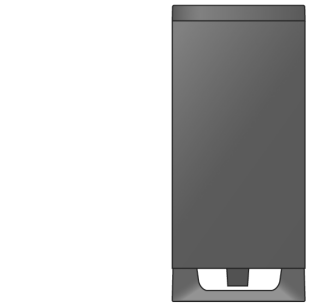
PSG1104027CE

Service Manual

Home Theater Audio System

Model No. SU-HTB520GN
SU-HTB520GS
SU-HTB520PH
SB-HWA520GN
SB-HWA520GS
SB-HWA520PH
SC-HTB520GN
SC-HTB520GS
SC-HTB520PH



SB-HWA520

Remote Control

SU-HTB520

Product Color: (K)...Black Type

⚠ WARNING

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

IMPORTANT SAFETY NOTICE

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

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Panasonic

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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.

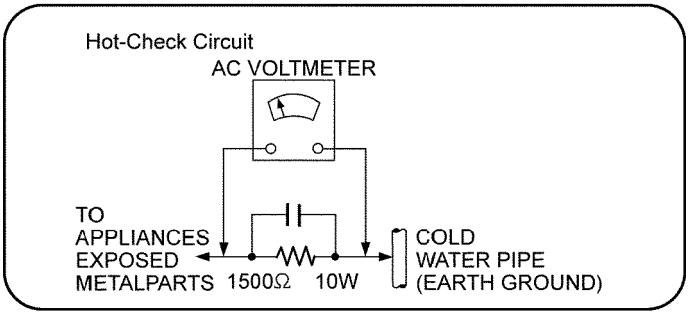
1.1.1. Leakage Current Cold Check

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. Before Use (For GS/PH only)

Be sure to disconnect the mains cord before adjusting the voltage selector.
Use a minus(-) screwdriver to set the voltage selector (on the rear 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 Åg110V ~ 127V or 220V ~ 240VÅh 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.)

1.3. Before Repair and Adjustment

Main Unit (SU-HTB520)

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 220-240V, at 50 Hz in NO SIGNAL mode, at volume minimum, SEL: HDMI/D-IN should be ~180 mA (For GN).
- Current consumption at AC 110-127V / 220-240V, at 50/60 Hz in NO SIGNAL mode, at volume minimum, SEL: HDMI/D-IN should be ~180 mA (For GS/PH).

Speaker Unit (SB-HWA520)

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 220-240V, at 50/60 Hz in NO SIGNAL mode, at volume minimum, SEL: HDMI/D-IN should be ~220 mA (For GN).
- Current consumption at AC 110-240V, at 50/60 Hz in NO SIGNAL mode, at volume minimum, SEL: HDMI/D-IN should be ~220 mA (For GS/PH).

1.4. Caution For SMPS Module & Fuse Replacement

Caution:
This models uses SMPS Module to supply the voltage & power required for the circuitries (SU-HTB520 & SB-HWA520). It is replaced as an assembly, do not attempt to replace or repair by individual components.

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 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 OF 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 stated 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.

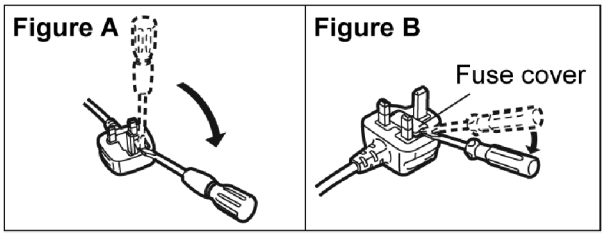
WARNING: DO NOT CONNECT EITHER WIRE TO THE EARTH TERMINAL WHICH IS MARKED WITH THE LETTER E, BY THE EARTH SYMBOL ⏚ OR COLOURED GREEN OR GREEN/ YELLOW.

THIS PLUG IS NOT WATERPROOF—KEEP DRY.

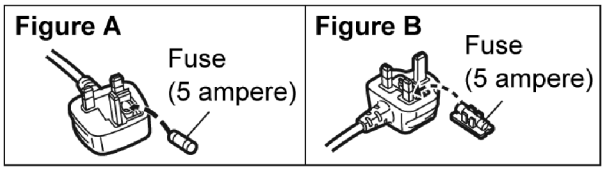
Before use
Remove the connector cover.

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.



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



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 & 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. Main Unit (SU-HTB520)

Safety	Ref. No.	Part No.	Part Name & Description	Remarks
⚠	33	RGNX1204-K1	SPEC LABEL	GS
⚠	33	RGNX1205-K1	SPEC LABEL	PH
⚠	33	RGNX1249-K1	SPEC LABEL	GN
⚠	A2	K2CJ2DA00010	AC CORD	GN
⚠	A2	K2CQ2CA00007	AC CORD	GS,PH
⚠	A2	K2CZ3YY00005	AC CORD	GS
⚠	A3	RQTX1279-1B	O/I BOOK (En)	GN,GS
⚠	A3	RQTX1282-G	O/I BOOK	GS
⚠	A3	RQTX1283-M	O/I BOOK	PH
⚠	PCB1	N0AE2FH00001	SMPS P.C.B	

1.7.2. Speaker Unit (SB-HWA520)

Safety	Ref. No.	Part No.	Part Name & Description	Remarks
⚠	6	RGNX1251-K	SPEC LABEL	GN
⚠	6	RGNX1200-K	SPEC LABEL	PH
⚠	6	RGNX1199-K	SPEC LABEL	GS
⚠	10	REEX1265	AC WIRE WITH CONNECTOR	
⚠	A4	RFAX1036C	TRANSMITTER UNIT	GS
⚠	A4	RFAX1036D	TRANSMITTER UNIT	PH
⚠	A4	RFAX1036F	TRANSMITTER UNIT	GN
⚠	PCB3	REPX0911BD	AC INLET P.C.B	
⚠	PCB4	N0AE3ZJ00001	SMPS MODULE	
⚠	PCB5	REPX0771D	RX MODULE	
⚠	P5701	K2AAYA000001	AC INLET	

1.8. Safety Installation Instructions

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

WARNING

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

CAUTION

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

2 Warning

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

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

1. Immediately before handling any semiconductor component or semiconductor-equiped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equiped with ES devices, place the assembly on a conductive surface such as aluminium foil, to prevent electrostatic charge build up or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder remover device. Some solder removal devices not classified as “anti-static (ESD protected)” can generate electrical charge to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminium foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
   Caution
   Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize body motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient to damage an ES device).

2.2. Service caution based on Legal restrictions

2.2.1. General description about Lead Free Solder (PbF)

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

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

Definition of PCB Lead Free Solder being used

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

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

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

Recommended Lead Free Solder (Service Parts Route.)

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

Note

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

3 Service Navigation

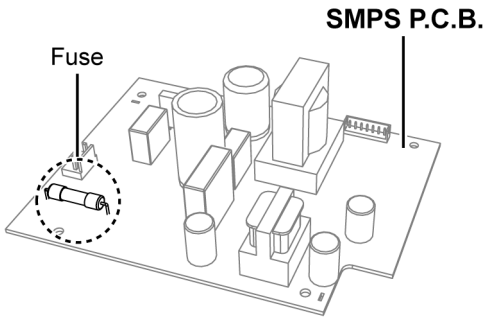
3.1. Service Information

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

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

- **Micro-processor :**
  The following components are supplied as an assembled part.
  - Micro-processor IC, IC2201 (RFKWMHTB520M).
  - Micro-processor IC, IC2301 (RFKWHTB520PH).

- **SMPS Module :**
  Caution:
  This models uses SMPS Module to supply the voltage & power required for the circuitries (SU-HTB520 & SB-HWA520). It is replaced as an assembly, do not attempt to replace or repair by individual components.



4 Specifications

SU-HTB520, SB-HWA520

■ GENERAL

Power consumption:	Main unit (SU-HTB520): 30 W Active subwoofer (SB-HWA520): 23 W Digital transmitter: 1.2 W
Power consumption in standby mode:	
	Main unit (SU-HTB520): Approx. 0.4 W Active Subwoofer (SB-HWA520): Approx. 0.2 W
Power supply:	Main unit (SU-HTB520): AC 220 V to 240 V, 50 Hz (GN) Active subwoofer (SB-HWA520): AC 220 V to 240 V, 50 Hz (GN) Main unit (SU-HTB520): AC 110 V to 240 V, 50/60 Hz (GS) Active subwoofer (SB-HWA520): AC 110 V to 240 V, 50/60 Hz (GS)
Dimensions (W x H x D):	
Main unit :	
(Excluding projecting parts)	1018 mm x 75 mm x 44 mm
(With safety holder)	1018 mm x 77 mm x 52 mm
(With stands (Low)	1018 mm x 95 mm x 75 mm
(With stands (High)	1018 mm x 105 mm x 75 mm
Active Subwoofer	180 mm x 408 mm x 306 mm
Digital transmitter	43.5 mm x 37.3 mm x 8.2 mm
Mass (Weight):	
Main unit :	
(Without accessories)	Approx. 2.5 kg
(With safety holder)	Approx. 2.6 kg
(With stands)	Approx. 2.6 kg
Active Subwoofer	Approx. 5.2 kg
Digital transmitter	Approx. 0.0095 kg
Operating temperature range:	0°C to +40°C
Operating humidity range:	20% to 80% RH (no condensation)

■ WIRELESS SECTION

Wireless module	
Frequency range:	2.4 GHz to 2.4835 GHz
Number of channels:	3

■ AMPLIFIER SECTION

RMS Output Power: Dolby Digital Mode	
Front ch:	60 W per channel (4 Ω), 1 kHz, 10% THD
Subwoofer ch:	120 W per channel (8 Ω), 100 Hz, 10 % THD
Total RMS Dolby Digital mode power:	240 W
PMPO Output Power:	2100 W(GS/PH)

■ SPEAKER SECTION

FRONT SPEAKERS (BUILT-IN)	
Type:	2 way, 2 speaker system (Bass Reflex)
Woofer:	6.5 cm Cone type x 2
Tweeter:	2.5 cm Semi-dome type x 2
ACTIVE SUBWOOFER (SB-HWA520)	
Type:	1 way, 1 speaker system (Bass Reflex)
Woofer:	16 cm Cone type
Frequency range:	30 Hz to 180 Hz (-16 dB), 35 Hz to 160 Hz (-10 dB)

■ TERMINAL SECTION

HDAVI Control	This unit supports “HDAVI Control 5” function.
HDMI AV input	
Terminal:	19-pin type A connector
HDMI AV output	
Terminal:	19-pin type A connector
Digital Audio Input (TV only)	
Optical digital input:	Optical terminal
Sampling frequency:	32 kHz, 44.1 kHz, 48 kHz
Audio Format:	LPCM, Dolby Digital, DTS Digital Surround

IR Blaster

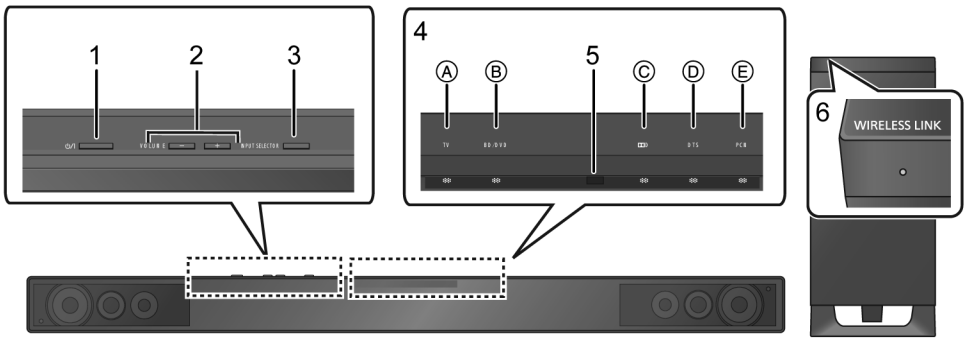
Terminal type:	3.5 mm jack

Note:
1. Specifications are subject to change without notice.
2. Total harmonic distortion is measured by the digital spectrum analyzer.

5 Location of Controls and Components

5.1. Main Unit Key Button Operations (SU-HTB520)

This unit and active subwoofer (Front)

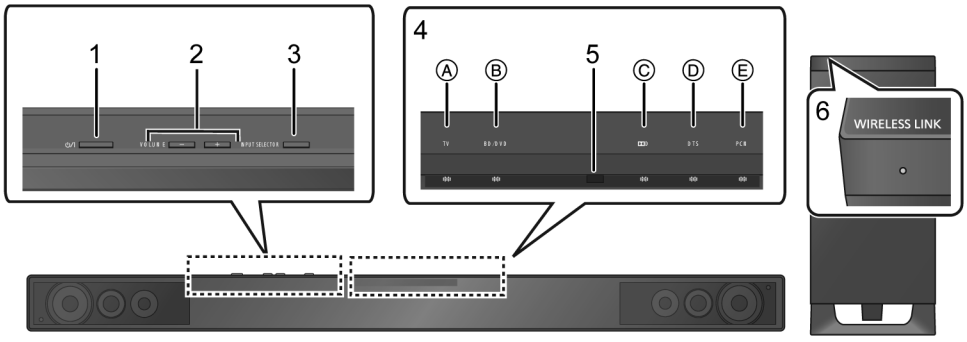


1 **Standby/on switch (⏻/I)**
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.
2 Adjust the Volume of this unit
3 Select the source
"TV" ⟷ "BD/DVD"
- **TV:** When the TV is the audio source (Ⓐ lights in green)
- **BD/DVD:** When the device connected to the HDMI AV IN terminal is the audio source (Ⓑ lights in amber)

4 LED status indicators
Ⓐ TV indicator
Ⓑ BD/DVD indicator
Ⓒ Dolby Digital indicator
Ⓓ DTS indicator
Ⓔ PCM or LPCM indicator
5 Remote control signal sensor
Remote control operation range
Distance:
Within approx. 7 m directly in front
Angle:
Approx. 30° left and right
6 WIRELESS LINK indicator

5.2. Active Subwoofer (SB-HWA520)

This unit and active subwoofer (Front)



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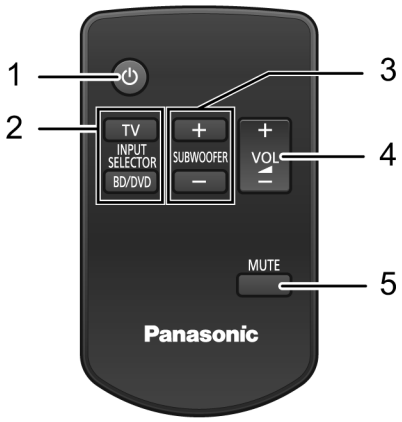
4 LED status indicators
Ⓐ TV indicator
Ⓑ BD/DVD indicator
Ⓒ Dolby Digital indicator
Ⓓ DTS indicator
Ⓔ PCM or LPCM indicator
5 Remote control signal sensor
Remote control operation range
Distance:
Within approx. 7 m directly in front
Angle:
Approx. 30° left and right
6 WIRELESS LINK indicator

5.3. Remote Control Key Buttons Operation

Remote control



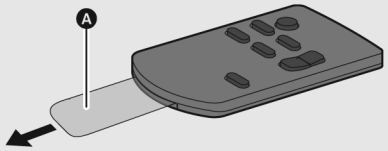
1 Turn this unit on or off
2 Select the source
- [TV]:
  Select the TV as the source
- [BD/DVD]:
  Select the device connected to the HDMI AV IN terminal as the source

3 Adjust the output level of the active subwoofer

4 Adjust the volume of this unit
5 Mute the sound

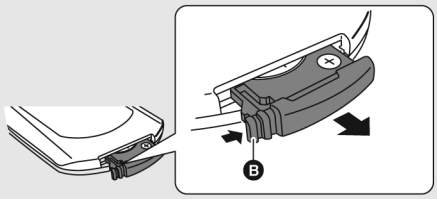
CAUTION
Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

Remove the insulation sheet Ⓐ before using.

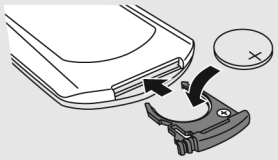


■ To replace a button-type battery

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.

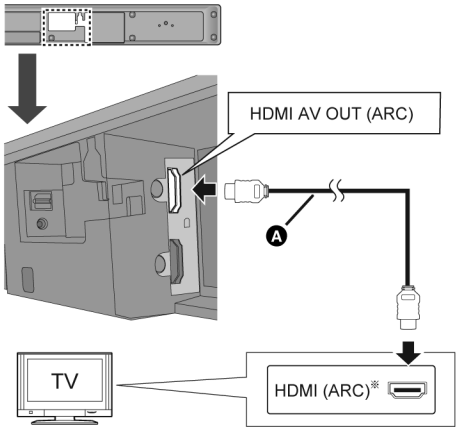


- When the button-type battery runs down, replace it with a new battery (part number: CR2025). The battery should normally last about 1 year, however, this depends on how frequently the unit is used.
- Do not heat or expose to flame.
- Do not leave the battery(ies) in an automobile exposed to direct sunlight for a long period of time with doors and windows closed.

5.4. Connection to a TV

■ **Verify if the TV's HDMI terminal is labeled "HDMI (ARC)".**	■ **What is ARC?**
The connection method will differ when the terminal is labeled "HDMI (ARC)" and when it is not. **Labeled "HDMI (ARC)": Method Ⓐ** **Not labeled "HDMI (ARC)": Method Ⓑ**	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 unit 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.

Ⓐ Labeled "HDMI (ARC)"

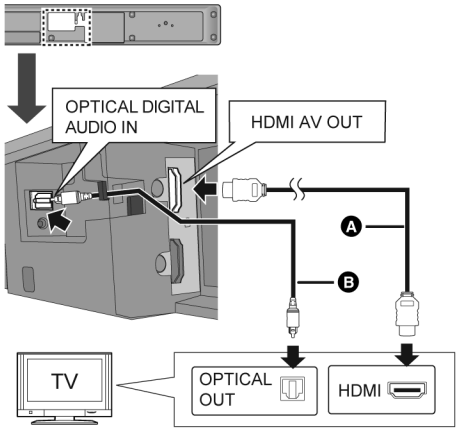


Ⓐ **HDMI cable** (not supplied)

※ Be sure to connect to the TV's ARC compatible terminal. (Refer to the Operating Instructions for the TV.)

- If the connected TV is ARC compatible, but audio is not output to this unit, connect using the optical digital audio cable. (⇨ right, "Ⓑ Not labeled "HDMI (ARC)"")

Ⓑ Not labeled "HDMI (ARC)"



Ⓐ **HDMI cable** (not supplied)

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

- Be sure to place the cable under the projecting part.

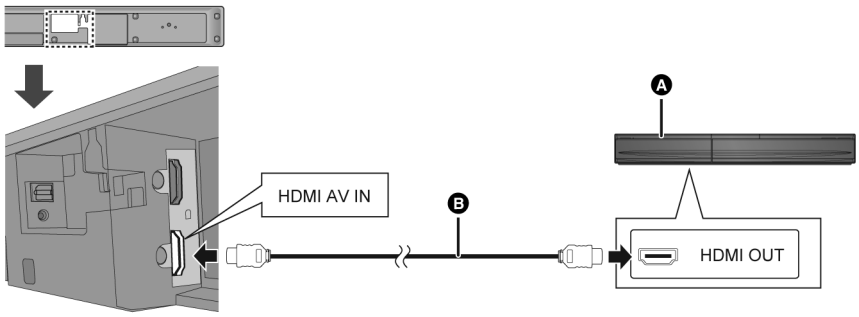
- The optical digital audio cable connection is needed when the HDMI cable is connected to a terminal that is not labeled "HDMI (ARC)".

5.5. Connection from an HDMI compatible device

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

Preparation

- Connect this unit to the TV.



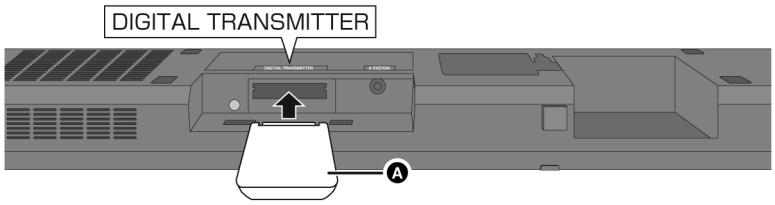
Ⓐ E.g., Blu-ray Disc Player

Ⓑ **HDMI cable** (not supplied)

- Refer to the Operating Instructions of the connected HDMI compatible device for the necessary setting, to output the video and audio signals.

5.6. Digital transmitter connection

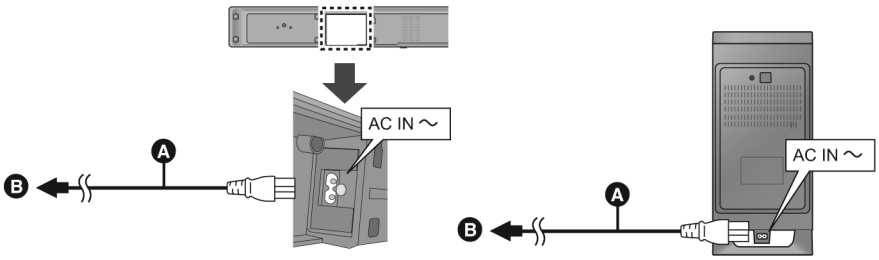
Do not insert or remove while this unit is on.



Ⓐ **Digital transmitter** (supplied)
Insert the digital transmitter, with the label facing down, until you hear a click.

5.7. AC power supply cord connection

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



Ⓐ **AC mains lead** (supplied)
Ⓑ To a household mains socket

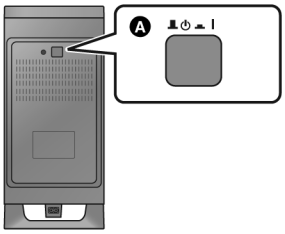
For the United Kingdom, Ireland, Saudi Arabia and Kuwait
BE SURE TO READ THE CAUTION FOR THE AC MAINS LEAD ON PAGE 3 BEFORE CONNECTION.

- This system consumes a small amount of AC power, even when it is turned off (this unit; approx. 0.4 W, the active subwoofer; approx. 0.2 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 this unit and the active subwoofer only.
  Do not use it with other equipment. Also, do not use cords for other equipment with this unit or the active subwoofer.

5.8. Active subwoofer wireless connection

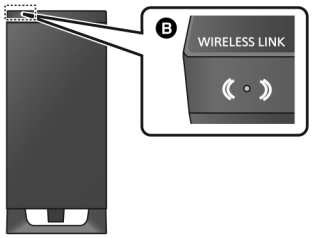
1 Turn on this unit.

2 Press [⏻, I] on the active subwoofer.



Ⓐ **Unit on/off button [⏻, I]**
Use this button to turn the unit on and off.
I:
The active subwoofer is on
⏻:
The active subwoofer is off

3 Check that the wireless link is activated.



Ⓑ **WIRELESS LINK indicator**
The indicator lights when the active subwoofer is turned on.
- **Red:**
  The active subwoofer is on and the wireless link is deactivated
- **Green:**
  The active subwoofer is on and the wireless link is activated

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 BD/DVD input selector indicator (for HDMI in) (BD/DVD)
LED 3 Decorder/Audio format Indicator (DOLBY D)
LED 4 Decorder/Audio format Indicator (DTS)
LED 5 Decorder/Audio format Indicator (AAC for Japan region/PCM for non Japan region)

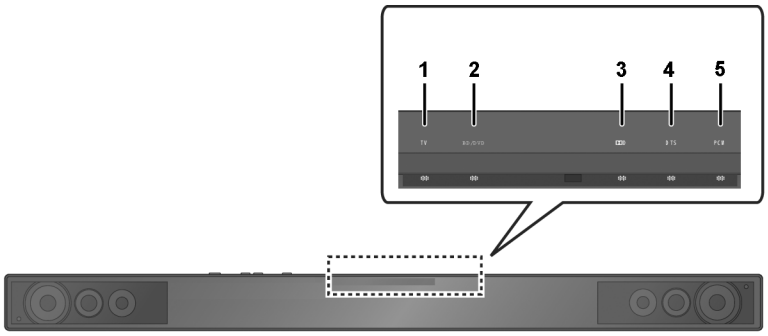


Fig 6.1

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 (BD/DVD)	LED 3 (DOLBY D)	LED 4 (DTS)	LED 5 (AAC)	Cause and Problem
OVERLOAD (F61) If this error occurs, main set will automatically power off.	*	*	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	DC Power/Voltage Supply abnormality. Check for faulty parts and replace with new parts if necessary.
F70 DSP	*	*	*	X	X	DSP - Main Micro-p IC communication failure/ abnormality. Check for faulty parts and replace with new parts if necessary.
F70 DAP	*	*	*	*	X	DAP - Main Micro- P IC communication failure / abnormality. Check for faulty parts and replace with new parts if necessary.
F70 HDMI	*	*	*	*	*	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	Connected devices error (HDCP non-compliance). Check for faulty parts and replace with new parts if necessary.
U703	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	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

6.2. Service Mode

This mode can be used during servicing.
1 : Checking the region/model.
2 : Checking the Main micro-p & HDMI micro-p firmware version.
3 : Wireless pairing.
4 : Wireless RF channel selection.
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 uit is ready for next command

This unit is equipped with service mode function for:

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

6.2.1. Checking of Main Micro-p Firmware version

Here are the procedures to check the region and main firmware version:
Step 1 : Power-up the main unit.
Step 2 : Enter into service mode. (Refer to Section 6.2 for the procedures).
Step 3 : Press [VOL+] on main unit one time to check for the region. (Refer to table 6-2 for information on the LED indication).
Step 4 : Press [VOL+] on main unit two time to check for the main micro-p firmware version no. (Refer to table 6-2 for information on the LED indication).

Key Operation	LED 1 (TV)	LED 2 (BD/DVD)	LED 3 (DOLBY D)	LED 4 (DTS)	LED 5 (PCM/AAC)
Press [VOL+] button on main unit for one time	*	X	Region Bit 2	Region bit 1	Region bit 0
Press [VOL+] button on main unit for two times	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0

Table 6-2

6.2.1.1. Region Bit No.

The region bit no. is to indicate the destination for model. (Refer to table 6-3 for more information).

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

Table 6-3

6.2.1.2. Firmware version Bit No. (Bit 0~4)

It is to indicate the firmware version no. (Bit 0 ~4). (Refer to table 6-4 for more information).

Bit 4 (TV)	Bit 3 (BD/DVD)	Bit 2 (DOLBY D)	Bit 1 (DTS)	Bit 0 (PCM/AAC)	Version No
X	X	X	X	X	00
X	X	X	X	O	01
X	X	X	O	X	02
X	X	X	O	O	03
X	X	O	X	X	04
X	X	O	X	O	05
X	X	O	O	X	06
X	X	O	O	O	07
X	O	X	X	X	08
X	O	X	X	O	09
X	O	X	O	X	10
X	O	X	O	O	11
X	O	O	X	X	12
X	O	O	X	O	13
X	O	O	O	X	14
X	O	O	O	O	15
O	X	X	X	X	16
O	X	X	X	O	17
O	X	X	O	X	18
O	X	X	O	O	19
O	X	O	X	X	20
O	X	O	X	O	21
O	X	O	O	X	22
O	X	O	O	O	23
O	O	X	X	X	24
O	O	X	X	O	25
O	O	X	O	X	26
O	O	X	O	O	27
O	O	O	X	X	28
O	O	O	X	O	29
O	O	O	O	X	30
O	O	O	O	O	31

Table 6-4

6.2.2. Checking of HDMI Micro-p Firmware version

Here are the procedures for checking the HDMI micro-p firmware version no:

Step 1 : Enter into service mode. (Refer to Section 6.2 for the procedures)

Step 2 : Press [VOL-] one to check the region no. (Refer to table 6-7 for information).

Step 3 : Press [VOL-] two time to check the HDMI micro-p firmware version no. (Refer to table 6-7 for information).

Key Operation	LED 1 (TV)	LED 2 (BD/DVD)	LED 3 (DOLBY D)	LED 4 (DTS)	LED 5 (PCM/AAC)
Press [VOL-] button on main unit one time	-	-	-	Region bit 4	Region bit 3
Press [VOL-] button on main unit two time	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0

Table 6-5

6.2.2.1. Region Bit No.

The region bit no. is to indicate the HDMI Firmware type. (Refer to table 6-6 for more information).

Region Bit 4 (DTS)	Region Bit 3 (PCM/AAC)	HDMI Software
X	O	NON JAPAN
O	X	JAPAN

Table 6-6

6.2.2.2. Firmware version Bit No. (Bit 0~4)

It is to indicate the firmware version no. (Bit 0 ~4). (Refer to table 6-9 for more information).

Bit 4 (TV)	Bit 3 (BD/DVD)	Bit 2 (DOLBY D)	Bit 1 (DTS)	Bit 0 (PCM/AAC)	Version No
X	X	X	X	X	00
X	X	X	X	O	01
X	X	X	O	X	02
X	X	X	O	O	03
X	X	O	X	X	04
X	X	O	X	O	05
X	X	O	O	X	06
X	X	O	O	O	07
X	O	X	X	X	08
X	O	X	X	O	09
X	O	X	O	X	10
X	O	X	O	O	11
X	O	O	X	X	12
X	O	O	X	O	13
X	O	O	O	X	14
X	O	O	O	O	15
O	X	X	X	X	16
O	X	X	X	O	17
O	X	X	O	X	18
O	X	X	O	O	19
O	X	O	X	X	20
O	X	O	X	O	21
O	X	O	O	X	22
O	X	O	O	O	23
O	O	X	X	X	24
O	O	X	X	O	25
O	O	X	O	X	26
O	O	X	O	O	27
O	O	O	X	X	28
O	O	O	X	O	29
O	O	O	O	X	30
O	O	O	O	O	31

Table 6-11

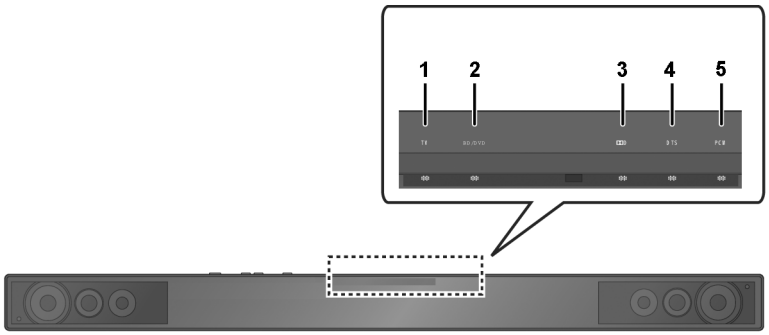
6.3. Cold start

Here are the procedures to do a reset for the main unit.

Step 1 : Power-up the main unit.

Step 2 : Press & hold [POWER] button on main unit for 4s or more.

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



6.4. Pairing mode (with Active Woofer - SB-HWA520)

Here are the procedure to do pairing between main unit (SU-HTB520) with Active woofer unit (SB-HWA520)

Step 1 : Power-up the main unit & active woofer unit.

Note : Please check connection on main unit and active woofer unit when either fails to power up. (LED on active woofer should turn RED if it is not linked)

Step 2 : Enter into service mode. (Refer to section 6.2 for procedures to enter Service Mode)

Step 3 : Press [ID SET] on active subwoofer unit

Step 4 : While TV LED is blinking, press [BD/DVD] (Pairing begins)

Note :

1) LED 3 to 5 will run one by one (at rate of 1s interval, if after 1 min and pairing is not completed it will time out.

2) LED 2 will blink & it stops when pairing is completed. LED on active woofer turns GREEN if pairing is successful.

6.4.1. Pairing RF channel selection.

Step 1 : Enter into Service Mode. (Refer to section 6.2 for procedures to enter Service Mode)

Step 2 : Press [SUB W+] on remote control to select the RF channel.

RF Channel	LED 3 (DOLBY D)	LED 4 (DTS)	LED 5 (PCM/AAC)
Auto	*	*	*
Channel 1	*		
Channel 2		*	
Channel 3			*

"*" LED Blinking in green

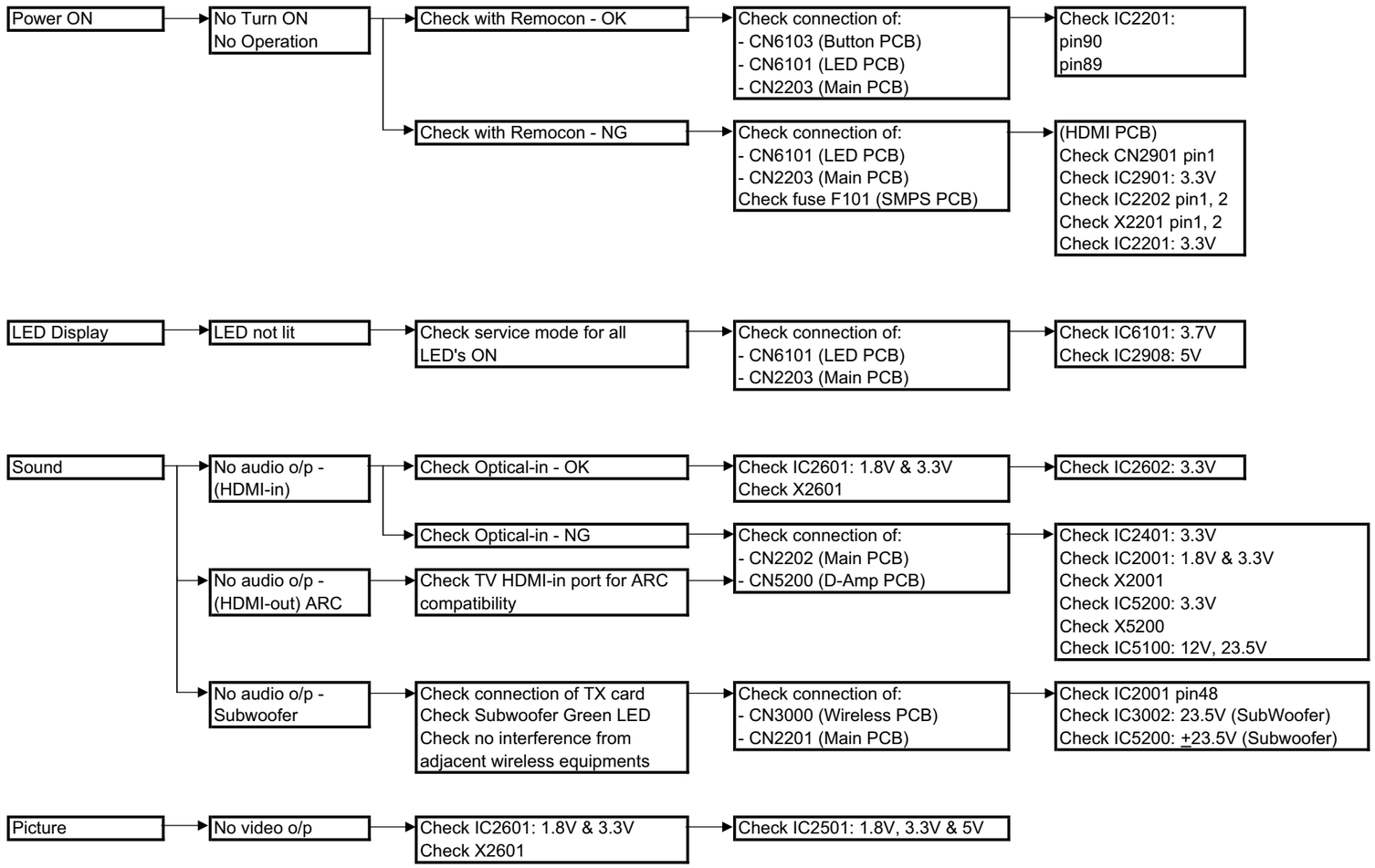
6.5. SET AUDIO DELAY

This model is equipped with auto lipsync feature which will synchronize the timing of VIDEO and AUDIO output. However, this unit can be set to 150ms fixed delay.

Step 1 : Press and hold [VOL -] on main unit followed by [VOL -] and [SUB +] on remote control.

LED of decorder will blink once for confirmation display and audio delay setting is set to 150 ms.

7 Troubleshooting Guide



8 Service Fixture & Tools

Prepare service tools before process service position.

Ref. No.	Service Tools		Remarks
SFT1	FFC (26P)	REZX1019-1	
SFT2	2P CABLE WIRE	REXX1194	

9 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)**

CAUTION: HOT!!
PLEASE DO NOT
TOUCH THE HEAT SINK

- **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.**

Main Unit (SU-HTB520)

- Disassembly of Back Cabinet Sub Block
- Disassembly of Button P.C.B.
- Disassembly of Back Cabinet Assembly
- Disassembly of Front Speaker L (SP1)
- Disassembly of Tweeter Unit L
- Disassembly of Front Speaker R (SP2)
- Disassembly of Tweeter Unit R
- Disassembly of SMPS P.C.B.
- Disassembly of D-Amp P.C.B.
- Replacement of Digital Amplifier IC (IC5100)
- Disassembly of Wireless P.C.B.
- Disassembly of HDMI P.C.B.
- Disassembly of AMP Module
- Disassembly of LED P.C.B.
- Replacement of Speaker Wire

Speaker Unit (SB-HWA520)

- Disassembly of Bottom Panel
- Disassembly of Woofer Speaker
- Disassembly of Amp Module
- Disassembly of SMPS P.C.B.
- Disassembly of RX Module P.C.B.
- Disassembly of D-Amp P.C.B. and Power Button P.C.B.
- Replacement of Digital Amplifier IC (IC5200)

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

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

ⓐ : XTB3+16JFJK
ⓑ : XTB3+8JFJK
ⓒ : RHD14136
ⓓ : RHD30119-K
ⓔ : RHDX301002
ⓕ : XTB3+10JFJ
ⓖ : XTB3+12JFJK
ⓗ : XTB3+6JFJK

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

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

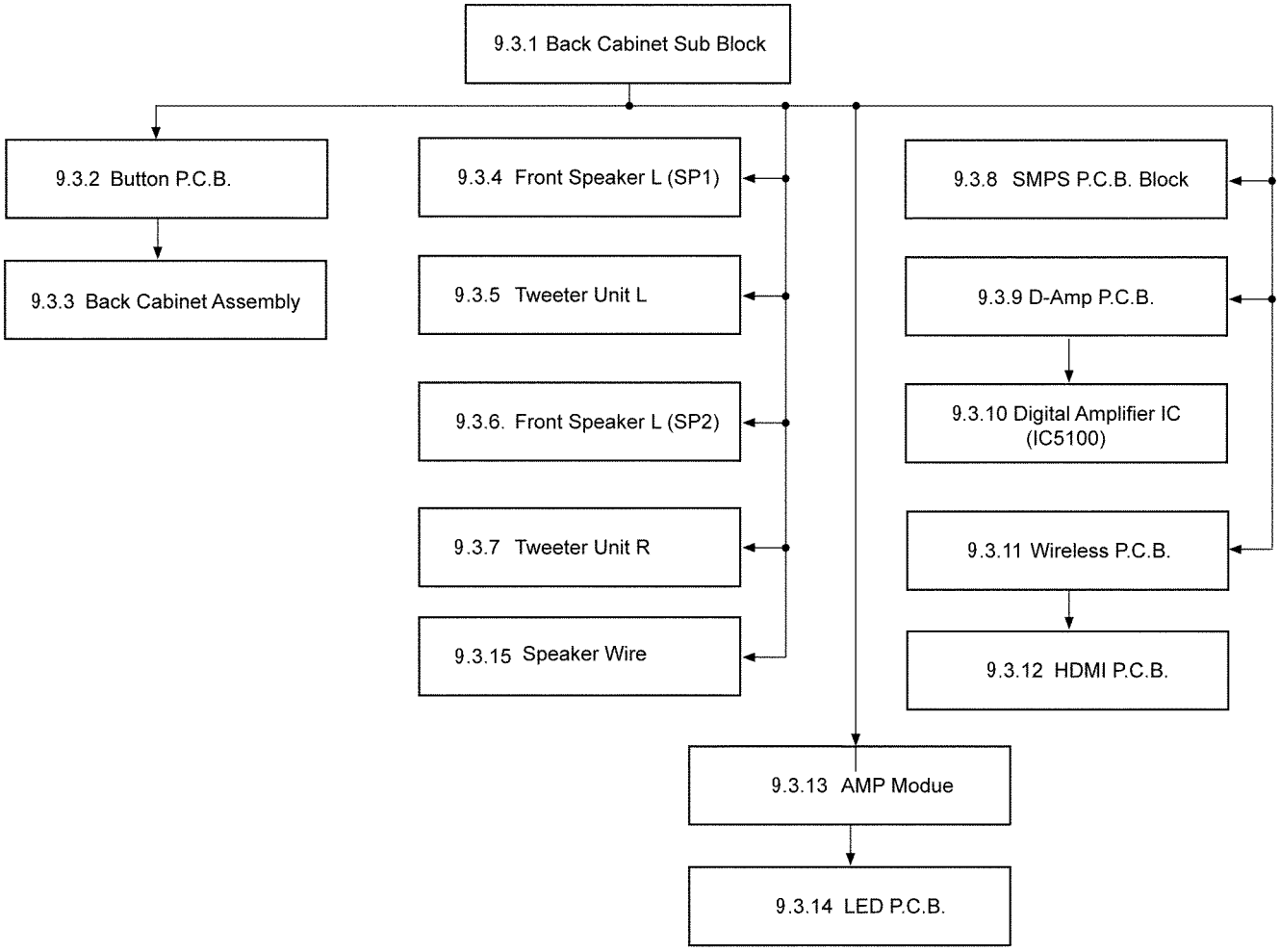
ⓐ : XTB4+16AFJK
ⓑ : XTB3+10JFJK
ⓒ : RHD30111-31
ⓓ : RHD26046

9.1. Disassembly flow chart

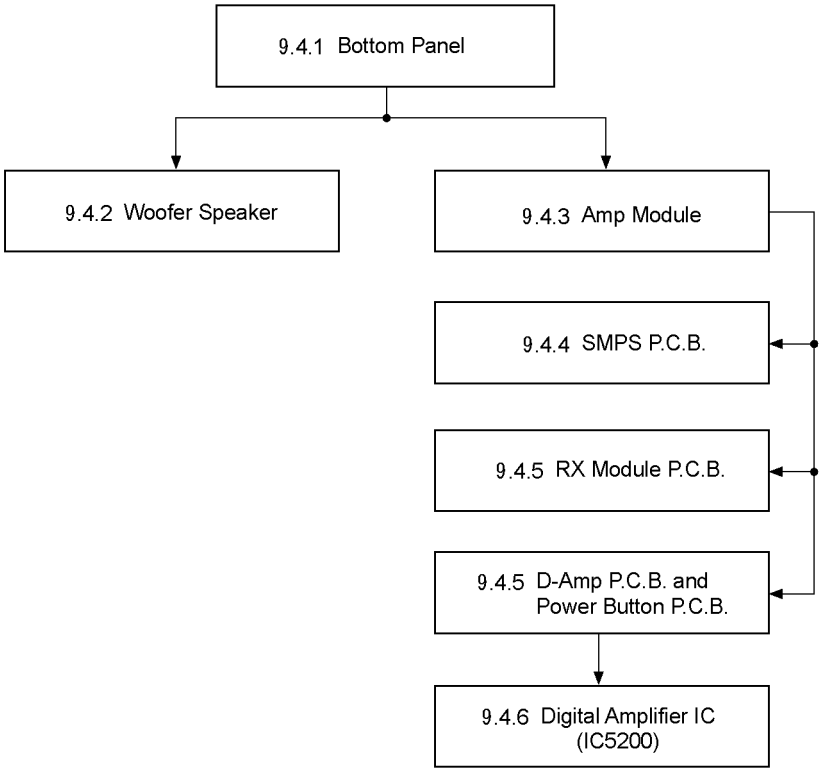
The following chart is the procedure for disassembling the casing and inside parts for internal inspection when carrying out the servicing.

To assemble the unit, reverse the steps shown in the chart below.

9.1.1. Main Unit (SU-HTB520)

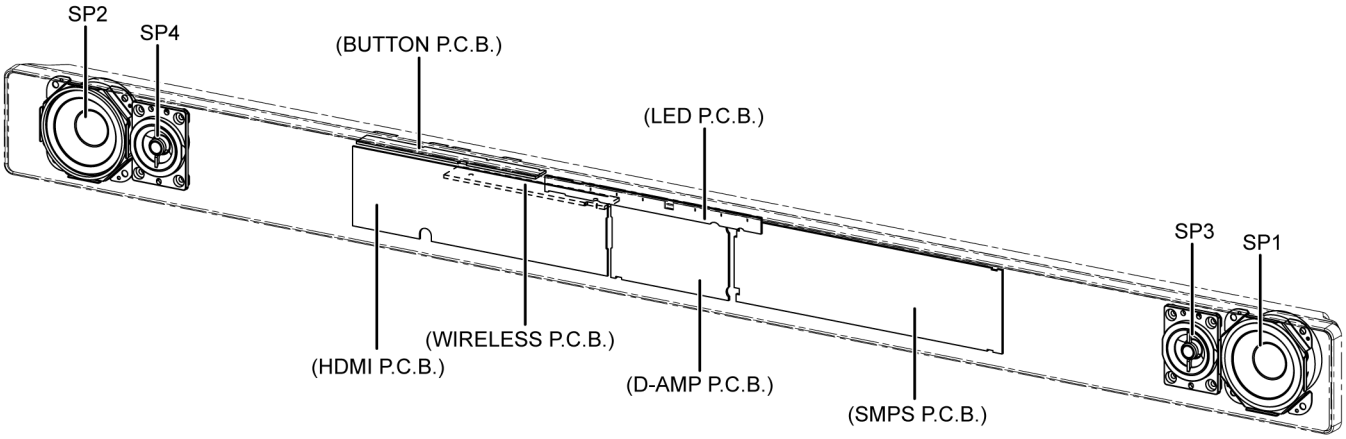


9.1.2. Speaker Unit (SB-HWA520)

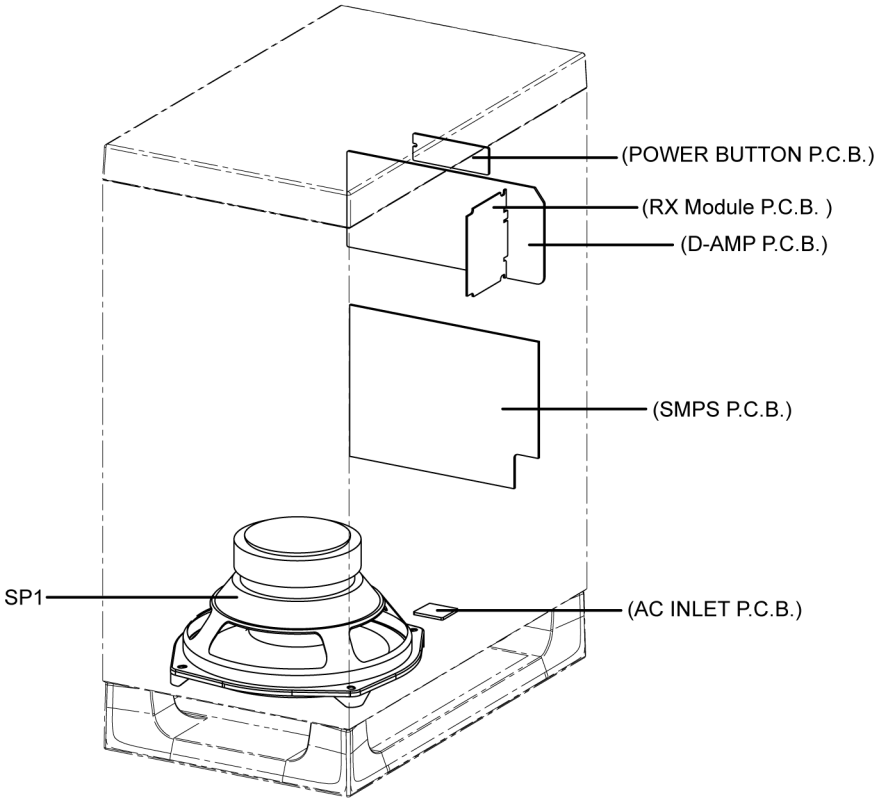


9.2. Main Parts Location Diagram

9.2.1. Main Unit (SU-HTB520)



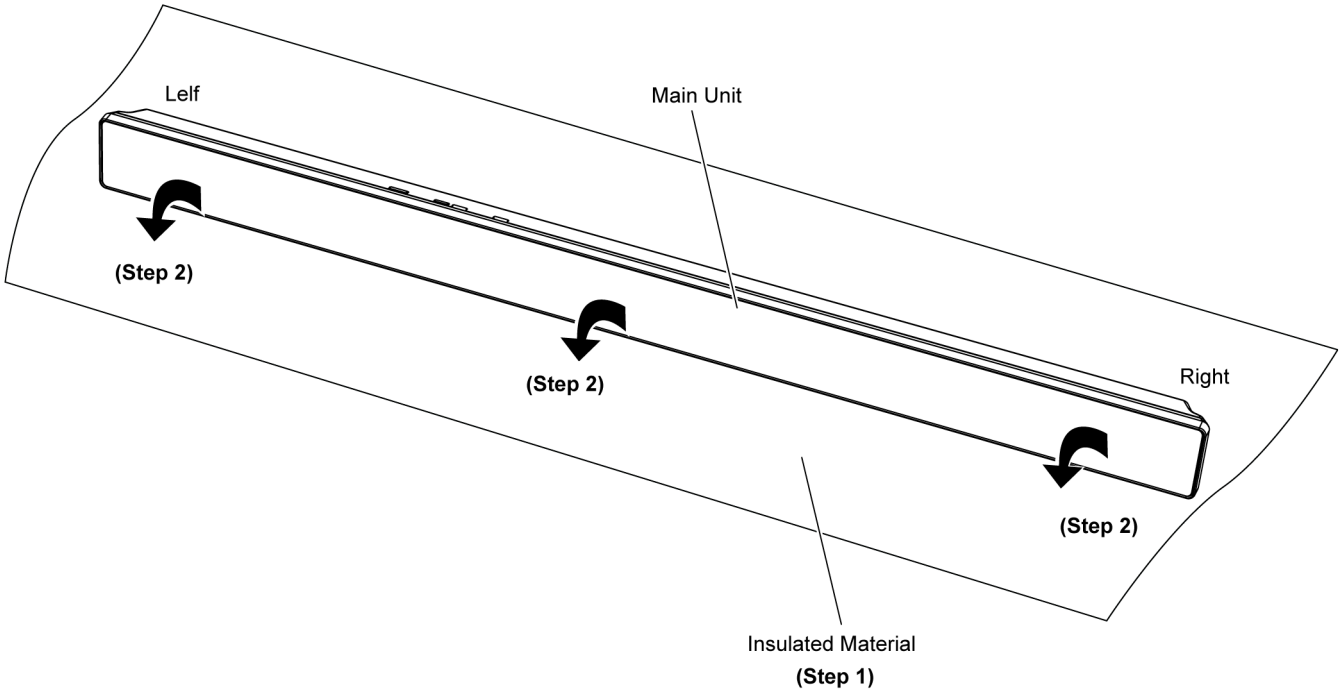
9.2.2. Speaker Unit (SB-HWA520)



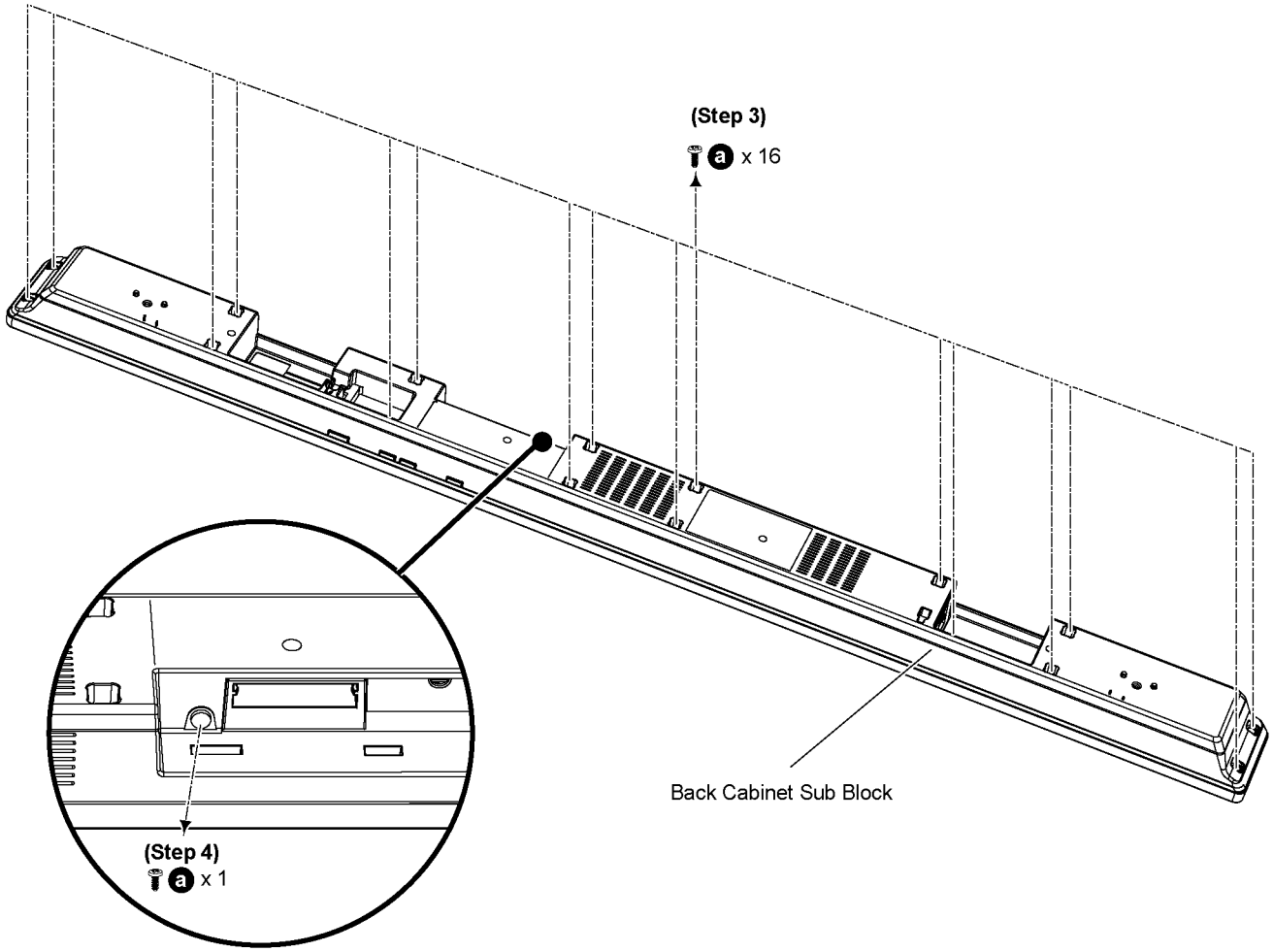
9.3. Main Unit (SU-HTB520)

9.3.1. Disassembly of Back Cabinet Sub Block

Step 1 : Place Main Unit on an insulated material.
Step 2 : Upset the Main unit as diagram shown.



Caution: Due to unit structure, all illustration are shown the unit's vertical position is place to in front of service man.
Step 3 : Remove 16 screws.
Step 4 : Remove 1 screw.

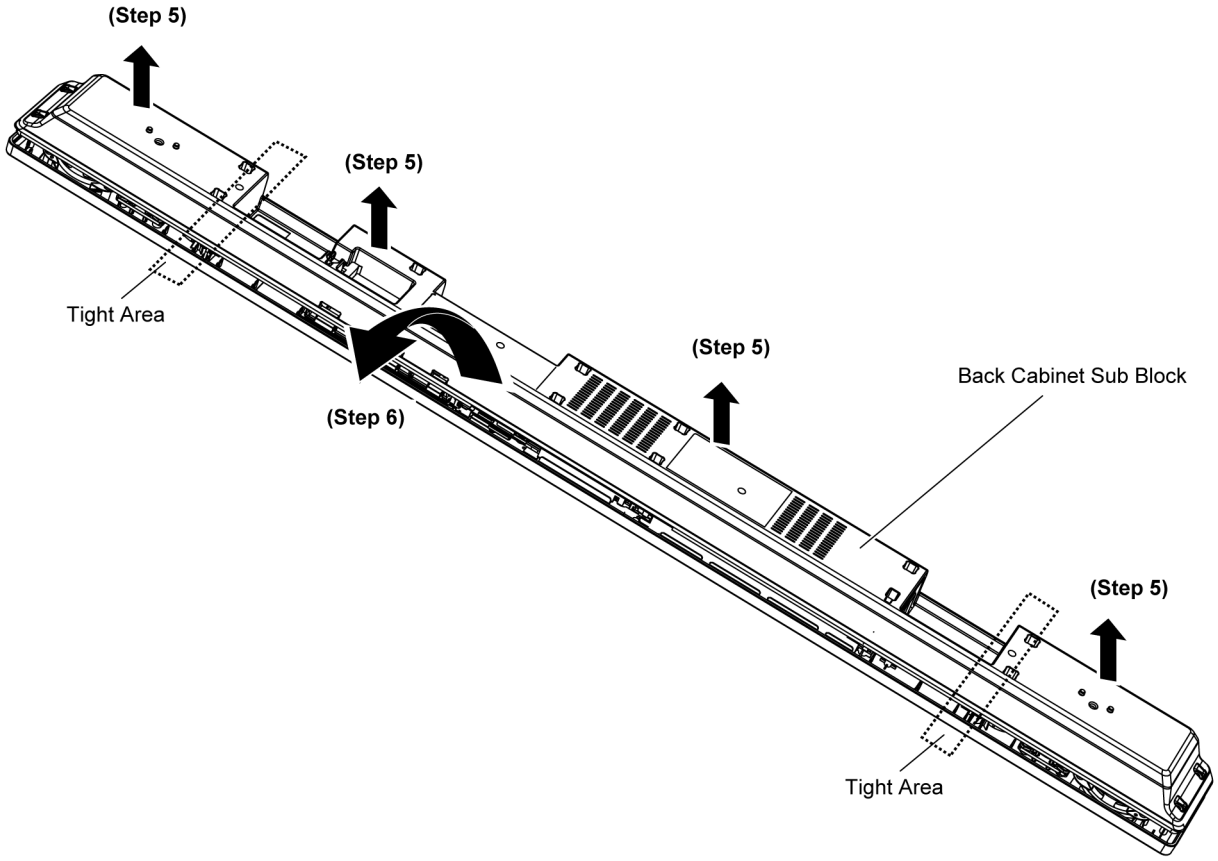


Step 5 : Slightly lift up the Back Cabinet Sub Block as arrow shown.

