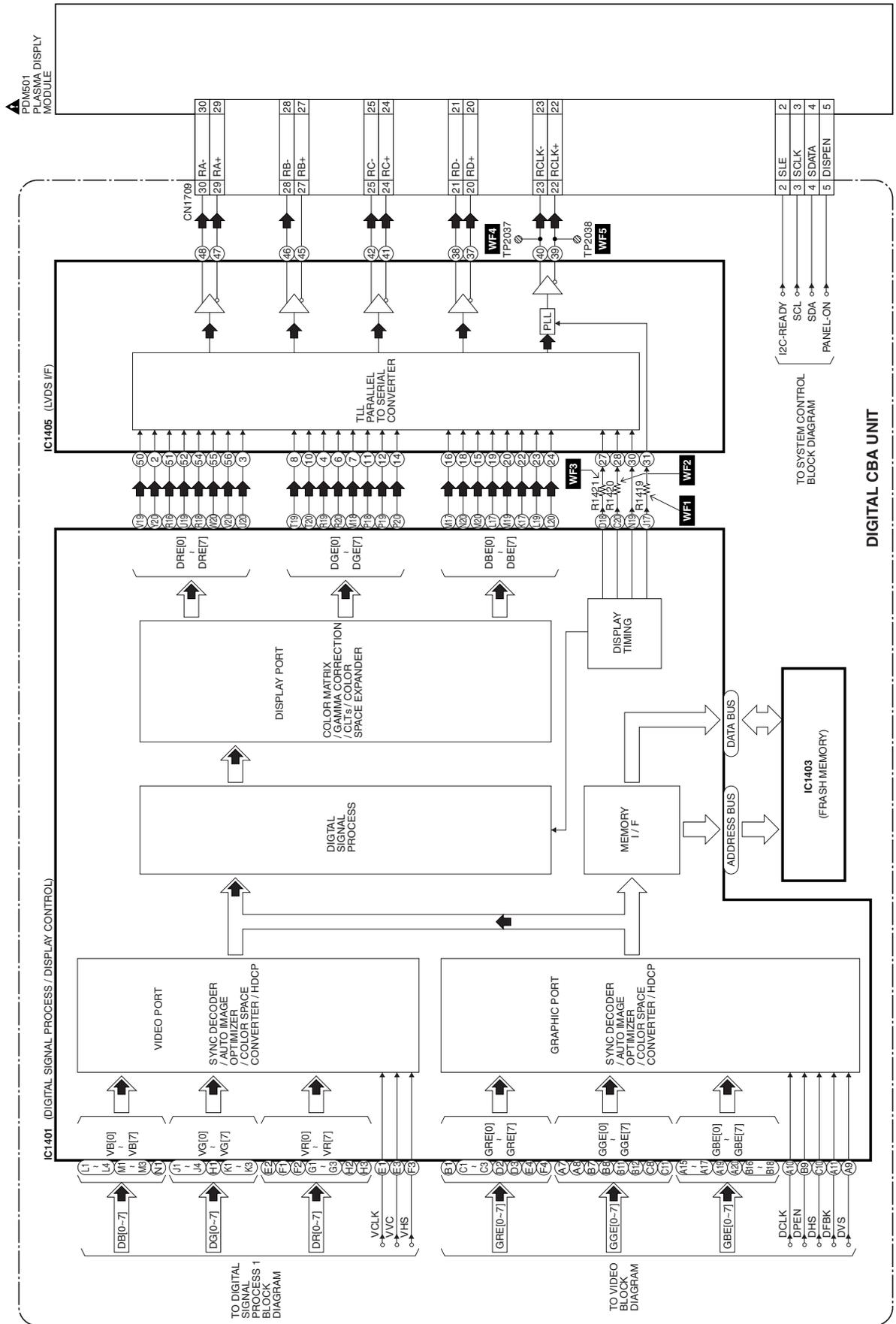
Video Block Diagram



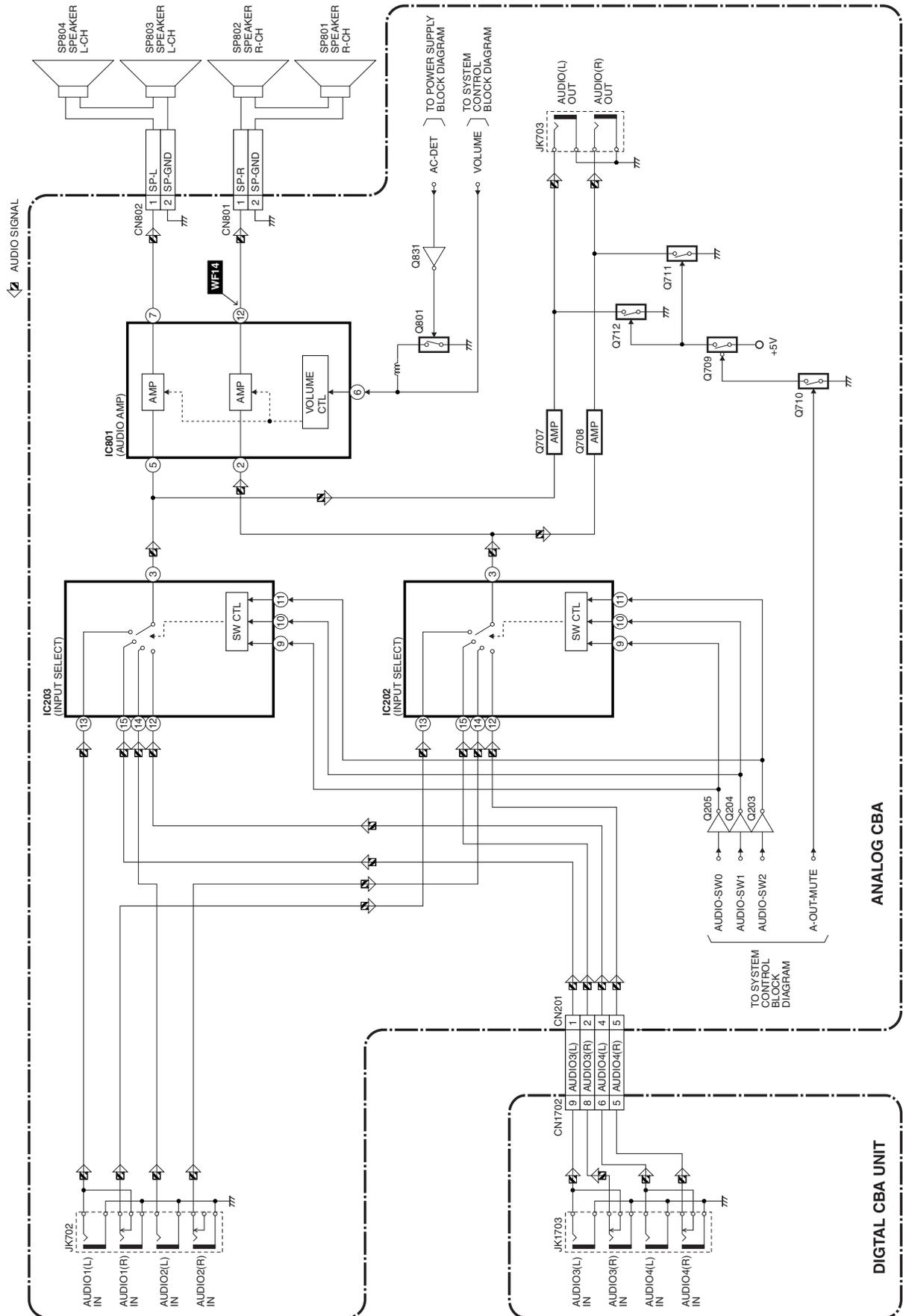
Digital Signal Process 1 Block Diagram



Digital Signal Process 2 Block Diagram



Audio Block Diagram

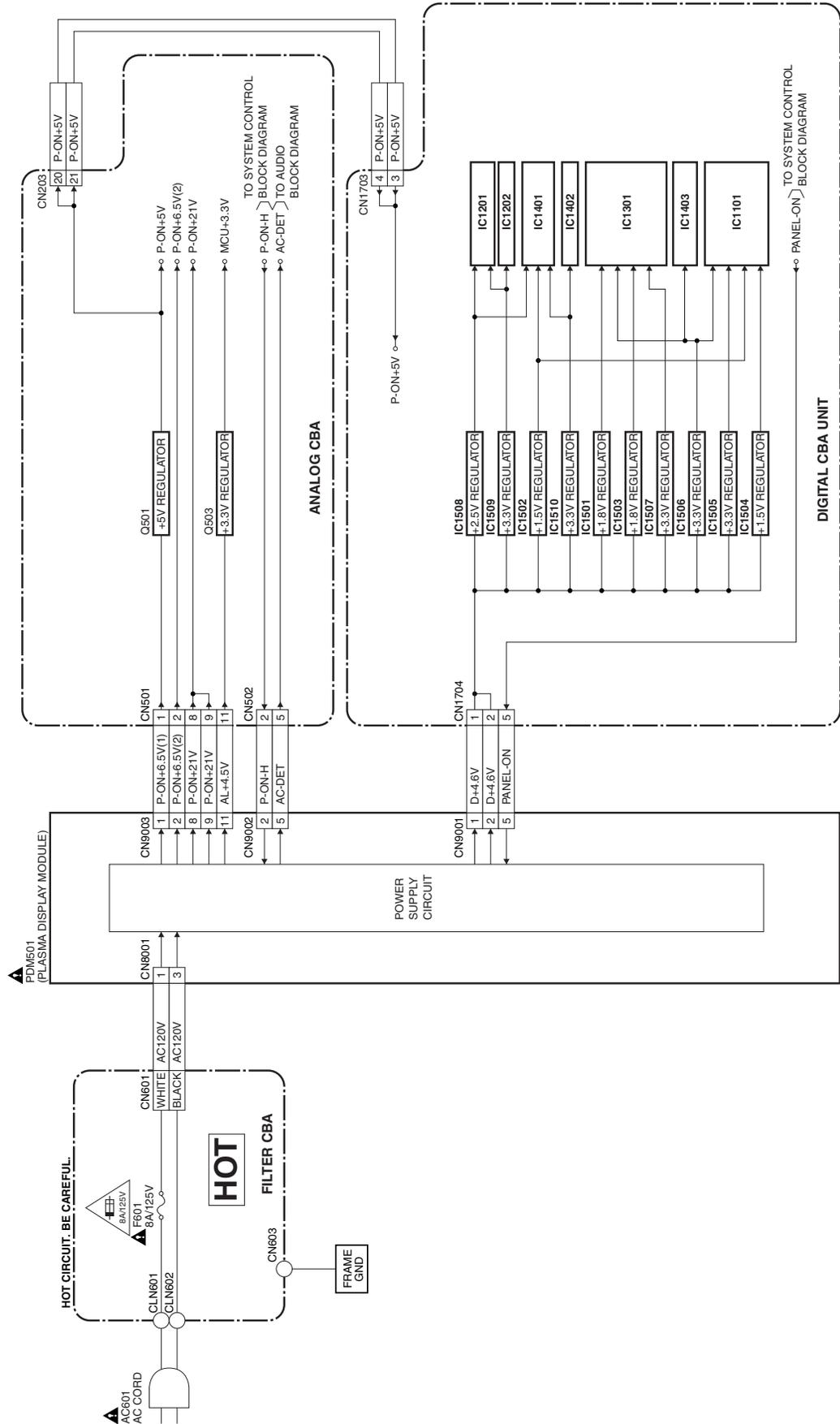


Power Supply Block Diagram

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



CAUTION: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE,
REPLACE ONLY WITH SAME TYPE 8 A, 250V FUSE.
ATTENTION: UTILISER UN FUSIBLE DE RECHANGE DE MEME TYPE DE 8A, 250V.



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 ($P=10^{-6}\mu F$).
5. All voltages are DC voltages unless otherwise specified.

Note of Capacitors:

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

Temperature Characteristics of Capacitors are noted with the following:

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

Tolerance of Capacitors are noted with the following:

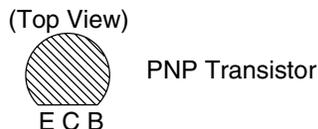
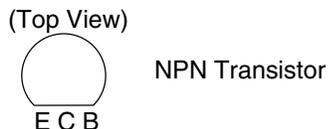
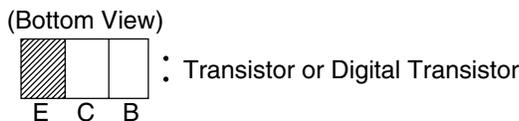
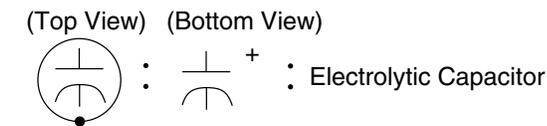
Z --- $+80\sim\sim 20\%$

Note of Resistors:

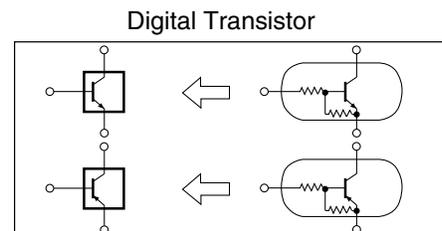
CEM --- Cement Res. MTL --- Metal Res. F --- Fuse Res.

Capacitors and transistors are represented by the following symbols.

CBA Symbols



Schematic Diagram Symbols



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

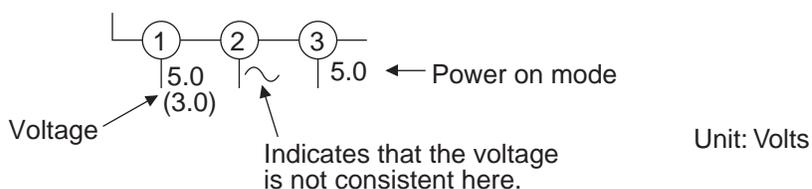
3. Note:

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

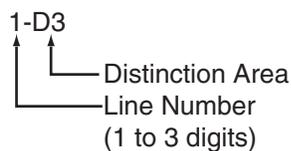
(2) To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list section of the service manual.

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

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



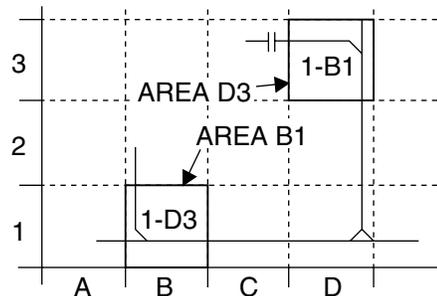
5. How to read converged lines



Examples:

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

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



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.

Digital 1/5 Schematic Diagram

***1 Note:**

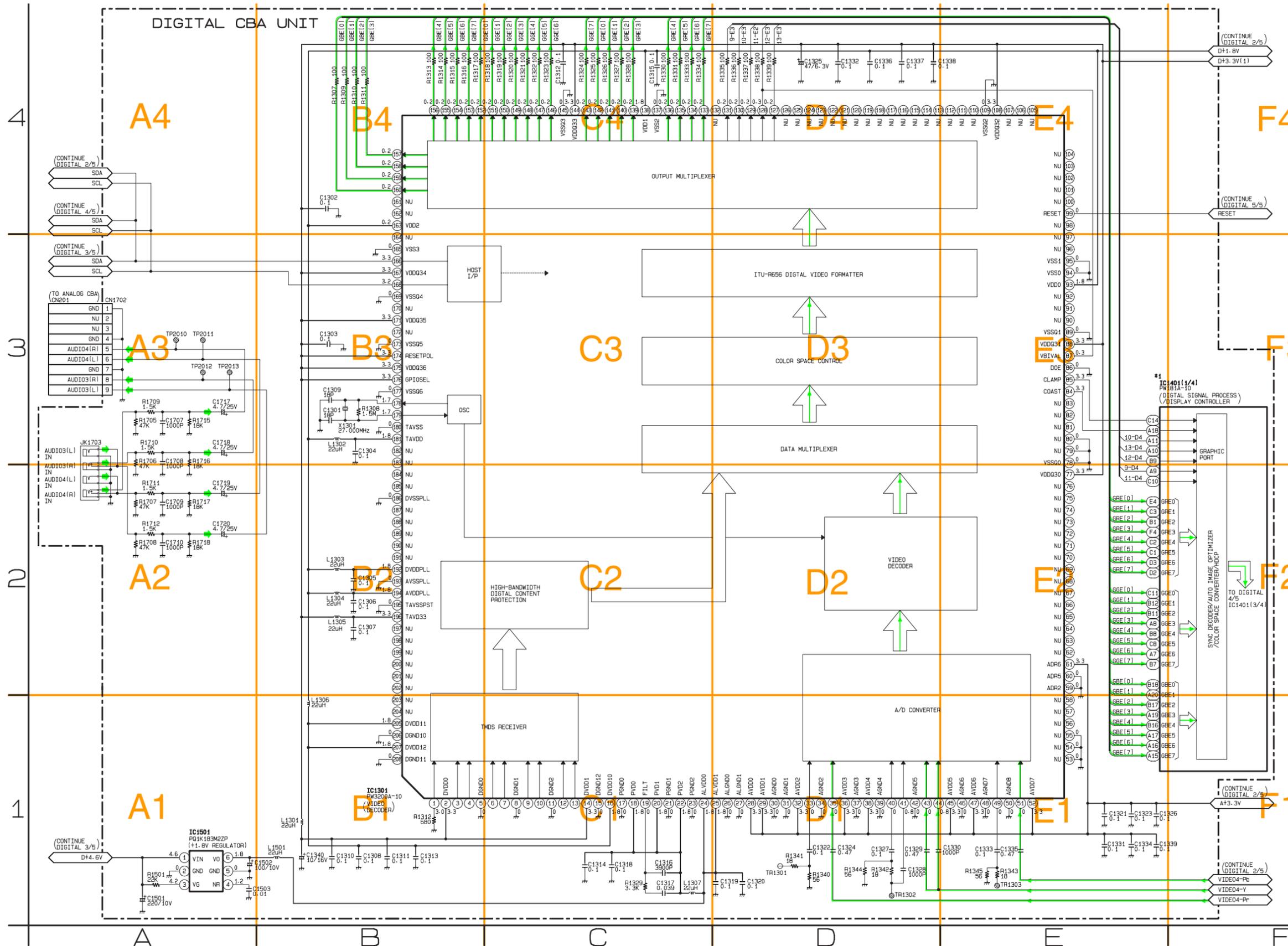
1. The order of pins shown are different from that of IC1401 itself.
2. Some pins are not shown because they are not used.
3. IC1401 is shown as IC1401(1/4) through IC1401(4/4) in Digital Schematic Diagram section.

————— Video Signal

← Audio Signal

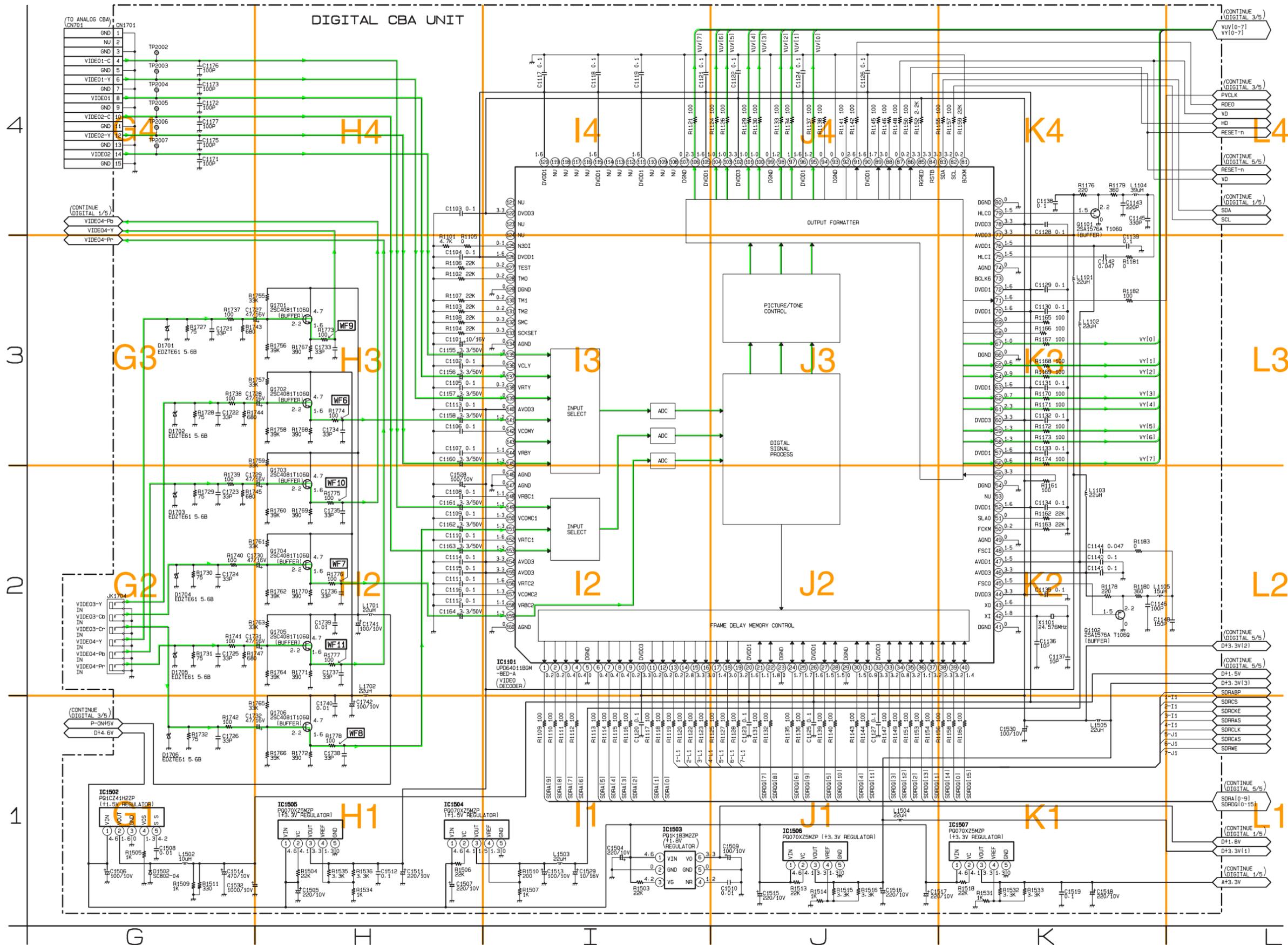
DIGITAL 1/5

Ref No.	Position
ICS	
IC1301	B-1
IC1401(1/4)	F-3
IC1501	A-1
CONNECTOR	
CN1702	A-4



Digital 2/5 Schematic Diagram

Video Signal



DIGITAL 2/5	
Ref No.	Position
ICS	
IC1101	I-2
IC1502	G-1
IC1503	I-1
IC1504	H-1
IC1505	H-1
IC1506	J-1
IC1507	K-1
TRANSISTORS	
Q1101	K-4
Q1102	K-2
Q1701	H-3
Q1702	H-3
Q1703	H-2
Q1704	H-2
Q1705	H-2
Q1706	H-1
CONNECTOR	
CN1701	G-4

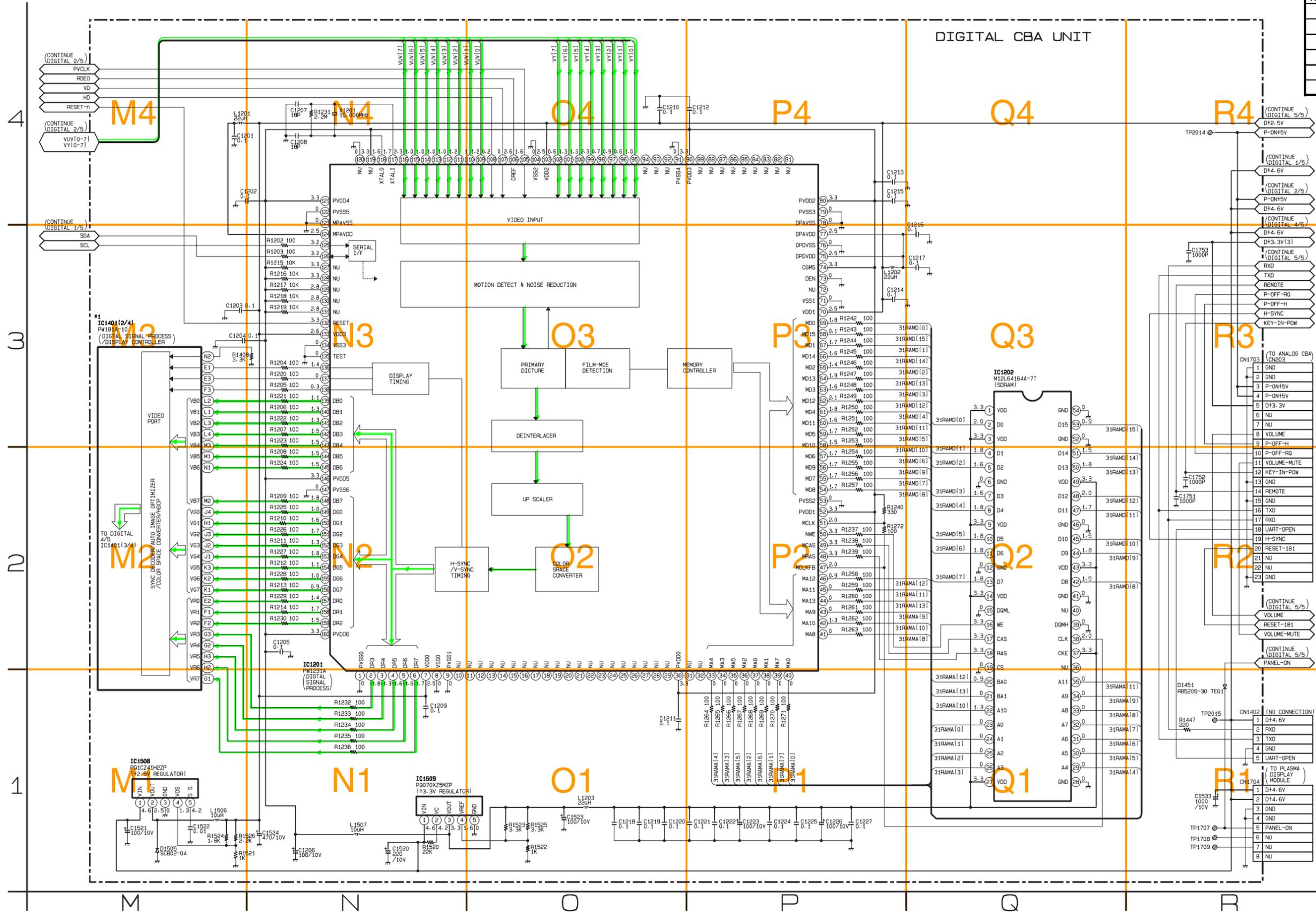
Digital 3/5 Schematic Diagram

***1 Note:**

- The order of pins shown are different from that of IC1401 itself.
- Some pins are not shown because they are not used.
- IC1401 is shown as IC1401(1/4) through IC1401(4/4) in Digital Schematic Diagram section.

