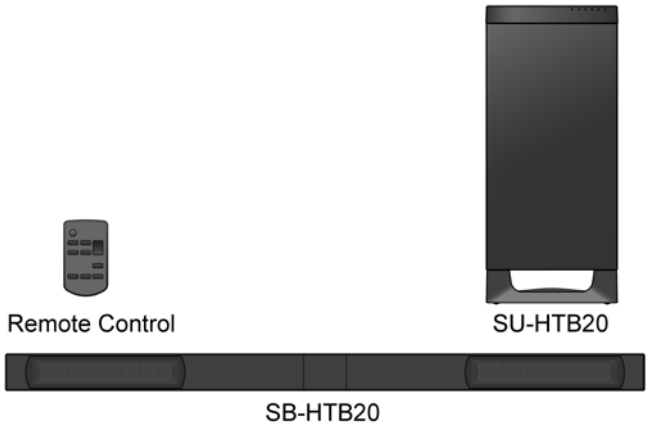
PSG1203011CE
A6

Service Manual

Home Theater Audio System

Model No. SU-HTB20P
SU-HTB20PC
SB-HTB20P
SB-HTB20PC
SC-HTB20P
SC-HTB20PC

Product Color: (K)...Black Type



⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety. These parts are marked by ⚠ in the Schematic Diagrams, Circuit Board Diagrams, Exploded Views and Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire or other hazards. Do not modify the original design without permission of manufacturer.

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Panasonic

1 Safety Precautions

1.1. General Guidelines

1. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
2. After servicing, ensure that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing, check for leakage current checks to prevent from being exposed to shock hazards.

(This “Safety Precaution” is applied only in U.S.A.)

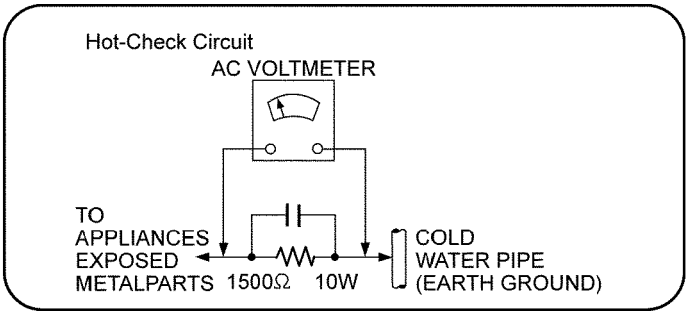
1. Before servicing, unplug the power cord to prevent an electric shock.
2. When replacing parts, use only manufacturer’s recommended components for safety.
3. Check the condition of the power cord. Replace if wear or damage is evident.
4. After servicing, be sure to restore the lead dress, insulation barriers, insulation papers, shields, etc.
5. Before returning the serviced equipment to the customer, be sure to make the following insulation resistance test to prevent the customer from being exposed to a shock hazard.

1.1.1. Leakage Current Cold Check

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Using an ohmmeter measure the resistance value, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between 1MΩ and 5.2Ω. When the exposed metal does not have a return path to the chassis, the reading must be ∞

1.1.2. Leakage Current Hot Check

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a 1.5kΩ, 10 watts resistor, in parallel with a 0.15μF capacitors, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure 1.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 or equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 milliamp. should the measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and re-checked before it is returned to the customer.



1.2. Before Repair and Adjustment

Active Subwoofer (SU-HTB20)

Disconnect AC power, discharge unit AC Capacitors as such C5700, C5701, C5702, C5703 and C5705 through a 10W, 1W resistor to ground.

Caution : DO NOT SHORT-CIRCUIT DIRECTLY (with a screwdriver blade, for instance), as this may destroy solid state devices.

After repairs are completed, restore power gradually using a variac, to avoid overcurrent.

- Current consumption AC 120 V, 60 Hz in Power On, No signal, Volume minimum, SEL: HDMI/OPT mode should be ~180 mA.

1.3. Protection Circuitry

The protection circuitry may have operated if either of the following conditions are noticed:

- No sound is heard when the power is turned on.
- Sound stops during a performance.

The function of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are "shorted", or if speaker systems with an impedance less than the indicated rated impedance of the amplifier are used.

If this occurs, follow the procedure outlines below:

1. Turn off the power.
2. Determine the cause of the problem and correct it.
3. Turn on the power once again after one minute.

Note:

When the protection circuitry functions, the unit will not operate unless the power is first turned off and then on again.

1.4. Caution For Fuse Replacement

1.4.1. SU-HTB20

CAUTION:

Replace with the same type fuse:
(Manufacturer: SKYGATE, Type: SG SCT, F1, T3.15A 250V)

ATTENTION:

Utiliser un fusible de rechange de même type:
(Fabricant: SKYGATE, Type: SG SCT, F1, T3.15A 250V)

1.5. Safety Part Information

Safety Parts List:

There are special components used in this equipment which are important for safety.

These parts are marked by ⚠ in the Schematic Diagrams & Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire or other hazards. Do not modify the original design without permission of manufacturer.

1.5.1. Active Subwoofer (SU-HTB20)

Safety	Ref. No.	Part No.	Part Name & Description	Remarks
⚠	3	REX1508	1P PRIMARY WIRE	
⚠	4	REX1509	1P PRIMARY WIRE	
⚠	11	RGN3158-K	NAME PLATE	P
⚠	12	RGN3158A-K	NAME PLATE	PC
⚠	26	RFKHUHTB20PK	REAR PANEL ASS'Y	
⚠	PCB4	REP4737G	SMPS P.C.B.	(RTL)
⚠	PCB5	REP4737G	AC INLET P.C.B.	(RTL)
⚠	DZ5701	ERZVA5Z471	ZNR	
⚠	L5702	ELF19H520E	LINE FILTER	
⚠	L5703	ELF19H520E	LINE FILTER	
⚠	T5701	ETS35BC2ZGAD	MAIN TRANSFORMER	
⚠	PC5720	B3PBA0000503	PHOTO COUPLER	
⚠	PC5760	B3PBA0000503	PHOTO COUPLER	
⚠	F1	K5G312Y00007	FUSE	
⚠	TH5702	D4CAA2R20001	THERMISTOR	
⚠	P5702	K2AB2B000007	AC INLET	
⚠	R5700	ERJ8GEYJ155V	1.5M 1/4W	
⚠	R5701	ERJ8GEYJ155V	1.5M 1/4W	
⚠	R5710	ERJ8GEYJ155V	1.5M 1/4W	
⚠	C5700	F1BAF1020020	1000pF	
⚠	C5701	F0CAF104A105	0.1uF	
⚠	C5702	F0CAF104A105	0.1uF	
⚠	C5703	F0CAF104A105	0.1uF	
⚠	C5705	F1BAF1020020	1000pF	

1.5.2. Front Speaker (SB-HTB20)

Safety	Ref. No.	Part No.	Part Name & Description	Remarks
⚠	4	RGN3157-K	NAME PLATE (LEFT)	
⚠	4	RGN3157A-K	NAME PLATE (RIGHT)	

1.5.3. System (SC-HTB20)

Safety	Ref. No.	Part No.	Part Name & Description	Remarks
⚠	A1	N2QAYC000064	REMOTE CONTROL	
⚠	A2	K2CB2CB00021	AC CORD	
⚠	A3	VQT4D53	O/I BOOK (En)	
⚠	A3	VQT4D54	O/I BOOK (Cf)	

1.6. Safety Installation Instructions

Professional installation is required.
The installation should never be done by any other than a qualified installation specialist.
PANASONIC DISCLAIMS ANY PROPERTY DAMAGE AND/OR SERIOUS INJURY, INCLUDING DEATH RESULTING FROM IMPROPER INSTALLATION OR INCORRECT HANDLING.
● Be sure to install this unit as indicated within this Owner's manual.

WARNING

Ensure that the installation location is strong enough to support long-term use.
● If its strength becomes insufficient over the course of long-term use, the unit may drop, possibly causing injury.
The installation work should be done by a qualified installation specialist.
● Incorrect installation may cause equipment to fall, and personal injury may result.
Include a safety factor when considering the strength of the proposed installation location.
● If strength is not sufficient the equipment may fall, and personal injury may result.
Do not install in a location that cannot bear the load.
● If the installation location lacks sufficient strength, the equipment may fall.
Do not modify the wall mount brackets.
● Otherwise the unit may fall and become damaged, and personal injury may result.
Install the unit by taking only the steps which are specified in these instructions: Do not install it in any other way.
● Otherwise the unit may drop and become damaged, and personal injury may result.
Do not install on a location other than a vertical wall.
● Otherwise the unit may drop and become damaged, and personal injury may result.

CAUTION

Do not install in any locations subject to humidity, dust, smoke, steam or heat or under an air conditioner where water may drip onto the unit.
● This may have an adverse effect on the unit and cause fire or electric shock.
Leave a clearance between the rear panel and the wall.
● The unit has air ventilation holes at the front and rear. Covering these may result in a fire.
Install the mounting screws and power cable in such a way that they will not make contact with metal objects or wiring inside the wall.
● Electric shocks may result from contact with any metal objects inside the wall.
For installation, use the special-purpose constituent parts.
● Otherwise, the unit may fall off the wall, and personal injury may result.
When removing this unit, remove the wall mounting screws as well.
● Otherwise the mounting screws may get caught and personal injury may result.
To operate this unit safely, install it at an appropriate height.
● Otherwise the unit may fall, and personal injury may result.

2 Warning

2.1. Prevention of Electro Static Discharge (ESD) to Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor “chip” components. The following techniques should be used to help reduce the incidence of component damage caused by electro static discharge (ESD).

1. Immediately before handling any semiconductor component or semiconductor-equiped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equiped with ES devices, place the assembly on a conductive surface such as aluminium foil, to prevent electrostatic charge build up or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder remover device. Some solder removal devices not classified as “anti-static (ESD protected)” can generate electrical charge to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminium foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

   Caution

   Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize body motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient to damage an ES device).

2.2. Service caution based on Legal restrictions

2.2.1. General description about Lead Free Solder (PbF)

The lead free solder has been used in the mounting process of all electrical components on the printed circuit boards used for this equipment in considering the globally environmental conservation.

The normal solder is the alloy of tin (Sn) and lead (Pb). On the other hand, the lead free solder is the alloy mainly consists of tin (Sn), silver (Ag) and Copper (Cu), and the melting point of the lead free solder is higher approx.30 degrees C (86°F) more than that of the normal solder.

Definition of PCB Lead Free Solder being used

The letter of “PbF” is printed either foil side or components side on the PCB using the lead free solder. (See right figure)	PbF

Service caution for repair work using Lead Free Solder (PbF)

- The lead free solder has to be used when repairing the equipment for which the lead free solder is used. (Definition: The letter of “PbF” is printed on the PCB using the lead free solder.)
- To put lead free solder, it should be well molten and mixed with the original lead free solder.
- Remove the remaining lead free solder on the PCB cleanly for soldering of the new IC.
- Since the melting point of the lead free solder is higher than that of the normal lead solder, it takes the longer time to melt the lead free solder.
- Use the soldering iron (more than 70W) equipped with the temperature control after setting the temperature at 350±30 degrees C (662±86°F).

Recommended Lead Free Solder (Service Parts Route.)

- The following 3 types of lead free solder are available through the service parts route.
  RFKZ03D01K----------(0.3mm 100g Reel)
  RFKZ06D01K----------(0.6mm 100g Reel)
  RFKZ10D01K----------(1.0mm 100g Reel)

Note

* Ingredient: Tin (Sn), 96.5%, Silver (Ag) 3.0%, Copper (Cu) 0.5%, Cobalt (Co) / Germanium (Ge) 0.1 to 0.3%

3 Service Navigation

3.1. Service Information

This service manual contains technical information which will allow service personnel's to understand and service this model. Please place orders using the parts list and not the drawing reference numbers.

If the circuit is changed or modified, this information will be followed by supplement service manual to be filed with original service manual.

- **Microprocessor :**
  The following components are supplied as an assembled part.
  - Microprocessor IC, IC2301 (RFKWMHTB20P).

4 Specifications

■ Amplifier Section

RMS Output Power	
10% total harmonic distortion	
Subwoofer ch	110 W per channel (100 Hz, 3 Ω)
Front ch (L, R ch)	65 W per channel (1 kHz, 6 Ω)
Total RMS Dolby Digital mode power	240 W
FTC output power	
1% total harmonic distortion	
Subwoofer ch	50 Hz to 110 Hz 40 W (3 Ω)
Front ch (L, R ch)	110 Hz to 20 kHz 25 W (6 Ω)
Total FTC Dolby Digital mode power	90 W

■ Terminal Section

HDMI	This unit supports “HDAVI Control 5” function
HDMI AV input (BD/DVD)	1
Input connector	Type A (19 pin)
HDMI AV output (To TV (ARC))	1
Output connector	Type A (19 pin)
Digital audio input	
Optical (TV, AUX)	2
Sampling frequency	32 kHz, 44.1 kHz, 48 kHz
Audio format	LPCM, Dolby Digital, DTS Digital surround
Speaker Output	
(Front L, R)	2

■ Subwoofer Section

1 way, 1 speaker system (Bass reflex type)

Woofer	16 cm (6 1/2”) cone type x 1

■ Main Unit General

Power consumption	40 W
In standby condition	Approx. 0.07 W
Power supply	AC 120 V, 60 Hz
Dimensions (W x H x D)	180 mm x 408 mm x 305 mm (7 3/32” x 16 1/16” x 12 1/64”)
Mass (weight)	5.5 kg (12.2 lbs)
Operating temperature range	0°C to 40°C (32°F to 104°F)
Operating humidity range	20% to 80 % RH (no condensation)

■ Front Speaker Section

1 way, 1 speaker system (Bass reflex type)

Full range	3.5cm (1 3/8”) x 10cm (4”) cone type x 1

■ Speaker general

Horizontal placement using the stands	
Dimensions (W x H x D)	755 mm x 91 mm x 75 mm (29 47/64" x 3 19/32" x 2 61/64")
Mass (weight)	1.3 kg (2.9 lbs)
Horizontal placement using the speaker feet	
Dimensions (W x H x D)	755 mm x 52 mm x 58.5 mm (29 47/64" x 2 3/64" x 2 5/16")
Mass (weight)	1.3 kg (2.9 lbs)
Horizontal placement (for wall mount)	
Dimensions (W x H x D)	755 mm x Approx. 49 mm x 58.5 mm (29 47/64" x 1 59/64" x 2 5/16")
Mass (weight)	1.3 kg (2.9 lbs)
Vertical placement using the speaker bases	
Dimensions (W x H x D)	126 mm x 430 mm x 130 mm (4 31/32" x 16 15/16" x 5 1/8")
Mass (weight)	0.7 kg (1.6 lbs)
Vertical placement (for wall mount)	
Dimensions (W x H x D)	Approx. 49 mm x 377.5 mm x 58.5 mm (1 59/64" x 14 55/64" x 2 5/16")
Mass (weight)	0.6 kg (1.4 lbs)

- Specifications are subject to change without notice.
- Weight and dimensions are approximate.
- Total harmonic distortion is measured by the digital spectrum analyzer.
- Total harmonic distortion is measured by using AES17 filter.

■ System: SC-HTB20P-K

ACTIVE SUBWOOFER : SU-HTB20P-K
FRONT SPEAKERS : SB-HTB20P-K

■ System: SC-HTB20PC-K

ACTIVE SUBWOOFER : SU-HTB20PC-K
FRONT SPEAKERS : SB-HTB20PC-K

5 General/Introduction

5.1. About VIERA Link “HDAVI Control”

What is VIERA Link “HDAVI Control”?

VIERA Link™ is a new name for EZ Sync™.
VIERA Link “HDAVI Control” is a convenient function that offers linked operations of this unit, and a Panasonic TV (VIERA) under “HDAVI Control”.
You can use this function by connecting the equipment with an HDMI cable. See the operating instructions for connected equipment for operational details.

Preparation

① Confirm that the HDMI connection has been made.
② Set the “HDAVI Control” operations on the connected equipment (e.g., TV).
③ For the optimal “HDAVI Control” operations change the following settings on the connected TV※1.
- Set the default speaker settings to this system.※2
- Set the speaker selection settings to this system.

④ Turn on all “HDAVI Control” compatible equipment and select the TV’s input for this system so that the “HDAVI Control” function works properly.
⑤ If a device is connected to the HDMI IN terminal, start play to check that the picture is displayed on the TV correctly.

When the connection or settings are changed, repeat this procedure.

※1 The availability and function of the settings may vary depending on the TV. Refer to the operating instructions for the TV for details.
※2 If the TV has a default speaker setting within the VIERA Link setting items, choosing this system as the default speaker will automatically change the speaker selection to this system.

- VIERA Link “HDAVI Control”, based on the control functions provided by HDMI which is an industry standard known as HDMI CEC (Consumer Electronics Control), is a unique function that we have developed and added. As such, its operation with other manufacturers’ equipment that supports HDMI CEC cannot be guaranteed.
- This unit supports “HDAVI Control 5” function.
“HDAVI Control 5” is the newest standard (current as of November, 2011) for Panasonic’s HDAVI Control compatible equipment. This standard is compatible with Panasonic’s conventional HDAVI equipment.
- Please refer to individual manuals for other manufacturers’ equipment supporting VIERA Link function.

What you can do with VIERA Link “HDAVI Control”

To make sure that the audio is output from this system, turn the main unit on by using the TV’s remote control and selecting home theater from the speaker menu of VIERA Link menu. The availability and function of the settings may vary depending on the TV. Refer to the operating instructions for the TV for details.

■ Speaker control

You can select whether audio output is from this system or the TV speakers by using the TV menu settings.

Home theater

This system is active.
- When this system is in standby mode, changing the TV speakers to this system in the VIERA Link menu will automatically turn this system on and select TV as the source.
- You can control the volume setting of this system using the volume or mute button on the TV remote control.
- If you turn off this system, TV speakers will be automatically activated.
- Audio will automatically be output from this system if the TV is compatible to VIERA Link “HDAVI Control 4” or later.

TV

TV speakers are active.
- The volume of this system is set to its minimum.

■ Automatic input switching

When the following operations are performed, this system will automatically change the input to the corresponding source.
– When play starts on an HDMI connected device.※3
– When the TV input or the TV channel is changed.

※3 If the speaker output setting on the TV is set to this system, the TV and this system turn on automatically (Power on link).

■ Power off link

When the TV is turned off, the main unit also turns off automatically.

■ Automatic lip-sync function
(for HDAVI Control 3 or later)

Delay between audio and video is automatically adjusted by adding time-lag to the audio output, enabling you to enjoy smooth audio for the picture.

The delay information is automatically set if the TV is compatible to VIERA Link “HDAVI Control 3” or later and the VIERA Link is set to on.
When the delay information cannot be retrieved, the audio delay is set to 40 ms.

5.2. Others (Licenses)

Manufactured under license from Dolby Laboratories. Dolby, Pro Logic, and the double-D symbol are trademarks of Dolby Laboratories.
Manufactured under license under U.S. Patent Nos: 5,956,674; 5,974,380; 6,487,535 & other U.S. and worldwide patents issued & pending. DTS, the Symbol, & DTS and the Symbol together are registered trademarks & DTS Digital Surround and the DTS logos are trademarks of DTS, Inc. Product includes software. © DTS, Inc. All Rights Reserved.
HDMI, the HDMI Logo, and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries.
HDAVI Control™ is a trademark of Panasonic Corporation.
VIERA Link™ is a trademark of Panasonic Corporation.
EZ Sync™ is a trademark of Panasonic Corporation.

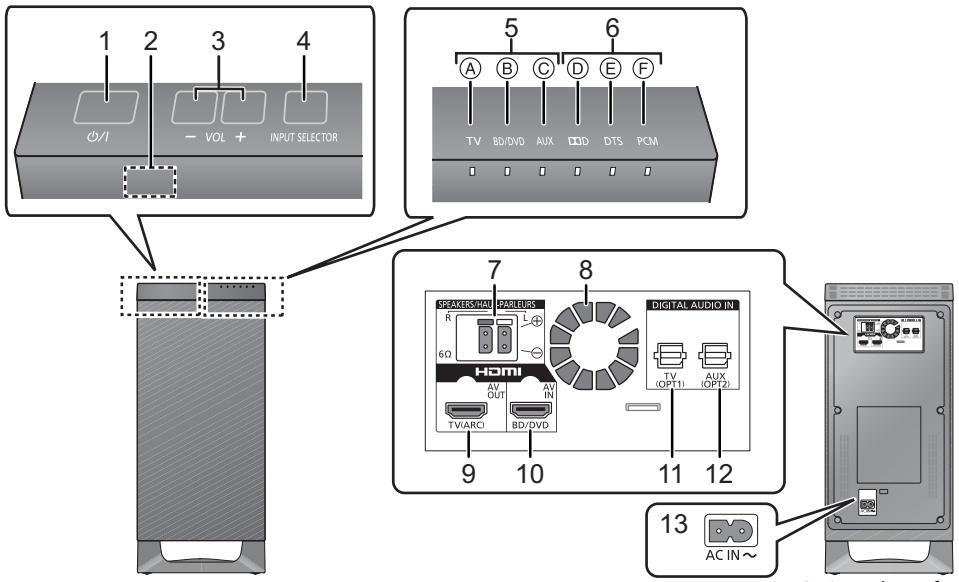
As an ENERGY STAR® Partner,※
Panasonic has determined that
this product meets the ENERGY STAR®
guidelines for energy efficiency.

※ For Canada only: The word “Participant” is used in place of the word “Partner”.

6 Location of Controls and Components

6.1. Main Unit Key Button Operations

Active subwoofer



Active subwoofer (front)

Active subwoofer (rear)

1 Standby/on switch (⏻/I)
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.

2 Remote control signal sensor

3 Adjust the volume of the speakers

4 Select the input source
TV ⟶ BD/DVD ⟶ AUX
↑ ⌊

5 Input selector indicators ※
Ⓐ TV indicator
Lights green when the TV is the audio source
Ⓑ BD/DVD indicator
Lights amber when the device connected to the BD/DVD terminal is the audio source
Ⓒ AUX indicator
Lights amber when the device connected to the AUX terminal is the audio source

6 Audio format indicators ※
Ⓓ Dolby Digital indicator
Lights when Dolby Digital is the current audio format
Ⓔ DTS indicator
Lights when DTS is the current audio format
Ⓕ PCM indicator
Lights when PCM (2ch, Multi-channel) is the current audio format

7 Speaker terminals

8 Cooling fan

9 HDMI OUT terminal (ARC compatible)

10 HDMI IN terminal (BD/DVD)

11 OPTICAL DIGITAL AUDIO IN terminal (TV)

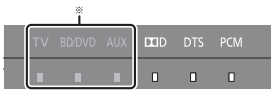
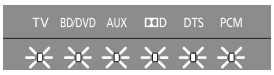
12 OPTICAL DIGITAL AUDIO IN terminal (AUX)

13 AC IN terminal

※ The indicators will also blink in various conditions (Refer to 6.2 Indicator illumination)

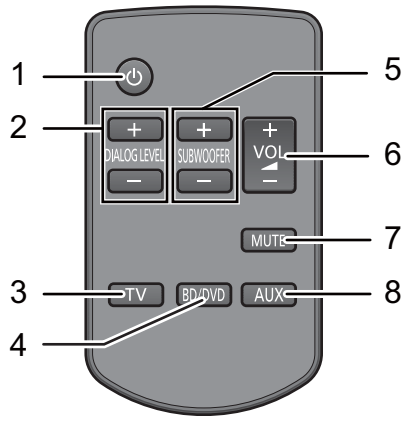
6.2. Indicator illumination

The indicators display the condition of this system by flashing. The indicator patterns illustrated below are displayed during normal operational conditions. They do not refer to the indications of a problem.

Indicator	Description
	The indicators blink from left to right (**+**) or from right to left (**-**). • When the speaker volume, the subwoofer level, or dialog effect level is adjusted
	The indicators blink simultaneously. • When “MUTE” is on
	The indicator blinks for 10 sec. • When the audio output mode is Multi-channel mode • When 3D surround effect and clear-mode dialog effect are on • When the dual audio setting is Main • When the auto gain control is on • When the subwoofer level or the dialog effect level is 1
	The indicator blinks for 10 sec. • When the audio output mode is Auto mode • When the subwoofer level or the dialog effect level is 2
	The indicator blinks for 10 sec. • When the audio output mode is Auto mode
	The indicator blinks for 10 sec. • When the subwoofer level or the dialog effect level is 3
	The indicator blinks for 10 sec. • When the audio output mode is 2ch mode • When 3D surround effect and clear-mode dialog effect are off • When the dual audio setting is Secondary (SAP: Secondary Audio Program) • When the auto gain control is off • When the subwoofer level or the dialog effect level is 4
	The indicators blink for 10 sec. • When the dual audio setting is Main and Secondary
	The indicators blink for 10 sec. • When the remote control code is changed The indicators blink once. • When changing the setting (“To reduce the clear-mode dialog effect”, “To turn off VIERA Link “HDAVI Control”” and “To turn off the volume limitation”)

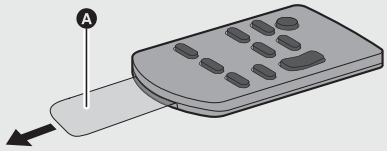
※ The selected source indicator will also light.

6.3. Remote Control Key Button Operations



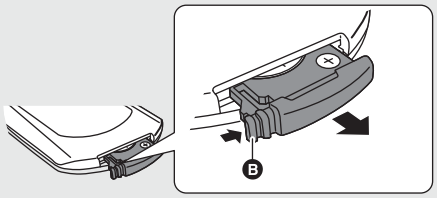
1 Turn the system on or off
2 Adjust the dialog effect level
3 Select the TV as the source
4 Select the BD/DVD as the source
5 Adjust the output level of the active subwoofer (bass sound)
6 Adjust the volume of the speakers
7 Mute the sound
8 Select the AUX as the source

Remove the insulation sheet Ⓐ before using.

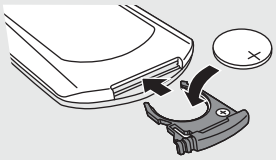


■ To replace a button-type battery

① While pressing the stopper Ⓑ, pull out the battery holder.



② Set the button-type battery with its (+) mark facing upward and then put the battery holder back in place.



- When replacing the battery, use: CR2025 (Lithium battery)
- Keep the button-type battery out of reach of children to prevent swallowing.

Unit care

■ Clean the system with a soft, dry cloth

- When the system becomes very dirty, wring a cloth moistened in water tightly to wipe the dirt, and then wipe it with a dry cloth.
- When cleaning the system, use a fine cloth. Do not use tissues or other materials (towels, etc.) that can fall apart. Small grains may get stuck inside the speaker cover.
- Never use alcohol, paint thinner or benzine to clean the system.
- Before using chemically-treated cloth, carefully read the instructions that came with the cloth.

7 Installation Instructions

7.1. Connections

• Turn off all equipment before connection and read the appropriate owner's manual.
Do not connect the AC power supply cord until all other connections are complete.

■ HDMI

The HDMI connection supports VIERA Link "HDAVI Control" when used with a compatible Panasonic TV.
- Use the High Speed HDMI cables. Non-HDMI-compliant cables cannot be utilized. It is recommended that you use Panasonic's HDMI cables.
  Recommended part number (High Speed HDMI cable):
  RP-CDHS15 (1.5 m/4.9 ft), RP-CDHS30 (3.0 m/9.8 ft), RP-CDHS50 (5.0 m/16.4 ft), etc.

■ 3D compatibility

Compatible with FULL HD 3D TV and Blu-ray Disc Player
- This system can pass through the 3D video signal from a 3D compatible Blu-ray Disc Player to a FULL HD 3D TV.

7.1.1. HDMI (ARC) connection (1/2)

1 Verify if the TV's HDMI terminal is labeled "HDMI (ARC)".

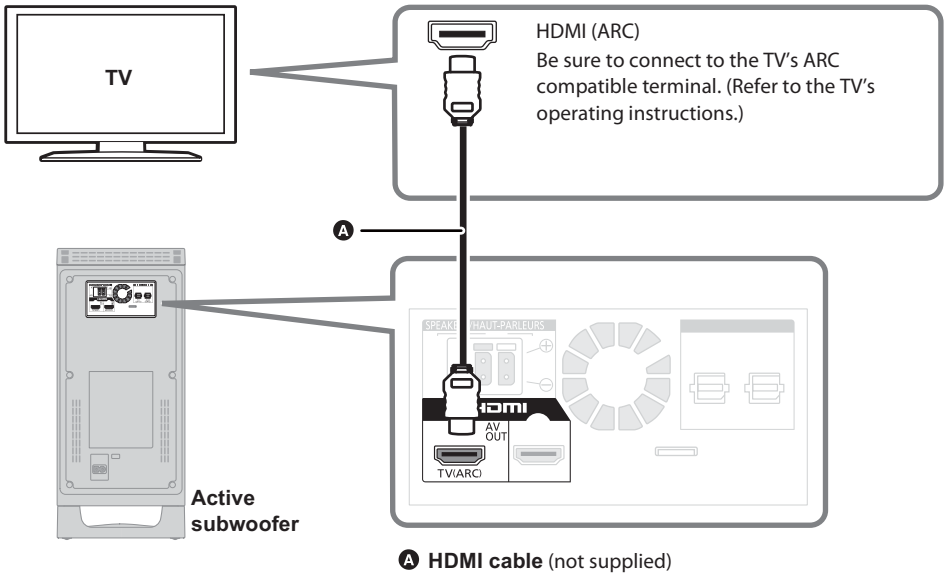
The connection will differ when the TV's HDMI terminal is labeled "HDMI (ARC)" and when it is not.
Labeled "HDMI (ARC)": Connection A
Not labeled "HDMI (ARC)": Connection B

■ What is ARC?

ARC is an abbreviation of Audio Return Channel, also known as HDMI ARC. It refers to one of the HDMI functions. When you connect the active subwoofer to the terminal labeled "HDMI (ARC)", the optical digital audio cable that is usually required in order to listen to sound from a TV is no longer required, and TV pictures and sound can be enjoyed with a single HDMI cable.

2 Make the connection.

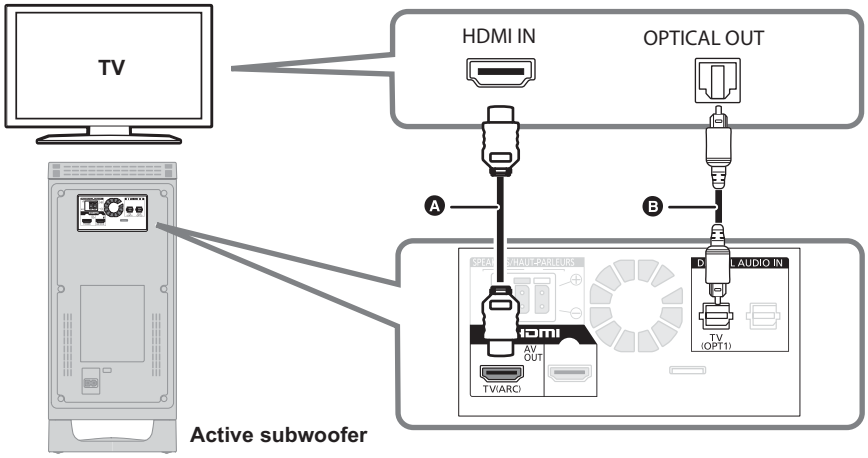
A Labeled "HDMI (ARC)"



Ⓐ **HDMI cable** (not supplied)

7.1.2. HDMI (Non-ARC) connection (2/2)

B Not labeled “HDMI (ARC)”



Ⓐ **HDMI cable** (not supplied)
Ⓑ **Optical digital audio cable** (not supplied)

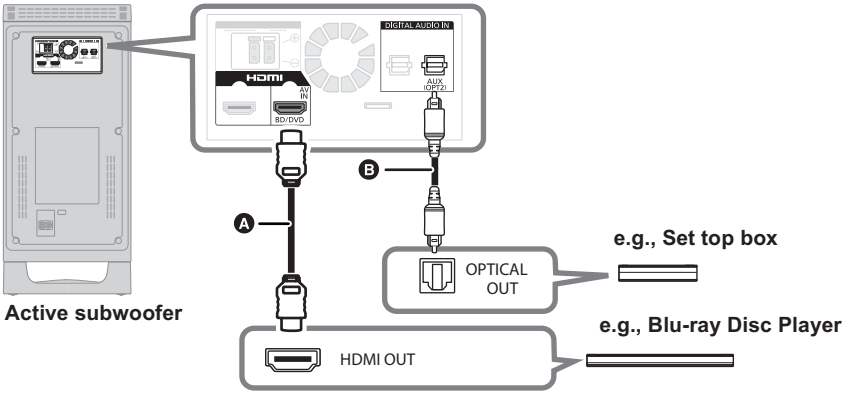
7.1.3. Connection with other devices

You can direct the audio signal from the connected Blu-ray Disc player, DVD player, Set Top Box, etc. to this system.

• Refer to the operating instructions of the set top box for the optimal video connection.

Preparation

• Connect this system to the TV.



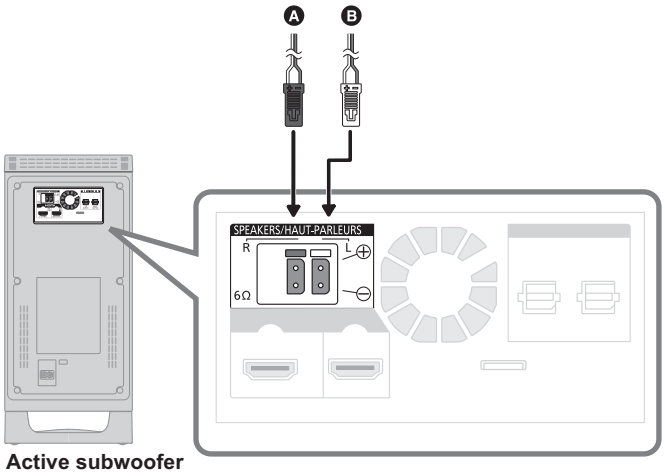
Ⓐ **HDMI cable** (not supplied)
Ⓑ **Optical digital audio cable** (not supplied)

■ HDMI standby pass-through

Even if this system is in standby mode, the audio and/or video signal from the device connected to the HDMI IN terminal (BD/DVD) will be sent to the TV connected to the HDMI OUT terminal (ARC) (The sound will not be output from this system).

7.1.4. Speaker cable connection

Connect to the terminals of the same color.



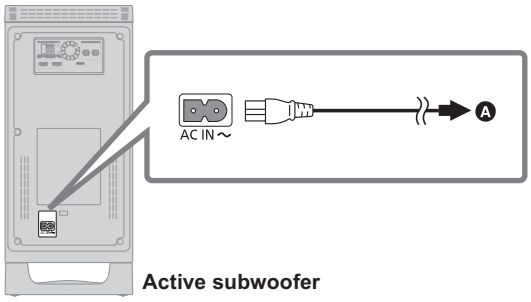
Active subwoofer

Ⓐ RED
Front speaker (Rch)

Ⓑ WHITE
Front speaker (Lch)

7.1.5. AC power supply cord connection

- Connect only after all other connections are complete.



Active subwoofer

Ⓐ To a household AC outlet

- The active subwoofer consumes a small amount of AC power even when it is in standby mode (0.07 W). In the interest of power conservation, if you will not be using this system for a long time, unplug it from the household AC outlet.

Install this unit so that the power cord can be unplugged from the socket outlet immediately if any problem occurs.

Saving energy

This system is designed to conserve its power consumption and save energy.

- **This system will automatically switch to standby mode** when no signal is input and no operation is performed for approx. 30 minutes.

8 Service Mode

This unit is equipped with features of self-diagnostic & special mode setting for checking the functions & reliability.
Special Note : Checking of the reliability (ageing) & operation must be carry out to ensure good working condition in unit.

8.1. Service Mode

This mode can be used during servicing.

1 : Checking the Main Microprocessor Firmware version and Region.

2 : Checking the Model Display and ROM Correction Information.

Here are the procedures to enter into service mode:

Step 1 : Power up the main unit.

Step 2 : Press & hold [VOL-] on main unit, follow by [SUB-] & [SUB+] on remote control.

Note : All decorder LED (Dolby D, DTS, AAC/PCM) will blink 4 times followed by TV blinking. At this TV blinking, main unit is ready for next command

To exit Service Mode, press [⏻] on remote control.

8.1.1. Model Display Details by LED Blinking Indicators

This section describes the LED status indicators by its blinking to represent the error codes.

Caution: The LED blinking process will stop only when the unit is power off completely.

Remote Control Code	LED 1 (TV)	LED 2 (BD/ DVD)	LED 3 (AUX)	LED 4 (DOLBY D)	LED 5 (DTS)	LED 6 (PCM)	Test Mode and Purpose
TV	O	-	-	-	-	-	ERROR HISTORY DISPLAY By pressing button, it goes back its history list. Eg: [1 F76] -> [2 F70HDM] -> [3 F61]
BD / DVD	O	-	-	-	-	-	Accumulation Operation Time Display Eg: [20M](under one hour / 20 minutes), [12] (12 hour)
MUTE	X	X	O	*	*	*	ROM Correction by CEC
VOLUME + (one press)	O	X	Bit 3	Bit 2	Bit 1	Bit 0	Software version (Refer to Table 8-1-2-1)
VOLUME + (twice press)	X	O	X	REG 2	REG 1	REG 0	Region display (Refer to Table 8-1-2-2)
VOLUME - (one press)	X	O	X	Bit 2	Bit 1	Bit 0	Model name (Refer to Table 8-1-3-1)
VOLUME - (twice press)	O	X	X	Bit 2	Bit 1	Bit 0	ROM correction (Refer to Table 8-1-3-2)
Power	X	X	X	X	X	X	Exit Service Mode and Power Off
Link Status “O” means LED on “X” means LED off “*” means LED blinking in progress							

Table 8-1-1

8.1.2. Checking of Main Microprocessor Firmware version and Region

Here are the procedures to check the region and main firmware version:

Step 1 : Power up the main unit.

Step 2 : Enter into service mode. (Refer to Section 8.1 for the procedures).

Step 3 : Press [VOL+] on remote control one time to check for the main microprocessor firmware version no. (Refer to table 8-1-2 for information on the LED indication).

Step 4 : Press [VOL+] on remote control two times to check for the region. (Refer to table 8-1-2 for information on the LED indication).

Key Operation	LED 1 (TV)	LED 2 (BD/DVD)	LED 3 (AUX)	LED 4 (DOLBY D)	LED 5 (DTS)	LED 6 (PCM/AAC)
Press [VOL+] button on remote control for one times	O	X	Bit 3	Bit 2	Bit 1	Bit 0
Press [VOL+] button on remote control for two time	X	O	X	REG 2	REG 1	REG 0

Table 8-1-2

8.1.2.1. Firmware version Bit No. (Bit 0~3)

It is to indicate the firmware version no. (Bit 0 ~3). (Refer to table 8-1-2-1 for more information).
Version number display are repeated every 16 releases.

Version No	Bit 3 (AUX)	Bit 2 (DOLBY D)	Bit 1 (DTS)	Bit 0 (PCM/AAC)
00, 16, 32 ...	X	X	X	X
01, 17, 33 ...	X	X	X	O
02, 18, 34 ...	X	X	O	X
03, 19, 35 ...	X	X	O	O
04, 20, 36 ...	X	O	X	X
05, 21, 37 ...	X	O	X	O
06, 22, 38 ...	X	O	O	X
07, 23, 39 ...	X	O	O	O
08, 24, 40 ...	O	X	X	X
09, 25, 41 ...	O	X	X	O
10, 26, 42 ...	O	X	O	X
11, 27, 43 ...	O	X	O	O
12, 28, 44 ...	O	O	X	X
13, 29, 45 ...	O	O	X	O
14, 30, 46 ...	O	O	O	X
15, 31, 47 ...	O	O	O	O

Table 8-1-2-1

8.1.2.2. Region Bit No.

The region bit no. is to indicate the destination for model. (Refer to table 8-1-2-2 for more information).

Region Bit 2	Region Bit 1	Region Bit 0	Destination
X	X	X	Japan
X	X	O	US/Canada
X	O	X	Europe
X	O	O	Oceania, Asia, South/Central America
O	X	X	China

Table 8-1-2-2

8.1.3. Checking of Model Display and ROM Correction Information

Here are the procedures to check the model display and ROM correction information:

Step 1 : Power up the main unit.

Step 2 : Enter into service mode. (Refer to Section 8.1 for the procedures).

Step 3 : Press [VOL-] on remote control one time to check for the model display. (Refer to table 8-1-3 for information on the LED indication).

Step 4 : Press [VOL-] on remote control two time to check for the ROM correction information. (Refer to table 8-1-3 for information on the LED indication).

Key Operation	LED 1 (TV)	LED 2 (BD/DVD)	LED 3 (AUX1 / AUX)	LED 4 (DOLBY D)	LED 5 (DTS)	LED 6 (PCM/AAC)
Press [VOL-] button on remote control for one times	X	O	X	Model 1	Model 2	Model 3
Press [VOL-] button on remote control for two time	X	O	O	X	X	ROMCOR info

Table 8-1-3

8.1.3.1. Model Display

It is to indicate the model display. (Refer to table 8-1-3-1 for more information).

Model 1 (Dolby D)	Model 2 (DTS)	Model 3 (PCM/AAC)	Series
X	X	X	HTX730/530
X	X	O	HTF50
X	O	X	HTE50
X	O	O	HTB20
O	X	X	HTB550
O	X	O	HTB350/351
O	O	O	OTHERS

Table 8-1-3-1

8.1.3.2. ROM Correction Display

It is to indicate the ROM correction display. (Refer to table 8-1-3-2 for more information).

(Dolby D)	(DTS)	ROMCOR Info (PCM/AAC)	Have ROM Correction?
X	X	X	No
X	X	O	Yes

Table 8-1-3-2

8.2. Displayed Error Codes

This model does not have an alphanumetric display unit hence error code (when a fault condition occurs) is represented by the LED status indicators. Refer to Fig 8.2

Here is the description of the LED status indicators:
LED 1 TV input selector indicator (OPTICAL INPUT 1)
LED 2 BD/DVD input selector indicator (OPTICAL INPUT 2)
LED 3 AUX input selector indicator
LED 4 DOLBY D decorder/audio format indicator
LED 5 DTS decorder/audio format indicator
LED 6 AAC decorder/audio format indicator (Japan region)
LED 6 PCM/LPCM decorder/audio format indicator (Non Japan region)

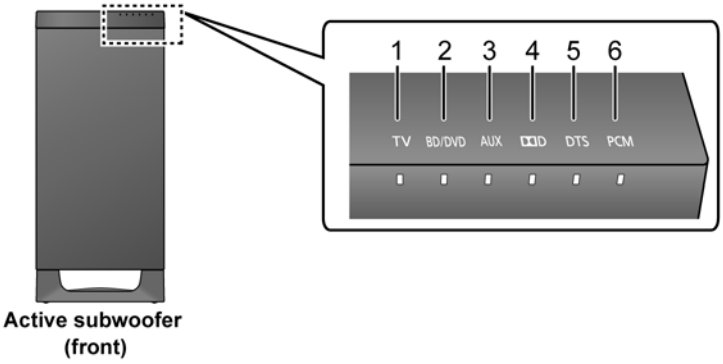


Fig 8.2

8.2.1. Error Code Display Details by LED Blinking Indicators

This section describes the LED status indicators by its blinking to represent the error codes.
Caution: The LED blinking process will stop only when the unit is power off completely.

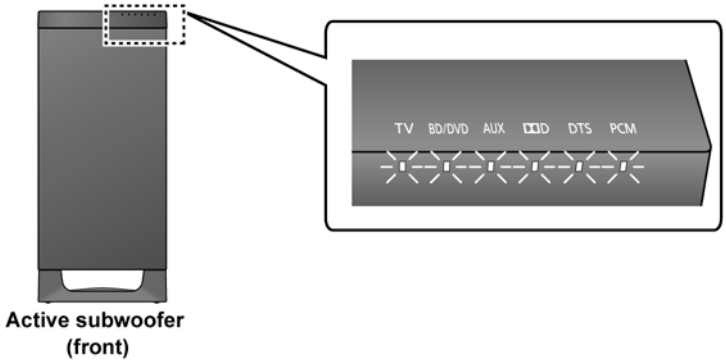
Error Code	LED 1 (TV)	LED 2 (BD/ DVD)	LED 3 (AUX)	LED 4 (DOLBY D)	LED 5 (DTS)	LED 6 (PCM)	Cause and Problem
OVERLOAD (F61) If this error occurs, main set will automatically power off.	*	X	*	X	X	X	Speaker protection, DAMP IC abnormality. Check for faulty parts and replace with new parts if necessary.
F76 If this error occurs, main set will automatically power off.	*	X	X	X	X	X	DC Power/Voltage Supply abnormality. Check for faulty parts and replace with new parts if necessary.
F70 DSP	*	X	*	*	X	X	DSP - Main Micro-p IC communication failure/abnormality. Check for faulty parts and replace with new parts if necessary.
F70 DAP	*	X	*	*	*	X	DAP - Main Micro- P IC communication failure /abnormality. Check for faulty parts and replace with new parts if necessary.
F70 HDMI	*	X	*	*	*	*	HDMI LSI to Main Micro-P IC communication error. Check for faulty parts and replace with new parts if necessary.
U701 / U703 / U704	X	X	*	X	X	X	• Connected devices error (HDCP non-compliance). Check for faulty parts and replace with new parts if necessary. • HDMI connection abnormality (cable damage, HDCP non-compliance etc). Check for faulty parts and replace with new parts if necessary. • HDMI image format incompatibility. Check for faulty parts and replace with new parts if necessary.
"X" means LED off. "*" means LED blink							

Table 8-2-1

8.3. Cold start

Here are the procedures to do a reset for the main unit.
Step 1 : Power up the main unit.
Step 2 : Press & hold [POWER] button on main unit for 4s or more.

All LED will light-up and blink for 2 times (at frequency of 4Hz)



8.4. Checking of Error Code History

Here are the procedures for checking the error code display.
Step 1 : Enter into Service Mode.
Step 2 : Press [TV] one time on remote control to check for the error codes.

LED Indicators						Sample
TV	**BD/DVD**	**AUX**	**DOLBY D**	**DTS**	**PCM**	
O	-	-	-	-	-	[1 F76] -> [2 F70HDM] -> [3 F61] .....

Refer to table 8.2.1 for the error code display details.

9 Troubleshooting Guide

・How to Reset （Factory Setup Condition）

1. Power on the main unit.
2. Press and hold Power button for 5 seconds.
   （All LEDs blink twice）
3. Power off the main unit.

・How to enter Service mode （To exit, turn the power off）

1. Power on the main unit.
2. Press and hold [Vol-] of main set, followed by [Vol-] and [Vol+] on remote control.

Power ON	Not Turn ON (Power LED Not Turned ON)	Check with Remocon-OK (Relay Turned ON)	Check Connection between FFC and Connector	・[Panel P.C.B.]-[MAIN P.C.B.]Check 11P FFC Connector [DAMP P.C.B.]-[MAIN P.C.B.] Check 40P FFC Connector		
			Check FFC	・[Panel P.C.B.]-[MAIN P.C.B.]Check 11P FFC, [DAMP P.C.B.]-[MAIN P.C.B.] Check 40P FFC, [SMPS P.C.B.]-[MAIN P.C.B.] Check 9P FFC		
			Check Switch Operation Check LED Display	・[Panel P.C.B.] Check Voltage of S6001, Press->0V, Release -> 3.3 V		
		Check with Remocon-NG (Relay Turned ON)	Check Connection between FFC and Connector	[Panel P.C.B.] Check Voltage of CN6001(Pin 2)->3.3V, CN6001(Pin 8)->5V, Check Connection of 11P FFC		
			Check Backup Power Source	[SMPS P.C.B.] Check Voltage of CN1(Pin 5)->5.6V, [MAIN P.C.B.] IC2301(Pin 14, 97)->3.3V		
			Check AC Inlet/Cord	[SMPS P.C.B.]-[AC Inlet P.C.B.] Check Wire, Pattern and Soldering.		
			Check Fuse Blowout	[SMPS P.C.B.] Continuity Check of F1		
	Power ON->Power OFF Soom	Error Code F76	TV LED Blink->Power OFF	Check DAMP IC Overcurrent, Overheat, and Damage	DAMP IC - NG	
		Error Code F61	TV/AUX LED Blink->Power OFF	Check Fan Output, Connection /parts of power source (FAN,DAMP,+12V,+5.6,+3.3,+1.8V)		
	Power ON/LED Error Display	Error Code F70 DSP	TV/AUX/DOLBY LED Blink	[MAIN P.C.B.] Communication Error between DSP and Main Micro-P	MAIN P.C.B. - NG	
		Error Code F70 DAP	TV/AUX/DOLBY/DTS LED Blink	[MAIN P.C.B.],[DAMP P.C.B.] Communication Error between DAMP IC and Main Micro-P	DAMP P.C.B. - NG	
		Error Code F70 HDMI	TV/AUX/DOLBY/DTS/AAC LED Blink	[MAIN P.C.B.] Communication Error between HDMI IC and Main Micro-P	MAIN P.C.B. - NG	
		Error Code U701/703/704	Only AUX LED Blinking	Power ON/OFF Connected Devices, Insert/Remove HDMI Cable		
Fuse Blowout	Blowout by AC Cord In after Replacement	Stand-by Power Source-NG	Continuity Check for Stand-by Power Source Circuit	[SMPS P.C.B.] Diode, Electrolytic Capacitor, Power IC, Tranformer Short-out (D5701,C5712,IC5701,T5701)		
	Blowout by Power Relay ON after Replacement	Main Power Source-NG	Continuity Check for Main Power Source Circuit	[SMPS P.C.B.] Diode, Electrolytic Capacitor, Power IC, Transistor Short-out (D5802,C5805,IC5801,Q5821)		
LED Display	Check Doctor Mode for All LED's ON	Not All LED Turned ON/OFF	Drive IC - NG, LED's not lit - NG	[Panel P.C.B.] Check IC6001(Pin 5,6,7,8,9,10) LED : ON->0V, OFF->5V		
		No LED lit	Check Drive IC, Serial Signal, and FFC	[Panel P.C.B.] Check IC6001(Pin 18)->3.3V, D6001(Anode)->5V [Panel P.C.B.] Check Serial Singnal of IC6001(Pin 2,3,4).		

Picture	No Video Output HDMI Devices Not Detected	Check HDMI-IN->NG	HDMI IC, EEPROM - NG	[MAIN P.C.B.] Check IC2501(Pin 12, 55,etc.)->1.8V、IC2501(Pin 14, 44, etc.)->3.3V		
				[MAIN P.C.B.] Check IC2601(Pin 37, 72, etc.)->1.8V、IC2601(6,18,32, etc.)->3.3V		
				[MAIN P.C.B.] Check Input resistor(R2723・・・,R2730, etc.)		
				[MAIN P.C.B.] Check JK2701,LB2703,IC2703,Q2701,R2723, etc.		
				[MAIN P.C.B.] Check Connection of Input/Output terminal (JK2701, etc.)		
	Strange Color of Picture	Check HDMI-IN->NG	Error between RX and TX	[MAIN P.C.B.] Check Resistor Array (RX2601・・・,RX2610, etc.)		
				[MAIN P.C.B.] Check Pins Connected to IC2501 and IC2601		
				[MAIN P.C.B.] Check Soldering Connection of Input/Output terminal (JK2701, etc.)		
		Check HDMI-IN->OK	Relevant HDMI-IN - NG	[MAIN P.C.B.] Check Soldering Connection of Input/Output terminal (JK2701, etc.)		
				[MAIN P.C.B.] Check Connection of Input/Output terminal (JK2701, etc.)		
Sound	No Audio Output (Both OPT IN)	Check HDMI IN->OK	Check OPT Terminal/OPT Cable	[DAMP P.C.B.] Check JK5251,JK5252 (Pin 1)->3.3V, SPDIF Wave Form of Output (Pin 3)		
	No Audio Output (Either of OPT IN)		Check OPT Terminal	[DAMP P.C.B.] Check JK5251,JK5252(Pin 1)->3.3V, SPDIF Wave Form of Output (Pin 3)		
	No Audio Output(HDMI IN)	Check OPT IN->NG	DSP, DAMP Input - NG	[MAIN P.C.B.]-[DAMP P.C.B.] Check 40P FFC and Connectors		
	No Audio Output(HDMI/ARC IN)	Check OPT IN->OK	ARC Circuit - NG, Check HDMI Cable	[MAIN P.C.B.] Check IC2502(Pin 5)->3.3V, IC2401(Pin 6,21,23)->3.3V		
	No Audio Output -Front Speaker	Check Subwoofer->OK	DAMP IC of Front Channel - NG	[MAIN P.C.B.]-[DAMP P.C.B.] Check the connection of 40P FFC and Connectors		
				[DAMP P.C.B.] DAMP (IC5300) of Front Speaker - NG		
	No Audio Output -Subwoofer	Check Front Speaker->OK	Check Connector of Subwoofer	[MAIN P.C.B.]-[DAMP P.C.B.] Check the connection of 40P FFC and Connectors		
				[DAMP P.C.B.] DAMP (IC5500) of Subwoofer - NG		
				[DAMP P.C.B.] Check Connection of Subwoofer 2P Connector		

10 Service Fixture & Tools

Prepare service tools before process service position.

Ref. No.	Service Tools		Remarks
SFT1	Woofer Speaker (SP61) - DAMP P.C.B. (CN5100)	RFKZHTB15SP (NETWORK ASS'Y)	

11 Disassembly and Assembly Instructions

Caution Note:

- **This section describes the disassembly and/or assembly procedures for all major printed circuit boards & main components for the unit. (You may refer to the section of "Main components and P.C.B Locations" as described in the service manual)**
- **Before carrying out the disassembly process, please ensure all the safety precautions & procedures are followed.**
- **During the disassembly and/or assembly process, please handle with care as there may be chassis components with sharp edges.**
- **Avoid touching heatsinks due to its high temperature after prolong use. (See caution as described below)**

- **During disassembly and assembly, please ensure proper service tools, equipments or jigs is being used.**
- **During replacement of component parts, please refer to the section of "Replacement Parts List" as described in the service manual.**
- **Select items from the following indexes when disassembly or replacement are required.**

Active Subwoofer (SU-HTB20)

- Disassembly of Top Panel Unit
- Disassembly of Panel P.C.B.
- Disassembly of Rear Panel Unit
- Disassembly of SMPS P.C.B. & AC Inlet P.C.B.
- Replacement of Switching Regulator IC (IC5701)
- Replacement of Rectifier Diode (D5802)
- Disassembly of Main P.C.B. Unit
- Disassembly of DAMP P.C.B.
- Replacement of Digital Amplifier IC (IC5300/IC5500)
- Disassembly of Fan Unit
- Disassembly of Main P.C.B.
- Disassembly of Woofer Speaker (SP61)

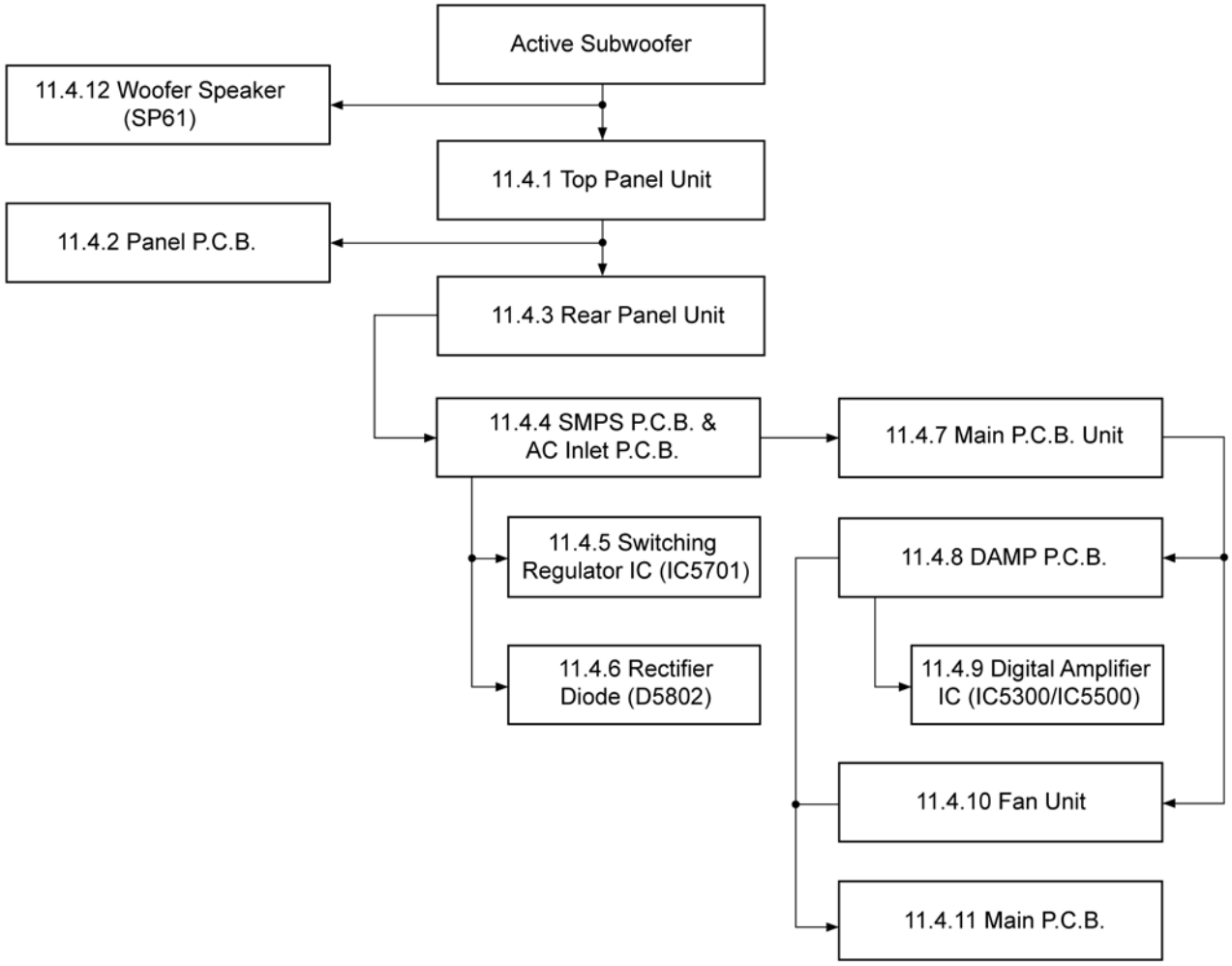
Front Speakers (SB-HTB20)

- Disassembly of Front Speaker Unit (L/R) (Bar position)
- Disassembly of Front Speaker Unit (L/R) (Standing position)
- Disassembly of Rear Cabinet Assembly
- Disassembly of Full Range Speaker (SP1)

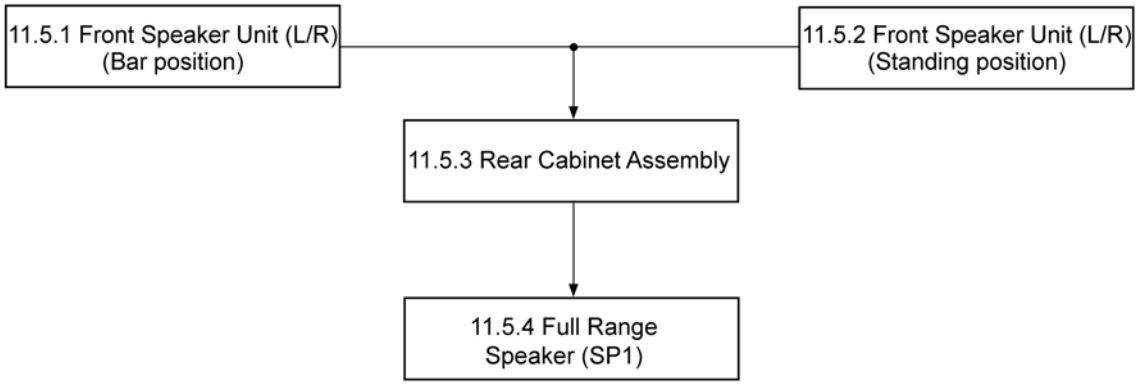
11.1. Disassembly flow chart

The following chart is the procedure for disassembling the casing and inside parts for internal inspection when carrying out the servicing.
To assemble the unit, reverse the steps shown in the chart below.

11.1.1. Active Subwoofer (SU-HTB20)



11.1.2. Front Speakers (SB-HTB20)



11.2. Types of Screws

11.2.1. Active Subwoofer (SU-HTB20)

CAUTION NOTE:
Please use original screw and at correct locations.

Below shown is part no. of different screw types used:

- ⓐ : XTB3+10JFJK
- ⓑ : RHD26046
- ⓒ : XTB4+16AFJK
- ⓓ : RHD30172
- ⓔ : RHD30119-S
- ⓕ : RHDX261002
- ⓖ : RHD30102-1

11.2.2. Front Speakers (SB-HTB20)

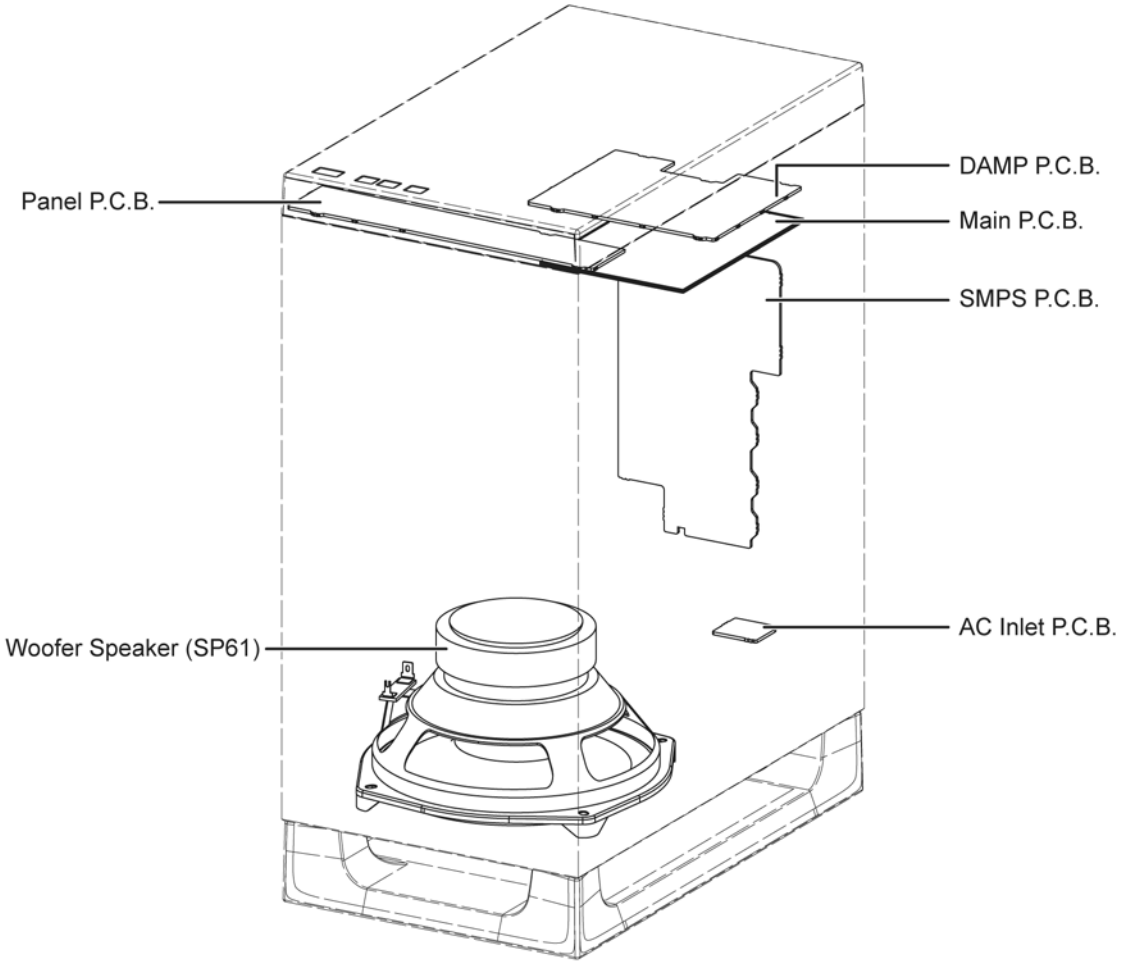
CAUTION NOTE:
Please use original screw and at correct locations.