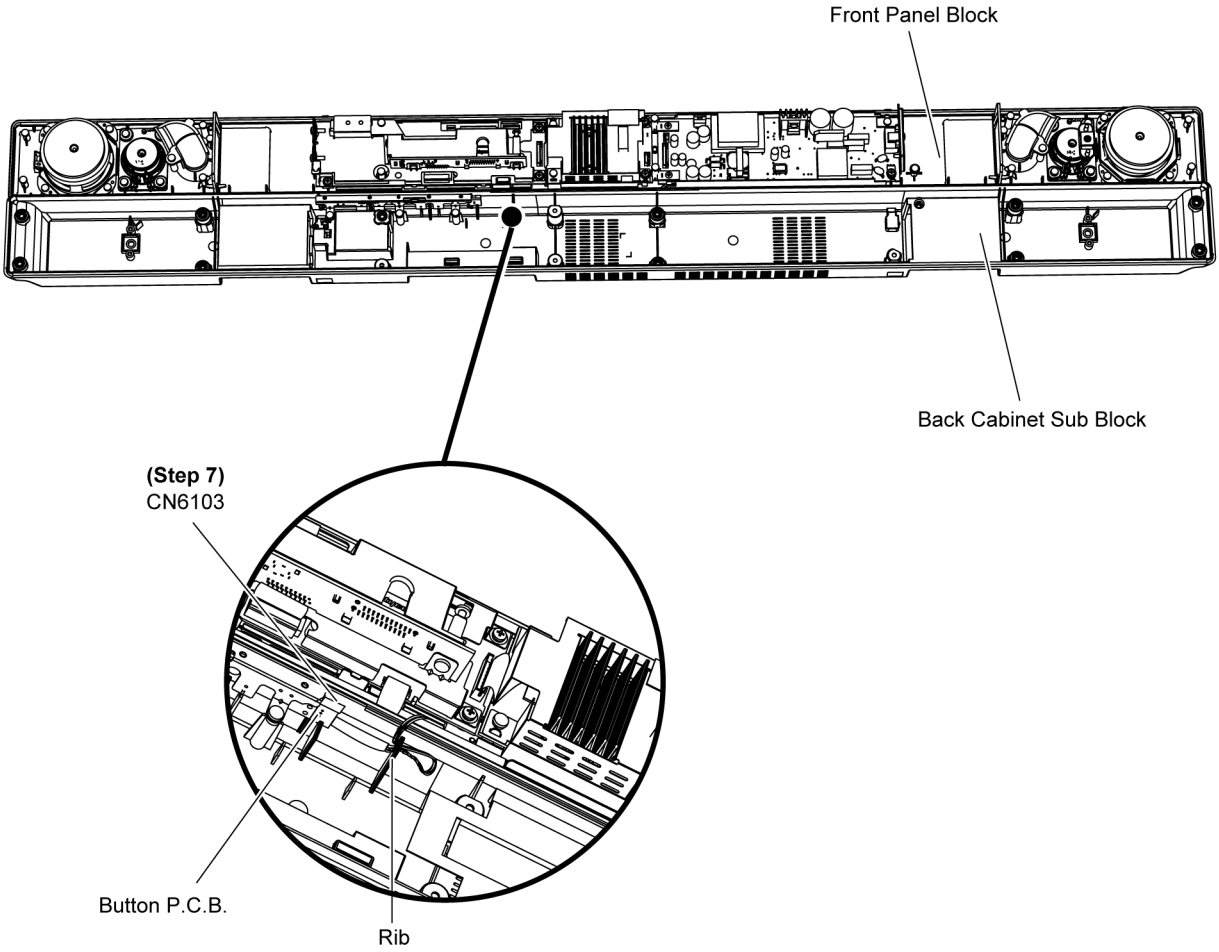
Caution : During assembly of Back Cabinet Sub Block, please refer to (8.3.1) Speaker Wire Dressing.

Step 6 : Flip over the Back Cabinet Sub Block as arrow shown.

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



Step 7 : Detach 3P Cable at the connector (CN6103) on Button P.C.B. and remove Back Cabinet Sub Block.
Caution: During assembling, ensure that 3P Cable is dressed & fully located rib.



9.3.1.1. Wire Dressing for assembling

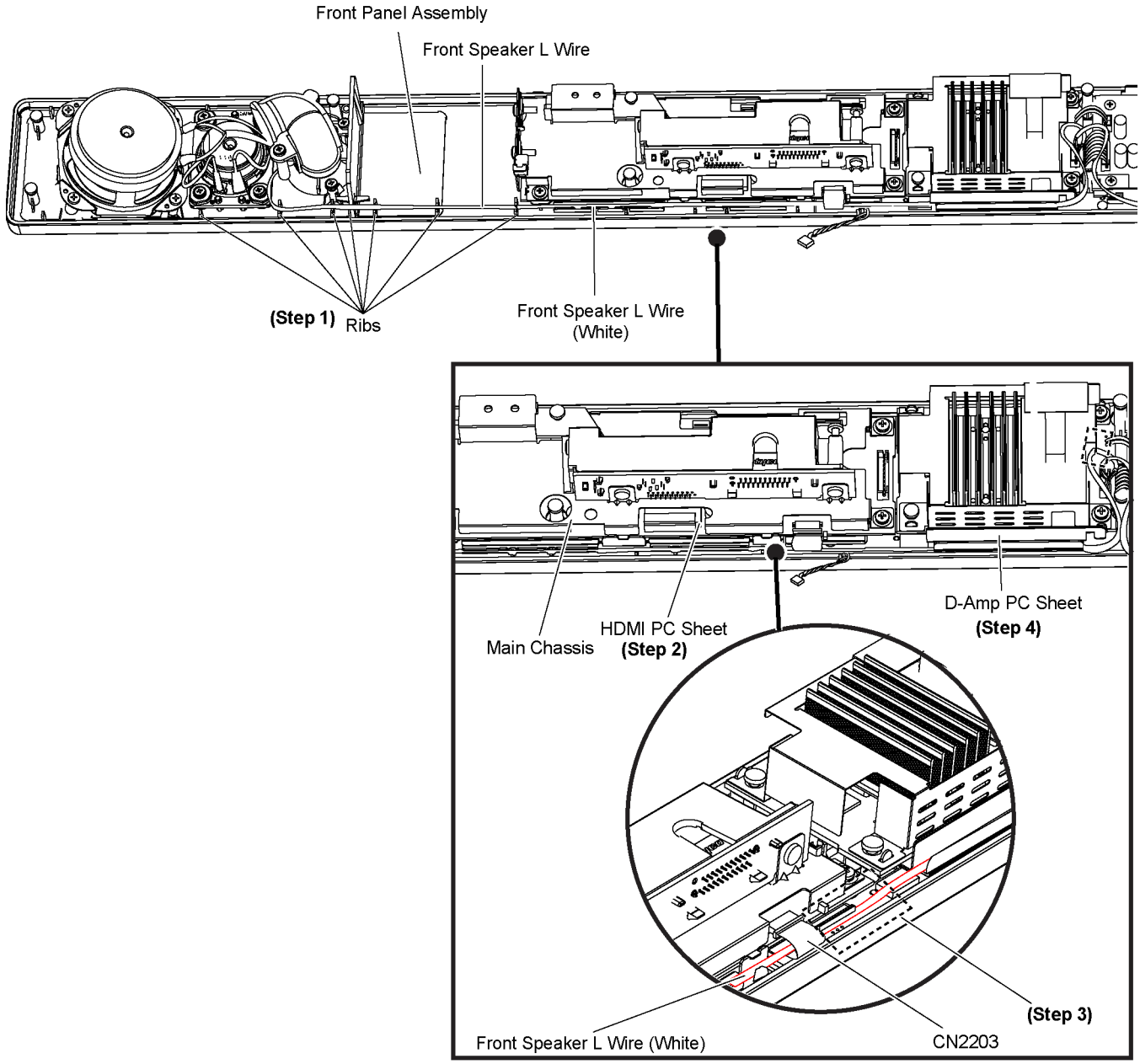
Step 1 : Dress the Front Speaker L wire is properly into the Front Panel Assembly 7 ribs.

Step 2 : Dress the Front Speaker L wire is properly between Main Chassis and HDMI PC Sheet.

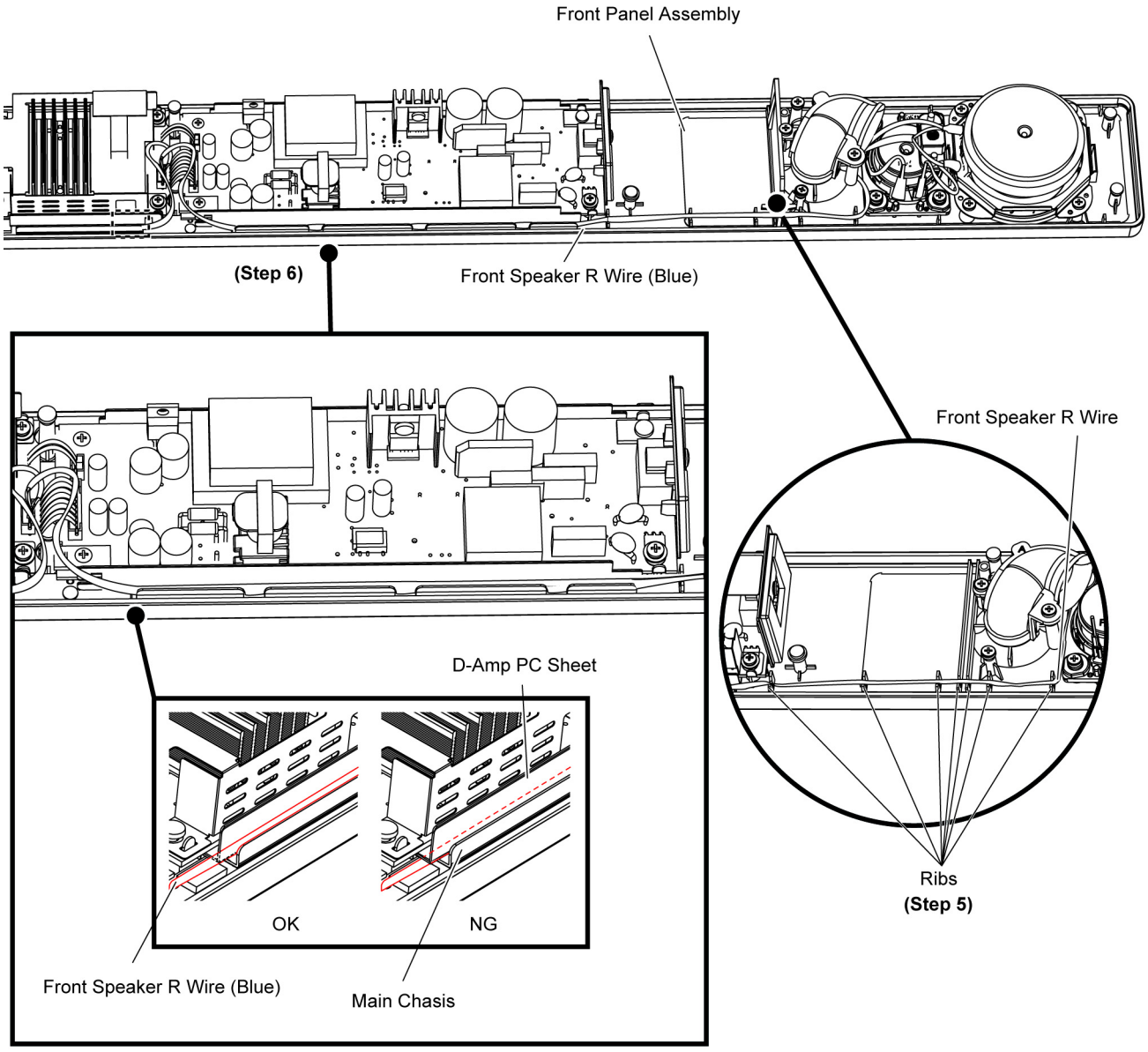
Step 3 : Dress the Front Speaker L wire under 12P FFC and across through HDMI PC Sheet dot box as diagrame shown.

Caution: During 12P FFC connect to connector (CN2203) on HDMI P.C.B., ensure speaker L wire is across under 12P FFC as digrame shown.

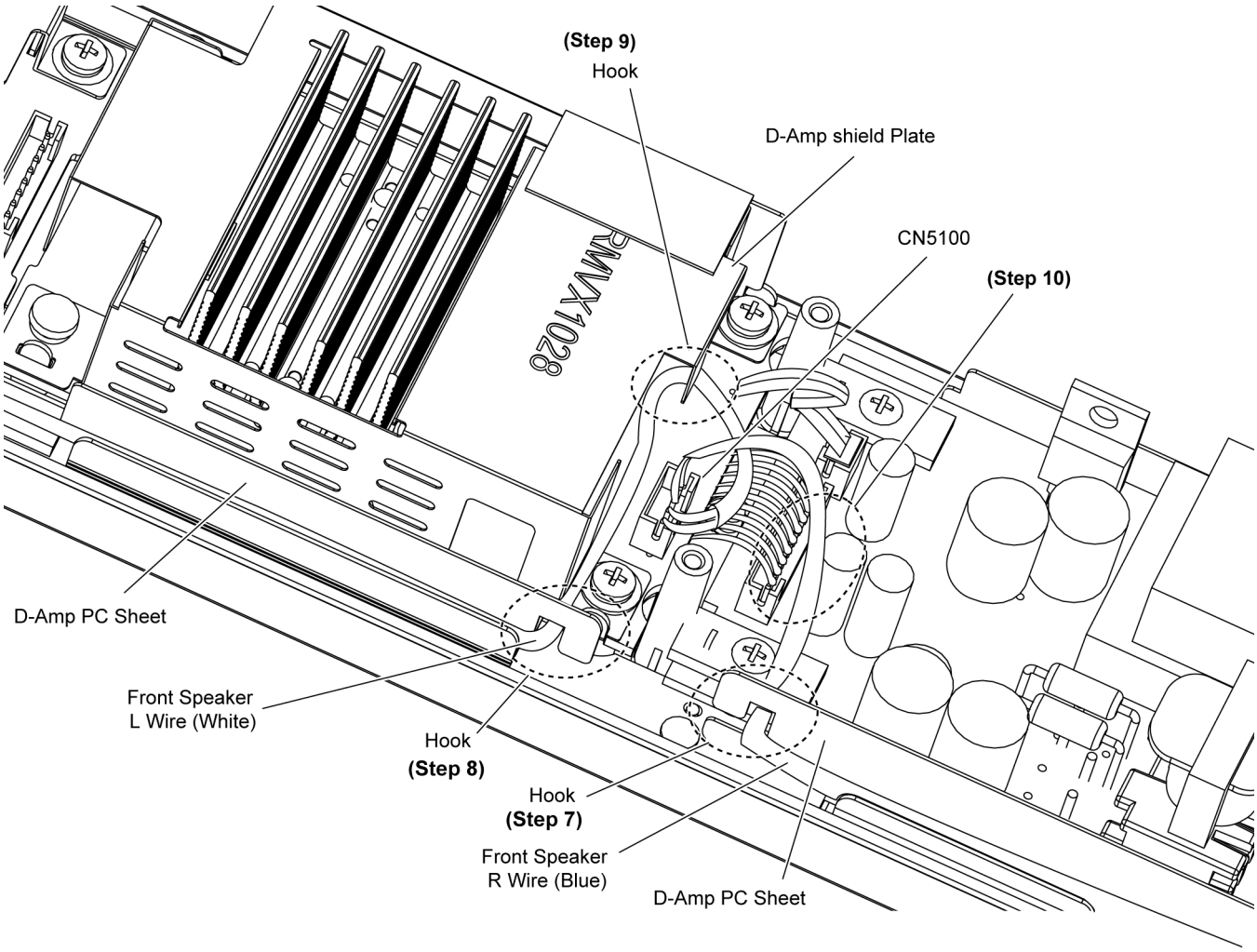
Step 4 : Dress the Front Speaker L wire is properly between Main Chassis and D-Amp PC Sheet.



Step 5 : Dress the Front Speaker L wire is properly into the Front Panel Assembly 7 ribs.
Step 6 : Dress the Front Speaker L Wire is properly into Main Chassis and D-Amp PC Sheet.



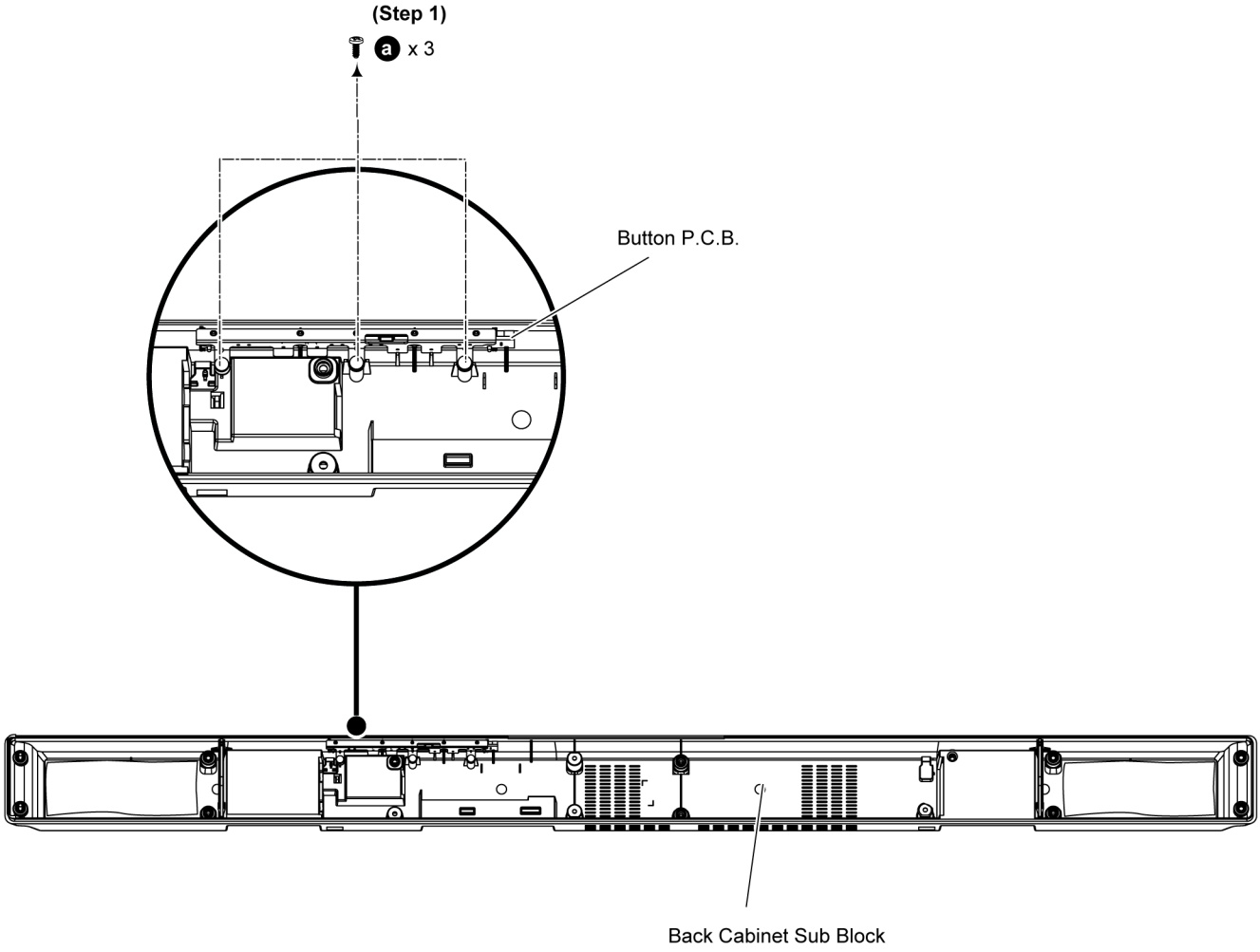
Step 7 : Front Speaker R Wire (Blue) across the hook of D-Amp PC Sheet as dot box digrame shown.
Step 8 : Front Speaker L Wire (White) across the hook of D-Amp PC Sheet as dot box digrame shown.
Step 9 : Front Speaker L Wire (White) across the hook of D-Amp Shield Plate.
Step 10 : After 4P speaker wire is connect into connector (CN5100) on D-Amp P.C.B., dress Front Speaker into Dot Box as diagrame shown.



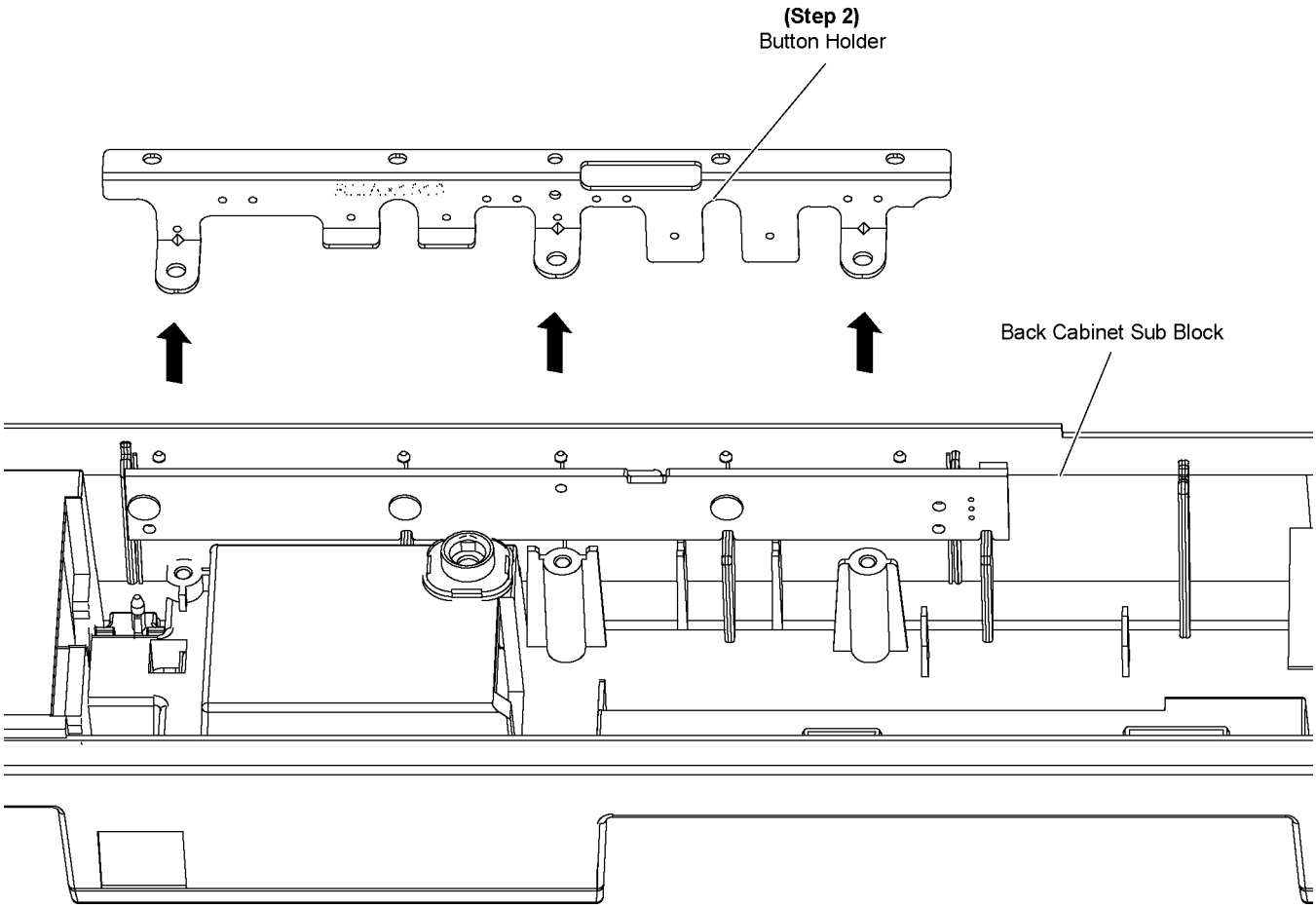
9.3.2. Disassembly of Button P.C.B.

• Refer to “Disassembly of Back Cabinet Sub Block”.

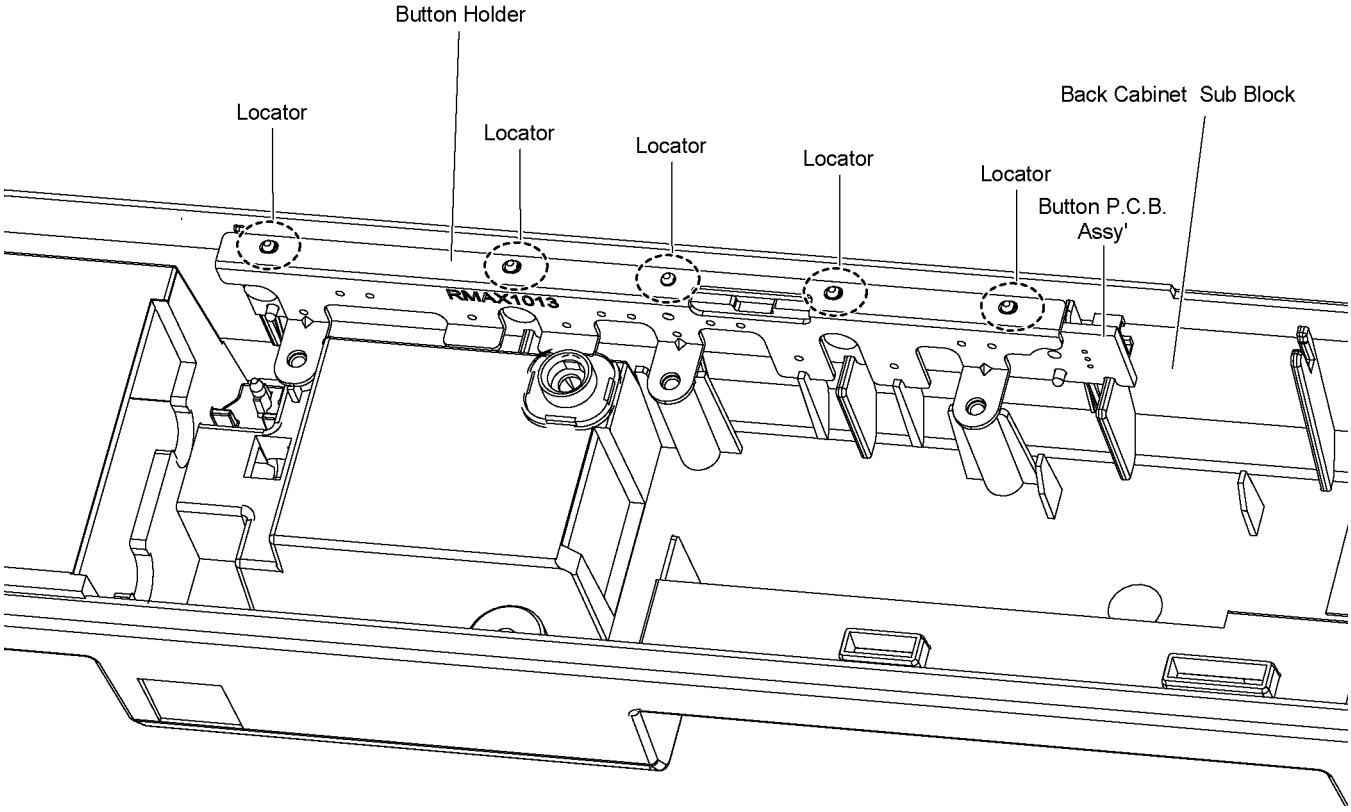
Step 1 : Remove 3 screws.



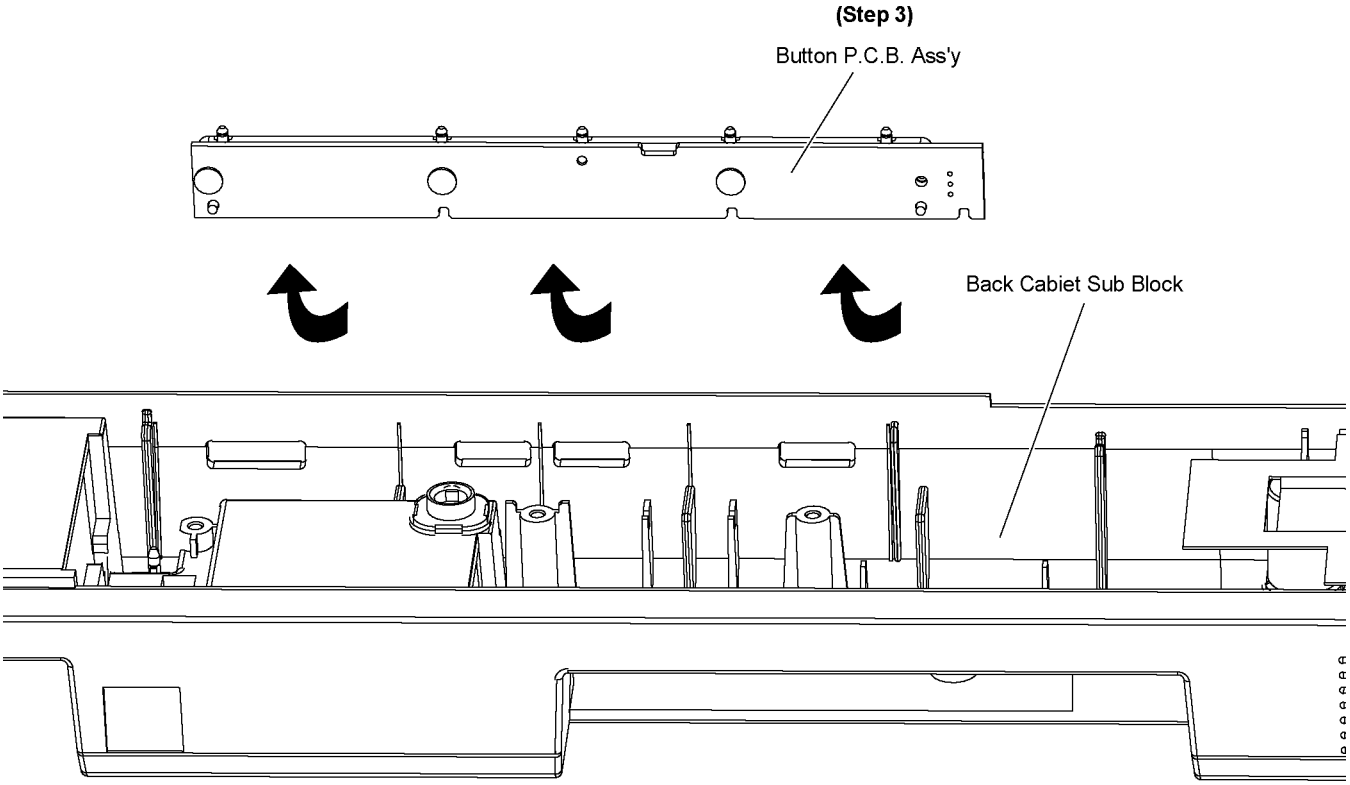
Step 2 : Lift up to remove Button Holder.



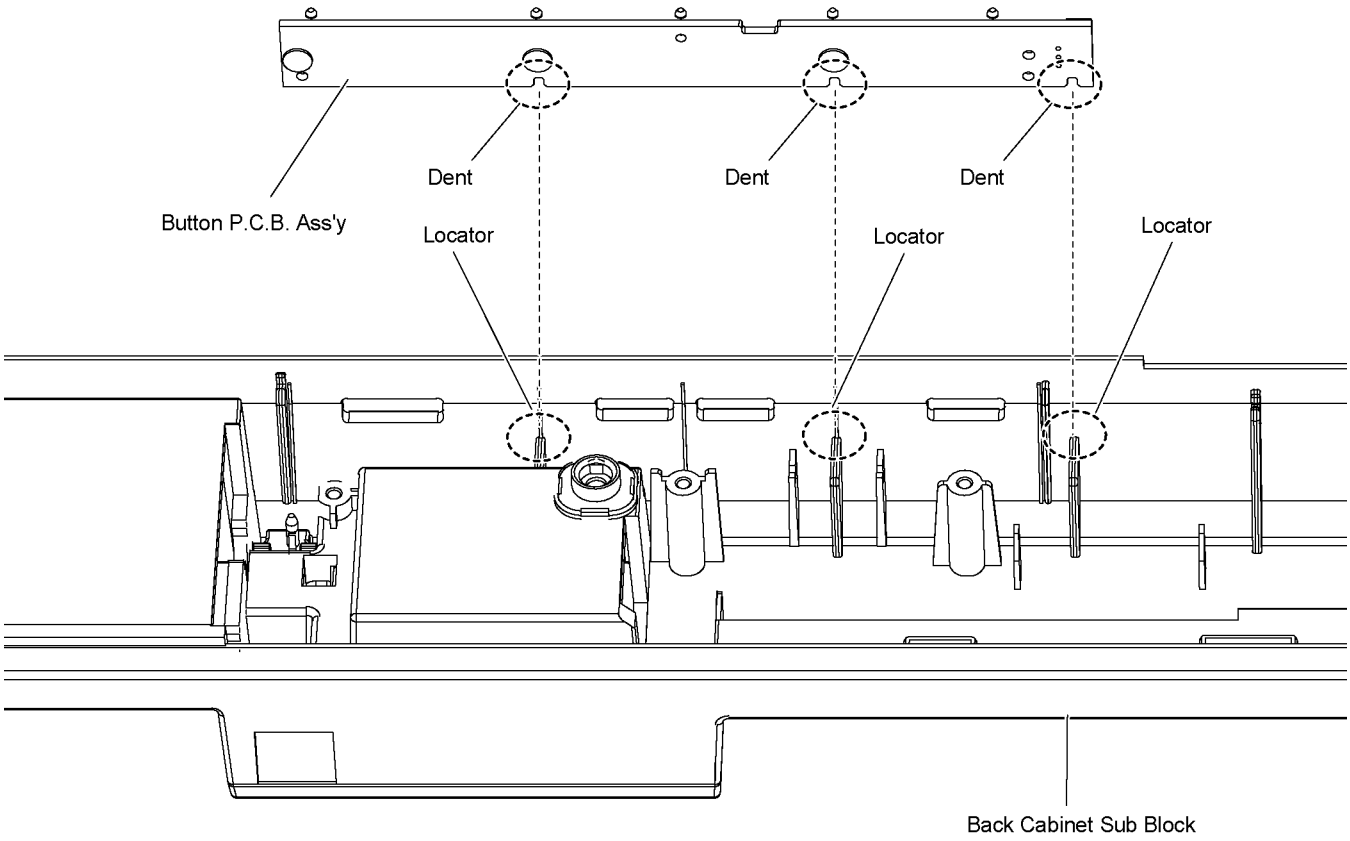
Caution: During assembling, ensure that Button Holder is properly located & fully seated onto Back Cabinet Sub Block.



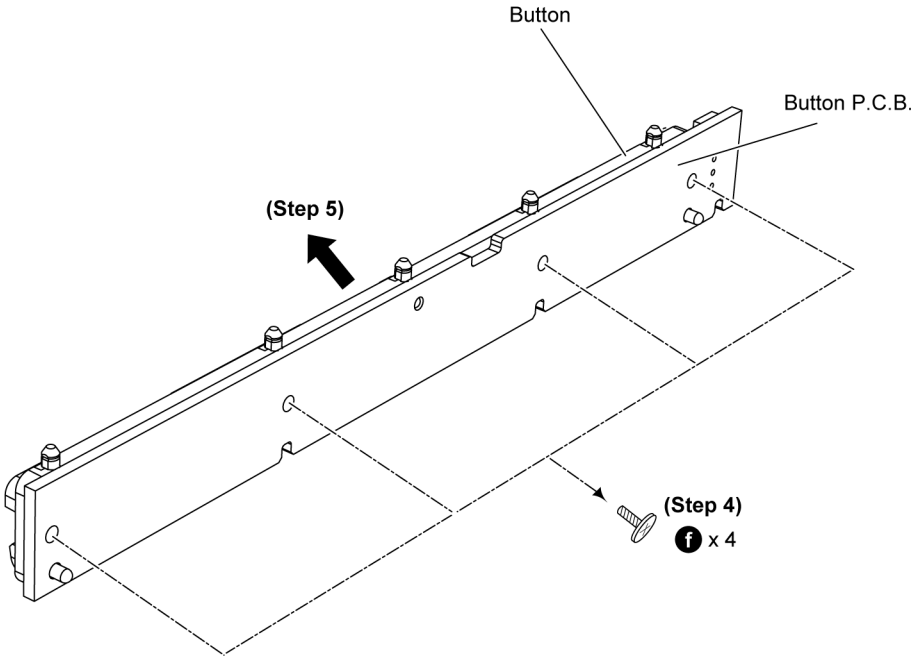
Step 3 : Lift up to remove Button P.C.B. Ass'y.



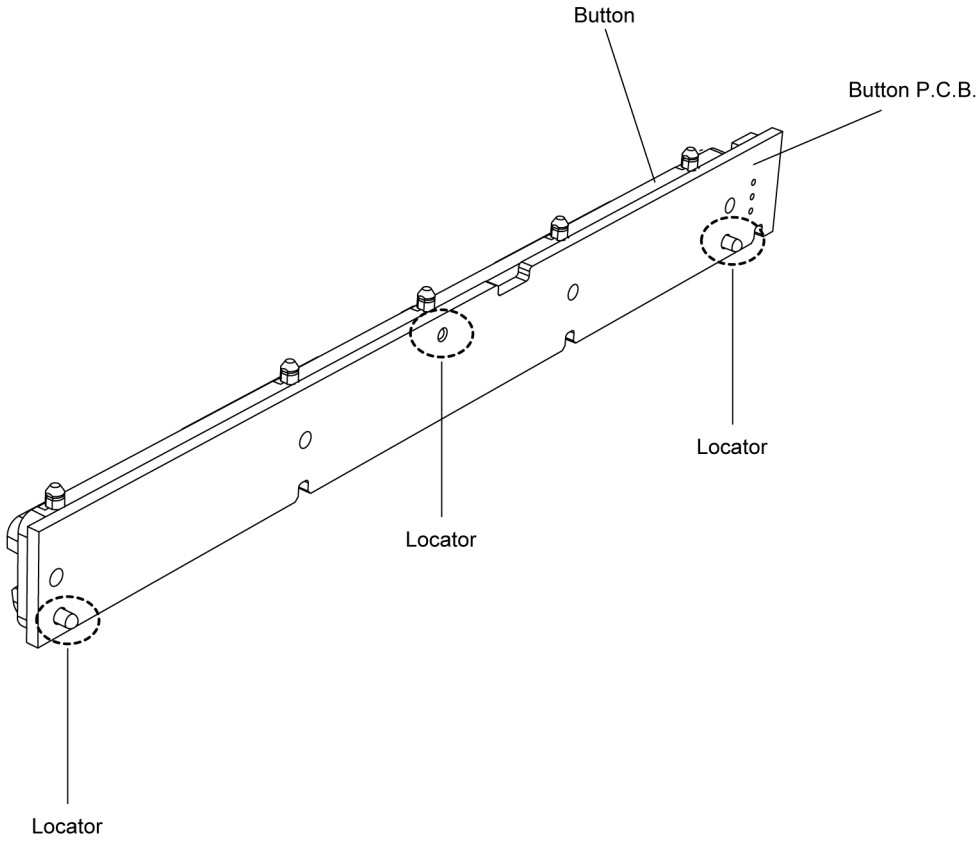
Caution: During assembling, ensure that Button P.C.B. is properly located & fully seated onto Back Cabinet Sub Block.



Step 4 : Remove 4 screws.
Step 5 : Remove Button from Button P.C.B..



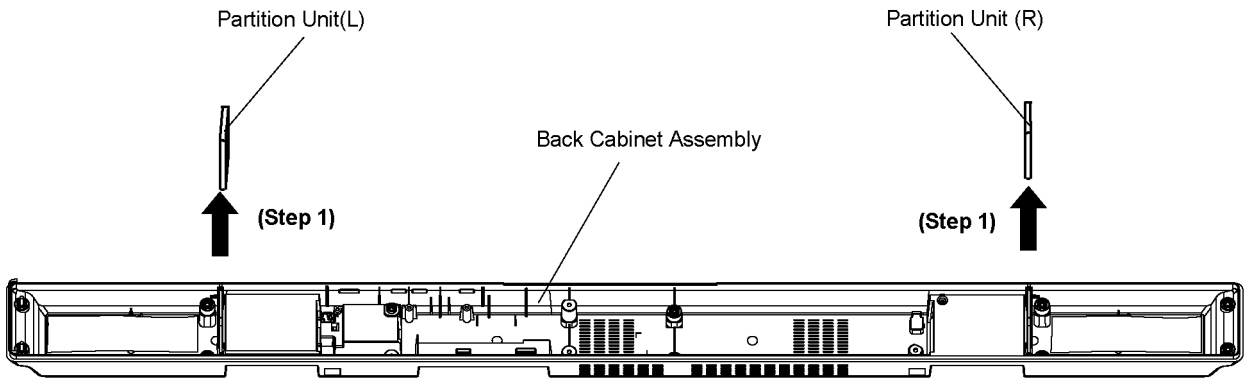
Caution: During assembling, ensure that Button is properly located & fully seated onto Button P.C.B. before screwing.



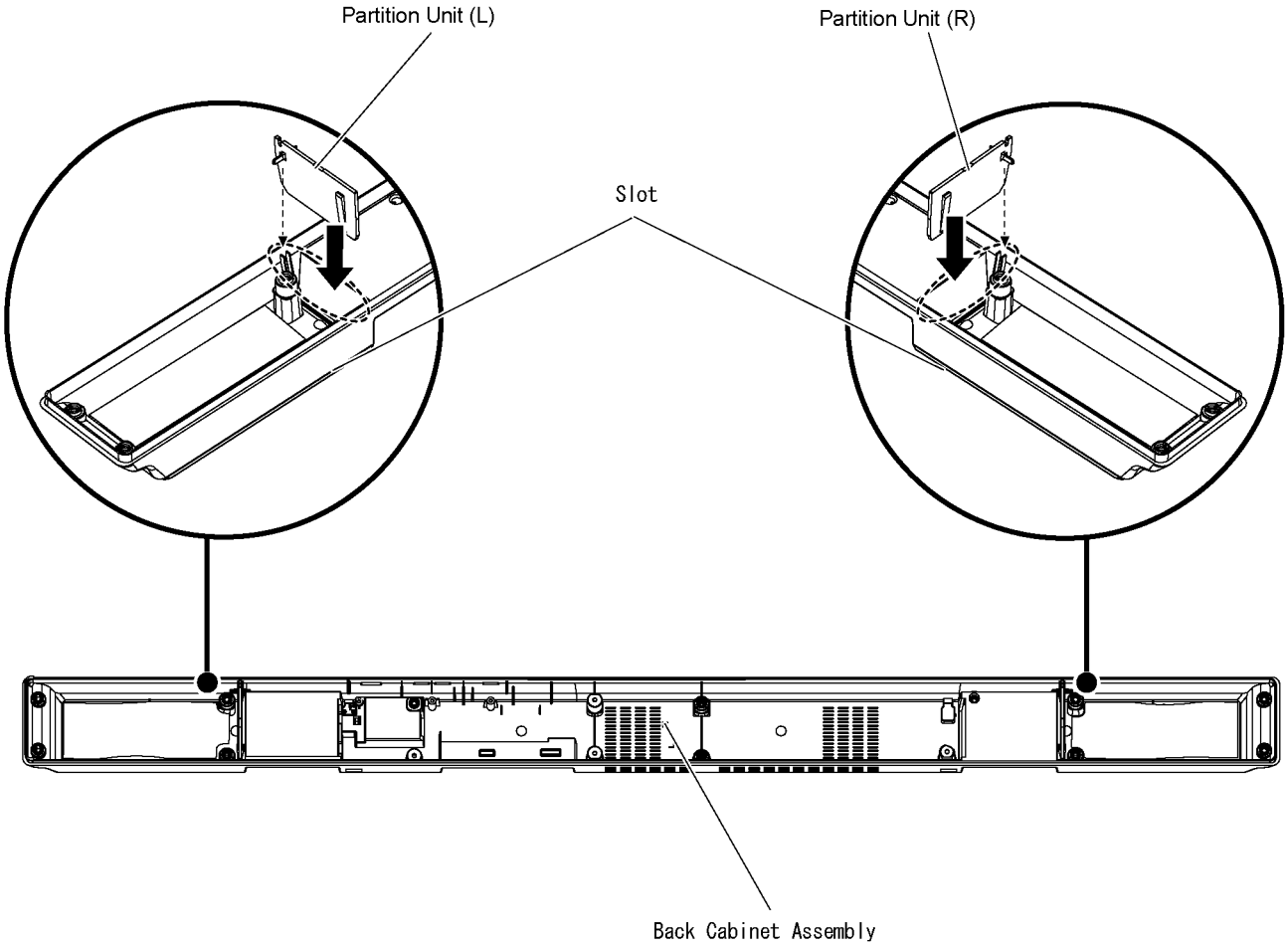
9.3.3. Disassembly of Back Cabinet Assembly

- Refer to “Disassembly of Back Cabinet Sub Block”.
- Refer to “Disassembly of Button P.C.B.”.

Step 1 : Lift up 2 Partition Unit L and Partition Unit R.



Caution : During assembling, ensure that both Partition Unit (L&R) is properly inserted into slot & fully seated onto Back Cabinet Assembly.



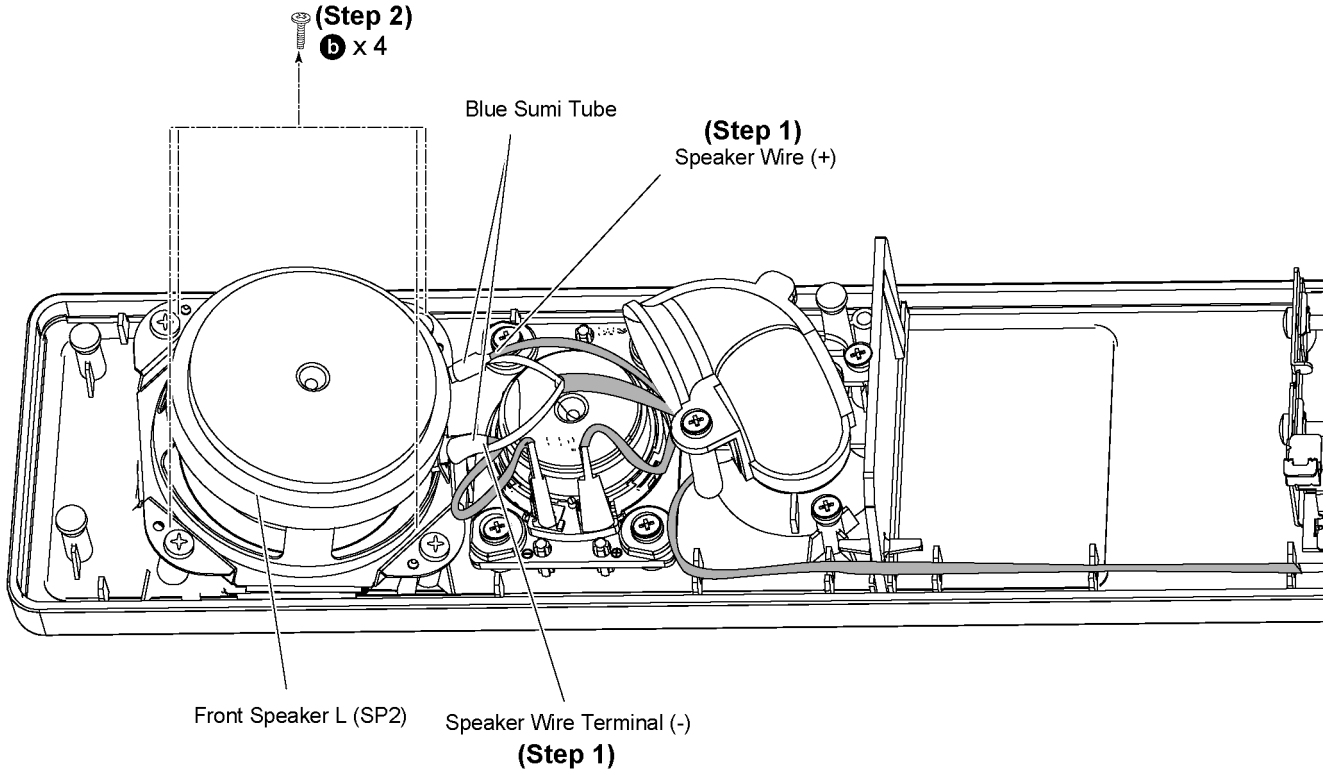
9.3.4. Disassembly of Front Speaker L (SP1)

• Refer to “Disassembly of Back Cabinet Sub Block”.

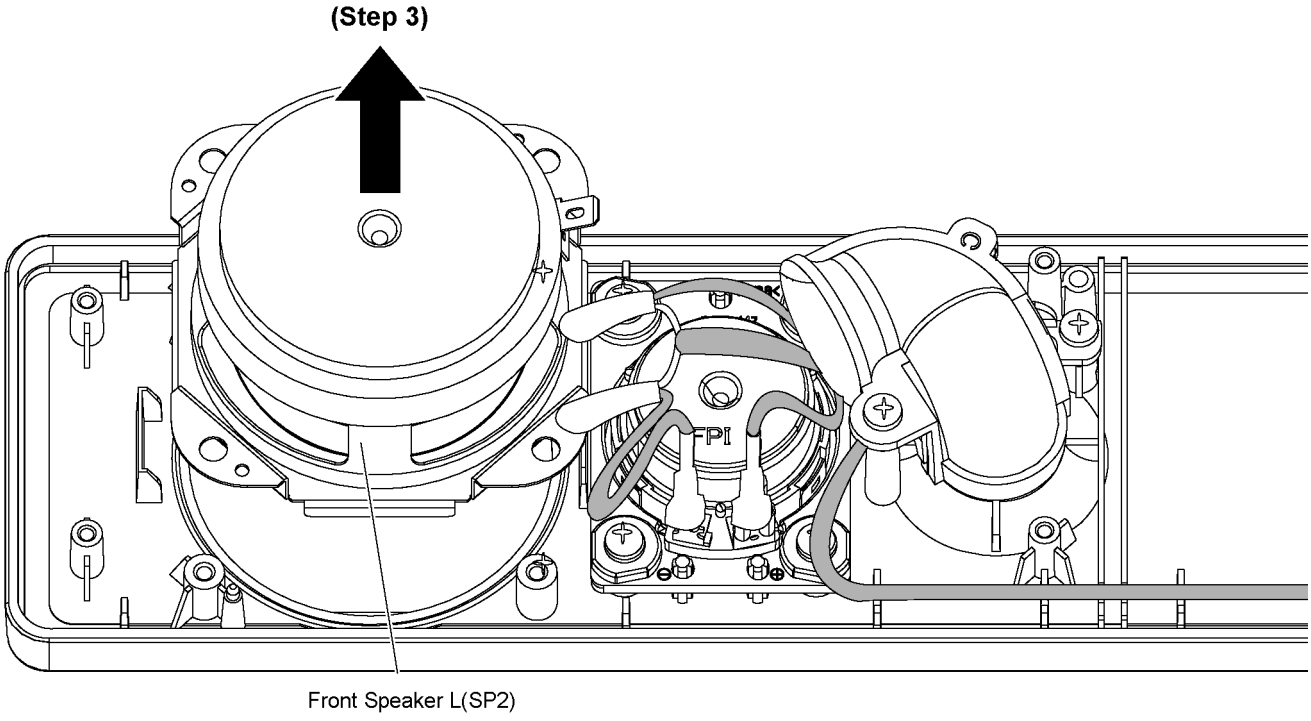
Step 1 : Detach the (+) and (-) speaker wire terminals.

Caution During assembling, ensure that the speaker wire terminals (+) and (-) are correctly connected.

Step 2 : Remove 4 screws.



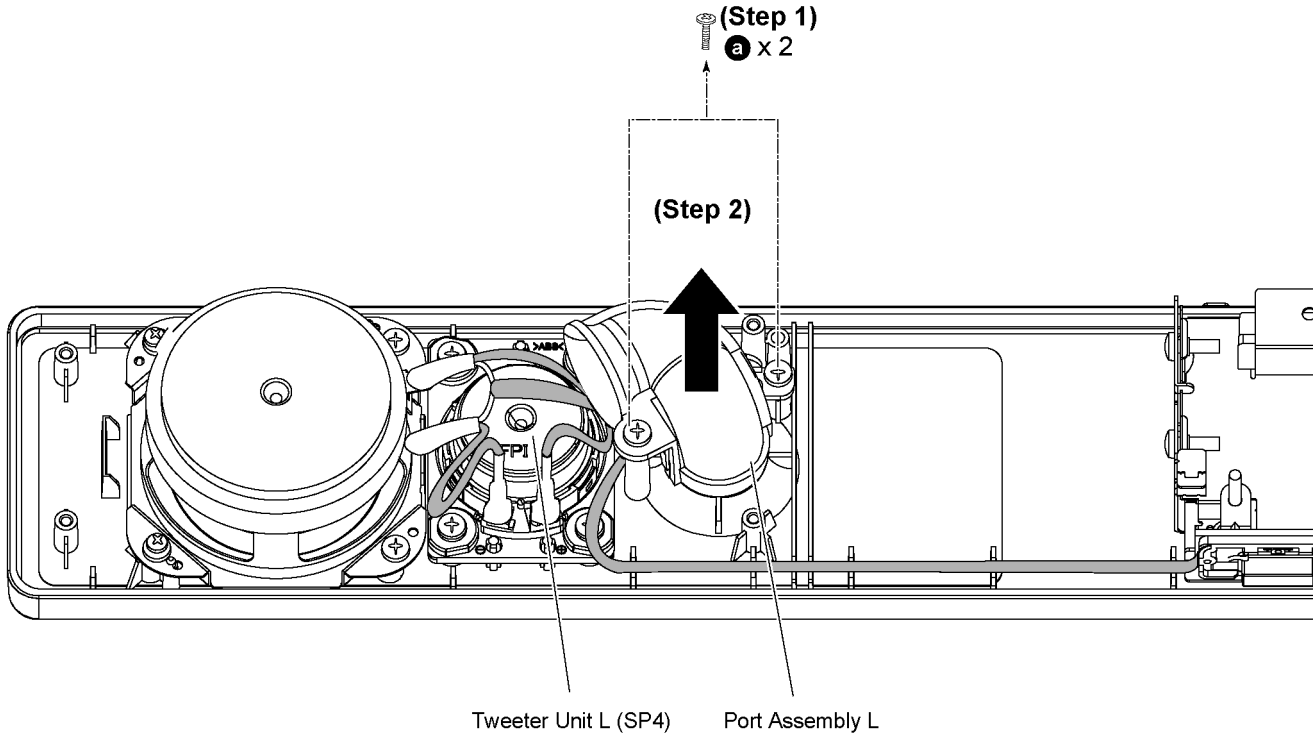
Step 3 : Remove the Front Speaker L (SP2).



9.3.5. Disassembly of Tweeter Unit L(SP4)

• Refer to “Disassembly of Back Cabinet Sub Block”.

Step 1 : Remove 2 screws.
Step 2 : Remove Port Assembly L as arrow shown.

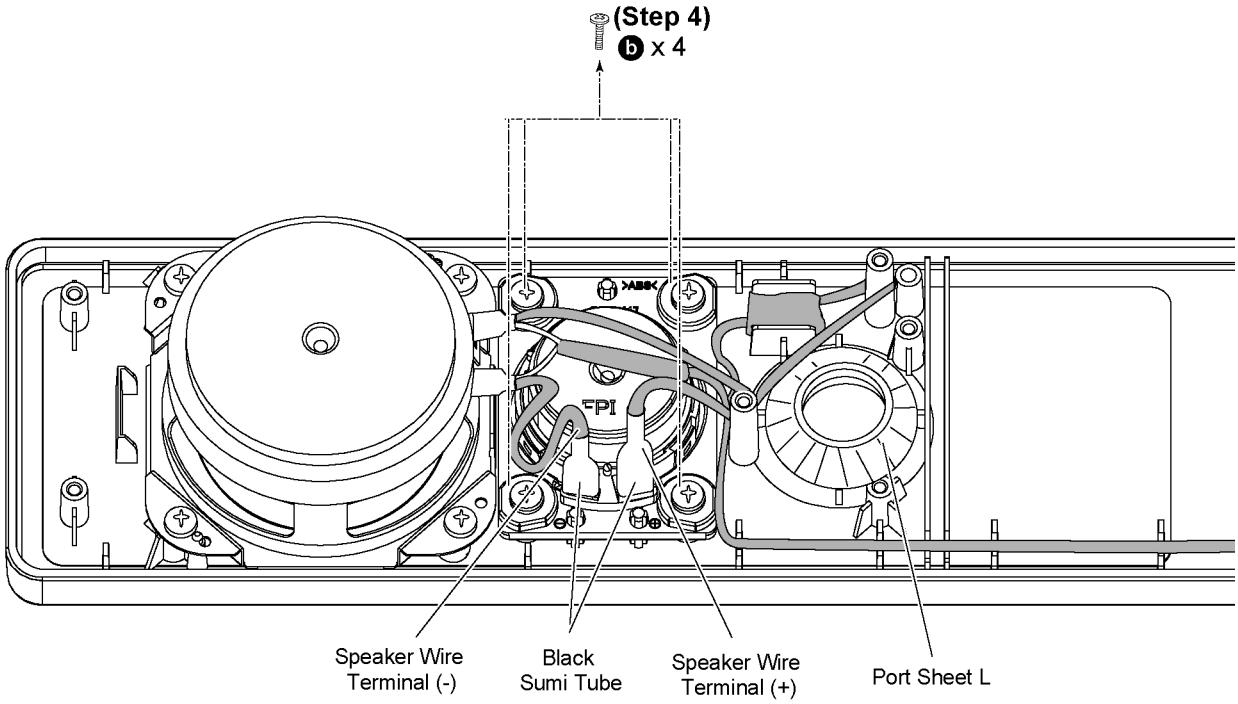


Step 3 : Detach the (+) and (-) speaker terminals in Tweeter Unit (L).

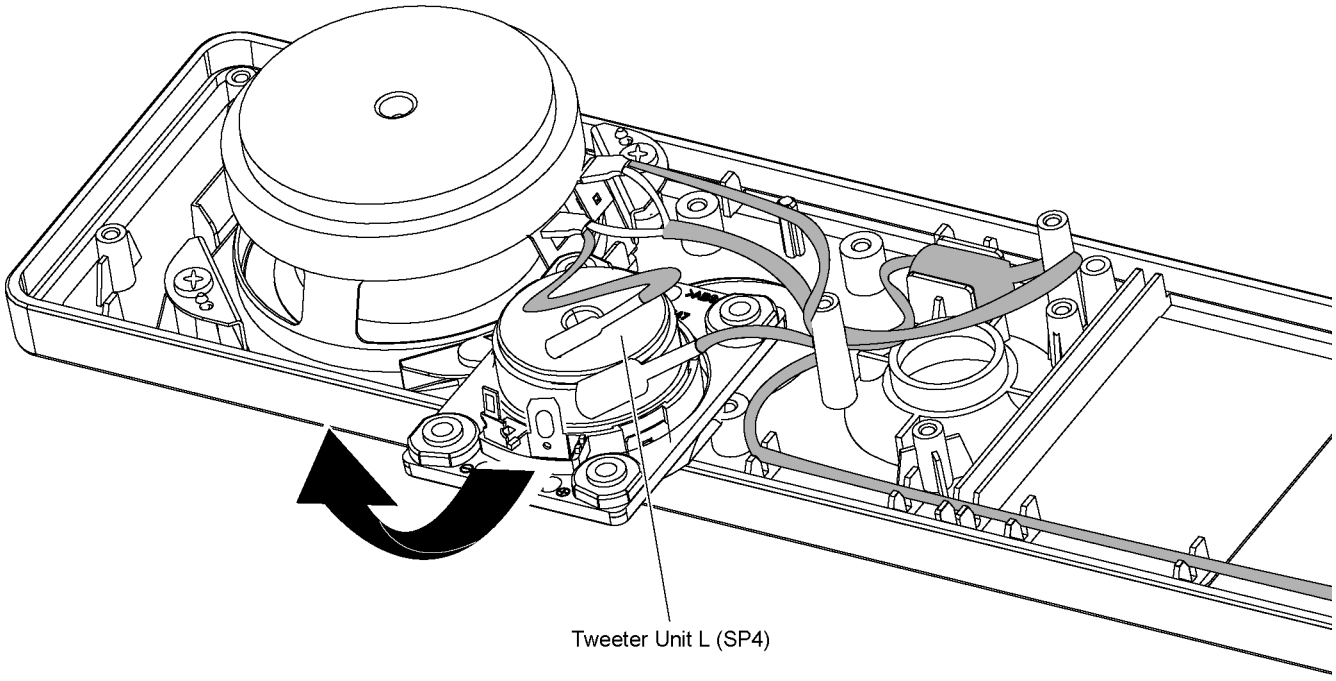
Caution : During assembling, ensure that the speaker wire terminal (+) and (-) are correctly connected.

Step 4 : Remove 4 screws.