Video Signal

DIGITAL 3/5	
Ref No.	Position
ICS	
IC1201	N-2
IC1202	Q-3
IC1401(2/4)	M-3
IC1508	M-1
IC1509	N-1
CONNECTORS	
CN1402	R-1
CN1703	R-3
CN1704	R-1



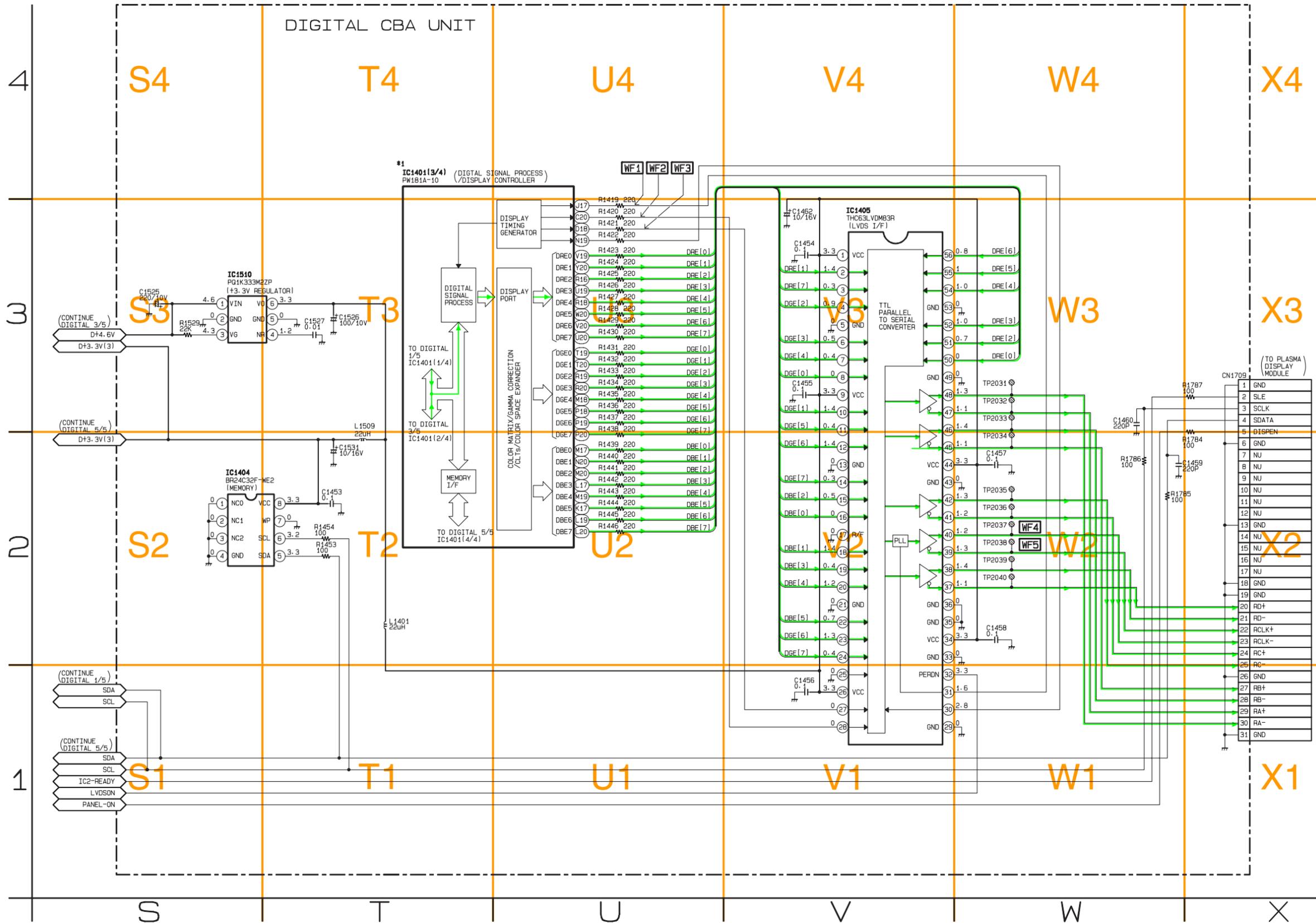
Digital 4/5 Schematic Diagram

***1 Note:**

1. The order of pins shown are different from that of IC1401 itself.
2. Some pins are not shown because they are not used.
3. IC1401 is shown as IC1401(1/4) through IC1401(4/4) in Digital Schematic Diagram section.

———— Video Signal

DIGITAL 4/5	
Ref No.	Position
ICS	
IC1401(3/4)	T-4
IC1404	S-2
IC1405	V-3
IC1510	S-3
CONNECTOR	
CN1709	X-3

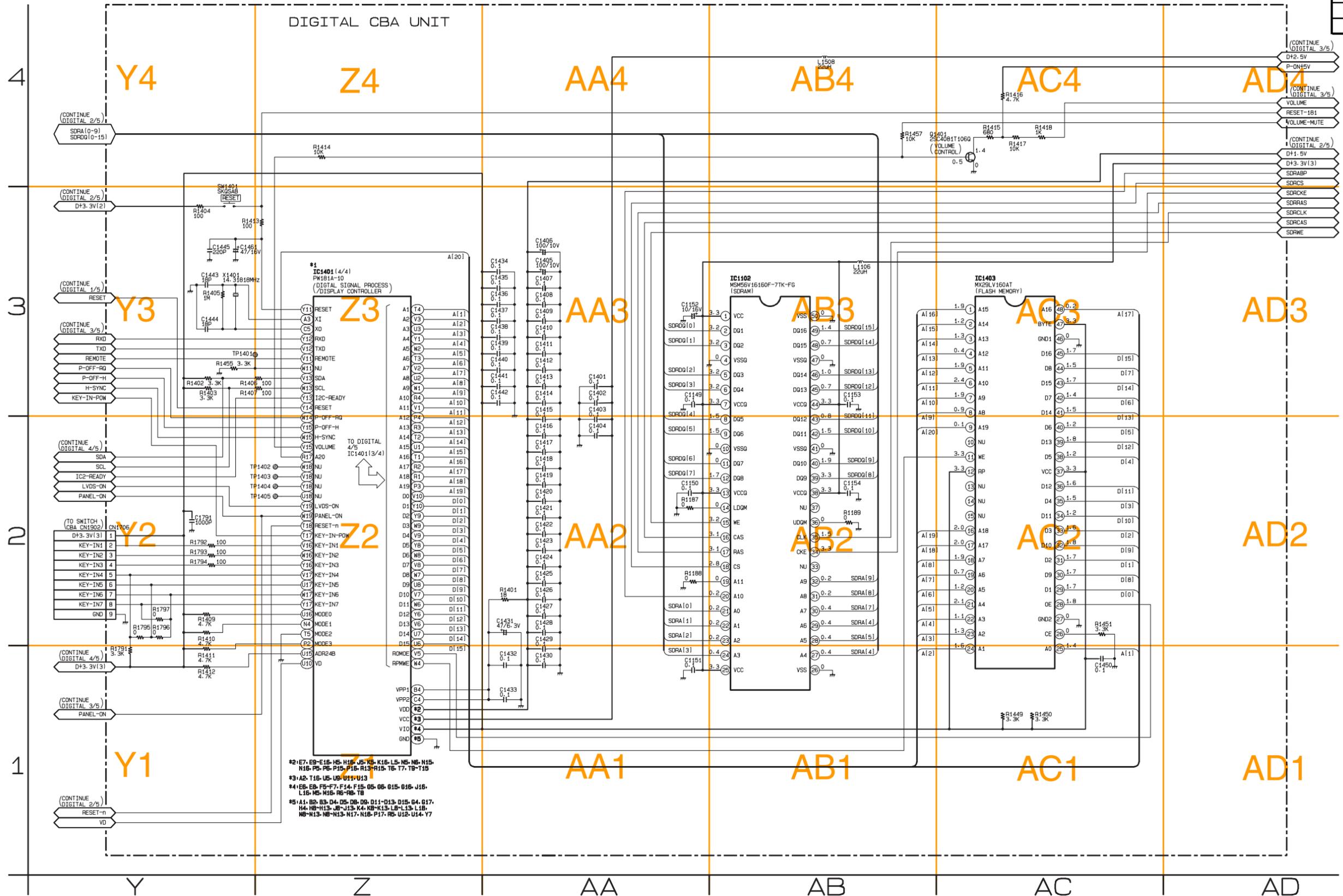


Digital 5/5 Schematic Diagram

***1 Note:**

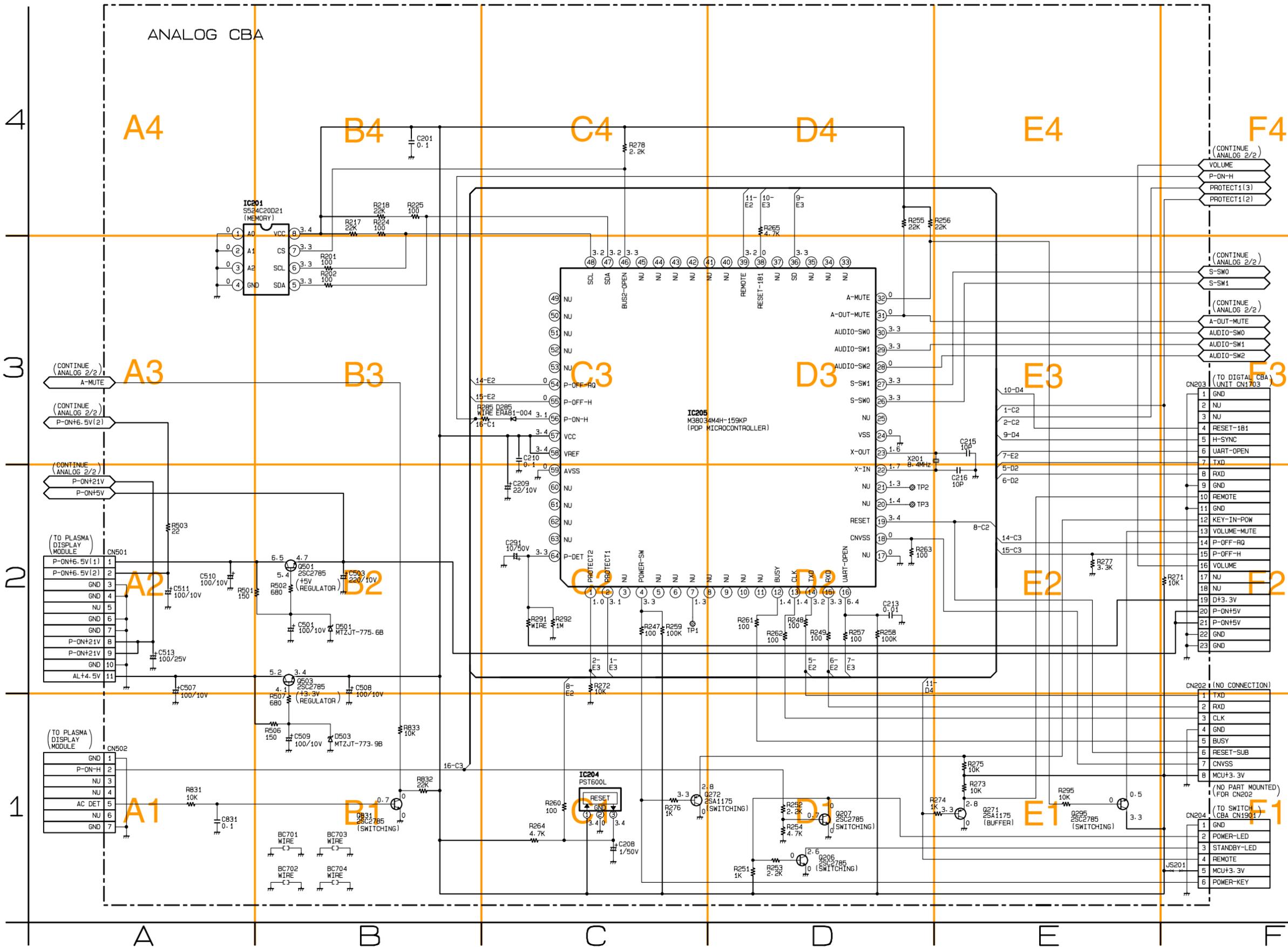
1. The order of pins shown are different from that of IC1401 itself.
2. Some pins are not shown because they are not used.
3. IC1401 is shown as IC1401(1/4) through IC1401(4/4) in Digital Schematic Diagram section.

DIGITAL 5/5	
Ref No.	Position
ICS	
IC1102	AB-3
IC1401(4/4)	Z-3
IC1403	AC-3
TRANSISTOR	
Q1401	AC-4
CONNECTOR	
CN1706	Y-2



*2: E7, E9, E16, H5, H16, J5, K5, K16, L5, N5, N15, N16, P5, P6, P15, P16, R13, R15, T6, T7, T9, T15
 *3: A2, T16, U5, U9, U11, U13
 *4: E6, E8, F5, F7, F14, F16, G5, G6, G15, G16, J16, L16, M5, M16, R6, R8, T8
 *5: A1, B2, B3, D4, D5, D8, D9, D11, D13, D15, G4, G17, H4, H8, H15, H16, J13, K4, K8, K15, L6, L15, L16, N8, N13, N8, N13, N17, N18, P17, R5, U12, U14, Y7

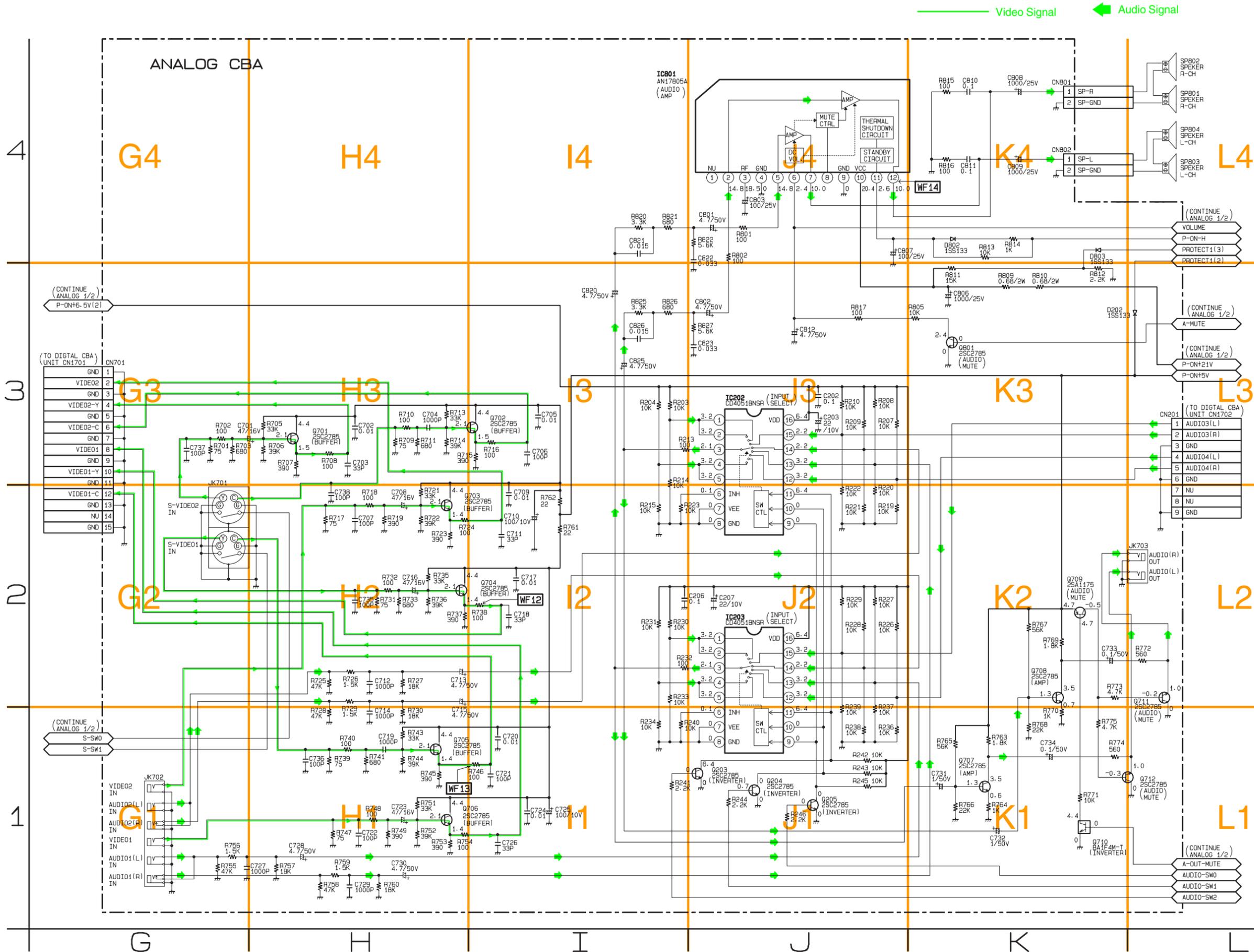
Analog 1/2 Schematic Diagram



ANALOG 1/2

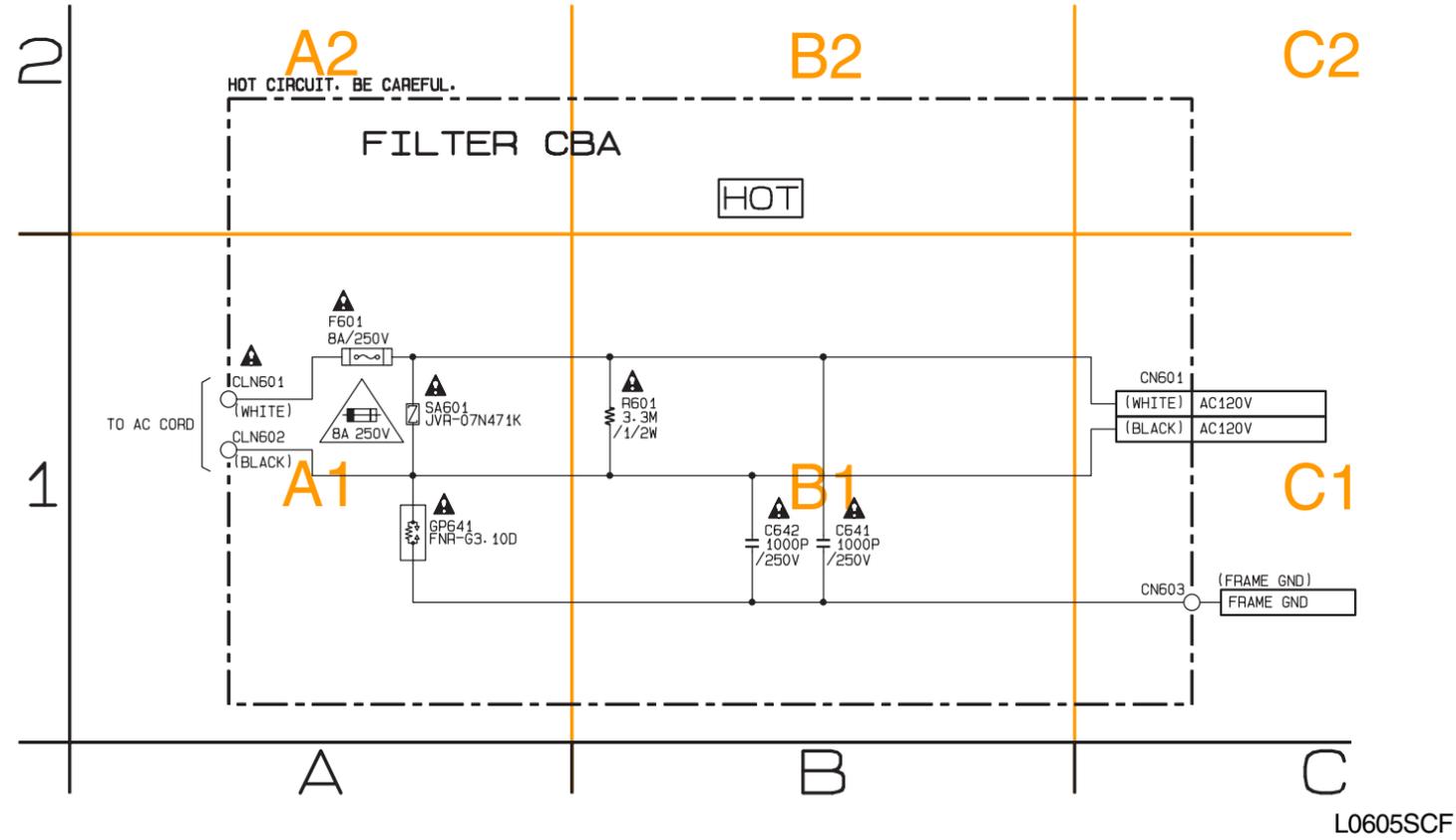
Ref No.	Position
ICS	
IC201	B-4
IC204	C-1
IC205	D-3
TRANSISTORS	
Q206	D-1
Q207	D-1
Q271	E-1
Q272	C-1
Q295	E-1
Q501	B-2
Q503	B-2
Q831	B-1
CONNECTORS	
CN202	F-2
CN203	F-3
CN204	F-1
CN501	A-2
CN502	A-1

Analog 2/2 Schematic Diagram



ANALOG 2/2	
Ref No.	Position
ICS	
IC202	J-3
IC203	J-2
IC801	J-4
TRANSISTORS	
Q203	J-1
Q204	J-1
Q205	J-1
Q701	H-3
Q702	I-3
Q703	H-2
Q704	H-2
Q705	H-1
Q706	H-1
Q707	K-1
Q708	K-2
Q709	K-2
Q710	K-1
Q711	L-2
Q712	L-1
Q801	K-3
CONNECTORS	
CN201	L-3
CN701	G-3
CN801	K-4
CN802	K-4

Filter Schematic Diagram



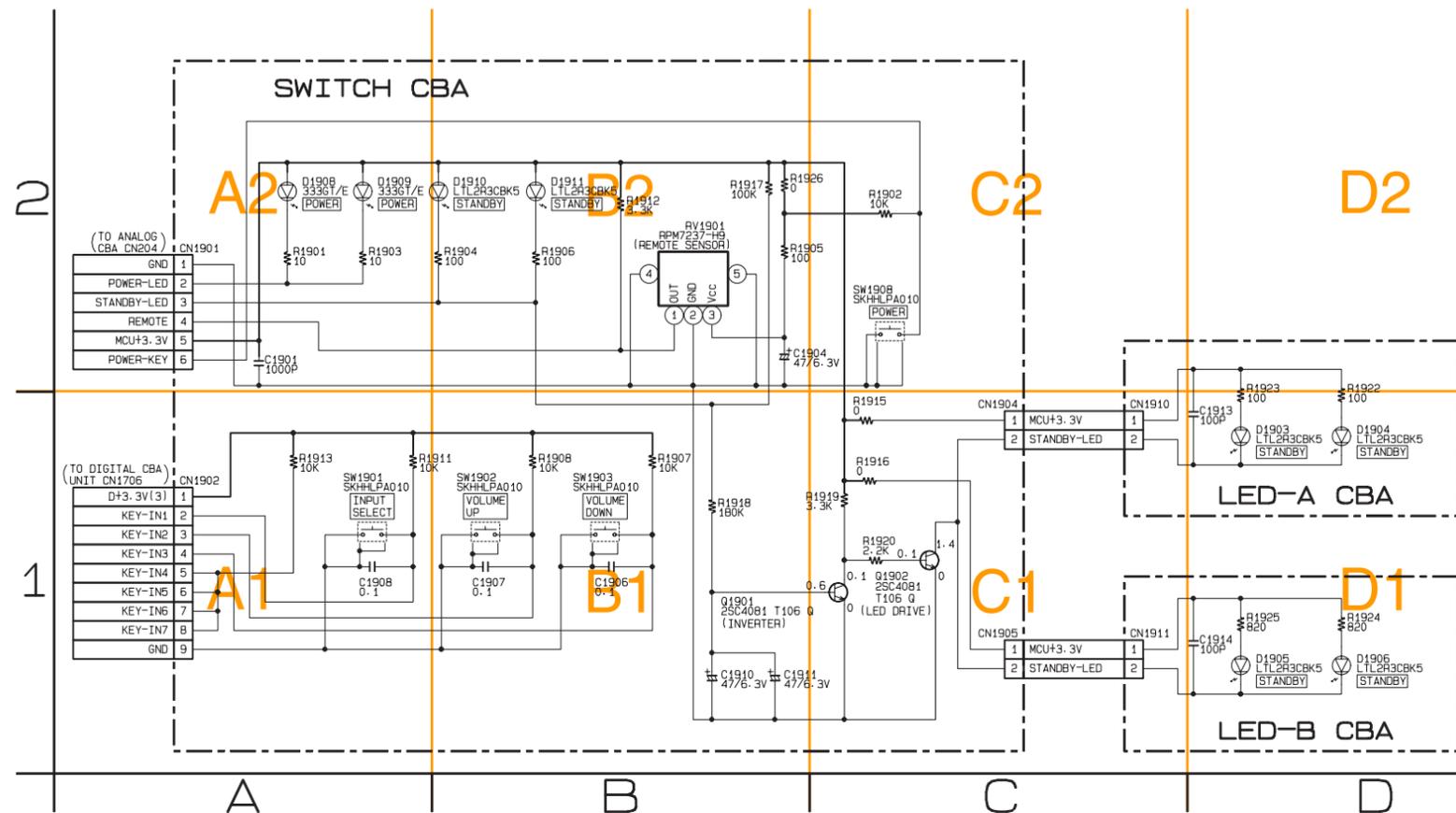
CAUTION !

