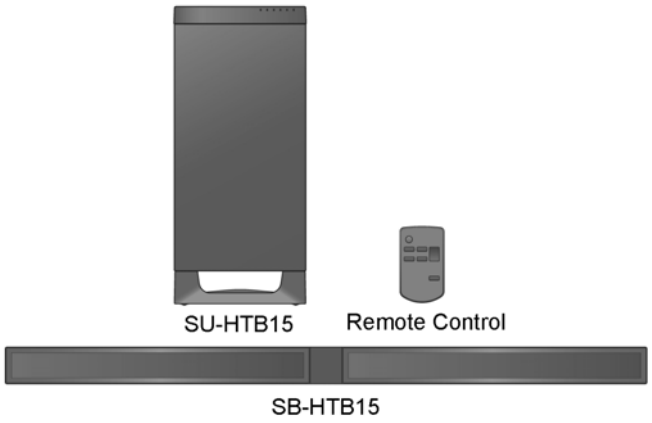
PSG1109001CE

Service Manual

Home Theater Audio System

Model No. SU-HTB15GS
SU-HTB15GSX
SU-HTB15PH
SB-HTB15EG
SB-HTB15PH
SB-HTB15PP
SC-HTB15GS
SC-HTB15GSX
SC-HTB15PH

VIERA Link™ HDMI



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.

TABLE OF CONTENTS

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.

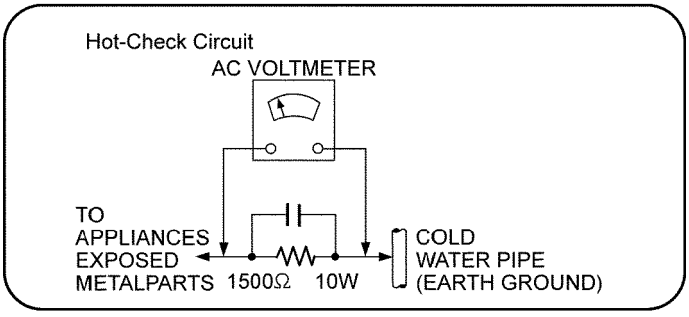
1.1.1. Leakage Current Cold Check

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.

Figure 1



1.2. Caution for AC Cord (For GS only)

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.
A 5-ampere fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark or the BSI mark on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover, the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local dealer.

CAUTION!
IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OFF SAFELY.
THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted, please observe the wiring code as shown below.
If in any doubt please consult a qualified electrician.

IMPORTANT
The wires in this mains lead are coloured in accordance with the following code:

Blue:	Neutral
Brown:	Live

As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured Black or Blue.

The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured Brown or Red.

WARNING: DO NOT CONNECT EITHER WIRE TO THE EARTH TERMINAL WHICH IS MARKED WITH THE LETTER E, BY THE EARTH SYMBOL ⏚ OR COLOURED GREEN OR GREEN/YELLOW.

THIS PLUG IS NOT WATERPROOF—KEEP DRY.

Before use
Remove the connector cover.

How to replace the fuse
The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.
Illustrations may differ from actual AC mains plug.

1. Open the fuse cover with a screwdriver.

Figure A

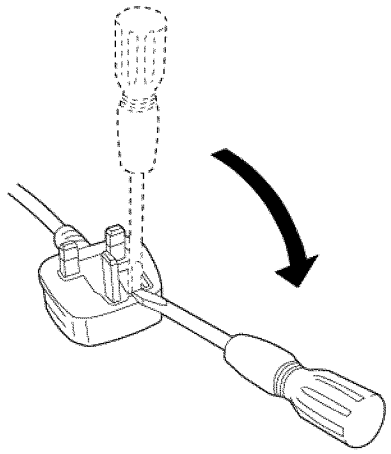
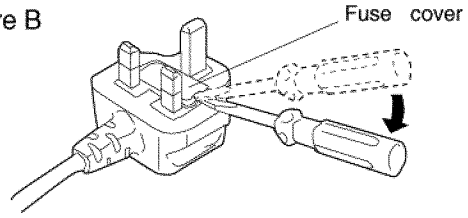


Figure B



2. Replace the fuse and close or attach the fuse cover.

Figure A

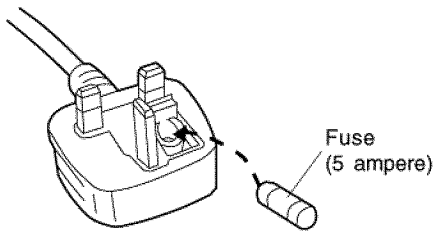
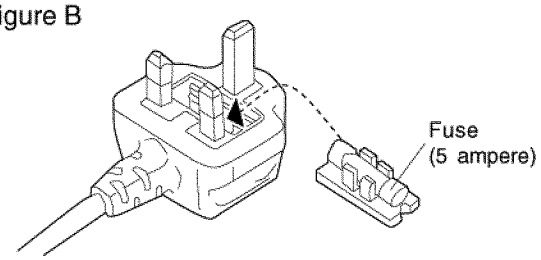


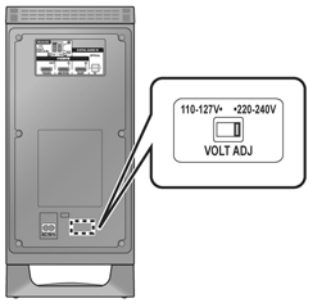
Figure B



1.3. Before Use

Be sure to disconnect the mains cord before adjusting the voltage selector.
Use a minus(-) screwdriver to set the voltage selector (on the bottom panel) to the voltage setting for the area in which the unit will be used. (If the power supply in your area is 110V ~ 127V or 220V ~ 240V, set to the “110V ~ 127V or 220V ~ 240V” position.)
Note that this unit will be seriously damaged if this setting is not made correctly. (There is no voltage selector for some countries, the correct voltage is already set.)

Use a flat-head screwdriver to turn “VOLT ADJ” to the voltage setting for the area in which this unit is used.



1.4. Before Repair and Adjustment

Disconnect AC power, discharge unit AC Capacitors as such C5700, C5701, C5702, C5703, C5705 and C5706 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 at AC 110 - 127 V / 220 - 240 V, at 50/60 Hz in NO SIGNAL mode, at volume minimum, SEL: HDMI/OPT should be ~250 mA.

1.5. 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.

1.6. Caution For Fuse Replacement

CAUTION:

Replace with the same type fuse:
(Manufacturer: Littelfuse Inc, Type: F1 T6.3AH, 250V)

1.7. 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, Exploded View & 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.

1.7.1. Active Subwoofer (Main Unit) (SU-HTB15)

Safety	Ref. No.	Part No.	Part Name & Description	Remarks
⚠	5	REX1462	1P RED WIRE (SMPS-AC INLET)	
⚠	6	REX1463	1P BLACK WIRE (SMPS-AC INLET)	
⚠	10	RGN3072E-K	NAME PLATE	GS/GSX
⚠	10	RGN3072F-K	NAME PLATE	PH
⚠	16	RSC0839	RADIATOR SHEET	
⚠	41	REX1453	1P BLUE WIRE (AC INLET-VOLTAGE SELECTOR)	
⚠	42	REX1452	1P WHITE WIRE (AC UNLET-VOLTAGE SELECTOR)	
⚠	A2	K2CP2CA00001	AC CORD W/TAG	GS/GSX
⚠	A2	K2CQ2CA00007	AC CORD	
⚠	A2	K2CZ3YY00005	AC CORD	GS/GSX
⚠	A3	VQT3R83	O/I BOOK (En)	GS/GSX
⚠	A3	VQT3R86	O/I BOOK (Cn/Ar)	GS/GSX
⚠	A3	VQT3R87	O/I BOOK (Sp)	PH
⚠	C5700	F1BAF471A013	470pF	
⚠	C5701	F0CAF104A105	0.1uF	
⚠	C5702	F0CAF104A105	0.1uF	
⚠	C5703	F0CAF104A105	0.1uF	
⚠	C5705	F1BAF471A013	470pF	
⚠	C5706	F1BAF221A013	220pF	
⚠	DZ5701	ERZV10V511CS	ZNR	
⚠	F1	K5D632BNA005	FUSE	
⚠	L5702	ELF19H820E	LINE FILTER	
⚠	L5703	ELF19H820E	LINE FILTER	
⚠	P5701	K2AA2B000011	AC INLET	
⚠	PC5720	B3PBA0000503	PHOTO COUPLER	
⚠	PC5799	B3PBA0000503	PHOTO COUPLER	
⚠	PCB5	REP4719D	SMPS P.C.B.	(RTL)
⚠	PCB6	REP4719D	AC INLET P.C.B.	(RTL)
⚠	PCB7	REP4719D	VOLTAGE SELECTOR P.C.B.	(RTL)
⚠	RY701	K6B1AYY00065	RELAY	
⚠	S5701	K0ABCA000007	VOLTAGE SELECTOR SWITCH	
⚠	T5701	ETS35BL156AD	MAIN TRANSFORMER	
⚠	T5751	ETS19AB2A6AG	SWITCHING TRANSFORMER	
⚠	TH5702	D4CAA5R10001	THERMISTOR	

1.7.2. Speaker Unit (SB-HTB15)

Safety	Ref. No.	Part No.	Part Name & Description	Remarks
⚠	4	RGN3071-K	NAME PLATE (LEFT)	
⚠	4	RGN3071A-K	NAME PLATE (RIGHT)	

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.

- **Micro-processor :**
  The following components are supplied as an assembled part.
  - MAIN Micro-processor IC, IC2201 (RFKWMHTB15M0).
  - HDMI Micro-processor IC, IC2301 (RFKWMHTB15P0).

4 Specifications

SU-HTB15

■ AMPLIFIER SECTION

RMS Output Power	
10% Total harmonic distortion	
Subwoofer ch	120 W per channel (100Hz, 3 Ω)
Front ch (L, R ch)	60 W per channel (1kHz, 6 Ω)
Total RMS Dolby Digital mode power:	240 W

■ TERMINAL SECTION

HDMI	This unit supports “HDAVI Control 5” function.
HDMI AV input (HDMI 1, HDMI 2)	2
Input connector	Type A (19 pin)
HDMI AV output (To TV (ARC))	1
Output connector	Type A (19 pin)
Digital audio input	
Optical (TV)	1
Sampling frequency	32 kHz, 44.1 kHz, 48 kHz 88.2kHz, 96kHz (only Optical (TV) input, LPCM)
Audio format	LPCM, Dolby Digital, DTS
Speaker output	
(Front L, R)	2

■ SUBWOOFER SECTION

1 way,1 speaker system (Bass reflex type)	
Woofer	16 cm cone type x 1

■ MAIN UNIT GENERAL

Power consumption	52 W
In standby condition	0.1 W
Power supply	AC 110 V to 127 V/220 V to 240 V, 50/60 Hz
Dimensions (W x H x D)	180 mm x 408 mm x 305 mm
Mass	5.6 kg
Operating temperature range	0°C to +40°C
Operating humidity range	20% to 80% RH (no condensation)

SB-HTB15

■ FRONT SPEAKER SECTION

2 way, 2 speaker system (Bass Reflex type)	
Woofer	3.5 cm x 10 cm cone type x 1
Tweeter	2.5 cm semi dome type x 1

■ SPEAKER GENERAL

Horizontal Placement using the Stands	
Dimensions (W x H x D)	800 mm x 89 mm x 75 mm
Mass	1.4 kg
Horizontal Placement using the Speaker Feet	
Dimensions (W x H x D)	800 mm x 51 mm x 58 mm
Mass	1.36 kg
Horizontal Placement (for wall mount)	
Dimensions (W x H x D)	800 mm x Approx. 49 mm x 58 mm
Mass	1.36 kg
Vertical Placement using the Base Stands	
Dimensions (W x H x D)	135 mm x 398 mm x 135 mm
Mass	0.64 kg
Vertical Placement (for wall mount)	
Dimensions (W x H x D)	Approx. 49 mm x 380 mm x 58 mm
Mass	0.59 kg

Note:

1. Specifications are subject to change without notice.
2. Weight and dimensions are approximate.
3. Total harmonic distortion is measured by a digital spectrum analyzer.
4. Total harmonic distortion is measured by using AES17 filter.

■ **System : SC-HTB15GS-K**

MAIN UNIT : SU-HTB15GS-K
FRONT SPEAKER : SB-HTB15EG-K

■ **System : SC-HTB15GSXK**

MAIN UNIT : SU-HTB15GSXK
FRONT SPEAKER : SB-HTB15PP-K

■ **System : SC-HTB15PH-K**

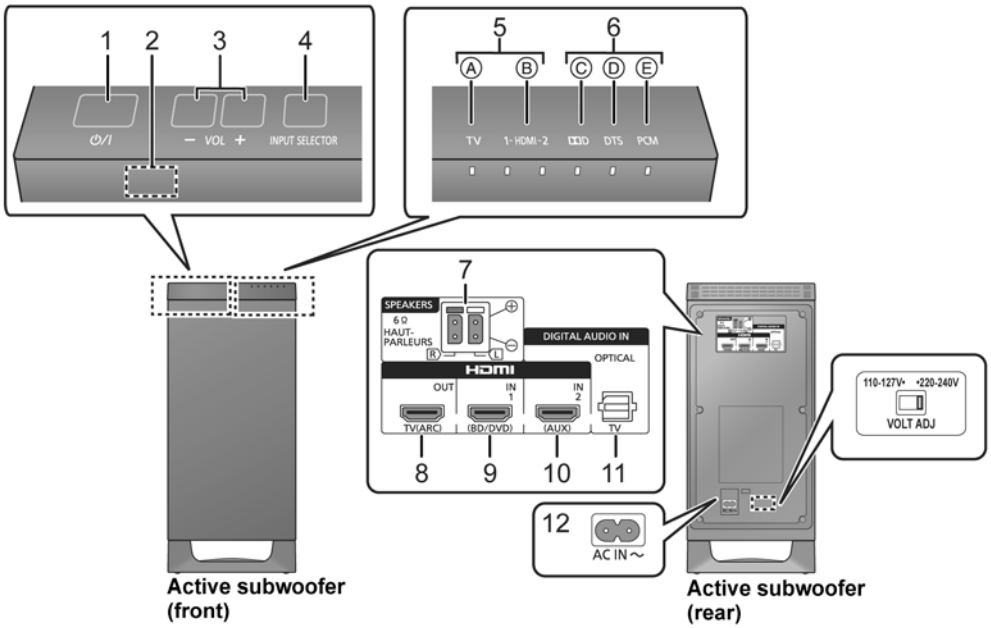
MAIN UNIT : SU-HTB15PH-K
FRONT SPEAKER : SB-HTB15PH-K

4.1. 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.

5 Location of Controls and Components

5.1. Main Unit Key Button Operations



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 → HDMI 1 → HDMI 2
↑ ┘

5 Input selector indicators※
Ⓐ TV indicator
Lights green when the TV is the audio source
Ⓑ HDMI IN 1, HDMI IN 2 indicator
When the device connected to the HDMI IN 1 terminal or the HDMI IN 2 terminal is the audio source (Ⓑ lights in amber)

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 HDMI OUT terminal (ARC compatible)

9 HDMI IN 1 terminal

10 HDMI IN 2 terminal

11 OPTICAL DIGITAL AUDIO IN terminal

12 AC IN terminal

13 AC Voltage selector

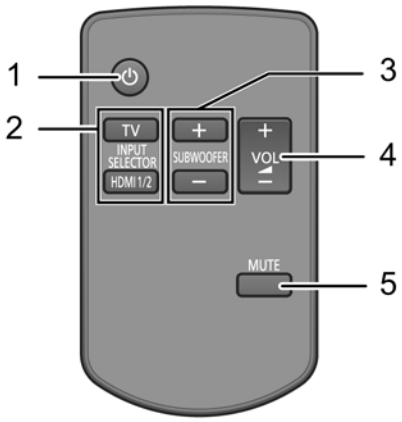
※The indicators will also blink in various conditions (⇨ 5.2. Indicator illumination)

5.2. 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 or the subwoofer 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
	**The indicator blinks for 10 sec.** ● When the audio output mode is Auto mode
	**The indicator blinks for 10 sec.** ● When the audio output mode is 2ch mode ● When Dolby Virtual Speaker is on ● When the dual audio setting is Secondary (SAP: Secondary Audio Program)
	**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 turn off VIERA Link “HDAVI Control”, To reduce the clear-mode dialog effect and To turn off the volume limitation)

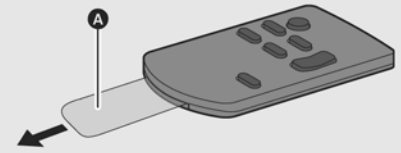
5.3. Remote Control Key Buttons Operation



1 Turn the system on or off
2 Select the input source
- [TV]:
  Select the TV as the source
- [HDMI 1/2]:
  Select the device connected to the HDMI IN 1 or HDMI IN 2 terminal as the source

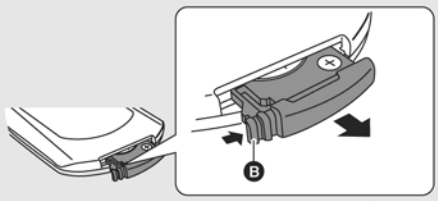
3 Adjust the output level of the active subwoofer (bass sound)
4 Adjust the volume of the speakers
5 Mute the sound

Remove the insulation sheet Ⓐ before using.

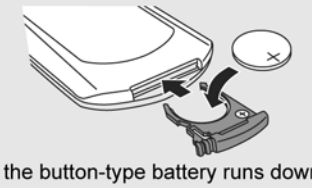


■ To replace a button-type battery

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 the button-type battery runs down, replace it with a new battery (part number: CR2025). The battery should normally last about 1 year, however, this depends on how frequently the unit is used.
- Keep the button-type battery out of reach of children to prevent swallowing.

5.4. Connections

5.4.1. Basic connection

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

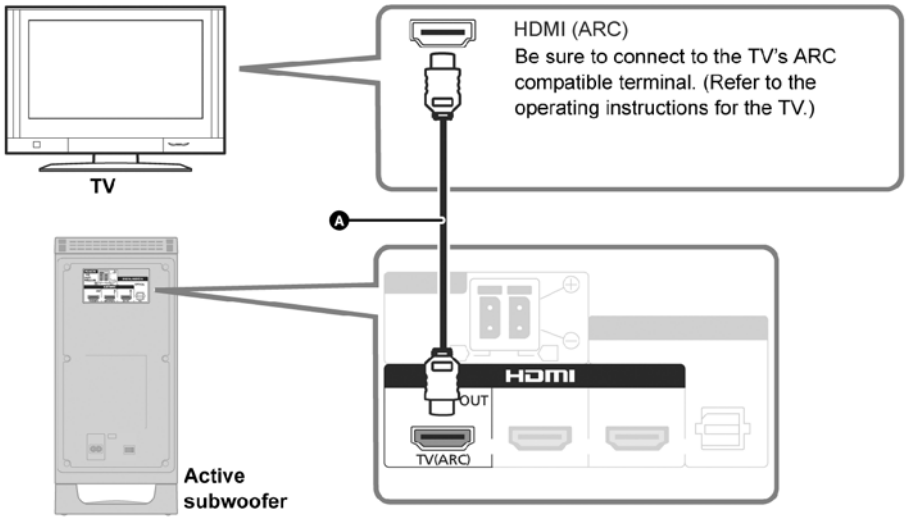
The connection will differ when the TV's HDMI terminal is labeled "HDMI (ARC)" and when it is not.
Labeled "HDMI (ARC)": Connection A
Not labeled "HDMI (ARC)": Connection B

■ **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.

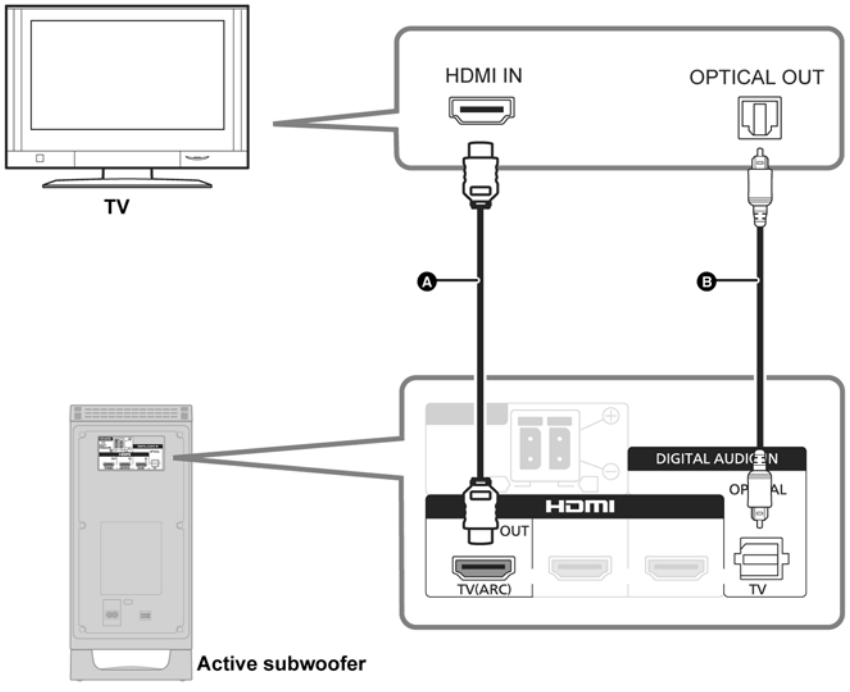
2 Make the connection.

A Labeled "HDMI (ARC)"



A **HDMI cable** (not supplied)

B *Not* labeled "HDMI (ARC)"



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

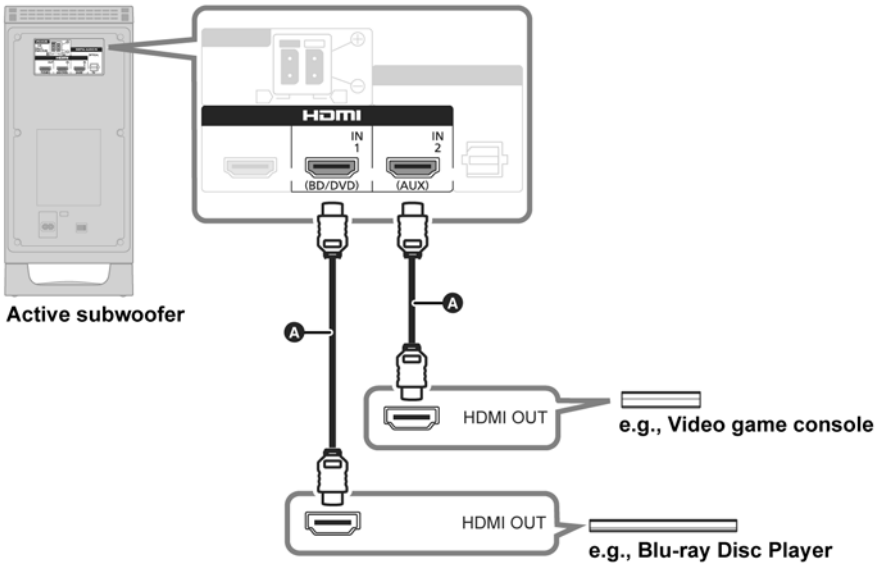
5.4.2. Connection with HDMI compatible devices

You can output the audio signal from the connected HDMI compatible Blu-ray Disc player, DVD player, etc. with this system and pass the signal through to your TV.

- When connecting other external device such as a set top box, refer to the operating instructions for the TV.

Preparation

- Connect this system to the TV.



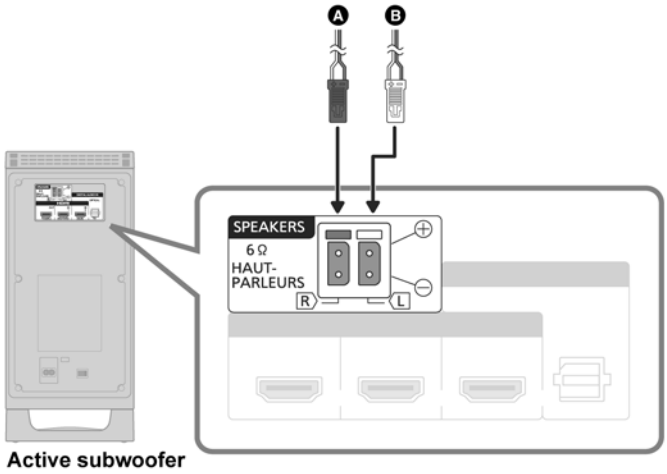
Ⓐ **HDMI cable** (not supplied)

■ 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 1 or HDMI IN 2 terminal will be sent to the TV connected to the HDMI OUT terminal (The sound will not be output from this system). When devices are connected to both HDMI IN 1 and HDMI IN 2 terminals, audio and/or video signal of the device whose input is lastly selected is output.

5.4.3. Speaker cable connection

Connect to the terminals of the same color.

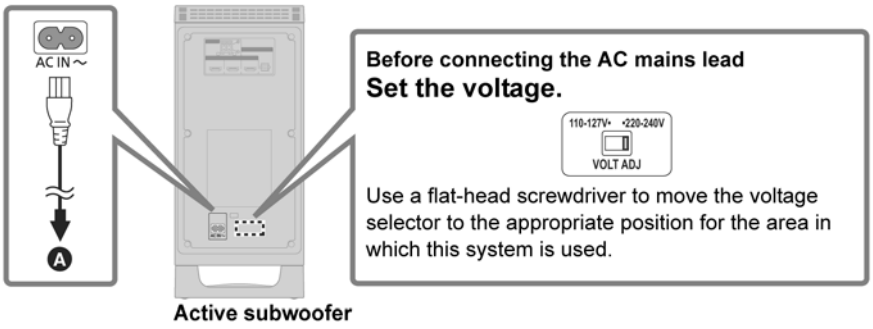


Ⓐ **RED**
Front speaker (Rch)

Ⓑ **WHITE**
Front speaker (Lch)

5.4.4. AC power supply cord connection

- **Connect only after all other connections are complete.**



Ⓐ To a household mains socket

(For GS)

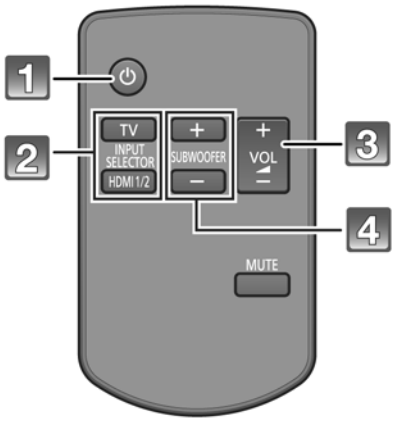
BE SURE TO READ THE CAUTION FOR THE AC MAINS LEAD ON PAGE 4 BEFORE CONNECTION.

- The active subwoofer consumes a small amount of AC power, even when it is in standby mode (0.1 W). In the interest of power conservation, if you will not be using this system for a long time, unplug it from the household mains socket.
- The supplied AC mains lead is for use with the active subwoofer. Do not use it with other equipment. Also, do not use cords for other equipment with the active subwoofer.

5.4.5. Using this unit

Preparation

- Turn on the TV.



1 Press [⏻] to turn on the system.

2 Press [TV] or [HDMI 1/2] to select the input source.

- If you have selected [HDMI 1/2], make sure to select the TV's input mode for this system and start the playback.

3 Press [+ VOL −] to adjust the volume of the speakers.

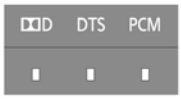
- Volume range: 1 to 100※

4 Press [+ SUBWOOFER −] to adjust the subwoofer level (bass sound).

- Subwoofer levels: 1 to 4※

※ The audio format indicators blink from left to right (+) or from right to left (−) while adjusting the speaker volume or the subwoofer level. The indicators will not blink when it has reached the maximum or minimum.

Audio format indicator



If the system does not operate as expected such as sound defects, return the settings to the factory preset and operate the system again.

6 Self diagnostic and special mode setting

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.

6.1. Automatically 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 6.1

Here is the description of the LED status indicators:
LED 1 TV input selector indicator (for optical in/ARC)(TV)
LED 2 HDMI1 input selector indicator (for HDMI in)
LED 3 HDMI2 input selector indicator (for HDMI in)
LED 4 Decorder/Audio format Indicator (DOLBY D)
LED 5 Decorder/Audio format Indicator (DTS)
LED 6 Decorder/Audio format Indicator (AAC for Japan region/PCM for non Japan region)

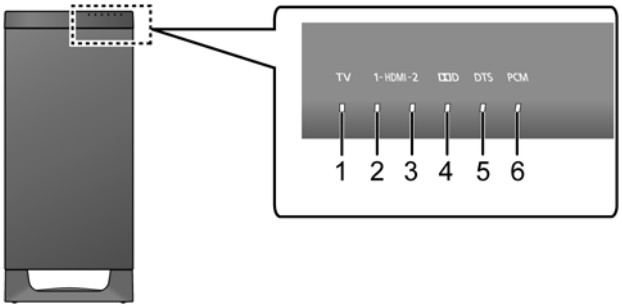


Fig 6.1

6.1.1. 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 (HDMI1)	LED 3 (HDMI2)	LED 4 (DOLBY D)	LED 5 (DTS)	LED 6 (AAC/ PCM)	Cause and Problem
OVERLOAD (F61) If this error occurs, main set will automatically power off.	*	X	*	X	X	X	Speaker protection, D-AMP 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 Micro-P to Main Micro-P IC communication error. Check for faulty parts and replace with new parts if necessary.
U701	X	X	*	X	X	X	Connected devices error (HDCP non-compliance). Check for faulty parts and replace with new parts if necessary.
U703	X	X	*	X	X	X	HDMI connection abnormality (cable damage, HDCP non-compliance etc). Check for faulty parts and replace with new parts if necessary.
U704	X	X	*	X	X	X	HDMI image format incompatibility. Check for faulty parts and replace with new parts if necessary.
"X" means LED off. "*" means LED blink							

Table 6.1.1

6.2. Service Mode

This mode can be used during servicing.
1 : Checking the Main Micro-P region and firmware version.
2 : Checking the HDMI Micro-P region and firmware version.
3 : Error Code History.

Legend:
“O” means LED ON
“X” means LED OFF
“*” means LED blinking

Service Mode
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.

6.2.1. Checking of Main Micro-P Region and Firmware version

Here are the procedures to check the region and firmware version:
Step 1 : Enter into Service Mode.
Step 2 : Press [VOL+] on remote control one time to check for the region. (Refer to table 6.2.1.1 for the region display).
Step 3 : Press [VOL+] on remote control two times to check for the firmware version. (Refer to table 6.2.1.2 for the version display).

Key Operation	LED 1 (TV)	LED 2 (HDMI1)	LED 3 (HDMI2)	LED 4 (DOLBY D)	LED 5 (DTS)	LED 6 (AAC/PCM)
Press [VOL+] button on remote control for one time	X	O	X	X	Bit 1	Bit 0
Press [VOL+] button on remote control for two times	O	X	Bit 3	Bit 2	Bit 1	Bit 0

Table 6.2.1

6.2.1.1. Main Micro-P Region Display

The region display is to indicate the destination for model.

TV	HDMI1	HDMI2	DOLBY D	DTS	AAC/PCM	Destination	
	Region Display			Bit 1	Bit 0	MAIN Software	HDMI Software
X	O	X	X	X	X	JAPAN	“HLxx” : For Japan
X	O	X	X	X	O	US	-
X	O	X	X	O	X	EUR/ASIA	-
X	O	X	X	O	O	-	“HMxx” : For overseas

Table 6.2.1.1

6.2.1.2. Main Micro-P Firmware version Bit No. (Bit 0~4)

It is to indicate the firmware version no. (Bit 0 ~4).

Version No	TV	HDMI1	HDMI2	DOLBY D	DTS	AAC/PCM
	Version Display		Bit 3	Bit 2	Bit 1	Bit 0
00	O	X	X	X	X	X
01	O	X	X	X	X	O
02	O	X	X	X	O	X
03	O	X	X	X	O	O
04	O	X	X	O	X	X
05	O	X	X	O	X	O
06	O	X	X	O	O	X
07	O	X	X	O	O	O
08	O	X	O	X	X	X
09	O	X	O	X	X	O
10	O	X	O	X	O	X
11	O	X	O	X	O	O
12	O	X	O	O	X	X
13	O	X	O	O	X	O
14	O	X	O	O	O	X
15	O	X	O	O	O	O

Table 6.2.1.2

6.2.2. Checking of HDMI Micro-P Region and Firmware version

Here are the procedures for checking the region and firmware version:

Step 1 : Enter into Service Mode.

Step 2 : Press [VOL-] one time on remote control to check the region. (Refer to table 6.2.2.1 for the region display).

Step 3 : Press [VOL-] two times on remote control to check for the firmware version. (Refer to table 6.2.2.2 for the version display).

Key Operation	LED 1 (TV)	LED 2 (HDMI1)	LED 3 (HDMI2)	LED 4 (DOLBY D)	LED 5 (DTS)	LED 6 (AAC/PCM)
Press [VOL+] button on remote control for one time	X	O	X	X	Bit 1	Bit 0
Press [VOL+] button on remote control for two times	O	X	Bit 3	Bit 2	Bit 1	Bit 0

Table 6.2.2

6.2.2.1. HDMI Micro-P Region Display

The region display is to indicate the destination for model.

TV	HDMI1	HDMI2	DOLBY D	DTS	AAC/PCM	Destination	
	Region Display			Bit 1	Bit 0	MAIN Software	HDMI Software
X	O	X	X	X	X	JAPAN	“HLxx” : For Japan
X	O	X	X	X	O	US	-
X	O	X	X	O	X	EUR/ASIA	-
X	O	X	X	O	O	-	“HMxx” : For overseas

Table 6.2.2.1

6.2.2.2. HDMI Micro-P Firmware version Bit No. (Bit 0~4)

It is to indicate the firmware version no. (Bit 0 ~4).

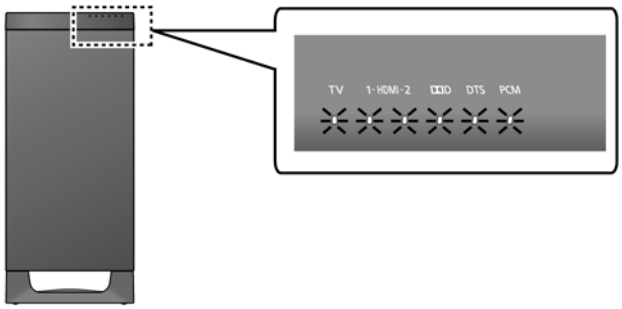
Version No	TV	HDMI1	HDMI2	DOLBY D	DTS	AAC/PCM
	Version Display		Bit 3	Bit 2	Bit 1	Bit 0
00	O	X	X	X	X	X
01	O	X	X	X	X	O
02	O	X	X	X	O	X
03	O	X	X	X	O	O
04	O	X	X	O	X	X
05	O	X	X	O	X	O
06	O	X	X	O	O	X
07	O	X	X	O	O	O
08	O	X	O	X	X	X
09	O	X	O	X	X	O
10	O	X	O	X	O	X
11	O	X	O	X	O	O
12	O	X	O	O	X	X
13	O	X	O	O	X	O
14	O	X	O	O	O	X
15	O	X	O	O	O	O

Table 6.2.2.2

6.3. Cold start

Here are the procedures to do a reset for the main unit.
Step 1 : Power on the main unit.
Step 2 : Press & hold [POWER] button on main unit for 5s.
Step 3 : Power off the main unit.

All LED blinks 2 times.



6.4. 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	**HDMI1**	**HDMI2**	**DOLBY D**	**DTS**	**AAC/PCM**	
O	-	-	-	-	-	[1 F76] -> [2 F70HDM] -> [3 F61] .....

Refer to table 6.1.1 for the error code display details.

7 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 blinks 2 times)
3. Power off the main unit.

・How to enter Doctor mode (To exit, press [⏻] on the remote control)
1. Power on the main unit.
2. Press and hold of [Vol-] key of the main unit, followed by
   [Vol -] and [Vol +] on remote control.
   (All LEDs blink 3 times, then TV LED is lit.)

Power ON	No Turn ON No Sound of Relay	Check with Remocon-OK (Relay Turn ON)	Check the Connection between FFC and Connector Check Subwoofer Output Check LED Display	[Panel P.C.B.],[D-AMP P.C.B.] Check 11P FFC, [DAMP P.C.B.],[Main P.C.B.] Check 40P FFC [Panel P.C.B.] Check Voltage of S6001, Press→0V, Release→3.3V		
		Check with Remocon-NG (No Relay Turn ON)	Check the Connection between FFC and Connector	[Panel P.C.B.] Check Voltage of CN6001(Pin 2)→3.3V, Check Connection of 11P FFC		
			Check Backup Power Source	[SMPS P.C.B.] Check Voltage of JW2(Pin 2)→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 and Pattern		
			Check Fuse Blowout	[SMPS P.C.B.] Continuity Check for Fuse		
	Power ON->Power OFF Soon	Error Code F76	TV LED Blink->Power OFF	Check DAMP IC Overcurrent, Overheat	DAMP IC NG	
		Error Code F61	TV, HDMI2 LED Blink->Power OFF	Check Fan Output, Connection/parts of power source (FAN,DAMP,+5.6,+3.3,+1.8V)		
	Power ON/LED Error Display	Error Code F70 DSP	TV, HDMI2, DOLBY D, LED Blink	[Main P.C.B.] Communication Error between DSP(IC2001) and Main Micro-P(IC2201)	[Main P.C.B.] -NG	
		Error Code F70 DAP	TV, HDMI2, DOLBY D, DTS LED Blink	[Main P.C.B.],[D-AMP P.C.B.] Communication Error between DAMP IC(IC5201/5300/5500) and Main Micro-P(IC2201)	[DAMP P.C.B.] -NG	
		Error Code F70 HDMI	TV, HDMI2, DOLBY D, DTS, PCM/ACC LED Blink	[Main P.C.B.] Communication Error between HDMI Micro-P(IC2301) and Main Micro-P (IC2201)	[Main P.C.B.] -NG	
		Error Code U701/703/704	HDMI2 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 Standby Power Source Circuit	[SMPS P.C.B.] Diode, Electrolytic Capacitor, Power IC, Transformer Short-out (D5719,C5799,IC5799,T5751)		
	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, Transformer Short-out (D5701,C5712,IC5701,T5701)		
LED Display	Check Doctor Mode for All LED's ON	Not All LED Turn ON/OFF	Drive IC-NG, LEDs not lit -NG	[Panel P.C.B.] IC6001(Pin 5,6,7,8,9,10) ON→0V, OFF→5V		
		No LED lit	Check Drive IC, Serial Signal, and FFC	[Panel P.C.B.] IC6001(Pin 18)→3.3V, D6001（Anode）→5V [Panel P.C.B.] Check Serial Signal of IC6001（Pin 2,3,4）		
Picture	No Video Output HDMI Devices Not Detected	Check HDMI-in - NG	HDMI IC, EEPROM-NG			
		Check HDMI-in - OK	Check relevant Input Peripheral Circuit.	[Main P.C.B.] IC2501(Pin 12,55 ect.)→1.8V、IC2501（Pin 14,44 ect.）→3.3V		
				[Main P.C.B.] IC2601(Pin 37,72 ect.)→1.8V、IC2601(Pin 6,12,18 ect.)→3.3V		
				[Main P.C.B.] IC2603(Pin 8) If there is Connector Connection→5V		
				[Main P.C.B.] JK2601,LB2603,IC2603,Q2601,R2623., etc		
	Strange Color of Picture	Check HDMI-in - NG	Error between RX and TX			
		Check HDMI-in - OK	Relevant HDMI-in -NG	[Main P.C.B.] Check Resister Array（RX2601 to RX2610 etc.）		
				[Main P.C.B.] Check Pins Connected to IC2501 and IC2601		
				[Main P.C.B.] Check Input Register（R2623 to R2630 etc.）		
				[Main P.C.B.] Check Connection of Input Terminals (JK2601, etc.)		
Sound	No Sound（OPT IN）	Check HDMI-in - OK	Check OPT Terminal/OPT Cable	[Main P.C.B.] IC3000(Pin 1)→3.3V, Check SPDIF Wave of Output (Pin 3)		
	No Sound（HDMI IN 1/2）	Check Optical-in - NG	DSP, DAMP Input - NG	[Main P.C.B.],[DAMP P.C.B.] Check 40P FFC and Connector		
	No Sound（HDMI/ARC IN）	Check Optical-in - OK	ARC Circuit -NG, Check HDMI Cable	[Main P.C.B.] 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 40P FFC and Connector [D-AMP P.C.B.] DAMP (IC5300) of Front Speaker - NG Check Front Speaker		
	No Audio Output - Subwoofer	Check Front Speaker-OK	Check Connector of Subwoofer	[Main P.C.B.],[DAMP P.C.B.] Check 40P FFC and Connector [D-AMP P.C.B.] Check Connection of Subwoofer 2P Connector [D-AMP P.C.B.] DAMP (IC5500) of Subwoofer - NG Check Subwoofer		

8 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 (Main Unit) (SU-HTB15)

- Disassembly of Top Panel Unit
- Disassembly of Panel P.C.B.
- Disassembly of Fan P.C.B.
- Replacement of Fan Cover Unit
- Disassembly of Fan Unit
- Disassembly of Rear Panel Unit
- Disassembly of SMPS P.C.B.
- Replacement of Switching Regulator IC (IC5701)
- Replacement of Rectifier Diode (D5702)
- Replacement of Rectifier Diode (D5802)
- Disassembly of AC Inlet P.C.B.
- Disassembly of Voltage Selector P.C.B.
- Disassembly of Main P.C.B. Unit
- Disassembly of D-Amp P.C.B.
- Replacement of Digital Amplifier IC (IC5300/IC5500)
- Disassembly of Main P.C.B.
- Disassembly of Woofer Speaker (SP61)

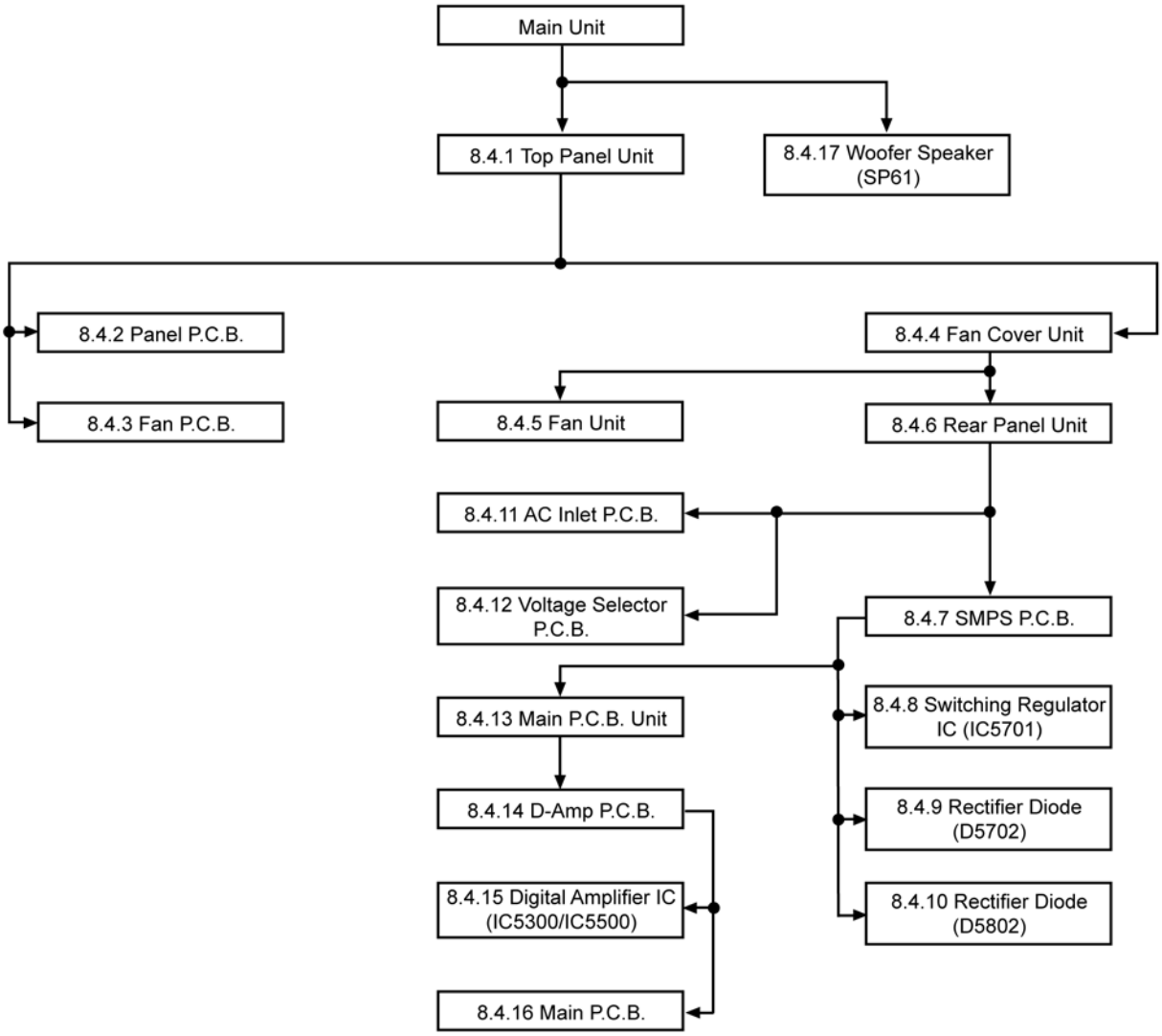
Speaker Unit (SB-HTB15)

- Disassembly of Speaker Unit (L/R) (Bar position)
- Disassembly of Speaker Unit (L/R) (Standing position)
- Disassembly of Rear Cabinet Unit
- Disassembly of Rear Cabinet Assembly
- Disassembly of Tweeter Speaker (SP1)
- Disassembly of Woofer Speaker (SP2)
- Disassembly of Front Cabinet Assembly
- Replacement of Speaker Wires

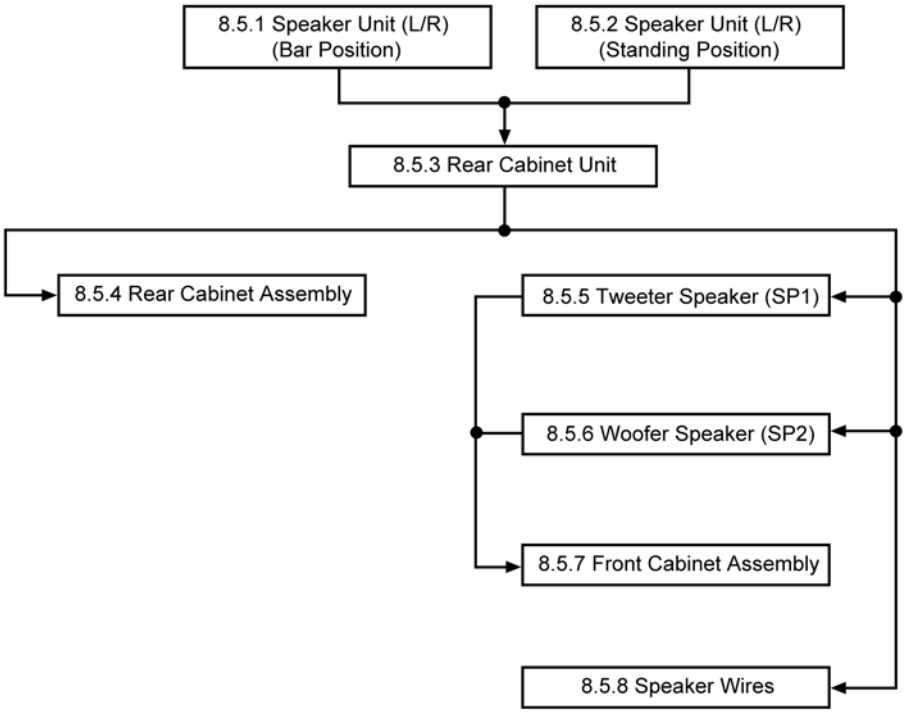
8.1. Disassembly flow chart

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.

8.1.1. Active Subwoofer (Main Unit) (SU-HTB15)



8.1.2. Speaker Unit (SB-HTB15)



8.2. Types of Screws

8.2.1. Active Subwoofer (Main Unit) (SU-HTB15)

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
- ⓓ : RHDX301003
- ⓔ : RHD30119-S
- ⓕ : RHDX261002

8.2.2. Speaker Unit (SB-HTB15)

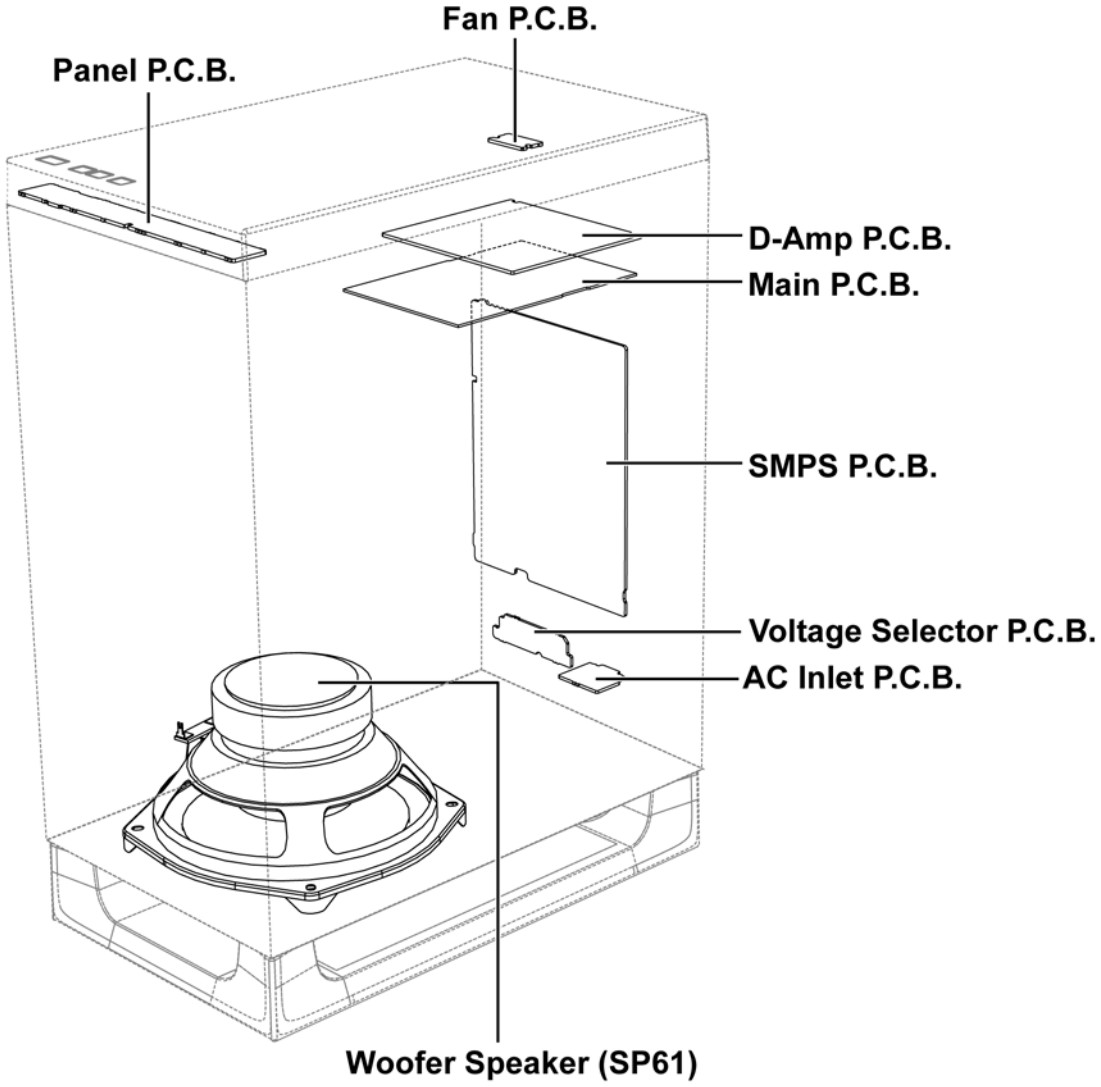
CAUTION NOTE:
Please use original screw and at correct locations.

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

- ⓐ : XYN5+J14FJK
- ⓑ : XYN3+F10FJK
- ⓒ : XTB3+10JFJK

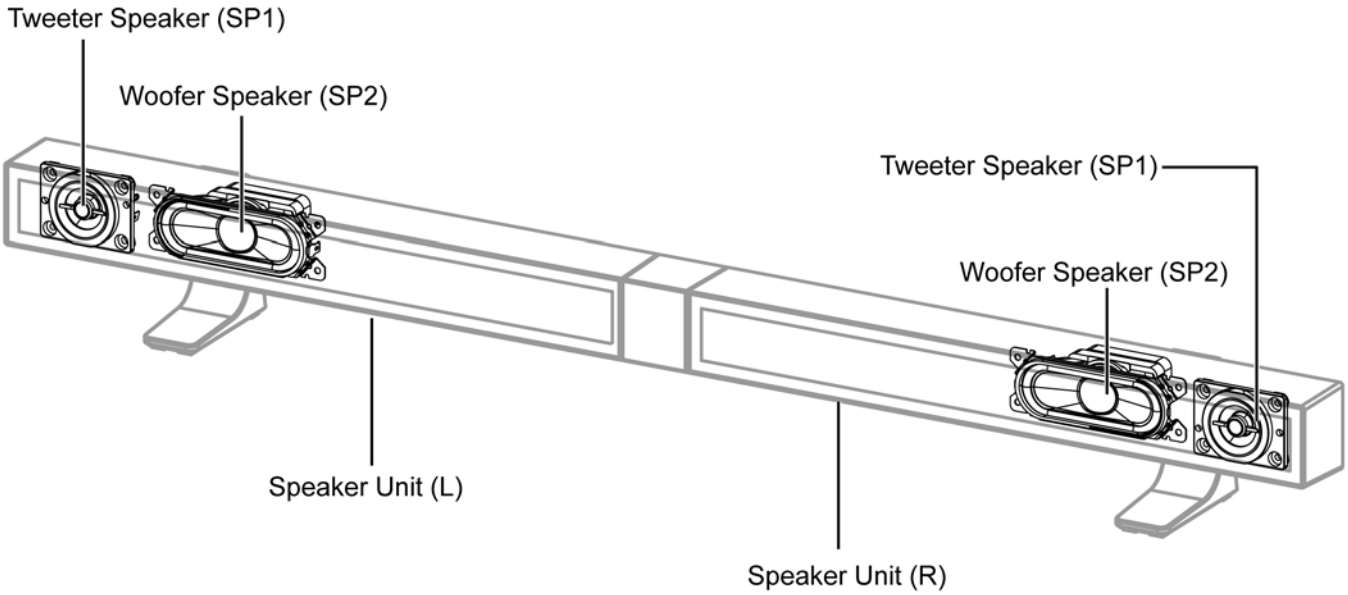
8.3. Main Parts Location Diagram

8.3.1. Active Subwoofer (Main Unit) (SU-HTB15)

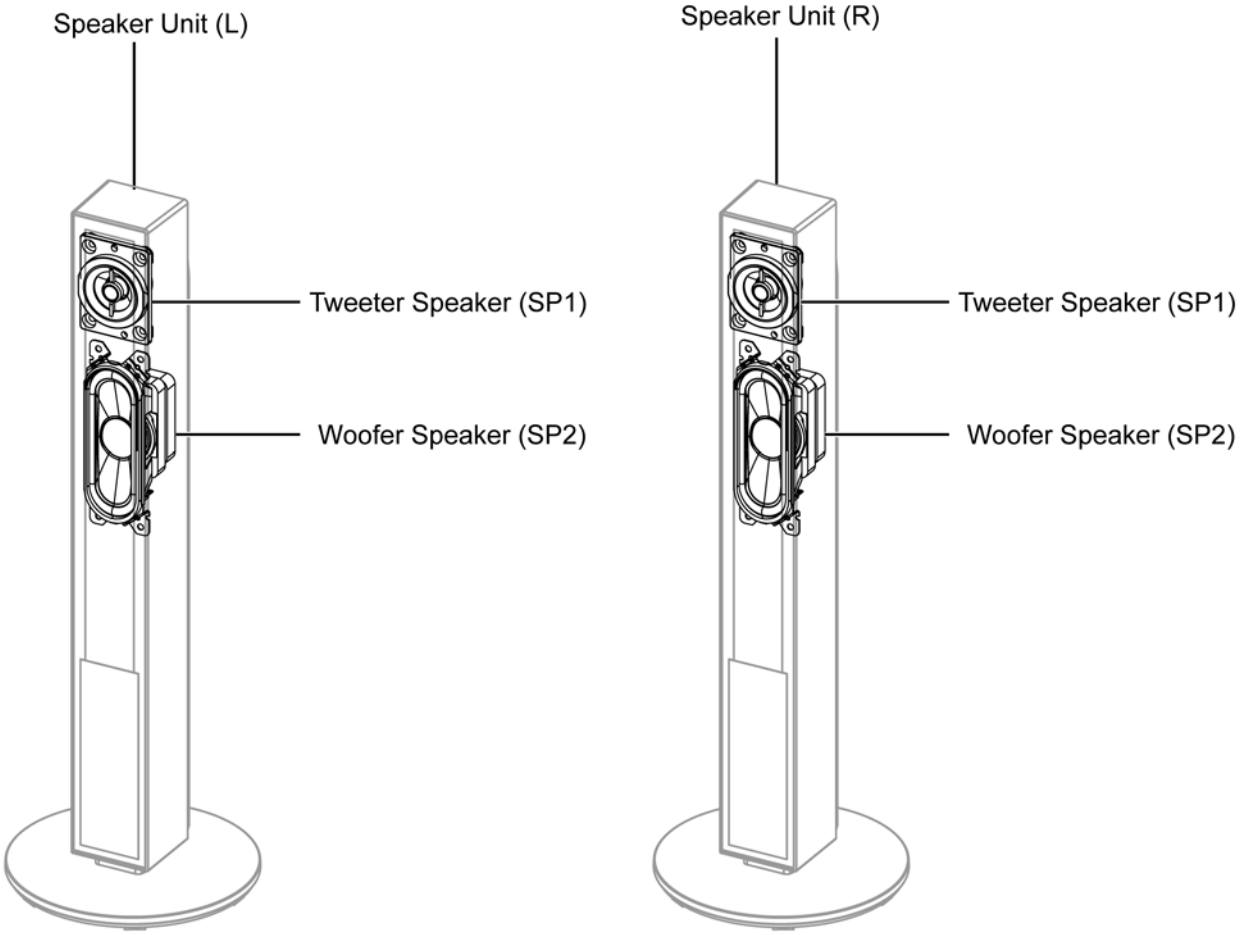


8.3.2. Speaker Unit (SB-HTB15)

BAR POSITION



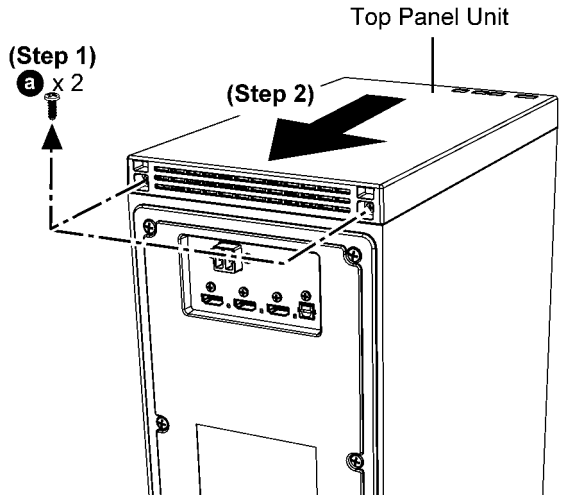
STANDING POSITION



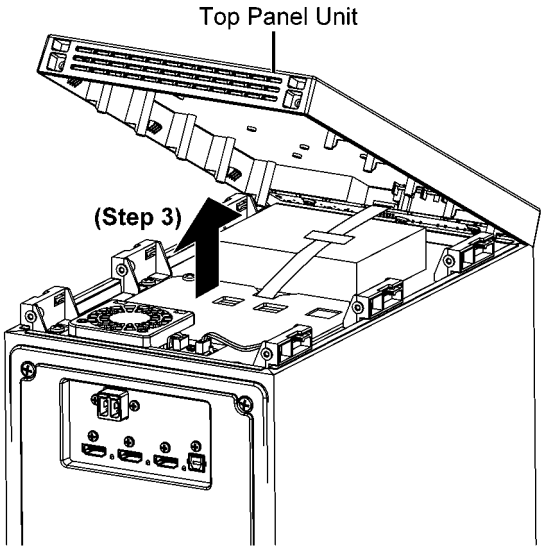
8.4. Active Subwoofer (Main Unit) (SU-HTB15)

8.4.1. Disassembly of Top Panel Unit

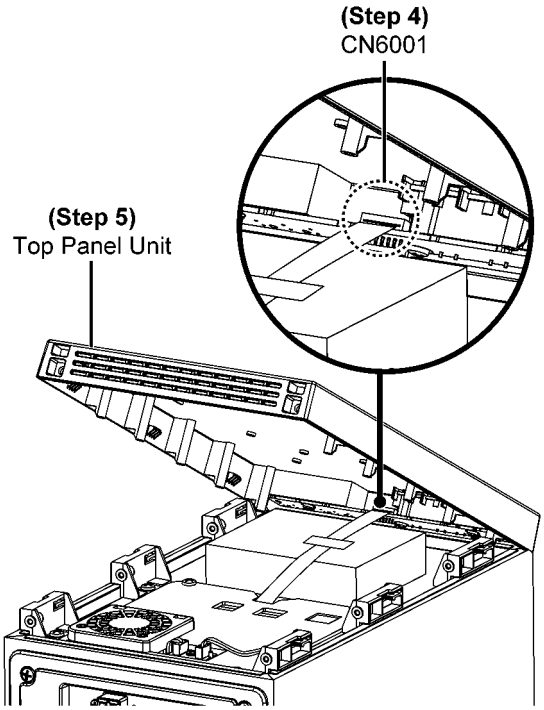
Step 1 : Remove 2 screws.
Step 2 : Slide the Top Panel Unit backwards.



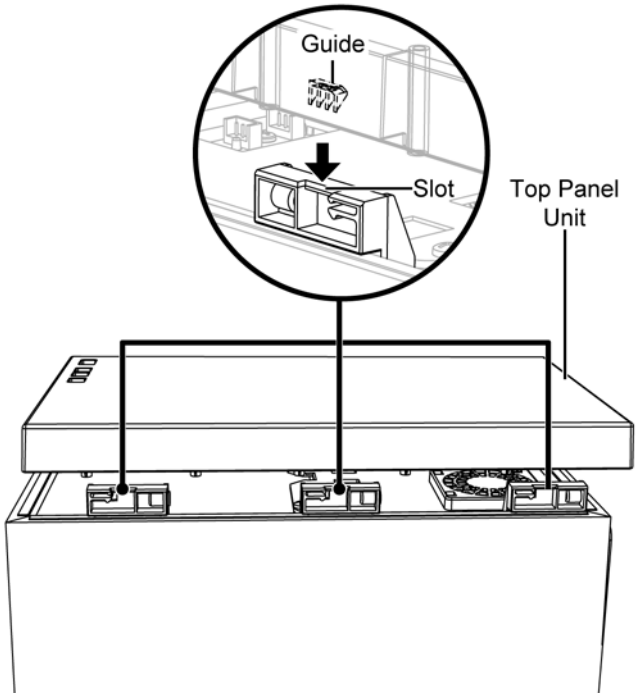
Step 3 : Gently lift up the Top Panel Unit.
Caution : Do not exert too much force as it may damage the wiring within.



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



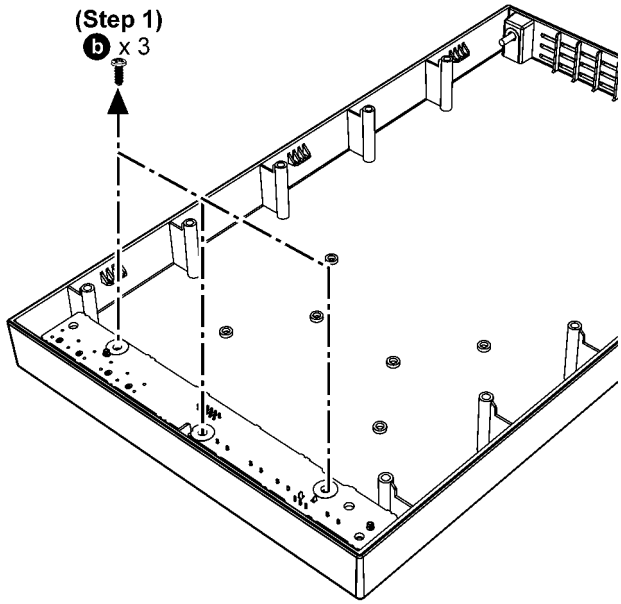
Caution : During assembling, ensure the guides are properly slotted.