Below shown is part no. of different screw types used:

- ⓐ : XYN5+J14FJK
- ⓑ : XTB3+10JFJK

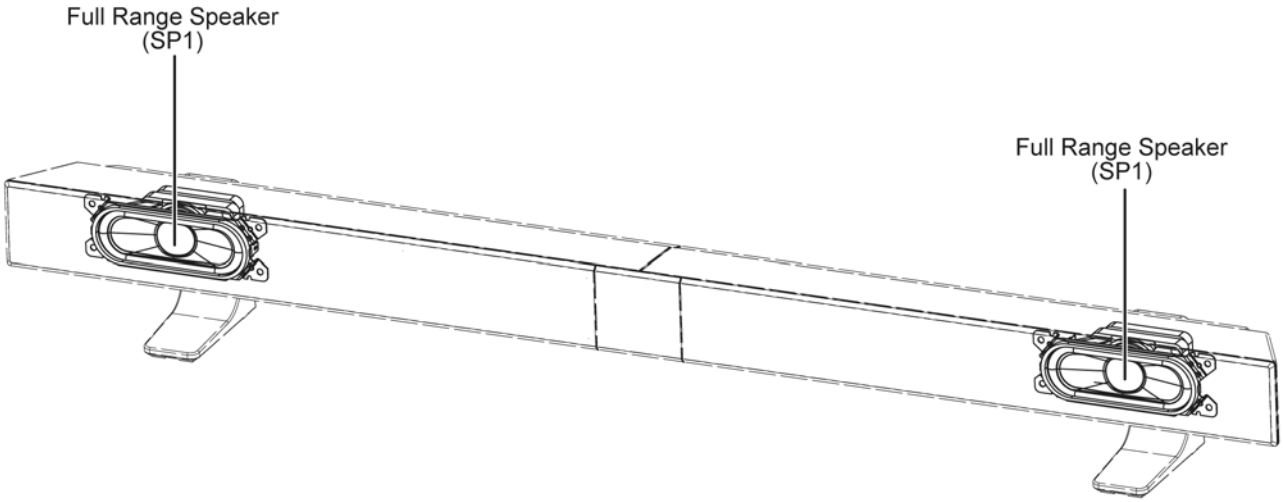
11.3. Main Parts Location Diagram

11.3.1. Active Subwoofer (SU-HTB20)

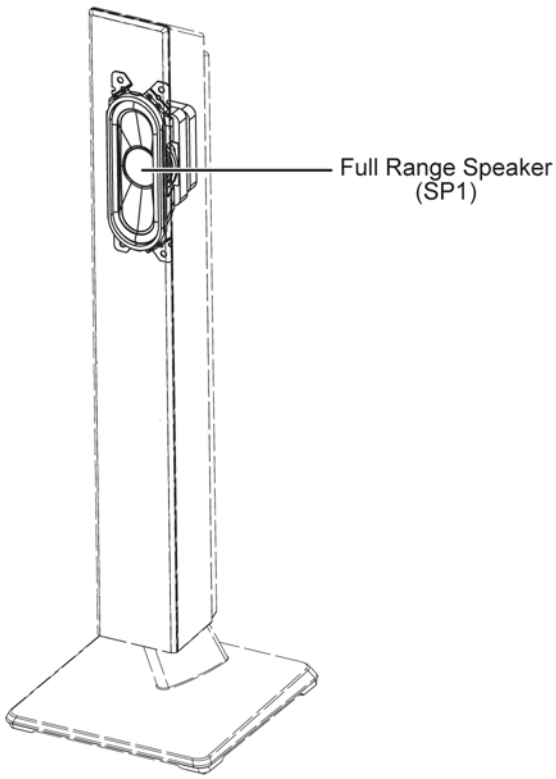


11.3.2. Front Speakers (SB-HTB20)

11.3.2.1. Bar Position



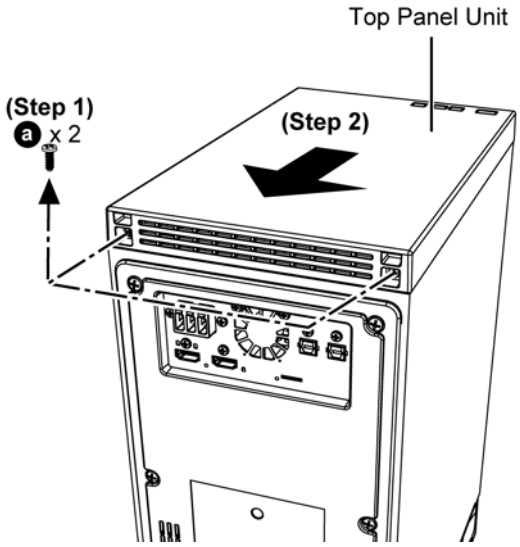
11.3.2.2. Standing Position



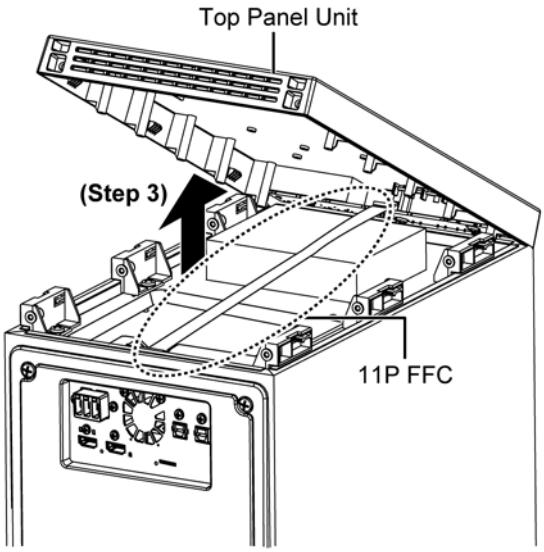
11.4. Active Subwoofer (SU-HTB20)

11.4.1. Disassembly of Top Panel Unit

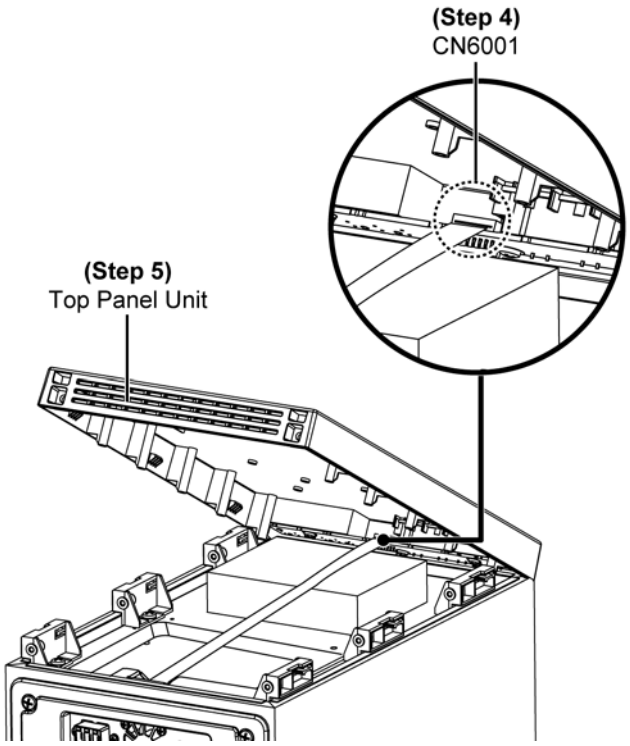
Step 1 : Remove 2 screws.
Step 2 : Slide the Top Panel Unit backwards.



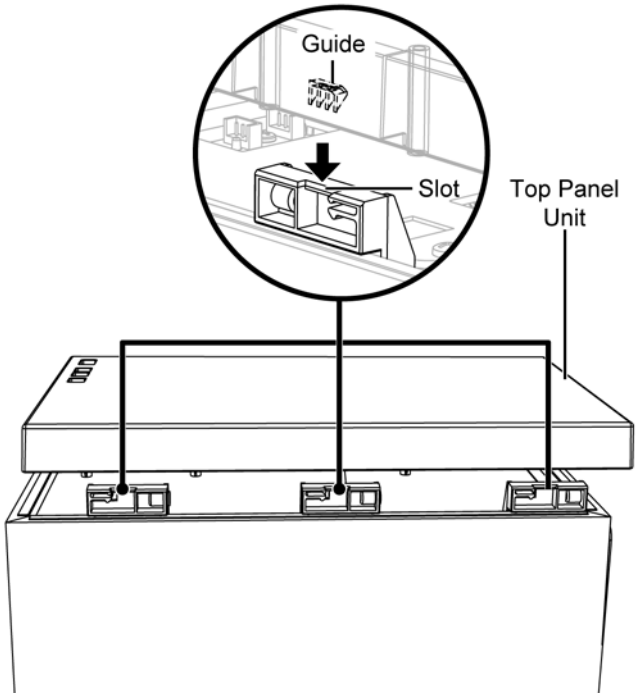
Step 3 : Gently lift up the Top Panel Unit.
Caution: Do not exert too much force as it may damage the cable wiring.



Step 4 : Detach 11P FFC at the connector (CN6001) on the Panel P.C.B..
Step 5 : Remove the Top Panel Unit.



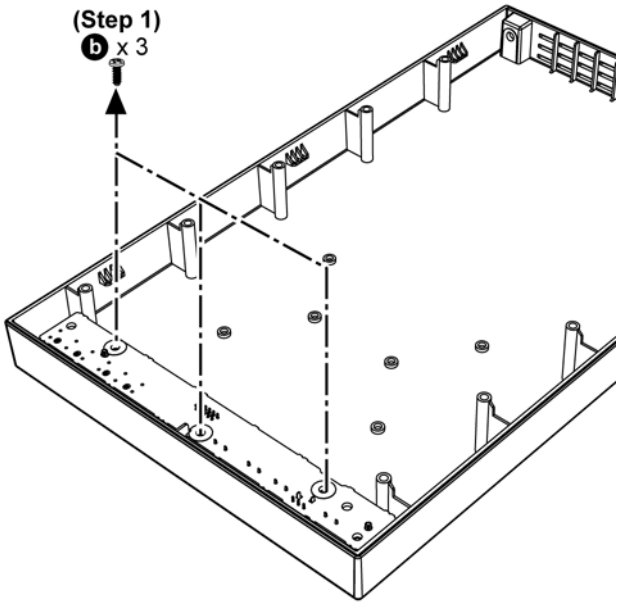
Caution: During assembling. ensure that the Top Panel Unit is inserted properly into the slots.



11.4.2. Disassembly of Panel P.C.B.

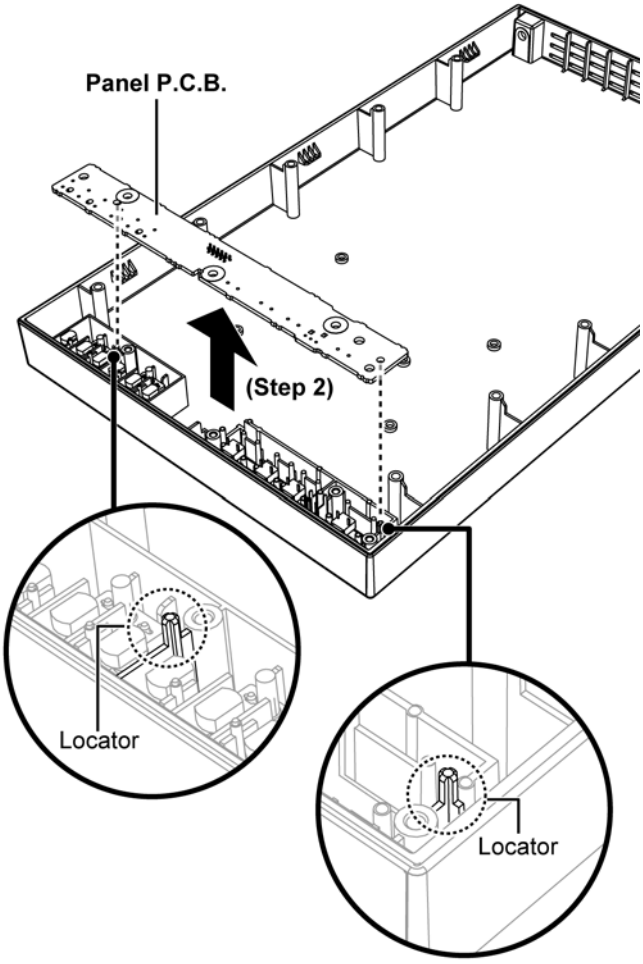
• Refer to “Disassembly of Top Panel Unit”.

Step 1 : Remove 3 screws.



Step 2 : Remove the Panel P.C.B..

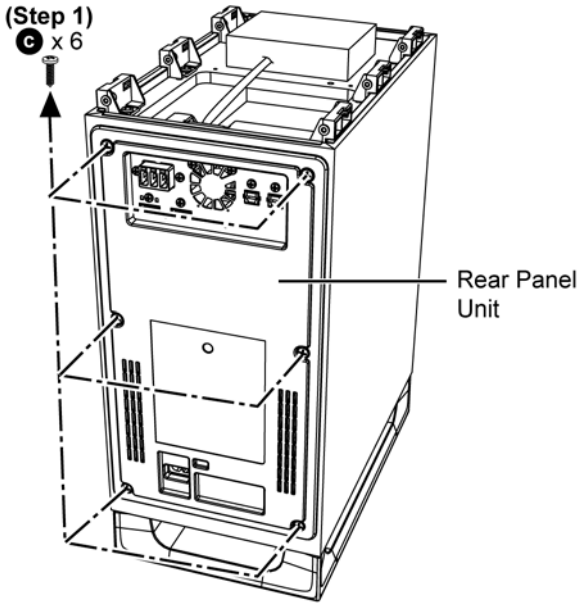
Caution: During assembling, ensure that the Panel P.C.B. is fully inserted & properly seated onto the locators.



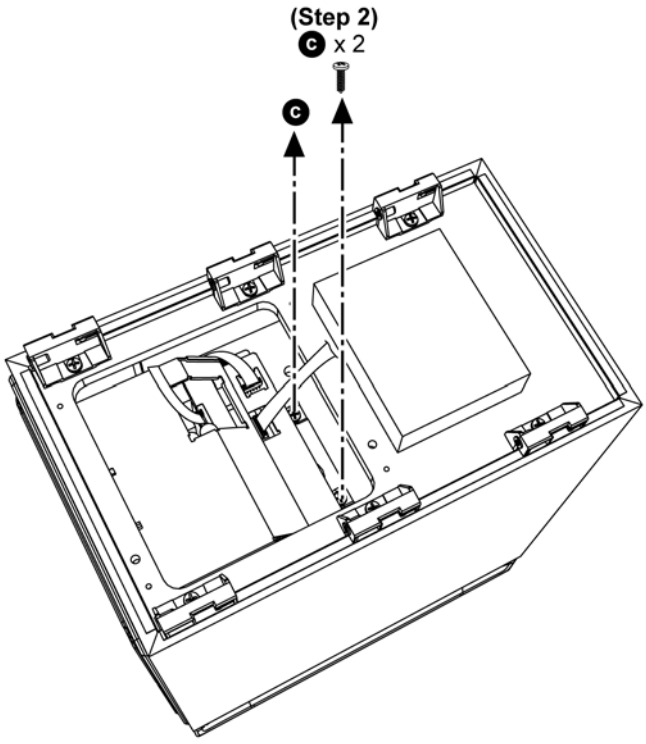
11.4.3. Disassembly of Rear Panel Unit

• Refer to “Disassembly of Top Panel Unit”.

Step 1 : Remove 6 screws.



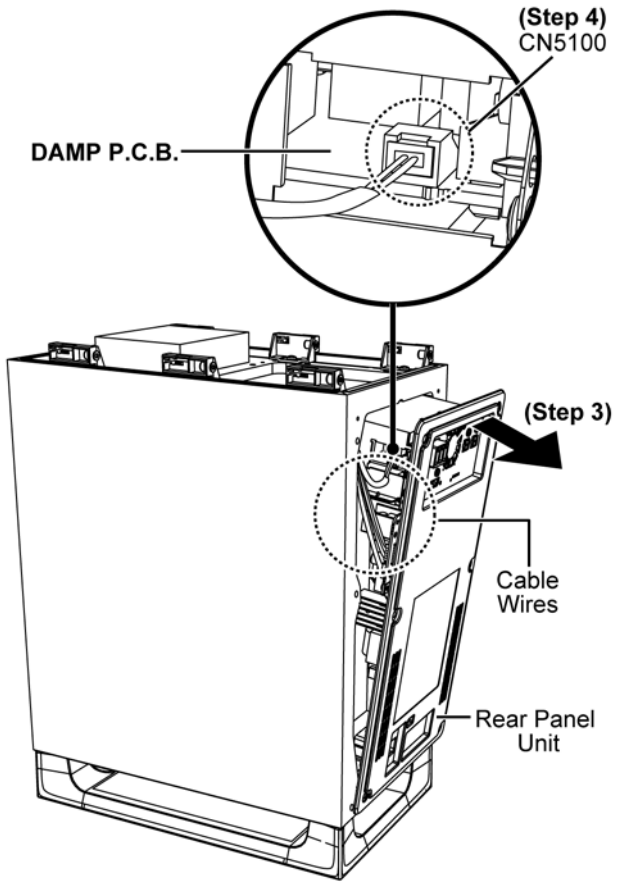
Step 2 : Remove 2 screws.



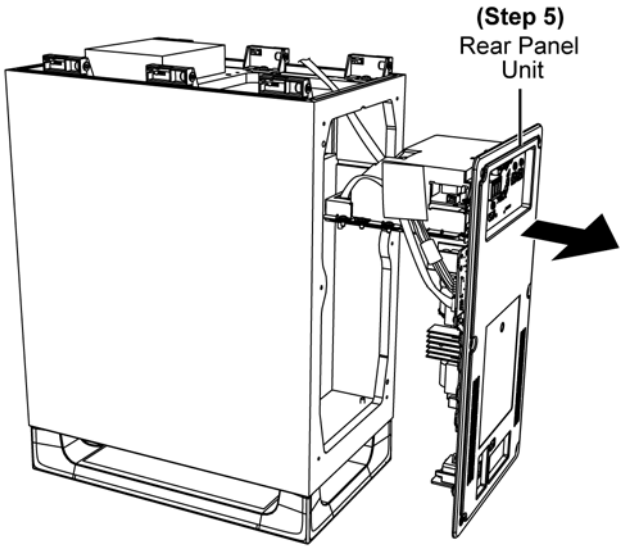
Step 3 : Lift forward the Rear Panel Unit as shown.

Caution: Do not exert too much force as it may damage the cable wiring.

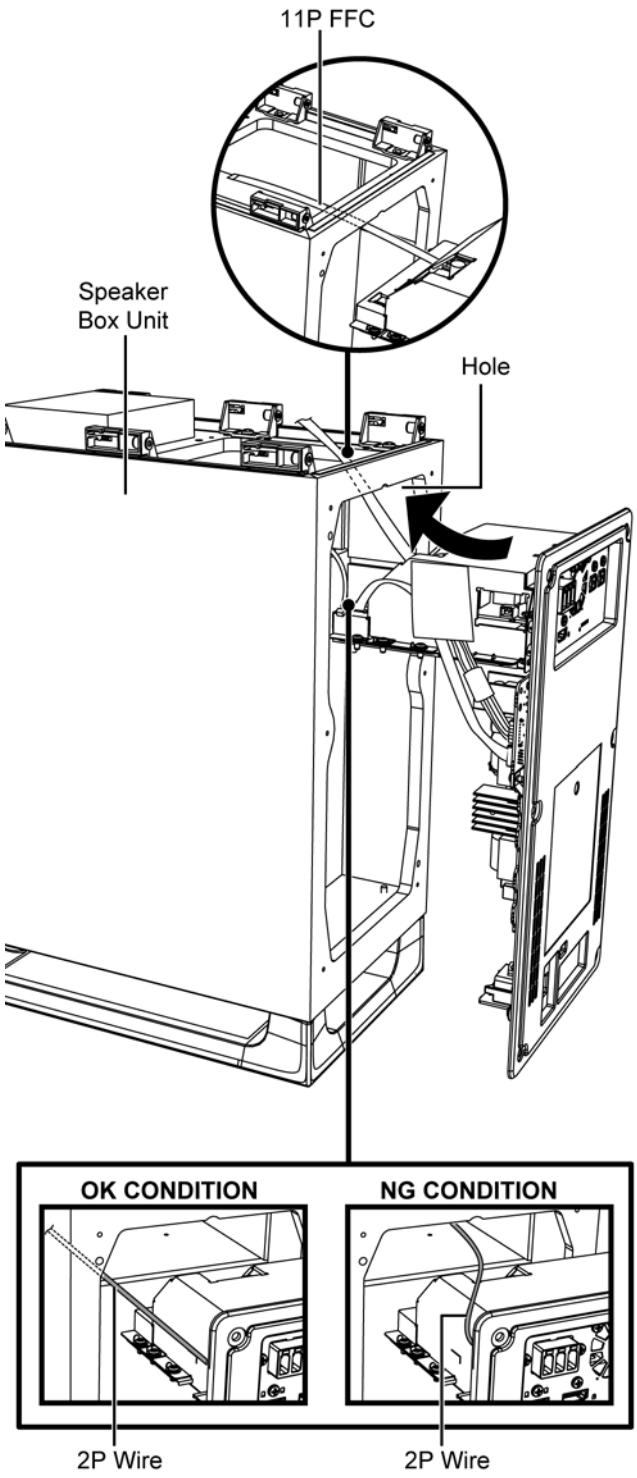
Step 4 : Detach 2P Cable Wire at the connector (CN5100) on the DAMP P.C.B..



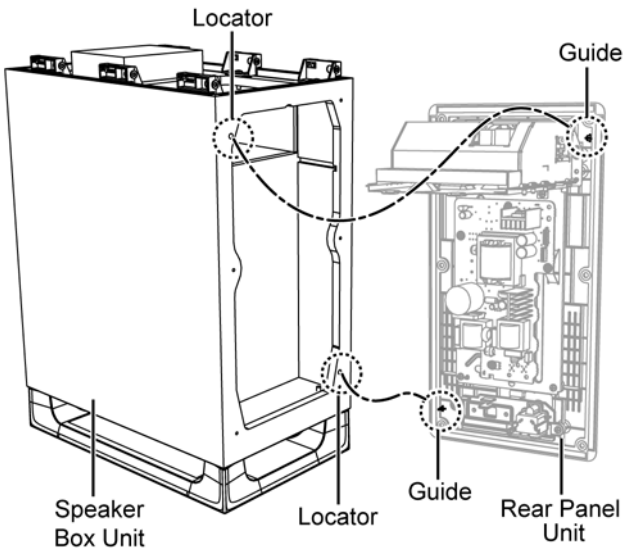
Step 5 : Remove the Rear Panel Unit as shown.



Caution 1 : During assembling, ensure that the 2P Cable Wire and 11P FFC are properly dressed as shown.



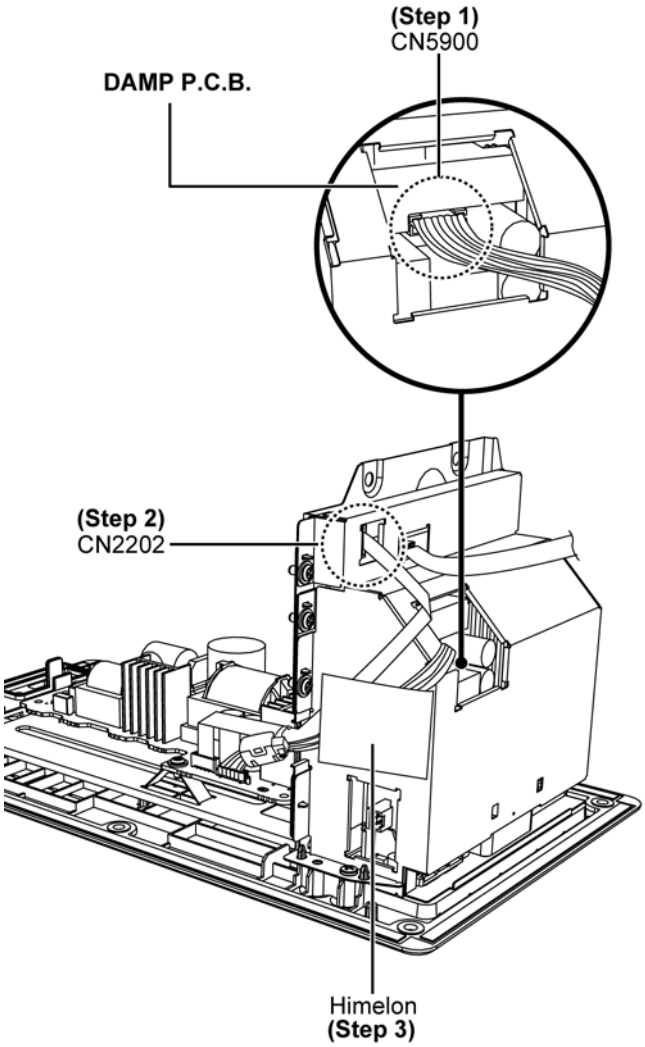
Caution 2 : During assembling, ensure the Rear Panel Unit seated properly onto the locator.



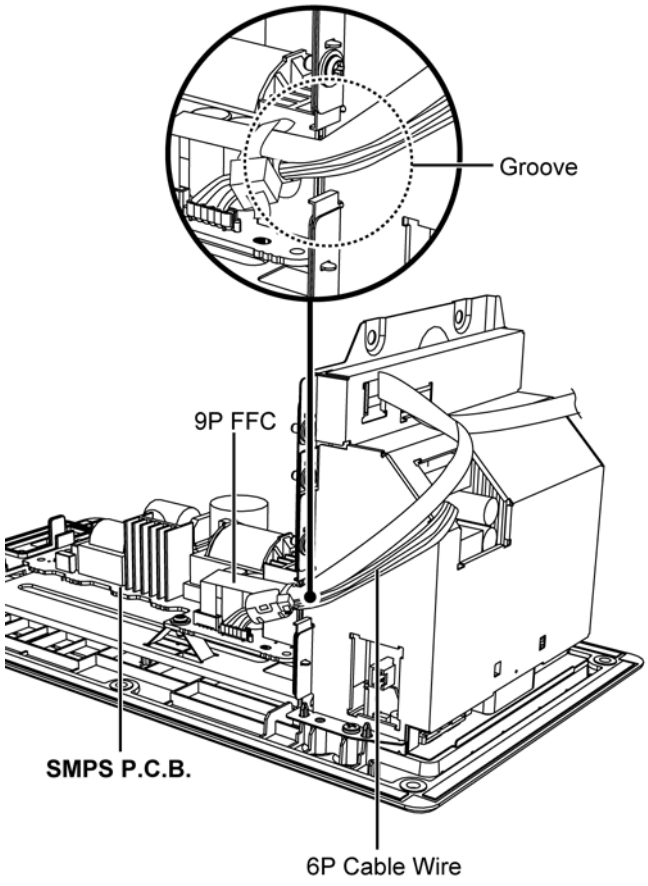
11.4.4. Disassembly of SMPS P.C.B. & AC Inlet P.C.B.

• Refer to “Disassembly of Top Panel Unit”.

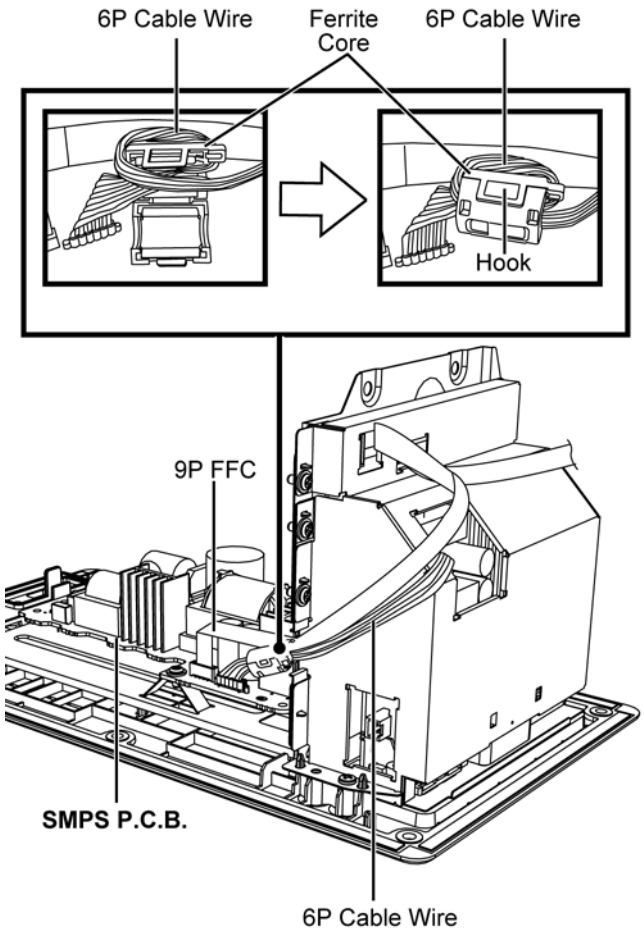
Step 1 : Detach 6P Cable Wire at the connector (CN5900) on the DAMP P.C.B..
Step 2 : Detach 9P FFC at the connector (CN2202) on the DAMP P.C.B..
Step 3 : Lift up and remove the Himelon.
Caution: Replace the Himelon if they is torn.



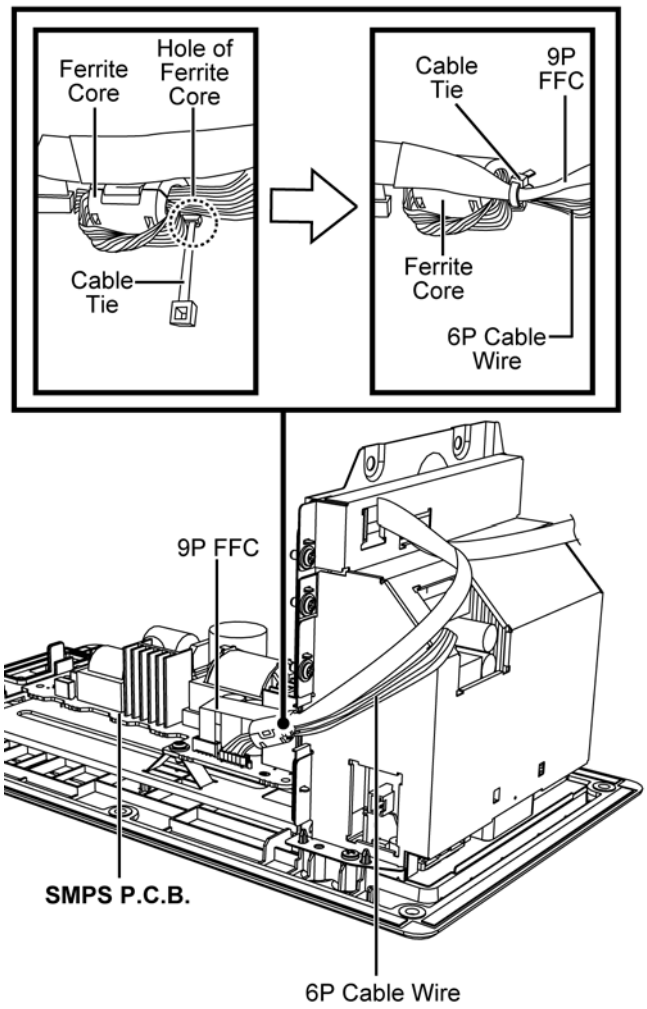
Caution: During assembling, ensure that the 6P Cable Wire and 9P FFC are properly dressed into the groove.



Caution : During assembling, ensure that the 6P Cable Wire is dressed properly into and fully catched onto the Hook with “Click” sound heard.

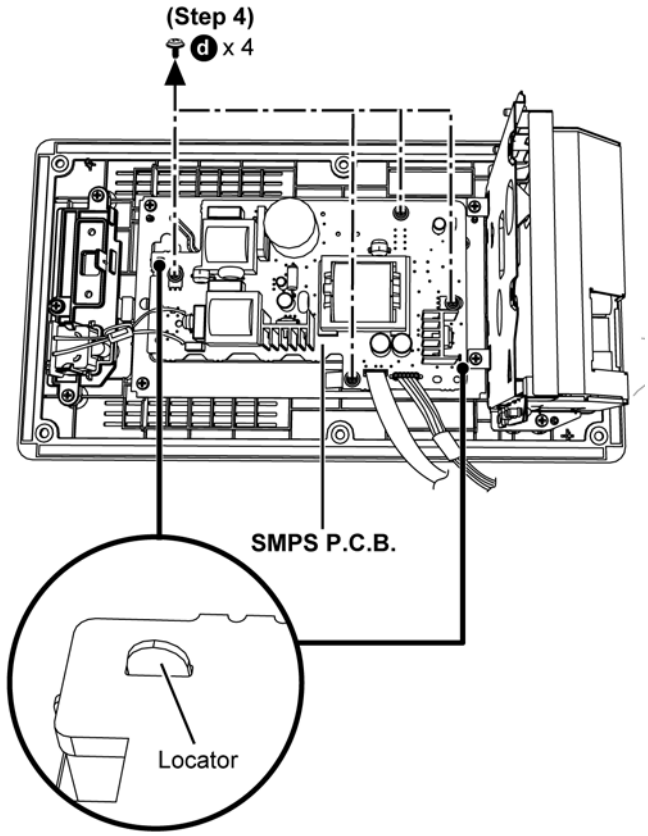


Caution : During assembling, ensure that the 6P Cable Wire and 9P FFC are dressed as shown.



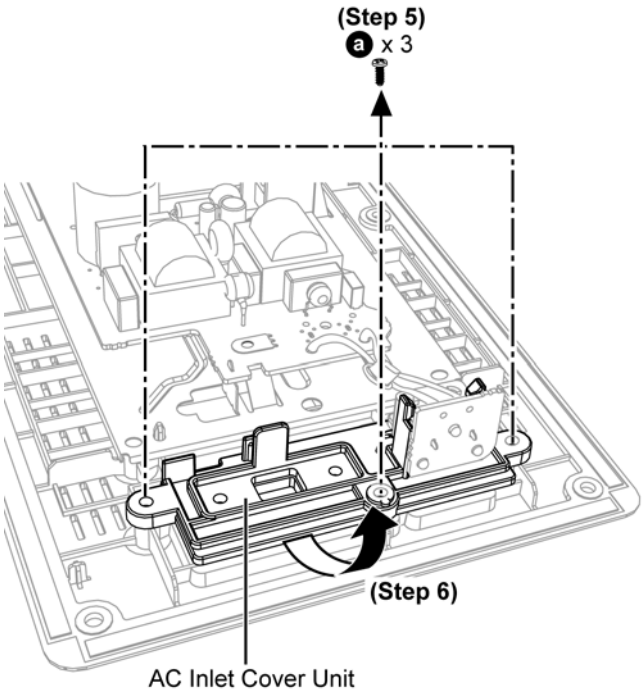
Step 4 : Remove 4 screws.

Caution: During assembling, ensure that the SMPS P.C.B. is properly seated onto the locators.

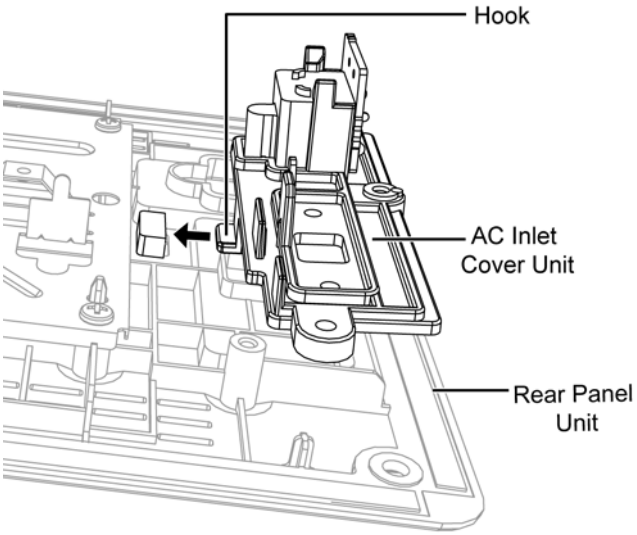


Step 5 : Remove 3 screws.

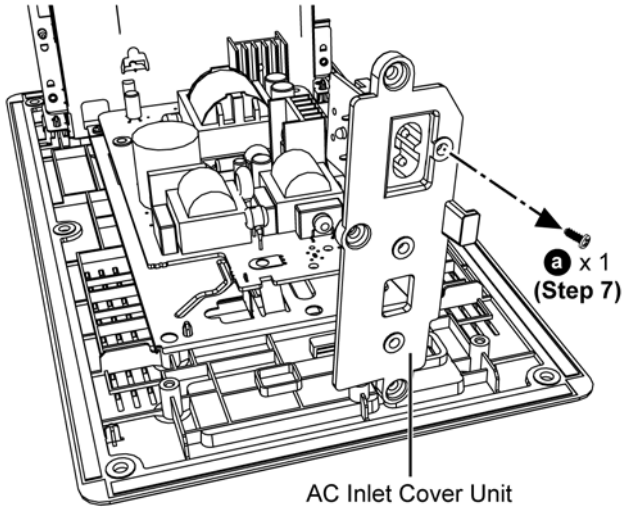
Step 6 : Lift up the AC Inlet Cover Unit as shown.



Caution : During assembling, ensure that the AC Inlet Cover Unit is fully inserted into the Rear Panel Unit.



Step 7 : Remove 1 screw.

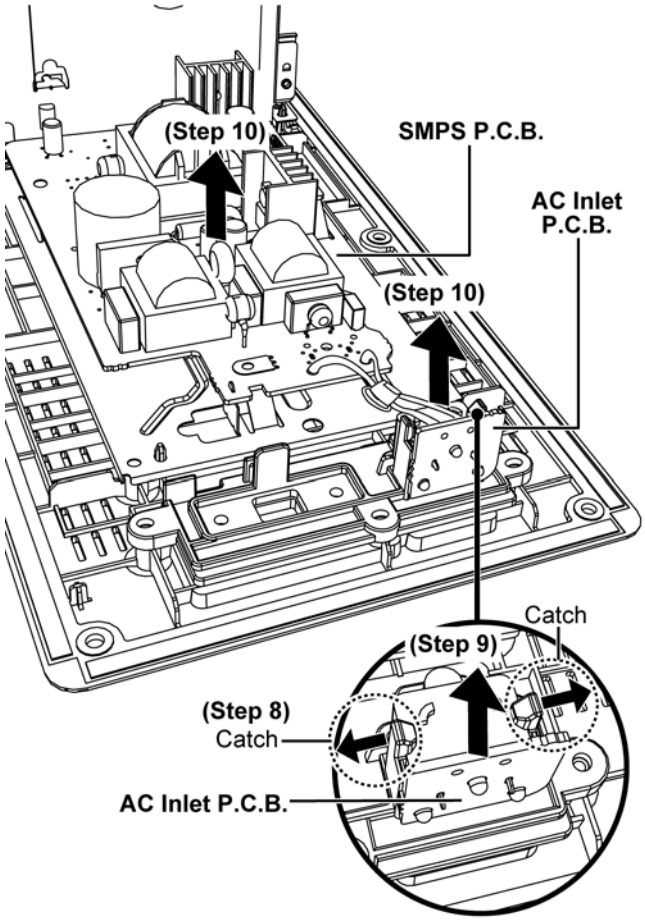


Step 8 : Release 2 catches as shown.

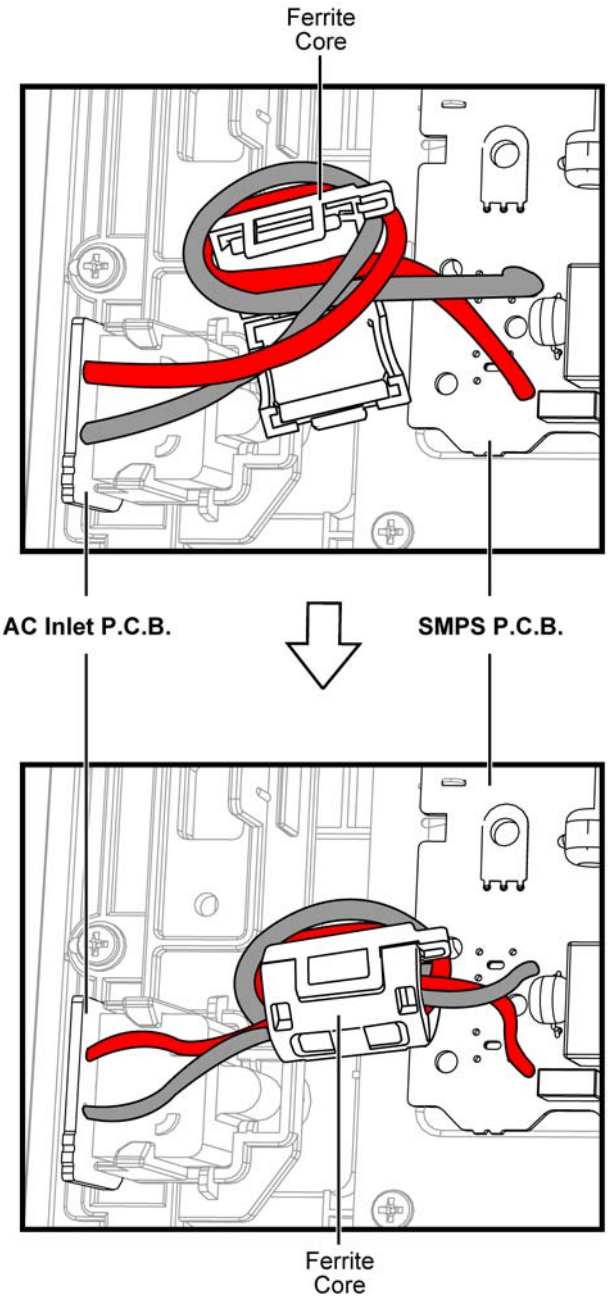
Step 9 : Lift up the AC Inlet P.C.B..

Caution : During assembling, ensure that the AC Inlet P.C.B. is properly inserted & fully catched.

Step 10 : Remove the SMPS P.C.B. and AC Inlet P.C.B. as shown.



Caution : During assembling, ensure that the Red Wire and the Black Wire are dressed properly into the Ferrite Core.



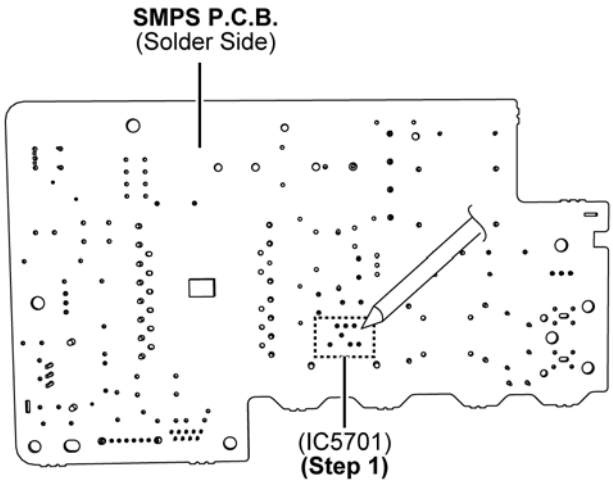
11.4.5. Replacement of Switching Regulator IC (IC5701)

- Refer to “Disassembly of SMPS P.C.B.”.

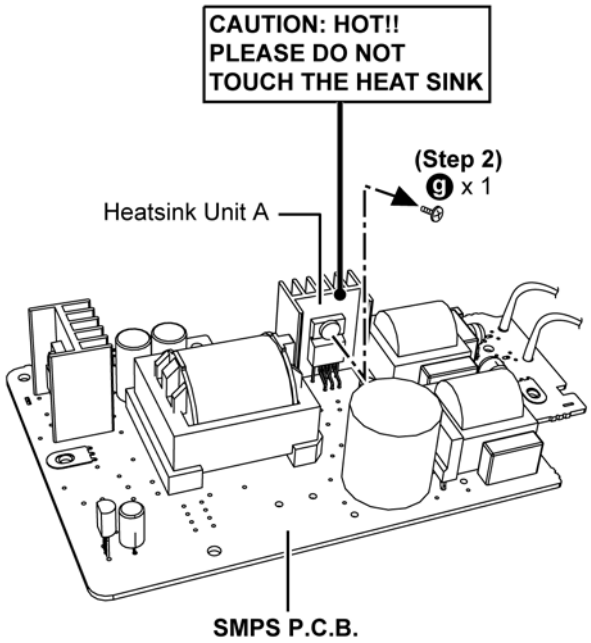
11.4.5.1. Disassembly of Switching Regulator IC (IC5701)

Caution: Handle the SMPS P.C.B. with caution. Avoid touching the Heatsink Unit A due to it’s high temperature after prolonged use. Touching it may lead to injuries.

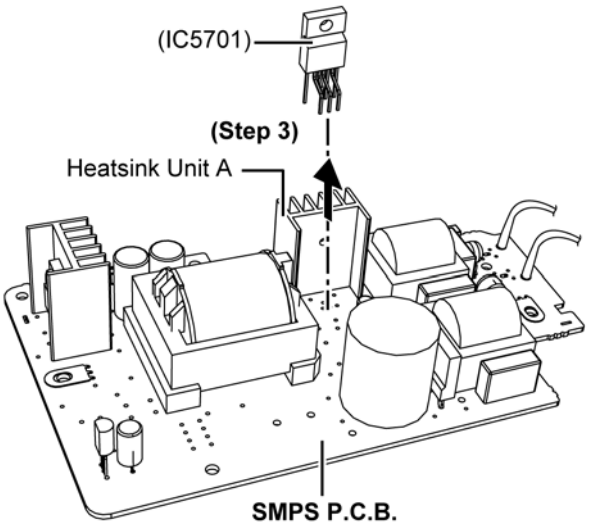
Step 1 : Desolder the pins of Switching Regulator IC (IC5701) on the solder side of the SMPS P.C.B..



Step 2 : Remove 1 screw.



Step 3 : Remove the Switching Regulator IC (IC5701) from the Heatsink Unit A.

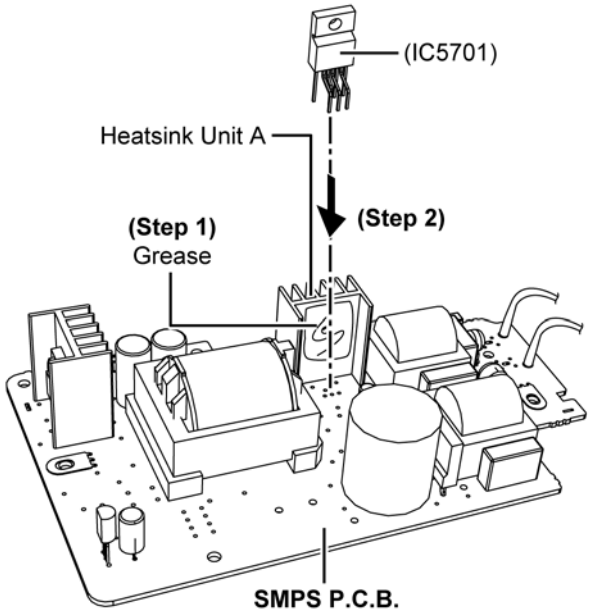


11.4.5.2. Assembly of Switching Regulator IC (IC5701)

Step 1 : Apply Grease on the Heatsink Unit A.

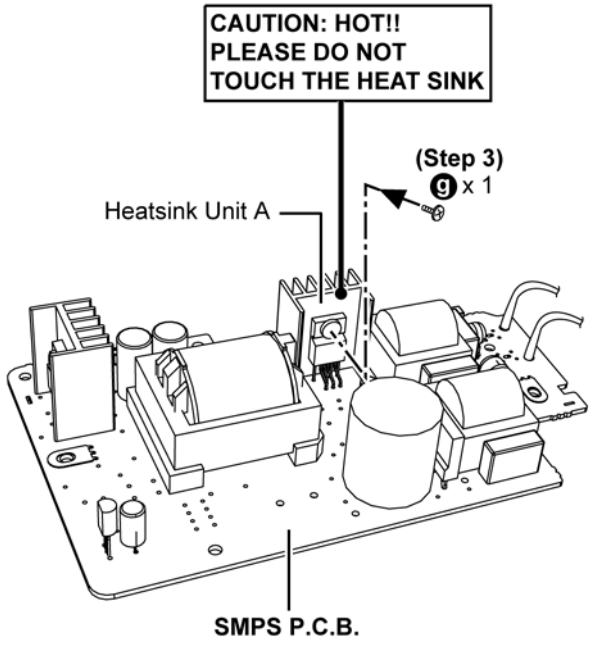
Step 2 : Fix the Switching Regulator IC (IC5701) to the SMPS P.C.B..

Caution: Ensure the pins of Switching Regulator IC (IC5701) are properly seated into the SMPS P.C.B..

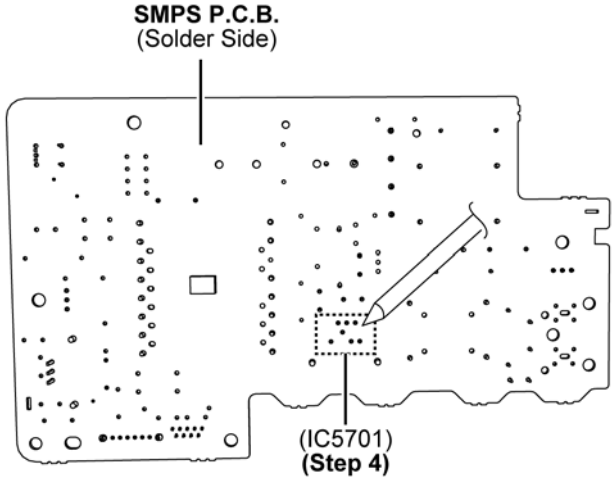


Step 3 : Screw the Switching Regulator IC (IC5701) to the Heatsink Unit A.

Caution: Ensure the Switching Regulator IC (IC5701) is tightly screwed to the Heatsink Unit A.



Step 4 : Solder the pins of Switching Regulator IC(IC5701) on the solder side of the SMPS P.C.B..



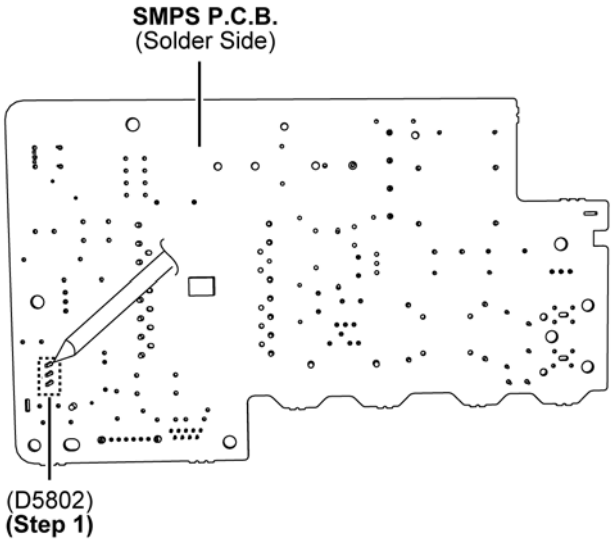
11.4.6. Replacement of Rectifier Diode (D5802)

- Refer to “Disassembly of SMPS P.C.B.”.

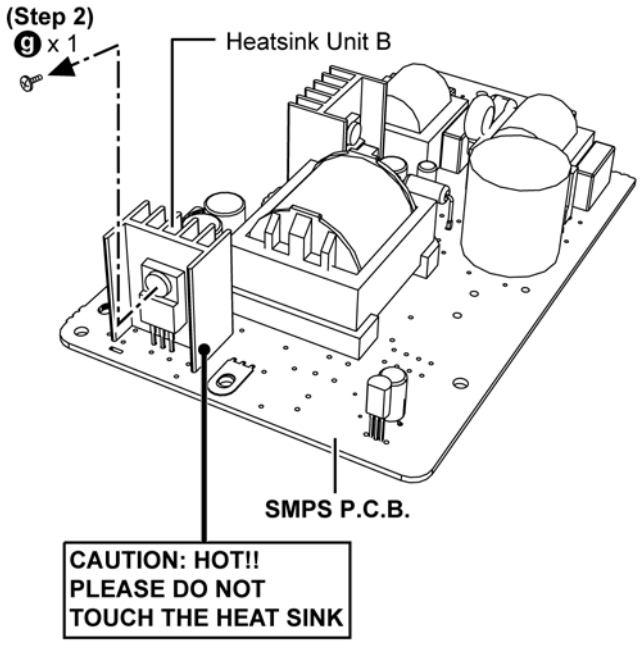
11.4.6.1. Disassembly of Rectifier Diode (D5802)

Caution: Handle the SMPS P.C.B. with caution. Avoid touching the Heatsink Unit B due to it’s high temperature after prolonged use. Touching it may lead to injuries.

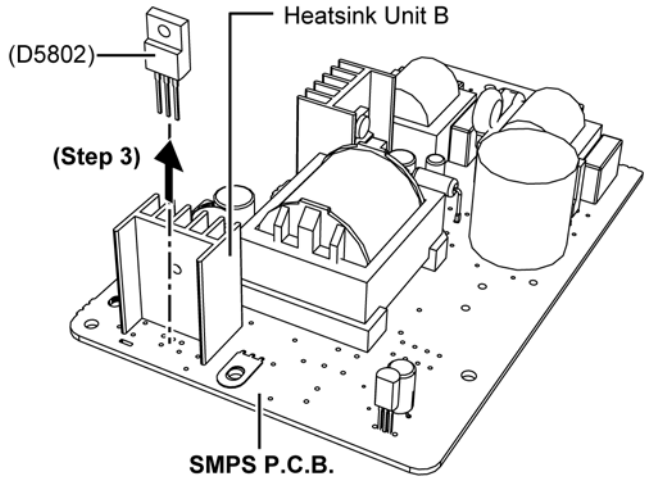
Step 1 : Desolder the pins of the Rectifier Diode (D5802) on the solder side of the SMPS P.C.B..



Step 2 : Remove 1 screw.



Step 3 : Remove the Rectifier Diode (D5802) from the Heatsink Unit B.

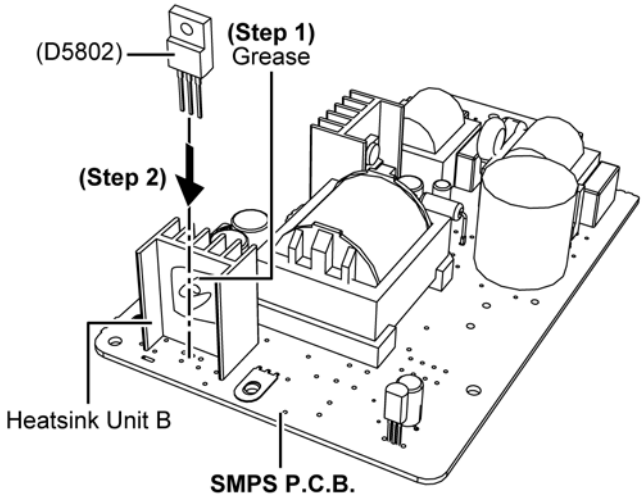


11.4.6.2. Assembly of Rectifier Diode (D5802)

Step 1 : Apply Grease on the Heatsink Unit B.

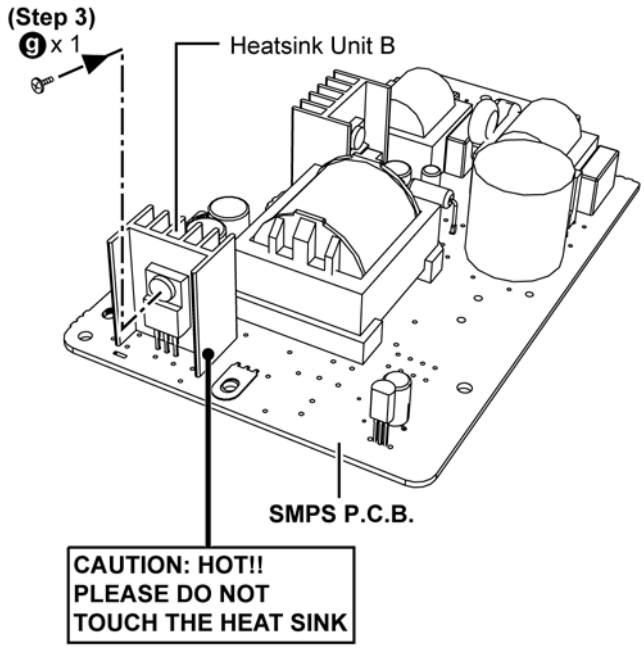
Step 2 : Fix the Rectifier Diode (D5802) onto the SMPS P.C.B..

Caution: Ensure the pins of Rectifier Diode (D5802) are properly seated into the SMPS P.C.B..

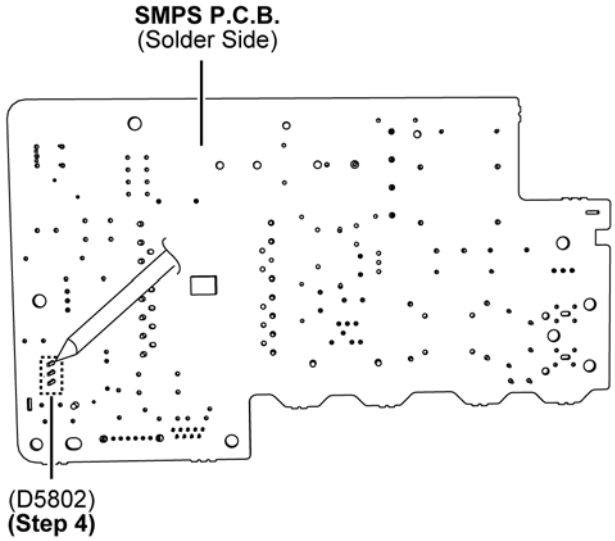


Step 3 : Fix the Rectifier Diode (D5802) onto the Heatsink Unit B with a screw.

Caution: Ensure the Rectifier Diode (D5802) is tightly screwed to the Heatsink Unit B.



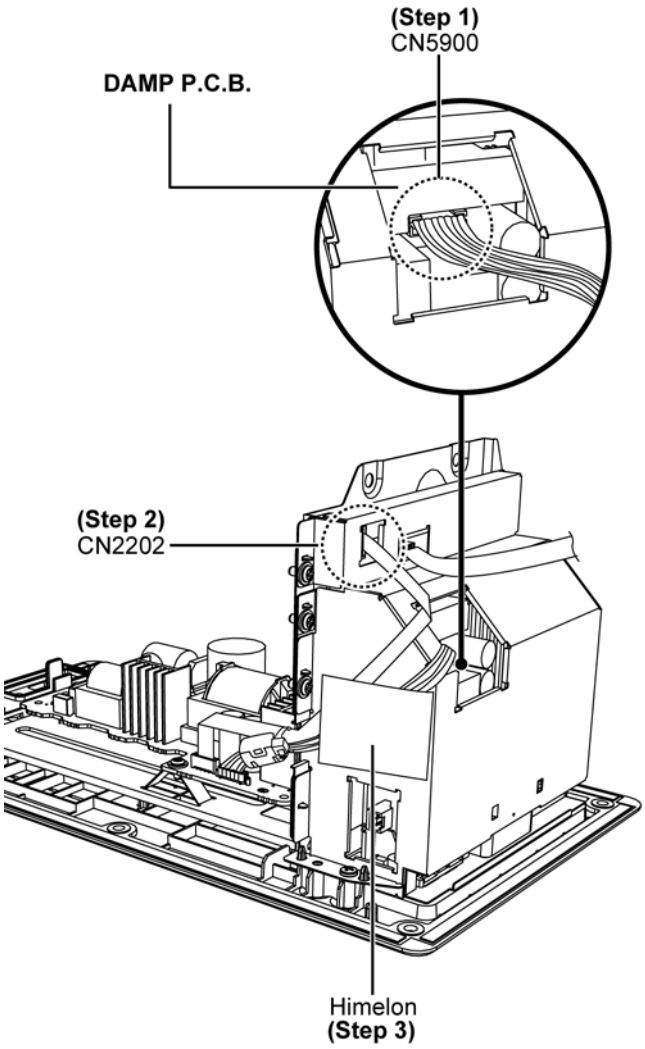
Step 4 : Solder the pins of the Rectifier Diode (D5802) on the solder side of the SMPS P.C.B..



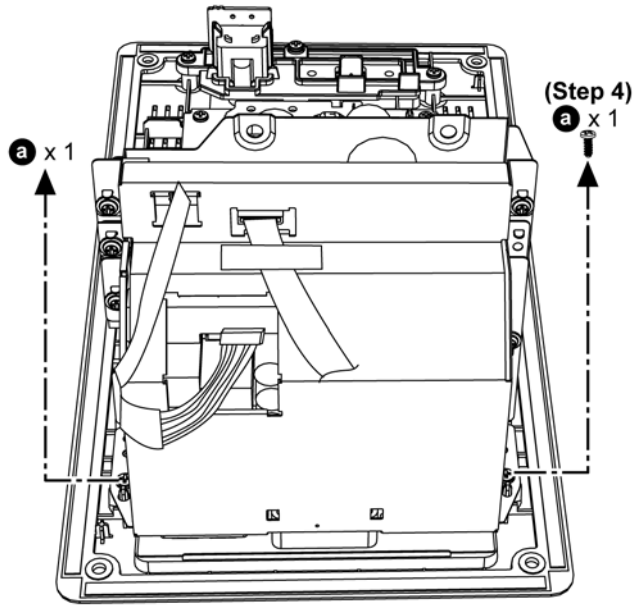
11.4.7. Disassembly of Main P.C.B. Unit

- Refer to “Disassembly of Top Panel Unit”.
- Refer to “Disassembly of Rear Panel Unit”.

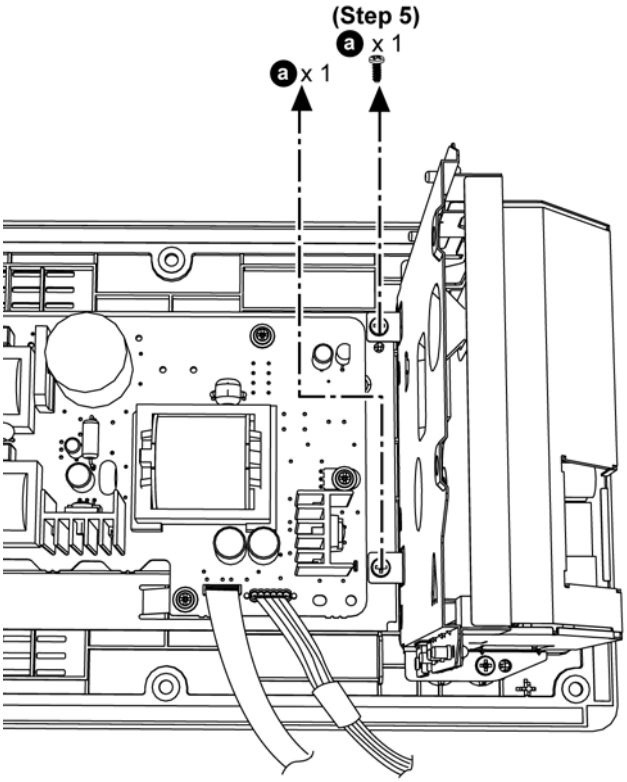
Step 1 : Detach 6P Cable Wire at the connector (CN5900) on the DAMP P.C.B..
Step 2 : Detach 9P FFC at the connector (CN2202) on the Main P.C.B..
Step 3 : Lift up and remove the Himelon.
Caution: Replace the Himelon if they is torn.



Step 4 : Remove 2 screws.