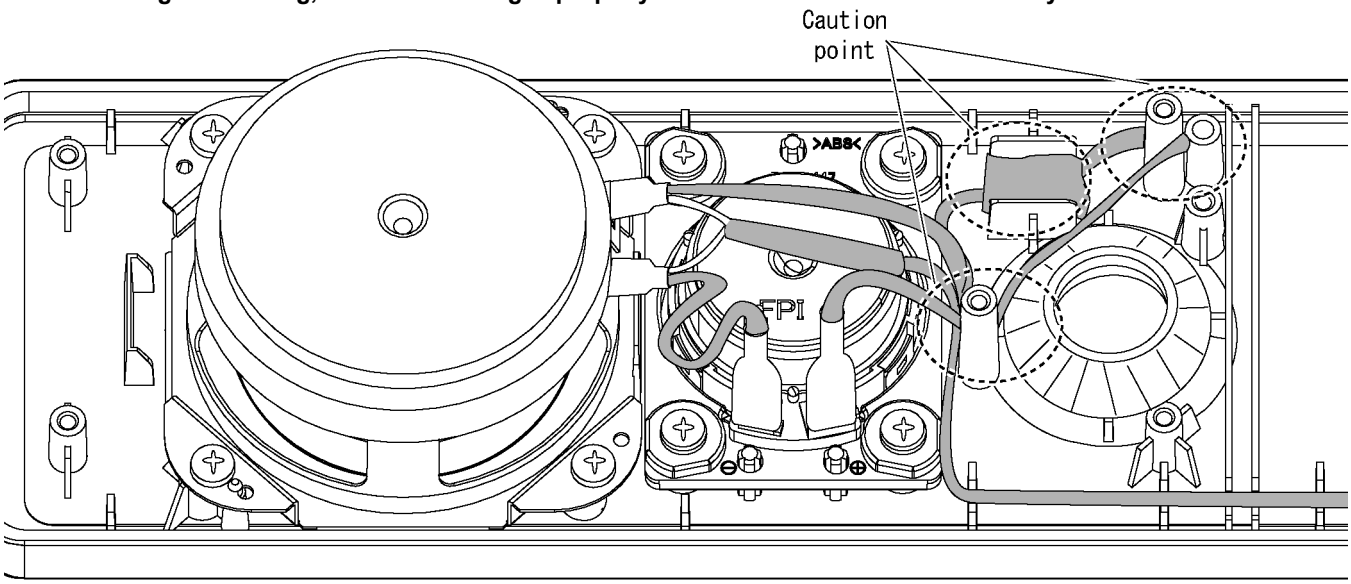
Caution : Replace the Port Sheet L if it is torn.



Step 5 : Lift up to remove Tweeter Unit L as arrow shown.



Caution : During assembling, ensure the wiring is properly dressed into Front Panel Assembly.



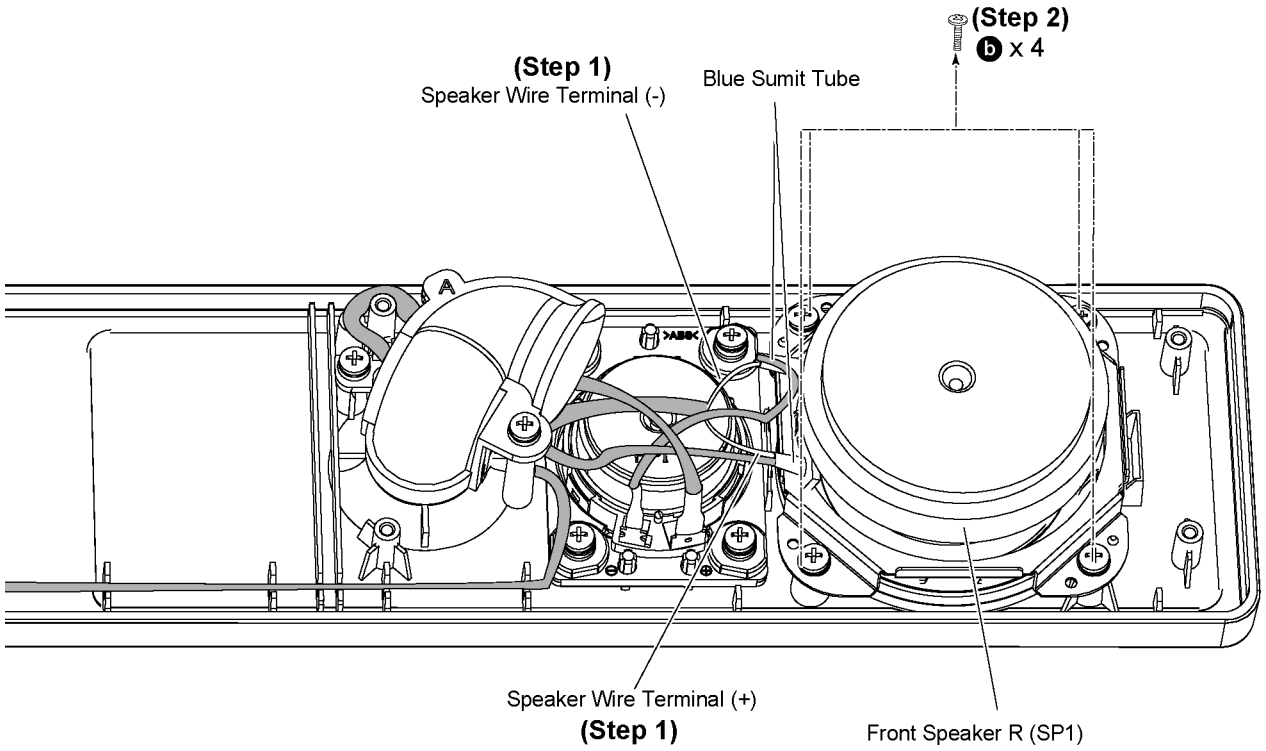
9.3.6. Disassembly of Front Speaker R (SP1)

• Refer to “Disassembly of Back Cabinet Sub Block”.

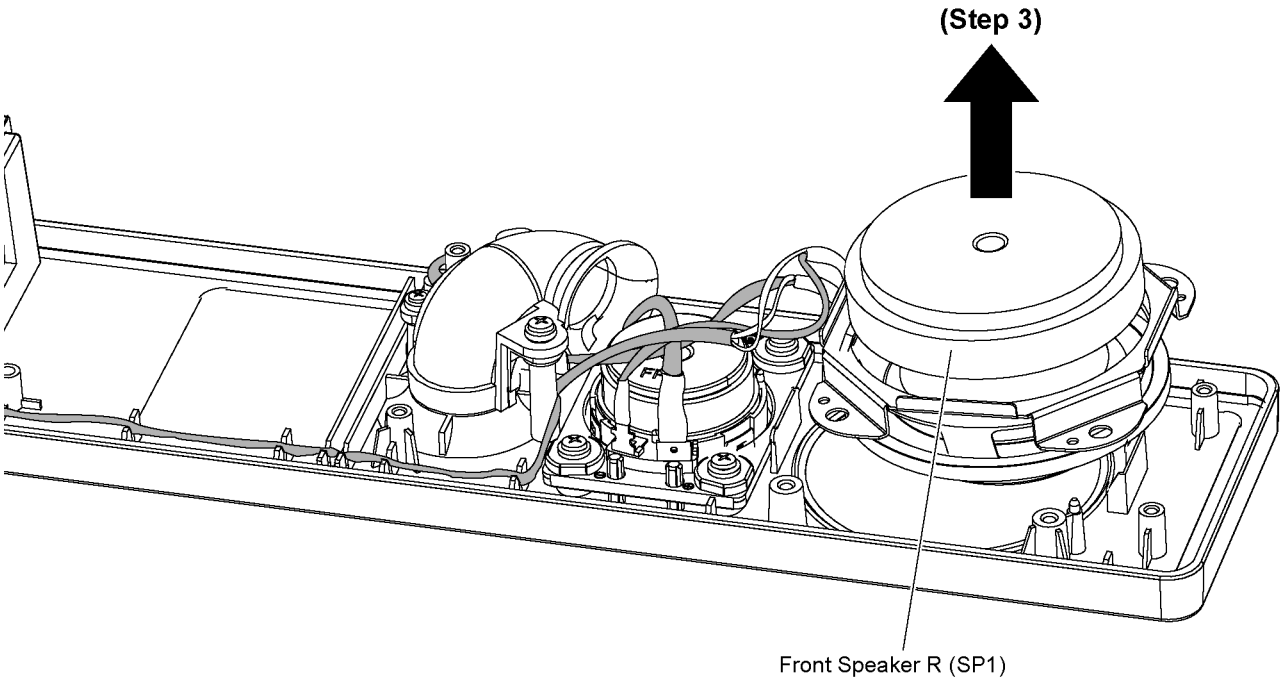
Step 1 : Detach the (+) and (-) speaker terminals.

Caution : During assembling, ensure the speaker wire terminal (+) and (-) are correctly connected.

Step 2 : Remove 4 screws.



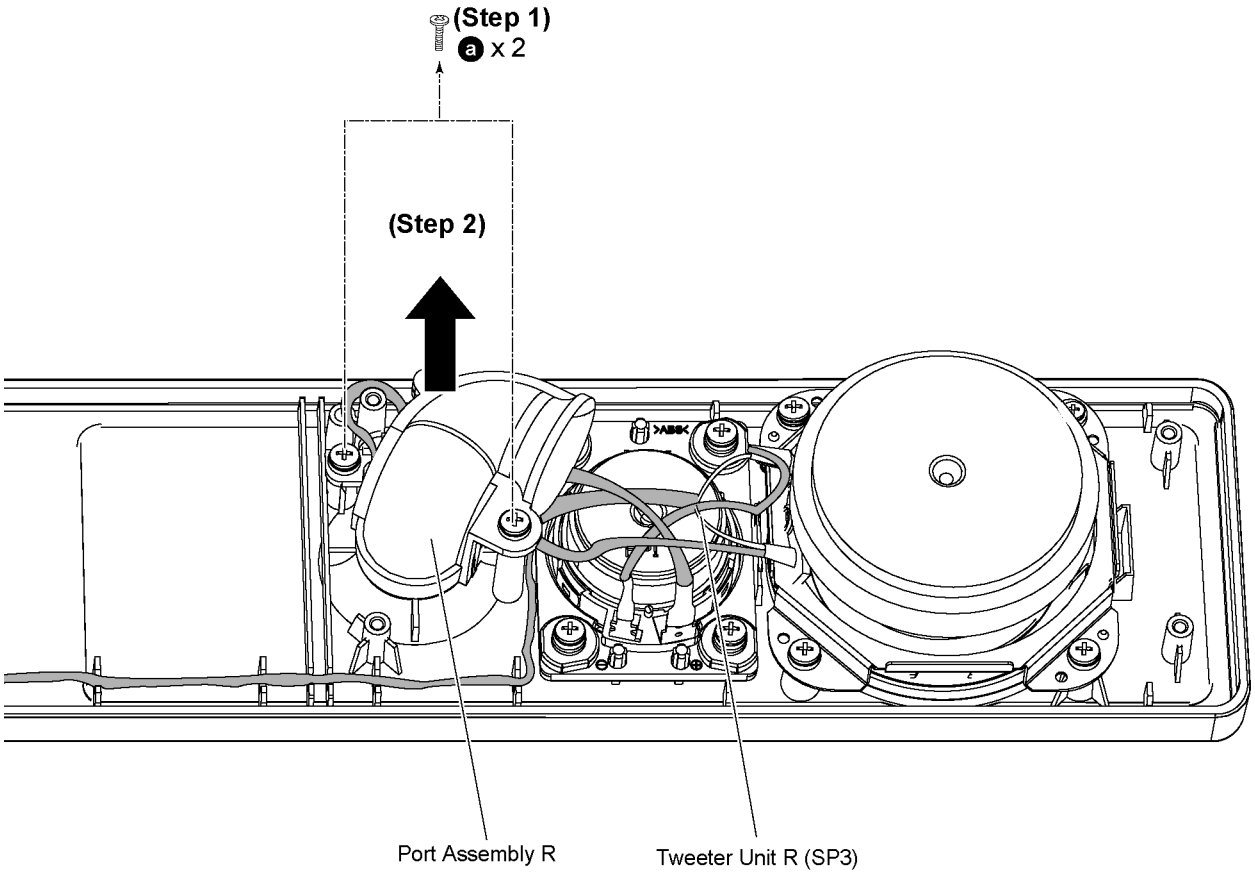
Step 3 : Remove the Front Speaker R (SP1).



9.3.7. Disassembly of Tweeter Unit R (SP3)

• Refer to “Disassembly of Back Cabinet Sub Block”.

Step 1 : Remove 2 screws.
Step 2 : Remove Port Assembly R as arrow shown.

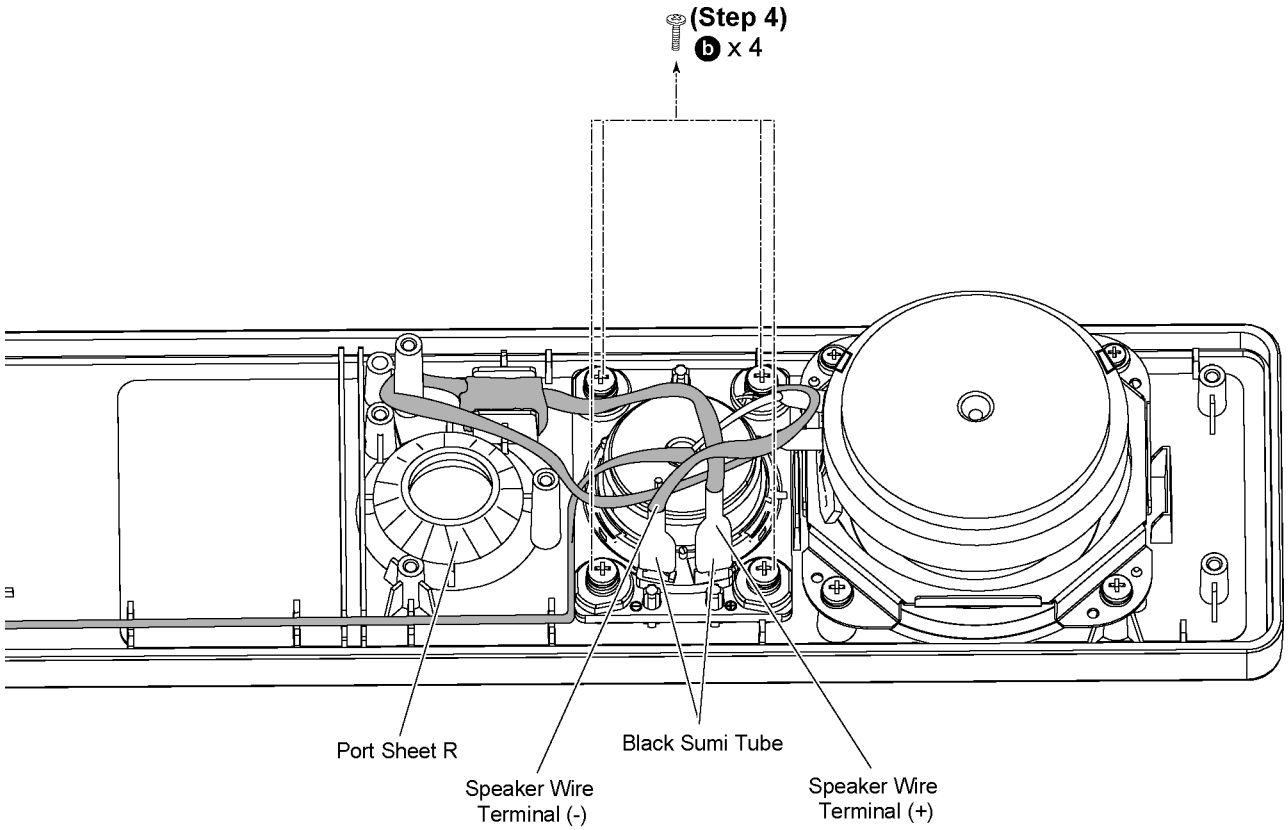


Step 3 : Detach the (+) and (-) speaker terminals.

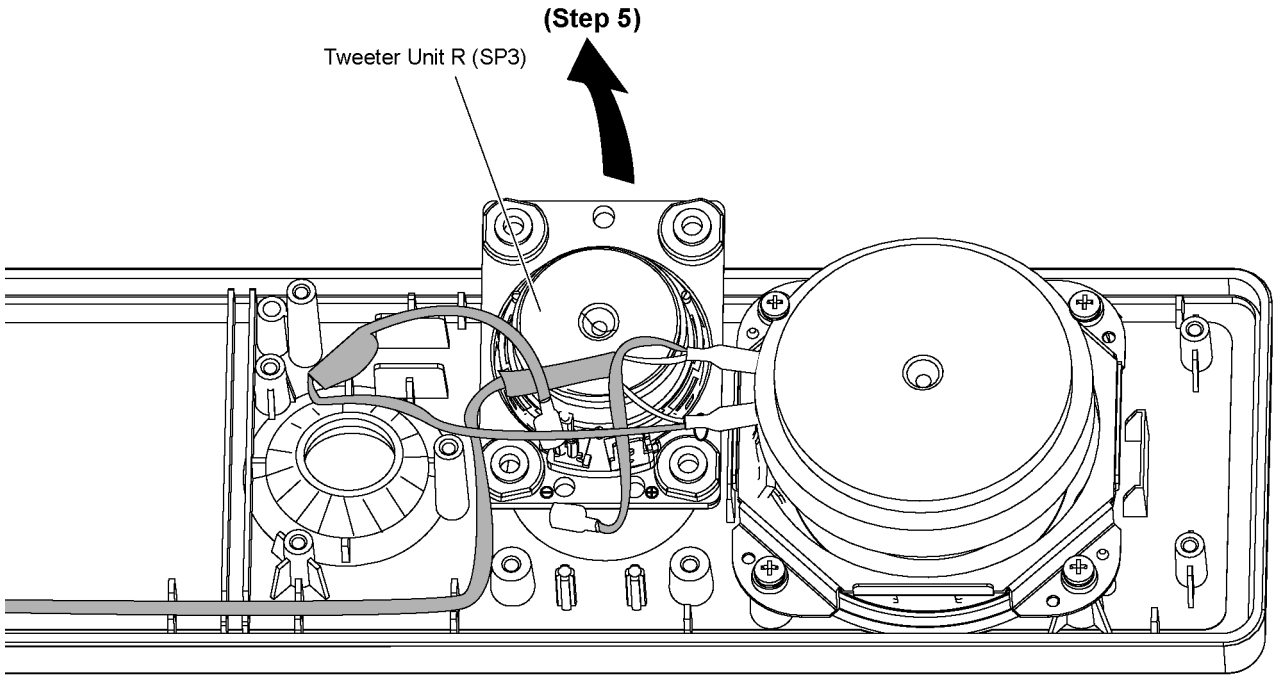
Caution : During assembling, ensure the speaker wire terminals (+) and (-) are correctly connected.

Step 4 : Remove 4 screws.

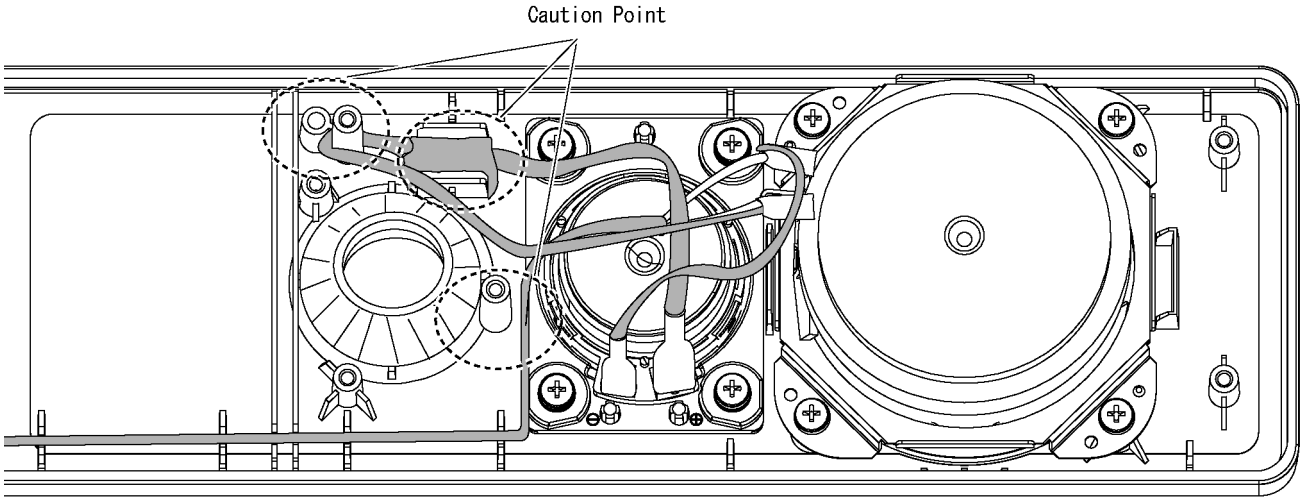
Caution : Replace the Port Sheet R if it is torn.



Step 5 : Lift up to remove Tweeter Unit R as arrow shown.



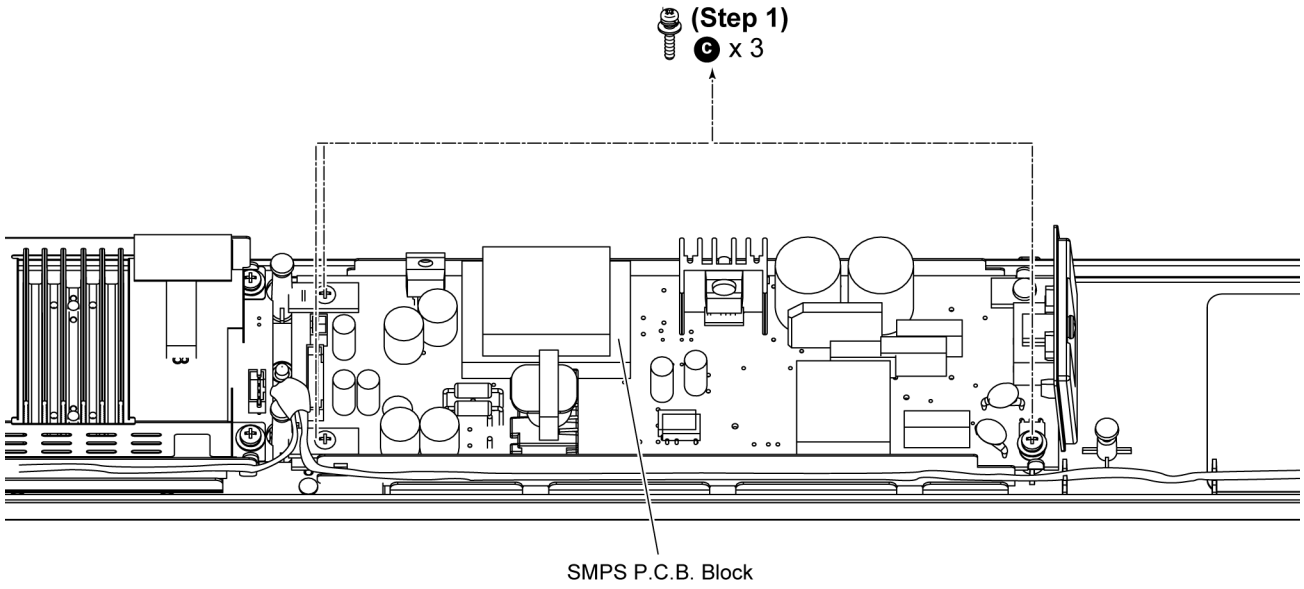
Caution : During assembling, ensure the wiring is properly dressed into Front Panel Assembly.



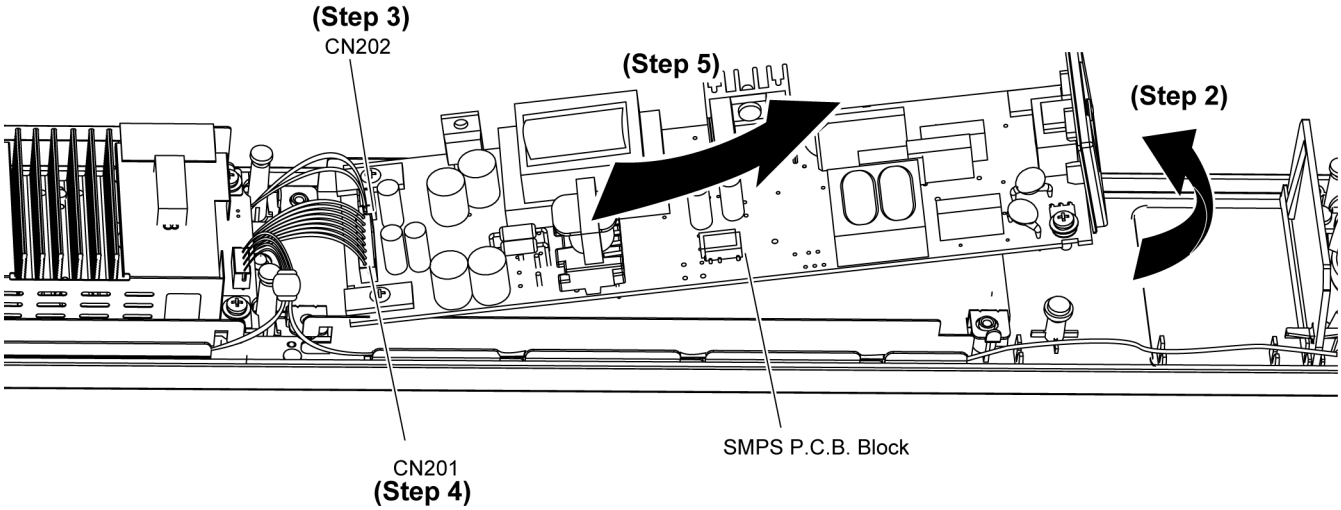
9.3.8. Disassembly of SMPS P.C.B. Block

• Refer to “Disassembly of Back Cabinet Sub Block”.

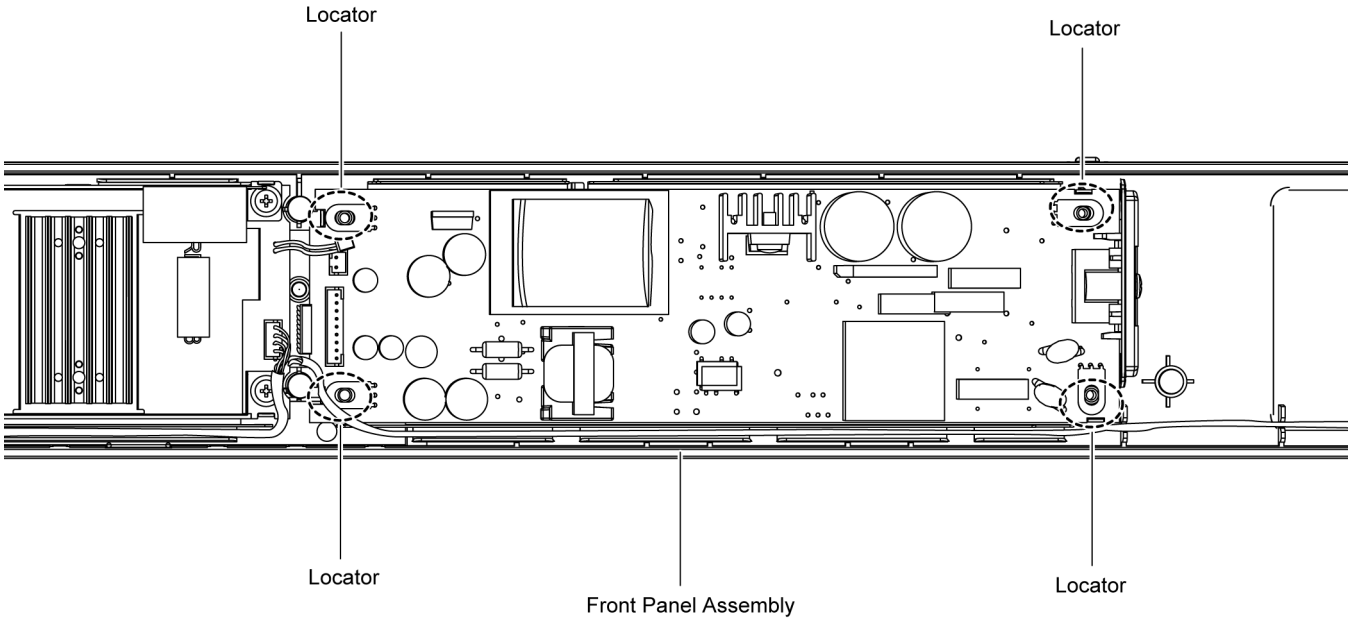
Step 1 : Remove 3 screws.



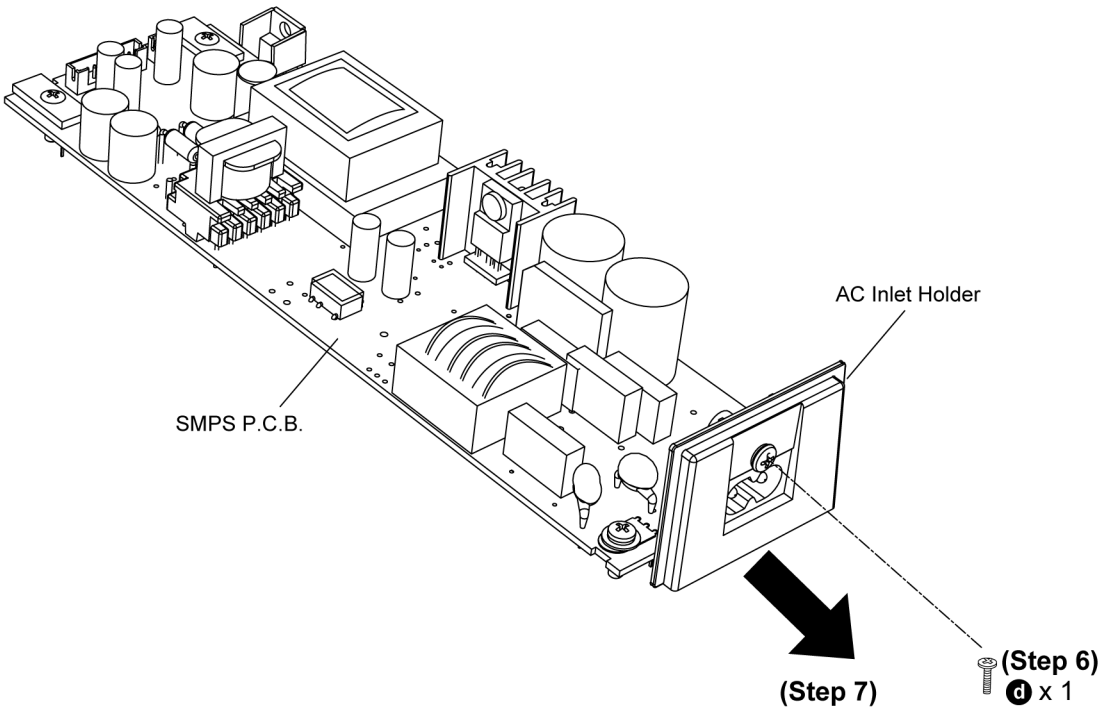
Step 2 : Slightly lift up SMPS P.C.B. Block as arrow shown.
Step 3 : Detach 2P Cable to the connector (CN202) on SMPS P.C.B..
Step 4 : Detach 9P Cable to the connector (CN201) on SMPS P.C.B..
Step 5 : Remove SMPS P.C.B. Block as arrow shown.



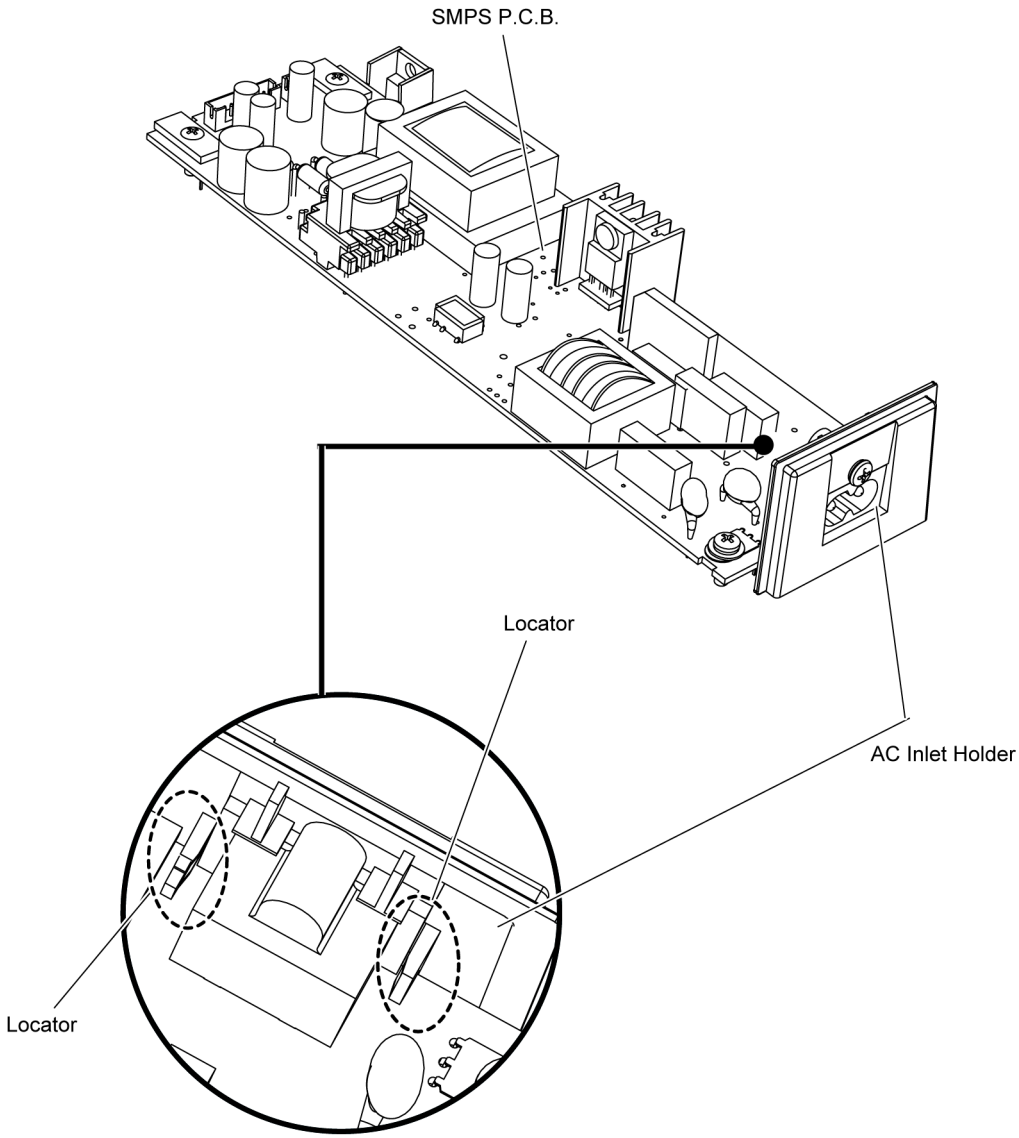
Caution : During assembling, ensure that SMPS P.C.B. is properly located & fully seated onto Front Panel Assembly before screwing.



Step 6 : Remove 1 screw.
Step 7 : Remove AC Inlet Holder from SMPS P.C.B..



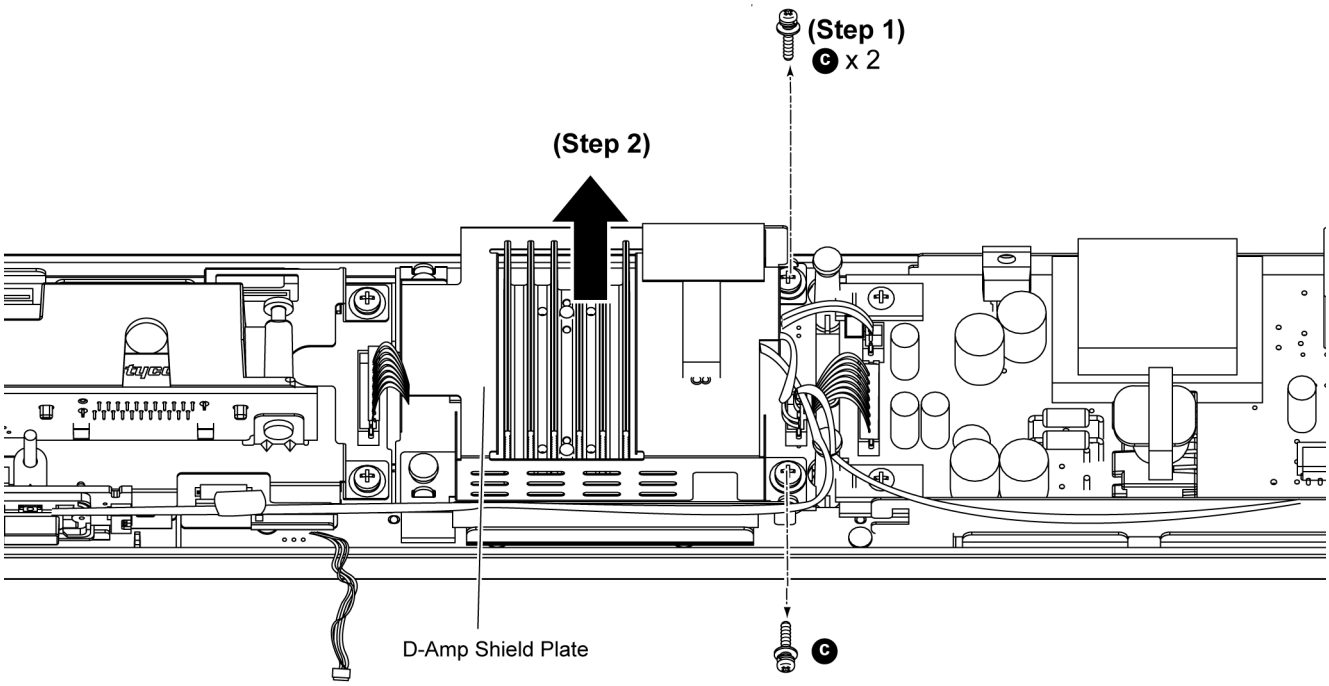
Caution: During assembling, ensure that AC Inlet Holder is properly located & fully seated onto SMPS P.C.B. before screwing.



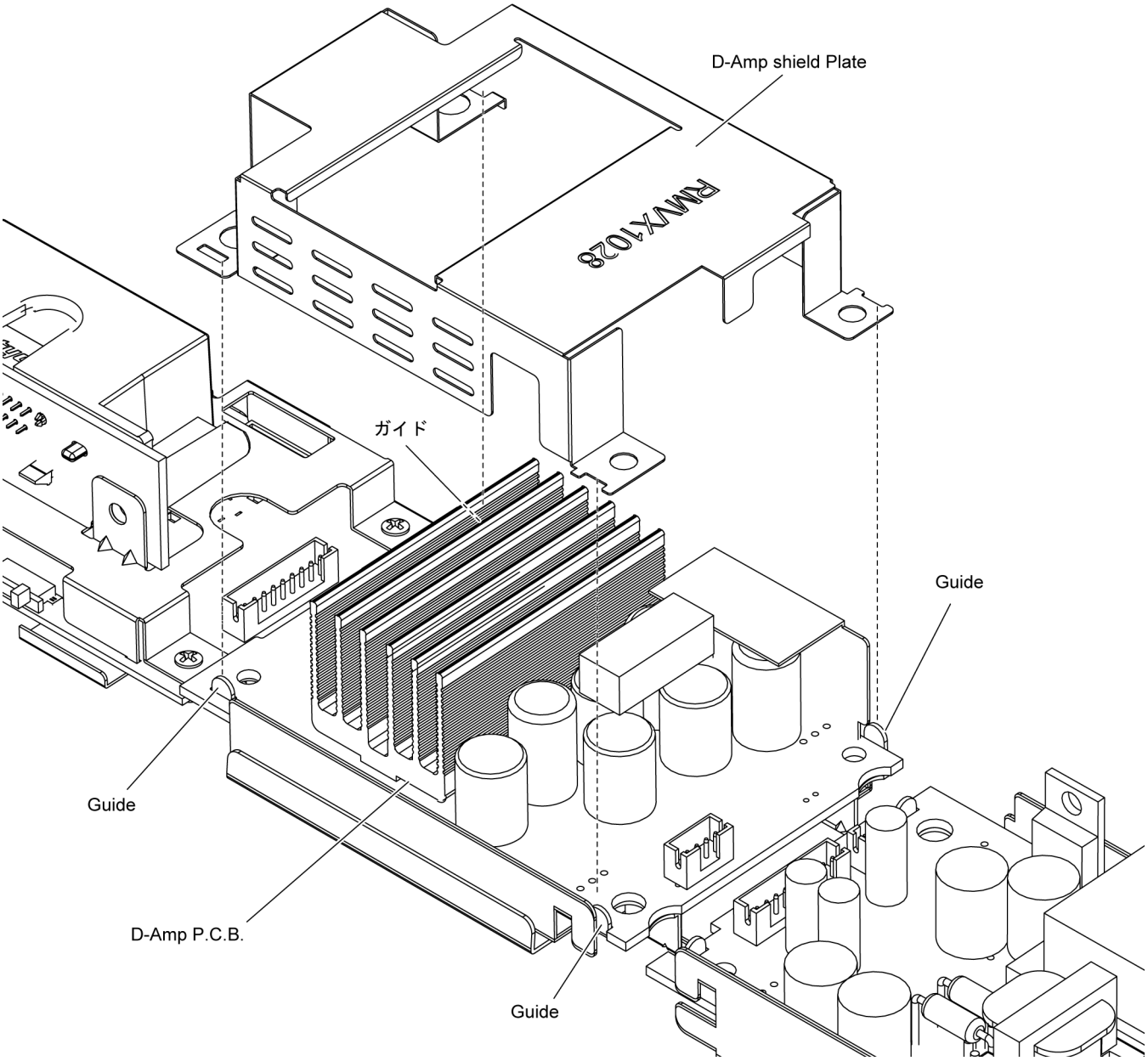
9.3.9. Disassembly of D-Amp P.C.B.

• Refer to “Disassembly of Back Cabinet Sub Block”.

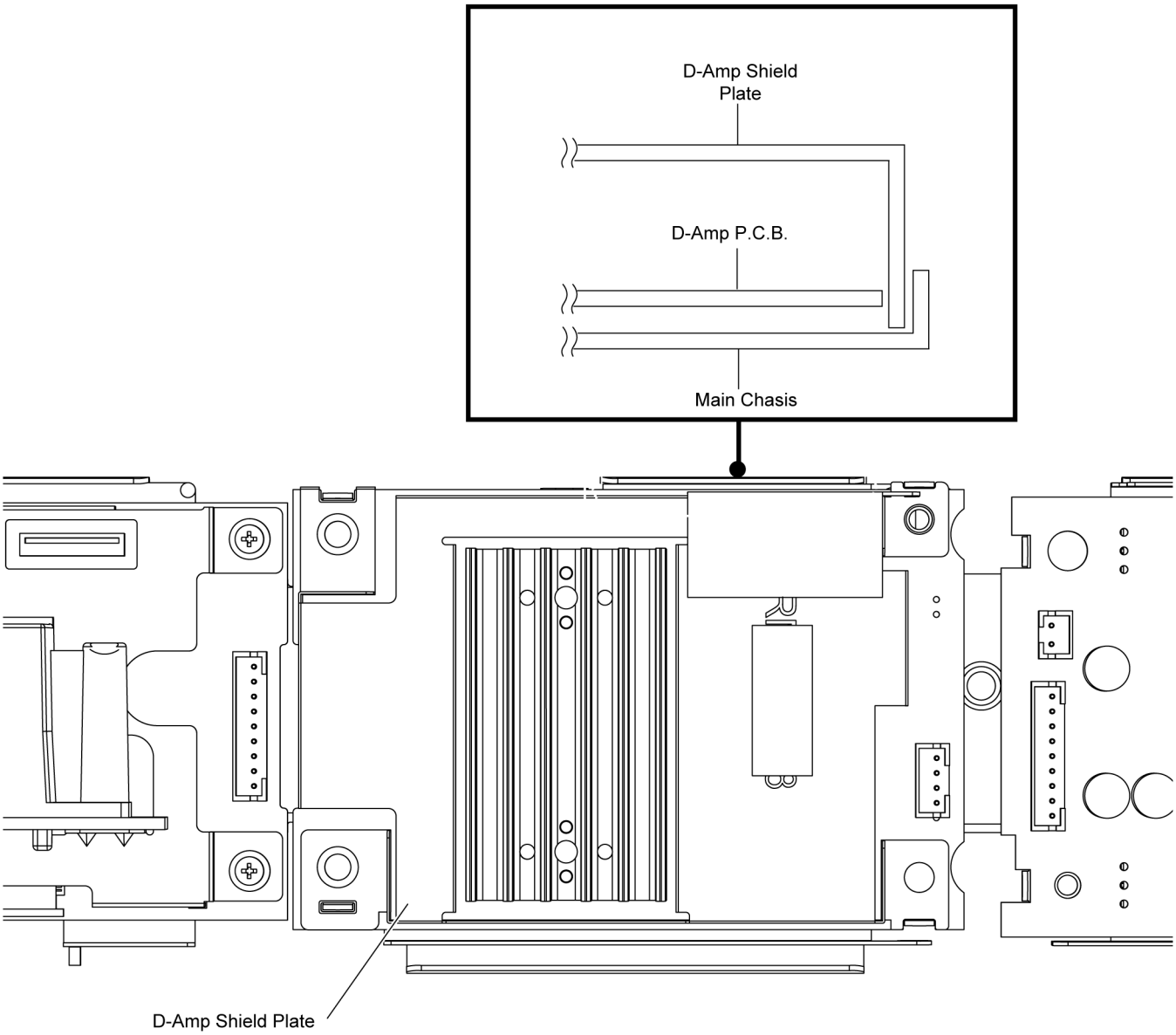
Step 1 : Remove 2 screws.
Step 2 : Remove D-Amp Shield Plate.



Caution : During assembling, ensure that D-Amp Shield Plate is properly located into Main Chassis guides.



Caution : During assembling, ensure that D-Amp PC Sheet is located properly between D-Amp P.C.B. and Main Chassis as diagram shown.



Step 3 : Detach 2P Cable to the connector (CN202) on SMPS P.C.B..

Caution : During assembling, ensure that 2P Cable is connected properly as diagram shown.

Step 4 : Detach 4P Cable to the connector (CN5100) on D-Amp P.C.B..

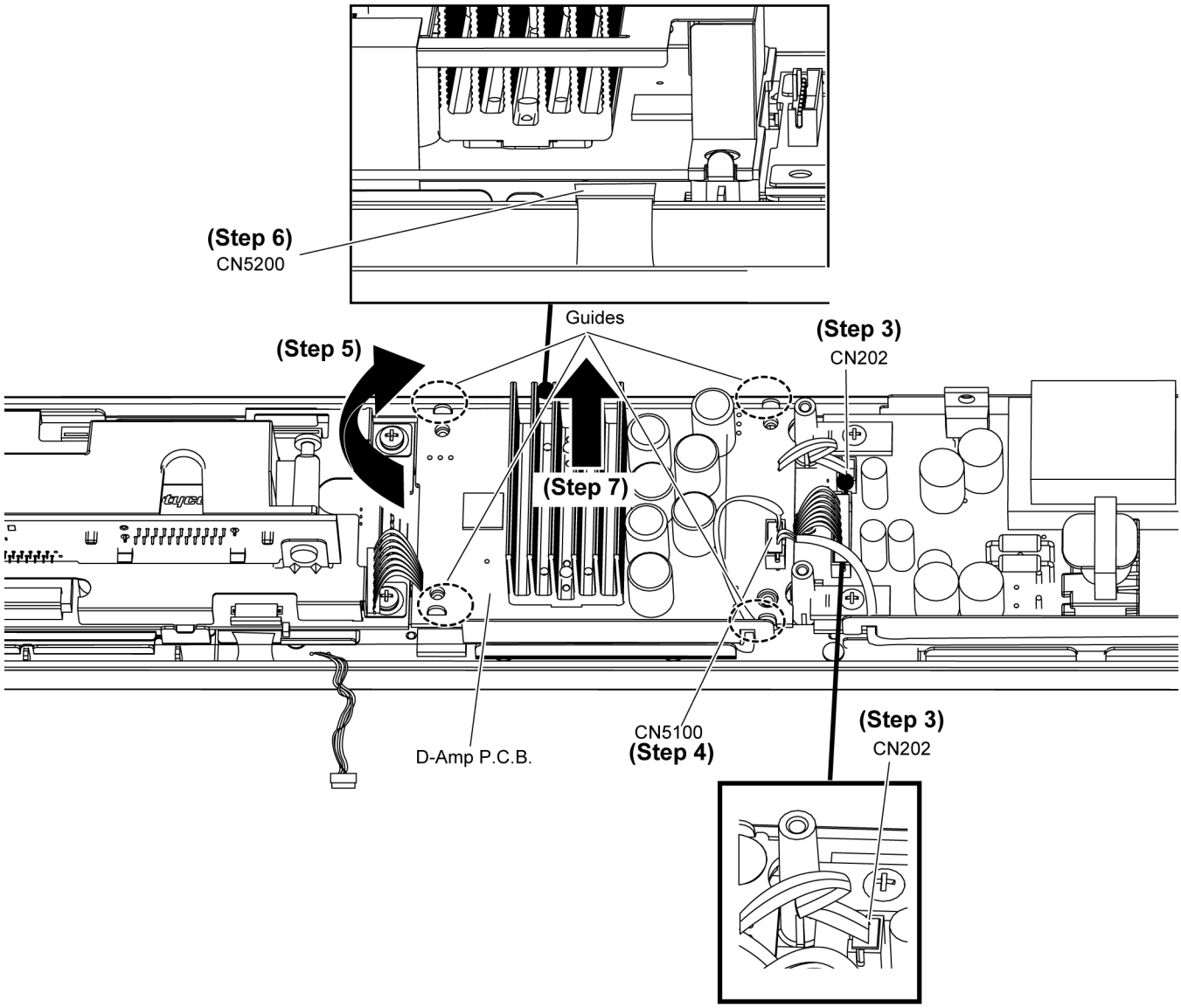
Caution : During assembling, please refer to "9.3.1.1 Wire Dressing for assembling".

Step 5 : Slightly lift up D-Amp P.C.B. as arrow shown.

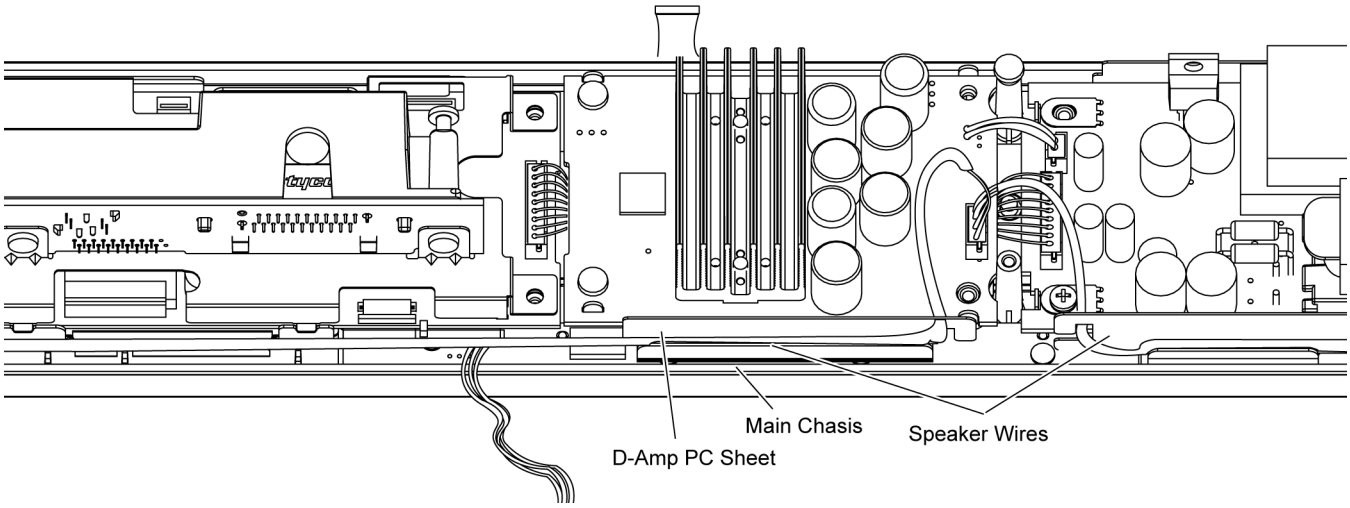
Step 6 : Detach 26P FFC to the connector (CN5200) on D-Amp P.C.B..

Step 7 : Remove D-Amp P.C.B. as arrow shown.

Caution : During assembling, ensure that D-Amp P.C.B. is properly located & fully seated onto Main Chassis before screwing.



Caution : During assembling, ensure that speaker wires are properly dressed between Main Chassis and D-Amp PC Sheet.



9.3.10. Replacement of Digital Amplifier IC (IC5100)

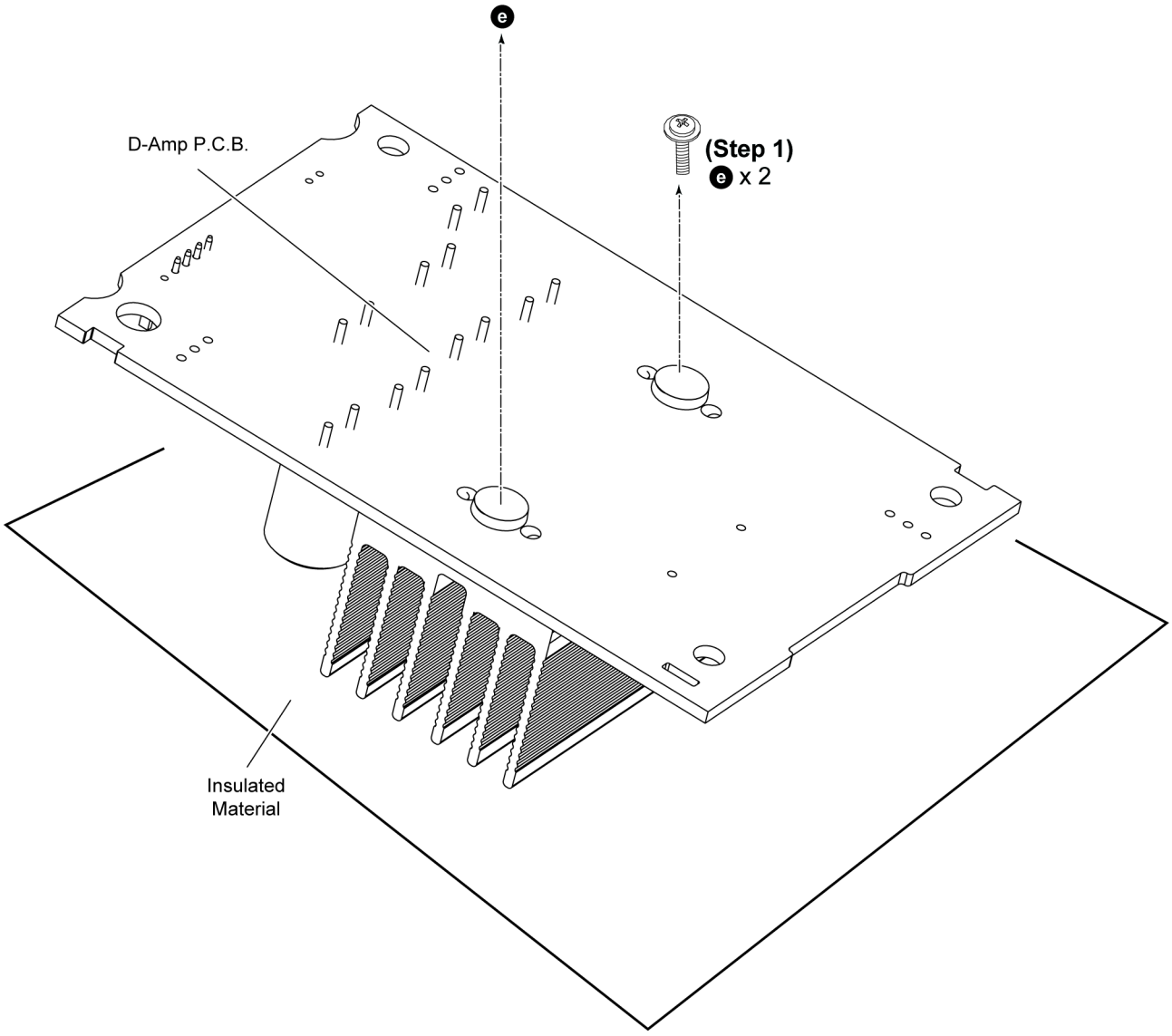
- Refer to “Disassembly of Back Cabinet Sub Block”.
- Refer to “Disassembly of D-Amp P.C.B.”.

9.3.10.1. Disassembly of Digital Amplifier IC (IC5100)

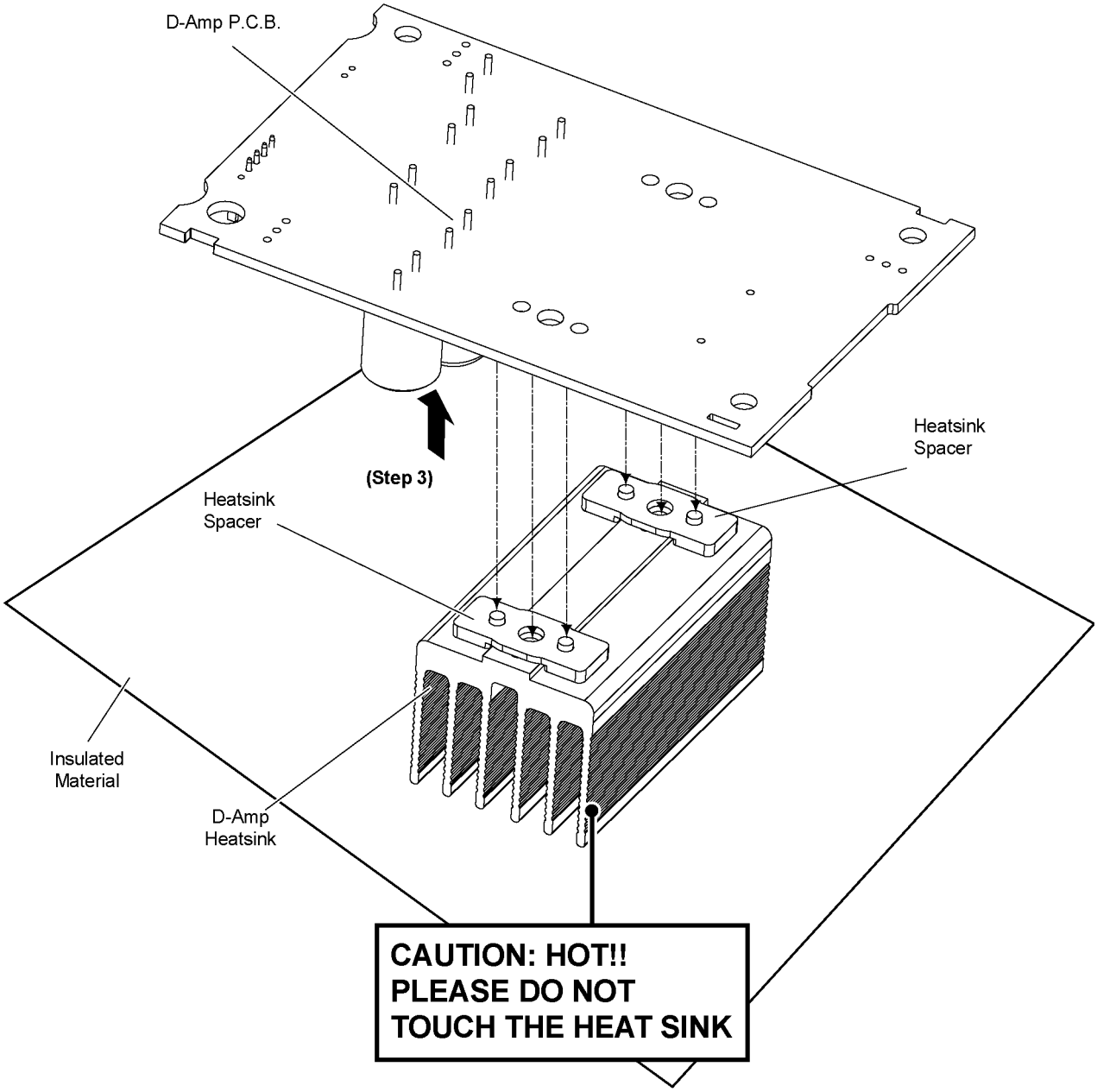
Caution : Handle the D-Amp P.C.B. with caution due to its high temperature after prolonged use. Touching is may lead to injuries.