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.

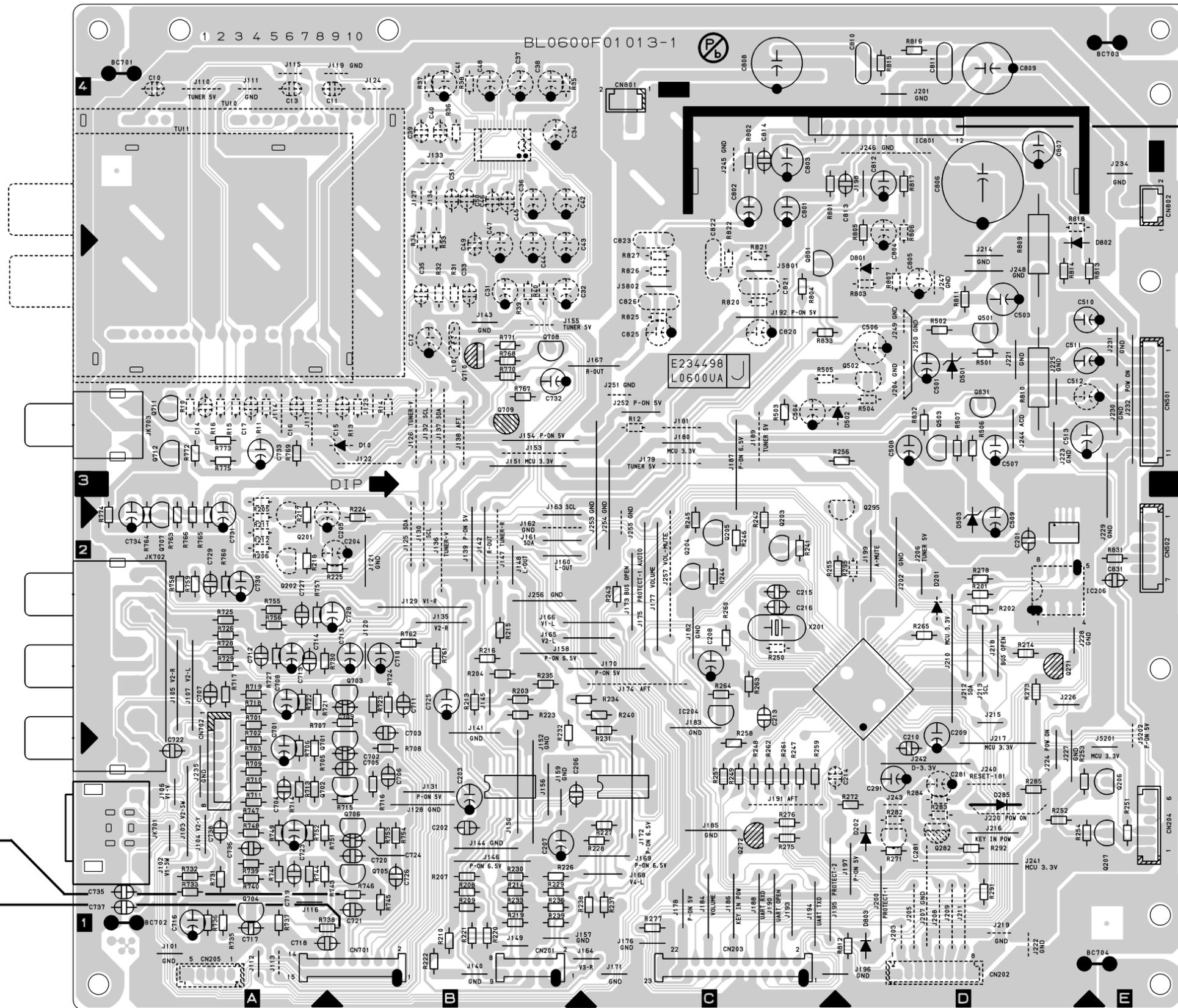


CAUTION: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE 8A, 250V FUSE.
ATTENTION: UTILISER UN FUSIBLE DE RECHANGE DE MÊME TYPE DE 8A, 250V.

Switch Schematic Diagram



Analog CBA Top View



WF14
PIN 12
OF IC801

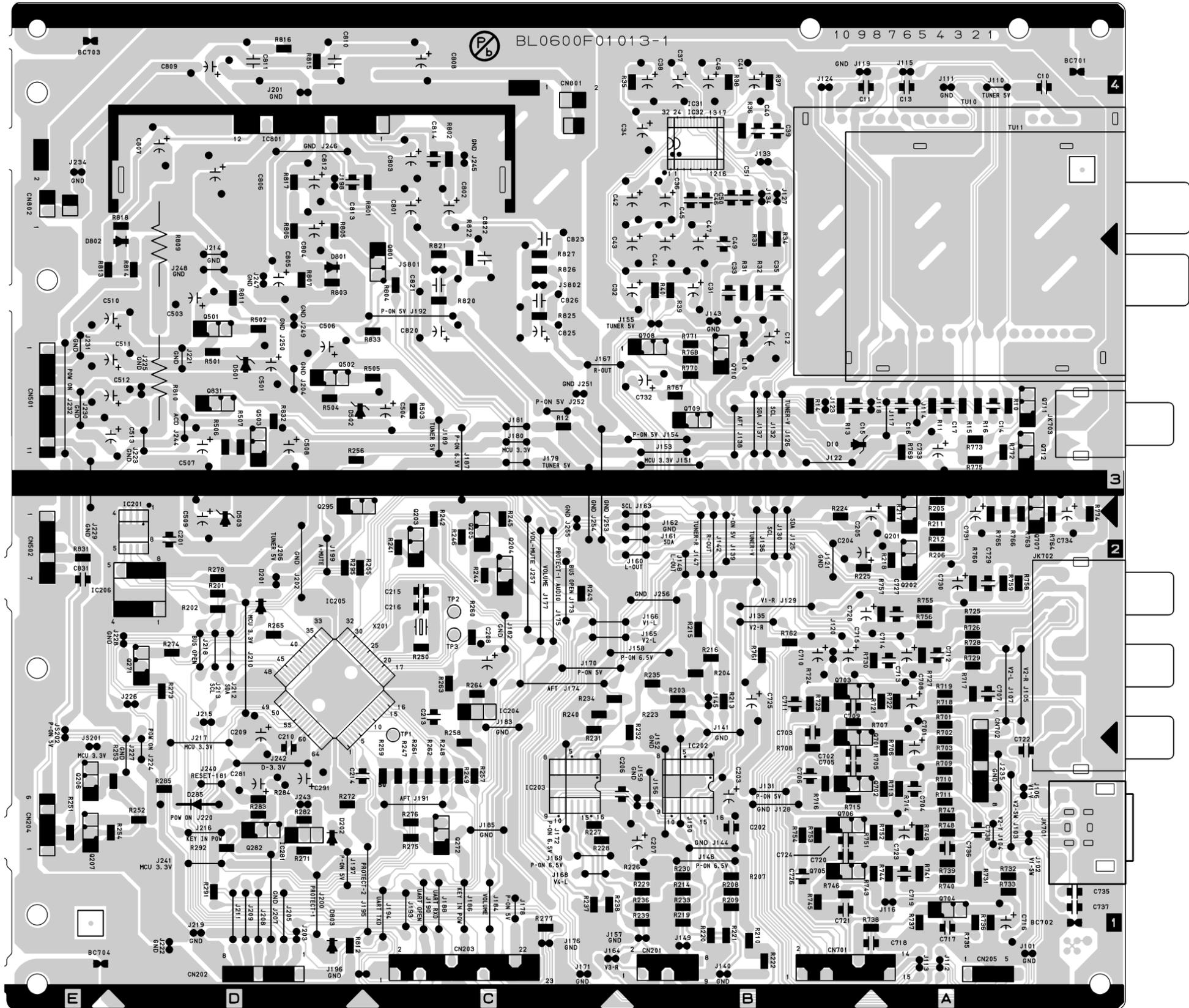
WF13
R746 LEAD

WF12
R738 LEAD

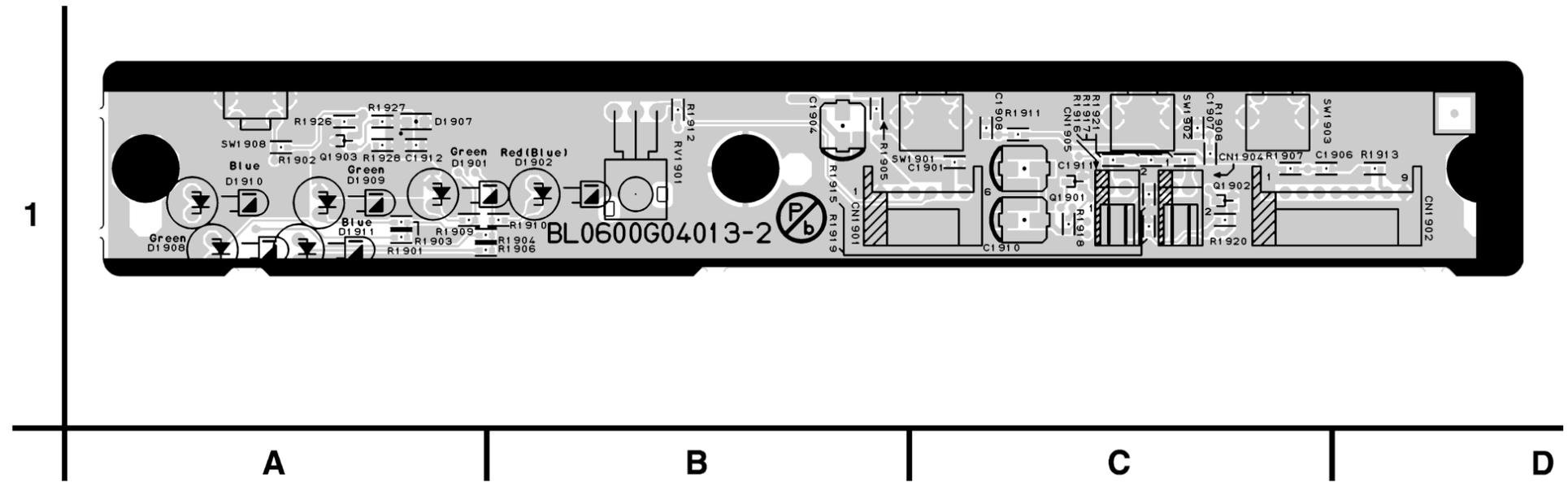
ANALOG CBA

Ref No.	Position
ICS	
IC201	D-3
IC202	B-1
IC203	C-1
IC204	C-2
IC205	D-2
IC801	D-4
TRANSISTORS	
Q203	C-2
Q204	C-2
Q205	C-2
Q206	E-1
Q207	E-1
Q271	D-2
Q272	C-1
Q295	D-3
Q501	D-3
Q503	D-3
Q701	A-2
Q702	A-1
Q703	B-2
Q704	A-1
Q705	B-1
Q706	B-1
Q707	A-2
Q708	B-3
Q709	B-3
Q710	B-3
Q711	A-3
Q712	A-3
Q801	C-3
Q831	D-3
CONNECTORS	
CN201	B-1
CN202	D-1
CN203	C-1
CN204	E-1
CN501	E-3
CN502	E-2
CN701	B-1
CN702	A-1
CN801	D-4
CN802	E-4

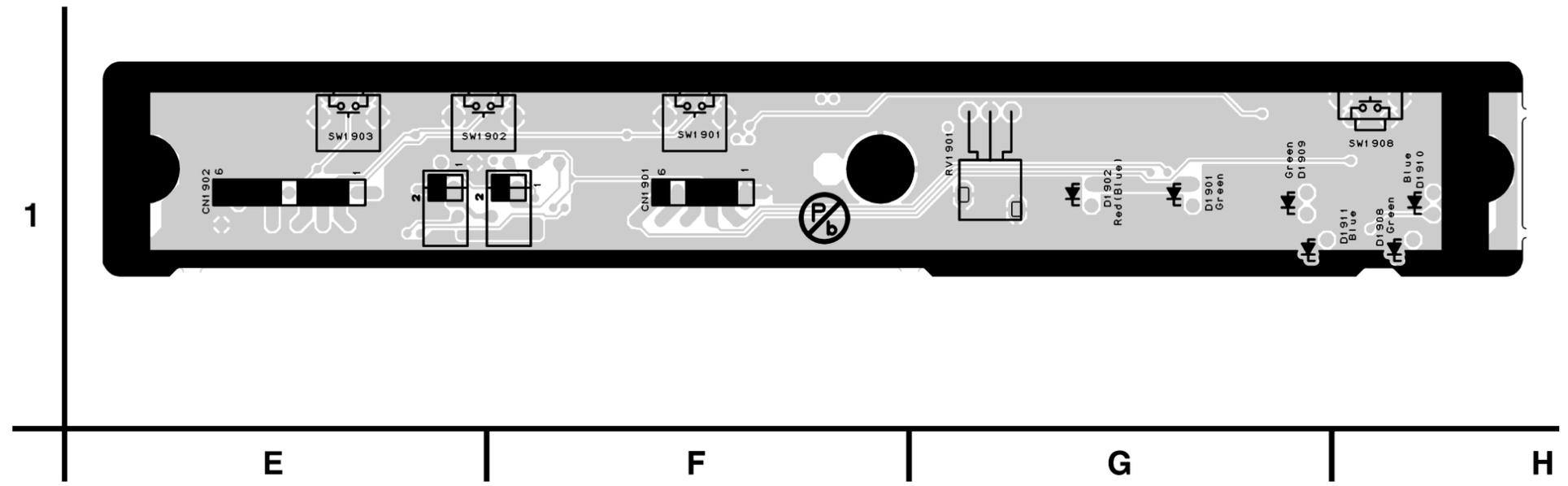
Analog CBA Bottom View



Switch CBA Top View



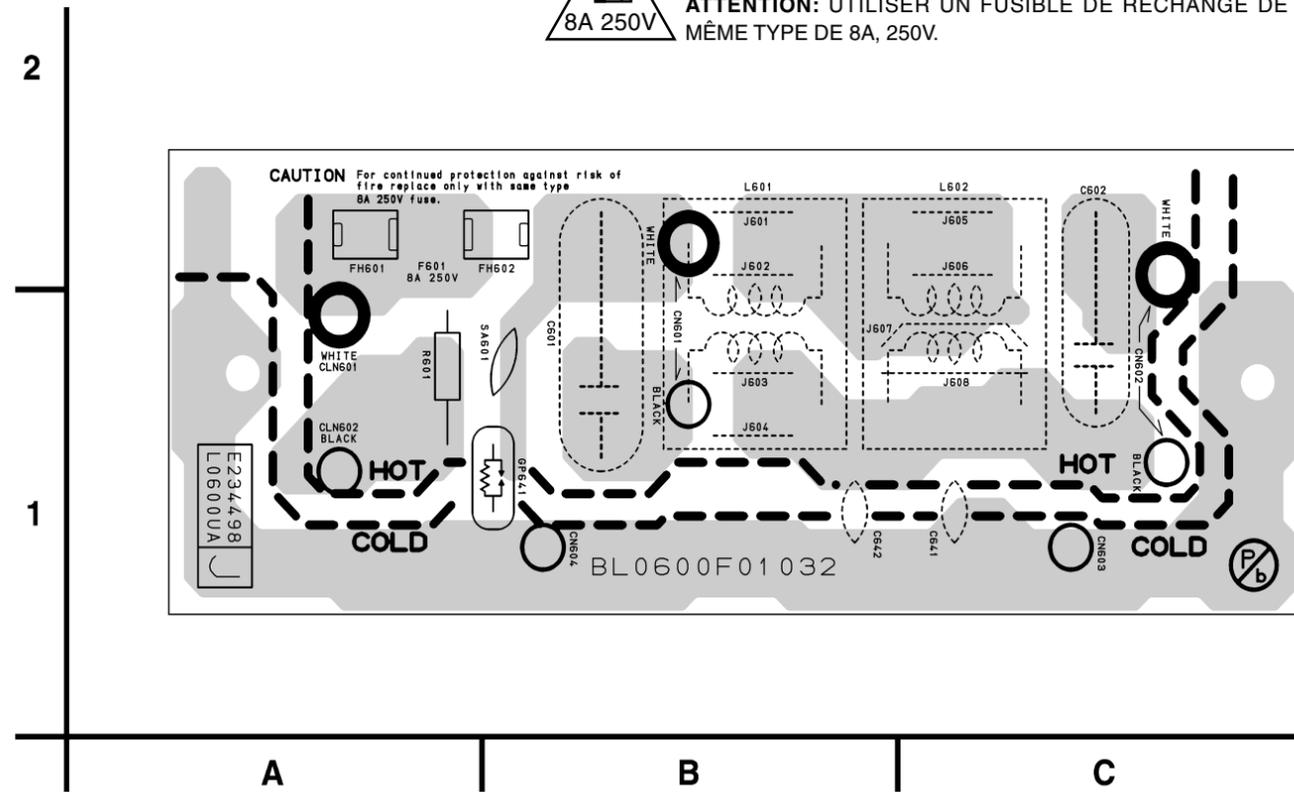
Switch CBA Bottom View



Filter CBA Top View



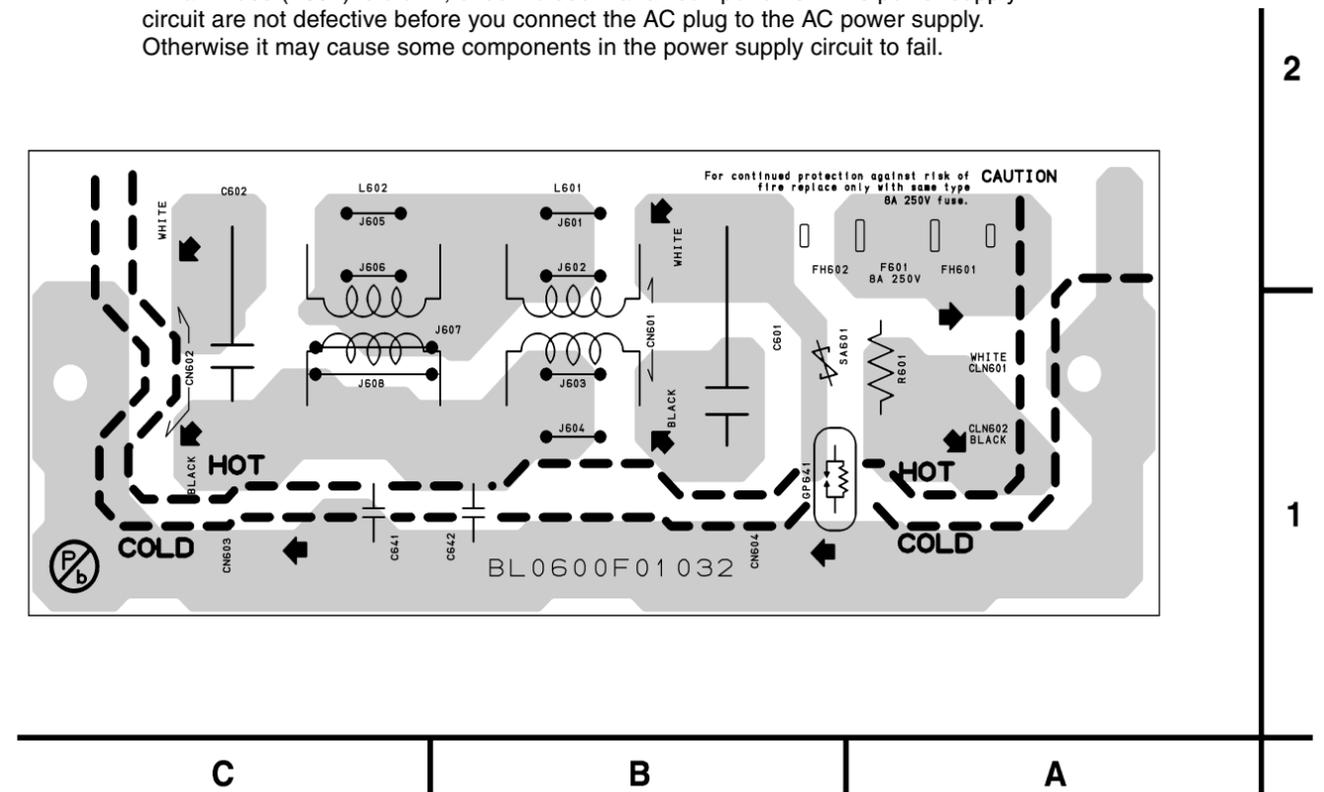
CAUTION: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE 8A, 250V FUSE.
ATTENTION: UTILISER UN FUSIBLE DE RECHANGE DE MÊME TYPE DE 8A, 250V.



Filter CBA Bottom View

CAUTION !