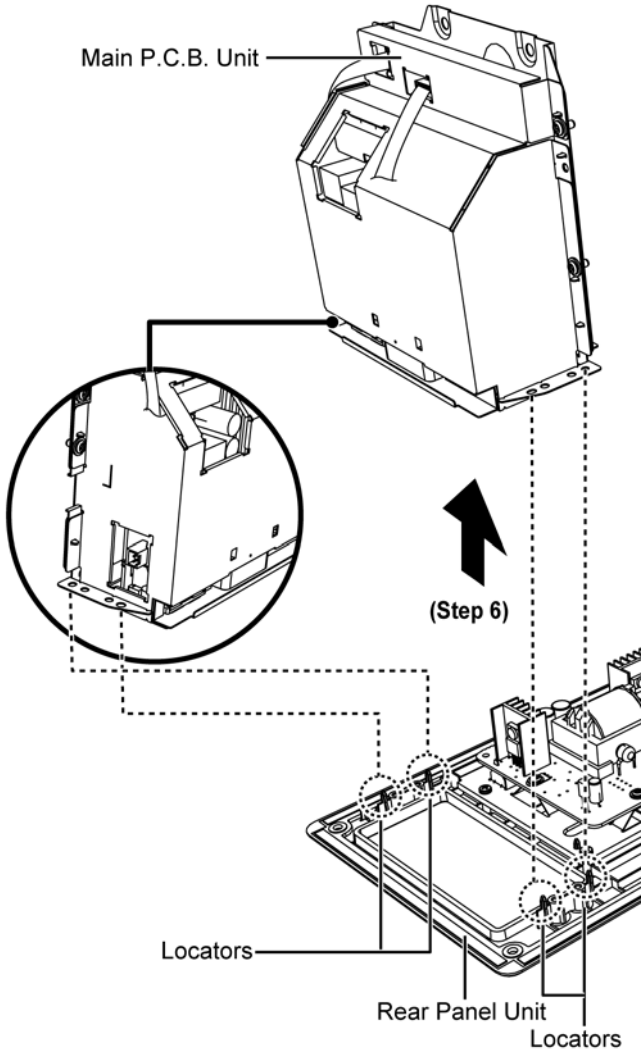


Step 5 : Remove 2 screws.



Step 6 : Remove the Main P.C.B. Unit as shown.

Caution: During assembling, ensure that the Main P.C.B. Unit is properly seated onto the locators.



11.4.8. Disassembly of DAMP P.C.B.

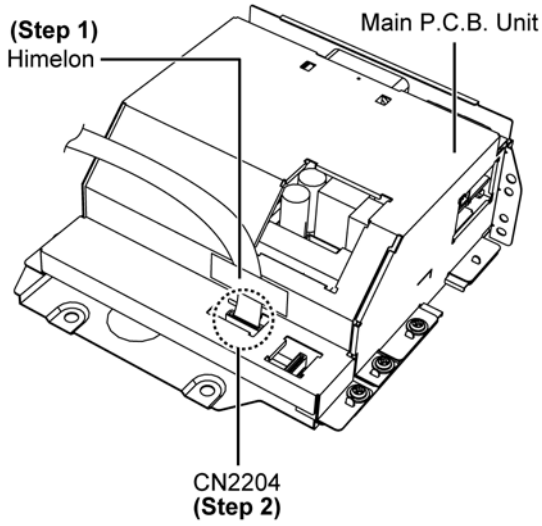
- Refer to “Disassembly of Top Panel Unit”.
- Refer to “Disassembly of Rear Panel Unit”.
- Refer to “Disassembly of Main P.C.B. Unit”.

Step 1 : Lift up Himelon.

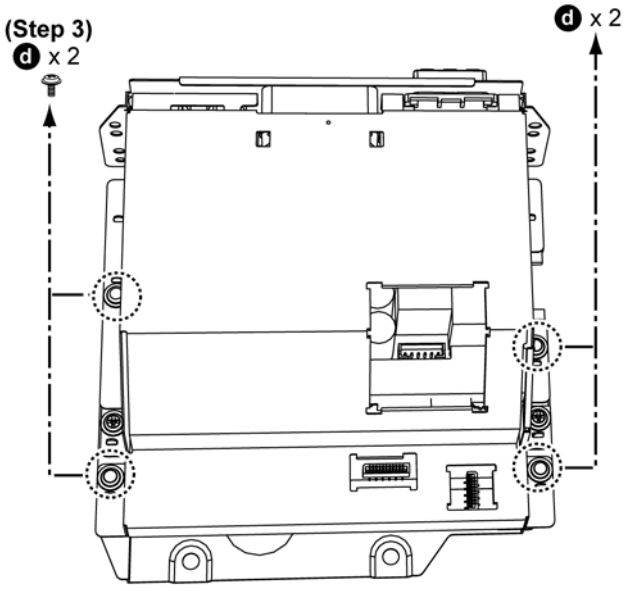
Caution: Replace Himelon if torn.

Step 2 : Detach 11P FFC at the connector (CN2204) on the Main P.C.B..

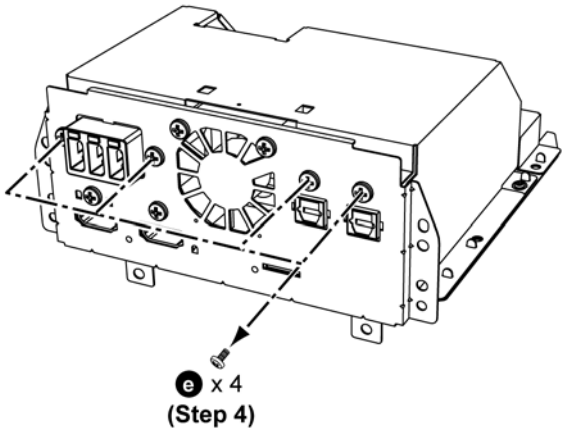
Caution: Keep the 11P FFC in safe place. Avoid denting it, place it back during assembling.



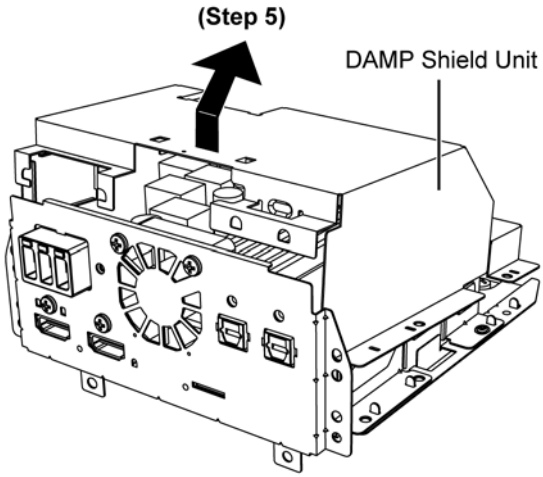
Step 3 : Remove 4 screws.



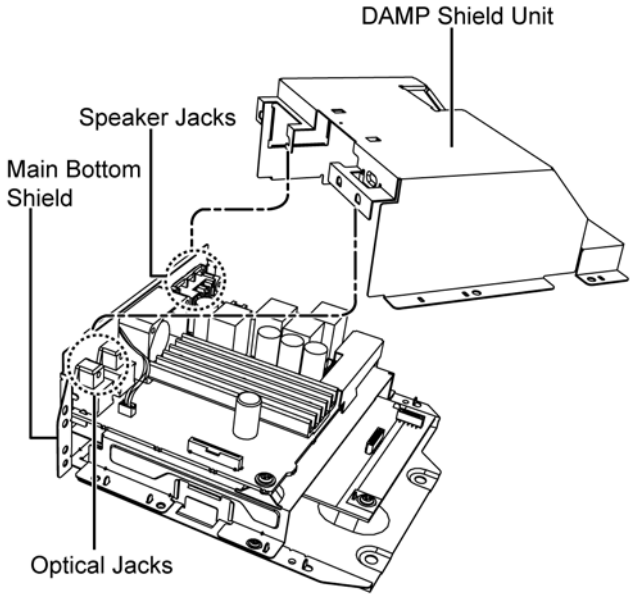
Step 4 : Remove 4 screws.



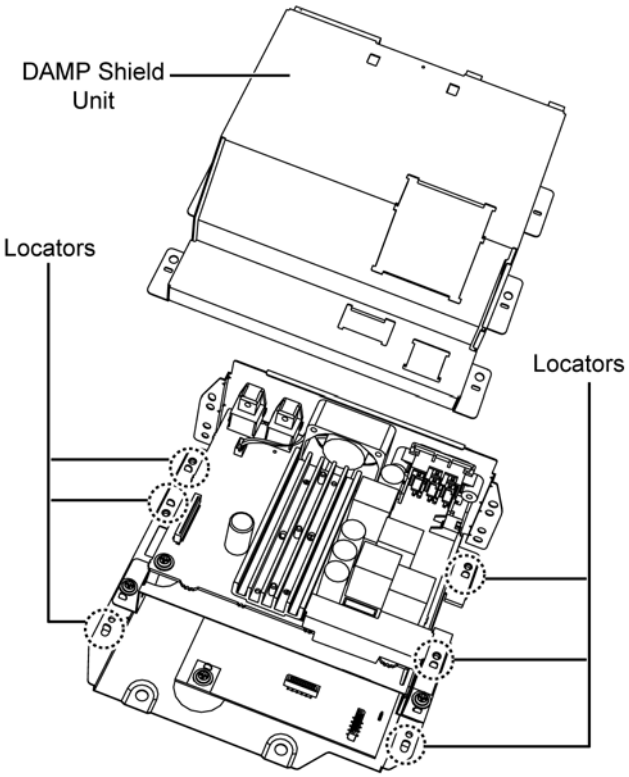
Step 5 : Lift up and remove the DAMP Shield Unit as shown.



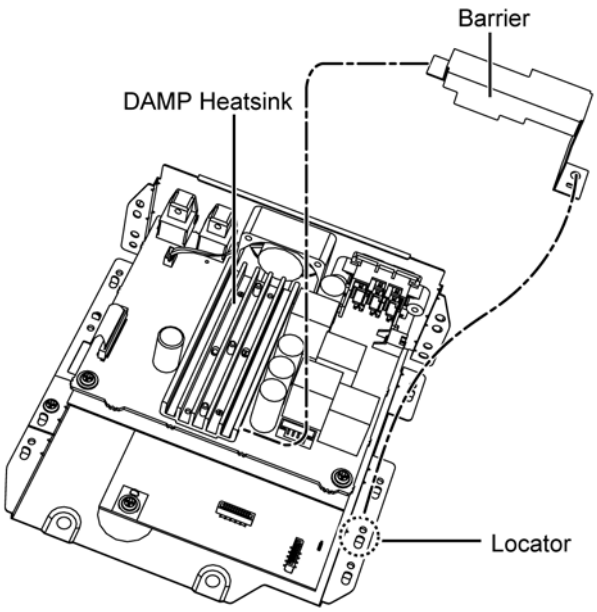
Caution 1 : During assembling, ensure that the DAMP Shield Unit is properly inserted within Optical Jacks, Speaker Jacks and the Main Bottom Shield.



Caution 2 : During assembling, ensure that the DAMP Shield Unit is properly seated onto the locators.

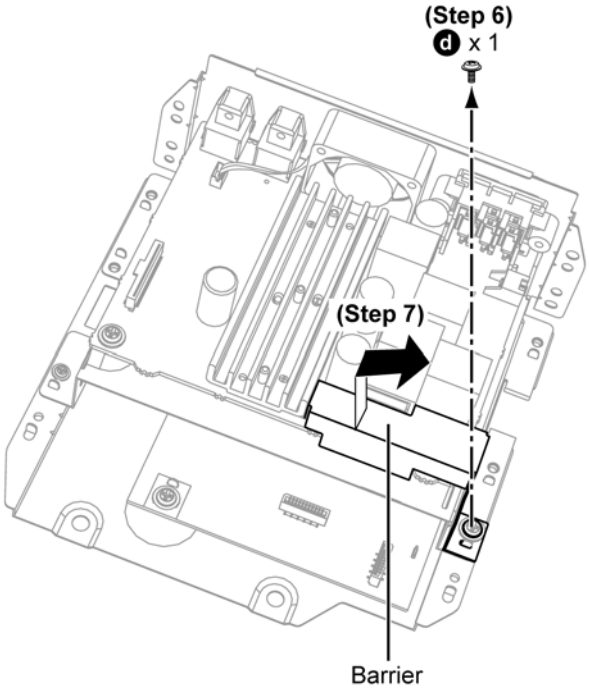


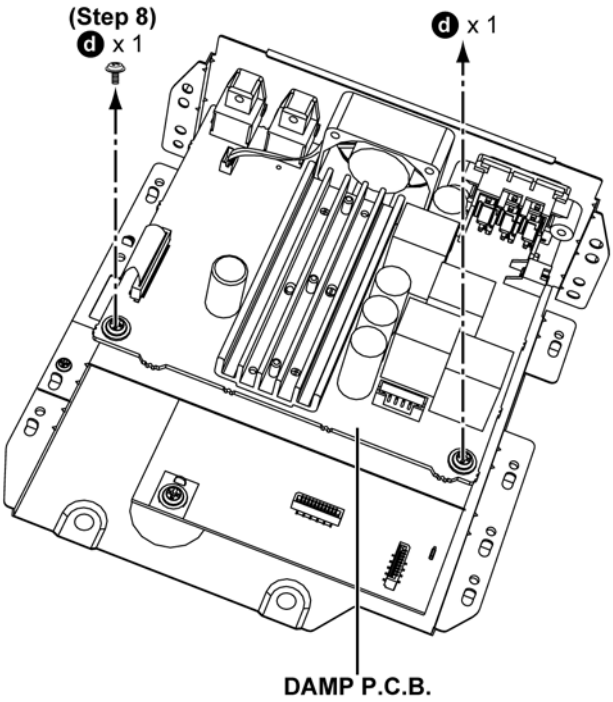
Caution: During assembling, ensure that the Barrier is properly seated onto the Locator and fully inserted under the DAMP Heatsink.



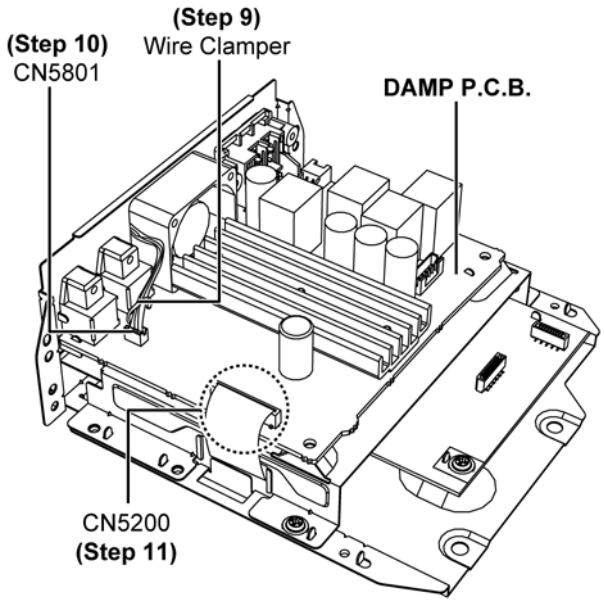
Step 8 : Remove 2 screws.

Step 6 : Remove 1 screw.
Step 7 : Remove the Barrier as arrow shown.

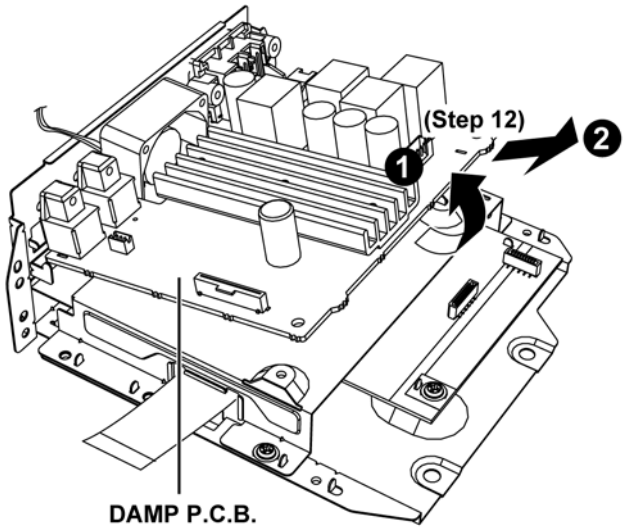




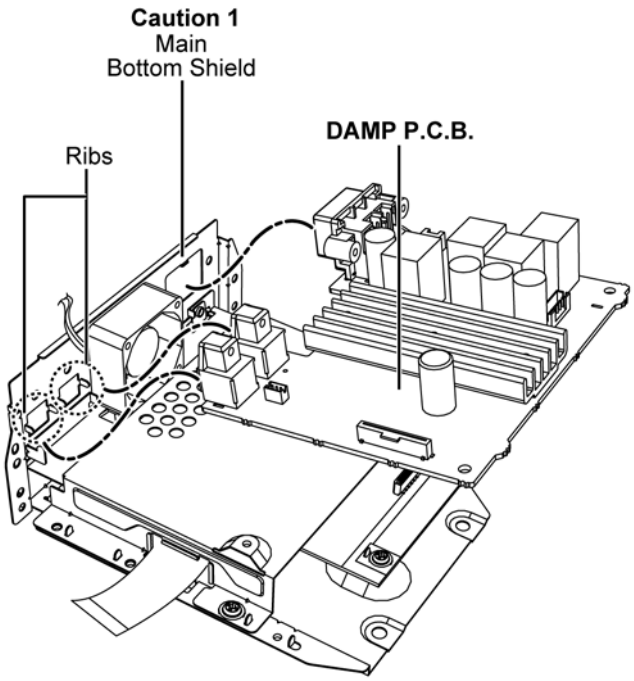
Step 9 : Lift up the Wire Clamper.
Step 10 : Detach 3P Cable Wire at the connector (CN5801) on DAMP P.C.B..
Step 11 : Detach 40P FFC at the connector (CN5200) on DAMP P.C.B..



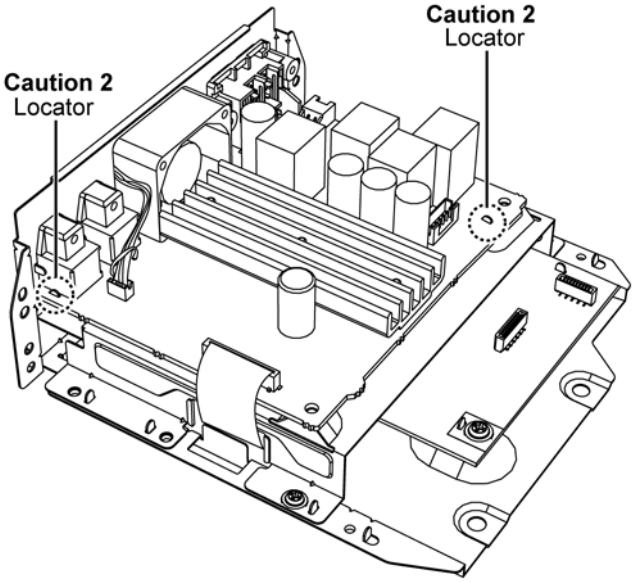
Step 12 : Slightly lift up and remove the DAMP P.C.B. as shown.



Caution 1 : During assembling, ensure that the DAMP P.C.B. is properly inserted into the Main Bottom Shield.



Caution 2 : During assembling, ensure that the DAMP P.C.B. is properly seated onto the locators.



11.4.9. Replacement of Digital Amplifier IC (IC5300/IC5500)

• Refer to “Disassembly of DAMP P.C.B.”.

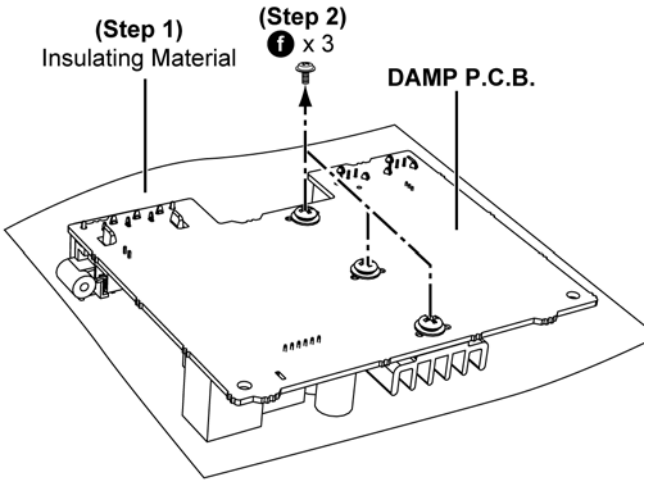
11.4.9.1. Disassembly of Digital Amplifier IC (IC5300/IC5500)

Note : For disassembling of Digital Amplifier IC (IC5500), repeat the (Step 1) to (Step 5) of 11.4.9.1.

Caution: Handle the DAMP P.C.B. with caution. Avoid touching the Heatsink Unit B due to it’s high temperature after prolonged use. Touching it may lead to injuries.

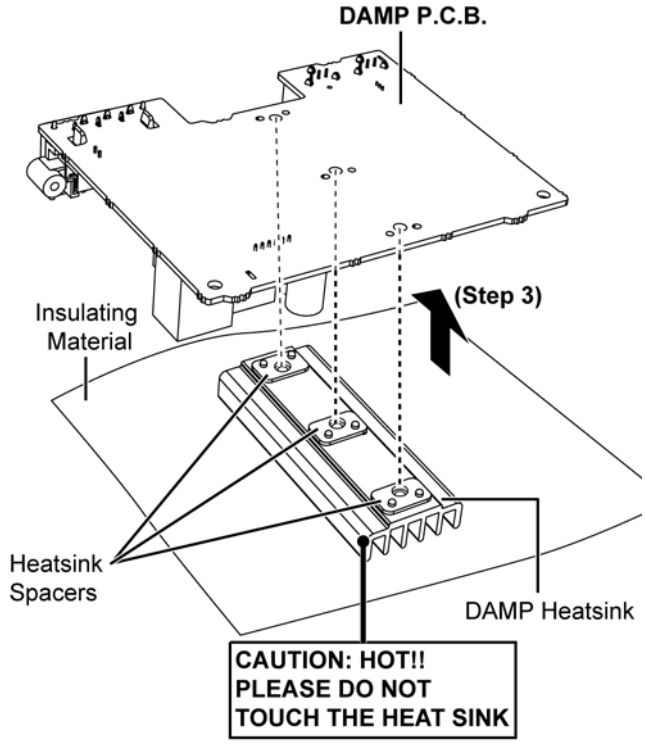
Step 1 : Place the DAMP P.C.B. on an Insulated Material.

Step 2 : Remove 3 screws.



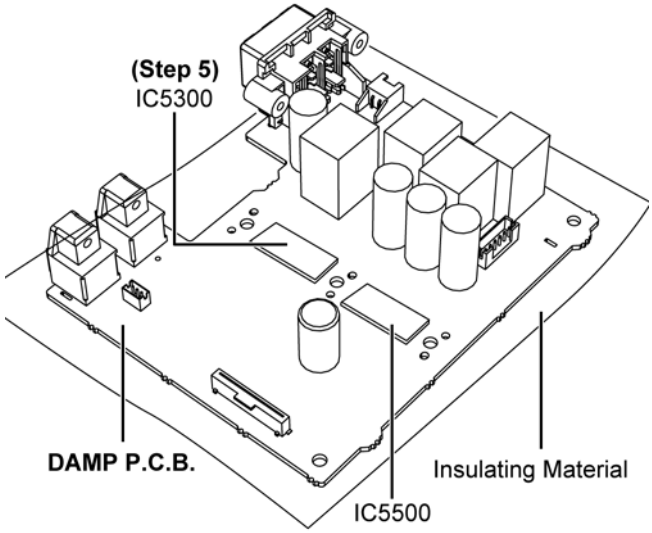
Step 3 : Lift up the DAMP P.C.B. as arrow shown.

Caution: Keep the Heatsink Spacer in safe place. Avoid denting it, place it back during assembling.



Step 4 : Desolder the pins of Digital Amplifier IC (IC5300).

Step 5 : Remove Digital Amplifier IC (IC5300).



11.4.9.2. Assembly of Digital Amplifier IC (IC5300/IC5500)

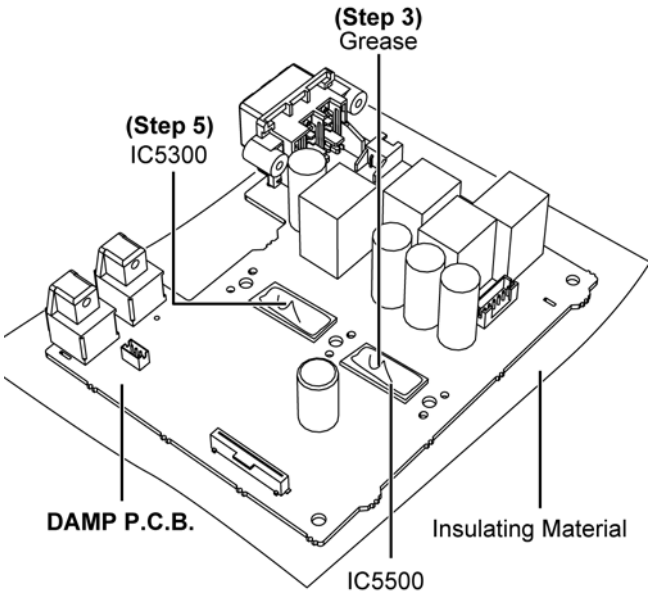
Note : For assembling of Digital Amplifier IC (IC5500), repeat the (Step 1) to (Step 5) of 11.4.9.2.

Step 1 : Fix the Digital Amplifier IC (IC5300) onto the DAMP P.C.B..

Step 2 : Solder pins of Digital Amplifier IC (IC5300).

Caution: Ensure that the pins of Digital Amplifier IC (IC5300) is positioned correctly on DAMP P.C.B. before soldering.

Step 3 : Apply grease on the top side of the Digital Amplifier IC (IC5300).

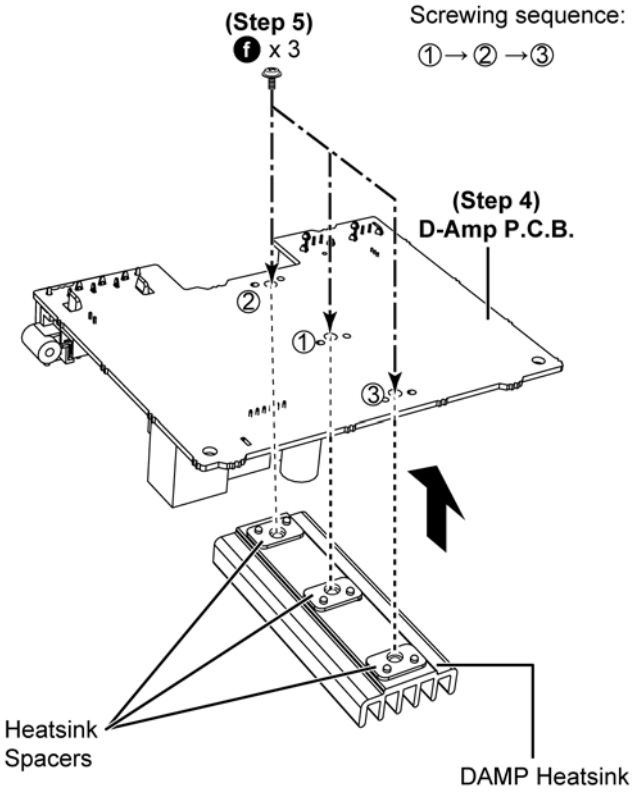


Step 4 : Upset the DAMP P.C.B..

Caution: During assembling, ensure that the heatsink spacer are properly located & fully seated onto the DAMP Heatsink.

Step 5 : Fix 3 screws.

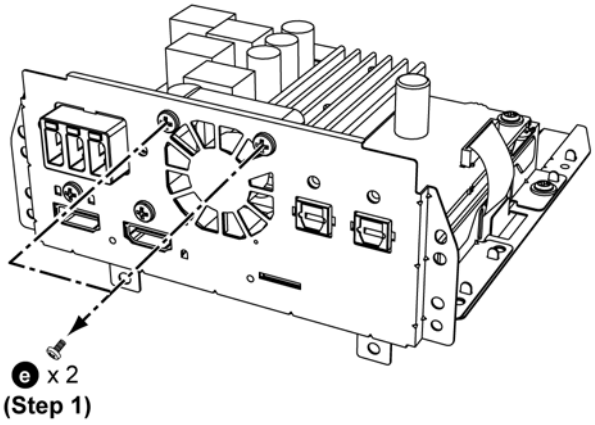
Caution: During assembling, ensure that the screwing sequence is strictly follow to the illustration shown.



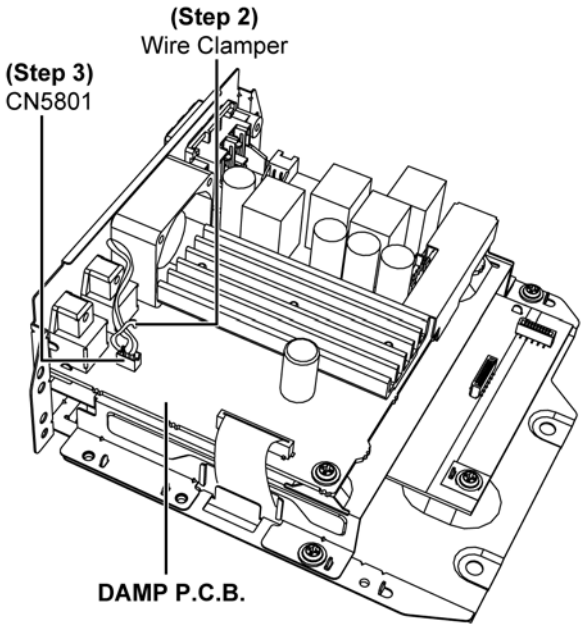
11.4.10. Disassembly of Fan Unit

- Refer to “Disassembly of Top Panel Unit”.
- Refer to “Disassembly of Rear Panel Unit”.
- Refer to “Disassembly of Main P.C.B. Unit”.

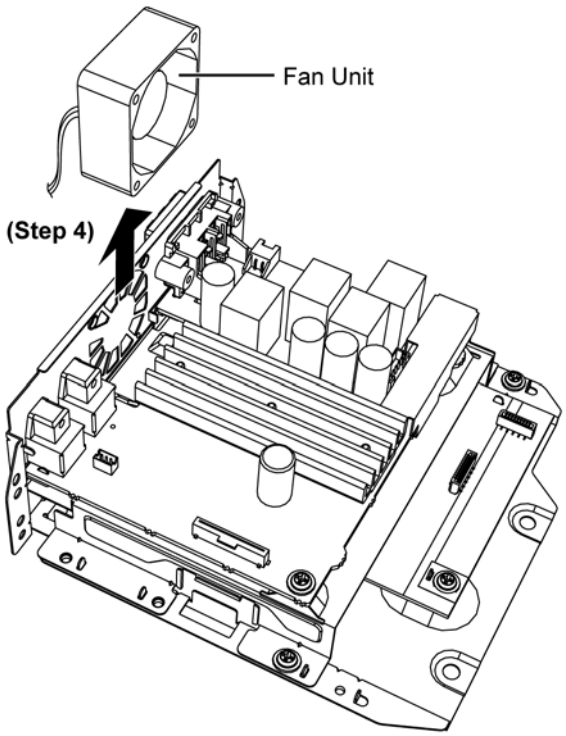
Step 1 : Remove 2 screws.



Step 2 : Lift up the Wire Clamper.
Step 3 : Detach 3P Cable Wire at the connector (CN5801) on DAMP P.C.B..



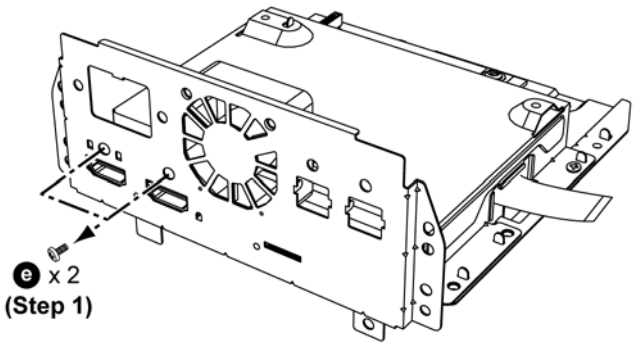
Step 4 : Lift up and remove the Fan Unit.



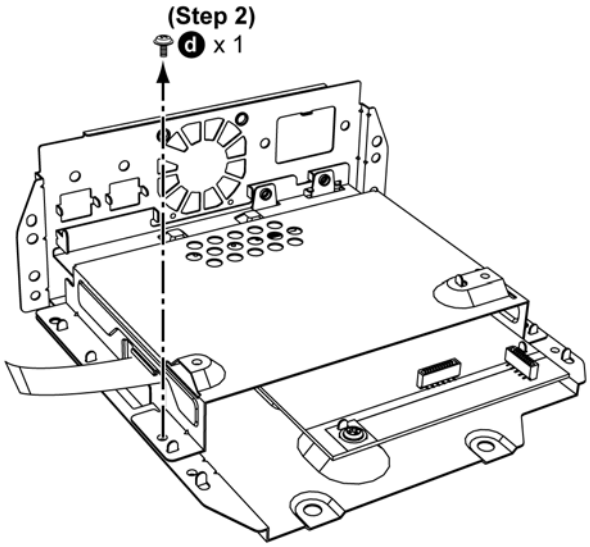
11.4.11. Disassembly of Main P.C.B.

- Refer to “Disassembly of Top Panel Unit”.
- Refer to “Disassembly of Rear Panel Unit”.
- Refer to “Disassembly of Main P.C.B. Unit”.
- Refer to “Disassembly of DAMP P.C.B.”.
- Refer to “Disassembly of Fan Unit”.

Step 1 : Remove 2 screws.

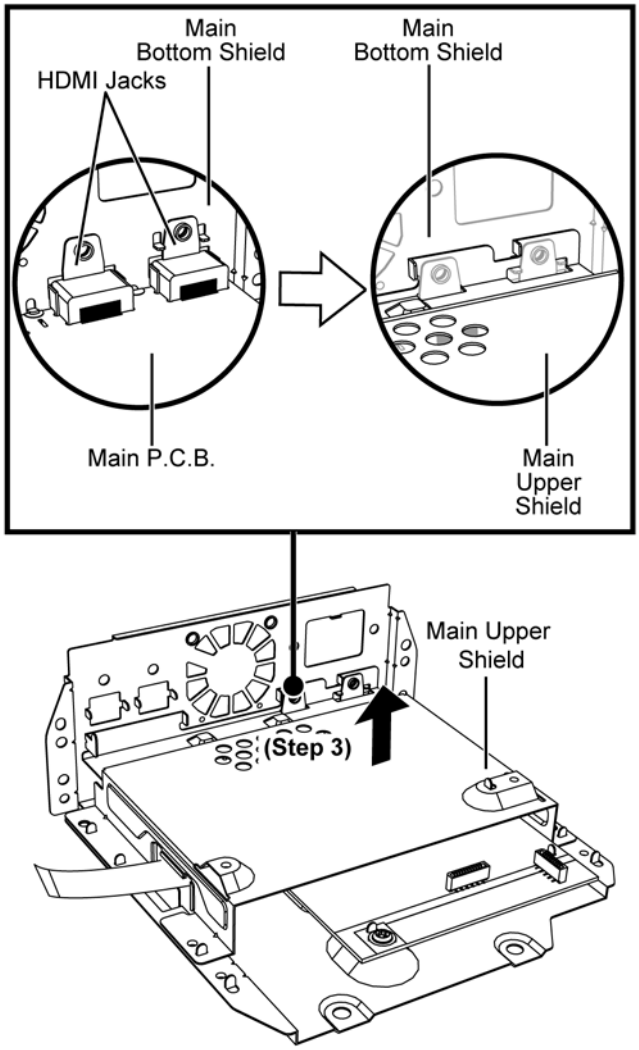


Step 2 : Remove 1 screw.



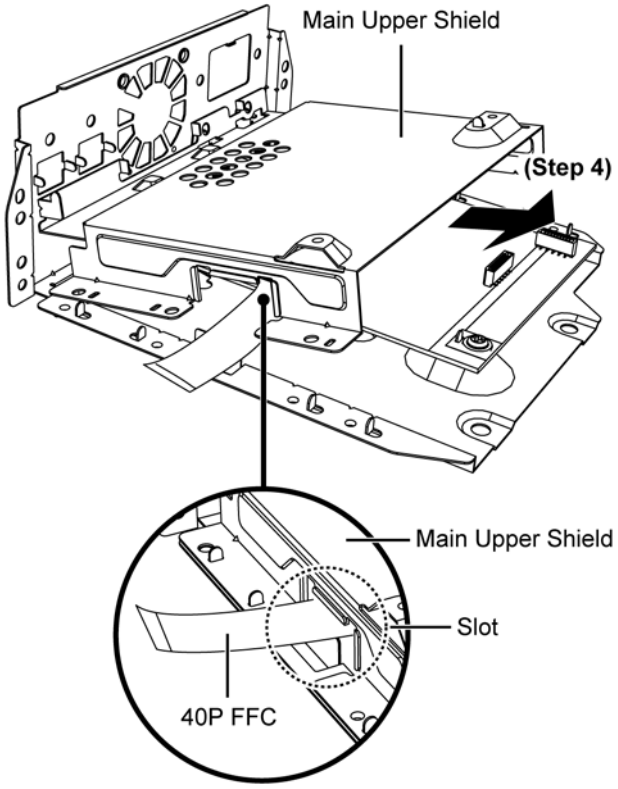
Step 3 : Slightly lift up the Main Upper Shield as shown.

Caution: During assembling, ensure that the Main Upper Shield is properly inserted between the HDMI Jacks and Main Bottom Shield.

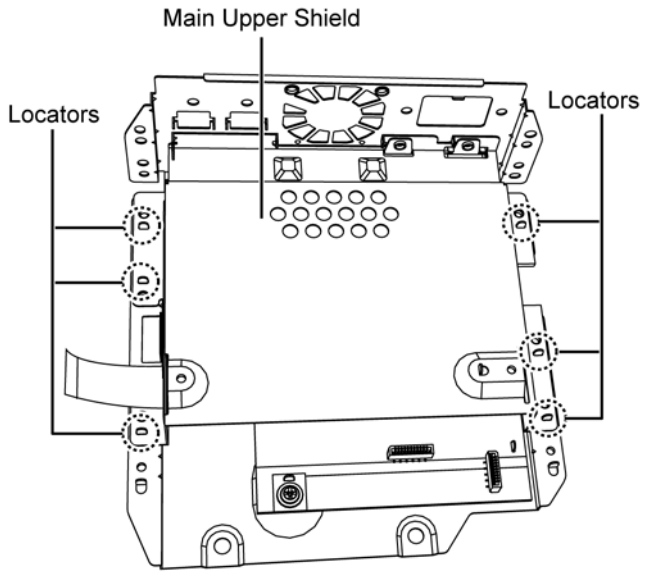


Step 4 : Remove the Main Upper Shield as shown.

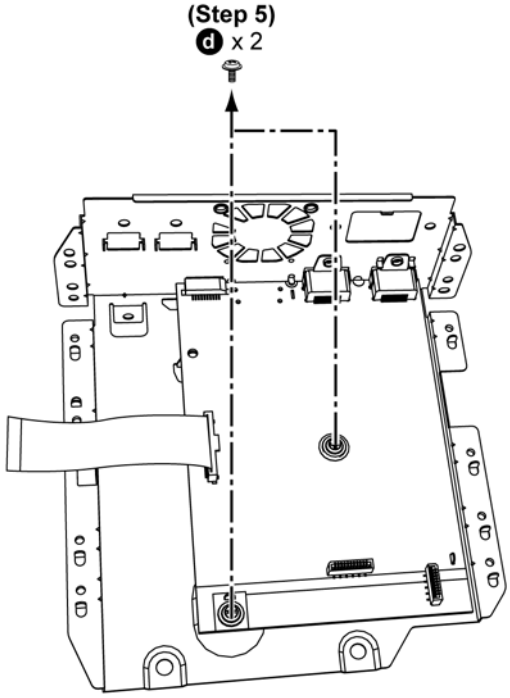
Caution 1 : During assembling, ensure that the 40P FFC is properly dressed between the slot.



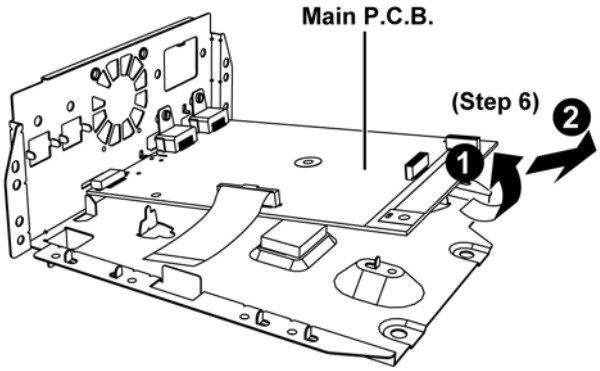
Caution 2 : During assembling, ensure that the Main Upper Shield is properly seated onto the locators.



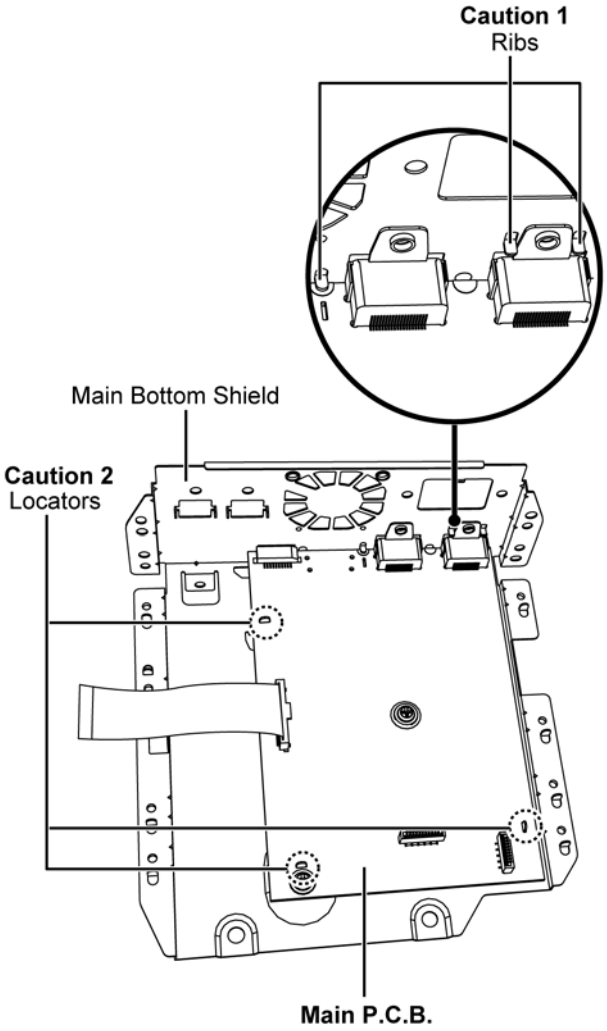
Step 5 : Remove 2 screws.



Step 6 : Slightly lift up and remove the Main P.C.B. as shown.

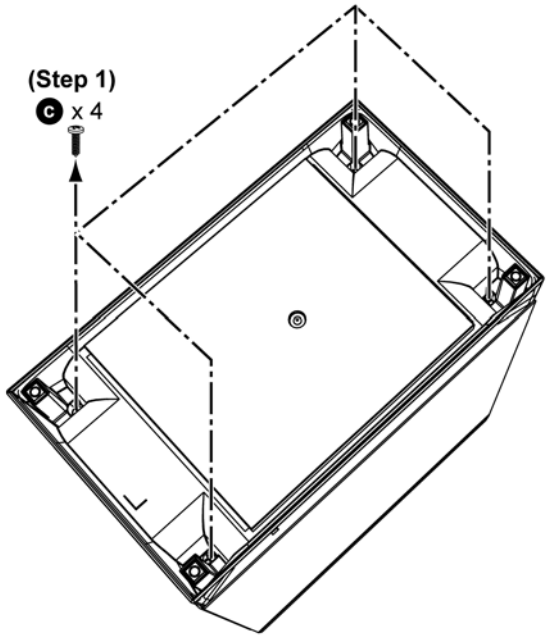


Caution 1 : During assembling, ensure that the Main P.C.B. is fully catched and properly slotted between the Ribs.
Caution 2 : During assembling, ensure that the Main P.C.B. is properly seated onto the locators.

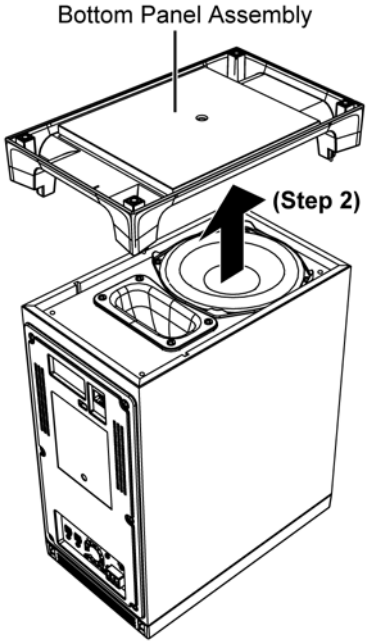


11.4.12. Disassembly of Woofer Speaker (SP61)

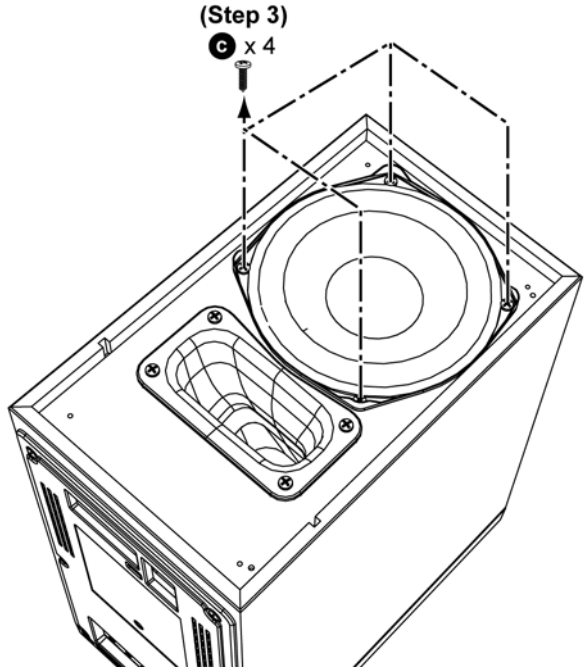
Step 1 : Remove 4 screws.



Step 2 : Remove the Bottom Panel Assembly as shown.



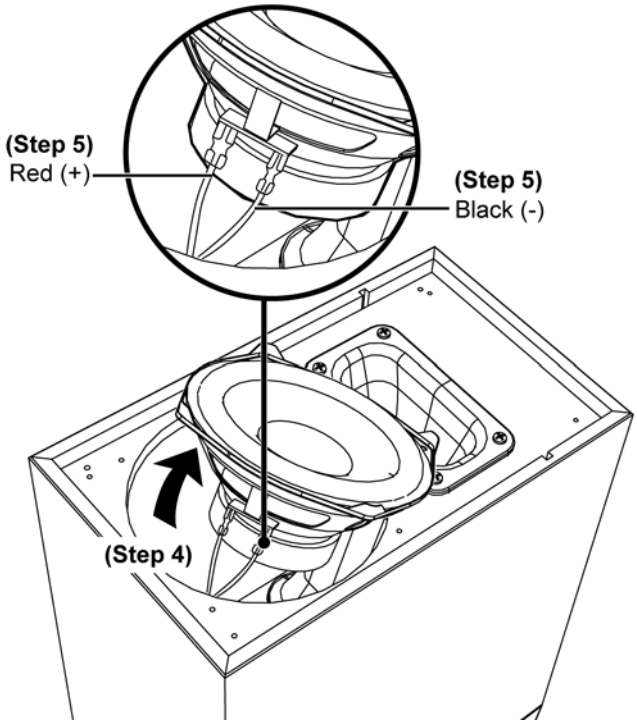
Step 3 : Remove 4 screws.



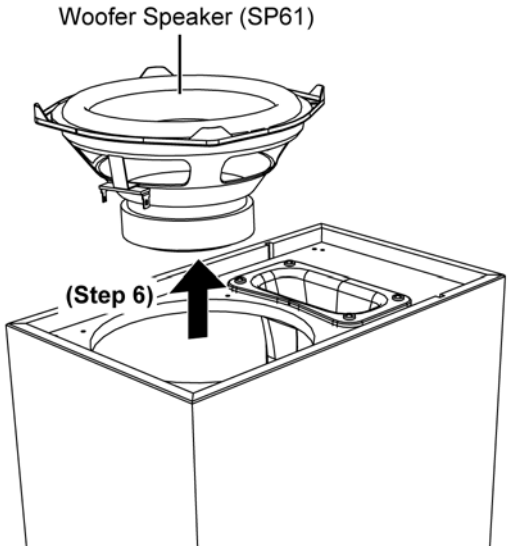
Step 4 : Gently lift up the Woofer Speaker.

Caution: Do not exert too much force as it may damage the Speaker Wires.

Step 5 : Detach the Red (+) wire and Black (-) wire.



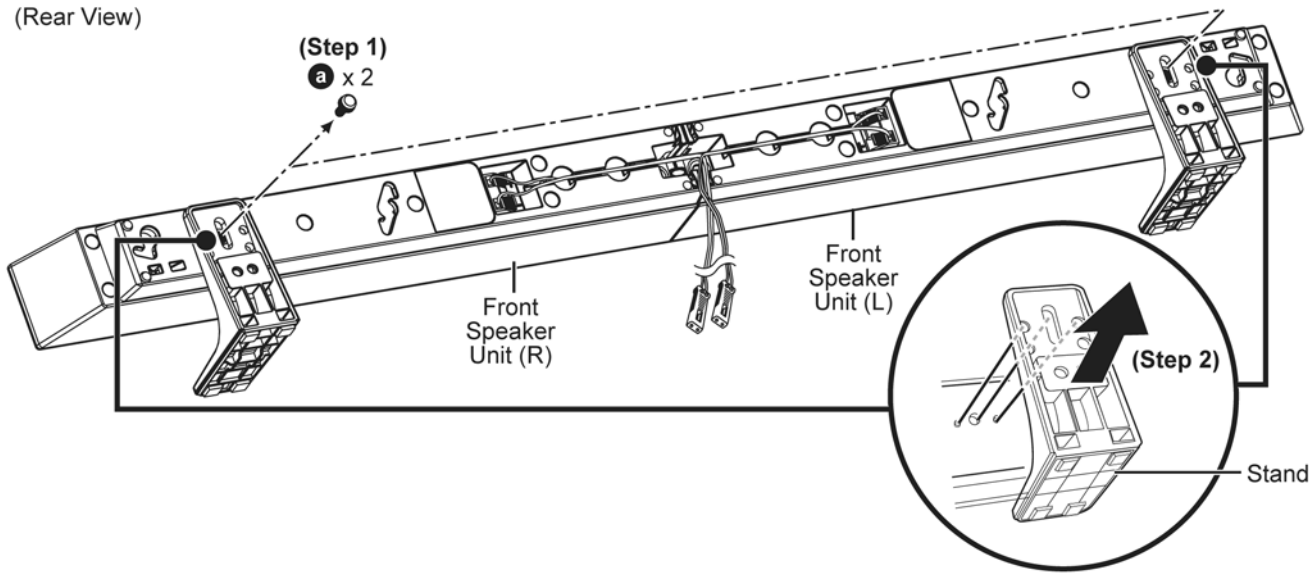
Step 6 : Remove the Woofer Speaker (SP61).



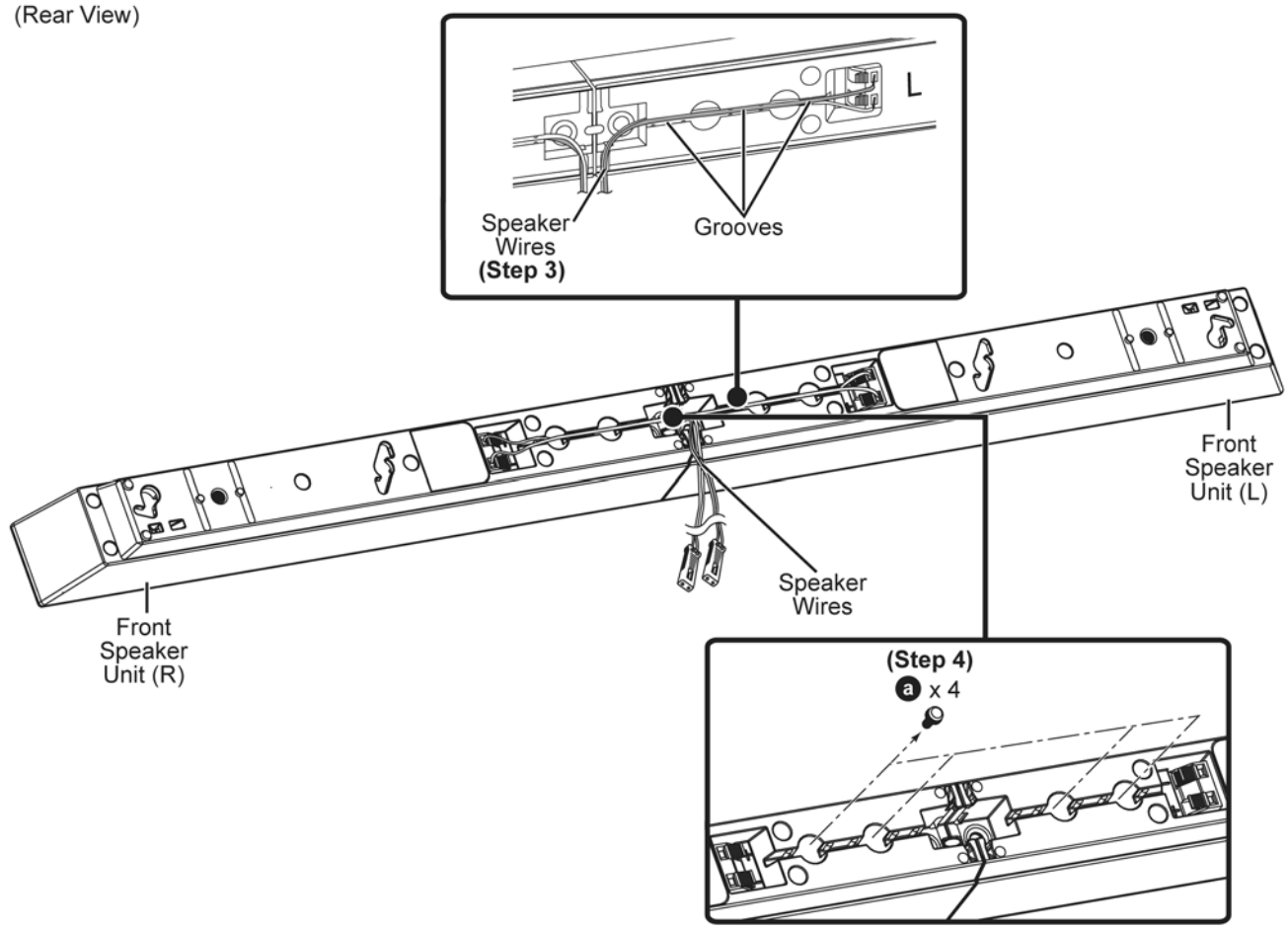
11.5. Front Speakers (SB-HTB20)

11.5.1. Disassembly of Front Speaker Unit (L/R) (Bar position)

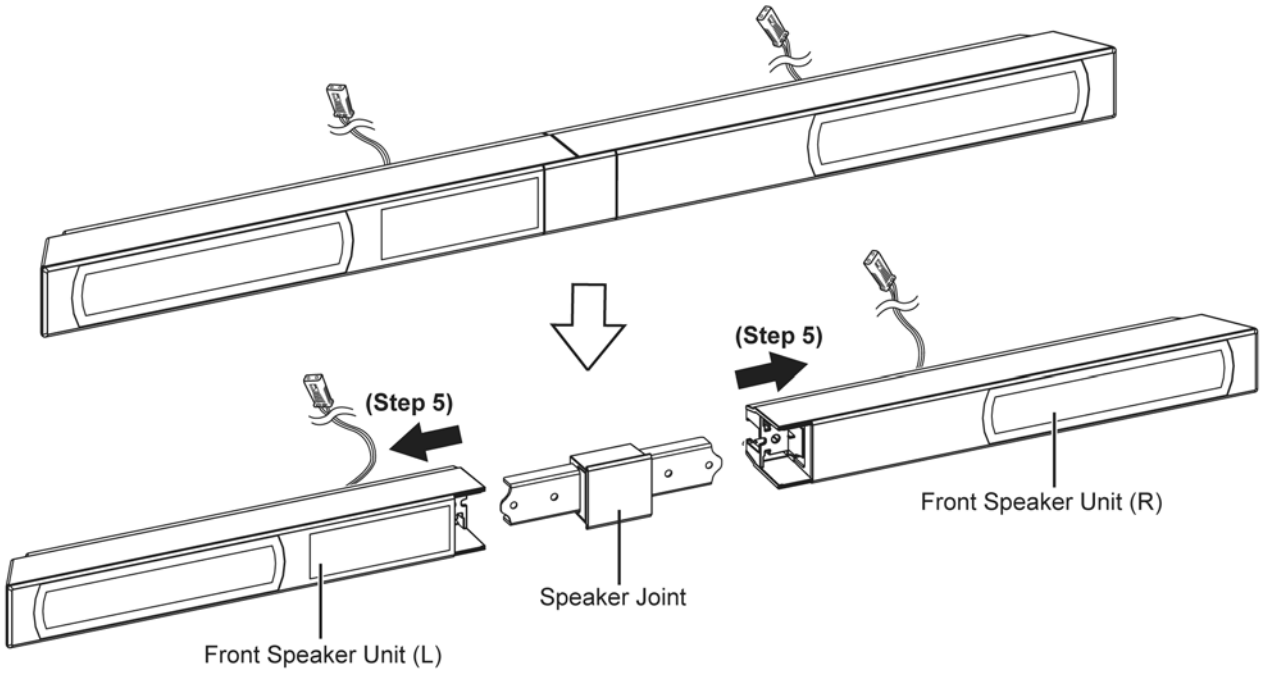
Step 1 : Remove 2 screws.
Step 2 : Remove 2 Stands.



Step 3 : Release the Speaker Wires from the grooves.
Step 4 : Remove 4 screws.



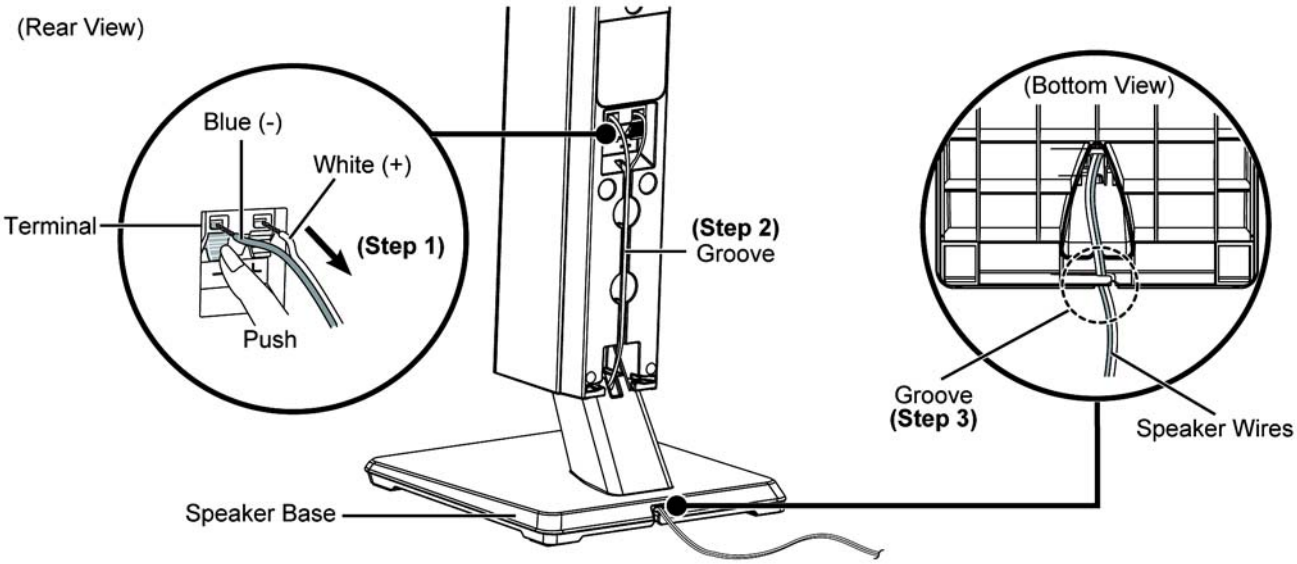
Step 5 : Detach the Front Speaker Units (L) & (R) as arrow shown.



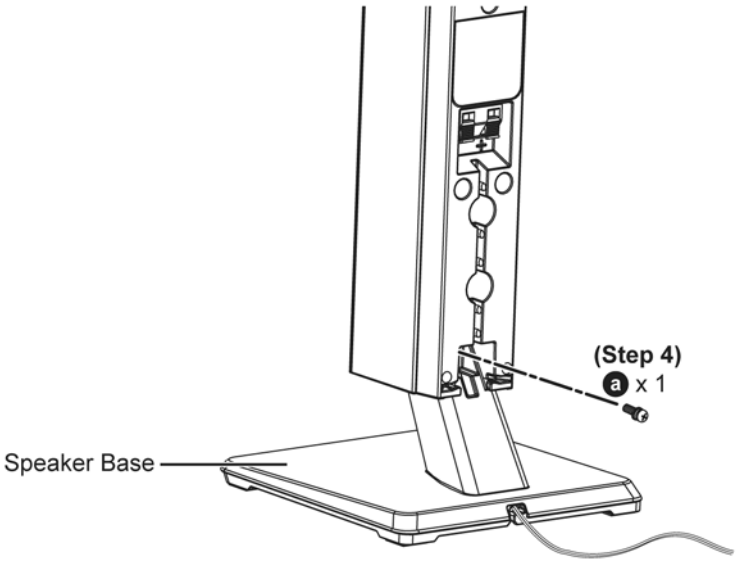
11.5.2. Disassembly of Front Speaker Unit (L/R) (Standing position)

Note : Front Speaker Unit (L) and (R) have the same mechanical structure.
The same disassembly procedure can be applied for the both of them. Front Speaker Unit (L) is illustrated here.

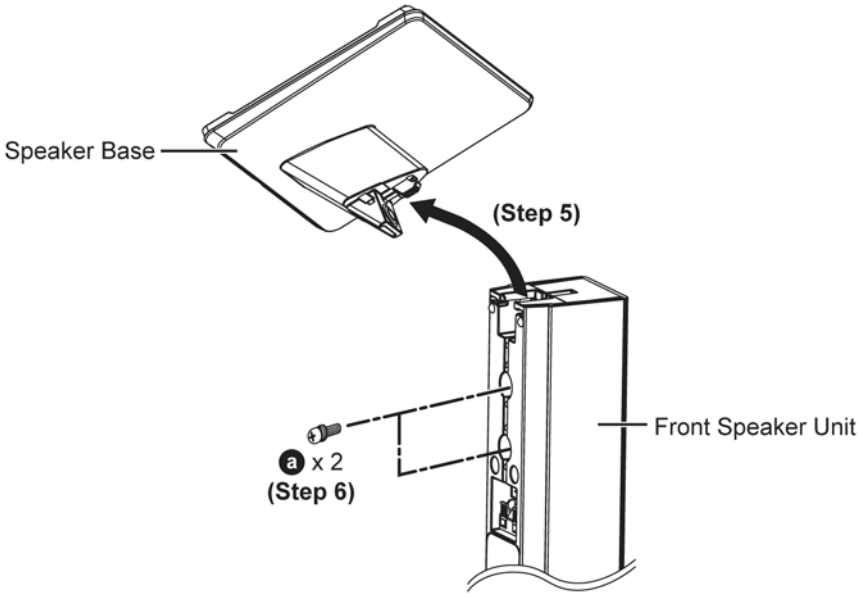
Step 1 : Push and release the White (+) and Blue (-) Speaker wires from the Terminal.
Step 2 : Release the Speaker Wires from the groove.
Step 3 : Release the Speaker Wires from the groove.