8.4.2. Disassembly of Panel P.C.B.

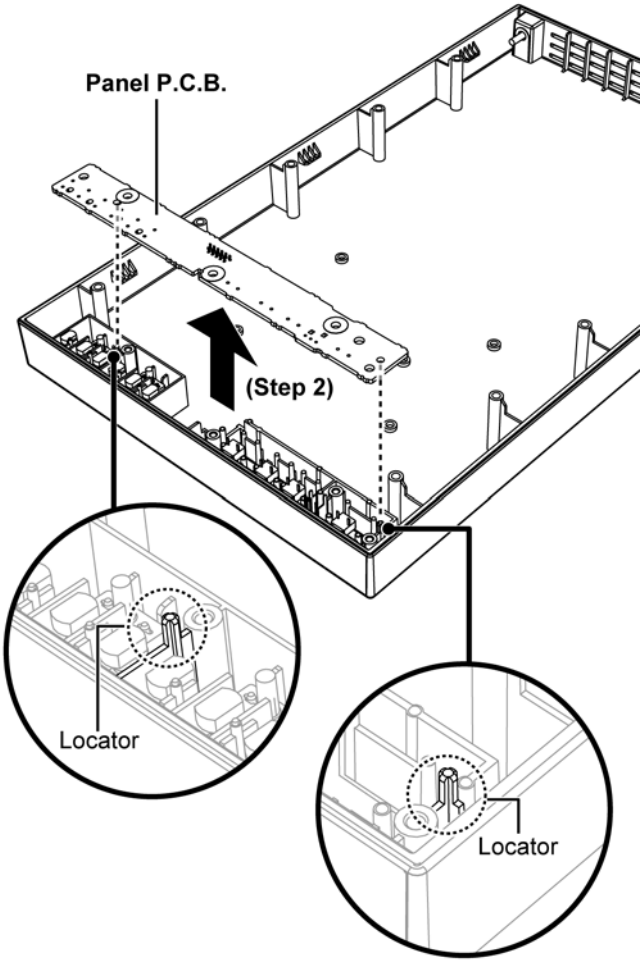
• Refer to “Disassembly of Top Panel Unit”

Step 1 : Remove 3 screws.



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

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

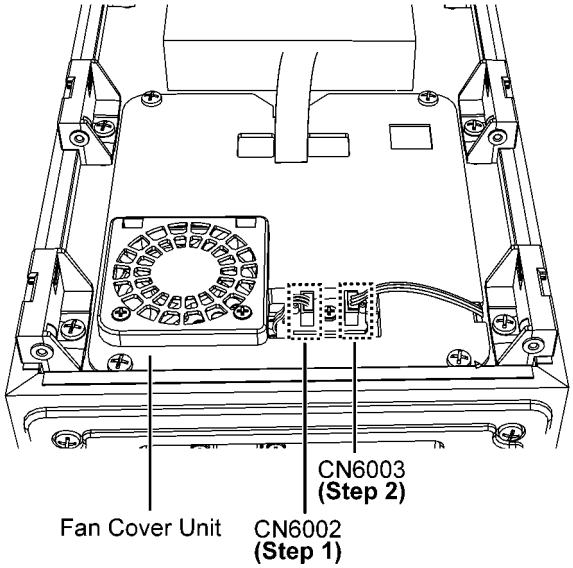


8.4.3. Disassembly of Fan P.C.B.

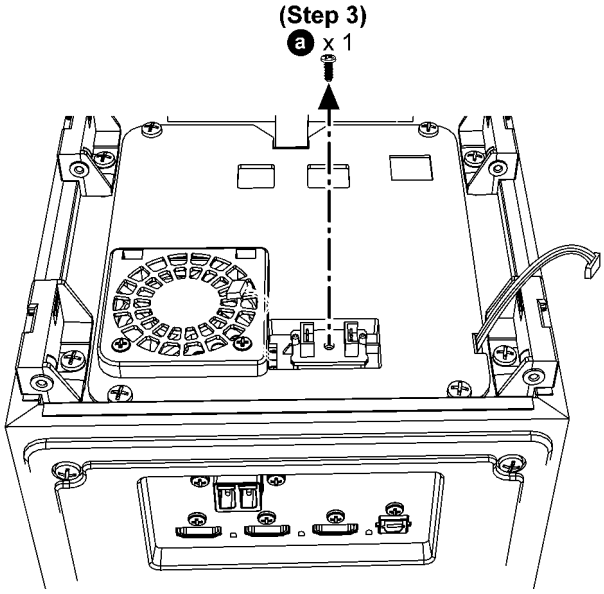
• Refer to “Disassembly of Top Panel Unit”

Step 1 : Detach 3P Wire at the connector (CN6002) on the Fan P.C.B..

Step 2 : Detach 3P Cable Wire at the connector (CN6003) on the Fan P.C.B..

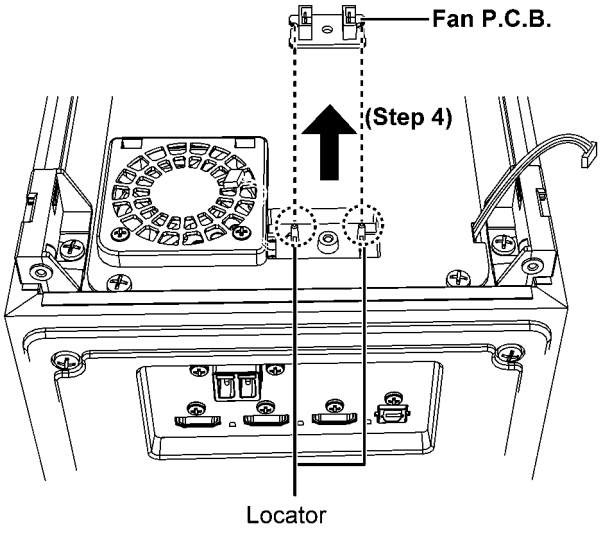


Step 3 : Remove 1 screw.



Step 4 : Remove the Fan P.C.B..

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

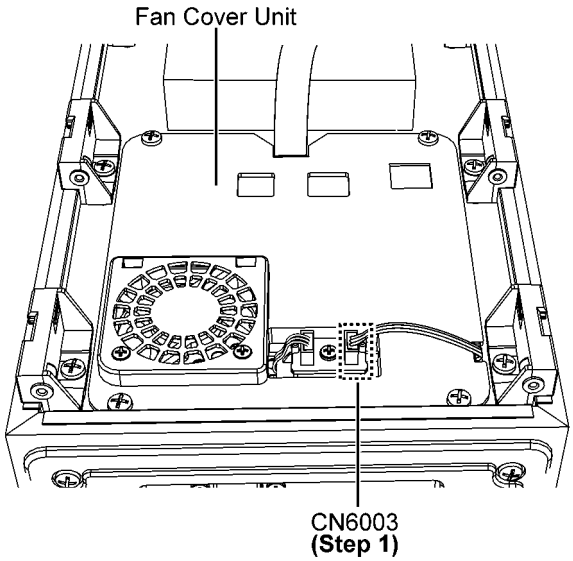


8.4.4. Replacement of Fan Cover Unit

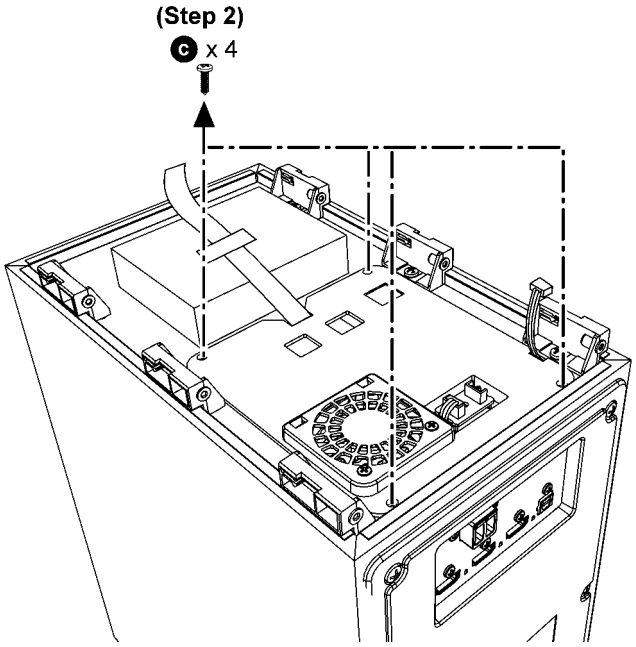
- Refer to “Disassembly of Top Panel Unit”

8.4.4.1. Disassembly of Fan Cover Unit

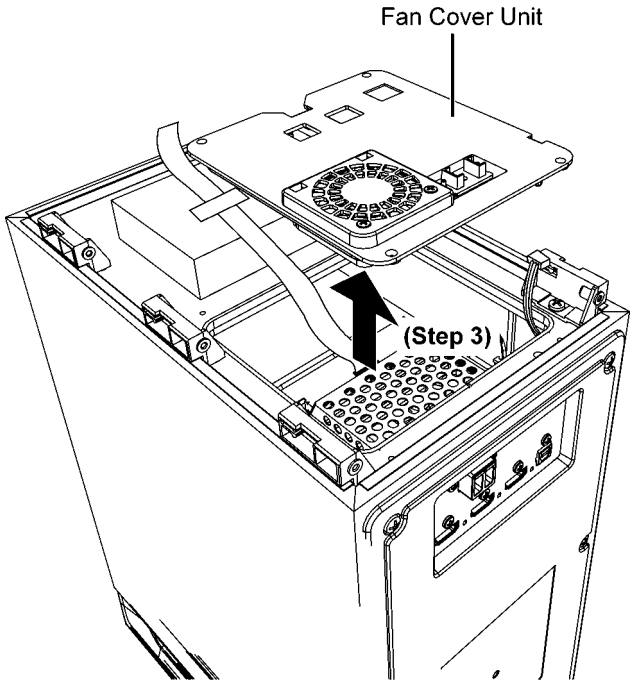
Step 1 : Detach 3P Cable Wire at the connector (CN6003) on the Fan P.C.B..



Step 2 : Remove 4 screws.

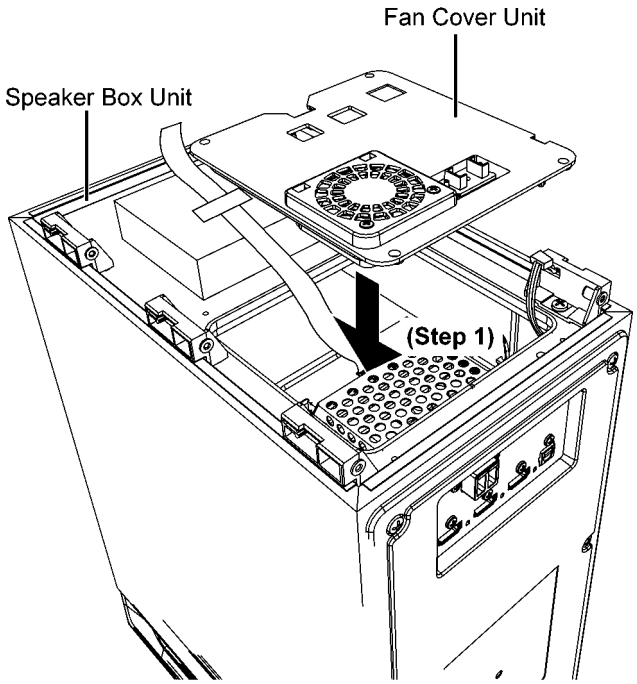


Step 3 : Remove Fan Cover Unit.

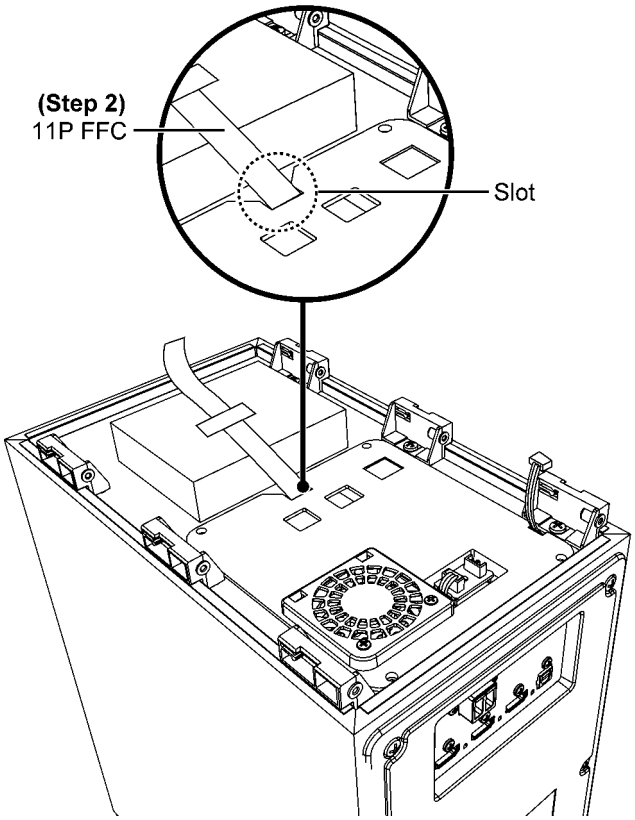


8.4.4.2. Assembly of Fan Cover Unit

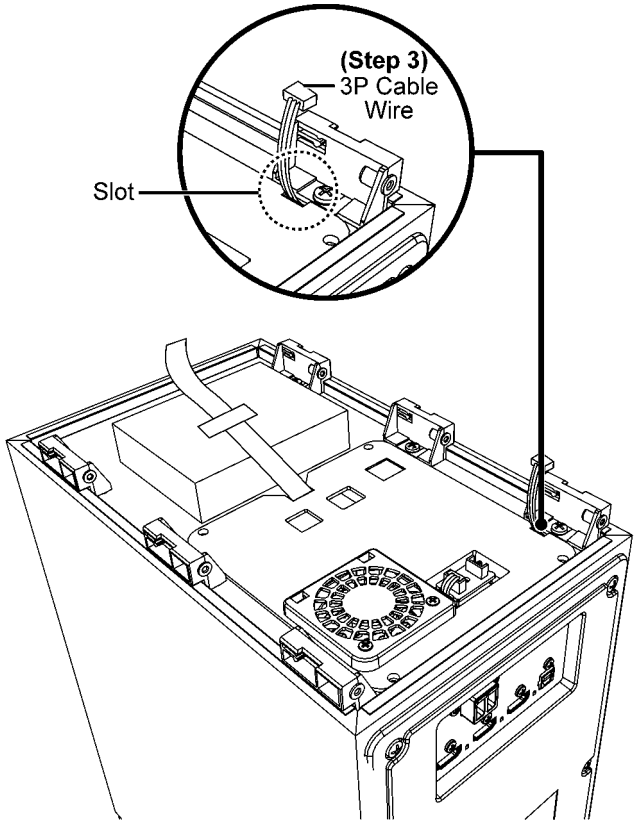
Step 1 : Place Fan Cover Unit to Speaker Box unit.



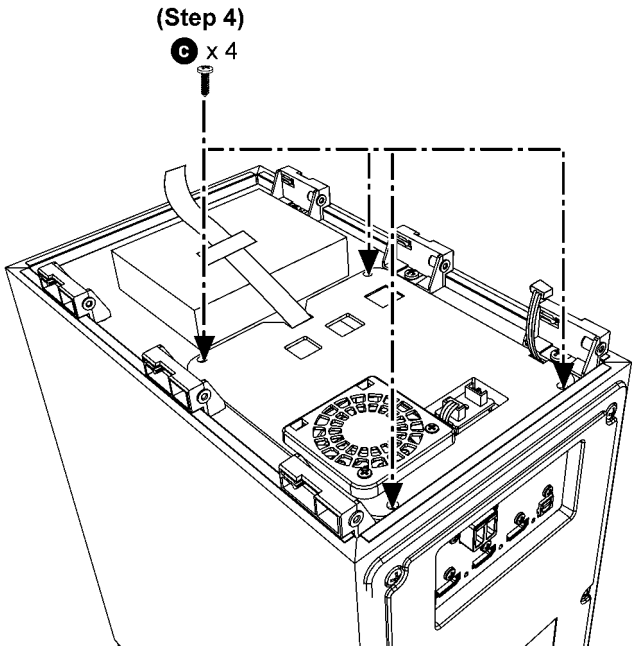
Step 2 : Dress the 11P FFC out of the slot.



Step 3 : Dress the 3P Cable Wire out of the slot.



Step 4 : Screw the 4 screws.

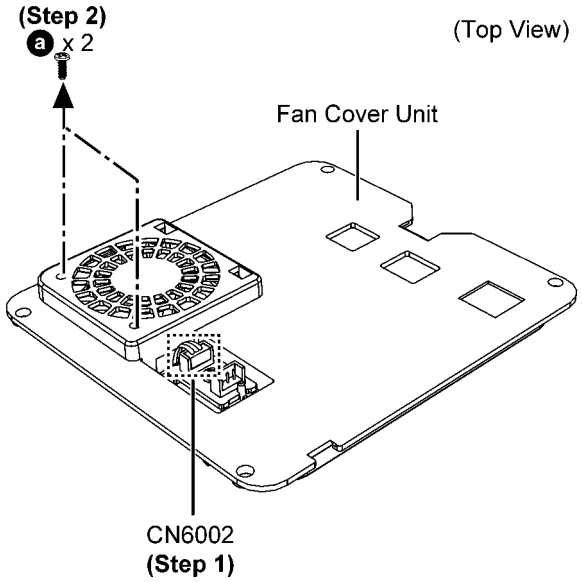


8.4.5. Disassembly of Fan Unit

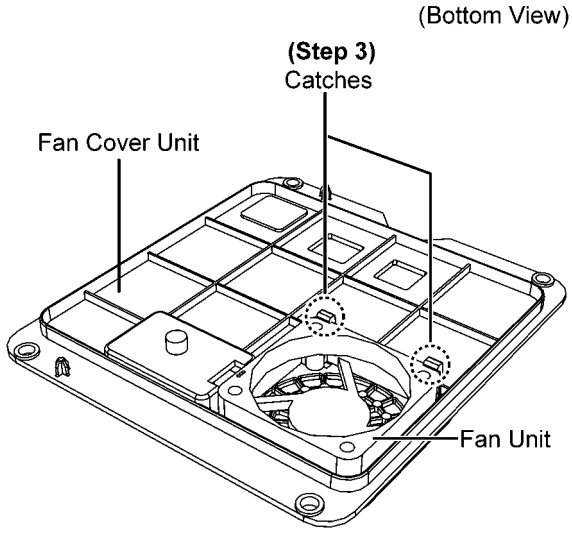
- Refer to “Disassembly of Top Panel Unit”

Step 1 : Detach 3P Wire at the connector (CN6002) on the Fan P.C.B..

Step 2 : Remove 2 screws.

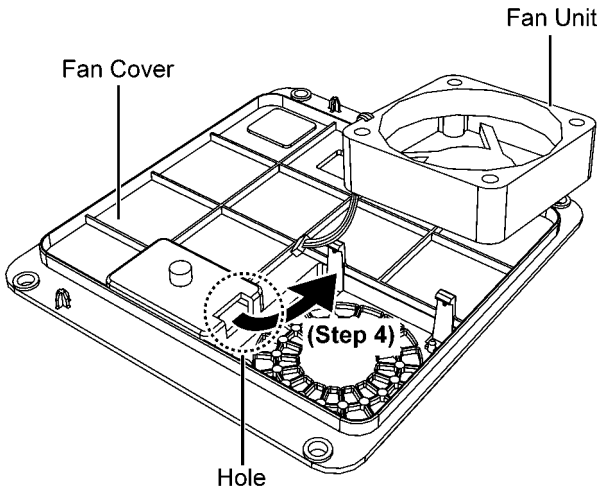


Step 3 : Release 2 Catches.

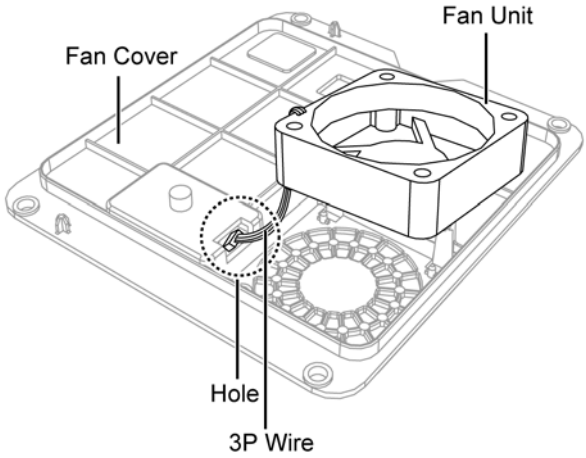


Step 4 : Remove Fan Unit.

Caution : Do not exert too much force, ensure the 3P Wire is properly slotted out of the hole of the Fan Cover.



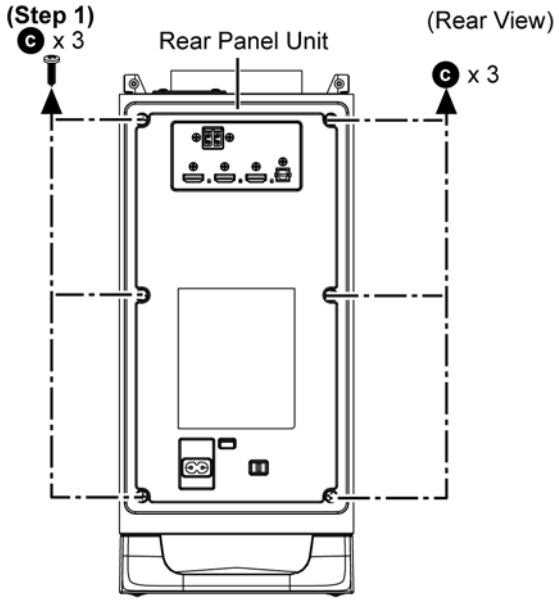
Caution : During assembling Fan Unit, ensure 3P Wire is properly slotted into the hole of the Fan Cover.



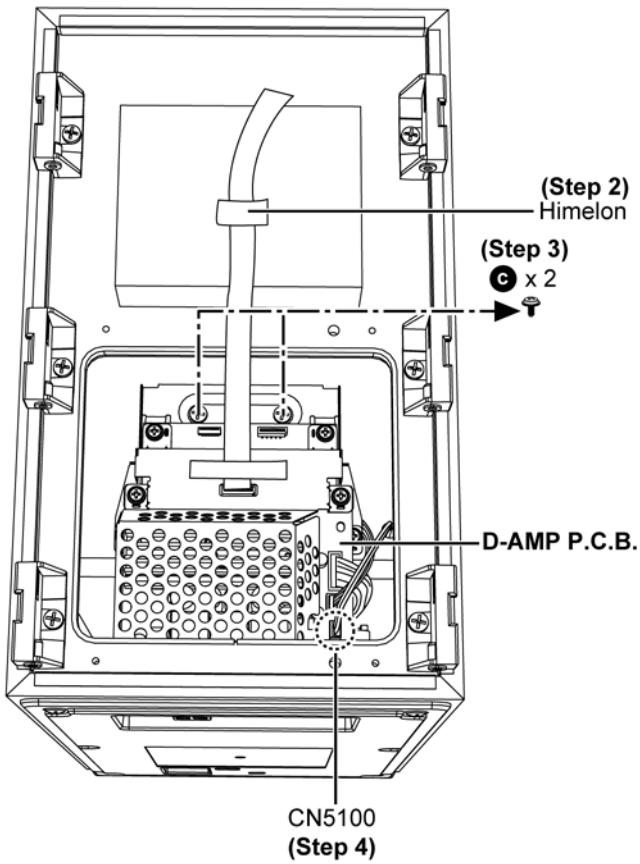
8.4.6. Disassembly of Rear Panel Unit

- Refer to “Disassembly of Top Panel Unit”
- Refer to “Disassembly of Fan Cover Unit”

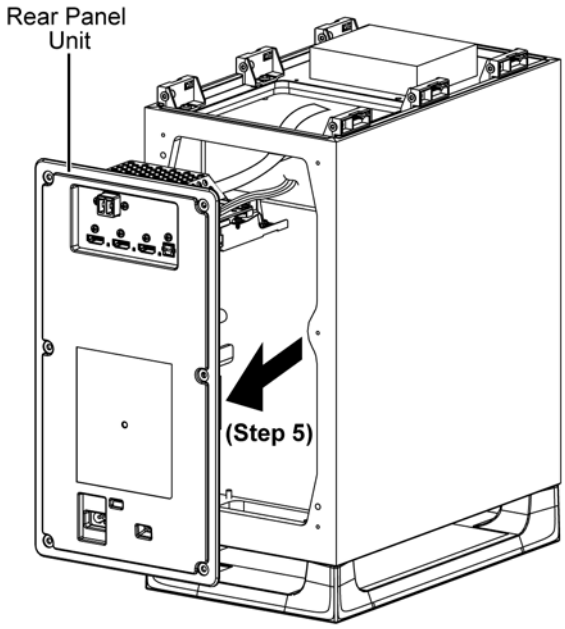
Step 1 : Remove 6 screws.



Step 2 : Release the Himelon.
Step 3 : Remove 2 screws.
Step 4 : Detach 2P Cable Wire at the connector (CN5100) on the D-AMP P.C.B..



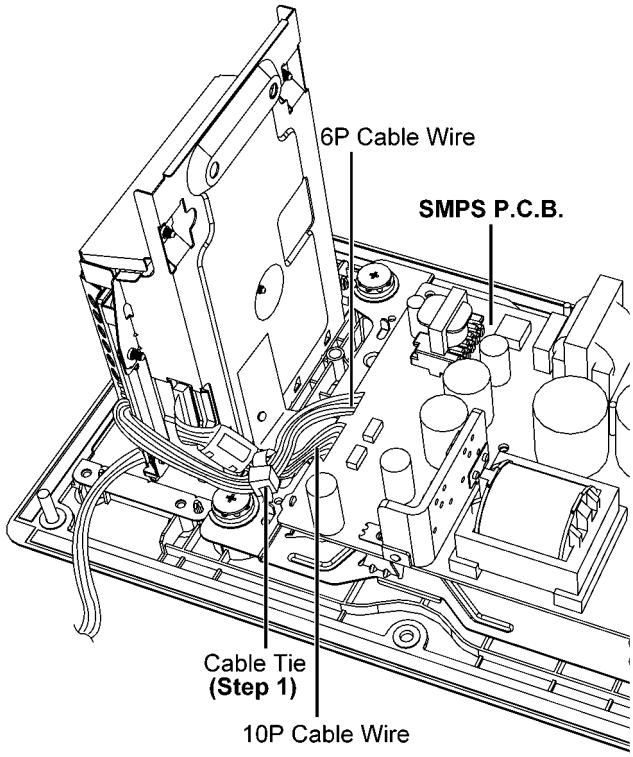
Step 5 : Remove the Rear Panel Unit as shown.



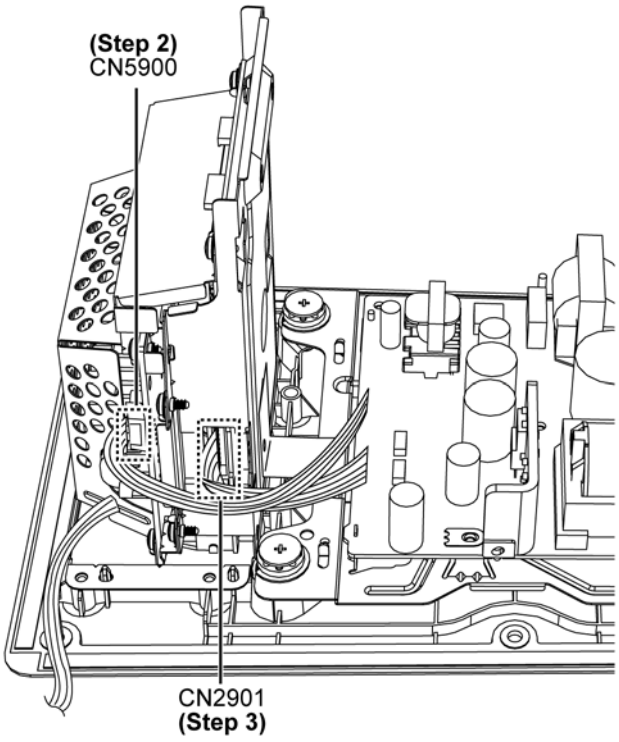
8.4.7. Disassembly of SMPS P.C.B.

- Refer to “Disassembly of Top Panel Unit”
- Refer to “Disassembly of Fan Cover Unit”
- Refer to “Disassembly of Rear Panel Unit”

Step 1 : Cut off the Cable Tie.

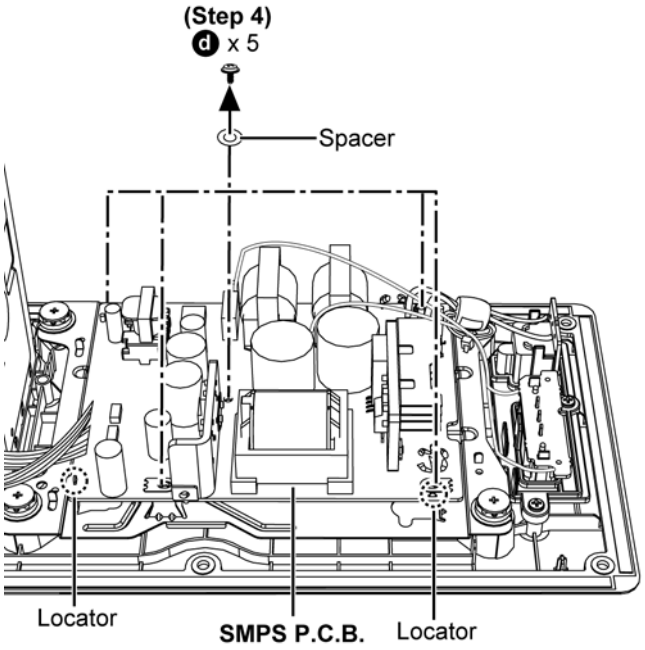


Step 2 : Detach 6P Cable Wire at the connector (CN5900) on the D-AMP P.C.B..
Step 3 : Detach 10P Cable Wire at the connector (CN2901) on the Main P.C.B..

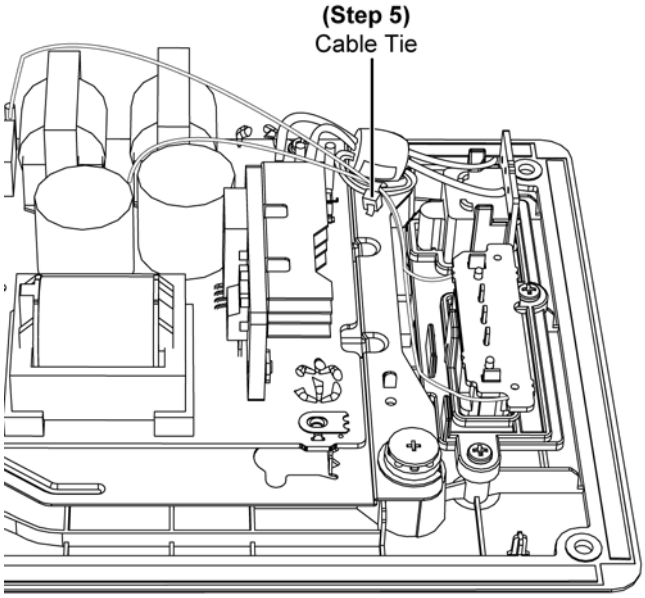


Step 4 : Remove 5 screws and 1 Spacer.

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

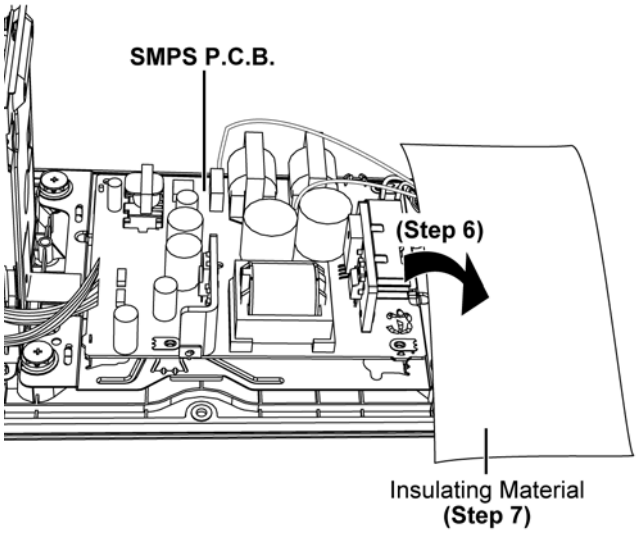


Step 5 : Cut off the Cable Tie.

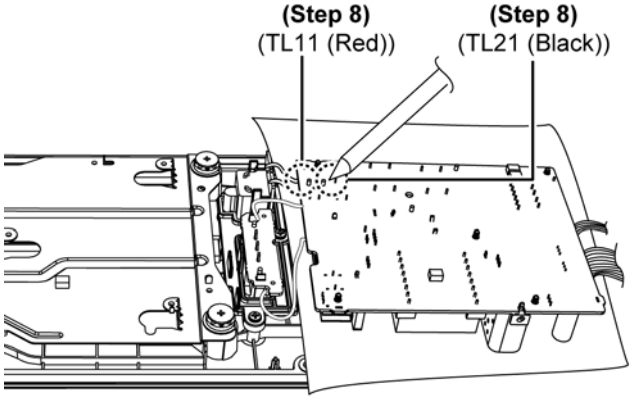


Step 6 : Upset the SMPS P.C.B..

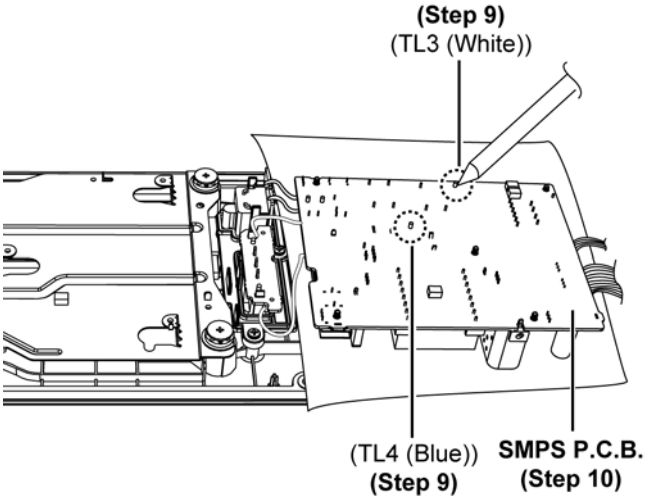
Step 7 : Place the SMPS P.C.B. on the Insulating Material.



Step 8 : Desolder pins(TL11 (Red)) & (TL21 (Black)) on the solder side of SMPS P.C.B..



Step 9 : Desolder pins(TL3 (White)) & (TL4 (Blue)) on the solder side of SMPS P.C.B..
Step 10 : Remove the SMPS P.C.B..



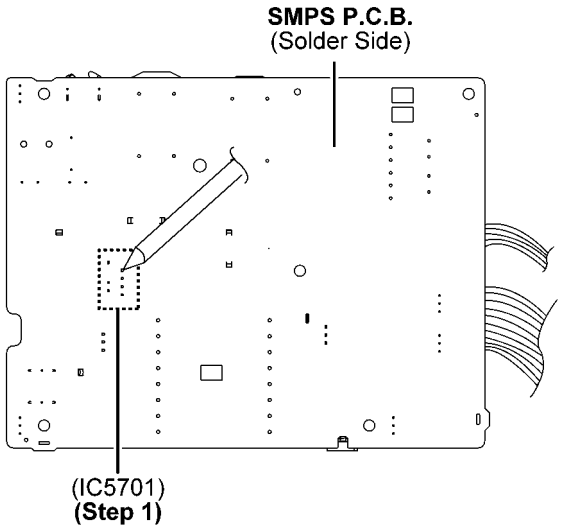
8.4.8. Replacement of Switching Regulator IC (IC5701)

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

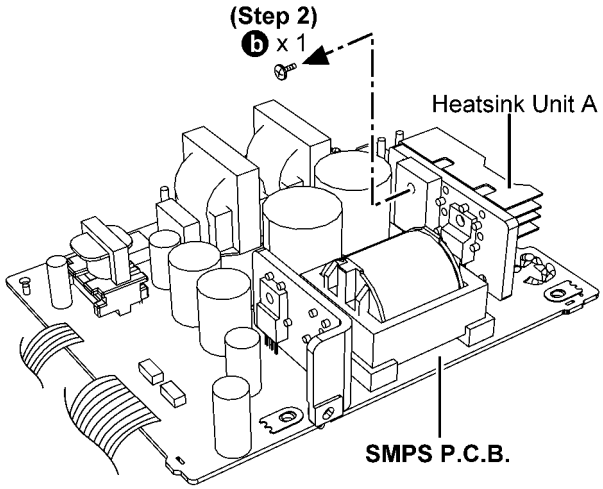
8.4.8.1. Disassembly of Switching Regulator IC (IC5701)

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.

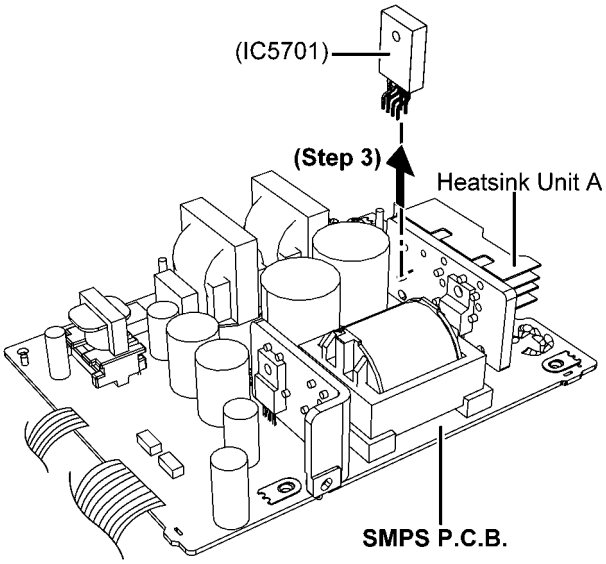
Step 1 : Desolder pins of the Switching Regulator IC (IC5701) on the solder side of SMPS P.C.B..



Step 2 : Remove 1 screw.



Step 3 : Remove the Switching Regulator IC (IC5701).



8.4.8.2. Assembly of Switching Regulator IC (IC5701)

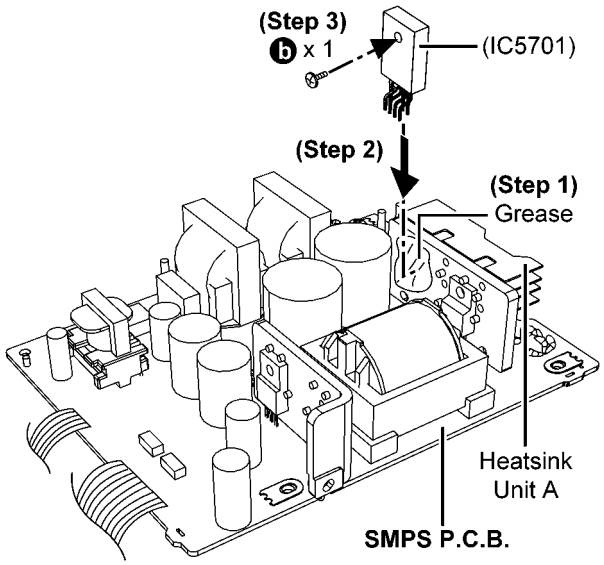
Step 1 : Apply grease to the Heatsink Unit A.

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

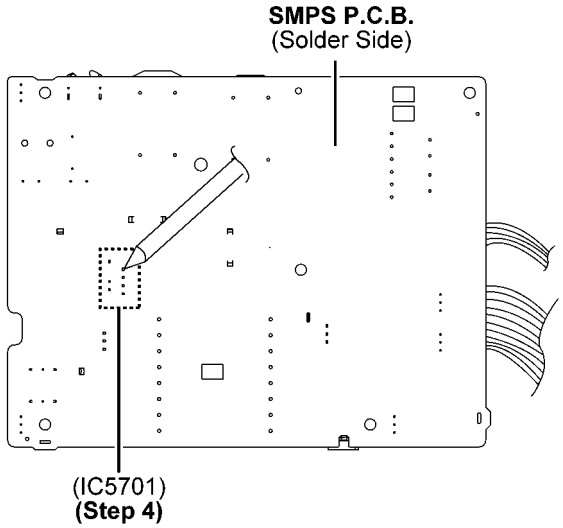
Caution : Ensure the pins of Switching Regulator IC (IC5701) are properly seated on the SMPS P.C.B..

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 pins of the Switching Regulator IC (IC5701).



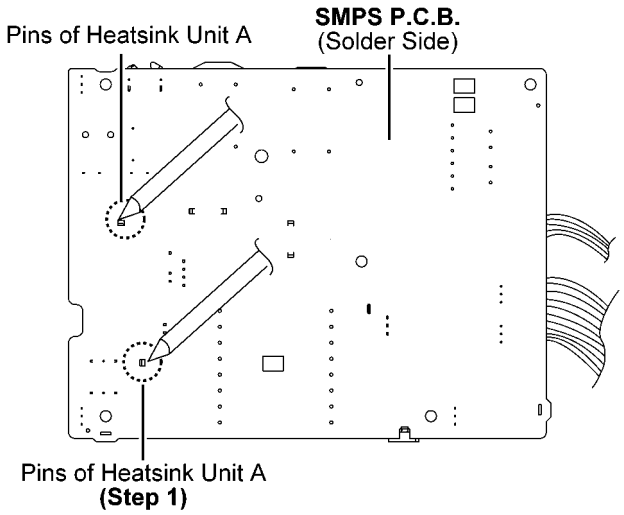
8.4.9. Replacement of Rectifier Diode (D5702)

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

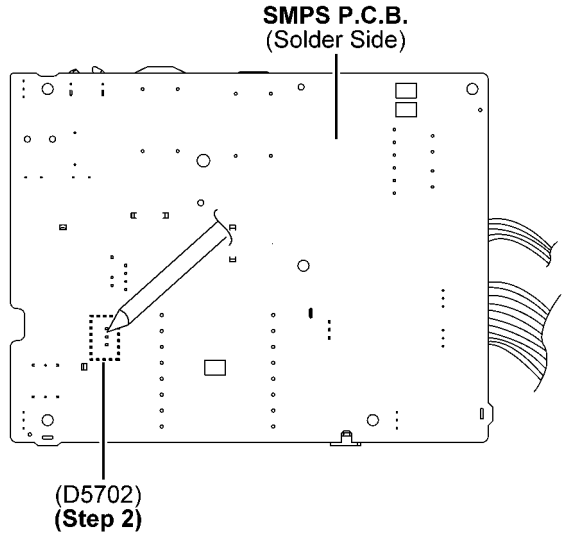
8.4.9.1. Disassembly of Rectifier Diode (D5702)

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.

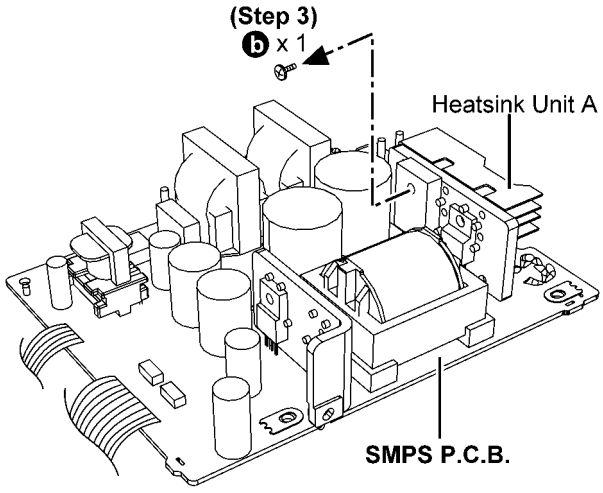
Step 1 : Desolder pins of Heatsink Unit A on the solder side of SMPS P.C.B..



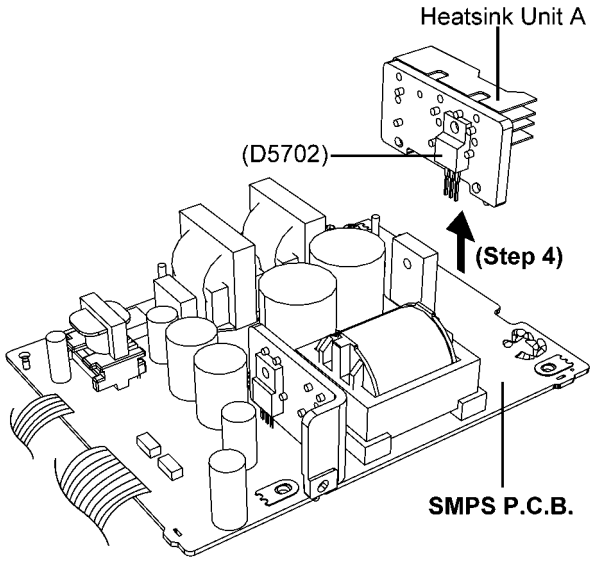
Step 2 : Desolder pins of the Rectifier Diode (D5702) on the solder side of SMPS P.C.B..



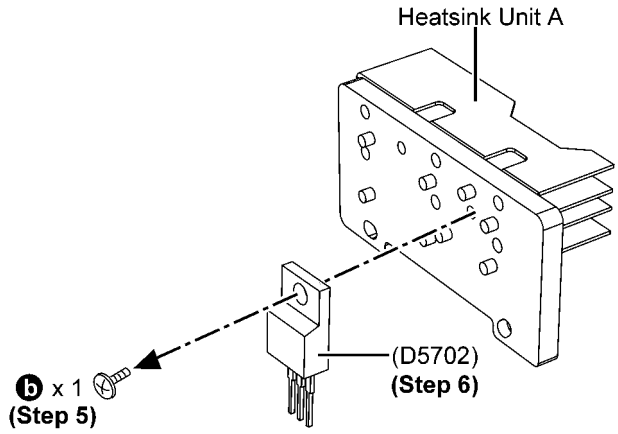
Step 3 : Remove 1 screw at Switching Regulator IC (IC5701).



Step 4 : Remove the Heatsink Unit A with Rectifier Diode (D5702).

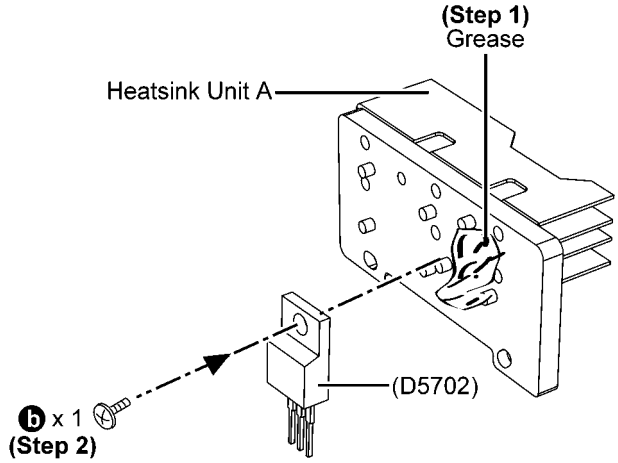


Step 5 : Remove 1 screw.
Step 6 : Remove the Rectifier Diode (D5702) from Heatsink Unit A.

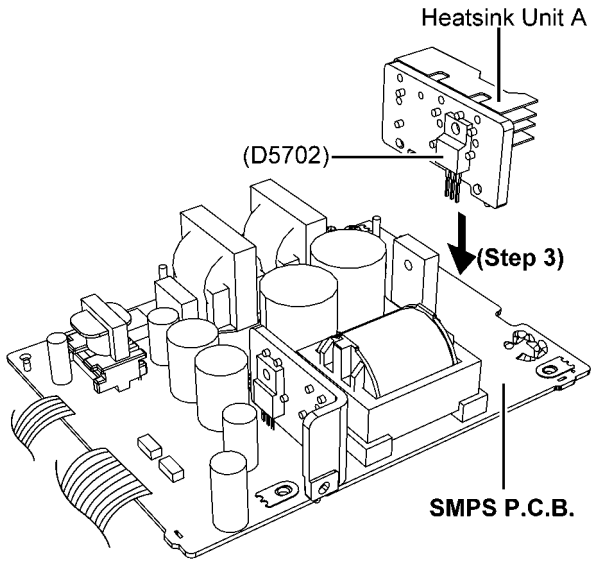


8.4.9.2. Assembly of Rectifier Diode (D5702)

Step 1 : Apply grease to the Heatsink Unit A.
Step 2 : Screw the Rectifier Diode (D5702) to the Heatsink Unit A.
Caution : Ensure the Rectifier Diode (D5702) is tightly screwed to the Heatsink Unit A.

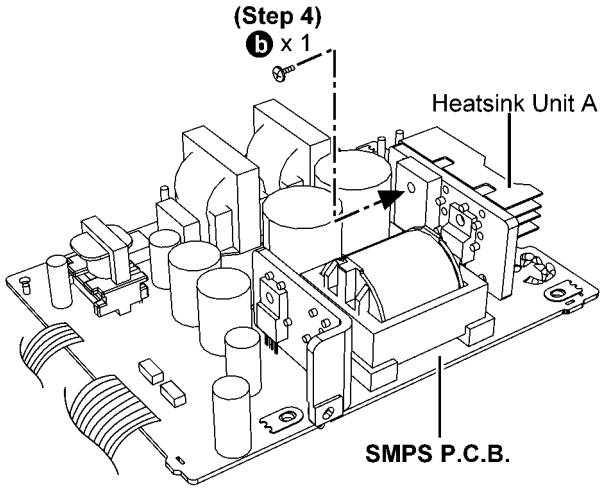


Step 3 : Fix the Heatsink Unit A with the Rectifier Diode (D5702) onto the SMPS P.C.B..
Caution : Ensure the pins of Rectifier Diode (D5702) are properly seated on the SMPS P.C.B..

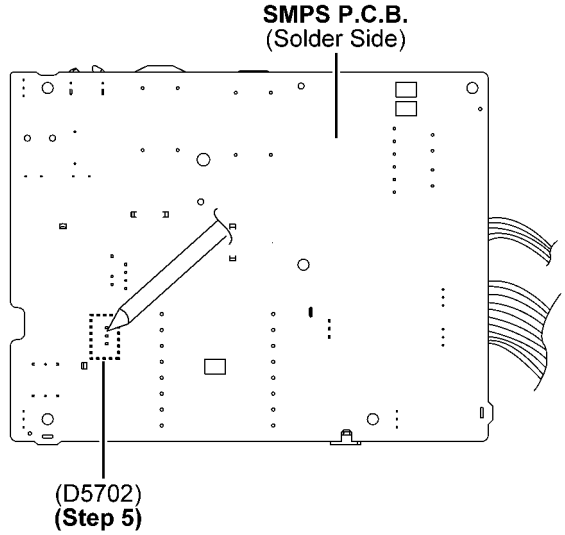


Step 4 : Screw the Switching Regulator IC (IC5701) to the Heatsink Unit A.

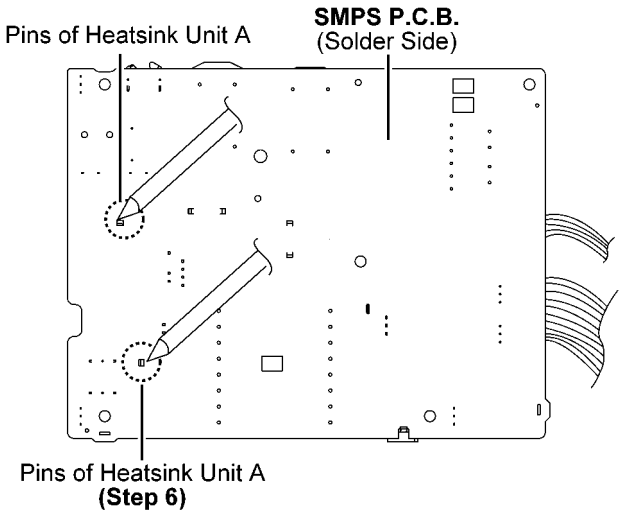
Caution : Ensure the Switching Regulator IC (IC5701) is tightly screwed to the Heatsink Unit A.



Step 5 : Solder pins of the Rectifier Diode (D5702) on the solder side of SMPS P.C.B..



Step 6 : Solder pins of the Heatsink Unit A on the solder side of SMPS P.C.B..



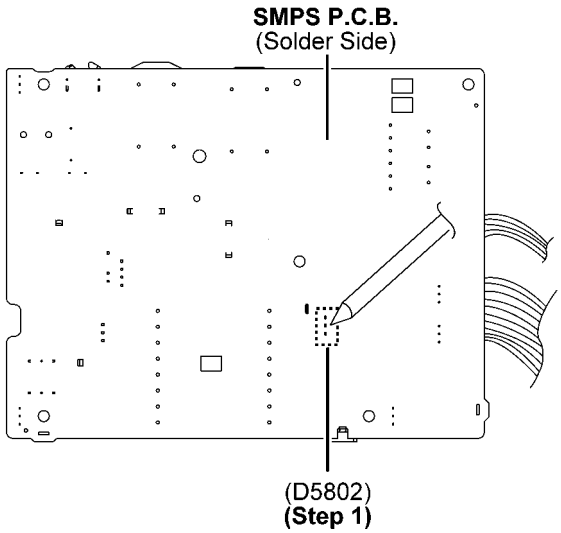
8.4.10. Replacement of Rectifier Diode (D5802)

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

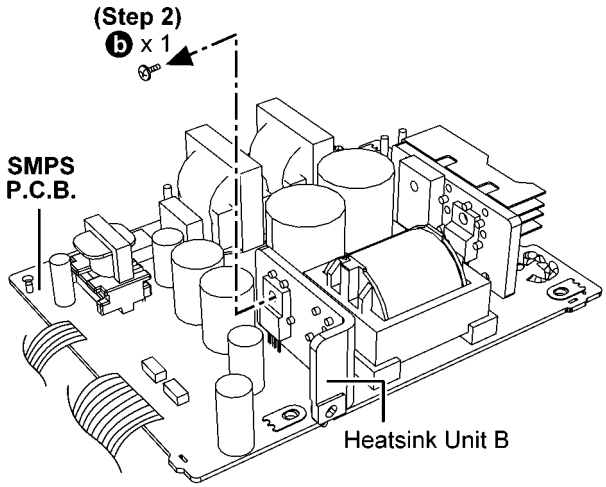
8.4.10.1. Disassembly of Rectifier Diode (D5802)

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.

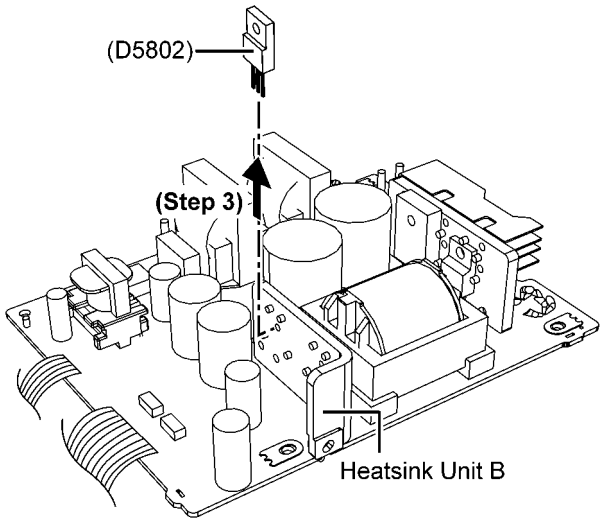
Step 1 : Desolder pins of the Rectifier Diode (D5802) on the solder side of SMPS P.C.B..



Step 2 : Remove 1 screw.

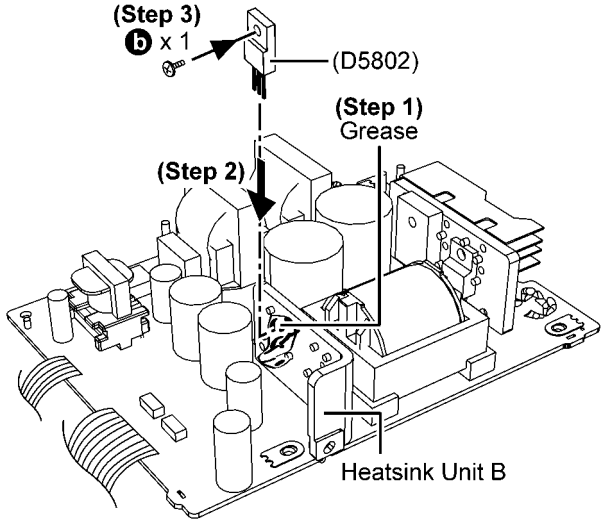


Step 3 : Remove the Rectifier Diode (D5802).

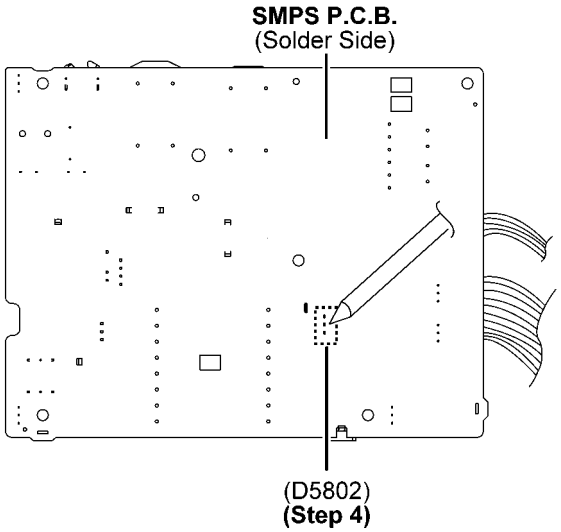


8.4.10.2. Assembly of Rectifier Diode (D5802)

Step 1 : Apply grease to the Heatsink Unit B.
Step 2 : Fix the Rectifier Diode (D5802) onto SMPS P.C.B..
Caution : Ensure the pins of Rectifier Diode (D5802) are properly seated on the SMPS P.C.B..
Step 3 : Screw the Rectifier Diode (D5802) to the Heatsink Unit B.
Caution : Ensure the Rectifier Diode (D5802) is tightly screwed to the Heatsink Unit B.



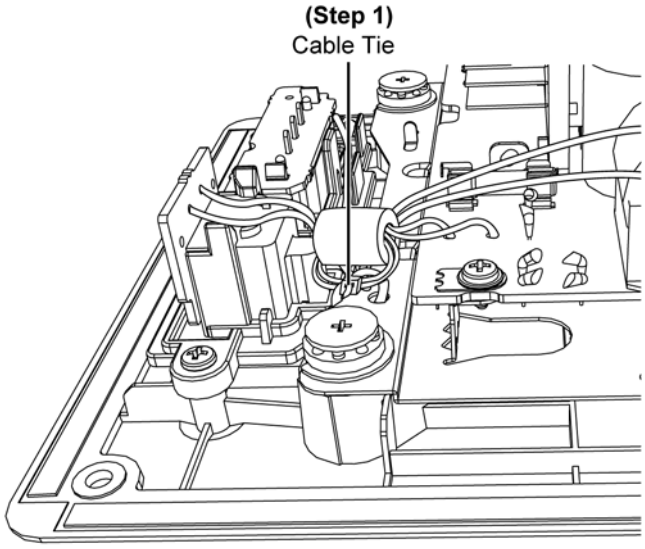
Step 4 : Solder pins of the Rectifier Diode (D5802) on the solder side of the SMPS P.C.B..



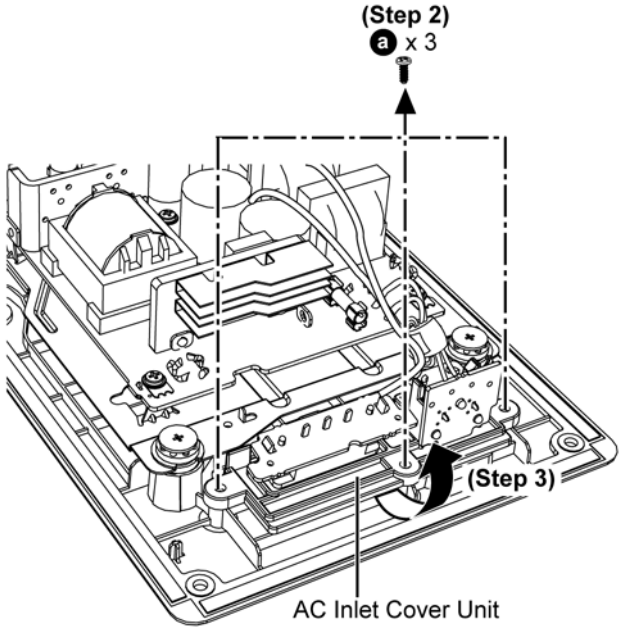
8.4.11. Disassembly of AC Inlet P.C.B.

- Refer to “Disassembly of Top Panel Unit”
- Refer to “Disassembly of Fan Cover Unit”
- Refer to “Disassembly of Rear Panel Unit”

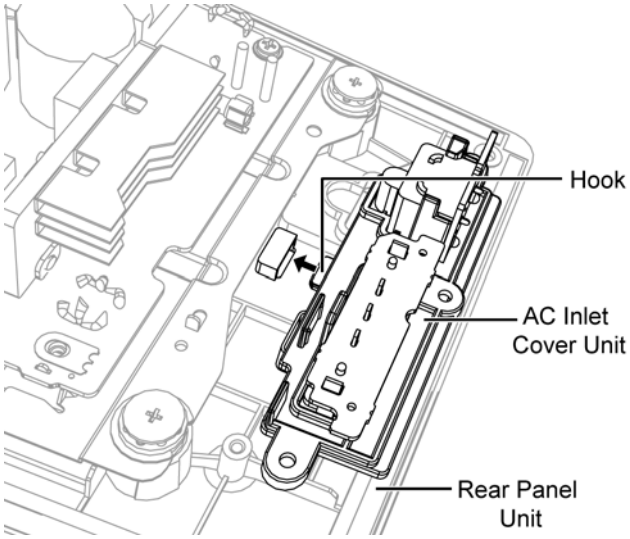
Step 1 : Cut off the Cable Tie.



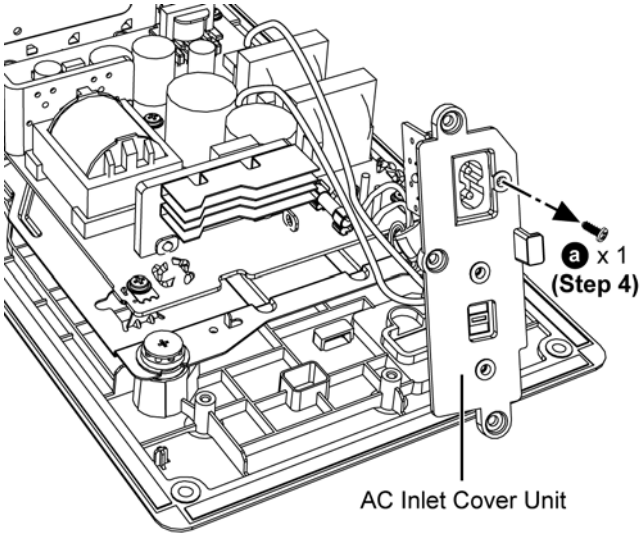
Step 2 : Remove 3 screws.
Step 3 : Lift up AC Inlet Cover Unit as arrow shown.



Caution : During assembling, ensure hook of AC Inlet Cover Unit is fully catch into the Rear Panel Unit.



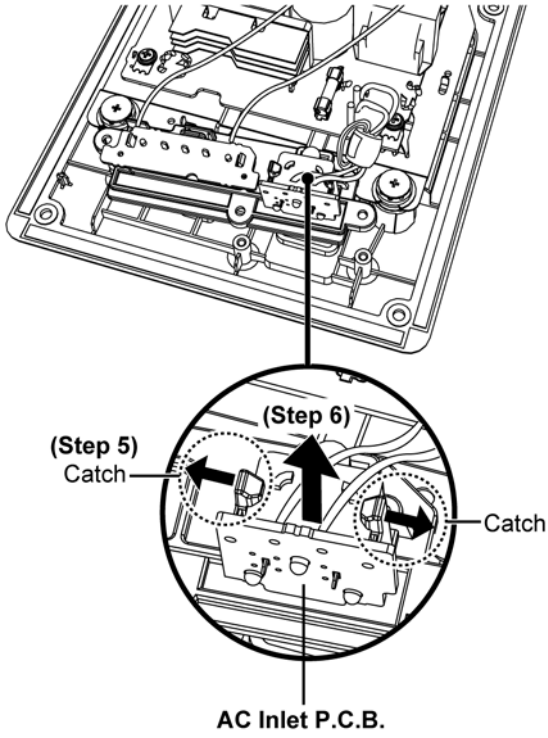
Step 4 : Remove 1 screw.



Step 5 : Release 2 catches as show.

Step 6 : Lift up AC Inlet P.C.B..

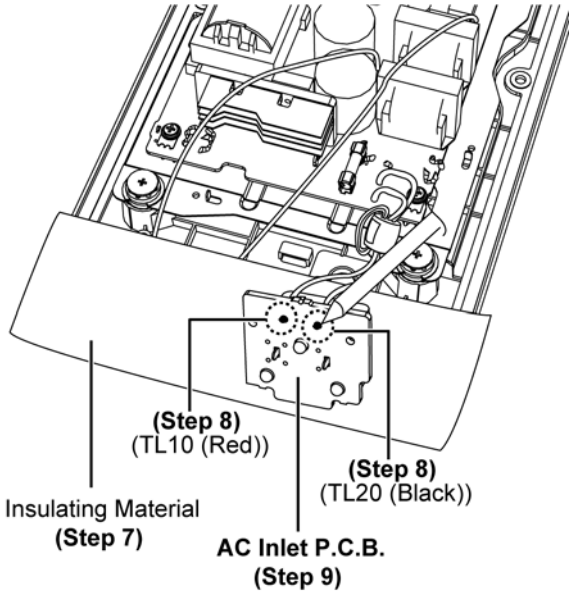
Caution : During assembling, ensure the AC Inlet P.C.B. is properly inserted & fully catched.