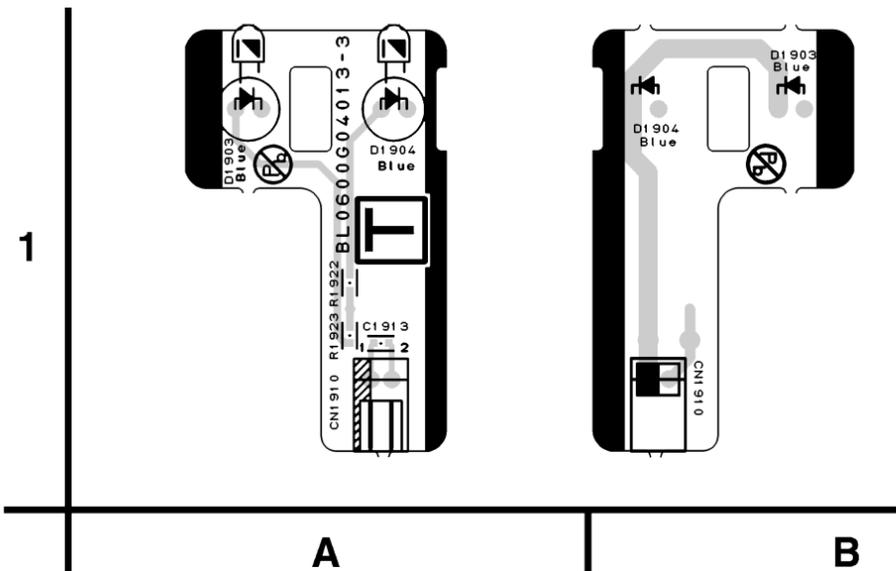
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
 If Main Fuse (F601) is blown, check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.
 Otherwise it may cause some components in the power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



BL0600F01032

LED-A CBA Top View

LED-A CBA Bottom View

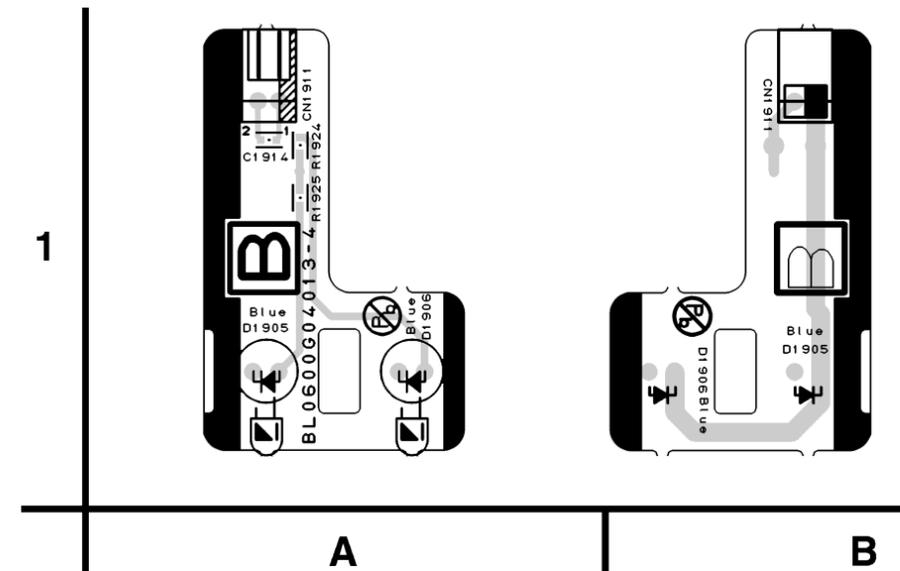


BL0600G04013-3

1-9-25

LED-B CBA Top View

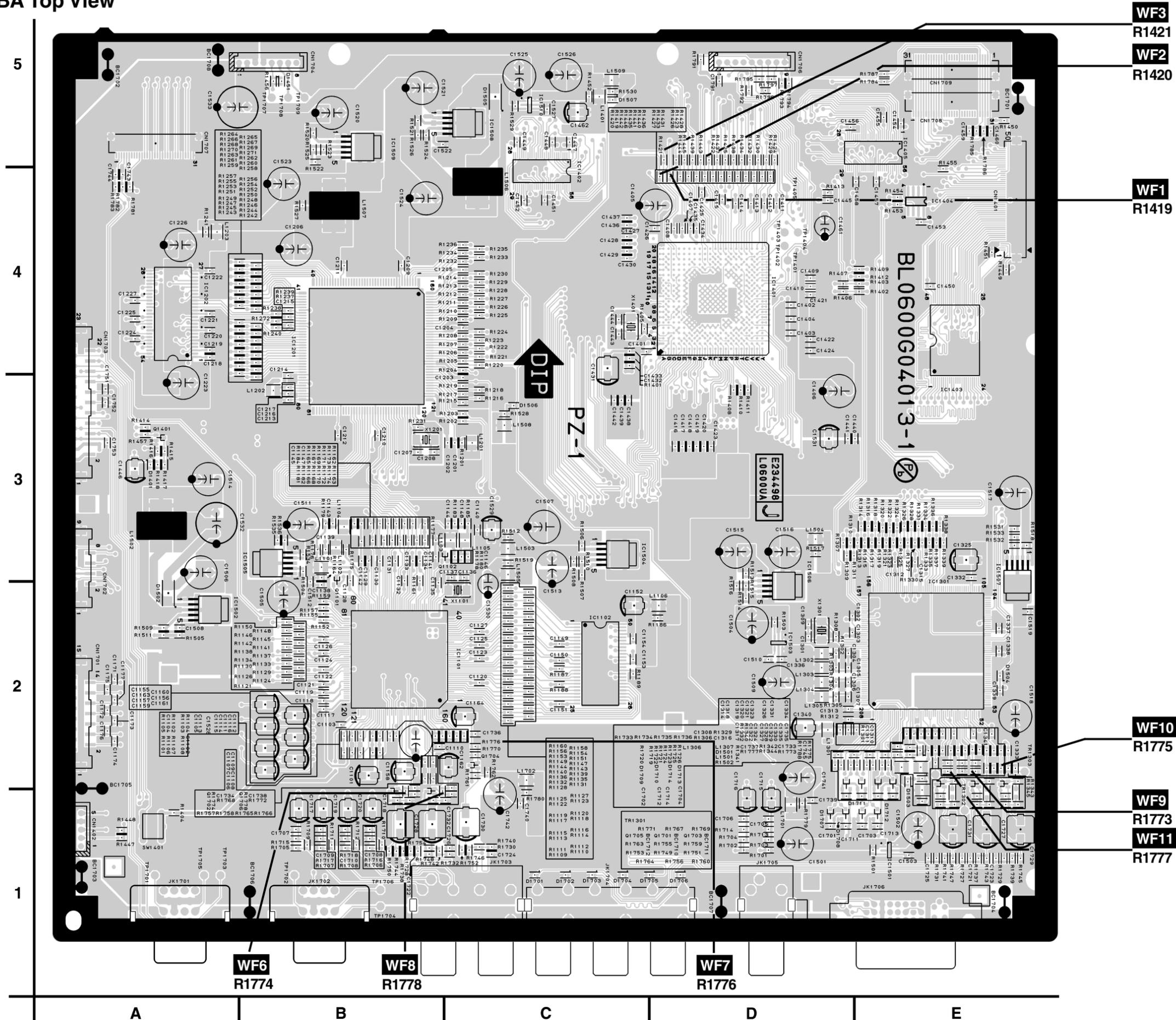
LED-B CBA Bottom View



BL0600G04013-4

1-9-26

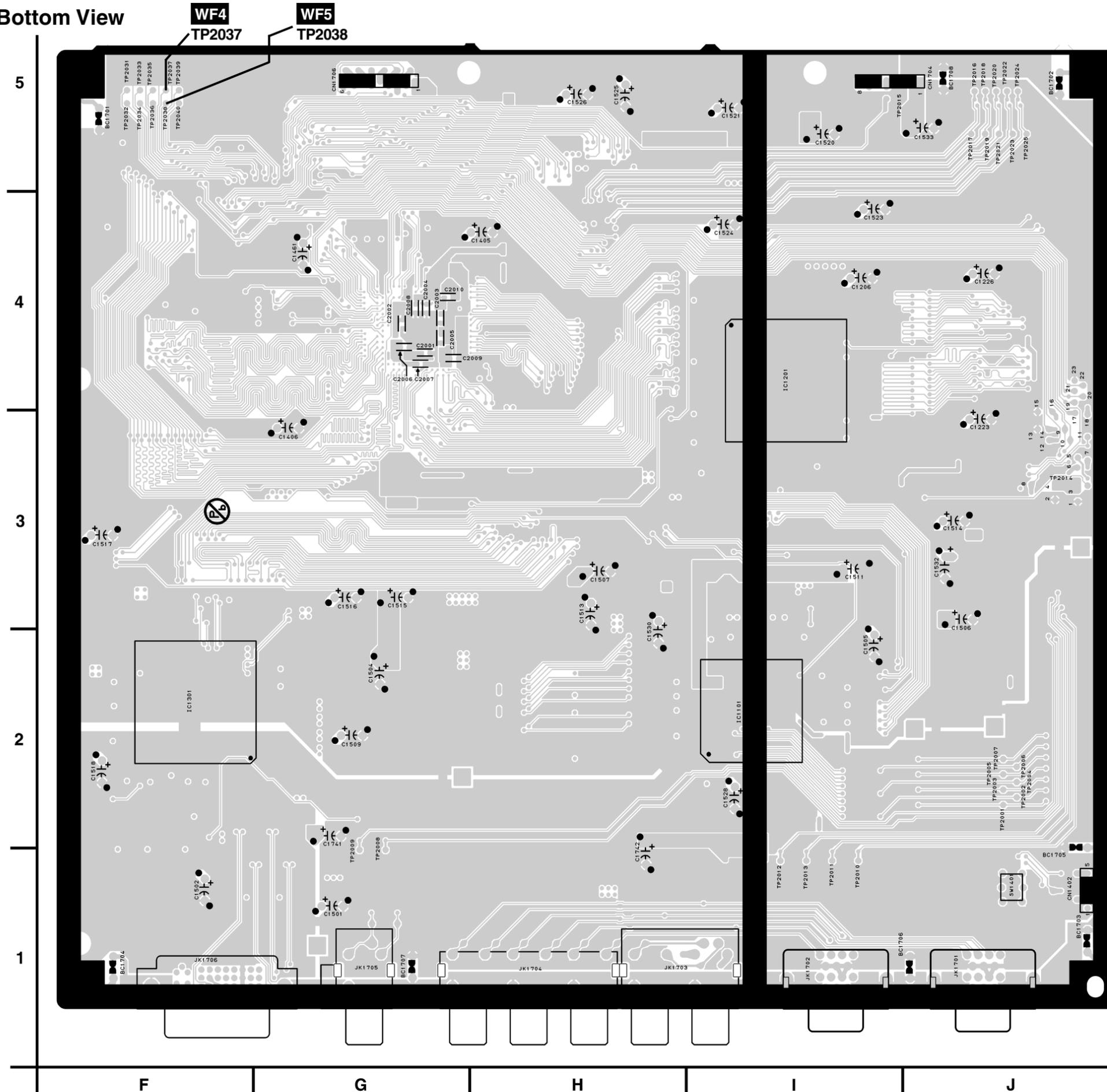
Digital CBA Top View



DIGITAL CBA

Ref No.	Position
ICS	
IC1101	C-2
IC1102	C-2
IC1201	B-4
IC1202	A-4
IC1301	E-2
IC1401	D-4
IC1403	E-3
IC1404	E-4
IC1405	F-5
IC1501	E-1
IC1502	A-2
IC1503	D-2
IC1504	C-3
IC1505	B-3
IC1506	D-3
IC1507	E-3
IC1508	C-5
IC1509	B-5
IC1510	C-5
TRANSISTORS	
Q1101	B-2
Q1102	B-3
Q1401	A-3
Q1701	D-1
Q1702	A-1
Q1703	D-1
Q1704	C-2
Q1705	C-1
Q1706	B-1
CONNECTORS	
CN1402	A-1
CN1701	A-2
CN1702	A-3
CN1703	A-3
CN1704	B-5
CN1706	D-5
CN1709	E-5

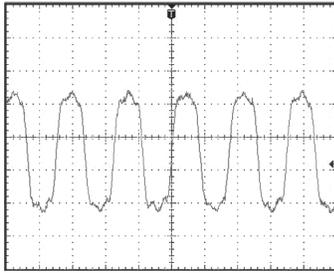
Digital CBA Bottom View



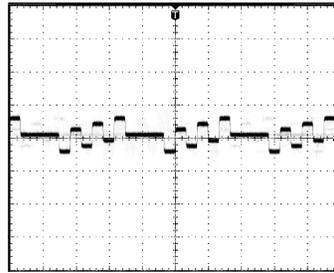
WAVEFORMS

WF1 ~ WF14 = Waveforms to be observed at
Waveform check points.
(Shown in Schematic Diagram.)

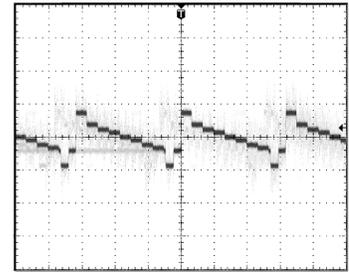
Input: NTSC Color Bar Signal (with 1kHz Audio Signal)



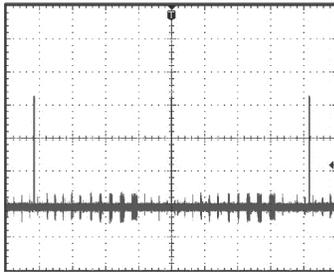
WF1 1DIV: 1.0V 20ns
R1419



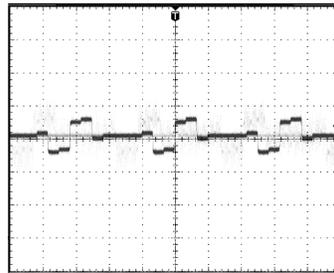
WF7 1DIV: 500mV 20µs
R1776



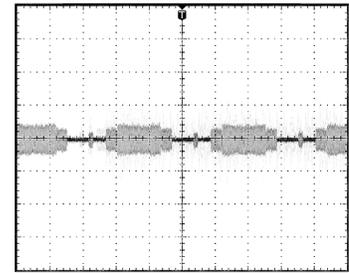
WF12 1DIV: 500mV 20µs
R738



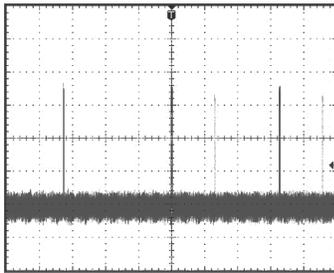
WF2 1DIV: 1.0V 4ms
R1420



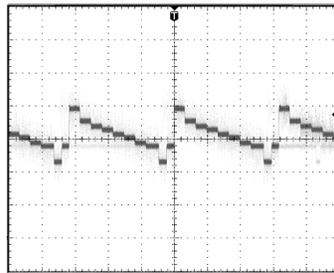
WF8 1DIV: 500mV 20µs
R1778



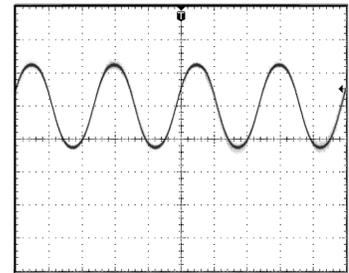
WF13 1DIV: 500mV 20µs
R746



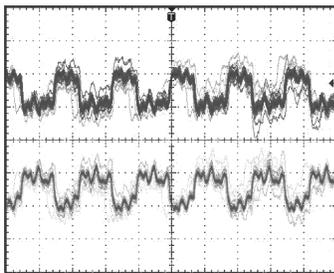
WF3 1DIV: 1.0V 10µs
R1421



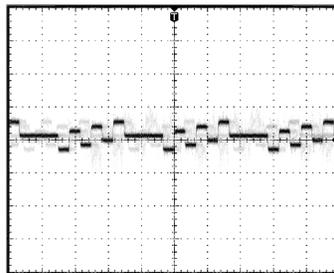
WF9 1DIV: 500mV 20µs
R1773



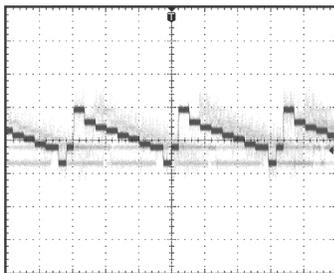
WF14 1DIV: 2V 400µs
Pin 12 of IC801



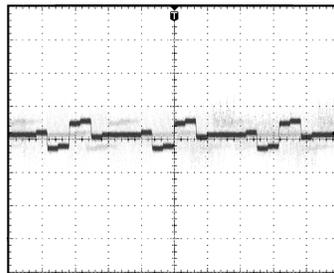
UPPER WF4 TP2037
LOWER WF5 TP2038
1DIV: 500mV 20ns



WF10 1DIV: 500mV 20µs
R1775

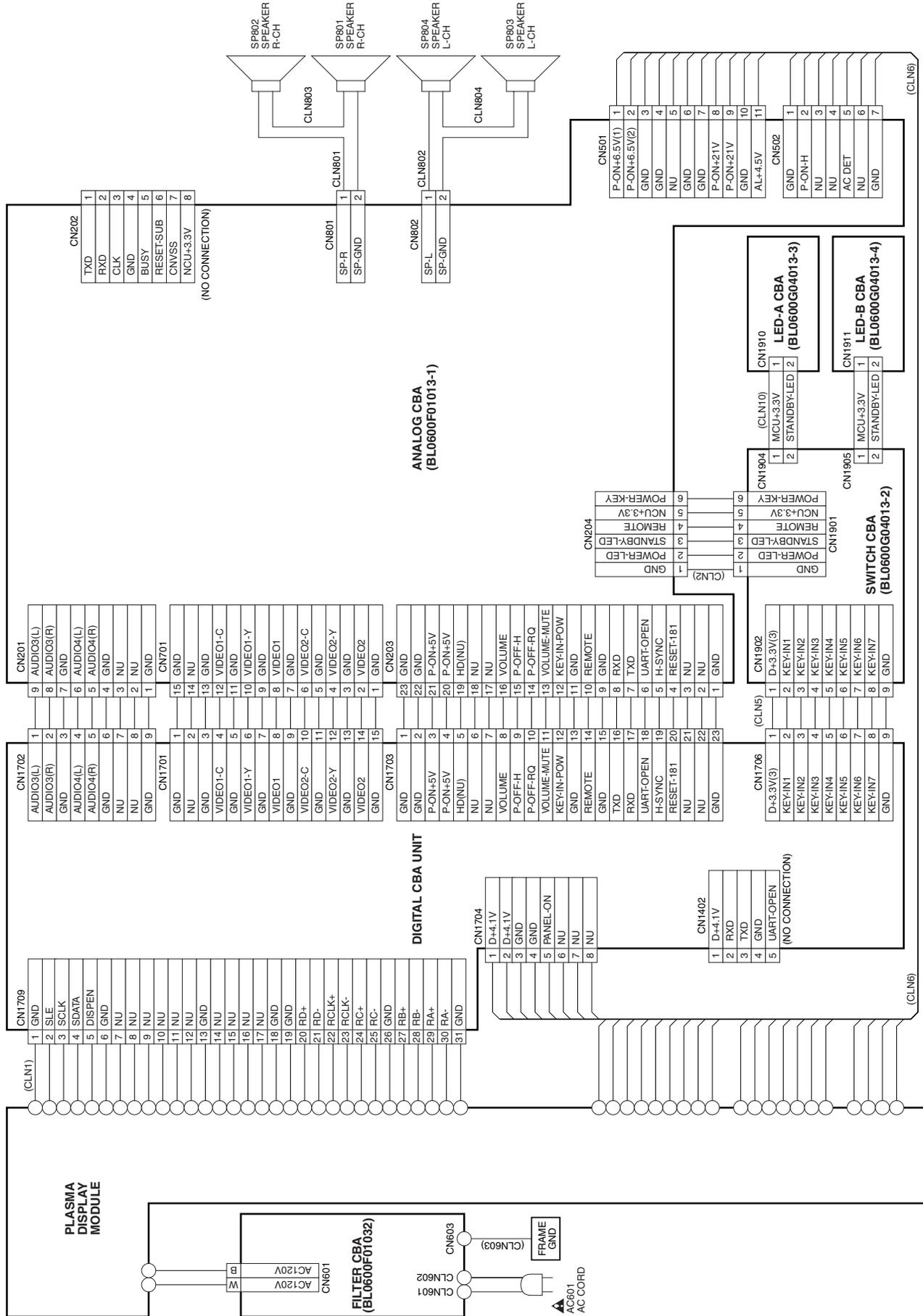


WF6 1DIV: 500mV 20µs
R1774



WF11 1DIV: 500mV 20µs
R1777

WIRING DIAGRAM



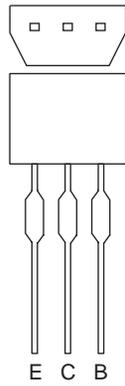
IC PIN FUNCTIONS

IC205 (PDP Micro Controller)

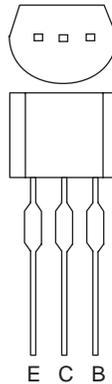
Pin No.	Signal Name	Function
1	PROTECT2	Power Supply Protection
2	PROTECT1	Power Supply Protection
3	NU	Not Used
4	POWER-SW	Power ON key
5	NU	Not Used
6	NU	Not Used
7	NU	Not Used
8	NU	Not Used
9	NU	Not Used
10	NU	Not Used
11	NU	Not Used
12	BUSY	Busy
13	CLK	Clock Input
14	TXD	Main/Sub processor interface transmit
15	RXD	Main/Sub processor interface receive
16	UART-OPEN	Main/Sub processor interface permit
17	NU	Not Used
18	CNVSS	Switching Chip Operation Mode
19	RESET	Input Reset Signal
20	NU	Not Used
21	NU	Not Used
22	X-IN	Clock Input
23	X-OUT	Clock Output
24	VSS	VSS
25	NU	Not Used
26	S-SW0	Detecting S-Video 0 Signal
27	S-SW1	Detecting S-Video 1 Signal
28	AUDIO-SW2	Switching Audio 2
29	AUDIO-SW1	Switching Audio 1
30	AUDIO-SW0	Switching Audio 0
31	A-OUT-MUTE	Mute Control
32	A-MUTE	Mute Control
33	NU	Not Used

Pin No.	Signal Name	Function
34	NU	Not Used
35	NU	Not Used
36	SD	SD Detection
37	NU	Not Used
38	RESET-181	Reset PW181
39	REMOTE	Receive Remote
40	NU	Not Used
41	NU	Not Used
42	NU	Not Used
43	NU	Not Used
44	NU	Not Used
45	NU	Not Used
46	BUS2-OPEN	I2C Interface Permit
47	SDA	I2C-BUS Controller Interface (Data)
48	SCL	I2C-BUS Controller Interface (Clock)
49	NU	Not Used
50	NU	Not Used
51	NU	Not Used
52	NU	Not Used
53	NU	Not Used
54	P-OFF-RQ	Power OFF Request
55	P-OFF-H	Power OFF Detect
56	P-ON-H	Output for P-ON-H
57	VCC	VCC
58	VREF	Standard Voltage Input for Convert AD
59	AVSS	GND for Convert AD
60	NU	Not Used
61	NU	Not Used
62	NU	Not Used
63	NU	Not Used
64	P-DET	D+3.3V Power Detect

LEAD IDENTIFICATIONS

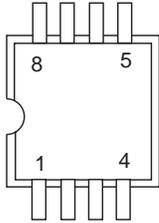


2SA1015-GR(TPE2)
 2SA1175(F)
 2SC2785(F)
 KTA1267(GR)
 BA1F4M-T
 KRC103M
 KTA1266(GR)
 KTC3199(GR)

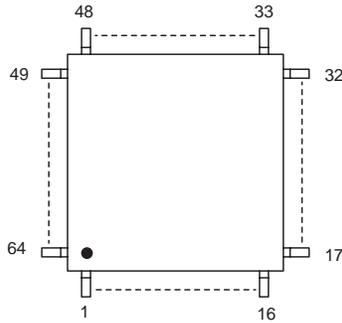


2SC1815-GR(TPE2)
 KTC3198(GR)

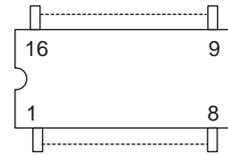
CAT24WC02JI
 BR24C02F
 BR24C02F-W
 S524C20D21
 M24C02-WMN6



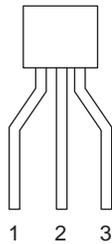
M38034M4H-159KP



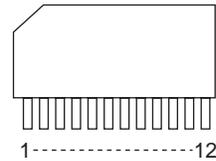
CD4051BNSR



PST600L



AN17805A

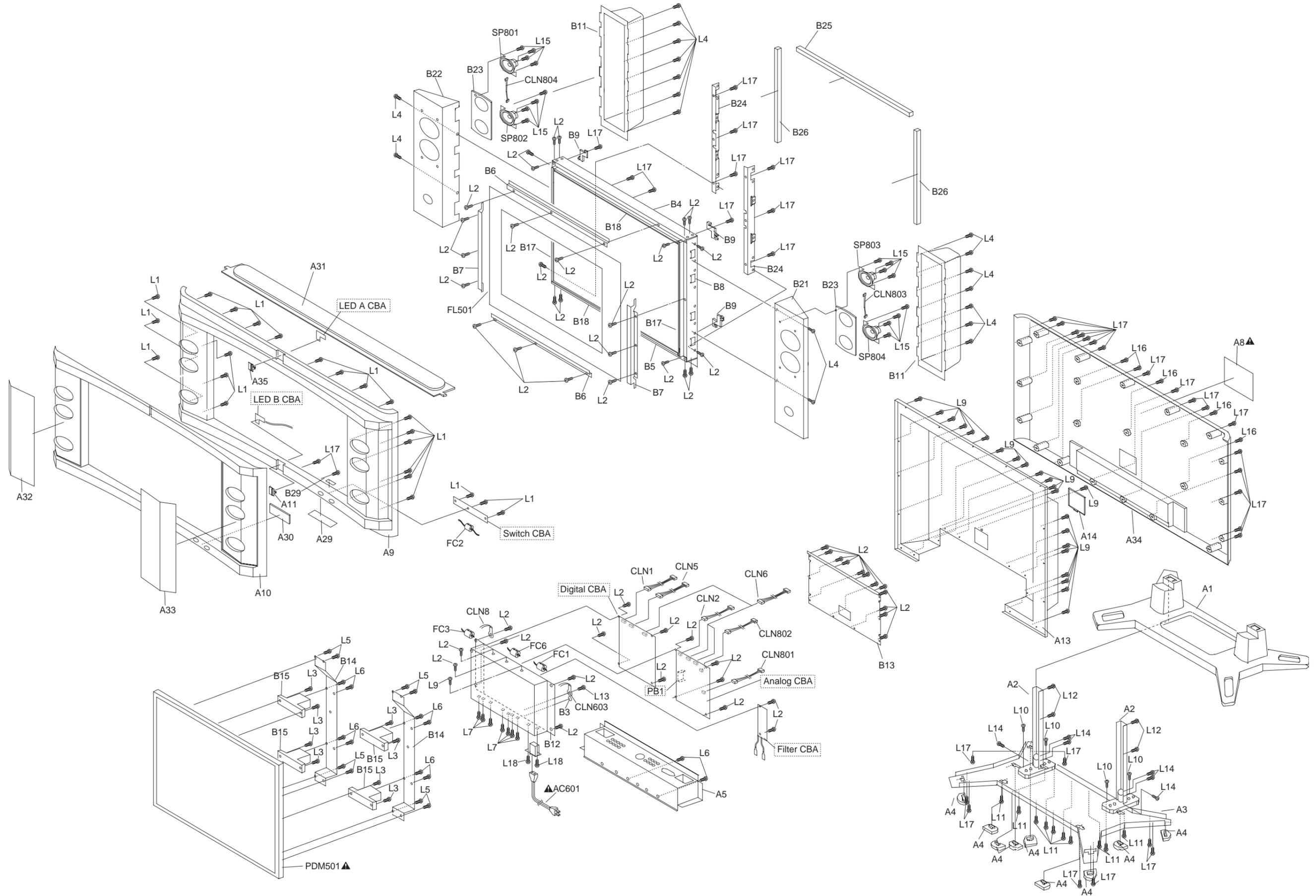


Note:

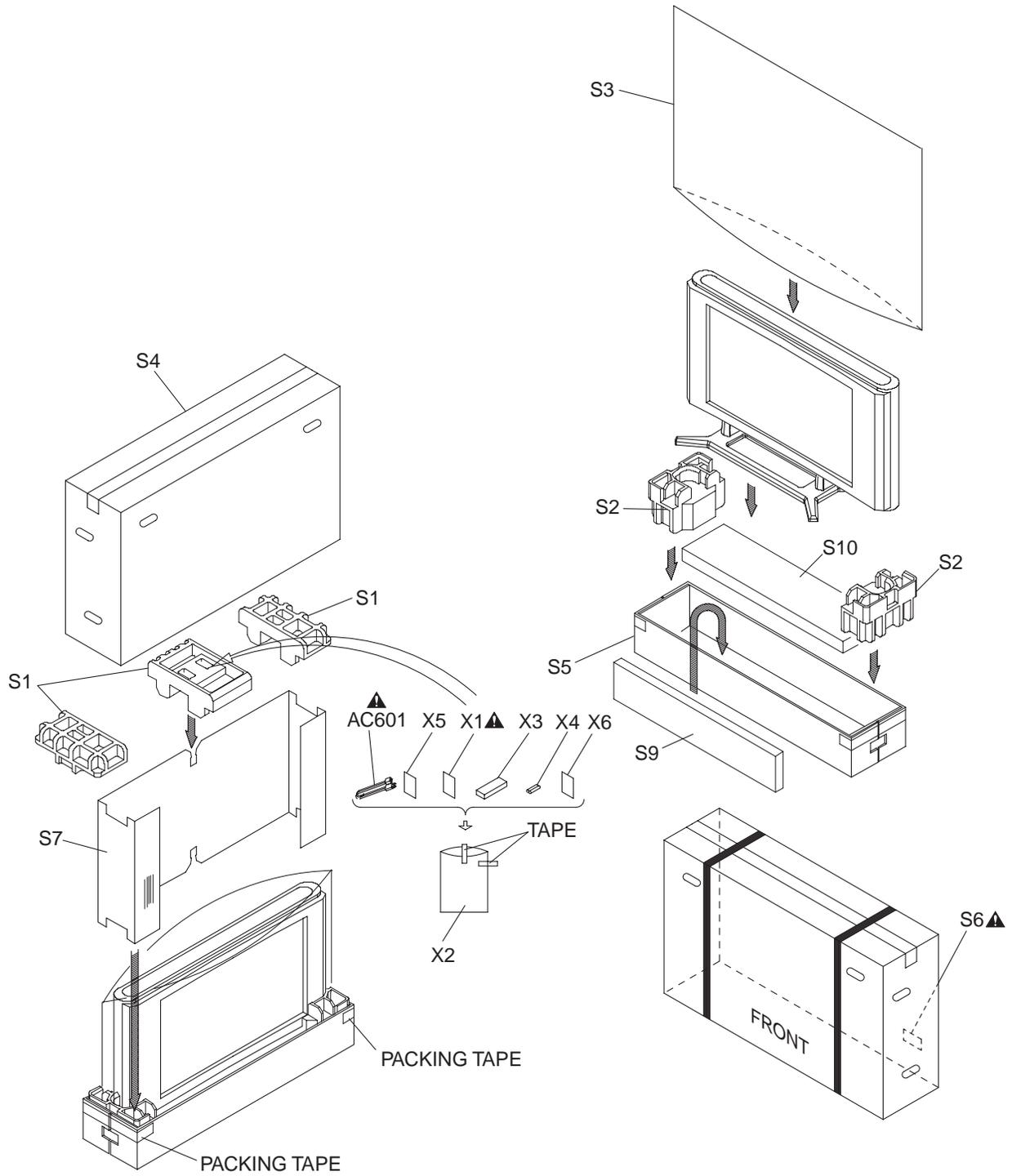
- A: Anode
- K: Cathode
- E: Emitter
- C: Collector
- B: Base
- R: Reference
- S: Source
- G: Gate
- D: Drain

Cabinet

EXPLODED VIEWS



Packing



MECHANICAL PARTS LIST

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

NOTE:

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

Ref. No.	Description	Part No.
A1	STAND COVER L0605UF	1EM020088
A2	STAND L0605UF	1EM220044
A3	STAND BASE L0605UF	1EM020089
A4	RUBBER FOOT L0600UA	0EM408992
A5	JACK COVER L0605UF	1EM020087
A8▲	RATING LABEL L0605UF	-----
A9	FRONT CABINET L0605UF	1EM020063
A10	DECORATION PANEL L0605UF	1EM020064
A11	LED LENS L0605UF	1EM420359
A13	REAR CABINET L0605UF	1EM020099
A14	REAR COVER L0600UA	0EM408989
A29	CONTROL PLATE L0605UF	1EM320100
A30	KEY LENS L0605UF	1EM420360
A31	BRAND PLATE L0605UF	1EM020081
A32	PUNCHING SHEET(L) L0605UF	1EM020082
A33	PUNCHING SHEET(R) L0605UF	1EM020083
A34	BACK CABINET L0605UF	1EM020065
A35	LED LENS(U) L0605UF	1EM320114
AC601▲	AC CORD VM0289S-VM0266S 2M	WBC0202H0001
B3	EARTH LABEL L0600UA	-----
B4	PANEL HOLDER(U)ASSEMBLY L0605UF	1EM220069
B5	PANEL HOLDER(L)ASSEMBLY L0605UF	1EM220070
B6	FILTER HOLDER(L) L0600UA	0EM101455
B7	FILTER HOLDER(S) L0600UA	0EM101456
B8	PANEL HOLDER(S) L0600UA	0EM101463
B9	LOCATEDBLOCK L0600UA	0EM408991
B11	SPEAKER COVER L0605UF	1EM020086
B12	PCB HOLDER L0605UF	1EM020097
B13	PCB SHIELD PLATE L0600UA	0EM101457
B14	CHASSIS BRACKET L0600UA	0EM000913
B15	PANEL SPACER L0601UB	1EM220035
B17	GASKET-B L0600UA	0EM409061
B18	GASKET-A L0600UA	0EM409060
B21	SPEAKER HOLDER(R) L0605UF	1EM020085
B22	SPEAKER HOLDER(L) L0605UF	1EM020084
B23	SPEAKER SPACER L0605UF	1EM320098
B24	SP HOLDER PLATE L0605UF	1EM120061
B25	CUSHION(L) L0605UF	1EM420519
B26	CUSHION(S) L0605UF	1EM420518
B27	CLOTH(B) L5201U0:15X10X1.0T	0EM400076
B29	DOUBLE SIDE TAPE L0605UF	1EM420549
CLN1	WIRE ASSEMBLY(LVDS) WX1L0600-012	WX1L0600-012
CLN2	WIRE ASSEMBLY 6P WX1L0600-002	WX1L0600-002
CLN5	WIRE ASSEMBLY 9P WX1L0600-024	WX1L0600-024
CLN6	WIRE ASSEMBLY WX1L0600-013	WX1L0600-013
CLN8	WIRE ASSEMBLY 1P WX1L0600-021	WX1L0600-021
CLN603	WIRE ASSEMBLY 1P WX1L0600-018	WX1L0600-018

Ref. No.	Description	Part No.
CLN801	WIRE ASSEMBLY 2P 160CM WX1L0600-015	WX1L0600-015
CLN802	WIRE ASSEMBLY 2P 110CM WX1L0600-016	WX1L0600-016
CLN803	WIRE ASSEMBLY 1P WX1L0600-017	WX1L0600-017
CLN804	WIRE ASSEMBLY 1P WX1L0600-017	WX1L0600-017
FC1	FERRITE CORE RFC-H13 or FERRITE CORE RFC-H13 BK	XL06041WD001 XL06041WD002
FC2	FERRITE CORE RFC-H13 or FERRITE CORE RFC-H13 BK	XL06041WD001 XL06041WD002
FC3	FERRITE CORE RFC-H13 or FERRITE CORE RFC-H13 BK	XL06041WD001 XL06041WD002
FC6	SLEEVE FERRITE CLAMP RFC-6	XL06034WD001
FL501	OPTICAL FILTER PM006Z018	XA00000SM003
L1	P-TIGHT SCREW 3X8 BIND +	GBMP3080
L2	SCREW, B-TIGHT M3X6 BIND HEAD+	GBMB3060
L3	DOUBLE SEMS SCREW M4X25 PAN HEAD+	0EM409073
L4	SCREW, B-TIGHT M3X8 BIND HEAD+	GBMB3080
L5	DOUBLE SEMS SCREW M4X8 PAN HEAD+	0EM409074
L6	SCREW, P-TIGHT 4X18 BIND HEAD +	GBMP4180
L7	SCREW, P-TIGHT 3X12 BIND HEAD+ BLK	GBKP3120
L9	SCREW ASSEMBLED M3X6 BLACK	0EM409078
L10	DOUBLE SEMS SCREW 5X16 PA5X16 PAN HEAD+	0EM409236
L11	SCREW, P-TIGHT 4X12 BIND HEAD+	GBMP4120
L12	DOUBLE SEMS SCREW M5X20 PAN HEAD+	0EM409077
L13	EARTH SEMS SCREW M4X8 TOOTHED	1EM420012
L14	DOUBLE SEMS SCREW M4X12 PAN HEAD+	1EM420188
L15	DOUBLE SEMS SCREW M3X12 PAN HEAD	1EM420400
L16	SCREW ASSEMBLED M3X10 BLACK	1EM420399
L17	SCREW, P-TIGHT 3X12 BIND HEAD+	GBMP3120
L18	SCREW M3X10 BIND HEAD+	SBK33100
L20	ASSEMBLED SCREW 8: 3X12	1EM420517
PDM501▲	PLASMA DISPLAY MODULE PDP42V6	UDPUPLSGS001
SP801	SPEAKER S08JA77A	DSD0408SY002
SP802	SPEAKER S08JA77A	DSD0408SY002
SP803	SPEAKER S08JA77A	DSD0408SY002
SP804	SPEAKER S08JA77A	DSD0408SY002
PACKING		
S1	STYRFOAM TOP L0605UF	1EM020090
S2	STYRFOAM BOTTOM L0605UF	1EM020091
S3	SET BAG(L) L0605UF	1EM320103
S4	CARTON(U) L0605UF	1EM320101
S5	CARTON(L) L0605UF	1EM320102
S6▲	SERIAL NO. LABEL L0605UF	-----
S7	HOLD PAD (L) L0605UF	1EM420361
S9	CUSHION(A) L0605UF	1EM420535
S10	CUSHION(B) L0605UF	1EM420536
ACCESSORIES		
X1▲	OWNER'S MANUAL ENGLISH/SPANISH	1EMN20115
X2	BAG POLYETHYLENE 235X365XT0.03	0EM408420
X3	REMOTE CONTROL NE802UD	NE802UD
X4	DRY BATTERY R6P/2S or DRY BATTERY(SUNRISE) R6SSE/2S or DRY BATTERY R6P(AR)2PX or DRY BATTERY R6P(AR)2P X ICI	XB0M451T0001 XB0M451MS002 XB0M451HU002 XB0M451HU003
X5	EASY SET UP GUIDE L0605UF	1EMN20120
X6	RETURN STOP SHEET L0605UF	1EM420403

ELECTRICAL PARTS LIST

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

NOTES:

- Parts that are not assigned part numbers (-----) are not available.
- Tolerance of Capacitors and Resistors are noted with the following symbols.

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

DIGITAL CBA ASSEMBLY

Ref. No.	Description	Part No.
	DIGITAL CBA ASSEMBLY Consists of the following:	1ESA10297
	DIGITAL CBA	-----
	SWITCH CBA	-----
	LED A CBA	-----
	LED B CBA	-----

DIGITAL CBA

Ref. No.	Description	Part No.
	DIGITAL CBA	-----

SWITCH CBA (Each parts on this CBA can be supplied.)

Ref. No.	Description	Part No.
	SWITCH CBA Consists of the following	-----
CAPACITORS		
C1901	CHIP CERAMIC CAP.(1608) B K 1000pF/50V	CHD1JK30B102
C1904	CHIP ELECTROLYTIC CAP. 47µF/6.3V M or CHIP ELECTROLYTIC CAP. 47µF/6.3V M(WX)	CA0K470SP012 CE0KMR1CL470
C1906	CHIP CERAMIC CAP.(1608) F Z 0.1µF/25V	CHD1EZ30F104
C1907	CHIP CERAMIC CAP.(1608) F Z 0.1µF/25V	CHD1EZ30F104
C1908	CHIP CERAMIC CAP.(1608) F Z 0.1µF/25V	CHD1EZ30F104
C1910	CHIP ELECTROLYTIC CAP. 47µF/6.3V M or CHIP ELECTROLYTIC CAP. 47µF/6.3V M(WX)	CA0K470SP012 CE0KMR1CL470
C1911	CHIP ELECTROLYTIC CAP. 47µF/6.3V M or CHIP ELECTROLYTIC CAP. 47µF/6.3V M(WX)	CA0K470SP012 CE0KMR1CL470
CONNECTORS		
CN1901	PH CONNECTOR, SIDE 6P S6B-PH-K-S	J3PHC06JG004
CN1902	PH CONNECTOR, SIDE 9P S9B-PH-K-S	J3PHC09JG004
CN1904	CONNECTOR BASE/LIGHT ANGLE 008283021100000 or ANGLE PIN HEADER, 2P 173979-2	J383C02UG001 1770247
CN1905	CONNECTOR BASE/LIGHT ANGLE 008283021100000 or ANGLE PIN HEADER, 2P 173979-2	J383C02UG001 1770247
DIODES		

Ref. No.	Description	Part No.
D1908	LED 333GT/E	NPHZ00333GTE
D1909	LED 333GT/E	NPHZ00333GTE
D1910	LED LAMP LTL2R3CBK5	NPQZL2R3CBK5
D1911	LED LAMP LTL2R3CBK5	NPQZL2R3CBK5
TRANSISTORS		
Q1901	TRANSISTOR 2SC4081 T106 Q	QQ1Q02SC4081
Q1902	TRANSISTOR 2SC4081 T106 Q	QQ1Q02SC4081
RESISTORS		
R1901	CHIP RES.(1608) 1/10W J 10 Ω	RRXAJR5Z0100
R1902	CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R1903	CHIP RES.(1608) 1/10W J 10 Ω	RRXAJR5Z0100
R1904	CHIP RES.(1608) 1/10W J 100 Ω	RRXAJR5Z0101
R1905	CHIP RES.(1608) 1/10W J 100 Ω	RRXAJR5Z0101
R1906	CHIP RES.(1608) 1/10W J 100 Ω	RRXAJR5Z0101
R1907	CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R1908	CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R1911	CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R1912	CHIP RES.(1608) 1/10W J 3.3k Ω	RRXAJR5Z0332
R1913	CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R1915	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R1916	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R1917	CHIP RES.(1608) 1/10W J 100k Ω	RRXAJR5Z0104
R1918	CHIP RES.(1608) 1/10W J 180k Ω	RRXAJR5Z0184
R1919	CHIP RES.(1608) 1/10W J 3.3k Ω	RRXAJR5Z0332
R1920	CHIP RES.(1608) 1/10W J 2.2k Ω	RRXAJR5Z0222
R1926	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
SWITCHES		
SW1901	TACT SWITCH SKHHLPA010	SST0101AL056
SW1902	TACT SWITCH SKHHLPA010	SST0101AL056
SW1903	TACT SWITCH SKHHLPA010	SST0101AL056
SW1908	TACT SWITCH SKHHLPA010	SST0101AL056
MISCELLANEOUS		
RV1901	PHOTO LINK MODULE RPM7237-H9	USESJRSRM006

LED A CBA (Each parts on this CBA can be supplied.)

Ref. No.	Description	Part No.
	LED A CBA Consists of the following	-----
CAPACITOR		
C1913	CHIP CERAMIC CAP.(1608) CH J 100pF/50V	CHD1JJ3CH101
CONNECTORS		
CN1910	CONNECTOR BASE/LIGHT ANGLE 008283021100000 or ANGLE PIN HEADER, 2P 173979-2	J383C02UG001 1770247
DIODES		
D1903	LED LAMP LTL2R3CBK5	NPQZL2R3CBK5
D1904	LED LAMP LTL2R3CBK5	NPQZL2R3CBK5
RESISTORS		
R1922	CHIP RES.(1608) 1/10W J 100 Ω	RRXAJR5Z0101
R1923	CHIP RES.(1608) 1/10W J 100 Ω	RRXAJR5Z0101

LED B CBA (Each parts on this CBA can be supplied.)

Ref. No.	Description	Part No.
	LED B CBA Consists of the following	-----
CAPACITOR		
C1914	CHIP CERAMIC CAP.(1608) CH J 100pF/50V	CHD1JJ3CH101
CONNECTOR		
CN1911	WIRE ASSEMBLY 2P WX1L0600-025	WX1L0600-025
DIODES		
D1905	LED LAMP LTL2R3CBK5	NPQZL2R3CBK5
D1906	LED LAMP LTL2R3CBK5	NPQZL2R3CBK5
RESISTORS		
R1924	CHIP RES.(1608) 1/10W J 820 Ω	RRXAJR5Z0821
R1925	CHIP RES.(1608) 1/10W J 820 Ω	RRXAJR5Z0821

ANALOG CBA

Ref. No.	Description	Part No.
	ANALOG CBA Consists of the following	1ESA10294
CAPACITORS		
C201	CERAMIC CAP.(AX) F Z 0.1μF/50V	CA1J104TU014
C202	CERAMIC CAP.(AX) F Z 0.1μF/50V	CA1J104TU014
C203	ELECTROLYTIC CAP. 22μF/10V M or ELECTROLYTIC CAP. 22μF/10V M	CE1AMASTL220 CE1AMASDL220
C206	CERAMIC CAP.(AX) F Z 0.1μF/50V	CA1J104TU014
C207	ELECTROLYTIC CAP. 22μF/10V M or ELECTROLYTIC CAP. 22μF/10V M	CE1AMASTL220 CE1AMASDL220
C208	ELECTROLYTIC CAP. 1μF/50V M or ELECTROLYTIC CAP. 1μF/50V M or ELECTROLYTIC CAP. 1μF/50V M	CE1JMASTL1R0 CE1JMASDL1R0 CE1JMASDL010
C209	ELECTROLYTIC CAP. 22μF/10V M or ELECTROLYTIC CAP. 22μF/10V M	CE1AMASTL220 CE1AMASDL220
C210	CERAMIC CAP.(AX) F Z 0.1μF/50V	CA1J104TU014
C213	CERAMIC CAP.(AX) F Z 0.01μF/25V	CCA1EZTFZ103
C215	CERAMIC CAP.(AX) CH J 10pF/50V	CCA1JITCH100
C216	CERAMIC CAP.(AX) CH J 10pF/50V	CCA1JITCH100
C291	ELECTROLYTIC CAP. 10μF/50V M or ELECTROLYTIC CAP. 10μF/50V M	CE1JMASTL100 CE1JMASDL100
C501	ELECTROLYTIC CAP. 100μF/10V M or ELECTROLYTIC CAP. 100μF/10V M	CE1AMASTL101 CE1AMASDL101
C503	ELECTROLYTIC CAP. 220μF/10V M or ELECTROLYTIC CAP. 220μF/10V M	CE1AMASTL221 CE1AMASDL221
C507	ELECTROLYTIC CAP. 100μF/10V M or ELECTROLYTIC CAP. 100μF/10V M	CE1AMASTL101 CE1AMASDL101
C508	ELECTROLYTIC CAP. 100μF/10V M or ELECTROLYTIC CAP. 100μF/10V M	CE1AMASTL101 CE1AMASDL101
C509	ELECTROLYTIC CAP. 100μF/10V M or ELECTROLYTIC CAP. 100μF/10V M	CE1AMASTL101 CE1AMASDL101
C510	ELECTROLYTIC CAP. 100μF/10V M or ELECTROLYTIC CAP. 100μF/10V M	CE1AMASTL101 CE1AMASDL101
C511	ELECTROLYTIC CAP. 100μF/10V M or ELECTROLYTIC CAP. 100μF/10V M	CE1AMASTL101 CE1AMASDL101
C513	ELECTROLYTIC CAP. 100μF/25V M or ELECTROLYTIC CAP. 100μF/25V M	CE1EMASTL101 CE1EMASDL101
C701	ELECTROLYTIC CAP. 47μF/16V M or ELECTROLYTIC CAP. 47μF/16V M	CE1CMASTL470 CE1CMASDL470
C702	CERAMIC CAP.(AX) F Z 0.01μF/25V	CCA1EZTFZ103
C703	CERAMIC CAP.(AX) CH J 33pF/50V	CA1J330TU008
C704	CERAMIC CAP.(AX) B K 1000pF/50V	CCA1JKT0B102

Ref. No.	Description	Part No.
C705	CERAMIC CAP.(AX) F Z 0.01μF/25V	CCA1EZTFZ103
C706	CERAMIC CAP.(AX) CH J 100pF/50V	CA1J101TU008
C707	CERAMIC CAP.(AX) CH J 100pF/50V	CA1J101TU008
C708	ELECTROLYTIC CAP. 47μF/16V M or ELECTROLYTIC CAP. 47μF/16V M	CE1CMASTL470 CE1CMASDL470
C709	CERAMIC CAP.(AX) F Z 0.01μF/25V	CCA1EZTFZ103
C710	ELECTROLYTIC CAP. 100μF/10V M or ELECTROLYTIC CAP. 100μF/10V M	CE1AMASTL101 CE1AMASDL101
C711	CERAMIC CAP.(AX) CH J 33pF/50V	CA1J330TU008
C712	CERAMIC CAP.(AX) B K 1000pF/50V	CCA1JKT0B102
C713	ELECTROLYTIC CAP. 4.7μF/50V M or ELECTROLYTIC CAP. 4.7μF/50V M	CE1JMASTL4R7 CE1JMASDL4R7
C714	CERAMIC CAP.(AX) B K 1000pF/50V	CCA1JKT0B102
C715	ELECTROLYTIC CAP. 4.7μF/50V M or ELECTROLYTIC CAP. 4.7μF/50V M	CE1JMASTL4R7 CE1JMASDL4R7
C716	ELECTROLYTIC CAP. 47μF/16V M or ELECTROLYTIC CAP. 47μF/16V M	CE1CMASTL470 CE1CMASDL470
C717	CERAMIC CAP.(AX) F Z 0.01μF/25V	CCA1EZTFZ103
C718	CERAMIC CAP.(AX) CH J 33pF/50V	CA1J330TU008
C719	CERAMIC CAP.(AX) B K 1000pF/50V	CCA1JKT0B102
C720	CERAMIC CAP.(AX) F Z 0.01μF/25V	CCA1EZTFZ103
C721	CERAMIC CAP.(AX) CH J 100pF/50V	CA1J101TU008
C722	CERAMIC CAP.(AX) CH J 100pF/50V	CA1J101TU008
C723	ELECTROLYTIC CAP. 47μF/16V M or ELECTROLYTIC CAP. 47μF/16V M	CE1CMASTL470 CE1CMASDL470
C724	CERAMIC CAP.(AX) F Z 0.01μF/25V	CCA1EZTFZ103
C725	ELECTROLYTIC CAP. 100μF/10V M or ELECTROLYTIC CAP. 100μF/10V M	CE1AMASTL101 CE1AMASDL101
C726	CERAMIC CAP.(AX) CH J 33pF/50V	CA1J330TU008
C727	CERAMIC CAP.(AX) B K 1000pF/50V	CCA1JKT0B102
C728	ELECTROLYTIC CAP. 4.7μF/50V M or ELECTROLYTIC CAP. 4.7μF/50V M	CE1JMASTL4R7 CE1JMASDL4R7
C729	CERAMIC CAP.(AX) B K 1000pF/50V	CCA1JKT0B102
C730	ELECTROLYTIC CAP. 4.7μF/50V M or ELECTROLYTIC CAP. 4.7μF/50V M	CE1JMASTL4R7 CE1JMASDL4R7
C731	ELECTROLYTIC CAP. 1μF/50V M or ELECTROLYTIC CAP. 1μF/50V M or ELECTROLYTIC CAP. 1μF/50V M	CE1JMASTL1R0 CE1JMASDL1R0 CE1JMASDL010
C732	ELECTROLYTIC CAP. 1μF/50V M or ELECTROLYTIC CAP. 1μF/50V M or ELECTROLYTIC CAP. 1μF/50V M	CE1JMASTL1R0 CE1JMASDL1R0 CE1JMASDL010
C733	ELECTROLYTIC CAP. 0.1μF/50V M or ELECTROLYTIC CAP. 0.1μF/50V M or ELECTROLYTIC CAP. 0.1μF/50V M	CE1JMASTLR10 CE1JMASDLR10 CE1JMASDL0R1
C734	ELECTROLYTIC CAP. 0.1μF/50V M or ELECTROLYTIC CAP. 0.1μF/50V M or ELECTROLYTIC CAP. 0.1μF/50V M	CE1JMASTLR10 CE1JMASDLR10 CE1JMASDL0R1
C735	CERAMIC CAP.(AX) CH J 100pF/50V	CA1J101TU008
C736	CERAMIC CAP.(AX) CH J 100pF/50V	CA1J101TU008
C737	CERAMIC CAP.(AX) CH J 100pF/50V	CA1J101TU008
C738	CERAMIC CAP.(AX) CH J 100pF/50V	CA1J101TU008
C801	ELECTROLYTIC CAP. 4.7μF/50V M or ELECTROLYTIC CAP. 4.7μF/50V M	CE1JMASTL4R7 CE1JMASDL4R7
C802	ELECTROLYTIC CAP. 4.7μF/50V M or ELECTROLYTIC CAP. 4.7μF/50V M	CE1JMASTL4R7 CE1JMASDL4R7
C803	ELECTROLYTIC CAP. 100μF/25V M or ELECTROLYTIC CAP. 100μF/25V M	CE1EMASTL101 CE1EMASDL101
C806	ELECTROLYTIC CAP. 1000μF/25V M or ELECTROLYTIC CAP. 1000μF/25V M or ELECTROLYTIC CAP. 1000μF/25V M	CE1EMZNTL102 CE1EMZPDL102 CE1EMZADL102
C807	ELECTROLYTIC CAP. 100μF/25V M or	CE1EMASTL101