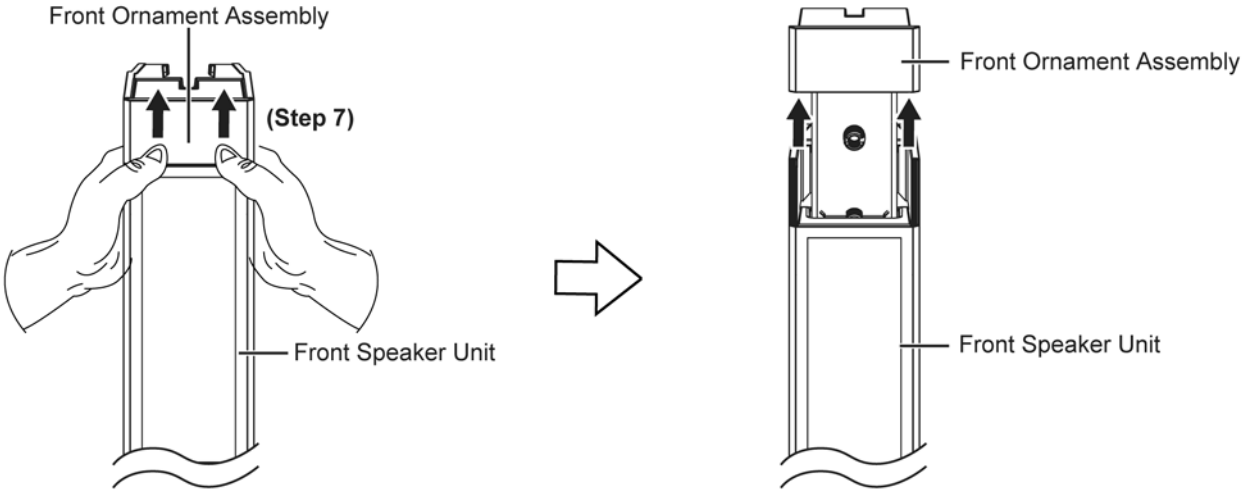
Step 4 : Remove 1 screw.



Step 5 : Remove the Speaker Base.
Step 6 : Remove 2 screws.



Step 7 : Push up and remove the Front Ornament Assembly.

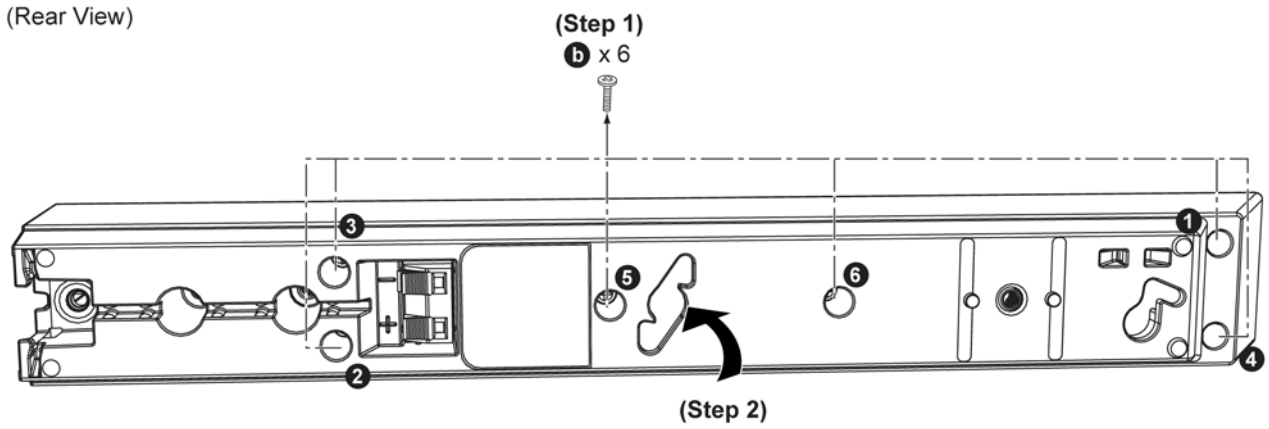


11.5.3. Disassembly of Rear Cabinet Assembly

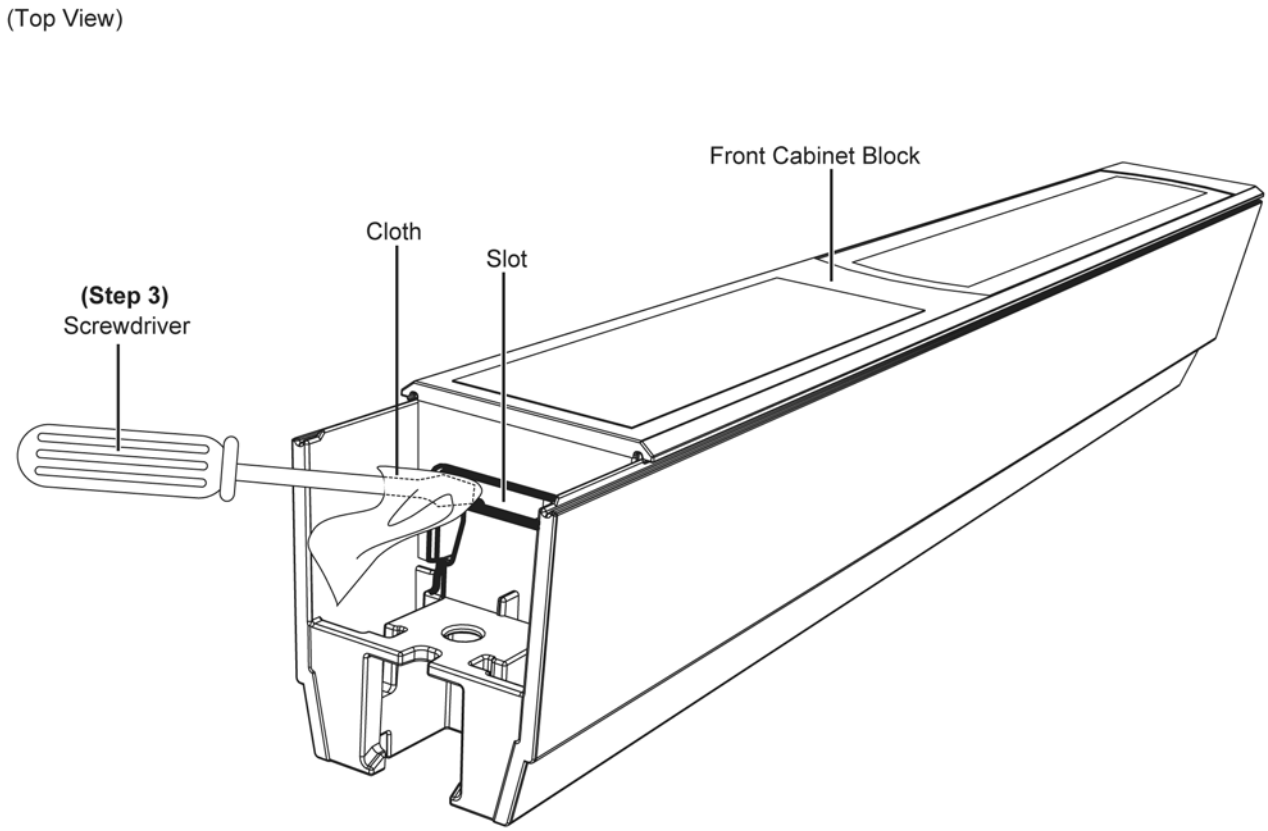
Notes : Front Speaker Unit (L) and (R) have the same mechanical structure. The same disassembly procedure can be applied for the both of them. Front Speaker Unit (L) is illustrated here.

- Refer to “Disassembly of Front Speaker Unit (L/R)”.

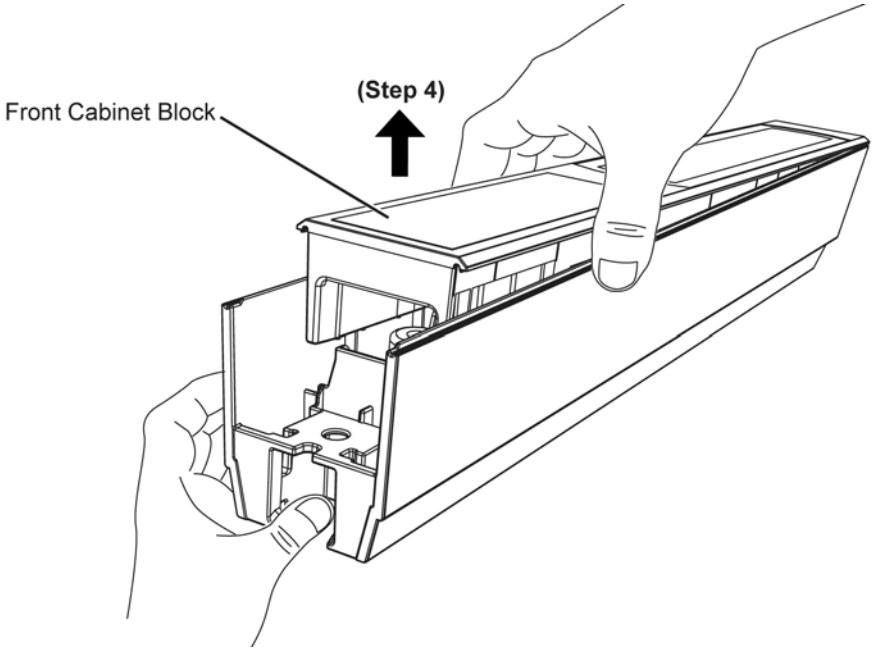
Step 1 : Remove 6 screws.
Caution: During assembling, fixed the screws by following sequence from 1 to 6.
Step 2 : Upset the unit.



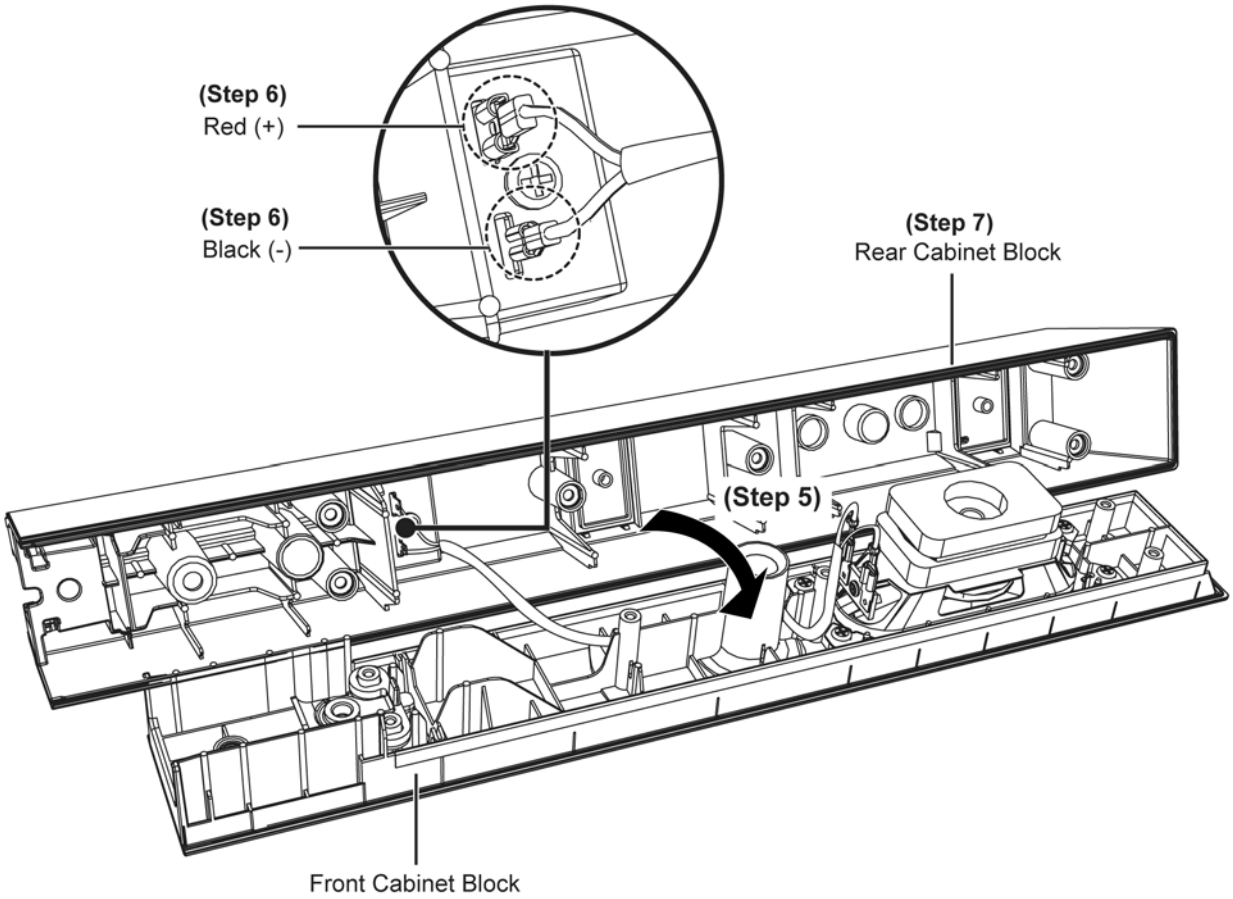
Step 3 : Slightly tilt open the Front Cabinet Block by using screwdriver with cloth.
Caution: Do not exert too much force as it may damage the Front Cabinet Block.



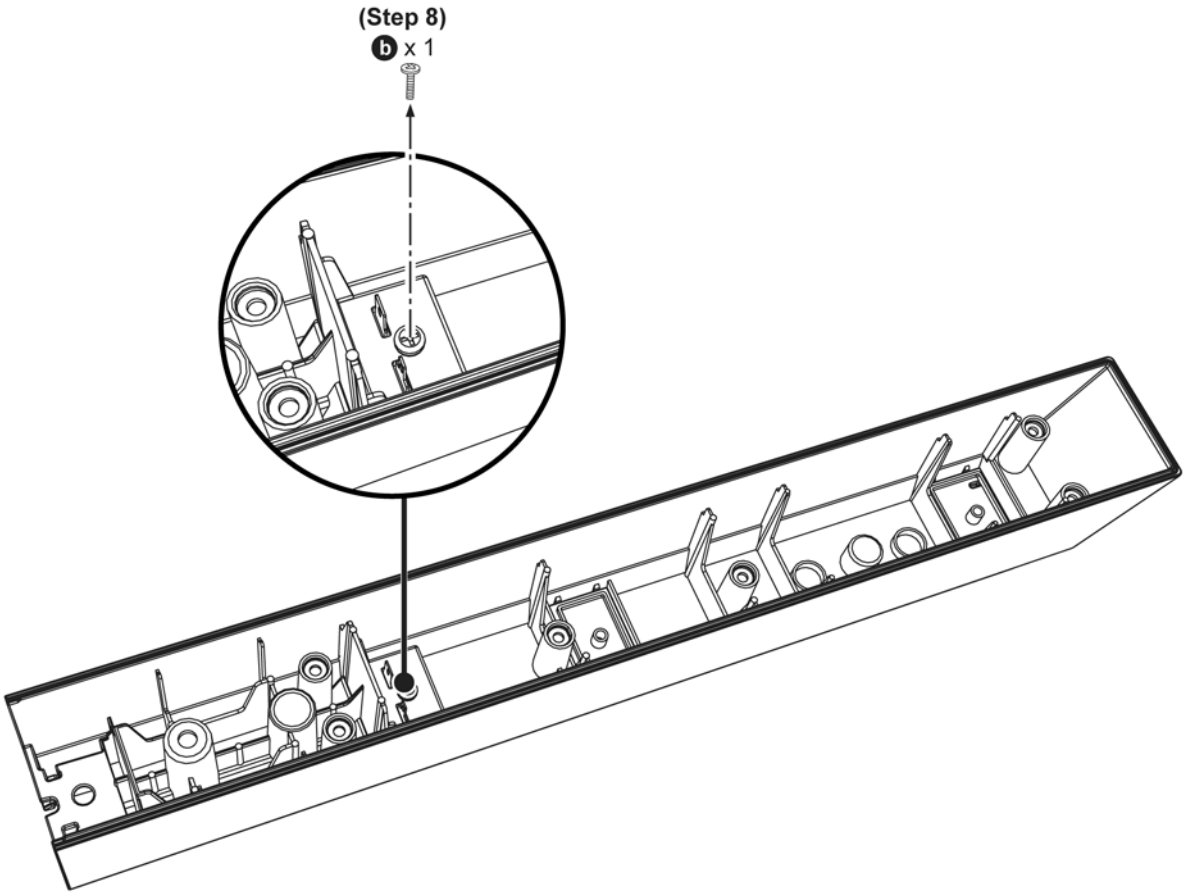
Step 4 : Slightly lift up the Front Cabinet Block as arrow shown.



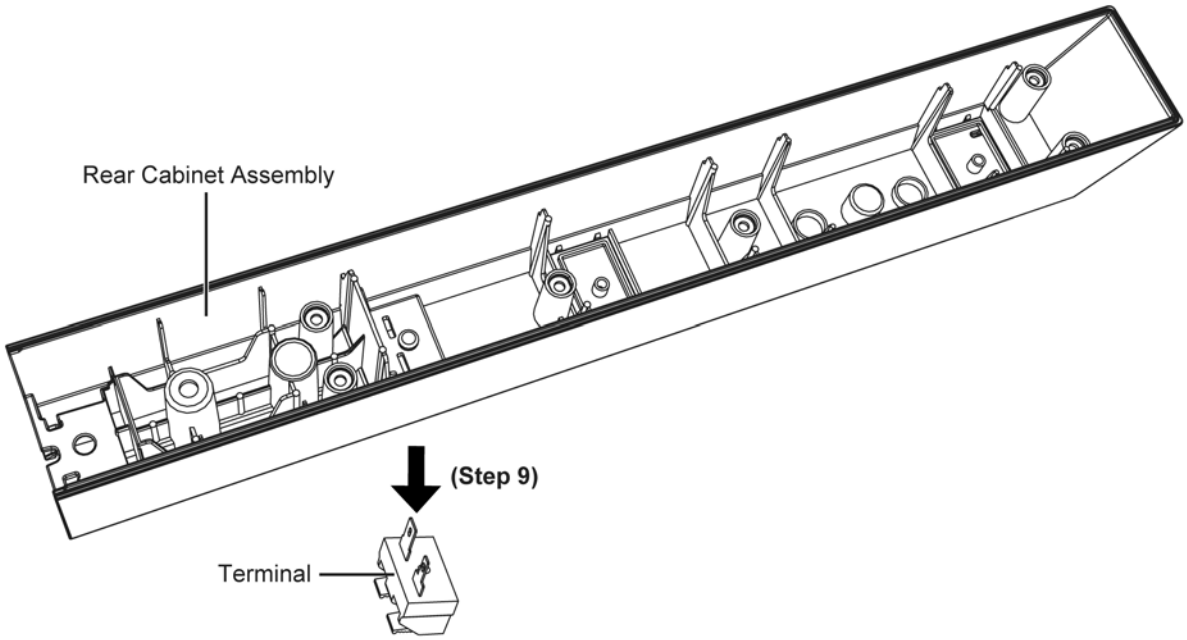
Step 5 : Place the Front Cabinet Block by the side of Rear Cabinet Block.
Step 6 : Detach the Red (+) and Black (-) wires.
Step 7 : Remove the Rear Cabinet Block.



Step 8 : Remove 1 screw.



Step 9 : Remove the Terminal as arrow shown.

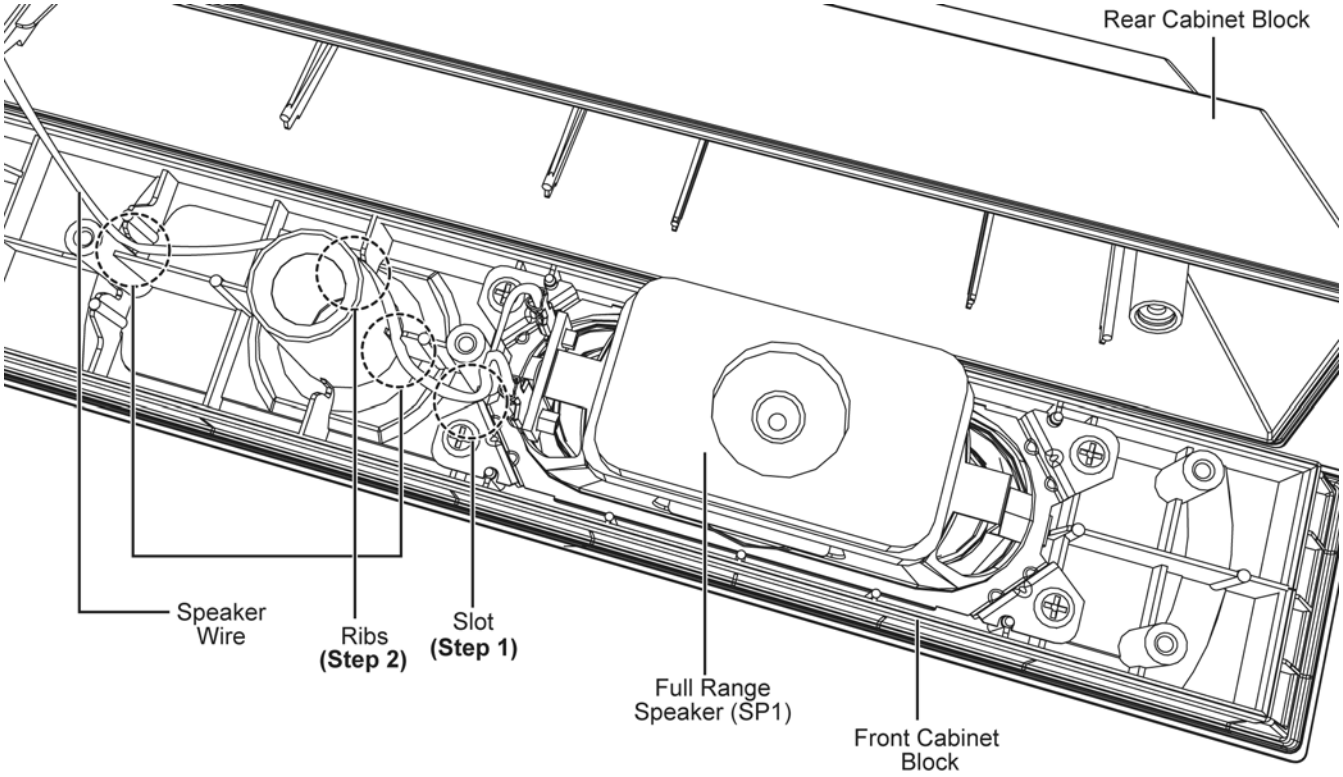


11.5.4. Disassembly of Full Range Speaker (SP1)

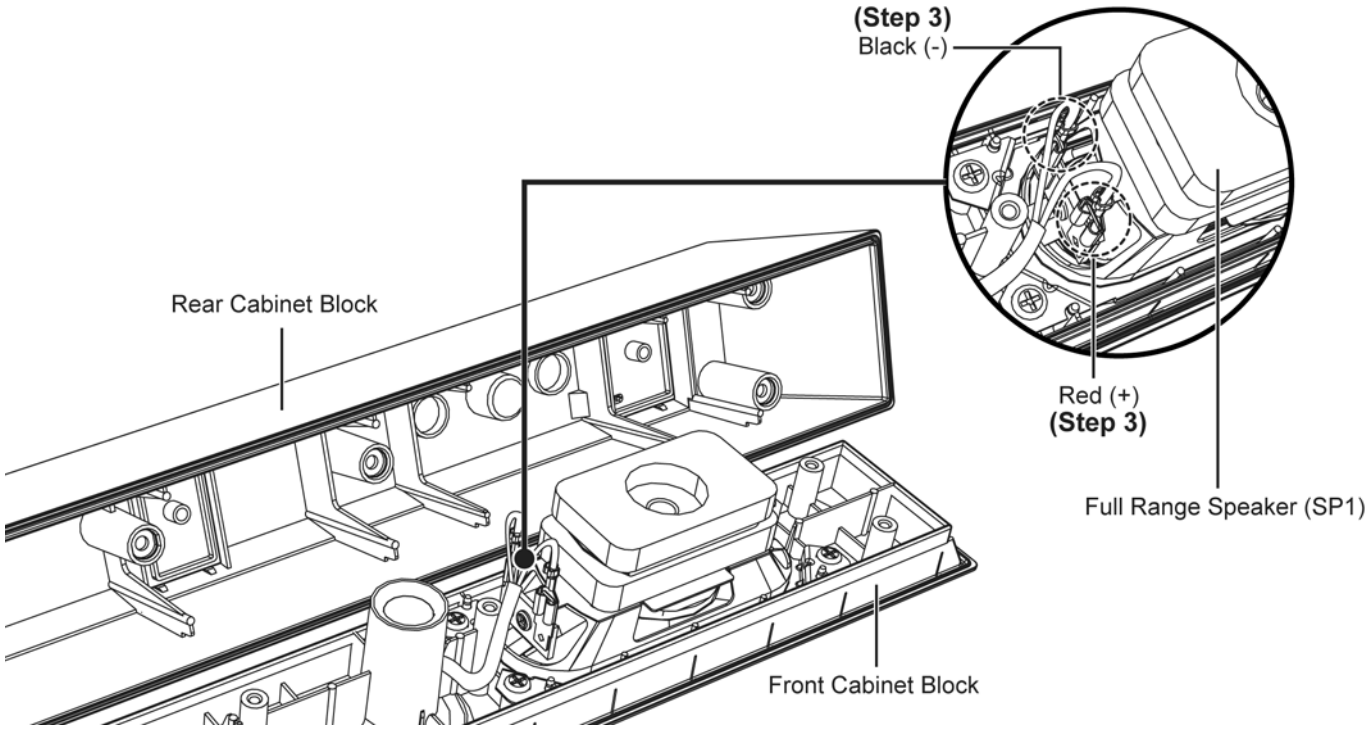
Notes : Front Speaker Unit (L) and (R) have the same mechanical structure. The same disassembly procedure can be applied for both of them. Front Speaker Unit (L) is illustrated here.

- Refer to “Disassembly of Front Speaker Unit (L/R)”.
- Refer to (Step 1) to (Step 5) of “Disassembly of Rear Cabinet Assembly”.

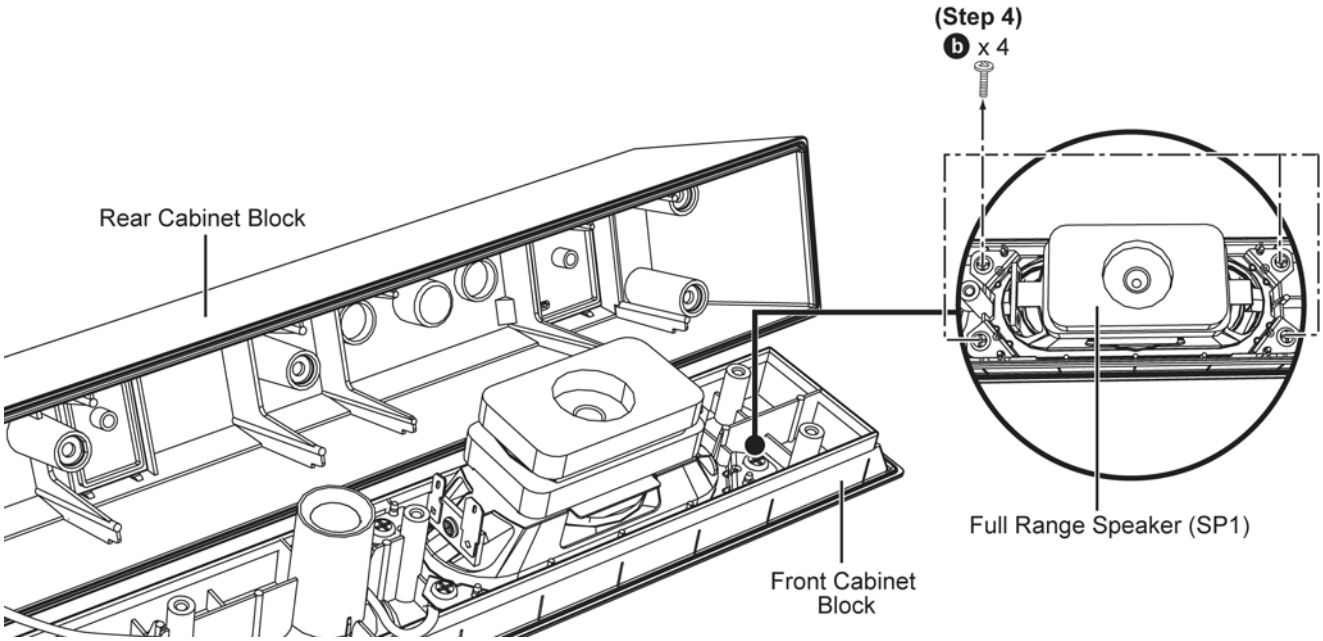
Step 1 : Release the Speaker Wire from the slot of the Full Range Speaker (SP1).
Caution: During assembling, dressed the Speaker Wire into the slot as shown.
Step 2 : Release the Speaker Wire from the ribs of the Front Cabinet Block.
Caution: During assembling, dressed the Speaker Wire between the ribs of the Front Cabinet Block.



Step 3 : Detach the Red (+) and Black (-) wires.

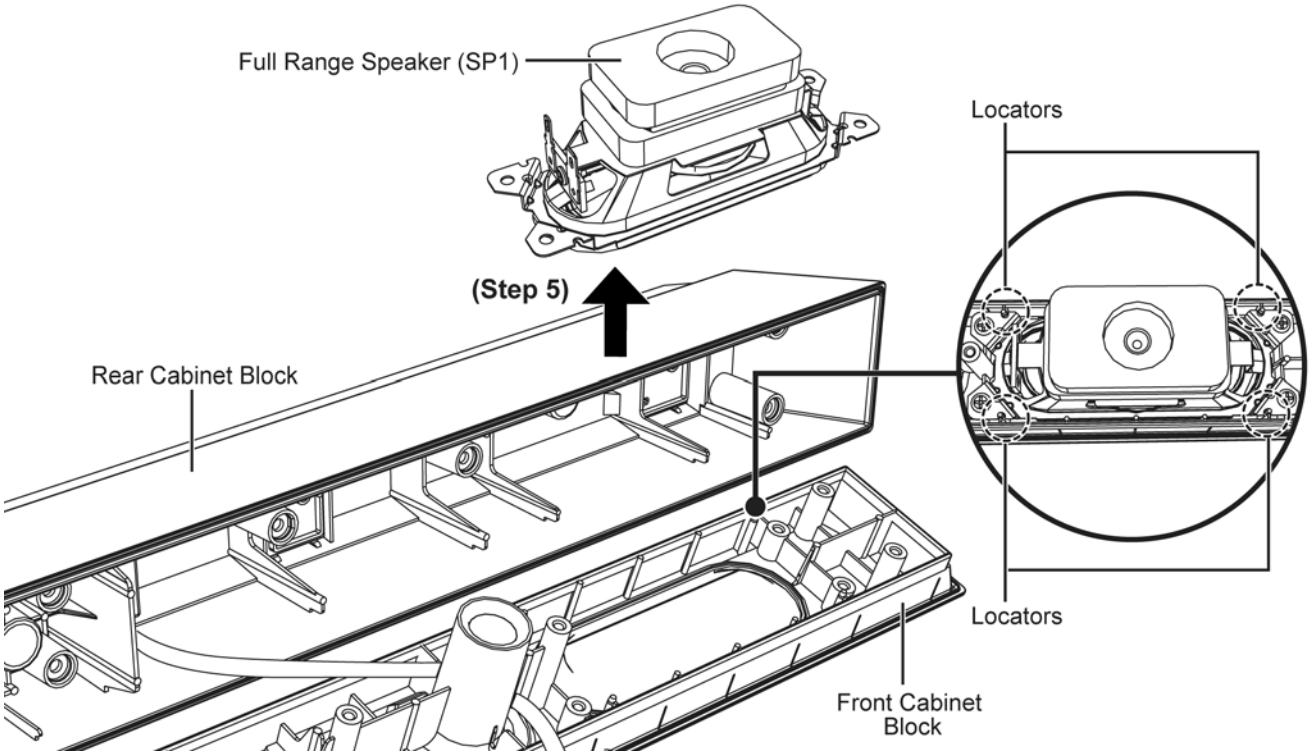


Step 4 : Remove 4 screws.



Step 5 : Remove the Full Range Speaker (SP1).

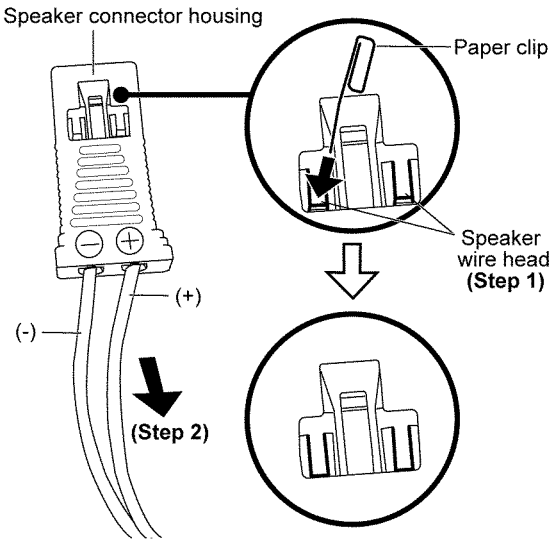
Caution: During assembling, ensure that the Full Range Speaker (SP1) is properly seated on the 4 locators of the Front Cabinet Block.



11.5.5. Replacement of Speaker Connector Housing

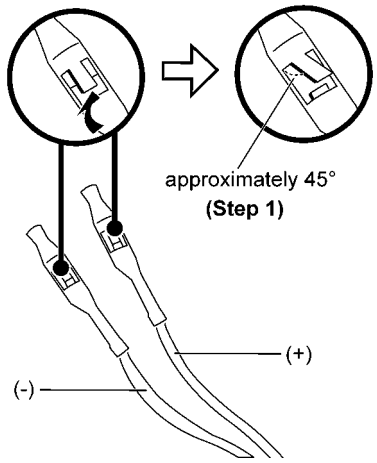
11.5.5.1. Disassembly

Step 1: Use a paper clip push the Speaker Wire head until it hide inside the Speaker Connector Housing.
Step 2: Pull out the (+) and (-) speaker wires.

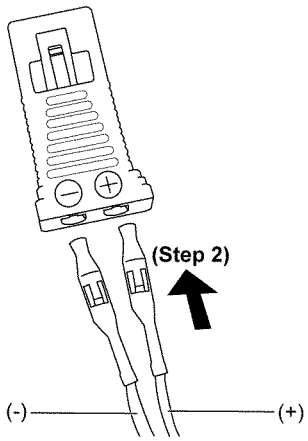


11.5.5.2. Assembly

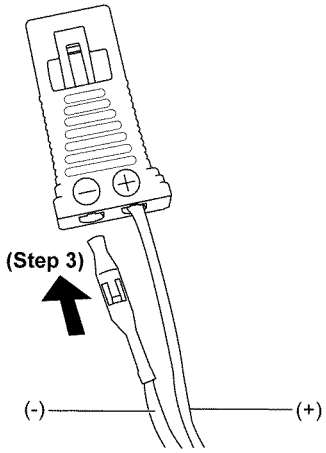
Step 1: Slightly push up the speaker wire head approximately 45° as shown.



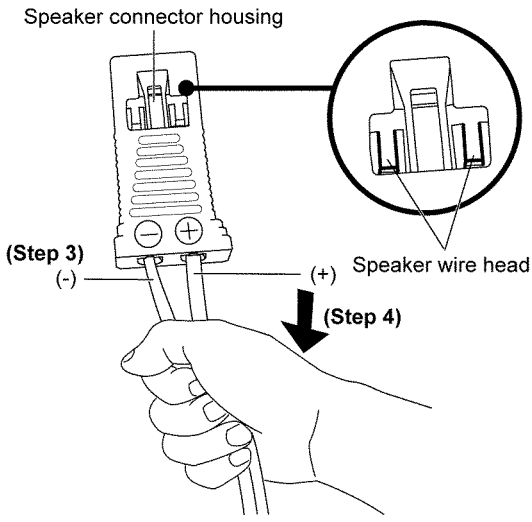
Step 2: Insert the (+) speaker wire into the (+) hole of the Speaker Connector Housing.
Note: Push in the speaker wire until hear the “click” sound.



Step 3: Insert the (-) speaker wire into the (-) hole of the speaker connector housing.
Note: Push in the speaker wire until hear the “click” sound.



Step 4: Pull both speaker wires gently to ensure they lock-in firmly.
Note: Repeat step1 to 3 if the speaker wires come out.



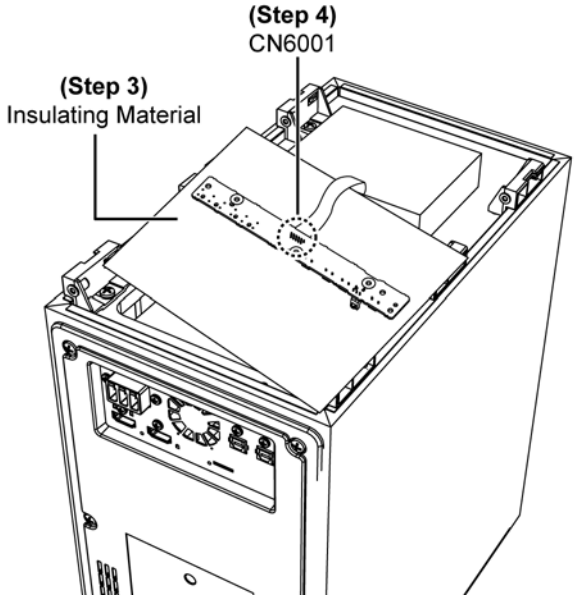
12 Service Position

12.1. Active Subwoofer (SU-HTB20)

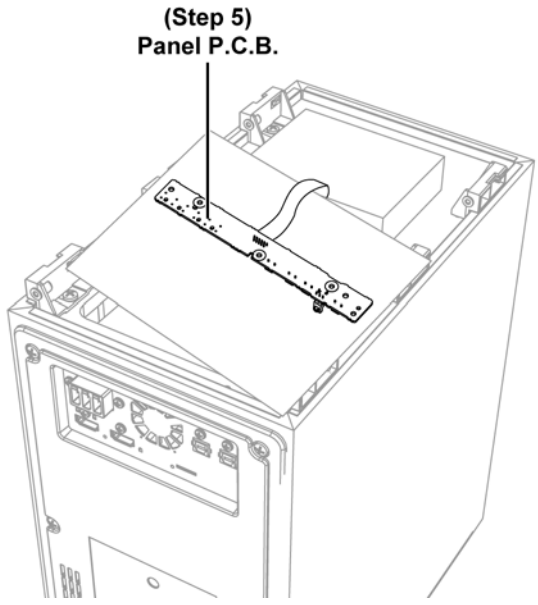
Note: For description of the disassembly procedures, see the Section 11

12.1.1. Checking and Repairing of Panel P.C.B.

Step 1 : Remove Top Panel Unit.
Step 2 : Remove Panel P.C.B..
Step 3 : Place the Panel P.C.B. on the Insulating Material.
Step 4 : Attach 11P FFC at the connector (CN6001) on the Panel P.C.B..

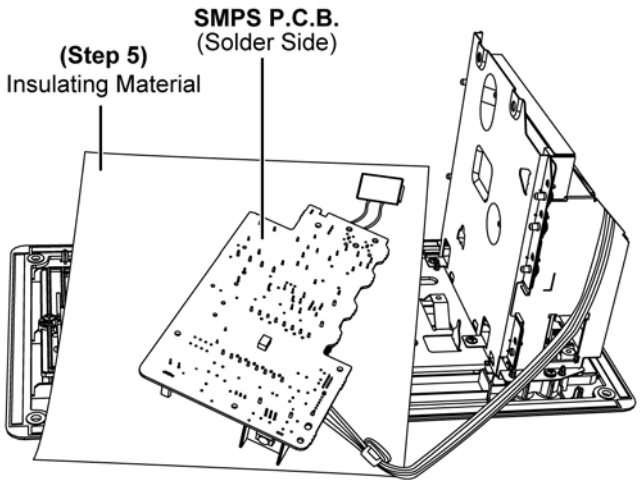


Step 5 : Panel P.C.B. can be checked and repaired as diagram shown.

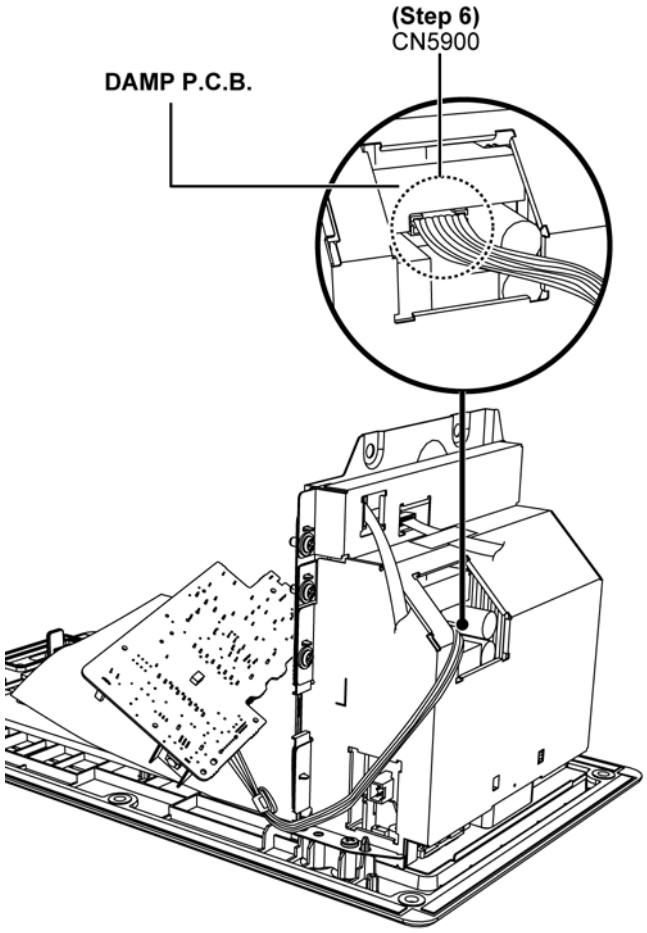


12.1.2. Checking and Repairing of SMPS P.C.B.

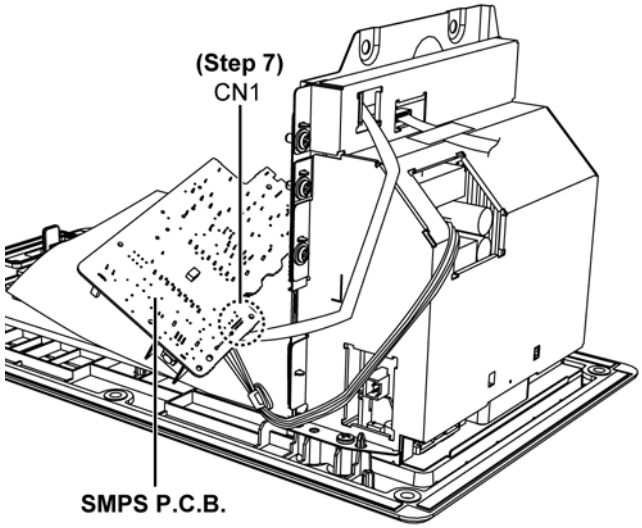
Step 1 : Remove Top Panel Unit.
Step 2 : Remove Rear Panel Unit.
Step 3 : Remove SMPS P.C.B. & AC Inlet P.C.B..
Step 4 : Remove Woofer Speaker (SP61).
Step 5 : Place the SMPS P.C.B. on the Insulating Material.



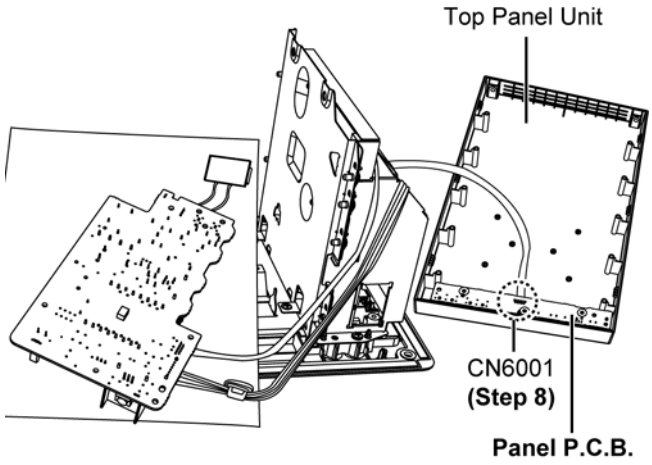
Step 6 : Attach 6P Cable Wire at the connector (CN5900) on the DAMP P.C.B..



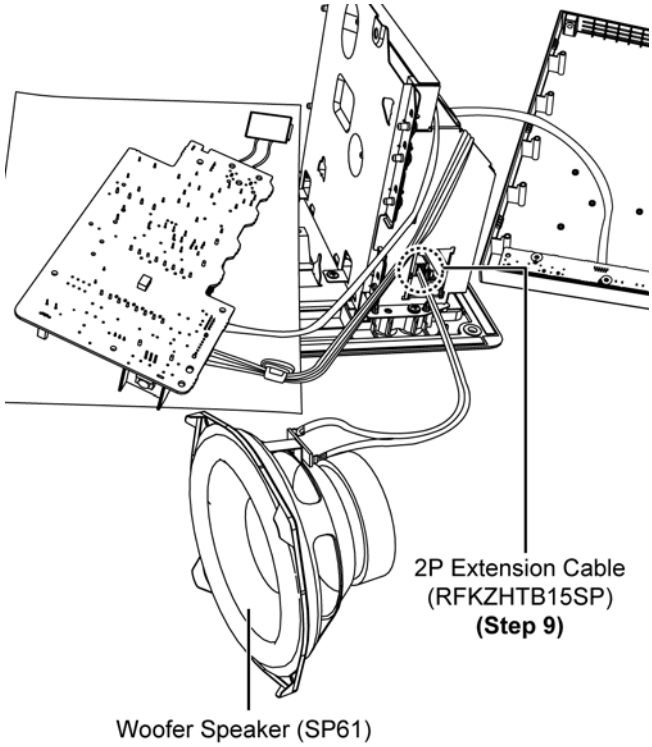
Step 7 : Attach 9P FFC at the connector (CN1) on the SMPS P.C.B..



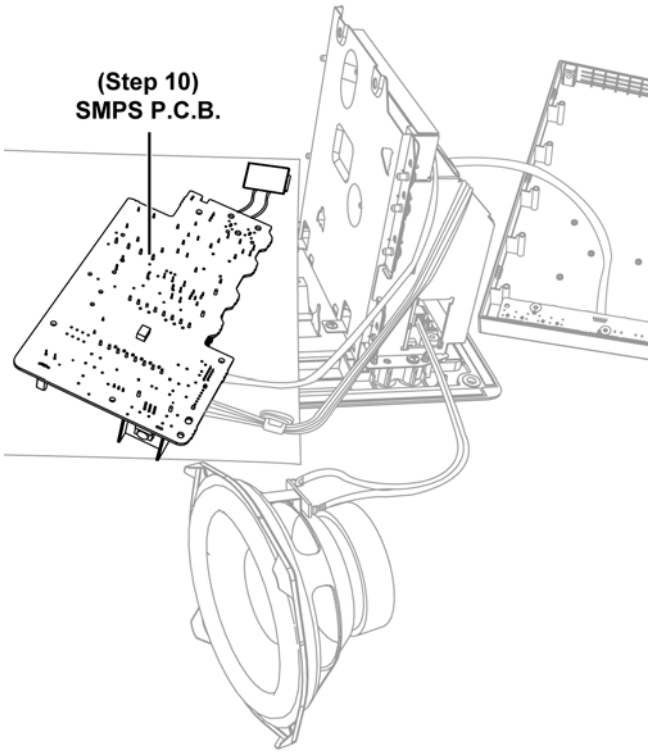
Step 8 : Attach 11P FFC at the connector (CN6001) on the Panel P.C.B..



Step 9 : Attach 2P Extension Cable (RFKZHTB15SP) from Woofer Speaker (SP61) to the connector (CN5100) on the DAMP P.C.B..

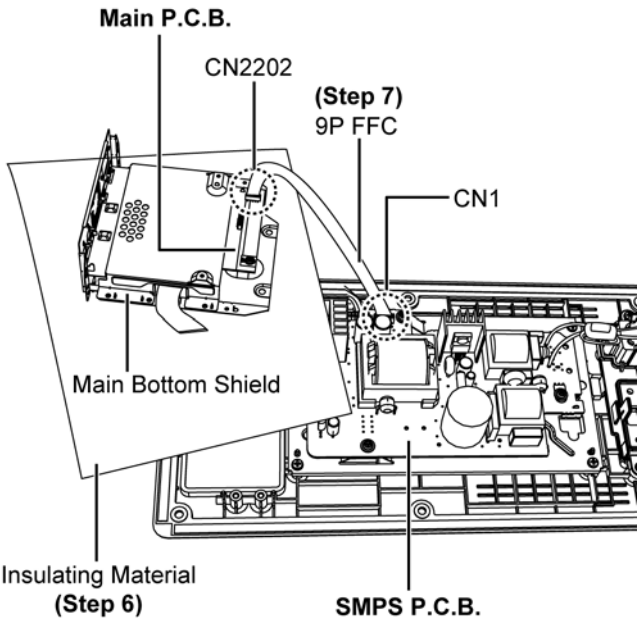


Step 10 : SMPS P.C.B. can be checked and repaired as diagram shown.

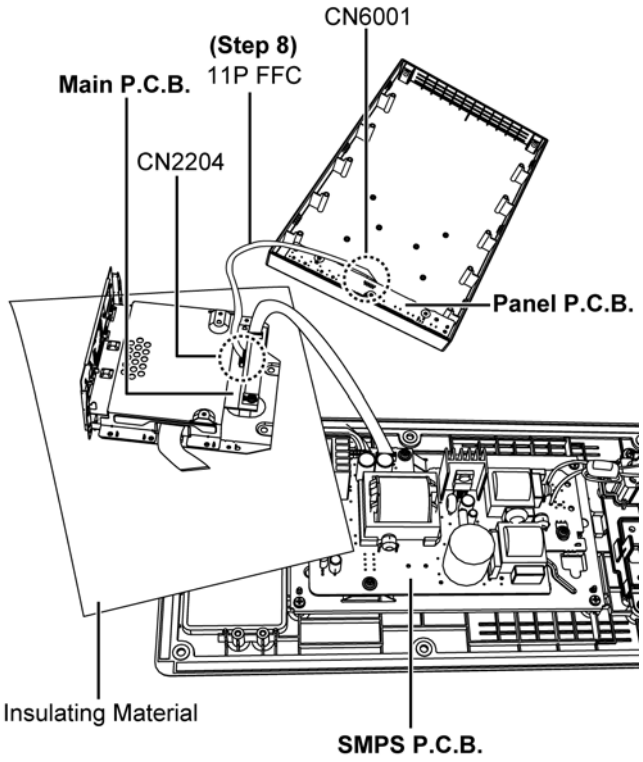


12.1.3. Checking and Repairing of DAMP P.C.B. (Side A)

Step 1 : Remove Top Panel Unit.
Step 2 : Remove Rear Panel Unit.
Step 3 : Remove Main P.C.B. Unit.
Step 4 : Remove DAMP P.C.B..
Step 5 : Remove Woofer Speaker (SP61).
Step 6 : Place the Main P.C.B. with the Main Bottom Shield on the Insulating Material.
Step 7 : Attach 9P FFC at connector (CN1) on the SMPS P.C.B. and at connector (CN2202) on the Main P.C.B..

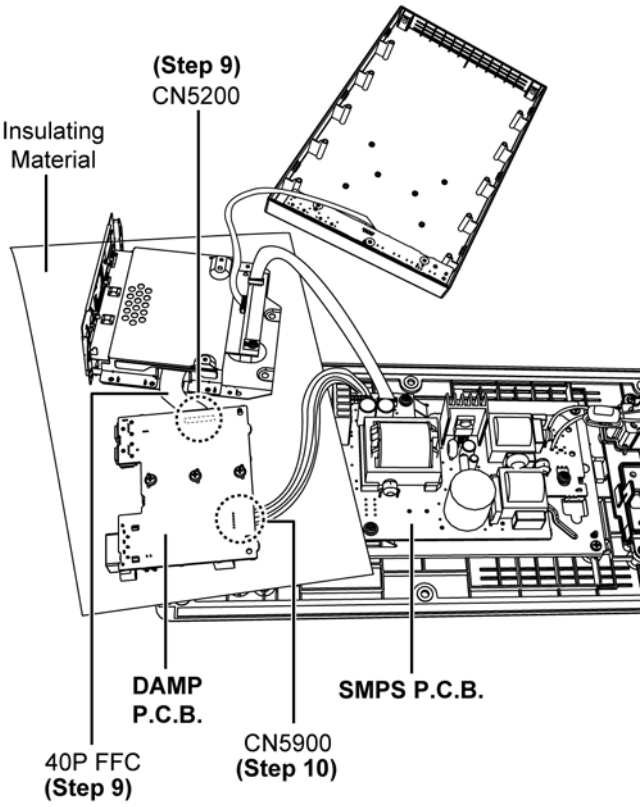


Step 8 : Attach 11P FFC at connector (CN6001) on the Panel P.C.B. and at connector (CN2204) on the Main P.C.B..

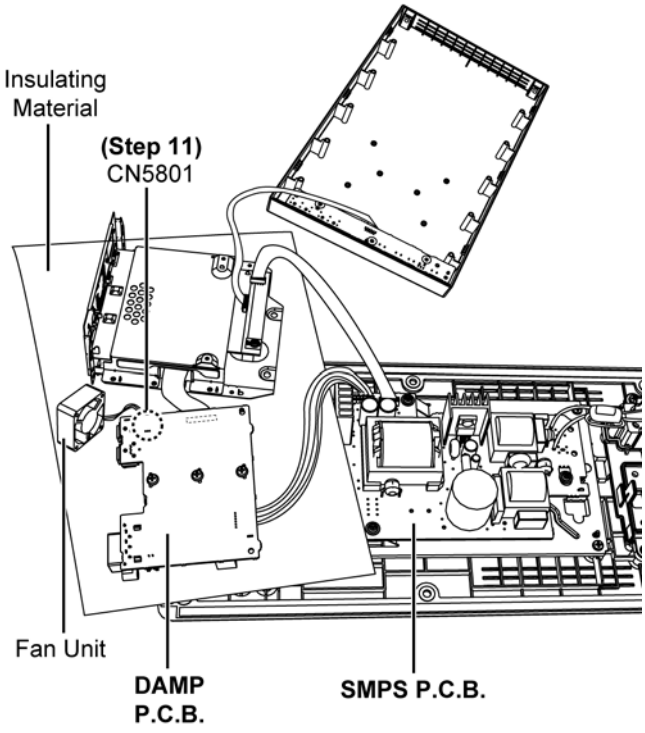


Step 9 : Attach 40P FFC at connector (CN5200) on the DAMP P.C.B..

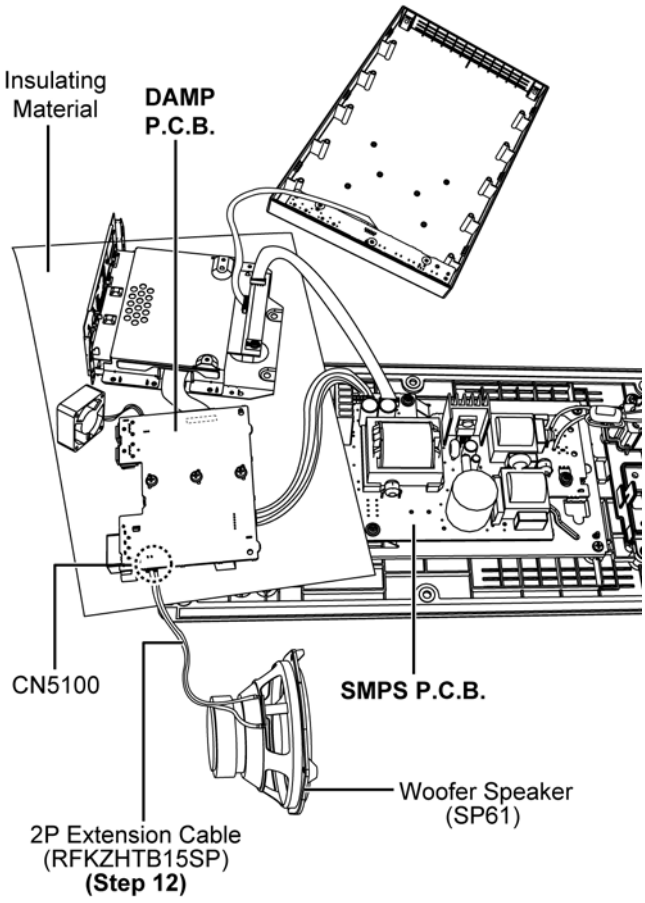
Step 10 : Attach 6P Cable Wire at the connector (CN5900) on the DAMP P.C.B..



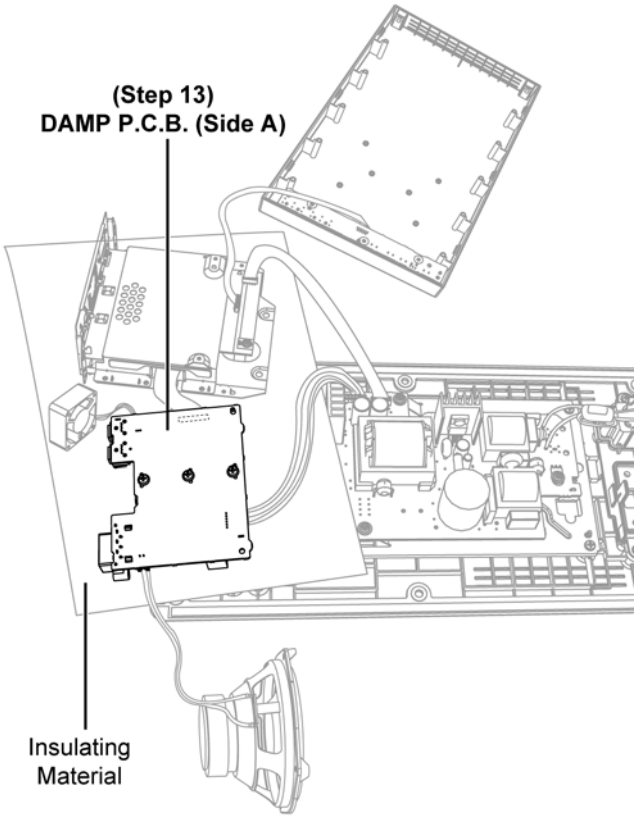
Step 11 : Attach 3P Cable Wire at connector (CN5801) on the DAMP P.C.B..



Step 12 : Attach 2P Extension Cable (RFKZHTB15SP) from Woofer Speaker (SP61) to the connector (CN5100) on the DAMP P.C.B..

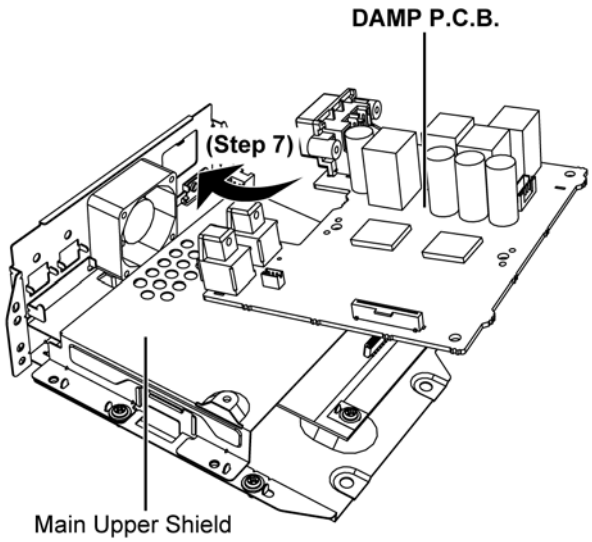


Step 13 : DAMP P.C.B. (Side A) can be checked and repaired as diagram shown.

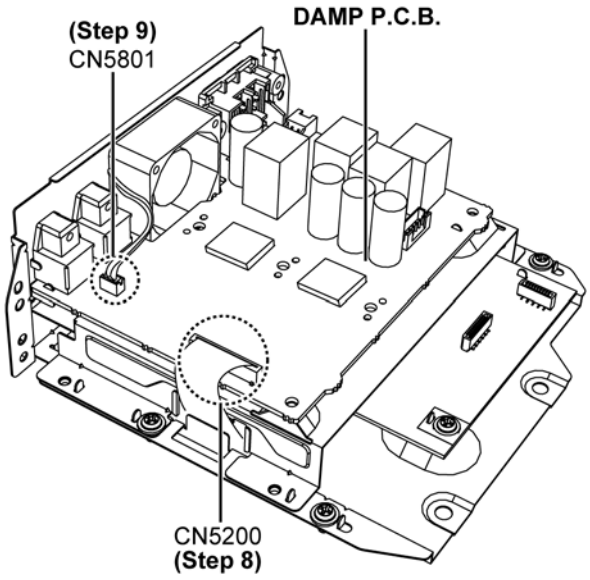


12.1.4. Checking and Repairing of DAMP P.C.B. (Side B)

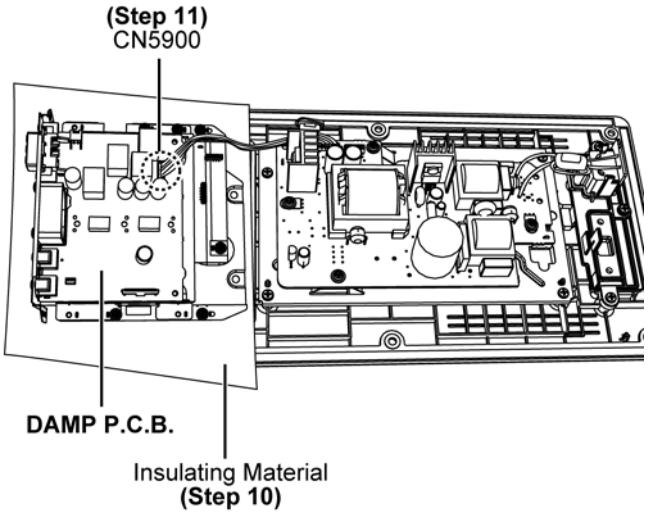
Step 1 : Remove Top Panel Unit.
Step 2 : Remove Rear Panel Unit.
Step 3 : Remove Main P.C.B. Unit.
Step 4 : Remove DAMP P.C.B..
Step 5 : Remove DAMP Heatsink & Heatsink Spacer.
Step 6 : Remove Woofer Speaker (SP61).
Step 7 : Replace back DAMP P.C.B. on Main Upper Shield.