Step 7 : Place the AC Inlet P.C.B. on the Insulating Material.

Step 8 : Desolder pins(TL10 (Red)) & (TL20 (Black)) on the solder side of AC Inlet P.C.B..

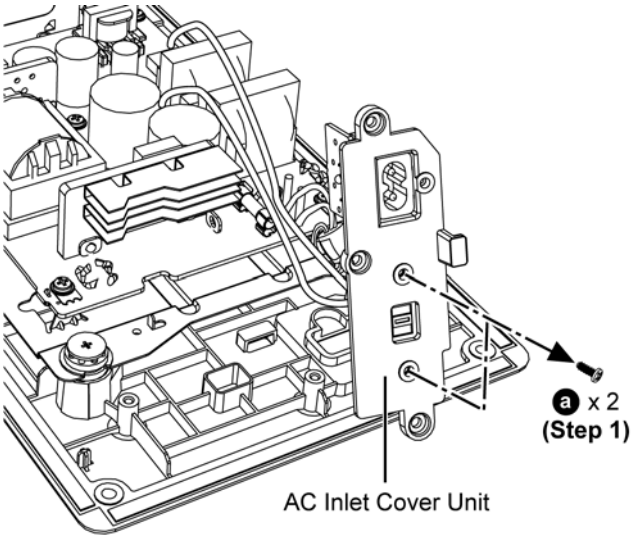
Step 9 : Remove the AC Inlet P.C.B..



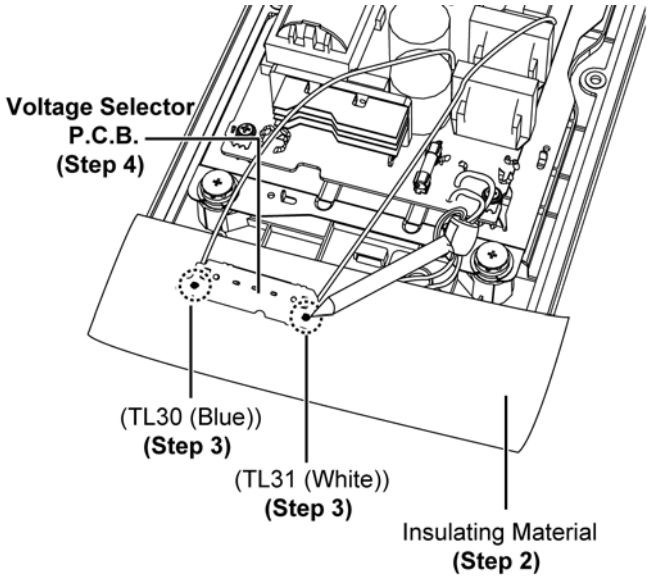
8.4.12. Disassembly of Voltage Selector P.C.B.

- Refer to “Disassembly of Top Panel Unit”
- Refer to “Disassembly of Fan Cover Unit”
- Refer to “Disassembly of Rear Panel Unit”
- Refer to (Step 1) - (Step 3) of item 8.4.11.

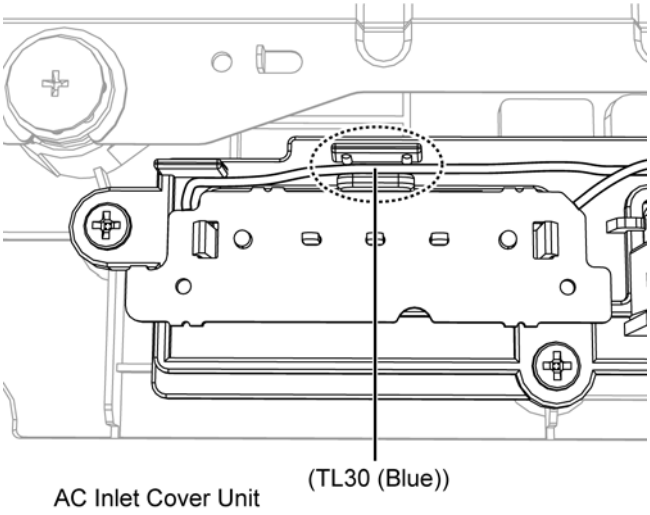
Step 1 : Remove 2 screws.



Step 2 : Place the Voltage Selector P.C.B. on the Insulating Material.
Step 3 : Desolder pins(TL30 (Blue)) & (TL31 (White)) on the solder side of Voltage Selector P.C.B..
Step 4 : Remove the Voltage Selector P.C.B..



Caution : Dress 1P wire TL30 (Blue) in between the two walls of AC Inlet Cover as shown.

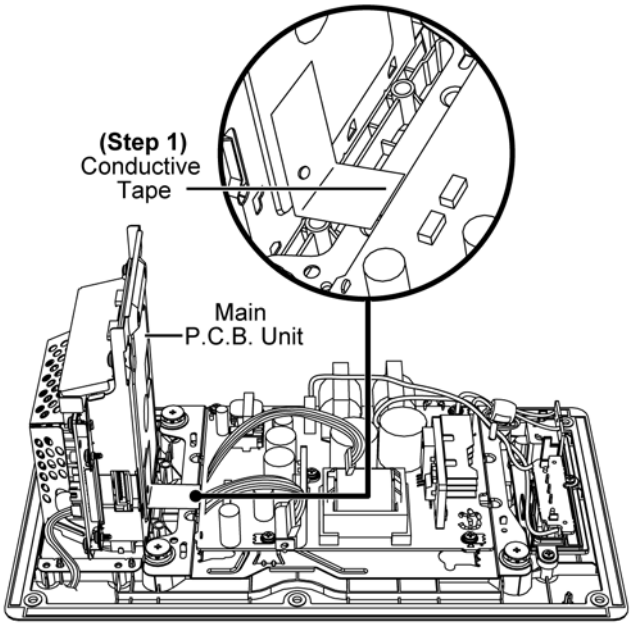


8.4.13. Disassembly of Main P.C.B. Unit

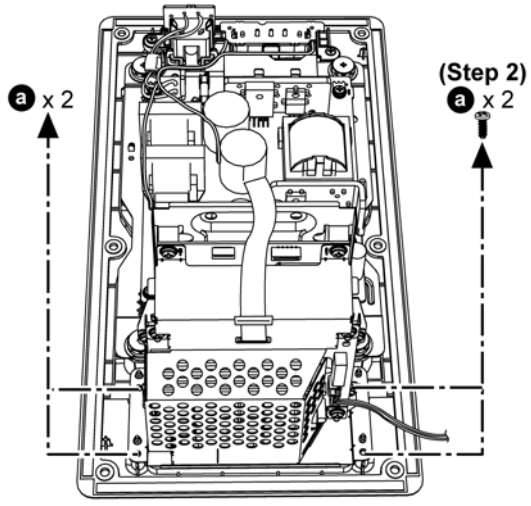
- Refer to “Disassembly of Top Panel Unit”
- Refer to “Disassembly of Fan Cover Unit”
- Refer to “Disassembly of Rear Panel Unit”
- Refer to (Step 1) - (Step 3) of item 8.4.7.

Step 1 : Lift up the Conductive Tape.

Caution : During assembling of Main P.C.B. Unit, replace Conductive Tape if it is torn.

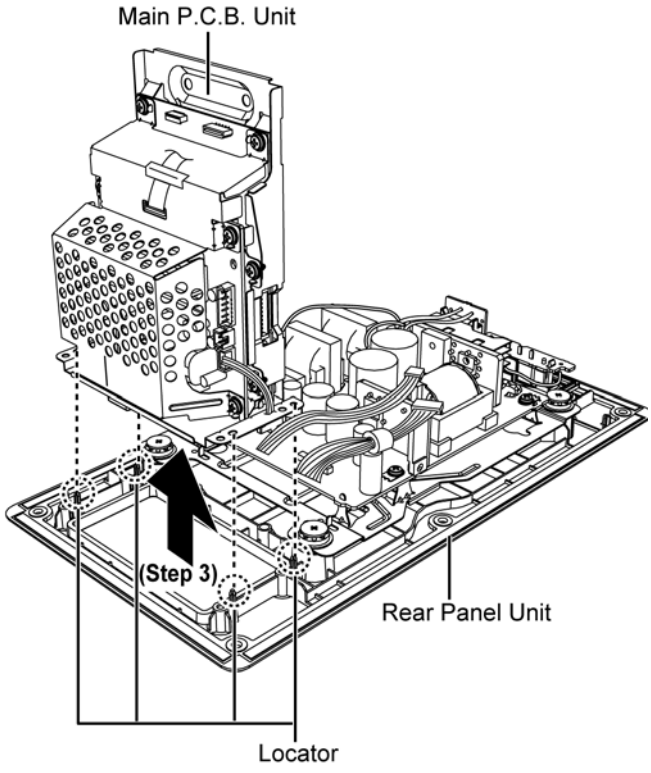


Step 2 : Remove 4 screws.



Step 3 : Remove the Main P.C.B. Unit as shown.

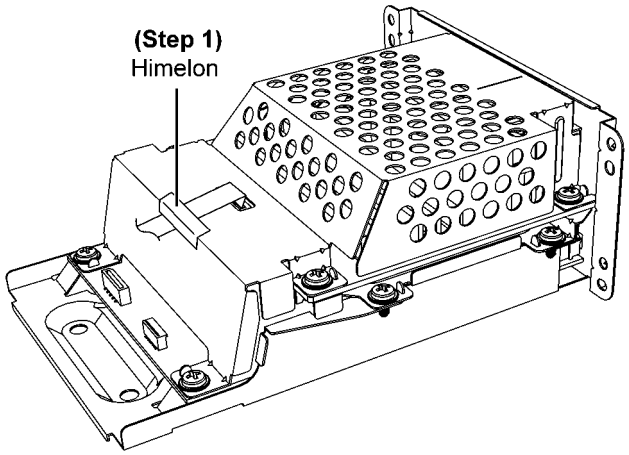
Caution : During assembling, ensure the Main P.C.B. Unit is properly seated onto the locators.



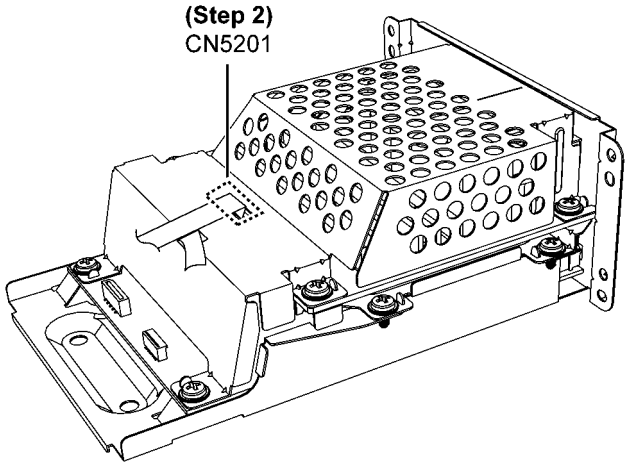
8.4.14. Disassembly of D-Amp P.C.B.

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

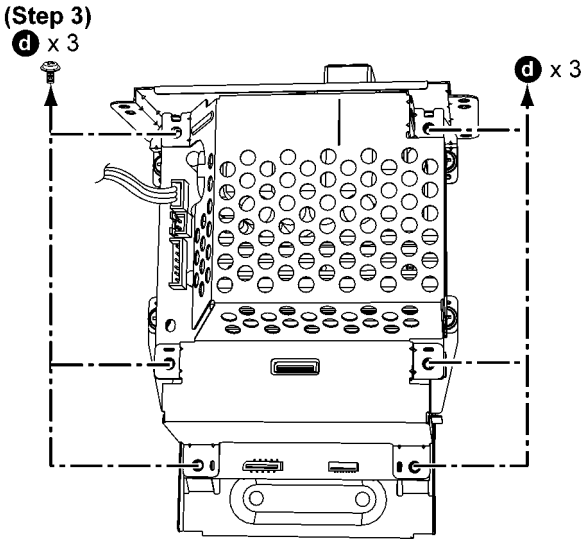
Step 1 : Lift up Himelon.
Caution : Replace Himelon if torn.



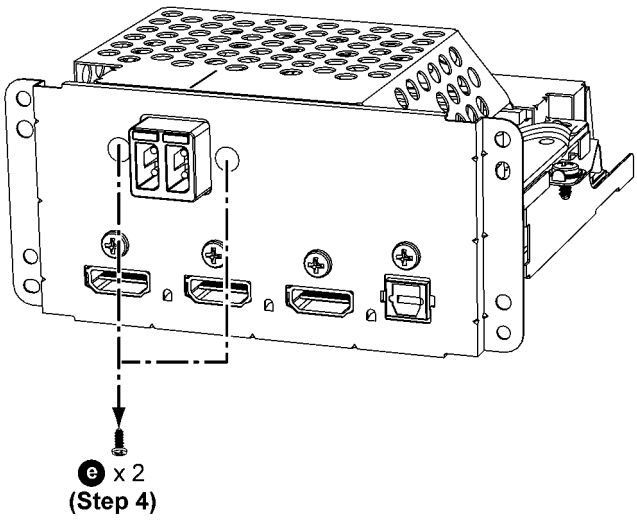
Step 2 : Detach 11P FFC at the connector (CN5201) on the D-Amp P.C.B..
Caution : Keep the 11P FFC in safe place. Avoid denting it, place it back during assembling.



Step 3 : Remove 6 screws.

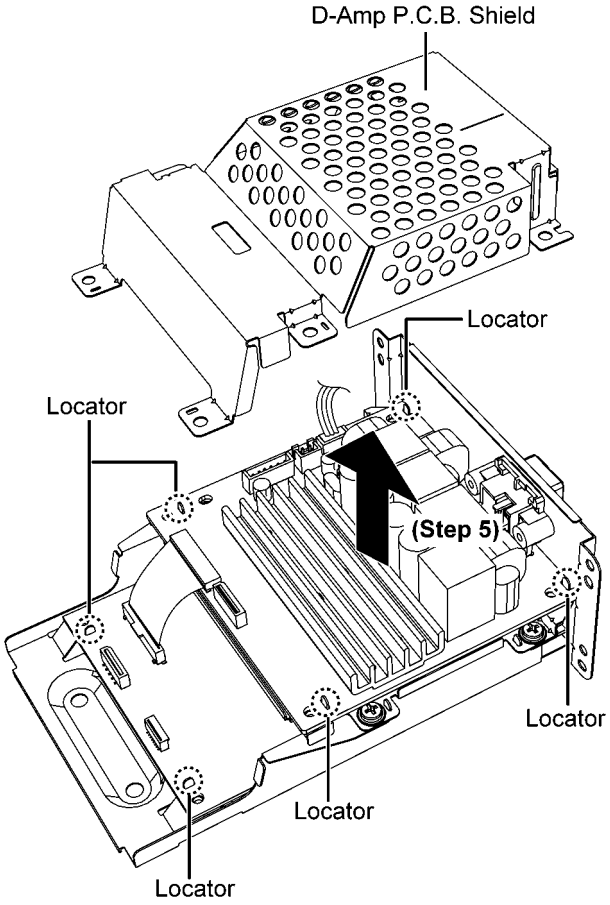


Step 4 : Remove 2 screws.

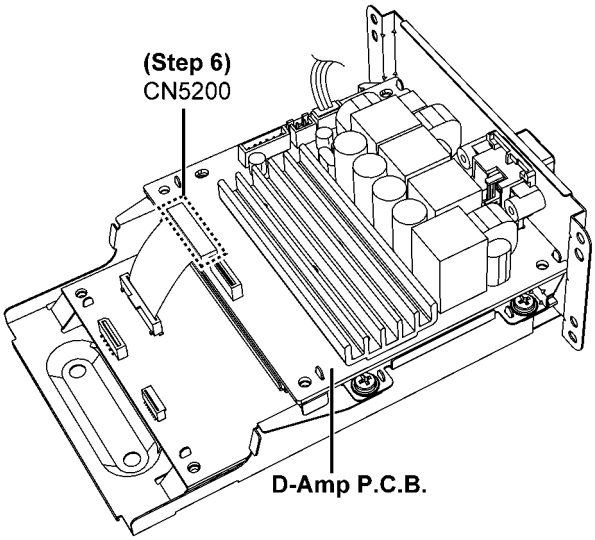


Step 5 : Remove D-Amp P.C.B. Shield as shown.

Caution : During assembling, ensure the D-Amp P.C.B. Shield is properly seated onto the locators.

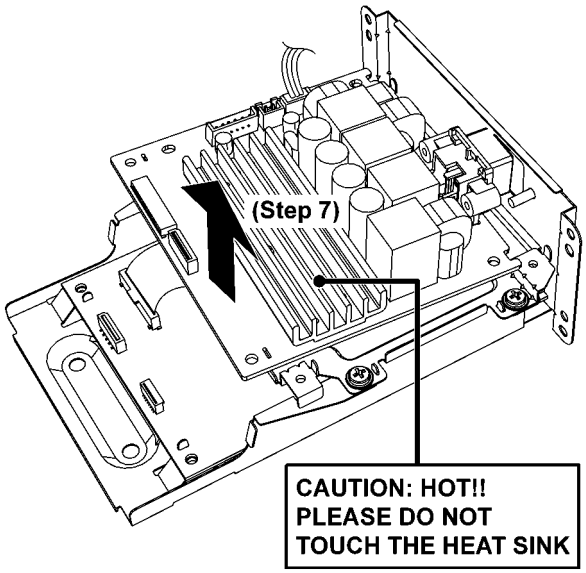


Step 6 : Detach 40P FFC at connector (CN5200) on D-Amp P.C.B..

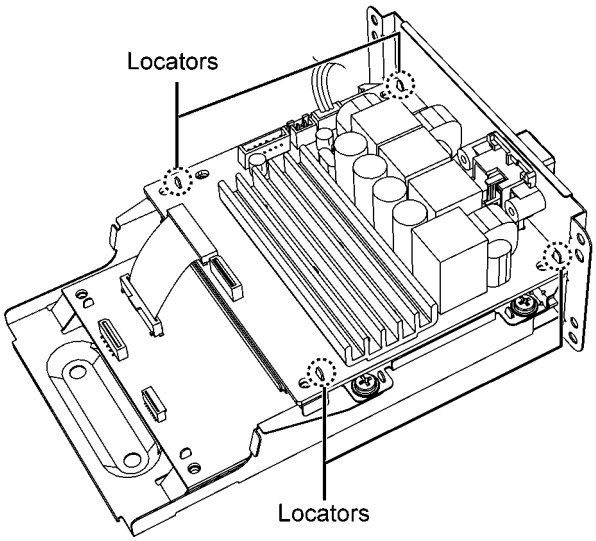


Step 7 : Lift up and remove D-Amp P.C.B..

Caution : During disassembly of the D-Amp P.C.B., avoid touching the Heatsink Unit due to it's high temperature after prolonged use. Touching it may lead to injuries.



Caution : During assembling, ensure the D-Amp P.C.B. is properly seated onto the locator.



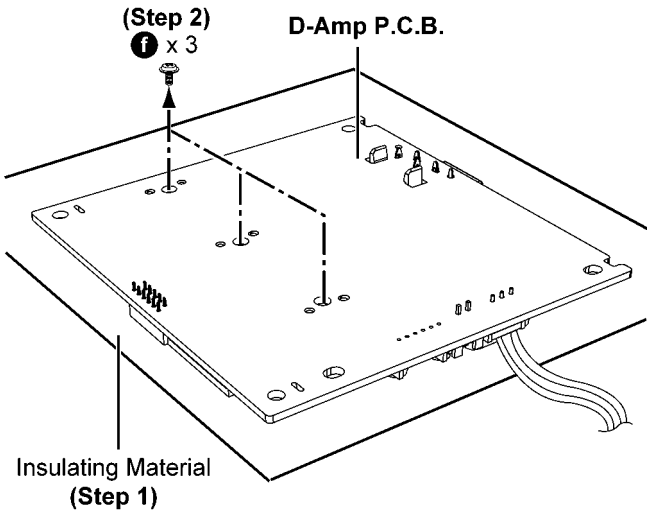
8.4.15. Replacement of Digital Amplifier IC (IC5300/IC5500)

• Refer to “Disassembly of D-Amp P.C.B.”

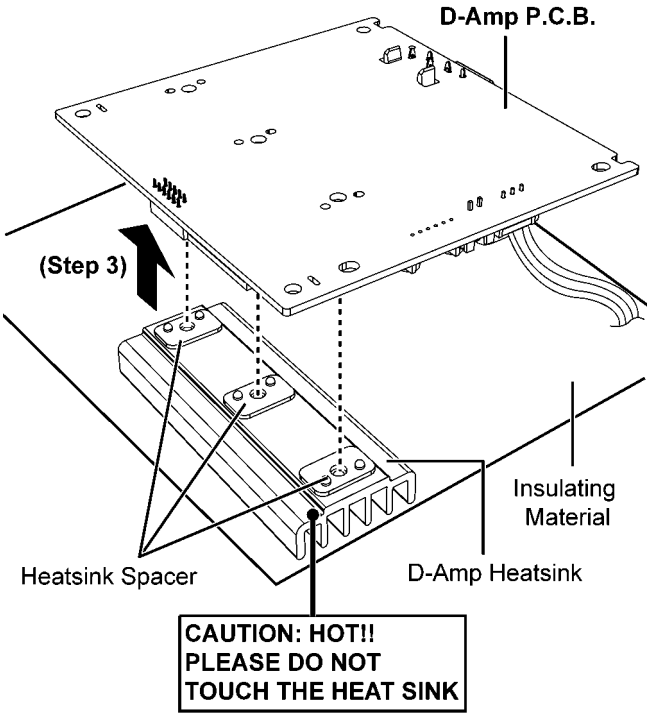
8.4.15.1. Disassembly of Digital Amplifier IC (IC5300/IC5500)

Caution : Handle the D-Amp Heatsink & P.C.B. with caution due to it’s high temperature after prolonged use. Touching it may lead to injuries.

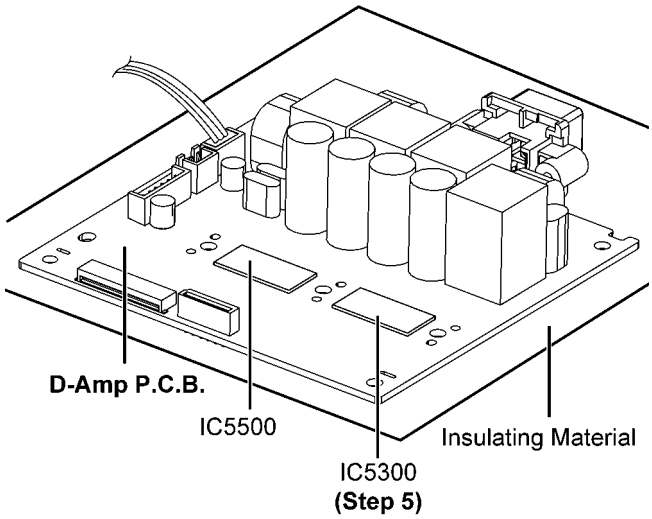
Step 1 : Place the D-Amp P.C.B. on an Insulated Material.
Step 2 : Remove 3 screws.



Step 3 : Lift up D-Amp P.C.B..
Caution : Keep the Heatsink Spacer in safe place. Place it back during assembling.



Step 4 : Desolder the pins of Digital Amplifier IC (IC5300).
Step 5 : Remove Digital Amplifier IC (IC5300).
Note 1 : For disassembling of Digital Amplifier IC (IC5500), repeat the (Step 1) to (Step 5) of 8.4.14.1.



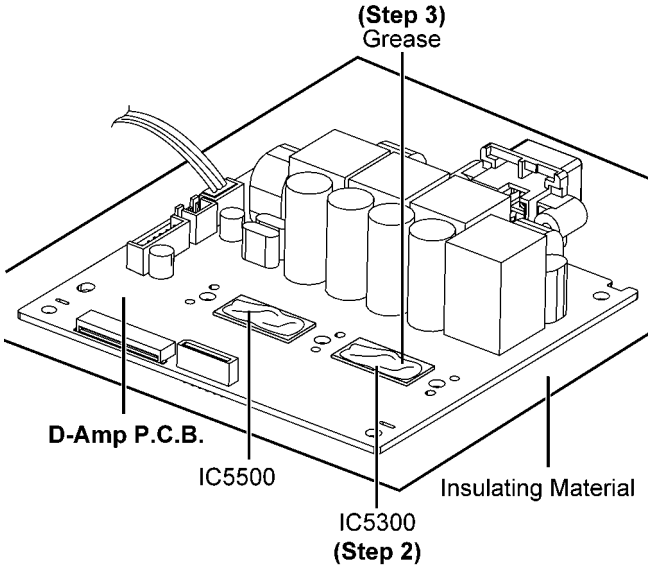
8.4.15.2. Assembly of Digital Amplifier IC (IC5300/IC5500)

Step 1 : Fix the Digital Amplifier IC (IC5300) onto the D-Amp 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 D-Amp P.C.B. before soldering.

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



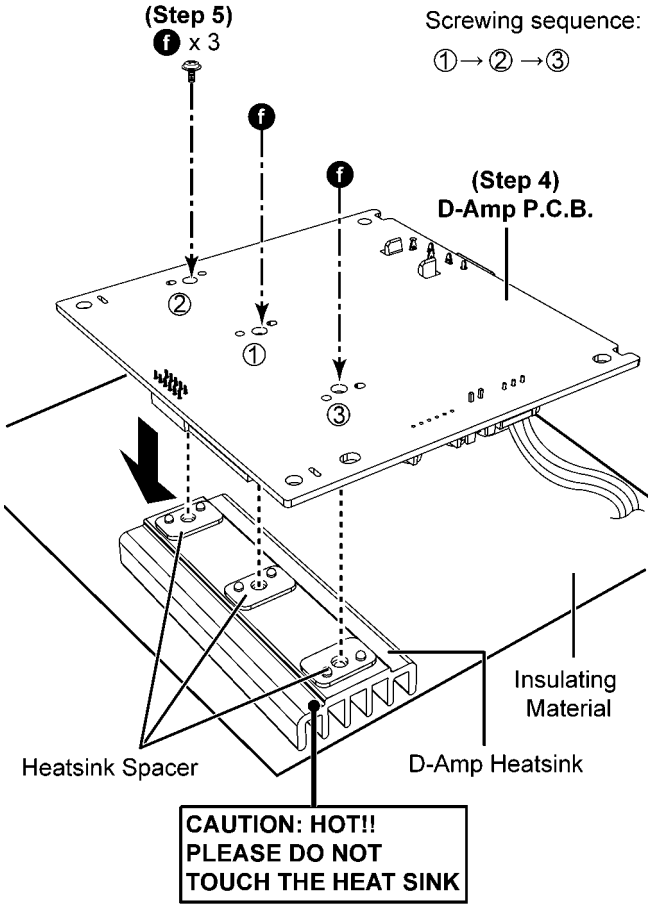
Step 4 : Upset the D-Amp P.C.B..

Caution 1 : During assembling, ensure that heatsink spacer are properly located & fully seated onto D-Amp Heatsink.

Step 5 : Fix 3 screws.

Caution 2 : During assembling, ensure that screwing sequence is strictly follow to the illustration shown.

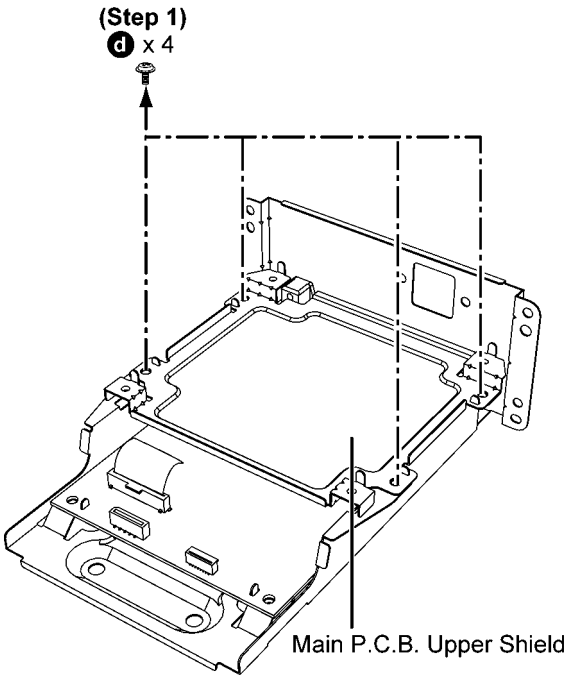
Note : For assembling of Digital Amplifier IC (IC5500), repeat the (Step 1) to (Step 5) of 8.4.14.2.



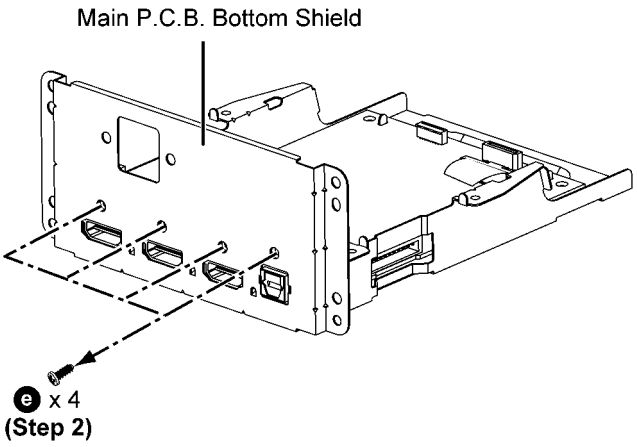
8.4.16. Disassembly of Main P.C.B.

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

Step 1 : Remove 4 screws.

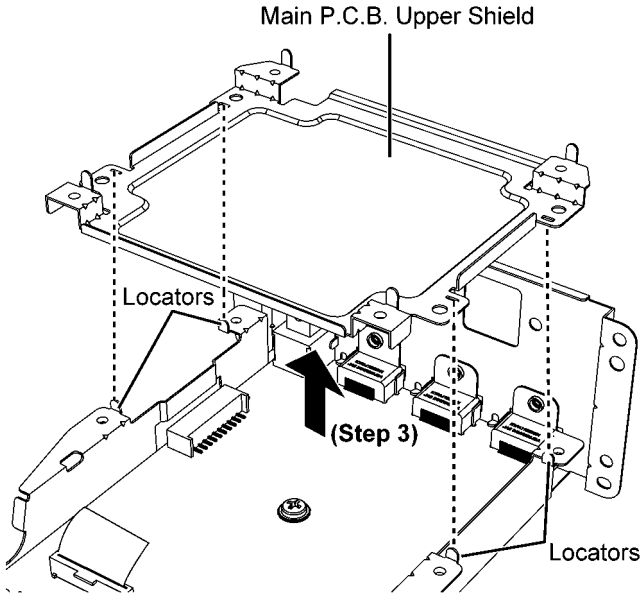


Step 2 : Remove 4 screws.



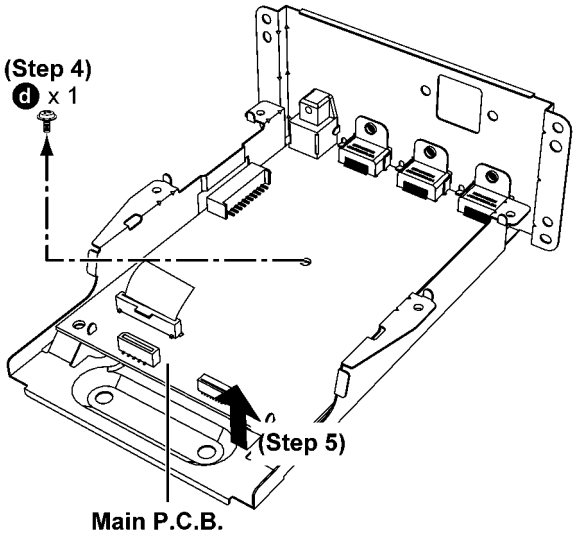
Step 3 : Remove Main P.C.B. Upper Shield.

Caution : During assembling, ensure the Main P.C.B. Upper Shield is properly seated onto the locator.

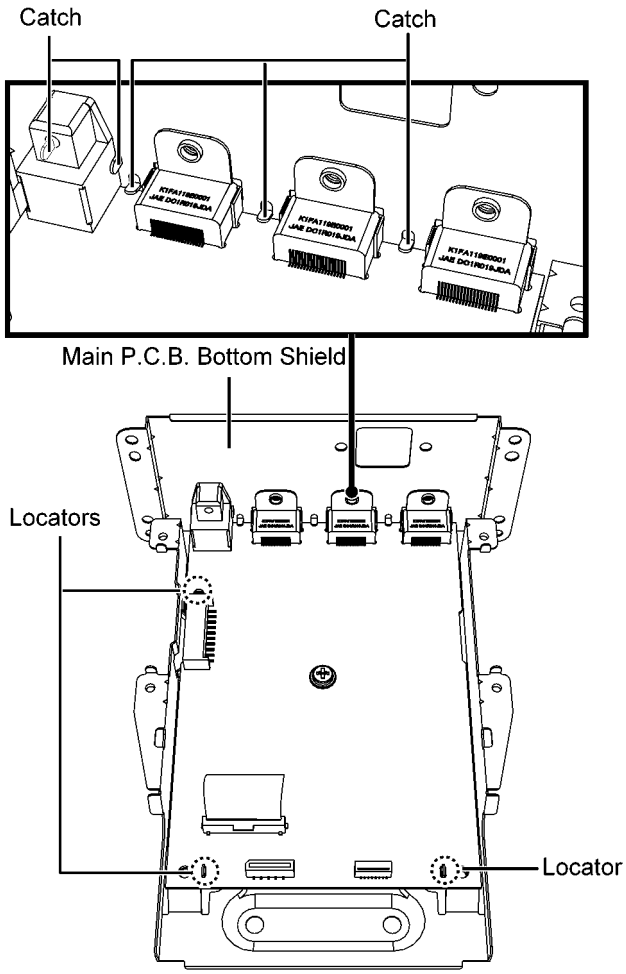


Step 4 : Remove 1 screw.

Step 5 : Lift up and remove Main P.C.B..

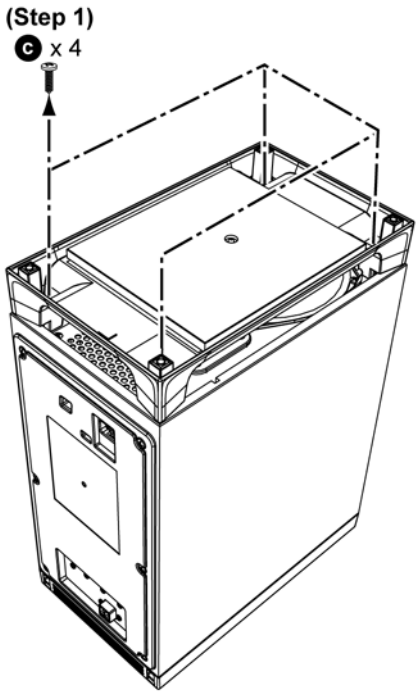


Caution : During assembling, ensure the Main P.C.B. is fully catched & properly seated onto the locator.

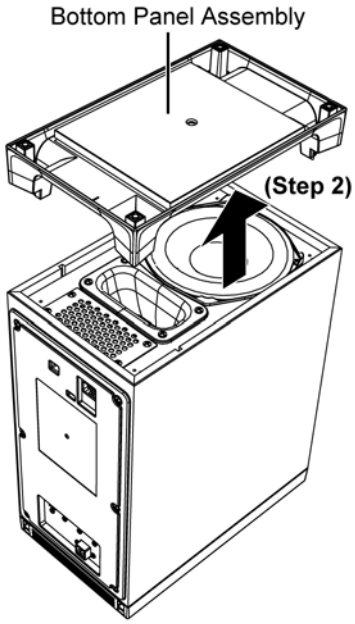


8.4.17. Disassembly of Woofer Speaker (SP61)

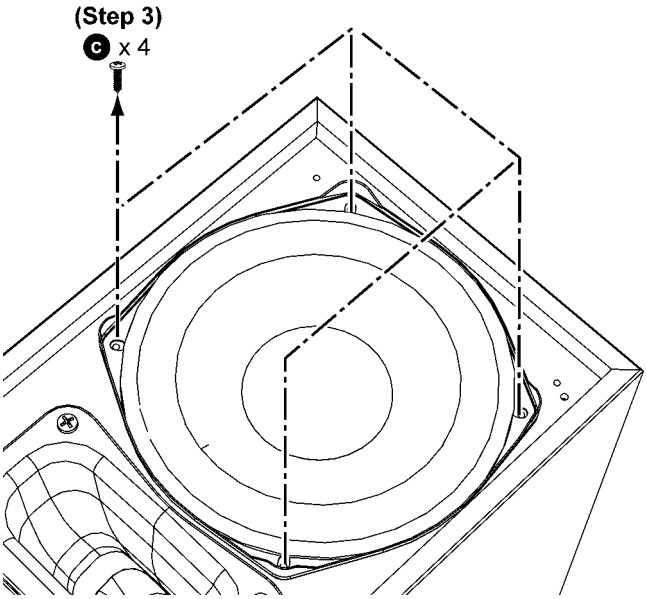
Step 1 : Remove 4 screws.



Step 2 : Remove Bottom Panel Assembly.



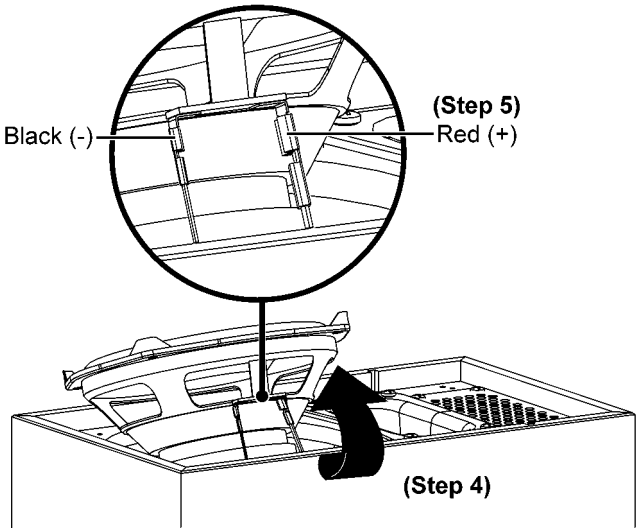
Step 3 : Remove 4 screws.



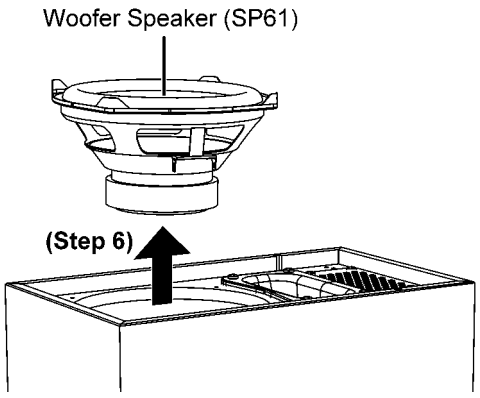
Step 4 : Gently Lift up the Woofer Speaker (SP61).

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

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



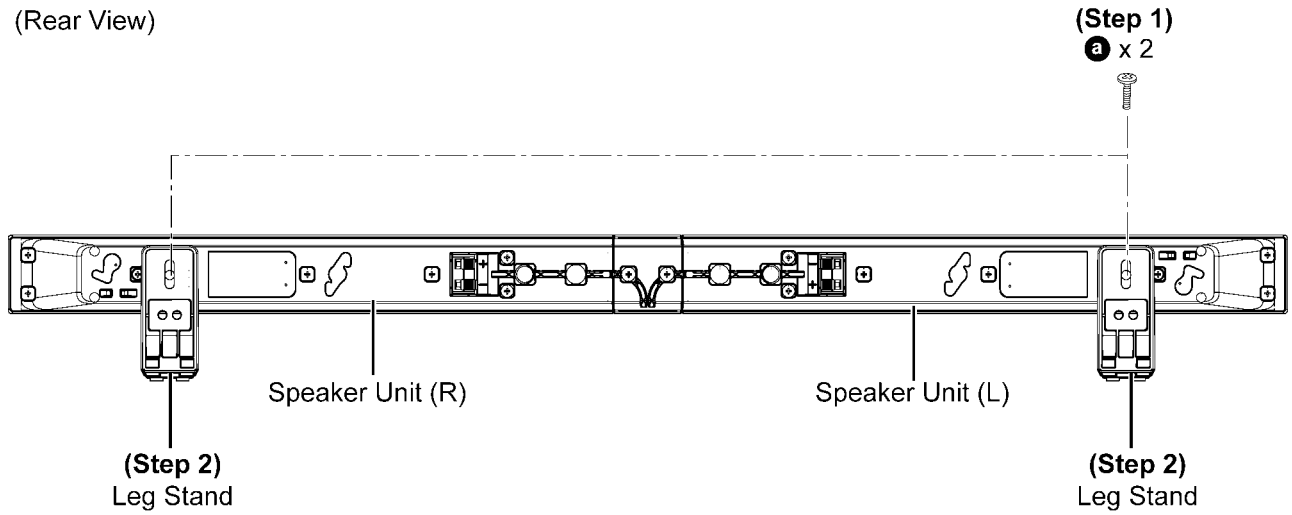
Step 6 : Remove the Woofer Speaker (SP61).



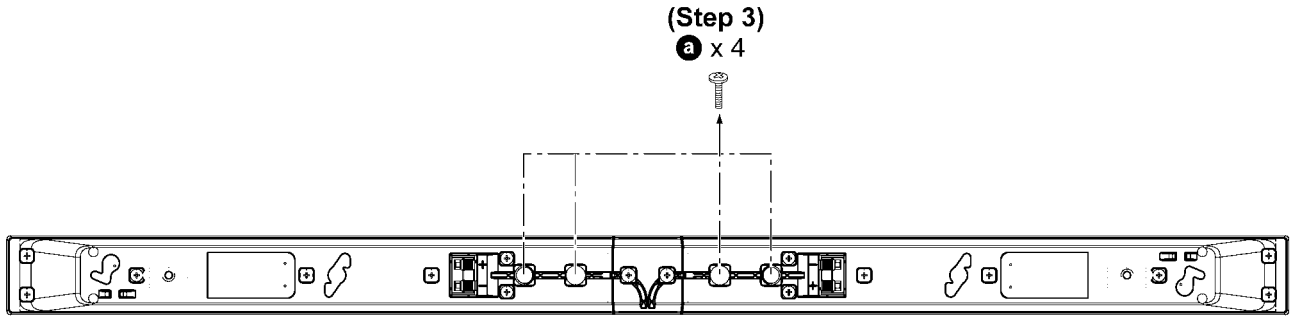
8.5. Speaker Unit (SB-HTB15)

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

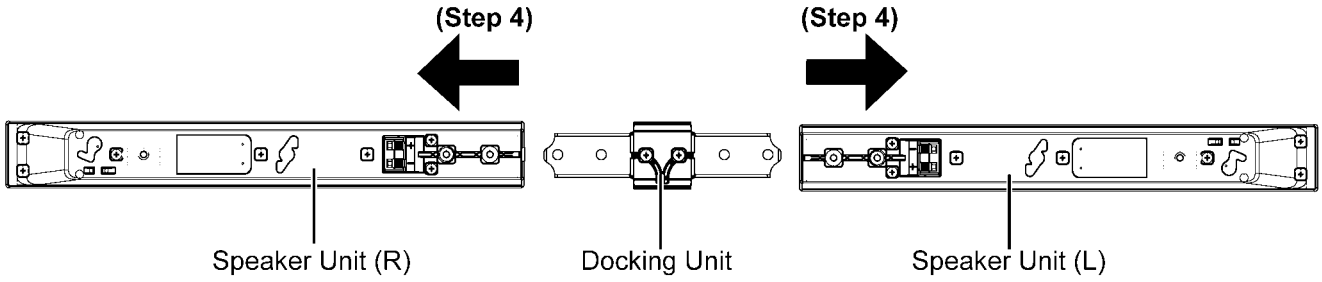
Step 1 : Remove 2 screws.
Step 2 : Remove 2 Leg Stands.



Step 3 : Remove 4 screws.



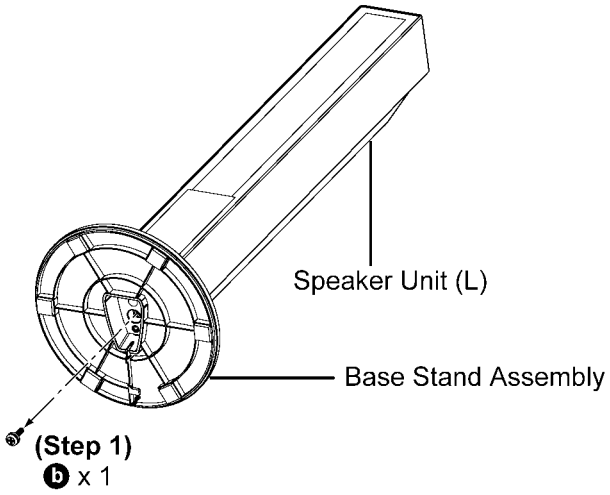
Step 4 : Remove the Speaker Unit (L/R) as arrow shown.



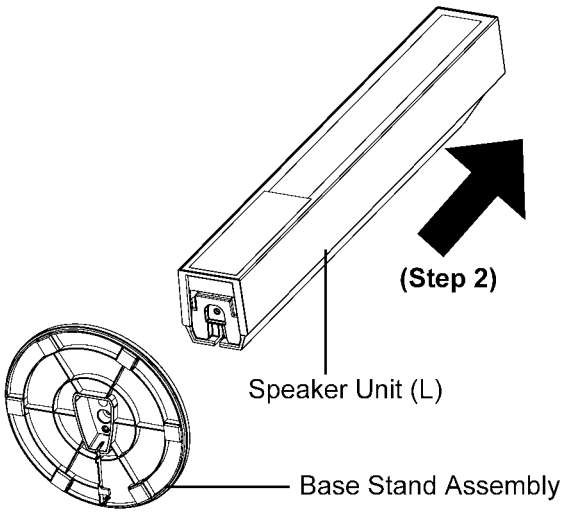
8.5.2. Disassembly of Speaker Unit (L/R) (Standing position)

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

Step 1 : Remove 1 screw.



Step 2 : Remove the Speaker Unit (L) as arrow shown.



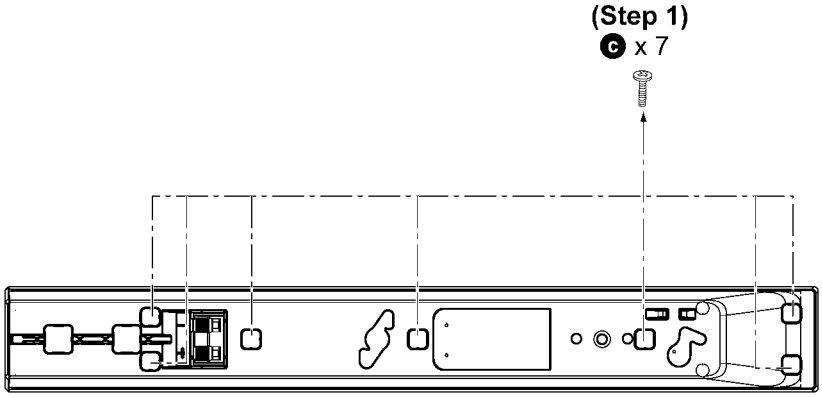
8.5.3. Disassembly of Rear Cabinet Unit

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

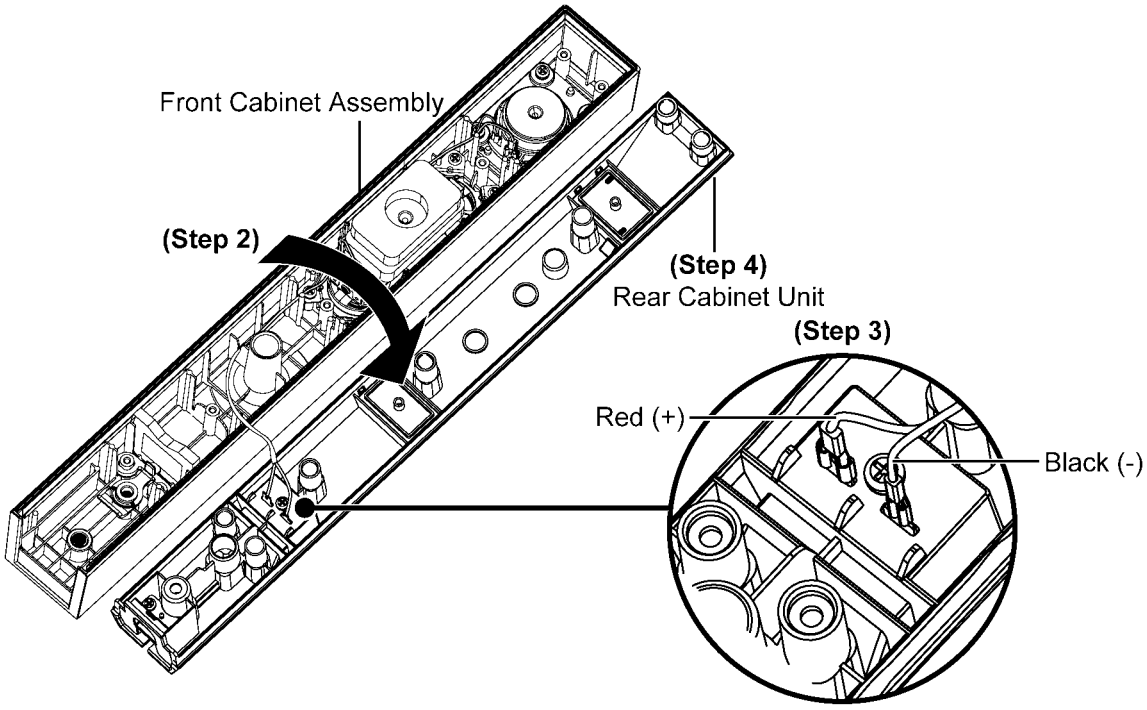
- Refer to “Disassembly of Speaker Unit (L/R)”

Step 1 : Remove 7 screws.

(Rear View)



Step 2 : Flip the Rear Cabinet Unit and place it by the side of Front Cabinet Assembly.
Step 3 : Detach the Red(+) and Black(-) wires.
Step 4 : Remove the Rear Cabinet Unit.

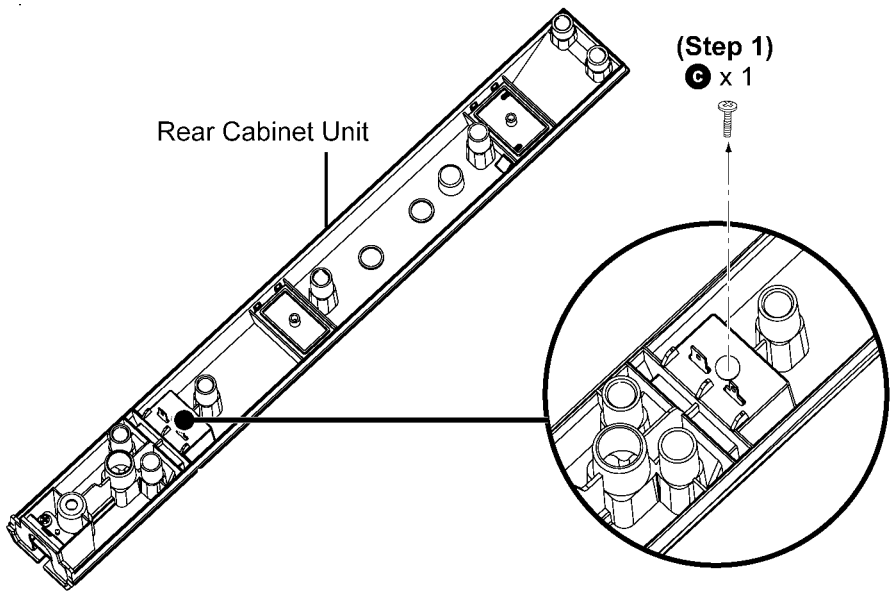


8.5.4. Disassembly of Rear Cabinet Assembly

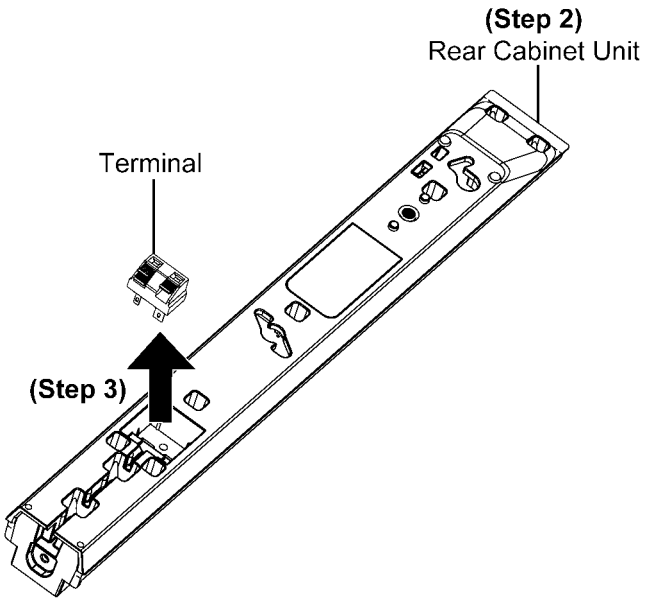
Notes : Speaker Unit (L) and (R) have the same mechanical structure. The same disassembly procedure can be applied for the both of them. Speaker Unit (L) is illustrated here.

- Refer to “Disassembly of Rear Cabinet Unit”

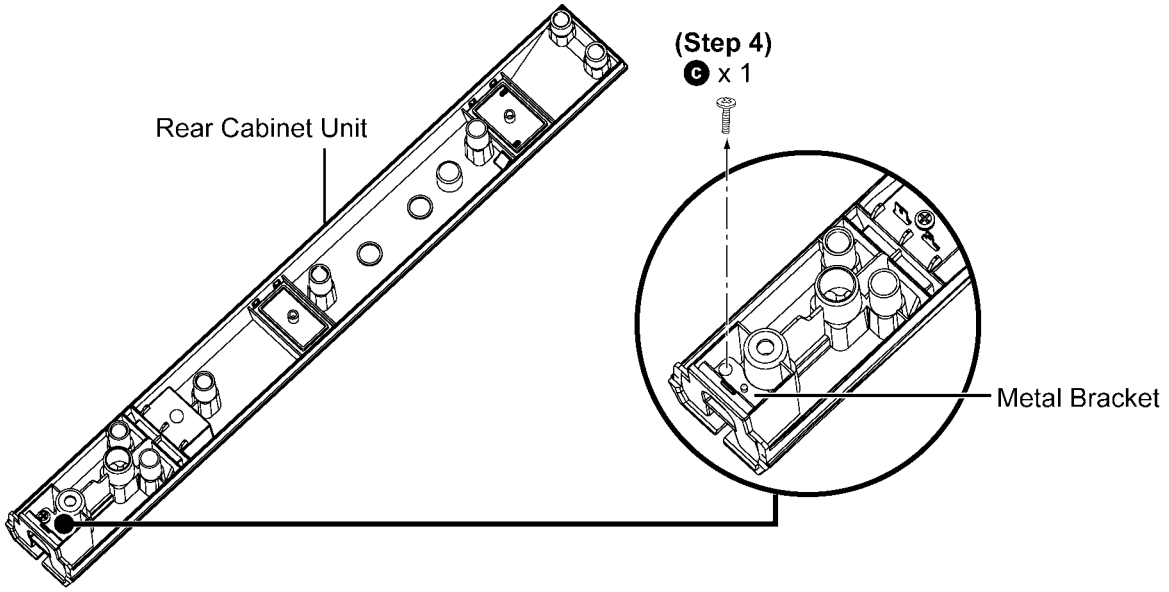
Step 1 : Remove 1 screw.



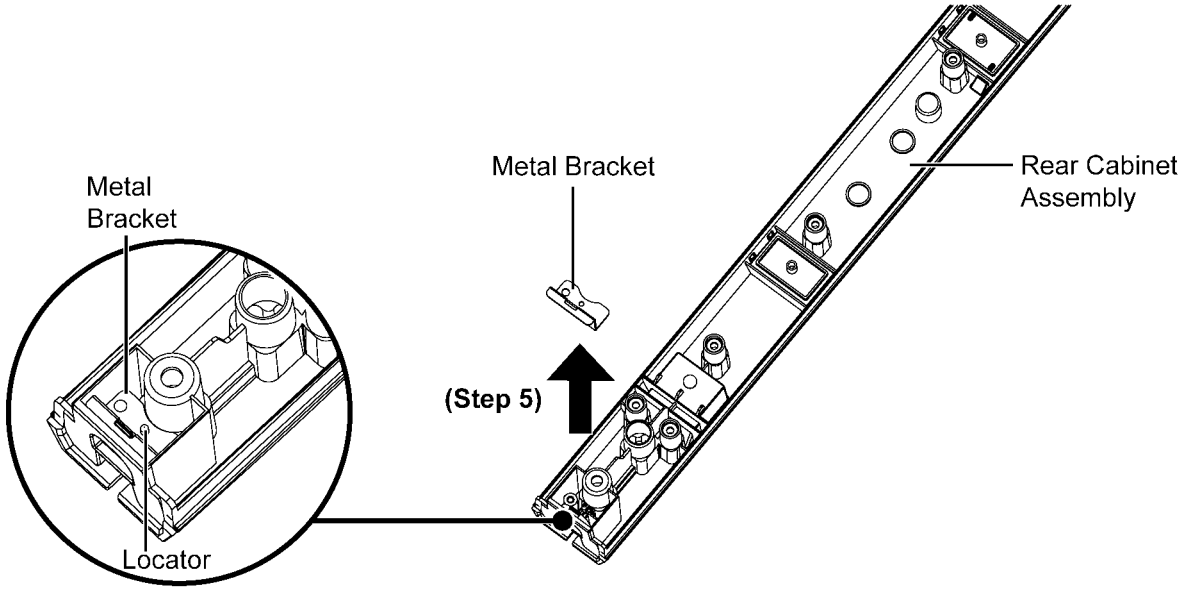
Step 2 : Upset the Rear Cabinet Unit.
Step 3 : Remove the Terminal as arrow shown.



Step 4 : Remove 1 screw.



Step 5 : Remove the Metal Bracket from Rear Cabinet Assembly as arrow shown.
Caution : During assembling, ensure that the Metal Bracket is seated properly on the locator.

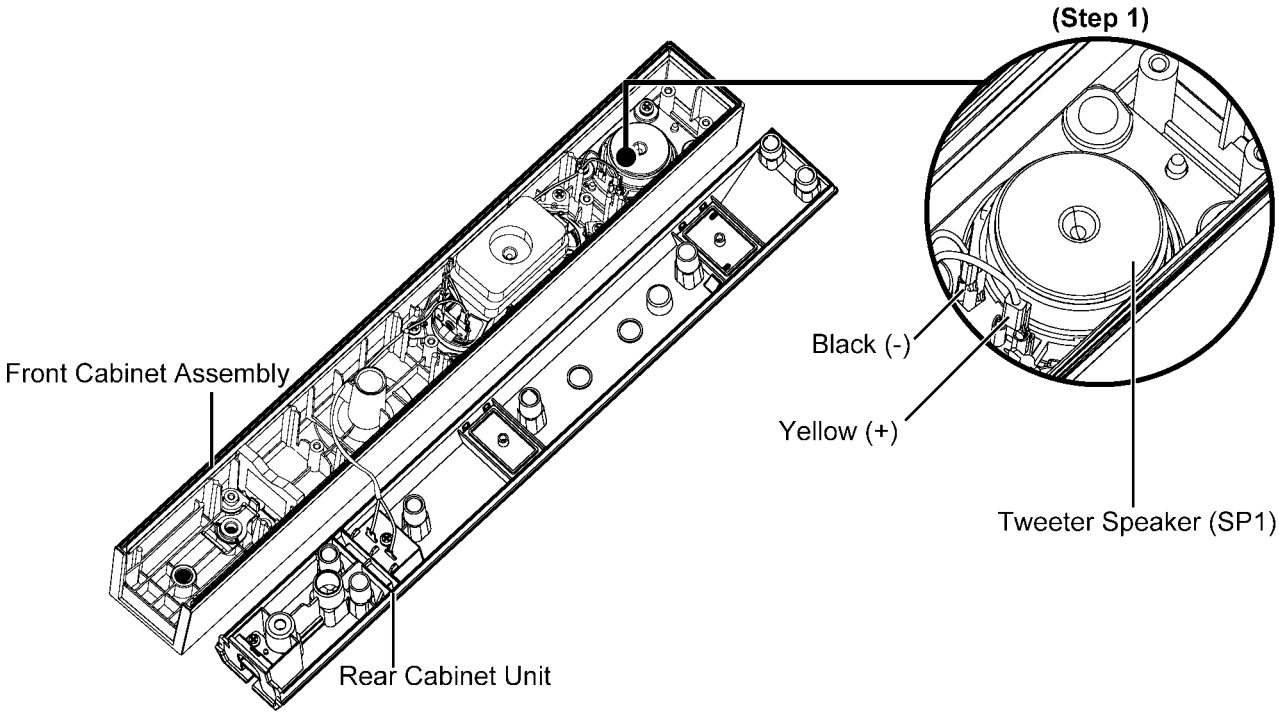


8.5.5. Disassembly of Tweeter Speaker (SP1)

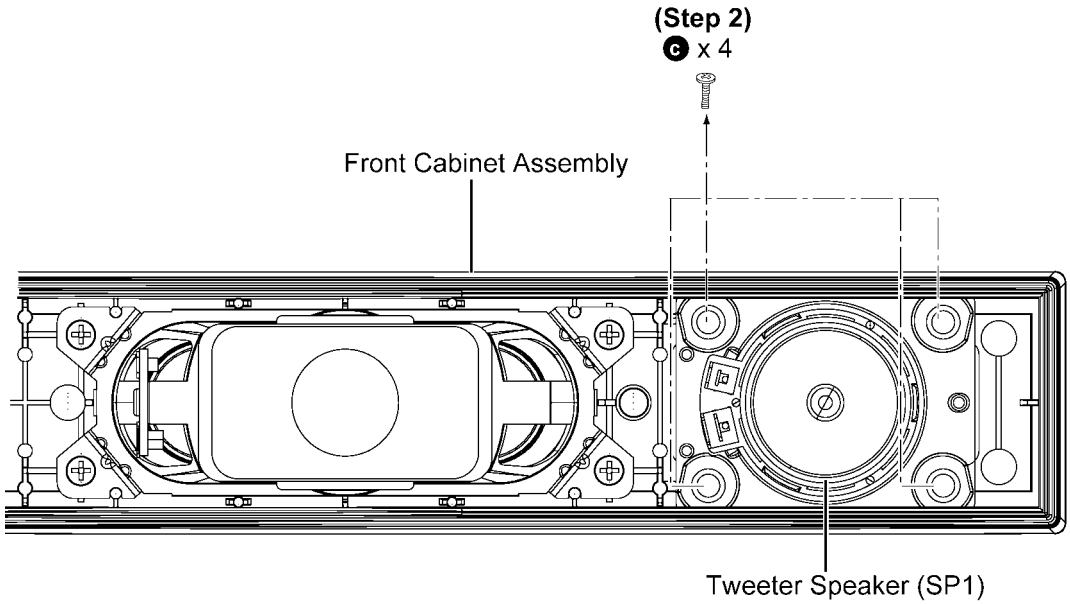
Notes : Speaker Unit (L) and (R) have the same mechanical structure. The same disassembly procedure can be applied for the both of them. Speaker Unit (L) is illustrated here.

- Refer to (Step 1) - (Step 2) of item 8.5.3.

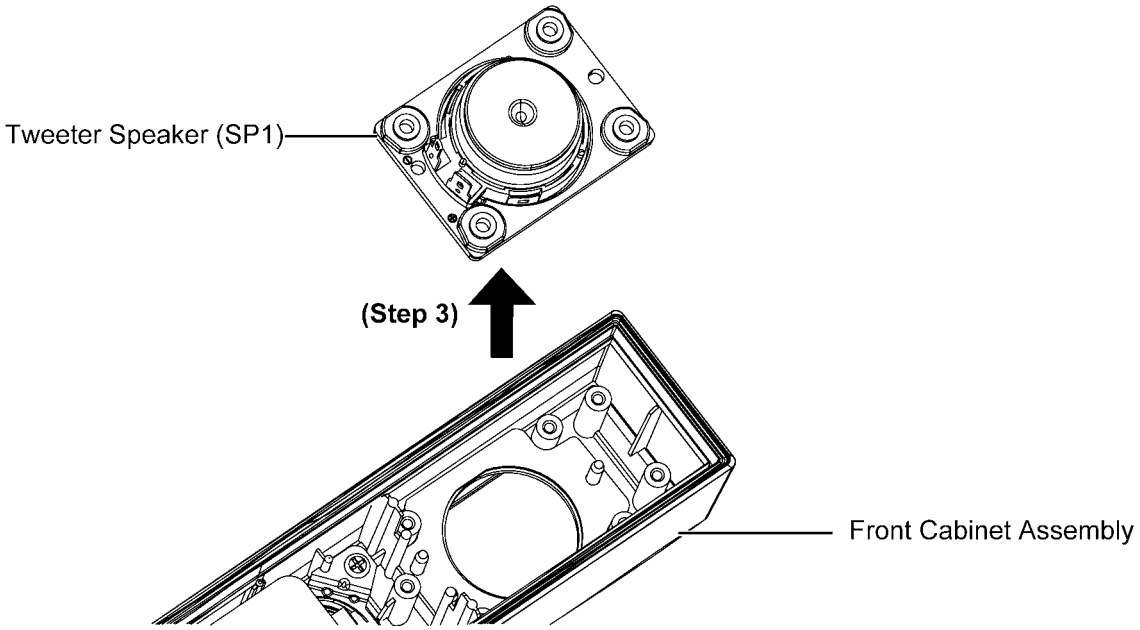
Step 1 : Detach the Yellow(+) and Black(-) wires.