Ref. No.	Description	Part No.
	ELECTROLYTIC CAP. 100µF/25V M	CE1EMASDL101
C808	ELECTROLYTIC CAP. 1000µF/25V M or	CE1EMZNTL102
	ELECTROLYTIC CAP. 1000µF/25V M or	CE1EMZPDL102
	ELECTROLYTIC CAP. 1000µF/25V M	CE1EMZADL102
C809	ELECTROLYTIC CAP. 1000µF/25V M or	CE1EMZNTL102
	ELECTROLYTIC CAP. 1000µF/25V M or	CE1EMZPDL102
	ELECTROLYTIC CAP. 1000µF/25V M	CE1EMZADL102
C810	FILM CAP.(P) 0.1µF/50V J or	CMA1JJS00104
	FILM CAP.(P) 0.1µF/50V J	CA1J104MS029
C811	FILM CAP.(P) 0.1µF/50V J or	CMA1JJS00104
	FILM CAP.(P) 0.1µF/50V J	CA1J104MS029
C812	ELECTROLYTIC CAP. 4.7µF/50V M or	CE1JMASTL4R7
	ELECTROLYTIC CAP. 4.7µF/50V M	CE1JMASDL4R7
C820	ELECTROLYTIC CAP. 4.7µF/50V M or	CE1JMASTL4R7
	ELECTROLYTIC CAP. 4.7µF/50V M	CE1JMASDL4R7
C821	FILM CAP.(P) 0.015µF/50V J or	CMA1JJS00153
	FILM CAP.(P) 0.015µF/50V J	CA1J153MS029
C822	FILM CAP.(P) 0.033µF/50V J or	CMA1JJS00333
	FILM CAP.(P) 0.033µF/50V J	CA1J333MS029
C823	FILM CAP.(P) 0.033µF/50V J or	CMA1JJS00333
	FILM CAP.(P) 0.033µF/50V J	CA1J333MS029
C825	ELECTROLYTIC CAP. 4.7µF/50V M or	CE1JMASTL4R7
	ELECTROLYTIC CAP. 4.7µF/50V M	CE1JMASDL4R7
C826	FILM CAP.(P) 0.015µF/50V J or	CMA1JJS00153
	FILM CAP.(P) 0.015µF/50V J	CA1J153MS029
C831	CERAMIC CAP.(AX) F Z 0.1µF/50V	CA1J104TU014
CONNECTORS		
CN201	TWG CONNECTOR 09P TWG-P09P-A1	J3TWA09TG001
CN203	TWG CONNECTOR 23P TWG-P23P-A1	J3TWA23TG001
CN204	PH CONNECTOR, TOP 6P B6B-PH-K-S	J3PHC06JG001
CN501	CONNECTOR BASE, TOP 11P B11B-PH-K-S	J3PHC11JG001
CN502	PH CONNECTOR, TOP 7P B7B-PH-K-S	J3PHC07JG001
CN701	TWG CONNECTOR 15P TWG-P15P-A1	J3TWA15TG001
CN801	CONNECTOR BASE, 2P(EH) B2B-EH-A	J3EHC02JG001
CN802	CONNECTOR BASE, 2P(EH) B2B-EH-A	J3EHC02JG001
DIODES		
D202	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1N4148	NDTZ001N4148
D285	SCHOTTKY BARRIER DIODE ERA81-004	QDPZERA81004
D501	ZENER DIODE MTZJT-775.6B or	QDTB0MTZJ5R6
	ZENER DIODE DZ-5.6BSBT265	NDTB0DZ5R6BS
D503	ZENER DIODE MTZJT-773.9B or	QDTB0MTZJ3R9
	ZENER DIODE DZ-3.9BSBT265	NDTB0DZ3R9BS
D802	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1N4148	NDTZ001N4148
D803	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1N4148	NDTZ001N4148
ICS		
IC201	IC:MEMORY S524C20D21 or	NSZBA0SSM028
	IC:MEMORY BR24C02F-W or	QSMBA0SRM003
	IC:MEMORY BR24C02F or	QSMMA0SRM003
	IC:EEPROM CAT24WC02Jl or	NSZBA0SBG001
	IC(EEP-ROM) M24C02-VMMN6	NSZAA0SSS004
IC202	IC:ANALOG MULTIPLEXER CD4051BNSR	NSZBA0TTY157
IC203	IC:ANALOG MULTIPLEXER CD4051BNSR	NSZBA0TTY157
IC204	IC PST600L	QSBLA0TMM018
IC205	PDP MICOM M38034M4H-159KP	QSZABORHT029
IC801	AUDIO POWER IC AN17805A	QSZBA0SMS007
TRANSISTORS		
Q203	TRANSISTOR 2SC2785(F) or	QQSF02SC2785

Ref. No.	Description	Part No.
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR KTC3198(GR) or	NQS40KTC3198
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q204	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR KTC3198(GR) or	NQS40KTC3198
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q205	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR KTC3198(GR) or	NQS40KTC3198
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q206	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR KTC3198(GR) or	NQS40KTC3198
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q207	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR KTC3198(GR) or	NQS40KTC3198
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q271	TRANSISTOR 2SA1175(F) or	QQSF02SA1175
	TRANSISTOR KTA1267(GR) or	NQS10KTA1267
	TRANSISTOR KTA1266(GR) or	NQS40KTA1266
	TRANSISTOR 2SA1015-GR(TPE2)	QQS102SA1015
Q272	TRANSISTOR 2SA1175(F) or	QQSF02SA1175
	TRANSISTOR KTA1267(GR) or	NQS10KTA1267
	TRANSISTOR KTA1266(GR) or	NQS40KTA1266
	TRANSISTOR 2SA1015-GR(TPE2)	QQS102SA1015
Q295	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR KTC3198(GR) or	NQS40KTC3198
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q501	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR KTC3198(GR) or	NQS40KTC3198
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q503	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR KTC3198(GR) or	NQS40KTC3198
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q701	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR KTC3198(GR) or	NQS40KTC3198
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q702	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR KTC3198(GR) or	NQS40KTC3198
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q703	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR KTC3198(GR) or	NQS40KTC3198
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q704	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR KTC3198(GR) or	NQS40KTC3198
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q705	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR KTC3198(GR) or	NQS40KTC3198
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q706	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199

Ref. No.	Description	Part No.
	TRANSISTOR KTC3198(GR) or	NQS40KTC3198
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q707	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR KTC3198(GR) or	NQS40KTC3198
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q708	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR KTC3198(GR) or	NQS40KTC3198
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q709	TRANSISTOR 2SA1175(F) or	QQSF02SA1175
	TRANSISTOR KTA1267(GR) or	NQS10KTA1267
	TRANSISTOR KTA1266(GR) or	NQS40KTA1266
	TRANSISTOR 2SA1015-GR(TPE2)	QQS102SA1015
Q710	RES. BUILT-IN TRANSISTOR BA1F4M-T or	QQSZ00BA1F4M
	RES. BUILT-IN TRANSISTOR KRC103M	NQSZ0KRC103M
Q711	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR KTC3198(GR) or	NQS40KTC3198
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q712	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR KTC3198(GR) or	NQS40KTC3198
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q801	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR KTC3198(GR) or	NQS40KTC3198
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q831	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR KTC3198(GR) or	NQS40KTC3198
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
RESISTORS		
R201	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R202	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R203	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R204	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R207	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R208	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R209	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R210	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R213	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R214	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R215	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R217	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R218	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R219	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R220	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R221	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R222	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R223	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R224	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R225	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R226	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R227	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R228	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R229	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R230	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R231	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R232	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101

Ref. No.	Description	Part No.
R233	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R234	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R236	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R237	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R238	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R239	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R240	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R241	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R242	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R243	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R244	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R245	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R246	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R247	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R248	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R249	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R251	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R252	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R253	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R254	CARBON RES. 1/4W J 4.7k Ω	RCX4JATZ0472
R255	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R256	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R257	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R258	CARBON RES. 1/4W J 100k Ω	RCX4JATZ0104
R259	CARBON RES. 1/4W J 100k Ω	RCX4JATZ0104
R260	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R261	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R262	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R263	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R264	CARBON RES. 1/4W J 4.7k Ω	RCX4JATZ0472
R265	CARBON RES. 1/4W J 4.7k Ω	RCX4JATZ0472
R271	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R272	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R273	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R274	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R275	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R276	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R277	CARBON RES. 1/4W J 3.3k Ω	RCX4JATZ0332
R278	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R285	PCB JUMPER D0.6-P5.0	JW5.0T
R291	PCB JUMPER D0.6-P5.0	JW5.0T
R292	CARBON RES. 1/4W J 1M Ω	RCX4JATZ0105
R295	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R501	CARBON RES. 1/4W J 150 Ω	RCX4JATZ0151
R502	CARBON RES. 1/4W J 680 Ω	RCX4JATZ0681
R503	CARBON RES. 1/4W J 22 Ω	RCX4JATZ0220
R506	CARBON RES. 1/4W J 150 Ω	RCX4JATZ0151
R507	CARBON RES. 1/4W J 680 Ω	RCX4JATZ0681
R701	CARBON RES. 1/4W J 75 Ω	RCX4JATZ0750
R702	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R703	CARBON RES. 1/4W J 680 Ω	RCX4JATZ0681
R705	CARBON RES. 1/4W J 33k Ω	RCX4JATZ0333
R706	CARBON RES. 1/4W J 39k Ω	RCX4JATZ0393
R707	CARBON RES. 1/4W J 390 Ω	RCX4JATZ0391
R708	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R709	CARBON RES. 1/4W J 75 Ω	RCX4JATZ0750
R710	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R711	CARBON RES. 1/4W J 680 Ω	RCX4JATZ0681
R713	CARBON RES. 1/4W J 33k Ω	RCX4JATZ0333
R714	CARBON RES. 1/4W J 39k Ω	RCX4JATZ0393
R715	CARBON RES. 1/4W J 390 Ω	RCX4JATZ0391

Ref. No.	Description	Part No.
R716	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R717	CARBON RES. 1/4W J 75 Ω	RCX4JATZ0750
R718	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R719	CARBON RES. 1/4W J 390 Ω	RCX4JATZ0391
R721	CARBON RES. 1/4W J 33k Ω	RCX4JATZ0333
R722	CARBON RES. 1/4W J 39k Ω	RCX4JATZ0393
R723	CARBON RES. 1/4W J 390 Ω	RCX4JATZ0391
R724	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R725	CARBON RES. 1/4W J 47k Ω	RCX4JATZ0473
R726	CARBON RES. 1/4W J 1.5k Ω	RCX4JATZ0152
R727	CARBON RES. 1/4W J 18k Ω	RCX4JATZ0183
R728	CARBON RES. 1/4W J 47k Ω	RCX4JATZ0473
R729	CARBON RES. 1/4W J 1.5k Ω	RCX4JATZ0152
R730	CARBON RES. 1/4W J 18k Ω	RCX4JATZ0183
R731	CARBON RES. 1/4W J 75 Ω	RCX4JATZ0750
R732	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R733	CARBON RES. 1/4W J 680 Ω	RCX4JATZ0681
R735	CARBON RES. 1/4W J 33k Ω	RCX4JATZ0333
R736	CARBON RES. 1/4W J 39k Ω	RCX4JATZ0393
R737	CARBON RES. 1/4W J 390 Ω	RCX4JATZ0391
R738	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R739	CARBON RES. 1/4W J 75 Ω	RCX4JATZ0750
R740	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R741	CARBON RES. 1/4W J 680 Ω	RCX4JATZ0681
R743	CARBON RES. 1/4W J 33k Ω	RCX4JATZ0333
R744	CARBON RES. 1/4W J 39k Ω	RCX4JATZ0393
R745	CARBON RES. 1/4W J 390 Ω	RCX4JATZ0391
R746	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R747	CARBON RES. 1/4W J 75 Ω	RCX4JATZ0750
R748	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R749	CARBON RES. 1/4W J 390 Ω	RCX4JATZ0391
R751	CARBON RES. 1/4W J 33k Ω	RCX4JATZ0333
R752	CARBON RES. 1/4W J 39k Ω	RCX4JATZ0393
R753	CARBON RES. 1/4W J 390 Ω	RCX4JATZ0391
R754	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R755	CARBON RES. 1/4W J 47k Ω	RCX4JATZ0473
R756	CARBON RES. 1/4W J 1.5k Ω	RCX4JATZ0152
R757	CARBON RES. 1/4W J 18k Ω	RCX4JATZ0183
R758	CARBON RES. 1/4W J 47k Ω	RCX4JATZ0473
R759	CARBON RES. 1/4W J 1.5k Ω	RCX4JATZ0152
R760	CARBON RES. 1/4W J 18k Ω	RCX4JATZ0183
R761	CARBON RES. 1/4W J 22 Ω	RCX4JATZ0220
R762	CARBON RES. 1/4W J 22 Ω	RCX4JATZ0220
R763	CARBON RES. 1/4W J 1.8k Ω	RCX4JATZ0182
R764	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R765	CARBON RES. 1/4W J 56k Ω	RCX4JATZ0563
R766	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R767	CARBON RES. 1/4W J 56k Ω	RCX4JATZ0563
R768	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R769	CARBON RES. 1/4W J 1.8k Ω	RCX4JATZ0182
R770	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R771	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R772	CARBON RES. 1/4W J 560 Ω	RCX4JATZ0561
R773	CARBON RES. 1/4W J 4.7k Ω	RCX4JATZ0472
R774	CARBON RES. 1/4W J 560 Ω	RCX4JATZ0561
R775	CARBON RES. 1/4W J 4.7k Ω	RCX4JATZ0472
R801	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R802	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R805	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R809	METAL OXIDE FILM RES. 2W J 0.68 Ω or	RN02R68ZU001
	METAL OXIDE FILM RES. 2W J 0.68 Ω	RN02R68DP004

Ref. No.	Description	Part No.
R810	METAL OXIDE FILM RES. 2W J 0.68 Ω or	RN02R68ZU001
	METAL OXIDE FILM RES. 2W J 0.68 Ω	RN02R68DP004
R811	CARBON RES. 1/4W J 15k Ω	RCX4JATZ0153
R812	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R813	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R814	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R815	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R816	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R817	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R820	CARBON RES. 1/4W J 3.3k Ω	RCX4JATZ0332
R821	CARBON RES. 1/4W J 680 Ω	RCX4JATZ0681
R822	CARBON RES. 1/4W J 5.6k Ω	RCX4JATZ0562
R825	CARBON RES. 1/4W J 3.3k Ω	RCX4JATZ0332
R826	CARBON RES. 1/4W J 680 Ω	RCX4JATZ0681
R827	CARBON RES. 1/4W J 5.6k Ω	RCX4JATZ0562
R831	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R832	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R833	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
MISCELLANEOUS		
BC701	PCB JUMPER D0.6-P5.0	JW5.0T
BC702	PCB JUMPER D0.6-P5.0	JW5.0T
BC703	PCB JUMPER D0.6-P5.0	JW5.0T
BC704	PCB JUMPER D0.6-P5.0	JW5.0T
JK701	Y/C JACK(SW) YKF51-5563N	JYEL080JC002
JK702	RCA JACK YKC21-4510N	JYRL060JC005
JK703	RCA JACK(WHITE/RED) YKC21-4042N	JXRL020JC024
JS201	PCB JUMPER D0.6-P5.0	JW5.0T
PB1	HEAT SINK (PJH) ASSEMBLY L0600UA	0EM409007
X201	X'TAL AT-49 8.400MHz	FXE845LDS001

FILTER CBA

Ref. No.	Description	Part No.
	FILTER CBA Consists of the following	1ESA10304
CONNECTOR		
CN601	WIRE ASSEMBLY 2P WX1L0600-014	WX1L0600-014
RESISTOR		
R601	SOLID RES.(UL) 1/2W 3.3M Ω	RSX2335KE010
MISCELLANEOUS		
CLN601	WIRE ASSEMBLY 1P WX1L0600-019	WX1L0600-019
CLN602	WIRE ASSEMBLY 1P WX1L0600-020	WX1L0600-020
F601	FUSE 8A/250V	PAGF20BAG802
FH601	FUSE HOLDER MSF-015	XH01Z00LY001
FH602	FUSE HOLDER MSF-015	XH01Z00LY001
GP641▲	GAP. FNR-G3.10D	FAZ000LD6005
JK601▲	EMI FILTER ID-N10AEH	JTDCFZ04D001
SA601▲	SURGE ABSORBER JVR-07N471K or	NVQZVR07N471
▲	SURGE ABSORBER CNR-10D471K or	NVQZR10D471K
▲	SURGE ABSORBER CNR-07D471K or	NVQZR07D471K
▲	SURGE ABSORBER PVR-07D471KB	NVQZ07D471KB

PLASMA DISPLAY MODULE SECTION

PLASMA DISPLAY

F42PDME

Plasma Display Module Section

- Safety Precautions
- Disassembly and Adjustment
- Troubleshooting
- Exploded Views
- Parts List

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Disassembly and Adjustment.....	2-2-1
Troubleshooting	2-3-1
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Parts List	2-6-1

SAFETY PRECAUTIONS

PDP Module is a display device to be divided into a Panel part and a Drive part. The Panel part consists of Electrodes, Phosphor, various dielectrics and gas, and the Drive part includes electronic circuitry and PCB. When using/handling this PDP Module, pay attention to the below warning and cautions.

Warning!

Indicates a hazard that may lead to death or injury if the warning is ignored and the product is handled incorrectly.

Caution!

Indicates a hazard that can lead to injury or damage to property if the caution is ignored and the product is handled incorrectly.

1. WARNING

- (1) Do not supply a voltage higher than that specified to this product. This may damage the product and may cause a fire.
- (2) Do not use this product in locations where the humidity is extremely high, where it may be splashed with water, or where flammable materials surround it.
Do not install or use the product in a location that does not satisfy the specified environmental conditions. This may damage the product and may cause a fire.
- (3) If a foreign substance (such as water, metal, or liquid) gets inside the product, immediately turn off the power. Continuing to use the product, it may cause fire or electric shock.
- (4) If the product emits smoke, and abnormal smell, or makes an abnormal sound, immediately turn off the power. Continuing to use the product, it may cause fire or electric shock.
- (5) Do not disconnect or connect the connector while power to the product is on. It takes some time for the voltage to drop to a sufficiently low level after the power has been turned off.
Confirm that the voltage has dropped to a safe level before disconnecting or connecting the connector.
- (6) Do not pull out or insert the power cable from/to an outlet with wet hands. It may cause electric shock.
- (7) Do not damage or modify the power cable. It may cause fire or electric shock.
- (8) If the power cable is damaged, or if the connector is loose, do not use the product: otherwise, this can lead to fire or electric shock.
- (9) If the power connector or the connector of the power cable becomes dirty or dusty, wipe it with a dry cloth. Otherwise, this can lead to fire.
- (10) PDP Module uses a high voltage (Max.450V dc). Keep the cautions concerning electric shock and do not touch the Device circuitry when handling the PDP Unit. And because the capacitor of the Device circuitry may remain charged at the moment of Power OFF, standing by for 1 minute is required in order to touch the Device circuitry.

2. CAUTIONS

- (1) Do not place this product in a location that is subject to heavy vibration, or on an unstable surface such as an inclined surface. The product may fall off or fall over, causing injuries.
- (2) Before disconnecting cable from the product, be sure to turn off the power. Be sure to hold the connector when disconnecting cables. Pulling a cable with excessive force may cause the core of the cable to be exposed or break the cable, and this can lead to fire or electric shock.
- (3) This product should be moved by two or more persons. If one person attempts to carry this product alone, he/she may be injured.
- (4) This product contains glass. The glass may break, causing injuries, if shock, vibration, heat, or distortion is applied to the product.

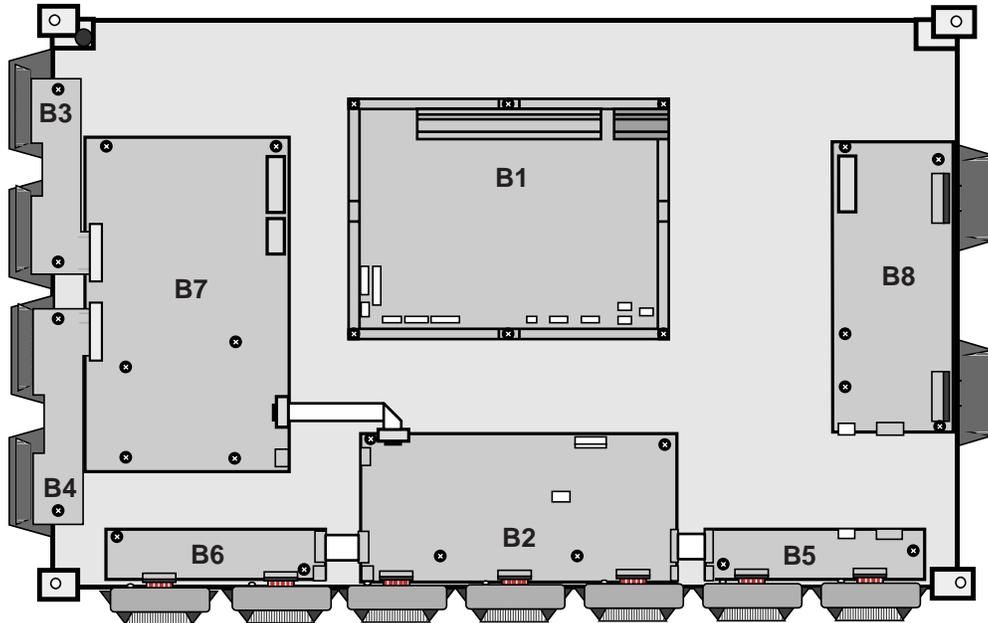
- (5) The temperature of the glass of the display may rise to 80°C or more depending on the conditions of use.
If you touch the glass inadvertently, you may be burned.
- (6) If glass surface of the display breaks or is scratched, do not touch the broken pieces or the scratches with bare hands. You may be injured.
- (7) PDP Module requires to be handled with care not to be touched with metal or hard materials, and must not be stressed by heat or mechanical impact.
- (8) There are some exposed components on the rear panel of this product. Touching these components may cause an electric shock.
- (9) When moving the product, be sure to turn off the power and disconnect all the cables. While moving the product, watch your step. The product may be dropped or all, leading to injuries of electric shock.
- (10) In order to protect static electricity due to C-MOS circuitry of the Drive part, wear a wrist band to protect static electricity when handling.
- (11) If cleaning the Panel, wipe it with a soft cloth moistened with water or a neutral detergent and squeezed, being careful not to touch the connector part of the Panel. And don't use chemical materials like thinner or benzene.
- (12) If this product is used as a display board to display a static image, "image sticking" occurs. This means that the luminance of areas of the display that remain lit for a long time drops compared with luminance of areas that are lit for a shorter time, causing uneven luminance across the display.
The degree to which this occurs is in proportion to the luminance at which the display is used. To prevent this phenomenon, therefore, avoid static images as much as possible and design your system so that it is used at a low luminance, by reducing signal level difference between bright area and less bright area through signal processing.
- (13) Because PDP Module emits heat from the Glass Panel part and the Drive circuitry, the environmental temperature must not be over 40°C.
The temperature of the Glass Panel part is especially high owing to heat from internal Drive circuitry. And because the PDP Module is driven by high voltage, it must avoid conductive materials.
- (14) If inserting components or circuit board in order to repair, be sure to fix a lead line to the connector before soldering.
- (15) If inserting high-power resistor (metal-oxide film resistor or metal film resistor) in order to repair, insert it as 10mm away as from a board.
- (16) During repairs, high voltage or high temperature components must be put away from a lead line.
- (17) This is a Cold Chassis but you had better use a cold transformer for safety during repairs. If repairing electricity source part, you must use the cold transformer.
- (18) Do not place an object on the glass surface of the display. The glass may break or be scratched.
- (19) This product may be damaged if it is subject to excessive stresses (such as excessive voltage, current, or temperature). The absolute maximum ratings specify the limits of these stresses.
- (20) The recommended operating conditions are conditions in which the normal operation of this product is guaranteed. All the rated values of the electrical specifications are guaranteed within these conditions.
Always use the product within the range of the recommended operating conditions. Otherwise, the reliability of the product may be degraded.
- (21) This product has a glass display surface. Design your system so that excessive shock and load are not applied to the glass. Exercise care that the vent at the corner of the glass panel is not damaged.
If the glass panel or vent is damaged, the product is inoperable.
- (22) Do not cover or wrap the product with a cloth or other covering while power is supplied to the product.
- (23) Before turning on power to the product, check the wiring of the product and confirm that the supply voltage is within the rated voltage range. If the wiring is wrong or if a voltage outside the rated range is applied, the product may malfunction or be damaged.
- (24) Do not store this product in a location where temperature and humidity are high. This may cause the product to malfunction. Because this product uses a discharge phenomenon, it may take time to light (operation may be delayed) when the product is used after it has been stored for a long time. In this case, it is recommended to light all cells for about 2 hours (aging).

- (25) This product is made from various materials such as glass, metal, and plastic. When discarding it, be sure to contact a professional waste disposal operator.
- (26) If faults occur due to arbitrary modification or disassembly, LG Electronics is not responsible for function, quality or other items.
- (27) Use of the product with a combination of parameters, conditions, or logic not specified in the specifications of this product is not guaranteed. If intending to use the product in such a way, be sure to consult LGE in advance.
- (28) Within the warranty period, general faults that occur due to defects in components such as ICs will be rectified by LGE without charge. However, IMAGE STICKING due to misapplying the above (12) provision is not included in the warranty. Repairs due to the other faults may be charged for depending on responsibility for the faults.