Step 1 : Place D-Amp P.C.B. on an insulated material.

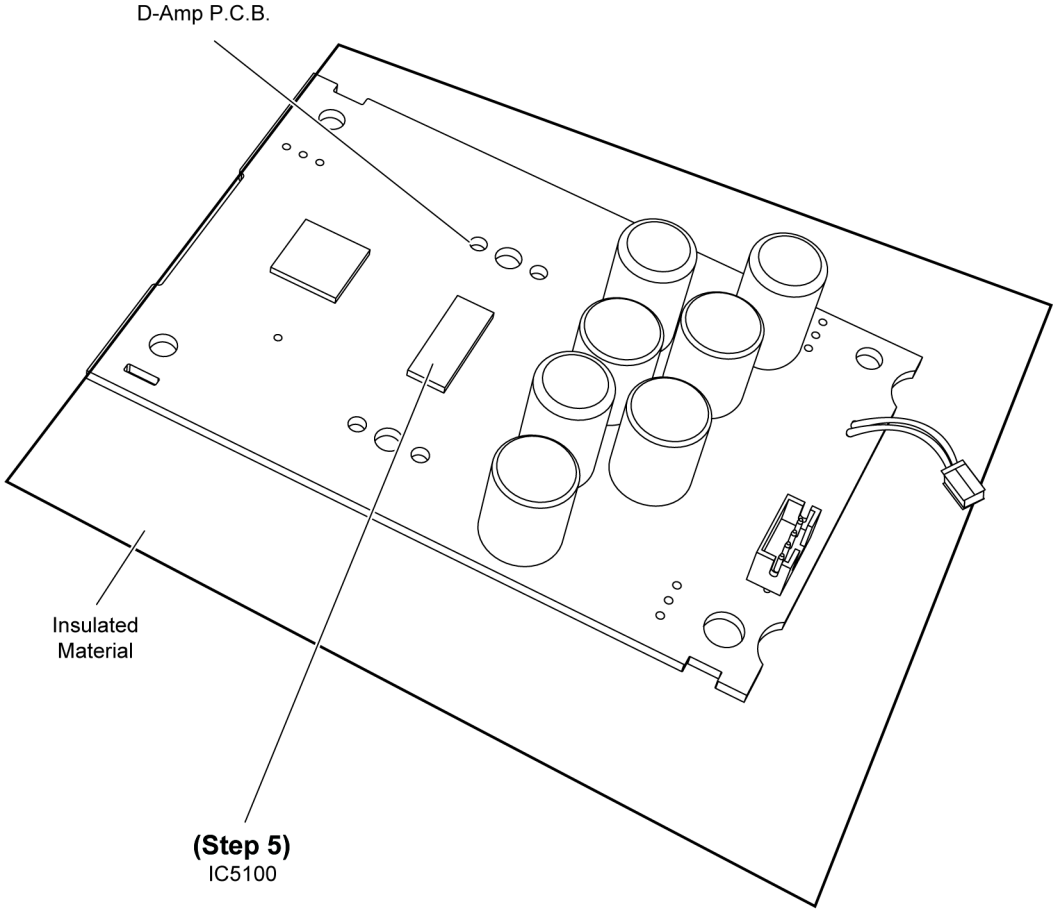
Step 2 : Remove 2 screws.



Step 3 : Lift up to remove D-Amp P.C.B. as arrow shown.
Caution : During assembly, please put the heatsink spacer.



Step 4 : Desolder the pins of Digital Amplifier IC (IC5100).
Step 5 : Remove Digital Amplifier IC (IC5100).
Note : Refer to diagram of D-Amp P.C.B. (item 9.3.9) for location of part.



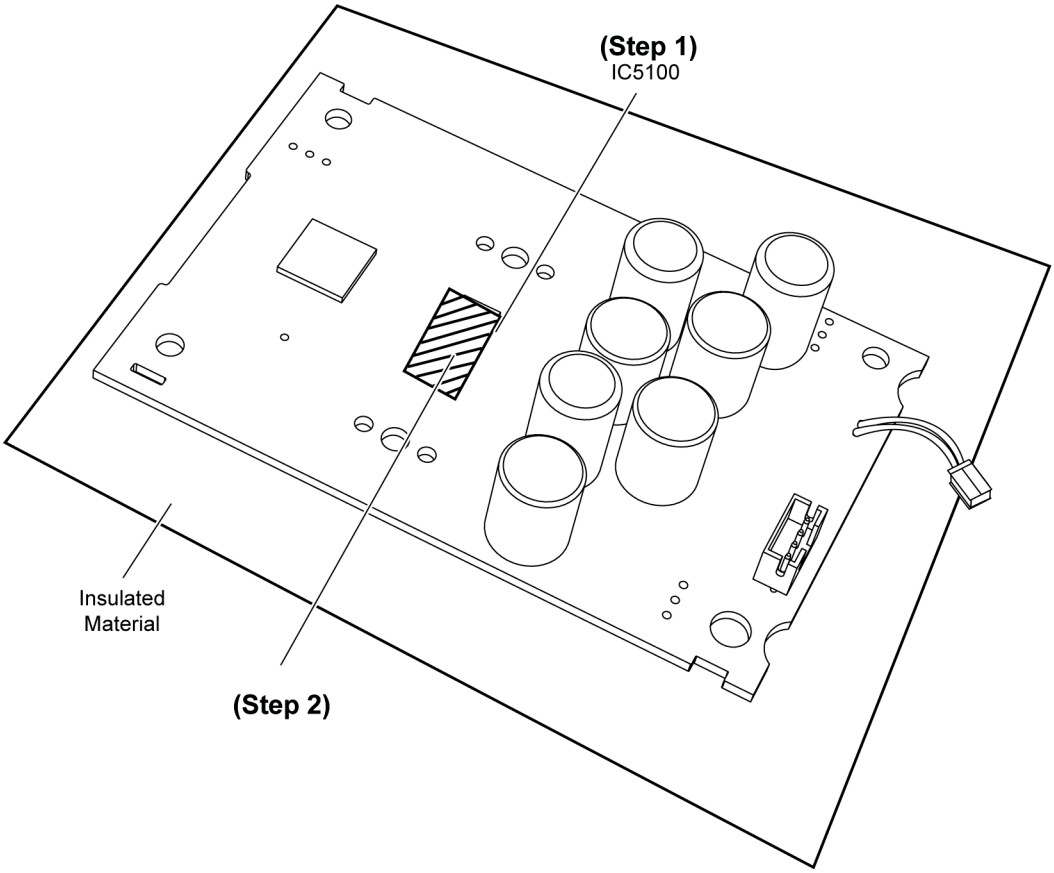
9.3.10.2. Assembly of Digital Amplifier IC (IC5100)

Step 1 : Fix the Digital Amplifier IC (IC5100) on to the D-Amp P.C.B..

Step 2 : Solder pins of Digital Amplifier IC (IC5100).

Caution : Ensure that the pins of Digital Amplifier IC (IC5100) is positioned correctly on D-Amp P.C.B. before soldering.

Step 3 : Apply grease on the top side of the Digital Amplifier IC (IC5100).



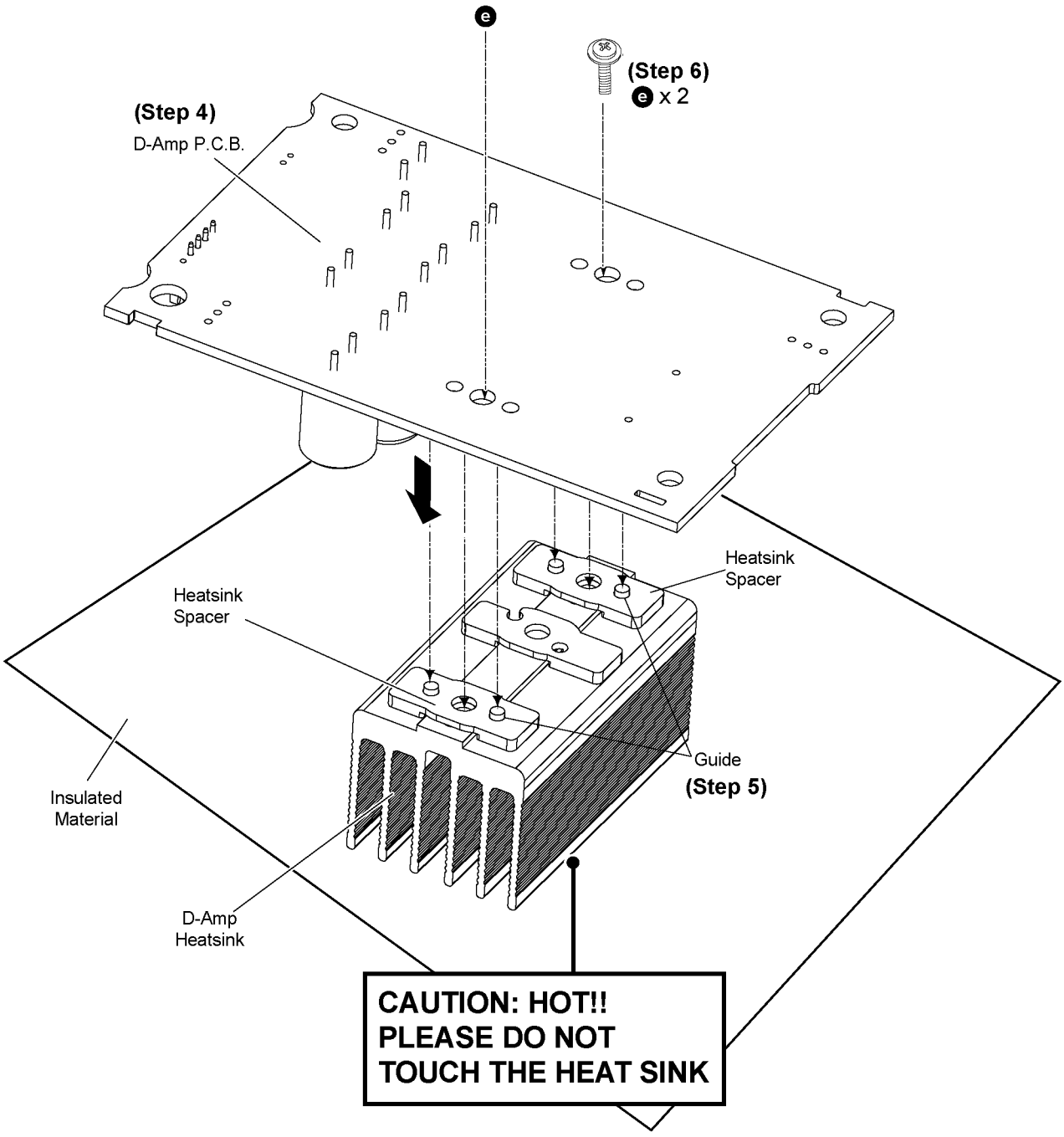
Step 4 : Upset the D-Amp P.C.B..

Step 5 : Place D-Amp P.C.B. holes into D-Amp Heatsink guide properly.

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

Step 6 : Fix 2 screws.

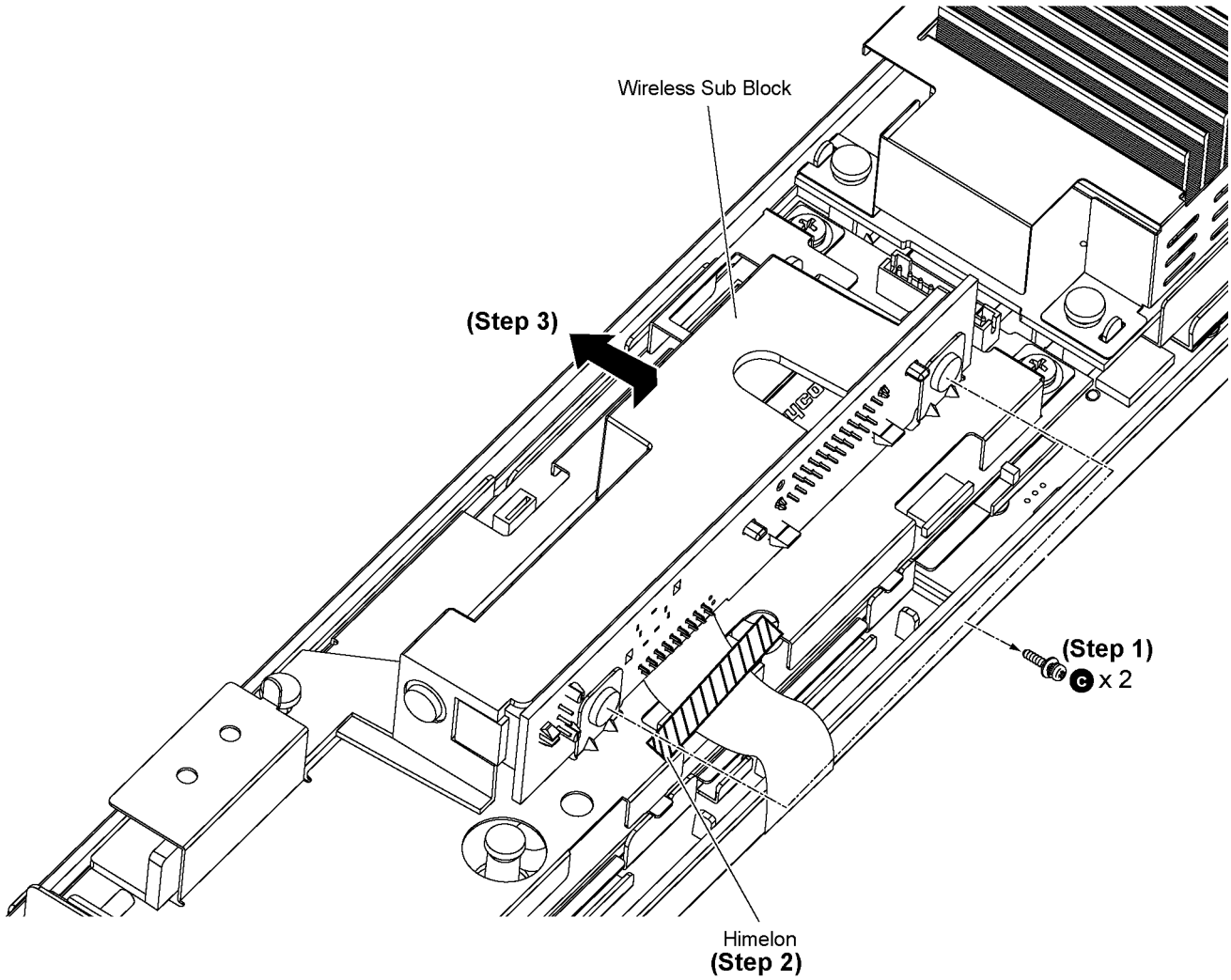
Caution : During assembling, ensure that screwing sequence is strictly follow to the illustration shown.



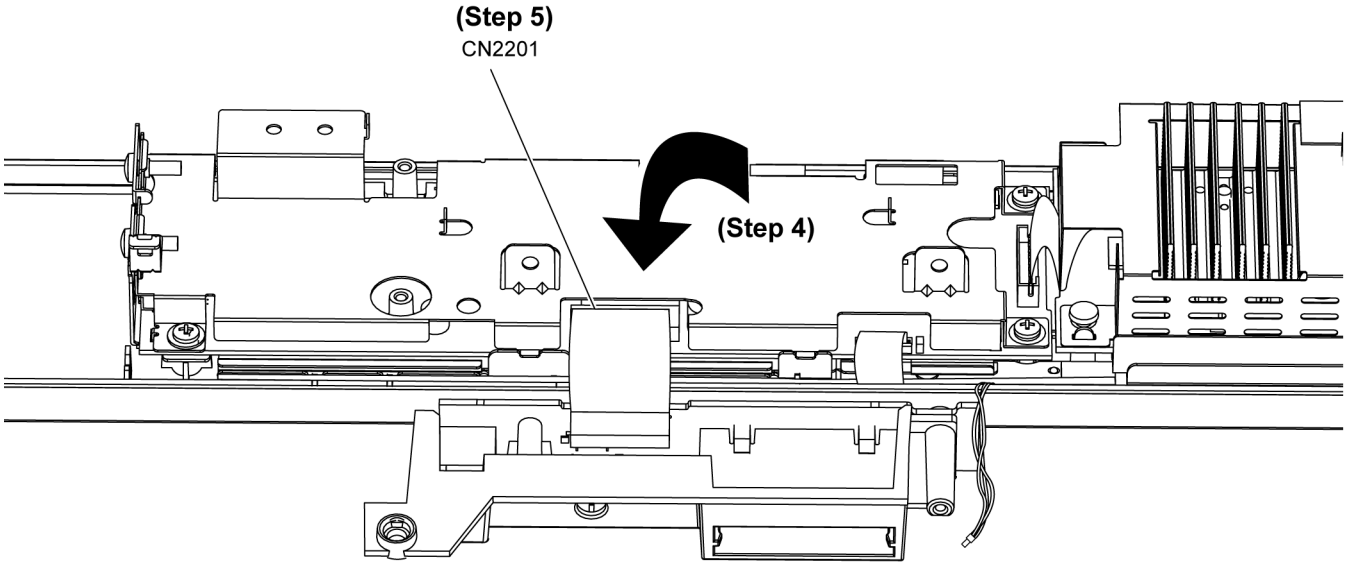
9.3.11. Disassembly of Wireless P.C.B.

• Refer to “Disassembly of Back Cabinet Sub Block”.

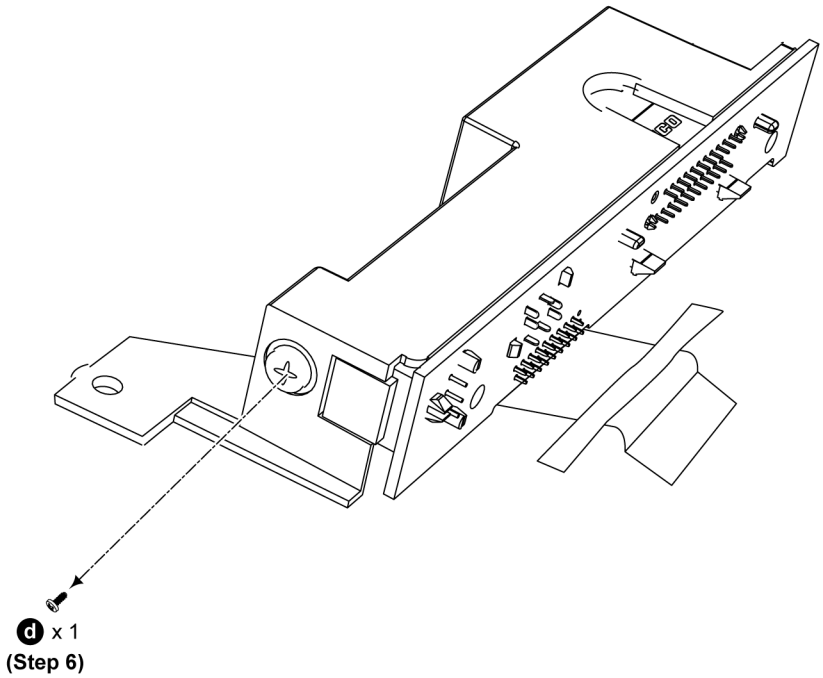
Step 1 : Remove 2 screws.
Step 2 : Lift up himelon.
Caution : Replace the himelon if torn.
Step 3 : Slightly lift up and remove Wireless Sub Block as arrow shown.



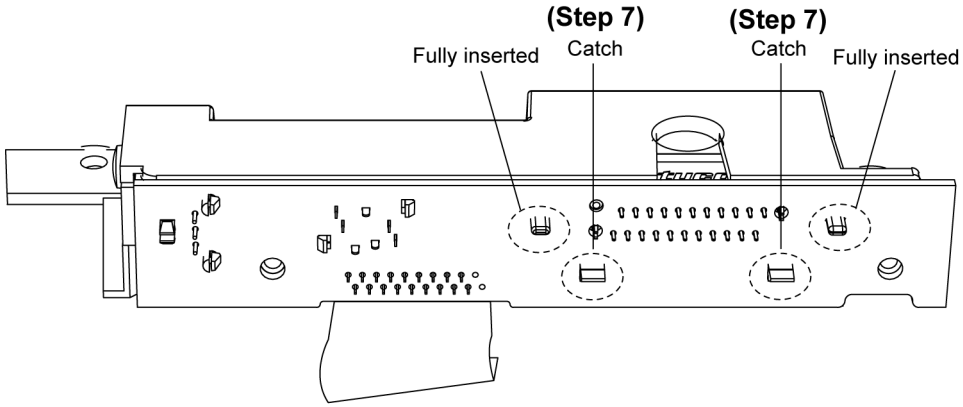
Step 4 : Flip the Wireless Sub Block as arrow shown.
Step 5 : Detach 20P FFC to the connector (CN2201) on HDMI P.C.B..



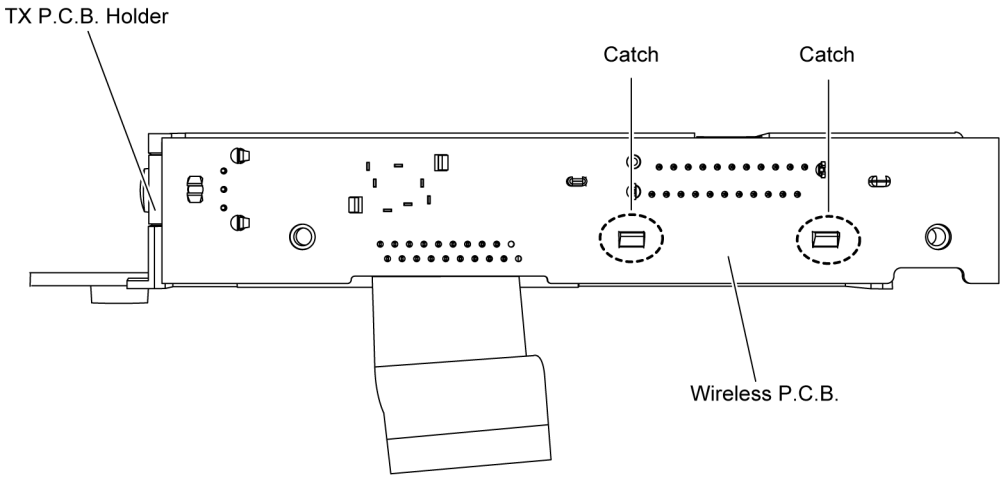
Step 6 : Remove 1 screw.



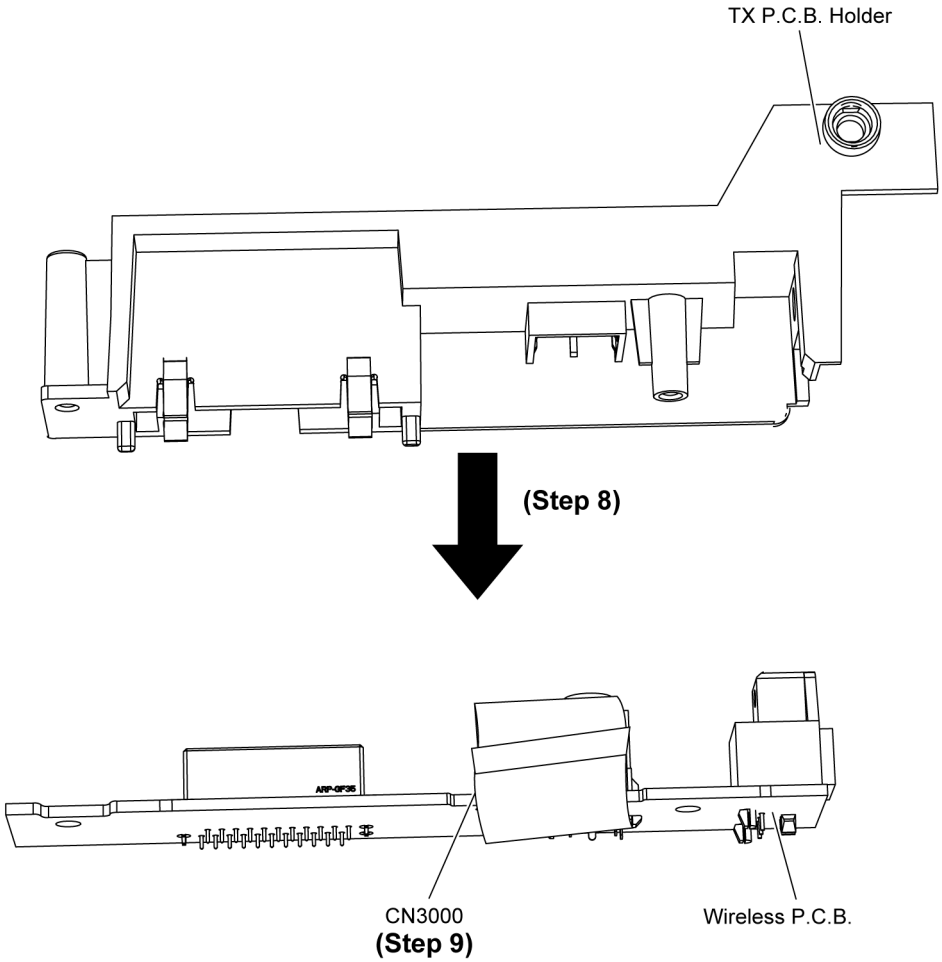
Step 7 : Release 2 catches.



Caution: During assembling, ensure that Wireless P.C.B. is seated properly at the locators & fully catched onto TX P.C.B. Holder.



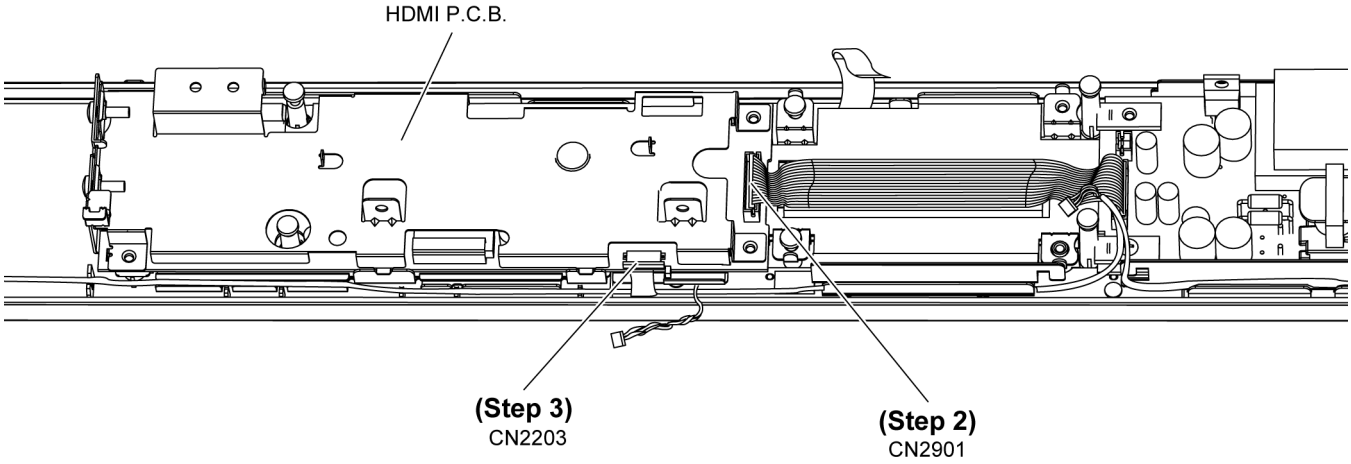
Step 8 : Detach Wireless P.C.B. from TX P.C.B. Holder.
Step 9 : Detach 20P FFC at the connector (CN3000) and remove Wireless P.C.B..



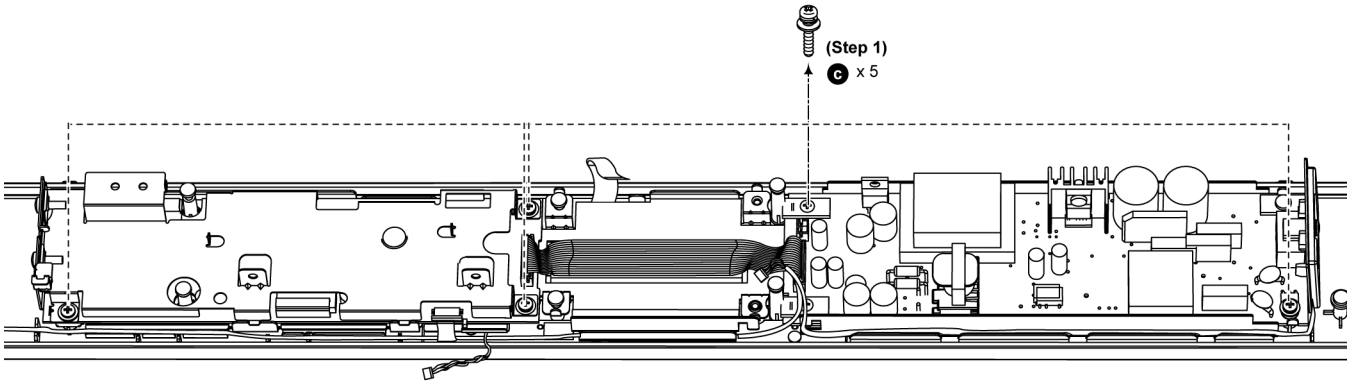
9.3.12. Disassembly of HDMI P.C.B.

- Refer to “Disassembly of Back Cabinet Sub Block”.
- Refer to “Disassembly of D-Amp P.C.B.”.
- Refer to (Step 1) - (Step 5) of “Disassembly of Wireless P.C.B.”.

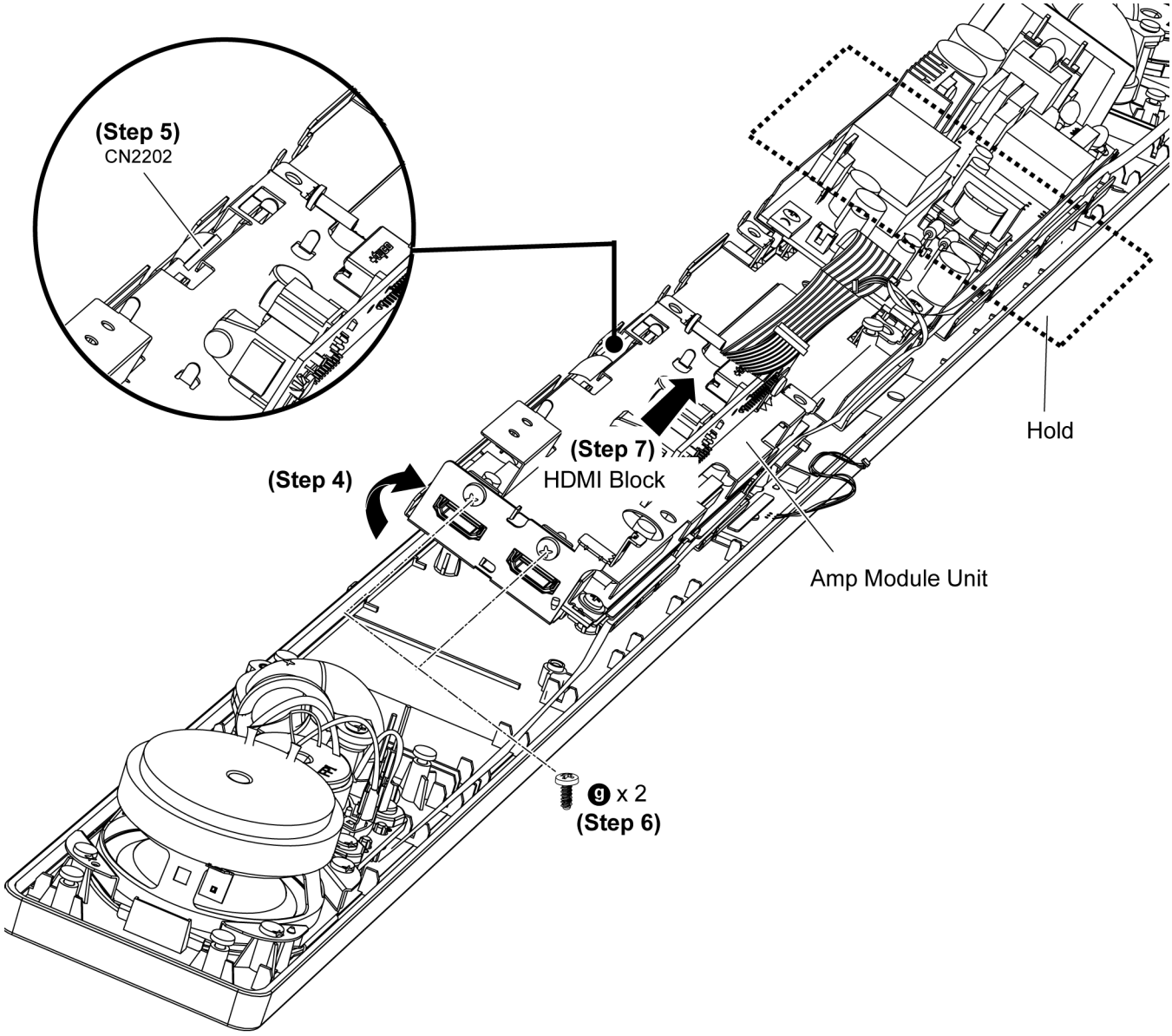
Step 1 : Detach 9P cable at the connector (CN2901) on HDMI P.C.B..
Step 2 : Detach 12P FFC at the connector (CN2203) on HDMI P.C.B..



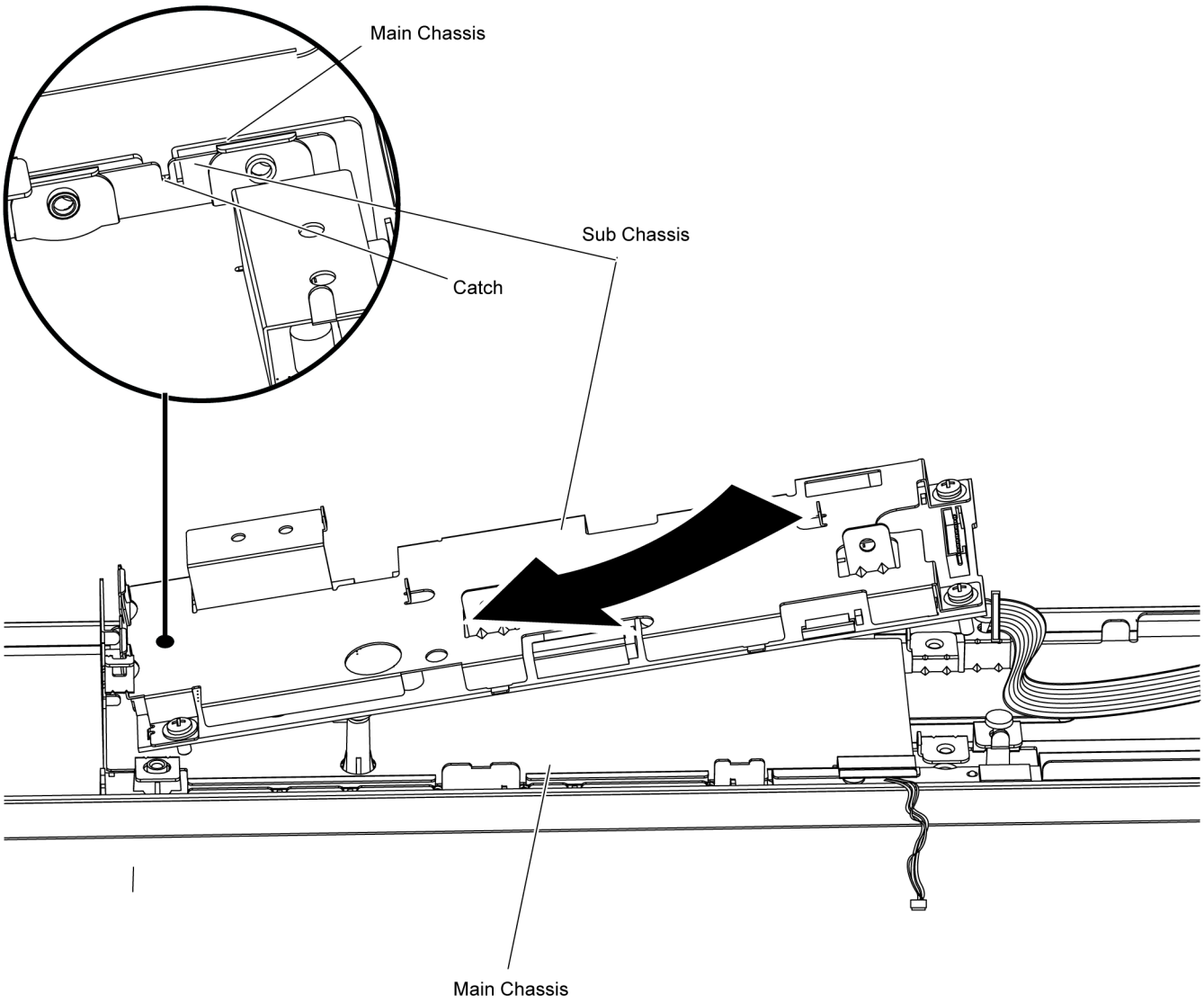
Step 3 : Remove 5 screws.



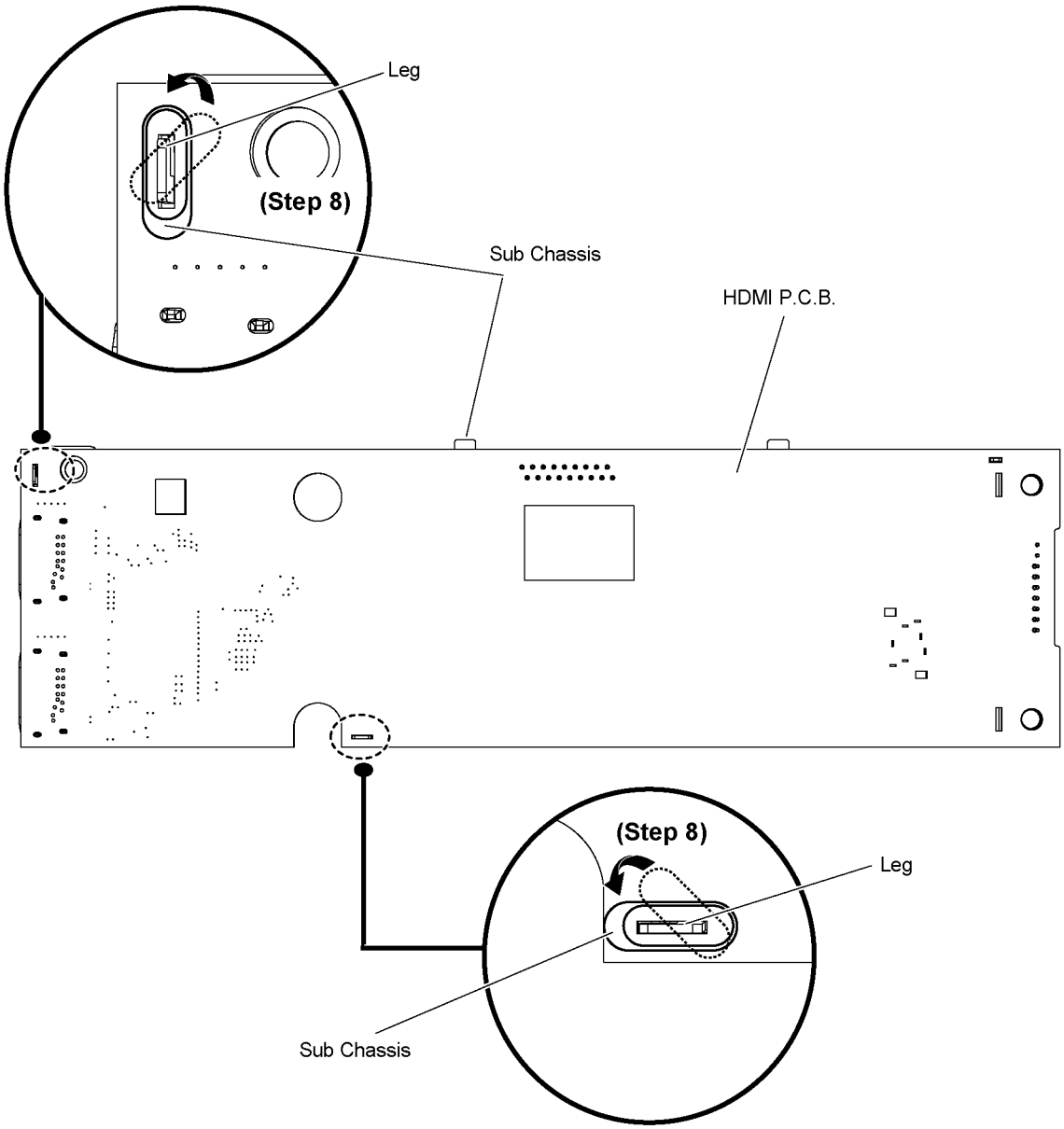
Step 4 : Slightly lift up Amp Module Unit and hold as diagram shown.
Step 5 : Detach 26P FFC at the connector (CN2202) on HDMI P.C.B..
Step 6 : Remove 2 screws.
Step 7 : Remove HDMI Block.



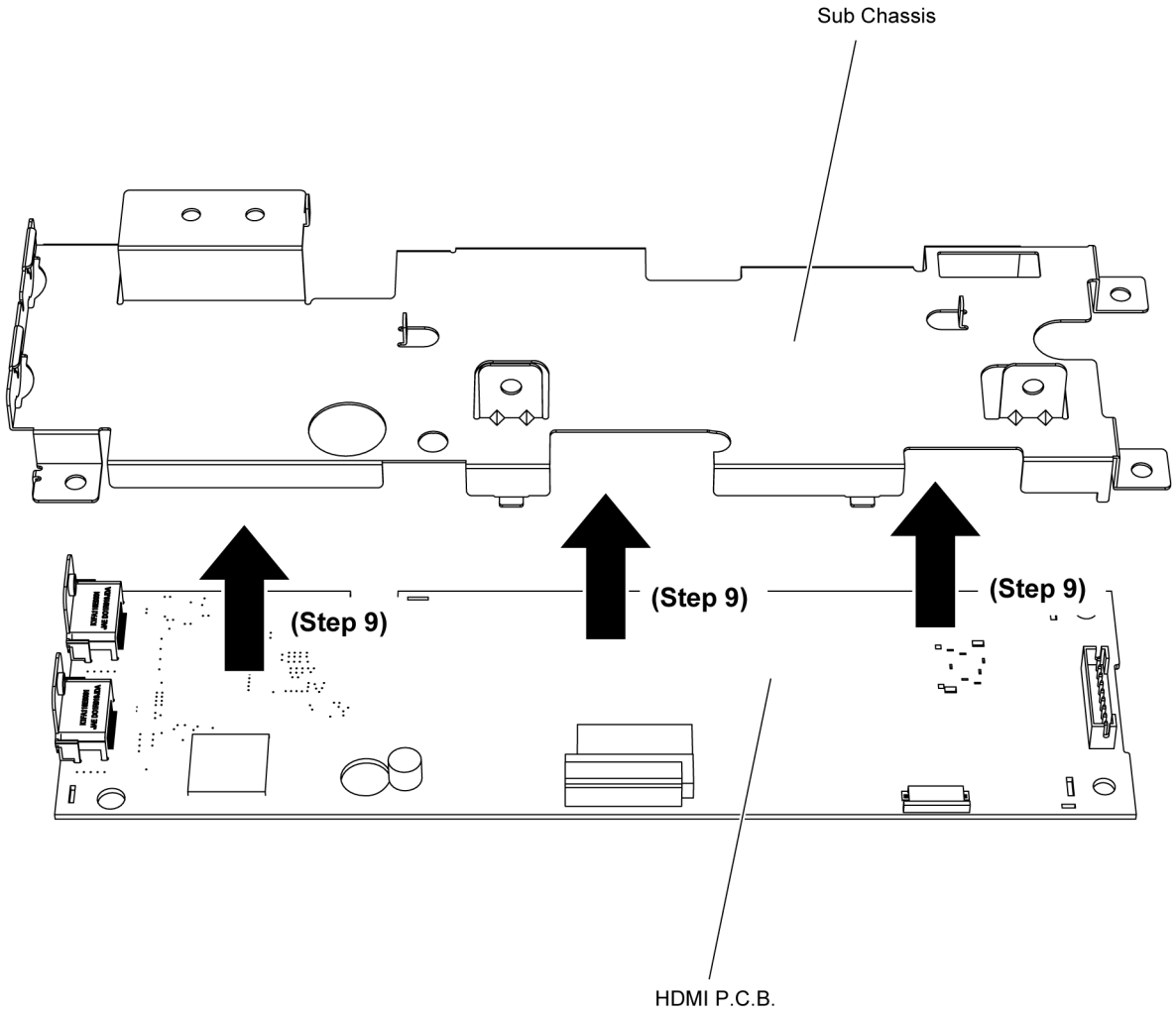
Caution: During assembling, ensure that Sub Chassis is properly located & fully cached onto Main Chassis.



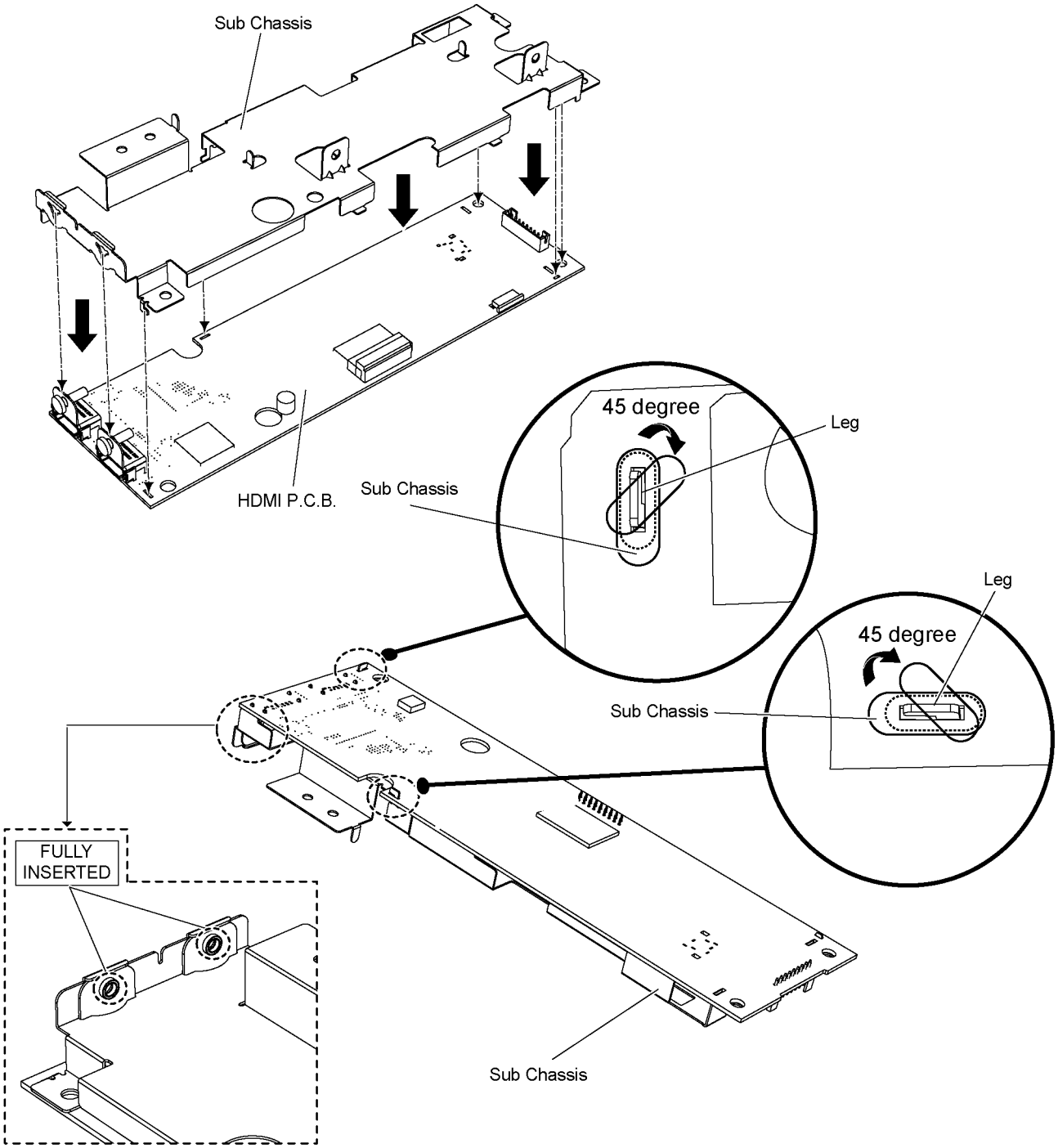
Step 8 : Twist the 2 legs of Sub Chassis by 45 degree in an Anti-Clockwise or Clockwise direction as diagram shown.



Step 9 : Lift up Sub Chassis from HDMI P.C.B. as arrow shown.



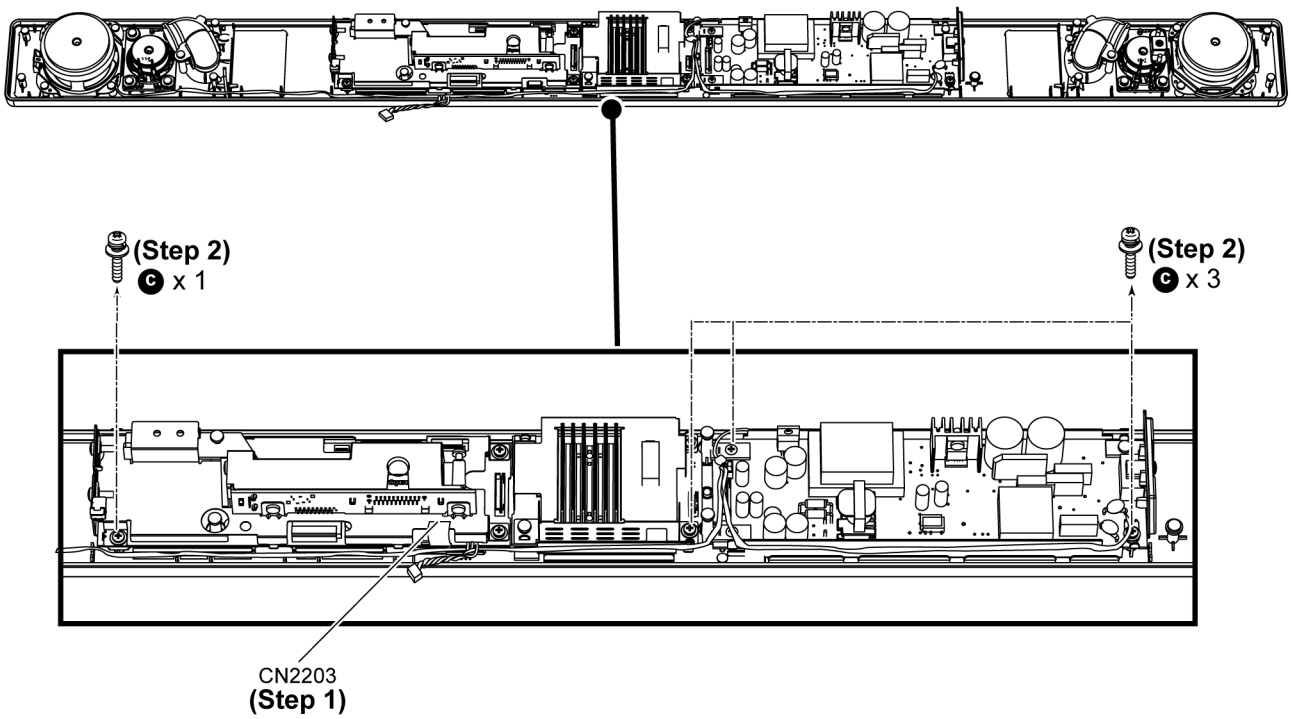
Caution: During assembling, ensure that Sub Chassis is properly located & fully cached onto HDMI P.C.B..



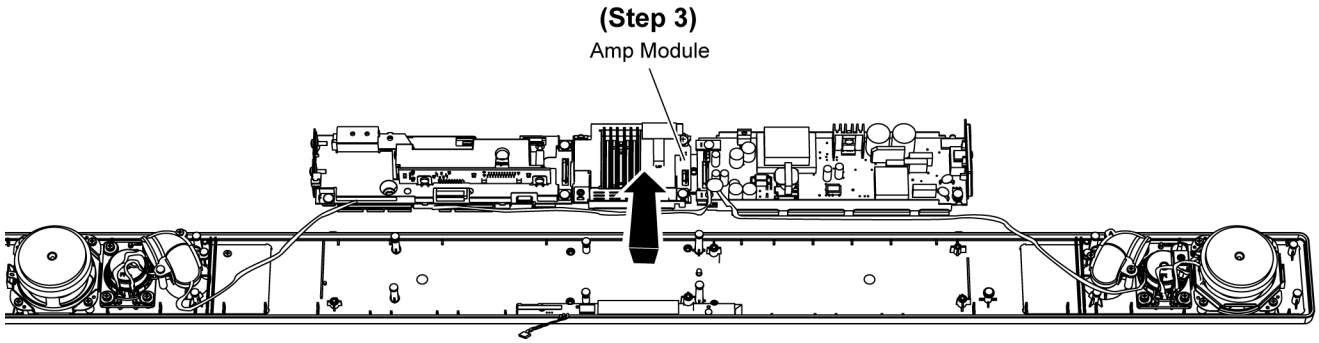
9.3.13. Disassembly of Amp Module

• Refer to “Disassembly of Back Cabinet Sub Block”.

Step 1 : Detach 12P FFC to the connector (CN2203) on HDMI P.C.B..
Step 2 : Remove 4 screws.



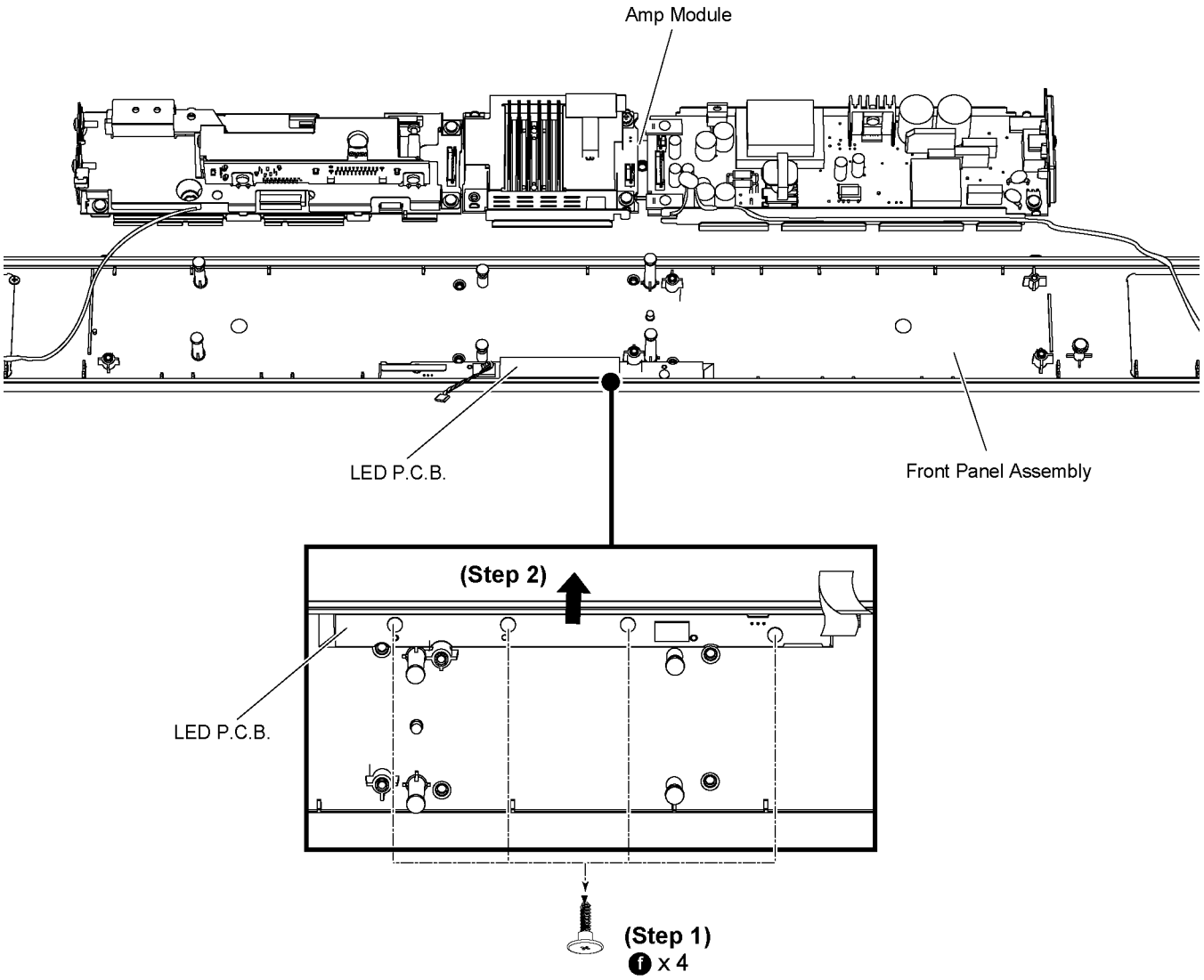
Step 3 : Slightly lift up and move Amp Module Unit to the direction of arrow shown.