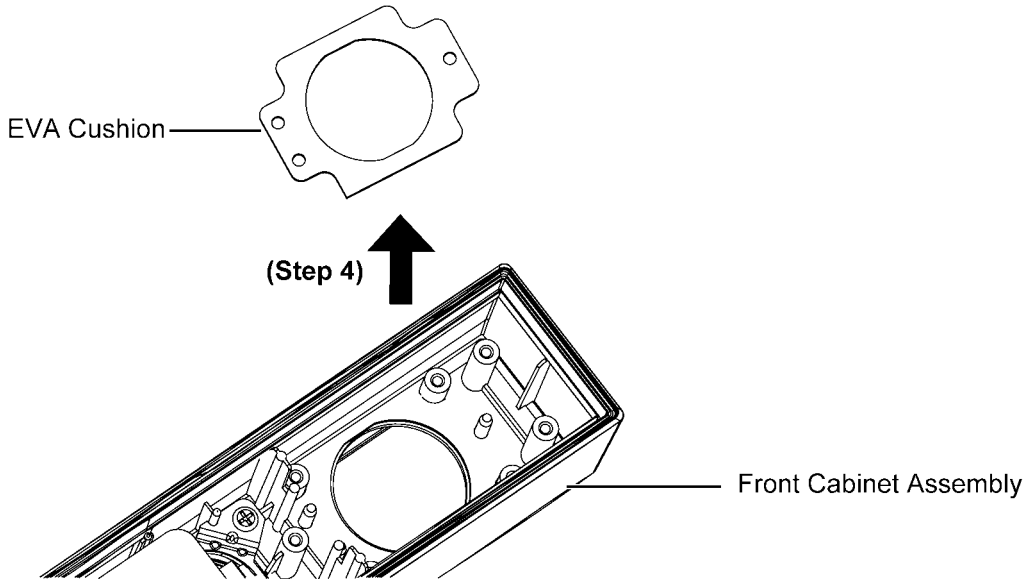
Step 2 : Remove 4 screws.



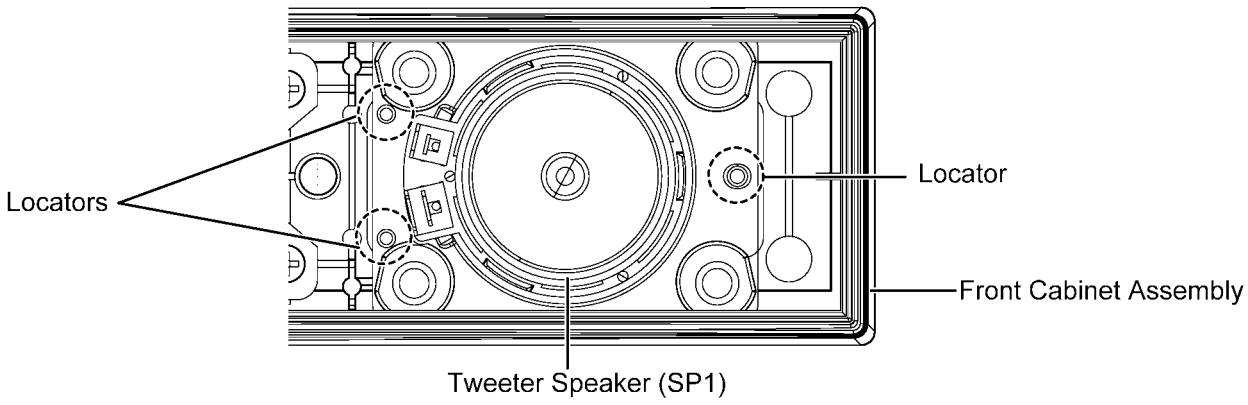
Step 3 : Remove the Tweeter Speaker (SP1).



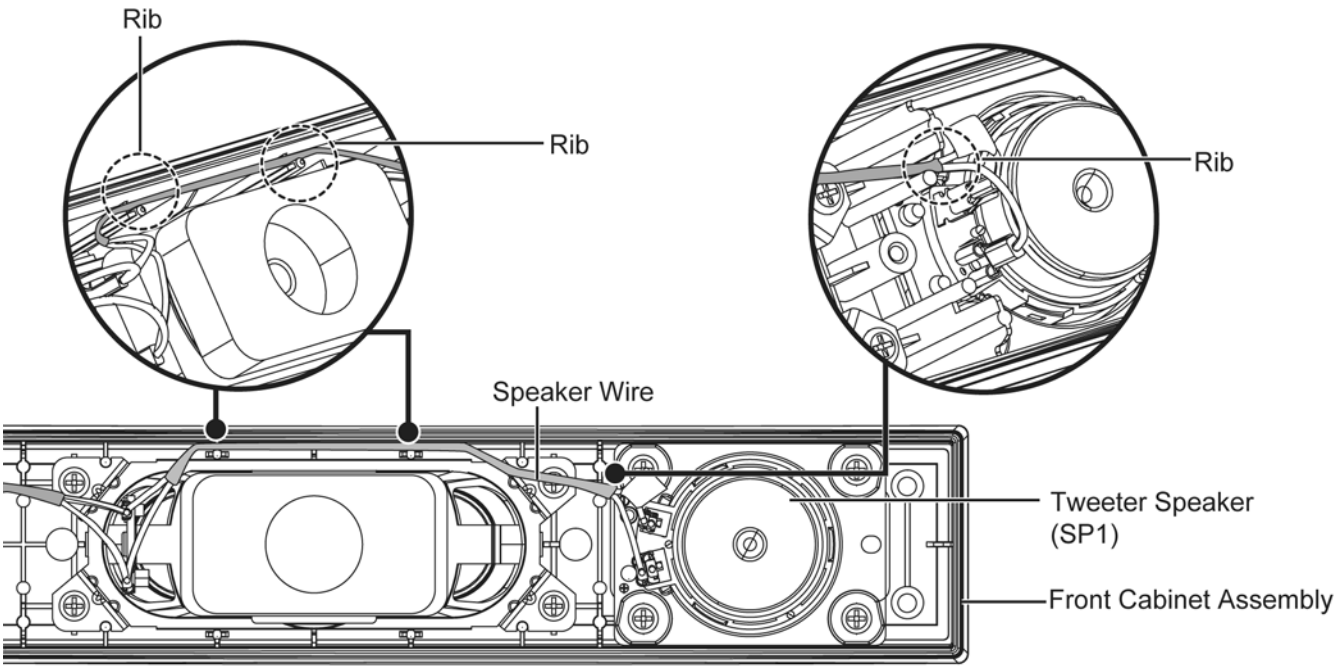
Step 4 : Remove the EVA Cushion.



Caution : During assembling, ensure that the EVA Cushion and Tweeter Speaker are seated properly on the 3 locators of the Front Cabinet Assembly.



Caution: During assembling, ensure that the Speaker Wires are properly slotted between the 3 ribs of the Front Cabinet Unit as shown.

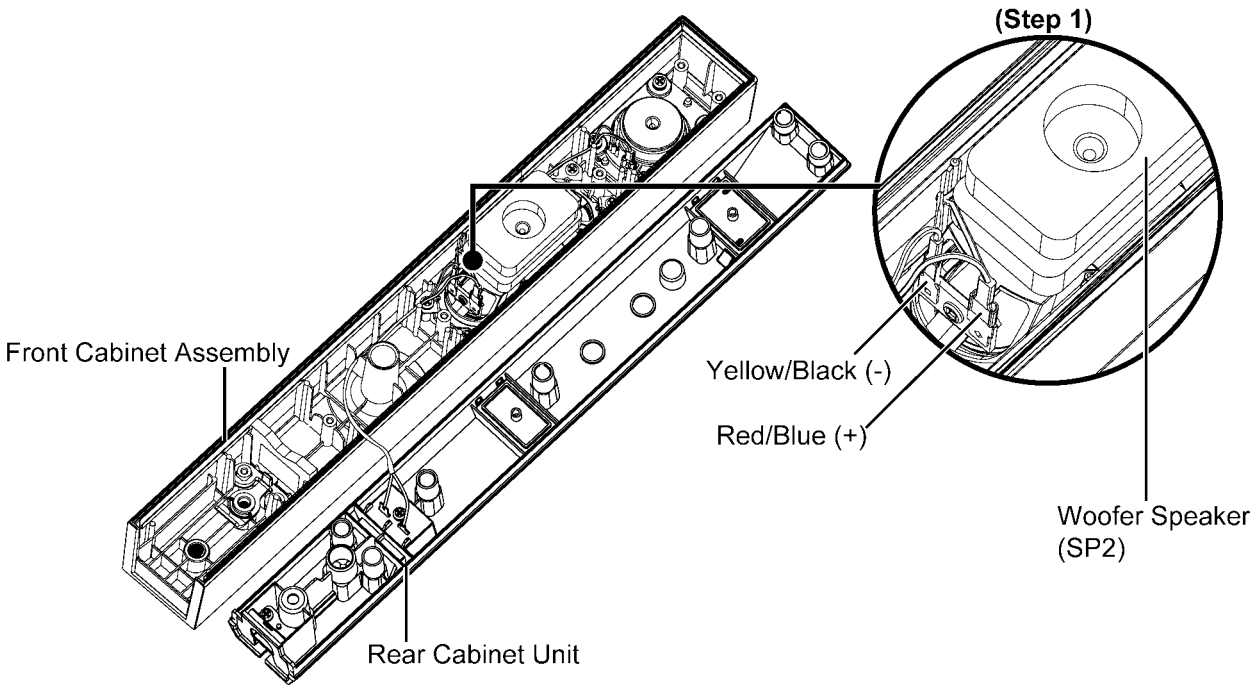


8.5.6. Disassembly of Woofer Speaker (SP2)

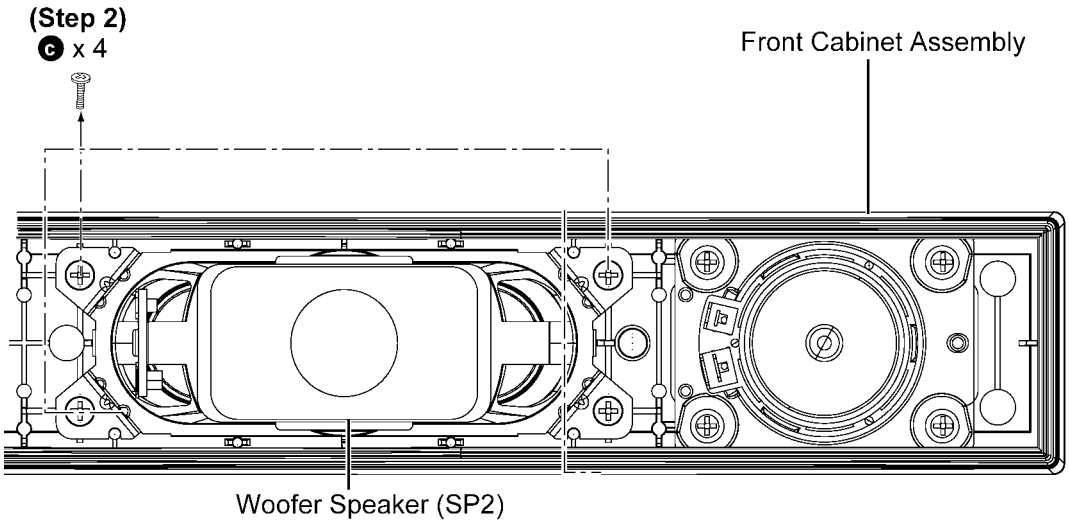
Notes : Speaker Unit (L) and (R) have the same mechanical structure. The same disassembly procedure can be applied for the both of them. Speaker Unit (L) is illustrated here.

- Refer to (Step 1) - (Step 2) of item 8.5.3.

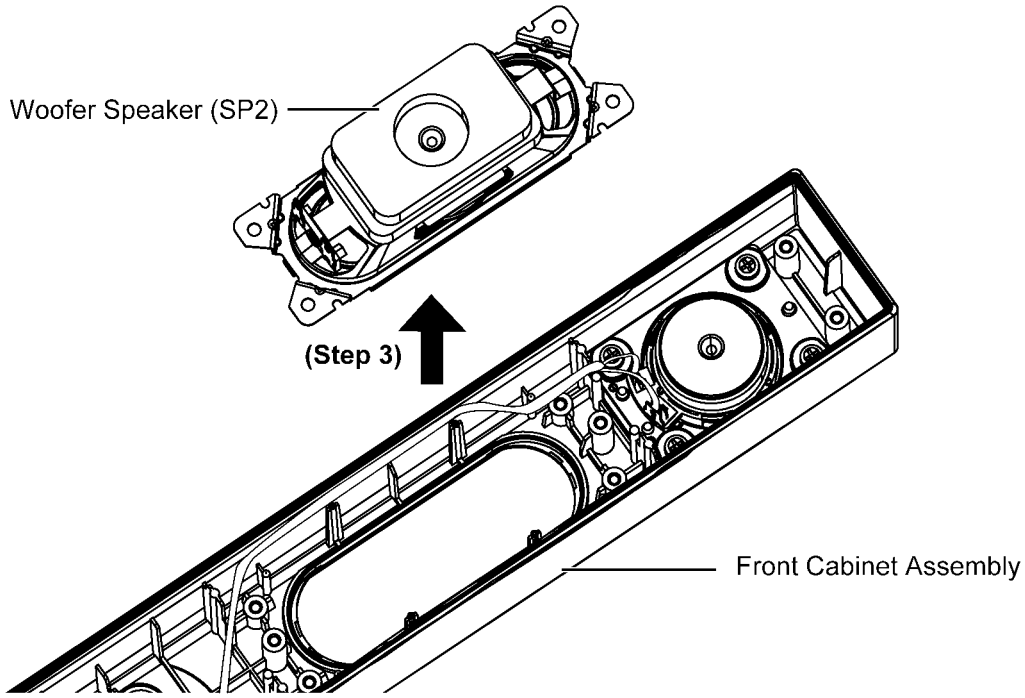
Step 1 : Detach the Red/Blue(+) and Yellow/Black(-) wires.



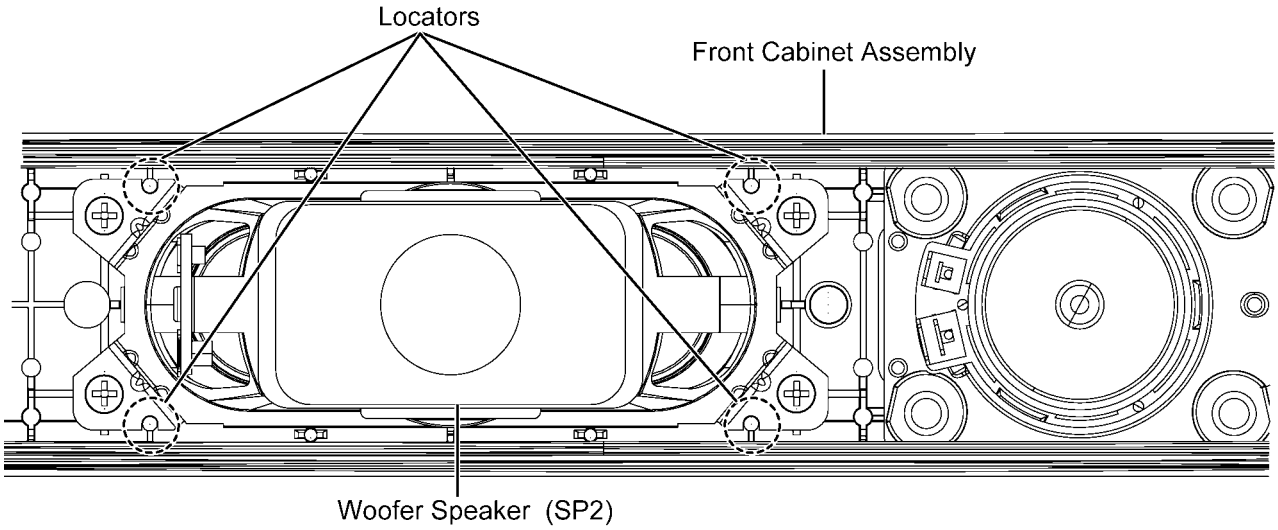
Step 2 : Remove 4 screws.



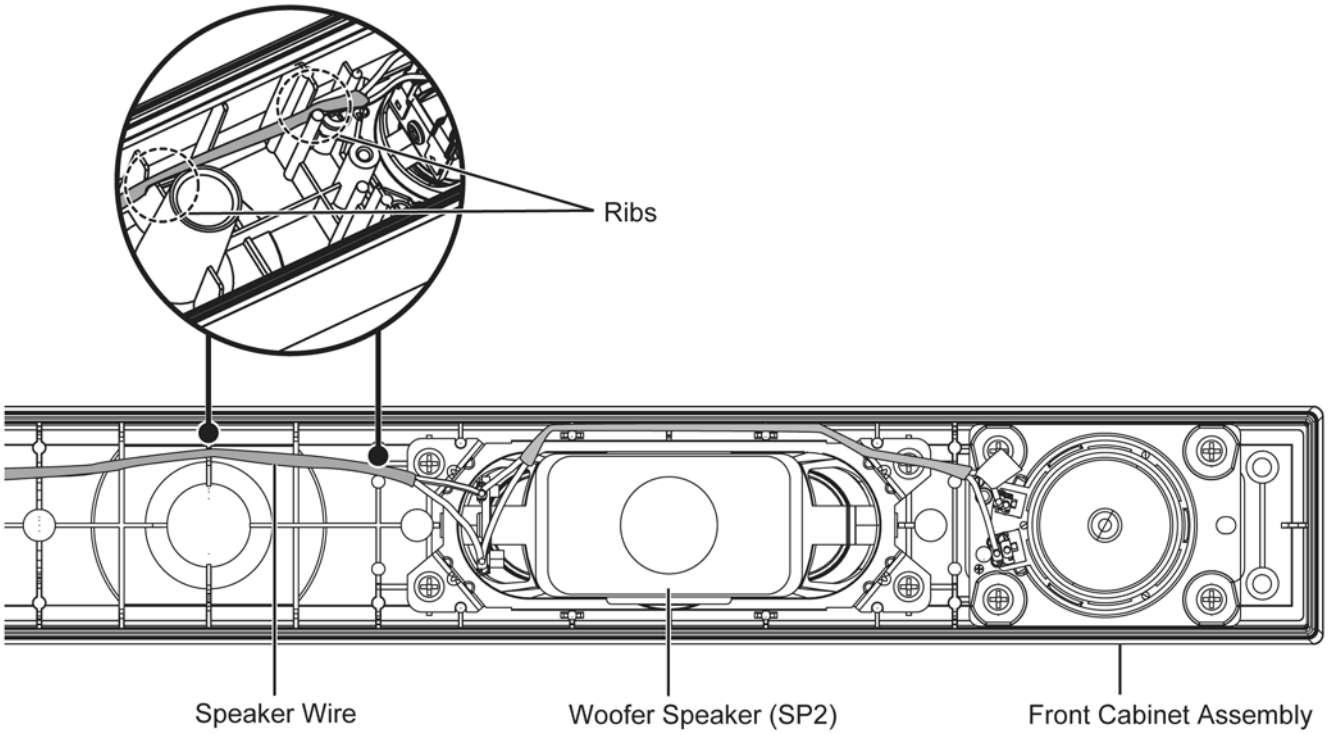
Step 3 : Remove the Woofer Speaker (SP2).



Caution: During assembling, ensure that the Woofer Speaker (SP2) is properly seated on the 4 locators of the Front Cabinet Assembly.



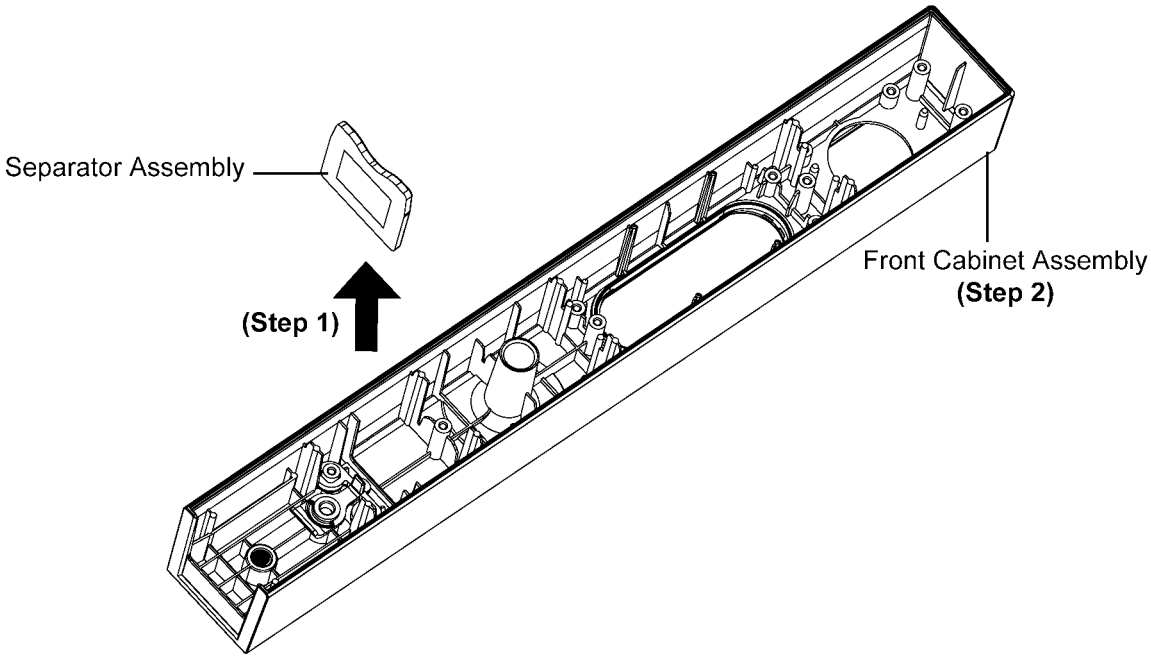
Caution: During assembling, ensure that the Speaker Wires are properly slotted between the 2 ribs of the Front Cabinet Assembly as shown.



8.5.7. Disassembly of Front Cabinet Assembly

- Refer to (Step 1) - (Step 2) of item 8.5.3.
- Refer to (Step 1) - (Step 4) of item 8.5.5.
- Refer to (Step 1) - (Step 3) of item 8.5.6.

Step 1 : Remove the Separator Assembly as arrow shown.
Step 2 : Remove the Front Cabinet Assembly.

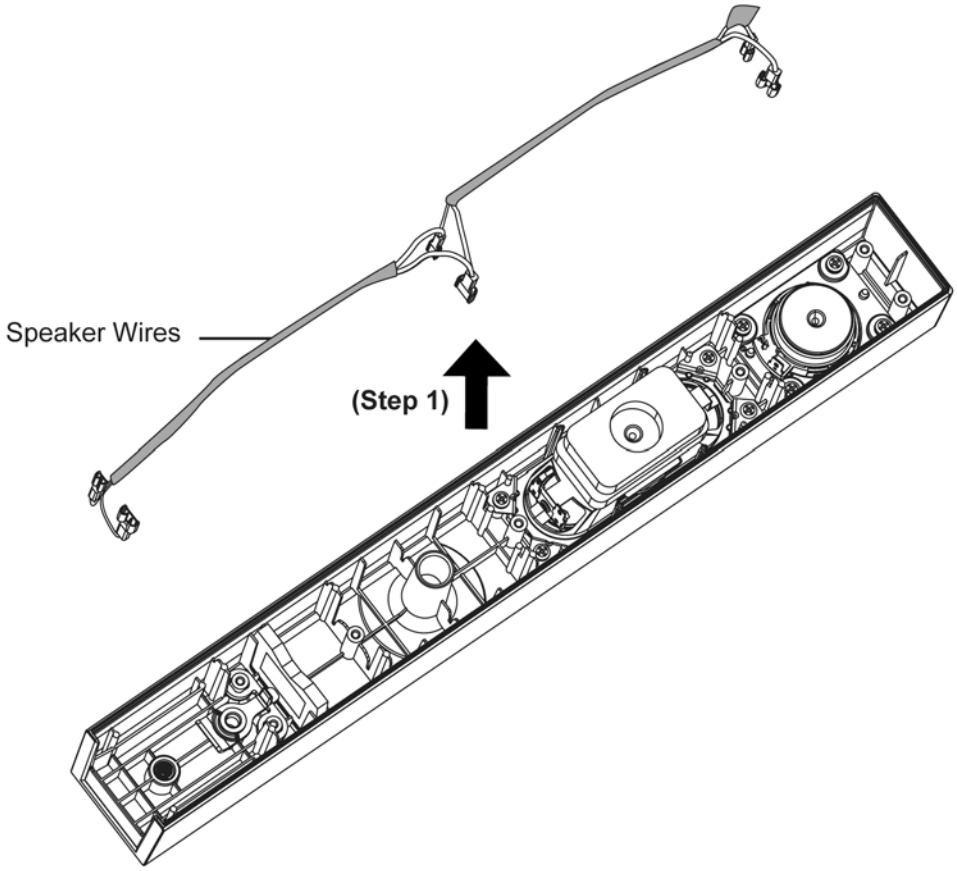


8.5.8. Replacement of Speaker Wires

- Refer to (Step 1) - (Step 2) of item 8.5.3.
- Refer to (Step 1) of item 8.5.5.
- Refer to (Step 1) of item 8.5.6.

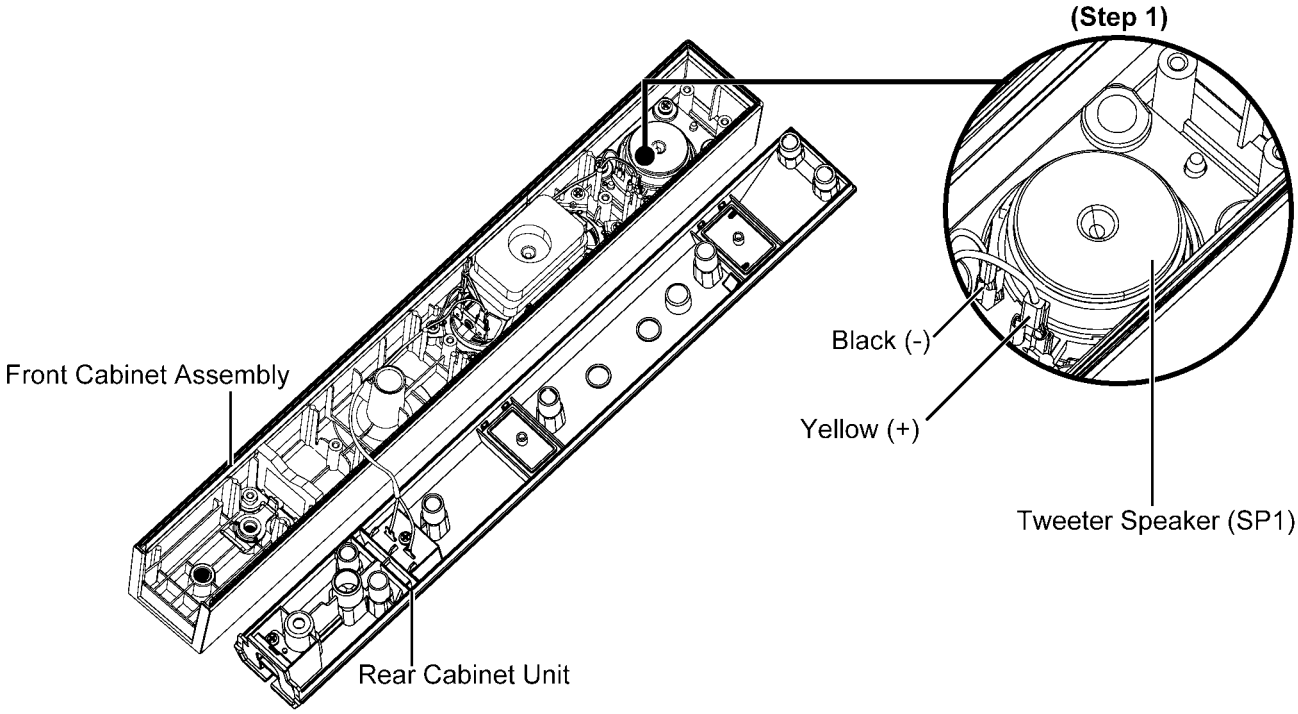
8.5.8.1. Disassembly of Speaker Wires

Step 1 : Remove the Speaker Wires.

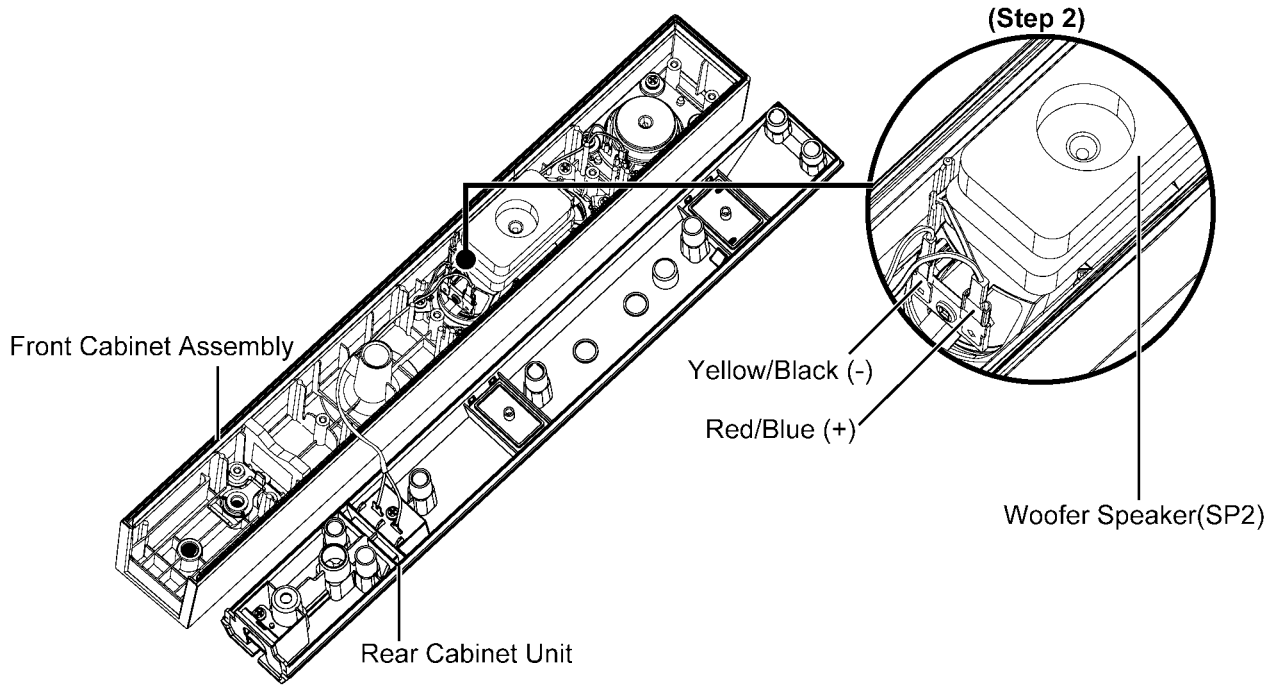


8.5.8.2. Assembly of Speaker Wires

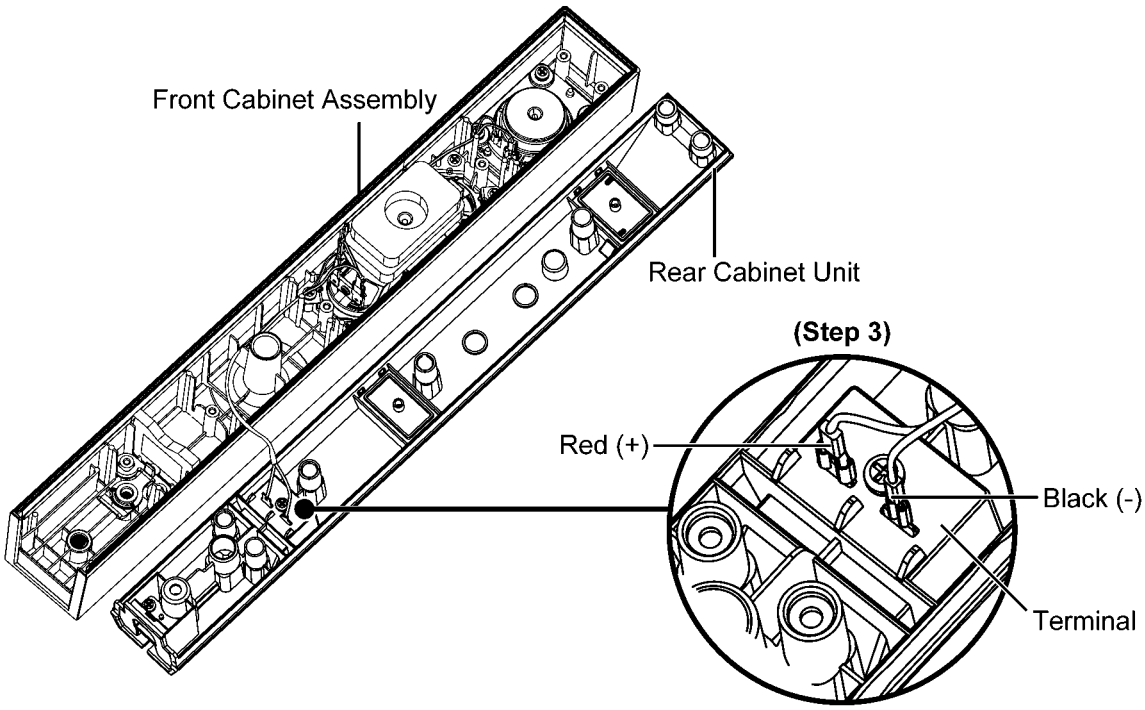
Step 1 : Connect the Yellow(+) and Black(-) wires to the terminals of Tweeter Speaker (SP1).



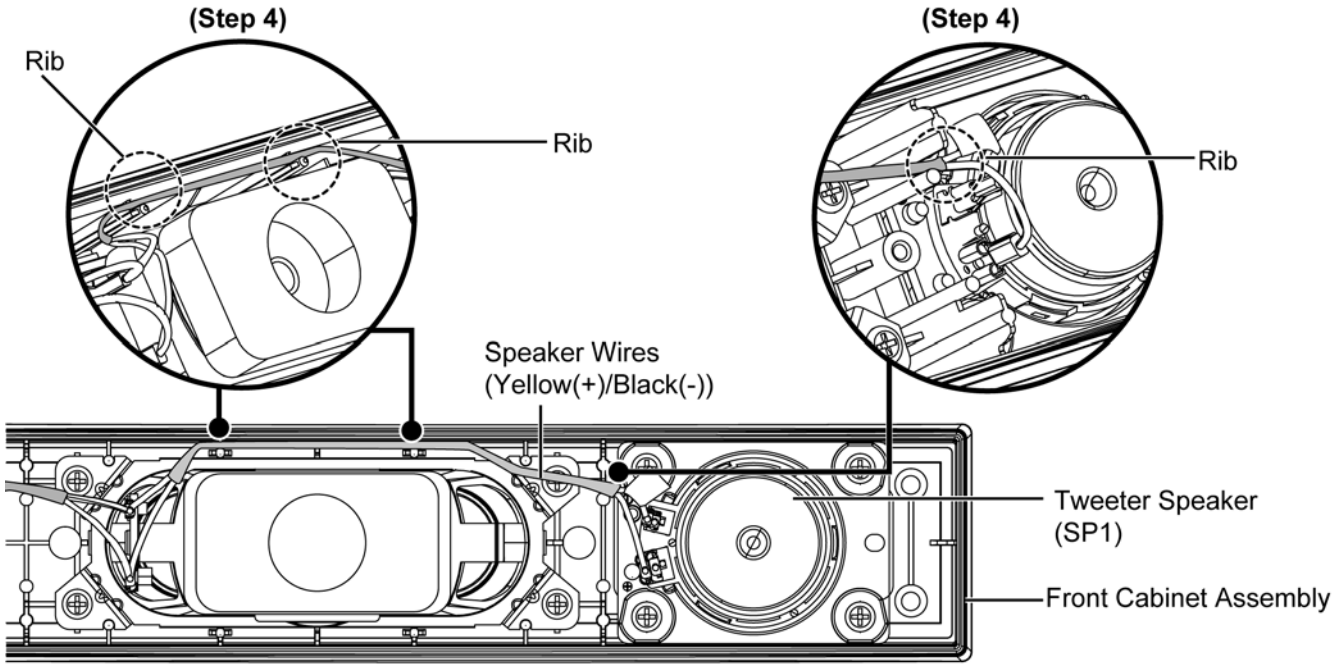
Step 2 : Connect the Red/Blue(+) and Yellow/Black(-) wires to the terminals of Woofer Speaker (SP2).



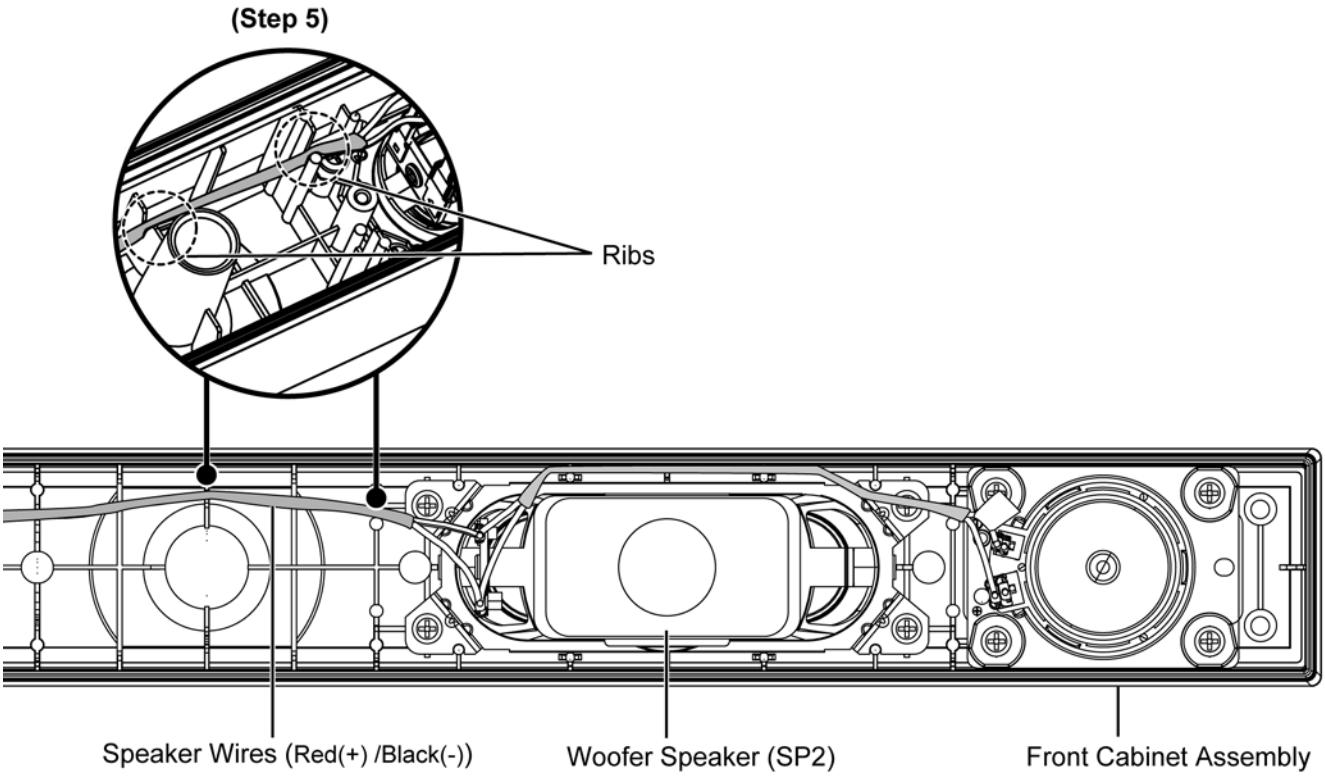
Step 3 : Connect the Red(+) and Black(-) wires to the Terminal.



Step 4 : Slot the Yellow(+) and Black(-) wires between the 3 ribs of the Front Cabinet Assembly as shown.
Caution : Ensure that the Speaker Wires are properly slotted between the 3 ribs of the Front Cabinet Assembly.



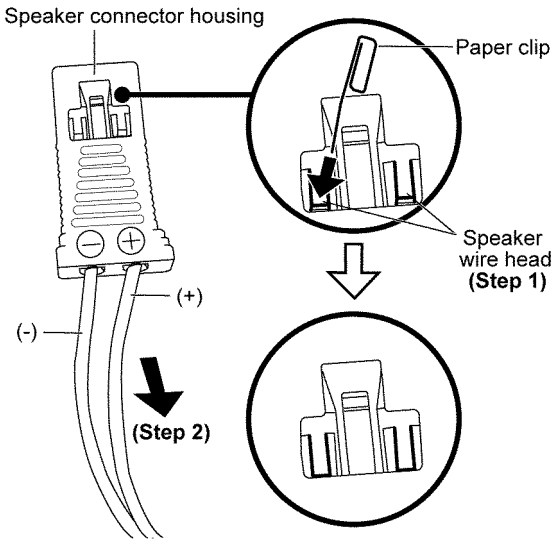
Step 5 : Slot the Red(+) and Black(-) wires between the 2 ribs of the Front Cabinet Assembly as shown.
Caution : Ensure that the Speaker Wires are properly slotted between the 2 ribs of the Front Cabinet Assembly.



8.5.9. Replacement of Speaker Connector Housing

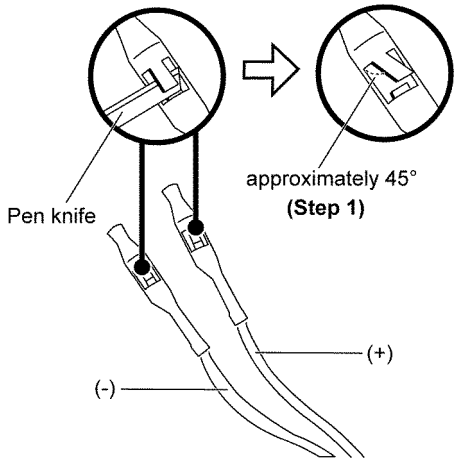
8.5.10. Disassembly

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.

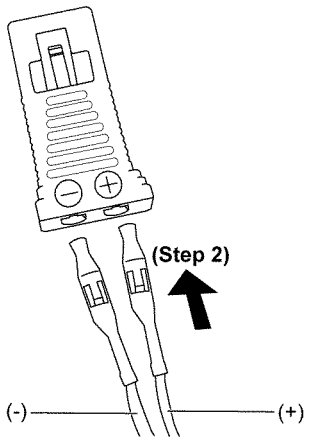


8.5.11. Assembly

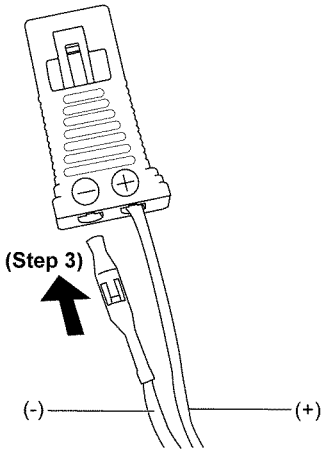
Step 1: Use a pen knife slightly push up the speaker wire head approximately 45°.



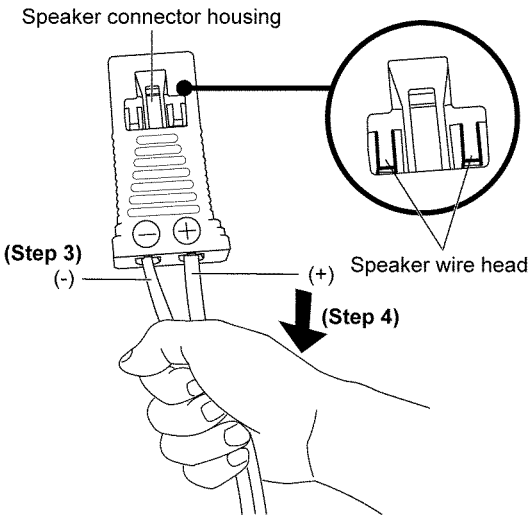
Step 2: Insert the (+) speaker wire into the (+) hole of the Speaker Connector Housing.
Note: Push in the speaker wire until hear the “click” sound.



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.



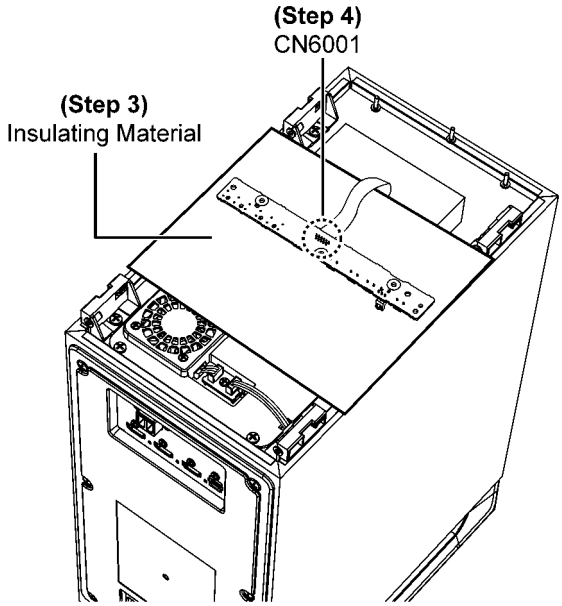
9 Service Position

Note: For description of the disassembly procedures, see the Section 8

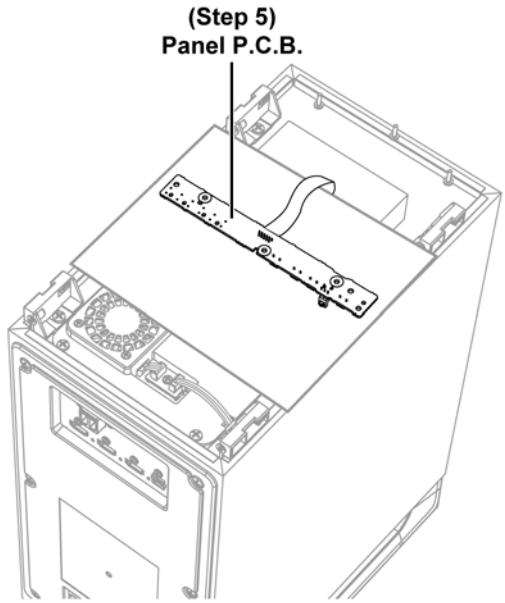
9.1. Active Subwoofer (Main Unit) (SU-HTB15)

9.1.1. 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..

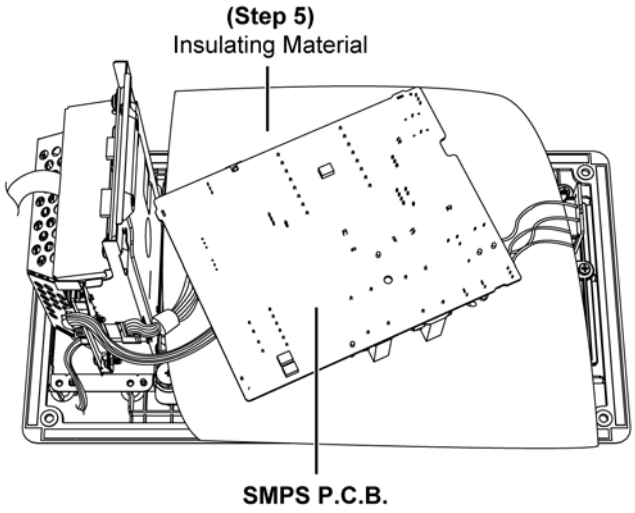


Step 5 : Panel P.C.B. can be checked and repaired as diagram shown.

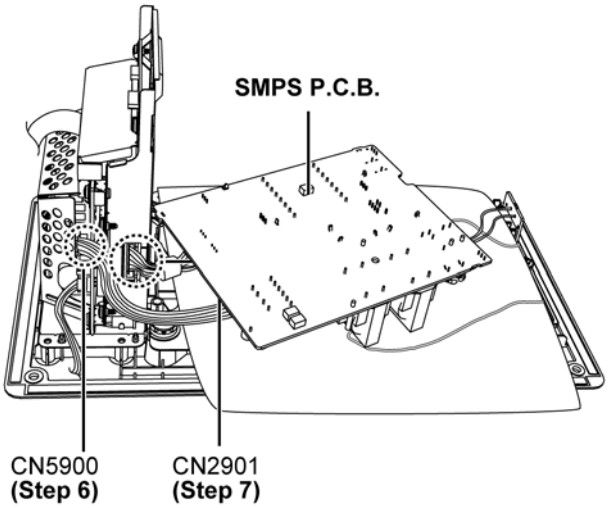


9.1.2. Checking and Repairing of SMPS P.C.B.

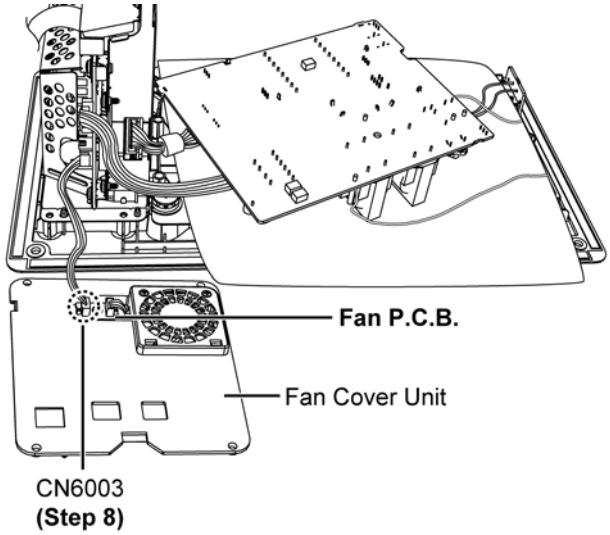
Step 1 : Remove Top Panel Unit.
Step 2 : Remove Fan Cover Unit.
Step 3 : Remove Rear Panel Unit.
Step 4 : Remove SMPS P.C.B..
Step 5 : Place the SMPS P.C.B. on the Insulating Material.



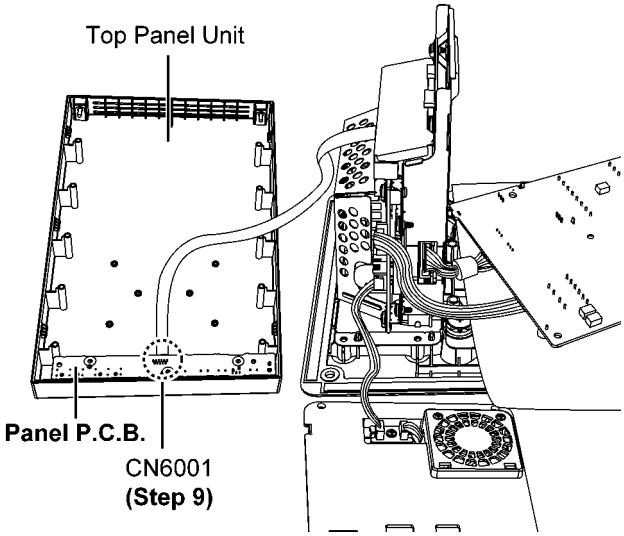
Step 6 : Attach 6P Cable Wire at the connector (CN5900) on the D-AMP P.C.B..
Step 7 : Attach 10P Cable Wire at the connector (CN2901) on the Main P.C.B..



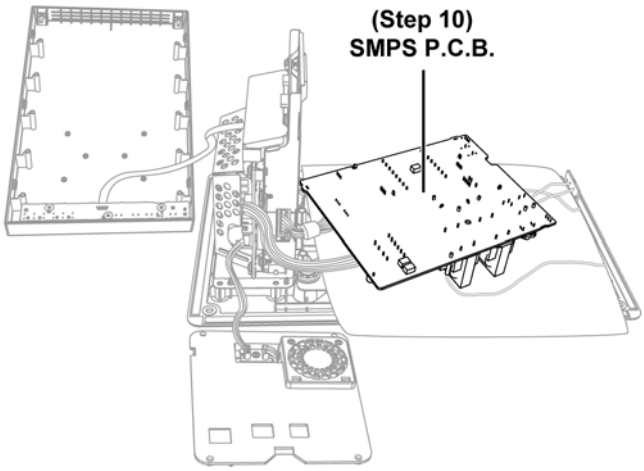
Step 8 : Attach 3P Cable Wire at the connector (CN6003) on the Fan P.C.B..



Step 9 : Attach 11P FFC at the connector (CN6001) on the Panel P.C.B..

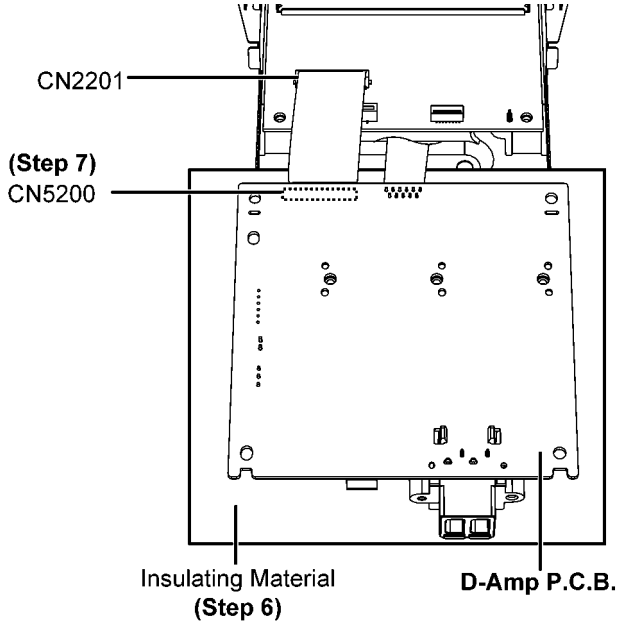


Step 10 : SMPS P.C.B. can be checked and repaired as diagram shown.

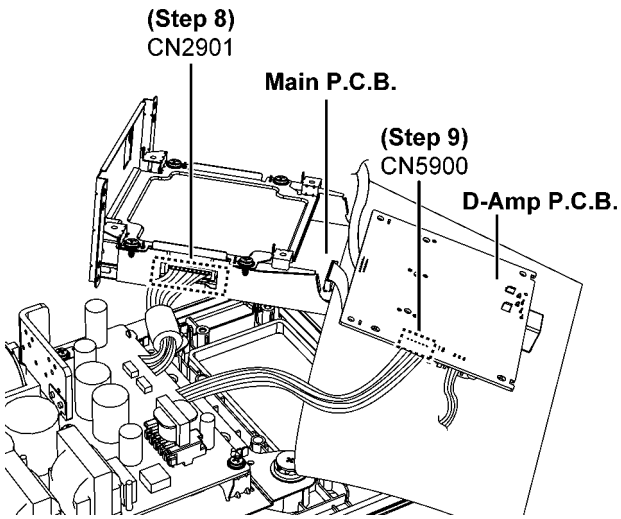


9.1.3. Checking and Repairing of D-Amp P.C.B. (Side A)

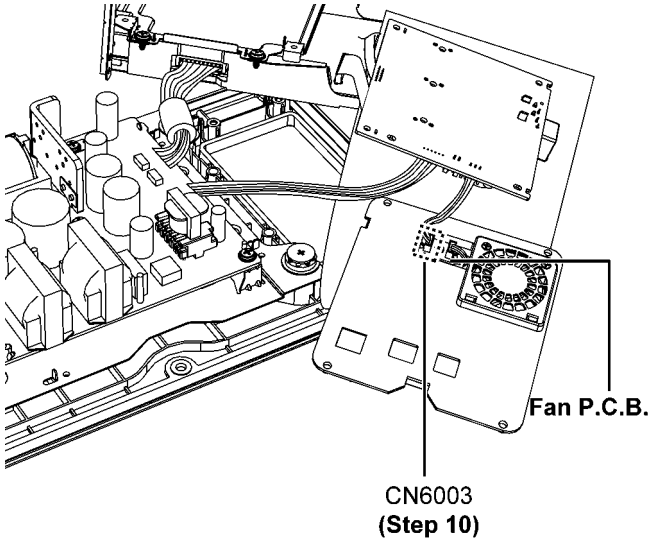
Step 1 : Remove Top Panel Unit.
Step 2 : Remove Fan Cover Unit.
Step 3 : Remove Rear Panel Unit.
Step 4 : Remove Main P.C.B. Unit.
Step 5 : Remove D-Amp P.C.B..
Step 6 : Place the D-Amp P.C.B. on the Insulating Material.
Step 7 : Attach 40P FFC at the connector (CN5200) on the D-Amp P.C.B..



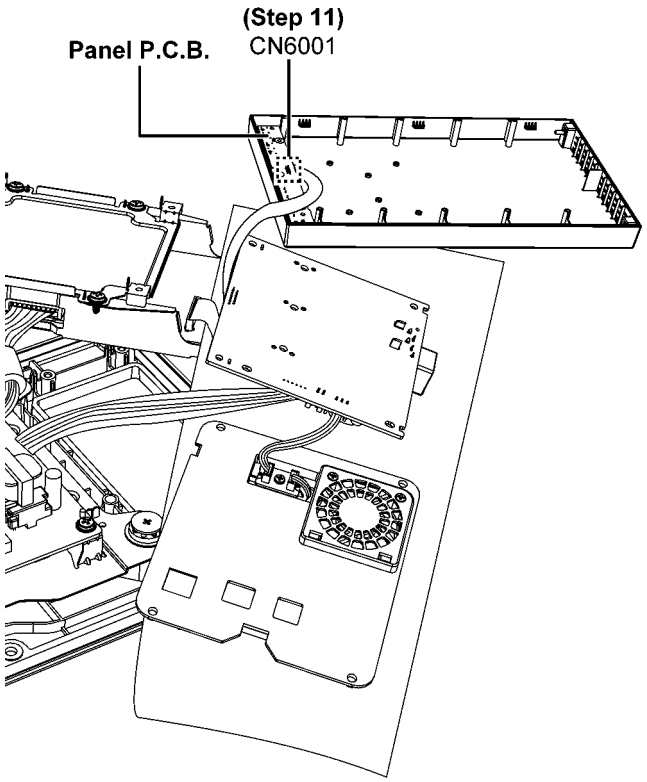
Step 8 : Attach 10P Cable Wire at the connector (CN2901) on the Main P.C.B..
Step 9 : Attach 6P Cable Wire at the connector (CN5900) on the D-Amp P.C.B..



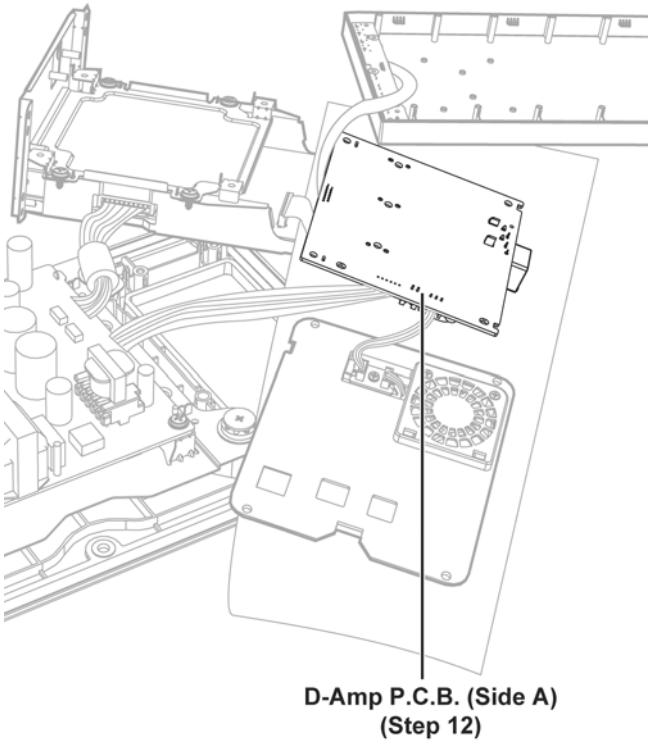
Step 10 : Attach 3P Cable Wire at the connector (CN6003) on the Fan P.C.B..



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

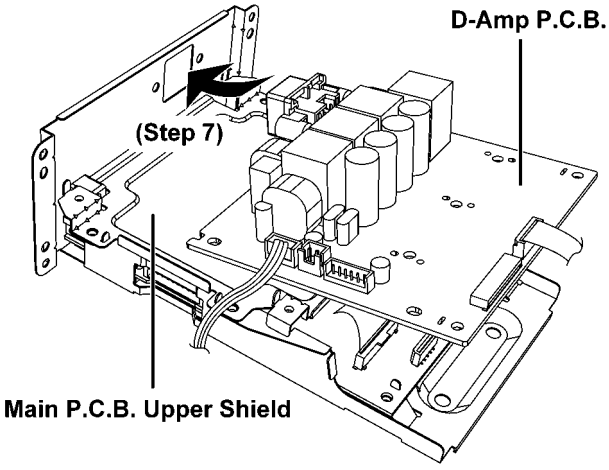


Step 12 : D-Amp P.C.B. (Side A) can be checked and repaired as diagram shown.

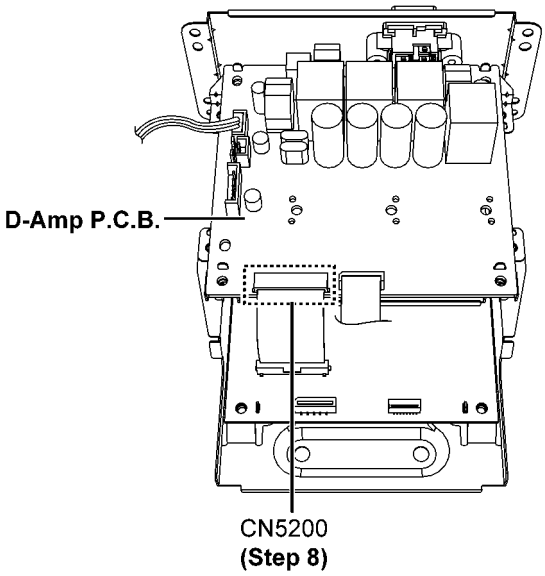


9.1.4. Checking and Repairing of D-Amp P.C.B. (Side B)

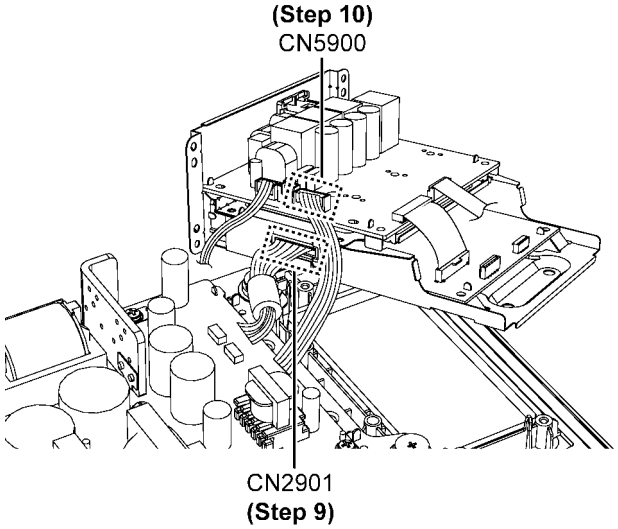
Step 1 : Remove Top Panel Unit.
Step 2 : Remove Fan Cover Unit.
Step 3 : Remove Rear Panel Unit.
Step 4 : Remove Main P.C.B. Unit.
Step 5 : Remove D-Amp P.C.B..
Step 6 : Remove D-Amp Heatsink & Heatsink Spacer.
Step 7 : Replace back D-Amp P.C.B. on Main P.C.B. Upper Shield.



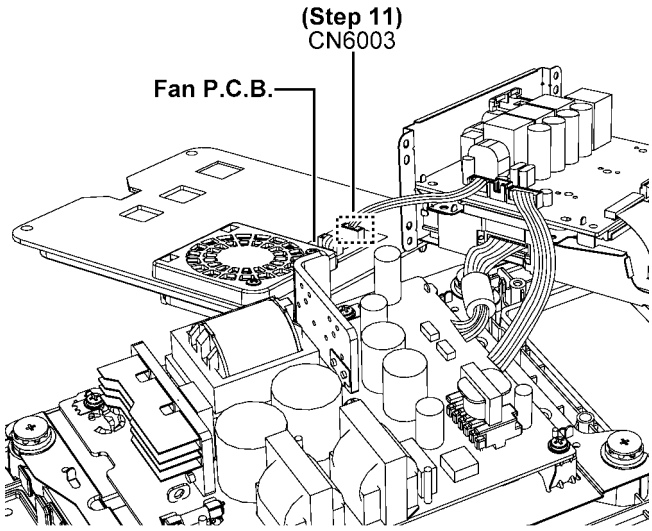
Step 8 : Attach 40P FFC at the connector (CN5200) on the D-Amp P.C.B..