DISASSEMBLY AND ADJUSTMENT

I. DISASSEMBLY

1. Board and Positions of Screw Mount



⊙ : Screw

Fig. DE1

No.	Name of Board	No. of Screw
B1	PDP PS Unit	6
B2	LVDS CTRL B/D Unit	4
B3	Y DRV UPPER B/D Unit	2
B4	Y DRV LOWER B/D Unit	2
B5	X RIGHT B/D Unit	2
B6	X LEFT B/D Unit	2
B7	Y SUS B/D Unit	6
B8	Z SUS B/D Unit	5

2. Signal Connectors of Boards

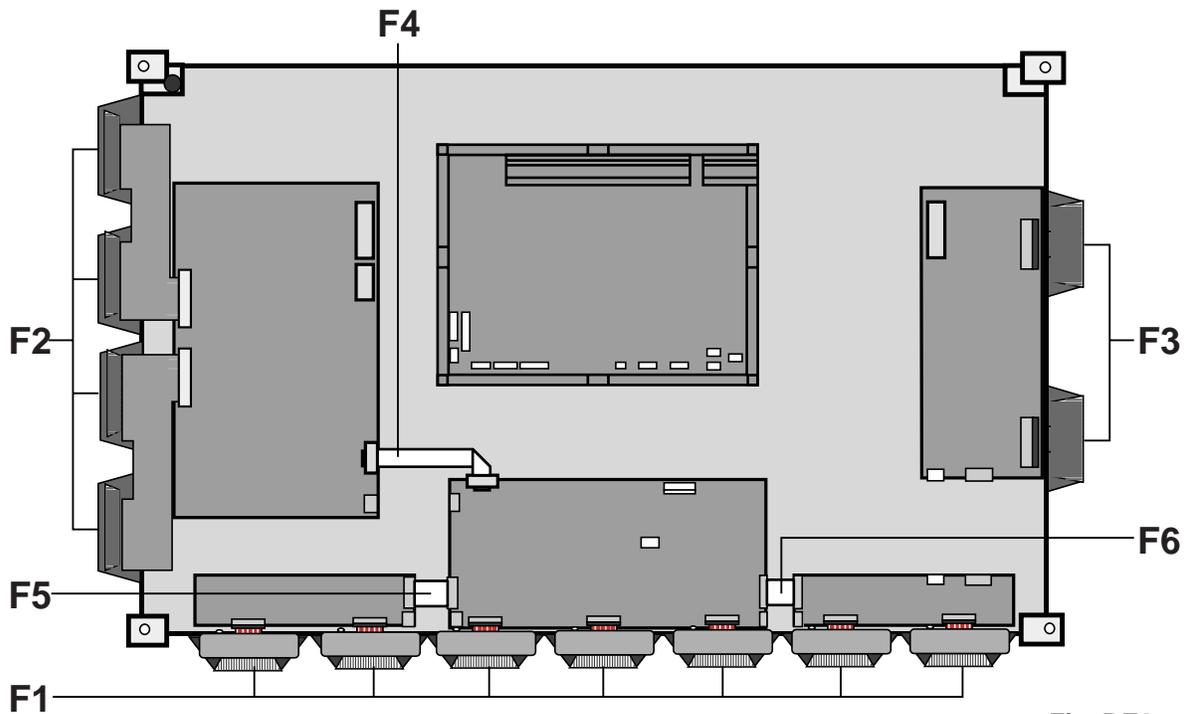


Fig. DE2

No.	Name of Cable	Disconnecting Note
F1	COF (Chip on Film)	1
F2	FPC (Flexible Printed Circuit)	2
F3	FPC (Flexible Printed Circuit)	2
F4	FFC (Flexible Flat Cable)	1
F5	FFC (Flexible Flat Cable)	1
F6	FFC (Flexible Flat Cable)	1

NOTES:

1. Lift up the locker of connector as shown in Fig. DE3-1 and then pull out cable.
2. Perform the following procedures for disconnection.
 - a) Pull out the locker of connector as shown in Fig. DE3-2.
 - b) Push down the Flat Cable slightly and take back cable.

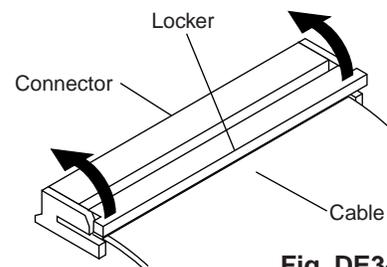


Fig. DE3-1

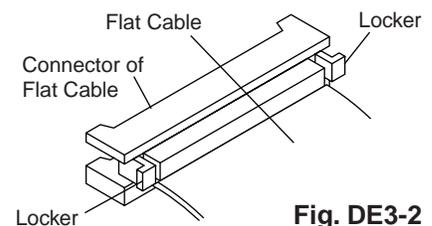


Fig. DE3-2

3. Power Cable Connectors

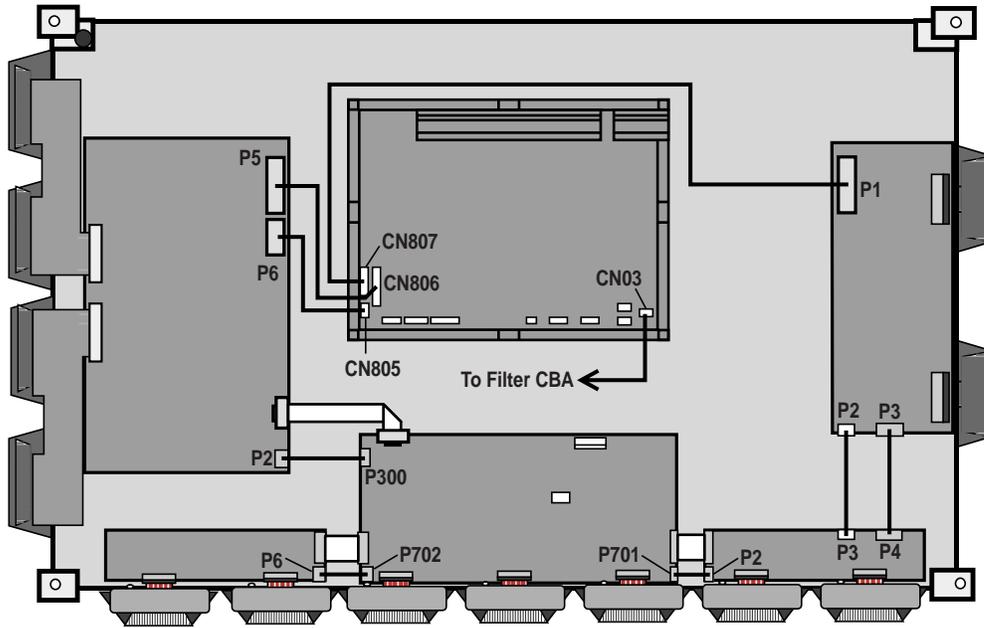


Fig. DE4

II. ADJUSTMENT

1. Application Object

This standard is applied to the PDP42V6#### PDP Module which is manufactured by the manufacturing team of PDP promotion department or elsewhere.

2. Notes

- (1) Without any special specification, the Module should be at the condition of preliminaries more than 10minutes before adjusting.
 - Service signal: 100% Full White signal
 - Service DC voltage: Vcc: 5V, Va: 65V, Vs: 185V
 - DC/DC Pack voltage: Vsetup: 200V, Vscw: 115V, -Vy: -75V
 - Preliminaries environment: Temp ($25\pm 5^{\circ}\text{C}$), Relative humidity ($65\pm 10\%$)
- (2) Module should get the Aging for the equilibrium after finish the assembling. Aging condition is shown below.
 - Service signal: 100% Full White, Red, Green, Blue pattern signal (Service time of each pattern: within 5minutes/cycle)
 - Service DC voltage: Match the voltage with the set up voltage in the first adjustment.
 - Aging time: More than 4Hrs
 - Aging environment: Temp ($60\pm 2^{\circ}\text{C}$), Relative humidity- Less than 75%
- (3) Module adjustment should be followed by below sequence.
 - Setting up the initial voltage and adjusting the voltage wave form of Vsetup
 - Measuring the Margin of Vs voltage and deciding the voltage
 - Adjusting and checking the voltage of DC/DC pack (Vsetup, Vscw, -Vy)
 - Adjusting the voltage wave form of Vset-down
 - Measuring the Margin of Vset-up voltage and deciding the voltage
 - Adjusting the wave form of final voltage

But, these items above can be changed by the consideration of mass production. (When changing the sequence, there should be an agreement of the Module development 2Gr./ QA Gr./ Manufacturing Gr.)
- (4) Without any special specification, you should adjust the Module in the environment of Temp ($25\pm 5^{\circ}\text{C}$) and Relative humidity ($65\pm 10\%$).

Caution) If you let the still image more than 10 minutes (especially The Digital pattern or Cross Hatch Pattern which has clear gradation), after image can be presented in the black level part of screen.

3. Adjustment items

3-1. Adjusting the Board Group

- (1) Adjusting the voltage wave form of Vset-up
- (2) Adjusting the voltage wave form of Vset-down
- (3) Adjusting the voltage wave form of Vramp

3-2 Adjustment after assembling (PDP Module adjustment)

- (1) Setting up the initial voltage and adjusting the voltage wave form of Vsetup
- (2) Measuring the voltage Margin of Vs and deciding the voltage
- (3) Adjusting and checking the voltage of DC/DC pack (Vsetup, Vscw, -Vy)
- (4) Adjusting the voltage wave form of Vset-down
- (5) Measuring the Margin of Vset-up voltage and deciding the voltage
- (6) Adjusting the wave form of final voltage

4. Adjusting the Board Group

(Applying the Jig Set)

4-1. Using Tools

- (1) Digital oscilloscope: More than 200MHz
- (2) DVM (Digital Multimeter): Fluke 87 or similar one
- (3) Signal generator: VG-825 or similar one
- (4) DC power supply
 - DC power supply for Vs (1): Should be changeable more than 0-200V/ more than 10A
 - DC power supply for Va (1): Should be changeable more than 0-100V/ more than 5A
 - DC power supply for 5V (1): Should be changeable more than 0-10V/ more than 10A
 - DC-DC Converter Jig (1): The Jig which has voltage equivalent output of PDP42V6#### Module after taking the Vs, Va, 5V voltage
 - Voltage stability of power supply: Within $\pm 1\%$ for Vs/Va, within $\pm 3\%$ for 5V

4-2. Connection diagram of measuring instrument and setting up the initial voltage

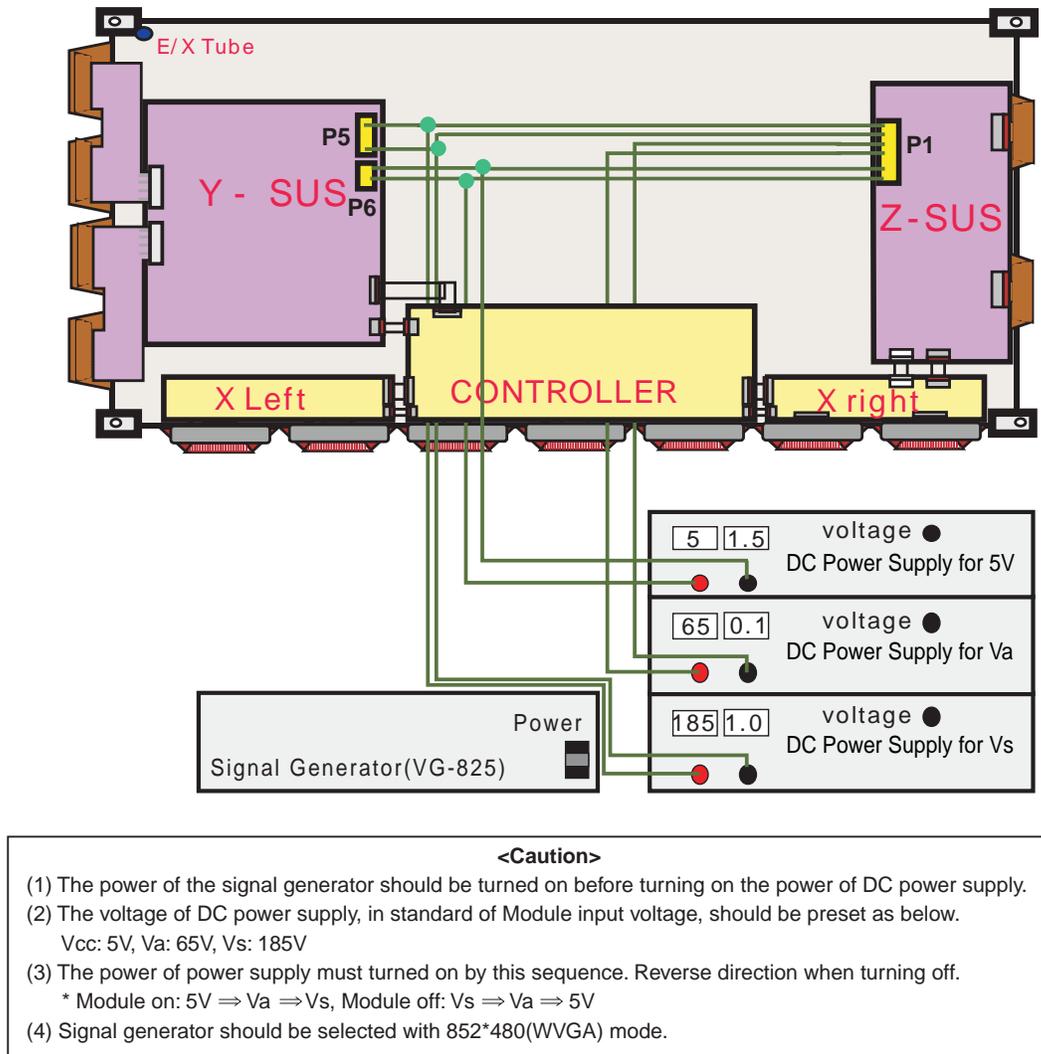
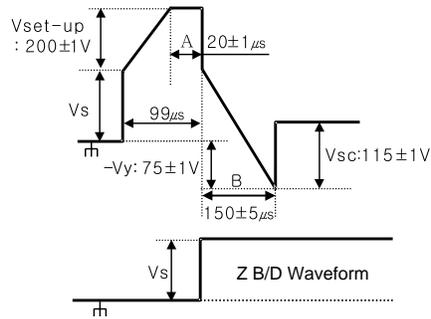


Fig. DE5 (Connection diagram of measuring instrument)

- (1) Connection diagram of measuring instrument
Refer to Fig. DE5. (Connection diagram of measuring instrument that adjusting the voltage wave form)
- (2) Setting up the initial voltage
Initially setting up voltage: Vcc: 5V, Va: 65V, Vs: 185V
But, Initially setting up voltage can be changed by the set up range according to the Module's characteristic.

4-3. How to Adjust

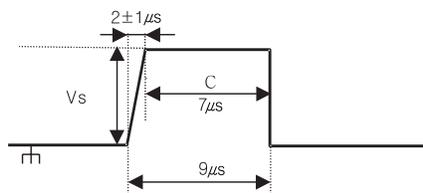
- (1) Adjusting the Voltage Wave form of Vsetup
 - a. Connect measuring instrument like the connection diagram Fig. DE5.
 - b. Turn on the power of the measuring instrument like the <Caution> item Fig. DE5.
 - c. Connect the oscilloscope probe to P4 connector(80 Pin) of Y-SUS PCB and GND.
 - d. Turn the VR1 of Y-SUS PCB and make the "A" wave form Fig. DE6 to be $20 \pm 1 \mu\text{s}$.
- (2) Adjusting Vset-down Voltage Wave form
Turn the VR2 of Y-SUS PCB and make the "B" wave form Fig. DE6 to be $150 \pm 5 \mu\text{s}$.



(Fig. DE6) Y, Z set-up Waveform

- (3) Adjusting the Voltage Wave form of Vramp
 - a. Connect oscilloscope Probe to the B37 Pin on Z PCB and the GND.
 - b. Turn the VR3 of Z PCB and make the “C” wave form Fig. DE7 to be 7µs.

But, in case of not setting up the Test point, produce same output and adjust wave form connect to other pattern or parts which has no possibility of short.



(Fig. DE7) Z ramp Waveform

5. Adjustment after Assembling

(PDP Module Adjustment)

5-1.Using Tools

- (1) Digital oscilloscope: More than 200MHz
- (2) DVM (Digital Multimeter): Fluke 87 or similar one
- (3) Signal generator: VG-825 or similar one
- (4) DC power supply
 - DC power supply for Vs (1): Should be changeable more than 0-200V/ more than 10A
 - DC power supply for Va (1): Should be changeable more than 0-100V/ more than 5A
 - DC power supply for 5V (1): Should be changeable more than 0-10V/ more than 10A
 - DC-DC Converter Jig (1): The Jig which has voltage equivalent output of PDP42V6#### Module after taking the Vs, Va, 5V voltage
 - Voltage stability of power supply: Within $\pm 1\%$ for Vs/Va, within $\pm 3\%$ for 5V

5-2. Connection diagram of measuring instrument and setting up the initial voltage

- (1) Connection diagram of measuring instrument
Refer to Fig. DE5. (Connection diagram of measuring instrument that adjusting the voltage wave form)
- (2) Setting up the initial voltage
Initially setting up voltage: Vcc: 5V, Va: 65V, Vs: 185V

But, Initially setting up voltage can be changed by the set up range according to the Module's characteristic.

5-3. How to Adjust

(1) Adjusting initial voltage wave form

Check the voltage wave form like the mentioned way on the 4-3(How to adjust) and readjust the wave form when it is wrong.

(2) Checking the DC/DC pack voltage

- a. Convert the signal of signal generator to the 100% Full White signal
- b. Connect the GND terminal of DVM to the R30's right leg of the Y B/D and set the Plus terminal to the left leg of R30 to check the Vscw voltage($115\pm 1V$) and when there is abnormality in voltage turn the variable resistor(VR5) of DC/DC Pack (Vscw) on Y B/D to adjust.
- c. Connect the GND terminal of DVM to the R31's right leg of the Y B/D and set the Plus terminal to the left leg of R31 to check the -Vy voltage ($-75\pm 1V$) and when there is abnormality in voltage turn the variable resistor (VR6) of DC/DC Pack (-Vy) on Y B/D to adjust.
- d. Connect the GND terminal of DVM to the R27's right leg of the Y B/D and set the Plus terminal to the left leg of R27 to check the Vsetup voltage ($200\pm 1V$) and when there is abnormality in voltage turn the variable resistor(VR4) of DC/DC Pack (Vsetup) on Y B/D to adjust.

(3) Measuring the Vs voltage Margin and deciding the voltage

- a. Convert the signal of signal generator to the 100% Full Red signal.
- b. Turn the voltage adjusting knob of Vs DC power supply to the voltage -down direction and make the cell of screen turned off.
- c. Turn the voltage adjusting knob of Vs DC power supply to the voltage -up direction until the cell of screen turned on. The first voltage, which make the cell of full screen turned on, is named as V_{min1} and record it.
- d. Turn the voltage adjusting knob of Vs DC power supply to the voltage-up direction slowly until the cell of screen turned off or over electric discharge. The first voltage, which makes the cell of screen turned off or over electric discharge, is named as V_{max1} and records it (Only, Vs voltage variable passes over the maximum 190V)
- e. Convert the signal of signal generator to the 100% Full Green signal.
- f. Repeat the adjustment (2) item and name each voltage as V_{min2}/V_{max2} and record them.
- g. Convert the signal of signal generator to 100% Full Blue signal.
- h. Repeat the adjustment (2) item and name each voltage as V_{min3}/V_{max3} and record them.
- i. Convert the signal of signal generator to 100% Full White signal.
- j. Repeat the adjustment (2) item and name each voltage as V_{min4}/V_{max4} and record them.
- k. Convert the signal of signal generator to 100% Full Black signal.
- l. Repeat the adjustment (2) item and name each voltage as V_{min5}/V_{max5} and record them.
- m. At this time decided Vs voltage adds 6V to Max value(V_{min1}~V_{min5}) and set up the voltage within the set-up range($180V < V_s \leq 190V$) in consideration of other features.
- n. Turn the voltage adjusting knob of Vs DC power supply make deciding the Vs voltage.
- o. Adjust Vset-down wave form using setting up Vs voltage like mentioned on the 4-3.

(4) Adjusting the final voltage wave form

Check the voltage wave form like the mentioned way on the 4-3(How to adjust) and readjust the wave form when it is twisted.

(5) DC-DC Pack Voltage Set up Range

V_{setup}: 185V ~ 225V

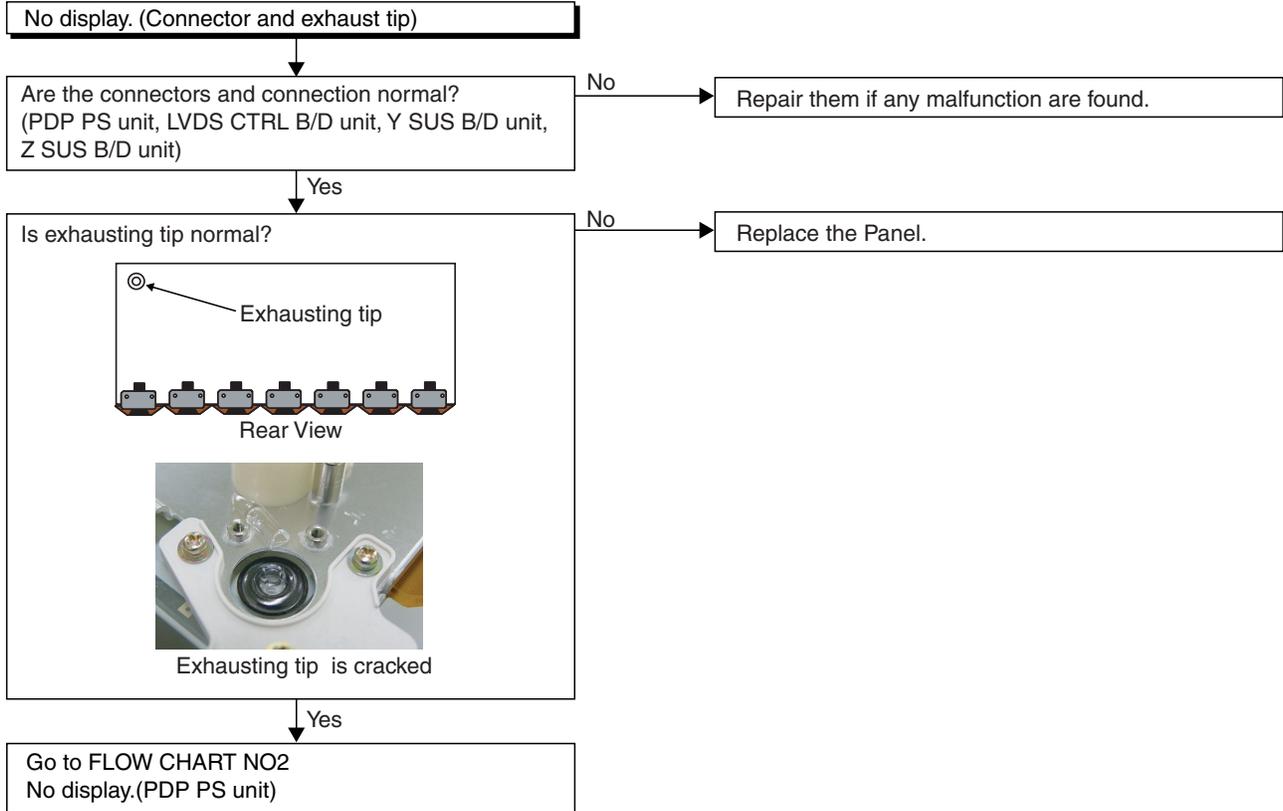
V_{sc}: 90V ~ 120V

-V_y: -60V ~ -80V

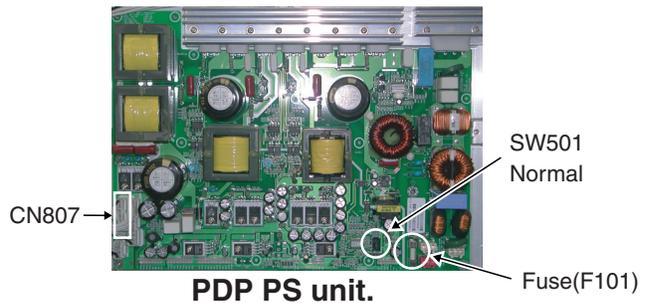
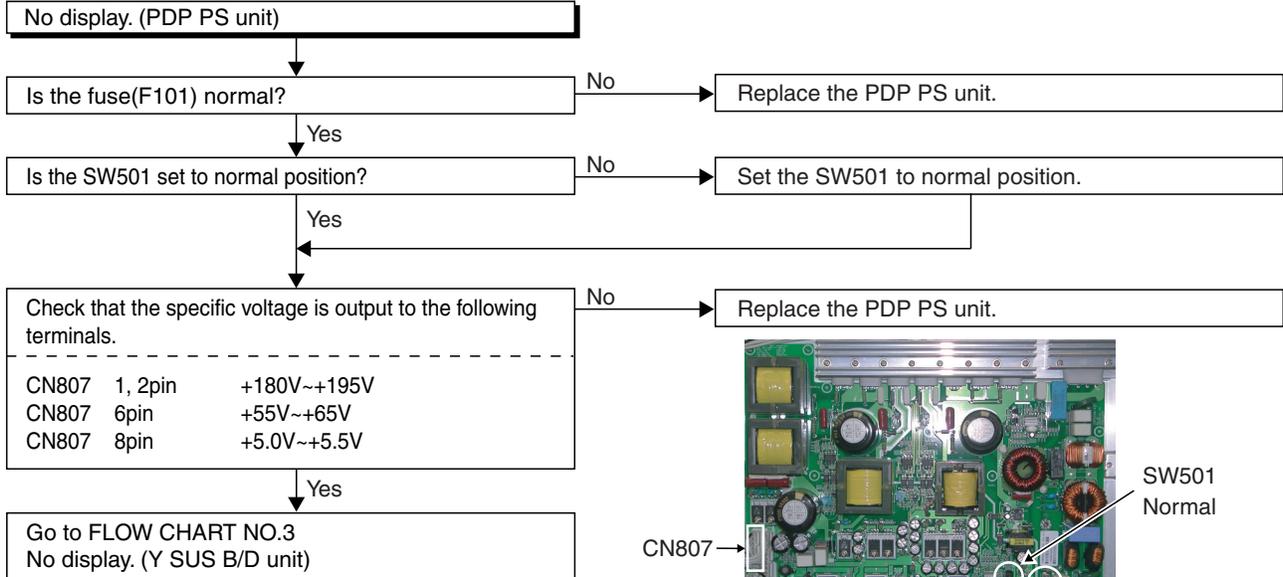
TROUBLESHOOTING

Below are charts for troubleshooting, even under the condition that both the Digital CBA and the Analog CBA are normal, when there is a malfunction in the plasma display module.