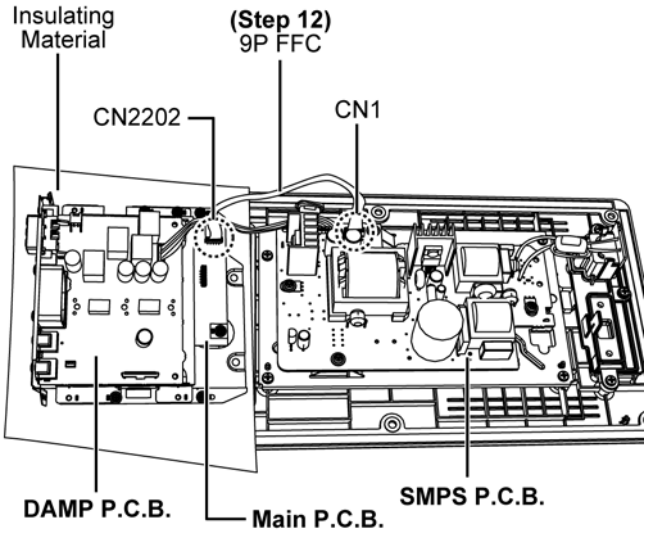
Step 8 : Attach 40P FFC at the connector (CN5200) on the DAMP P.C.B..
Step 9 : Attach 3P Cable Wire at the connector (CN5801) on the DAMP P.C.B..



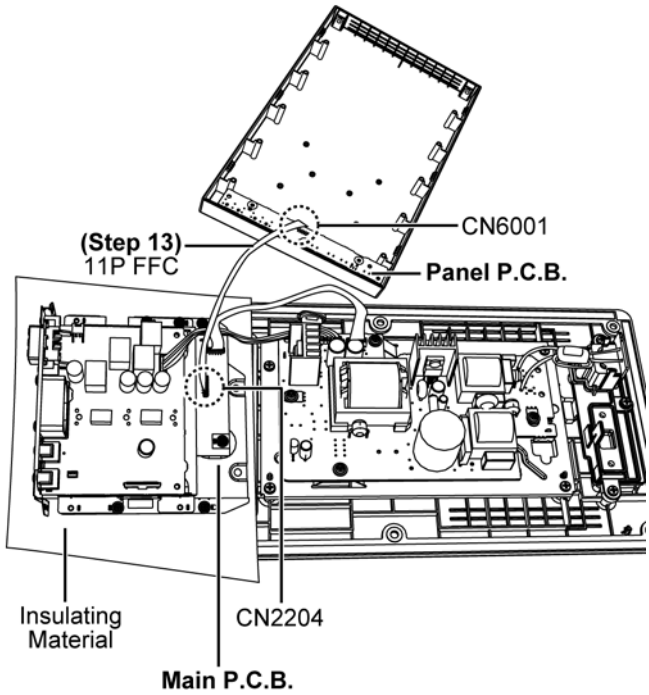
Step 10 : Place the DAMP P.C.B. on the Insulating Material.
Step 11 : Attach 6P Cable Wire at the connector (CN5900) on the DAMP P.C.B..



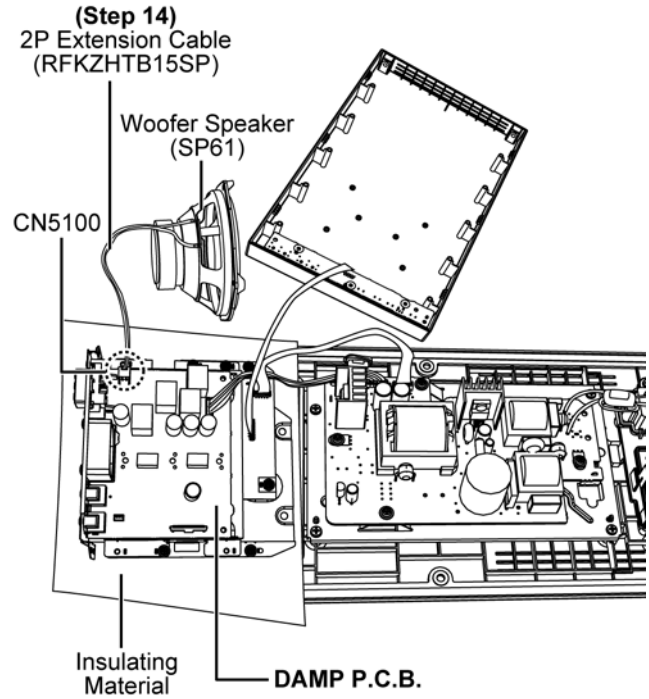
Step 12 : Attach 9P FFC at connector (CN1) on the SMPS P.C.B. and at connector (CN2202) on the Main P.C.B..



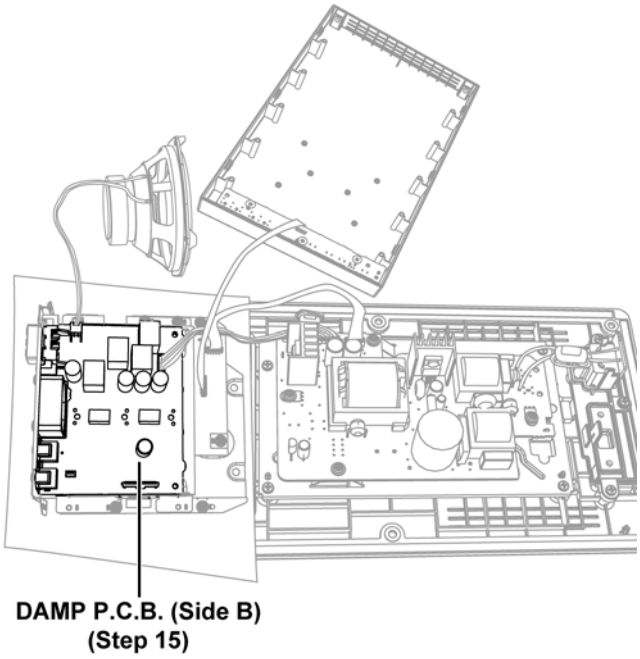
Step 13 : Attach 11P FFC at connector (CN6001) on the Panel P.C.B. and at connector (CN2204) on the Main P.C.B..



Step 14 : Attach 2P Extension Cable (RFKZHTB15SP) from Woofer Speaker (SP61) to the connector (CN5100) on the DAMP P.C.B..

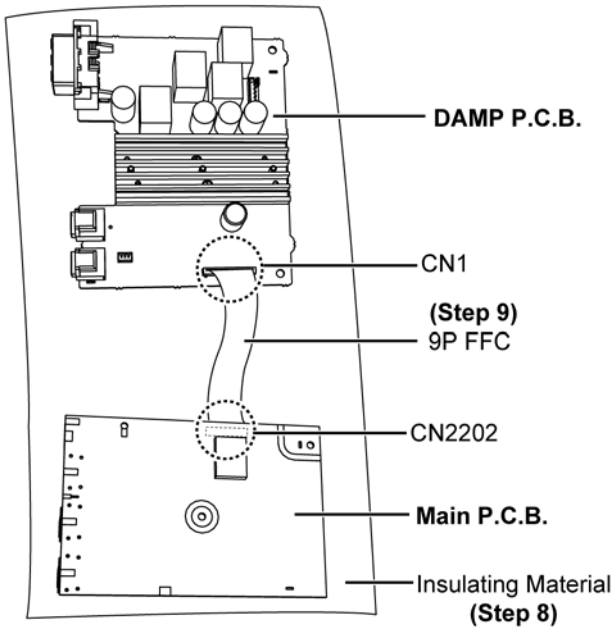


Step 15 : DAMP P.C.B. (Side B) can be checked and repaired as diagram shown.



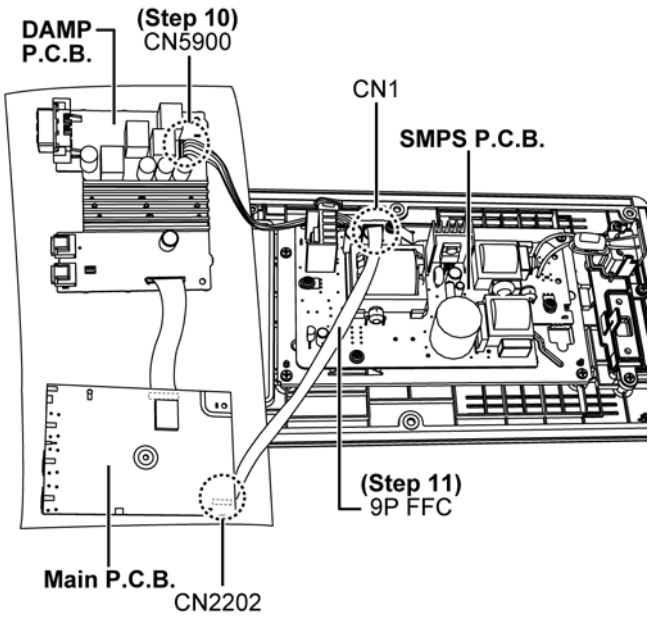
12.1.5. Checking and Repairing of Main P.C.B. (Side A)

Step 1 : Remove Top Panel Unit.
Step 2 : Remove Rear Panel Unit.
Step 3 : Remove Main P.C.B. Unit.
Step 4 : Remove DAMP P.C.B..
Step 5 : Remove Fan Unit.
Step 6 : Remove Main P.C.B..
Step 7 : Remove Woofer Speaker (SP61).
Step 8 : Place the DAMP P.C.B. and Main P.C.B. on the Insulating Material.
Step 9 : Attach 9P FFC at connector (CN1) on the SMPS P.C.B. and at connector (CN2202) on the Main P.C.B..

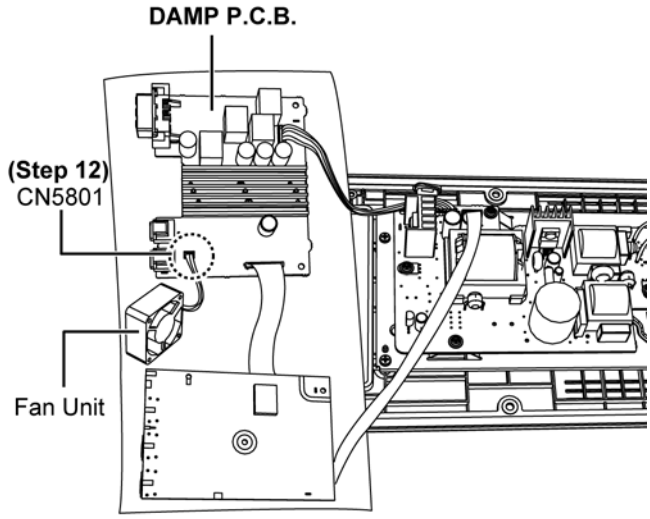


Step 10 : Attach 6P Cable Wire at the connector (CN5900) on the DAMP P.C.B..

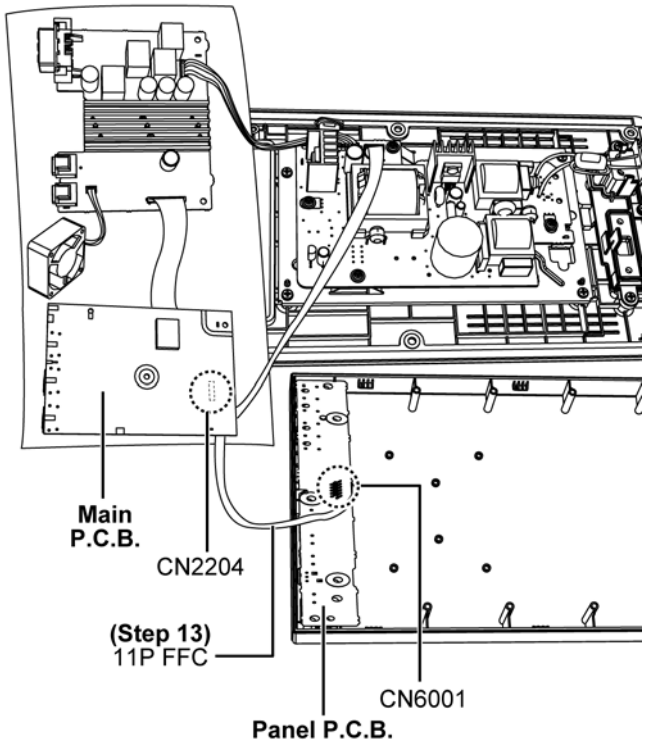
Step 11 : Attach 9P FFC at connector (CN1) on the SMPS P.C.B. and at connector (CN2202) on the Main P.C.B..



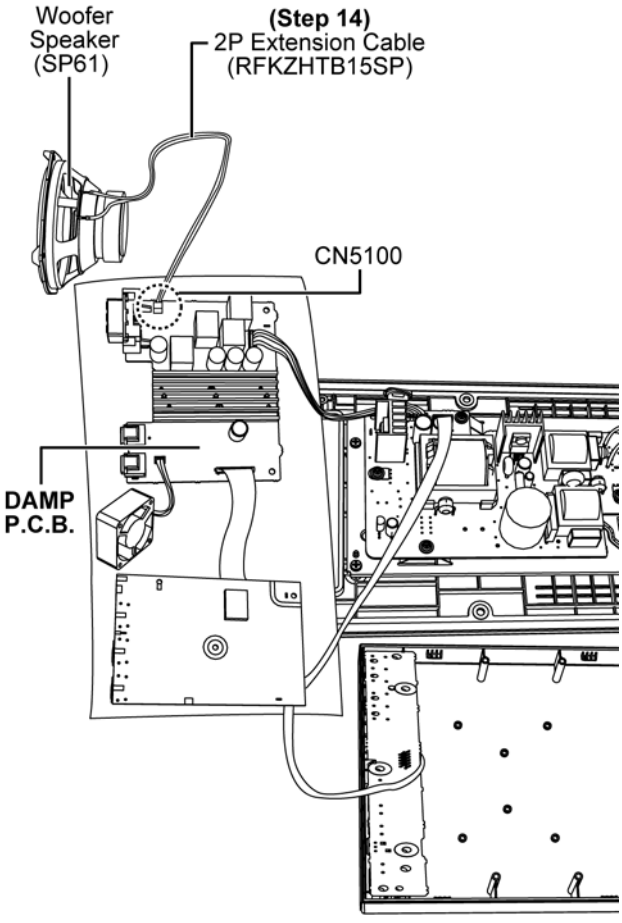
Step 12 : Attach 3P Cable Wire at connector (CN5801) on the DAMP P.C.B..



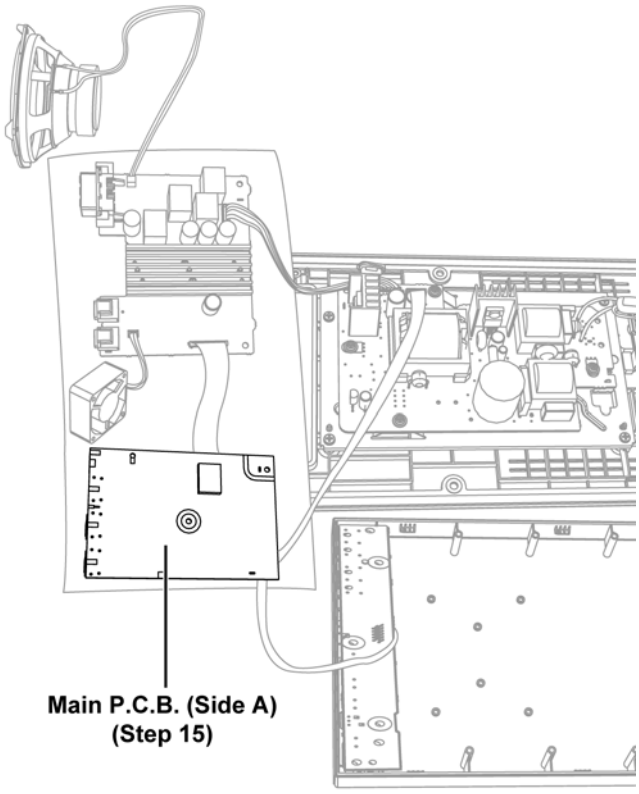
Step 13 : Attach 11P FFC at connector (CN6001) on the Panel P.C.B. and at connector (CN2204) on the Main P.C.B..



Step 14 : Attach 2P Extension Cable (RFKZHTB15SP) from Woofer Speaker (SP61) to the connector (CN5100) on the DAMP P.C.B..

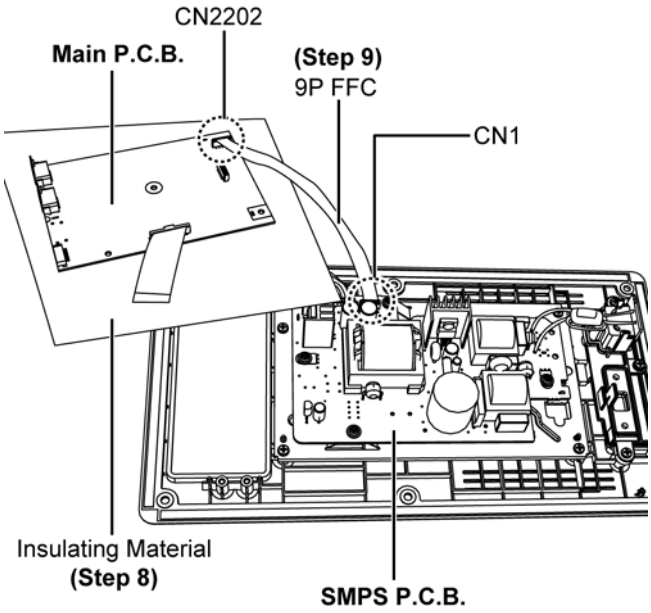


Step 15 : Main P.C.B. (Side A) can be checked and repaired as diagram shown.

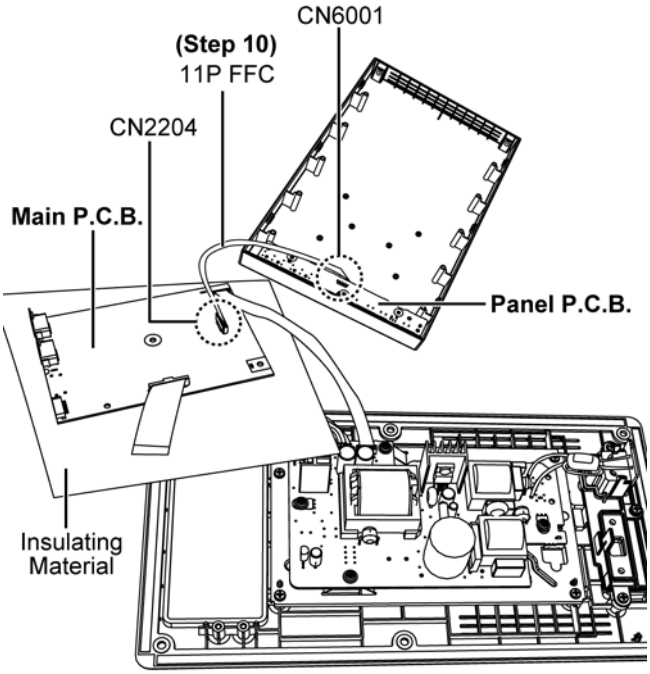


12.1.6. Checking and Repairing of Main P.C.B. (Side B)

Step 1 : Remove Top Panel Unit.
Step 2 : Remove Rear Panel Unit.
Step 3 : Remove Main P.C.B. Unit.
Step 4 : Remove DAMP P.C.B..
Step 5 : Remove Fan Unit.
Step 6 : Remove Main P.C.B..
Step 7 : Remove Woofer Speaker (SP61).
Step 8 : Place the Main P.C.B. on the Insulating Material.
Step 9 : Attach 9P FFC at connector (CN1) on the SMPS P.C.B. and at connector (CN2202) on the Main P.C.B..

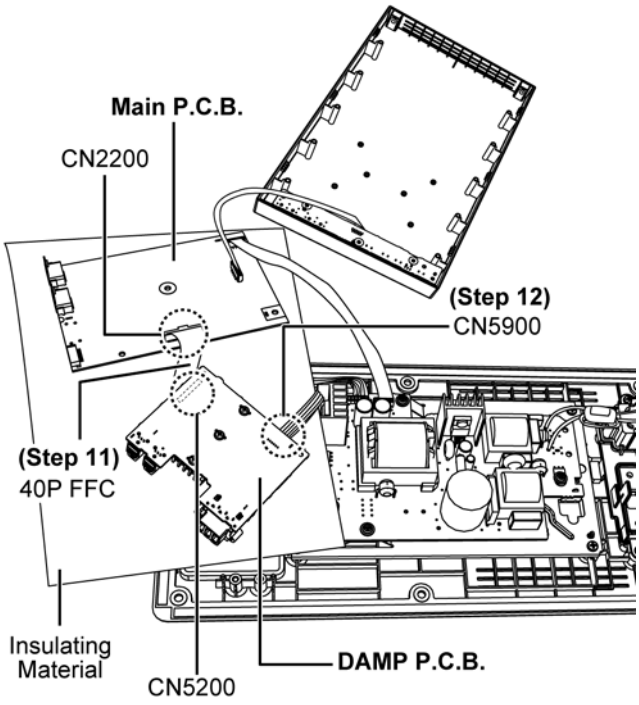


Step 10 : Attach 11P FFC at connector (CN6001) on the Panel P.C.B. and at connector (CN2204) on the Main P.C.B..

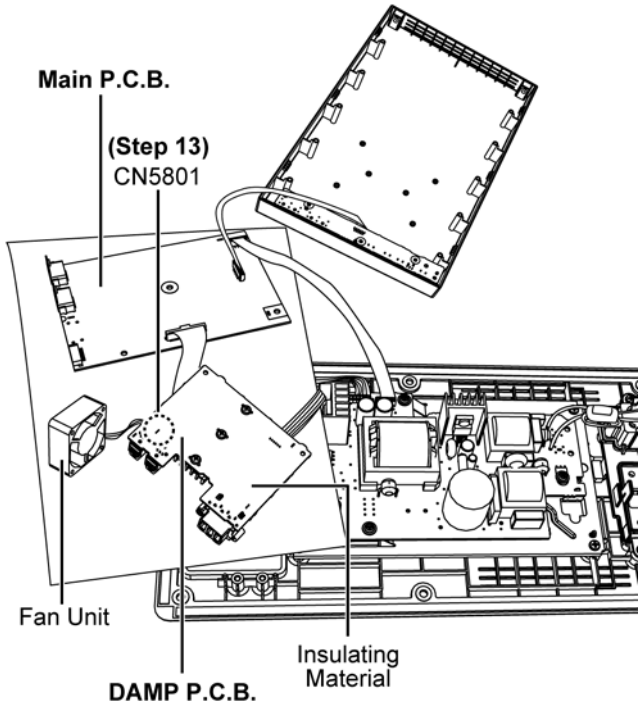


Step 11 : Attach 40P FFC at connector (CN5200) on the DAMP P.C.B. and at connector (CN2200) on the Main P.C.B..

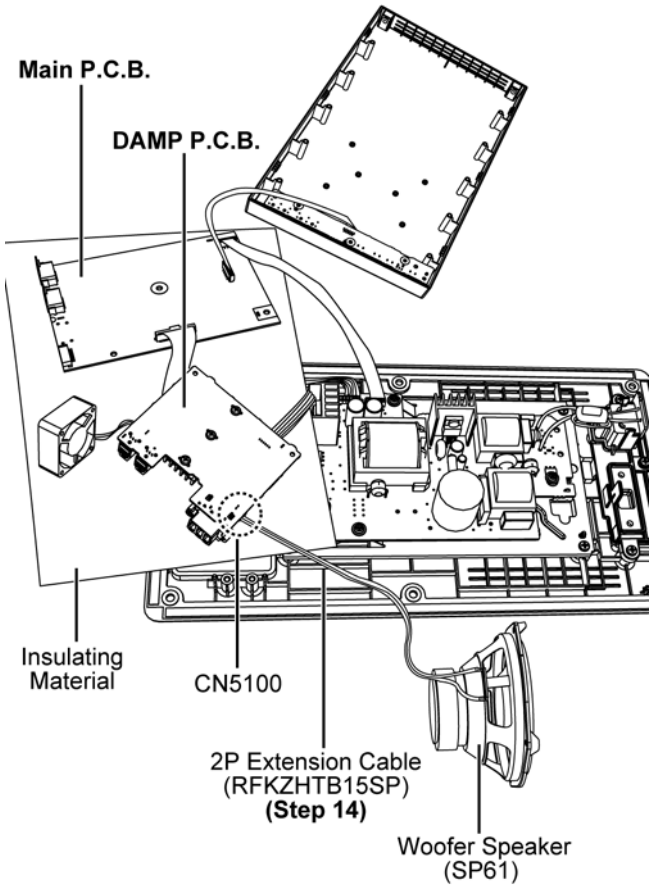
Step 12 : Attach 6P Cable Wire at the connector (CN5900) on the DAMP P.C.B..



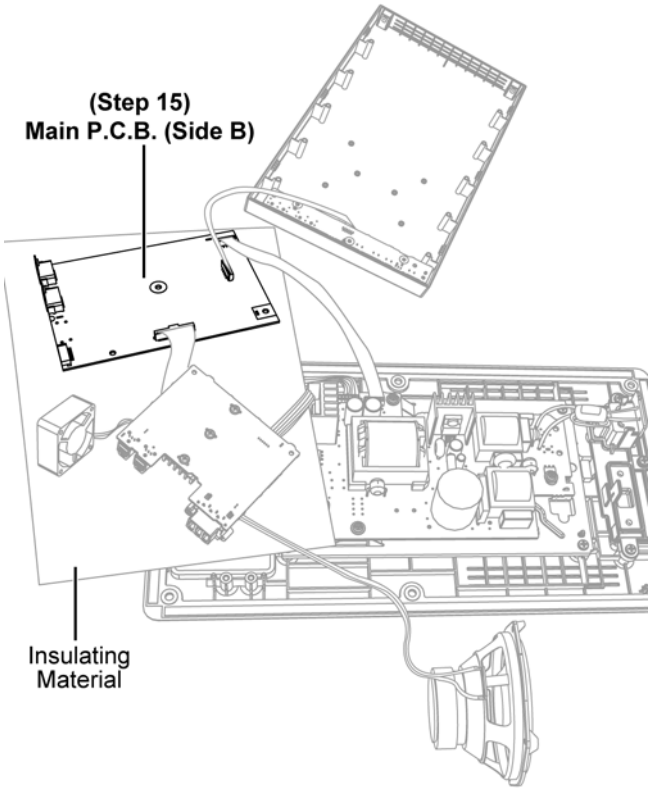
Step 13 : Attach 3P Cable Wire at connector (CN5801) on the DAMP P.C.B..



Step 14 : Attach 2P Extension Cable (RFKZHTB15SP) from Woofer Speaker (SP61) to the connector (CN5100) on the DAMP P.C.B..

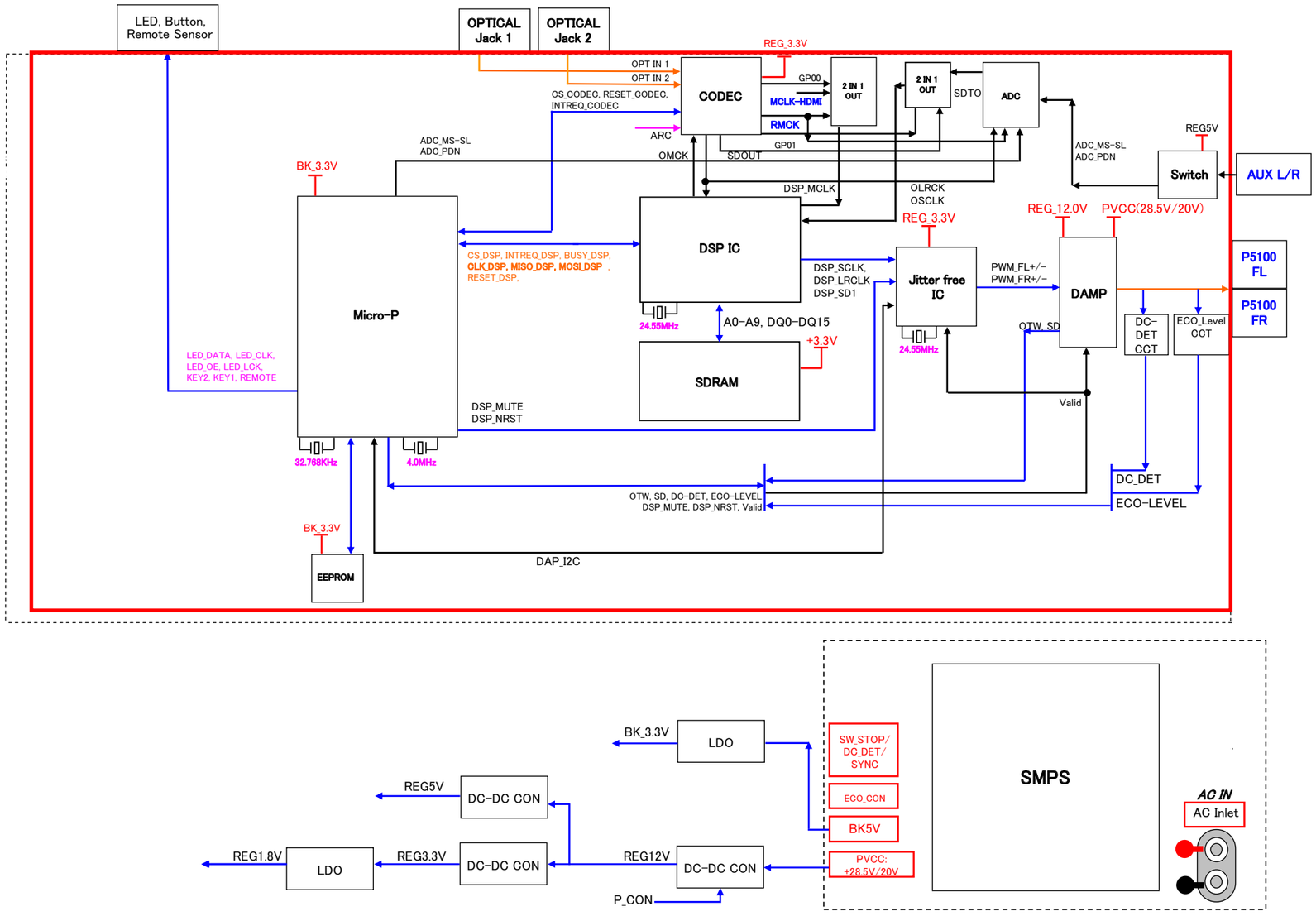


Step 15 : Main P.C.B. (Side B) can be checked and repaired as diagram shown.

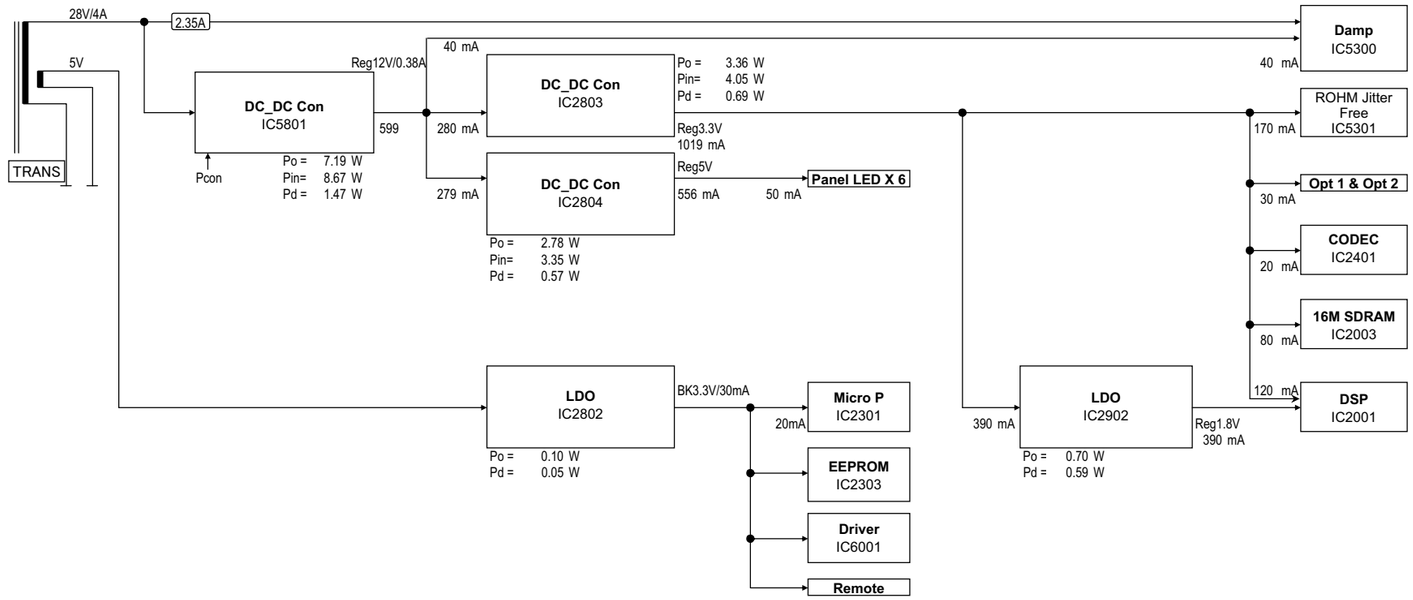


13 Overall Simplified Block

13.1. Overall Control Diagram

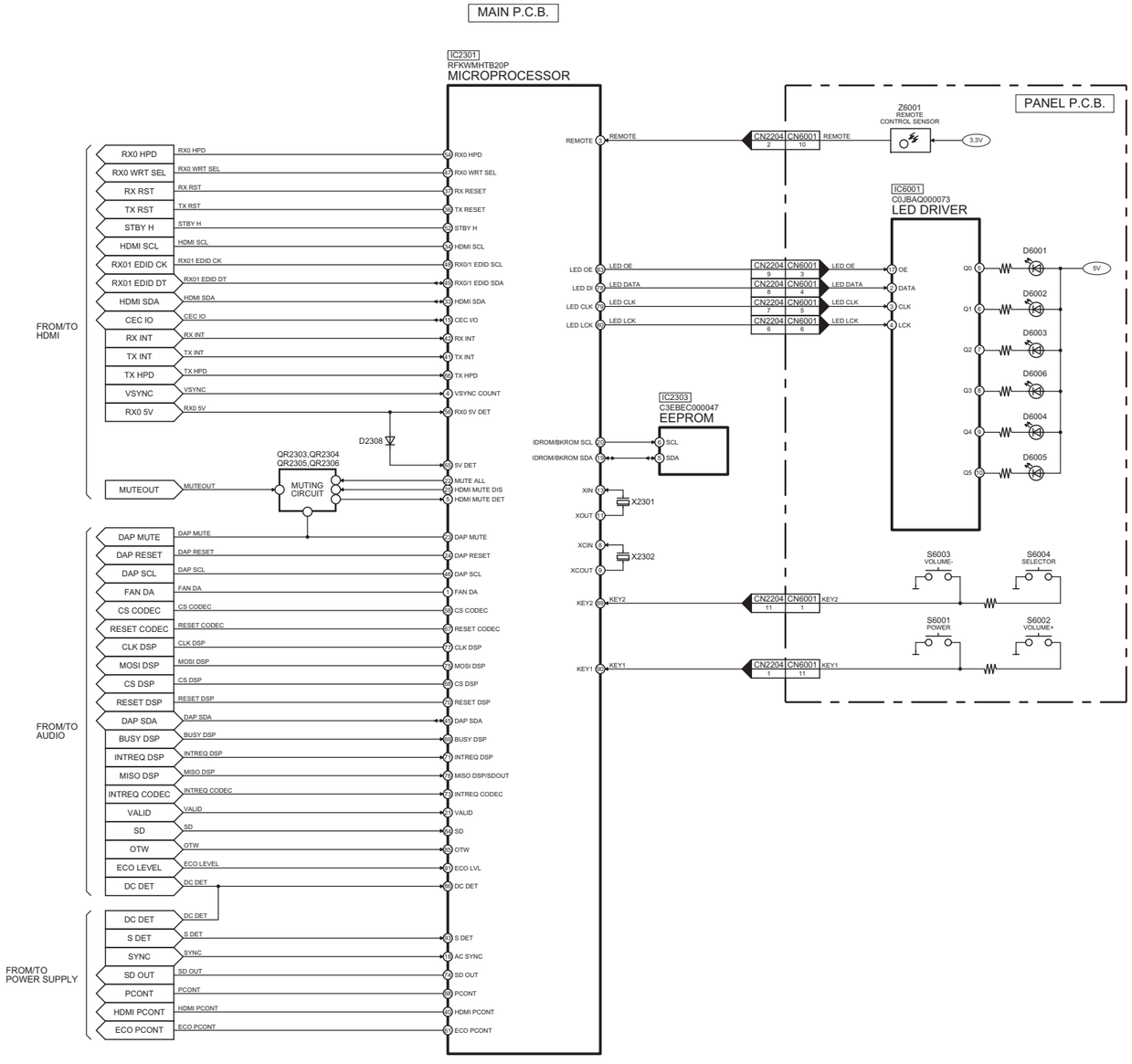


13.2. Power Supply Diagram



14 Block Diagram

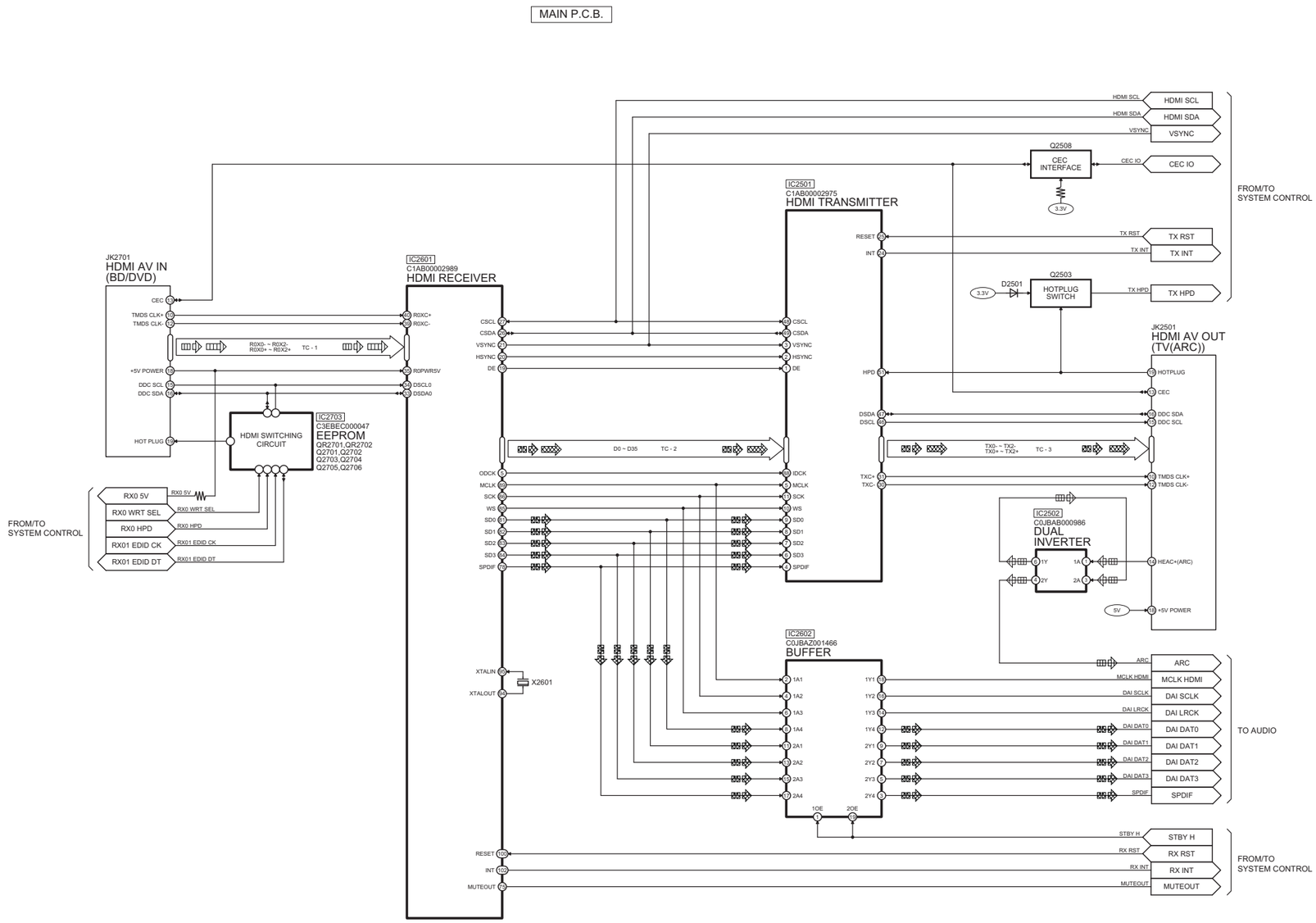
14.1. SYSTEM CONTROL BLOCK DIAGRAM



SC-HTB20P/PC(SU-HTB20P/PC) SYSTEM CONTROL BLOCK DIAGRAM

14.2. HDMI BLOCK DIAGRAM

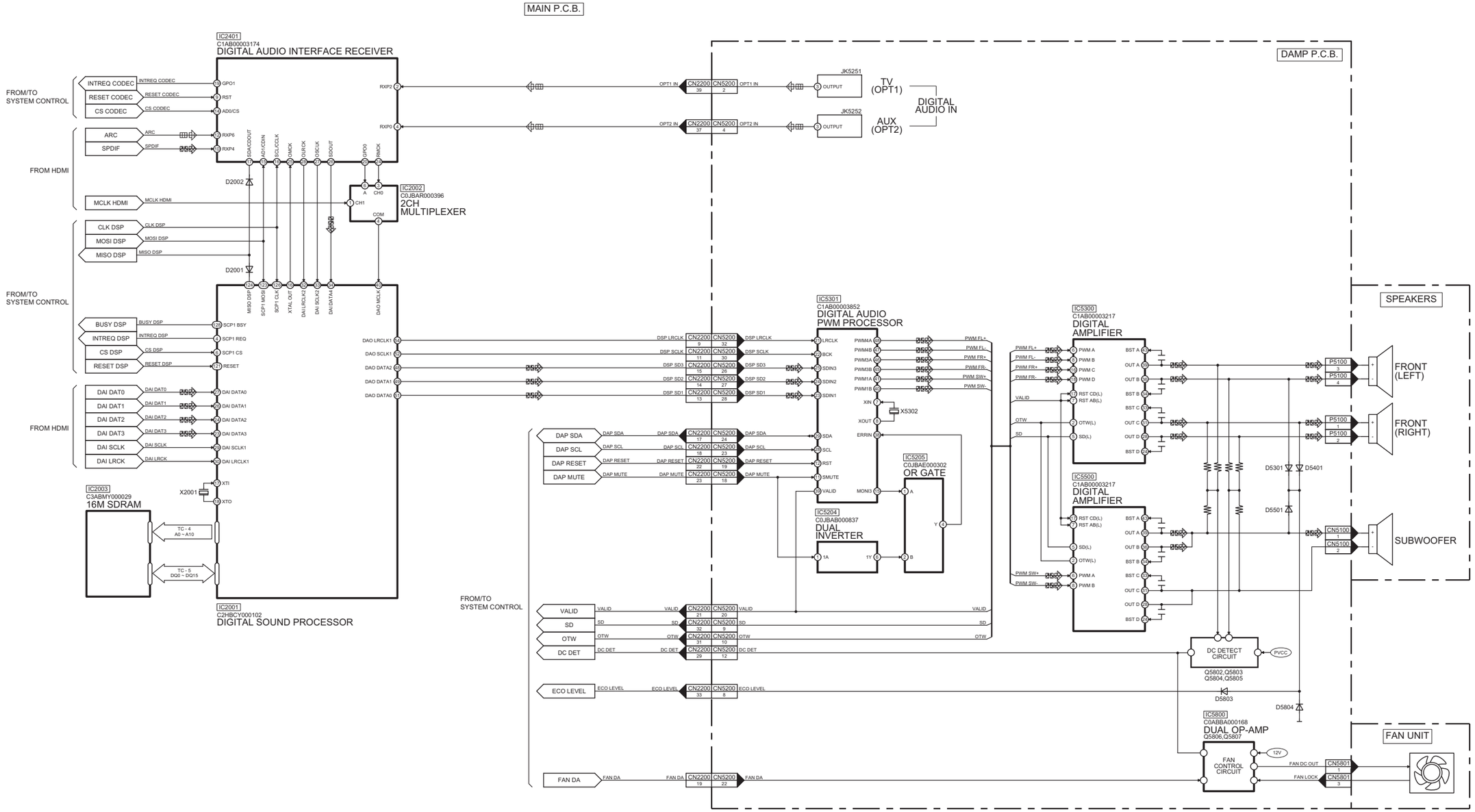
: HDMI AUDIO INPUT SIGNAL LINE : HDMI VIDEO INPUT SIGNAL LINE : AUDIO OUTPUT SIGNAL LINE : VIDEO OUTPUT SIGNAL LINE



SC-HTB20P/PC(SU-HTB20P/PC) HDMI BLOCK DIAGRAM

14.3. AUDIO BLOCK DIAGRAM

: HDMI/OPTICAL AUDIO INPUT SIGNAL LINE : AUDIO OUTPUT SIGNAL LINE



SC-HTB20P/PC(SU-HTB20P/PC) AUDIO BLOCK DIAGRAM

14.4. IC TERMINAL CHART

TC	JK2701 HDMI AV IN (BD/DVD)		SIGNAL NAME	IC2601 HDMI RECEIVER	
	PORT NAME	PIN NO		PIN NO	PORT NAME
1	TMDS D0-	9	R0X0-	43	R0X0-
	TMDS D0+	7	R0X0+	44	R0X0+
	TMDS D1-	6	R0X1-	47	R0X1-
	TMDS D1+	4	R0X1+	48	R0X1+
	TMDS D2-	3	R0X2-	51	R0X2-
	TMDS D2+	1	R0X2+	52	R0X2+

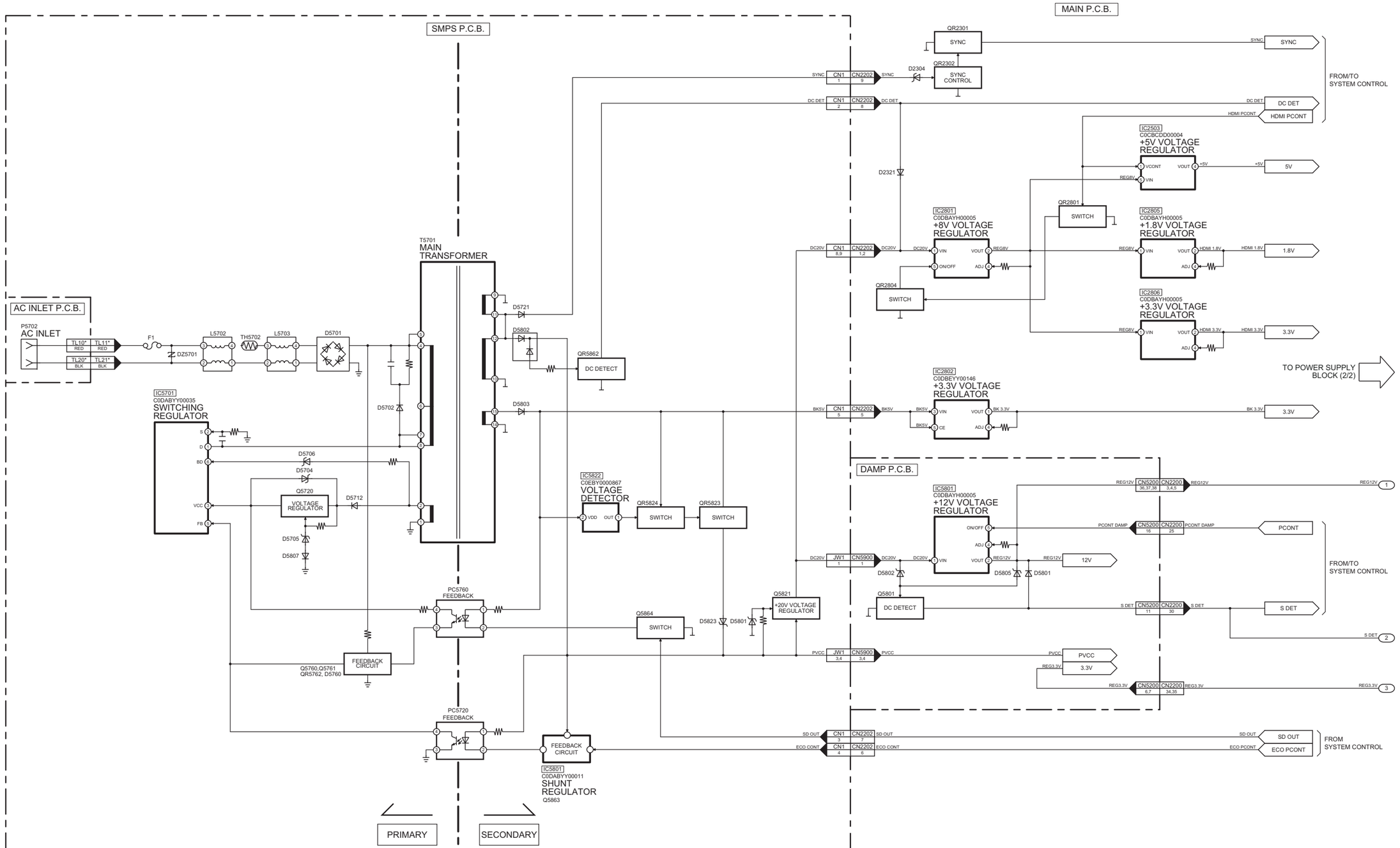
TC	IC2501 HDMI TRANSMITTER		SIGNAL NAME	JK2501 HDMI AV OUT (TV(ARC))	
	PORT NAME	PIN NO		PIN NO	PORT NAME
3	TX0-	33	TX0-	9	TMDS D0-
	TX0+	34	TX0+	7	TMDS D0+
	TX1-	36	TX1-	6	TMDS D1-
	TX1+	37	TX1+	4	TMDS D1+
	TX2-	39	TX2-	3	TMDS D2-
	TX2+	40	TX2+	1	TMDS D2+

TC	IC2601 HDMI RECEIVER		SIGNAL NAME	IC2501 HDMI TRANSMITTER	
	PORT NAME	PIN NO		PIN NO	PORT NAME
2	Q0	16	D0	98	D0
	Q1	15	D1	97	D1
	Q2	14	D2	96	D2
	Q3	13	D3	95	D3
	Q4	10	D4	94	D4
	Q5	9	D5	93	D5
	Q6	8	D6	92	D6
	Q7	7	D7	91	D7
	Q8	3	D8	90	D8
	Q9	2	D9	86	D9
	Q10	1	D10	85	D10
	Q11	144	D11	84	D11
	Q12	141	D12	83	D12
	Q13	140	D13	82	D13
	Q14	139	D14	81	D14
	Q15	138	D15	80	D15
	Q16	135	D16	79	D16
	Q17	134	D17	78	D17
	Q18	133	D18	77	D18
	Q19	132	D19	75	D19
	Q20	129	D20	74	D20
	Q21	128	D21	73	D21
	Q22	127	D22	72	D22
	Q23	126	D23	71	D23
	Q24	123	D24	70	D24
	Q25	122	D25	69	D25
	Q26	121	D26	68	D26
	Q27	120	D27	67	D27
	Q28	117	D28	63	D28
	Q29	116	D29	62	D29
	Q30	115	D30	61	D30
	Q31	114	D31	60	D31
	Q32	111	D32	59	D32
	Q33	110	D33	58	D33
	Q34	109	D34	57	D34
	Q35	108	D35	56	D35

TC	IC2001 DSP		SIGNAL NAME	IC2003 16M SDRAM	
	PORT NAME	PIN NO		PIN NO	PORT NAME
4	EXT A0	102	A0	21	A0
	EXT A1	101	A1	22	A1
	EXT A2	99	A2	23	A2
	EXT A3	97	A3	24	A3
	EXT A4	96	A4	27	A4
	EXT A5	93	A5	28	A5
	EXT A6	91	A6	29	A6
	EXT A7	90	A7	30	A7
	EXT A8	88	A8	31	A8
	EXT A9	87	A9	32	A9
	EXT A10	103	A10	20	A10

TC	IC2001 DSP		SIGNAL NAME	IC2003 16M SDRAM	
	PORT NAME	PIN NO		PIN NO	PORT NAME
5	EXT D0	68	DQ0	2	DQ0
	EXT D1	65	DQ1	3	DQ1
	EXT D2	64	DQ2	5	DQ2
	EXT D3	63	DQ3	6	DQ3
	EXT D4	61	DQ4	8	DQ4
	EXT D5	60	DQ5	9	DQ5
	EXT D6	59	DQ6	11	DQ6
	EXT D7	58	DQ7	12	DQ7
	EXT D8	78	DQ8	39	DQ8
	EXT D9	77	DQ9	40	DQ9
	EXT D10	75	DQ10	42	DQ10
	EXT D11	74	DQ11	43	DQ11
	EXT D12	72	DQ12	45	DQ12
	EXT D13	71	DQ13	46	DQ13
	EXT D14	70	DQ14	48	DQ14
	EXT D15	69	DQ15	49	DQ15

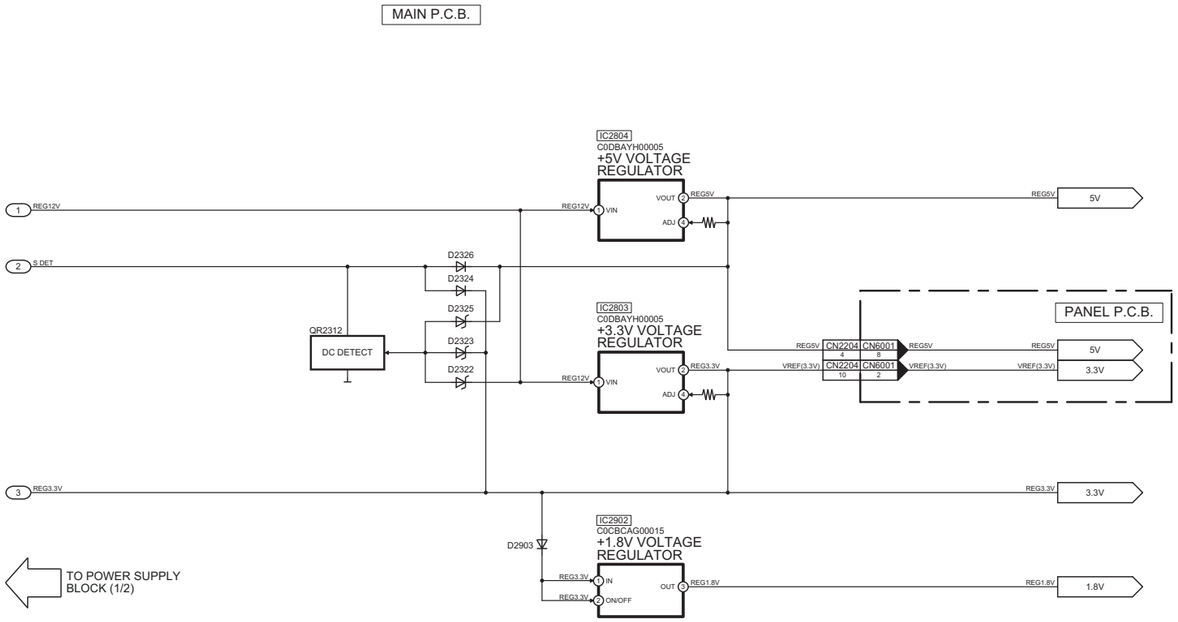
14.5. POWER SUPPLY (1/2) BLOCK DIAGRAM



NOTE: " * " REF IS FOR INDICATION ONLY

SC-HTB20P/PC(SU-HTB20P/PC) POWER SUPPLY (1/2) BLOCK DIAGRAM

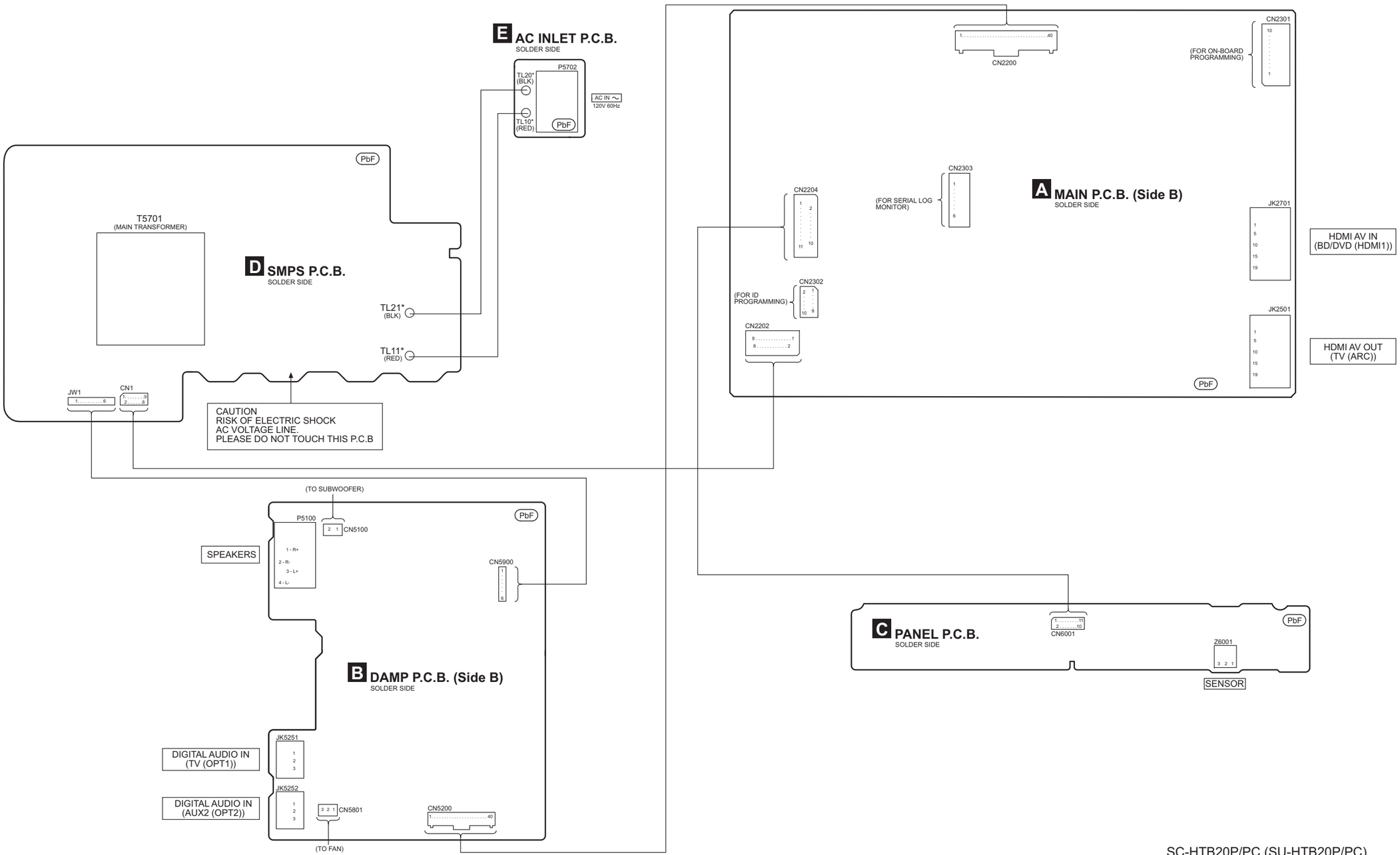
14.6. POWER SUPPLY (2/2) BLOCK DIAGRAM



SC-HTB20P/PC(SU-HTB20P/PC) POWER SUPPLY (2/2) BLOCK DIAGRAM

15 Wiring Connection Diagram

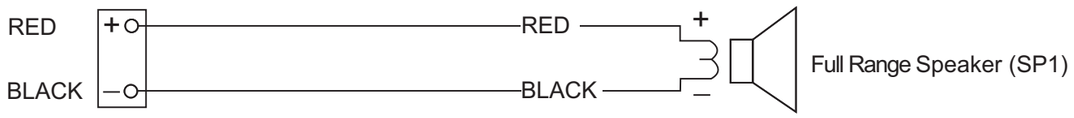
15.1. Active Subwoofer (SU-HTB20)



NOTE: " * " REF IS FOR INDICATION ONLY.

SC-HTB20P/PC (SU-HTB20P/PC)
WIRING CONNECTION DIAGRAM

15.2. Front Speakers (SB-HTB20)



SC-HTB20P/PC (SB-HTB20P/PC)
WIRING CONNECTION DIAGRAM

16 Schematic Diagram

16.1. Schematic Diagram Notes

(All schematic diagrams may be modified at any time with the development of new technology)

Notes:

Active Subwoofer (SU-HTB20)

S6001:	POWER switch.
S6002:	SELECTOR switch.
S6003:	VOLUME UP switch.
S6004:	VOLUME DOWN switch.

- Important safety notice:

  Components identified by ⚠ mark have special characteristics important for safety.
  Furthermore, special parts which have purposes of fire-retardant (resistors), high quality sound (capacitors), low-noise (resistors), etc are used.
  When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

- In case of AC rated voltage Capacitors, the part no. and values will be indicated in the Schematic Diagram.
  AC rated voltage capacitors:
  C5700, C5701, C5702, C5703, C5705

- **Resistor**
  Unit of resistance is OHM [Ω] (K=1,000, M=1,000,000).

- **Capacitor**
  Unit of capacitance is μF, unless otherwise noted. F=Farads, pF=pico-Farad.

- **Coil**
  Unit of inductance is H, unless otherwise noted.

- *****

  REF IS FOR INDICATION ONLY.

- Voltage and signal line

  : +B Signal Line

  : -B Signal Line

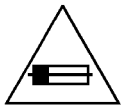
  : HDMI/Optical Audio Input Signal Line

  : HDMI Video Input Signal Line

  : Audio Output Signal Line

  : Video Output Signal Line

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE F1 T3.15A, 250V FUSE



RISK OF FIRE-REPLACE FUSE AS MARKED.

FUSE CAUTION

These symbols located near the fuse indicates that the fuse used is a fast operating type. For continued protection against fire harzard, replace with the same type fuse. For fuse rating, refer to the marking adjacent to the symbol.

Ce symbole indique que le fusible utilisé est à rapide. Pour une protection permanente, n' utiliser que des fusibles de même type. Ce dernier est indiqué là qù le présent symbole est apposé.