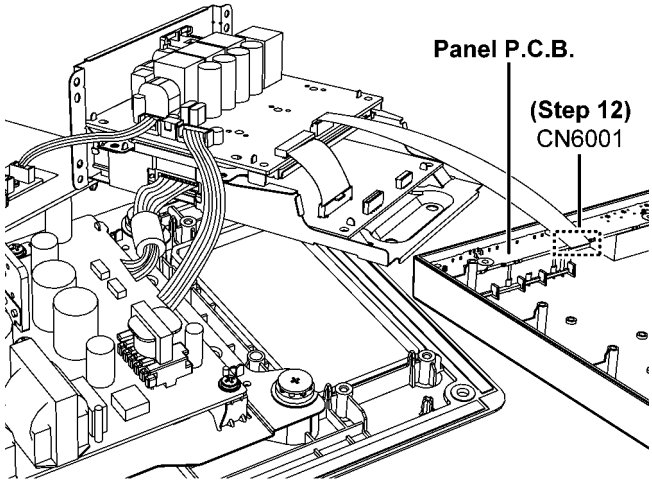
Step 9 : Attach 10P Cable Wire at the connector (CN2901) on the Main P.C.B..
Step 10 : Attach 6P Cable Wire at the connector (CN5900) on the D-Amp P.C.B..



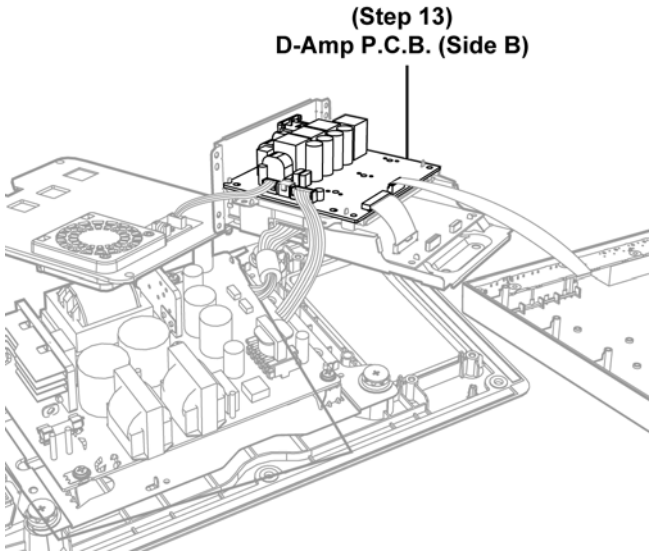
Step 11 : Attach 3P Cable Wire at the connector (CN6003) on the Fan P.C.B..



Step 12 : Attach 11P FFC at the connector (CN6001) on the Panel P.C.B..

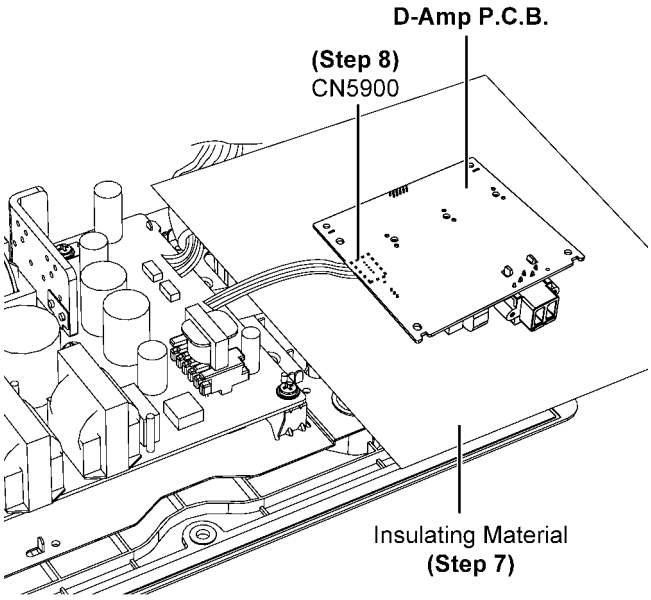


Step 13 : D-Amp P.C.B. (Side B) can be checked and repaired as diagram shown.

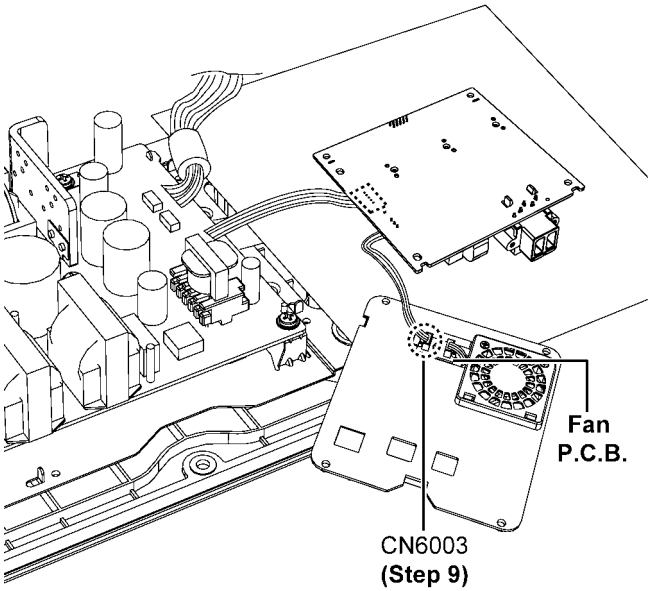


9.1.5. Checking and Repairing of Main P.C.B. (Side A)

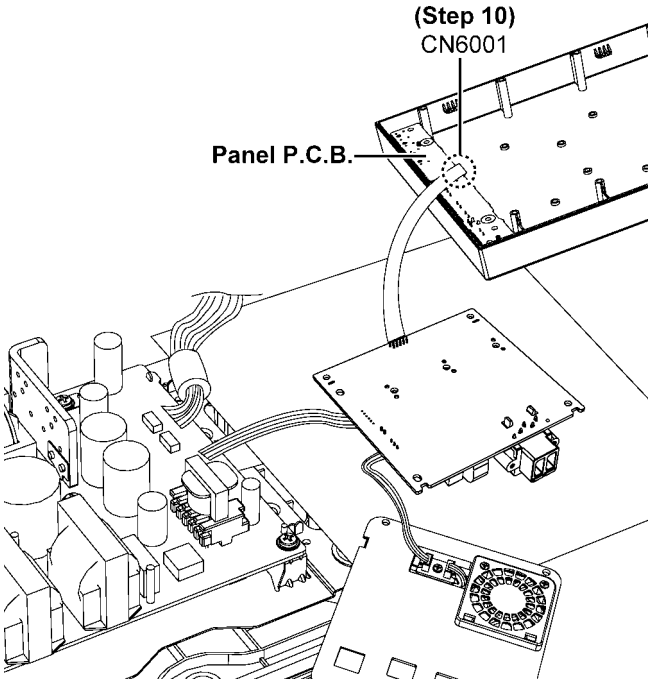
Step 1 : Remove Top Panel Unit.
Step 2 : Remove Fan Cover Unit.
Step 3 : Remove Rear Panel Unit.
Step 4 : Remove Main P.C.B. Unit.
Step 5 : Remove D-Amp P.C.B..
Step 6 : Remove Main P.C.B..
Step 7 : Place the D-Amp P.C.B. on the Insulating Material.
Step 8 : Attach 6P Cable Wire at the connector (CN5900) on the D-Amp P.C.B..



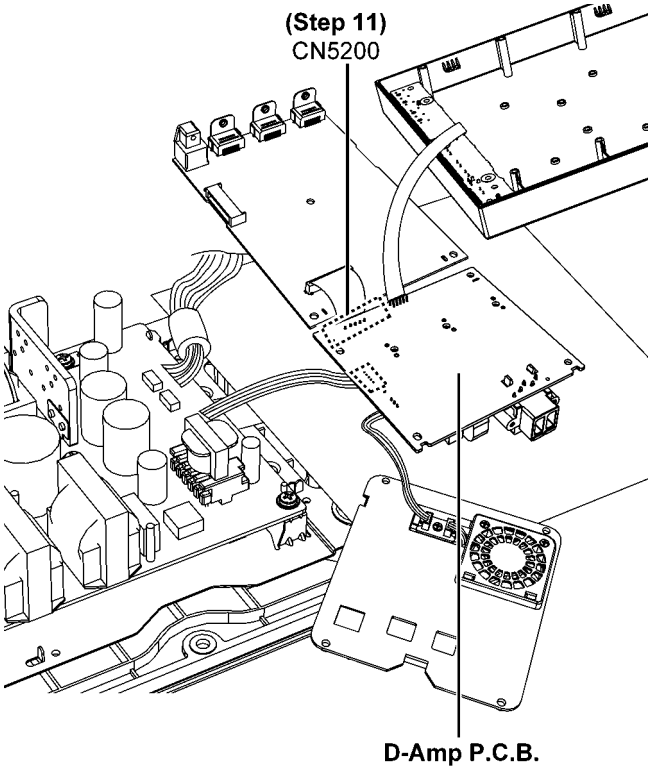
Step 9 : Attach 3P Cable Wire at the connector (CN6003) on the Fan P.C.B..



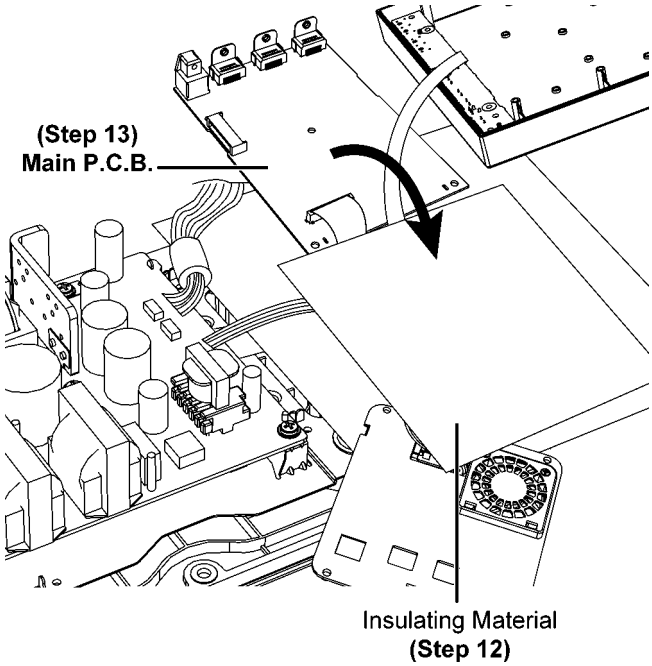
Step 10 : Attach 11P FFC at the connector (CN6001) on the Panel P.C.B..



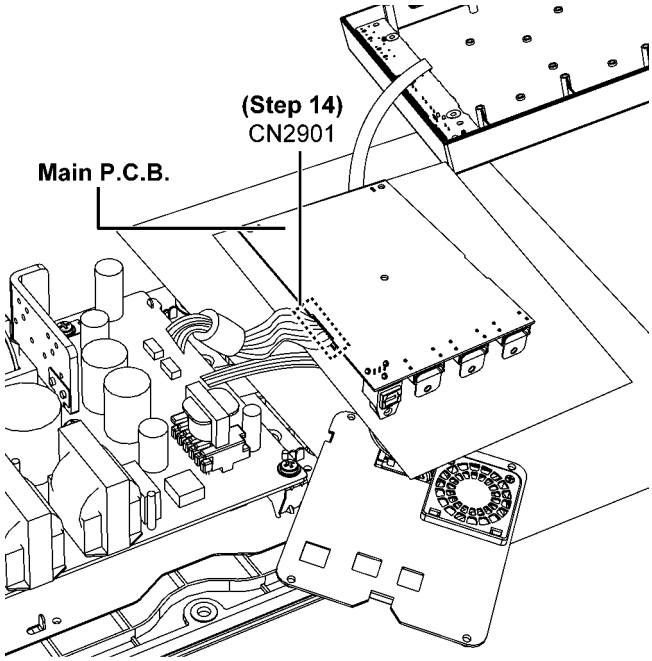
Step 11 : Attach 40P FFC at the connector (CN5200) on the D-Amp P.C.B..



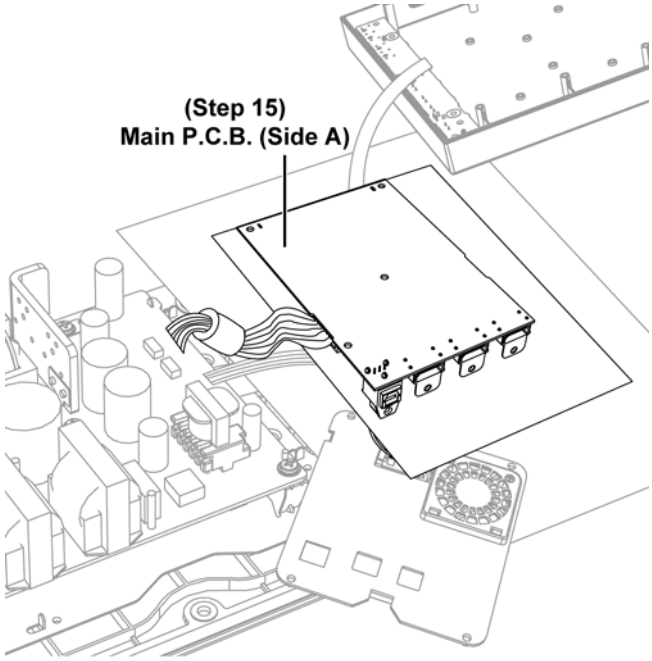
Step 12 : Place the Insulating Material on D-amp P.C.B..
Step 13 : Place the Main P.C.B. on the Insulating Material as shown.



Step 14 : Attach 10P Cable Wire at the connector (CN2901) on the Main P.C.B..

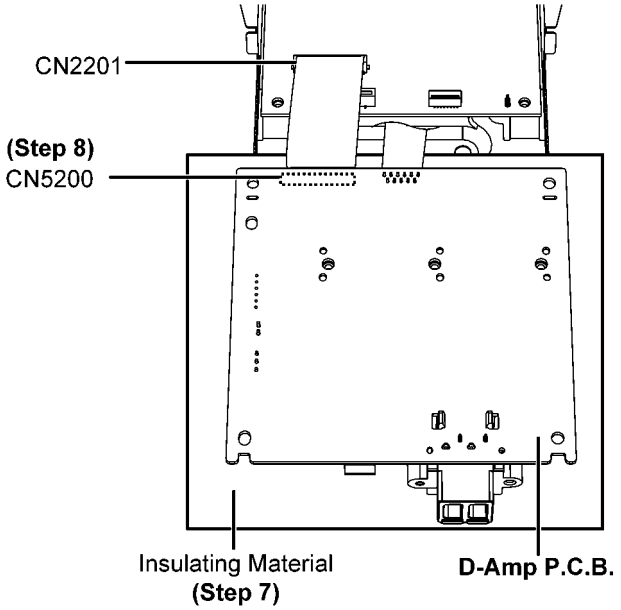


Step 15 : Main P.C.B. (Side A) can be checked and repaired as diagram shown.

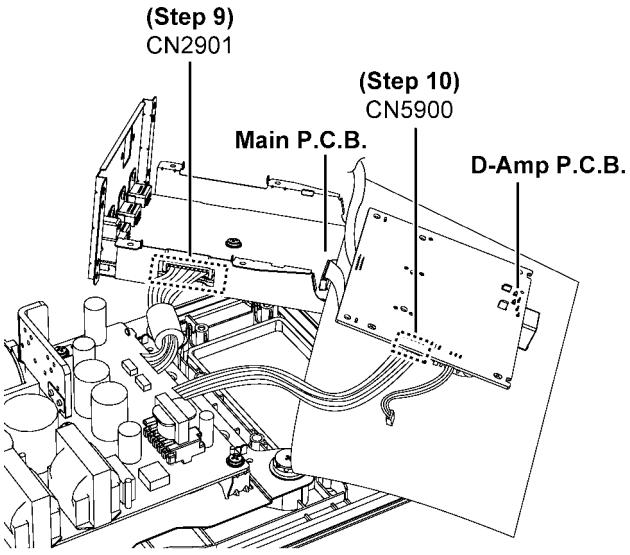


9.1.6. Checking and Repairing of Main P.C.B. (Side B)

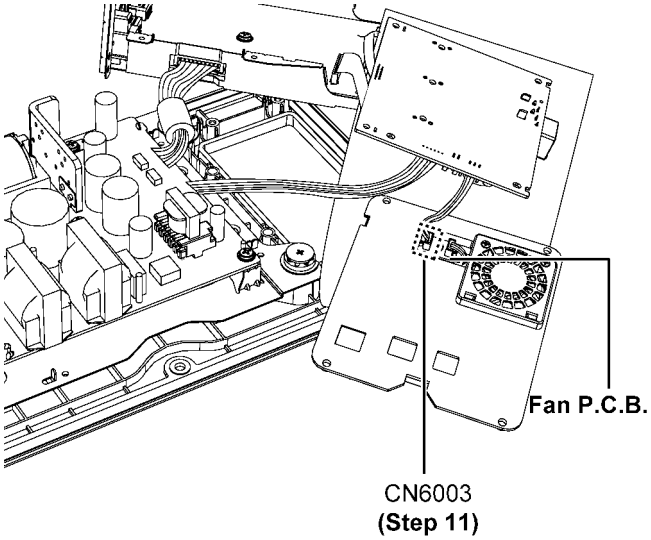
Step 1 : Remove Top Panel Unit.
Step 2 : Remove Fan Cover Unit.
Step 3 : Remove Rear Panel Unit.
Step 4 : Remove Main P.C.B. Unit.
Step 5 : Remove D-Amp P.C.B..
Step 6 : Remove Main P.C.B. Upper Shield.
Step 7 : Place the D-Amp P.C.B. on the Insulating Material.
Step 8 : Attach 40P FFC at the connector (CN5200) on the D-Amp P.C.B..



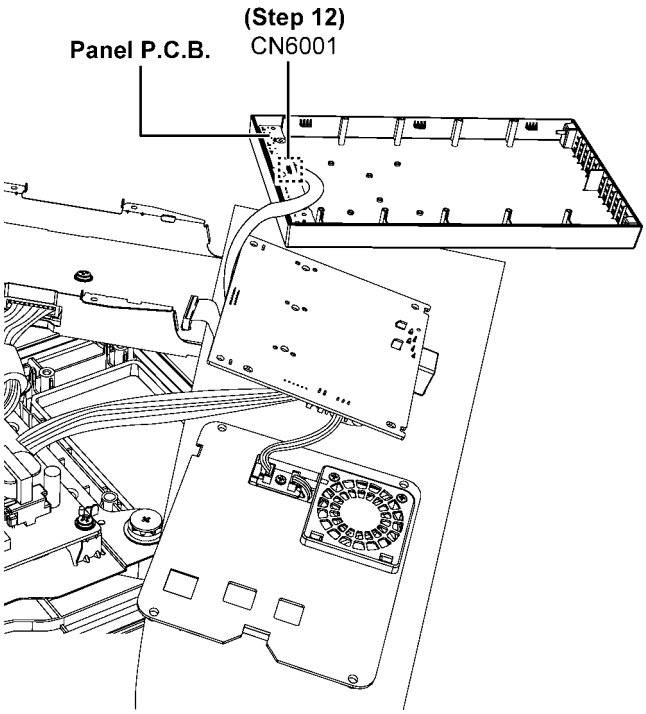
Step 9 : Attach 10P Cable Wire at the connector (CN2901) on the Main P.C.B..
Step 10 : Attach 6P Cable Wire at the connector (CN5900) on the D-Amp P.C.B..



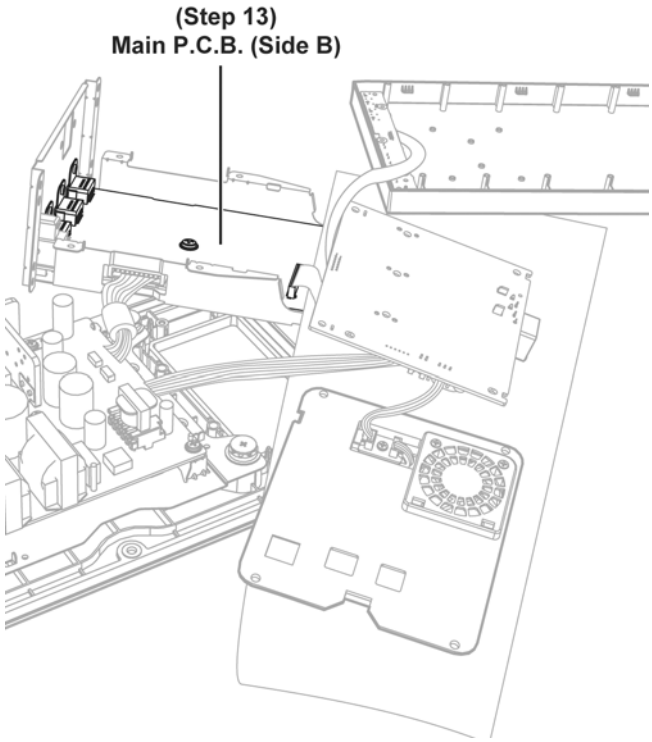
Step 11 : Attach 3P Cable Wire at the connector (CN6003) on the Fan P.C.B..



Step 12 : Attach 11P FFC at the connector (CN6001) on the Panel P.C.B..



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



10 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.

10.1. Active Subwoofer (Main Unit) (SU-HTB15)

10.1.1. D-AMP P.C.B. (1/2)

REF NO.	IC5201																			
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	3.3	0	0	0.9	0.9	0	3.3	3.3	3.3	3.2	0	0	1.2	1.9	3.3	3.3	3.3	1.7	1.7
STANDBY	1.7	3.3	0.2	3.3	0.9	0.9	0	1.6	3.3	3.3	3.3	0	0	1.2	1.9	0	3.3	3.3	1.7	1.7

REF NO.	IC5201																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38		
POWER ON	0	1.2	0	0.9	0.1	1.7	3.2	0	0	0	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6		
STANDBY	0	0	0	0	0	0	3.2	0	0	1.8	0	0	0	0	0	0	0	0		

REF NO.	IC5202																			
MODE	1	2	3	4	5															
POWER ON	3.3	3.3	0	0	0															
STANDBY	3.3	0	0	0	0															

REF NO.	IC5203																			
MODE	1	2	3	4	5															
POWER ON	3.1	3.0	0	3.1	3.1															
STANDBY	3.1	3.1	0	3.1	3.1															

REF NO.	IC5204																			
MODE	1	2	3	4	5	6														
POWER ON	1.6	0	0	1.6	3.1	1.6														
STANDBY	0	0	0	1.6	3.1	0														

REF NO.	IC5205																			
MODE	1	2	3	4	5	6														
POWER ON	1.6	0	0	3.2	3.2	0														
STANDBY	0	0	0	3.1	3.1	1.6														

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	11	3.3	0	0	3.3	1.6	1.6	1.2	0	0	3.3	1.6	0	0	0	1.7	3.3	1.7	0	0
STANDBY	11	3.3	0	0	3.3	1.6	1.6	1.2	0	0	3.3	1.6	0	0	0	1.7	3.3	1.7	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	11.4	11.6	0	0	0	28.5	28.5	14.2	0	28.5	0	0	11.8	0	0	28.5	14.2	0	0	0
STANDBY	11.4	11.6	0	0	0	28.5	28.5	14.2	0	28.5	0	0	11.8	0	0	28.5	14.2	0	0	0

REF NO.	IC5300																			
MODE	41	42	43	44																
POWER ON	28.5	0	0	11.8																
STANDBY	28.5	0	0	11.8																

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	11.5	3.2	0	0	3.2	1.6	3.2	1.6	1.1	0	0	3.1	0	3.1	3.1	0	3.2	0	0	0
STANDBY	11.5	3.2	0	0	3.2	1.6	3.2	1.6	1.1	0	0	3.1	0	3.1	3.1	0	3.2	0	0	0

SC-HTB15GS/GSX/PH(SU-HTB15GS/GSX/PH) D-AMP P.C.B.

10.1.2. D-AMP 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	11.5	11.5	11.5	0	0	28.5	28.5	0	0	0	14.2	28.5	25	0	28.5	14.2	0	0	14.2	0
STANDBY	11.5	11.5	11.5	0	0	28.5	28.5	0	0	0	14.2	28.5	25	0	28.5	14.2	0	0	14.2	0

REF NO.	IC5500																			
MODE	41	42	43	44																
POWER ON	28.5	0	0	11.8																
STANDBY	28.5	0	0	11.8																

REF NO.	IC5800																			
MODE	1	2	3	4	5	6	7	8												
POWER ON	7.3	1.8	1.8	0	0	0	0	17.2												
STANDBY	7.5	1.8	1.8	0	0	0	0	17.2												

REF NO.	IC5900																			
MODE	1	2	3	4	5															
POWER ON	17.3	17	0.1	12	1.1															
STANDBY	17.3	17.3	0.1	12	1.1															

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	3.2	0		0	0	14.2		28.6	0	0		14	0	14		14.3	0	14.3	
STANDBY	0	3.3	0		0	0	14.2		28.6	0	0		14	0	14		14.3	0	14.3	

REF NO.	Q5806				Q5807				QR5201				QR5202				QR5203			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
POWER ON	0	17.3	7.2		0	3.1	0.1		0	3.0	0		3.1	0	3.0		0	-1.3	0	
STANDBY	0	17.3	7.2		0	3.1	0.1		0	3.0	0		3.1	0	3.0		0	-1.3	0	

SC-HTB15GS/GSX/PH(SU-HTB15GS/GSX/PH) D-AMP P.C.B.

10.1.3. MAIN P.C.B. (1/6)

REF NO.	IC2001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
POWER ON	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	0	3.2	3.2	1.7	3.2	3.2	0	1.5	0.8	0.9	0	1.6
STANDBY	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	0	0	3.3	3.3	3.3	3.3	0	1.5	0.8	0.9	0	0

REF NO.	IC2001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
POWER ON	3.3	0	0	0	0	0.2	1.6	1.6	1.6	0	1.6	1.6	0.2	0.1	3.2	3.2	3.2	0.1	0.1	1.6
STANDBY	3.3	0	0	0	0	0	3.3	1.7	1.7	0	0	0.4	0	0.4	0	0	0	0	0	1.5

REF NO.	IC2001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
POWER ON	0	1.7	0.1	1.6	0	1.6	0.1	0.9	0.1	3.2	1.6	16	0	0	3	0	3.3	3.1	3	3.1
STANDBY	0	1.7	0	1.6	0	1.6	0	0	0	3.2	0	1.6	0	1.6	1.7	0	0	3.2	3.2	3.2

REF NO.	IC2001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
POWER ON	3	3.3	3.1	3.3	3.2	3.3	0	0	0	3.2	3.2	3.2	3.2	3.2	3.3	3.2	3.1	0	3.2	3.2
STANDBY	0	3.2	3.3	3.3	2.3	3.3	0	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.2	0	3.2	3.3	3.3	1.9

REF NO.	IC2001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
POWER ON	3.3	2	2	3.3	0	0	0	0	0	0	3.3	0	0	0	0	3.3	1.7	0	0	3.3
STANDBY	1.9	3.3	1.7	0	0	0	0	0	3.3	0	0	0	0	3.3	1.8	0	0	0	0	3.3

REF NO.	IC2001																			
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
POWER ON	0	0	0	0	0	0	3.2	3.3	3.3	3.3	3.1	1.7	0	0	0	0	0	3.1	3.1	3.1
STANDBY	0	0	0	0	0	0	3.2	3.3	3.3	3.3	0	1.7	0	0	0	0	0	3.1	3.3	3.3

REF NO.	IC2001																			
MODE	121	122	123	124	125	126	127	128												
POWER ON	3.1	0	0.3	3.1	1.7	0.7	0	3.1												
STANDBY	3.3	3.3	0	3	1.7	0.7	0	3.1												

REF NO.	IC2002																			
MODE	1	2	3	4	5	6														
POWER ON	1.6	0	1.5	1.4	3.2	0														
STANDBY	1.6	0	1.5	1.4	3.2	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
POWER ON	3.3	3.2	1.3	0	3.2	3.2	3.3	3.2	3.2	0	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	0	0
STANDBY	3.3	3.2	1.3	0	3.2	3.2	3.3	3.2	3.2	0	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	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
POWER ON	0	0	0	0	3.3	0	0	0	0	0	0	0	0	3.3	1.9	3.3	0	3.3	3.2	3.2
STANDBY	0	0	0	0	3.3	0	0	0	0	0	0	0	0	3.3	1.9	3.3	0	3.3	3.2	3.2

SC-HTB15GS/GSX/PH(SU-HTB15GS/GSX/PH) MAIN P.C.B.

10.1.4. MAIN P.C.B. (2/6)

REF NO.	IC2003																			
MODE	41	42	43	44	45	46	47	48	49	50										
POWER ON	0	3.1	3.2	3.3	3.2	3.2	0	3.2	3.2	0										
STANDBY	0	3.1	3.2	3.3	3.2	3.2	0	3.2	3.2	0										

REF NO.	IC2201																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HDMI	1.8	0	3.2	0	0	0	0	0	0	3.2	1.6	0	3.3	3.3	3.3	3.3	3.3	0	0	3.3
STANDBY	1.8	1.6	3.2	0	0	0	0	0	0	3.2	1.6	0	3.3	3.3	3.3	3.3	3.3	3.3	0	3.3

REF NO.	IC2201																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
HDMI	3.3	3.3	0	3.3	0	0	3.3	0	3.3	3.3	0	0	0.2	0.6	0.6	0.8	0	0	0	0
STANDBY	0	3.3	0	0	0	0	3.3	3.3	3.3	3.3	0	0	0	0.6	0	0	0	0	0	0

REF NO.	IC2201																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
HDMI	0	3.3	2.1	0	3.3	3.3	3.3	3.3	0	3.3	3.3	3.3	0	0	0	0	0	0	0	3.3
STANDBY	0	2.1	0	3.3	0	3.3	2.1	3.3	0	3.3	3.3	3.3	0	0	0	0	0	0	3.3	3.3

REF NO.	IC2201																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
HDMI	3.3	0	0	0	0	0	0.7	3.3	3.3	3.3	0	0	3.4	1.7	3.3	3.3	0	3.3	3.3	3.3
STANDBY	3.3	0	0	0	0	0	0	3.3	0	0	3.3	0.4	3.4	1.7	3.3	3.3	0	3.3	3.3	0

REF NO.	IC2201																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
HDMI	3.3	0	0	0	3.3	3.2	3.3	0	0	0	0	3.3	3,3	0	0	3.3	3.3	0	0	3.3
STANDBY	3.3	0	0	0	0	0	3.3	3.2	3.2	3.3	0	0	3.3	0	0	3.3	3.3	0	0	3.3

REF NO.	IC2203																			
MODE	1	2	3	4	5	6	7	8												
HDMI	3.3	3.3	0	0	3.3	3.3	0	3.1												
STANDBY	3.3	3.3	0	0	3.3	3.3	0	3.1												

REF NO.	IC2301																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
POWER ON	0	2.1	3.3	3.1	0	0	0	0.9	0	0	1.6	0	1.6	3.3	3.3	3.1	3.1	3.1	3.3	0
STANDBY	0	2.1	3.3	3.1	0	0	0	0	1.2	3.3	1.6	0	1.6	3.3	3.3	3.1	3	3	0	3.3

REF NO.	IC2301																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
POWER ON	0	0	0	3.3	3.3	0.8	0.8	0.6	3.3	0	0	0	3	0	3.3	3.3	0	0	0	0
STANDBY	0	0	0	3.3	3.3	0.8	0.2	0.6	3.3	3.3	0	0	3	3	0	3.3	3.3	0	0	3.3

REF NO.	IC2301																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
POWER ON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.3
STANDBY	3.3	0	0	0	0	0	0	3.3	3.3	0	0	0	0	0	0	0	0	0	0	3.3

10.1.5. MAIN P.C.B. (3/6)

REF NO.	IC2301																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
POWER ON	0	0	3	3.1	3	3	3.1	3.1	0	3.5	0	3.1	0	3.2	0	0	0	0	0	3.3
STANDBY	0	0	0	0	3.1	3	3.1	3.1	0	3.5	0	3.1	0	3.2	0	0	0	0	3.3	3.3

REF NO.	IC2301																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
POWER ON	0	0	0	0	0	0	0	3.3	0	0	0	1.8	2.1	0	0	3.3	3.3	0	0	0
STANDBY	0	0	0	0	0	0	0	3.3	0	0	0	1.8	2.1	0	00	3.3	3.3	0	0	0

REF NO.	IC2302																			
MODE	1	2	3	4	5	6	7	8												
POWER ON	0	0	3.1	0	3.3	3.3	0	3.3												
STANDBY	0	0	3.1	0	3.3	3.3	0	3.3												

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	0	0	1.7	1.7	3.3	0	1.6	3.3	1.7	0	0	0	1.8	0.4	0.7	0	0	3.3	0
STANDBY	0	0	0	1.7	1.7	3.3	0	1.6	3.3	1.7	0	0	0	1.8	0.4	0.7	0	0	3.3	0

REF NO.	IC2401																			
MODE	21	22	23	24	25	26	27	28												
POWER ON	3.3	0	3.3	1.5	1.5	0.3	1.6	1.7												
STANDBY	3.3	0	3.3	1.5	1.5	0.3	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
POWER ON	2.3	2.7	2.9	1.5	1.5	0	0	0	0.2	1.5	1.5	1.8	0	3.0	0	0	0	0	0	0
STANDBY	2.3	2.7	2.9	1.5	1.5	0	0	0	0.2	1.5	1.5	1.8	0	3.0	0	0	0	0	0	0

REF NO.	IC2501																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
POWER ON	0	0	0	2.8	3.1	0	1.8	1.8	0	0.1	0.1	1.8	0.7	0.7	0.6	0.8	0.8	1.8	0.8	0.8
STANDBY	0	0	0	2.8	3.1	0	1.8	1.8	0	0.1	0.1	1.8	0.7	0.7	0.6	0.8	0.8	1.8	0.8	0.8

REF NO.	IC2501																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
POWER ON	0	1.8	0	3.0	5.1	5.1	5.1	2.8	2.8	0.2	0	0	2.8	0	1.7	2.0	0.7	0.8	0.6	0.7
STANDBY	0	1.8	0	3.0	5.1	5.1	5.1	2.8	2.8	0.2	0	0	2.8	0	1.7	2.0	0.7	0.8	0.6	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
POWER ON	0.6	0.6	0.7	1.8	0	2.8	0	0	0	0	0.6	0.5	0.5	2.5	0.8	1.7	0	0.9	0.6	0
STANDBY	0.6	0.6	0.7	1.8	0	2.8	0	0	0	0	0.6	0.5	0.5	2.5	0.8	1.7	0	0.9	0.6	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
POWER ON	0	0	0	0	0	0	0	1.4	2.8	0	0	0	0	0	0	0	0	0	1.8	0
STANDBY	0	0	0	0	0	0	0	1.4	2.8	0	0	0	0	0	0	0	0	0	1.8	0

10.1.6. MAIN P.C.B. (4/6)

REF NO.	IC2502																			
MODE	1	2	3	4	5	6														
POWER ON	1.5	0	1.1	2.9	3.1	1.5														
STANDBY	1.5	0	1.1	2.9	3.1	1.5														

REF NO.	IC2503																			
MODE	1	2	3	4	5															
POWER ON	3.2	0	1.3	5	5.6															
STANDBY	3.2	0	1.3	5	5.4															

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	0	0	0	0	1.4	2.9	0	0	0	0	0	1.8	0	0	0	0	0	2.9	2.2	2.7
STANDBY	0	0	0	0	1.4	2.9	0	0	0	0	0	1.8	0	0	0	0	0	2.9	2.2	2.7

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	2.9	2.9	0	1.8	1.8	2.8	2.7	4.9	4.9	4.9	0	2.9	0.8	0.8	0	0	1.8	3.0	0.7	0.6
STANDBY	2.9	2.9	0	1.8	1.8	2.8	2.7	4.9	4.9	4.9	0	2.9	0.8	0.8	0	0	1.8	3.0	0.7	0.6

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	3.0	0.6	0.6	0	3.0	0.6	0.6	0	3.0	0.6	0.6	0	1.8	0.7	3.0	2.7	2.7	0	3.0
STANDBY	0	3.0	0.6	0.6	0	3.0	0.6	0.6	0	3.0	0.6	0.6	0	1.8	0.7	3.0	2.7	2.7	0	3.0

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	2.7	2.7	0	3.0	2.7	2.7	0	3.0	2.7	2.7	0	0	0	3.0	0	0	0	1.5	0	1.8
STANDBY	2.7	2.7	0	3.0	2.7	2.7	0	3.0	2.7	2.7	0	0	0	3.0	0	0	0	1.5	0	1.8

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	0.2	0	0	0	1.4	1.4	0	2.8	1.4	0	1.7	1.7	0	1.4	1.4	2.8	2.8	00	0	3.1
STANDBY	0.2	0	0	0	1.4	1.4	0	2.8	1.4	0	1.7	1.7	0	1.4	1.4	2.8	2.8	00	0	3.1

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	2.8	2.8	0	2.8	0	0	1.8	2.1	0.8	0.9	0	0	3.0	0.7	0.7	0.7	0.7	0	1.8	0
STANDBY	2.8	2.8	0	2.8	0	0	1.8	2.1	0.8	0.9	0	0	3.0	0.7	0.7	0.7	0.7	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	3.0	0.2	0.4	0.6	2.5	0	1.8	1.2	1.2	0.9	0.8	0	3.0	0	0	0
STANDBY	0	0	0	0	3.0	0.2	0.4	0.6	2.5	0	1.8	1.2	1.2	0.9	0.8	0	3.0	0	0	0

REF NO.	IC2601																			
MODE	141	142	143	144																
POWER ON	0	0	1.8	0																
STANDBY	0	0	1.8	0																

SC-HTB15GS/GSX/PH(SU-HTB15GS/GSX/PH) MAIN P.C.B.

10.1.7. MAIN P.C.B. (5/6)

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	1.3	1.5	1.7	1.5	0	1.5	0	0.2	0	0	0	0.3	0	1.7	0	1.7	1.5	1.6	0	3.3
STANDBY	1.3	1.5	1.7	1.5	0	1.5	0	0.2	0	0	0	0.3	0	1.7	0	1.7	1.5	1.6	0	3.3

REF NO.	IC2603																			
MODE	1	2	3	4	5	6	7	8												
POWER ON	0	0	0	0	5.0	5.0	5.0	5.0												
STANDBY	0	0	0	0	5.0	5.0	5.0	5.0												

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

REF NO.	IC2901																			
MODE	1	2	3																	
POWER ON	3.3	0	4.3																	
STANDBY	3.3	0	4.3																	

REF NO.	IC2902																			
MODE	1	2	3	4	5															
POWER ON	2.4	3.2	1.8	0	0															
STANDBY	2.4	3.2	1.8	0	0															

REF NO.	IC2906																			
MODE	1	2	3	4	5															
POWER ON	5.0	3.4	0	1.2	2.1															
STANDBY	5.0	3.4	0	1.2	2.1															

REF NO.	IC2907																			
MODE	1	2	3	4	5															
POWER ON	4.9	1.8	0	1.2	2.0															
STANDBY	4.9	1.8	0	1.2	2.0															

REF NO.	IC2908																			
MODE	1	2	3	4	5															
POWER ON	16.5	5.0	0	1.2	2.1															
STANDBY	16.5	5.0	0	1.2	2.1															

REF NO.	IC3000																			
MODE	1	2	3																	
POWER ON	3.3	0	0.7																	
STANDBY	3.3	0	0.7																	

REF NO.	Q2503				Q2508						Q2601									
MODE	E	C	B		1	2	3	4	5		1	2	3	4	5	6				
POWER ON	0	3.2	0		3.2	3.2	3.2	3.2	3.2		5.1	0	0	4.7	5.1	4.7				
STANDBY	0	3.2	0		3.2	3.2	3.2	3.2	3.2		5.1	0	0	4.7	5.1	4.7				

SC-HTB15GS/GSX/PH(SU-HTB15GS/GSX/PH) MAIN P.C.B.

10.1.8. MAIN P.C.B. (6/6)

REF NO.	Q2602						Q2603							Q2604						
MODE	1	2	3	4	5		1	2	3	4	5	6		1	2	3	4	5		
POWER ON	4.7	5.1	4.7	5.1	5.1		5.1	0	0	4.7	5.1	4.7		4.7	5.1	4.7	5.1	5.1		
STANDBY	4.7	5.1	4.7	5.1	5.1		5.1	0	0	4.7	5.1	4.7		4.7	5.1	4.7	5.1	5.1		

REF NO.	Q2605						Q2606						Q2701							
MODE	1	2	3	4	5		1	2	3	4	5		1	2	3	4	5	6		
POWER ON	0	0.9	0	3.3	5.1		0	0.7	0	5.1	3.3		5	0	0	4.8	5	4.8		
STANDBY	0	0.9	0	3.3	5.1		0	0.7	0	5.1	3.3		5	0	0	4.8	5	4.8		

REF NO.	Q2702						Q2703							Q2704						
MODE	1	2	3	4	5		1	2	3	4	5	6		1	2	3	4	5		
POWER ON	4.7	4.7	4.7	5	5		5	0	0	4.7	5	4.7		4.8	5	4.8	5	5		
STANDBY	4.7	5	4.8	5	5		5	0	0	4.8	5	4.8		4.9	5	4.8	5	5		

REF NO.	Q2705						Q2706						Q2901				QR2201			
MODE	1	2	3	4	5		1	2	3	4	5		E	C	B		E	C	B	
POWER ON	0	0.8	0	3.3	5		0	0.6	0	5	3.3		3.3	3.0	2.5		0	3	-9.3	
STANDBY	0	0.8	0	0	5		0	0.6	0	5	3.3		3.3	3.0	2.5		0	3.2	-9.3	

REF NO.	QR2301				QR2302				QR2601				QR2602				QR2701			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
POWER ON	0	3.3	0		0	3.2	0		0	0	3.2		0	0	3.2		0	4.9	0	
STANDBY	0	3.3	0		0	3.2	0		0	0	3.2		0	0	3.2		0	4.9	0	

REF NO.	QR2702				QR2902				QR2904				QR2905							
MODE	E	C	B		E	C	B		E	C	B		E	C	B					
POWER ON	0	5	0		0	0	3		0	2	0		0	0	3.2					
STANDBY	0	5	0		0	0	3		0	2	0		0	0	3.2					

SC-HTB15GS/GSX/PH(SU-HTB15GS/GSX/PH) MAIN P.C.B.

10.1.9. 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	3.2	3.2	0	3.8	3.8	3.8	1.1	0	1.1	3.8	0.5	3.8	1.1	1.1	1.1	0	4.3		
STANDBY	0	3.2	3.2	0	3.8	3.8	3.8	1.1	0	1.1	3.8	0.5	3.8	1.1	1.1	1.1	0	4.3		

SC-HTB15GS/GSX/PH(SU-HTB15GS/GSX/PH) PANEL P.C.B.

10.1.10. SMPS P.C.B.

REF NO.	IC5701																			
MODE	1	2	3	4	5	6	7													
POWER ON	164.8	0	0	19.1	0	1.4	0													
STANDBY	164.8	0	0	19.1	0	1.4	0													

REF NO.	IC5799																			
MODE	1	2	3	4	5	6	7	8												
POWER ON	5.9	1.0	2.3	11.0	164.2	0	0	0												
STANDBY	5.9	1.0	2.3	11.0	164.2	0	0	0												

REF NO.	IC5801																			
MODE	1	2	3																	
POWER ON	12.2	2.0	3.0																	
STANDBY	12.2	2.0	3.0																	

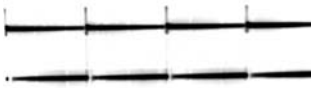
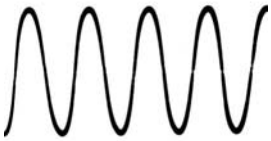
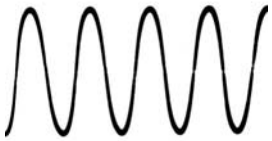
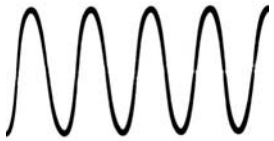
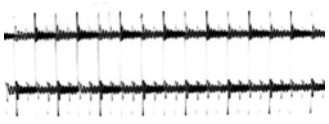
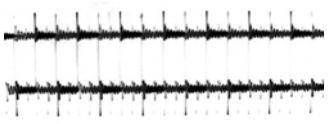
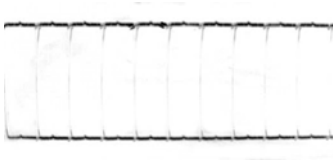
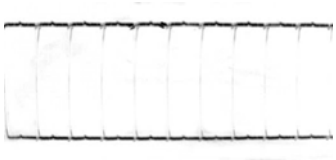
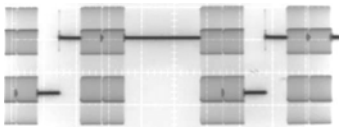
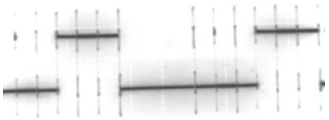
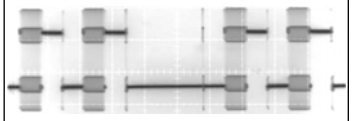
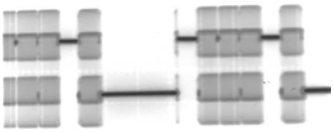
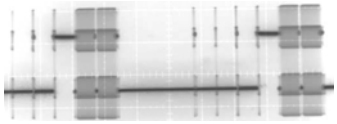
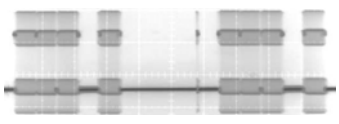
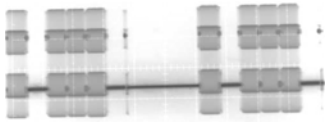
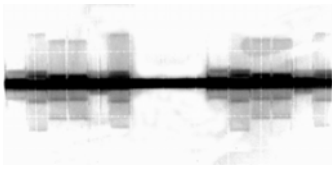
REF NO.	IC5899																			
MODE	1	2	3	4																
POWER ON	0	0	3.8	2.3																
STANDBY	0	0	3.8	2.3																

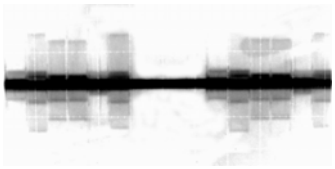
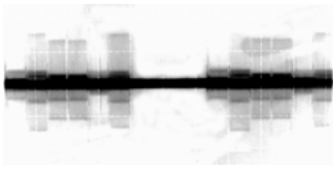
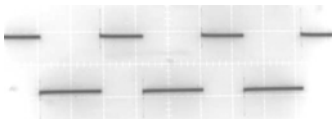
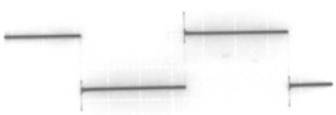
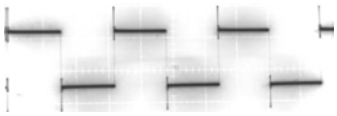
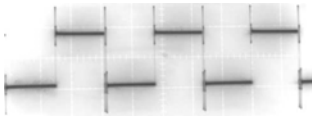
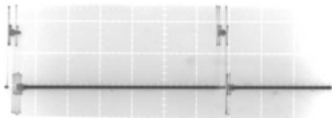
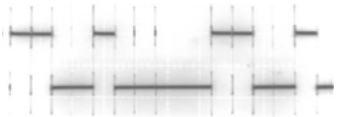
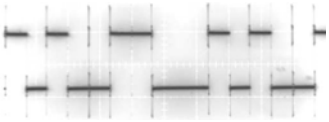
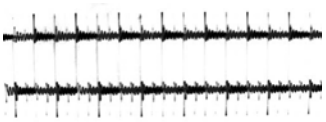
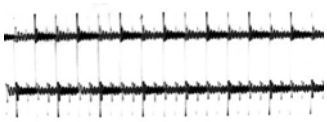
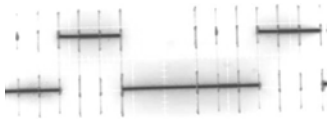
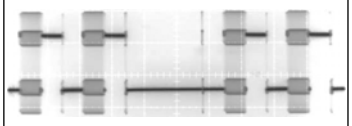
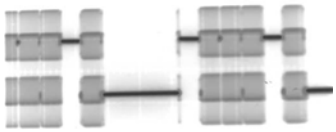
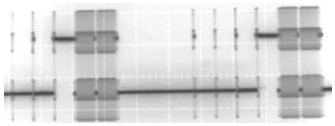
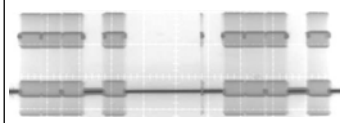
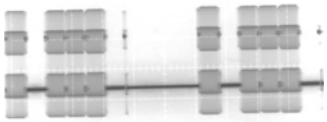
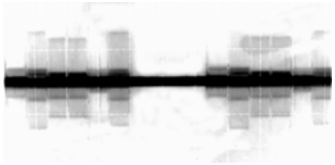
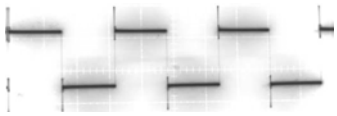
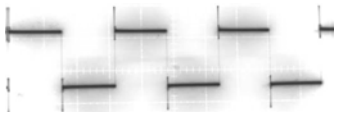
REF NO.	Q5720				Q5863				Q5899				QR5862							
MODE	E	C	B		E	C	B		E	C	B		E	C	B					
POWER ON	7.3	8.5	7.6		0	2.0	3.0		0	0	0.7		0	4.8	0					
STANDBY	7.4	8.6	7.7		0	2.0	3.0		0	0	0.7		0	4.8	0					

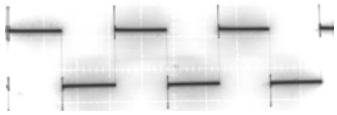
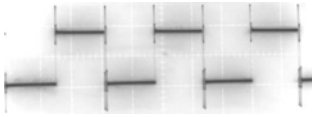
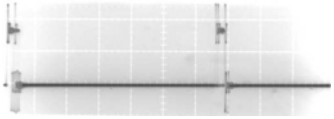
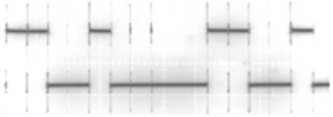
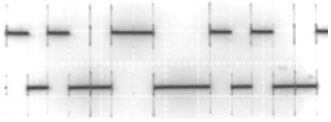
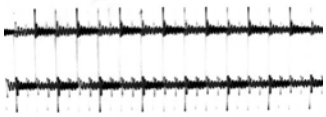
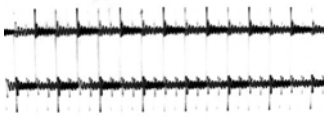
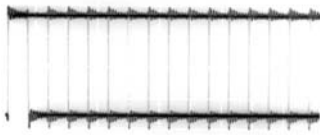
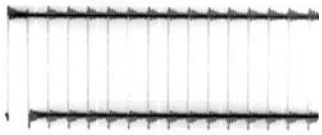
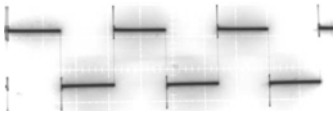
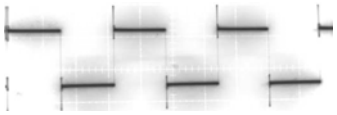
SC-HTB15GS/GSX/PH(SU-HTB15GS/GSX/PH) SMPS P.C.B.

10.2. Waveform Chart

10.2.1. Main Unit (SU-HTB15)

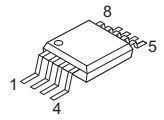
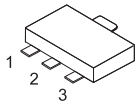
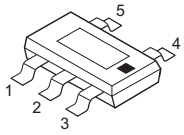
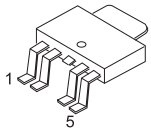
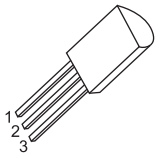
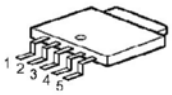
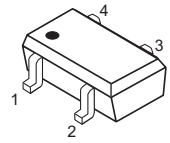
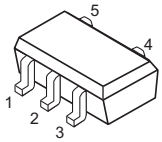
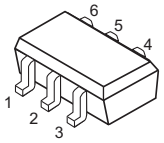
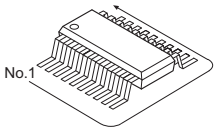
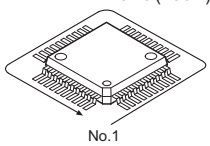
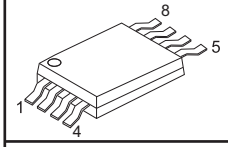
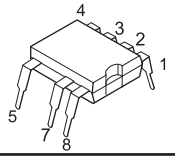
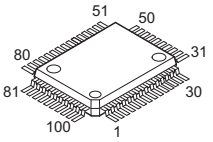
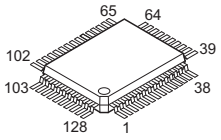
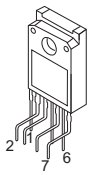
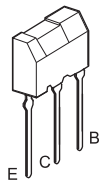
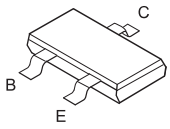
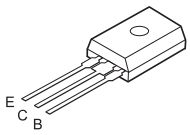
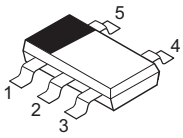
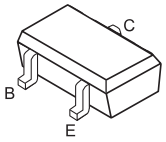
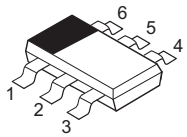
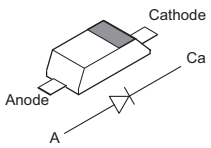
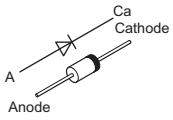
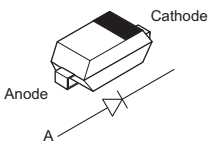
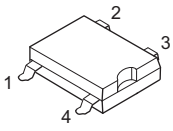
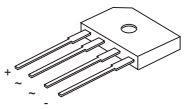
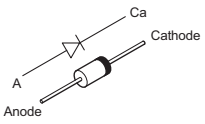
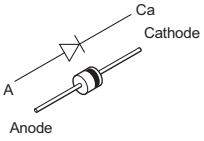
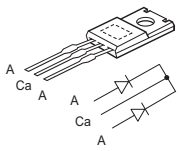
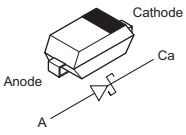
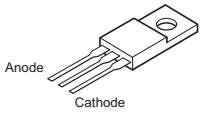
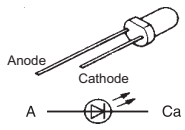
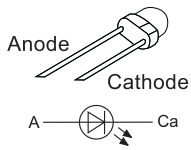
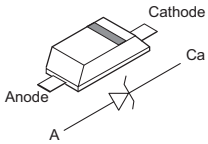
WF No. IC2001-17 (PLAY)  0.5Vp-p(20nsec/div)	WF No. IC2001-26,27,34, 48 (PLAY)  3.5Vp-p(50usec/div)	WF No. IC2001-49,51 (PLAY)  5.5Vp-p(500nsec/div)	WF No. IC2201-11,13 (PLAY)  0.6Vp-p(20nsec/div)
WF No. IC2301-8 (PLAY)  1Vp-p(5usec/div)	WF No. IC2301-9 (PLAY)  2.75Vp-p(5usec/div)	WF No. IC2301-11 (PLAY)  3.75Vp-p(100nsec/div)	WF No. IC2301-13 (PLAY)  3.25Vp-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. IC5201-24,26 (PLAY)  4.5Vp-p(500nsec/div)	WF No. IC5201-35 (PLAY)  6Vp-p(500nsec/div)	WF No. IC5201-36 (PLAY)  5.5Vp-p(500nsec/div)
WF No. IC5300-6,8,16,18 (PLAY)  6Vp-p(1usec/div)	WF No. IC5500-28,31,36, 39 (PLAY)  32Vp-p(1usec/div)		

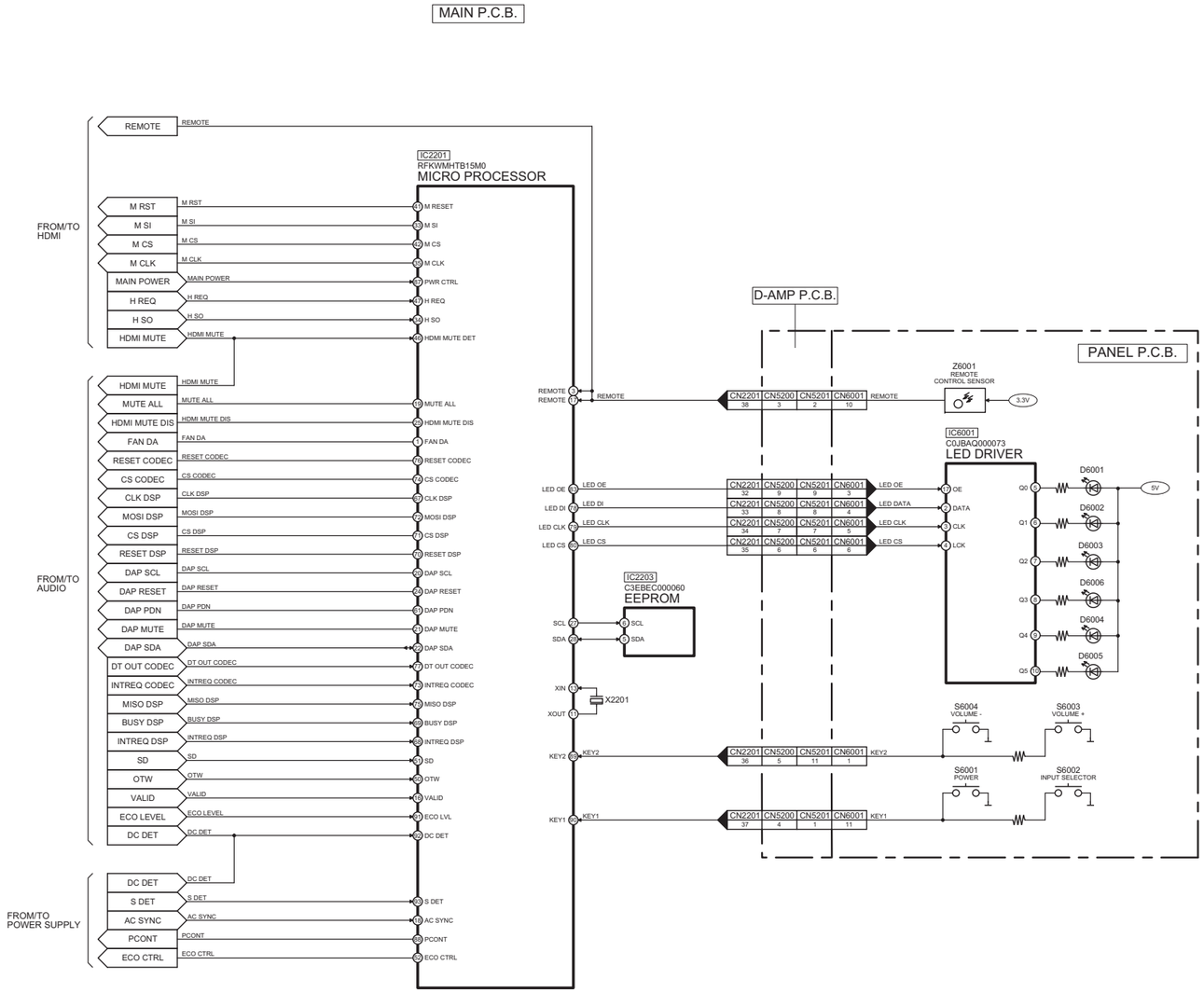
11 Illustration of IC's, Transistors and Diodes

11.1. Active Subwoofer (Main Unit) (SU-HTB15)

C0ABBA000168 (8P) 	C0CBABC00117 (3P) 	C0CBCDD00004 (5P) 	C0CBCAG00015 (5P) C0DBAYH00005 (5P) 	C0DABFC00002 (3P) 	C0DBEKG00004 (5P) 
C0DBZMC00006 (4P) 	C0EBE0000456 (5P) C0JBAA000501 (5P) 	C0JBAB000837 (6P) C0JBAB000986 (6P) C0JBAR000396 (6P) 		C1AB00002461 (38P) C1AB00003174 (28P) C1AB00003217 (44P) C3ABMY000022 (50P) C0JBAQ000073 (18P) C0JBAZ001466 (20P)	C1AB00002989 (144P) RFKWMHTB15M0 (100P) RFKWMHTB15P0 (100P) 
C3EBEC000047 C3EBEC000060 	MIP2F20MSSCF (8P) 	C1AB00002975 (100P) 	C2HBCY000091 (128P) 	C5HACYY00003 (7P) 	B1BABD000001 
B1ABCF000011 B1ABCF000079 B1ABCF000176 	B1ABGC000001 B1ADBL000010 B1ADCE000012 B1GBCFGG0030 B1GBCFJJ0007 B1GBCFNN0038 B1GDCFJJ0008	B1BABG000007 	B1CFGD000002 	B1GBCFJJ0048 B1GBCFNN0035 	B1HBCFA00003 
	B0ACCK000005 B0ACCK000012 B0JCCD000017	B0EAMM000057 	B0ECKP000002 	B0EDKT000009 	B0FBAR000043 
B0JAME000029 	B0HAMP000094 	B0HBSM000054 	B0JCPG000005 	B0ZAZ0000052 	B3ABA0000187 
B3ADA0000087 		DZ2J030M0L DZ2J051M0L DZ2J062M0L DZ2J075M0L DZ2J200M0L DZ2J270M0L DZ2J300M0L			

12 Block Diagram

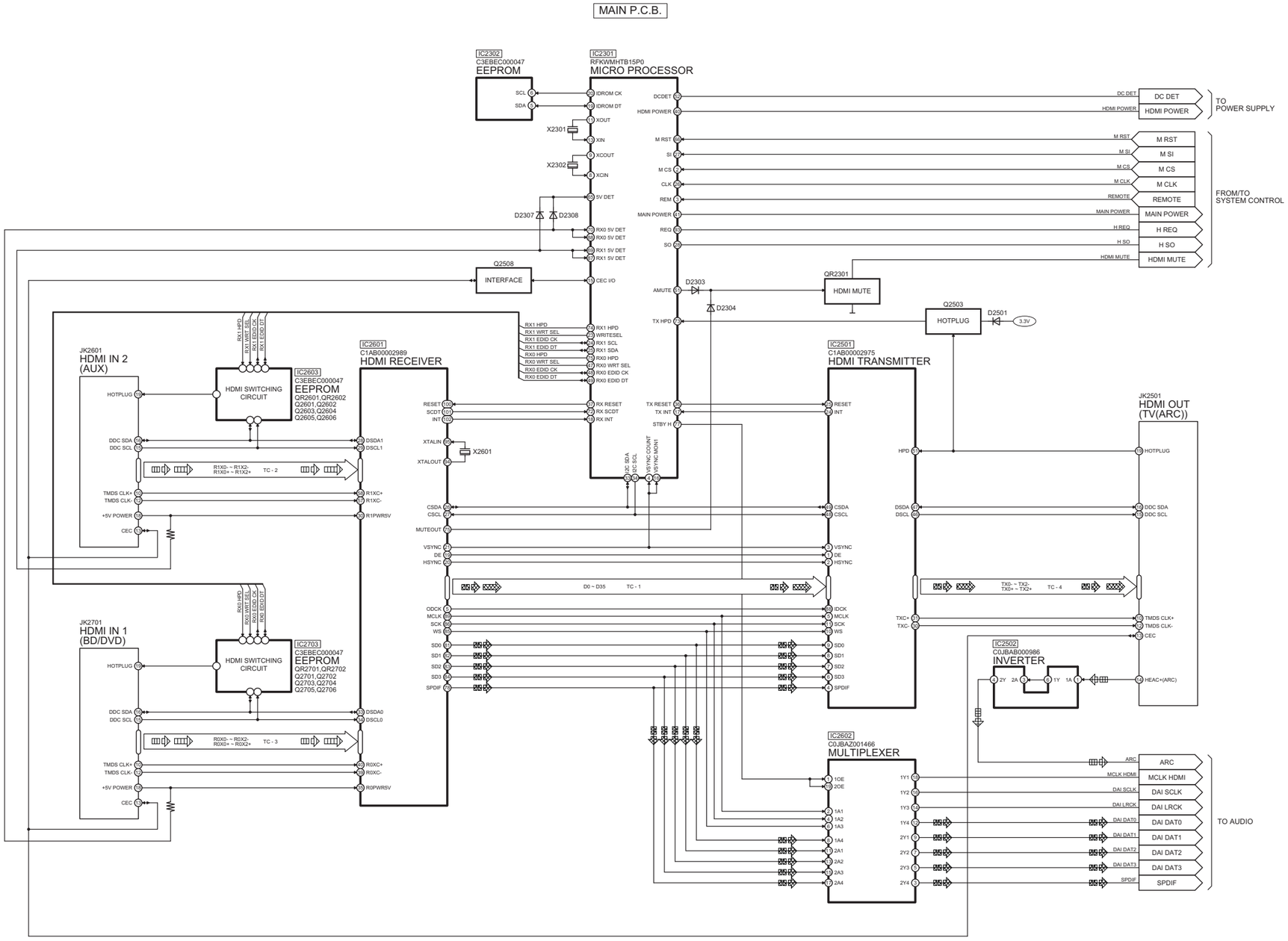
12.1. SYSTEM CONTROL BLOCK DIAGRAM



SC-HTB15GS/GSX/PH(SU-HTB15GS/GSX/PH) SYSTEM CONTROL BLOCK DIAGRAM

12.2. HDMI BLOCK DIAGRAM

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



SC-HTB15GS/GSX/PH(SU-HTB15GS/GSX/PH) HDMI BLOCK DIAGRAM

12.3. IC TERMINAL CHART

TC	IC2601 HDMI RECEIVER		SIGNAL NAME	IC2501 HDMI TRANSMITTER	
	Port Name	Pin No		Pin No	Port Name
1	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	JK2601 HDMI IN 2 (AUX)		SIGNAL NAME	IC2601 HDMI RECEIVER	
	Port Name	Pin No		Pin No	Port Name
2	TMDS D0-	9	R1X0-	61	R1X0-
	TMDS D0+	7	R1X0+	62	R1X0+
	TMDS D1-	6	R1X1-	65	R1X1-
	TMDS D1+	4	R1X1+	66	R1X1+
	TMDS D2-	3	R1X2-	69	R1X2-
	TMDS D2+	1	R1X2+	70	R1X2+