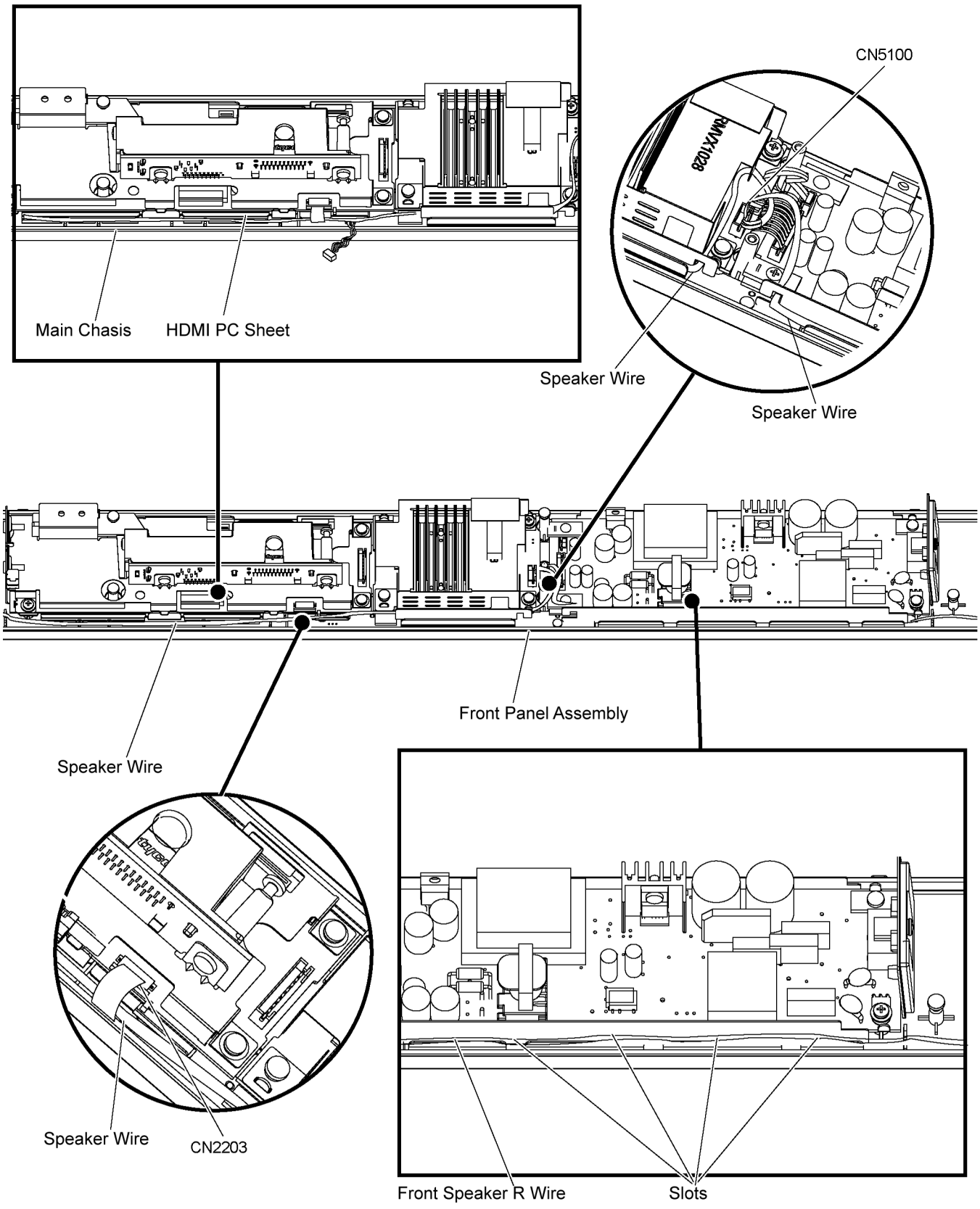
9.3.14. Disassembly of LED P.C.B.

- Refer to “Disassembly of Back Cabinet Sub Block”.
- Refer to “Disassembly of Amp Module”.

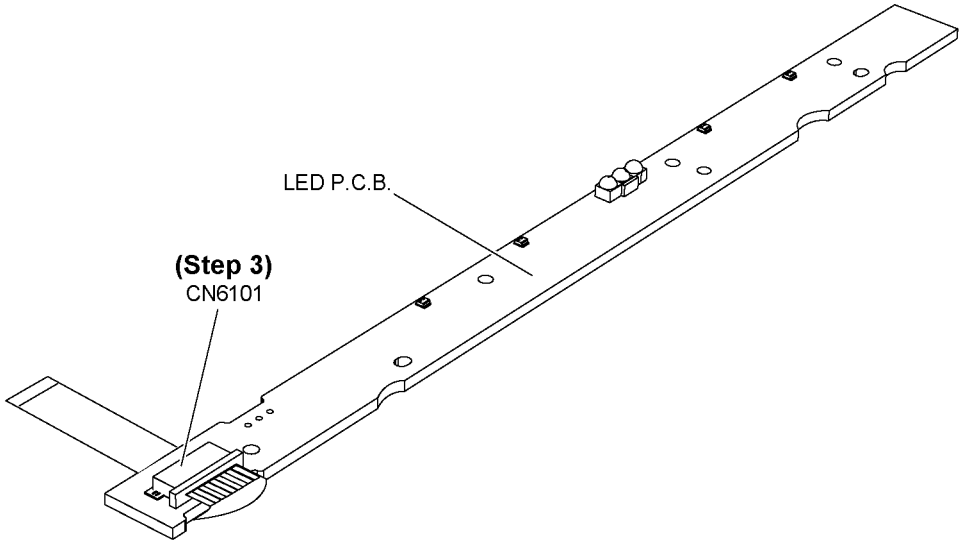
Step 1 : Remove 4 screws.
Step 2 : Remove LED P.C.B. from Front Panel Assembly.



Caution 1 : During assembling, ensure that Amp Module is located properly into Frant Panel Assembly.
Caution 2 : During assembling, please refer to section 9.3.1.1 “Wire Dressing for assembling” and section 9.3.15 “Replacement of Speaker Wire“ for all wires and FFC are correctly dressing.



Step 3 : Detach 12P FFC to the connector (CN6101) on LED P.C.B..

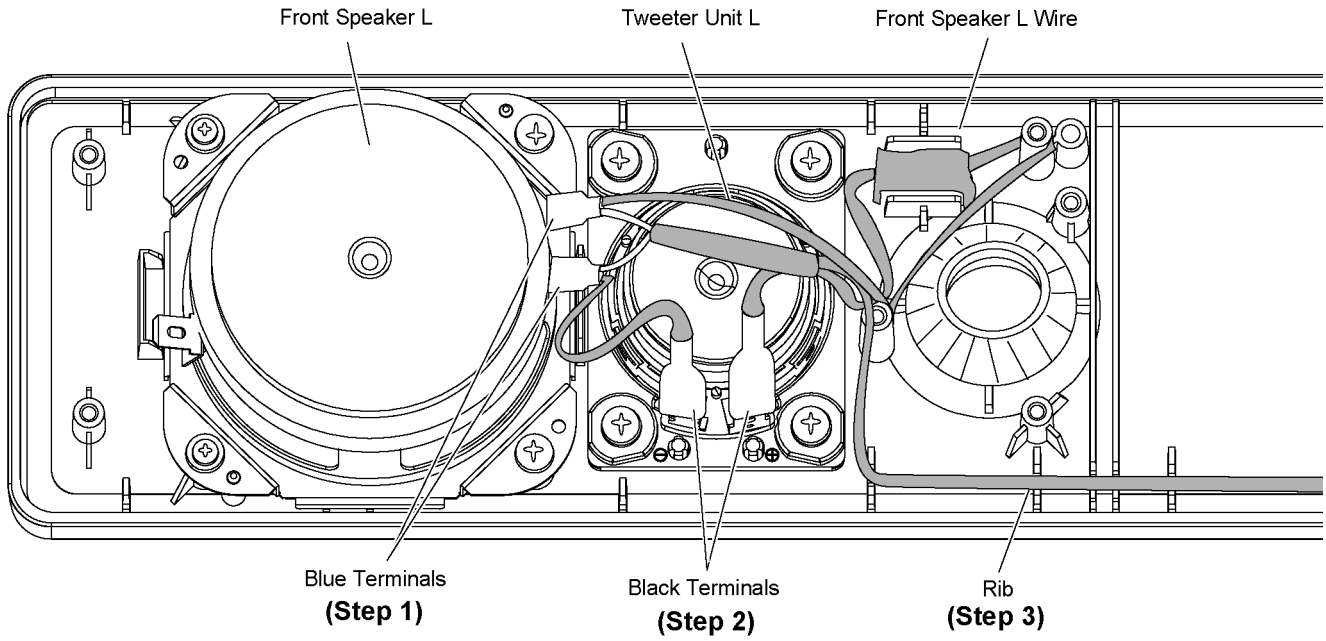


9.3.15. Replacement of Speaker Wire

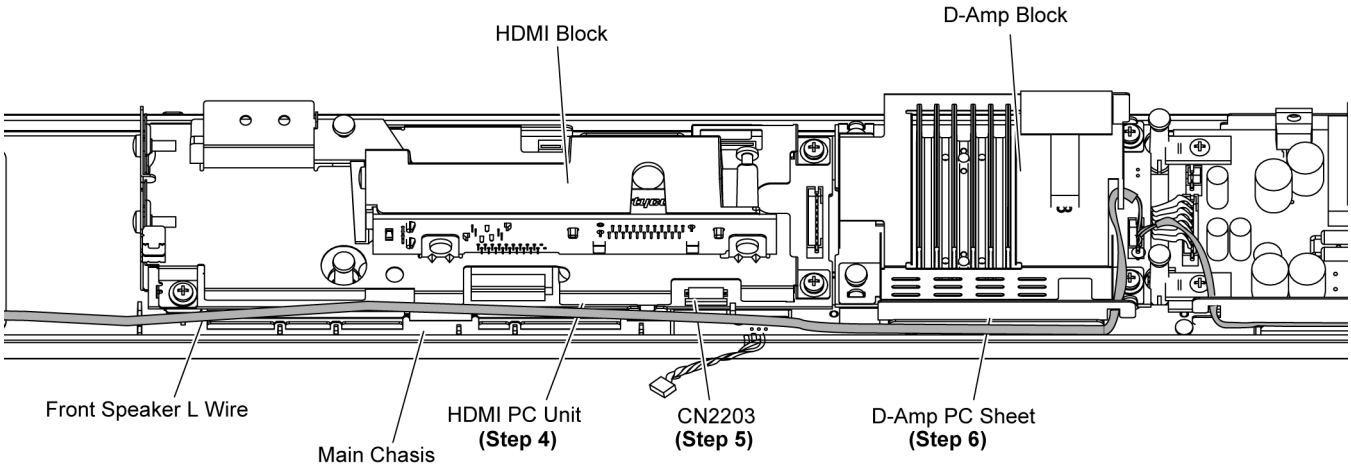
- Refer to “Disassembly of the Back Cabinet Sub Block”.
- Refer to “Disassembly of Tweeter Unit L (SP4)” Step 1 to Step 2.
- Refer to “Disassembly of Tweeter Unit R (SP3)” Step 1 to Step 2.

9.3.15.1. Disassembly of Speaker Wire

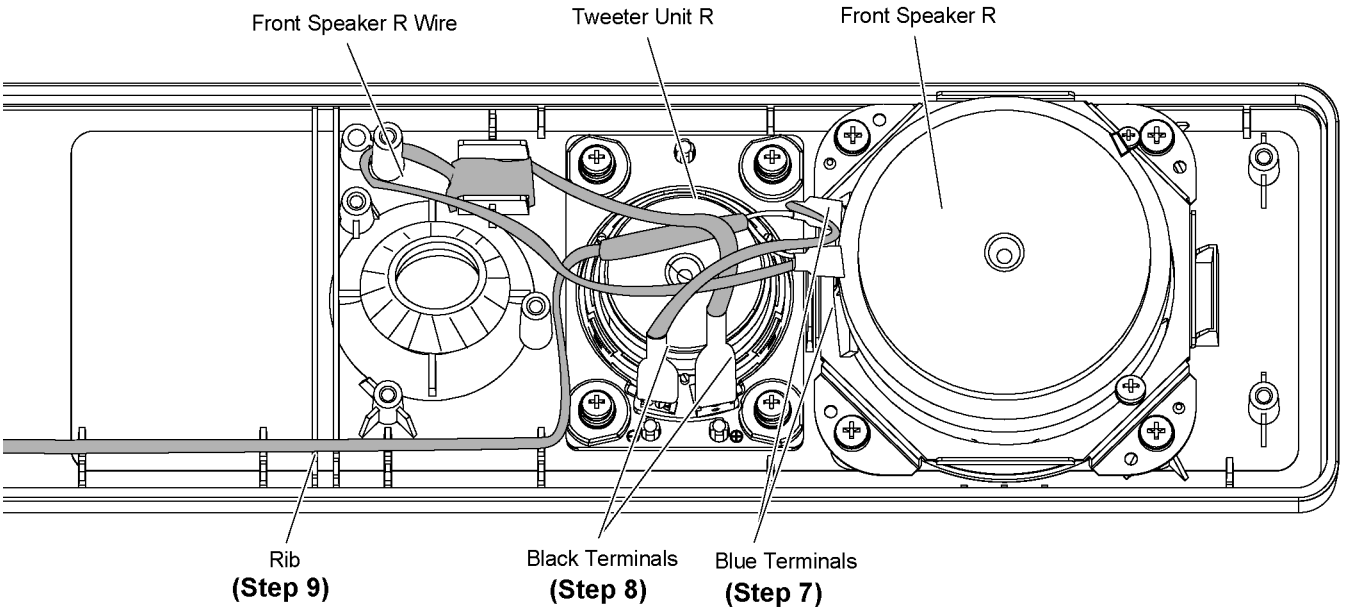
Step 1 : Detach Front Speaker L (SP2) speaker wire 2 blue terminals (+) and (-).
Step 2 : Detach Tweeter Unit L (SP4) speaker wire 2 black terminals (+) and (-).
Step 3 : Remove Front Speaker L Wire from rib.



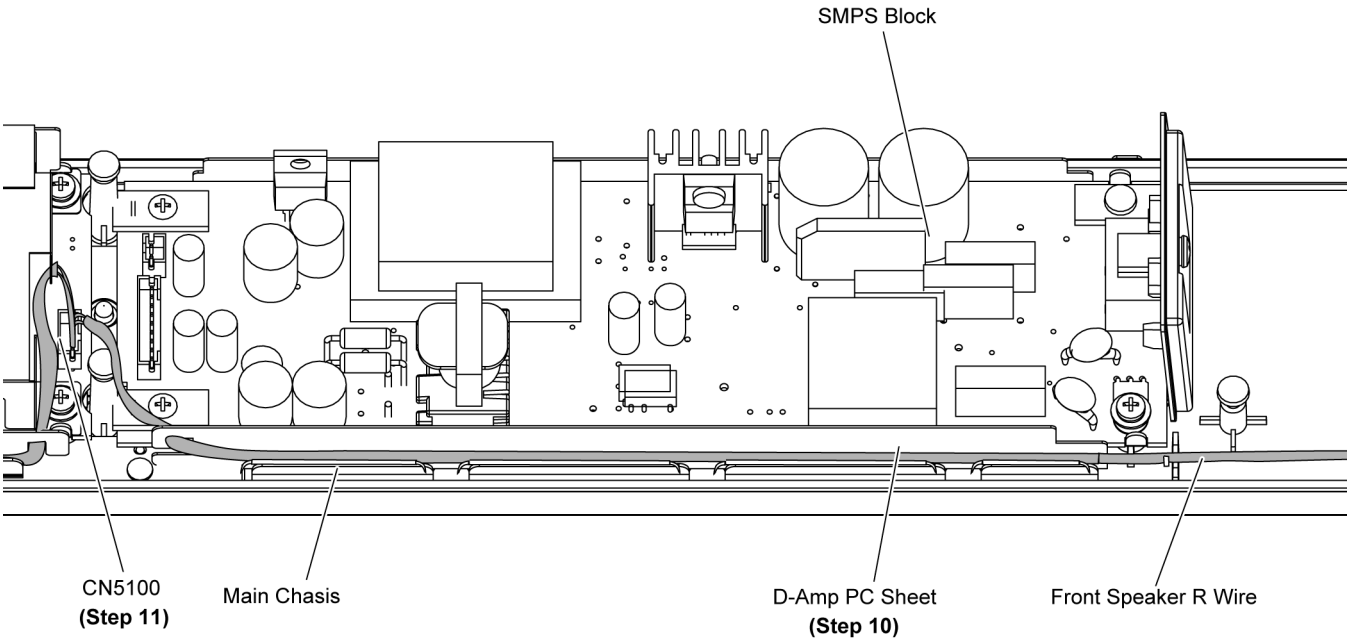
Step 4 : Remove Front Speaker L Wire that between Main Chassis and HDMI PC Sheet.
Step 5 : Detach 12P FFC at the connector (CN2203) on HDMI P.C.B..
Step 6 : Remove Front Speaker L Wire that between Main Chassis and D-Amp PC Sheet.



Step 7 : Detach Front Speaker R(SP1) speaker wire 2 blue terminals (+) and (-).
Step 8 : Detach Tweeter Unit R (SP3) speaker wire 2 black terminals (+) and (-).
Step 9 : Remove Front Speaker R Wire from rib.

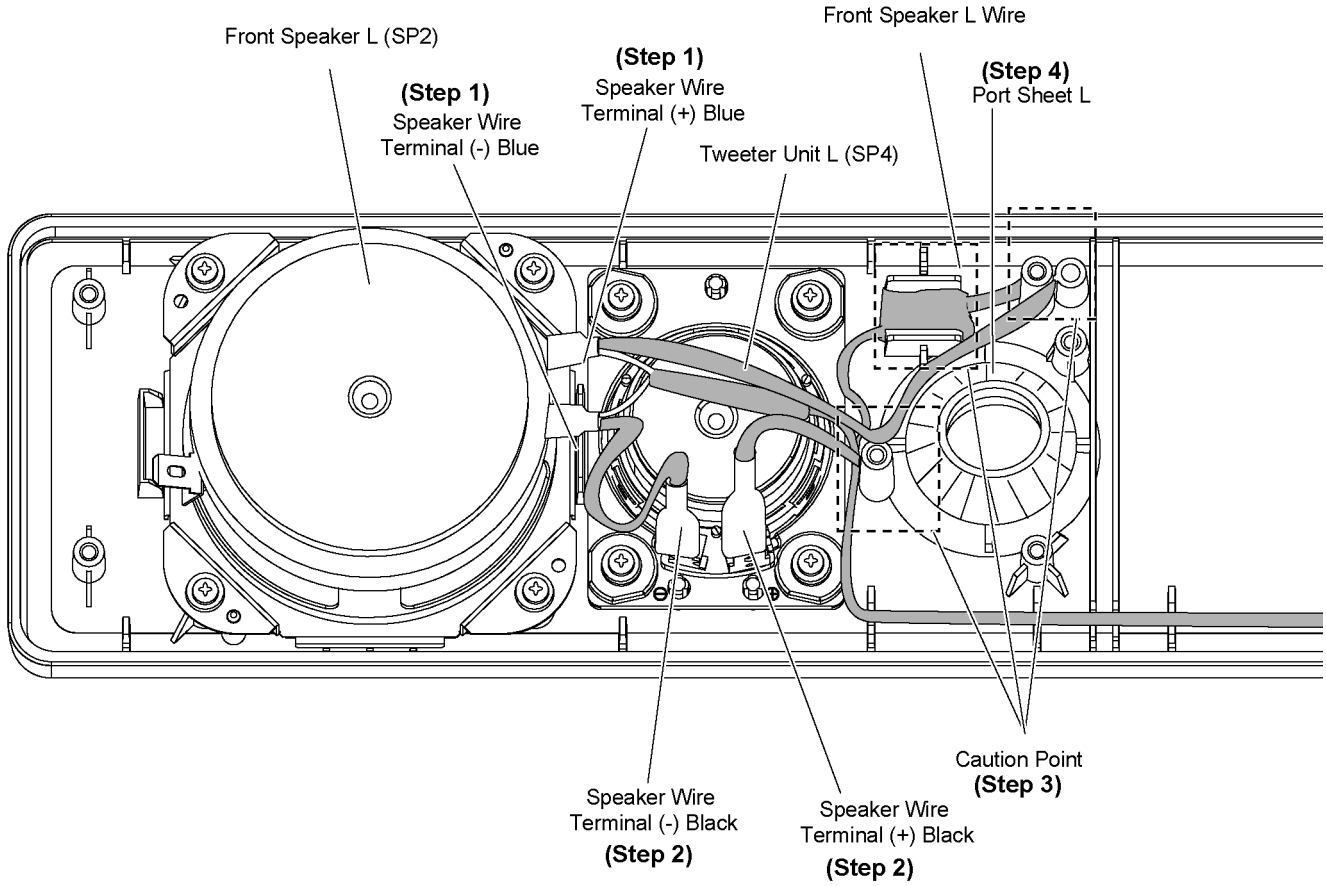


Step 10 : Remove Front Speaker R Wire that between D-Amp PC Sheet.
Step 11 : Detach 4P Cable at the connector (CN5100) on D-Amp P.C.B.
• Refer “Disassembly of D-Amp P.C.B.“ Step 1 to Step 6

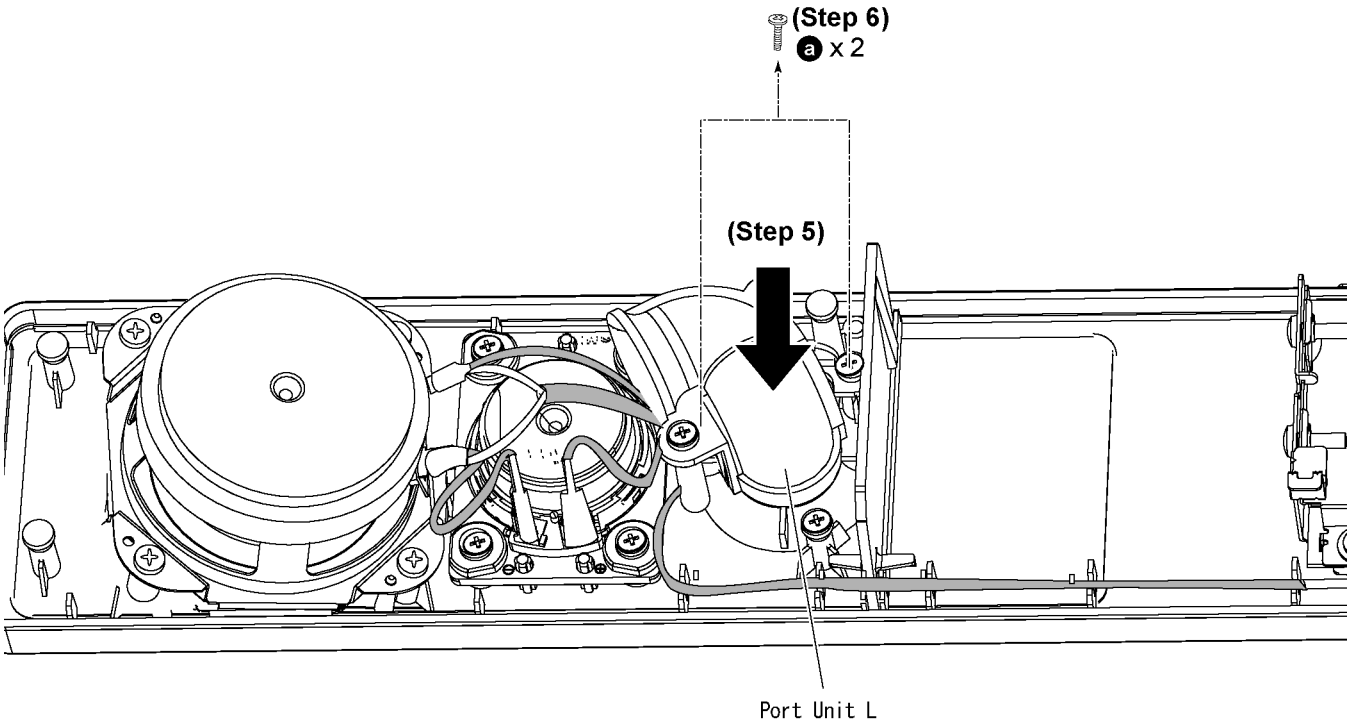


9.3.15.2. Assembly of Speaker Wire

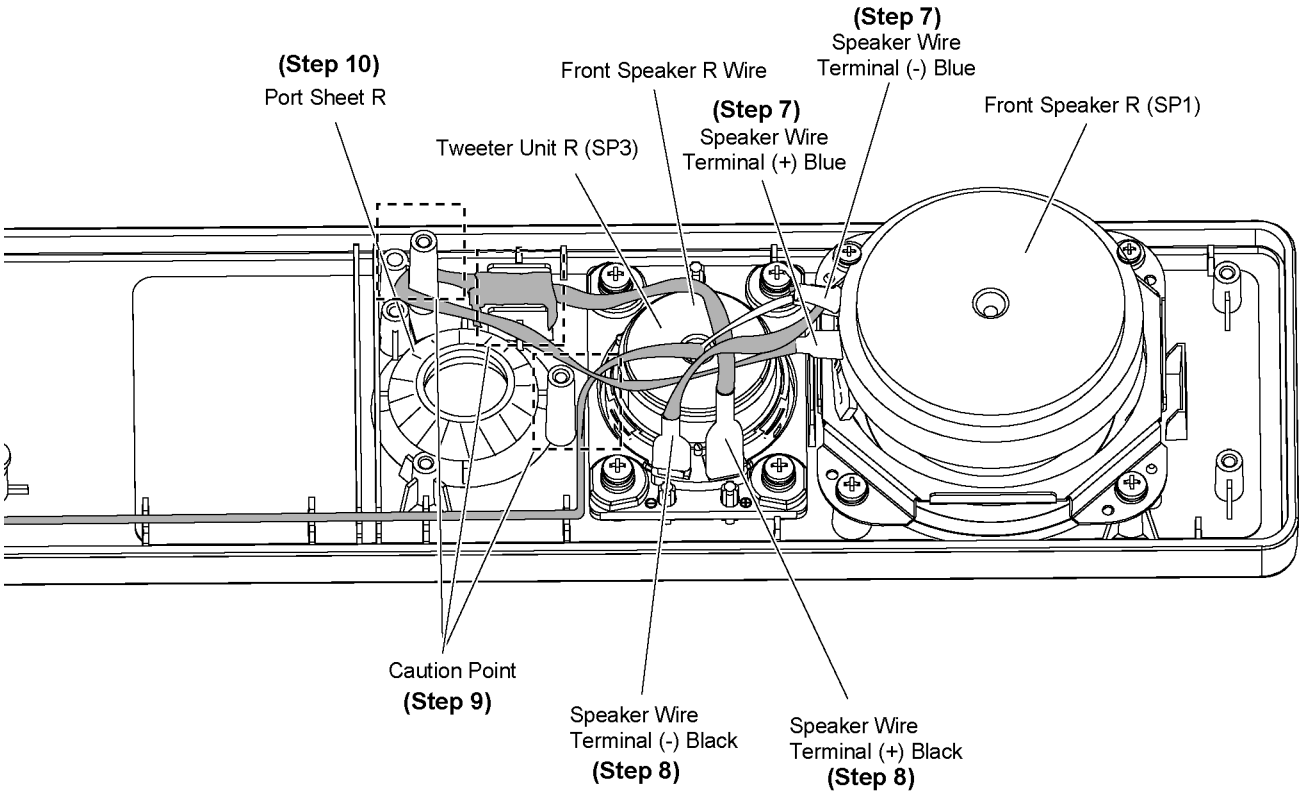
Step 1 : Detach Front Speaker L (SP2) speaker wire 2 blue terminals (+) and (-).
Step 2 : Detach Tweeter Unit L (SP4) speaker wire 2 black terminals (+) and (-).
Caution : During assembling, ensure that type of Speaker Wire Terminal (+) and (-) are used correctly.
Step 3 : Dressing speaker wire, specially caution point at dot box as diagram shown.
Step 4 : Ensure Port Sheet L not torn.
Caution : Replace Port Sheet L if torn.



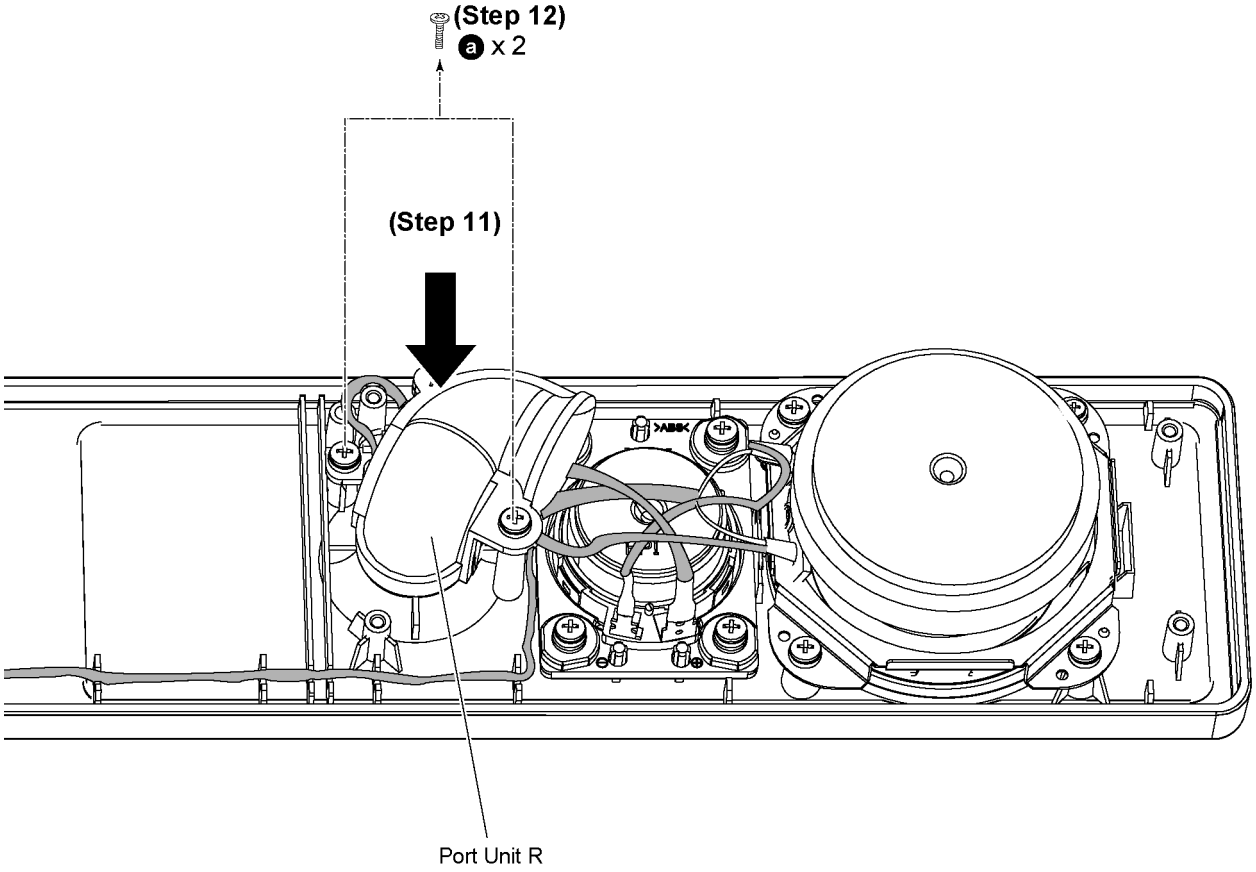
Step 5 : Place Port Unit L as diagram shown.
Step 6 : Fix 2 screws.



Step 7 : Detach Front Speaker R (SP1) speaker wire 2 blue terminals (+) and (-).
Step 8 : Detach Tweeter Unit R (SP3) speaker wire 2 black terminals (+) and (-).
Caution : During assembling, ensure that type of Speaker Wire Terminal (+) and (-) are used correctly.
Step 9 : Dressing speaker wire, specially caution point at dot box as diagram shown.
Step 10 : Ensure Port Sheet R not torn.
Caution : Replace Port Sheet R if torn.



Step 11 : Place Port Assembly R as arrow shown
Step 12 : Fix 2 screws

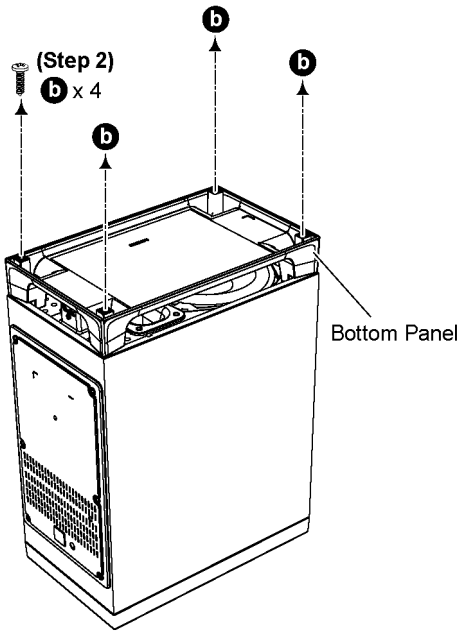


Step 13 : Refer 8.3.1.1 “Wire Dressing for assembling“ during wire dressing.

9.4. Speaker Unit (SB-HWA520)

9.4.1. Disassembly of Bottom Panel

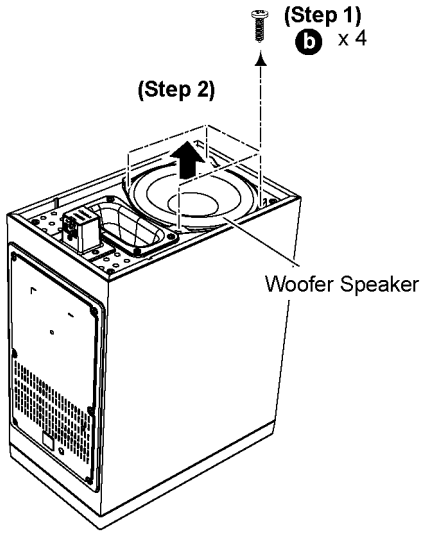
Step 1 : Remove 4 screws.
Step 2 : Remove the Bottom Panel.



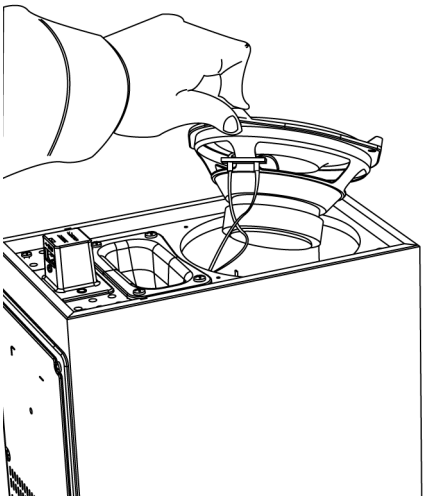
9.4.2. Disassembly of Woofer Speaker

• Refer to “Disassembly of Bottom Panel”.

Step 1 : Remove 4 screws.
Step 2 : Lift up to remove Woofer Speaker.



Step 3 : Detach the Red (+) wire and Black/Red (-) wires.
Step 4 : Remove the Woofer Speaker.
Caution : During assembling of the Woofer Speaker, ensure that the terminals are properly place.

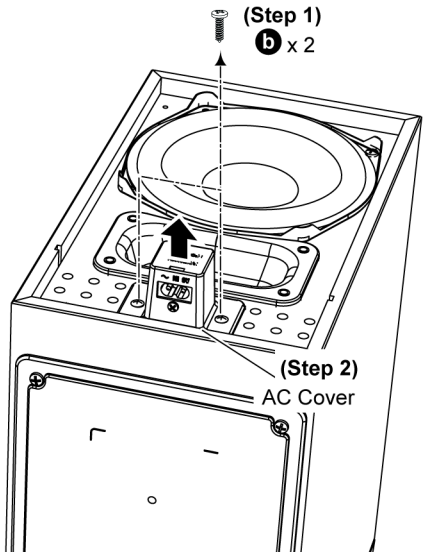


9.4.3. Disassembly of Amp Module

• Refer to “Disassembly of Bottom Panel”.

Step 1 : Remove 2 screws.

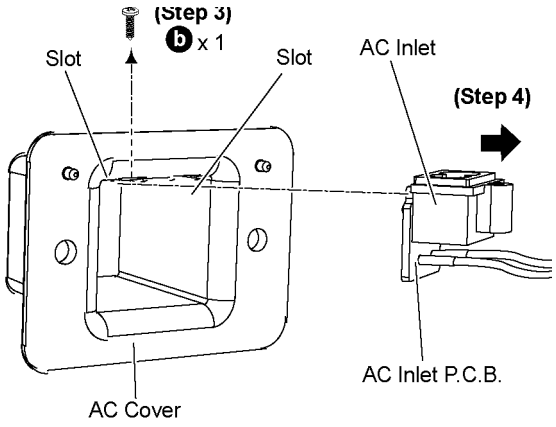
Step 2 : Lift up the AC Cover with AC Inlet P.C.B. as arrow shown.



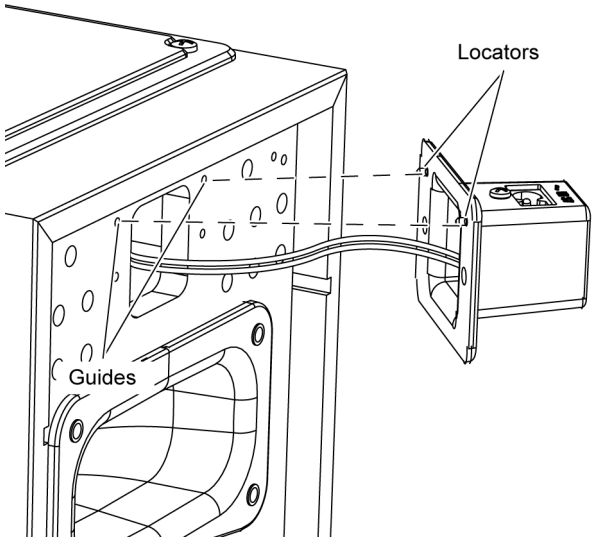
Step 3 : Remove 1 screw.

Step 4 : Remove the AC inlet P.C.B. from the AC Cover as arrow shown.

Caution : During assembling of the AC Inlet P.C.B., ensure the AC Inlet is properly inserted into the slots of AC Cover as diagram shown.

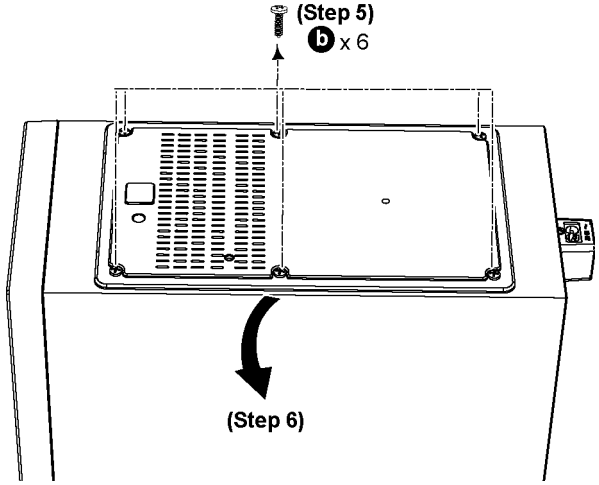


Caution : During assembling of the AC Cover, ensure the AC Cover Locators are properly inserted into the guides as diagram shown.

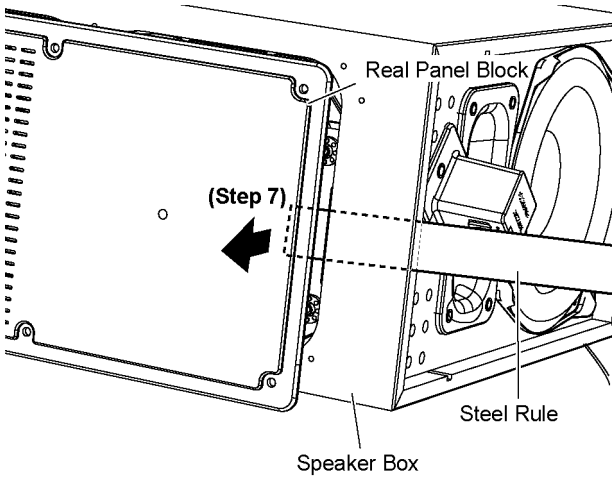


Step 5 : Remove 6 screw.

Step 6 : Lay down slghtly the Cabinet as arrow shown.



Step 7 : Push out the Rear Panel Block slightly by steel rule.

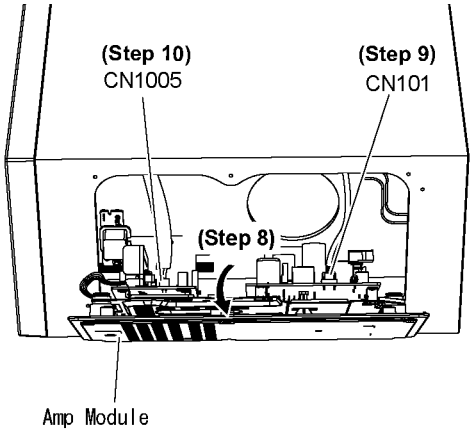


Step 8 : Open carefuly the Rear Panel Block as arrow shown.

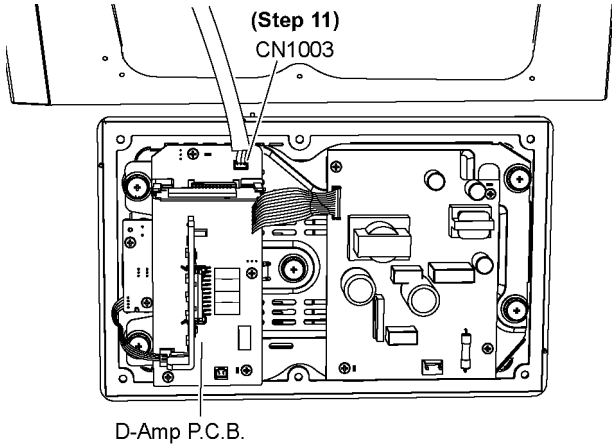
Caution : Do not exert too much force as it may damage the wiring inside.

Step 9 : Detach 2P Cable from the connector (CN101) on the SMPS P.C.B..

Step 10 : Detach 2P Cable from the connector (CN1005) on the D-Amp P.C.B..



Step 11 : Detach 3P Cable from the connector (CN1003) on the D-Amp P.C.B..



9.4.4. Disassembly of SMPS P.C.B.

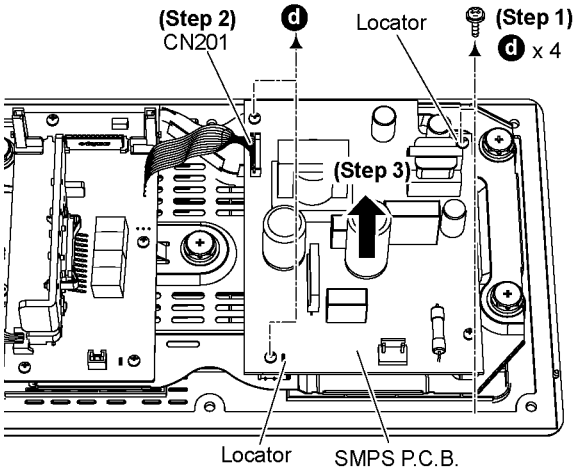
- Refer to “Disassembly of Bottom Panel”.
- Refer to “Disassembly of Amp Module”.

Step 1 : Remove 4 screws.

Step 2 : Detach 7P Cable from the connector (CN201) on the SMPS P.C.B..

Step 3 : Remove the SMPS P.C.B. as arrow shown.

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



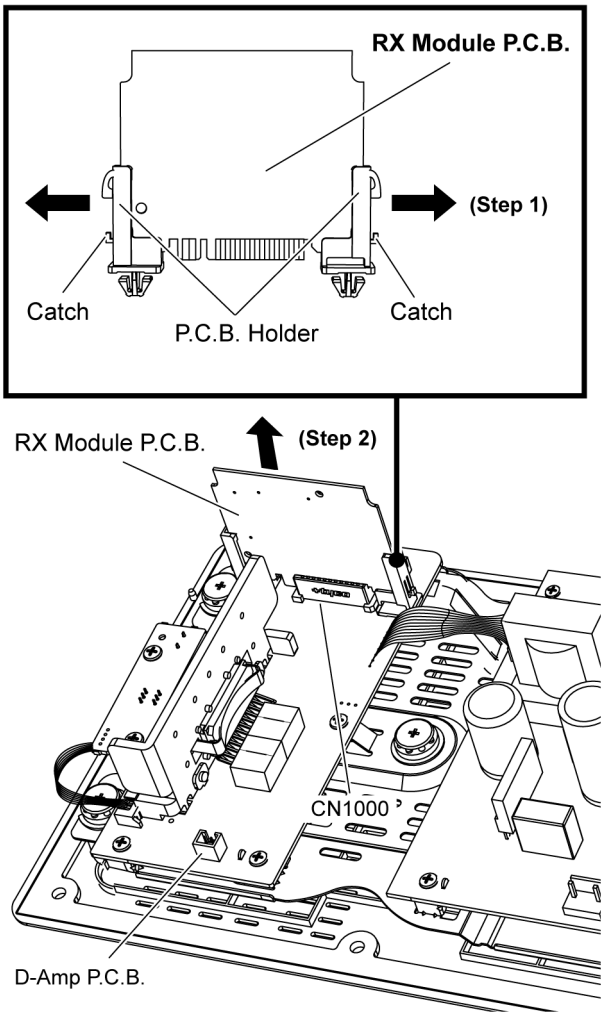
9.4.5. Disassembly of RX Module P.C.B.

- Refer to “Disassembly of Bottom Panel”.
- Refer to “Disassembly of Amp Module”.

Step 1 : Release the P.C.B. Holders slightly outwards as arrows shown.

Step 2 : Detach the RX Module P.C.B. from the connector (CN1000) on the D-Amp P.C.B..

Caution : During assembling, ensure the RX Module P.C.B. is properly and fully inserted onto the connector (CN1000) on the D-Amp P.C.B. and locked by the catchs.



9.4.6. Disassembly of D-Amp P.C.B. and Power Button P.C.B.

- Refer to “Disassembly of Bottom Panel”.
- Refer to “Disassembly of Amp Module”.

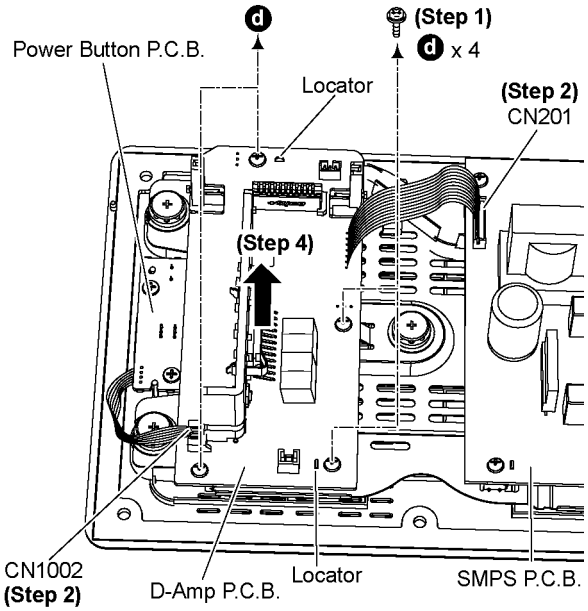
Step 1 : Remove 4 screws.

Step 2 : Detach 7P Cable from the connector (CN201) on the SMPS P.C.B..

Step 3 : Detach 4P Cable from the connector (CN1002) on the D-Amp P.C.B..

Step 4 : Remove the D-Amp P.C.B. as arrow shown.

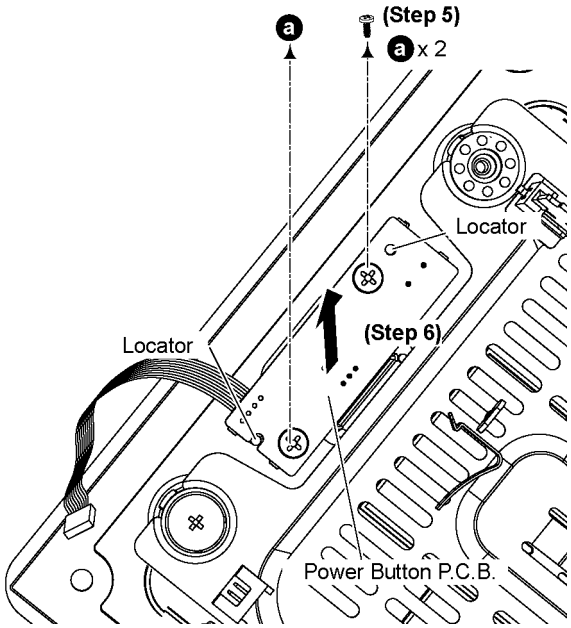
Caution : During assembling, ensure the D-Amp P.C.B. is seated properly onto the locators.



Step 5 : Remove 2 screws.

Step 6 : Remove the Power Button P.C.B. as arrow shown.

During assembling, ensure the Power Button P.C.B. is seated properly onto the locators



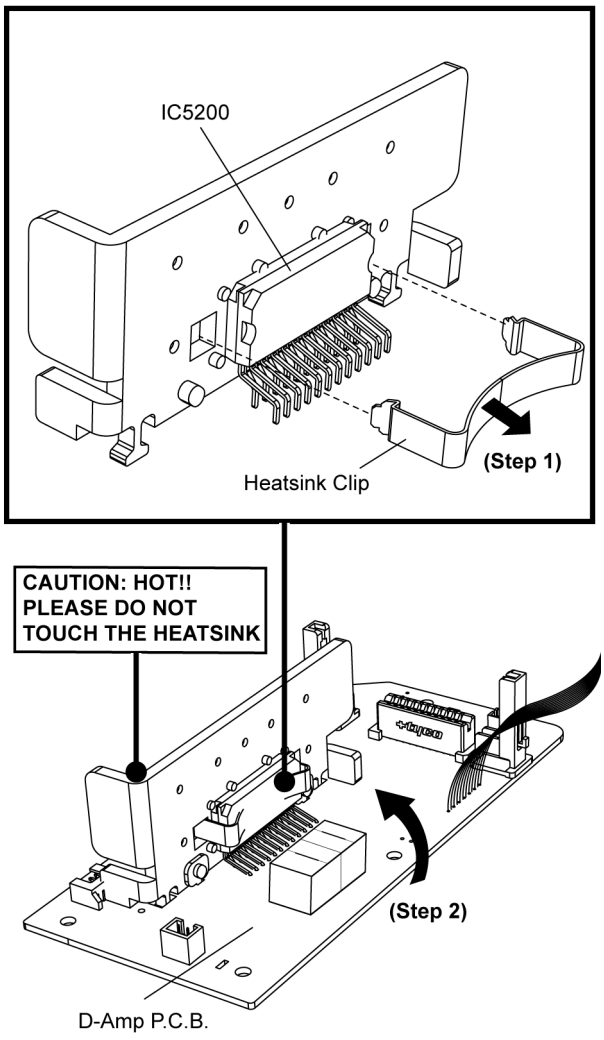
9.4.7. Replacement of Digital Amplifier IC (IC5200)

- Refer to “Disassembly of Bottom Panel”.
- Refer to “Disassembly of Amp Module”.
- Refer to “Refer to (Step 1) - (Step 4) of “Disassembly of Amp Module”.

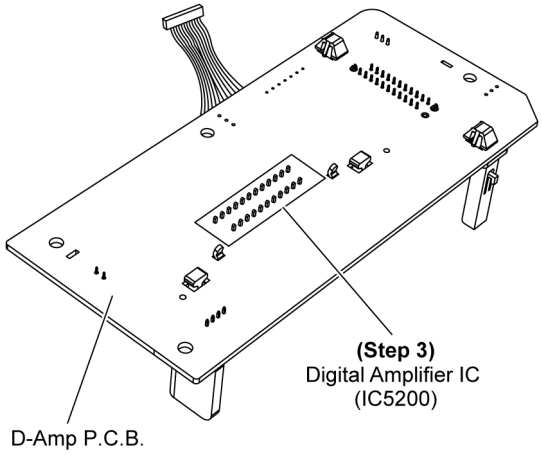
9.4.7.1. Disassembly of Digital Amplifier IC (IC5200)

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

Step 1 : Remove Heatsink Clip.
Step 2 : Upset over the D-Amp P.C.B. as arrow shown.

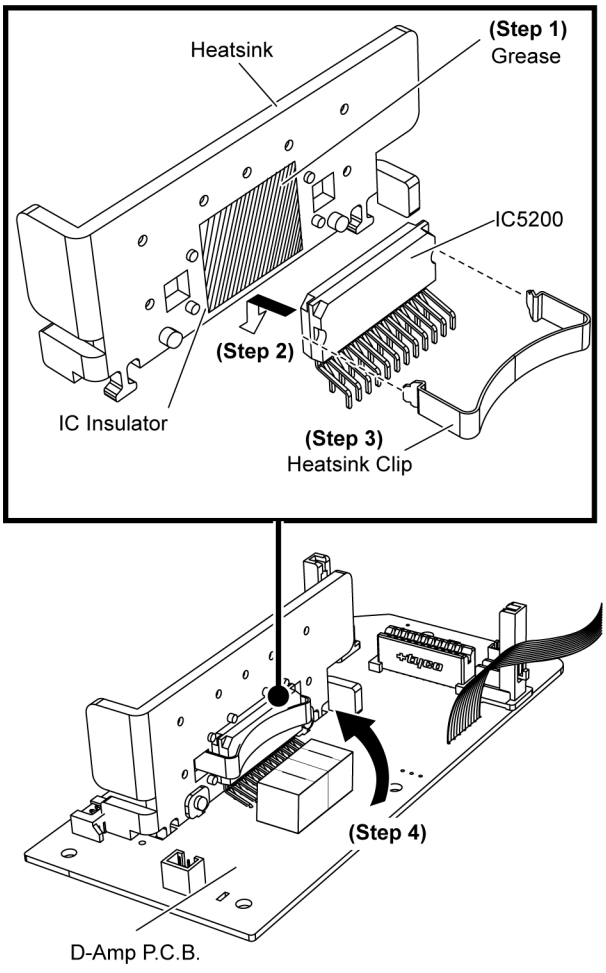


Step 3 : Desolder the pins of Digital Amplifier IC (IC5200).



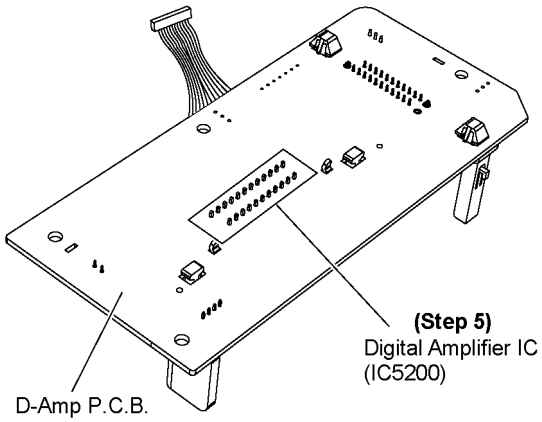
9.4.7.2. Assembly of Digital Amplifier IC (IC5200)

Step 1 : Apply Grease on the IC Insulator onto the Heatsink.
Step 2 : Fix the Digital Amplifier IC (IC5200) onto the D-Amp P.C.B..
Step 3 : Fix the Heatsink Clip onto the Heatsink.
Step 4 : Flip over the D-Amp P.C.B. as shown.
Caution : Ensure the Heatsink Clip is fully inserted onto the Heatsink



Step 5 : Solder pins of Digital Amplifier IC (IC5200).

Caution: Ensure that the pins of Digital Amplifier IC (IC5200) is positioned correctly on D-Amp P.C.B. before soldering



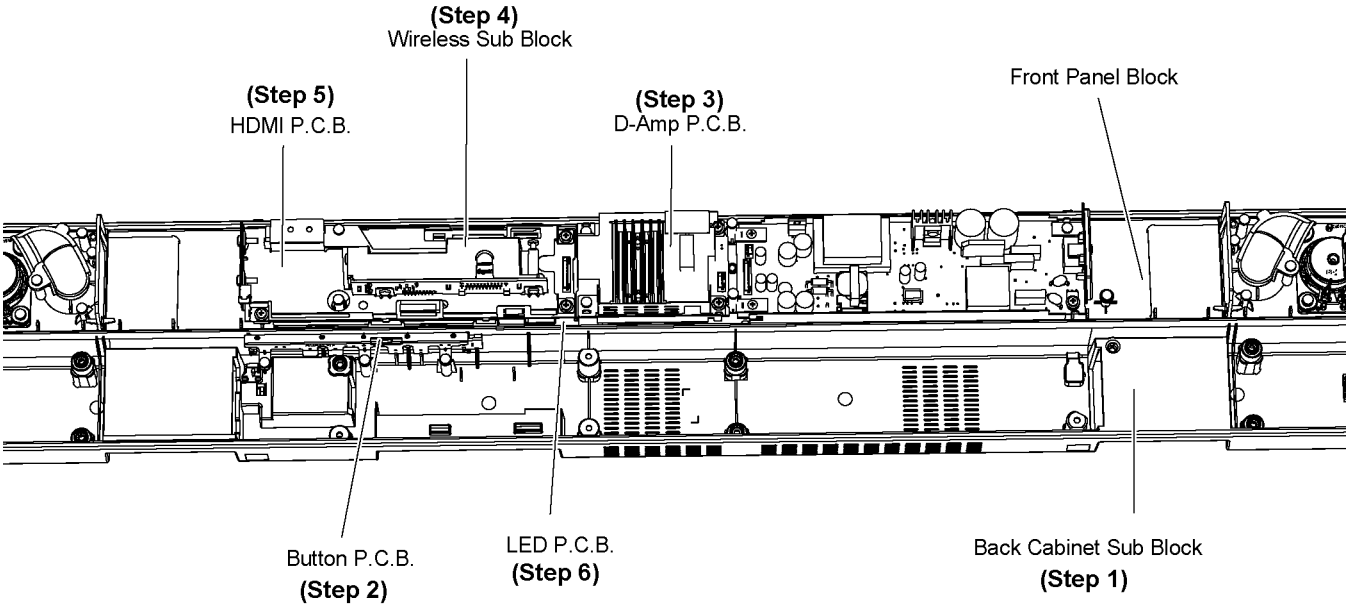
10 Service Position

Note: For description of the disassembly procedures, see the Section 9.3

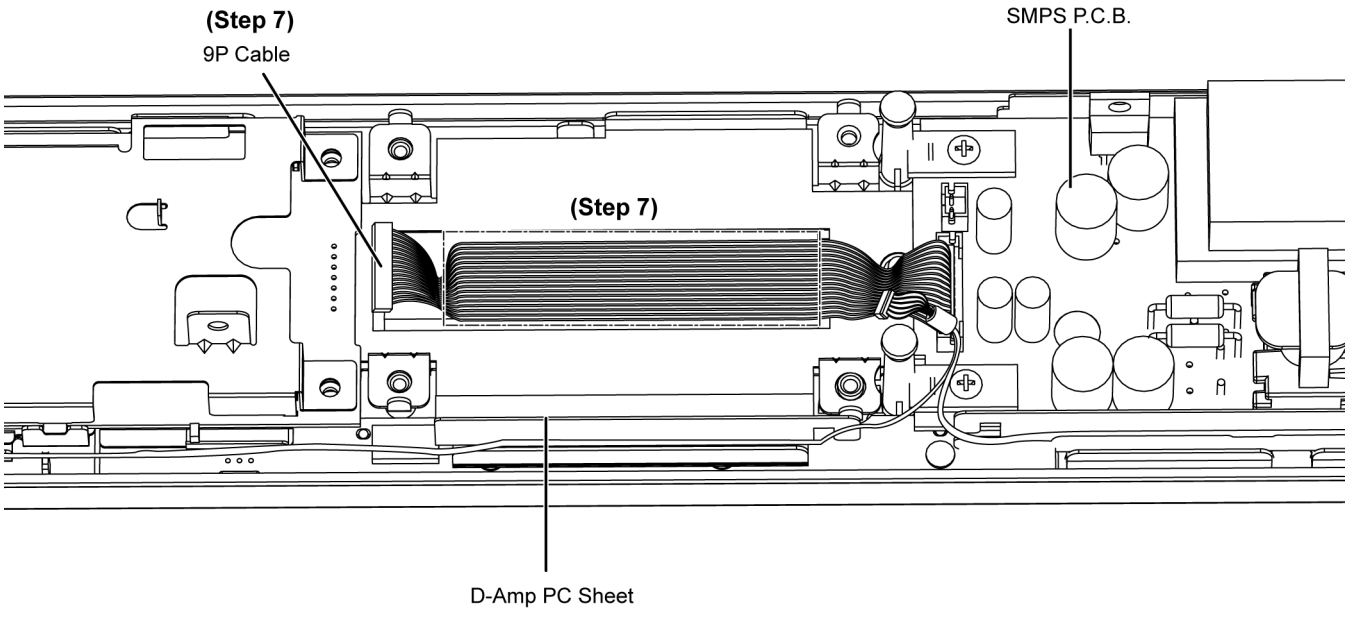
10.1. Main Unit (SU-HTB520)

10.1.1. Checking and Repairing of HDMI P.C.B. (Side B) and LED P.C.B.

Step 1 : Remove Back Cabinet Sub Block.
Step 2 : Remove Button P.C.B.. (Refer to "Disassembly of the Button P.C.B." (Step 1) - (Step 4))
Step 3 : Remove D-Amp P.C.B..
Step 4 : Remove Wireless Sub Block (Refer to "Disassembly of the Wireless P.C.B." (Step 1) - (Step 5))
Step 5 : Remove HDMI P.C.B..
Step 6 : Remove LED P.C.B. (Refer to "Disassembly of the LED P.C.B." (Step 1) - (Step 5))



Step 7 : Detach 9P Cable out of D-Amp PC Sheet.
Caution : Lift up arrow portion of D -Amp PC Sheet and dress center portion of 9P cable into D-Amp PC Sheet as shown. Ensure the 9P Cable is properly and fully insert into the D-Amp PC Sheet as shown.