FLOW CHART NO.1



FLOW CHART NO.2



CAUTION!

It is power protection when power is off automatically within 2~3 min. from power on.
Power protection function protect the boards when occurred short on circuits of PDP module or power problem.
If can not impress power even after replacing PDP PS unit, find out where the short occurred.

FLOW CHART NO.3

No display. (Y SUS B/D unit)

Check that the specific voltage is input to the following terminals.

P6	3, 4pin	+5.0V~+5.5V
P5	1, 2, 3pin	+180V~+195V

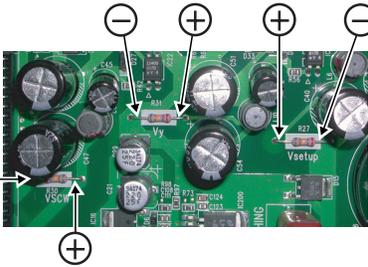
No → Refer to FLOW CHART NO.2 (No display (PDP PS unit)).

Yes → Is the fuse(FS1,FS2) normal?

No → Replace the Y SUS B/D unit.

Yes → Check that the specific voltage is input to the following point.

R27	+200V	(Vsetup)
R31	-75V	(-Vy)
R30	+115V	(Vscw)



Y SUS B/D unit

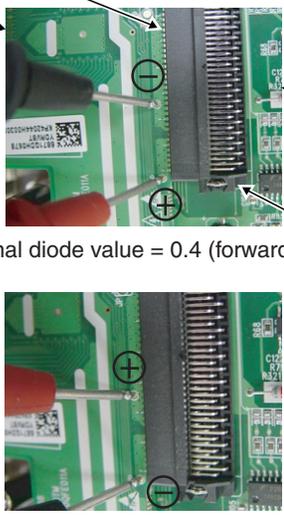
Check whether output voltages agrees with voltage that represented in label.

No → Replace the Y SUS B/D unit.

Yes → Check diode between GND and Y SUS output.

No → Replace the LVDS CTRL B/D unit.

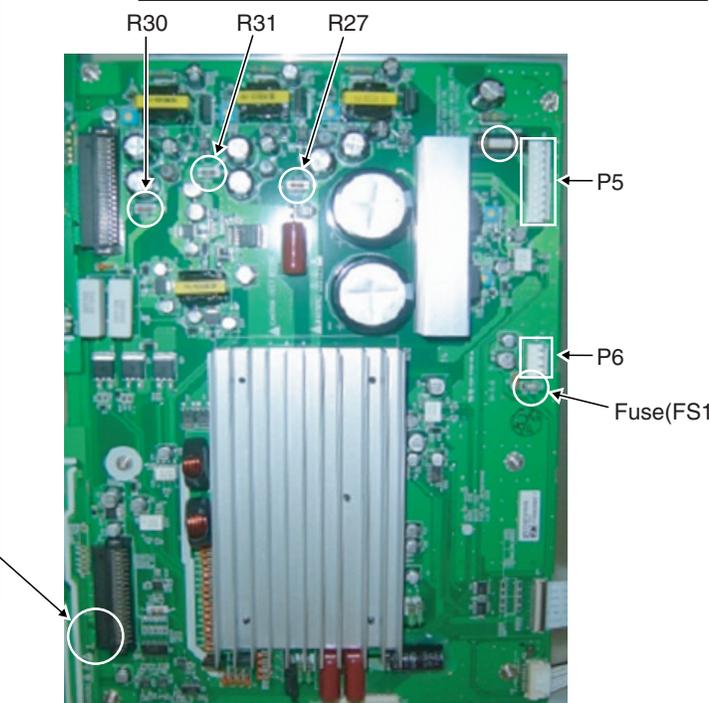
Y DRV LOWER B/D unit



Y SUS B/D unit

Normal diode value = 0.4 (forward)

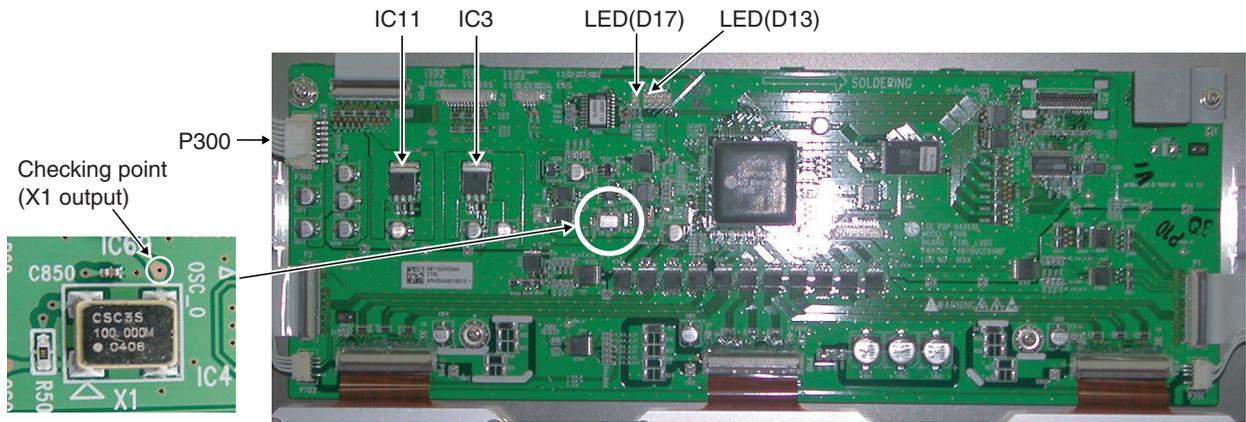
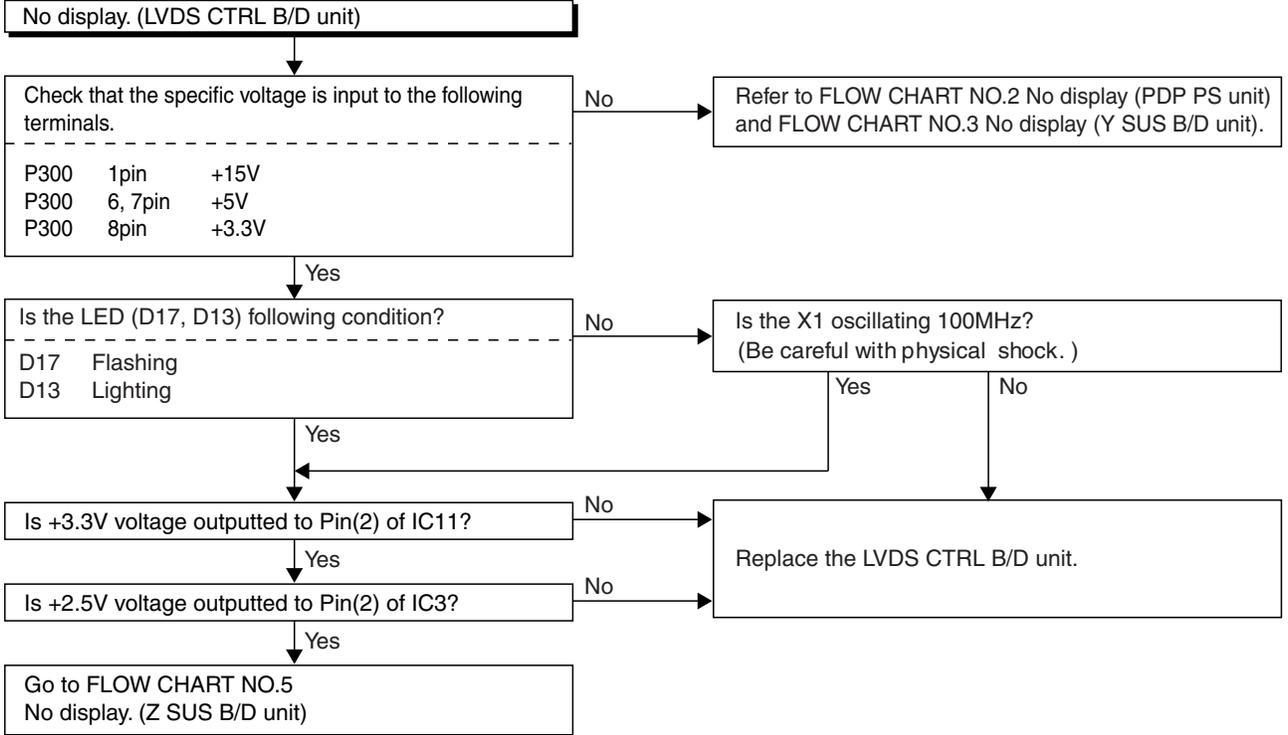
Normal diode value = OL (reverse)



Yes → Go to FLOW CHART NO.4 No display. (LVDS CTRL B/D unit)

Y SUS B/D unit.

FLOW CHART NO.4



LVDS CTRL B/D unit.

FLOW CHART NO.5

No display. (Z SUS B/D unit)

Check that the specific voltage is input to the following terminals.

P1	1, 2pin	+180V~+195V
P1	6pin	+55V~+65V
P1	8pin	+5.0V~+5.5V

No → Refer to FLOW CHART NO.4 (No display (PDP PS unit)).

Yes
Is the fuse(FS1,FS2, FS3) normal?

No → Replace the Z SUS B/D unit.
Yes → Check that the specific voltage is output to the following terminals.

Check that the specific voltage is output to the following terminals.

P3	1pin	+15V
P3	4, 5pin	+5V
P3	8pin	+55V~+65V

Yes
Check FPC output diode value.

No → Replace the Z SUS B/D unit.

Z SUS B/D unit

Normal diode value = 0.375 (forward)

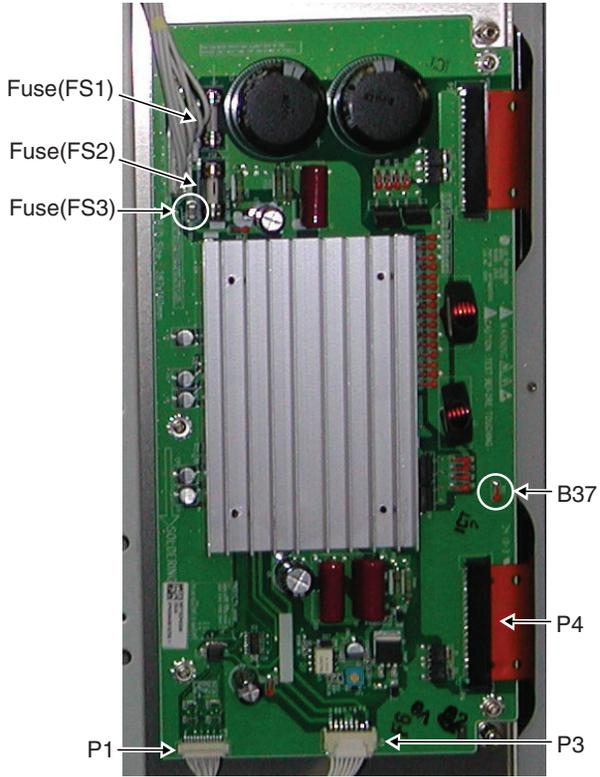
Normal diode value = OL (reverse)

Yes
Check Z RAMP waveform slope.
Measuring point: B37

Z RAMP waveform

No → Replace the Z SUS B/D unit.

Yes
Replace the Panel.



Z SUS B/D unit.

FLOW CHART NO.6

Vertical defect

Is the following picture displayed?



Bar

Yes → Check the connectors and connection on LVDS CTRL B/D unit, X RIGHT B/D unit and X LEFT B/D unit. (P109, P110, P111, P210, P211, P212, P213)
(If not connected well, it will occur a bar defect.)

No

Is the following picture displayed?

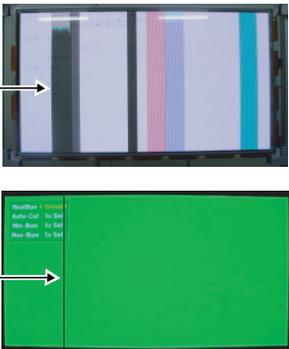


Off

Yes → Check the connector and connection on LVDS CTRL B/D unit (P701, P702), X RIGHT B/D unit (P2) and X LEFT B/D unit (P6).

No

Is the following picture displayed?



COF is torn partly

1 line open

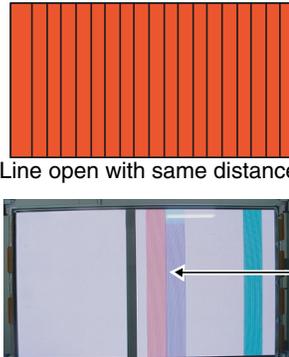
Yes → Replace the LVDS CTRL B/D unit. No improvement can be found.

Yes → Replace the Panel.

No → LVDS CTRL B/D unit is poor.

No

Is the following picture displayed?



Line open with same distance.

16 line open

Yes → Replace the LVDS CTRL B/D unit.

No → Replace the Panel.

FLOW CHART NO.7

Horizontal defect

Is the following picture displayed?



← Screen off

Yes → Check the connectors and connection between Y DRV UPPER B/D unit (P12) and Y DRV LOWER B/D unit (P13).

Yes → No improvement can be found.

No

Is the following picture displayed?



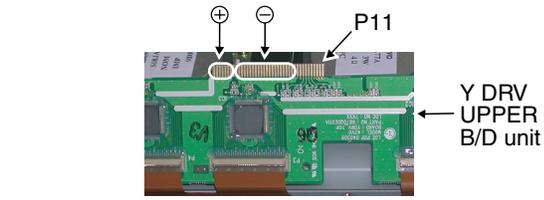
← Horizontal bar

Yes → Check the connector and connection on Y DRV UPPER B/D unit (P1~P4) and Y DRV LOWER B/D unit (P5~P8).

No

Check diode value P11 on Y DRV UPPER B/D unit and P9 on Y DRV LOWER B/D unit.

No → Replace Y DRV UPPER B/D unit or Y DRV LOWER B/D unit.



Normal diode value.
(In case of Panasonic IC=1.035)



Defective diode value=0.018

*It is different from each IC Maker.
(In case of TI IC=0.6~0.7)

Yes

Replace Y SUS B/D unit.
No improvement can be found.

No → Original Y SUS B/D unit is poor.

Yes

Replace LDVS CTRL B/D unit.

FLOW CHART NO.8

Mis-discharge

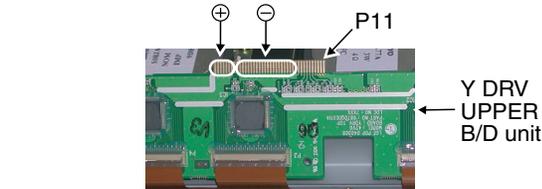
Are the Y SUS B/D unit and Z SUS B/D unit signal cables normal?

No → Confirms whether the connector is connected properly.

Yes

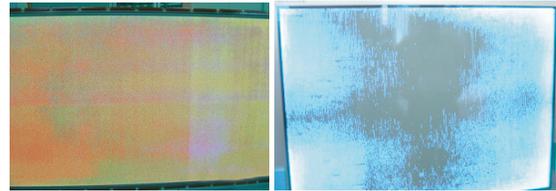
Check diode value of P11 on Y DRV UPPER B/D unit and P9 on Y DRV LOWER B/D unit.

No → Replace Y DRV UPPER B/D unit or Y DRV LOWER B/D unit.



Normal diode value. (In case of Panasonic IC=1.035)
Defective diode value=0.018

*It is different from each IC Maker. (In case of TI IC=0.6~0.7)



*Mis-discharge

Yes

Check that the specific voltage is input to the following point.

No → Replace the Y SUS B/D unit.

R31 -75V (-Vy)
R30 +115V (Vscw)

Refer to FLOW CHART NO.3 (No display (Y SUS B/D unit)).

Yes

Check Y SUS B/D unit, Z SUS B/D unit IPM fail.

No → Replace the Y SUS B/D unit or Z SUS B/D unit.

Forward : test 1 GND(+), Sus-out(-)
test 2 Sus-out(+), Vs(-)
test 3 ER-DN(-), ER-COM(+)
test 4 ER-COM(-), ER-UP(+)

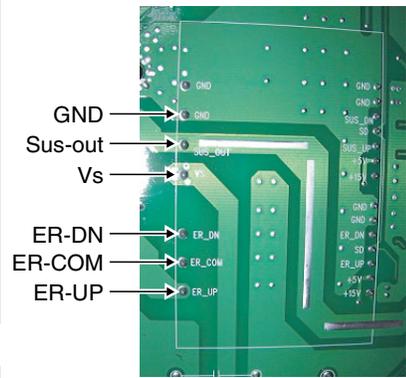
when each 4 TEST Diode value is over 0.4V

Reverse : test 1 GND(-), Sus-out(+)
test 2 Sus-out(-), Vs(+)
test 3 ER-DN(+), ER-COM(-)
test 4 ER-COM(+), ER-UP(-)

when each 4 TEST Diode value is infinity

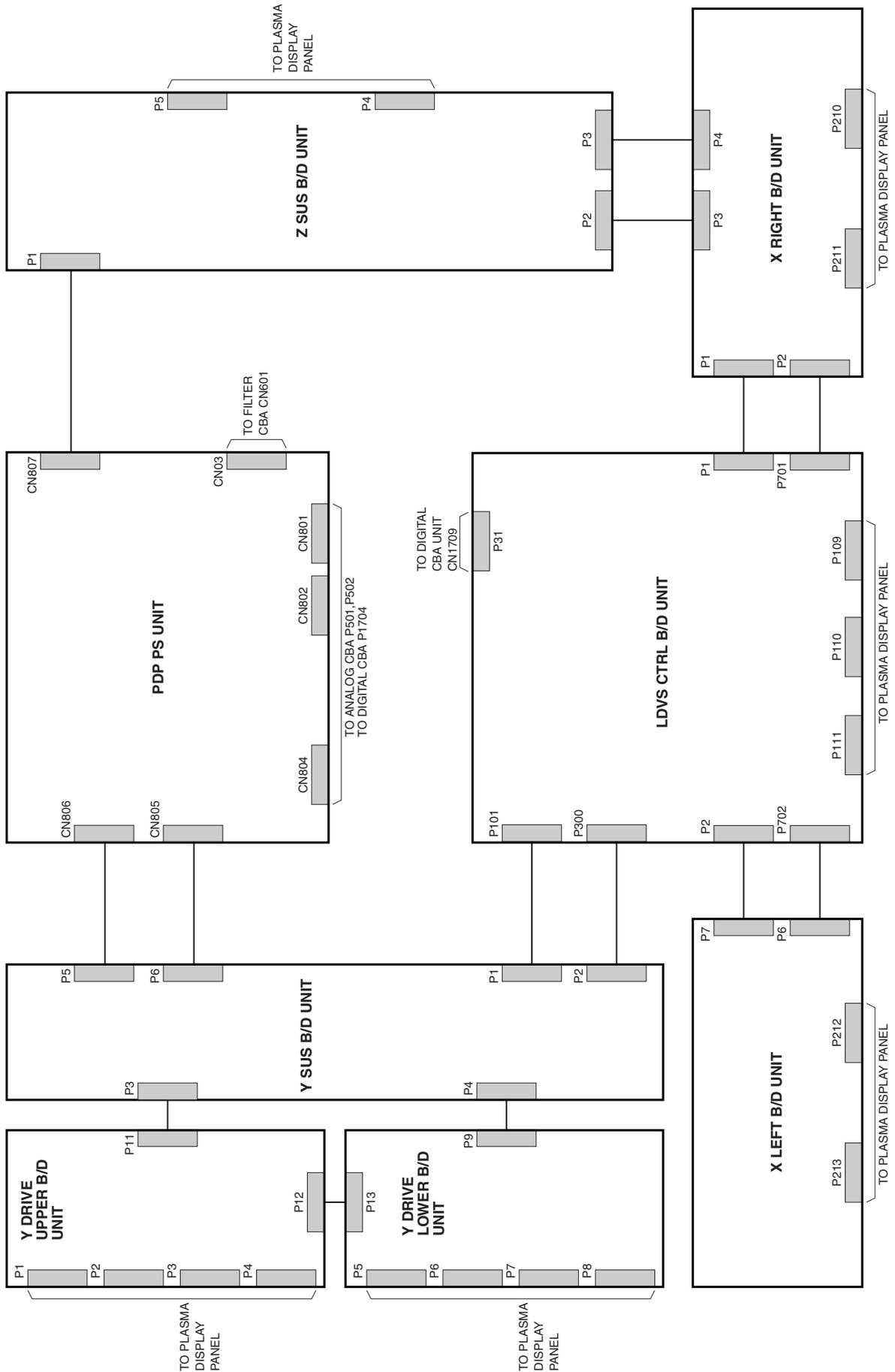
Yes

Replace the LVDS CTRL B/D unit.

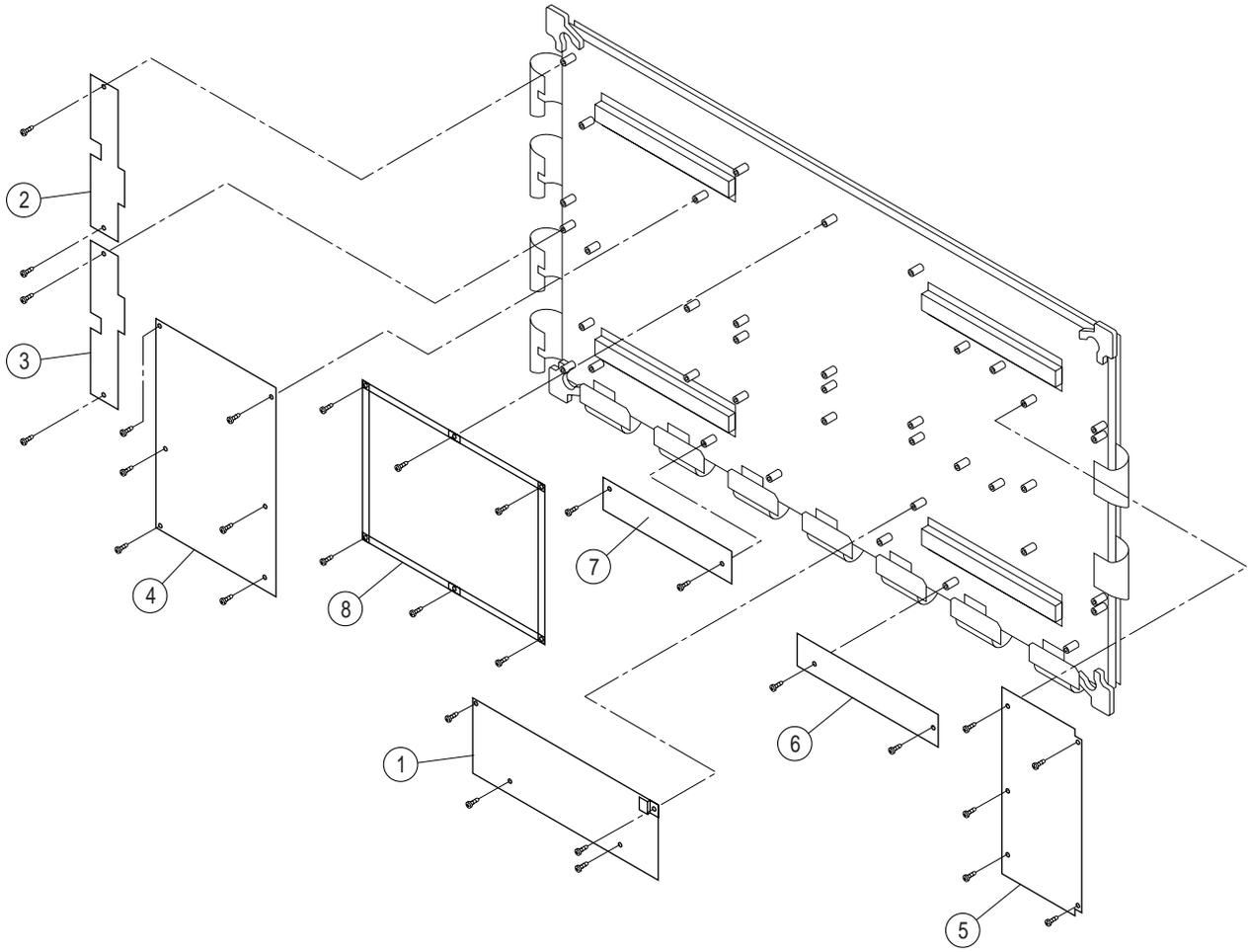


Y SUS B/D unit.

WIRING DIAGRAM



EXPLODED VIEWS OF PDP MODULE



PARTS LIST

Ref. No.	Description	Part No.
1	CTRL B/D Assembly(LVDS)	1EDM10576
2	YDRV Upper B/D Assembly	1EDM10577
3	YDRV Lower B/D Assembly	1EDM10578
4	Y SUS B/D Assembly	1EDM10579
5	Z SUS B/D Assembly	1EDM10580
6	X RIGHT B/D Assembly	1EDM10581
7	X LEFT B/D Assembly	1EDM10582
8	42 PSU Assembly	1EDM10583