TC	JK2701 HDMI IN 1 (BD/DVD)		SIGNAL NAME	IC2601 HDMI RECEIVER	
	Port Name	Pin No		Pin No	Port Name
3	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+

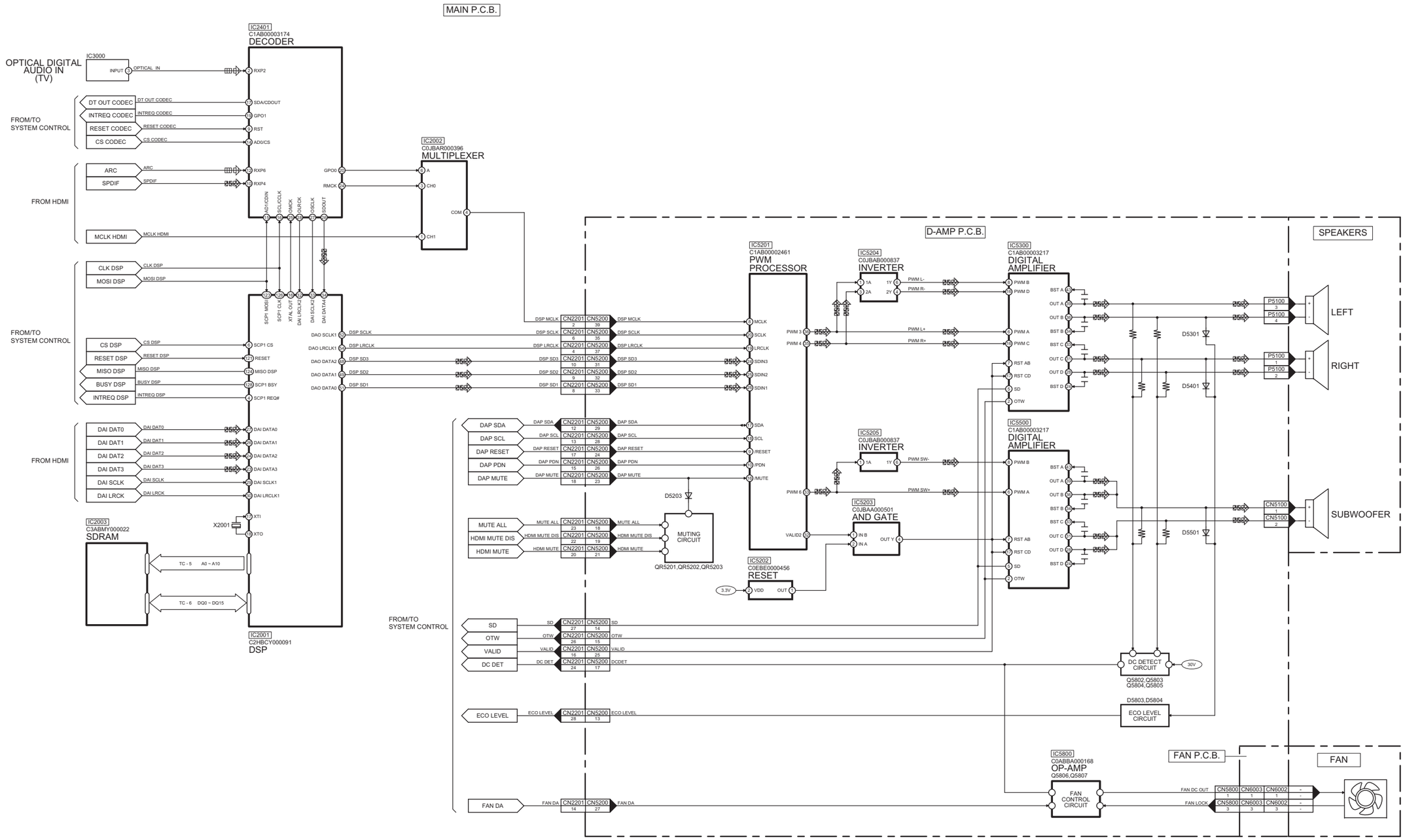
TC	IC2501 HDMI TRANSMITTER		SIGNAL NAME	JK2501 HDMI OUT (TV(ARC))	
	Port Name	Pin No		Pin No	Port Name
4	TX0-	33	TX0-	9	TMDS D0-
	TX0+	34	TX0+	7	TMDS D0+
	TX1-	36	TX1-	6	TMDS D1-
	TX1+	37	TX1+	4	TMDS D1+
	TX2-	39	TX2-	3	TMDS D2-
	TX2+	40	TX2+	1	TMDS D2+

TC	IC2001 DSP		SIGNAL NAME	IC2003 SDRAM	
	Port Name	Pin No		Pin No	Port Name
5	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 SDRAM	
	Port Name	Pin No		Pin No	Port Name
6	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

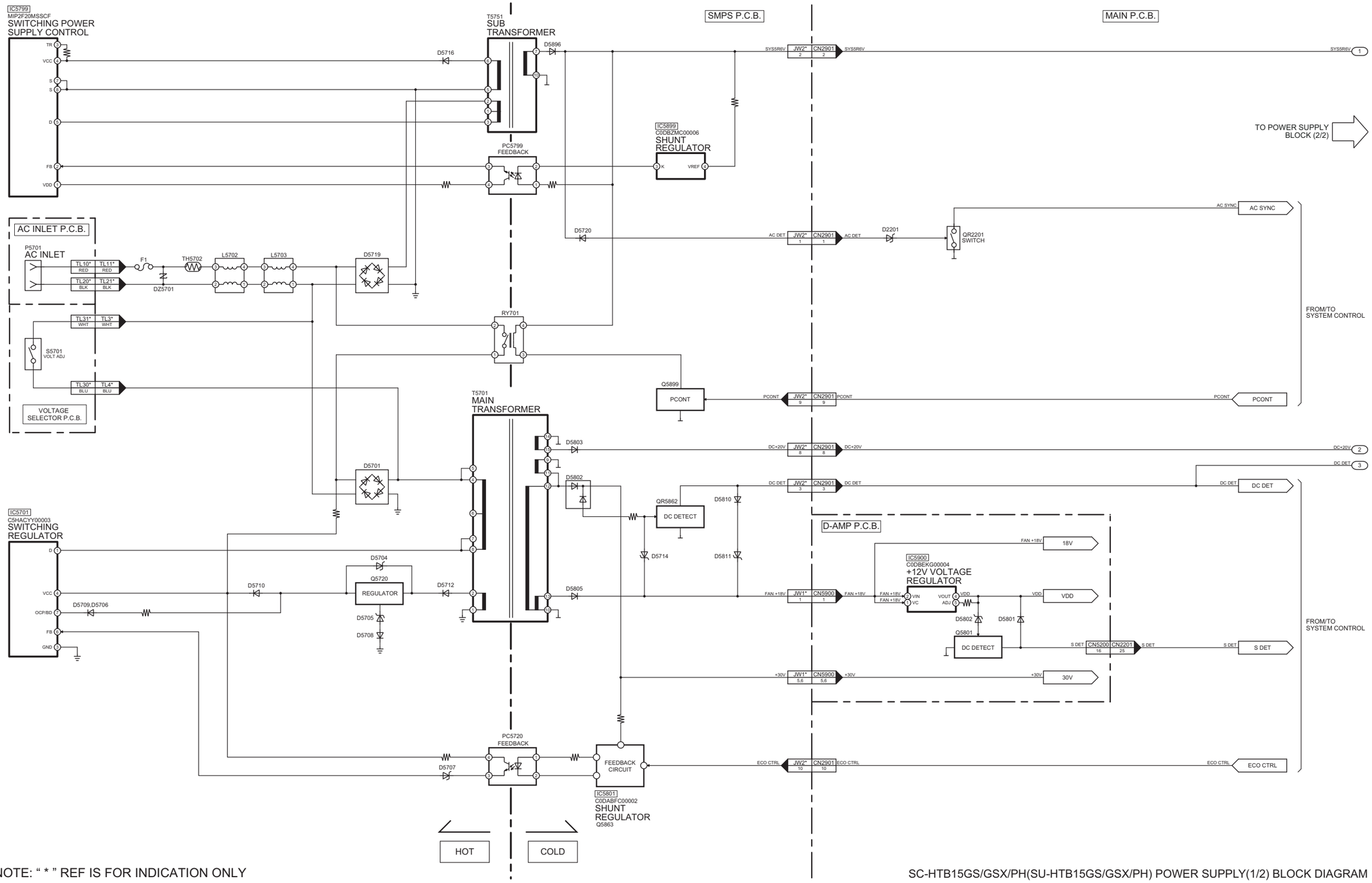
12.4. AUDIO BLOCK DIAGRAM

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



SC-HTB15GS/GSX/PH(SU-HTB15GS/GSX/PH) AUDIO BLOCK DIAGRAM

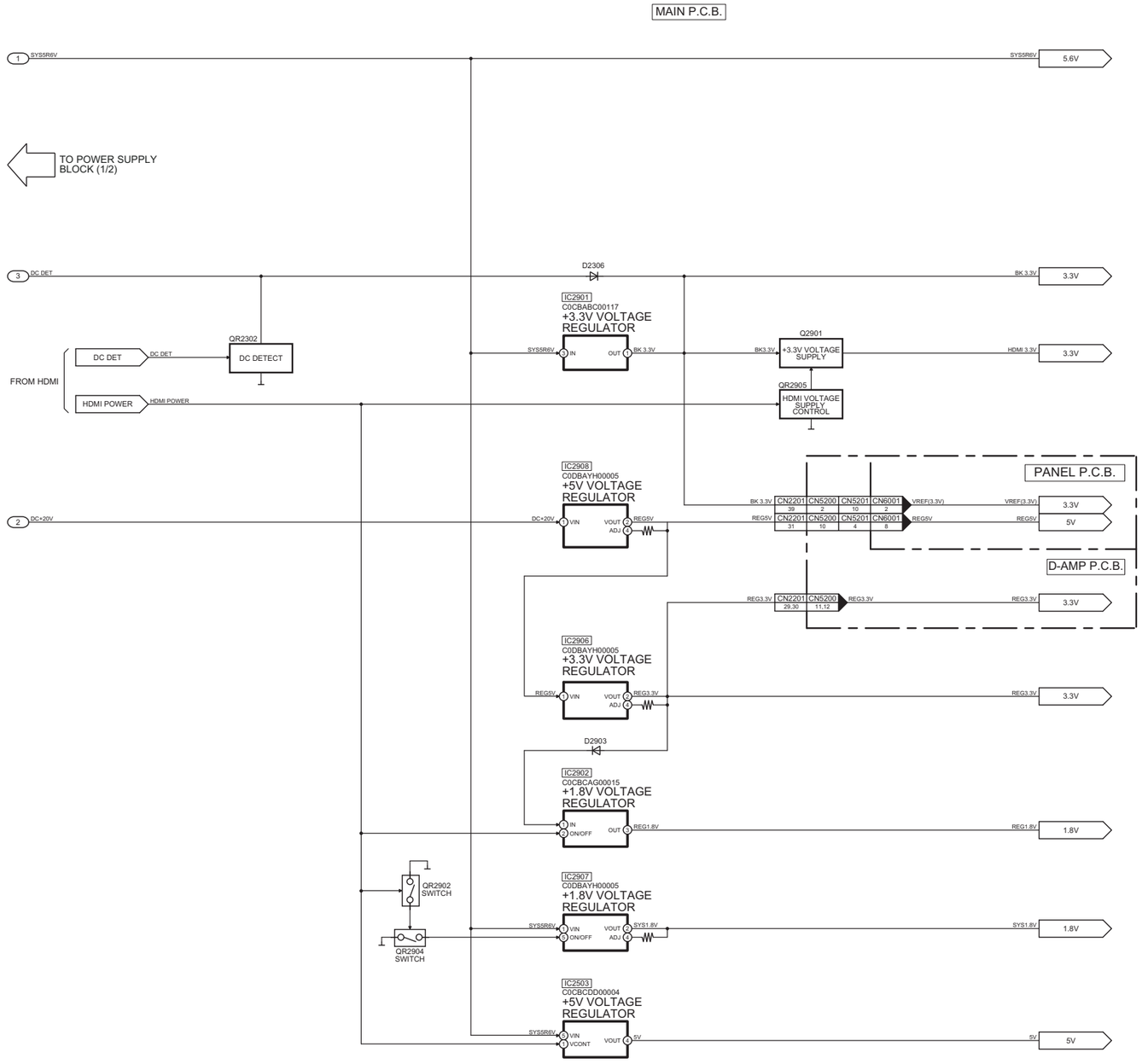
12.5. POWER SUPPLY (1/2) BLOCK DIAGRAM



NOTE: " * " REF IS FOR INDICATION ONLY

SC-HTB15GS/GSX/PH(SU-HTB15GS/GSX/PH) POWER SUPPLY(1/2) BLOCK DIAGRAM

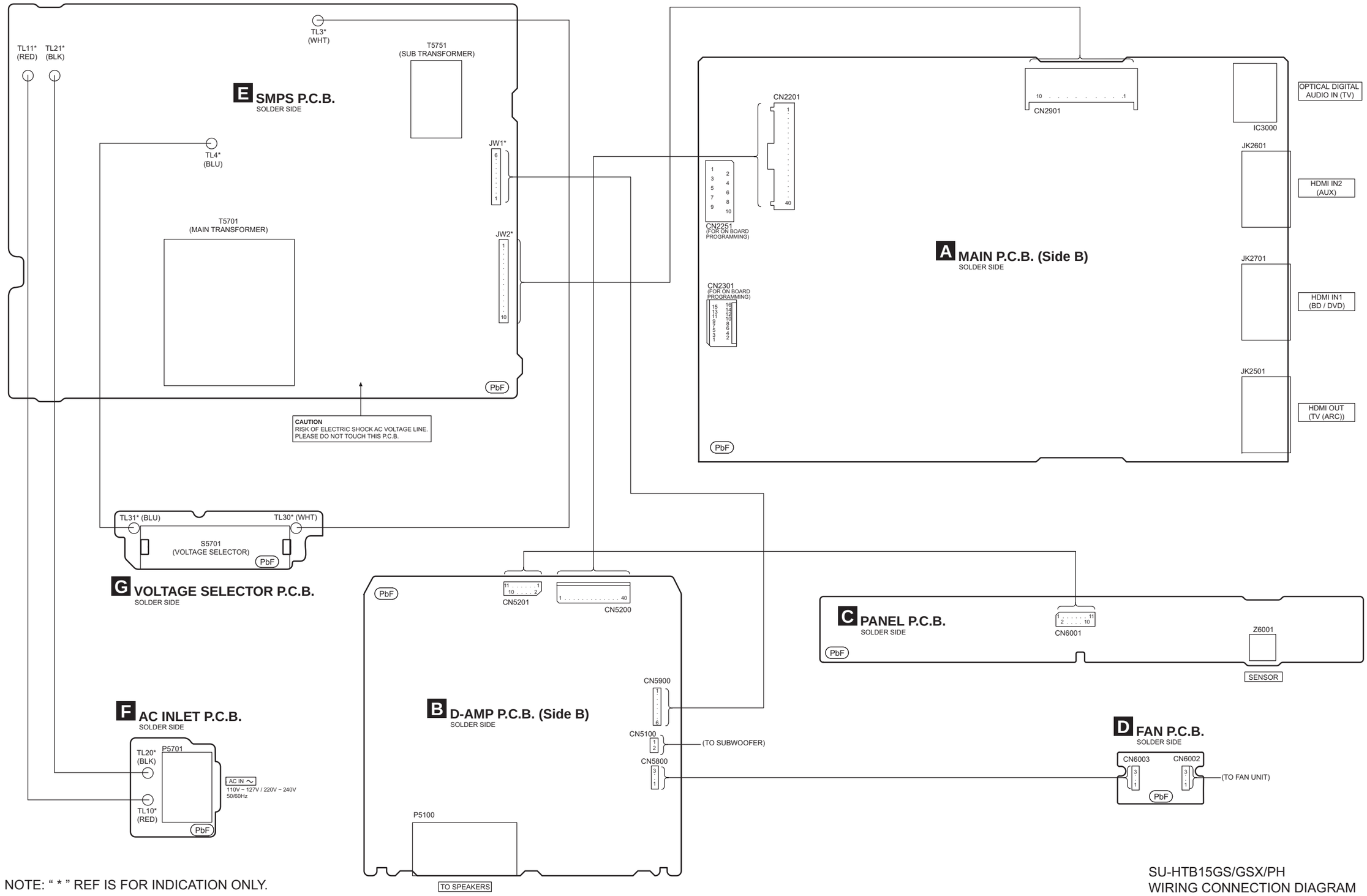
12.6. POWER SUPPLY (2/2) BLOCK DIAGRAM



SC-HTB15GS/GSX/PH(SU-HTB15GS/GSX/PH) POWER SUPPLY(2/2) BLOCK DIAGRAM

13 Wiring Connection Diagram

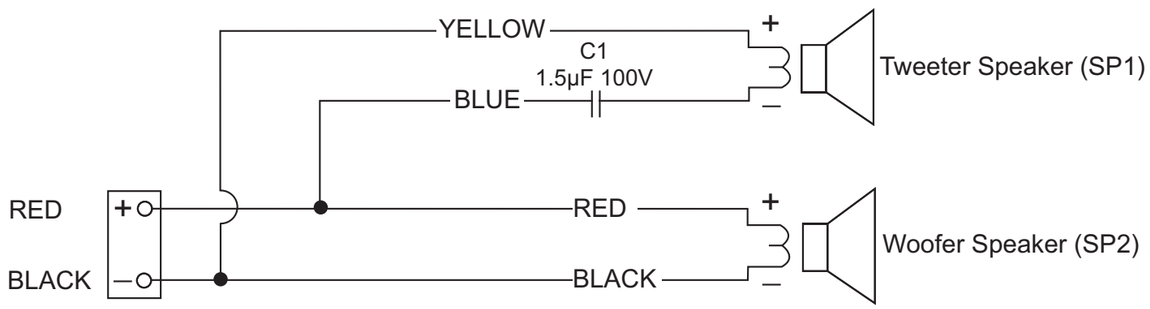
13.1. Active Subwoofer (Main Unit) (SU-HTB15)



NOTE: " * " REF IS FOR INDICATION ONLY.

SU-HTB15GS/GSX/PH
WIRING CONNECTION DIAGRAM

13.2. Speaker Unit (SB-HTB15)



SB-HTB15GS/PH/PP
WIRING CONNECTION DIAGRAM

14 Schematic Diagram

14.1. Schematic Diagram Notes

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

S5701:	VOLTAGE SELECTOR SWITCH.
S6001:	POWER SWITCH.
S6002:	INPUT 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, C5706

- **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 lines:**

: +B signal line

: Audio Output signal line

: Video Output signal line

: HDMI Video Input signal line

: HDMI/Optical Audio Input signal line

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE F1 T6.3AH, 250V FUSE

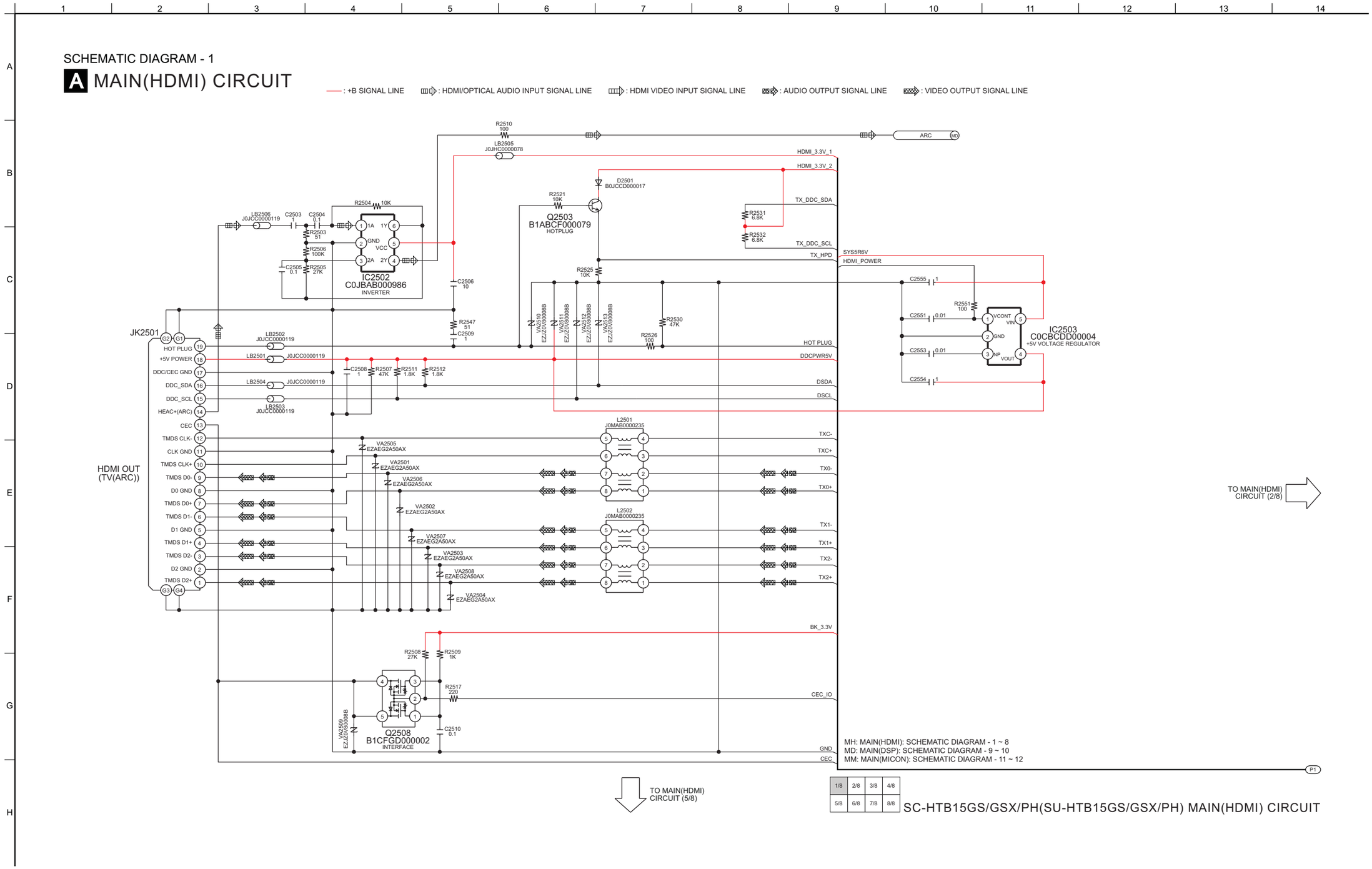
RISK OF FIRE-REPLACE FUSE AS MARKED.

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.

14.2. Active Subwoofer (Main Unit) (SU-HTB15)

14.2.1. MAIN(HDMI) CIRCUIT (1/8)



14.2.2. MAIN(HDMI) CIRCUIT (2/8)

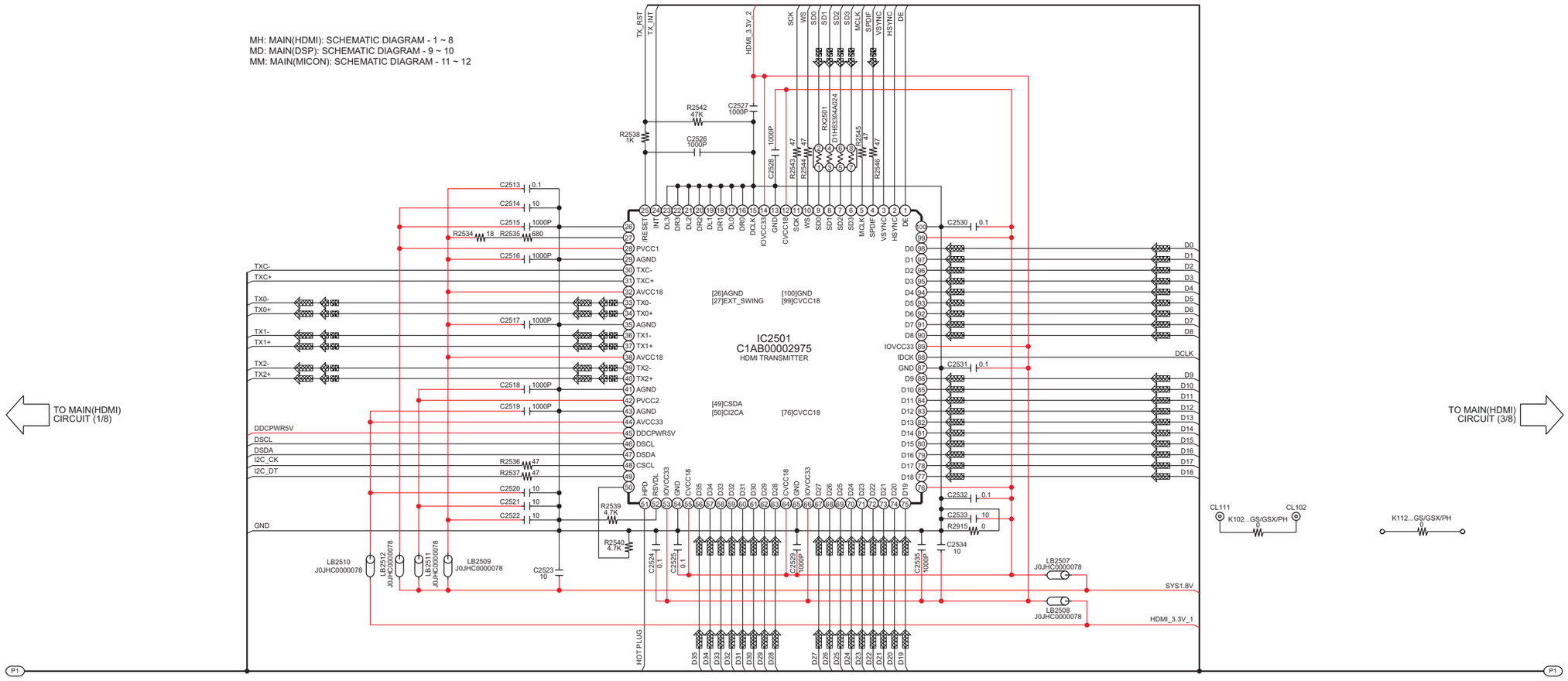
15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28

SCHEMATIC DIAGRAM - 2

A MAIN(HDMI) CIRCUIT

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

MH: MAIN(HDMI): SCHEMATIC DIAGRAM - 1 ~ 8
MD: MAIN(DSP): SCHEMATIC DIAGRAM - 9 ~ 10
MM: MAIN(MICON): SCHEMATIC DIAGRAM - 11 ~ 12



1/8	2/8	3/8	4/8
5/8	6/8	7/8	8/8

SC-HTB15GS/GSX/PH(SU-HTB15GS/GSX/PH) MAIN(HDMI) CIRCUIT

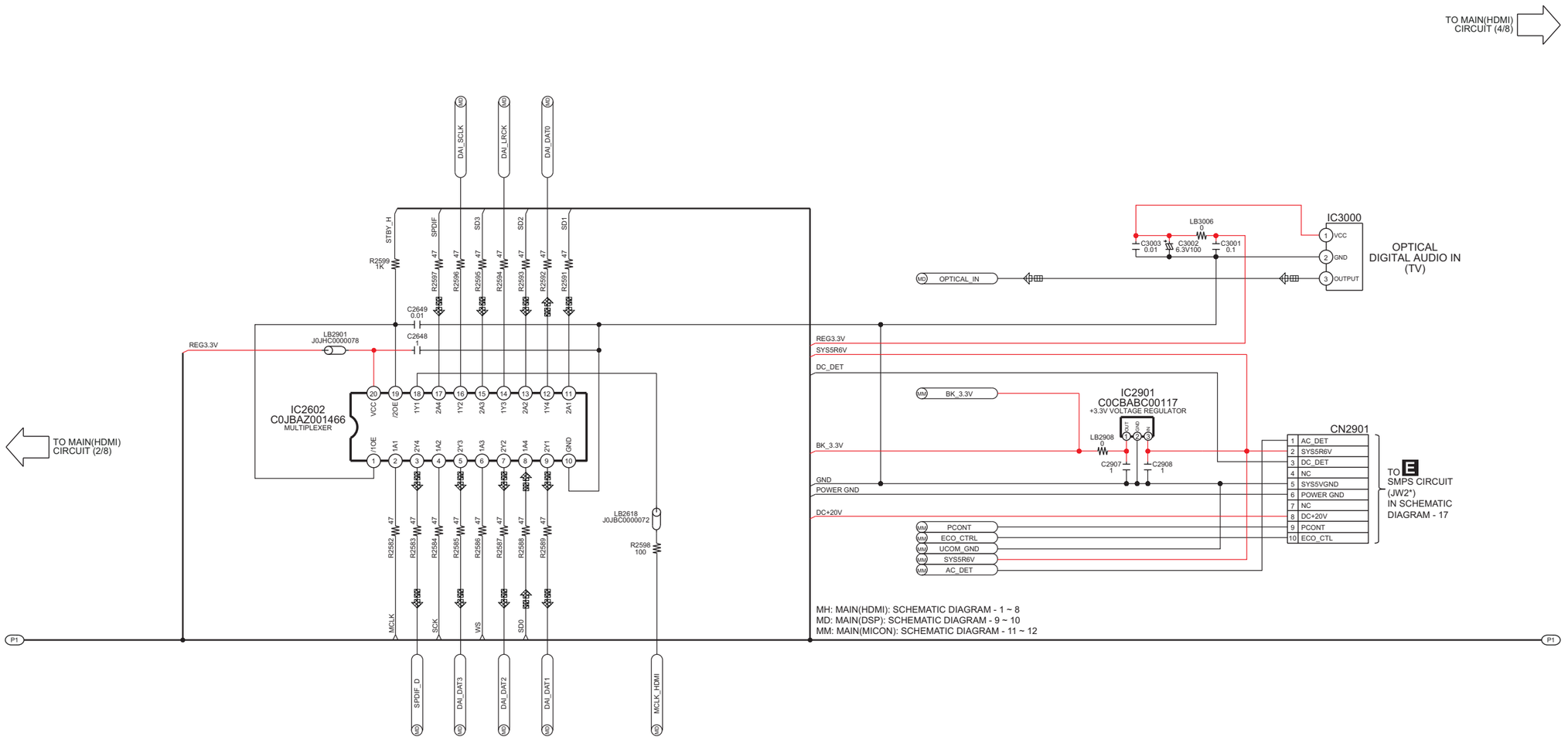
14.2.3. MAIN(HDMI) CIRCUIT (3/8)

29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42

SCHEMATIC DIAGRAM - 3

A MAIN(HDMI) CIRCUIT

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

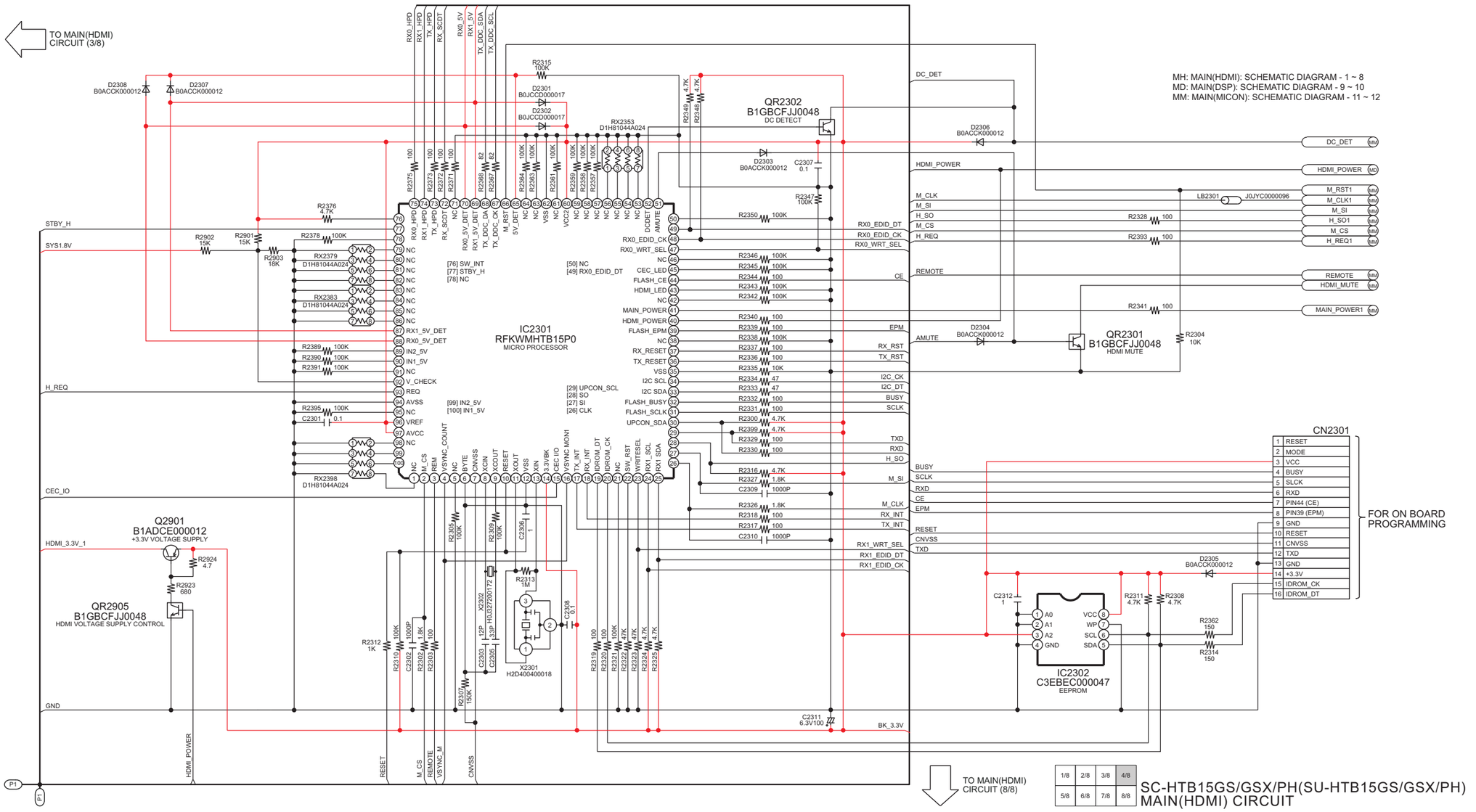


14.2.4. MAIN(HDMI) CIRCUIT (4/8)

SCHEMATIC DIAGRAM - 4

A MAIN(HDMI) CIRCUIT

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

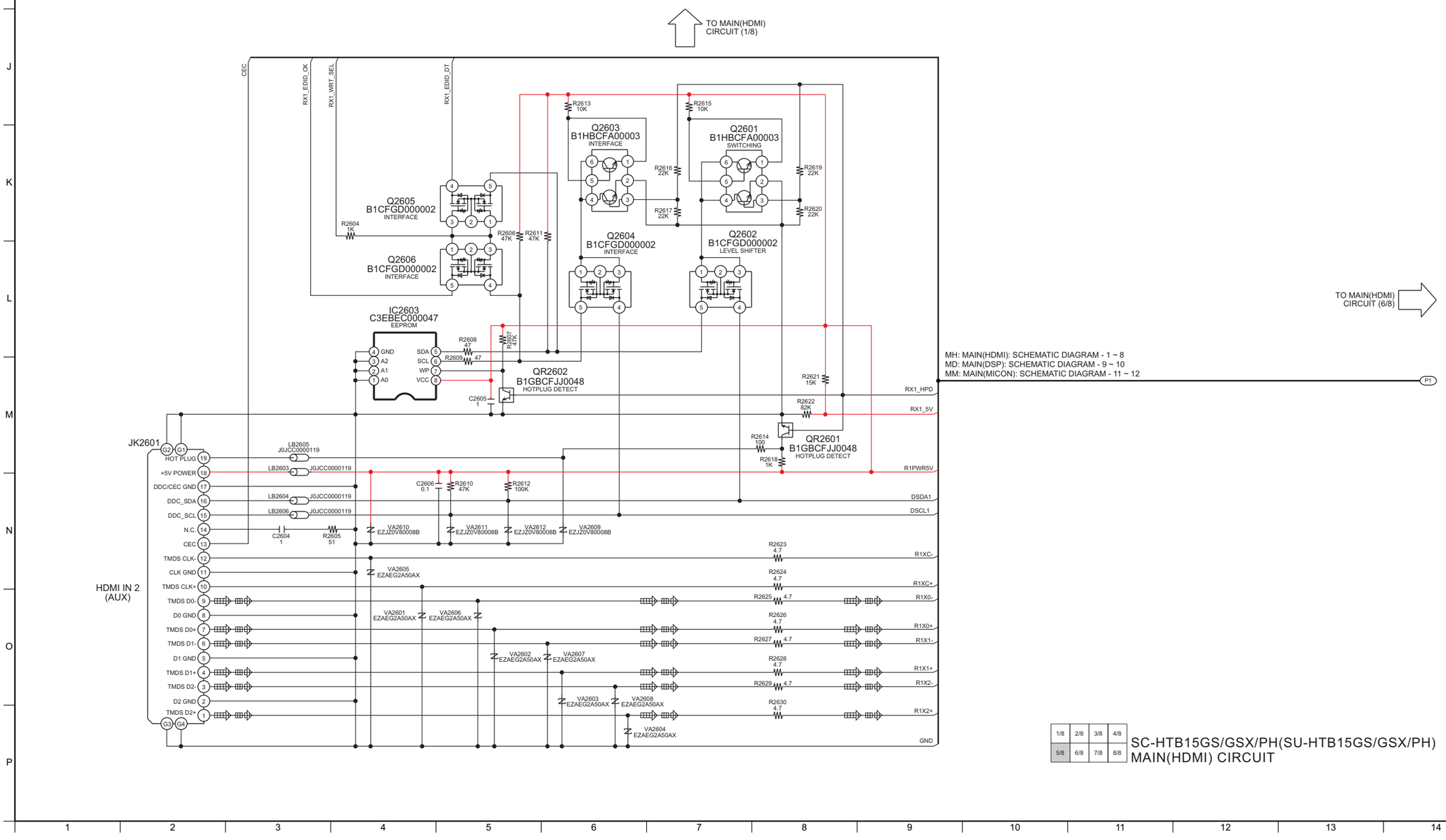


14.2.5. MAIN(HDMI) CIRCUIT (5/8)

SCHEMATIC DIAGRAM - 5

A MAIN(HDMI) CIRCUIT

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



1/8	2/8	3/8	4/8
5/8	6/8	7/8	8/8

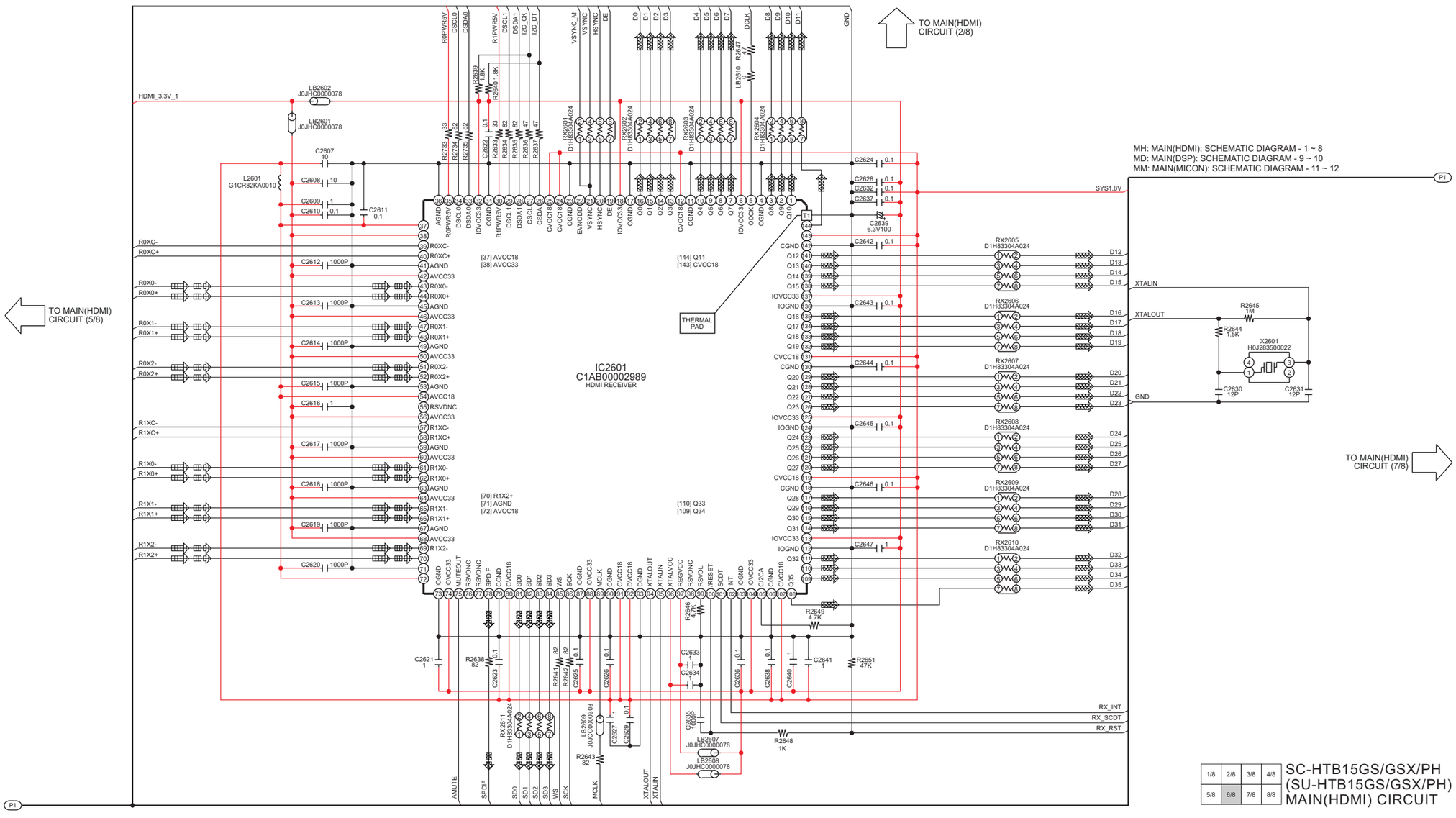
SC-HTB15GS/GSX/PH(SU-HTB15GS/GSX/PH)
MAIN(HDMI) CIRCUIT

14.2.6. MAIN(HDMI) CIRCUIT (6/8)

SCHEMATIC DIAGRAM - 6

A MAIN(HDMI) CIRCUIT

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



1/8	2/8	3/8	4/8
5/8	6/8	7/8	8/8

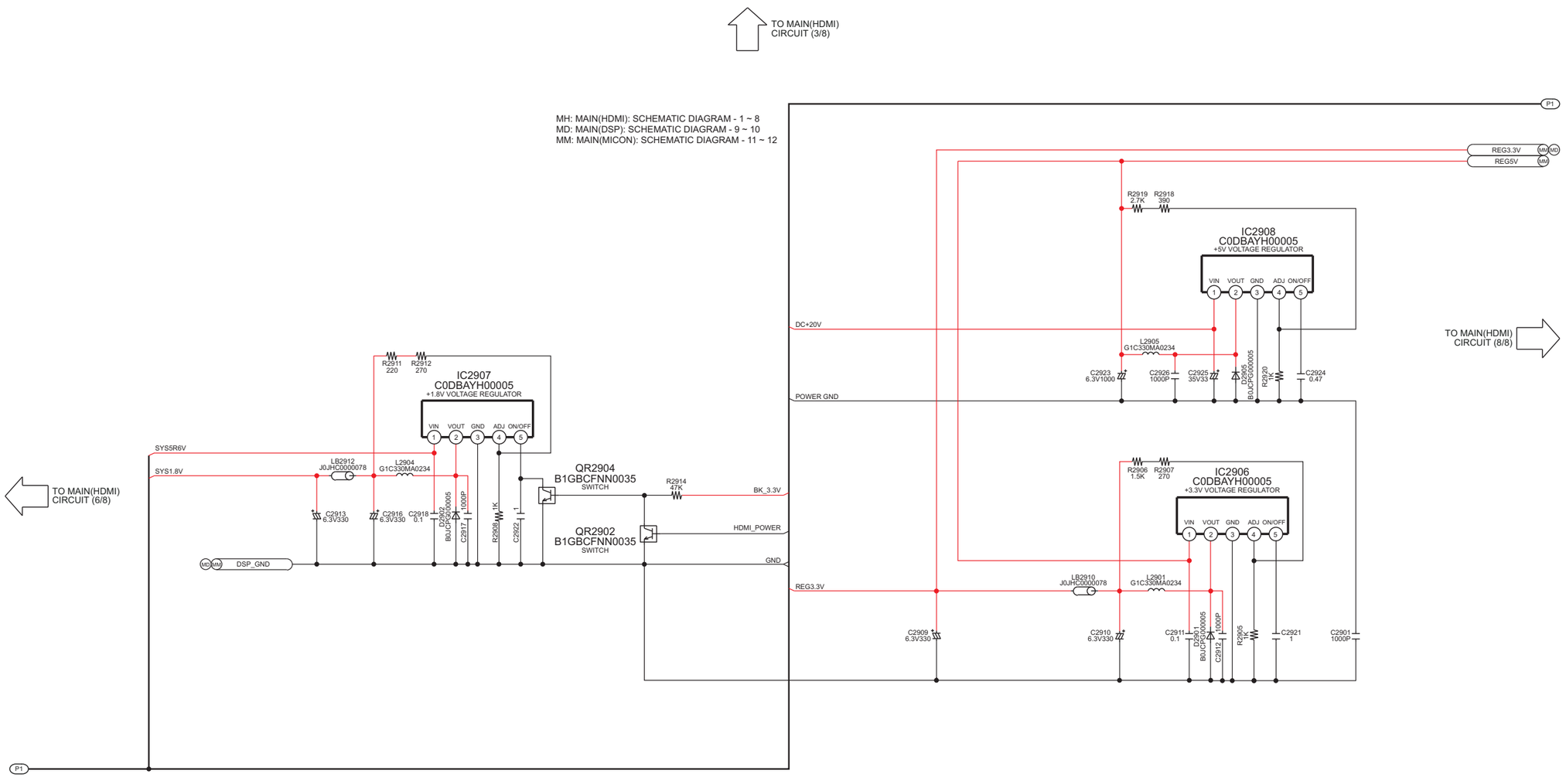
SC-HTB15GS/GSX/PH
(SU-HTB15GS/GSX/PH)
MAIN(HDMI) CIRCUIT

14.2.7. MAIN(HDMI) CIRCUIT (7/8)

SCHEMATIC DIAGRAM - 7

A MAIN(HDMI) CIRCUIT

: +B SIGNAL LINE : HDMI/OPTICAL AUDIO INPUT SIGNAL LINE : HDMI VIDEO INPUT SIGNAL LINE : AUDIO OUTPUT SIGNAL LINE : VIDEO OUTPUT SIGNAL LINE



1/8	2/8	3/8	4/8
5/8	6/8	7/8	8/8

SC-HTB15GS/GSX/PH(SU-HTB15GS/GSX/PH) MAIN(HDMI) CIRCUIT

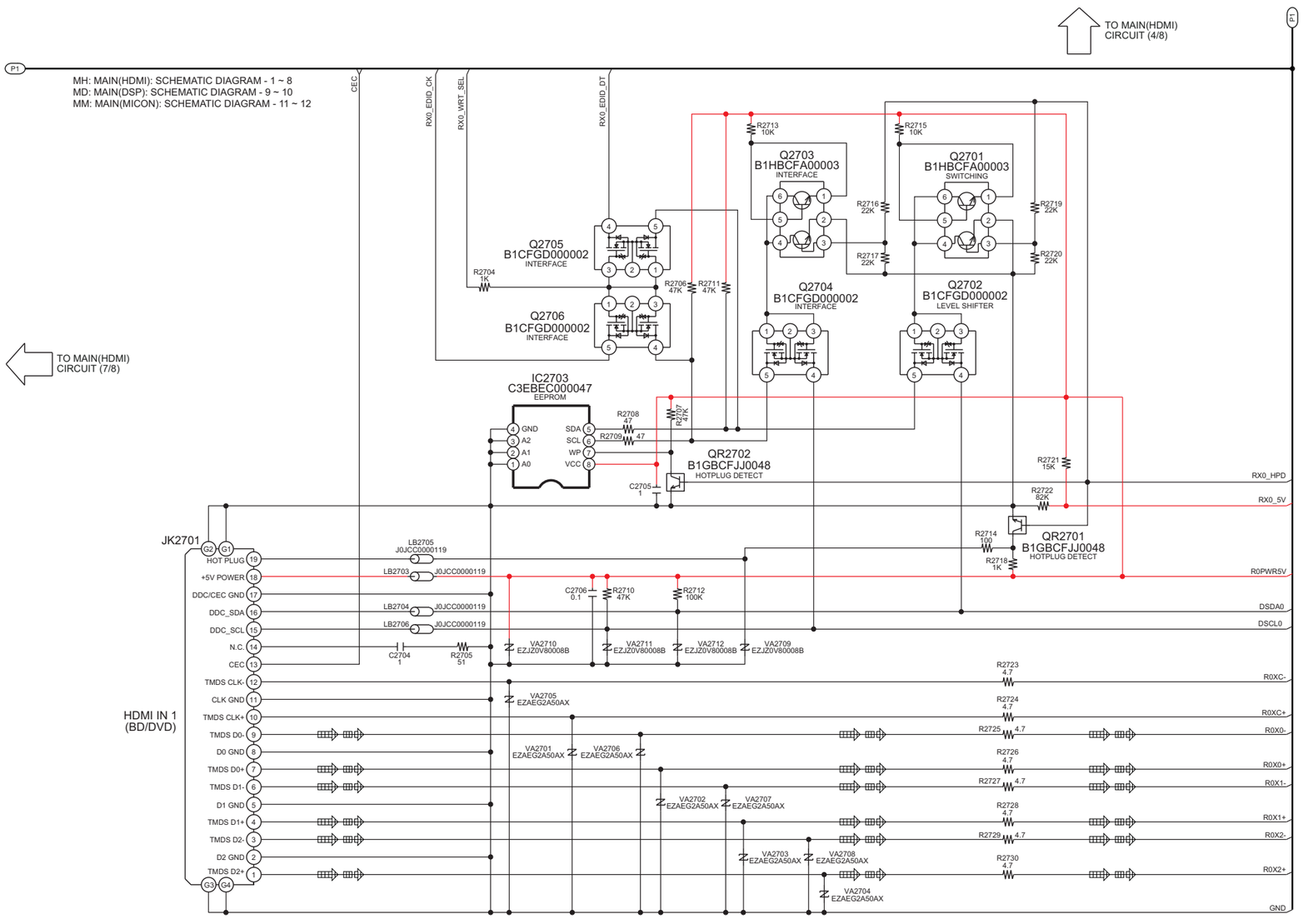
29 30 31 32 33 34 35 36 37 38 39 40 41 42

14.2.8. MAIN(HDMI) CIRCUIT (8/8)

SCHEMATIC DIAGRAM - 8

A MAIN(HDMI) CIRCUIT

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



1/8	2/8	3/8	4/8
5/8	6/8	7/8	8/8

SC-HTB15GS/GSX/PH
(SU-HTB15GS/GSX/PH)
MAIN(HDMI) CIRCUIT

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

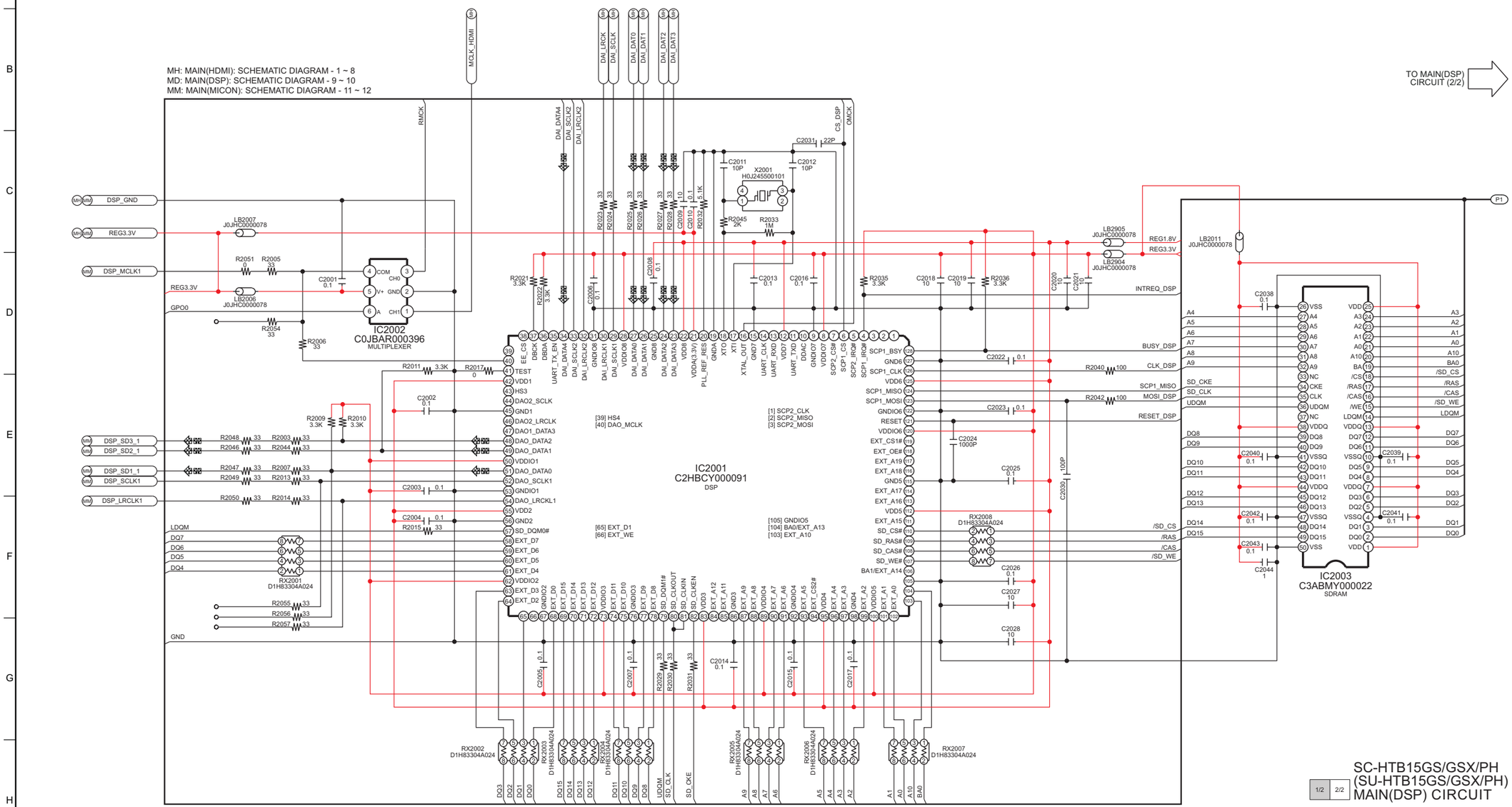
SCHEMATIC DIAGRAM - 9

A MAIN(DSP) CIRCUIT

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

MH: MAIN(HDMI): SCHEMATIC DIAGRAM - 1 ~ 8
MD: MAIN(DSP): SCHEMATIC DIAGRAM - 9 ~ 10
MM: MAIN(MICON): SCHEMATIC DIAGRAM - 11 ~ 12

TO MAIN(DSP) CIRCUIT (2/2)



SC-HTB15GS/GSX/PH
(SU-HTB15GS/GSX/PH)
MAIN(DSP) CIRCUIT

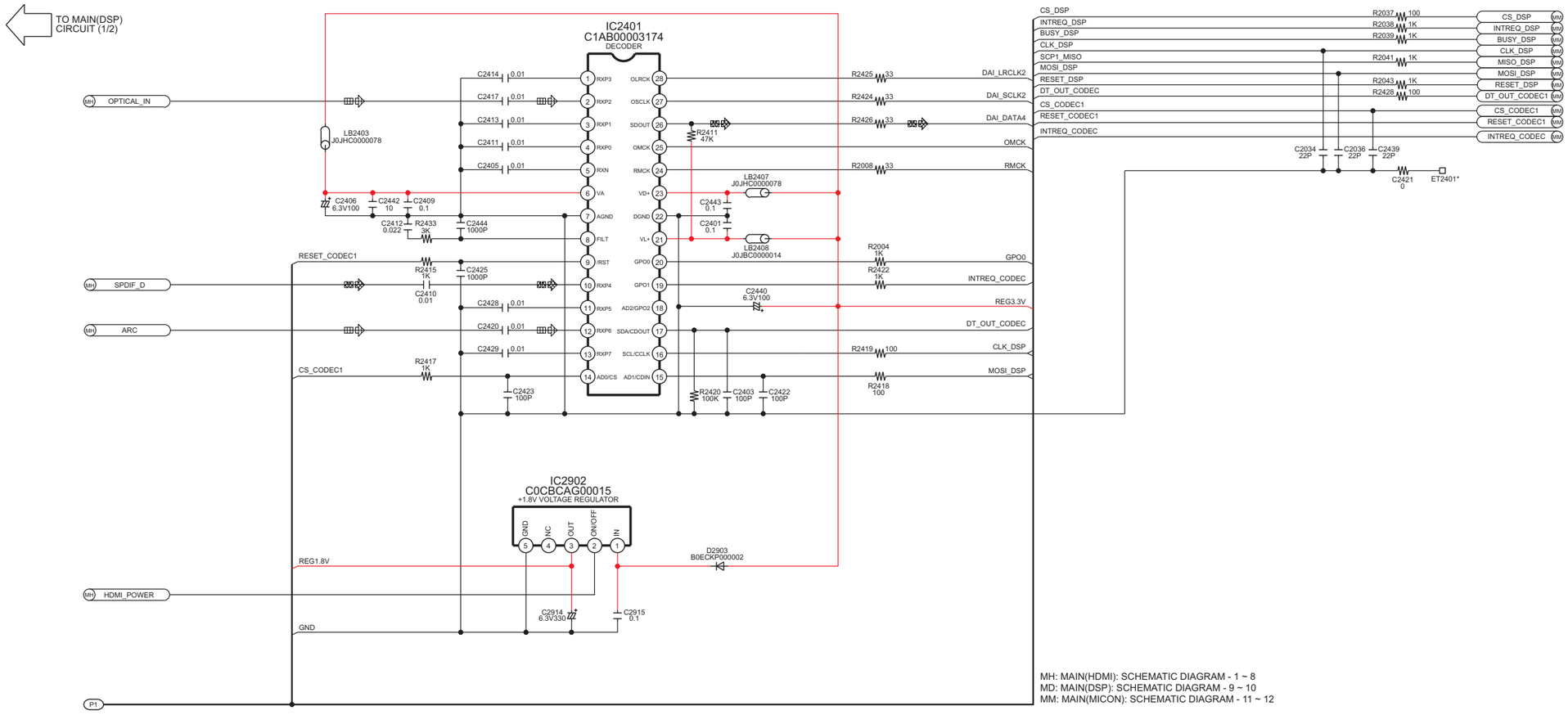
1/2 2/2

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

SCHEMATIC DIAGRAM - 10

A MAIN(DSP) CIRCUIT

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



NOTE: “ * ” REF IS FOR INDICATION ONLY

1/2 2/2 SC-HTB15GS/GSX/PH(SU-HTB15GS/GSX/PH) MAIN(DSP) CIRCUIT

14.2.11. MAIN(MICON) CIRCUIT (1/2)

SCHEMATIC DIAGRAM - 11

A MAIN(MICON) CIRCUIT

—— : +B SIGNAL LINE ▨▨▨ : AUDIO OUTPUT SIGNAL LINE

MH: MAIN(HDMI): SCHEMATIC DIAGRAM - 1 ~ 8
MD: MAIN(DSP): SCHEMATIC DIAGRAM - 9 ~ 10
MM: MAIN(MICON): SCHEMATIC DIAGRAM - 11 ~ 12

TO MAIN(MICON) CIRCUIT (2/2)

IC2201
RFKWMHTB15M0
MICRO PROCESSOR

[76] RESET_CODEC
[77] DT_OUT_CODEC
[78] LED_DI
[79] LED_CLK

[52] ECO_CTRL
[51] /SD

[99] W_SSB
[100] W_DET

[25] HDMIMUTE_DIS
[26] AMP_POWER
[27] SCL
[28] SDA
[29] TXD/FL_DATA

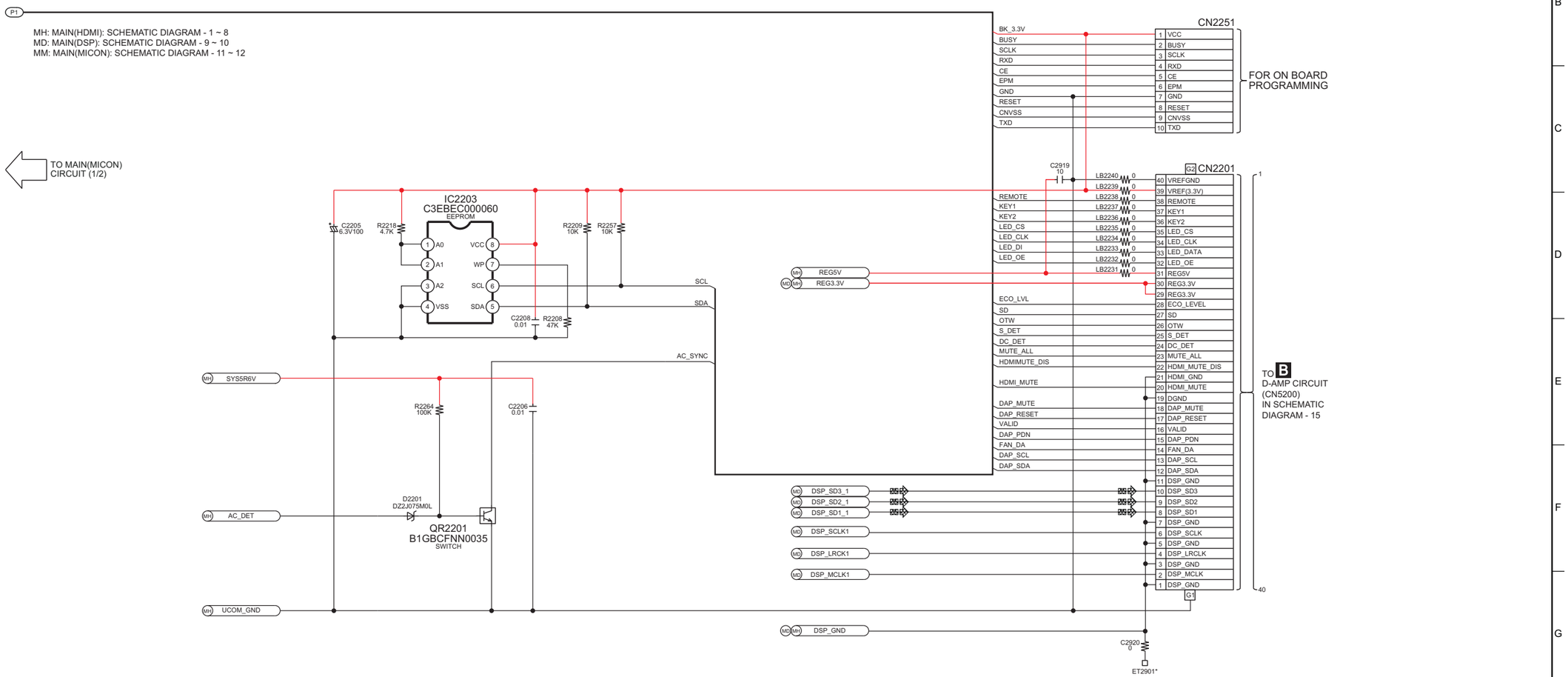
SC-HTB15GS/GSX/PH
(SU-HTB15GS/GSX/PH)MAIN(MICON) CIRCUIT
1/2 2/2