Step 8 : Connect 26P Extension FFC (REZX1019) to the connector (CN5200) on D-Amp P.C.B. and the connector (CN2202) on HDMI P.C.B..

Step 9 : Connect 20P FFC to the connector (CN2201) on HDMI P.C.B..

Step 10 : Connect 12P FFC to the connector (CN2203) on HDMI P.C.B..

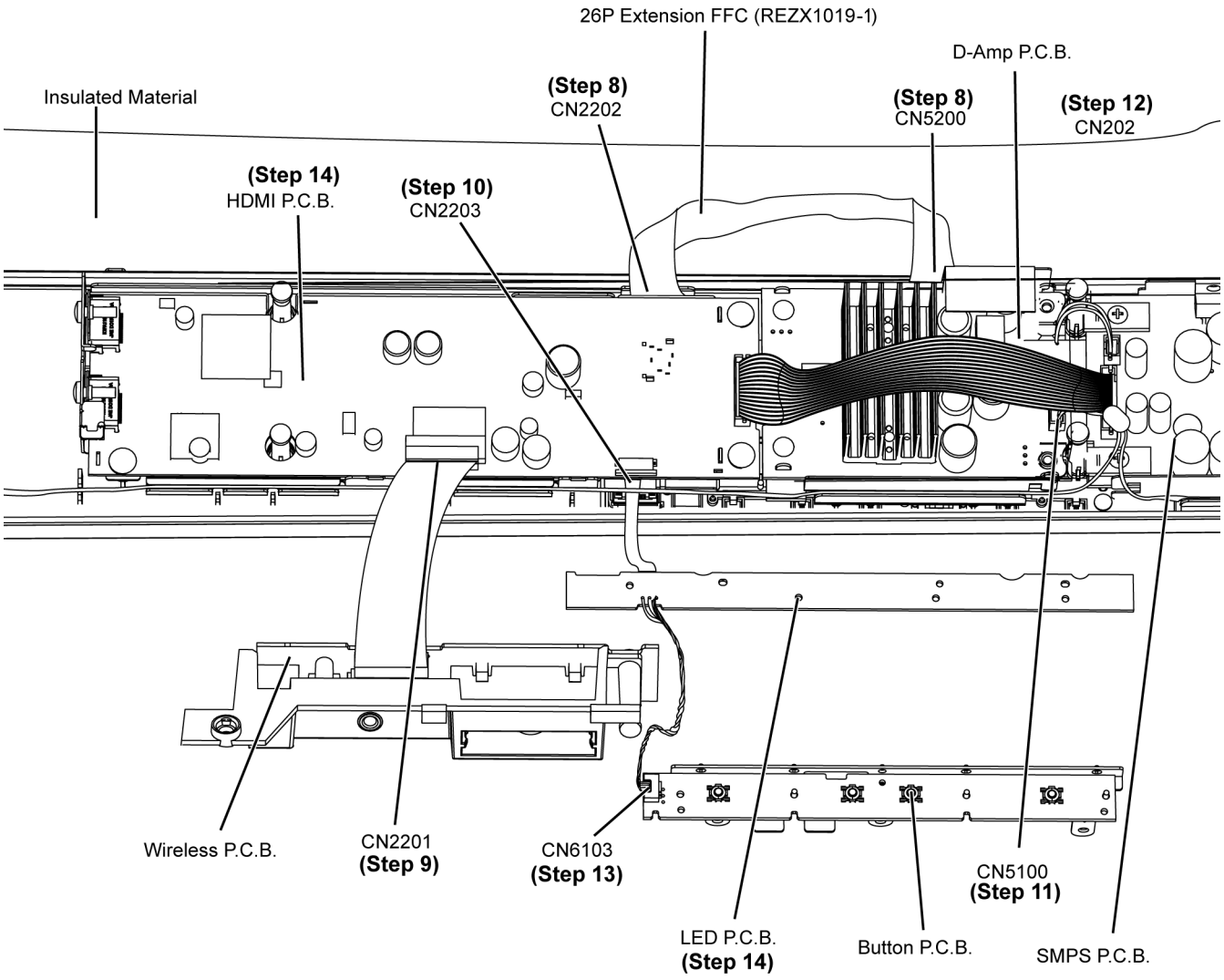
Note : Ensure FFC is properly inserted and fully connected into the connector.

Step 11 : Connect 4P Cable to the connector (CN5100) on D-Amp P.C.B..

Step 12 : Connect 2P Cable to the connector (CN202) on SMPS P.C.B..

Step 13 : Connect 3P Cable to the connector (CN6103) on Button P.C.B..

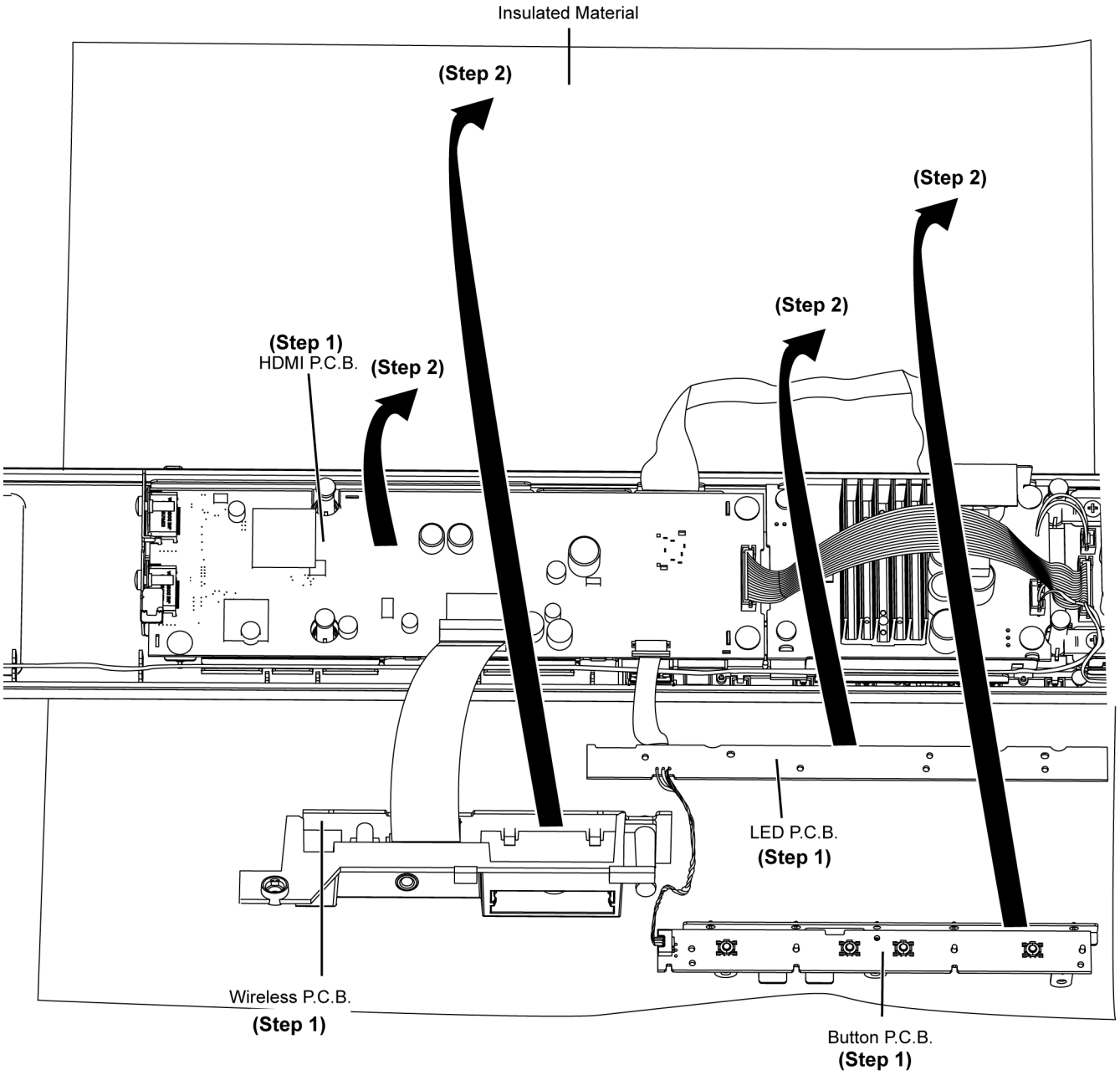
Step 14 : HDMI P.C.B. (Side B) and LED P.C.B. can be checked and repaired as diagram shown.



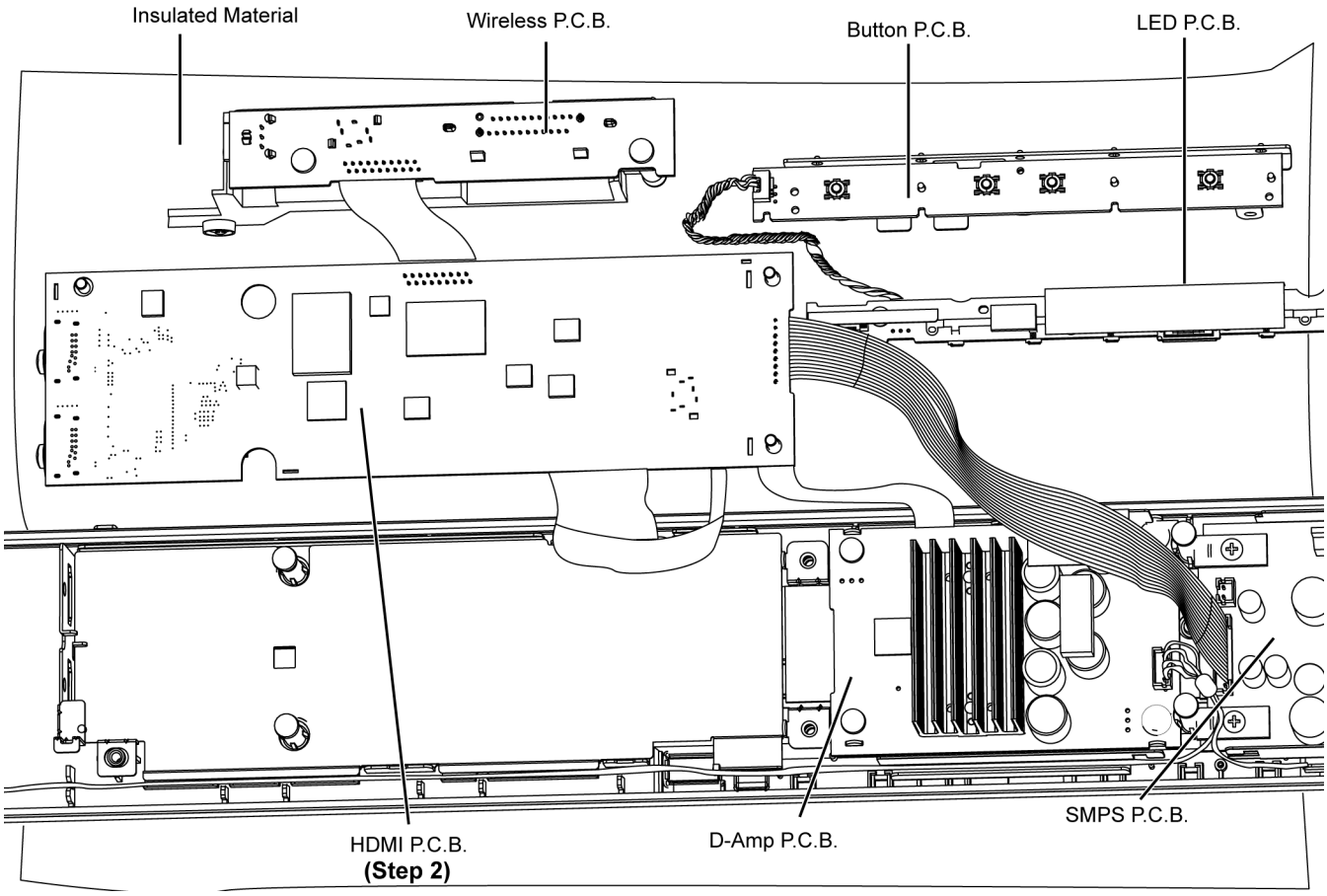
10.1.2. Checking and Repairing of HDMI P.C.B. (Side A)

• Refer to (Step 1) - (Step 14) of item 10.1.1

Step 1 : Place HDMI P.C.B, Wireless P.C.B., LED P.C.B. and Button P.C.B. arrow shown.
Step 2 : Lift and flip over HDMI P.C.B., Wireless P.C.B., LED P.C.B. and Button P.C.B. as arrow shown.



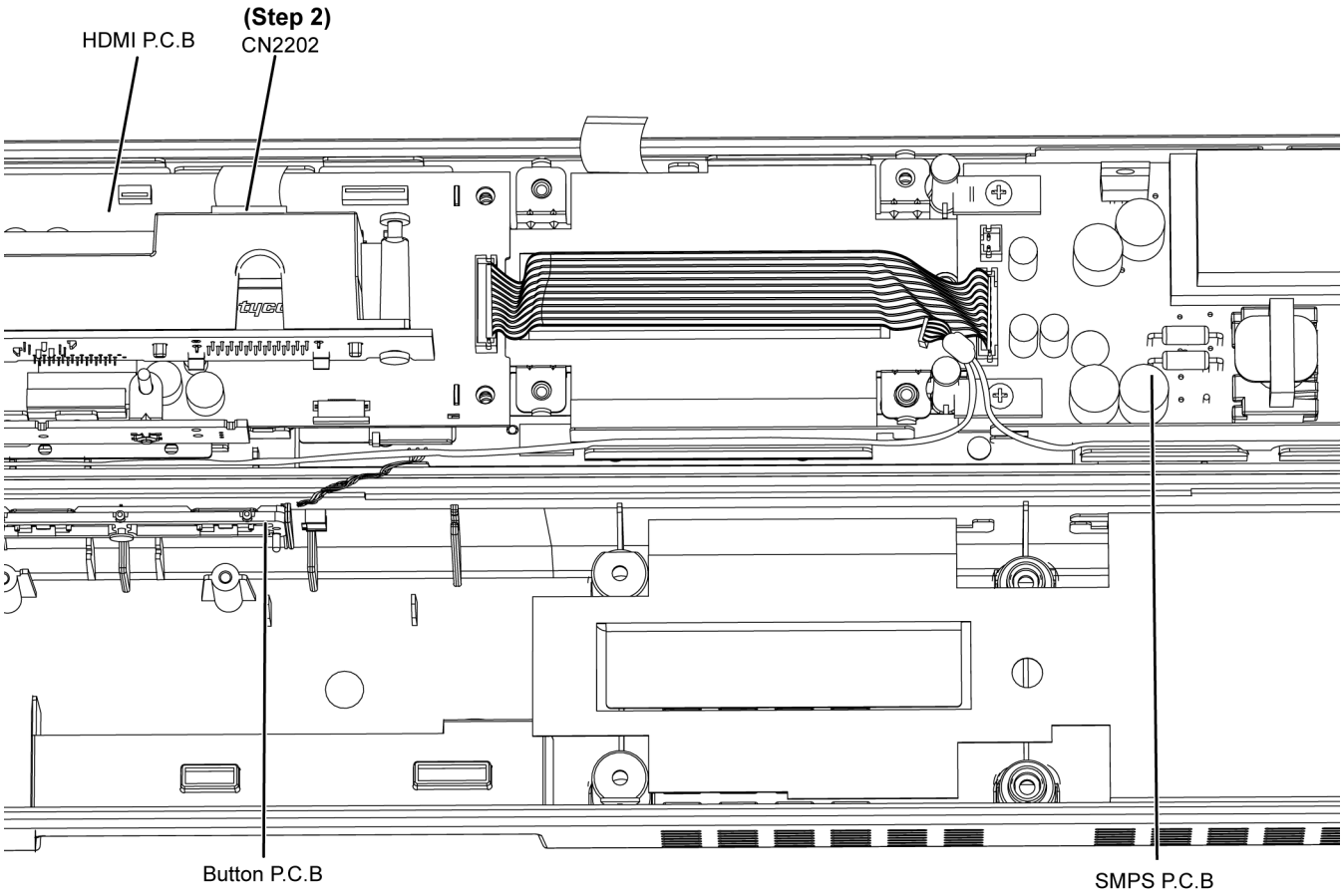
Step 2 : HDMI P.C.B. (Side A) can be checked and repaired as diagram shown.



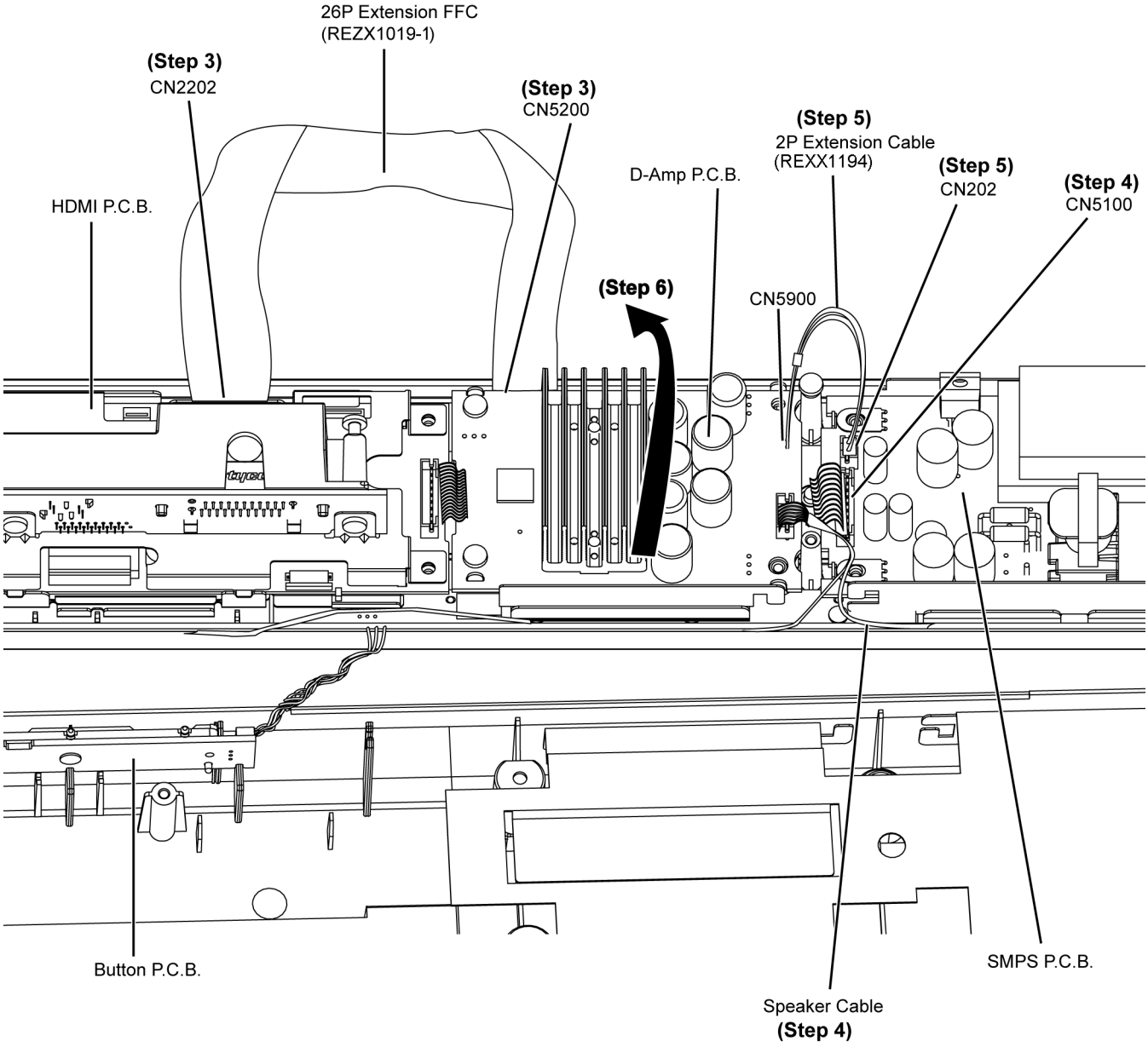
10.1.3. Checking and Repairing of D-Amp P.C.B.

Step 1 : Remove D-Amp P.C.B..

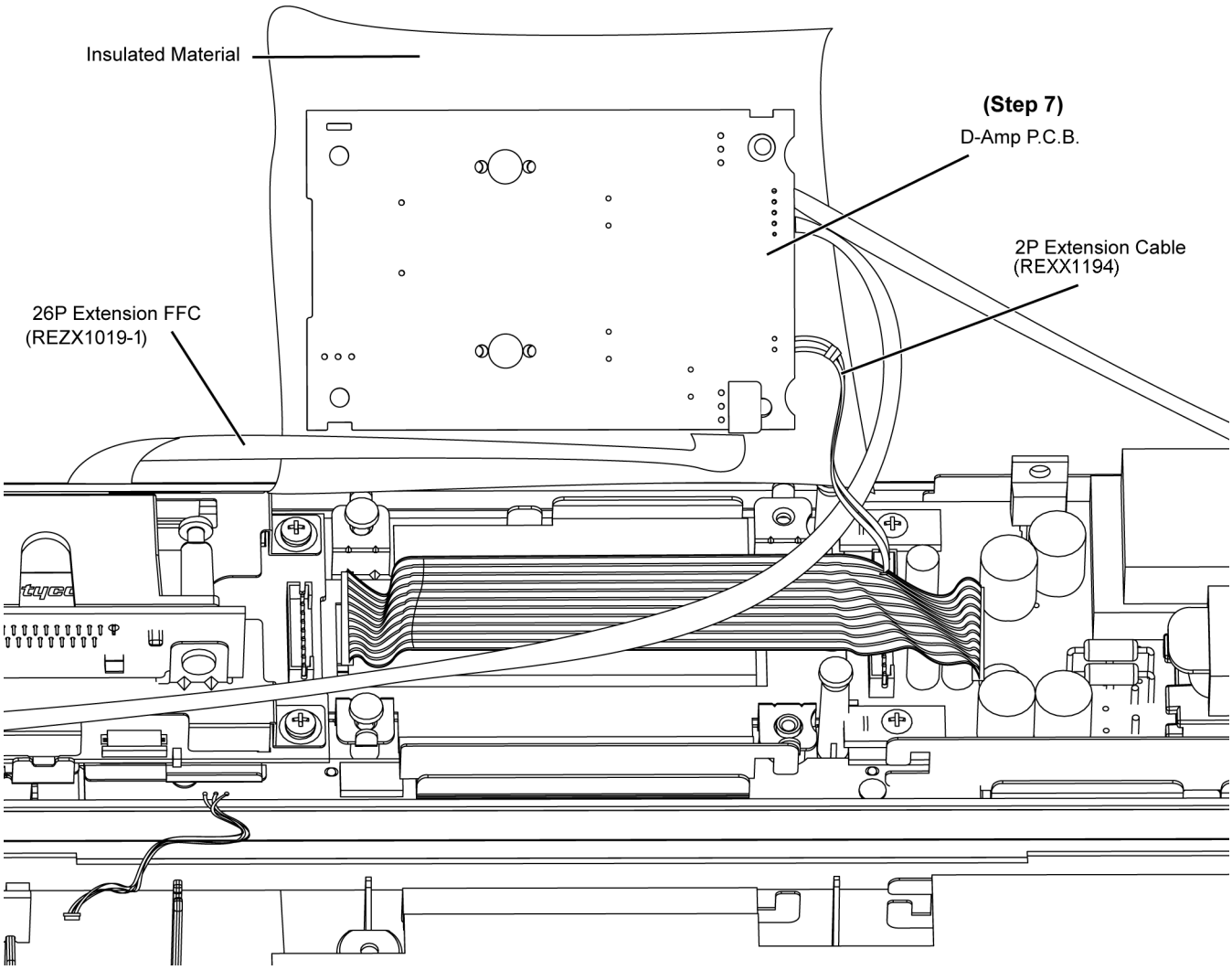
Step 2 : Detach 26P FFC to the connector (CN2202) on HDMI P.C.B..



Step 3 : Connect 26P Extension FFC to the connector (CN5200) on D-Amp P.C.B. and the connector (CN2202) on HDMI P.C.B..
Step 4 : Connect 4P Cable to the connector (CN5100) on D-Amp P.C.B. and Speaker Cable.
Step 5 : Connect 2P Extension Cable (REXX1194) to the connector (CN202) on SMPS P.C.B..
Step 6 : Lift up and flip over D-Amp P.C.B. as arrow shown.

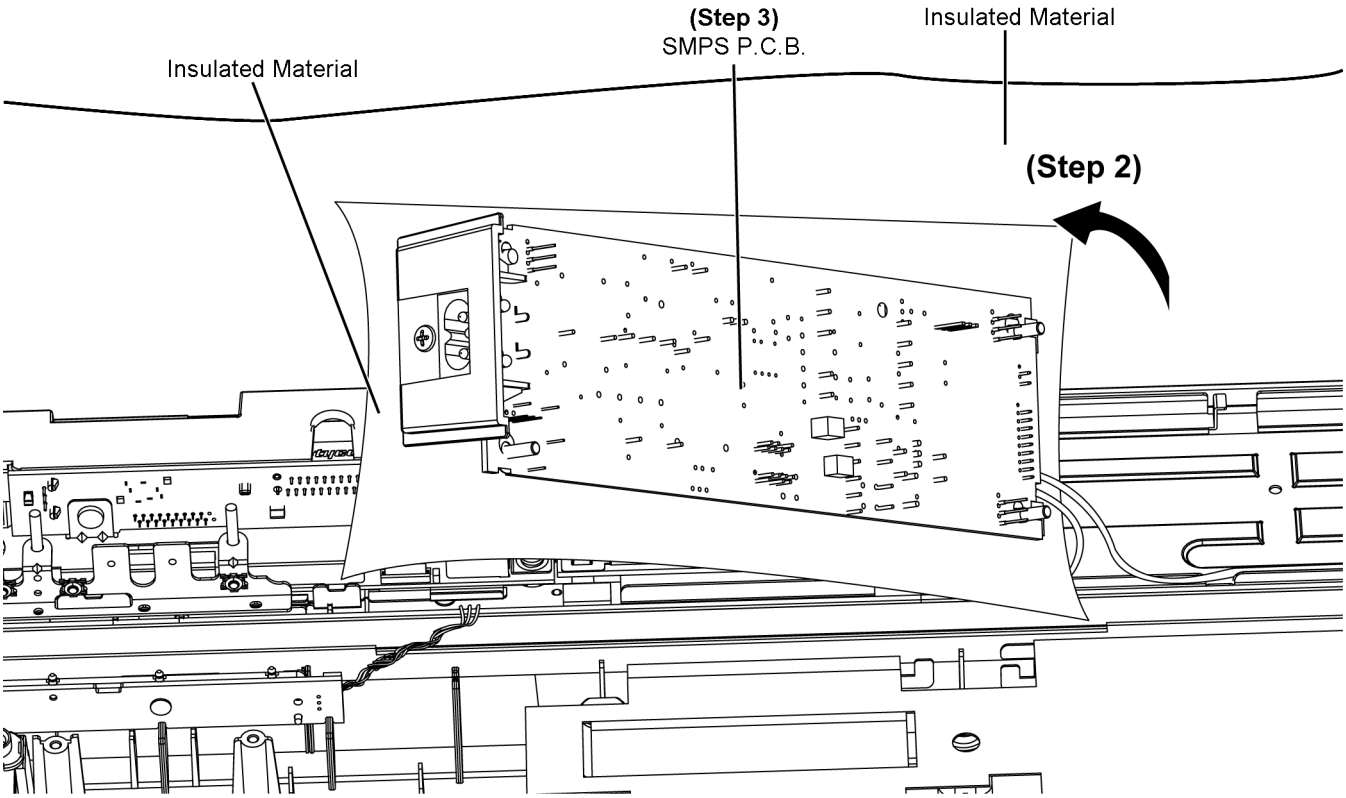


Step 7 : D-Amp P.C.B. can be checked and repaired as diagram shown.



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

Step 1 : Remove SMPS P.C.B.. (Refer to "Disassembly of the SMPS P.C.B." (Step 1) - (Step 2))
Step 2 : Flip over SMPS P.C.B. as arrow shown.
Step 3 : SMPS P.C.B. can be checked as diagram shown.

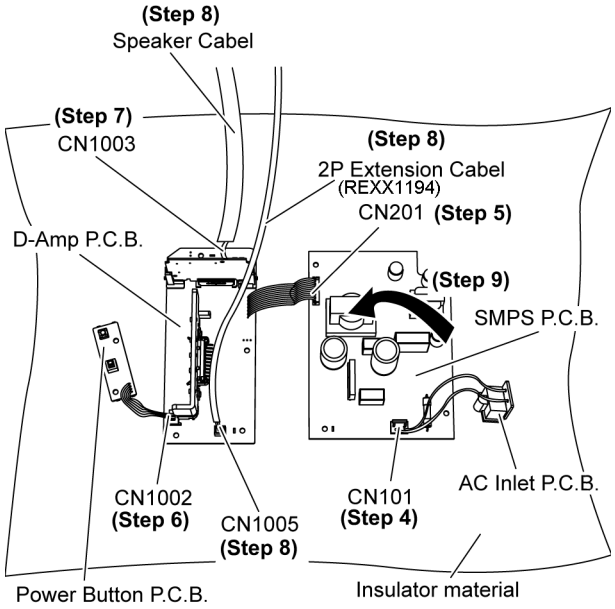


10.2. Speaker Unit (SB-HWA520)

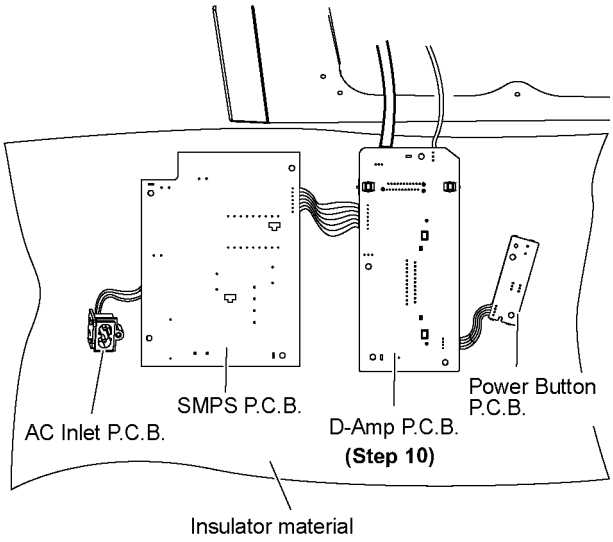
Note: For description of the disassembly procedures, see the Section 9.4

10.2.1. Checking and Repairing of D-Amp P.C.B.

Step 1 : Remove the AC Inlet P.C.B..
Step 2 : Remove the SMPS P.C.B..
Step 3 : Remove the D-Amp P.C.B and Power Button P.C.B..
Step 4 : Connect 2P Cable to the connector (CN101) on the SMPS P.C.B.
Step 5 : Connect 7P Cable to the connector (CN201) on the SMPS P.C.B..
Step 6 : Connect 4P Cable to the connector (CN1002) on the D-Amp P.C.B..
Step 7 : Connect 3P Cable to the connector (CN1003) on the D-Amp P.C.B..
Step 8 : Connect 2P Extension Cable (REXX1194) to the Speaker Cable and the connector (CN1005) on the D-Amp P.C.B..
Step 9 : Lift and flip over SMPS P.C.B., AC Inlet P.C.B., D-Amp P.C.B and Power Button P.C.B. as arrow shown.



Step 10 : D-Amp P.C.B. can be checked and repaired as diagram shown.



11 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.

11.1. Main Unit (SU-HTB520)

11.1.1. D-AMP P.C.B.

REF NO.	IC5100																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HDMI	11.2	3.2	0	0	3.0	1.5	2.9	1.5	1.1	0	0	3.0	0	0	0	1.5	2.9	1.5	0	0
STANDBY	11.2	3.2	0	0	3.0	1.5	2.9	1.5	1.1	0	0	3.0	0	0	0	1.5	2.9	1.5	0	0

REF NO.	IC5100																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
HDMI	11.1	11.1	11.2	0.1	0	20.3	20.3	10.1	0	0	10.2	20.3	10.2	10.2	20.3	10.2	0	0	10.2	20.3
STANDBY	11.1	11.1	11.2	0.1	0	20.3	20.3	10.1	0	0	10.2	20.3	10.2	10.2	20.3	10.2	0	0	10.2	20.3

REF NO.	IC5100																			
MODE	41	42	43	44																
HDMI	20.3	0	10.2	3.3																
STANDBY	20.3	0	10.2	3.3																

REF NO.	IC5200																			
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	0.9	0.9	0	0	1.9	0	3.1	1.3	3.1	0	3.0	3.3	3.1	0	1.9	3.1	3.1	3.1
STANDBY	1.8	0	0.9	0.9	0	0	1.9	0	3.1	1.3	3.1	0	3.0	3.3	3.1	0	1.9	3.1	3.1	3.1

REF NO.	IC5200																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
HDMI	0	0	0	3.3	3.3	1.7	1.7	0	1.7	0	0	0	1.8	0	0	3.1	0	0	3.1	0
STANDBY	0	0	0	3.3	3.3	1.7	1.7	0	1.7	0	0	0	1.8	0	0	3.1	0	0	3.1	0

REF NO.	IC5200																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
HDMI	0	0	0	1.6	1.6	1.6	1.6	1.6	0	0	0	0	0	3.1	1.6	1.6	1.5	1.6	0.8	0.8
STANDBY	0	0	0	1.6	1.6	1.6	1.6	1.6	0	0	0	0	0	3.1	0	0	0	0	0	0

REF NO.	IC5200																			
MODE	61	62	63	64																
HDMI	0.8	0.8	1.6	0.1																
STANDBY	0	0	1.6	0																

REF NO.	QR5201				QR5202				QR5203				QR5204				QR5205			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
HDMI	0	3.0	0		3.1	0	3.0		0	-1.3	0		3.0	3.0	0		0	0	2.9	
STANDBY	0	3.0	0		3.1	0	3.0		0	-1.3	0		3.0	3.0	0		0	0	2.9	

REF NO.	IC5900																			
MODE	1	2	3	4	5															
POWER ON	23.5	11.2	0	1.2	2.0															
STANDBY	23.5	11.2	0	1.2	2.0															

REF NO.	Q5401				Q5402				Q5403				Q5404				Q5405			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
POWER ON	0	3.3	0		0	3.1	0		16.1	0	0		8.2	0	7.9		7.9	0	7.9	
STANDBY	0	3.3	0		0	3.1	0		16.1	0	0		8.2	0	7.9		7.9	0	7.9	

SC-HTB520GN/GS/PH(SU-HTB520GN/GS/PH) D-AMP P.C.B.

11.1.2. HDMI 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
HDMI	3.3	3.1	3.1	3.1	3.2	3.3	3.3	3.3	0	3.3	3.3	1.8	3.3	3.3	0	1.5	0.8	0.9	0	1.6

REF NO.	IC2001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
HDMI	3.3	1.8	0	0	0	0	0.3	3.3	1.6	1.6	0	1.6	1.6	0.3	0.1	3.3	3.3	0.1	0.1	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
HDMI	0	1.8	0.1	1.7	0	1.7	0.1	0.9	0.1	3.3	1.7	1.7	0	1.7	0	0	3.3	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
HDMI	3.2	3.3	3.2	3.1	1.2	3.1	0	3.0	3.0	3.0	3.1	3.2	3.3	3.1	2.9	0	3.0	3.0	3.1	1.8

REF NO.	IC2001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
HDMI	1.8	3.2	1.8	0	0	0	0	0	3.3	0	0	0	0	3.2	1.7	0	0	0	0	3.1

REF NO.	IC2001																			
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
HDMI	0	0	0	0	0	0	3.3	3.3	3.3	3.3	0	1.8	0	0	0	0	0	3.3	3.3	3.3

REF NO.	IC2001																			
MODE	121	122	123	124	125	126	127	128												
HDMI	3.3	0	0.4	3.3	1.8	0.7	0	3.3												

REF NO.	IC2002																			
MODE	1	2	3	4	5	6														
HDMI	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
HDMI	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
HDMI	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

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

REF NO.	IC2401																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HDMI	0	0	0	1.7	1.7	0	0	1.6	3.3	1.7	0	0	0	1.8	0.4	0.7	0	0	3.3	0

SC-HTB520GN/GS/PH(SU-HTB520GN/GS/PH) HDMI P.C.B.

11.1.3. HDMI P.C.B. (2/6)

REF NO.	IC2401																			
MODE	21	22	23	24	25	26	27	28												
HDMI	3.3	0	3.3	1.5	1.5	0.3	1.6	1.7												

REF NO.	IC2402																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HDMI	3.3	3.3	3.3	0	0	0	3.3	0	0	0	0	0	3.2	0	0	0	0	0	0	0

REF NO.	IC2501																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HDMI	2.3	2.7	2.9	1.5	1.5	0	0	0	0.2	1.5	1.5	1.8	0	3.3	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
HDMI	0	0	0	2.8	3.1	0	1.8	1.8	0	0.1	0.1	1.8	0.7	0.7	0	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
HDMI	0	1.8	0	3.3	5.1	5.1	5.1	2.8	2.8	0	0	0	3.3	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
HDMI	0.6	0.6	0.7	1.8	0	3.0	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
HDMI	0	0	0	0	0	0	0	1.4	3.3	0	0	0	0	0	0	0	0	0	1.8	0

REF NO.	IC2502																			
MODE	1	2	3	4	5	6														
HDMI	1.5	0	1.5	1.5	3.3	1.5														

REF NO.	IC2601																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HDMI	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
HDMI	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
HDMI	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
HDMI	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

SC-HTB520GN/GS/PH(SU-HTB520GN/GS/PH) HDMI P.C.B.

11.1.4. HDMI P.C.B. (3/6)

REF NO.	IC2601																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
HDMI	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
HDMI	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
HDMI	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																
HDMI	0	0	1.8	0																

REF NO.	IC2602																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HDMI	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												
HDMI	0	0	0	0	5.0	5.0	5.0	5.0												

REF NO.	Q2503				Q2508						Q2601									
MODE	E	C	B		1	2	3	4	5		1	2	3	4	5	6				
HDMI	3.3	3.2	3.3		3.2	3.2	3.2	3.2	3.2		5.1	0	0	4.7	5.1	4.7				

REF NO.	Q2602						Q2603													
MODE	1	2	3	4	5		1	2	3	4	5	6								
HDMI	4.7	5.1	4.7	5.1	5.1		5.1	0	0	4.7	5.1	4.7								

REF NO.	Q2604						Q2605						Q2606							
MODE	1	2	3	4	5		1	2	3	4	5		1	2	3	4	5			
HDMI	4.7	5.1	4.7	5.1	5.1		0	0.9	0	3.3	5.1		0	0.7	0	5.1	3.3			

REF NO.	QR2601				QR2602															
MODE	E	C	B		E	C	B													
HDMI	0	4.9	0		0	5.0	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
POWER ON	1.1	0	3.2	0	1.0	0	0	0	0	3.3	1.6	0	0	3.3	3.3	0	3.2	3.2	0	3.3
STANDBY	1.1	0	3.2	0	1.0	0	0	0	0	3.3	1.6	0	0	3.3	3.3	0	3.2	3.2	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
POWER ON	3.3	0	0	3.3	0	3.3	3.3	3.3	0	3.3	3.3	0	0.2	0.6	0.7	0	0	0	0	0
STANDBY	3.3	0	0	3.3	0	3.3	3.3	3.3	0	3.3	3.3	0	0.2	0.6	0.7	0	0	0	0	0

SC-HTB520GN/GS/PH(SU-HTB520GN/GS/PH) HDMI P.C.B.

11.1.5. HDMI P.C.B. (4/6)

REF NO.	IC2201																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
POWER ON	3.3	2.1	0	0	0	3.2	2.1	3.3	0	3.3	3.3	0	0	0	0	0	0	0	0	3.3
STANDBY	3.3	2.1	0	0	0	3.2	2.1	3.3	0	3.3	3.3	0	0	0	0	0	0	0	0	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
POWER ON	3.3	0	0	0	0	0	0.7	3.3	3.3	3.3	3.3	0.4	3.3	1.8	3.3	3.3	0	3.3	3.3	0
STANDBY	3.3	0	0	0	0	0	0.7	3.3	3.3	3.3	3.3	0.4	3.3	1.8	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
POWER ON	1.6	0	0	0	0	0	3.3	3.2	3.3	3.3	0	3.3	3.3	0	0	3.3	3.3	0	0	0
STANDBY	1.6	0	0	0	0	0	3.3	3.2	3.3	3.3	0	3.3	3.3	0	0	3.3	3.3	0	0	0

REF NO.	IC2202																			
MODE	1	2	3	4																
POWER ON	3.2	5.1	0	0																
STANDBY	3.2	5.1	0	0																

REF NO.	IC2203																			
MODE	1	2	3	4	5	6	7	8												
POWER ON	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	2.0	3.1	2.8	0	0	0	0.8	1.2	3.1	1.5	0	0	3.1	3.1	2.8	2.8	2.8	3.1	3.1
STANDBY	0	2.0	3.1	2.8	0	0	0	0.8	1.2	3.1	1.5	0	0	3.1	3.1	2.8	2.8	2.8	3.1	3.1

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	3.2	3.1	0.7	0.2	0.6	3.1	3.1	0	0	2.7	2.6	0	3.1	3.1	0	0	3.2
STANDBY	0	0	0	3.2	3.1	0.7	0.2	0.6	3.1	3.1	0	0	2.7	2.6	0	3.1	3.1	0	0	3.2

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	3.2	0	0	0	0	0	0	0	0	0	3.3	0	0	0	0	0	0	0	0	3.1
STANDBY	3.2	0	0	0	0	0	0	0	0	0	3.3	0	0	0	0	0	0	0	0	3.1

REF NO.	IC2301																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
POWER ON	0	0	0	0	2.9	2.8	2.8	2.8	3.3	0	0	2.8	0	0	0	0	0	0	0	0
STANDBY	0	0	0	0	2.9	2.8	2.8	2.8	3.3	0	0	2.8	0	0	0	0	0	0	0	0

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	5.0	5.0	0	0	0	1.8	2.0	0	0	3.1	3.1	0	0	0
STANDBY	0	0	0	0	0	0	5.0	5.0	0	0	0	1.8	2.0	0	0	3.1	3.1	0	0	0

SC-HTB520GN/GS/PH(SU-HTB520GN/GS/PH) HDMI P.C.B.

11.1.6. HDMI P.C.B. (5/6)

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.	IC2901																			
MODE	1	2	3																	
POWER ON	3.3	0	5.0																	
STANDBY	3.3	0	5.0																	

REF NO.	IC2902																			
MODE	1	2	3	4	5															
POWER ON	3.3	2.9	1.8	0	0															
STANDBY	3.3	2.9	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	2.1															
STANDBY	4.9	1.8	0	1.2	2.1															

REF NO.	IC2908																			
MODE	1	2	3	4	5															
POWER ON	23.5	5.0	0	1.2	2.1															
STANDBY	23.5	5.0	0	1.2	2.1															

REF NO.	Q2901				QR2301				QR2302				QR2902				QR2904			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
POWER ON	3.3	3.0	2.5		0	3.2	0		0	0	3.3		0	0	2.9		0	2.1	0	
STANDBY	0	3.0	0		0	0	3.3		0	0	3.3		0	0	2.9		0	2.1	0	

REF NO.	QR2905																			
MODE	E	C	B																	
POWER ON	0	0	3.3																	
STANDBY	0	0	0																	

SC-HTB520GN/GS/PH(SU-HTB520GN/GS/PH) HDMI P.C.B.

11.1.7. LED P.C.B.

REF NO.	IC6101																			
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	0	0	1.1	3.8	0.5	3.8	0	0	0	0	4.3		
STANDBY	0	3.2	3.2	0	3.8	3.8	3.8	0	0	1.1	3.8	0.5	3.8	0	0	0	0	4.3		

SC-HTB520GN/GS/PH(SU-HTB520GN/GS/PH) LED P.C.B.

11.1.8. WIRELESS P.C.B.

REF NO.	IC3000																			
MODE	1	2	3																	
OPT IN	3.3	0	1.9																	

REF NO.	QR3401																			
MODE	E	C	B																	
OPT IN	0	1.1	0																	

SC-HTB520GN/GS/PH(SU-HTB520GN/GS/PH) WIRELESS P.C.B.

11.2. Speaker Unit (SB-HWA520)

11.2.1. D-AMP P.C.B.

REF NO.	IC3002																			
MODE	1	2	3	4	5	6	7	8												
HDMI	1	0	0	-15.1	0	0	0	15.8												
STANDBY	1	0	0	-15.1	0	0	0	15.8												

REF NO.	IC5200																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HDMI	2.5	0	0	22.8	0	-22.7	-14.2	23.1	9.0	0	-22.9	-12.8	-22.9	0	9.0	23.1	-22.7	-22.7	0	22.8
STANDBY	2.5	0	0	22.8	0	-22.7	-14.2	23.1	9.0	0	-22.9	-12.8	-22.9	0	9.0	23.1	-22.7	-22.7	0	22.8

REF NO.	IC5200																			
MODE	21	22	23																	
HDMI	7.7	0	4.9																	
STANDBY	7.7	0	4.9																	

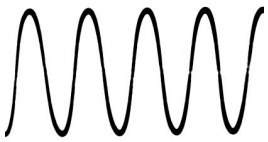
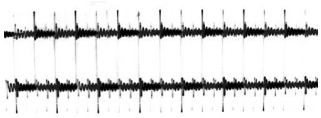
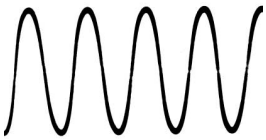
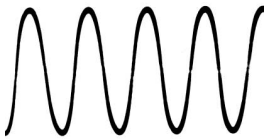
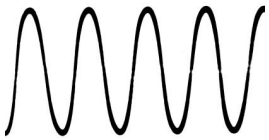
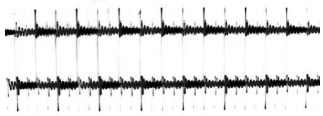
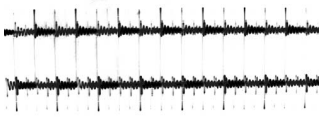
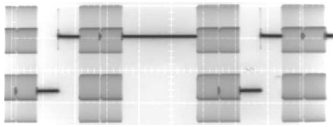
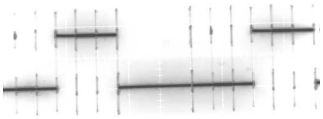
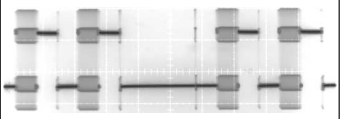
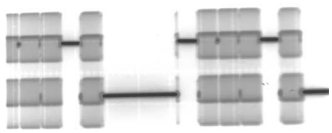
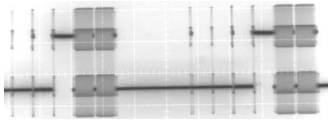
REF NO.	Q1003				Q1004				Q1005				Q1006				Q1007			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
POWER ON	5.1	5.0	4.3		4.6	4.7	0		0	0	2.9		0	4.3	3.3		0	2.5	0	
STANDBY	5.1	5.0	4.3		4.6	4.7	4.2		0	0	2.9		0	4.3	3.3		0	2.5	0	

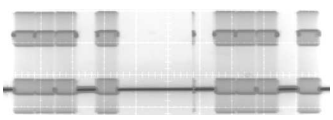
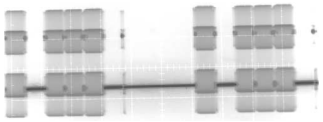
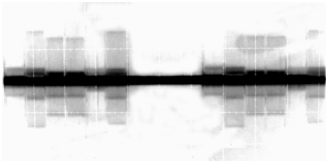
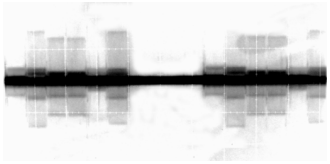
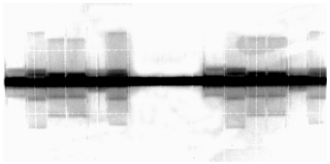
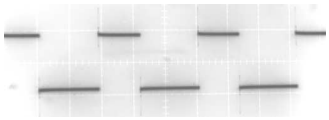
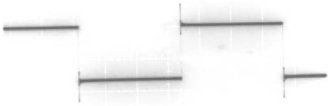
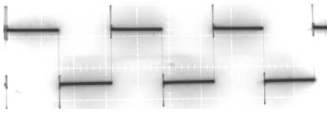
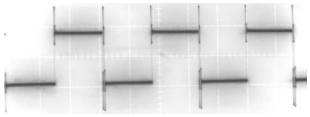
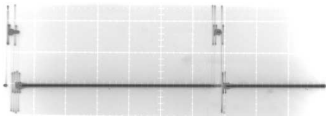
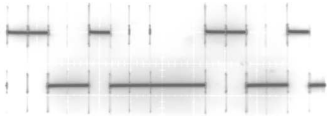
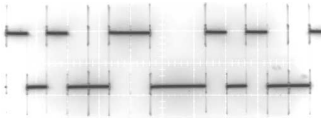
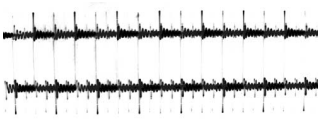
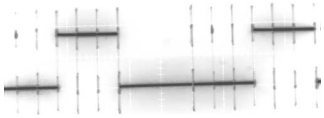
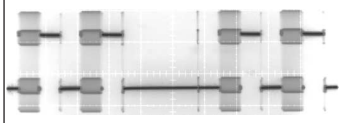
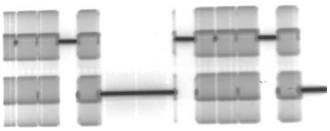
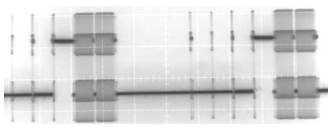
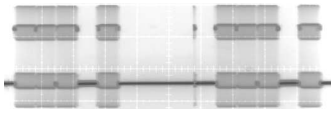
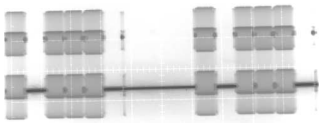
REF NO.	Q1008				Q1009				Q2002				Q2010				Q2011			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
POWER ON	0	2.6	0		0	2.8	0		15.8	22.9	16.4		0	-15.7	-0.6		-15.1	-22.7	-15.5	
STANDBY	0	2.6	0		0	2.8	0		15.8	22.9	16.4		0	-15.7	-0.6		-15.1	-22.7	-15.5	

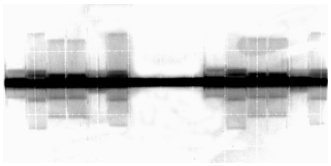
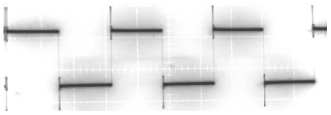
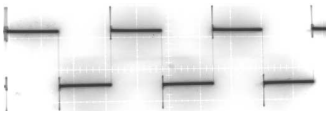
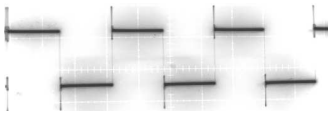
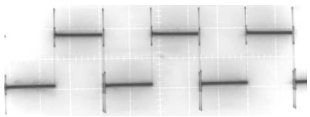
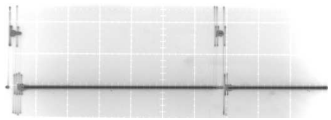
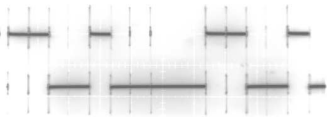
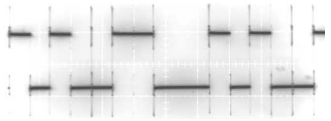
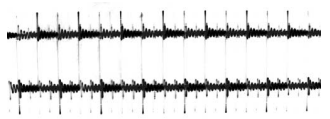
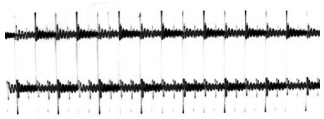
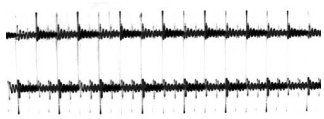
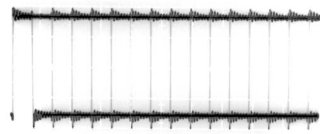
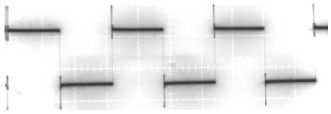
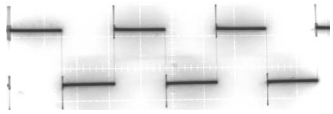
SC-HTB520GN/GS/PH(SB-HWA520GN/GS/PH) D-AMP P.C.B.