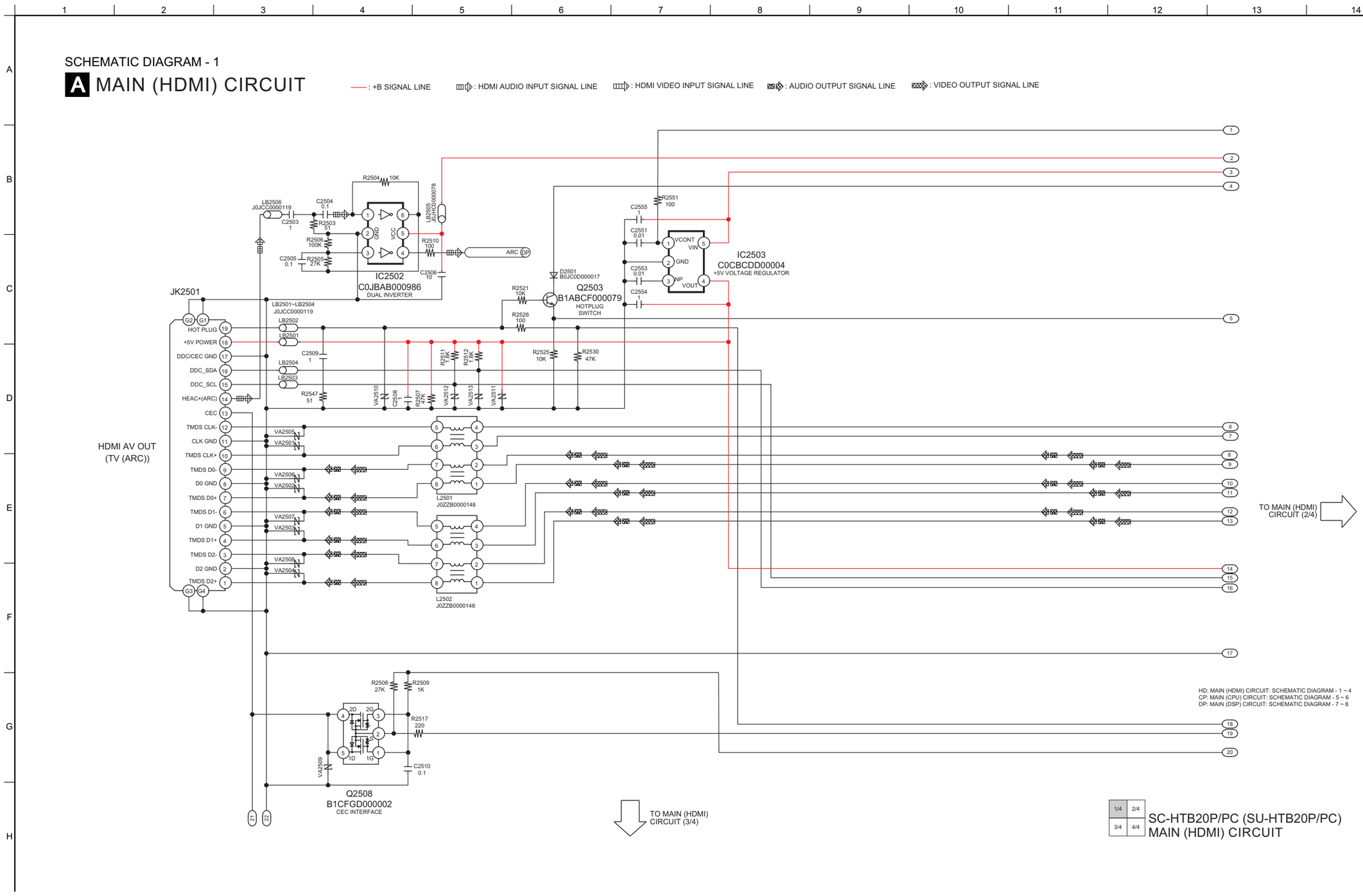
16.2. Active Subwoofer (SU-HTB20)

16.2.1. MAIN (HDMI) CIRCUIT (1/4)

SCHEMATIC DIAGRAM - 1

A MAIN (HDMI) CIRCUIT

—— : +B SIGNAL LINE : HDMI AUDIO INPUT SIGNAL LINE : HDMI VIDEO INPUT SIGNAL LINE : AUDIO OUTPUT SIGNAL LINE : VIDEO OUTPUT SIGNAL LINE



1/4	2/4
3/4	4/4

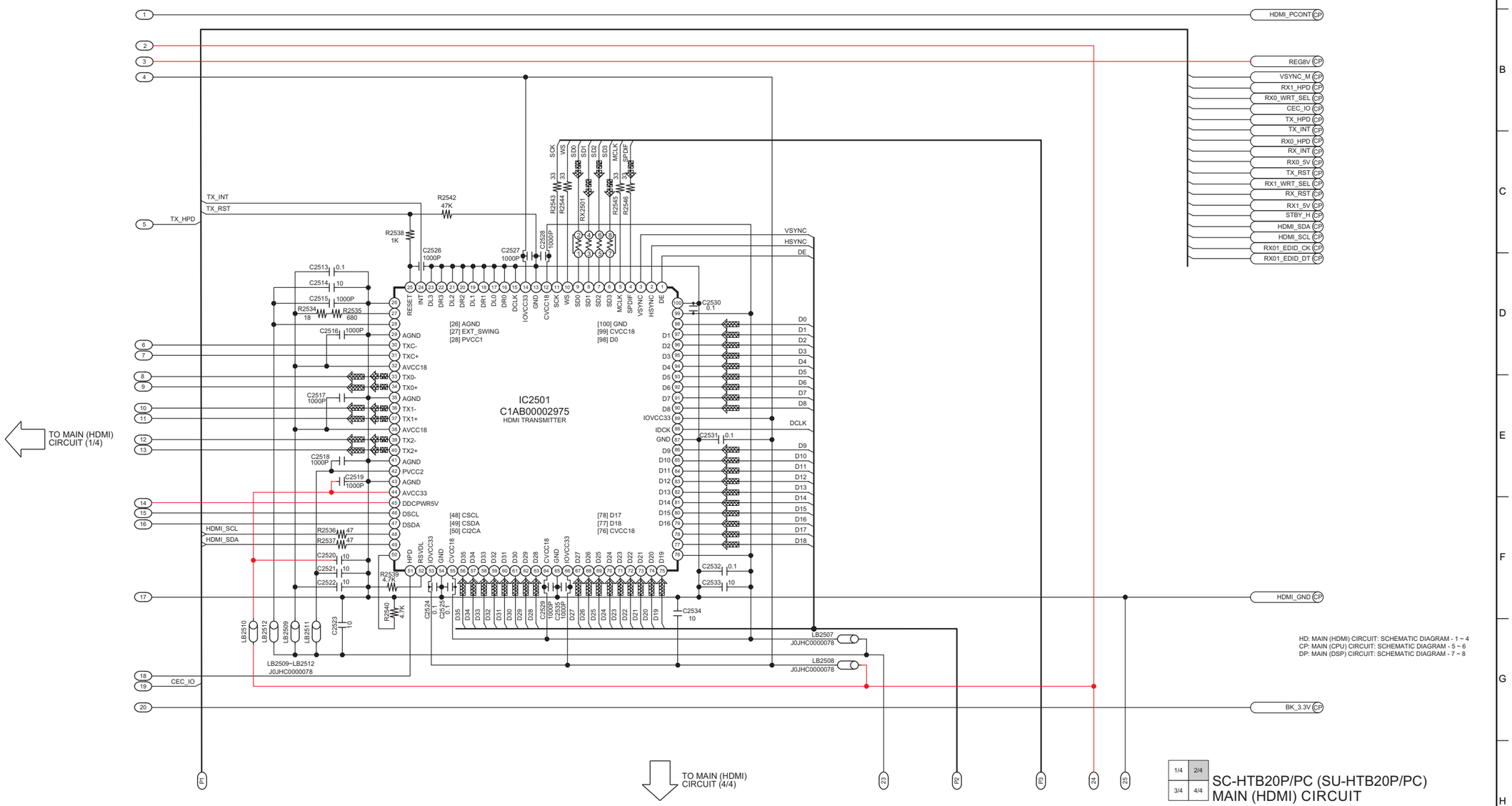
SC-HTB20P/PC (SU-HTB20P/PC)
MAIN (HDMI) CIRCUIT

16.2.2. MAIN (HDMI) CIRCUIT (2/4)

SCHEMATIC DIAGRAM - 2

A MAIN (HDMI) CIRCUIT

—— : +B SIGNAL LINE : HDMI AUDIO INPUT SIGNAL LINE : HDMI VIDEO INPUT SIGNAL LINE : AUDIO OUTPUT SIGNAL LINE : VIDEO OUTPUT SIGNAL LINE



1/4 | 2/4 | 3/4 | 4/4

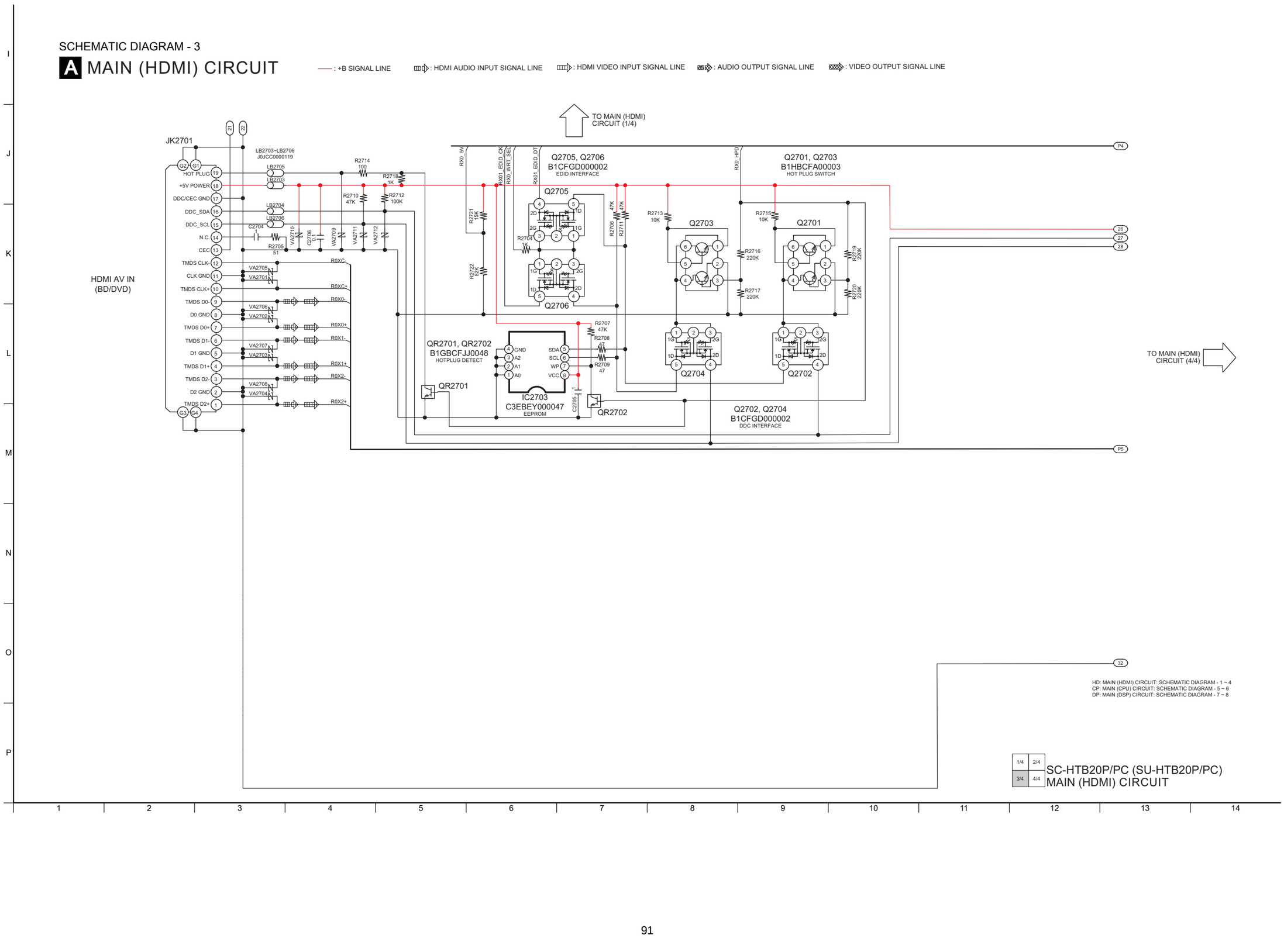
SC-HTB20P/PC (SU-HTB20P/PC)
MAIN (HDMI) CIRCUIT

16.2.3. MAIN (HDMI) CIRCUIT (3/4)

SCHEMATIC DIAGRAM - 3

A MAIN (HDMI) CIRCUIT

—— : +B SIGNAL LINE
: HDMI AUDIO INPUT SIGNAL LINE
: HDMI VIDEO INPUT SIGNAL LINE
: AUDIO OUTPUT SIGNAL LINE
: VIDEO OUTPUT SIGNAL LINE

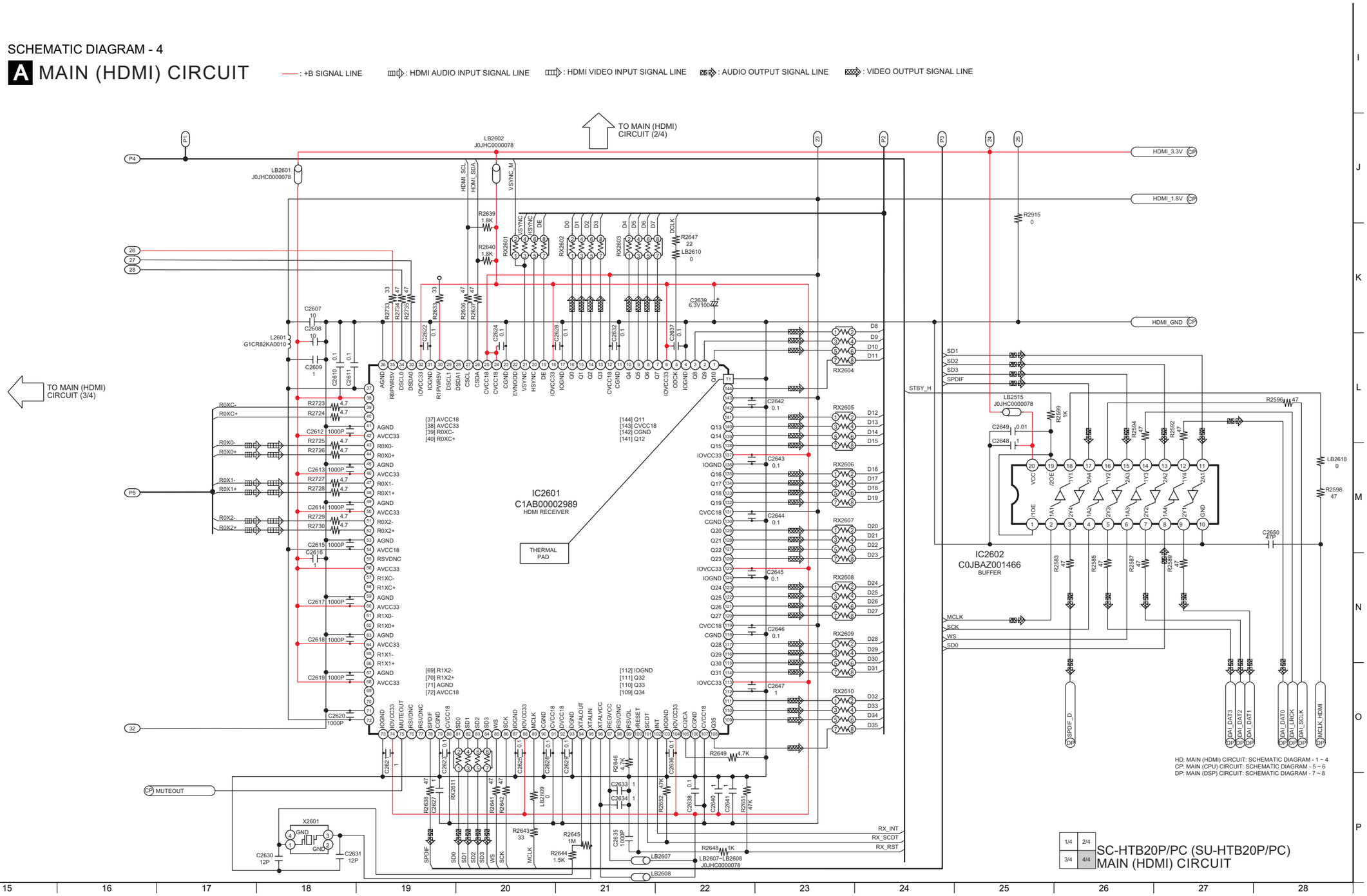


16.2.4. MAIN (HDMI) CIRCUIT (4/4)

SCHEMATIC DIAGRAM - 4

A MAIN (HDMI) CIRCUIT

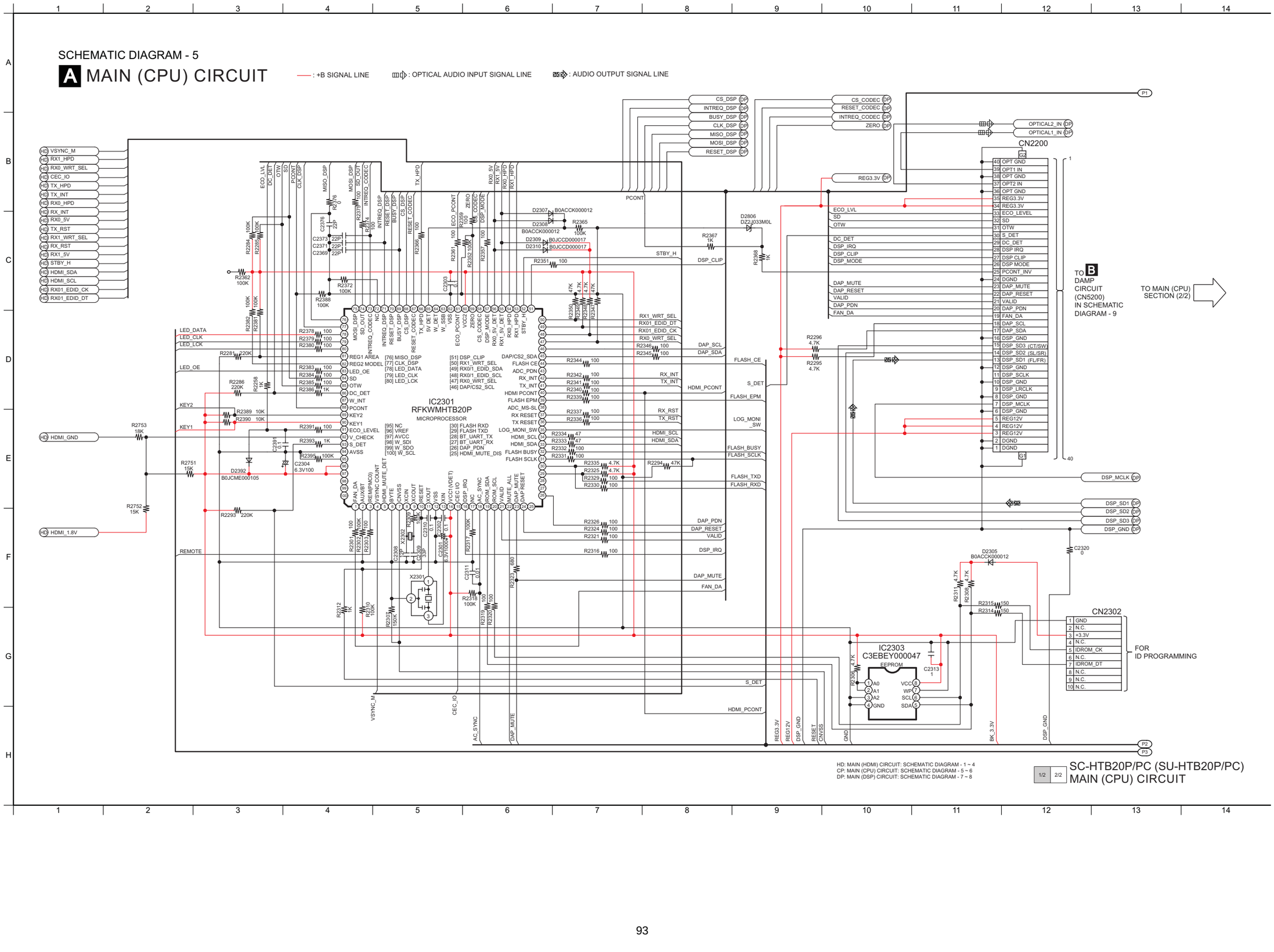
—— : +B SIGNAL LINE : HDMI AUDIO INPUT SIGNAL LINE : HDMI VIDEO INPUT SIGNAL LINE : AUDIO OUTPUT SIGNAL LINE : VIDEO OUTPUT SIGNAL LINE



1/4	2/4
3/4	4/4

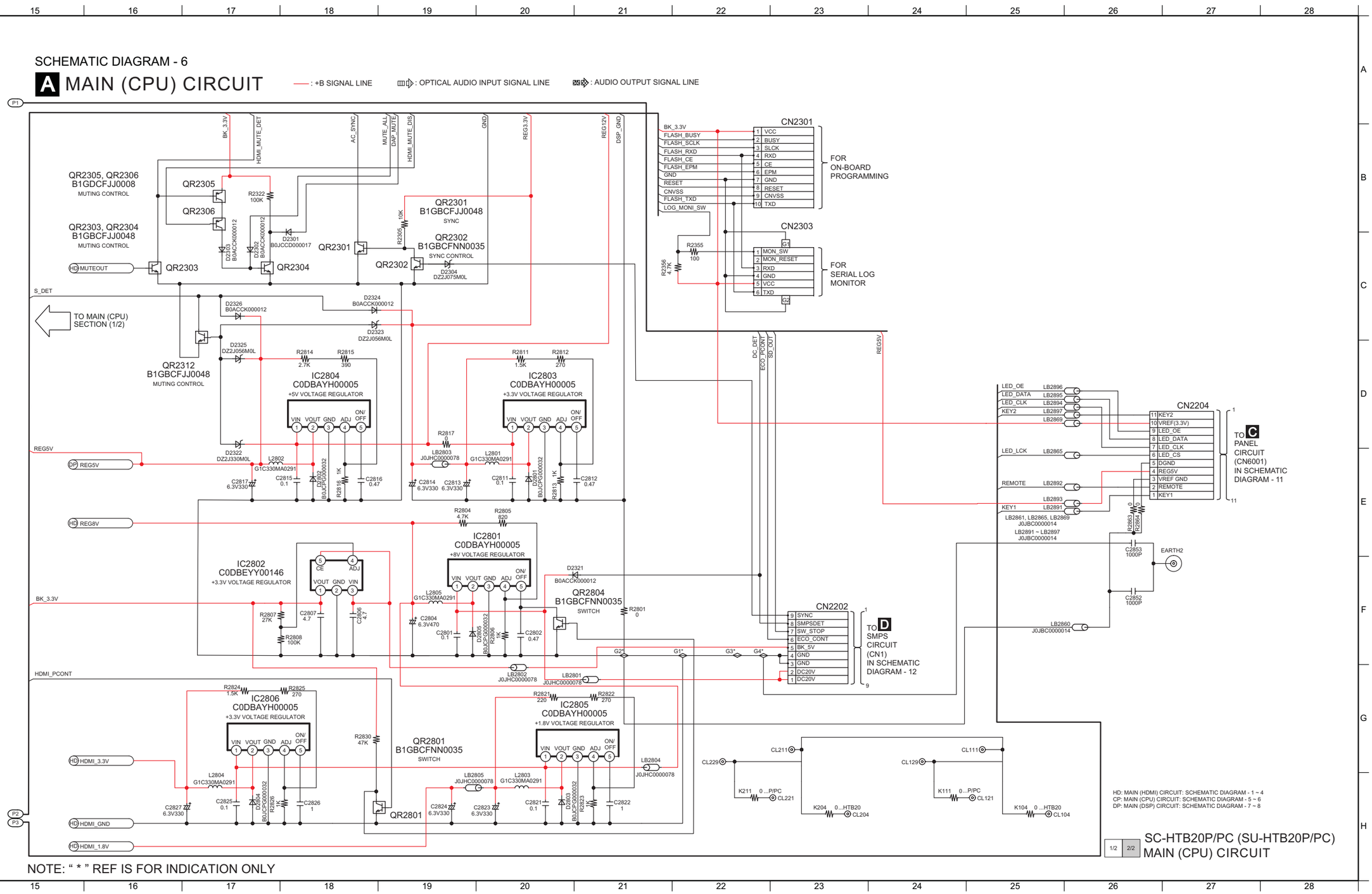
SC-HTB20P/PC (SU-HTB20P/PC)
MAIN (HDMI) CIRCUIT

16.2.5. MAIN (CPU) CIRCUIT (1/2)



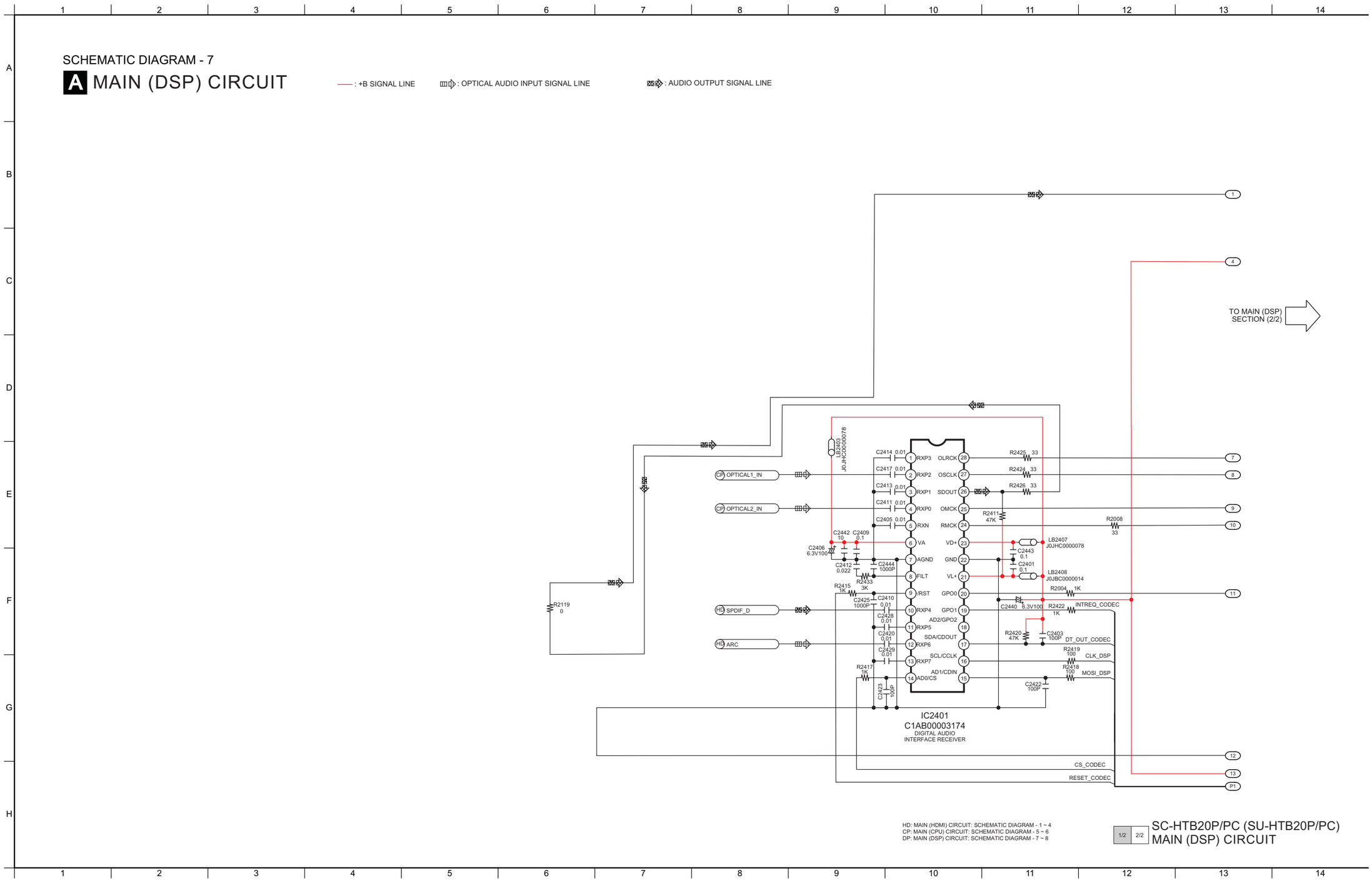
16.2.6. MAIN (CPU) CIRCUIT (2/2)

SCHEMATIC DIAGRAM - 6



NOTE: " * " REF IS FOR INDICATION ONLY

16.2.7. MAIN (DSP) CIRCUIT (1/2)



HD: MAIN (HDMI) CIRCUIT: SCHEMATIC DIAGRAM - 1 ~ 4
CP: MAIN (CPU) CIRCUIT: SCHEMATIC DIAGRAM - 5 ~ 6
DP: MAIN (DSP) CIRCUIT: SCHEMATIC DIAGRAM - 7 ~ 8

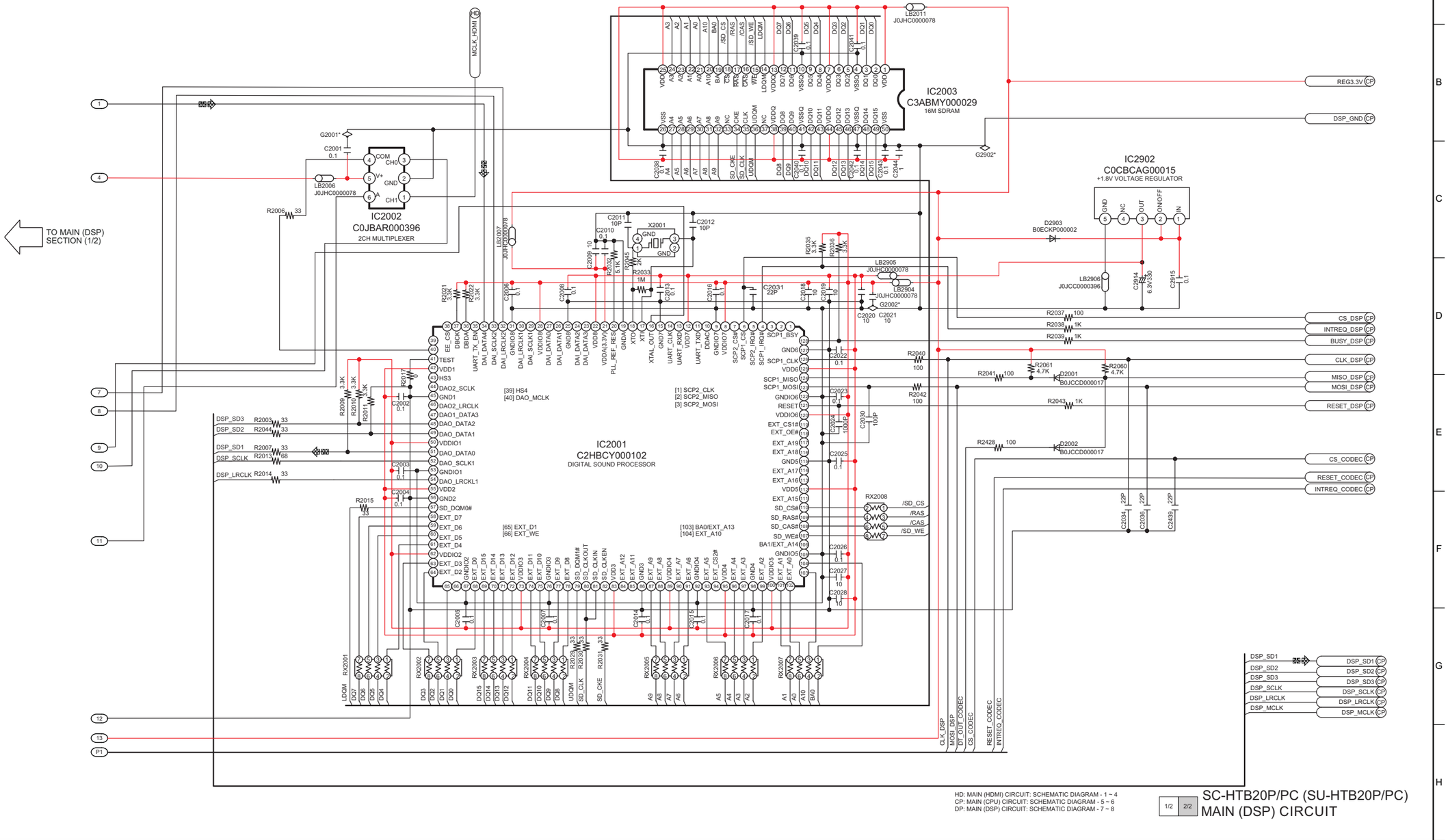
1/2 2/2 SC-HTB20P/PC (SU-HTB20P/PC)
MAIN (DSP) CIRCUIT

16.2.8. MAIN (DSP) CIRCUIT (2/2)

SCHEMATIC DIAGRAM - 8

A MAIN (DSP) CIRCUIT

—— : +B SIGNAL LINE　　: OPTICAL AUDIO INPUT SIGNAL LINE　　: AUDIO OUTPUT SIGNAL LINE



HD: MAIN (HDMI) CIRCUIT: SCHEMATIC DIAGRAM - 1 ~ 4
CP: MAIN (CPU) CIRCUIT: SCHEMATIC DIAGRAM - 5 ~ 6
DP: MAIN (DSP) CIRCUIT: SCHEMATIC DIAGRAM - 7 ~ 8

1/2 | 2/2

SC-HTB20P/PC (SU-HTB20P/PC)
MAIN (DSP) CIRCUIT

16.2.9. DAMP CIRCUIT (1/2)

SCHEMATIC DIAGRAM - 9

B DAMP CIRCUIT

—— : +B SIGNAL LINE : OPTICAL AUDIO INPUT SIGNAL LINE : AUDIO OUTPUT SIGNAL LINE

DIGITAL AUDIO IN (TV (OPT1))

DIGITAL AUDIO IN (AUX (OPT2))

JK5251

JK5252

TO **A** MAIN (CPU) CIRCUIT (CN2200) IN SCHEMATIC DIAGRAM - 5

CN5200

TO DAMP SECTION (2/2)

IC5301
C1AB00003852
DIGITAL AUDIO PWM PROCESSOR

IC5204
C0JBAB000837
DUAL INVERTER

IC5205
C0JBAE000302
OR GATE

Q5801
B1GBCFGG0030
DC DETECT

IC5801
C0DBAYH00005
+12V VOLTAGE REGULATOR

IC5800
C0ABBA000168
OP-AMP

Q5806
B1ABMF000020
DC DETECT

Q5807
B1GBCFNN0038
FAN LOCK

CN5801
1 FAN DC OUT
2 FAN GND
3 FAN LOCK
TO FAN

ZA09*
WIRE CLAMPER

NOTE: " * " REF IS FOR INDICATION ONLY

1/2 2/2 SC-HTB20P/PC (SU-HTB20P/PC)
DAMP CIRCUIT

16.2.10. DAMP CIRCUIT (2/2)

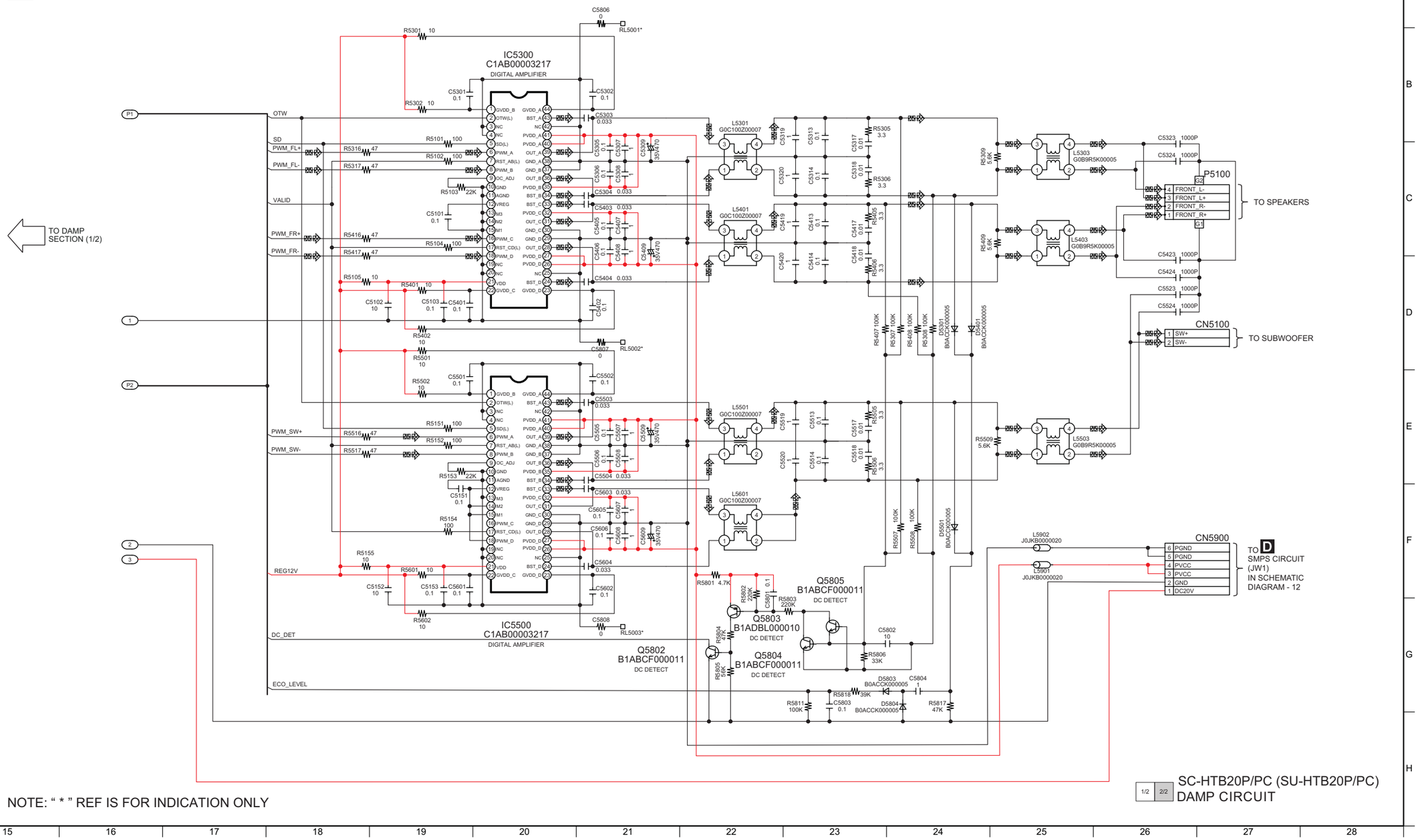
SCHEMATIC DIAGRAM - 10

B DAMP CIRCUIT

—— : +B SIGNAL LINE

: OPTICAL AUDIO INPUT SIGNAL LINE

: AUDIO OUTPUT SIGNAL LINE



NOTE: " * " REF IS FOR INDICATION ONLY

1/2 2/2

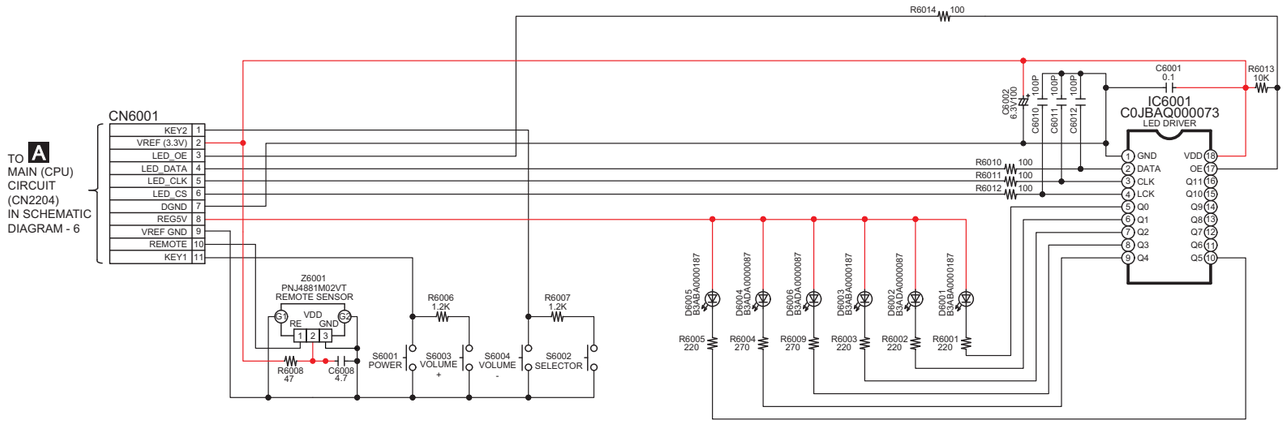
SC-HTB20P/PC (SU-HTB20P/PC)
DAMP CIRCUIT

16.2.11. PANEL & AC INLET CIRCUITCIRCUIT

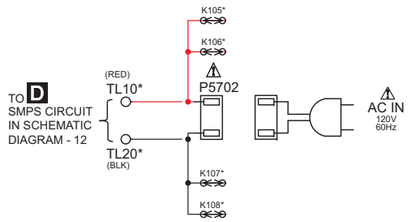
SCHEMATIC DIAGRAM - 11

C PANEL CIRCUIT

: +B SIGNAL LINE



E AC INLET CIRCUIT



SC-HTB20P/PC (SU-HTB20P/PC)
PANEL / AC INLET CIRCUIT

16.2.12. SMPS CIRCUIT

SCHEMATIC DIAGRAM - 12

D SMPS CIRCUIT

—— : +B SIGNAL LINE

TO **B** DAMP CIRCUIT (CN5900) IN SCHEMATIC DIAGRAM - 10

TO **A** MAIN (CPU) CIRCUIT (CN2202) IN SCHEMATIC DIAGRAM - 6

TO **E** AC INLET CIRCUIT IN SCHEMATIC DIAGRAM - 11

NOTE: " * " REF IS FOR INDICATION ONLY

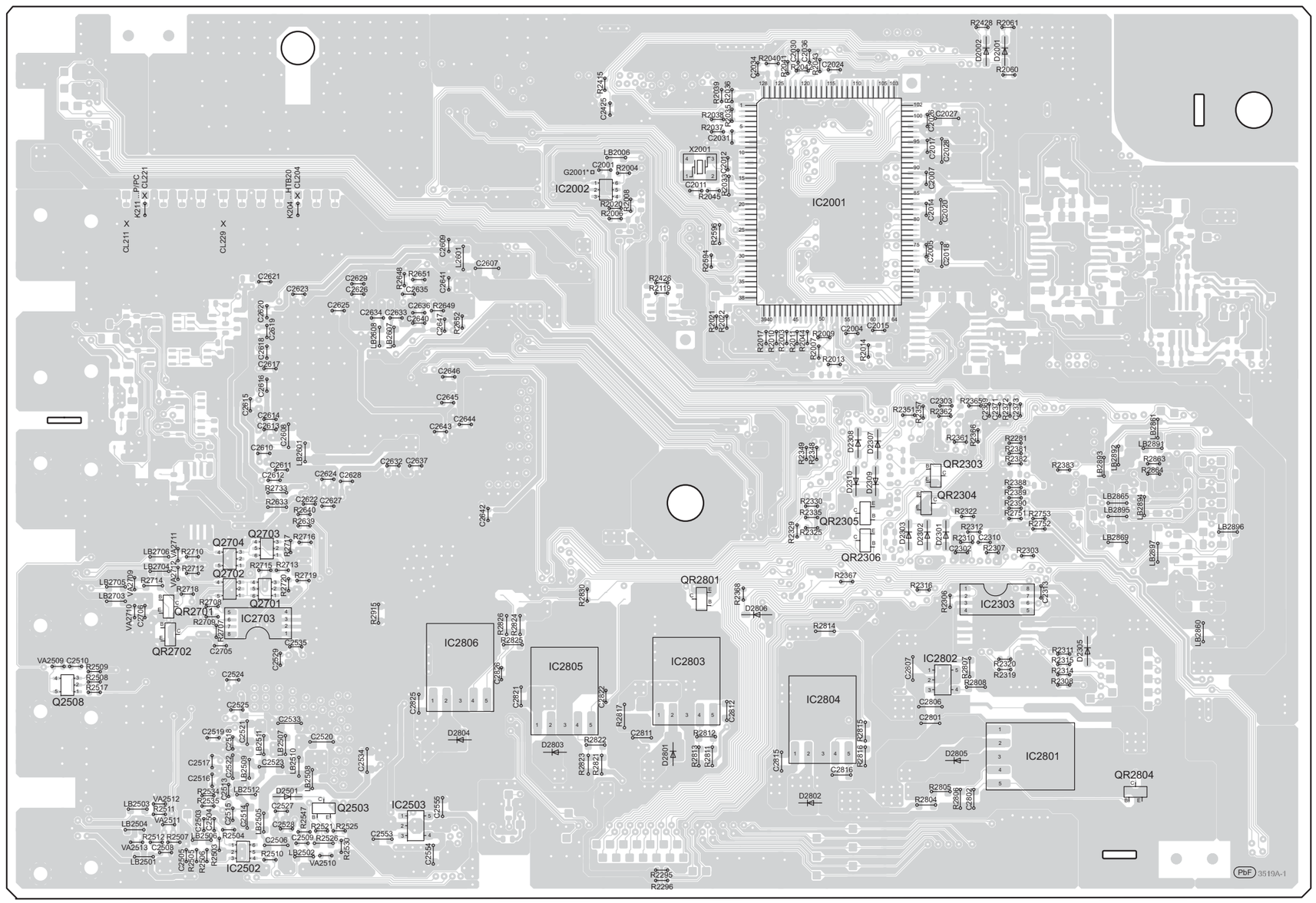
SC-HTB20P/PC (SU-HTB20P/PC)
SMPS CIRCUIT

17 Printed Circuit Board

17.1. Active Subwoofer (SU-HTB20)

17.1.1. MAIN P.C.B. (Side A)

A MAIN P.C.B. (REP4735J)



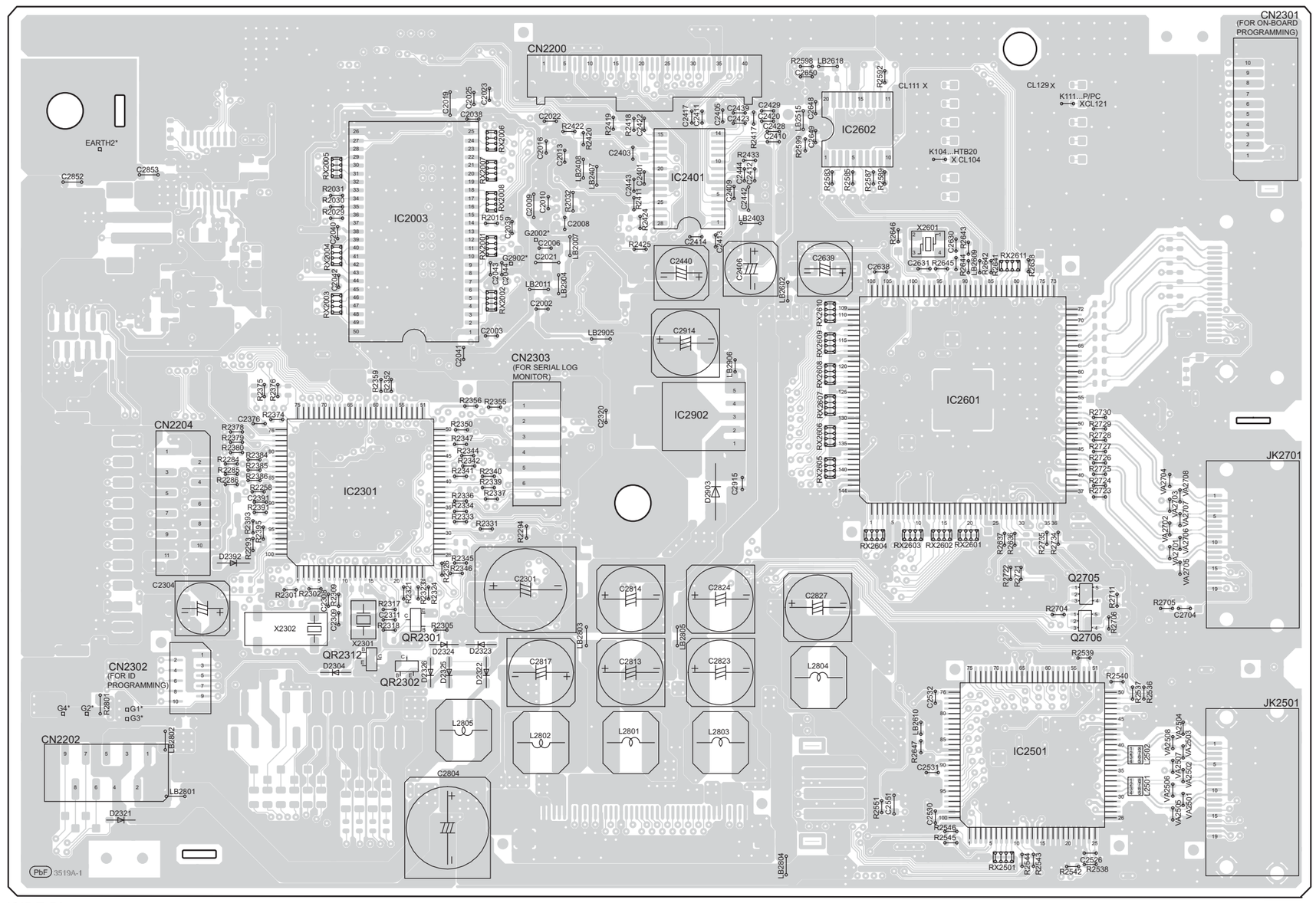
(SIDE A)

NOTE: " * " REF IS FOR INDICATION ONLY

SC-HTB20P/PC (SU-HTB20P/PC)
MAIN P.C.B.

17.1.2. MAIN P.C.B. (Side B)

A MAIN P.C.B. (REP4735J)



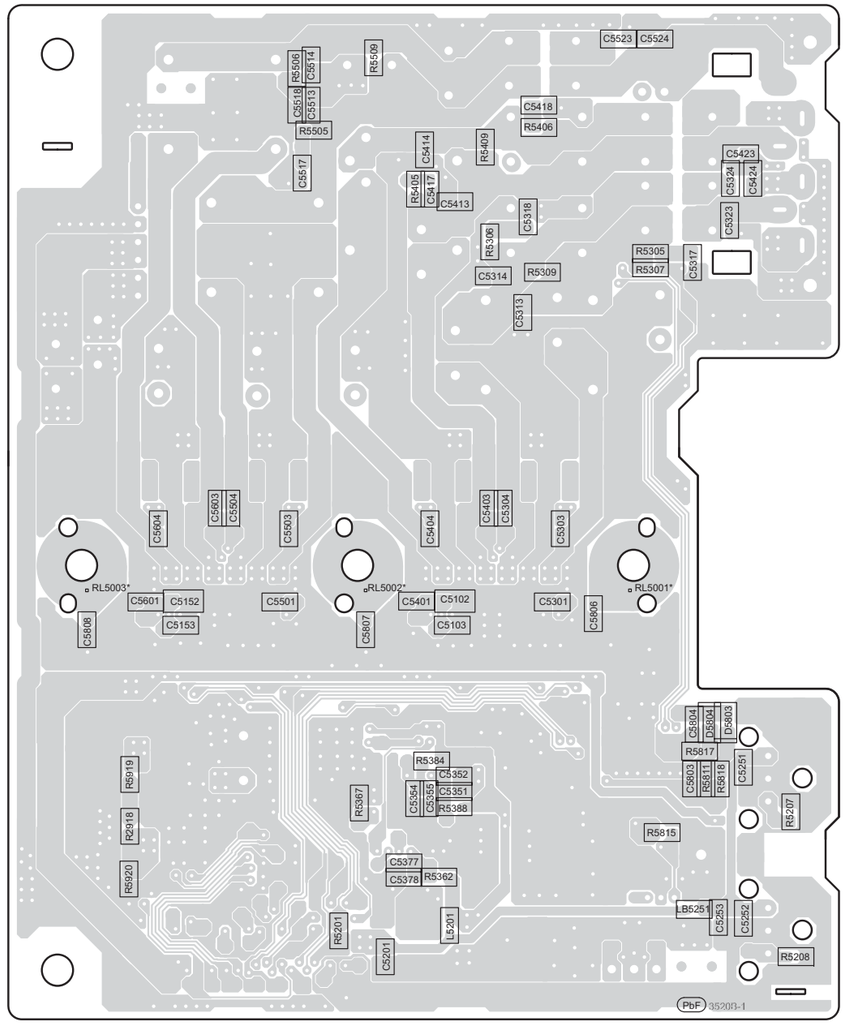
(SIDE B)

NOTE: " * " REF IS FOR INDICATION ONLY

SC-HTB20P/PC (SU-HTB20P/PC)
MAIN P.C.B.

17.1.3. DAMP P.C.B.

B DAMP P.C.B. (REP4807A)

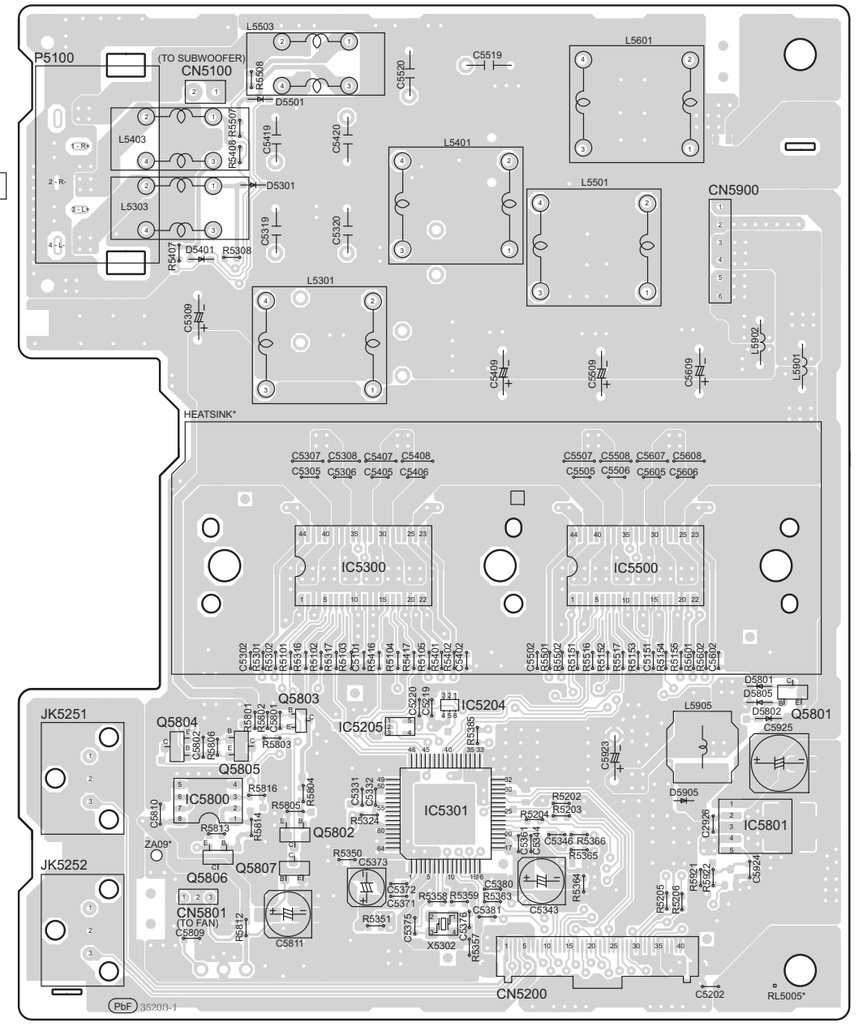


(SIDE A)

SPEAKERS

DIGITAL AUDIO IN (TV (OPT1))

DIGITAL AUDIO IN (AUX (OPT2))



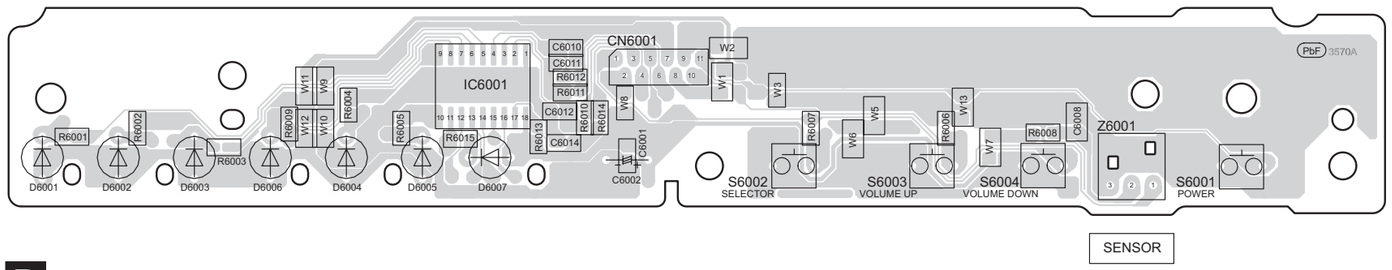
(SIDE B)

NOTE: " * " REF IS FOR INDICATION ONLY

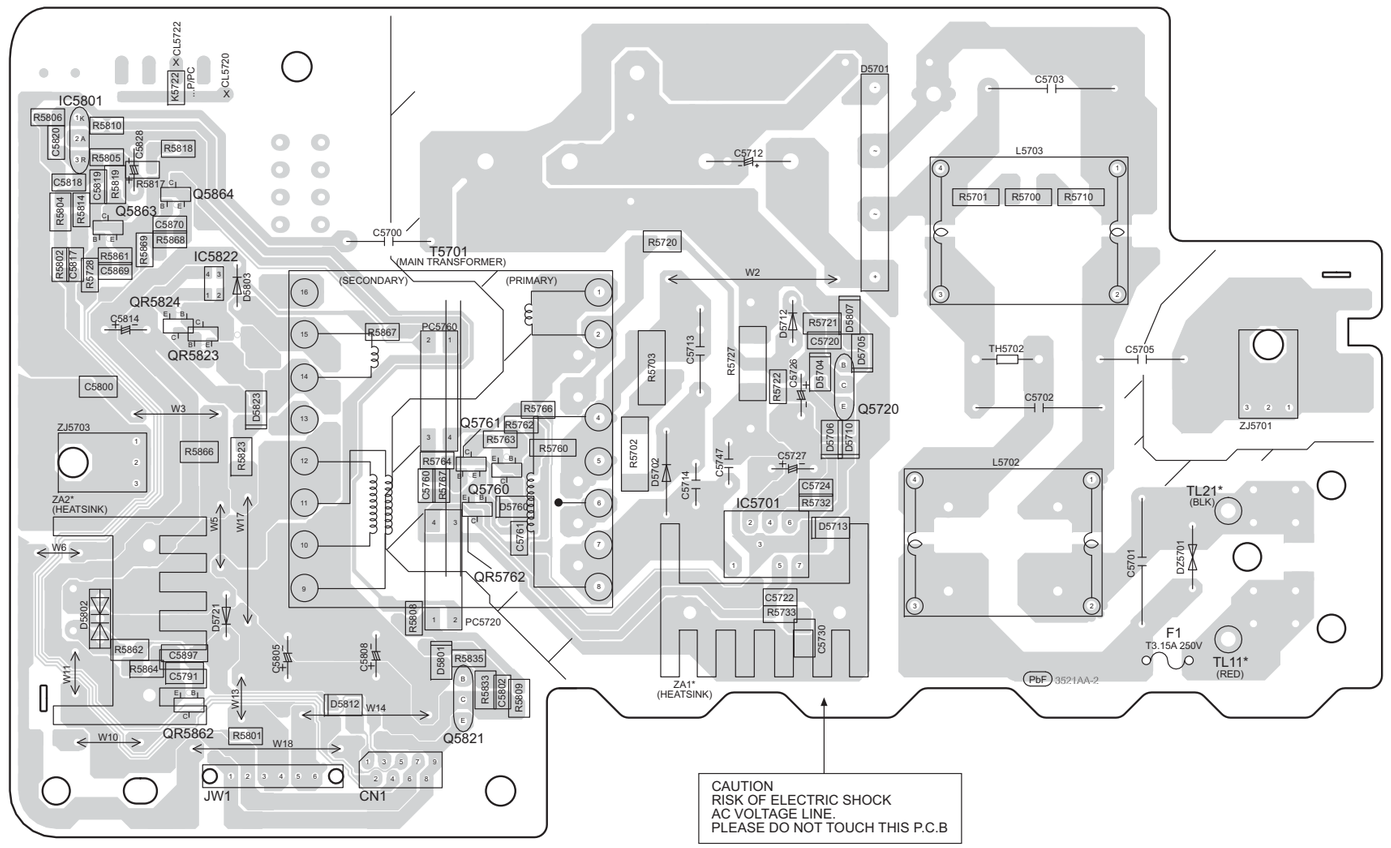
SC-HTB20P/PC (SU-HTB20P/PC)
DAMP P.C.B.

17.1.4. PANEL / SMPS / AC INLET P.C.B.

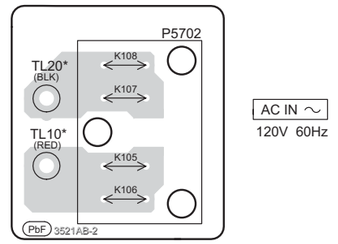
C PANEL P.C.B. (REP4808A)



D SMPS P.C.B. (REP4737G)



E AC INLET P.C.B. (REP4737G)



NOTE: " * " REF IS FOR INDICATION ONLY

18 Appendix Information of Schematic Diagram

18.1. Voltage Measurement & Waveform Chart

Note:

- Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard.
  Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.
- Circuit voltage and waveform described herein shall be regarded as reference information when probing defect point because it may differ from actual measuring value due to difference of Measuring instrument and its measuring condition and product itself.

18.1.1. Active Subwoofer (SU-HTB20)

18.1.1.1. MAIN P.C.B. (1/5)

REF NO.	IC2001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HDMI	0	0	3.4	0	0	0	0	1.5	3.4	0	0	0	0	3.4	0	0	0	0	0	1.7
STANDBY	0	0	3.4	0	0	0	0	1.5	3.4	0	0	0	0	3.4	0	0	0	0	0	1.7

REF NO.	IC2001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
HDMI	3.4	1.9	0	0	0	0	0.3	3.4	1.7	1.7	0	1.7	1.6	0.3	0.3	3.4	3.4	0.1	0	1.6
STANDBY	3.4	1.9	0	0	0	0	0.3	3.4	1.7	1.7	0	1.7	1.6	0.3	0.3	3.4	3.4	0.1	0	1.6

REF NO.	IC2001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
HDMI	0	1.8	0	1.7	0	1.7	0	0.9	0	3.4	1.7	0	0	1.7	1.8	0	3.3	3.3	3.3	3.3
STANDBY	0	1.8	0	1.7	0	1.7	0	0.9	0	3.4	1.7	0	0	1.7	1.8	0	3.3	3.3	3.3	3.3

REF NO.	IC2001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
HDMI	3.3	3.4	3.3	3.2	1.3	3.4	0	3.2	3.3	3.3	3.3	3.3	3.3	0	0	0	0	0	1.9	0
STANDBY	3.3	3.4	3.3	3.2	1.3	3.4	0	3.2	3.3	3.3	3.3	3.3	3.3	0	0	0	0	0	1.9	0

REF NO.	IC2001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
HDMI	3.4	0	1.8	0	0	0	0	0	0	0	0	0	1.6	0	0	0	0	0	3.4	0
STANDBY	3.4	0	1.8	0	0	0	0	0	0	0	0	0	1.6	0	0	0	0	0	3.4	0

REF NO.	IC2001																			
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
HDMI	0	0	0	0	0	0	3.4	3.4	3.4	3.4	0	1.8	0	0	0	0	0	3.4	3.4	3.4
STANDBY	0	0	0	0	0	0	3.4	3.4	3.4	3.4	0	1.8	0	0	0	0	0	3.4	3.4	3.4

REF NO.	IC2001																			
MODE	121	122	123	124	125	126	127	128												
HDMI	3.2	0	0	3.4	1.7	0	0	0												
STANDBY	3.2	0	0	3.4	1.7	0	0	0												

REF NO.	IC2002																			
MODE	1	2	3	4	5	6														
HDMI	1.7	0	1.5	1.5	3.4	0														
STANDBY	1.7	0	1.5	1.5	3.4	0														

REF NO.	IC2003																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HDMI	3.4	3.3	1.4	0	3.3	3.3	3.4	3.3	3.3	0	3.3	3.3	3.4	3.4	3.4	3.4	3.4	3.4	0	0
STANDBY	3.4	3.4	2.5	0	3.4	3.4	3.4	3.4	3.4	0	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	0	0

REF NO.	IC2003																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
HDMI	0	0	0	0	3.4	0	0	0	0	0	0	0	0	3.4	1.9	3.4	0	3.4	3.3	3.3
STANDBY	0	0	0	0	3.4	0	0	0	0	0	0	0	0	3.4	1.9	3.4	0	3.4	3.4	3.4

SC-HTB20P/PC (SU-HTB20P/PC) MAIN P.C.B.