14.2.12. MAIN(MICON) CIRCUIT (2/2)

SCHEMATIC DIAGRAM - 12

A MAIN(MICON) CIRCUIT

—— : +B SIGNAL LINE ⋙ : AUDIO OUTPUT SIGNAL LINE



NOTE: “ * ” REF IS FOR INDICATION ONLY

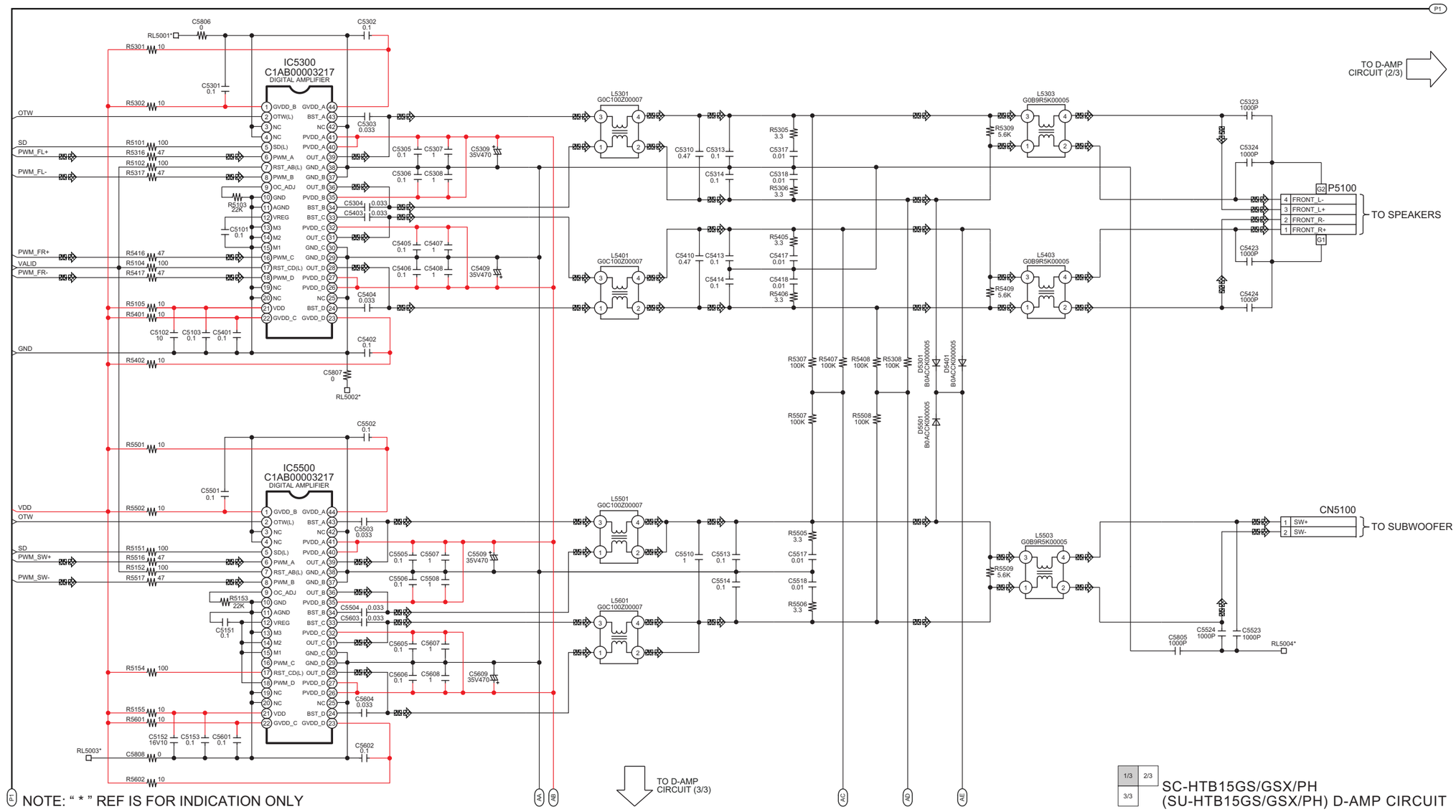
1/2 2/2 SC-HTB15GS/GSX/PH(SU-HTB15GS/GSX/PH) MAIN(MICON) CIRCUIT CIRCUIT

14.2.13. D-AMP CIRCUIT (1/3)

SCHEMATIC DIAGRAM - 13

B D-AMP CIRCUIT

—— : +B SIGNAL LINE ▨▨▶ : AUDIO OUTPUT SIGNAL LINE



NOTE: " * " REF IS FOR INDICATION ONLY

1/3	2/3
3/3	

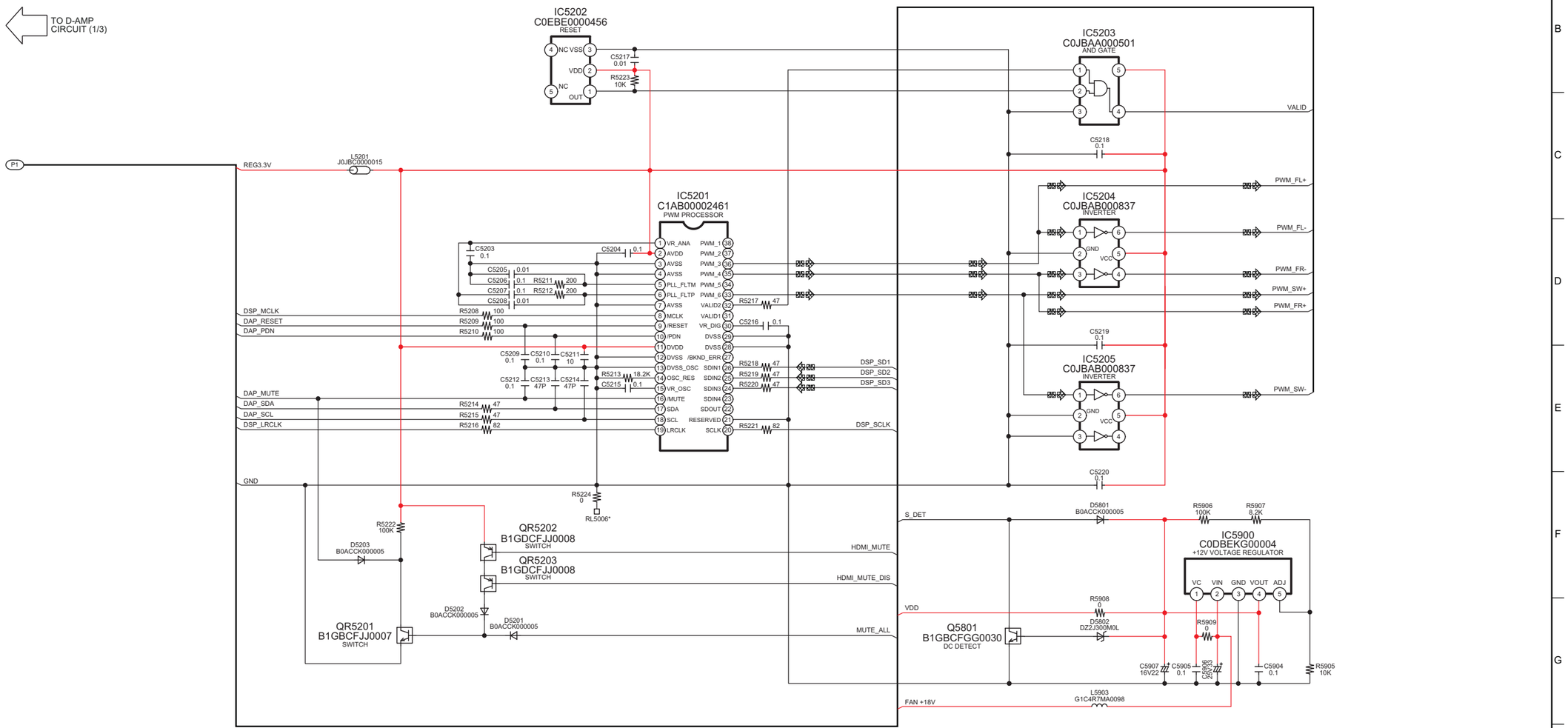
SC-HTB15GS/GSX/PH
(SU-HTB15GS/GSX/PH) D-AMP CIRCUIT

14.2.14. D-AMP CIRCUIT (2/3)

SCHEMATIC DIAGRAM - 14

B D-AMP CIRCUIT

—— : +B SIGNAL LINE ▷▷▷ : AUDIO OUTPUT SIGNAL LINE



NOTE: “ * ” REF IS FOR INDICATION ONLY

1/3 | 2/3 | 3/3

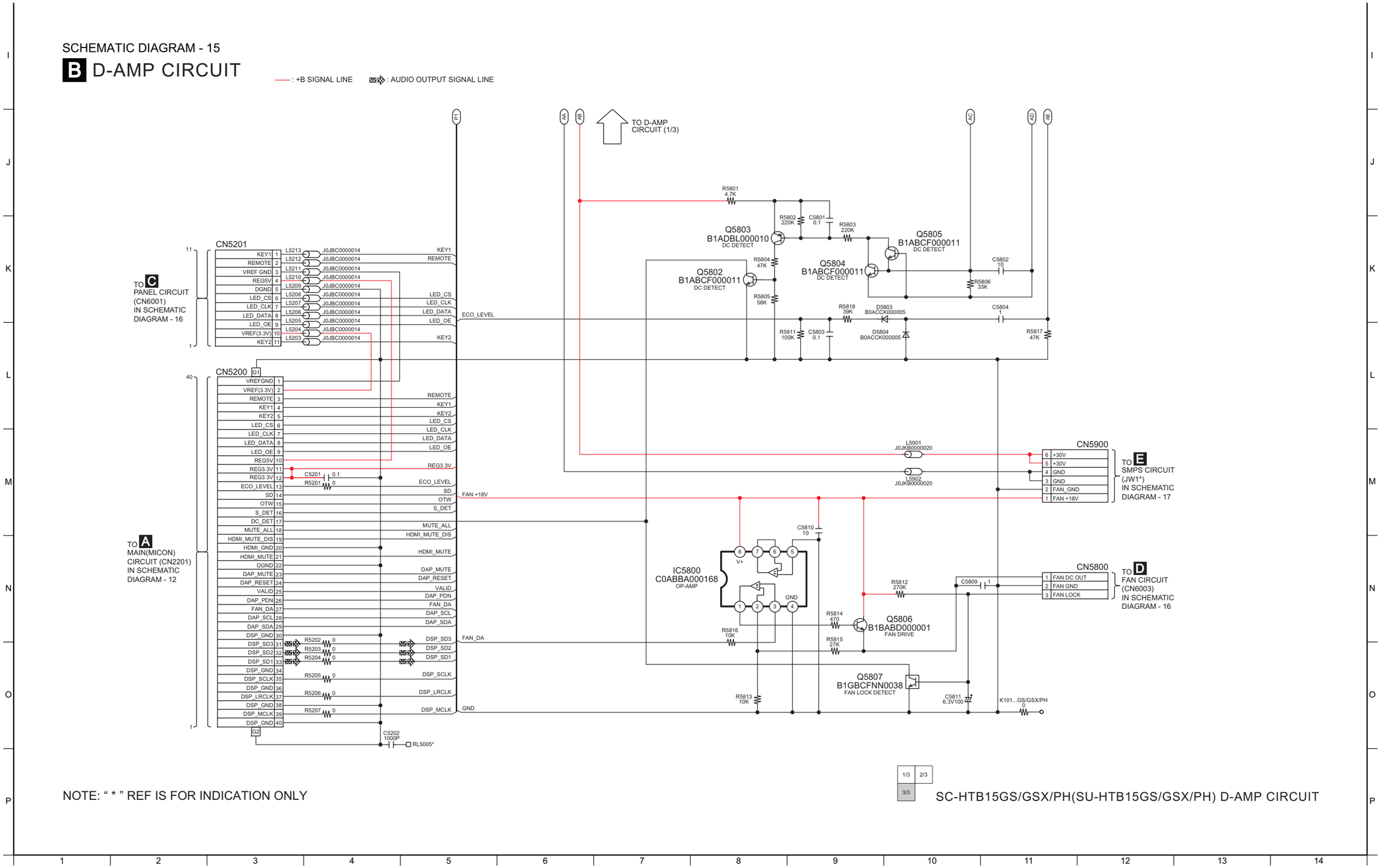
SC-HTB15GS/GSX/PH(SU-HTB15GS/GSX/PH) D-AMP CIRCUIT

14.2.15. D-AMP CIRCUIT (3/3)

SCHEMATIC DIAGRAM - 15

B D-AMP CIRCUIT

—— : +B SIGNAL LINE ▨ : AUDIO OUTPUT SIGNAL LINE



NOTE: " * " REF IS FOR INDICATION ONLY

1/3 2/3 3/3

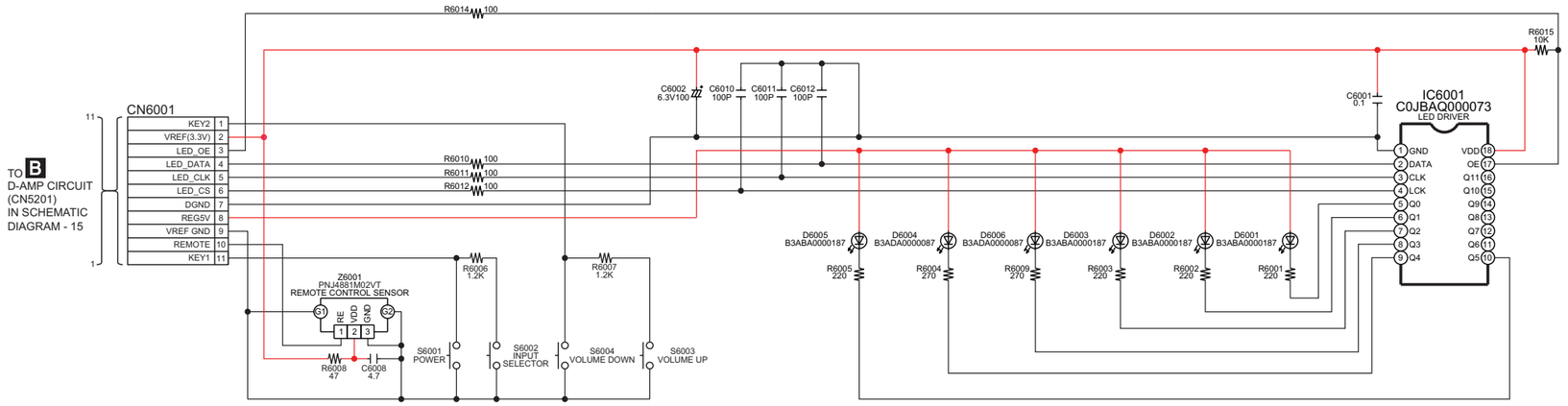
SC-HTB15GS/GSX/PH(SU-HTB15GS/GSX/PH) D-AMP CIRCUIT

14.2.16. PANEL, FAN, AC INLET & VOLTAGE SELECTOR CIRCUIT

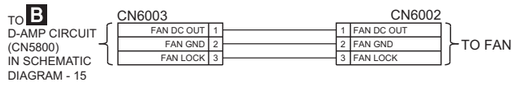
SCHEMATIC DIAGRAM - 16

C PANEL CIRCUIT

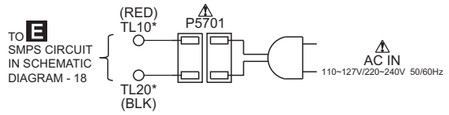
—— : +B SIGNAL LINE



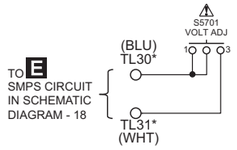
D FAN CIRCUIT



F AC INLET CIRCUIT



G VOLTAGE SELECTOR CIRCUIT



NOTE: " * " REF IS FOR INDICATION ONLY

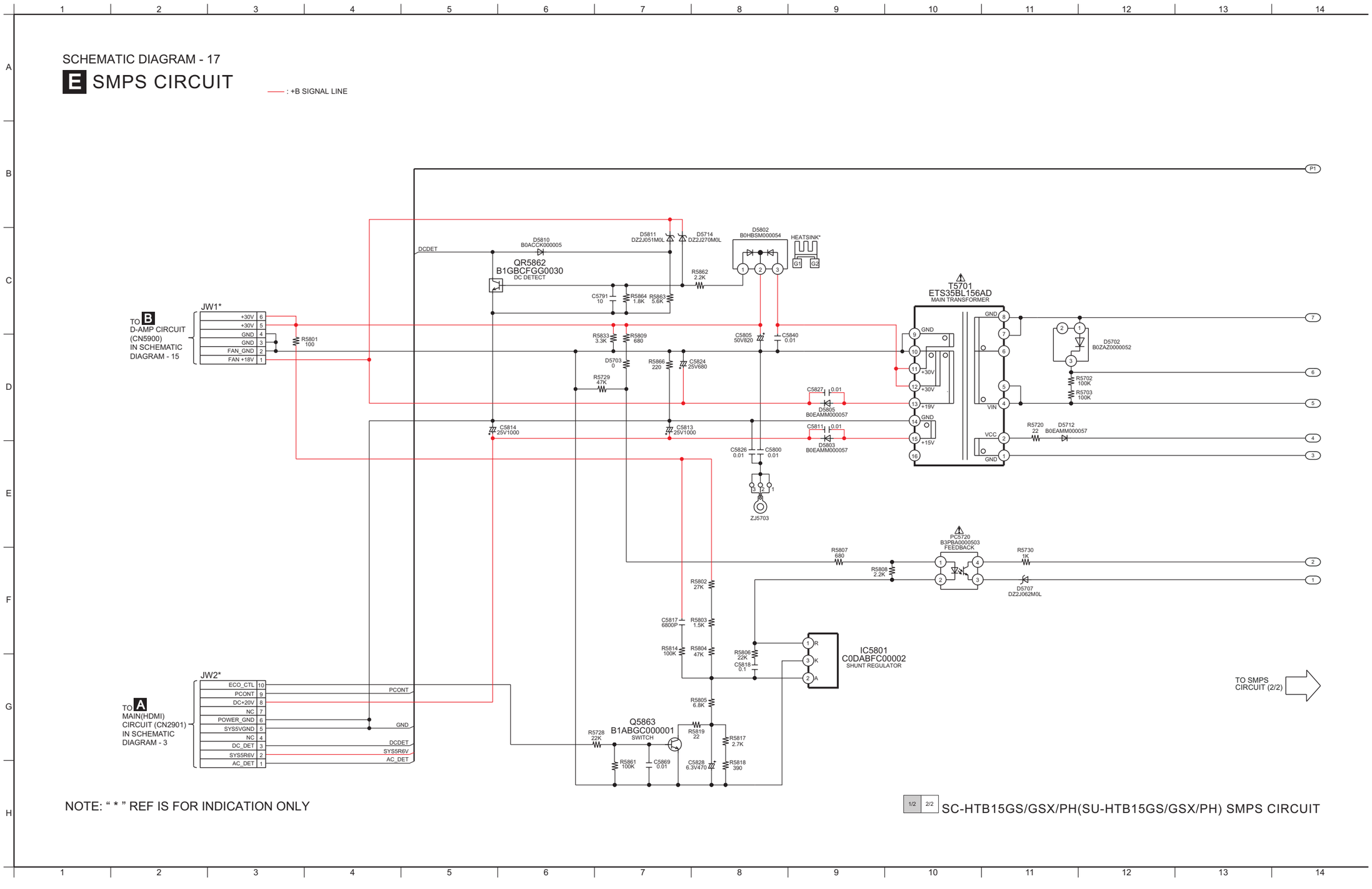
SC-HTB15GS/GSX/PH(SU-HTB15GS/GSX/PH) PANEL / FAN / AC INLET / VOLTAGE SELECTOR CIRCUIT

14.2.17. SMPS CIRCUIT (1/2)

SCHEMATIC DIAGRAM - 17

E SMPS CIRCUIT

—— : +B SIGNAL LINE



NOTE: " * " REF IS FOR INDICATION ONLY

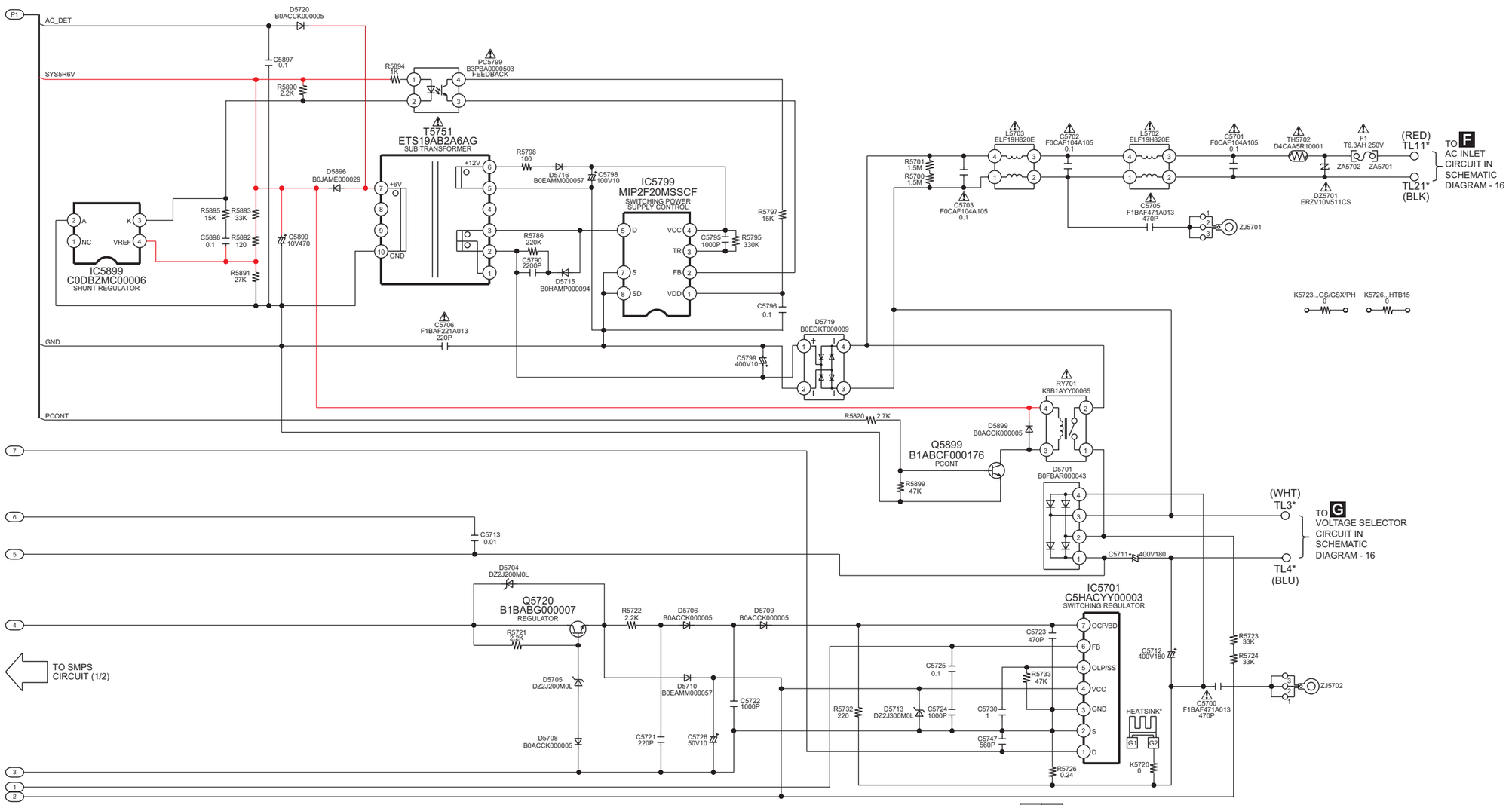
1/2 | 2/2 SC-HTB15GS/GSX/PH(SU-HTB15GS/GSX/PH) SMPS CIRCUIT

14.2.18. SMPS CIRCUIT (2/2)

SCHEMATIC DIAGRAM - 18

E SMPS CIRCUIT

—— : +B SIGNAL LINE



NOTE: " * " REF IS FOR INDICATION ONLY

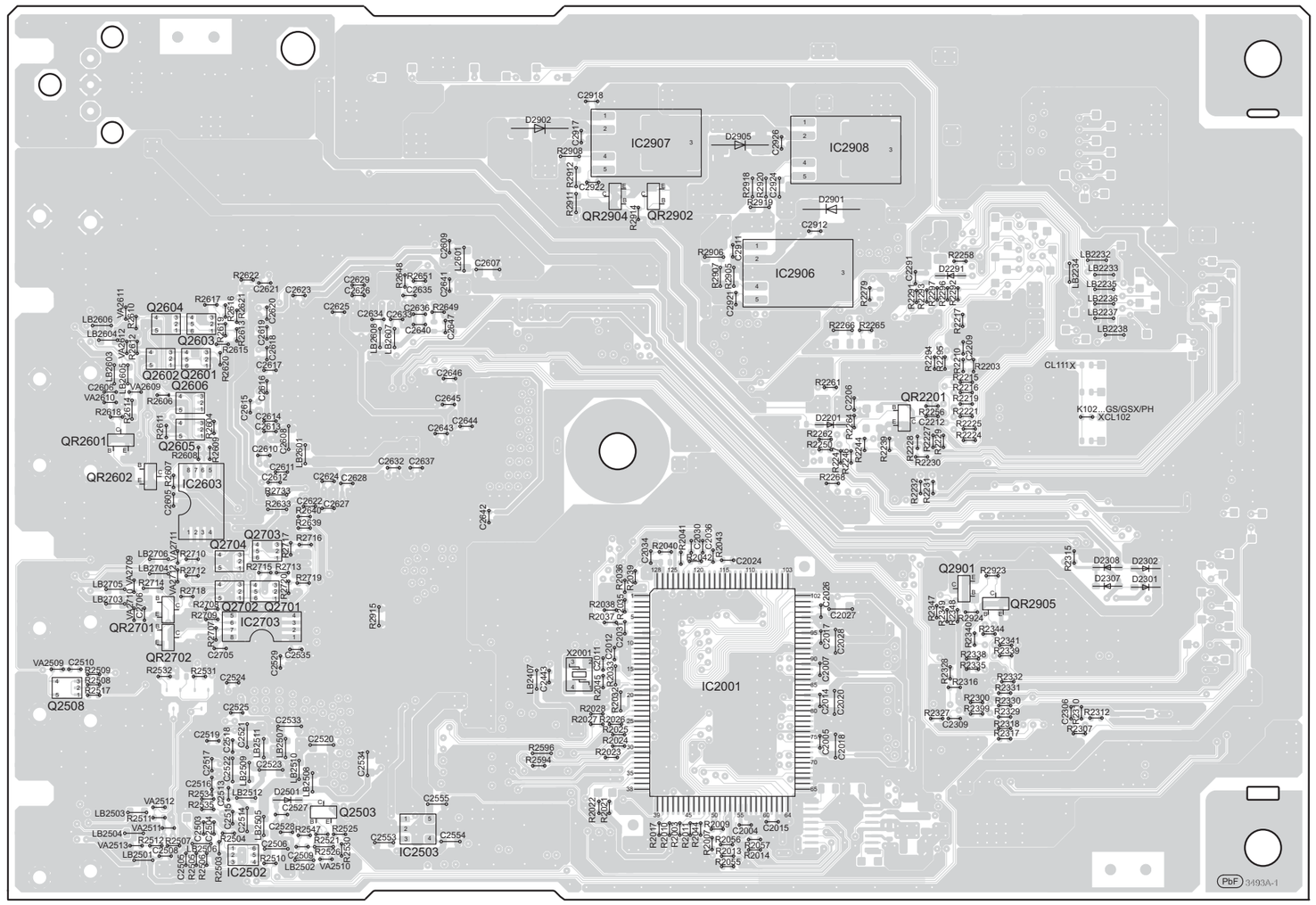
1/2 2/2 SC-HTB15GS/GSX/PH(SU-HTB15GS/GSX/PH) SMPS CIRCUIT

15 Printed Circuit Board

15.1. Active Subwoofer (Main Unit) (SU-HTB15)

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

A MAIN P.C.B. (REP4701C)

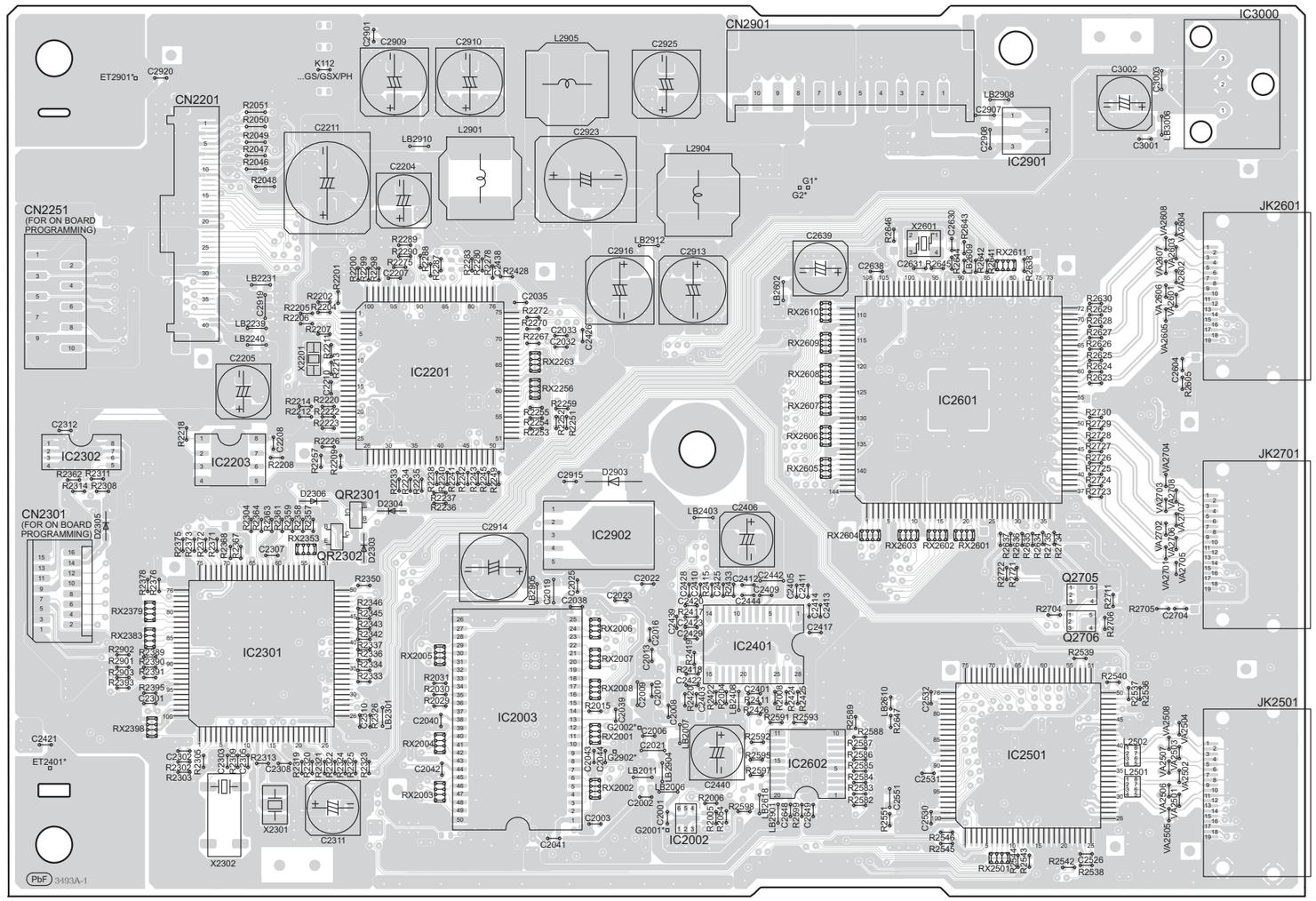


(SIDE A)

SC-HTB15GS/GSX/PH (SU-HTB15GS/GSX/PH)
MAIN P.C.B.

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

A MAIN P.C.B. (REP4701C)

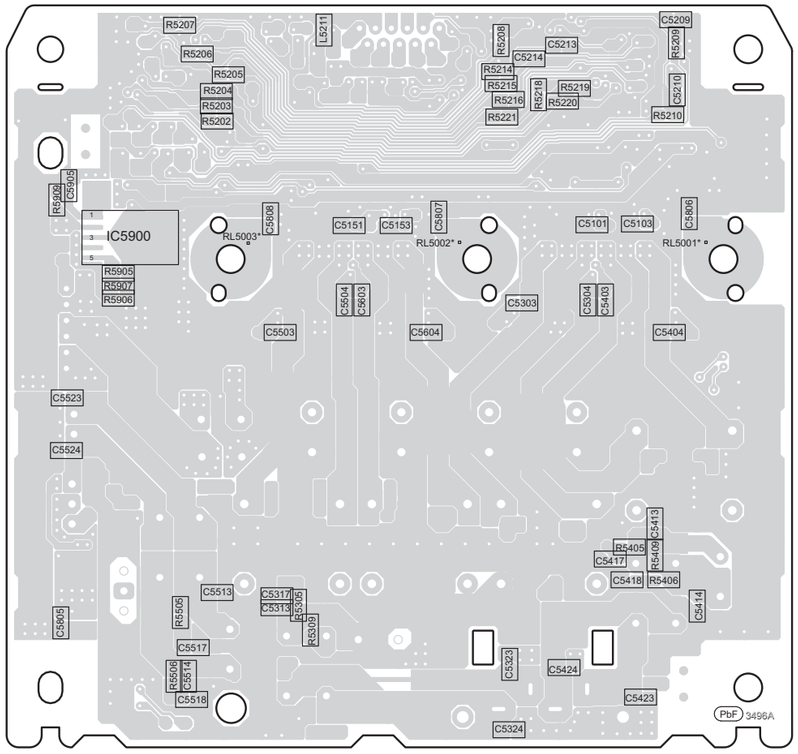


(SIDE B)

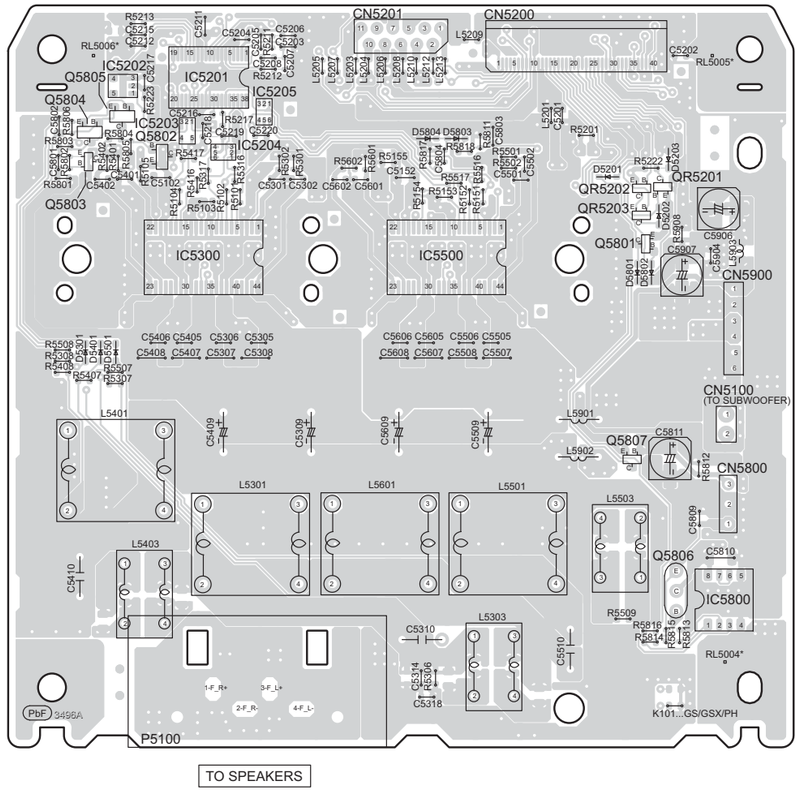
NOTE: " * " REF IS FOR INDICATION ONLY

15.1.3. D-AMP, PANEL & FAN P.C.B.

B D-AMP P.C.B. (REP4713A)

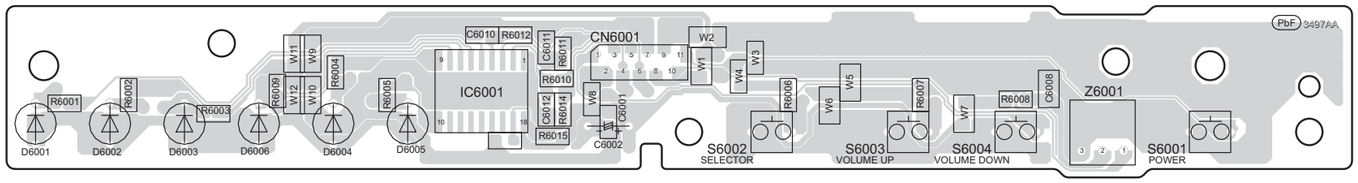


(SIDE A)



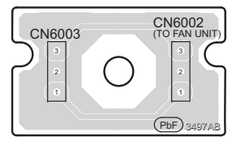
(SIDE B)

C PANEL P.C.B. (REP4714AA)



SENSOR

D FAN P.C.B. (REP4714AB)

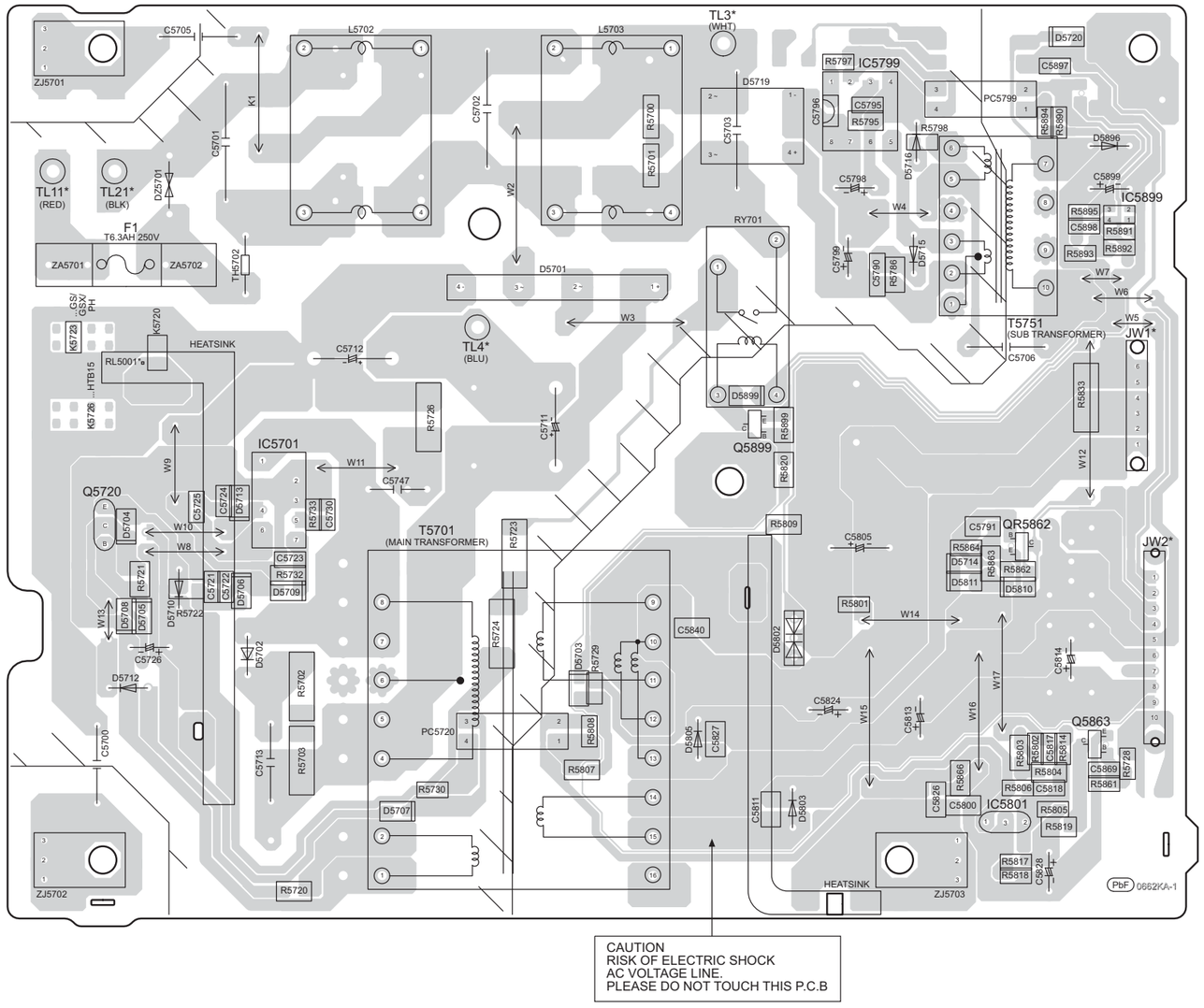


NOTE: " * " REF IS FOR INDICATION ONLY

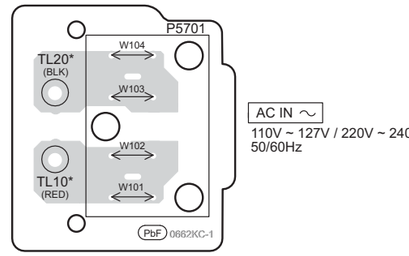
SC-HTB15GS/GSX/PH (SU-HTB15GS/GSX/PH)
D-AMP / PANEL / FAN P.C.B.

15.1.4. SMPS, AC INLET & VOLTAGE SELECTOR P.C.B.

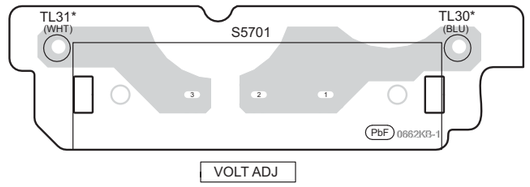
E SMPS P.C.B. (REP4719D)



F AC INLET P.C.B. (REP4719D)



G VOLTAGE SELECTOR P.C.B. (REP4719D)



NOTE: " * " REF IS FOR INDICATION ONLY

SC-HTB15GS/GSX/PH (SU-HTB15GS/GSX/PH)
SMPS / AC INLET / VOLTAGE SELECTOR P.C.B.

16 Terminal Function of IC's

16.1. IC2201 (RFKWMHTB15M0) MAIN MICRO PROCESSOR IC

No.	Port	I/O	Function Name
1	FAN_DA	I	Fan Control
2	W-SCL	-	No connection
3	REMOTE	I	Remote Control Signal
4	W_SDO	-	No connection
5	W_SDI	-	No connection
6	BYTE	I	Connect to ground via resistor
7	CNVSS	-	For on board programming
8	NC	-	Connect to ground via resistor
9	NC	-	Connect to ground via resistor
10	RESET	I	Micro Processor Reset
11	XOUT	O	10MHZ Oscillator Output
12	VSS	-	Ground
13	XIN	I	10MHZ Oscillator Input
14	VCC	-	+3.3V Voltage Supply
15	NMI	I	Non Maskable Interrupt
16	VALID	I	DAP Valid signal for APD and Loudness correction checking
17	REMOTE	I	Remote Control Input
18	AC_SYNC	I	Power Failure Detection
19	MUTE_ALL	O	Muting Control
20	DAP_SCL	I	DAP I2C Clock
21	DAP_MUTE	O	DAP Mute (active low)
22	DAP_SDA	I	DAP I2C Data
23	NC	-	Connect to ground via resistor
24	DAP_RESET	O	DAP RESET (Active Low)
25	HDMI_MUTE_DIS	O	To disable HDMI_MUTE signal goes to DAP
26	AMP_POWER	-	Connect to ground via resistor
27	SCL	I	EEPROM Clock
28	SDA	I	EEPROM Data
29	TXD / FL_DATA	I/O	To programming connector (TxD) /To FL for FL detection
30	RXD / FL_DET	I/O	To programming connector (RxD) / To FL for FL clock
31	SCLK / FL_PCONT	O	To programming connector (SCLK) / To FL for FL data
32	BUSY / FL_CS	O	To programming connector (BUSY) / To FL PCONT
33	M_SI	O	Main - HDMI Serial Input
34	H_SO	I	HDMI - Main Serial Output
35	M_CLK	O	HDMI μP Clock
36	NC	-	Connect to ground via resistor
37	NC	-	Connect to ground via resistor
38	NC	-	Connect to ground via resistor
39	EPM	O	Eraseable Programmer
40	NC	-	Connect to ground via resistor
41	M_RESET	O	HDMI μP Reset Strobing
42	M_CS	O	HDMI μP SPI chip select
43	ZERO	-	Connect to ground via resistor
44	CE / FL_CLK	O	To programming connector (CE) / To FL for FL strobe / chip select
45	PWR_CTRL	O	Power Control
46	HDMI_MUTE_DET	I	HDMI Mute Request
47	H_REQ	I	HDMI Request
48	HDMI_CTRL	O	HDMI Control
49	NC	-	Connect to ground via resistor
50	/OTW	I	D-AMP Over Temperature Warning
51	/SD	I	D-AMP Shutdown signal
52	ECO_CTRL	O	ECO Control
53	NC	-	Connect via resistor
54	NC	-	Connect via resistor
55	NC	-	Connect via resistor
56	RC_LED	O	LED is controlled through FL Driver
57	NC	-	No connection
58	NC	-	No connection
59	NC	-	No connection
60	VCC2	-	+3.3V Voltage Supply
61	DAP_PDN	O	DAP Power Down Control (Active Low)
62	VSS	-	Ground
63	NC	-	No connection
64	NC	-	No connection
65	NC	-	No connection
66	NC	-	No connection
67	CLK_DSP	O	DSP SPI Clock
68	INTREQ_DSP	I	DSP Interupt Request
69	BUSY_DSP	I	DSP Buffer full
70	RESET_DSP	O	DSP Reset
71	CS_DSP	O	DSP SPI Chip Select
72	MOSI_DSP	O	DSP SPI Data Out
73	INTREQ_CODEC	I	CODEC Interrupt Request
74	CS_CODEC	O	Codec SPI Chip Select
75	MISO_DSP	I	DSP SPI Data In to uP
76	RESET_CODEC	O	CODEC Reset
77	DT_OUT_CODEC	I	CODEC Data Out
78	LED_DI	O	LED Data Input
79	LED_CLK	O	LED Clock
80	LED_CS	O	LED Chip Select
81	REG1	I	Region Setting
82	REG2	I	Model Setting
83	/LED_OE	O	LED Output Enable
84	NC	-	No connection
85	NC	-	No connection
86	NC	-	No connection
87	PWR_CTRL	I	Power ON from HDMI uP to Main
88	PCONT	O	System power up
89	KEY2	I	Key Input 2
90	KEY1	I	Key Input 1
91	ECO_LVL	I/O	ECO Level Setting
92	DC_DET	I	DC Supply Detection
93	S_DET	I	Short Detection
94	AVSS	-	Ground
95	FILTER	-	Filter circuit
96	VREF	-	Voltage Supply
97	AVCC	-	Voltage Supply
98	NC	O	No connection
99	W_SSB	-	No connection
100	W_DET	-	No connection

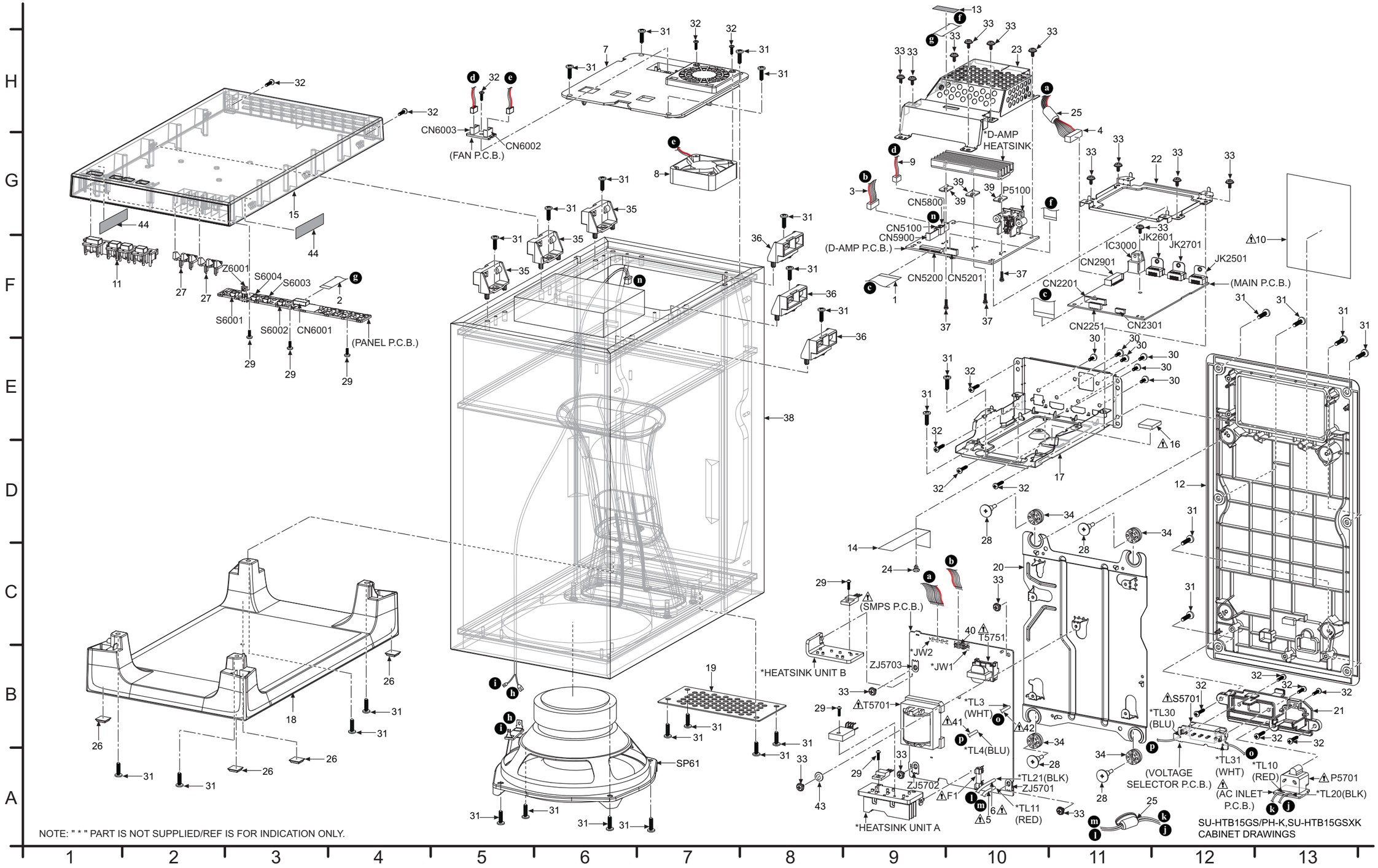
16.2. IC2301 (RFKWMHTB15P0) HDMI MICRO PROCESSOR IC

No.	Port	I/O	Function Name
1	NC	-	Connect to ground via resistor
2	M_CS	I	MAIN Micro-processor Communication
3	REM	I	REMOCON INPUT (For Power ON)
4	VSYNC_COUNT	I	VSYNC Monitor for Source
5	NC	-	Connect to ground via resistor
6	BYTE	I	Connect to ground via resistor
7	CNVSS	-	For on board programming
8	XCIN	I	32.768Khz Sub Clock (For Standby Mode)
9	XCOUT	O	32.768Khz Sub Clock (For Standby Mode)
10	RESET	-	For on board programming
11	XOUT	-	Main clock Output
12	VSS	-	Ground
13	XIN	I	Main clock Input
14	3.3VBK	-	Main Voltage Supply +3.3V
15	CEC I/O	I/O	CEC IN/OUT Serial Data
16	VSYNC MON1	I	Vertical Synchro Monitoring Input
17	TX_INT	I	HDMI Transmitter IC Interrupt Request (Active Low)
18	RX_INT	I	HDMI Receiver IC Interrupt Request (Active Low)
19	IDROM_DT	I/O	IDROM I2C Serial Data
20	IDROM_CK	I/O	IDROM I2S Serial Clock
21	NC	-	No connection
22	SW_RST	O	HDMI SW Reset (Active Low)
23	WRITESEL	O	IN3 EDID ROM Write Enable Select (Enable=High)
24	RX1_SCL	I/O	IN3 EDID ROM SCL (I2C)
25	RX1 SDA	I/O	IN3 EDID ROM SDA (I2C)
26	CLK	I	Communication to MAIN Micro-Processor (Serial Clock)
27	SI	I	Communication to MAIN Micro-Processor (Serial Input)
28	SO	O	Communication to MAIN Micro-Processor (Serial output)
29	UPCON_SCL	I/O	Micro-Processor Serial Clock
30	UPCON_SDA	I/O	Micro-Processor Serial Data
31	Flash_SCLK	O	For on board programming (Clock)
32	Flash_BUSY	O	For on board programming (Status: Busy = High)
33	I2C SDA	I/O	HDMI Transmitter I2C Serial Data
34	I2C SCL	I/O	HDMI Transmitter I2C Serial Clock
35	VSS	-	No connection
36	TX_RESET	O	HDMI Transmitter IC Reset (Active Low)
37	RX_RESET	O	HDMI Receiver IC Reset (Active Low)
38	NC	-	No connection
39	Flash_EPM	I	For on board programming
40	HDMI_POWER	O	HDMI power control
41	MAIN_POWER	O	Main Power Control
42	NC	-	No connection
43	HDMI_LED	-	No connection
44	Flash_CE	O	For on board programming
45	CEC LED	-	CEC LED
46	NC	-	Connect to ground via resistor
47	RX0_WRT_SEL	-	HDMI IN2 EDID ROM Write Enable
48	RX0_EDID_CK	-	HDMI IN2 EDID ROM Clock
49	RX0_EDID_DT	-	HDMI IN2 EDID ROM Data
50	NC	-	No connection
51	AMUTE	O	HDMI MUTE
52	DCDET	O	Voltage Detect Check (High = F76)
53	NC	-	Connect to ground via resistor
54	NC	-	Connect to ground via resistor
55	NC	-	Connect to ground via resistor
56	NC	-	Connect to ground via resistor
57	NC	-	Connect to ground via resistor
58	NC	-	Connect to ground via resistor
59	NC	-	Connect to ground via resistor
60	VCC2	-	Main power supply
61	NC	-	Connect to ground via resistor
62	VSS	-	Ground
63	NC	-	Connect to ground via resistor
64	NC	-	Connect to ground via resistor
65	5V_DET	I	+5V Voltage Detect (Detect = High)
66	M_RST	I	Main Micro-Processor IC Reset (Active Low)
67	TX_DDC_CK	I/O	TX DDC Serial Clock (I2C)
68	TX_DDC_DA	I/O	TX DDC Serial Data (I2C)
69	RX1_5V_DET	I	HDMI IN3 Detect
70	RX0_5V_DET	I	HDMI IN1/IN2 Detect
71	NC	-	Connect to ground via resistor
72	RX_SCDT	I	HDMI RX data
73	TX_HPD	I	Hot Plug Detect of HDMI Sink (HP-High)
74	RX1_HPD	O	Hot Plug Detect out to HDMI IN3 (HP=Low)
75	RX0_HPD	O	Hot Plug Detect out to HDMI IN1 or IN2 (HP=High)
76	SW_INT	I	HDMI SW Interrupt Request (Active Low)
77	STBY_H	O	Audio output enable control
78	NC	-	Connect to ground via resistor
79	NC	-	Connect to ground via resistor
80	NC	-	Connect to ground via resistor
81	NC	-	Connect to ground via resistor
82	NC	-	Connect to ground via resistor
83	NC	-	Connect to ground via resistor
84	NC	-	Connect to ground via resistor
85	NC	-	Connect to ground via resistor
86	NC	-	Connect to ground via resistor
87	RX1_5V_DET	-	+5V Voltage Detect (Detect = High)
88	RX0_5V_DET	-	+5V Voltage Detect (Detect = High)
89	IN2_5V	-	Connect to ground via resistor
90	IN1_5V	-	Connect to ground via resistor
91	NC	-	Connect to ground via resistor
92	V_CHECK	I	Power supply voltage Check
93	REQ	O	Main Micro-Processor Interrupt Request
94	AVSS	-	Ground
95	NC	-	No connection
96	VREF	-	ADC power supply
97	AVCC	-	Main power supply
98	NC	-	Connect to ground via resistor
99	IN2_5V	-	Connect to ground via resistor
100	IN1_5V	-	Connect to ground via resistor

17 Exploded View and Replacement Parts List

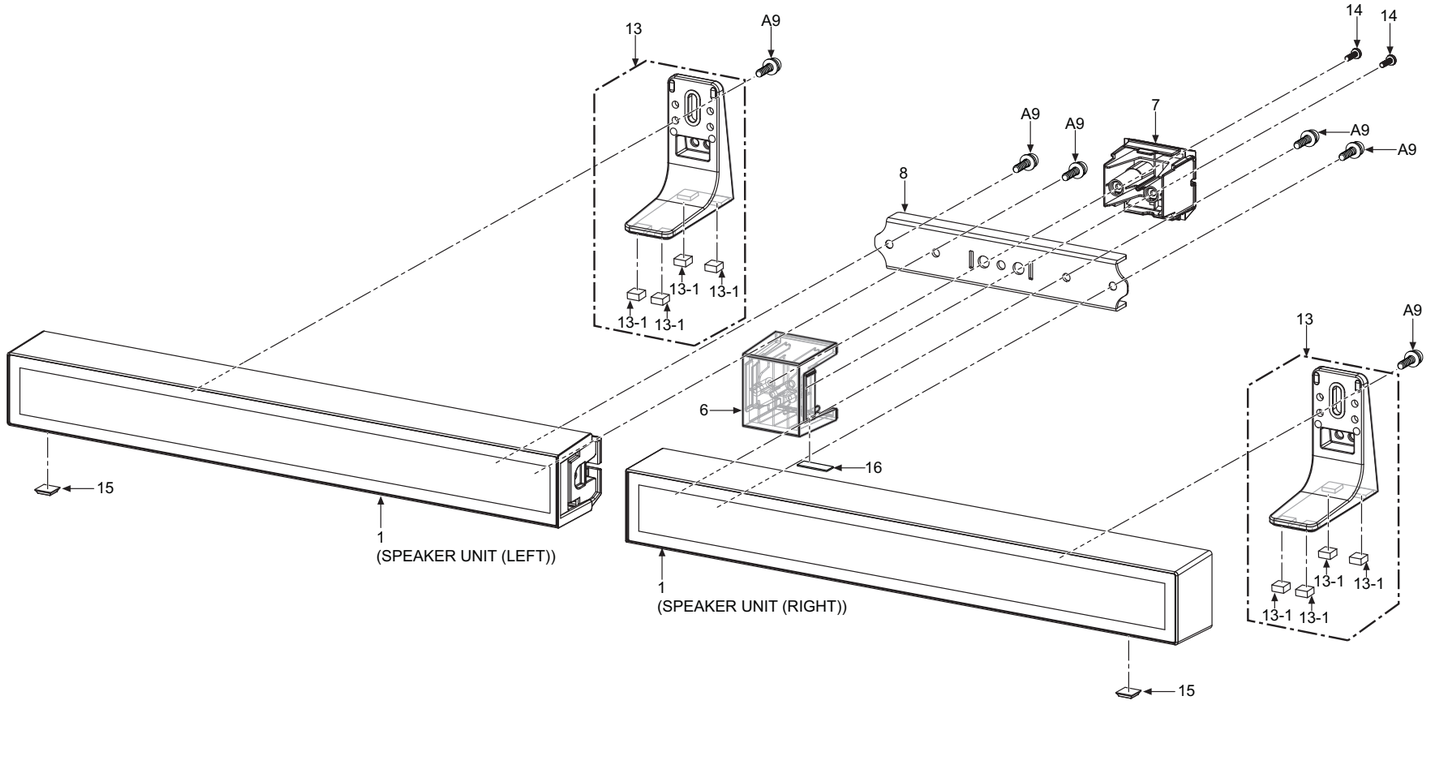
17.1. Exploded View and Mechanical Replacement Parts List

17.1.1. Cabinet Parts Location (SU-HTB15)

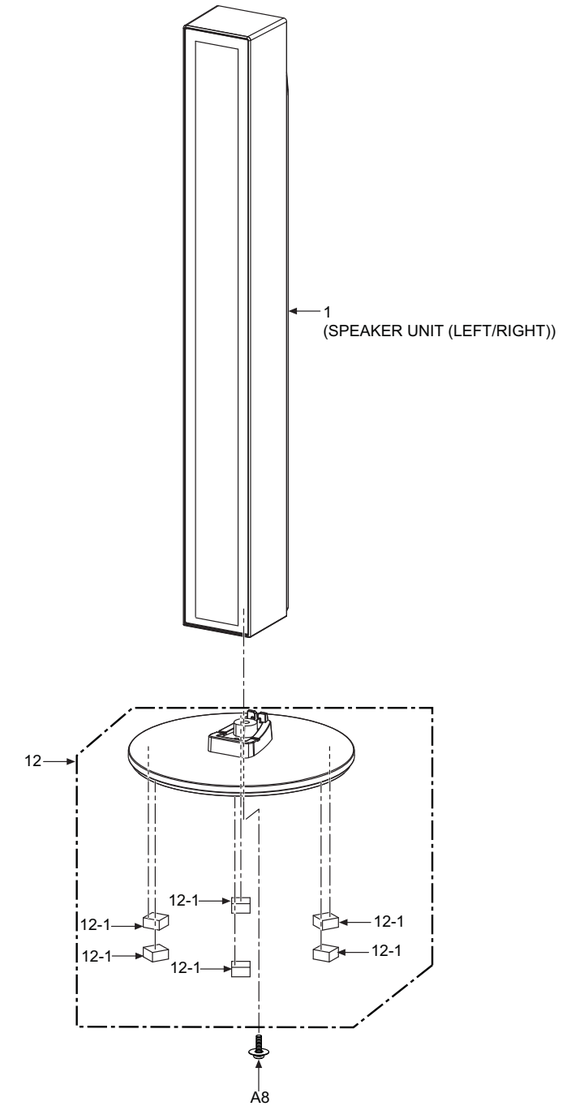


17.1.2. Cabinet Parts Location (SB-HTB15)

BAR POSITION

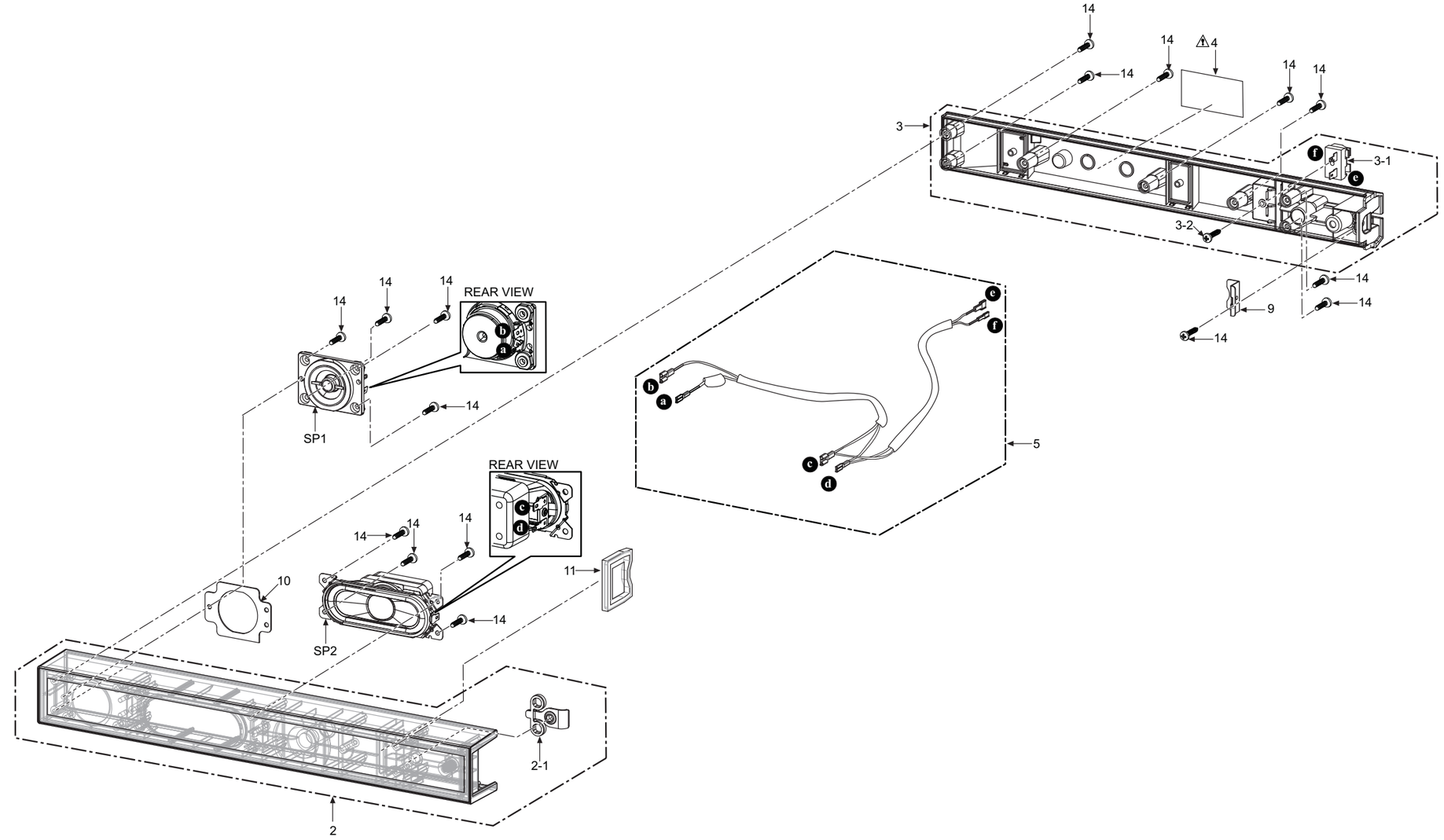


STANDING POSITION (SPEAKER UNIT LEFT/RIGHT)