11.3. Waveform Chart

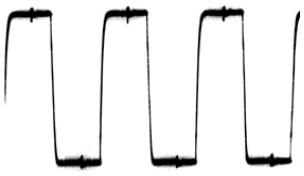
11.3.1. Main Unit (SU-HTB520)

WF No. IC2001-17 (PLAY)  0.45Vp-p(20nsec/div)	WF No. IC2001-27 (PLAY)  5Vp-p(1usec/div)	WF No. IC2001-34 (PLAY)  4Vp-p(1usec/div)	WF No. IC2001-48 (PLAY)  6Vp-p(2usec/div)
WF No. IC2001-51 (PLAY)  6Vp-p(1usec/div)	WF No. IC2201-11 (PLAY)  2.4Vp-p(50nsec/div)	WF No. IC2201-11 (PLAY)  1.75Vp-p(50nsec/div)	WF No. IC2301-8 (PLAY)  1Vp-p(10usec/div)
WF No. IC2301-9 (PLAY)  2.5Vp-p(10usec/div)	WF No. IC2301-11 (PLAY)  3.5Vp-p(100nsec/div)	WF No. IC2301-13 (PLAY)  2.2Vp-p(100nsec/div)	WF No. IC2401-10 (PLAY)  8Vp-p(1usec/div)
WF No. IC2401-26 (PLAY)  4Vp-p(1usec/div)	WF No. IC2501-4 (PLAY)  3Vp-p(200nsec/div)	WF No. IC2501-9 (PLAY)  3Vp-p(500nsec/div)	WF No. IC2501-56 (PLAY)  5Vp-p(5usec/div)
WF No. IC2501-57 (PLAY)  5Vp-p(5usec/div)	WF No. IC2501-58 (PLAY)  5Vp-p(5usec/div)	WF No. IC2501-59 (PLAY)  5Vp-p(5usec/div)	WF No. IC2501-60 (PLAY)  5Vp-p(5usec/div)
			SC-HTB520GN/GS/PH(SU-HTB520GN/GS/PH)

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)
			SC-HTB520GN/GS/PH(SU-HTB520GN/GS/PH)

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. IC5100-6,8,16,18 (PLAY)  6Vp-p(1usec/div)	WF No. IC5100-28,31,36,39 (PLAY)  32Vp-p(1usec/div)	WF No. IC5200-19 (PLAY)  2Vp-p(20nsec/div)	WF No. IC5200-20 (PLAY)  1Vp-p(20nsec/div)
WF No. IC5200-29 (PLAY)  3.2Vp-p(5usec/div)	WF No. IC5200-44,45,46,47 (PLAY)  6Vp-p(1usec/div)		

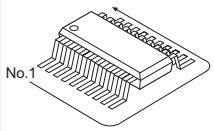
11.3.2. Speaker Unit (SB-HWA520)

WF No. IC5200-1 (PLAY)	WF No. IC5200-2 (PLAY)	WF No. IC5200-10,14 (PLAY)	WF No. IC5200-22 (PLAY)
			
5.6Vp-p(1usec/div)	0.84Vp-p(200usec/div)	80Vp-p(1usec/div)	0.84Vp-p(200usec/div)
SC-HTB520GN/GS/PH(SB-HWA520GN/GS/PH)			

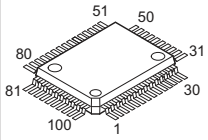
12 Illustration of IC's, Transistors and Diodes

12.1. Main Unit (SU-HTB520)

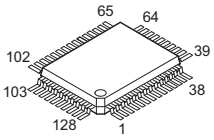
C0JBAQ000073 (18P)
C0JBAZ001466 (20P)
C1AB00003174 (28P)
C1AB00003217 (44P)
C3ABMY000022 (50P)



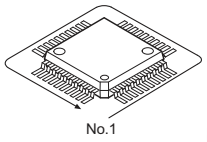
RFKWHTB520PH(100P)
RFKWMHTB520M(100P)
C1AB00002975 (100P)



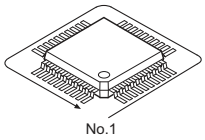
C2HBCY000067 (128P)



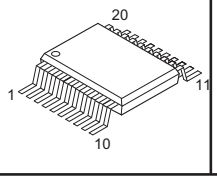
C1AB00002989 (144P)



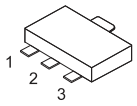
C1AB00003216 (64P)



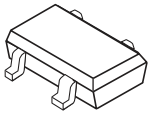
C2CBYY001016



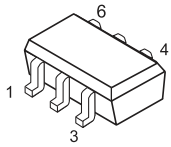
C0CBABC00117



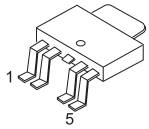
C0EBG0000107



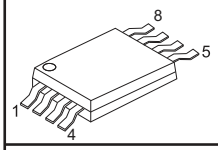
C0JBAR000396
C0JBAB000986



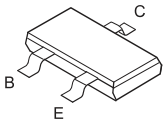
C0CBCAG00015
C0DBAYH00005



C3EBEC000047
C3EBEC000060

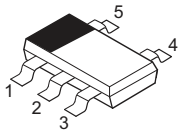


B1ABCF000011
B1ABCF000079

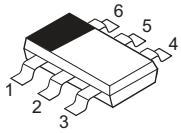


B1ABMF000020
B1ADBL000010
B1ADCE000012
B1GBCFGG0030
B1GBCFJJ0007
B1GDCFJJ0008
B1GDCFJJ0044
B1GBCFJJ0051
B1GBCFNN0004

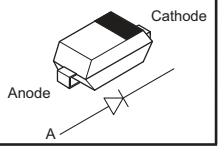
B1CFGD000002



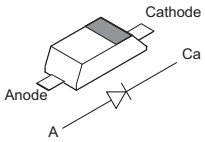
B1HBCFA00003



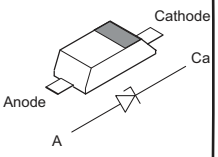
B0JCPG000005
B0ECKP000002



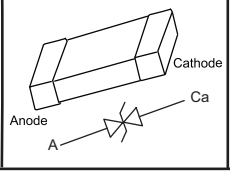
B0ACCK000005
B0ACCK000012
B0JCCD000017



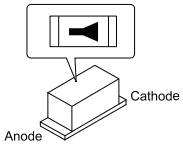
B0BC030A0264



B0ZBZ0000156

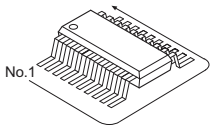


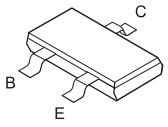
B3ADB0000026
B3ABB0000086



12.2. Speaker Unit (SB-HWA520)

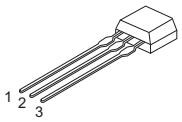
C0ABBB000244 (8P)
C1BA00000497 (24P)



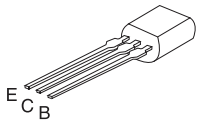


B1ABCF000176
B1ADCE000012
B1GDCFGG0026
B1GBCFGG0030
B1GBCFJJ0051

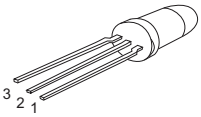
B1ACCF000094



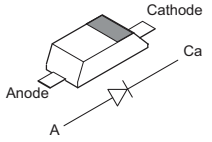
B1ACKD000006
B1AAKD000012



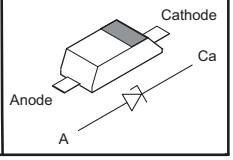
B3AGA0000124



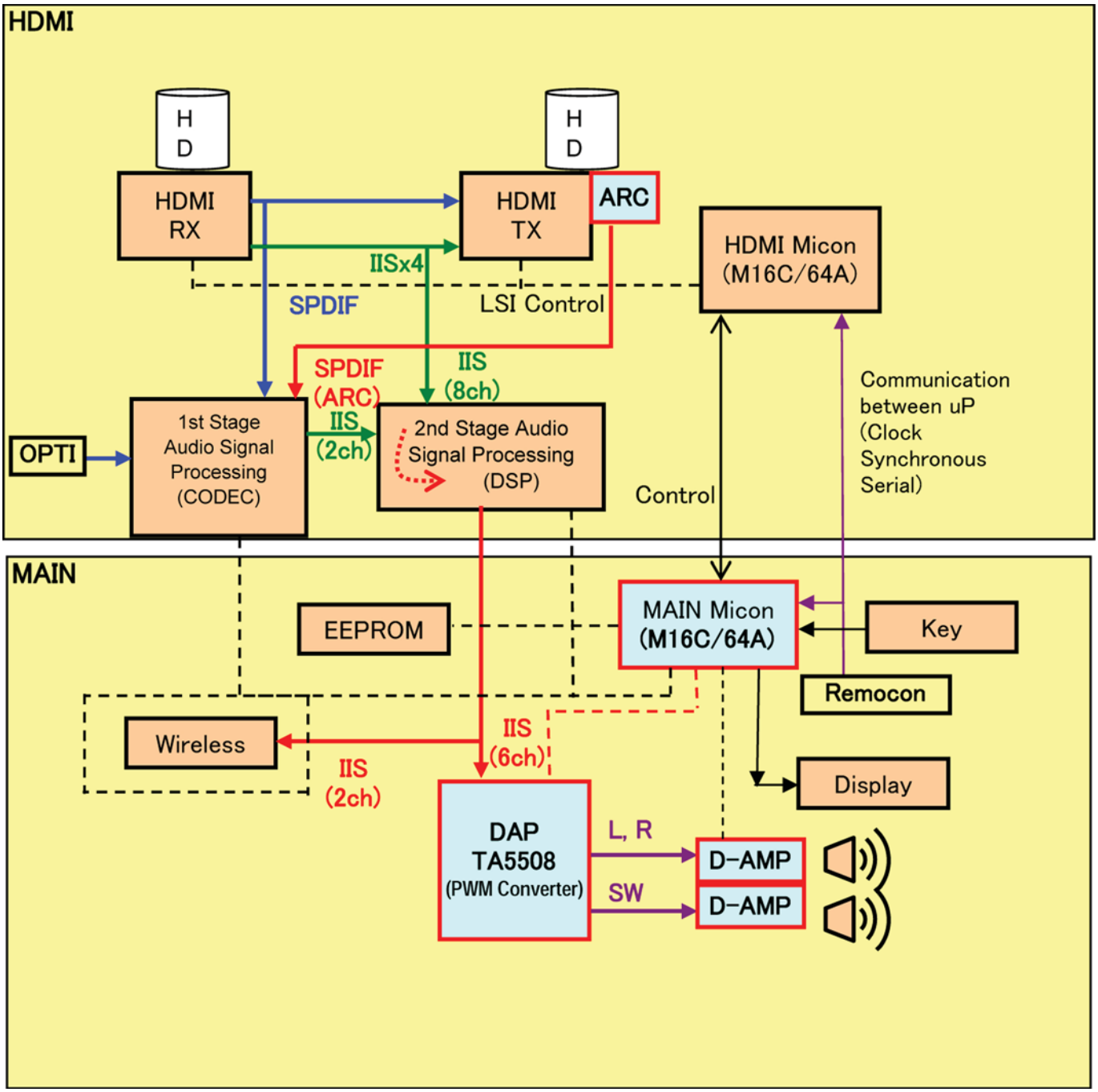
B0ACCK000012



B0BC01600013

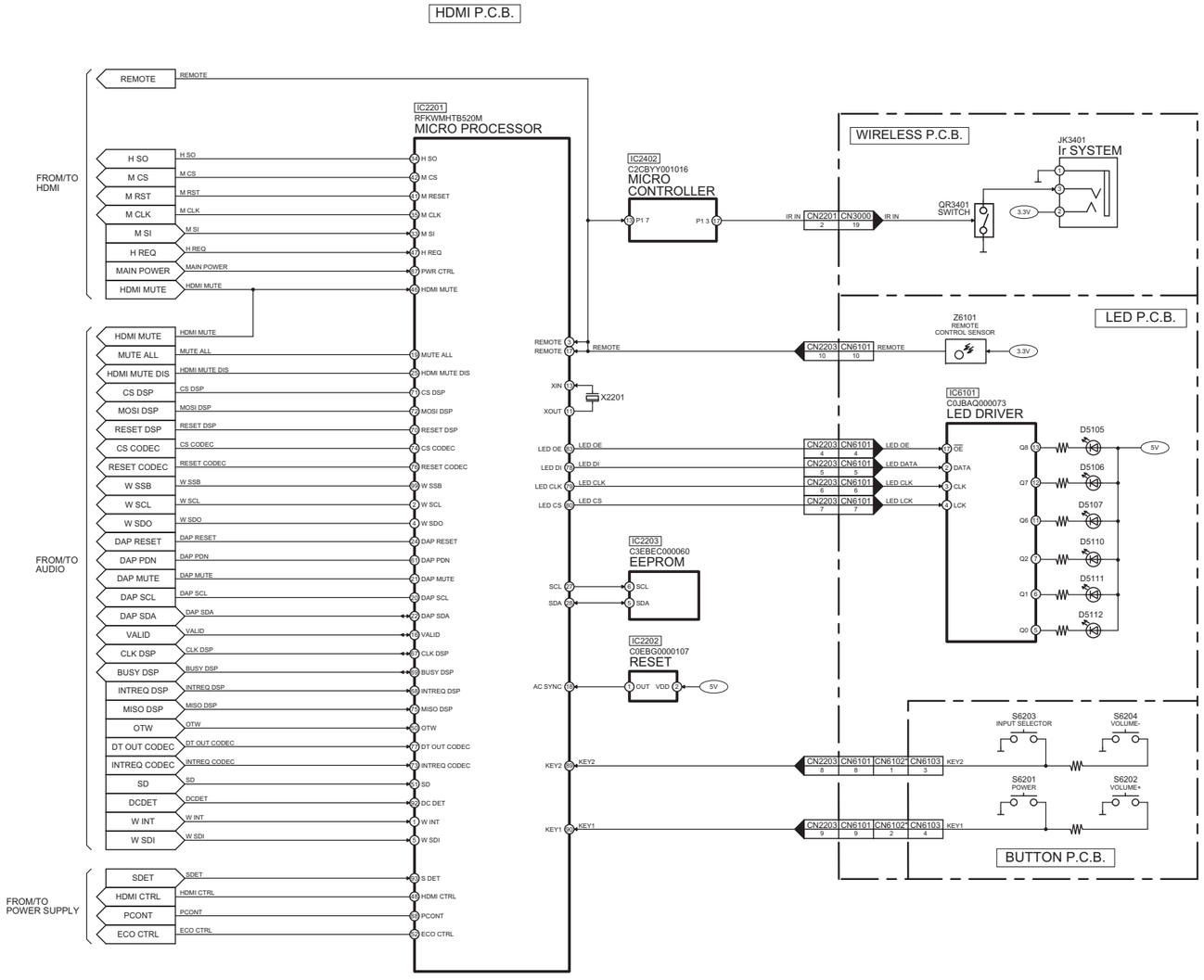


13 Overall Simplified Block



14 Block Diagram

14.1. SYSTEM CONTROL BLOCK DIAGRAM

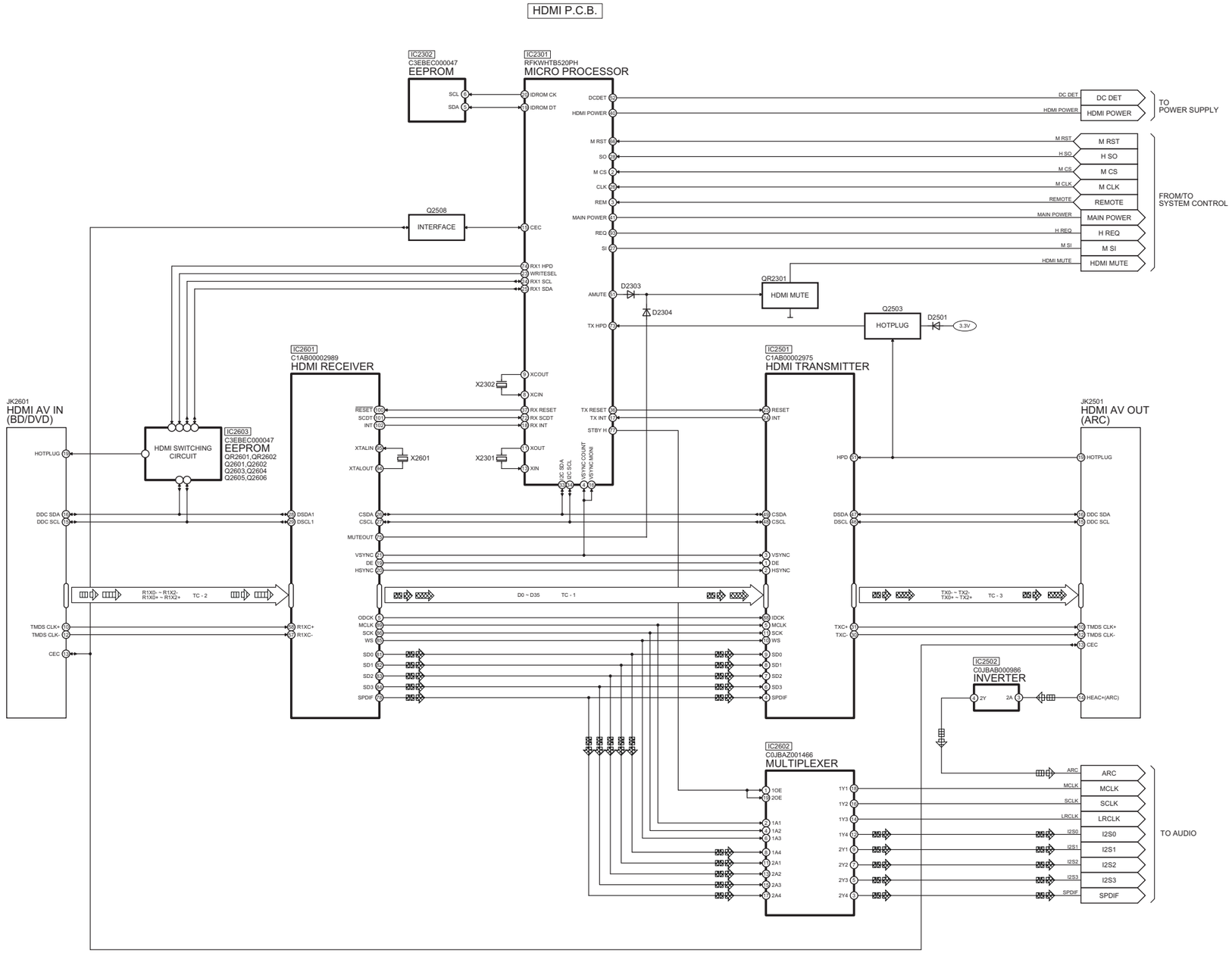


NOTE: “ * ” REF IS FOR INDICATION ONLY

SC-HTB520GN/GS/PH(SU-HTB520GN/GS/PH) SYSTEM CONTROL BLOCK DIAGRAM

14.2. HDMI BLOCK DIAGRAM

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



SC-HTB520GN/GS/PH(SU-HTB520GN/GS/PH) HDMI BLOCK DIAGRAM

14.3. 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 AV IN (BD/DVD)		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+

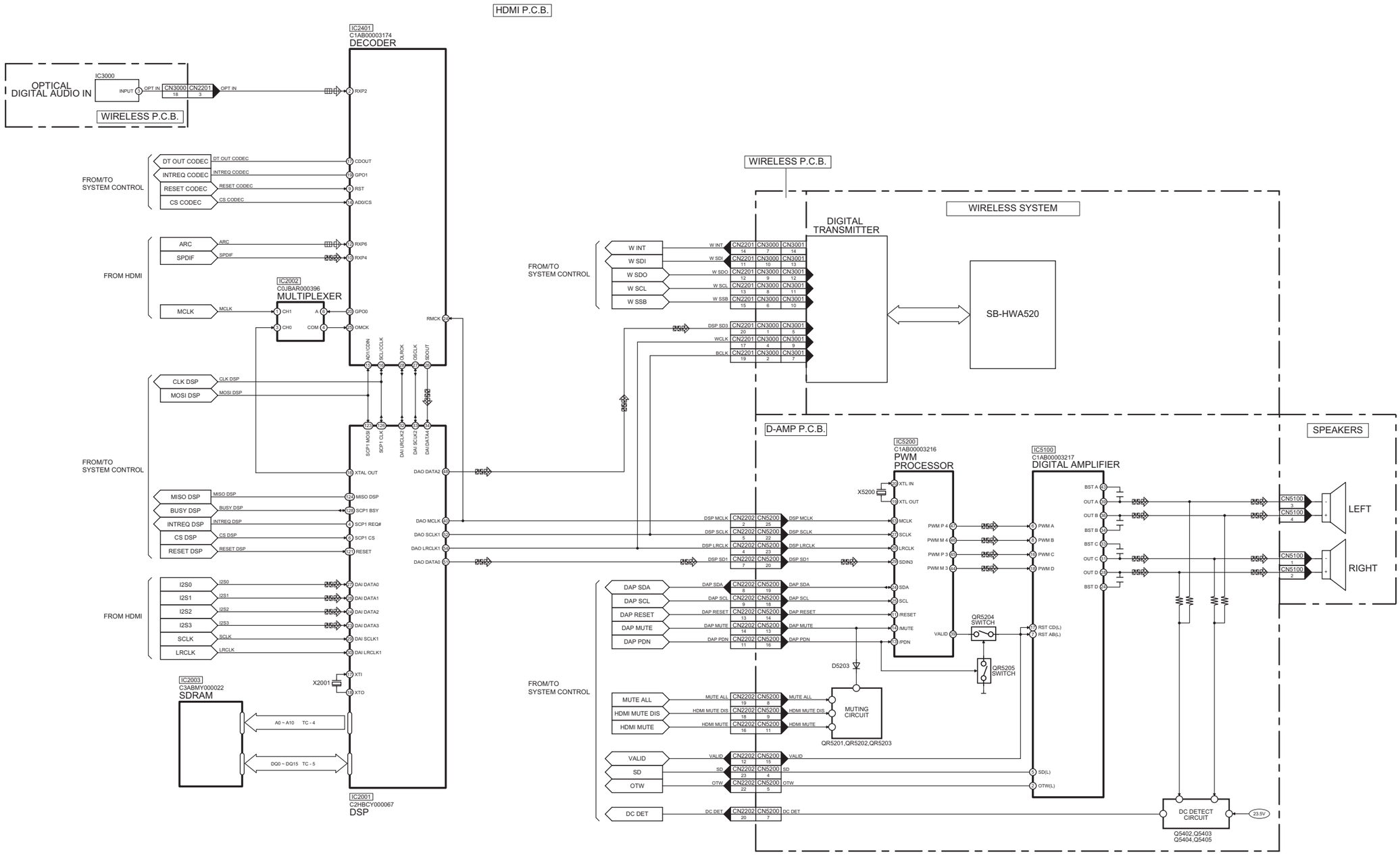
TC	IC2501 HDMI TRANSMITTER		SIGNAL NAME	JK2501 HDMI AV OUT (ARC)	
	Port Name	Pin No		Pin No	Port Name
3	TX0-	33	TX0-	9	TMDS D0-
	TX0+	34	TX0+	7	TMDS D0+
	TX1-	36	TX1-	6	TMDS D1-
	TX1+	37	TX1+	4	TMDS D1+
	TX2-	39	TX2-	3	TMDS D2-
	TX2+	40	TX2+	1	TMDS D2+

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

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

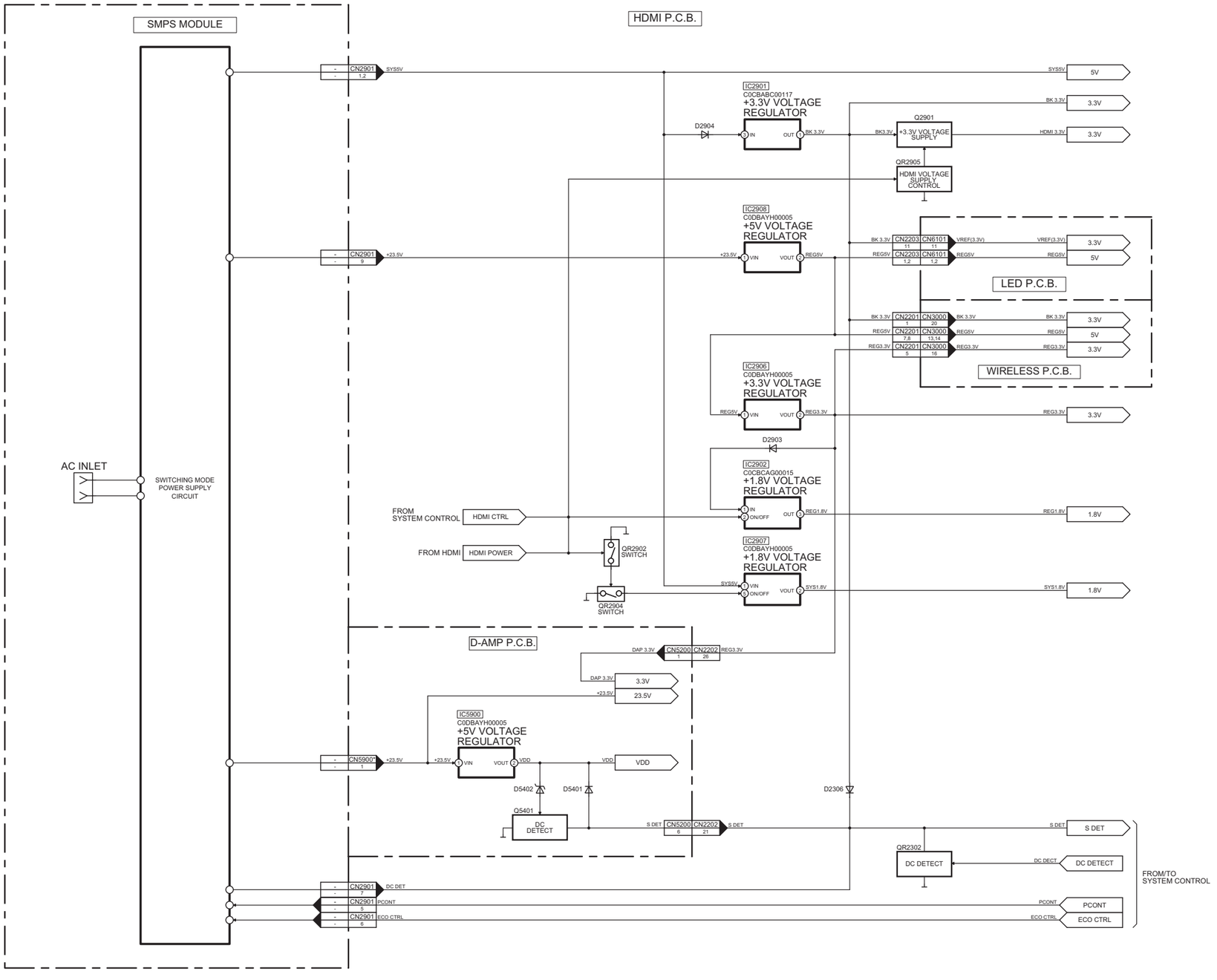
14.4. AUDIO BLOCK DIAGRAM

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



SC-HTB520GN/GS/PH(SU-HTB520GN/GS/PH) AUDIO BLOCK DIAGRAM

14.5. POWER SUPPLY (1/2) BLOCK DIAGRAM

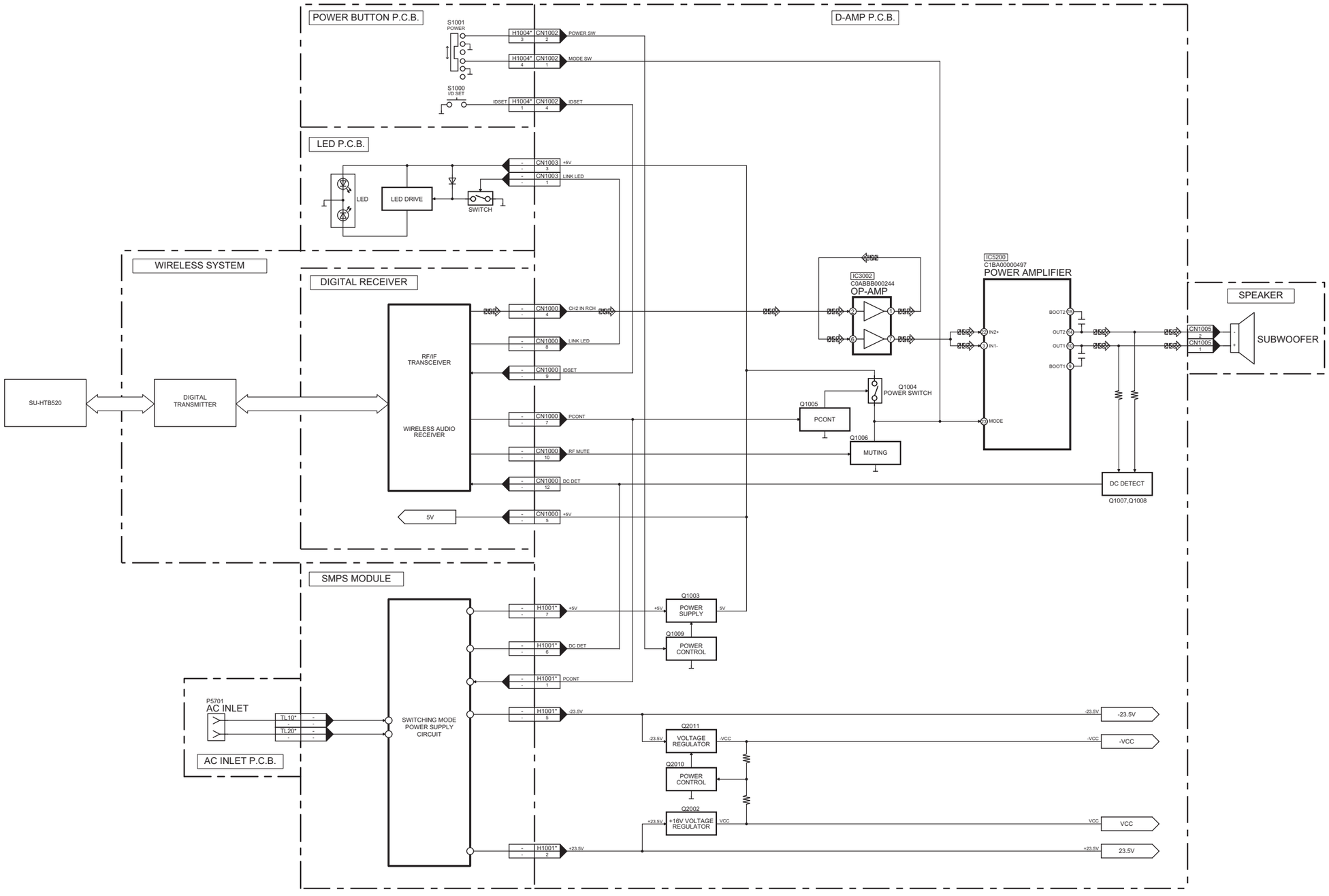


NOTE: " * " REF IS FOR INDICATION ONLY

SC-HTB520GN/GS/PH(SU-HTB520GN/GS/PH) POWER SUPPLY BLOCK DIAGRAM

14.6. AUDIO & POWER SUPPLY (2/2) BLOCK DIAGRAM

: AUDIO OUTPUT SIGNAL LINE

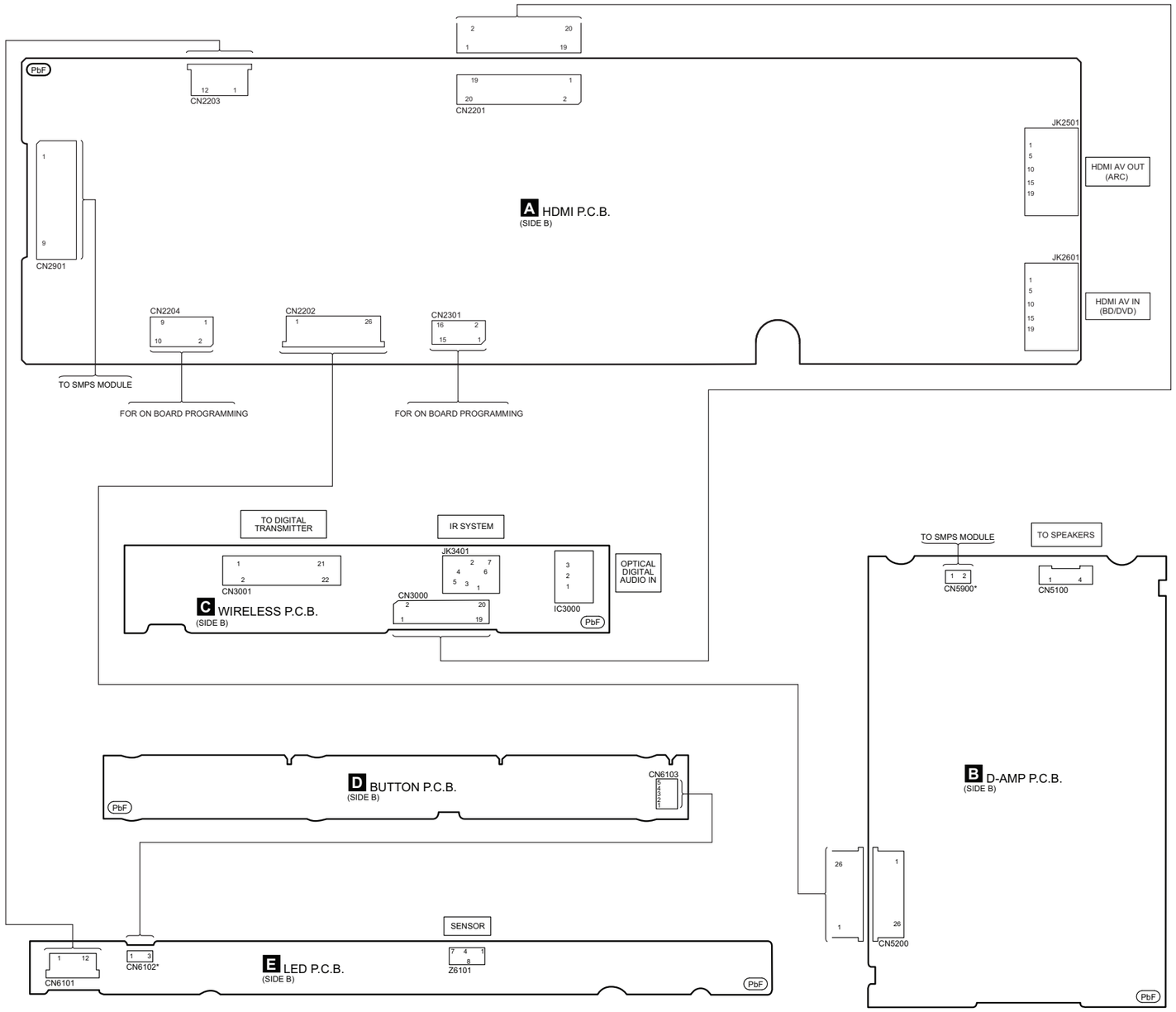


NOTE: " * " REF IS FOR INDICATION ONLY

SC-HTB520GN/GS/PH(SB-HWA520GN/GS/PH) AUDIO & POWER SUPPLY BLOCK DIAGRAM

15 Wiring Connection Diagram

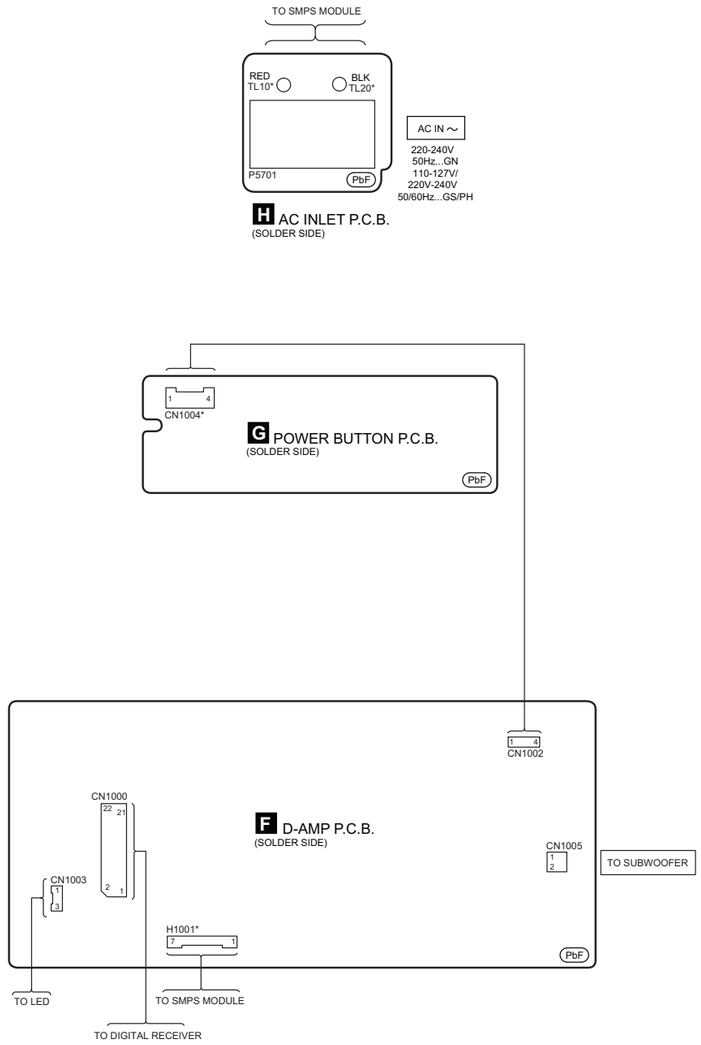
15.1. Main Unit (SU-HTB520)



NOTE: " * " REF IS FOR INDICATION ONLY.

SC-HTB520GN/GS/PH(SU-HTB520GN/GS/PH) WIRING CONNECTION DIAGRAM

15.2. Speaker Unit (SB-HWA520)



NOTE: " * " REF IS FOR INDICATION ONLY.

SC-HTB520GN/GS/PH(SB-HWA520GN/GS/PH) WIRING CONNECTION DIAGRAM

16 Schematic Diagram

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

S6201: POWER switch (⏻/I).
S6202: VOLUME UP switch (VOLUME +).
S6203: SELECTOR switch (INPUT SELECTOR).
S6204: VOLUME DOWN switch (VOLUME -).

- **" * "** REF IS FOR INDICATION ONLY.

- **Importance 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.

- Capacitor values are in microfarad(μF) unless specified otherwise, F=Farad, pF=Pico-Farad
  Resistance values are in ohm(Ω), unless specified otherwise, 1K=1,000Ω, 1M=1,000KΩ

- **Voltage and Signal lines:**

: +B signal line

: -B signal line


: Audio Output signal line


: Video Output signal line


: HDMI Video Input signal line


: HDMI/Optical Audio Input signal line

FUSE CAUTION


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


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

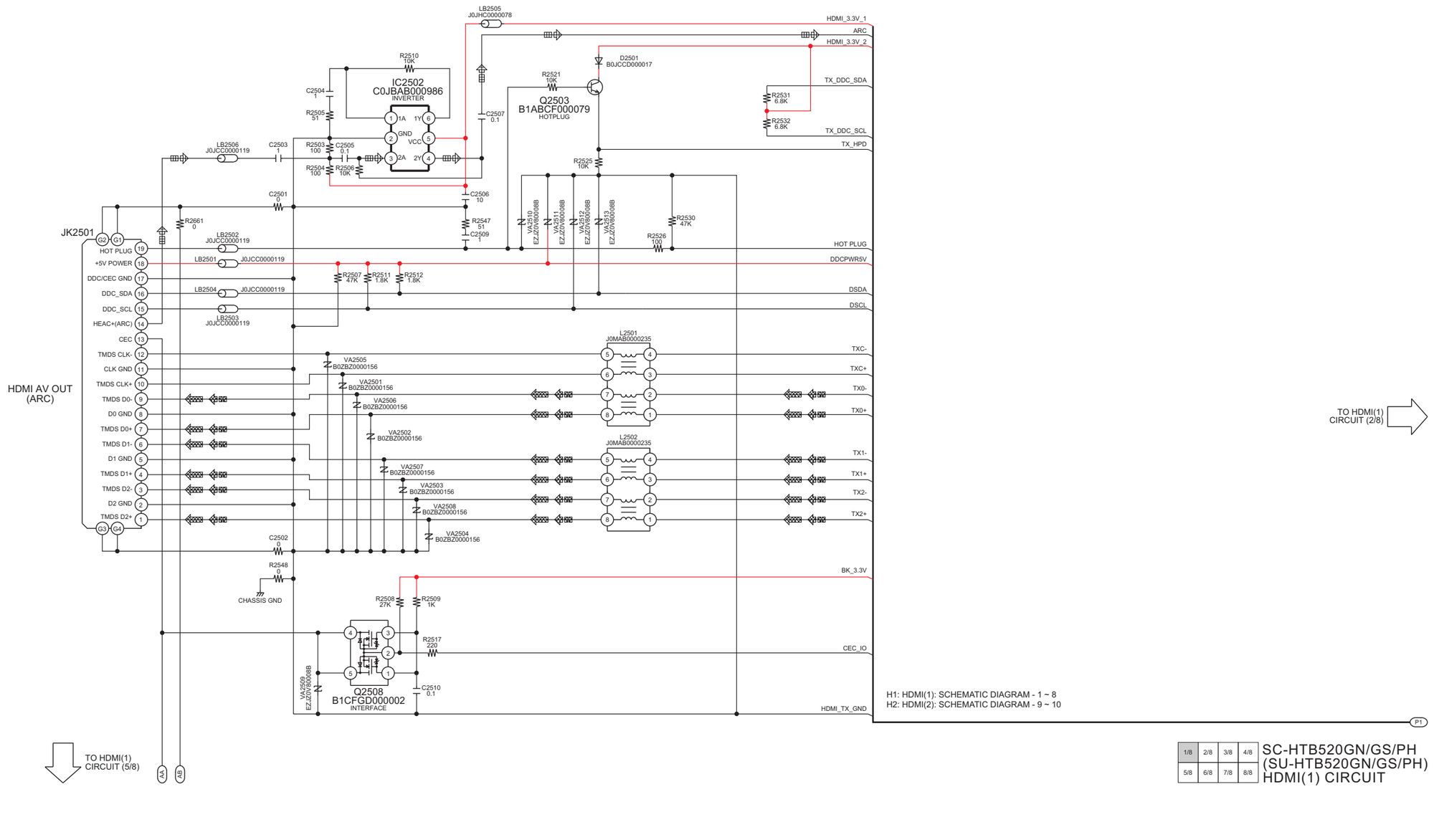
16.1. Main Unit (SU-HTB520)

16.1.1. HDMI(1) CIRCUIT (1/8)

SCHEMATIC DIAGRAM - 1

A HDMI(1) 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-HTB520GN/GS/PH
(SU-HTB520GN/GS/PH)
HDMI(1) CIRCUIT

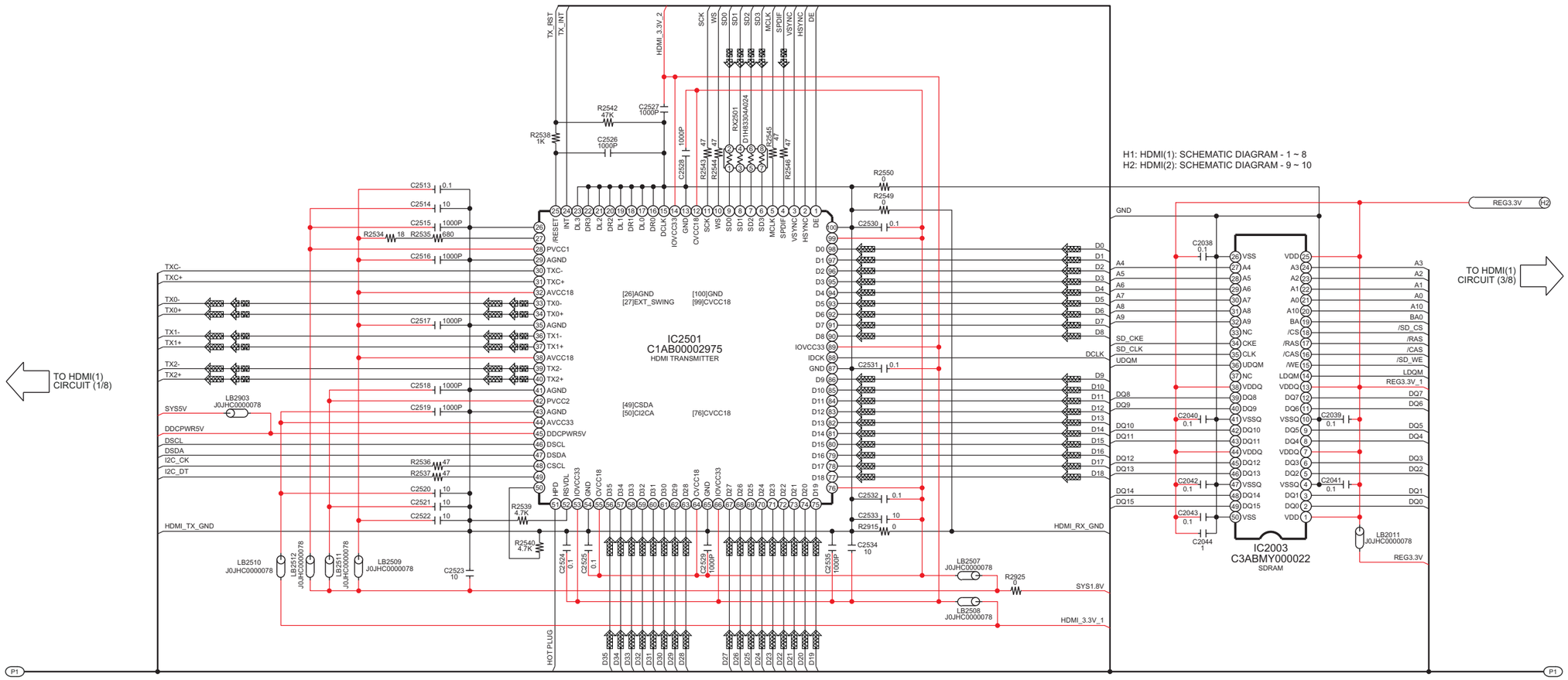
16.1.2. HDMI(1) CIRCUIT (2/8)

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

SCHEMATIC DIAGRAM - 2

A HDMI(1) 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-HTB520GN/GS/PH
(SU-HTB520GN/GS/PH)
HDMI(1) CIRCUIT

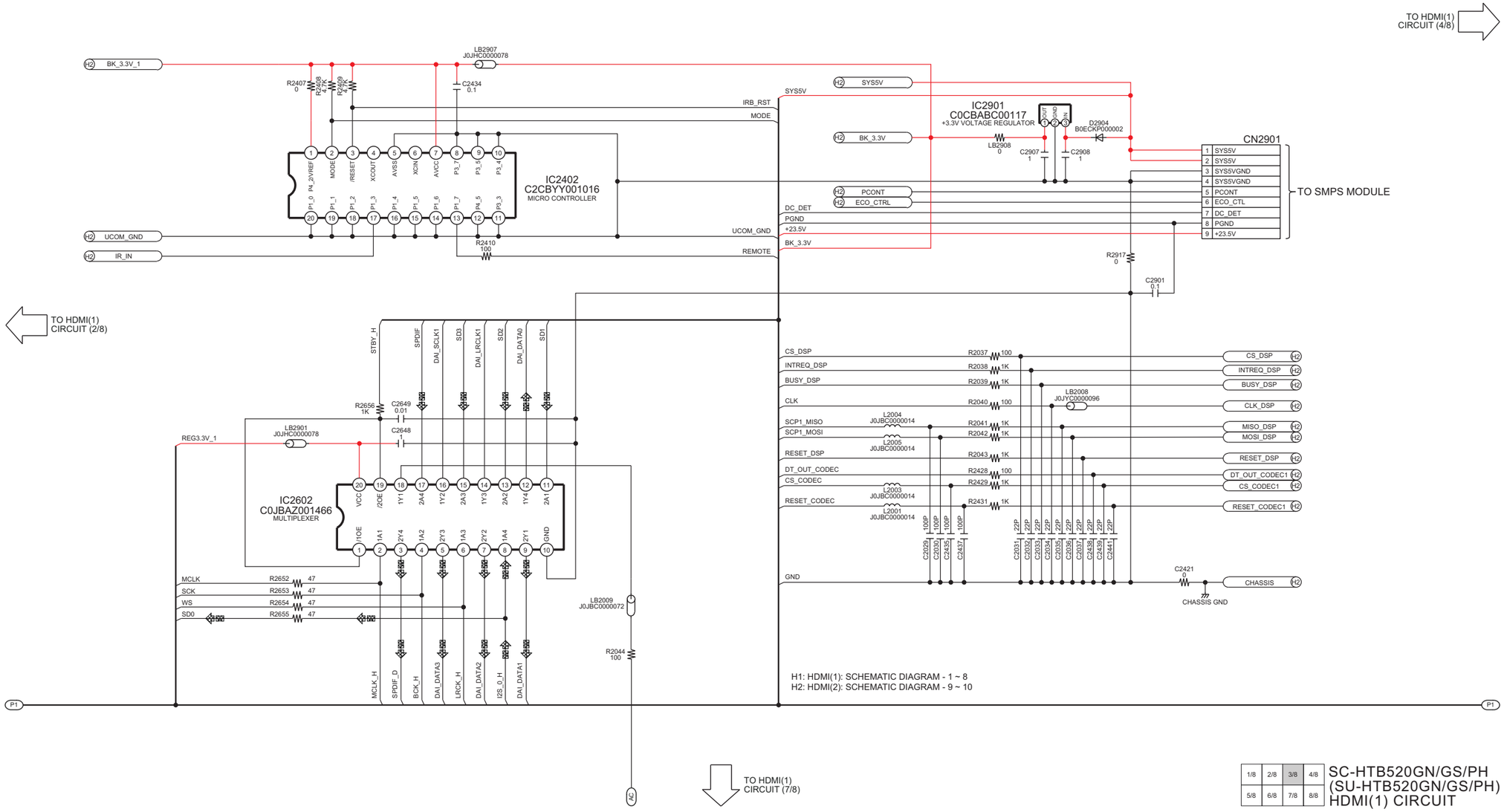
16.1.3. HDMI(1) CIRCUIT (3/8)

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

SCHEMATIC DIAGRAM - 3

A HDMI(1) 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

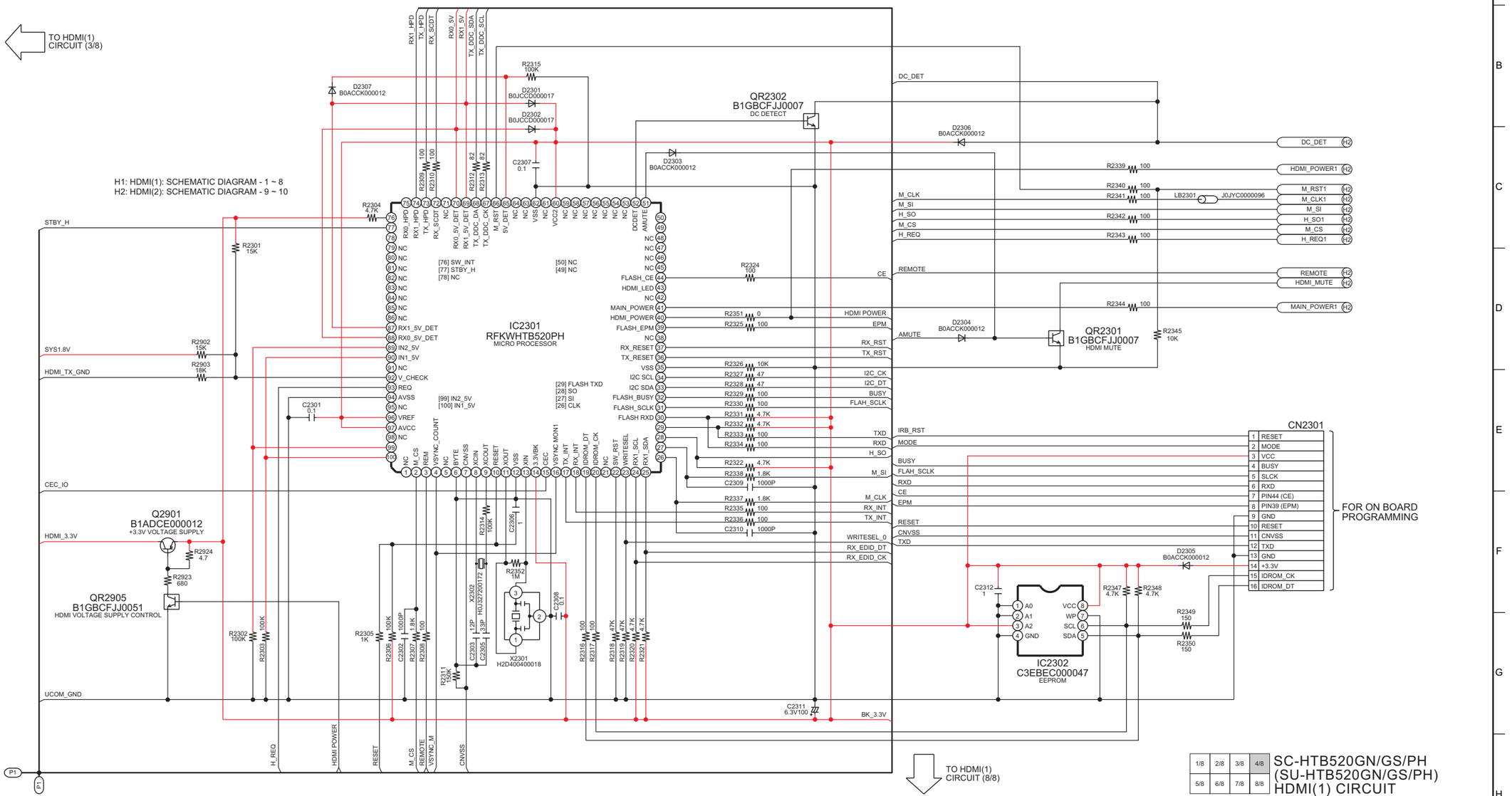
SC-HTB520GN/GS/PH
(SU-HTB520GN/GS/PH)
HDMI(1) CIRCUIT

16.1.4. HDMI(1) CIRCUIT (4/8)

SCHEMATIC DIAGRAM - 4

A HDMI(1) CIRCUIT

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

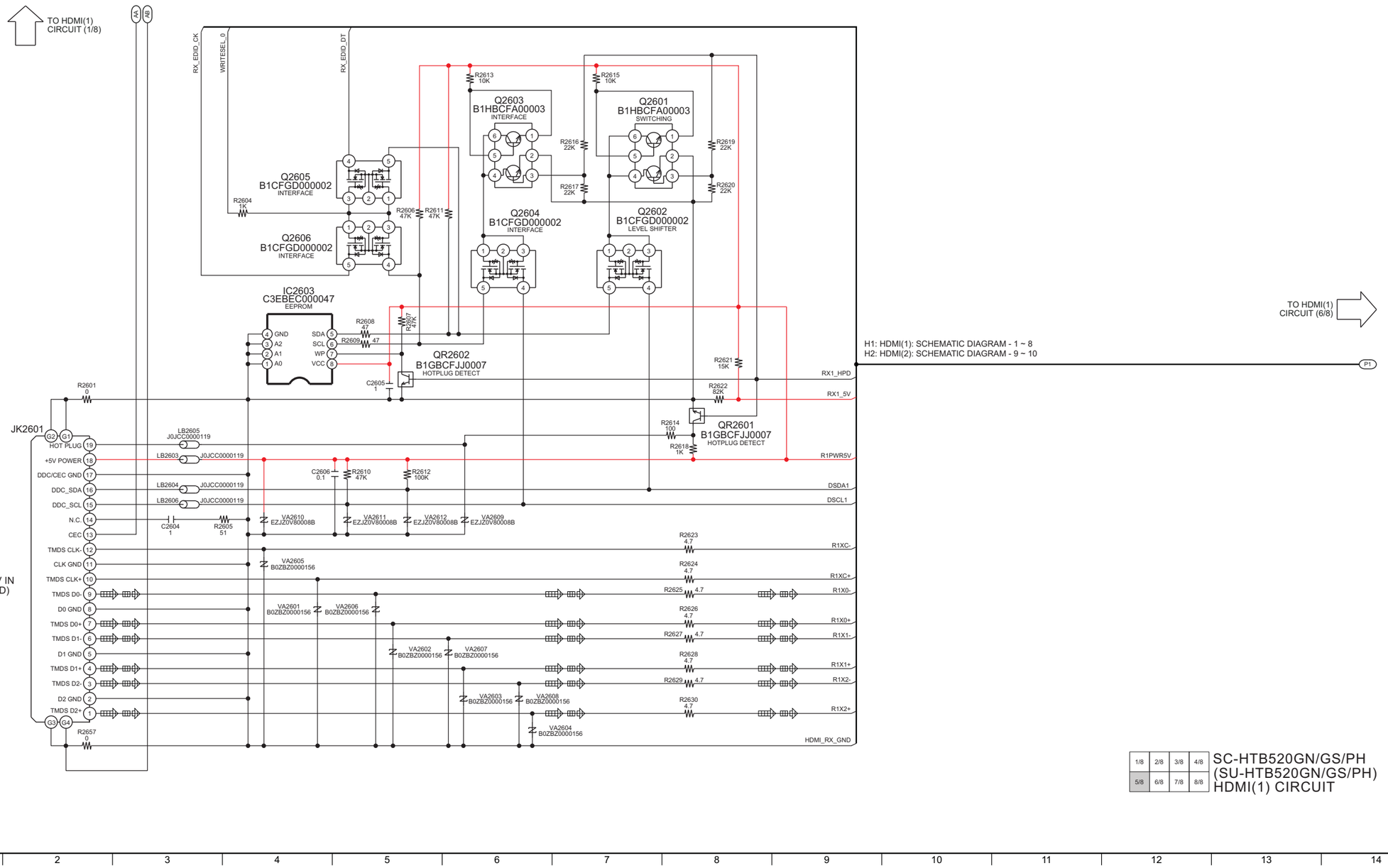


16.1.5. HDMI(1) CIRCUIT (5/8)

SCHEMATIC DIAGRAM - 5

A HDMI(1) 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

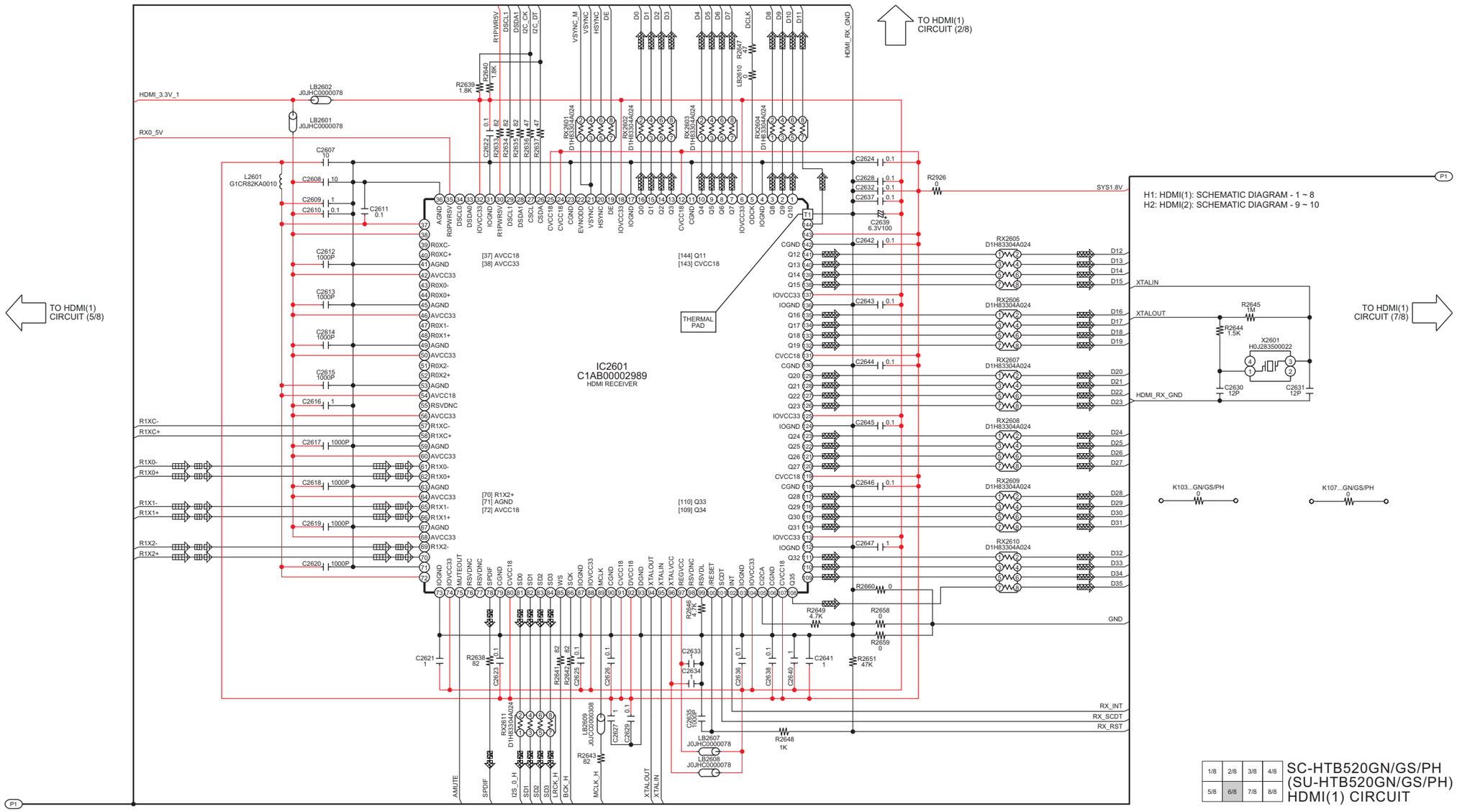
SC-HTB520GN/GS/PH
(SU-HTB520GN/GS/PH)
HDMI(1) CIRCUIT

16.1.6. HDMI(1) CIRCUIT (6/8)

SCHEMATIC DIAGRAM - 6

A HDMI(1) 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

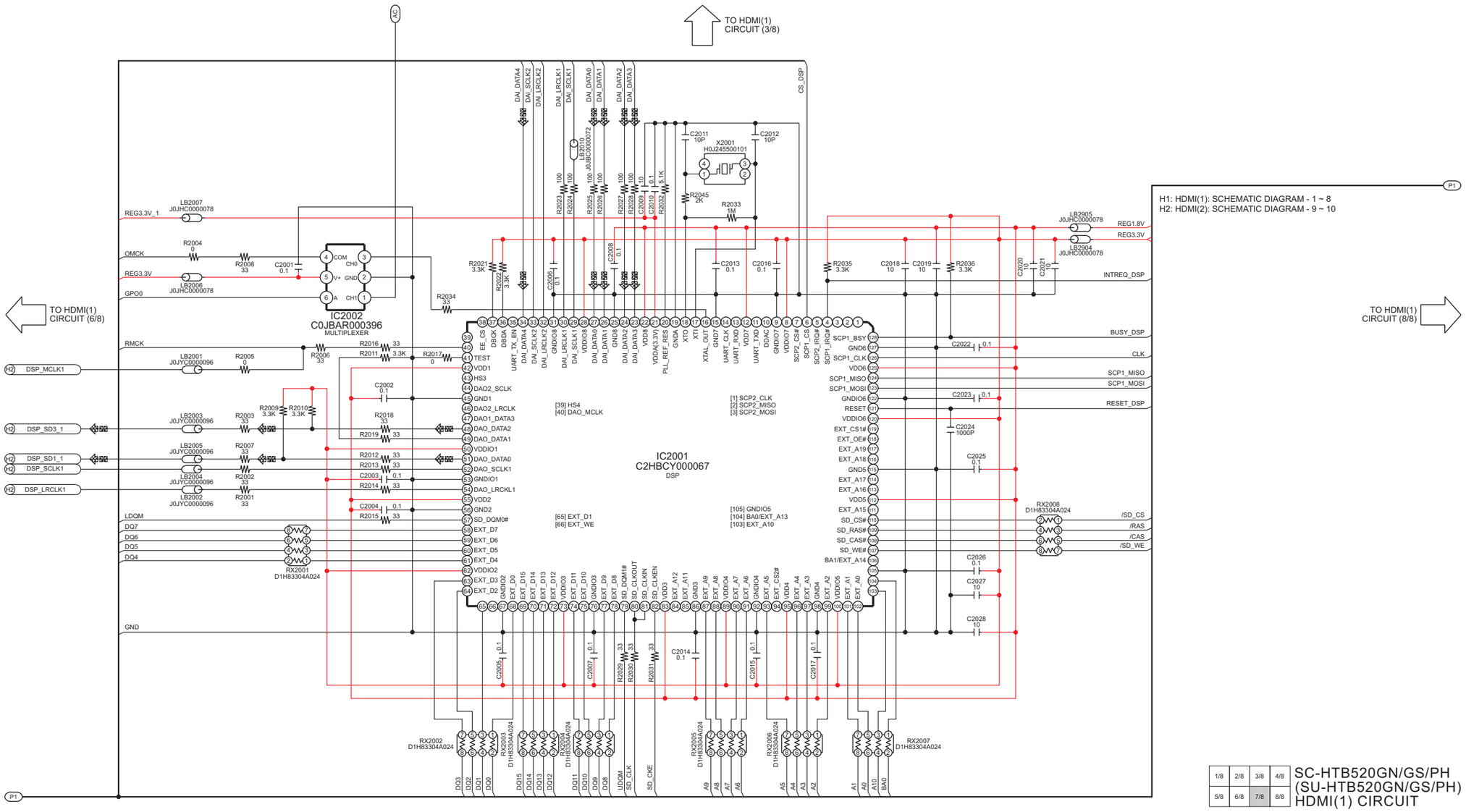
15 16 17 18 19 20 21 22 23 24 25 26 27 28