18.1.1.2. MAIN P.C.B. (2/5)

REF NO.	IC2003																			
MODE	41	42	43	44	45	46	47	48	49	50										
HDMI	0	3.1	3.3	3.4	3.3	3.3	0	3.3	3.3	0										
STANDBY	0	3.3	3.4	3.4	3.4	0	0	3.4	3.4	0										

REF NO.	IC2301																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HDMI	0	0	3.1	3.4	3.1	0	0	0.6	1.2	3.2	1.6	0	1.4	3.2	3.2	1.1	0	3.1	3.2	3.2
STANDBY	0	0	3.1	0	3.1	0	0	0.6	1.2	0	1.6	0	1.4	3.2	3.2	1.1	0	3.1	3.2	3.2

REF NO.	IC2301																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
HDMI	3.4	0	2.6	0	3.0	3.3	3.3	3.4	3.2	3.2	0	0	3.3	3.3	3.2	3.2	3.2	0	0	3.2
STANDBY	3.4	3.3	2.6	3.2	3.0	3.3	3.3	3.3	3.2	3.2	0	3.3	3.3	3.1	3.1	0	0	3.2	3.4	3.4

REF NO.	IC2301																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
HDMI	3.4	3.4	3.2	0.9	3.3	3.3	0	3.2	3.2	0	0	0	3.2	0	0	3.4	0	2.5	0	3.2
STANDBY	3.2	0.7	3.3	3.3	0	3.2	3.1	3.2	3.2	0	0	0	3.2	0	0	3.4	0	2.5	0	3.1

REF NO.	IC2301																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
HDMI	0	0	2.8	0	3	0	3.2	3.2	3.4	3.2	3.4	0	3.4	0	0	3.3	3.1	3.2	0.8	0
STANDBY	0	0	2.8	0	3	0	3.2	3.2	3.4	3.2	3.4	0	3.4	0	0	3.2	3.1	3.2	0	1.6

REF NO.	IC2301																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
HDMI	1.6	0	0	3.2	3.2	3.1	2.9	3.1	3.2	2.9	1.6	1.8	0	0	0	3.2	3.2	0	0	0
STANDBY	1.6	0	3.2	3.2	3.1	2.9	3.1	3.1	3.2	3.2	1.6	1.8	3.1	0	0	3.3	3.2	0	0	0

REF NO.	IC2303																			
MODE	1	2	3	4	5	6	7	8												
POWER ON	3.2	3.2	0	0	3.2	3.2	0	3.2												
STANDBY	3.2	3.2	0	0	3.2	3.2	0	3.2												

REF NO.	IC2401																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
POWER ON	0	1.7	0	1.7	0	3.4	0	1.5	3.2	1.7	3.1	1.7	3.1	2.6	0	0	3.2	3.4	3.4	0
STANDBY	0	1.7	0	1.7	0	3.4	0	1.5	3.2	1.7	3.1	1.7	3.1	2.6	0	0	3.2	3.4	3.4	0

REF NO.	IC2401																			
MODE	21	22	23	24	25	26	27	28												
POWER ON	3.4	0	3.4	1.5	1.5	0	1.6	1.7												
STANDBY	3.4	0	3.4	1.5	1.5	0	1.6	1.7												

REF NO.	IC2501																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HDMI	2.6	3.1	3.4	1.7	1.7	3.1	3.1	3.1	3.1	1.7	1.7	1.8	0	3.4	0	0	0	0	0	0
STANDBY	2.6	3.1	3.4	1.7	1.7	3.1	3.1	3.1	3.1	1.7	1.7	1.8	0	3.4	0	0	0	0	0	0

18.1.1.3. MAIN P.C.B. (3/5)

REF NO.	IC2501																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
HDMI	0	0	0	3.4	3.2	0	0	1.8	0	1.8	3.2	3.2	3.3	3.2	0	0.6	1.8	1.8	3.2	3.2
STANDBY	0	0	0	3.4	3.2	0	0	1.8	0	1.8	3.2	3.2	3.3	3.2	0	0.6	1.8	1.8	3.2	3.2

REF NO.	IC2501																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
HDMI	0	1.8	0	3.3	5.0	5.0	5.0	1.0	0.5	0.3	3.0	1.8	3.4	0	1.8	2.5	0.8	0.8	0.8	0.7
STANDBY	0	1.8	0	3.3	5.0	5.0	5.0	1.0	0.5	0.3	3.0	1.8	3.4	0	1.8	2.5	0.8	0.8	0.8	0.7

REF NO.	IC2501																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
HDMI	0.5	0.5	0.8	1.8	0	3.4	0	0	0	0	0.5	0.7	0.7	2.7	1	1.8	1.1	1	1	0
STANDBY	0.5	0.5	0.8	1.8	0	3.4	0	0	0	0	0.5	0.7	0.7	2.7	1	1.8	1.1	1	1	0

REF NO.	IC2501																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
HDMI	1.2	1.8	1.2	2.0	1.2	1.2	0	1.7	3.4	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	0
STANDBY	1.2	1.8	1.2	2.0	1.2	1.2	0	1.7	3.4	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	0

REF NO.	IC2502																			
MODE	1	2	3	4	5	6														
POWER ON	1.6	0	1.3	3.1	3.3	1.7														
STANDBY	1.6	0	1.3	3.1	3.3	1.7														

REF NO.	IC2503																			
MODE	1	2	3	4	5															
POWER ON	3.1	0	1.3	5	6.0															
STANDBY	3.1	0	1.3	5	6.0															

REF NO.	IC2601																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
POWER ON	1.6	1.6	1.6	0	1.7	3.4	1.7	1.7	1.7	1.7	0	1.8	1.7	1.7	1.7	1.7	0	3.4	2.6	3.2
STANDBY	1.6	1.6	1.6	0	1.7	3.4	1.7	1.7	1.7	1.7	0	1.8	1.7	1.7	1.7	1.7	0	3.4	2.6	3.2

REF NO.	IC2601																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
POWER ON	3.4	3.4	0	1.8	1.8	3.2	3.2	0	0	5.0	0	3.4	5	5	5	0	1.8	3.4	3.2	3.2
STANDBY	3.4	3.4	0	1.8	1.8	3.2	3.2	0	0	5.0	0	3.4	5	5	5	0	1.8	3.4	3.2	3.2

REF NO.	IC2601																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
POWER ON	0	3.4	3.2	3.2	0	3.4	3.2	3.2	0	3.4	3.2	3.2	0	1.8	0.7	3.4	0.7	0.6	0	3.4
STANDBY	0	3.4	3.2	3.2	0	3.4	3.2	3.2	0	3.4	3.2	3.2	0	1.8	0.7	3.4	0.7	0.6	0	3.4

REF NO.	IC2601																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
POWER ON	0.6	0.6	0	3.4	0.6	0.6	0	3.4	0.6	0.6	0	1.8	0	3.4	0	0	0	1.7	0	1.8
STANDBY	0.6	0.6	0	3.4	0.6	0.6	0	3.4	0.6	0.6	0	1.8	0	3.4	0	0	0	1.7	0	1.8

18.1.1.4. MAIN P.C.B. (4/5)

REF NO.	IC2601																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
POWER ON	3.1	3.1	3.1	3.1	1.7	1.7	0	3.4	1.7	0	1.8	1.8	0	1.7	1.7	3.4	3.4	0	3.1	3.4
STANDBY	3.1	3.1	3.1	3.1	1.7	1.7	0	3.4	1.7	0	1.8	1.8	0	1.7	1.7	3.4	3.4	0	3.1	3.4

REF NO.	IC2601																			
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
POWER ON	3.4	0	0	3.4	0	0	1.8	2.6	1.3	0	1.1	0	3.3	0	0.7	0	0	0	1.8	0
STANDBY	3.4	0	0	3.4	0	0	1.8	2.6	1.3	0	1.1	0	3.3	0	0.7	0	0	0	1.8	0

REF NO.	IC2601																			
MODE	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
POWER ON	0	0	0	0	3.3	0	0	0	0	0	1.8	0	1.1	1.1	0.8	0	3.4	0	0	0
STANDBY	0	0	0	0	3.3	0	0	0	0	0	1.8	0	1.1	1.1	0.8	0	3.4	0	0	0

REF NO.	IC2601																			
MODE	141	142	143	144																
POWER ON	0	0	0	0																
STANDBY	0	0	0	0																

REF NO.	IC2602																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
POWER ON	1.0	1.7	1.7	1.7	0	1.7	0	0.2	0	0	0	0.2	0	1.7	0	1.7	1.7	1.7	1.0	3.3
STANDBY	1.0	1.7	1.7	1.7	0	1.7	0	0	0	0	0	0	0	1.7	0	1.7	1.7	1.7	1.0	3.3

REF NO.	IC2703																			
MODE	1	2	3	4	5	6	7	8												
POWER ON	0	0	0	0	5.0	0	5.0	5.0												
STANDBY	0	0	0	0	5.0	5.0	5.0	5.0												

REF NO.	IC2801																			
MODE	1	2	3	4	5															
POWER ON	20.5	7.8	0	1.2	2.1															
STANDBY	20.5	7.8	0	1.2	2.1															

REF NO.	IC2802																			
MODE	1	2	3	4	5															
POWER ON	3.2	0	5.0	2.6	5.0															
STANDBY	3.2	0	5.0	2.6	5.0															

REF NO.	IC2803																			
MODE	1	2	3	4	5															
POWER ON	12.0	3.5	0	1.2	2.1															
STANDBY	12.0	3.5	0	1.2	2.1															

REF NO.	IC2804																			
MODE	1	2	3	4	5															
POWER ON	12.0	5	0	1.2	2.1															
STANDBY	12.0	5	0	1.2	2.1															

18.1.1.5. MAIN P.C.B. (5/5)

REF NO.	IC2805																			
MODE	1	2	3	4	5															
POWER ON	8.0	1.9	0	1.2	2.1															
STANDBY	8.0	1.9	0	1.2	2.1															

REF NO.	IC2806																			
MODE	1	2	3	4	5															
POWER ON	8.0	3.4	0	1.2	2.1															
STANDBY	8.0	3.4	0	1.2	2.1															

REF NO.	IC2902																			
MODE	1	2	3	4	5															
POWER ON	3.3	3.3	1.8	0	0															
STANDBY	3.3	3.3	1.8	0	0															

REF NO.	Q2503				Q2508						Q2705									
MODE	E	C	B		1	2	3	4	5		1	2	3	4	5					
HDMI	0	3.4	0		3.2	3.2	3.2	0	0		1.2	0	1.2	0	5.0					
STANDBY	0	3.4	0		3.2	3.2	3.2	0	0		1.2	0	1.2	0	5.0					

REF NO.	Q2706						QR2701				QR2702									
MODE	1	2	3	4	5		E	C	B		E	C	B							
HDMI	1.2	0	1.2	5.0	3.2		0	4.9	0		0	5.0	0							
STANDBY	1.2	0	1.2	5.0	3.2		0	4.9	0		0	5.0	0							

REF NO.	Q2701							Q2702						Q2703						
MODE	1	2	3	4	5	6		1	2	3	4	5		1	2	3	4	5	6	
POWER ON	5.0	0	0	4.7	5.0	4.6		4.7	5.0	4.7	5.0	5.0		4.6	0	4.6	5.0	5.0	0	
STANDBY	5.0	0	0	0	0	4.7		4.7	5.0	4.7	5.0	5.0		4.6	0	4.6	0	5.0	4.6	

REF NO.	Q2704						QR2301				QR2302				QR2303					
MODE	1	2	3	4	5		E	C	B		E	C	B		E	C	B			
POWER ON	0	5.0	4.7	0	5.0		0	3.1	0		0	3.1	0		0	0	3.2			
STANDBY	4.6	5.0	4.6	5.0	5.0		0	3.1	0		0	3.1	0		0	0	3.2			

REF NO.	QR2304				QR2305				QR2306				QR2312				QR2801			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
POWER ON	0	0	3.2		3.2	0	3.2		0	0	3.3		0	0	13.5		0	0	3.2	
STANDBY	0	0	3.2		3.2	0	3.2		0	0	3.3		0	0	13.5		0	0	3.2	

REF NO.	QR2804																			
MODE	E	C	B																	
POWER ON	0	2.0	0																	
STANDBY	0	2.0	0																	

SC-HTB20P/PC (SU-HTB20P/PC) MAIN P.C.B.

18.1.1.6. DAMP P.C.B. (1/2)

REF NO.	IC5204																			
MODE	1	2	3	4	5	6														
POWER ON	3.4	0	0	0	3.3	0														
STANDBY	3.4	0	0	0	3.3	0														

REF NO.	IC5205																			
MODE	1	2	3	4	5															
POWER ON	3.3	0	0	3.4	3.4															
STANDBY	3.3	0	0	3.4	3.4															

REF NO.	IC5300																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
POWER ON	12.0	3.2	0	0	0	0.5	3.4	0.5	1.1	0	0	0	0	0	0	0.5	3.4	0.5	0	0
STANDBY	12.0	3.2	0	0	0	0.5	3.4	0.5	1.1	0	0	0	0	0	0	0.5	3.4	0.5	0	0

REF NO.	IC5300																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
POWER ON	12.0	12.0	12.0	21.2	0	20.5	20.5	21.2	0	0	21.4	20.5	21.2	21.2	20.5	21.4	0	0	21.4	20.5
STANDBY	12.0	12.0	12.0	21.2	0	20.5	20.5	21.2	0	0	21.4	20.5	21.2	21.2	20.5	21.4	0	0	21.4	20.5

REF NO.	IC5300																			
MODE	41	42	43	44																
POWER ON	20.5	0	21.2	12																
STANDBY	20.5	0	21.2	12																

REF NO.	IC5301																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
POWER ON	0	3.3	0	0	0	0	1.5	1.7	3.3	0	0	3.2	0	1.7	3.3	0	1.5	1.5	1.5	0
STANDBY	0	3.3	0	0	0	0	1.5	1.7	3.3	0	0	3.2	0	1.7	3.3	0	1.5	1.5	1.5	0

REF NO.	IC5301																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
POWER ON	1.7	1.7	1.7	0.1	1	0	0	3.3	3.3	1.7	1.7	0	0	0	0	0	3.4	3.4	3.4	1.7
STANDBY	1.7	1.7	0	0	0	0	0	3.3	3.3	1.7	1.7	0	0	0	0	0	3.4	3.4	3.4	1.7

REF NO.	IC5301																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
POWER ON	1.7	0	0	3.3	1.7	1.7	1.7	1.7	0	0	0	0	0	3.3	0	0	0	0	0	0
STANDBY	1.7	0	0	3.3	1.7	1.7	1.7	1.7	0	0	0	0	0	3.3	0	0	0	0	0	0

REF NO.	IC5301																			
MODE	61	62	63	64																
POWER ON	0	0	0	0																
STANDBY	0	0	0	0																

REF NO.	IC5500																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
POWER ON	12.0	3.2	0	0	0	0.5	3.4	0.5	1.1	0	0	0	0	0	0	0.5	3.4	0.5	0	0
STANDBY	12.0	3.2	0	0	0	0.5	3.4	0.5	1.1	0	0	0	0	0	0	0.5	3.4	0.5	0	0

SC-HTB20P/PC (SU-HTB20P/PC) DAMP P.C.B.

18.1.1.7. DAMP P.C.B. (2/2)

REF NO.	IC5500																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
POWER ON	12.0	12.0	12.0	21.2	0	20.5	20.5	21.2	0	0	21.4	20.5	21.2	21.2	20.5	21.4	0	0	21.4	20.5
STANDBY	12.0	12.0	12.0	21.2	0	20.5	20.5	21.2	0	0	21.4	20.5	21.2	21.2	20.5	21.4	0	0	21.4	20.5

REF NO.	IC5500																			
MODE	41	42	43	44																
POWER ON	20.5	0	21.2	12																
STANDBY	20.5	0	21.2	12																

REF NO.	IC5800																			
MODE	1	2	3	4	5	6	7	8												
POWER ON	2.0	0.8	0	0	0	0	0	11.5												
STANDBY	2.0	0.8	0	0	0	0	0	11.5												

REF NO.	IC5801																			
MODE	1	2	3	4	5															
POWER ON	20.5	12	0	1.2	2.2															
STANDBY	20.5	12	0	1.2	2.2															

REF NO.	Q5801				Q5802				Q5803				Q5804				Q5805			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
POWER ON	0	3.1	0		0	3.1	0		20.5	0	19.1		21.2	19.6	21.2		21.2	19.1	21.2	
STANDBY	0	3.1	0		0	0	0		20.5	0	19.1		21.2	19.6	21.2		21.2	19.1	21.2	

REF NO.	Q5806				Q5807															
MODE	E	C	B		E	C	B													
POWER ON	0.8	11.5	2.0		0	3.1	0.5													
STANDBY	0.8	11.5	2.0		0	0	0.5													

SC-HTB20P/PC (SU-HTB20P/PC) DAMP P.C.B.

18.1.1.8. PANEL P.C.B.

REF NO.	IC6001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
POWER ON	0	3.1	3.1	3.0	3.8	1.2	1.1	1.1	1.1	3.7	0.6	3.9	3.9	3.2	0.7	3.8	0	3.2		
STANDBY	0	3.1	3.1	3.0	3.8	1.2	1.1	1.1	1.1	3.7	0.6	3.9	3.9	3.2	0.7	3.8	0	3.2		

SC-HTB20P/PC (SU-HTB20P/PC) PANEL P.C.B.

18.1.1.9. SMPS P.C.B.

REF NO.	IC5701																			
MODE	1	2	3	4	5	6	7													
POWER ON	159.3	0	7.0	0	0.1	7.8	0													
STANDBY	159.3	0	7.0	0	0.1	7.8	0													

REF NO.	IC5801																			
MODE	K	A	R																	
POWER ON	18.3	0	2.5																	
STANDBY	18.3	0	2.5																	

REF NO.	IC5822																			
MODE	1	2	3	4																
POWER ON	4.5	4.5	0	0																
STANDBY	4.5	4.5	0	0																

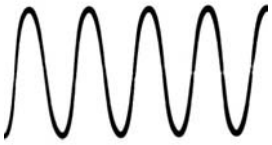
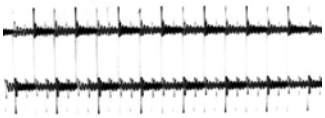
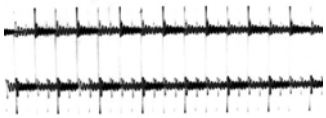
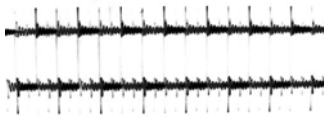
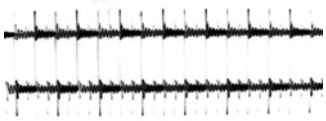
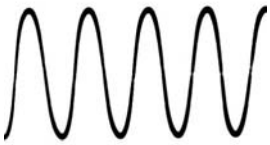
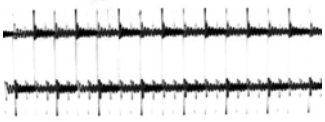
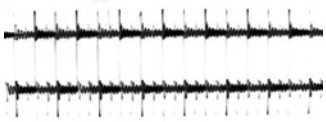
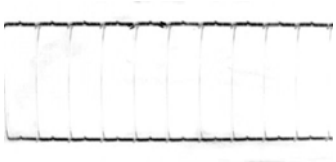
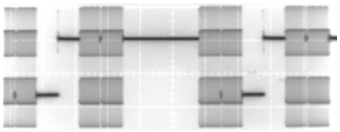
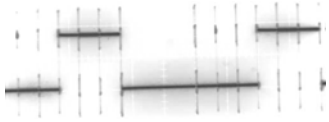
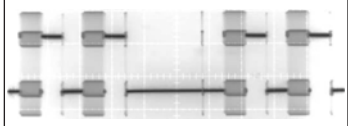
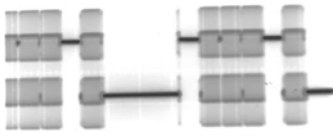
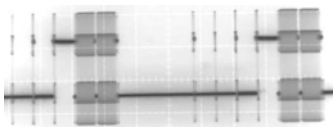
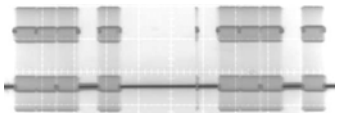
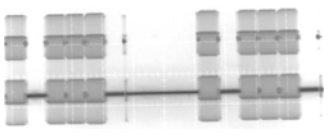
REF NO.	Q5720				Q5760				Q5761				Q5821				Q5863			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
POWER ON	6.9	7.8	6.9		0	7.0	7.2		0	7.0	7.2		19.5	19.1	0.8		0	0.9	0	
STANDBY	6.9	7.8	6.9		0	7.0	7.2		0	7.0	7.2		19.5	19.1	0.8		0	0.9	0	

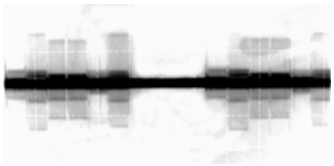
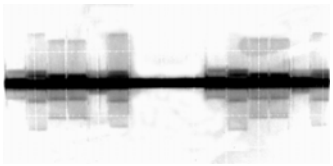
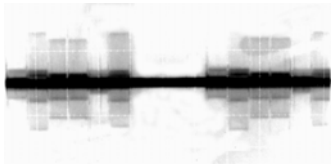
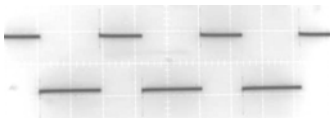
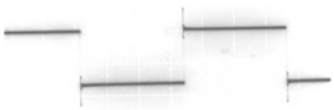
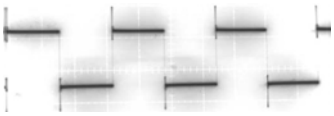
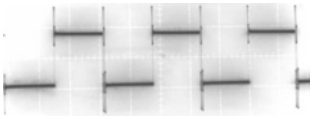
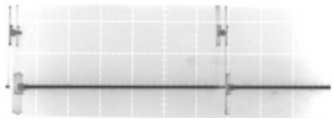
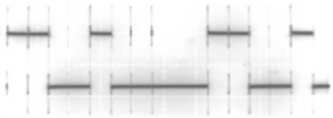
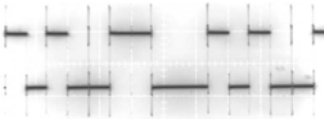
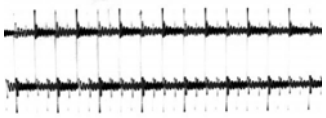
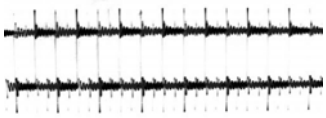
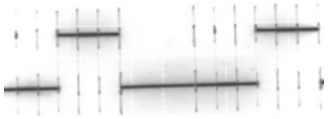
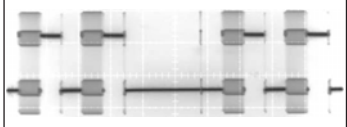
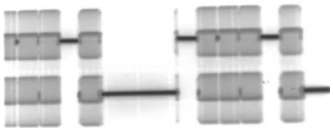
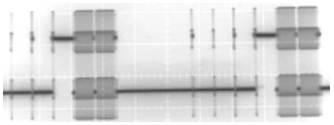
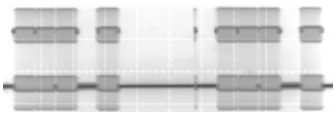
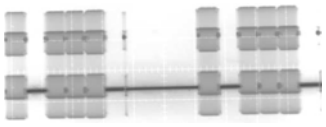
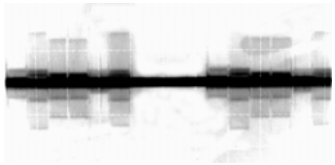
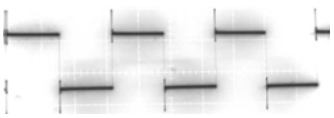
REF NO.	Q5864				QR5762				QR5823				QR5824				QR5862			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
POWER ON	0	4	0		0	0	7.0		13.9	4.6	13.7		4.5	13.7	4.5		0	3.1	0	
STANDBY	0	4	0		0	0	7.0		13.9	4.6	13.7		4.5	13.7	4.5		0	3.1	0	

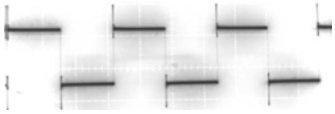
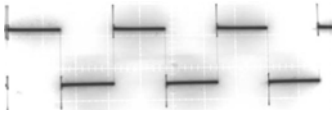
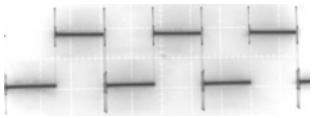
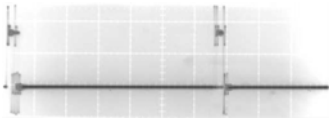
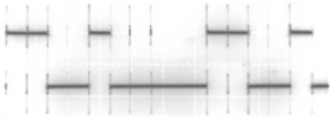
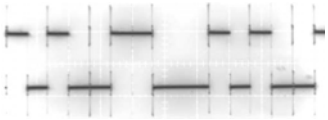
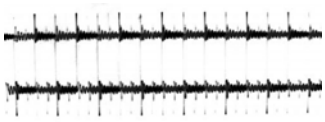
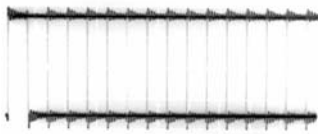
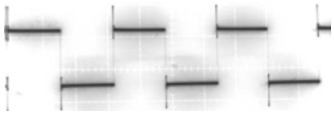
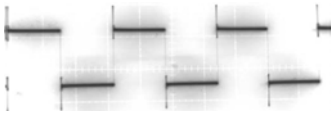
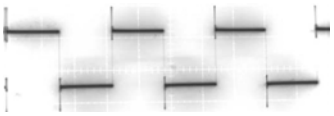
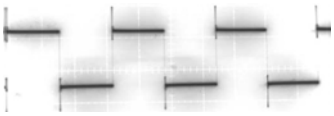
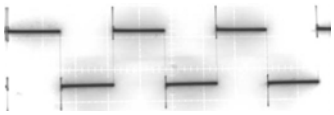
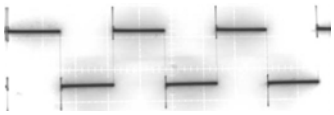
SC-HTB20P/PC (SU-HTB20P/PC) SMPS P.C.B.

18.1.2. Waveform Chart

18.1.2.1. Active Subwoofer (SU-HTB20)

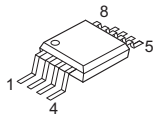
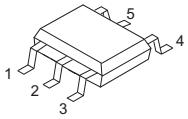
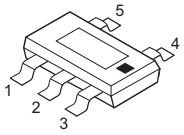
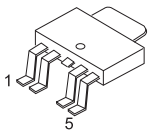
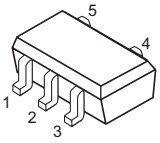
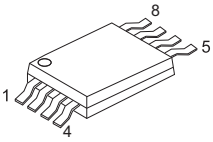
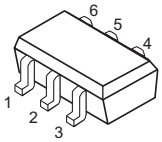
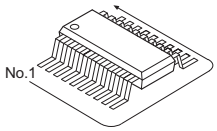
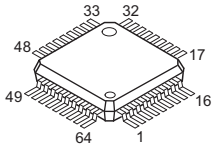
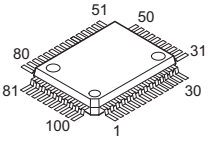
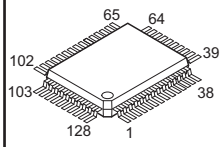
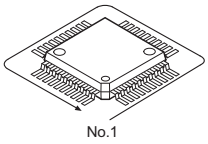
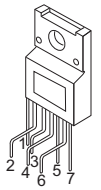
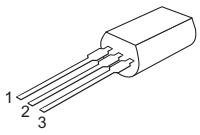
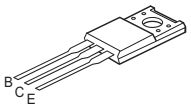
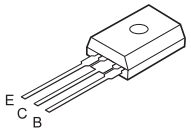
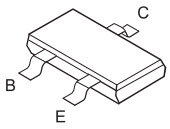
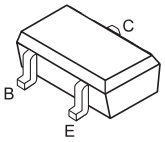
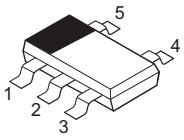
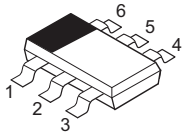
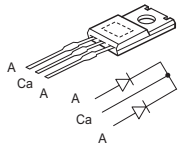
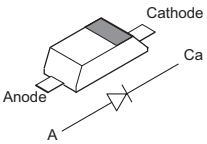
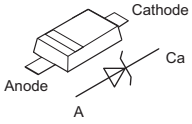
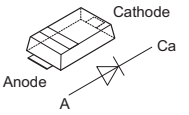
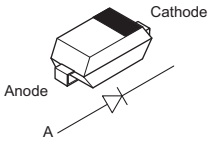
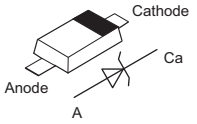
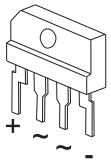
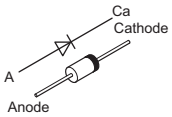
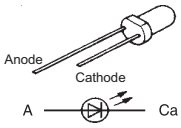
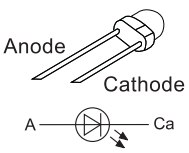
WF No. IC2001-17 (PLAY)  0.45Vp-p(20nsec/div)	WF No. IC2001-27 (PLAY)  5Vp-p(1usec/div)	WF No. IC2001-34 (PLAY)  4Vp-p(1usec/div)	WF No. IC2001-48 (PLAY)  6Vp-p(2usec/div)
WF No. IC2001-51 (PLAY)  6Vp-p(1usec/div)	WF No. IC2301-8 (PLAY)  1Vp-p(10usec/div)	WF No. IC2301-9 (PLAY)  2.5Vp-p(10usec/div)	WF No. IC2301-11 (PLAY)  3.5Vp-p(100nsec/div)
WF No. IC2301-13 (PLAY)  2.2Vp-p(100nsec/div)	WF No. IC2401-10 (PLAY)  8Vp-p(1usec/div)	WF No. IC2401-26 (PLAY)  4Vp-p(1usec/div)	WF No. IC2501-4 (PLAY)  3Vp-p(200nsec/div)
WF No. IC2501-9 (PLAY)  3Vp-p(500nsec/div)	WF No. IC2501-56 (PLAY)  5Vp-p(5usec/div)	WF No. IC2501-57 (PLAY)  5Vp-p(5usec/div)	WF No. IC2501-58 (PLAY)  5Vp-p(5usec/div)
WF No. IC2501-59 (PLAY)  5Vp-p(5usec/div)	WF No. IC2501-60 (PLAY)  5Vp-p(5usec/div)	WF No. IC2501-61,63 (PLAY)  5Vp-p(5usec/div)	WF No. IC2501-62 (PLAY)  5Vp-p(5usec/div)

WF No. IC2501-67 (PLAY)  1.5Vp-p(5usec/div)	WF No. IC2501-68,69 (PLAY)  0.04Vp-p(5usec/div)	WF No. IC2501-70 (PLAY)  0.024Vp-p(5usec/div)	WF No. IC2501-71 (PLAY)  3Vp-p(10usec/div)
WF No. IC2501-72 (PLAY)  5Vp-p(2usec/div)	WF No. IC2501-73 (PLAY)  5Vp-p(2usec/div)	WF No. IC2501-74,75 (PLAY)  5Vp-p(2usec/div)	WF No. IC2501-77 (PLAY)  5Vp-p(500nsec/div)
WF No. IC2501-78 (PLAY)  5Vp-p(5usec/div)	WF No. IC2501-79 (PLAY)  5Vp-p(5usec/div)	WF No. IC2601-78 (PLAY)  4Vp-p(1usec/div)	WF No. IC2601-81 (PLAY)  4.2Vp-p(500nsec/div)
WF No. IC2601-109 (PLAY)  6Vp-p(5usec/div)	WF No. IC2601-110 (PLAY)  6Vp-p(5usec/div)	WF No. IC2601-111 (PLAY)  6Vp-p(5usec/div)	WF No. IC2601-114 (PLAY)  6Vp-p(5usec/div)
WF No. IC2601-115,117 (PLAY)  6Vp-p(5usec/div)	WF No. IC2601-116 (PLAY)  6Vp-p(5usec/div)	WF No. IC2601-120 (PLAY)  0.06Vp-p(5usec/div)	WF No. IC2601-126 (PLAY)  6Vp-p(10usec/div)

WF No. IC2601-127 (PLAY)  6Vp-p(5usec/div)	WF No. IC2601-128 (PLAY)  6Vp-p(2usec/div)	WF No. IC2601-129,132 (PLAY)  6Vp-p(2usec/div)	WF No. IC2601-133 (PLAY)  6Vp-p(500nsec/div)
WF No. IC2601-134 (PLAY)  6Vp-p(5usec/div)	WF No. IC2601-135 (PLAY)  6Vp-p(5usec/div)	WF No. IC2602-3 (PLAY)  8Vp-p(500nsec/div)	WF No. IC2602-8 (PLAY)  4Vp-p(1usec/div)
WF No. IC2602-12 (PLAY)  7Vp-p(500nsec/div)	WF No. IC2602-17 (PLAY)  3.2Vp-p(1usec/div)	WF No. IC5300-6,8,16,18 (PLAY)  6Vp-p(1usec/div)	WF No. IC5300-28,31,36,39 (PLAY)  28Vp-p(1usec/div)
WF No. IC5301-7 (PLAY)  1.25Vp-p(20nsec/div)	WF No. IC5301-8 (PLAY)  4.4Vp-p(20nsec/div)	WF No. IC5301-40,45,46,47 48 (PLAY)  6.4Vp-p(1usec/div)	WF No. IC5301-41 (PLAY)  6Vp-p(1usec/div)
WF No. IC5500-6,8,16,18 (PLAY)  6Vp-p(1usec/div)	WF No. IC5500-28,31,36,39 (PLAY)  28Vp-p(1usec/div)		

18.2. Illustration of IC's, Transistors and Diodes

18.2.1. Active Subwoofer (SU-HTB20)

C0ABBA000168 	C0JBAE000302 	C0CBCDD00004 	C0CBCAG00015 C0DBAYH00005 	C0EBY0000867 	C3EBEC000047 
	C0DBEYY00146 C0JBAB000837 C0JBAB000986 C0JBAR000396		C0JBAQ000073 (18P) C0JBAZ001466 (20P) C1AB00003174 (28P) C1AB00003217 (44P) C3ABMY000029 (50P)	C1AB00003852 	C1AB00002975 RFKWMHTB20P 
C2HBCY000102 	C1AB00002989 (144P) 	C0DABYY00035 	C0DABYY00011 	B1BACG000048 	B1BABG000007 
B1ABCF000011 B1ABCF000079 B1ABCN000001 	B1ABGC000001 B1ABMF000020 B1ADBL000010 B1ADCN000010 B1GBCFGG0030 B1GBCFNN0038 B1GBCFJA0006 B1GDCFJJ0008	B1GBCFJJ0048 B1GBCFNN0035 	B1CFGD000002 	B1HBCFA00003 	B0HBSM000054 
	B0ACCK000005 B0ACCK000012 B0JCCD000017 B0JCME000105		DZ2J033M0L DZ2J056M0L DZ2J068M0L DZ2J075M0L DZ2J150M0L DZ2J270M0L DZ2J330M0L	B0JCPG000032 	B0ECKP000002 
B0BC020A0267 	B0EBNR000045 	B0EAKT000063 B0EAMM000057 	B3ABA0000187 	B3ADA0000087 	

18.3. Terminal Function of IC's

18.3.1. IC2301 (RFKWMHTB20P) MICRO PROCESSOR IC

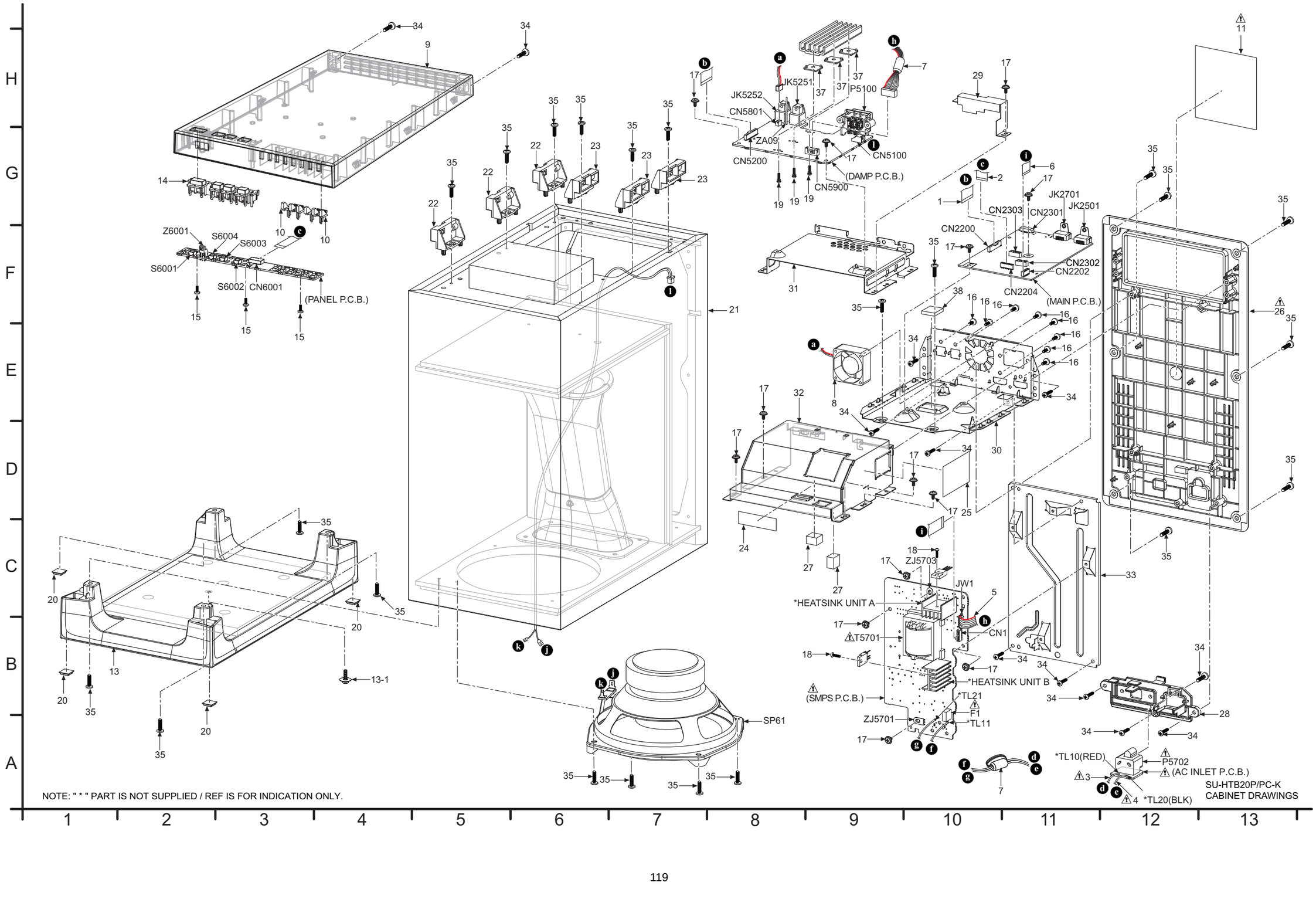
Pin No.	Mark	I/O	Function
1	FAN_DA	-	Fan Control
2	AUX/BT	-	No Connection
3	REMOTE	I	Remocon Serial Input
4	VSYNC_COUNT	I	VSYNC Monitor for Source
5	HDMI_MUTE_DET	I	No Connection
6	BYTE (VSS)	-	VSS
7	CNVSS	-	Ground
8	XCIN	-	Sub clock (For standby mode)
9	XCOUT	-	Sub clock (For standby mode)
10	RESET	I	For on board programming
11	XOUT	-	Main clock
12	VSS	-	VSS
13	XIN	-	Main clock
14	VCC1 (VDET)	-	Main power supply 3.3V
15	CEC I/O	I/O	CEC IN/OUT
16	DSP_IRQ	I	ROHM PWM control
17	NC	-	No Connection
18	AC_SYNC	I	Detection of AC Power fail (Power Fail = L)
19	IDROM/BKROM SDA	I/O	EEPROM for HDMI ID & Backup
20	IDROM/BKROM SCL	I/O	EEPROM for HDMI ID & Backup
21	VALID	I	VALID info of DAMP
22	MUTE_ALL	O	Audio Mute control
23	DAP_MUTE	O	Mute control for DAMP
24	DAP_RESET	O	DAMP RESET
25	HDMI_MUTE_DIS	O	HDMI mute disable
26	DAP_PDN	O	DAMP Power down
27	BT_UART_RX	-	No Connection
28	BT_UART_TX	-	No Connection
29	FLASH_TXD	O	For on board programming & Log monitor, Transmit
30	FLASH_RXD	I	For on board programming & Log monitor, Receive
31	Flash_SCLK	I	For on board programming
32	Flash_BUSY	O	For on board programming
33	HDMI_SDA	I/O	HDMI RX/TX control (Serial Data)
34	HDMI_SCL	I/O	HDMI RX/TX control (Serial Clock)
35	LOG_MONI_SW	I	Log monitor switch
36	TX_RESET	O	Reset of HDMI TX
37	RX_RESET	O	Reset of HDMI RX
38	ADC_MS-SL	O	ADC Master Slave Selection Analog mode : ADC mode 3 (master), DIR: slavedigital input, ADC mode 0 (slave), DIR: master
39	Flash_EPM	I	For on board programming
40	HDMI_PCONT	O	HDMI Power Control
41	TX_INT	I	Interrupt From HDMI TX
42	RX_INT	I	Interrupt From HDMI RX
43	ADC_PDN	O	ADC power down
44	Flash_CE	I	For on board programming
45	DAP_SDA	I/O	DAMP & Jitter less IC Serial Data
46	DAP_SCL	I/O	DAMP & Jitter less IC Serial Clock
47	RX0_WRT_SEL	O	RX0 EDID ROM write enable select (Enable = High)
48	RX0/1_EDID_SCL	O	RX0/1 EDID ROM Serial Clock
49	RX0/1_EDID_SDA	O	RX0/1 EDID ROM Serial Data
50	RX1_WRT_SEL	O	RX1 EDID ROM write enable select (Enable = High)
51	DSP_CLIP	O	PWM control
52	STBY_H	O	Audio output enable control (Enable = Low)
53	RX1_HPD	O	Hot Plug Detect out to HDMI RX1
54	RX0_HPD	O	Hot Plug Detect out to HDMI RX0
55	RX1_5V_DET	I	Detection of connect to HDMI RX1 (Detect = High)
56	RX0_5V_DET	I	Detection of connect to HDMI RX0 (Detect = High)
57	DSP_MODE	O	PWM control (Temperature Control)
58	CS_CODEC	O	DIR control
59	ZERO	I	Detection of digital signal zero
60	VCC2	-	Main power supply 3.3V
61	ECO_PCONT	O	ECO mode control
62	VSS	-	VSS
63	W_SSB	-	No Connection
64	W_DET	-	No Connection
65	5V_DET	I	Diode OR from RX_HPD (Detect = High)
66	TX_HPD	I	Hot Plug Detect of HDMI Sink
67	RESET_CODEC	O	DIR control (Reset)
68	CS_DSP	O	DSP control (Chip Select)
69	BUSY_DSP	I	DSP control (Busy Status)
70	RESET_DSP	O	DSP control (Reset)
71	INTREQ_DSP	I	DSP control (Interrupt Request)
72	NC	-	No Connection
73	INTREQ_CODEC	I	DIR control (Interrupt Request)
74	SD_OUT	O	Shut down output (DC_DET or SD is Active Low)
75	MOSI_DSP	O	DSP control
76	MISO_DSP / SDOUT	I	MISO_DSP OR DT_OUT_CODEC
77	CLK_DSP	O	DIR control (Clock)
78	LED_DATA	O	LED control (Data)
79	LED_CLK	O	LED control (Clock)
80	LED_LCK (CS)	O	LED control (Chip Select)
81	REG1 : AREA	I	Area Code
82	REG2 : MODEL	I	Model Code
83	LED_OE	O	LED control (Enable: L)
84	SD	I	DAMP Overload or Overtemp (Action : PCONT=Low & SD_OUT=High)
85	OTW	I	DAMP Over Temperature
86	DC_DET	I	DAMP & SMPS abnormal detection (Action : PCONT=Low & SD_OUT=High)
87	WS_INT	I	Wireless control (Initialize)
88	PCONT	O	Main power control (Power On = High)
89	KEY2	I	Selector : Vref * 0.05 ~ 0.0
			Vol UP : Vref * 0.16 ~ 0.06
90	KEY1	I	Power : Vref * 0.05 ~ 0.0
			Vol Down : Vref * 0.16 ~ 0.06
91	ECO_LEVEL	I	ECO LEVEL Detection
92	V_CHECK	I	HDMI Voltage Detection
93	S_DET	I	Short Circuit Detection
94	AVSS	-	AVSS
95	NC	-	No Connection
96	VREF	-	ADC power supply
97	AVCC	-	Main power supply 3.3V
98	W_SDI	I	Wireless control (Serial Data In)

Pin No.	Mark	I/O	Function
99	W_SDO	-	No Connection
100	W_SCL	-	No Connection

19 Exploded View and Replacement Parts List

19.1. Exploded View and Mechanical replacement Parts List

19.1.1. Cabinet Parts Location (SU-HTB20)

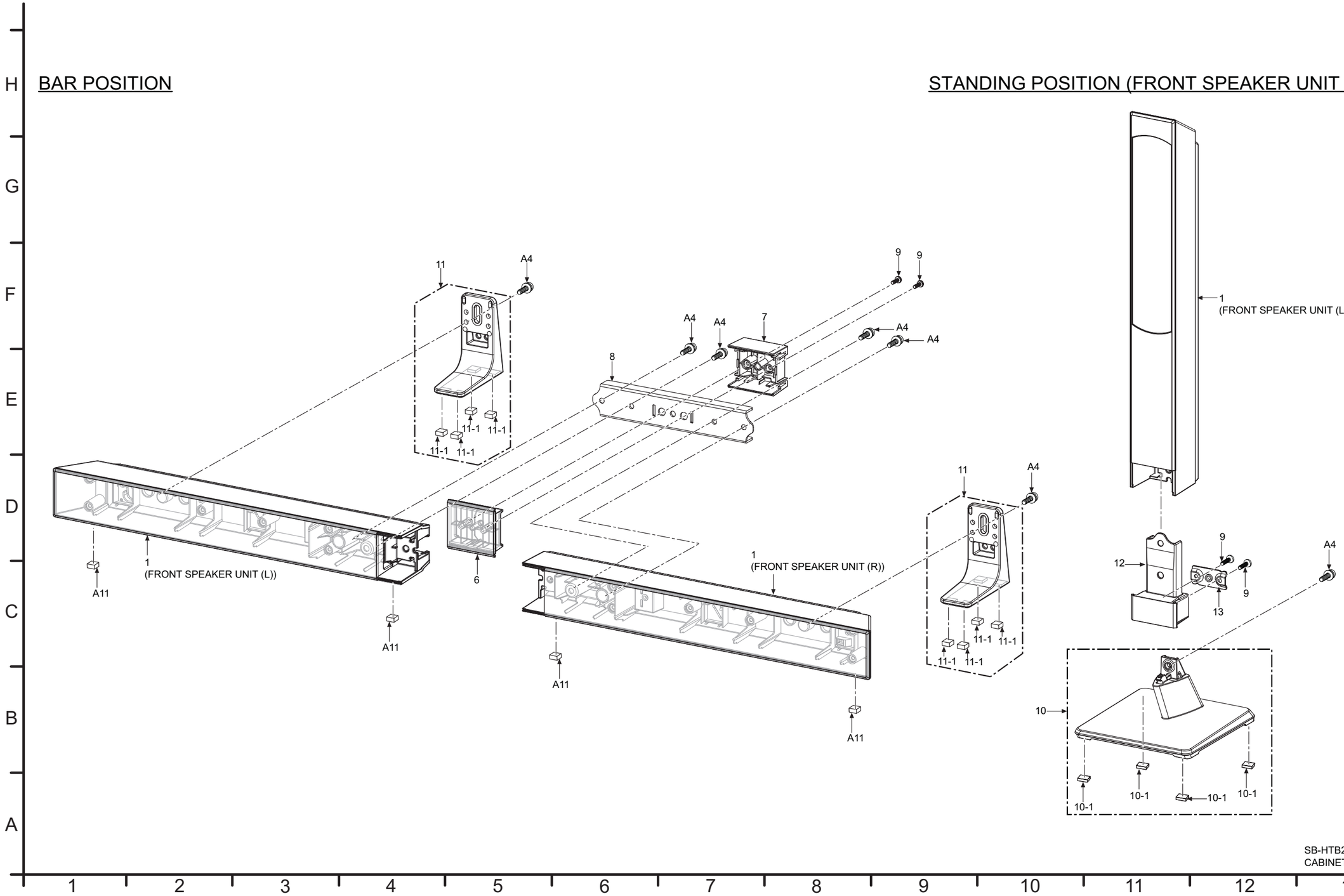


NOTE: " * " PART IS NOT SUPPLIED / REF IS FOR INDICATION ONLY.

19.1.2. Cabinet Parts Location (SB-HTB20)

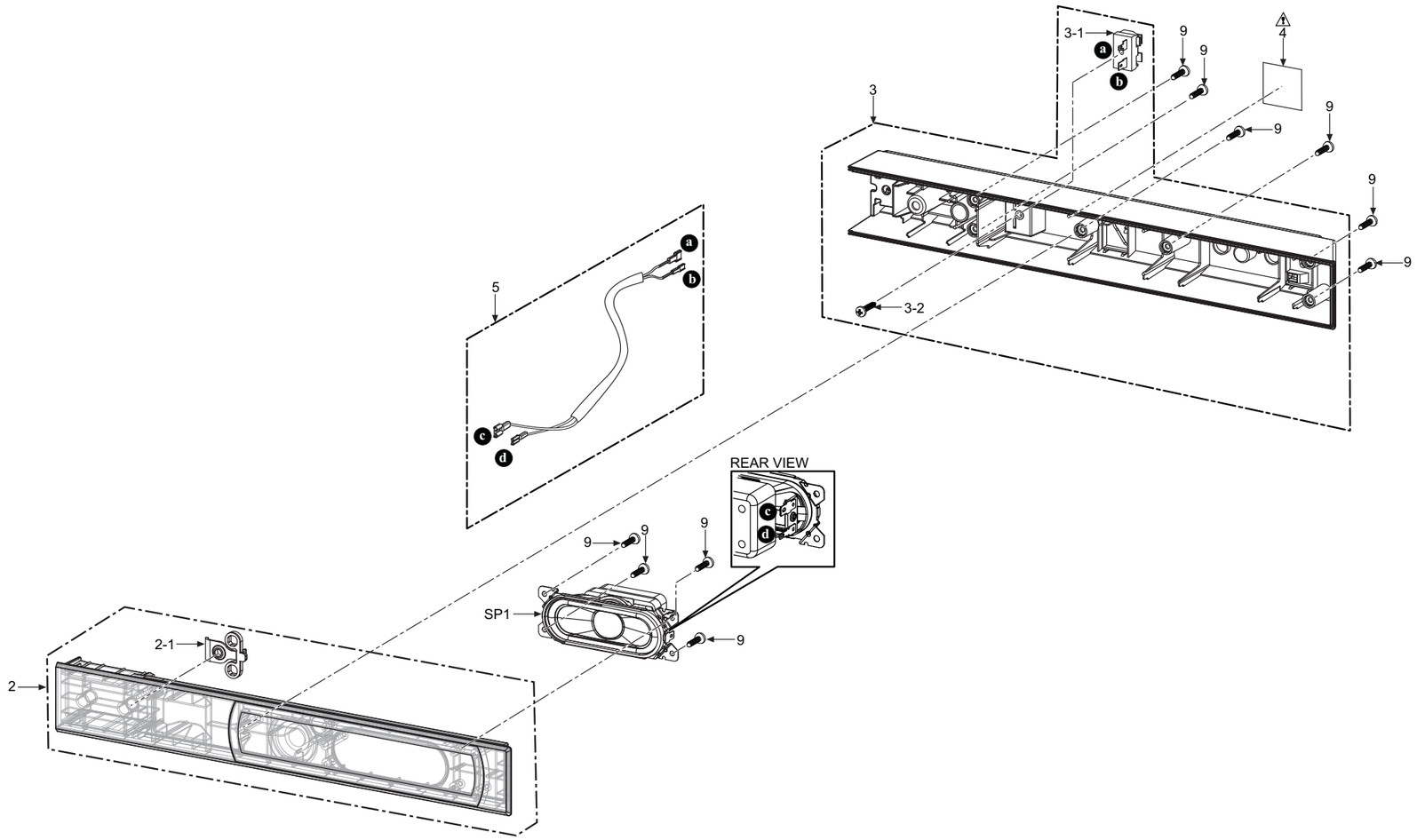
BAR POSITION

STANDING POSITION (FRONT SPEAKER UNIT L/R)

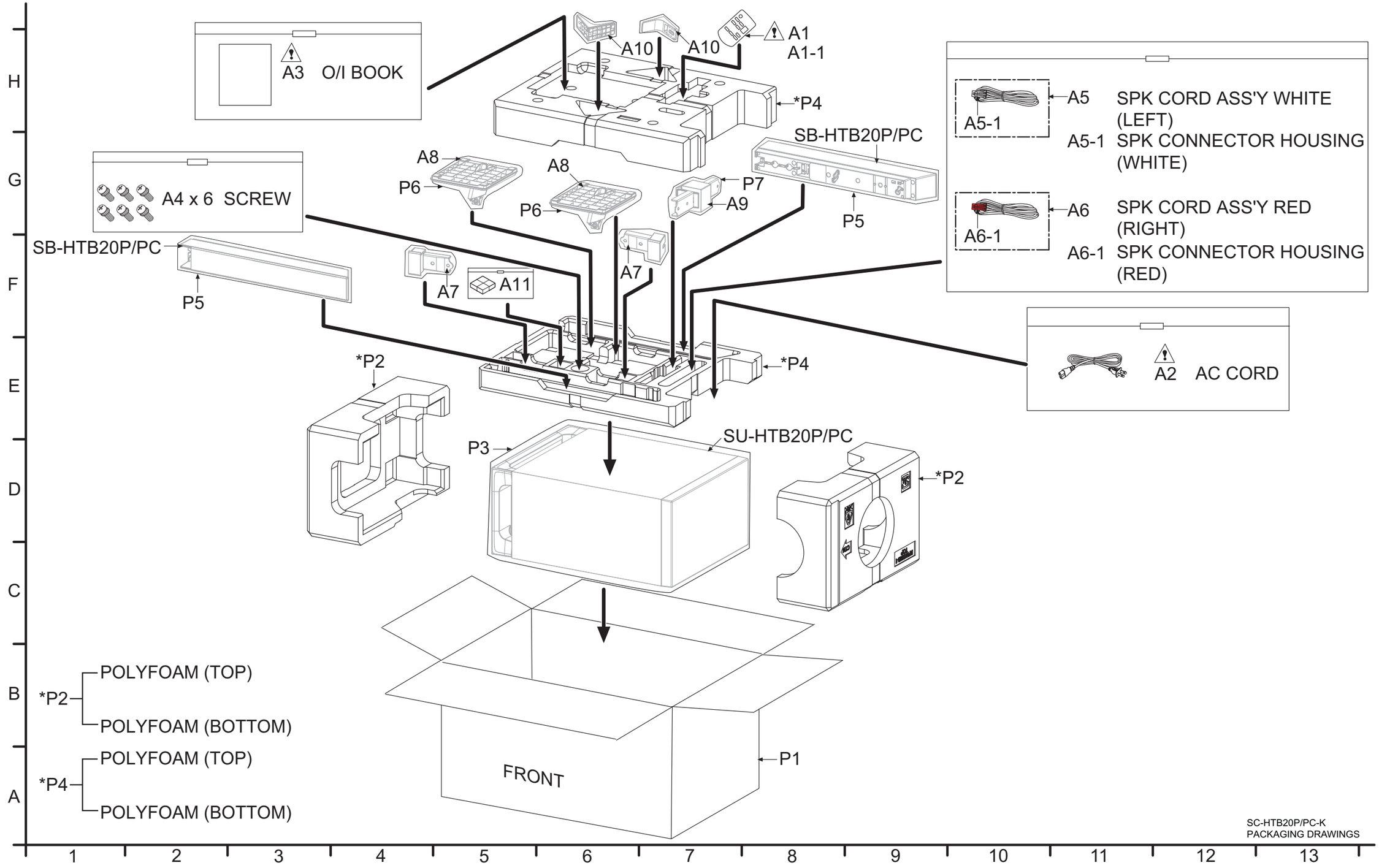


SB-HTB20P/PC-K
CABINET DRAWINGS

FRONT SPEAKER UNIT (L/R)



19.1.3. Packaging (SC-HTB20)



19.1.4. Mechanical Replacement Parts List

Important Safety Notice

Components identified by ⚠ mark have special characteristics important for safety.
When replacing any of these components, use only manufacturer's specified parts.

RTL (Retention Time Limited)

Note: The marking (RTL) indicates that the Retention Time is Limited for this item. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependant on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be available.

Note:

- When replacing any of these components, be sure to use only manufacturer's specified parts shown in the replacement part list.
- The parenthesized indications on the Remarks column specify the destination & product color (Refer to the cover page for the information).
- Parts without these indications shall be used for all areas.
- This product uses a laser diode. Refer to "Precaution of Laser Diode".
- All parts mentioned are supplied by PAVCSG unless indicated likewise.
- Parts mentioned [SPG] in the Remarks column are supplied by PAVC-CSG.
- Reference for O/I book languages are as follows:

Ar:	Arabic	Du:	Dutch	It:	Italian	Sp:	Spanish
Cf:	Canadian French	En:	English	Ko:	Korean	Sw:	Swedish
Cz:	Czech	Fr:	French	Po:	Polish	Co:	Traditional Chinese
Da:	Danish	Ge:	German	Ru:	Russian	Cn:	Simplified Chinese
Pe:	Persian	Ur:	Ukraine	Pr:	Portuguese		

19.1.4.1. Active Subwoofer (SU-HTB20)

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
			CABINET AND CHASSIS		
	1	REE1684	40P FFC(MAIN TO DAMP)	1	
	2	REE1700	11P FFC(PANEL - MAIN)	1	
⚠	3	REX1508	1P RED WIRE(AC INLET - SMPS)	1	
⚠	4	REX1509	1P BLK WIRE(AC INLET - SMPS)	1	
	5	REE1698	6P CABLE WIRE ASS'Y(SMPS-DAMP)	1	
	6	REE1699	9P FFC ASS'Y (SMPS - MAIN)	1	
	7	J0KG00000071	FERRITE CORE	2	
	8	L6FAYYYG0005	FAN UNIT	1	
	9	RFKKUHTB20PK	TOP PANEL ASS'Y	1	
	10	RGL0756-Q	LIGHTING PIECE	2	
⚠	11	RGN3158-K	NAME PLATE	1	P
⚠	11	RGN3158A-K	NAME PLATE	1	PC
	13	RXK0681-J	BOTTOM PANEL ASS'Y	1	
	14	RGU2748-K	OPERATION BUTTON	1	
	15	RHD26046	SCREW	3	
	16	RHD30119-S	SCREW	8	
	17	RHD30172	SCREW	13	
	18	RHD30102-1	SCREW	2	
	19	RHDX261002	SCREW	3	
	20	RKA0072-KJ	LEG RUBBER	4	
	21	RFKBUHTB20PK	SPEAKER BOX ASS'Y	1	
	22	RMA2332	TOP PANEL SUPPORT L	3	
	23	RMA2333	TOP PANEL SUPPORT R	3	
	24	RMF0443	NONWOVEN TAPE	1	
	25	RMF0494	HIMELON	1	
⚠	26	RFKHUHTB20PK	REAR PANEL ASS'Y	1	
	27	RMG0895-K	CUSHION	2	
	28	RMV0380-1	AC INLET COVER	1	
	29	RMZ1295	BARRIER (DAMP)	1	
	30	RSC1087	MAIN BOTTOM SHIELD	1	
	31	RSC1088	MAIN UPPER SHIELD	1	
	32	RSC1089	D-AMP SHIELD	1	
	33	RSC1090	SMPS MAIN SHIELD	1	
	34	XTB3+10JFJK	SCREW	12	
	35	XTB4+16AFJK	SCREW	22	
	37	RMZ1105	HEAT SINK SPACER	3	
	38	RSCX1060	RADIATION SHEET	1	
			SPEAKER		
	SP61	L0AA16A00052	WOOFER SPEAKER	1	

19.1.4.2. Front Speakers (SB-HTB20)

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
			CABINET AND CHASSIS		

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
	1	RFKABHTB20PL	SPEAKER ASS'Y (L)	1	
	1	RFKABHTB20PR	SPEAKER ASS'Y (R)	1	
	2	RFKGBHTB20PK	FRONT PANEL ASS'Y	1	
	2-1	RMQ1952	DOCKING SUPPORT SPRING	1	
	3	RFKHBHTB20PL	REAR CABINET ASS'Y (L)	1	
	3	RFKHBHTB20PR	REAR CABINET ASS'Y (R)	1	
	3-1	K4BC02B00017	TERMINAL(SANJI TERMINAL)	1	
	3-2	XTB3+10JFJK	SCREW	1	
⚠	4	RGN3157-K	NAME PLATE (LEFT)	1	
⚠	4	RGN3157A-K	NAME PLATE (RIGHT)	1	
	5	REX1511	TRANSIT WIRE	1	
	6	RKM0681-K	DOCKING FRONT CABINET	1	
	7	RKS0500-K	DOCKING REAR CABINET	1	
	8	RML0751-2	DOCKING ARM	1	
	9	XTB3+10JFJK	SCREW	14	
	10	RYK1688-K	STAND ASS'Y	1	
	10-1	RKAX0028-K	LEG FELT	4	
	11	RYQ0853-KJ	LEG STAND ASS'Y	2	
	11-1	RKAX0042-K	LEG CUSHION	8	
	12	RK00344-K	FRONT ORNAMENT	1	
	13	RMA2367	METAL PLATE STAND	1	
			SPEAKERS		
	SP1	EAS10S659F	Full Range SPEAKER	1	

19.1.4.3. Packaging & Accessories (SC-HTB20)

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
			ACCESSORIES		
⚠	A1	N2QAYC000064	REMOTE CONTROL	1	
	A1-1	RKK-HTB10GNK	R/C BATTERY COVER	1	
⚠	A2	K2CB2CB00021	AC CORD	1	
⚠	A3	VQT4D53	O/I BOOK (En)	1	
⚠	A3	VQT4D54	O/I BOOK (Cf)	1	PC
	A4	XYN5+J14FJK	SCREW	6	
	A5	REEX1267A	SPK CORD ASSY (LEFT)	1	
	A5-1	RHQX1002W	SPK CONNECTOR HOUSING (WHITE)	1	
	A6	REEX1266A	SPK CORD ASSY (RIGHT)	1	
	A6-1	RHQX1002R	SPK CONNECTOR HOUSING (RED)	1	
	A7	RAQ0088	FRONT ORNAMENT UNIT	2	
	A8	RYK1688-K	BASE STAND ASSY	2	
	A9	RAQ0087	SPEAKER JOINT	1	
	A10	RYQ0853-KJ	LEG STAND UNIT	2	
	A11	RKAX0028-K	LEG CUSHION	4	
			PACKING MATERI-ALS		
	P1	RPG9946	PACKING CASE	1	P
	P1	RPG9947	PACKING CASE	1	PC
	P2	RPNX1090-1	POLYFOAM (SU-HTB)	1	
	P3	RPFX1044GN	MIRAMAT BAG (SU-HTB)	1	
	P4	RPN2430	POLYFOAM (SB-HTB)	1	
	P5	RPF0560	MIRAMAT BAG (SB-HTB)	2	
	P6	RPF0561	MIRAMAT BAG (STAND BASE)	2	
	P7	RPF0562	MIRAMAT BAG (SPEAKER JOINT)	1	

19.2. Electrical Replacement Parts List

Important Safety Notice

Components identified by ⚠ mark have special characteristics important for safety.
When replacing any of these components, use only manufacturer's specified parts.