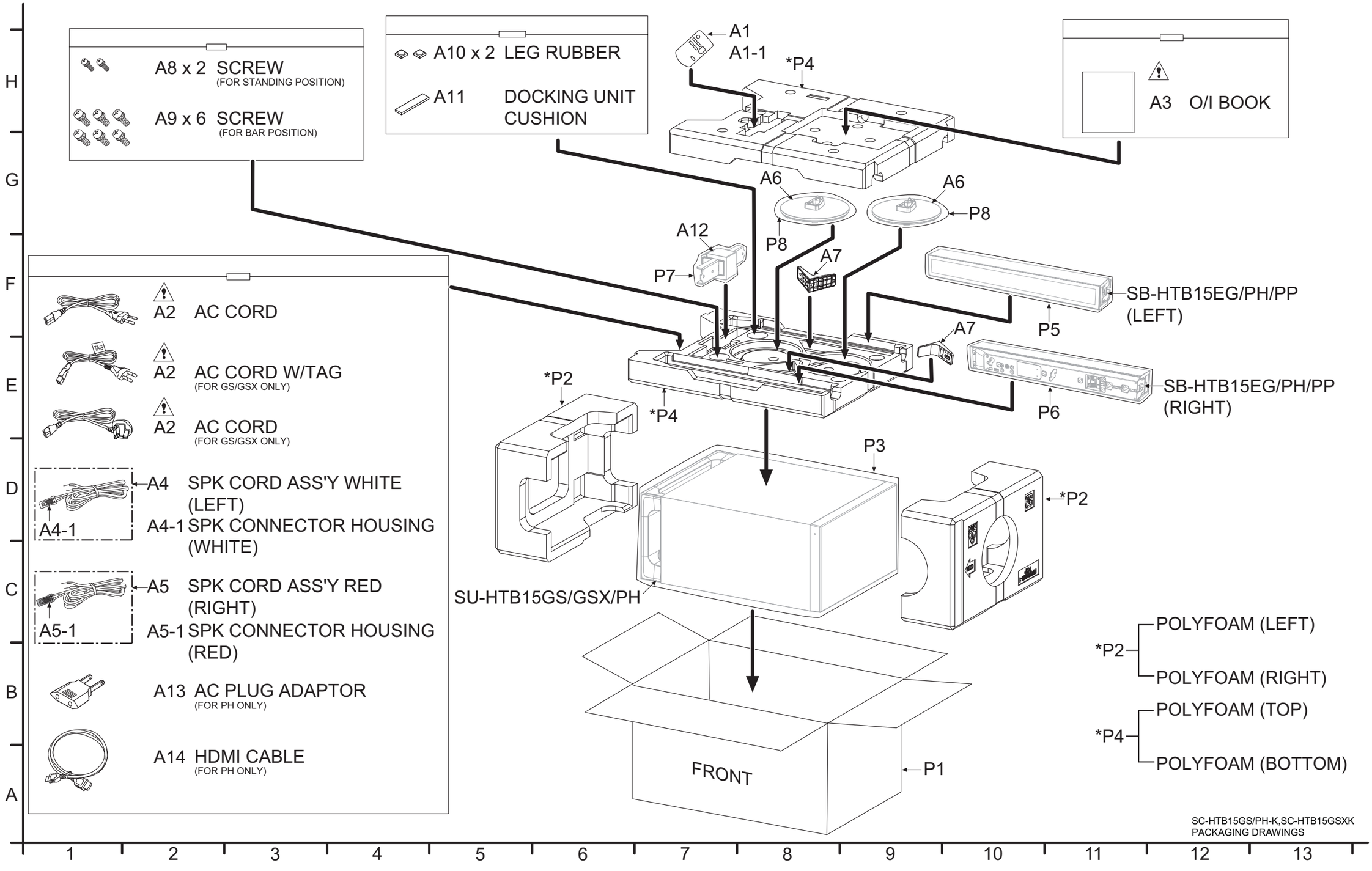


SB-HTB15EG/PH/PP-K
CABINET DRAWINGS

SPEAKER UNIT (LEFT/RIGHT)



17.1.3. Packaging (SC-HTB15)



17.1.4. 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		

17.1.4.1. Active Subwoofer (Main Unit) (SU-HTB15GS/PH-K), (SU-HTB15GSXK)

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
			CABINET AND CHASSIS		
	1	REE1614	40P FFC (D-AMP-MAIN)	1	
	2	REE1622	11P FFC ASS'Y (PANEL-D-AMP)	1	
	3	REX1449-1	6P CABLE WIRE (D-AMP-SMPS)	1	
	4	REX1450-1	10P CABLE WIRE (MAIN-SMPS)	1	
⚠	5	REX1462	1P RED WIRE (SMPS-AC INLET)	1	
⚠	6	REX1463	1P BLACK WIRE (SMPS-AC INLET)	1	
	7	RFKNUHTB15PP	FAN COVER ASS'Y	1	
	8	L6FAYYYH0079	FAN ASS'Y	1	
	9	REX1451	3P CABLE WIRE (D-AMP-FAN)	1	
⚠	10	RGN3072E-K	NAME PLATE	1	GS/GSX
⚠	10	RGN3072F-K	NAME PLATE	1	PH
	11	RGU2748-K	OPERATION BUTTON	1	
	12	RFKHUHTB15GS	REAR PANEL ASS'Y	1	
	13	RMF0539	HIMELON	1	
	14	RMQ1983	CONDUCTIVE CLOTH (MAIN PCB BTM SHIELD)	1	
	15	RFKKUHTB15EB	TOP PANEL ASS'Y	1	GS/GSX
	15	RFKKUHTB15PP	TOP PANEL ASS'Y	1	PH
⚠	16	RSC0839	RADIATOR SHEET	1	
	17	RSC1037-1	MAIN PCB BOTTOM SHIELD	1	
	18	RXK0681-J	BOTTOM PANEL ASS'Y	1	
	19	RFKRUHTB15PP	VENTILATION COVER ASS'Y	1	
	20	RMK0791	MAIN CHASSIS	1	
	21	RMV0380	AC INLET COVER	1	
	22	RSC1038-1	MAIN PCB UPPER SHIELD	1	
	23	RSC1039	D-AMP PCB SHIELD	1	
	24	VJF0036	RIVET	1	
	25	J0KG00000071	FERRITE CORE	2	
	26	RKA0072-KJ	LEG RUBBER	4	
	27	RGL0756-Q	LIGHTING PIECE	2	
	28	RHDX03001	SCREW	4	
	29	RHD26046	SCREW	6	
	30	RHD30119-S	SCREW	6	
	31	XTB4+16AFJK	SCREW	30	
	32	XTB3+10JFJK	SCREW	15	
	33	RHDX301003	SCREW	16	
	34	VMG1719	DAMPER	4	
	35	RMA2332	TOP PANEL SUPPORT L	3	
	36	RMA2333	TOP PANEL SUPPORT R	3	
	37	RHDX261002	SCREW	3	
	38	RFKBUHTB15PP	SPEAKER BOX ASS'Y	1	
	39	RMZ1105	HEAT SPACER	3	
	40	K1YZ06000002	6P CABLE WIRE HOLDER	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
⚠	41	REX1453	1P BLUE WIRE (AC INLET-VOLTAGE SELECTOR)	1	
⚠	42	REX1452	1P WHITE WIRE (AC UNLET-VOLT-AGE SELECTOR)	1	
	43	RHW40005	SPACER	1	
	44	RMFX1027	HIMELON (TOP PANEL)	2	
			SPEAKER		
	SP61	L0AA16A00052	WOOFER SPEAKER	1	
			PACKING MATERI-ALS		
	P1	RFKTHTB15GSX	PACKING CASE	1	GSX
	P1	RPG9658	PACKING CASE	1	GS
	P1	RPG9659	PACKING CASE	1	PH
	P2	RPNX1090-1	POLYFOAM	1	
	P3	RPFX1044GN	MIRAMAT BAG	1	
			ACCESSORIES		
	A1	N2QAYC000046	REMOTE CONTROL	1	
	A1-1	RKK-HTB10GNK	R/C BATTERY COVER	1	
⚠	A2	K2CP2CA00001	AC CORD W/TAG	1	GS/GSX
⚠	A2	K2CQ2CA00007	AC CORD	1	
⚠	A2	K2CZ3YY00005	AC CORD	1	GS/GSX
⚠	A3	VQT3R83	O/I BOOK (En)	1	GS/GSX
⚠	A3	VQT3R86	O/I BOOK (Cn/Ar)	1	GS/GSX
⚠	A3	VQT3R87	O/I BOOK (Sp)	1	PH
	A4	REEX1267A	SPK CORD ASS'Y WHITE (LEFT)	1	
	A4-1	RHQX1002W	SPK CONNECTOR HOUSING (WHITE)	1	
	A5	REEX1266A	SPK CORD ASS'Y RED (RIGHT)	1	
	A5-1	RHQX1002R	SPK CONNECTOR HOUSING (RED)	1	
	A13	K2DAYYY00002	AC PLUG ADAPTOR	1	PH
	A14	K1HA19CY0001	HDMI CABLE	1	PH

17.1.4.2. Speaker Unit (SB-HTB15EG/PH/PP-K)

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
			CABINET AND CHASSIS		
	1	RFKABHTB15PL	SPEAKER UNIT LEFT	1	
	1	RFKABHTB15PR	SPEAKER UNIT RIGHT	1	
	2	RFKGBHTB15PP	FRONT PANEL ASS'Y	1	
	2-1	RMQ1952	DOCKING SUPPORT SPRING	1	
	3	RFKHBHTB15PL	REAR CABINET ASS'Y LEFT	1	
	3	RFKHBHTB15PR	REAR CABINET ASS'Y RIGHT	1	
	3-1	K4BC02B00017	TERMINAL	1	
	3-2	XTB3+10JFJK	SCREW	1	
⚠	4	RGN3071-K	NAME PLATE (LEFT)	1	
⚠	4	RGN3071A-K	NAME PLATE (RIGHT)	1	
	5	REX1454	TRANSIT WIRE	1	
	6	RKM0654-K	DOCKING FRONT CAB	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	7	RKS0484-K	DOCKING REAR CAB	1	
	8	RML0751	DOCKING ARM	1	
	9	RMA2331	DOCKING SUPPORT ANGLE	1	
	10	RMF0458	EVA PACKING (TWEETER)	1	
	11	RFKRBHTB15PP	SEPARATOR ASS'Y	1	
	12	RYK1637A-K	BASE STAND ASS'Y	1	
	12-1	RKA0238-K	LEG CUSHION (BASE STAND)	6	
	13	RYQ0853-KJ	LEG STAND ASS'Y	2	
	13-1	RKAX0042-K	LEG CUSHION (LED STAND)	8	
	14	XTB3+10JFJK	SCREW	18	
	15	RKA0072-KJ	LEG RUBBER	2	
	16	RMG0859-K	DOCKING UNIT CUSHION	1	
			ACCESSORIES		
	A6	RYK1637A-K	BASE STAND ASS'Y	2	
	A7	RYQ0853-KJ	LEG STAND ASS'Y	2	
	A8	XYN3+F10FJK	SCREW (FOR STANDING POSI-TION)	2	
	A9	XYN5+J14FJK	SCREW (FOR BAR POSITION)	6	
	A10	RKA0072-KJ	LEG RUBBER	2	
	A11	RMG0859-K	DOCKING UNIT CUSHION	1	
	A12	RAQ0082	DOCKING UNIT	1	
			PACKING MATERI-ALS		
	P4	RPN2328	POLYFOAM (SB)	1	
	P5	RPF0560	MIRAMAT BAG (SPK UNIT LEFT)	1	
	P6	RPF0560A	MIRAMAT BAG (SPK UNIT RIGHT)	1	
	P7	RPF0562	MIRAMAT BAG (DOCKING UNIT)	1	
	P8	RPFX0133	MIRAMAT (BASE STAND)	2	
			SPEAKERS		
	SP1	L0AZ03A00014	TWEETER SPEAKER	1	
	SP2	EAS10S659E	WOOFER SPEAKER	1	

17.2. 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.

17.2.1. Active Subwoofer (Main Unit) (SU-HTB15GS/PH-K), (SU-HTB15GSXK)

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
			PRINTED CIR-CUITS BOARDS		
	PCB1	REP4701C	MAIN P.C.B.	1	(RTL)
	PCB2	REP4713A	D-AMP P.C.B.	1	(RTL)
	PCB3	REP4714AA	PANEL P.C.B.	1	(RTL)
	PCB4	REP4714AB	FAN P.C.B.	1	(RTL)
⚠	PCB5	REP4719D	SMPS P.C.B.	1	(RTL)
⚠	PCB6	REP4719D	AC INLET P.C.B.	1	(RTL)
⚠	PCB7	REP4719D	VOLTAGE SELEC-TOR P.C.B.	1	(RTL)
			INTERGRATED CIR-CUITS		
	IC2001	C2HBCY000091	IC	1	
	IC2002	C0JBAR000396	IC	1	
	IC2003	C3ABMY000022	IC	1	
	IC2201	RFKWMHTB15M0	IC	1	
	IC2203	C3EBEC000060	IC	1	
	IC2301	RFKWMHTB15P0	IC	1	
	IC2302	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	
	IC2603	C3EBEC000047	IC	1	
	IC2703	C3EBEC000047	IC	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	IC2901	C0CBABC00117	IC	1	
	IC2902	C0CBCAG00015	IC	1	
	IC2906	C0DBAYH00005	IC	1	
	IC2907	C0DBAYH00005	IC	1	
	IC2908	C0DBAYH00005	IC	1	
	IC5201	C1AB00002461	IC	1	
	IC5202	C0EBE0000456	IC	1	
	IC5203	C0JBAA000501	IC	1	
	IC5204	C0JBAB000837	IC	1	
	IC5205	C0JBAB000837	IC	1	
	IC5300	C1AB00003217	IC	1	
	IC5500	C1AB00003217	IC	1	
	IC5701	C5HACYY00003	IC	1	
	IC5799	MIP2F20MSSCF	IC	1	
	IC5800	C0ABBA000168	IC	1	
	IC5801	C0DABFC00002	IC	1	
	IC5899	C0DBZMC00006	IC	1	
	IC5900	C0DBEKG00004	IC	1	
	IC6001	C0JBAQ000073	IC	1	
			TRANSISTORS		
	Q2503	B1ABCF000079	TRANSISTOR	1	
	Q2508	B1CFGD000002	TRANSISTOR	1	
	Q2601	B1HBCFA00003	TRANSISTOR	1	
	Q2602	B1CFGD000002	TRANSISTOR	1	
	Q2603	B1HBCFA00003	TRANSISTOR	1	
	Q2604	B1CFGD000002	TRANSISTOR	1	
	Q2605	B1CFGD000002	TRANSISTOR	1	
	Q2606	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	
	Q2901	B1ADCE000012	TRANSISTOR	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	Q5720	B1BABG000007	TRANSISTOR	1	
	Q5801	B1GBCFGG0030	TRANSISTOR	1	
	Q5802	B1ABCF000011	TRANSISTOR	1	
	Q5803	B1ADBL000010	TRANSISTOR	1	
	Q5804	B1ABCF000011	TRANSISTOR	1	
	Q5805	B1ABCF000011	TRANSISTOR	1	
	Q5806	B1BABD000001	TRANSISTOR	1	
	Q5807	B1GBCFNN0038	TRANSISTOR	1	
	Q5863	B1ABGC000001	TRANSISTOR	1	
	Q5899	B1ABCF000176	TRANSISTOR	1	
	QR2201	B1GBCFNN0035	TRANSISTOR	1	
	QR2301	B1GBCFJJ0048	TRANSISTOR	1	
	QR2302	B1GBCFJJ0048	TRANSISTOR	1	
	QR2601	B1GBCFJJ0048	TRANSISTOR	1	
	QR2602	B1GBCFJJ0048	TRANSISTOR	1	
	QR2701	B1GBCFJJ0048	TRANSISTOR	1	
	QR2702	B1GBCFJJ0048	TRANSISTOR	1	
	QR2902	B1GBCFNN0035	TRANSISTOR	1	
	QR2904	B1GBCFNN0035	TRANSISTOR	1	
	QR2905	B1GBCFJJ0048	TRANSISTOR	1	
	QR5201	B1GBCFJJ0007	TRANSISTOR	1	
	QR5202	B1GDCFJJ0008	TRANSISTOR	1	
	QR5203	B1GDCFJJ0008	TRANSISTOR	1	
	QR5862	B1GBCFGG0030	TRANSISTOR	1	
			DIODES		
	D2201	DZ2J075M0L	DIODE	1	
	D2291	DZ2J030M0L	DIODE	1	
	D2301	B0JCCD000017	DIODE	1	
	D2302	B0JCCD000017	DIODE	1	
	D2303	B0ACCK000012	DIODE	1	
	D2304	B0ACCK000012	DIODE	1	
	D2305	B0ACCK000012	DIODE	1	
	D2306	B0ACCK000012	DIODE	1	
	D2307	B0ACCK000012	DIODE	1	
	D2308	B0ACCK000012	DIODE	1	
	D2501	B0JCCD000017	DIODE	1	
	D2901	B0JCPG000005	DIODE	1	
	D2902	B0JCPG000005	DIODE	1	
	D2903	B0ECKP000002	DIODE	1	
	D2905	B0JCPG000005	DIODE	1	
	D5201	B0ACCK000005	DIODE	1	
	D5202	B0ACCK000005	DIODE	1	
	D5203	B0ACCK000005	DIODE	1	
	D5301	B0ACCK000005	DIODE	1	
	D5401	B0ACCK000005	DIODE	1	
	D5501	B0ACCK000005	DIODE	1	
	D5701	B0FBAR000043	DIODE	1	
	D5702	B0ZAZ0000052	DIODE	1	
	D5704	DZ2J200M0L	DIODE	1	
	D5705	DZ2J200M0L	DIODE	1	
	D5706	B0ACCK000005	DIODE	1	
	D5707	DZ2J062M0L	DIODE	1	
	D5708	B0ACCK000005	DIODE	1	
	D5709	B0ACCK000005	DIODE	1	
	D5710	B0EAMM000057	DIODE	1	
	D5712	B0EAMM000057	DIODE	1	
	D5713	DZ2J300M0L	DIODE	1	
	D5714	DZ2J270M0L	DIODE	1	
	D5715	B0HAMP000094	DIODE	1	
	D5716	B0EAMM000057	DIODE	1	
	D5719	B0EDKT000009	DIODE	1	
	D5720	B0ACCK000005	DIODE	1	
	D5801	B0ACCK000005	DIODE	1	
	D5802	B0HBSM000054	DIODE	1	
	D5802	DZ2J300M0L	DIODE	1	
	D5803	B0ACCK000005	DIODE	1	
	D5803	B0EAMM000057	DIODE	1	
	D5804	B0ACCK000005	DIODE	1	
	D5805	B0EAMM000057	DIODE	1	
	D5810	B0ACCK000005	DIODE	1	
	D5811	DZ2J051M0L	DIODE	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	D5896	B0JAME000029	DIODE	1	
	D5899	B0ACCK000005	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	ERZV10V511CS	ZNR	1	
			VARISTORS		
	VA2501	EZAEG2A50AX	ESD SUPRESSOR	1	
	VA2502	EZAEG2A50AX	ESD SUPRESSOR	1	
	VA2503	EZAEG2A50AX	ESD SUPRESSOR	1	
	VA2504	EZAEG2A50AX	ESD SUPRESSOR	1	
	VA2505	EZAEG2A50AX	ESD SUPRESSOR	1	
	VA2506	EZAEG2A50AX	ESD SUPRESSOR	1	
	VA2507	EZAEG2A50AX	ESD SUPRESSOR	1	
	VA2508	EZAEG2A50AX	ESD SUPRESSOR	1	
	VA2509	EZJZ0V80008B	VARISTOR	1	
	VA2510	EZJZ0V80008B	VARISTOR	1	
	VA2511	EZJZ0V80008B	VARISTOR	1	
	VA2512	EZJZ0V80008B	VARISTOR	1	
	VA2513	EZJZ0V80008B	VARISTOR	1	
	VA2601	EZAEG2A50AX	ESD SUPRESSOR	1	
	VA2602	EZAEG2A50AX	ESD SUPRESSOR	1	
	VA2603	EZAEG2A50AX	ESD SUPRESSOR	1	
	VA2604	EZAEG2A50AX	ESD SUPRESSOR	1	
	VA2605	EZAEG2A50AX	ESD SUPRESSOR	1	
	VA2606	EZAEG2A50AX	ESD SUPRESSOR	1	
	VA2607	EZAEG2A50AX	ESD SUPRESSOR	1	
	VA2608	EZAEG2A50AX	ESD SUPRESSOR	1	
	VA2609	EZJZ0V80008B	VARISTOR	1	
	VA2610	EZJZ0V80008B	VARISTOR	1	
	VA2611	EZJZ0V80008B	VARISTOR	1	
	VA2612	EZJZ0V80008B	VARISTOR	1	
	VA2701	EZAEG2A50AX	ESD SUPRESSOR	1	
	VA2702	EZAEG2A50AX	ESD SUPRESSOR	1	
	VA2703	EZAEG2A50AX	ESD SUPRESSOR	1	
	VA2704	EZAEG2A50AX	ESD SUPRESSOR	1	
	VA2705	EZAEG2A50AX	ESD SUPRESSOR	1	
	VA2706	EZAEG2A50AX	ESD SUPRESSOR	1	
	VA2707	EZAEG2A50AX	ESD SUPRESSOR	1	
	VA2708	EZAEG2A50AX	ESD SUPRESSOR	1	
	VA2709	EZJZ0V80008B	VARISTOR	1	
	VA2710	EZJZ0V80008B	VARISTOR	1	
	VA2711	EZJZ0V80008B	VARISTOR	1	
	VA2712	EZJZ0V80008B	VARISTOR	1	
			SWITCHES		
⚠	S5701	K0ABCA000007	VOLTAGE SELECTOR SWITCH	1	
	S6001	EVQ21405RJ	SW POWER	1	
	S6002	EVQ21405RJ	SW INPUT SELECTOR	1	
	S6003	EVQ21405RJ	SW VOLUME UP	1	
	S6004	EVQ21405RJ	SW VOLUME DOWN	1	
			CONNECTORS		
	CN2201	K1MN40AA0082	40P CONNECTOR	1	
	CN2251	K1MN10AA0046	10P CONNECTOR	1	
	CN2301	K1MY16AA0021	16P CONNECTOR	1	
	CN2901	K1KA10BA0051	10P CONNECTOR	1	
	CN5100	K1KA02AA0186	2P CONNECTOR	1	
	CN5200	K1MN40BA0173	40P CONNECTOR	1	
	CN5201	K1MN11AA0003	11P CONNECTOR	1	
	CN5800	K1KA03AA0301	3P CONNECTOR	1	
	CN5900	K1KA06A00452	6P CONNECTOR	1	
	CN6001	K1MN11BA0004	11P CONNECTOR	1	
	CN6002	K1KA03AA0301	3P CONNECTOR	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	CN6003	K1KA03AA0301	3P CONNECTOR	1	
			COILS AND INDUC-TORS		
	L2501	J0MAB0000235	FILTER	1	
	L2502	J0MAB0000235	FILTER	1	
	L2601	G1CR82KA0010	INDUCTOR	1	
	L2901	G1C330MA0234	INDUCTOR	1	
	L2904	G1C330MA0234	INDUCTOR	1	
	L2905	G1C330MA0234	INDUCTOR	1	
	L5201	J0JBC0000015	INDUCTOR	1	
	L5203	J0JBC0000014	INDUCTOR	1	
	L5204	J0JBC0000014	INDUCTOR	1	
	L5205	J0JBC0000014	INDUCTOR	1	
	L5206	J0JBC0000014	INDUCTOR	1	
	L5207	J0JBC0000014	INDUCTOR	1	
	L5208	J0JBC0000014	INDUCTOR	1	
	L5209	J0JBC0000014	INDUCTOR	1	
	L5210	J0JBC0000014	INDUCTOR	1	
	L5211	J0JBC0000014	INDUCTOR	1	
	L5212	J0JBC0000014	INDUCTOR	1	
	L5213	J0JBC0000014	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	ELF19H820E	LINE FILTER	1	
⚠	L5703	ELF19H820E	LINE FILTER	1	
	L5901	J0JKB0000020	INDUCTOR	1	
	L5902	J0JKB0000020	INDUCTOR	1	
	L5903	G1C4R7MA0098	INDUCTOR	1	
	LB2006	J0JHC0000078	INDUCTOR	1	
	LB2007	J0JHC0000078	INDUCTOR	1	
	LB2011	J0JHC0000078	INDUCTOR	1	
	LB2301	J0JYC0000096	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	
	LB2601	J0JHC0000078	INDUCTOR	1	
	LB2602	J0JHC0000078	INDUCTOR	1	
	LB2603	J0JCC0000119	INDUCTOR	1	
	LB2604	J0JCC0000119	INDUCTOR	1	
	LB2605	J0JCC0000119	INDUCTOR	1	
	LB2606	J0JCC0000119	INDUCTOR	1	
	LB2607	J0JHC0000078	INDUCTOR	1	
	LB2608	J0JHC0000078	INDUCTOR	1	
	LB2609	J0JCC0000308	INDUCTOR	1	
	LB2618	J0JBC0000072	INDUCTOR	1	
	LB2703	J0JCC0000119	INDUCTOR	1	
	LB2704	J0JCC0000119	INDUCTOR	1	
	LB2705	J0JCC0000119	INDUCTOR	1	
	LB2706	J0JCC0000119	INDUCTOR	1	
	LB2901	J0JHC0000078	INDUCTOR	1	
	LB2904	J0JHC0000078	INDUCTOR	1	
	LB2905	J0JHC0000078	INDUCTOR	1	
	LB2910	J0JHC0000078	INDUCTOR	1	
	LB2912	J0JHC0000078	INDUCTOR	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
			TRANSFORMERS		
⚠	T5701	ETS35BL156AD	MAIN TRANSFORMER	1	
⚠	T5751	ETS19AB2A6AG	SWITCHING TRANS-FORMER	1	
			PHOTO DETECTOR		
	Z6001	PNJ4881M02VT	PHOTO DETECTOR	1	
			PHOTO COUPLERS		
⚠	PC5720	B3PBA0000503	PHOTO COUPLER	1	
⚠	PC5799	B3PBA0000503	PHOTO COUPLER	1	
			TERMINALS		
	ZJ5701	K4CZ01000027	TERMINAL	1	
	ZJ5702	K4CZ01000027	TERMINAL	1	
	ZJ5703	K4CZ01000027	TERMINAL	1	
			RELAY		
⚠	RY701	K6B1AYY00065	RELAY	1	
			FUSE		
⚠	F1	K5D632BNA005	FUSE	1	
			OSCILLATORS		
	X2001	H0J245500101	CRYSTAL OSCILLA-TOR	1	
	X2201	H2D100500004	CRYSTAL OSCILLA-TOR	1	
	X2301	H2D400400018	CRYSTAL OSCILLA-TOR	1	
	X2302	H0J327200172	CRYSTAL OSCILLA-TOR	1	
	X2601	H0J283500022	CRYSTAL OSCILLA-TOR	1	
			FUSE HOLDERS		
	ZA5701	K3GE1ZZ00001	FUSE HOLDER	1	
	ZA5702	K3GE1ZZ00001	FUSE HOLDER	1	
			THERMISTOR		
⚠	TH5702	D4CAA5R10001	THERMISTOR	1	
			JACKS		
	IC3000	B3RAB0000056	OPTICAL DIGITAL AUDIO IN (TV)	1	
	JK2501	K1FY119E0045	JK HDMI OUT (TV(ARC))	1	
	JK2601	K1FY119E0045	JK HDMI IN 1 (BD/DVD)	1	
	JK2701	K1FY119E0045	JK HDMI IN 2 (AUX)	1	
	P5100	K4AL02B00001	JK SPEAKERS (FRONT)	1	
⚠	P5701	K2AA2B000011	AC INLET	1	
			CHIP JUMPERS		
	D5703	D0GDR00JA017	0 1/8W	1	
	K101	D0GBR00JA008	0 1/10W	1	
	K102	D0GAR00J0008	0 1/16W	1	
	K112	D0GAR00J0008	0 1/16W	1	
	K5720	D0GDR00JA017	0 1/8W	1	
	K5723	D0GBR00JA008	0 1/10W	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	K5726	D0GBR00JA008	0 1/10W	1	
	LB2231	D0GBR00JA008	0 1/10W	1	
	LB2232	D0GBR00JA008	0 1/10W	1	
	LB2233	D0GBR00JA008	0 1/10W	1	
	LB2234	D0GBR00JA008	0 1/10W	1	
	LB2235	D0GBR00JA008	0 1/10W	1	
	LB2236	D0GBR00JA008	0 1/10W	1	
	LB2237	D0GBR00JA008	0 1/10W	1	
	LB2238	D0GBR00JA008	0 1/10W	1	
	LB2239	D0GBR00JA008	0 1/10W	1	
	LB2240	D0GBR00JA008	0 1/10W	1	
	LB2610	D0GAR00J0008	0 1/16W	1	
	LB2908	D0GBR00JA008	0 1/10W	1	
	LB3006	D0GBR00JA008	0 1/10W	1	
	W1	D0GDR00JA017	0 1/8W	1	
	W2	D0GDR00JA017	0 1/8W	1	
	W3	D0GBR00JA008	0 1/10W	1	
	W4	D0GBR00JA008	0 1/10W	1	
	W5	D0GDR00JA017	0 1/8W	1	
	W6	D0GDR00JA017	0 1/8W	1	
	W7	D0GDR00JA017	0 1/8W	1	
	W8	D0GBR00JA008	0 1/10W	1	
	W9	D0GDR00JA017	0 1/8W	1	
	W10	D0GDR00JA017	0 1/8W	1	
	W11	D0GDR00JA017	0 1/8W	1	
	W12	D0GDR00JA017	0 1/8W	1	
			RESISTORS		
	R2003	D0GA330JA023	33 1/16W	1	
	R2004	D0GA102JA023	1K 1/16W	1	
	R2005	D0GA330JA023	33 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	D0GA330JA023	33 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	
	R2023	D0GA330JA023	33 1/16W	1	
	R2024	D0GA330JA023	33 1/16W	1	
	R2025	D0GA330JA023	33 1/16W	1	
	R2026	D0GA330JA023	33 1/16W	1	
	R2027	D0GA330JA023	33 1/16W	1	
	R2028	D0GA330JA023	33 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	
	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	D0GA102JA023	1K 1/16W	1	
	R2042	D0GA101JA023	100 1/16W	1	
	R2043	D0GA102JA023	1K 1/16W	1	
	R2044	D0GA330JA023	33 1/16W	1	
	R2045	D0GA202JA023	2.0K 1/16W	1	
	R2046	D0GB330JA008	33 1/10W	1	
	R2047	D0GB330JA008	33 1/10W	1	
	R2048	D0GB330JA008	33 1/10W	1	
	R2049	D0GB330JA008	33 1/10W	1	
	R2050	D0GB330JA008	33 1/10W	1	
	R2051	D0GBR00JA008	0 1/10W	1	
	R2054	D0GA330JA023	33 1/16W	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	R2055	D0GA330JA023	33 1/16W	1	
	R2056	D0GA330JA023	33 1/16W	1	
	R2057	D0GA330JA023	33 1/16W	1	
	R2200	D0GA104JA023	100K 1/16W	1	
	R2201	D0GA101JA023	100 1/16W	1	
	R2202	D0GA104JA023	100K 1/16W	1	
	R2203	D0GA104JA023	100K 1/16W	1	
	R2204	D0GA104JA023	100K 1/16W	1	
	R2205	D0GA104JA023	100K 1/16W	1	
	R2206	D0GA103JA023	10K 1/16W	1	
	R2207	D0GA154JA023	150K 1/16W	1	
	R2208	D0GA473JA023	47K 1/16W	1	
	R2209	D0GA103JA023	10K 1/16W	1	
	R2210	D0GA102JA023	1K 1/16W	1	
	R2211	D0GA101JA023	100 1/16W	1	
	R2212	D0GA473JA023	47K 1/16W	1	
	R2213	D0GA105JA023	1M 1/16W	1	
	R2214	D0GA473JA023	47K 1/16W	1	
	R2215	D0GA103JA023	10K 1/16W	1	
	R2216	D0GA101JA023	100 1/16W	1	
	R2217	D0GA101JA023	100 1/16W	1	
	R2218	D0GA472JA023	4.7K 1/16W	1	
	R2219	D0GA101JA023	100 1/16W	1	
	R2220	D0GA101JA023	100 1/16W	1	
	R2221	D0GA101JA023	100 1/16W	1	
	R2222	D0GA101JA023	100 1/16W	1	
	R2223	D0GA104JA023	100K 1/16W	1	
	R2224	D0GA101JA023	100 1/16W	1	
	R2225	D0GA101JA023	100 1/16W	1	
	R2226	D0GA104JA023	100K 1/16W	1	
	R2227	D0GA103JA023	10K 1/16W	1	
	R2228	D0GA103JA023	10K 1/16W	1	
	R2229	D0GA101JA023	100 1/16W	1	
	R2230	D0GA101JA023	100 1/16W	1	
	R2231	D0GA101JA023	100 1/16W	1	
	R2232	D0GA101JA023	100 1/16W	1	
	R2233	D0GA102JA023	1K 1/16W	1	
	R2234	D0GA102JA023	1K 1/16W	1	
	R2235	D0GA102JA023	1K 1/16W	1	
	R2236	D0GA104JA023	100K 1/16W	1	
	R2237	D0GA104JA023	100K 1/16W	1	
	R2238	D0GA104JA023	100K 1/16W	1	
	R2239	D0GA103JA023	10K 1/16W	1	
	R2240	D0GA104JA023	100K 1/16W	1	
	R2241	D0GA102JA023	1K 1/16W	1	
	R2242	D0GA102JA023	1K 1/16W	1	
	R2243	D0GA101JA023	100 1/16W	1	
	R2244	D0GA103JA023	10K 1/16W	1	
	R2245	D0GA104JA023	100K 1/16W	1	
	R2246	D0GA102JA023	1K 1/16W	1	
	R2247	D0GA102JA023	1K 1/16W	1	
	R2249	D0GA104JA023	100K 1/16W	1	
	R2250	D0GA101JA023	100 1/16W	1	
	R2251	D0GA102JA023	1K 1/16W	1	
	R2252	D0GA101JA023	100 1/16W	1	
	R2253	D0GA104JA023	100K 1/16W	1	
	R2254	D0GA104JA023	100K 1/16W	1	
	R2255	D0GA104JA023	100K 1/16W	1	
	R2256	D0GA104JA023	100K 1/16W	1	
	R2257	D0GA103JA023	10K 1/16W	1	
	R2258	D0GA102JA023	1K 1/16W	1	
	R2259	D0GA103JA023	10K 1/16W	1	
	R2261	D0GA101JA023	100 1/16W	1	
	R2262	D0GA103JA023	10K 1/16W	1	
	R2264	D0GA104JA023	100K 1/16W	1	
	R2265	D0GA103JA023	10K 1/16W	1	
	R2266	D0GB103JA008	10K 1/10W	1	
	R2267	D0GAR00J0008	0 1/16W	1	
	R2268	D0GA333JA023	33K 1/16W	1	
	R2270	D0GA101JA023	100 1/16W	1	
	R2272	D0GA101JA023	100 1/16W	1	
	R2275	D0GA104JA023	100K 1/16W	1	
	R2278	D0GA101JA023	100 1/16W	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	R2279	D0GA101JA023	100 1/16W	1	
	R2280	D0GA101JA023	100 1/16W	1	
	R2283	D0GA101JA023	100 1/16W	1	
	R2287	D0GA101JA023	100 1/16W	1	
	R2288	D0GA103JA023	10K 1/16W	1	
	R2289	D0GA103JA023	10K 1/16W	1	
	R2290	D0GA103JA023	10K 1/16W	1	
	R2291	D0GA101JA023	100 1/16W	1	
	R2292	D0GA102JA023	1K 1/16W	1	
	R2293	D0GA102JA023	1K 1/16W	1	
	R2294	D0GA104JA023	100K 1/16W	1	
	R2295	D0GA104JA023	100K 1/16W	1	
	R2296	D0GA224JA023	220K 1/16W	1	
	R2297	D0GA103JA023	10K 1/16W	1	
	R2298	D0GA104JA023	100K 1/16W	1	
	R2299	D0GA104JA023	100K 1/16W	1	
	R2300	D0GA472JA023	4.7K 1/16W	1	
	R2302	D0GA182JA023	1.8K 1/16W	1	
	R2303	D0GA101JA023	100 1/16W	1	
	R2304	D0GA103JA023	10K 1/16W	1	
	R2305	D0GA104JA023	100K 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	
	R2313	D0GA105JA023	1M 1/16W	1	
	R2314	D0GA151JA023	150 1/16W	1	
	R2315	D0GA104JA023	100K 1/16W	1	
	R2316	D0GA472JA023	4.7K 1/16W	1	
	R2317	D0GA101JA023	100 1/16W	1	
	R2318	D0GA101JA023	100 1/16W	1	
	R2319	D0GA101JA023	100 1/16W	1	
	R2320	D0GA101JA023	100 1/16W	1	
	R2321	D0GA104JA023	100K 1/16W	1	
	R2322	D0GA473JA023	47K 1/16W	1	
	R2323	D0GA473JA023	47K 1/16W	1	
	R2324	D0GA472JA023	4.7K 1/16W	1	
	R2325	D0GA472JA023	4.7K 1/16W	1	
	R2326	D0GA182JA023	1.8K 1/16W	1	
	R2327	D0GA182JA023	1.8K 1/16W	1	
	R2328	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	D0GA103JA023	10K 1/16W	1	
	R2336	D0GA101JA023	100 1/16W	1	
	R2337	D0GA101JA023	100 1/16W	1	
	R2338	D0GA104JA023	100K 1/16W	1	
	R2339	D0GA101JA023	100 1/16W	1	
	R2340	D0GA101JA023	100 1/16W	1	
	R2341	D0GA101JA023	100 1/16W	1	
	R2342	D0GA104JA023	100K 1/16W	1	
	R2343	D0GA104JA023	100K 1/16W	1	
	R2344	D0GA101JA023	100 1/16W	1	
	R2345	D0GA104JA023	100K 1/16W	1	
	R2346	D0GA104JA023	100K 1/16W	1	
	R2347	D0GA104JA023	100K 1/16W	1	
	R2348	D0GA472JA023	4.7K 1/16W	1	
	R2349	D0GA472JA023	4.7K 1/16W	1	
	R2350	D0GA104JA023	100K 1/16W	1	
	R2357	D0GA104JA023	100K 1/16W	1	
	R2358	D0GA104JA023	100K 1/16W	1	
	R2359	D0GA104JA023	100K 1/16W	1	
	R2361	D0GA104JA023	100K 1/16W	1	
	R2362	D0GA151JA023	150 1/16W	1	
	R2363	D0GA104JA023	100K 1/16W	1	
	R2364	D0GA104JA023	100K 1/16W	1	
	R2367	D0GA820JA023	82 1/16W	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	R2368	D0GA820JA023	82 1/16W	1	
	R2371	D0GA104JA023	100K 1/16W	1	
	R2372	D0GA101JA023	100 1/16W	1	
	R2373	D0GA101JA023	100 1/16W	1	
	R2375	D0GA101JA023	100 1/16W	1	
	R2376	D0GA472JA023	4.7K 1/16W	1	
	R2378	D0GA104JA023	100K 1/16W	1	
	R2389	D0GA104JA023	100K 1/16W	1	
	R2390	D0GA104JA023	100K 1/16W	1	
	R2391	D0GA104JA023	100K 1/16W	1	
	R2393	D0GA101JA023	100 1/16W	1	
	R2395	D0GA104JA023	100K 1/16W	1	
	R2399	D0GA472JA023	4.7K 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	D0GA104JA023	100K 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	D0GA302JA023	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	
	R2531	D0GA682JA023	6.8K 1/16W	1	
	R2532	D0GA682JA023	6.8K 1/16W	1	
	R2534	D0GA180JA023	18 1/16W	1	
	R2535	D0GA681JA023	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	D0GA470JA023	47 1/16W	1	
	R2544	D0GA470JA023	47 1/16W	1	
	R2545	D0GA470JA023	47 1/16W	1	
	R2546	D0GA470JA023	47 1/16W	1	
	R2547	D0GA510JA023	51 1/16W	1	
	R2551	D0GA101JA023	100 1/16W	1	
	R2582	D0GA470JA023	47 1/16W	1	
	R2583	D0GA470JA023	47 1/16W	1	
	R2584	D0GA470JA023	47 1/16W	1	
	R2585	D0GA470JA023	47 1/16W	1	
	R2586	D0GA470JA023	47 1/16W	1	
	R2587	D0GA470JA023	47 1/16W	1	
	R2588	D0GA470JA023	47 1/16W	1	
	R2589	D0GA470JA023	47 1/16W	1	
	R2591	D0GA470JA023	47 1/16W	1	
	R2592	D0GA470JA023	47 1/16W	1	
	R2593	D0GA470JA023	47 1/16W	1	
	R2594	D0GA470JA023	47 1/16W	1	
	R2595	D0GA470JA023	47 1/16W	1	
	R2596	D0GB470JA008	47 1/10W	1	
	R2597	D0GA470JA023	47 1/16W	1	
	R2598	D0GA101JA023	100 1/16W	1	
	R2599	D0GA102JA023	1K 1/16W	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	R2604	D0GA102JA023	1K 1/16W	1	
	R2605	D0GA510JA023	51 1/16W	1	
	R2606	D0GA473JA023	47K 1/16W	1	
	R2607	D0GA473JA023	47K 1/16W	1	
	R2608	D0GA470JA023	47 1/16W	1	
	R2609	D0GA470JA023	47 1/16W	1	
	R2610	D0GA473JA023	47K 1/16W	1	
	R2611	D0GA473JA023	47K 1/16W	1	
	R2612	D0GA104JA023	100K 1/16W	1	
	R2613	D0GA103JA023	10K 1/16W	1	
	R2614	D0GB101JA008	100 1/10W	1	
	R2615	D0GA103JA023	10K 1/16W	1	
	R2616	D0GA223JA023	22K 1/16W	1	
	R2617	D0GA223JA023	22K 1/16W	1	
	R2618	D0GA102JA023	1K 1/16W	1	
	R2619	D0GA223JA023	22K 1/16W	1	
	R2620	D0GA223JA023	22K 1/16W	1	
	R2621	D0GA153JA023	15K 1/16W	1	
	R2622	D0GA823JA023	82K 1/16W	1	
	R2623	D0GA4R7JA023	4.7 1/16W	1	
	R2624	D0GA4R7JA023	4.7 1/16W	1	
	R2625	D0GA4R7JA023	4.7 1/16W	1	
	R2626	D0GA4R7JA023	4.7 1/16W	1	
	R2627	D0GA4R7JA023	4.7 1/16W	1	
	R2628	D0GA4R7JA023	4.7 1/16W	1	
	R2629	D0GA4R7JA023	4.7 1/16W	1	
	R2630	D0GA4R7JA023	4.7 1/16W	1	
	R2633	D0GB330JA008	33 1/10W	1	
	R2634	D0GA820JA023	82 1/16W	1	
	R2635	D0GA820JA023	82 1/16W	1	
	R2636	D0GA470JA023	47 1/16W	1	
	R2637	D0GA470JA023	47 1/16W	1	
	R2638	D0GA820JA023	82 1/16W	1	
	R2639	D0GA182JA023	1.8K 1/16W	1	
	R2640	D0GA182JA023	1.8K 1/16W	1	
	R2641	D0GA820JA023	82 1/16W	1	
	R2642	D0GA820JA023	82 1/16W	1	
	R2643	D0GA820JA023	82 1/16W	1	
	R2644	D0GA152JA023	1.5K 1/16W	1	
	R2645	D0GA105JA023	1M 1/16W	1	
	R2646	D0GA472JA023	4.7K 1/16W	1	
	R2647	D0GA470JA023	47 1/16W	1	
	R2648	D0GA102JA023	1K 1/16W	1	
	R2649	D0GA472JA023	4.7K 1/16W	1	
	R2651	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	D0GA223JA023	22K 1/16W	1	
	R2717	D0GA223JA023	22K 1/16W	1	
	R2718	D0GA102JA023	1K 1/16W	1	
	R2719	D0GA223JA023	22K 1/16W	1	
	R2720	D0GA223JA023	22K 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	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	R2734	D0GA820JA023	82 1/16W	1	
	R2735	D0GA820JA023	82 1/16W	1	
	R2901	D0GA153JA023	15K 1/16W	1	
	R2902	D0GA153JA023	15K 1/16W	1	
	R2903	D0GA183JA023	18K 1/16W	1	
	R2905	D0HB102ZA002	1K 1/16W	1	
	R2906	D0HB152ZA002	1.5K 1/16W	1	
	R2907	ERJ3RBD271V	270 1/16W	1	
	R2908	D0HB102ZA002	1K 1/16W	1	
	R2911	ERJ3RBD221V	220 1/16W	1	
	R2912	ERJ3RBD271V	270 1/16W	1	
	R2914	D0GA473JA023	47K 1/16W	1	
	R2915	D0GBR00JA008	0 1/10W	1	
	R2918	ERJ3RBD391V	390 1/16W	1	
	R2919	ERJ3RBD272V	2.7K 1/16W	1	
	R2920	D0HB102ZA002	1K 1/16W	1	
	R2923	D0GA681JA023	680 1/16W	1	
	R2924	D0GA472JA023	4.7K 1/16W	1	
	R5101	D0GB101JA008	100 1/10W	1	
	R5102	D0GB101JA008	100 1/10W	1	
	R5103	D0GB223JA008	22K 1/10W	1	
	R5104	D0GB101JA008	100 1/10W	1	
	R5105	D0GB100JA008	10 1/10W	1	
	R5151	D0GB101JA008	100 1/10W	1	
	R5152	D0GB101JA008	100 1/10W	1	
	R5153	D0GB223JA008	22K 1/10W	1	
	R5154	D0GB101JA008	100 1/10W	1	
	R5155	D0GB100JA008	10 1/10W	1	
	R5201	D0GBR00JA008	0 1/10W	1	
	R5202	D0GBR00JA008	0 1/10W	1	
	R5203	D0GBR00JA008	0 1/10W	1	
	R5204	D0GBR00JA008	0 1/10W	1	
	R5205	D0GBR00JA008	0 1/10W	1	
	R5206	D0GBR00JA008	0 1/10W	1	
	R5207	D0GBR00JA008	0 1/10W	1	
	R5208	D0GB101JA008	100 1/10W	1	
	R5209	D0GB101JA008	100 1/10W	1	
	R5210	D0GB101JA008	100 1/10W	1	
	R5211	ERJ3GEYJ201V	200 1/10W	1	
	R5212	ERJ3GEYJ201V	200 1/10W	1	
	R5213	ERJ3EKF1822V	1.8K 1/10W	1	
	R5214	D0GB470JA008	47 1/10W	1	
	R5215	D0GB470JA008	47 1/10W	1	
	R5216	D0GB820JA008	82 1/10W	1	
	R5217	D0GB470JA008	47 1/10W	1	
	R5218	D0GB470JA008	47 1/10W	1	
	R5219	D0GB470JA008	47 1/10W	1	
	R5220	D0GB470JA008	47 1/10W	1	
	R5221	D0GB820JA008	82 1/10W	1	
	R5222	D0GB104JA008	100K 1/10W	1	
	R5223	D0GB103JA008	10K 1/10W	1	
	R5301	D0GB100JA008	10 1/10W	1	
	R5302	D0GB100JA008	10 1/10W	1	
	R5305	ERJ3GEYJ3R3V	3.3 1/10W	1	
	R5306	ERJ3GEYJ3R3V	3.3 1/10W	1	
	R5307	D0GB104JA008	100K 1/10W	1	
	R5308	D0GB104JA008	100K 1/10W	1	
	R5309	D0GB562JA008	5.6K 1/10W	1	
	R5316	D0GB470JA008	47 1/10W	1	
	R5317	D0GB470JA008	47 1/10W	1	
	R5401	D0GB100JA008	10 1/10W	1	
	R5402	D0GB100JA008	10 1/10W	1	
	R5405	ERJ3GEYJ3R3V	3.3 1/10W	1	
	R5406	ERJ3GEYJ3R3V	3.3 1/10W	1	
	R5407	D0GB104JA008	100K 1/10W	1	
	R5408	D0GB104JA008	100K 1/10W	1	
	R5409	D0GB562JA008	5.6K 1/10W	1	
	R5416	D0GB470JA008	47 1/10W	1	
	R5417	D0GB470JA008	47 1/10W	1	
	R5501	D0GB100JA008	10 1/10W	1	
	R5502	D0GB100JA008	10 1/10W	1	
	R5505	ERJ3GEYJ3R3V	3.3 1/10W	1	
	R5506	ERJ3GEYJ3R3V	3.3 1/10W	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	R5507	D0GB104JA008	100K 1/10W	1	
	R5508	D0GB104JA008	100K 1/10W	1	
	R5509	D0GB562JA008	5.6K 1/10W	1	
	R5516	D0GB470JA008	47 1/10W	1	
	R5517	D0GB470JA008	47 1/10W	1	
	R5601	D0GB100JA008	10 1/10W	1	
	R5602	D0GB100JA008	10 1/10W	1	
	R5700	ERJ8GEYJ155V	1.5M 1/4W	1	
	R5701	ERJ8GEYJ155V	1.5M 1/4W	1	
	R5702	ERJ1TYJ104U	100K 1W	1	
	R5703	ERJ1TYJ104U	100K 1W	1	
	R5720	D0GD220JA017	22 1/8W	1	
	R5721	D0GD222JA017	2.2K 1/8W	1	
	R5722	D0GD222JA017	2.2K 1/8W	1	
	R5723	ERJ1TYJ333U	33K 1W	1	
	R5724	ERJ1TYJ333U	33K 1W	1	
	R5726	ERJ1TRQJR24U	0.24 1W	1	
	R5728	D0GB223JA008	22K 1/10W	1	
	R5729	D0GB473JA008	47K 1/10W	1	
	R5730	D0GB102JA008	1K 1/10W	1	
	R5732	ERJ6GEYJ221V	220 1/8W	1	
	R5733	D0GB473JA008	47K 1/10W	1	
	R5786	D0GD224JA003	220K 1/8W	1	
	R5795	ERJ6GEYJ334V	330K 1/8W	1	
	R5797	D0GB153JA008	15K 1/10W	1	
	R5798	D0GB101JA008	100 1/10W	1	
	R5801	D0GB101JA008	100 1/10W	1	
	R5801	D0GB472JA008	4.7K 1/10W	1	
	R5802	D0GB224JA008	220K 1/10W	1	
	R5802	ERJ3RBD273V	27K 1/16W	1	
	R5803	D0GB224JA008	220K 1/10W	1	
	R5803	D0HB152ZA002	1.5K 1/16W	1	
	R5804	D0GB473JA008	47K 1/10W	1	
	R5804	ERJ6RBD473V	47K 1/10W	1	
	R5805	D0GB563JA008	56K 1/10W	1	
	R5805	ERJ3RBD682V	6.8K 1/16W	1	
	R5806	D0GB223JA008	22K 1/10W	1	
	R5806	D0GB333JA008	33K 1/10W	1	
	R5807	D0GD681JA017	680 1/8W	1	
	R5808	D0GB222JA008	2.2K 1/10W	1	
	R5809	D0GD681JA017	680 1/8W	1	
	R5811	D0GB104JA008	100K 1/10W	1	
	R5812	D0GB274JA007	270K 1/10W	1	
	R5813	D0GB103JA008	10K 1/10W	1	
	R5814	D0GB104JA008	100K 1/10W	1	
	R5814	D0GB471JA008	470 1/10W	1	
	R5815	D0GB273JA008	27K 1/10W	1	
	R5816	D0GB103JA008	10K 1/10W	1	
	R5817	D0GB473JA008	47K 1/10W	1	
	R5817	ERJ3RBD272V	2.7K 1/16W	1	
	R5818	D0GB391JA008	390 1/10W	1	
	R5818	D0GB393JA008	39K 1/10W	1	
	R5819	D0GD220JA017	22 1/8W	1	
	R5820	D0GD272JA017	2.7K 1/8W	1	
	R5833	ERJ1TYJ332U	3.3K 1W	1	
	R5861	D0GB104JA008	100K 1/10W	1	
	R5862	D0GD222JA017	2.2K 1/8W	1	
	R5863	D0GD562JA017	5.6K 1/8W	1	
	R5864	D0GB182JA008	1.8K 1/10W	1	
	R5866	ERJ6GEYJ221V	220 1/8W	1	
	R5890	D0GB222JA008	2.2K 1/10W	1	
	R5891	ERJ3RBD273V	27K 1/16W	1	
	R5892	D0GB121JA008	120 1/10W	1	
	R5893	ERJ3RBD333V	33K 1/16W	1	
	R5894	D0GB102JA008	1K 1/10W	1	
	R5895	D0GB153JA008	15K 1/10W	1	
	R5899	D0GD473JA017	47K 1/8W	1	
	R5905	ERJ3RBD103V	10K 1/16W	1	
	R5906	ERJ3RBD104V	100K 1/16W	1	
	R5907	D0HB822ZA002	8.2K 1/16W	1	
	R5908	D0GBR00JA008	0 1/10W	1	
	R5909	D0GBR00JA008	0 1/10W	1	
	R6001	D0GB221JA007	220 1/10W	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	R6002	D0GB221JA007	220 1/10W	1	
	R6003	D0GB221JA007	220 1/10W	1	
	R6004	D0GB271JA008	270 1/10W	1	
	R6005	D0GB221JA007	220 1/10W	1	
	R6006	D0GB122JA008	1.2K 1/10W	1	
	R6007	D0GB122JA008	1.2K 1/10W	1	
	R6008	D0GB470JA008	47 1/10W	1	
	R6009	D0GB271JA008	270 1/10W	1	
	R6010	D0GB101JA008	100 1/10W	1	
	R6011	D0GB101JA008	100 1/10W	1	
	R6012	D0GB101JA008	100 1/10W	1	
	R6014	D0GB101JA008	100 1/10W	1	
	R6015	D0GB103JA008	10K 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	
	RX2008	D1H83304A024	RESISTOR NETWORK	1	
	RX2256	D1H81044A024	RESISTOR NETWORK	1	
	RX2263	D1H81044A024	RESISTOR NETWORK	1	
	RX2353	D1H81044A024	RESISTOR NETWORK	1	
	RX2379	D1H81044A024	RESISTOR NETWORK	1	
	RX2383	D1H81044A024	RESISTOR NETWORK	1	
	RX2398	D1H81044A024	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	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	C2028	F1J1A106A043	10uF 10V	1	
	C2030	F1G1H101A565	100pF 50V	1	
	C2031	F1G1H220A565	22pF 50V	1	
	C2032	F1G1H220A565	22pF 50V	1	
	C2033	F1G1H220A565	22pF 50V	1	
	C2034	F1G1H220A565	22pF 50V	1	
	C2035	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	
	C2204	EEEHB0J101UR	100uF 6.3V	1	
	C2205	EEEHB0J101UR	100uF 6.3V	1	
	C2206	F1G1C1030007	0.01uF 16V	1	
	C2207	F1G1A1040006	0.1uF 10V	1	
	C2208	F1G1C1030007	0.01uF 16V	1	
	C2209	F1G1C1030007	0.01uF 16V	1	
	C2210	F1G1A1040006	0.1uF 10V	1	
	C2211	EEEHB0J102UP	1000uF 6.3V	1	
	C2212	F1G1C1030007	0.01uF 16V	1	
	C2291	F1G1A1040006	0.1uF 10V	1	
	C2301	F1G1A1040006	0.1uF 10V	1	
	C2302	F1G1H1020008	1000pF 50V	1	
	C2303	F1G1H120A444	12pF 50V	1	
	C2305	F1G1H330A565	33pF 50V	1	
	C2306	F1G0J105A031	1uF 6.3V	1	
	C2307	F1G1A1040006	0.1uF 10V	1	
	C2308	F1G1A1040006	0.1uF 10V	1	
	C2309	F1G1H1020008	1000pF 50V	1	
	C2310	F1G1H1020008	1000pF 50V	1	
	C2311	EEEHB0J101UR	100uF 6.3V	1	
	C2312	F1G0J105A031	1uF 6.3V	1	
	C2401	F1G1A1040006	0.1uF 10V	1	
	C2403	F1G1H101A565	100pF 50V	1	
	C2405	F1G1C1030007	0.01uF 16V	1	
	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	
	C2421	D0GAR00J0008	0 1/16W	1	
	C2422	F1G1H101A565	100pF 50V	1	
	C2423	F1G1H101A565	100pF 50V	1	
	C2425	F1G1H1020008	1000pF 50V	1	
	C2426	F1G1H220A565	22pF 50V	1	
	C2428	F1G1C1030007	0.01uF 16V	1	
	C2429	F1G1C1030007	0.01uF 16V	1	
	C2438	F1G1H220A565	22pF 50V	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	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	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	
	C2604	F1G0J105A031	1uF 6.3V	1	
	C2605	F1G0J105A031	1uF 6.3V	1	
	C2606	F1G1A1040006	0.1uF 10V	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	
	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	
	C2704	F1G0J105A031	1uF 6.3V	1	
	C2705	F1G0J105A031	1uF 6.3V	1	
	C2706	F1G1A1040006	0.1uF 10V	1	
	C2901	F1G1H1020008	1000pF 50V	1	
	C2907	F1H1C105A097	1uF 16V	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	C2908	F1H1C105A097	1uF 16V	1	
	C2909	EEEFK0J331XP	330uF 6.3V	1	
	C2910	EEEFK0J331XP	330uF 6.3V	1	
	C2911	F1G1A1040006	0.1uF 10V	1	
	C2912	F1G1H1020008	1000pF 50V	1	
	C2913	EEEFK0J331XP	330uF 6.3V	1	
	C2914	EEEFK0J331XP	330uF 6.3V	1	
	C2915	F1G1A1040006	0.1uF 10V	1	
	C2916	EEEFK0J331XP	330uF 6.3V	1	
	C2917	F1G1H1020008	1000pF 50V	1	
	C2918	F1G1A1040006	0.1uF 10V	1	
	C2919	F1J1A106A043	10uF 10V	1	
	C2920	D0GAR00J0008	0 1/16W	1	
	C2921	F1G0J105A031	1uF 6.3V	1	
	C2922	F1G0J105A031	1uF 6.3V	1	
	C2923	EEEHB0J102UP	1000uF 6.3V	1	
	C2924	F1H1C474A008	0.47uF 16V	1	
	C2925	EEEHB1V330UP	33uF 35V	1	
	C2926	F1G1H1020008	1000pF 50V	1	
	C3001	F1G1A1040006	0.1uF 10V	1	
	C3002	EEEHB0J101UR	100uF 6.3V	1	
	C3003	F1H1H103A219	0.01uF 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	
	C5203	F1H1C104A042	0.1uF 16V	1	
	C5204	F1H1C104A042	0.1uF 16V	1	
	C5205	F1H1H103A238	0.01uF 50V	1	
	C5206	F1H1C104A042	0.1uF 16V	1	
	C5207	F1H1C104A042	0.1uF 16V	1	
	C5208	F1H1H103A238	0.01uF 50V	1	
	C5209	F1H1C104A042	0.1uF 16V	1	
	C5210	F1H1C104A042	0.1uF 16V	1	
	C5211	F1J1A106A043	10uF 10V	1	
	C5212	F1H1C104A042	0.1uF 16V	1	
	C5213	F1H1H470A230	47pF 50V	1	
	C5214	F1H1H470A230	47pF 50V	1	
	C5215	F1H1C104A042	0.1uF 16V	1	
	C5216	F1H1C104A042	0.1uF 16V	1	
	C5217	F1H1H103A238	0.01uF 50V	1	
	C5218	F1H1C104A042	0.1uF 16V	1	
	C5219	F1H1C104A042	0.1uF 16V	1	
	C5220	F1H1C104A042	0.1uF 16V	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	F1K1H105A149	1uF 50V	1	
	C5308	F1K1H105A149	1uF 50V	1	
	C5309	F2A1V4710058	470uF 35V	1	
	C5310	ECQV1H474JL3	0.47uF 50V	1	
	C5313	F1H1H104A913	0.1uF 50V	1	
	C5314	F1H1H104A913	0.1uF 50V	1	
	C5317	F1H1H103A238	0.01uF 50V	1	
	C5318	F1H1H103A238	0.01uF 50V	1	
	C5323	F1H1H102A219	1000pF 50V	1	
	C5324	F1H1H102A219	1000pF 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	F1K1H105A149	1uF 50V	1	
	C5408	F1K1H105A149	1uF 50V	1	
	C5409	F2A1V4710058	470uF 35V	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	C5410	ECQV1H474JL3	0.47uF 50V	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	
	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	F1K1H105A149	1uF 50V	1	
	C5508	F1K1H105A149	1uF 50V	1	
	C5509	F2A1V4710058	470uF 35V	1	
	C5510	ECQV1H105JL3	1uF 50V	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	
	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	F1K1H105A149	1uF 50V	1	
	C5608	F1K1H105A149	1uF 50V	1	
	C5609	F2A1V4710058	470uF 35V	1	
⚠	C5700	F1BAF471A013	470pF	1	
⚠	C5701	F0CAF104A105	0.1uF	1	
⚠	C5702	F0CAF104A105	0.1uF	1	
⚠	C5703	F0CAF104A105	0.1uF	1	
⚠	C5705	F1BAF471A013	470pF	1	
⚠	C5706	F1BAF221A013	220pF	1	
	C5711	F2A2G1810002	180uF 400V	1	
	C5712	F2A2G1810002	180uF 400V	1	
	C5713	F0C2J1030007	0.01uF 630V	1	
	C5721	F1H1H221A219	220pF 50V	1	
	C5722	F1H1H102A219	1000pF 50V	1	
	C5723	F1H1H471A219	470pF 50V	1	
	C5724	F1H1H102A219	1000pF 50V	1	
	C5725	F1H1H104A013	0.1uF 50V	1	
	C5726	F2A1H100A182	10uF 50V	1	
	C5730	F1H1E105A116	1uF 25V	1	
	C5747	F1B3D561A011	560pF 2000V	1	
	C5790	F1K2J2220002	2200pF 630V	1	
	C5791	F1J1C106A059	10uF 16V	1	
	C5795	F1H1H102A219	1000pF 50V	1	
	C5796	F1H1H104A013	0.1uF 50V	1	
	C5798	F2A2A100A057	10uF 100V	1	
	C5799	F2B2G1000001	10uF 400V	1	
	C5800	F1J2E1030004	0.01uF 250V	1	
	C5801	F1H1H104A913	0.1uF 50V	1	
	C5802	F1J1A106A043	10uF 10V	1	
	C5803	F1J1H104A717	0.1uF 50V	1	
	C5804	F1H1E105A116	1uF 25V	1	
	C5805	F1H1H102A219	1000pF 50V	1	
	C5805	F2A1H8210023	820uF 50V	1	
	C5806	D0GBR00JA008	0 1/10W	1	
	C5807	D0GBR00JA008	0 1/10W	1	
	C5808	D0GBR00JA008	0 1/10W	1	
	C5809	F1H1E105A116	1uF 25V	1	
	C5810	F1K1E106A078	10uF 25V	1	
	C5811	EEE0JA101WR	100uF 6.3V	1	
	C5811	F1J2E1030004	0.01uF 250V	1	
	C5813	F2A1E1020049	1000uF 25V	1	
	C5814	F2A1E1020049	1000uF 25V	1	
	C5817	F1H1H682A219	6800pF 50V	1	
	C5818	F1H1H104A013	0.1uF 50V	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	C5824	F2A1E6810012	680uF 25V	1	
	C5826	F1J2E1030004	0.01uF 250V	1	
	C5827	F1J2E1030004	0.01uF 250V	1	
	C5828	F2A0J471A247	470uF 6.3V	1	
	C5840	F1J2E1030004	0.01uF 250V	1	
	C5869	F1H1H103A219	0.01uF 50V	1	
	C5897	F1H1H104A013	0.1uF 50V	1	
	C5898	F1H1H104A013	0.1uF 50V	1	
	C5899	F2A1A4710038	470uF 10V	1	
	C5904	F1H1H104A913	0.1uF 50V	1	
	C5905	F1H1H104A913	0.1uF 50V	1	
	C5906	EEE1EA330WR	33uF 25V	1	
	C5907	EEEFK1C220R	22uF 16V	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	

IPSG1109