RTL (Retention Time Limited)

Note: The marking (RTL) indicates that the Retention Time is Limited for this item. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependant on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be available.

Note:

- When replacing any of these components, be sure to use only manufacturer's specified parts shown in the replacement part list.
- The parenthesized indications on the Remarks column specify the destination & product color (Refer to the cover page for the information).
- Parts without these indications shall be used for all areas.
- This product uses a laser diode. Refer to "Precaution of Laser Diode".
- Capacitor value are in microfarads (uF) unless specified otherwise, P=Pico-farads (pF), F=Farads.
- Resistance values are in ohms, unless specified otherwise, 1K=1000 (OHM).
- All parts mentioned are supplied by PAVCSG unless indicated likewise.
- Parts mentioned [SPG] in the Remarks column are supplied by PAVC-CSG.

19.2.1. Active Subwoofer (SU-HTB20)

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
			CIRCUITS PRINTED BOARDS		
	PCB1	REP4735J	MAIN P.C.B.	1	(RTL)
	PCB2	REP4807A	D-AMP P.C.B.	1	(RTL)
	PCB3	REP4808A	PANEL P.C.B.	1	(RTL)
⚠	PCB4	REP4737G	SMPS P.C.B.	1	(RTL)
⚠	PCB5	REP4737G	AC INLET P.C.B.	1	(RTL)
			INTEGRATED CIRCUITS		
	IC2001	C2HBCY000102	IC	1	
	IC2002	C0JBAR000396	IC	1	
	IC2003	C3ABMY000029	IC	1	
	IC2301	RFKWMHTB20P	IC	1	
	IC2303	C3EBEC000047	IC	1	
	IC2401	C1AB00003174	IC	1	
	IC2501	C1AB00002975	IC	1	
	IC2502	C0JBAB000986	IC	1	
	IC2503	C0CBCDD00004	IC	1	
	IC2601	C1AB00002989	IC	1	
	IC2602	C0JBAZ001466	IC	1	
	IC2703	C3EBEC000047	IC	1	
	IC2801	C0DBAYH00005	IC	1	
	IC2802	C0DBEYY00146	IC	1	
	IC2803	C0DBAYH00005	IC	1	
	IC2804	C0DBAYH00005	IC	1	
	IC2805	C0DBAYH00005	IC	1	
	IC2806	C0DBAYH00005	IC	1	
	IC2902	C0CBCAG00015	IC	1	
	IC5204	C0JBAB000837	IC	1	
	IC5205	C0JBAE000302	IC	1	
	IC5300	C1AB00003217	IC	1	

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
	IC5301	C1AB00003852	IC	1	
	IC5500	C1AB00003217	IC	1	
	IC5701	C0DABYY00035	IC	1	
	IC5800	C0ABBA000168	IC	1	
	IC5801	C0DABYY00011	IC	1	
	IC5801	C0DBAYH00005	IC	1	
	IC5822	C0EBY0000867	IC	1	
	IC6001	C0JBAQ000073	IC	1	
			TRANSISTORS		
	Q2503	B1ABCF000079	TRANSISTOR	1	
	Q2508	B1CFGD000002	TRANSISTOR	1	
	Q2701	B1HBCFA00003	TRANSISTOR	1	
	Q2702	B1CFGD000002	TRANSISTOR	1	
	Q2703	B1HBCFA00003	TRANSISTOR	1	
	Q2704	B1CFGD000002	TRANSISTOR	1	
	Q2705	B1CFGD000002	TRANSISTOR	1	
	Q2706	B1CFGD000002	TRANSISTOR	1	
	Q5720	B1BABG000007	TRANSISTOR	1	
	Q5760	B1ADCN000010	TRANSISTOR	1	
	Q5761	B1ABCN000001	TRANSISTOR	1	
	Q5801	B1GBCFGG0030	TRANSISTOR	1	
	Q5802	B1ABCF000011	TRANSISTOR	1	
	Q5803	B1ADBL000010	TRANSISTOR	1	
	Q5804	B1ABCF000011	TRANSISTOR	1	
	Q5805	B1ABCF000011	TRANSISTOR	1	
	Q5806	B1ABMF000020	TRANSISTOR	1	
	Q5807	B1GBCFNN0038	TRANSISTOR	1	
	Q5821	B1BACG000048	TRANSISTOR	1	
	Q5863	B1ABGC000001	TRANSISTOR	1	
	Q5864	B1ABGC000001	TRANSISTOR	1	
	QR2301	B1GBCFJJ0048	TRANSISTOR	1	
	QR2302	B1GBCFNN0035	TRANSISTOR	1	
	QR2303	B1GBCFJJ0048	TRANSISTOR	1	
	QR2304	B1GBCFJJ0048	TRANSISTOR	1	
	QR2305	B1GDCFJJ0008	TRANSISTOR	1	

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
	QR2306	B1GDCFJJ0008	TRANSISTOR	1	
	QR2312	B1GBCFJJ0048	TRANSISTOR	1	
	QR2701	B1GBCFJJ0048	TRANSISTOR	1	
	QR2702	B1GBCFJJ0048	TRANSISTOR	1	
	QR2801	B1GBCFNN0035	TRANSISTOR	1	
	QR2804	B1GBCFNN0035	TRANSISTOR	1	
	QR5762	B1GBCFJA0006	TRANSISTOR	1	
	QR5823	B1GDCFJJ0008	TRANSISTOR	1	
	QR5824	B1GBCFJJ0048	TRANSISTOR	1	
	QR5862	B1GBCFGG0030	TRANSISTOR	1	
			DIODES		
	D2001	B0JCCD000017	DIODE	1	
	D2002	B0JCCD000017	DIODE	1	
	D2301	B0JCCD000017	DIODE	1	
	D2302	B0ACCK000012	DIODE	1	
	D2303	B0ACCK000012	DIODE	1	
	D2304	DZ2J075M0L	DIODE	1	
	D2305	B0ACCK000012	DIODE	1	
	D2307	B0ACCK000012	DIODE	1	
	D2308	B0ACCK000012	DIODE	1	
	D2309	B0JCCD000017	DIODE	1	
	D2310	B0JCCD000017	DIODE	1	
	D2321	B0ACCK000012	DIODE	1	
	D2322	DZ2J330M0L	DIODE	1	
	D2323	DZ2J056M0L	DIODE	1	
	D2324	B0ACCK000012	DIODE	1	
	D2325	DZ2J056M0L	DIODE	1	
	D2326	B0ACCK000012	DIODE	1	
	D2392	B0JCME000105	DIODE	1	
	D2501	B0JCCD000017	DIODE	1	
	D2801	B0JCPG000032	DIODE	1	
	D2802	B0JCPG000032	DIODE	1	
	D2803	B0JCPG000032	DIODE	1	
	D2804	B0JCPG000032	DIODE	1	
	D2805	B0JCPG000032	DIODE	1	
	D2806	DZ2J033M0L	DIODE	1	
	D2903	B0ECKP000002	DIODE	1	
	D5301	B0ACCK000005	DIODE	1	
	D5401	B0ACCK000005	DIODE	1	
	D5501	B0ACCK000005	DIODE	1	
	D5701	B0EBNR000045	DIODE	1	
	D5702	B0EAKT000063	DIODE	1	
	D5704	B0BC020A0267	DIODE	1	
	D5705	B0BC020A0267	DIODE	1	
	D5706	B0ACCK000005	DIODE	1	
	D5712	B0EAMM000057	DIODE	1	
	D5713	DZ2J330M0L	DIODE	1	
	D5721	B0EAMM000057	DIODE	1	
	D5760	B0ACCK000005	DIODE	1	
	D5801	B0ACCK000005	DIODE	1	
	D5801	DZ2J270M0L	DIODE	1	
	D5802	B0HBSM000054	DIODE	1	
	D5802	DZ2J330M0L	DIODE	1	
	D5803	B0ACCK000005	DIODE	1	
	D5803	B0EAMM000057	DIODE	1	
	D5804	B0ACCK000005	DIODE	1	
	D5805	DZ2J150M0L	DIODE	1	
	D5807	B0ACCK000005	DIODE	1	
	D5823	DZ2J068M0L	DIODE	1	
	D5905	B0JCPG000032	DIODE	1	
	D6001	B3ABA0000187	DIODE	1	
	D6002	B3ABA0000187	DIODE	1	
	D6003	B3ABA0000187	DIODE	1	
	D6004	B3ADA0000087	DIODE	1	
	D6005	B3ABA0000187	DIODE	1	
	D6006	B3ADA0000087	DIODE	1	
⚠	DZ5701	ERZVA5Z471	ZNR	1	
			VARISTORS		
	VA2501	EZAEG2A50AX	FILTER	1	

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
	VA2502	EZAEG2A50AX	FILTER	1	
	VA2503	EZAEG2A50AX	FILTER	1	
	VA2504	EZAEG2A50AX	FILTER	1	
	VA2505	EZAEG2A50AX	FILTER	1	
	VA2506	EZAEG2A50AX	FILTER	1	
	VA2507	EZAEG2A50AX	FILTER	1	
	VA2508	EZAEG2A50AX	FILTER	1	
	VA2509	EZJZ0V80008B	VARISTOR	1	
	VA2510	EZJZ0V80008B	VARISTOR	1	
	VA2511	EZJZ0V80008B	VARISTOR	1	
	VA2512	EZJZ0V80008B	VARISTOR	1	
	VA2513	EZJZ0V80008B	VARISTOR	1	
	VA2701	EZAEG2A50AX	FILTER	1	
	VA2702	EZAEG2A50AX	FILTER	1	
	VA2703	EZAEG2A50AX	FILTER	1	
	VA2704	EZAEG2A50AX	FILTER	1	
	VA2705	EZAEG2A50AX	FILTER	1	
	VA2706	EZAEG2A50AX	FILTER	1	
	VA2707	EZAEG2A50AX	FILTER	1	
	VA2708	EZAEG2A50AX	FILTER	1	
	VA2709	EZJZ0V80008B	VARISTOR	1	
	VA2710	EZJZ0V80008B	VARISTOR	1	
	VA2711	EZJZ0V80008B	VARISTOR	1	
	VA2712	EZJZ0V80008B	VARISTOR	1	
			SWITCHES		
	S6001	EVQ21405RJ	SW POWER	1	
	S6002	EVQ21405RJ	SW VOLUME +	1	
	S6003	EVQ21405RJ	SW VOLUME -	1	
	S6004	EVQ21405RJ	SW SELECTOR	1	
			CONNECTORS		
	CN1	K1MY09AA0124	9P CONNECTOR	1	
	CN2200	K1MN40AA0082	40P CONNECTOR	1	
	CN2202	K1MN09AA0046	9P CONNECTOR	1	
	CN2204	K1MN11AA0046	11P CONNECTOR	1	
	CN2301	K1MN10BA0147	10P CONNECTOR	1	
	CN2302	K1MY10AA0021	10P CONNECTOR	1	
	CN2303	K1KA06AA0104	6P CONNECTOR	1	
	CN5100	K1KA02BA0125	2P CONNECTOR	1	
	CN5200	K1MN40AA0082	40P CONNECTOR	1	
	CN5801	K1KA03A00546	3P CONNECTOR	1	
	CN5900	K1KA06A00452	6P CONNECTOR	1	
	CN6001	K1MN11BA0004	11P CONNECTOR	1	
	JW1	K1YZ06000002	6P CONNECTOR	1	
			COILS AND INDUCTORS		
	L2501	J0ZZB0000148	FILTER	1	
	L2502	J0ZZB0000148	FILTER	1	
	L2601	G1CR82KA0010	INDUCTOR	1	
	L2801	G1C330MA0291	INDUCTOR	1	
	L2802	G1C330MA0291	INDUCTOR	1	
	L2803	G1C330MA0291	INDUCTOR	1	
	L2804	G1C330MA0291	INDUCTOR	1	
	L2805	G1C330MA0291	INDUCTOR	1	
	L5201	J0JBC0000015	INDUCTOR	1	
	L5301	G0C100Z00007	INDUCTOR	1	
	L5303	G0B9R5K00005	LINE FILTER	1	
	L5401	G0C100Z00007	INDUCTOR	1	
	L5403	G0B9R5K00005	LINE FILTER	1	
	L5501	G0C100Z00007	INDUCTOR	1	
	L5503	G0B9R5K00005	LINE FILTER	1	
	L5601	G0C100Z00007	INDUCTOR	1	
⚠	L5702	ELF19H520E	LINE FILTER	1	
⚠	L5703	ELF19H520E	LINE FILTER	1	
	L5901	J0JKB0000020	INDUCTOR	1	
	L5902	J0JKB0000020	INDUCTOR	1	
	L5905	G1C330MA0234	INDUCTOR	1	
	LB2006	J0JHC0000078	INDUCTOR	1	

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
	LB2007	J0JHC0000078	INDUCTOR	1	
	LB2011	J0JHC0000078	INDUCTOR	1	
	LB2403	J0JHC0000078	INDUCTOR	1	
	LB2407	J0JHC0000078	INDUCTOR	1	
	LB2408	J0JBC0000014	INDUCTOR	1	
	LB2501	J0JCC0000119	INDUCTOR	1	
	LB2502	J0JCC0000119	INDUCTOR	1	
	LB2503	J0JCC0000119	INDUCTOR	1	
	LB2504	J0JCC0000119	INDUCTOR	1	
	LB2505	J0JHC0000078	INDUCTOR	1	
	LB2506	J0JCC0000119	INDUCTOR	1	
	LB2507	J0JHC0000078	INDUCTOR	1	
	LB2508	J0JHC0000078	INDUCTOR	1	
	LB2509	J0JHC0000078	INDUCTOR	1	
	LB2510	J0JHC0000078	INDUCTOR	1	
	LB2511	J0JHC0000078	INDUCTOR	1	
	LB2512	J0JHC0000078	INDUCTOR	1	
	LB2515	J0JHC0000078	INDUCTOR	1	
	LB2601	J0JHC0000078	INDUCTOR	1	
	LB2602	J0JHC0000078	INDUCTOR	1	
	LB2607	J0JHC0000078	INDUCTOR	1	
	LB2608	J0JHC0000078	INDUCTOR	1	
	LB2703	J0JCC0000119	INDUCTOR	1	
	LB2704	J0JCC0000119	INDUCTOR	1	
	LB2705	J0JCC0000119	INDUCTOR	1	
	LB2706	J0JCC0000119	INDUCTOR	1	
	LB2801	J0JHC0000078	INDUCTOR	1	
	LB2802	J0JHC0000078	INDUCTOR	1	
	LB2803	J0JHC0000078	INDUCTOR	1	
	LB2804	J0JHC0000078	INDUCTOR	1	
	LB2805	J0JHC0000078	INDUCTOR	1	
	LB2860	J0JBC0000014	INDUCTOR	1	
	LB2865	J0JBC0000014	INDUCTOR	1	
	LB2869	J0JBC0000014	INDUCTOR	1	
	LB2891	J0JBC0000014	INDUCTOR	1	
	LB2892	J0JBC0000014	INDUCTOR	1	
	LB2893	J0JBC0000014	INDUCTOR	1	
	LB2894	J0JBC0000014	INDUCTOR	1	
	LB2895	J0JBC0000014	INDUCTOR	1	
	LB2896	J0JBC0000014	INDUCTOR	1	
	LB2897	J0JBC0000014	INDUCTOR	1	
	LB2904	J0JHC0000078	INDUCTOR	1	
	LB2905	J0JHC0000078	INDUCTOR	1	
	LB2906	J0JCC0000396	INDUCTOR	1	
	LB5251	J0JBC0000014	INDUCTOR	1	
			TRANSFORMER		
⚠	T5701	ETS35BC2ZGAD	MAIN TRANSFORMER	1	
			PHOTO DETECTOR		
	Z6001	PNJ4881M02VT	PHOTO DETECTOR	1	
			PHOTO COUPLERS		
⚠	PC5720	B3PBA0000503	PHOTO COUPLER	1	
⚠	PC5760	B3PBA0000503	PHOTO COUPLER	1	
			TERMINALS		
	ZJ5701	K4CZ01000027	TERMINAL	1	
	ZJ5703	K4CZ01000027	TERMINAL	1	
			FUSE		
⚠	F1	K5G312Y00007	FUSE	1	
			OSCILLATORS		
	X2001	H0J245500101	CRYSTAL OSCILLA-TOR	1	
	X2301	H2D400400018	CRYSTAL OSCILLA-TOR	1	
	X2302	H0J327200172	CRYSTAL OSCILLA-TOR	1	
	X2601	H0J283500022	CRYSTAL OSCILLA-TOR	1	
	X5302	H0J245500101	CRYSTAL OSCILLA-TOR	1	
			THERMISTOR		
⚠	TH5702	D4CAA2R20001	THERMISTOR	1	
			JACKS		
	JK2501	K1FY119E0055	JK HDMI AV OUT (TV(ARC))	1	
	JK2701	K1FY119E0055	JK HDMI AV IN (BD/DVD)	1	
	JK5251	B3RAB0000056	JK DIGITAL AUDIO IN (TV (OPT1))	1	
	JK5252	B3RAB0000056	JK DIGITAL AUDIO IN (AUX(OPT2))	1	
	P5100	K4AL02B00002	JK SPEAKER (FRONT)	1	
⚠	P5702	K2AB2B000007	AC INLET	1	
			CHIP JUMPERS		
	D5710	ERJ6GEY0R00V	0 1/8W	1	
	D5812	ERJ6GEY0R00V	0 1/8W	1	
	K104	D0GAR00J0008	0 1/16W	1	
	K111	D0GAR00J0008	0 1/16W	1	
	K204	D0GAR00J0008	0 1/16W	1	
	K211	D0GAR00J0008	0 1/16W	1	
	K5722	ERJ3GEY0R00V	0 1/10W	1	
	LB2609	D0GAR00J0008	0 1/16W	1	
	LB2610	D0GAR00J0008	0 1/16W	1	
	LB2618	D0GBR00JA008	0 1/10W	1	
	W1	ERJ6GEY0R00V	0 1/8W	1	
	W2	ERJ6GEY0R00V	0 1/8W	1	
	W3	ERJ3GEY0R00V	0 1/10W	1	
	W5	ERJ6GEY0R00V	0 1/8W	1	
	W6	ERJ6GEY0R00V	0 1/8W	1	
	W7	ERJ6GEY0R00V	0 1/8W	1	
	W8	ERJ3GEY0R00V	0 1/10W	1	
	W9	ERJ6GEY0R00V	0 1/8W	1	
	W10	ERJ6GEY0R00V	0 1/8W	1	
	W11	ERJ6GEY0R00V	0 1/8W	1	
	W12	ERJ6GEY0R00V	0 1/8W	1	
	W13	ERJ6GEY0R00V	0 1/8W	1	
			RESISTORS		
	R2003	D0GA330JA023	33 1/16W	1	
	R2004	D0GA102JA023	1K 1/16W	1	
	R2006	D0GA330JA023	33 1/16W	1	
	R2007	D0GA330JA023	33 1/16W	1	
	R2008	D0GA330JA023	33 1/16W	1	
	R2009	D0GA332JA023	3.3K 1/16W	1	
	R2010	D0GA332JA023	3.3K 1/16W	1	
	R2011	D0GA332JA023	3.3K 1/16W	1	
	R2013	D0GA680JA023	68 1/16W	1	
	R2014	D0GA330JA023	33 1/16W	1	
	R2015	D0GA330JA023	33 1/16W	1	
	R2017	D0GAR00J0008	0 1/16W	1	
	R2021	D0GA332JA023	3.3K 1/16W	1	
	R2022	D0GA332JA023	3.3K 1/16W	1	
	R2029	D0GA330JA023	33 1/16W	1	
	R2030	D0GA330JA023	33 1/16W	1	
	R2031	D0GA330JA023	33 1/16W	1	
	R2032	ERJ3RBD512V	5.1K 1/16W	1	
	R2033	D0GB105JA008	1M 1/10W	1	
	R2035	D0GA332JA023	3.3K 1/16W	1	
	R2036	D0GA332JA023	3.3K 1/16W	1	

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
	R2037	D0GA101JA023	100 1/16W	1	
	R2038	D0GA102JA023	1K 1/16W	1	
	R2039	D0GA102JA023	1K 1/16W	1	
	R2040	D0GA101JA023	100 1/16W	1	
	R2041	D0GA101JA023	100 1/16W	1	
	R2042	D0GA101JA023	100 1/16W	1	
	R2043	D0GA102JA023	1K 1/16W	1	
	R2044	D0GA330JA023	33 1/16W	1	
	R2045	D0GA202JA023	2K 1/16W	1	
	R2060	D0GA472JA023	4.7K 1/16W	1	
	R2061	D0GA472JA023	4.7K 1/16W	1	
	R2119	D0GAR00J0008	0 1/16W	1	
	R2258	D0GA102JA023	1K 1/16W	1	
	R2281	ERJ2GEJ224X	220K 1/16W	1	
	R2284	D0GA104JA023	100K 1/16W	1	
	R2285	D0GA104JA023	100K 1/16W	1	
	R2286	D0GA224JA023	220K 1/16W	1	
	R2293	D0GA224JA023	220K 1/16W	1	
	R2294	D0GA473JA023	47K 1/16W	1	
	R2295	D0GA472JA023	4.7K 1/16W	1	
	R2296	D0GA472JA023	4.7K 1/16W	1	
	R2301	D0GA101JA023	100 1/16W	1	
	R2302	D0GA104JA023	100K 1/16W	1	
	R2303	D0GA101JA023	100 1/16W	1	
	R2305	D0GA103JA023	10K 1/16W	1	
	R2306	D0GA472JA023	4.7K 1/16W	1	
	R2307	D0GA154JA023	150K 1/16W	1	
	R2308	D0GA472JA023	4.7K 1/16W	1	
	R2309	D0GA104JA023	100K 1/16W	1	
	R2310	D0GA104JA023	100K 1/16W	1	
	R2311	D0GA472JA023	4.7K 1/16W	1	
	R2312	D0GA102JA023	1K 1/16W	1	
	R2314	ERJ2GEJ151X	150 1/16W	1	
	R2315	ERJ2GEJ151X	150 1/16W	1	
	R2316	D0GA101JA023	100 1/16W	1	
	R2317	D0GA104JA023	100K 1/16W	1	
	R2318	D0GA104JA023	100K 1/16W	1	
	R2319	D0GA101JA023	100 1/16W	1	
	R2320	D0GA101JA023	100 1/16W	1	
	R2321	D0GA101JA023	100 1/16W	1	
	R2322	D0GA104JA023	100K 1/16W	1	
	R2323	D0GA681JA023	680 1/16W	1	
	R2324	D0GA101JA023	100 1/16W	1	
	R2325	D0GA472JA023	4.7K 1/16W	1	
	R2326	D0GA101JA023	100 1/16W	1	
	R2329	D0GA101JA023	100 1/16W	1	
	R2330	D0GA101JA023	100 1/16W	1	
	R2331	D0GA101JA023	100 1/16W	1	
	R2332	D0GA101JA023	100 1/16W	1	
	R2333	D0GA470JA023	47 1/16W	1	
	R2334	D0GA470JA023	47 1/16W	1	
	R2335	D0GA472JA023	4.7K 1/16W	1	
	R2336	D0GA101JA023	100 1/16W	1	
	R2337	D0GA101JA023	100 1/16W	1	
	R2339	D0GA101JA023	100 1/16W	1	
	R2340	D0GA101JA023	100 1/16W	1	
	R2341	D0GA101JA023	100 1/16W	1	
	R2342	D0GA101JA023	100 1/16W	1	
	R2344	D0GA101JA023	100 1/16W	1	
	R2345	D0GA101JA023	100 1/16W	1	
	R2346	D0GA101JA023	100 1/16W	1	
	R2347	D0GA473JA023	47K 1/16W	1	
	R2348	D0GA472JA023	4.7K 1/16W	1	
	R2349	D0GA472JA023	4.7K 1/16W	1	
	R2350	D0GA473JA023	47K 1/16W	1	
	R2351	D0GA101JA023	100 1/16W	1	
	R2352	D0GA104JA023	100K 1/16W	1	
	R2355	ERJ2GEJ101X	100 1/16W	1	
	R2356	ERJ2GEJ472X	4.7K 1/16W	1	
	R2357	D0GA101JA023	100 1/16W	1	
	R2359	D0GA101JA023	100 1/16W	1	
	R2361	D0GA101JA023	100 1/16W	1	
	R2362	D0GA104JA023	100K 1/16W	1	

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
	R2365	D0GA104JA023	100K 1/16W	1	
	R2366	D0GA101JA023	100 1/16W	1	
	R2367	D0GA102JA023	1K 1/16W	1	
	R2368	D0GA102JA023	1K 1/16W	1	
	R2372	D0GA104JA023	100K 1/16W	1	
	R2374	D0GA101JA023	100 1/16W	1	
	R2375	D0GA101JA023	100 1/16W	1	
	R2376	D0GAR00J0008	0 1/16W	1	
	R2378	D0GA101JA023	100 1/16W	1	
	R2379	D0GA101JA023	100 1/16W	1	
	R2380	D0GA101JA023	100 1/16W	1	
	R2381	D0GA104JA023	100K 1/16W	1	
	R2382	D0GA104JA023	100K 1/16W	1	
	R2383	D0GA101JA023	100 1/16W	1	
	R2384	D0GA101JA023	100 1/16W	1	
	R2385	D0GA101JA023	100 1/16W	1	
	R2386	D0GA102JA023	1K 1/16W	1	
	R2388	D0GA104JA023	100K 1/16W	1	
	R2389	D0GA103JA023	10K 1/16W	1	
	R2390	D0GA103JA023	10K 1/16W	1	
	R2391	D0GA101JA023	100 1/16W	1	
	R2393	D0GA102JA023	1K 1/16W	1	
	R2395	D0GA104JA023	100K 1/16W	1	
	R2411	D0GA473JA023	47K 1/16W	1	
	R2415	D0GA102JA023	1K 1/16W	1	
	R2417	D0GA102JA023	1K 1/16W	1	
	R2418	D0GA101JA023	100 1/16W	1	
	R2419	D0GA101JA023	100 1/16W	1	
	R2420	D0GA473JA023	47K 1/16W	1	
	R2422	D0GA102JA023	1K 1/16W	1	
	R2424	D0GA330JA023	33 1/16W	1	
	R2425	D0GA330JA023	33 1/16W	1	
	R2426	D0GA330JA023	33 1/16W	1	
	R2428	D0GA101JA023	100 1/16W	1	
	R2433	ERJ2RHD302X	3.0K 1/16W	1	
	R2503	D0GA510JA023	51 1/16W	1	
	R2504	D0GA103JA023	10K 1/16W	1	
	R2505	D0GA273JA023	27K 1/16W	1	
	R2506	D0GA104JA023	100K 1/16W	1	
	R2507	D0GA473JA023	47K 1/16W	1	
	R2508	D0GA273JA023	27K 1/16W	1	
	R2509	D0GA102JA023	1K 1/16W	1	
	R2510	D0GA101JA023	100 1/16W	1	
	R2511	D0GA182JA023	1.8K 1/16W	1	
	R2512	D0GA182JA023	1.8K 1/16W	1	
	R2517	D0GA221JA023	220 1/16W	1	
	R2521	D0GA103JA023	10K 1/16W	1	
	R2525	D0GA103JA023	10K 1/16W	1	
	R2526	D0GB101JA008	100 1/10W	1	
	R2530	D0GA473JA023	47K 1/16W	1	
	R2534	D0GA180JA023	18 1/16W	1	
	R2535	ERJ2RHD681X	680 1/16W	1	
	R2536	D0GA470JA023	47 1/16W	1	
	R2537	D0GA470JA023	47 1/16W	1	
	R2538	D0GA102JA023	1K 1/16W	1	
	R2539	D0GA472JA023	4.7K 1/16W	1	
	R2540	D0GA472JA023	4.7K 1/16W	1	
	R2542	D0GA473JA023	47K 1/16W	1	
	R2543	D0GA330JA023	33 1/16W	1	
	R2544	D0GA330JA023	33 1/16W	1	
	R2545	D0GA330JA023	33 1/16W	1	
	R2546	D0GA330JA023	33 1/16W	1	
	R2547	D0GA510JA023	51 1/16W	1	
	R2551	D0GA101JA023	100 1/16W	1	
	R2583	D0GA470JA023	47 1/16W	1	
	R2585	D0GA470JA023	47 1/16W	1	
	R2587	D0GA470JA023	47 1/16W	1	
	R2589	D0GA470JA023	47 1/16W	1	
	R2592	D0GA470JA023	47 1/16W	1	
	R2594	D0GA470JA023	47 1/16W	1	
	R2596	D0GB470JA008	47 1/10W	1	
	R2598	D0GA470JA023	47 1/16W	1	
	R2599	D0GA102JA023	1K 1/16W	1	

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
	R2633	D0GB330JA008	33 1/10W	1	
	R2636	D0GA470JA023	47 1/16W	1	
	R2637	D0GA470JA023	47 1/16W	1	
	R2638	D0GA470JA023	47 1/16W	1	
	R2639	D0GA182JA023	1.8K 1/16W	1	
	R2640	D0GA182JA023	1.8K 1/16W	1	
	R2641	D0GA470JA023	47 1/16W	1	
	R2642	D0GA470JA023	47 1/16W	1	
	R2643	D0GA330JA023	33 1/16W	1	
	R2644	D0GA152JA023	1.5K 1/16W	1	
	R2645	D0GA105JA023	1M 1/16W	1	
	R2646	D0GA472JA023	4.7K 1/16W	1	
	R2647	D0GA220JA023	22 1/16W	1	
	R2648	D0GA102JA023	1K 1/16W	1	
	R2649	D0GA472JA023	4.7K 1/16W	1	
	R2651	D0GA473JA023	47K 1/16W	1	
	R2652	D0GA473JA023	47K 1/16W	1	
	R2704	D0GA102JA023	1K 1/16W	1	
	R2705	D0GA510JA023	51 1/16W	1	
	R2706	D0GA473JA023	47K 1/16W	1	
	R2707	D0GA473JA023	47K 1/16W	1	
	R2708	D0GA470JA023	47 1/16W	1	
	R2709	D0GA470JA023	47 1/16W	1	
	R2710	D0GA473JA023	47K 1/16W	1	
	R2711	D0GA473JA023	47K 1/16W	1	
	R2712	D0GA104JA023	100K 1/16W	1	
	R2713	D0GA103JA023	10K 1/16W	1	
	R2714	D0GB101JA008	100 1/10W	1	
	R2715	D0GA103JA023	10K 1/16W	1	
	R2716	D0GA224JA023	220K 1/16W	1	
	R2717	D0GA224JA023	220K 1/16W	1	
	R2718	D0GA102JA023	1K 1/16W	1	
	R2719	D0GA224JA023	220K 1/16W	1	
	R2720	D0GA224JA023	220K 1/16W	1	
	R2721	D0GA153JA023	15K 1/16W	1	
	R2722	D0GA823JA023	82K 1/16W	1	
	R2723	D0GA4R7JA023	4.7 1/16W	1	
	R2724	D0GA4R7JA023	4.7 1/16W	1	
	R2725	D0GA4R7JA023	4.7 1/16W	1	
	R2726	D0GA4R7JA023	4.7 1/16W	1	
	R2727	D0GA4R7JA023	4.7 1/16W	1	
	R2728	D0GA4R7JA023	4.7 1/16W	1	
	R2729	D0GA4R7JA023	4.7 1/16W	1	
	R2730	D0GA4R7JA023	4.7 1/16W	1	
	R2733	D0GB330JA008	33 1/10W	1	
	R2734	D0GA470JA023	47 1/16W	1	
	R2735	D0GA470JA023	47 1/16W	1	
	R2751	D0GA153JA023	15K 1/16W	1	
	R2752	D0GA153JA023	15K 1/16W	1	
	R2753	D0GA183JA023	18K 1/16W	1	
	R2801	D0GBR00JA008	0 1/10W	1	
	R2804	ERJ3RBD472V	4.7K 1/16W	1	
	R2805	ERJ3RBD821V	820 1/16W	1	
	R2806	ERJ3RBD102V	1K 1/16W	1	
	R2807	ERJ3RBD273V	27K 1/16W	1	
	R2808	ERJ3RBD104V	100K 1/16W	1	
	R2811	ERJ3RBD152V	1.5K 1/16W	1	
	R2812	ERJ3RBD271V	270 1/16W	1	
	R2813	ERJ3RBD102V	1K 1/16W	1	
	R2814	ERJ3RBD272V	2.7K 1/16W	1	
	R2815	ERJ3RBD391V	390 1/16W	1	
	R2816	ERJ3RBD102V	1K 1/16W	1	
	R2817	ERJ6GEY0R00V	0 1/8W	1	
	R2821	ERJ3RBD221V	220 1/16W	1	
	R2822	ERJ3RBD271V	270 1/16W	1	
	R2823	ERJ3RBD102V	1K 1/16W	1	
	R2824	ERJ3RBD152V	1.5K 1/16W	1	
	R2825	ERJ3RBD271V	270 1/16W	1	
	R2826	ERJ3RBD102V	1K 1/16W	1	
	R2830	D0GA473JA023	47K 1/16W	1	
	R2863	D0GAR00J0008	0 1/16W	1	
	R2864	D0GAR00J0008	0 1/16W	1	
	R2915	D0GBR00JA008	0 1/10W	1	

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
	R2918	ERJ3RBD561V	560 1/16W	1	
	R5101	ERJ3GEYJ101V	100 1/10W	1	
	R5102	ERJ3GEYJ101V	100 1/10W	1	
	R5103	ERJ3GEYJ223V	22K 1/10W	1	
	R5104	ERJ3GEYJ101V	100 1/10W	1	
	R5105	ERJ3GEYJ100V	10 1/10W	1	
	R5151	ERJ3GEYJ101V	100 1/10W	1	
	R5152	ERJ3GEYJ101V	100 1/10W	1	
	R5153	ERJ3GEYJ223V	22K 1/10W	1	
	R5154	ERJ3GEYJ101V	100 1/10W	1	
	R5155	ERJ3GEYJ100V	10 1/10W	1	
	R5201	ERJ3GEY0R00V	0 1/10W	1	
	R5202	ERJ3GEY0R00V	0 1/10W	1	
	R5203	ERJ3GEY0R00V	0 1/10W	1	
	R5204	ERJ3GEY0R00V	0 1/10W	1	
	R5205	ERJ3GEY0R00V	0 1/10W	1	
	R5206	ERJ3GEY0R00V	0 1/10W	1	
	R5207	ERJ3GEYJ103V	10K 1/10W	1	
	R5208	ERJ3GEYJ103V	10K 1/10W	1	
	R5301	ERJ3GEYJ100V	10 1/10W	1	
	R5302	ERJ3GEYJ100V	10 1/10W	1	
	R5305	ERJ3GEYJ3R3V	3.3 1/10W	1	
	R5306	ERJ3GEYJ3R3V	3.3 1/10W	1	
	R5307	ERJ3GEYJ104V	100K 1/10W	1	
	R5308	ERJ3GEYJ104V	100K 1/10W	1	
	R5309	ERJ3GEYJ562V	5.6K 1/10W	1	
	R5316	ERJ3GEYJ470V	47 1/10W	1	
	R5317	ERJ3GEYJ470V	47 1/10W	1	
	R5324	ERJ3GEYJ220V	22 1/10W	1	
	R5350	ERJ3GEY0R00V	0 1/10W	1	
	R5351	ERJ3GEYJ2R2V	2.2 1/10W	1	
	R5357	ERJ3GEY0R00V	0 1/10W	1	
	R5358	ERJ3GEYJ105V	1M 1/10W	1	
	R5359	ERJ3GEYJ102V	1K 1/10W	1	
	R5362	ERJ3GEYJ1R0V	1.0 1/10W	1	
	R5363	ERJ3GEY0R00V	0 1/10W	1	
	R5364	ERJ3GEY0R00V	0 1/10W	1	
	R5365	ERJ3GEYJ470V	47 1/10W	1	
	R5366	ERJ3GEYJ470V	47 1/10W	1	
	R5367	ERJ3GEYJ103V	10K 1/10W	1	
	R5384	ERJ3GEYJ1R0V	1.0 1/10W	1	
	R5385	ERJ3GEYJ103V	10K 1/10W	1	
	R5388	ERJ3GEYJ220V	22 1/10W	1	
	R5401	ERJ3GEYJ100V	10 1/10W	1	
	R5402	ERJ3GEYJ100V	10 1/10W	1	
	R5405	ERJ3GEYJ3R3V	3.3 1/10W	1	
	R5406	ERJ3GEYJ3R3V	3.3 1/10W	1	
	R5407	ERJ3GEYJ104V	100K 1/10W	1	
	R5408	ERJ3GEYJ104V	100K 1/10W	1	
	R5409	ERJ3GEYJ562V	5.6K 1/10W	1	
	R5416	ERJ3GEYJ470V	47 1/10W	1	
	R5417	ERJ3GEYJ470V	47 1/10W	1	
	R5501	ERJ3GEYJ100V	10 1/10W	1	
	R5502	ERJ3GEYJ100V	10 1/10W	1	
	R5505	ERJ3GEYJ3R3V	3.3 1/10W	1	
	R5506	ERJ3GEYJ3R3V	3.3 1/10W	1	
	R5507	ERJ3GEYJ104V	100K 1/10W	1	
	R5508	ERJ3GEYJ104V	100K 1/10W	1	
	R5509	ERJ3GEYJ562V	5.6K 1/10W	1	
	R5516	ERJ3GEYJ470V	47 1/10W	1	
	R5517	ERJ3GEYJ470V	47 1/10W	1	
	R5601	ERJ3GEYJ100V	10 1/10W	1	
	R5602	ERJ3GEYJ100V	10 1/10W	1	
⚠	R5700	ERJ8GEYJ155V	1.5M 1/4W	1	
⚠	R5701	ERJ8GEYJ155V	1.5M 1/4W	1	
	R5702	ERJ1TYJ333U	33K 1W	1	
	R5703	ERJ1TYJ333U	33K 1W	1	
⚠	R5710	ERJ8GEYJ155V	1.5M 1/4W	1	
	R5720	ERJ6GEYJ1R0V	1 1/8W	1	
	R5721	ERJ6GEYJ222V	2.2K 1/8W	1	
	R5722	ERJ3GEYJ562V	5.6K 1/10W	1	
	R5727	ERX2SZJR15P	0.15 2W	1	
	R5728	ERJ3GEYJ223V	22K 1/10W	1	

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
	R5732	ERJ3GEYJ471V	470 1/10W	1	
	R5733	ERJ3GEYJ273V	27K 1/10W	1	
	R5760	ERJ8GEYJ474V	470K 1/4W	1	
	R5762	ERJ3GEYJ103V	10K 1/10W	1	
	R5763	ERJ3GEYJ103V	10K 1/10W	1	
	R5764	ERJ3GEYJ472V	4.7K 1/10W	1	
	R5766	ERJ3GEYJ333V	33K 1/10W	1	
	R5767	ERJ3GEYJ223V	22K 1/10W	1	
	R5801	ERJ3GEYJ101V	100 1/10W	1	
	R5801	ERJ3GEYJ472V	4.7K 1/10W	1	
	R5802	ERJ3GEYJ224V	220K 1/10W	1	
	R5802	ERJ3RBD153V	15K 1/16W	1	
	R5803	ERJ3GEYJ224V	220K 1/10W	1	
	R5804	ERJ3GEYJ473V	47K 1/10W	1	
	R5804	ERJ6RBD104V	100K 1/10W	1	
	R5805	ERJ3GEYJ563V	56K 1/10W	1	
	R5805	ERJ3RBD103V	10K 1/16W	1	
	R5806	ERJ3GEYJ333V	33K 1/10W	1	
	R5806	ERJ3GEYJ684V	680K 1/10W	1	
	R5808	ERJ3GEYJ472V	4.7K 1/10W	1	
	R5809	ERJ6GEYJ152V	1.5K 1/8W	1	
	R5810	ERJ3GEYJ221V	220 1/10W	1	
	R5811	ERJ3GEYJ104V	100K 1/10W	1	
	R5812	ERJ3GEYJ274V	270K 1/10W	1	
	R5813	ERJ3GEYJ103V	10K 1/10W	1	
	R5814	ERJ3GEYJ222V	2.2K 1/10W	1	
	R5814	ERJ3GEYJ471V	470 1/10W	1	
	R5815	ERJ3GEYJ273V	27K 1/10W	1	
	R5816	ERJ3GEYJ103V	10K 1/10W	1	
	R5817	ERJ3GEYJ473V	47K 1/10W	1	
	R5817	ERJ3RBD472V	4.7K 1/16W	1	
	R5818	ERJ3GEYJ393V	39K 1/10W	1	
	R5818	ERJ3RBD272V	2.7K 1/16W	1	
	R5819	ERJ6GEYJ151V	150 1/8W	1	
	R5823	ERJ6GEYJ221V	220 1/8W	1	
	R5833	ERJ6GEYJ102V	1K 1/8W	1	
	R5835	ERJ3GEYJ221V	220 1/10W	1	
	R5861	ERJ3GEYJ104V	100K 1/10W	1	
	R5862	ERJ6GEYJ222V	2.2K 1/8W	1	
	R5864	ERJ3GEYJ821V	820 1/10W	1	
	R5866	ERJ6GEY0R00V	0 1/8W	1	
	R5867	ERJ3GEYJ102V	1K 1/10W	1	
	R5868	ERJ3GEYJ473V	47K 1/10W	1	
	R5869	ERJ3GEYJ223V	22K 1/10W	1	
	R5919	ERJ3RBD822V	8.2K 1/16W	1	
	R5920	ERJ3RBD102V	1K 1/16W	1	
	R5921	ERJ3GEYJ103V	10K 1/10W	1	
	R5922	ERJ3GEY0R00V	0 1/10W	1	
	R6001	ERJ3GEYJ221V	220 1/10W	1	
	R6002	ERJ3GEYJ221V	220 1/10W	1	
	R6003	ERJ3GEYJ221V	220 1/10W	1	
	R6004	ERJ3GEYJ271V	270 1/10W	1	
	R6005	ERJ3GEYJ221V	220 1/10W	1	
	R6006	ERJ3GEYJ122V	1.2K 1/10W	1	
	R6007	ERJ3GEYJ122V	1.2K 1/10W	1	
	R6008	ERJ3GEYJ470V	47 1/10W	1	
	R6009	ERJ3GEYJ271V	270 1/10W	1	
	R6010	ERJ3GEYJ101V	100 1/10W	1	
	R6011	ERJ3GEYJ101V	100 1/10W	1	
	R6012	ERJ3GEYJ101V	100 1/10W	1	
	R6013	ERJ3GEYJ103V	10K 1/10W	1	
	R6014	ERJ3GEYJ101V	100 1/10W	1	
			RESISTOR NET-WORKS		
	RX2001	D1H83304A024	RESISTOR NETWORK	1	
	RX2002	D1H83304A024	RESISTOR NETWORK	1	
	RX2003	D1H83304A024	RESISTOR NETWORK	1	
	RX2004	D1H83304A024	RESISTOR NETWORK	1	
	RX2005	D1H83304A024	RESISTOR NETWORK	1	
	RX2006	D1H83304A024	RESISTOR NETWORK	1	
	RX2007	D1H83304A024	RESISTOR NETWORK	1	

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
	RX2008	D1H83304A024	RESISTOR NETWORK	1	
	RX2501	D1H83304A024	RESISTOR NETWORK	1	
	RX2601	D1H83304A024	RESISTOR NETWORK	1	
	RX2602	D1H83304A024	RESISTOR NETWORK	1	
	RX2603	D1H83304A024	RESISTOR NETWORK	1	
	RX2604	D1H83304A024	RESISTOR NETWORK	1	
	RX2605	D1H83304A024	RESISTOR NETWORK	1	
	RX2606	D1H83304A024	RESISTOR NETWORK	1	
	RX2607	D1H83304A024	RESISTOR NETWORK	1	
	RX2608	D1H83304A024	RESISTOR NETWORK	1	
	RX2609	D1H83304A024	RESISTOR NETWORK	1	
	RX2610	D1H83304A024	RESISTOR NETWORK	1	
	RX2611	D1H83304A024	RESISTOR NETWORK	1	
			CAPACITORS		
	C2001	F1G1A1040006	0.1uF 10V	1	
	C2002	F1G1A1040006	0.1uF 10V	1	
	C2003	F1G1A1040006	0.1uF 10V	1	
	C2004	F1G1A1040006	0.1uF 10V	1	
	C2005	F1G1A1040006	0.1uF 10V	1	
	C2006	F1G1A1040006	0.1uF 10V	1	
	C2007	F1G1A1040006	0.1uF 10V	1	
	C2008	F1G1A1040006	0.1uF 10V	1	
	C2009	F1J1A106A043	10uF 10V	1	
	C2010	F1G1A1040006	0.1uF 10V	1	
	C2011	F1G1H100A565	10pF 50V	1	
	C2012	F1G1H100A565	10pF 50V	1	
	C2013	F1G1A1040006	0.1uF 10V	1	
	C2014	F1G1A1040006	0.1uF 10V	1	
	C2015	F1G1A1040006	0.1uF 10V	1	
	C2016	F1G1A1040006	0.1uF 10V	1	
	C2017	F1G1A1040006	0.1uF 10V	1	
	C2018	F1J1A106A043	10uF 10V	1	
	C2019	F1J1A106A043	10uF 10V	1	
	C2020	F1J1A106A043	10uF 10V	1	
	C2021	F1J1A106A043	10uF 10V	1	
	C2022	F1G1A1040006	0.1uF 10V	1	
	C2023	F1G1A1040006	0.1uF 10V	1	
	C2024	F1G1H1020008	1000pF 50V	1	
	C2025	F1G1A1040006	0.1uF 10V	1	
	C2026	F1G1A1040006	0.1uF 10V	1	
	C2027	F1J1A106A043	10uF 10V	1	
	C2028	F1J1A106A043	10uF 10V	1	
	C2030	F1G1H101A565	100pF 50V	1	
	C2031	F1G1H220A565	22pF 50V	1	
	C2034	F1G1H220A565	22pF 50V	1	
	C2036	F1G1H220A565	22pF 50V	1	
	C2038	F1G1A1040006	0.1uF 10V	1	
	C2039	F1G1A1040006	0.1uF 10V	1	
	C2040	F1G1A1040006	0.1uF 10V	1	
	C2041	F1G1A1040006	0.1uF 10V	1	
	C2042	F1G1A1040006	0.1uF 10V	1	
	C2043	F1G1A1040006	0.1uF 10V	1	
	C2044	F1G0J105A031	1uF 6.3V	1	
	C2301	EEEHB0J102UP	1000uF 6.3V	1	
	C2302	F1G1A1040006	0.1uF 10V	1	
	C2303	F1G1A1040006	0.1uF 10V	1	
	C2304	EEEHB0J101UR	100uF 6.3V	1	
	C2308	F1G1H120A444	12pF 50V	1	
	C2309	F1G1H330A565	33pF 50V	1	
	C2310	F1G1A1040006	0.1uF 10V	1	
	C2311	F1G1C1030007	0.01uF 16V	1	
	C2313	F1G0J105A031	1uF 6.3V	1	
	C2320	D0GAR00J0008	0 1/16W	1	
	C2369	F1G1H220A565	22pF 50V	1	
	C2371	F1G1H220A565	22pF 50V	1	
	C2373	F1G1H220A565	22pF 50V	1	
	C2376	F1G1H220A565	22pF 50V	1	
	C2391	F1G1A1040006	0.1uF 10V	1	
	C2401	F1G1A1040006	0.1uF 10V	1	
	C2403	F1G1H101A565	100pF 50V	1	
	C2405	F1G1C1030007	0.01uF 16V	1	

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
	C2406	EEEHB0J101UR	100uF 6.3V	1	
	C2409	F1G1A1040006	0.1uF 10V	1	
	C2410	F1G1C1030007	0.01uF 16V	1	
	C2411	F1G1C1030007	0.01uF 16V	1	
	C2412	F1G1C223A091	0.022uF 16V	1	
	C2413	F1G1C1030007	0.01uF 16V	1	
	C2414	F1G1C1030007	0.01uF 16V	1	
	C2417	F1G1C1030007	0.01uF 16V	1	
	C2420	F1G1C1030007	0.01uF 16V	1	
	C2422	F1G1H101A565	100pF 50V	1	
	C2423	F1G1H101A565	100pF 50V	1	
	C2425	F1G1H1020008	1000pF 50V	1	
	C2428	F1G1C1030007	0.01uF 16V	1	
	C2429	F1G1C1030007	0.01uF 16V	1	
	C2439	F1G1H220A565	22pF 50V	1	
	C2440	EEEHB0J101UR	100uF 6.3V	1	
	C2442	F1J1A106A043	10uF 10V	1	
	C2443	F1G1A1040006	0.1uF 10V	1	
	C2444	F1G1H1020008	1000pF 50V	1	
	C2503	F1G0J105A031	1uF 6.3V	1	
	C2504	F1G1A1040006	0.1uF 10V	1	
	C2505	F1G1A1040006	0.1uF 10V	1	
	C2506	F1J1A106A043	10uF 10V	1	
	C2508	F1G0J105A031	1uF 6.3V	1	
	C2509	F1G0J105A031	1uF 6.3V	1	
	C2510	F1G1A1040006	0.1uF 10V	1	
	C2513	F1G1A1040006	0.1uF 10V	1	
	C2514	F1J1A106A043	10uF 10V	1	
	C2515	F1G1H1020008	1000pF 50V	1	
	C2516	F1G1H1020008	1000pF 50V	1	
	C2517	F1G1H1020008	1000pF 50V	1	
	C2518	F1G1H1020008	1000pF 50V	1	
	C2519	F1G1H1020008	1000pF 50V	1	
	C2520	F1J1A106A043	10uF 10V	1	
	C2521	F1J1A106A043	10uF 10V	1	
	C2522	F1J1A106A043	10uF 10V	1	
	C2523	F1J1A106A043	10uF 10V	1	
	C2524	F1G1A1040006	0.1uF 10V	1	
	C2525	F1G1A1040006	0.1uF 10V	1	
	C2526	F1G1H1020008	1000pF 50V	1	
	C2527	F1G1H1020008	1000pF 50V	1	
	C2528	F1G1H1020008	1000pF 50V	1	
	C2529	F1G1H1020008	1000pF 50V	1	
	C2530	F1G1A1040006	0.1uF 10V	1	
	C2531	F1G1A1040006	0.1uF 10V	1	
	C2532	F1G1A1040006	0.1uF 10V	1	
	C2533	F1J1A106A043	10uF 10V	1	
	C2534	F1J1A106A043	10uF 10V	1	
	C2535	F1G1H1020008	1000pF 50V	1	
	C2551	F1H1H103A219	0.01uF 50V	1	
	C2553	F1H1H103A219	0.01uF 50V	1	
	C2554	F1H1A105A025	1uF 10V	1	
	C2555	F1H1C105A097	1uF 16V	1	
	C2607	F1J1A106A043	10uF 10V	1	
	C2608	F1J1A106A043	10uF 10V	1	
	C2609	F1G0J105A031	1uF 6.3V	1	
	C2610	F1G1A1040006	0.1uF 10V	1	
	C2611	F1G1A1040006	0.1uF 10V	1	
	C2612	F1G1H1020008	1000pF 50V	1	
	C2613	F1G1H1020008	1000pF 50V	1	
	C2614	F1G1H1020008	1000pF 50V	1	
	C2615	F1G1H1020008	1000pF 50V	1	
	C2616	F1G0J105A031	1uF 6.3V	1	
	C2617	F1G1H1020008	1000pF 50V	1	
	C2618	F1G1H1020008	1000pF 50V	1	
	C2619	F1G1H1020008	1000pF 50V	1	
	C2620	F1G1H1020008	1000pF 50V	1	
	C2621	F1G0J105A031	1uF 6.3V	1	
	C2622	F1G1A1040006	0.1uF 10V	1	
	C2623	F1G1A1040006	0.1uF 10V	1	
	C2624	F1G1A1040006	0.1uF 10V	1	
	C2625	F1G1A1040006	0.1uF 10V	1	
	C2626	F1G1A1040006	0.1uF 10V	1	

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
	C2627	F1G0J105A031	1uF 6.3V	1	
	C2628	F1G1A1040006	0.1uF 10V	1	
	C2629	F1G1A1040006	0.1uF 10V	1	
	C2630	F1G1H120A444	12pF 50V	1	
	C2631	F1G1H120A444	12pF 50V	1	
	C2632	F1G1A1040006	0.1uF 10V	1	
	C2633	F1G0J105A031	1uF 6.3V	1	
	C2634	F1G0J105A031	1uF 6.3V	1	
	C2635	F1G1H1020008	1000pF 50V	1	
	C2636	F1G1A1040006	0.1uF 10V	1	
	C2637	F1G1A1040006	0.1uF 10V	1	
	C2638	F1G1A1040006	0.1uF 10V	1	
	C2639	EEEHB0J101UR	100uF 6.3V	1	
	C2640	F1G0J105A031	1uF 6.3V	1	
	C2641	F1G0J105A031	1uF 6.3V	1	
	C2642	F1G1A1040006	0.1uF 10V	1	
	C2643	F1G1A1040006	0.1uF 10V	1	
	C2644	F1G1A1040006	0.1uF 10V	1	
	C2645	F1G1A1040006	0.1uF 10V	1	
	C2646	F1G1A1040006	0.1uF 10V	1	
	C2647	F1G0J105A031	1uF 6.3V	1	
	C2648	F1G0J105A031	1uF 6.3V	1	
	C2649	F1G1C1030007	0.01uF 16V	1	
	C2650	F1G1H470A565	47pF 50V	1	
	C2704	F1G0J105A031	1uF 6.3V	1	
	C2705	F1G0J105A031	1uF 6.3V	1	
	C2706	F1G1A1040006	0.1uF 10V	1	
	C2801	F1H1H104A913	0.1uF 50V	1	
	C2802	F1H1C474A008	0.47uF 16V	1	
	C2804	EEEFK1C471P	470uF 16V	1	
	C2806	F1J1E4750002	4.7uF 25V	1	
	C2807	F1J1E4750002	4.7uF 25V	1	
	C2811	F1H1H104A913	0.1uF 50V	1	
	C2812	F1H1C474A008	0.47uF 16V	1	
	C2813	EEEFK0J331XP	330uF 6.3V	1	
	C2814	EEEFK0J331XP	330uF 6.3V	1	
	C2815	F1H1H104A913	0.1uF 50V	1	
	C2816	F1H1C474A008	0.47uF 16V	1	
	C2817	EEEFK0J331XP	330uF 6.3V	1	
	C2821	F1H1H104A913	0.1uF 50V	1	
	C2822	F1G0J105A031	1uF 6.3V	1	
	C2823	EEEFK0J331XP	330uF 6.3V	1	
	C2824	EEEFK0J331XP	330uF 6.3V	1	
	C2825	F1H1H104A913	0.1uF 50V	1	
	C2826	F1G0J105A031	1uF 6.3V	1	
	C2827	EEEFK0J331XP	330uF 6.3V	1	
	C2852	F1H1H102A219	1000pF 50V	1	
	C2853	F1H1H102A219	1000pF 50V	1	
	C2914	EEEFK0J331XP	330uF 6.3V	1	
	C2915	F1G1A1040006	0.1uF 10V	1	
	C2926	F1H1H102A219	1000pF 50V	1	
	C5101	F1H1H104A913	0.1uF 50V	1	
	C5102	F1J1C106A059	10uF 16V	1	
	C5103	F1H1H104A913	0.1uF 50V	1	
	C5151	F1H1H104A913	0.1uF 50V	1	
	C5152	F1J1C106A059	10uF 16V	1	
	C5153	F1H1H104A913	0.1uF 50V	1	
	C5201	F1H1H104A913	0.1uF 50V	1	
	C5202	F1H1H102A219	1000pF 50V	1	
	C5219	F1H1H104A913	0.1uF 50V	1	
	C5220	F1H1H104A913	0.1uF 50V	1	
	C5251	F1H1H103A238	0.01uF 50V	1	
	C5252	F1H1H103A238	0.01uF 50V	1	
	C5253	F1H0J106A009	10uF 6.3V	1	
	C5301	F1H1H104A913	0.1uF 50V	1	
	C5302	F1H1H104A913	0.1uF 50V	1	
	C5303	F1H1H333A220	0.033uF 50V	1	
	C5304	F1H1H333A220	0.033uF 50V	1	
	C5305	F1H1H104A913	0.1uF 50V	1	
	C5306	F1H1H104A913	0.1uF 50V	1	
	C5307	F1K1H105A138	1uF 50V	1	
	C5308	F1K1H105A138	1uF 50V	1	
	C5309	F2A1V4710058	470uF 35V	1	

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
	C5313	F1H1H104A913	0.1uF 50V	1	
	C5314	F1H1H104A913	0.1uF 50V	1	
	C5317	F1H1H103A238	0.01uF 50V	1	
	C5318	F1H1H103A238	0.01uF 50V	1	
	C5319	ECQV1H105JL3	1uF 50V	1	
	C5320	ECQV1H105JL3	1uF 50V	1	
	C5323	F1H1H102A219	1000pF 50V	1	
	C5324	F1H1H102A219	1000pF 50V	1	
	C5331	F1H0J106A009	10uF 6.3V	1	
	C5332	F1H1H102A219	1000pF 50V	1	
	C5343	F2G0J470A019	47uF 6.3V	1	
	C5344	F1H1H103A238	0.01uF 50V	1	
	C5346	F1H1H220A230	22pF 50V	1	
	C5351	F1H0J106A009	10uF 6.3V	1	
	C5352	F1H1H102A219	1000pF 50V	1	
	C5354	F1H0J106A009	10uF 6.3V	1	
	C5355	F1H1H102A219	1000pF 50V	1	
	C5361	F1H0J106A009	10uF 6.3V	1	
	C5371	F1H1H102A219	1000pF 50V	1	
	C5372	F1H0J106A009	10uF 6.3V	1	
	C5373	F2G0J220A019	22uF 6.3V	1	
	C5375	F1H1H120A230	12pF 50V	1	
	C5376	F1H1H120A230	12pF 50V	1	
	C5377	F1H1H102A219	1000pF 50V	1	
	C5378	F1H0J106A009	10uF 6.3V	1	
	C5380	F1H1H104A913	0.1uF 50V	1	
	C5381	F1H1H104A913	0.1uF 50V	1	
	C5401	F1H1H104A913	0.1uF 50V	1	
	C5402	F1H1H104A913	0.1uF 50V	1	
	C5403	F1H1H333A220	0.033uF 50V	1	
	C5404	F1H1H333A220	0.033uF 50V	1	
	C5405	F1H1H104A913	0.1uF 50V	1	
	C5406	F1H1H104A913	0.1uF 50V	1	
	C5407	F1K1H105A138	1uF 50V	1	
	C5408	F1K1H105A138	1uF 50V	1	
	C5409	F2A1V4710058	470uF 35V	1	
	C5413	F1H1H104A913	0.1uF 50V	1	
	C5414	F1H1H104A913	0.1uF 50V	1	
	C5417	F1H1H103A238	0.01uF 50V	1	
	C5418	F1H1H103A238	0.01uF 50V	1	
	C5419	ECQV1H105JL3	1uF 50V	1	
	C5420	ECQV1H105JL3	1uF 50V	1	
	C5423	F1H1H102A219	1000pF 50V	1	
	C5424	F1H1H102A219	1000pF 50V	1	
	C5501	F1H1H104A913	0.1uF 50V	1	
	C5502	F1H1H104A913	0.1uF 50V	1	
	C5503	F1H1H333A220	0.033uF 50V	1	
	C5504	F1H1H333A220	0.033uF 50V	1	
	C5505	F1H1H104A913	0.1uF 50V	1	
	C5506	F1H1H104A913	0.1uF 50V	1	
	C5507	F1K1H105A138	1uF 50V	1	
	C5508	F1K1H105A138	1uF 50V	1	
	C5509	F2A1V4710058	470uF 35V	1	
	C5513	F1H1H104A913	0.1uF 50V	1	
	C5514	F1H1H104A913	0.1uF 50V	1	
	C5517	F1H1H103A238	0.01uF 50V	1	
	C5518	F1H1H103A238	0.01uF 50V	1	
	C5519	ECQV1H105JL3	1uF 50V	1	
	C5520	ECQV1H105JL3	1uF 50V	1	
	C5523	F1H1H102A219	1000pF 50V	1	
	C5524	F1H1H102A219	1000pF 50V	1	
	C5601	F1H1H104A913	0.1uF 50V	1	
	C5602	F1H1H104A913	0.1uF 50V	1	
	C5603	F1H1H333A220	0.033uF 50V	1	
	C5604	F1H1H333A220	0.033uF 50V	1	
	C5605	F1H1H104A913	0.1uF 50V	1	
	C5606	F1H1H104A913	0.1uF 50V	1	
	C5607	F1K1H105A138	1uF 50V	1	
	C5608	F1K1H105A138	1uF 50V	1	
	C5609	F2A1V4710058	470uF 35V	1	
⚠	C5700	F1BAF1020020	1000pF	1	
⚠	C5701	F0CAF104A105	0.1uF	1	
⚠	C5702	F0CAF104A105	0.1uF	1	
⚠	C5703	F0CAF104A105	0.1uF	1	
⚠	C5705	F1BAF1020020	1000pF	1	
	C5712	F2B2F1810007	180uF 315V	1	
	C5713	F0C2J1030007	0.01uF 630V	1	
	C5714	F1B3D471A011	470pF 2000V	1	
	C5720	F1H1H101A230	100pF 50V	1	
	C5722	F1H1H102A219	1000pF 50V	1	
	C5724	F1H1H221A004	220pF 50V	1	
	C5726	F2A1H100A182	10uF 50V	1	
	C5727	F2A1H1010002	100uF 50V	1	
	C5730	F1J1E4750002	4.7uF 25V	1	
	C5747	F1B3D561A011	560pF 2000V	1	
	C5760	F1H1H104A013	0.1uF 50V	1	
	C5761	F1H1H104A013	0.1uF 50V	1	
	C5791	F1J1C106A059	10uF 16V	1	
	C5800	F1J2E1030004	0.01uF 250V	1	
	C5801	F1H1H104A913	0.1uF 50V	1	
	C5802	F1H1H101A230	100pF 50V	1	
	C5802	F1J1C106A059	10uF 16V	1	
	C5803	F1H1H104A913	0.1uF 50V	1	
	C5804	F1H1E105A116	1uF 25V	1	
	C5805	F2A1V4710074	470uF 35V	1	
	C5806	ERJ3GEY0R00V	0 1/10W	1	
	C5807	ERJ3GEY0R00V	0 1/10W	1	
	C5808	ERJ3GEY0R00V	0 1/10W	1	
	C5808	F2A1V4710074	470uF 35V	1	
	C5809	F1H1E105A116	1uF 25V	1	
	C5810	F1J1C106A059	10uF 16V	1	
	C5811	EEE0JA101WR	100uF 6.3V	1	
	C5814	F2A1A1020056	1000uF 10V	1	
	C5817	F1H1H682A219	6800pF 50V	1	
	C5818	F1H1H104A013	0.1uF 50V	1	
	C5819	F1H1H560A230	56pF 50V	1	
	C5820	F1H1H560A230	56pF 50V	1	
	C5828	F2A0J471A016	470uF 6.3V	1	
	C5869	F1H1H103A219	0.01uF 50V	1	
	C5870	F1H0J106A009	10uF 50V	1	
	C5897	F1K1H104A001	0.1uF 50V	1	
	C5923	F2A1C1020095	1000uF 16V	1	
	C5924	F1H1E474A068	0.47uF 25V	1	
	C5925	EEEHB1V330UP	33uF 35V	1	
	C6001	F1H1H104A913	0.1uF 50V	1	
	C6002	F2A0J101A245	100uF 6.3V	1	
	C6008	F1J1A4750002	4.7uF 10V	1	
	C6010	F1H1H101A230	100pF 50V	1	
	C6011	F1H1H101A230	100pF 50V	1	
	C6012	F1H1H101A230	100pF 50V	1	
			SERVICE FIXTURE & TOOLS		
	SFT1	RFKZHTB15SP	2P NETWORK ASS'Y (WOOFER-DAMP)	1	

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