16.1.7. HDMI(1) CIRCUIT (7/8)

SCHEMATIC DIAGRAM - 7

A HDMI(1) CIRCUIT

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



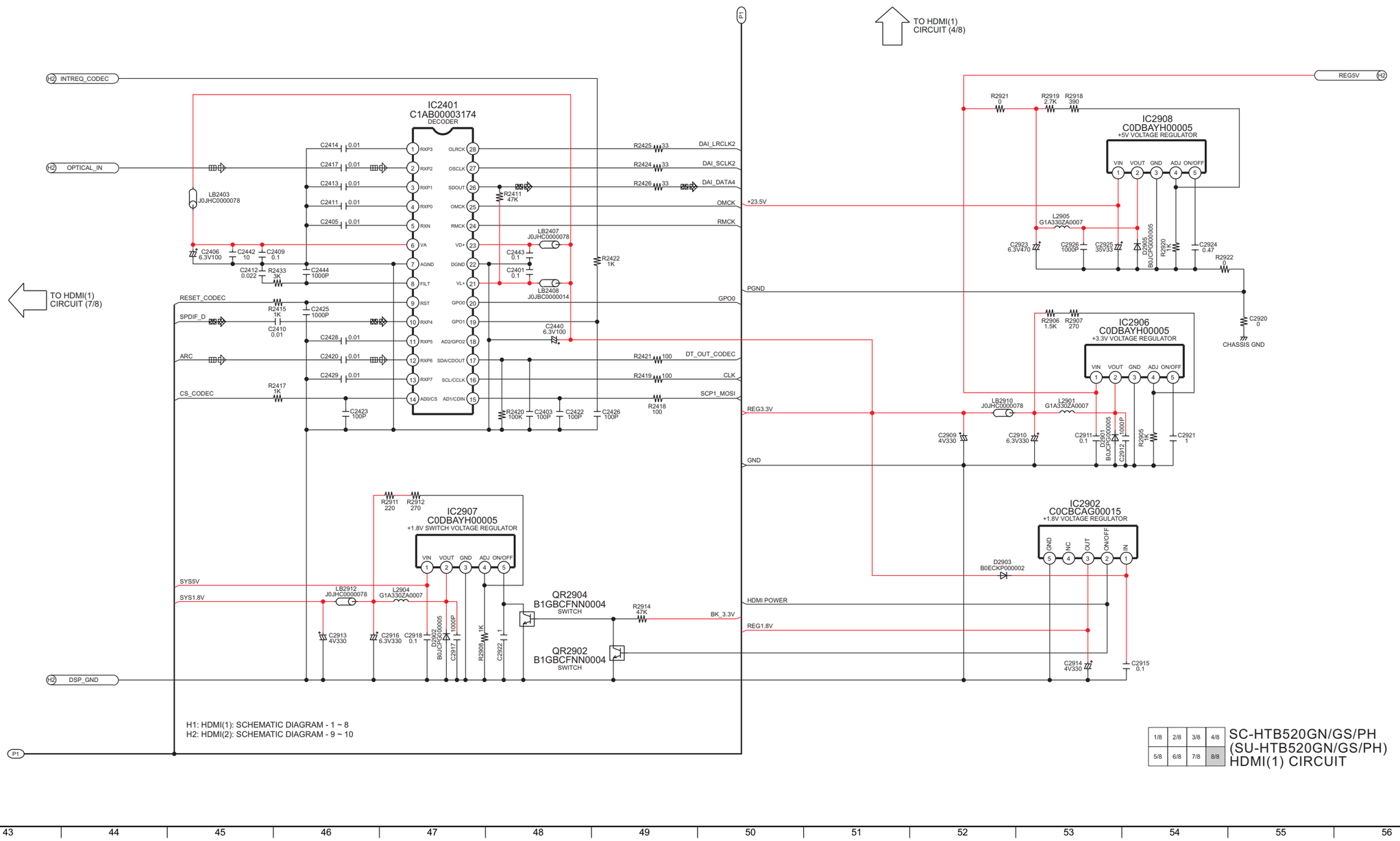
1/8	2/8	3/8	4/8	SC-HTB520GN/GS/PH
5/8	6/8	7/8	8/8	(SU-HTB520GN/GS/PH) HDMI(1) CIRCUIT

16.1.8. HDMI(1) CIRCUIT (8/8)

SCHEMATIC DIAGRAM - 8

A HDMI(1) 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-HTB520GN/GS/PH
(SU-HTB520GN/GS/PH)
HDMI(1) CIRCUIT

16.1.9. HDMI(2) CIRCUIT (1/2)

SCHEMATIC DIAGRAM - 9

A HDMI(2) CIRCUIT

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

TO E LED CIRCUIT (CN6101) IN SCHEMATIC DIAGRAM - 14

CN2203: REG5V 1, REG5V 2, DGND 3, LED_OE 4, LED_DATA 5, LED_CLK 6, LED_CS 7, KEY2 8, KEY1 9, REMOTE 10, VREF(3.3V) 11, VREFGND 12

LB2211 0; C2201 16V10

LB2202 0 LED_OE; LB2209 0 LED_DI; LB2210 0 LED_CLK; LB2206 0 LED_CS; LB2204 0 KEY2; LB2205 0 KEY1; LB2207 0 REMOTE; LB2203 0; LB2208 0

TO C WIRELESS CIRCUIT (CN3000) IN SCHEMATIC DIAGRAM - 13

CN2201: ADAT0 (C/SW) 20, BCLK 19, DGND 18, WCLK 17, DGND 16, SSB 15, INT 14, SCL 13, SDO 12, SDI 11, GND 10, GND 9, REG5V 8, REG5V 7, DGND 6, REG3.3V 5, DGND 4, OPT_IN 3, IR_IN 2, BK_3.3V 1

R2201 0; R2202 J0JBC0000072; R2203 J0JBC0000072

R2204 0 W_SSB; R2205 0 W_INT; R2206 0 W_SCL; W_SDO; W_SDI

C2919 10; LB2201 0

R2401 0

C2402 6.3V100; C2214 0.1

DSP_SD3_1 (H1)

UCOM_GND (H1); OPTICAL_IN (H1); IR_IN (H1); BK_3.3V_1 (H1); REG5V (H1)

REG3.3V (H1); DC_DET (H1); DSP_SD1_1 (H1); DSP_SCLK1 (H1); DSP_LRCLK1 (H1); DSP_MCLK1 (H1); DSP_GND (H1); CHASSIS (H1)

CN2202: 26 REG3.3V, 25 DGND, 24 ECO_LEVEL, 23 SD, 22 OTW, 21 S_DET, 20 DC_DET, 19 MUTE_ALL, 18 HDMI_MUTE_DIS, 17 HDMI_GND, 16 HDMI_MUTE, 15 DGND, 14 DAP_MUTE, 13 DAP_RESET, 12 VALID, 11 DAP_PDN, 10 DGND, 9 DAP_SCL, 8 DAP_SDA, 7 DSP_SD1, 6 DSP_GND, 5 DSP_SCLK, 4 DSP_LRCLK, 3 DSP_GND, 2 DSP_MCLK, 1 DSP_GND

S_DET; SD; OTW; DC_DET; MUTE_ALL; HDMIMUTE_DIS; HDMI_MUTE; DAP_MUTE; DAP_RESET; VALID; DAP_PDN; DAP_SCL; DAP_SDA

TO B D-AMP CIRCUIT (CN5200) IN SCHEMATIC DIAGRAM - 11

TO HDMI(2) CIRCUIT (2/2)

C2213 0.1; R2293 0; CHASSIS GND

CN2204: 1 VCC, 2 BUSY, 3 SLCK, 4 RXD, 5 CE, 6 EPM, 7 GND, 8 RESET, 9 CNVSS, 10 TXD

BUSY; SCLK; RXD; CE; EPM; GND; RESET; CNVSS; TXD

FOR ON BOARD PROGRAMMING

IC2203 C3EBEC000060 EEPROM

R2220 4.7K; A0 1, A1 2, A2 3, VSS 4, VCC 8, WP 7, SCL 6, SDA 5

R2254 10K; R2255 10K

VREF; SCL; SDA

C2205 6.3V100; C2208 0.01; R2234 47K

H1: HDMI(1): SCHEMATIC DIAGRAM - 1 ~ 8
H2: HDMI(2): SCHEMATIC DIAGRAM - 9 ~ 10

P1

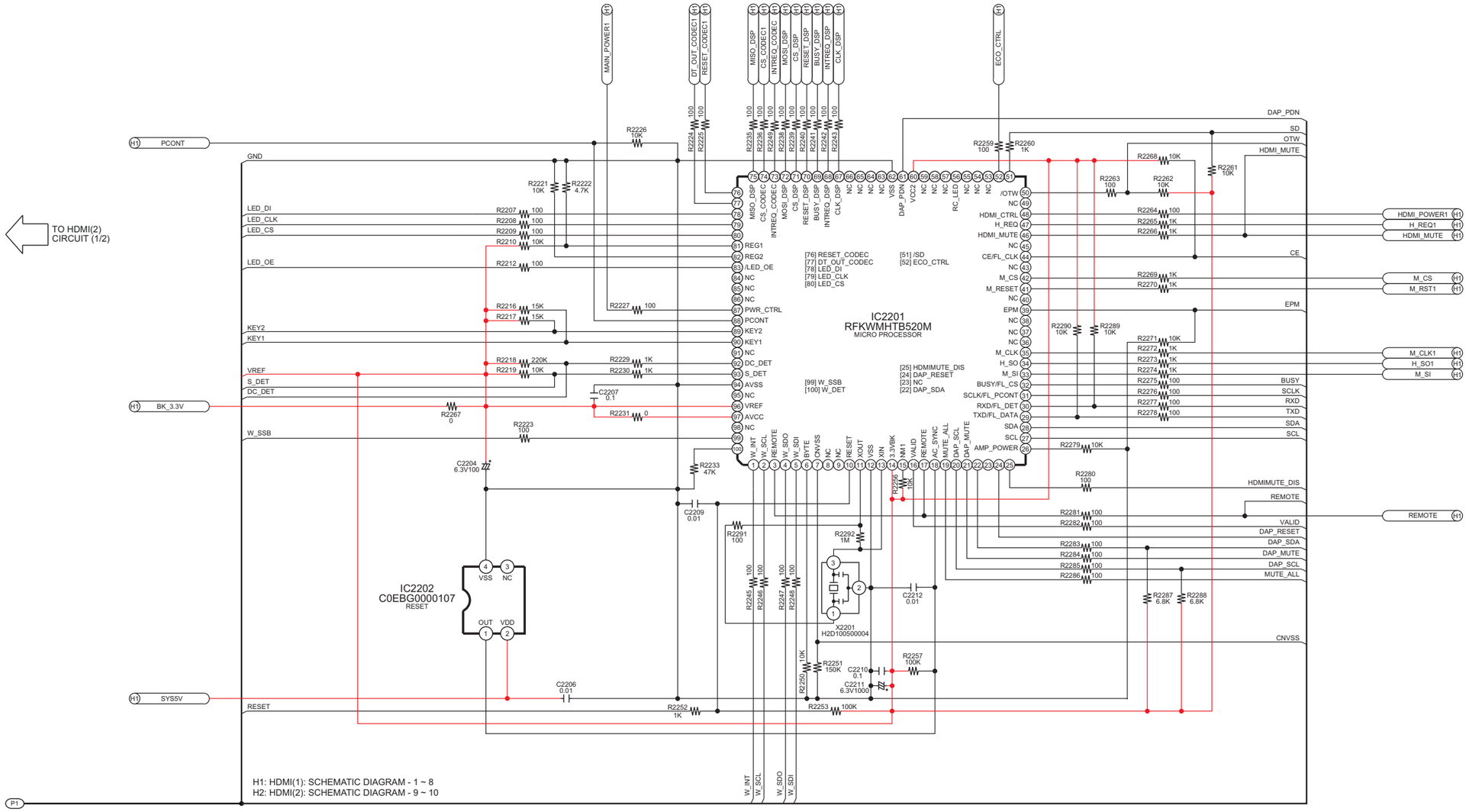
1/2 2/2 SC-HTB520GN/GS/PH(SU-HTB520GN/GS/PH) HDMI(2) CIRCUIT

16.1.10. HDMI(2) CIRCUIT (2/2)

SCHEMATIC DIAGRAM - 10

A HDMI(2) CIRCUIT

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



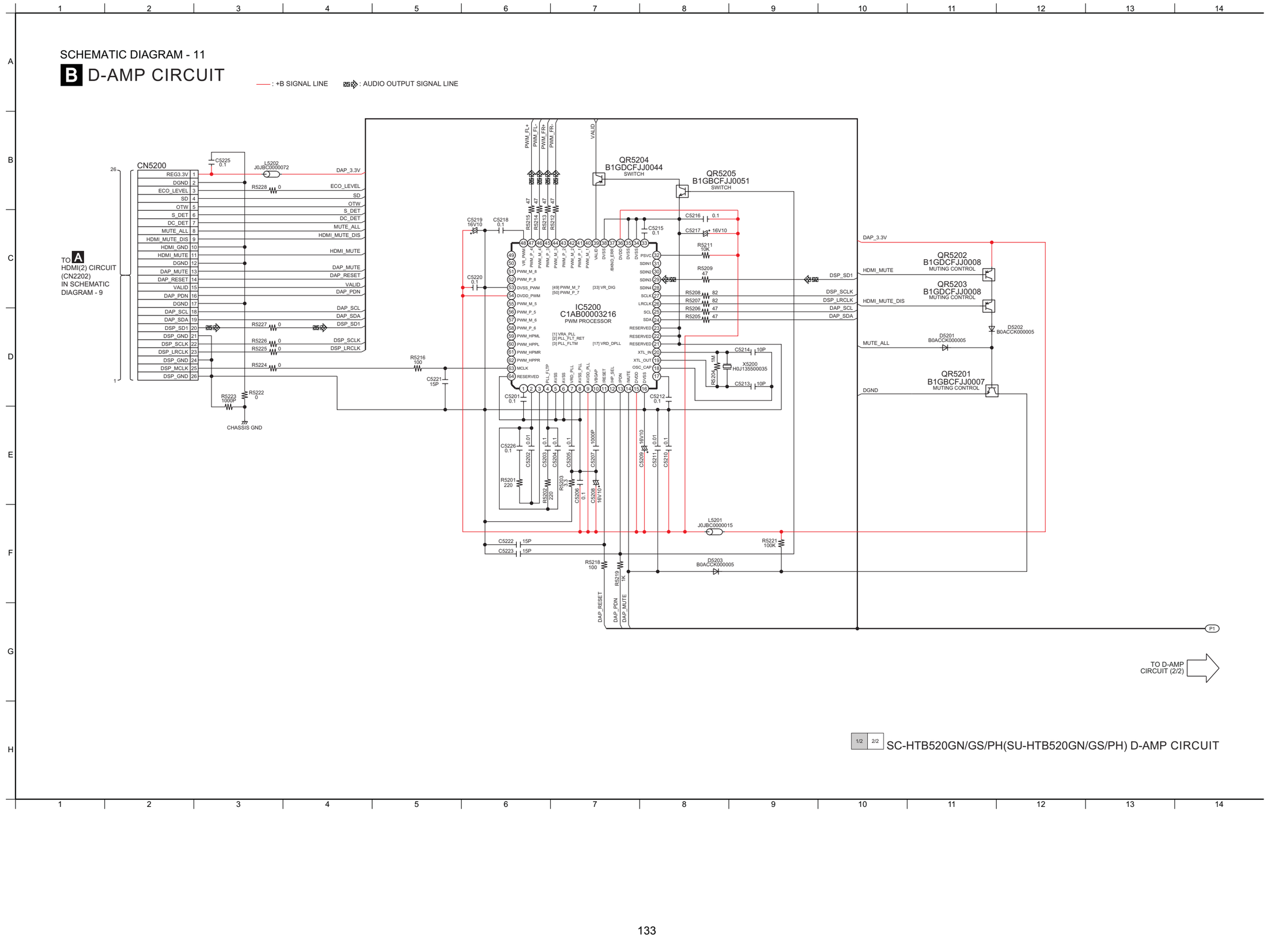
1/2 2/2 SC-HTB520GN/GS/PH(SU-HTB520GN/GS/PH) HDMI(2) CIRCUIT

16.1.11. D-AMP CIRCUIT (1/2)

SCHEMATIC DIAGRAM - 11

B D-AMP CIRCUIT

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



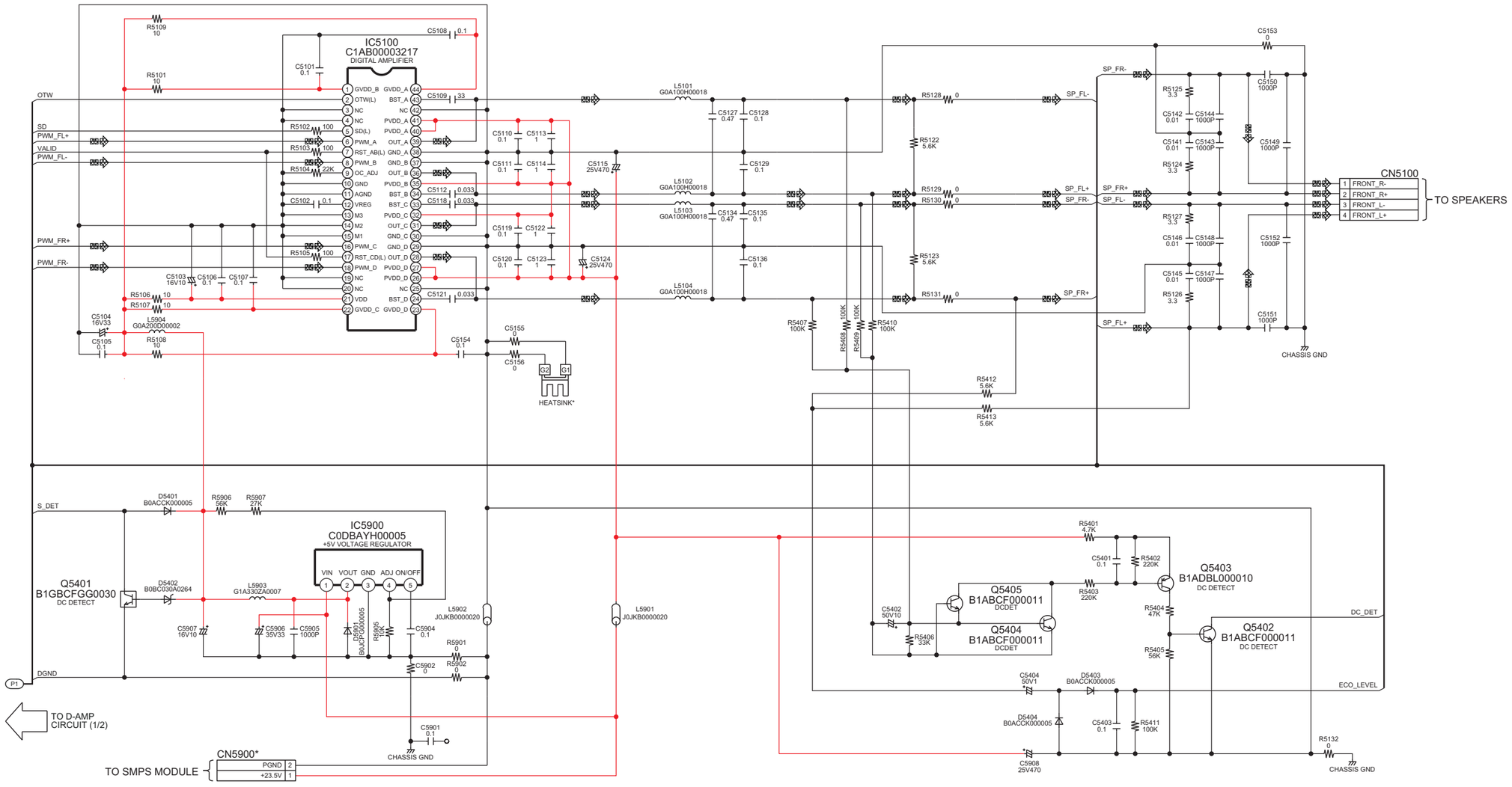
1/2 | 2/2 SC-HTB520GN/GS/PH(SU-HTB520GN/GS/PH) D-AMP CIRCUIT

16.1.12. D-AMP CIRCUIT (2/2)

SCHEMATIC DIAGRAM - 12

B D-AMP CIRCUIT

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



NOTE: " * " REF IS FOR INDICATION ONLY

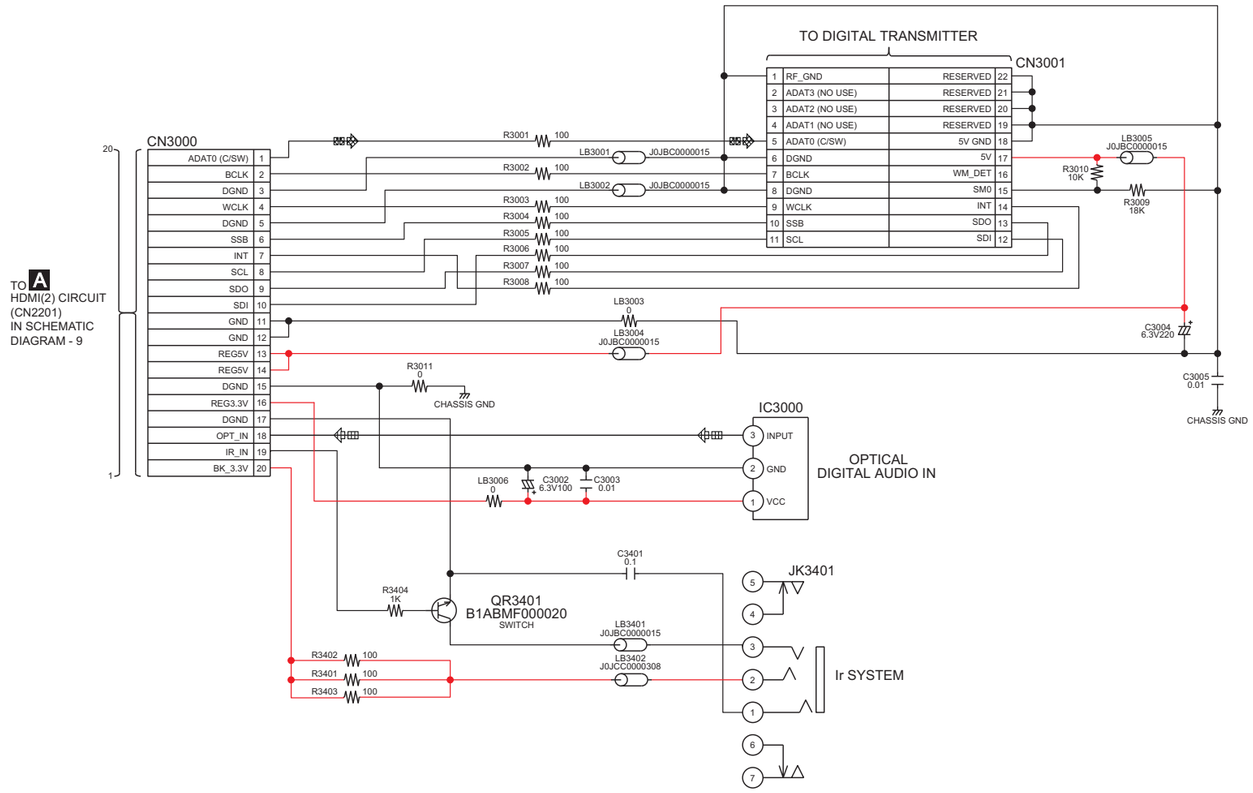
1/2 2/2 SC-HTB520GN/GS/PH(SU-HTB520GN/GS/PH) D-AMP CIRCUIT

16.1.13. WIRELESS CIRCUIT

SCHEMATIC DIAGRAM - 13

C WIRELESS CIRCUIT

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

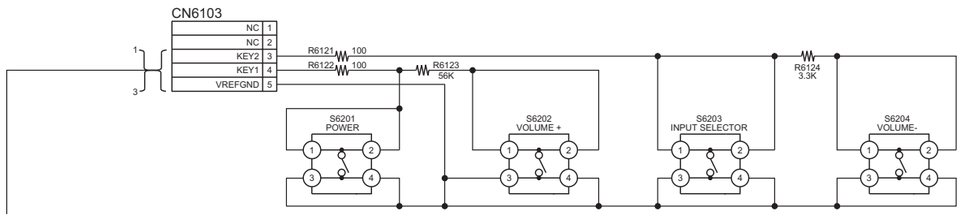


SC-HTB520GN/GS/PH(SU-HTB520GN/GS/PH) WIRELESS CIRCUIT

16.1.14. BUTTON & LED CIRCUIT

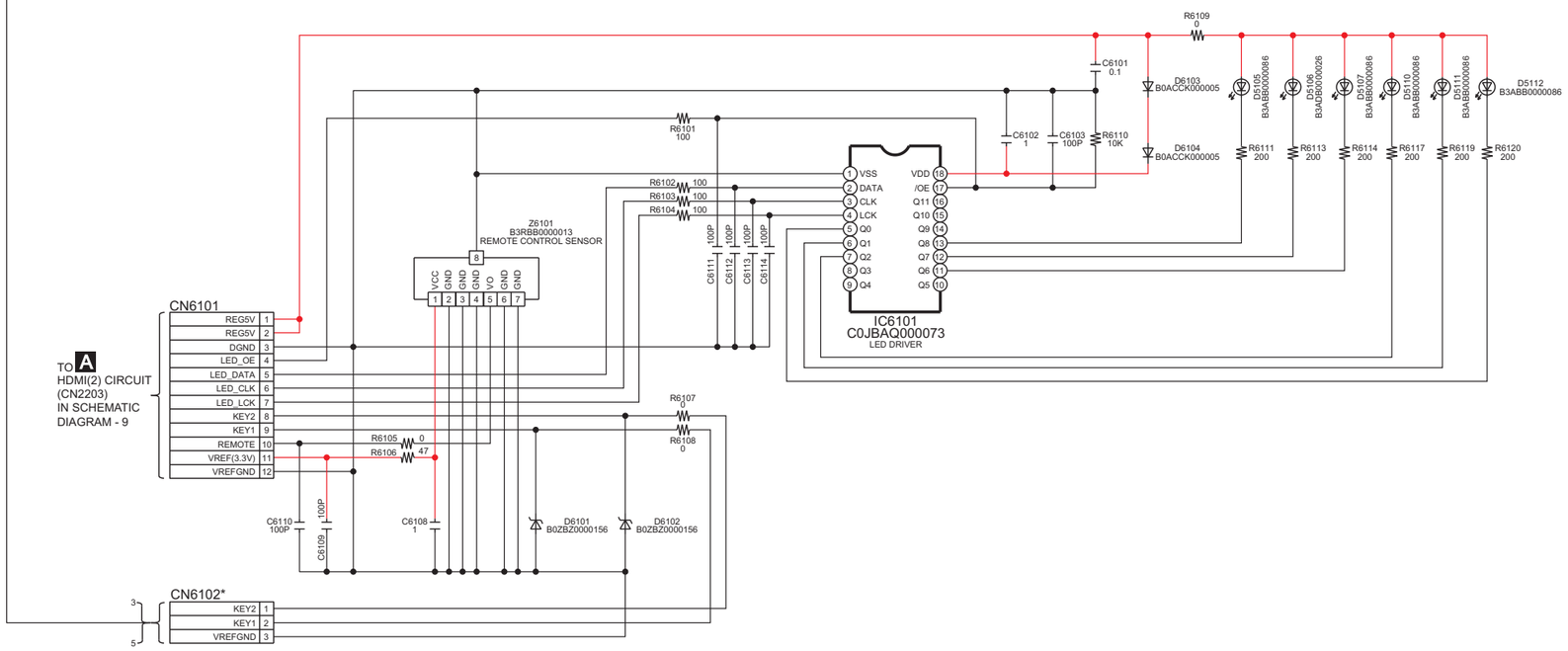
SCHEMATIC DIAGRAM - 14

D BUTTON CIRCUIT



E LED CIRCUIT

—— : +B SIGNAL LINE



NOTE: " * " REF IS FOR INDICATION ONLY

SC-HTB520GN/GS/PH(SU-HTB520GN/GS/PH) BUTTON / LED CIRCUIT

16.2. Speaker Unit (SB-HWA520)

16.2.1. D-AMP CIRCUIT (1/2)

SCHEMATIC DIAGRAM - 15

F D-AMP CIRCUIT

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

TO G POWER BUTTON CIRCUIT (H1004*) IN SCHEMATIC DIAGRAM - 17

CN1002: IDSET 4, +5V_GND 3, POWER_SW 2, MODE_SW 1

CN1000: AGND 1, CH2_IN_LCH 2, AGND 3, CH2_IN_RCH 4, +5V 5, +5V_GND 6, PCONT 7, LINK_LED 8, IDSET 9, RF_MUTE 10, DGND 11, DC_DET 12, NC 13, NC 14, NC 15, NC 16, NC 17, NC 18, LED1 19, LED2 20, NC 21, NC 22

TO DIGITAL RECEIVER

CN1003: LINK_LED 1, 5V_GND 2, 5V 3

TO LED

H1001*: +5V 7, DC_DET 6, -23.5V 5, +5V GND 4, PGND 3, +23.5V 2, PCONT 1

TO SMPS MODULE

R1000 150K, MODE_SW, Z1000, Z1003, C1000 0, C1010 0, C1003 0.1, R1034 0, +5V, +23.5V, PCONT, RF_MUTE, DC_DET, D1000 0, C4000 0.1, C5603 0.1, R1003 0, C1009 6.3V680, -23.5V, PGND

K1004 0

R2000 22, R2004 2.7K, C2000 0.1, Q2002 B1AAKD000012 +16V VOLTAGE REGULATOR, R2005 27, D2000 B0BCD1600013, C2001 25V100, R2006 10K

Q2010 B1ACCF000094 POWER CONTROL

C2010 25V100, R2013 8.2K, R2012 2.7K, C2011 0.1, R2014 560, R2010 22

Q2011 B1ACKD000006 VOLTAGE REGULATOR

Q1003 B1ACKD000006 POWER SUPPLY

R5770 10K, R1020 1K

Q1009 B1GBCFJJ0051 POWER CONTROL

C2006 0.1, R3107 390, R5769 1.2K, R3108 6.8K, C3106 100P, C3105 1000P

IC3002 C0ABBB000244 OP-AMP (+VCC, -VCC)

R3204 10K, C2015 0.1, C3205 10K, R3206 0

2, P1, 1

TO D-AMP CIRCUIT (2/2)

NOTE: " * " REF IS FOR INDICATION ONLY

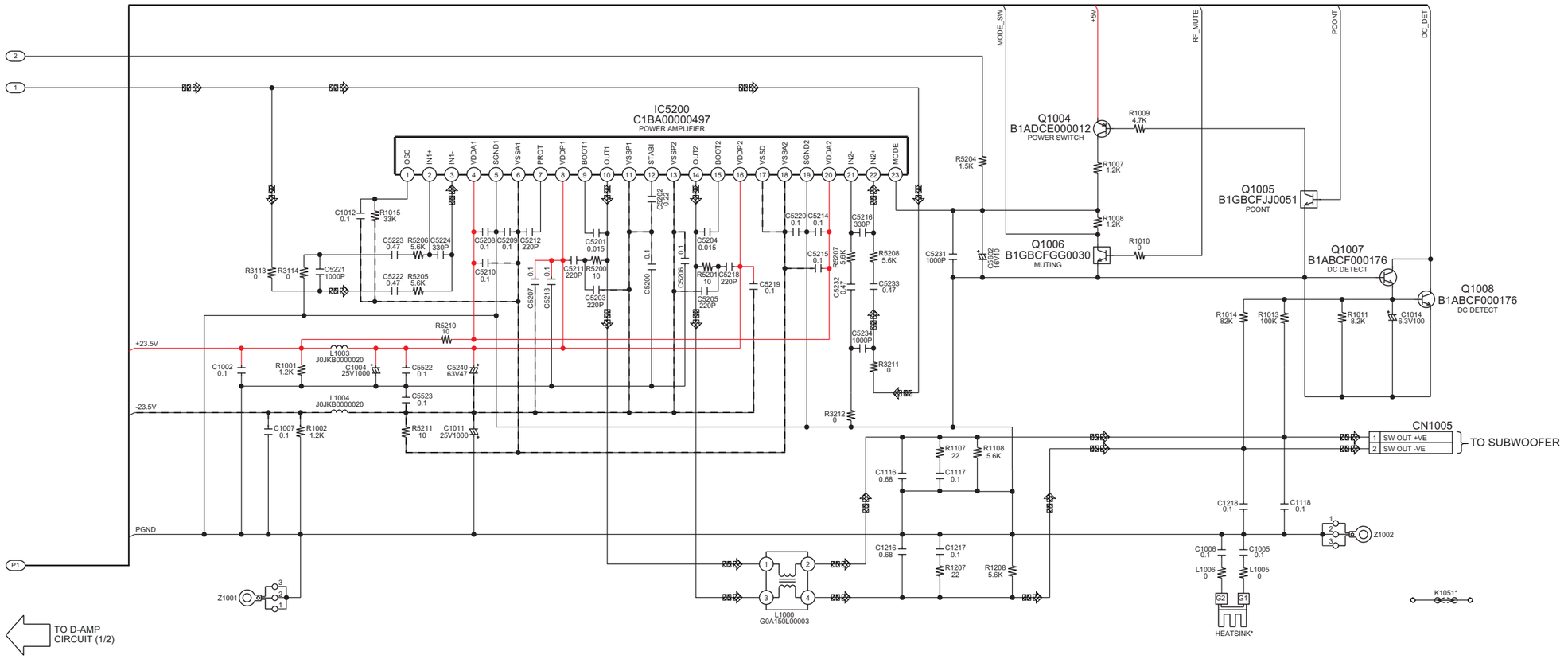
1/2 2/2 SC-HTB520GN/GS/PH(SB-HWA520GN/GS/PH) D-AMP CIRCUIT

16.2.2. D-AMP CIRCUIT (2/2)

SCHEMATIC DIAGRAM - 16

F D-AMP CIRCUIT

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



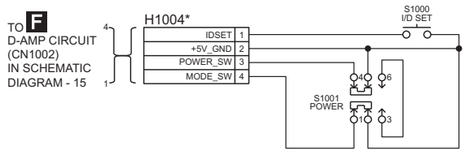
NOTE: " * " REF IS FOR INDICATION ONLY

1/2 2/2 SC-HTB520GN/GS/PH(SB-HWA520GN/GS/PH) D-AMP CIRCUIT

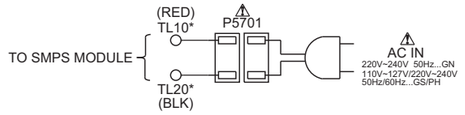
16.2.3. POWER BUTTON & AC INLET CIRCUIT

SCHEMATIC DIAGRAM - 17

G POWER BUTTON CIRCUIT



H AC INLET CIRCUIT



NOTE: " * " REF IS FOR INDICATION ONLY

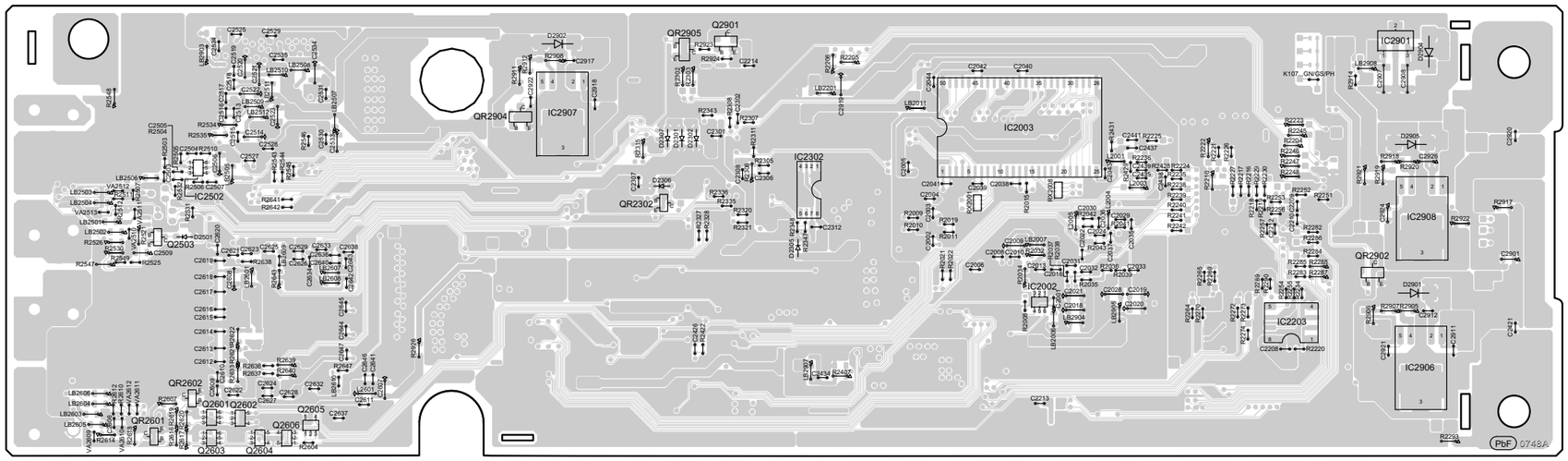
SC-HTB520GN/GS/PH(SB-HWA520GN/GS/PH) POWER BUTTON / AC INLET CIRCUIT

17 Printed Circuit Board

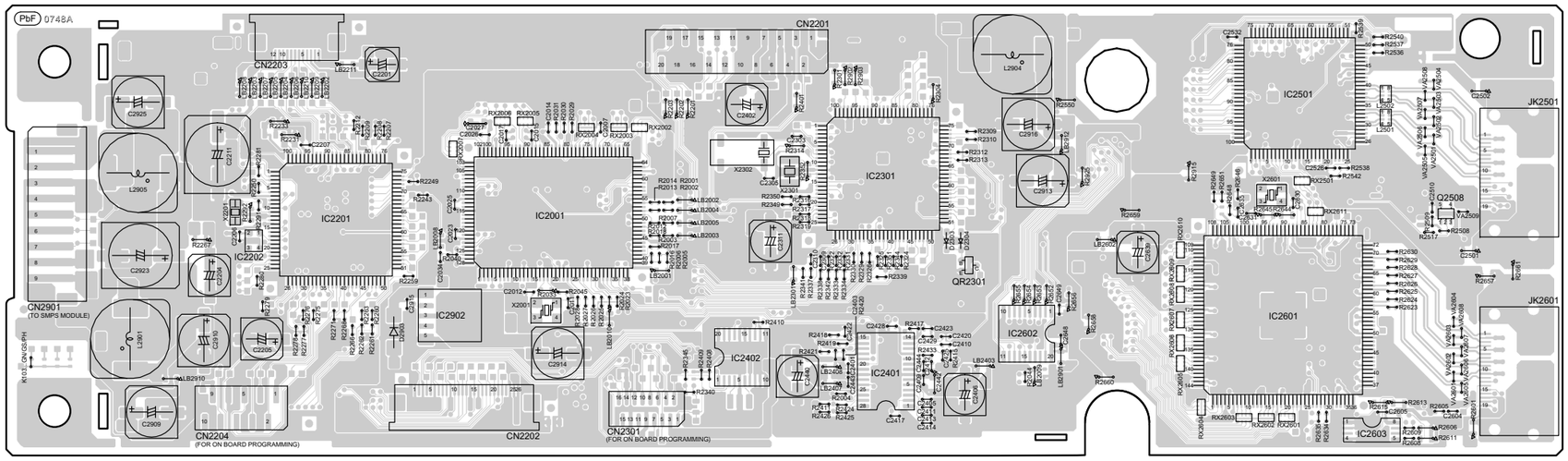
17.1. Main Unit (SU-HTB520)

17.1.1. HDMI P.C.B.

A HDMI P.C.B. (RFKBX0909D)



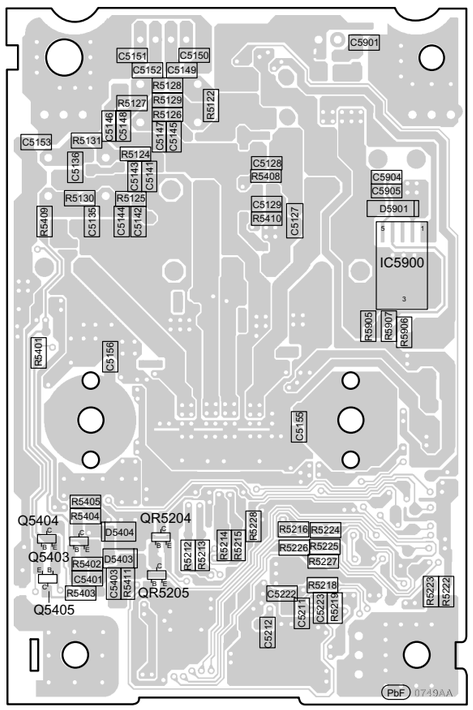
(SIDE A)



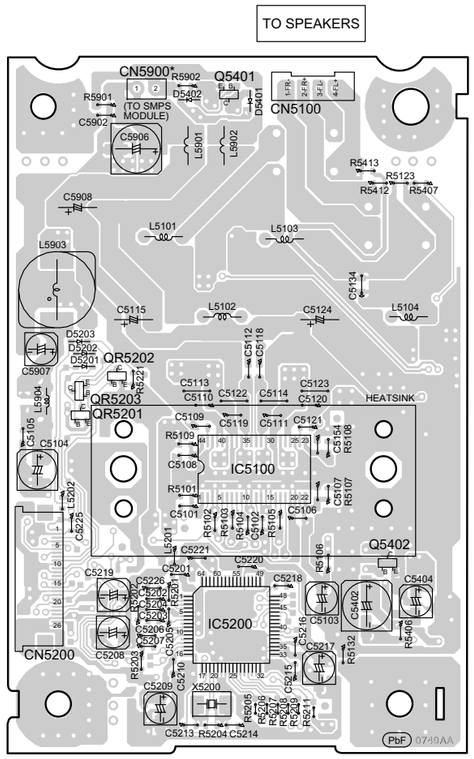
(SIDE B)

17.1.2. D-AMP & WIRELESS P.C.B.

B D-AMP P.C.B. (REPX0910AA)

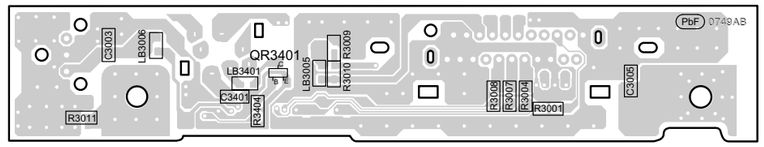


(SIDE A)

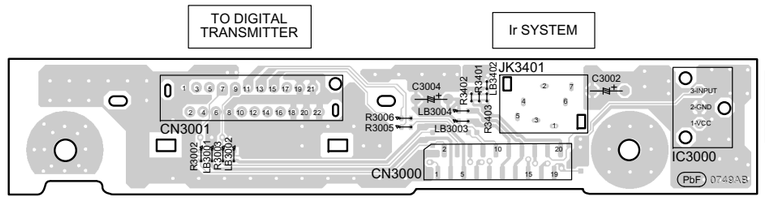


(SIDE B)

C WIRELESS P.C.B. (REPX0910AB)



(SIDE A)

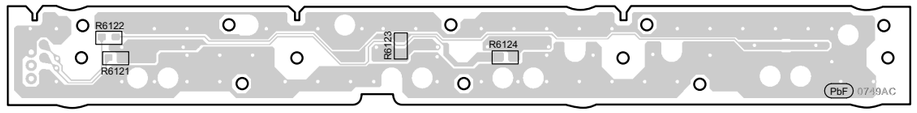


(SIDE B)

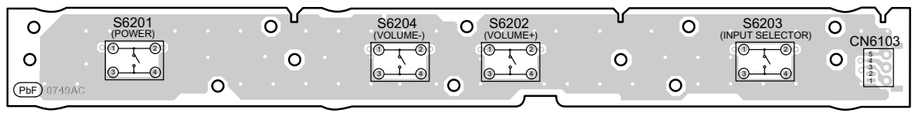
NOTE: " * " REF IS FOR INDICATION ONLY.

17.1.3. BUTTON & LED P.C.B.

D BUTTON P.C.B. (REPX0910AC)

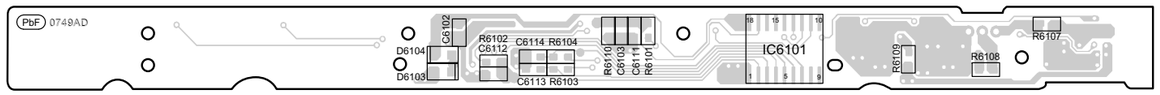


(SIDE A)

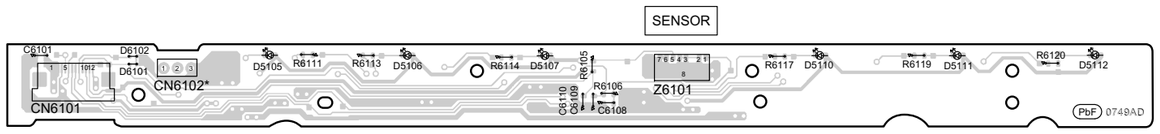


(SIDE B)

E LED P.C.B. (REPX0910AD)



(SIDE A)



(SIDE B)

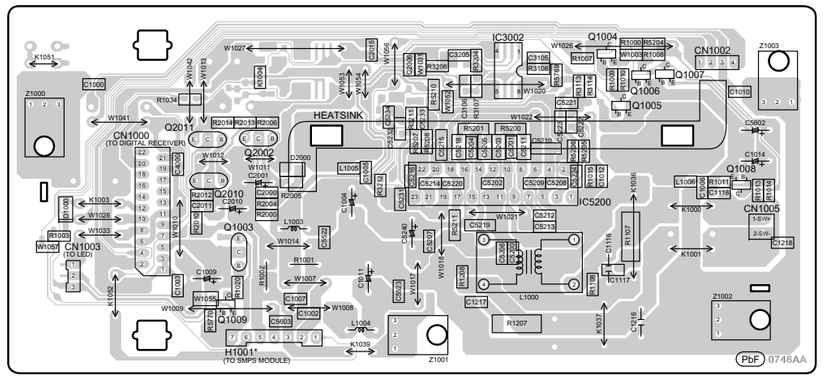
NOTE: " * " REF IS FOR INDICATION ONLY.

SC-HTB520GN/GS/PH(SU-HTB520GN/GS/PH)
BUTTON / LED P.C.B.

17.2. Speaker Unit (SB-HWA520)

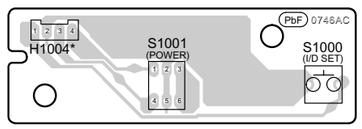
17.2.1. D-AMP, POWER BUTTON & AC INLET P.C.B.

F D-AMP P.C.B. (REPX0911BA)

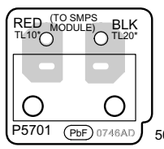


TO SUBWOOFER

G POWER BUTTON P.C.B. (REPX0911BC)



H AC INLET P.C.B. (REPX0911BD)



AC IN ~
220V-240V
50Hz...GN
110V-127V/
220V-240V
50/60Hz...GS/PH

NOTE: " * " REF IS FOR INDICATION ONLY.

SC-HTB520GN/GS/PH(SB-HWA520GN/GS/PH)
D-AMP / POWER BUTTON / AC INLET P.C.B.

18 Terminal Function of IC's

18.1. IC2201 (RFKWMHTB520M) IC MICRO PROCESSOR

No.	Port	I/O	Function Name
1	W_INT	I	Wireless Interrupt
2	W-SCL	O	Wireless Clock
3	REMOTE	I	Remote Control Mode
4	W_SDO	O	Wireless Data Output
5	W_SDI	I	Wireless Data Input
6	BYTE	-	No connection
7	CNVSS	-	Ground
8	NC	-	No connection
9	NC	-	No connection
10	RESET	I	Reset circuit
11	XOUT	O	10MHZ Oscillator Output
12	VSS	-	No connection
13	XIN	I	10MHZ Oscillator Input
14	3.3VBK	-	+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	AC Power Supply
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	-	No connection
24	DAP_RESET	O	DAP RESET (Active Low)
25	HDMIMUTE_DIS	O	To disable HDMI_MUTE signal goes to DAP
26	AMP_POWER	-	No connection
27	SCL	I	EEPROM Clock
28	SDA	I	EEPROM Data
29	TXD / FL_DATA	I/O	To programming connector (TxD) /To FL dummy jig for FL detection
30	RXD / FL_DET	I/O	To programming connector (RxD) / To FL dummy jig for FL clock
31	SCLK / FL_PCONT	O	To programming connector (CLK) / To FL dummy jig for FL data
32	BUSY / FL_CS	O	To programming connector (BUSY) / To FL dummy jig PCONT
33	M_SI	O	Main - HDMI Serial Input
34	H_SO	I	HDMI - Main Serial Output
35	M_CLK	O	Main Clock
36	NC	-	No connection
37	NC	-	No connection
38	NC	-	No connection
39	EPM	O	Eraseable Programmer
40	NC	-	No connection
41	M_RESET	O	Main Micro-Processor Reset Strobing
42	M_CS	O	HDMI micon SPI chip select
43	NC	-	No connection
44	CE / FL_CLK	O	To programming connector / To FL dummy jig for FL strobe / chip select
45	NC	-	No connection
46	HDMI_MUTE	I	HDMI Mute Request
47	H_REQ	I	HDMI Request
48	HDMI_CTRL	O	HDMI Control
49	NC	-	No connection
50	/OTW	I	D-AMP Over Temperature Warning
51	/SD	I	D-AMP Shutdown signal
52	ECO_CTRL	O	Eco Navi Port
53	NC	-	No connection
54	NC	-	No connection
55	NC	-	No connection
56	RC_LED	O	LED is controlled through FL Driver ?
57	NC	-	No connection
58	NC	-	No connection
59	NC	-	No connection
60	VCC2	-	Voltage Supply
61	DAP_PDN	O	DAP Power Down Control (Active Low)
62	VSS	-	No connection
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	NC	-	No connection
92	DC_DET	I	DC Supply Detection
93	S_DET	I	Short Detection
94	AVSS	-	Ground
95	NC	-	No connection
96	VREF	-	Voltage Supply
97	AVCC	-	Voltage Supply
98	NC	O	No connection
99	W_SSB	O	Wireless Chip Select
100	W_DET	I	Wireless Detect

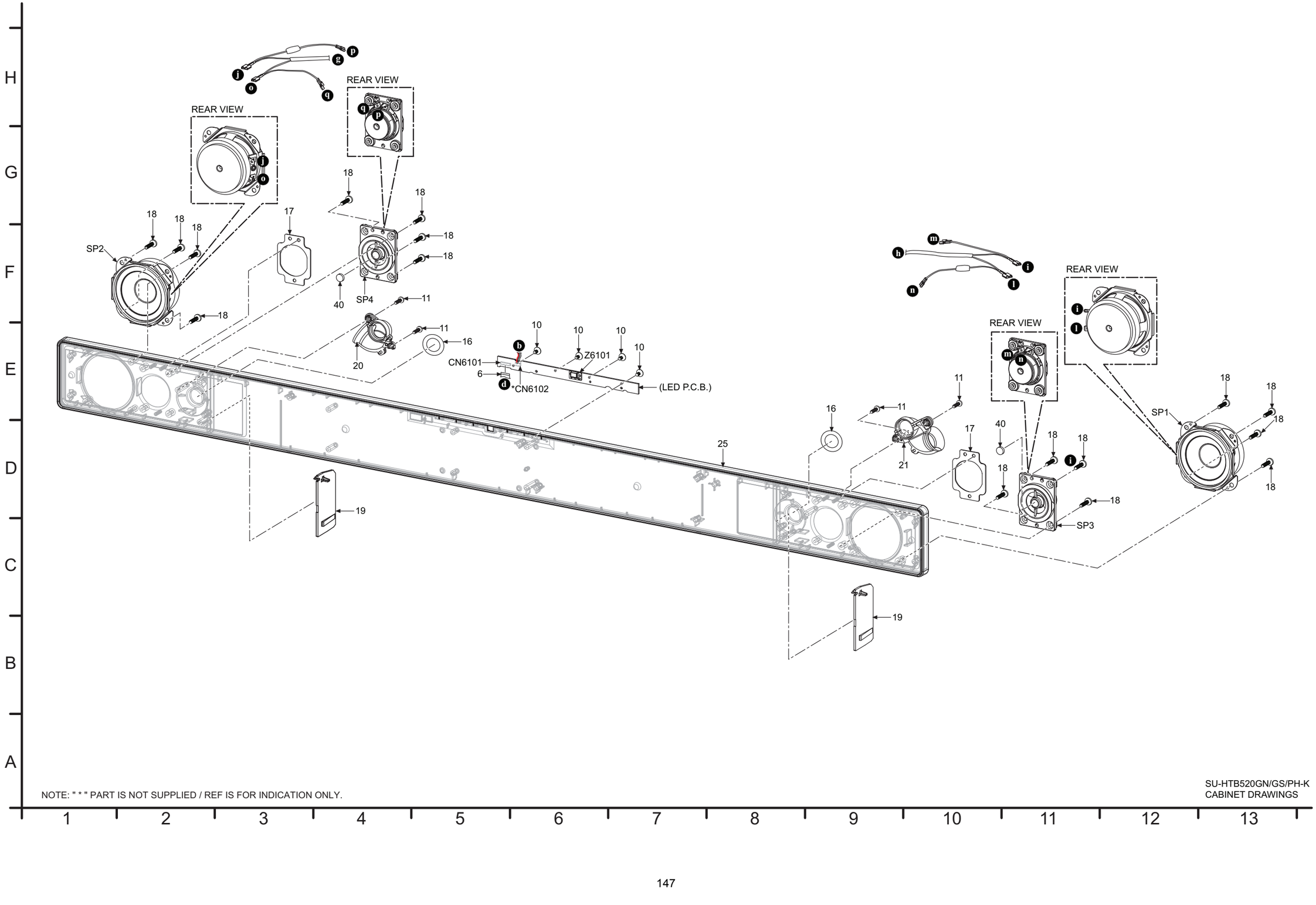
18.2. IC2301 (RFKWHTB520PH) IC MICRO PROCESSOR

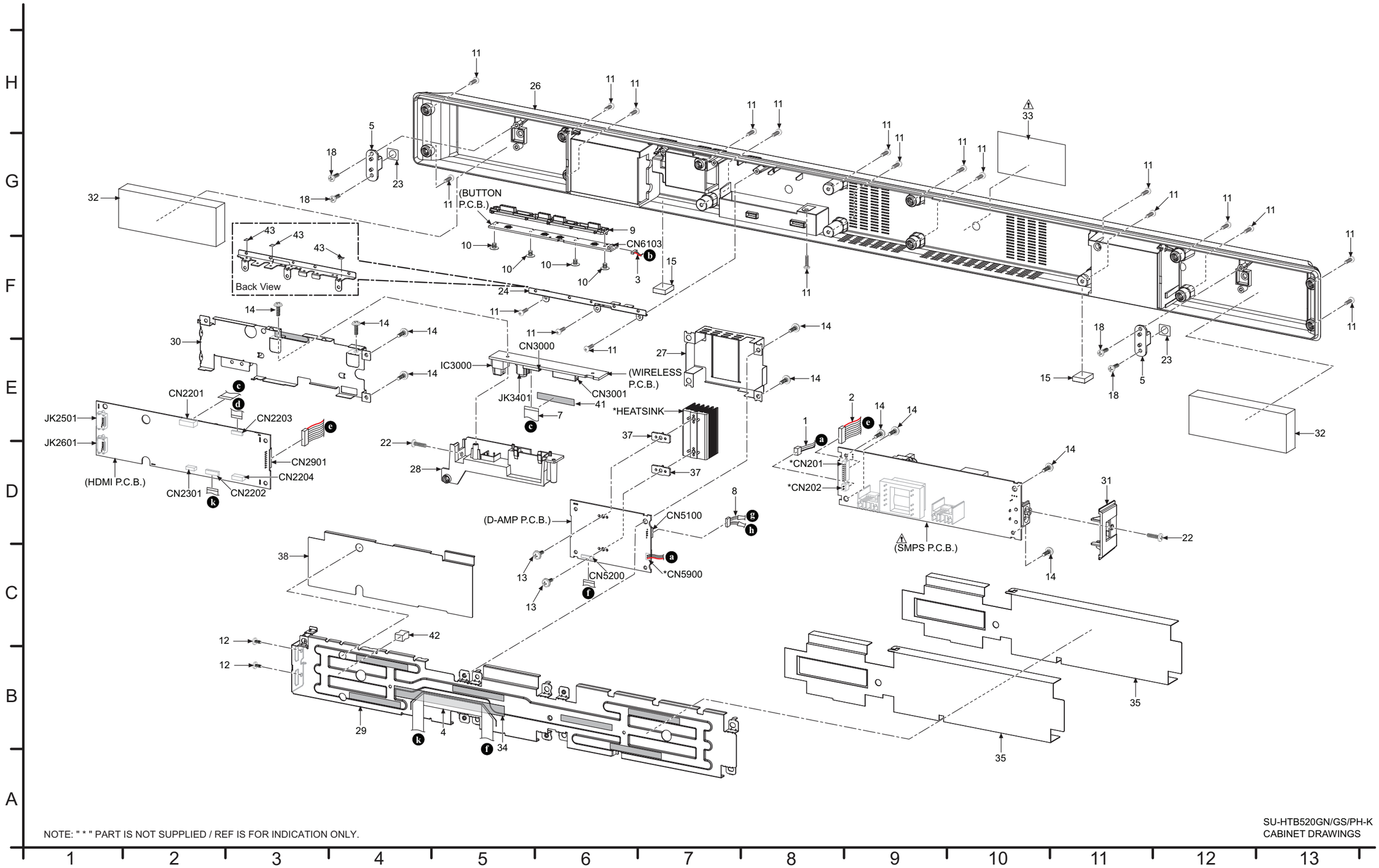
No.	Port	I/O	Function Name
1	NC	-	No connection
2	M_CS	I	MAIN Micro-processor Communication
3	REM	I	REMOCON INPUT (For Power ON)
4	VSYNC_COUNT	I	VSYNC Monitor for Source
5	NC	-	No connection
6	BYTE	-	Ground
7	CNVSS	-	No connection
8	XCIN	I	32.768kHz Sub clock?For standby mode?
9	XCOUT	O	32.768kHz Sub clock?For standby mode?
10	RESET	-	For on board programming
11	XOUT	-	Main clock Output
12	VSS	-	Ground
13	XIN	-	Main clock Input
14	3.3VBK	-	Main power supply
15	CEC	I/O	CEC IN/OUT Serial Data
16	VSYNC MON1	I/O	Vertical Synchro Monitor Terminal 1
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	Flash TXD	I	For on board programming (Transmit)
30	Flash RXD	I	For on board programming (Receive)
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	-	Ground
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	NC	-	No connection
46	NC	-	No connection
47	NC	-	No connection
48	NC	-	No connection
49	NC	-	No connection
50	NC	-	No connection
51	AMUTE	O	HDMI MUTE
52	DCDET	O	Voltage Detect Check (High = F76)
53	NC	-	No connection
54	NC	-	No connection
55	NC	-	No connection
56	NC	-	No connection
57	NC	-	No connection
58	NC	-	No connection
59	NC	-	No connection
60	VCC2	-	Main power supply
61	NC	-	No connection
62	VSS	-	Ground
63	NC	-	No connection
64	NC	-	No connection
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	-	No connection
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	-	No connection
79	NC	-	No connection
80	NC	-	No connection
81	NC	-	No connection
82	NC	-	No connection
83	NC	-	No connection
84	NC	-	No connection
85	NC	-	No connection
86	NC	-	No connection
87	RX1_5V_DET	-	+5V Voltage Detect (Detect = High)
88	RX0_5V_DET	-	+5V Voltage Detect (Detect = High)
89	IN2_5V	I	HDMI IN2 Detect
90	IN1_5V	I	HDMI IN1 Detect
91	NC	-	No connection
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	-	No connection
99	IN2_5V	I	HDMI IN2 Detect (Detect = High)
100	IN1_5V	I	HDMI IN1 Detect (Detect = High)

19 Exploded View and Replacement Parts List

19.1. Exploded View and Mechanical replacement Parts List

19.1.1. Cabinet Parts Location (SU-HTB520)

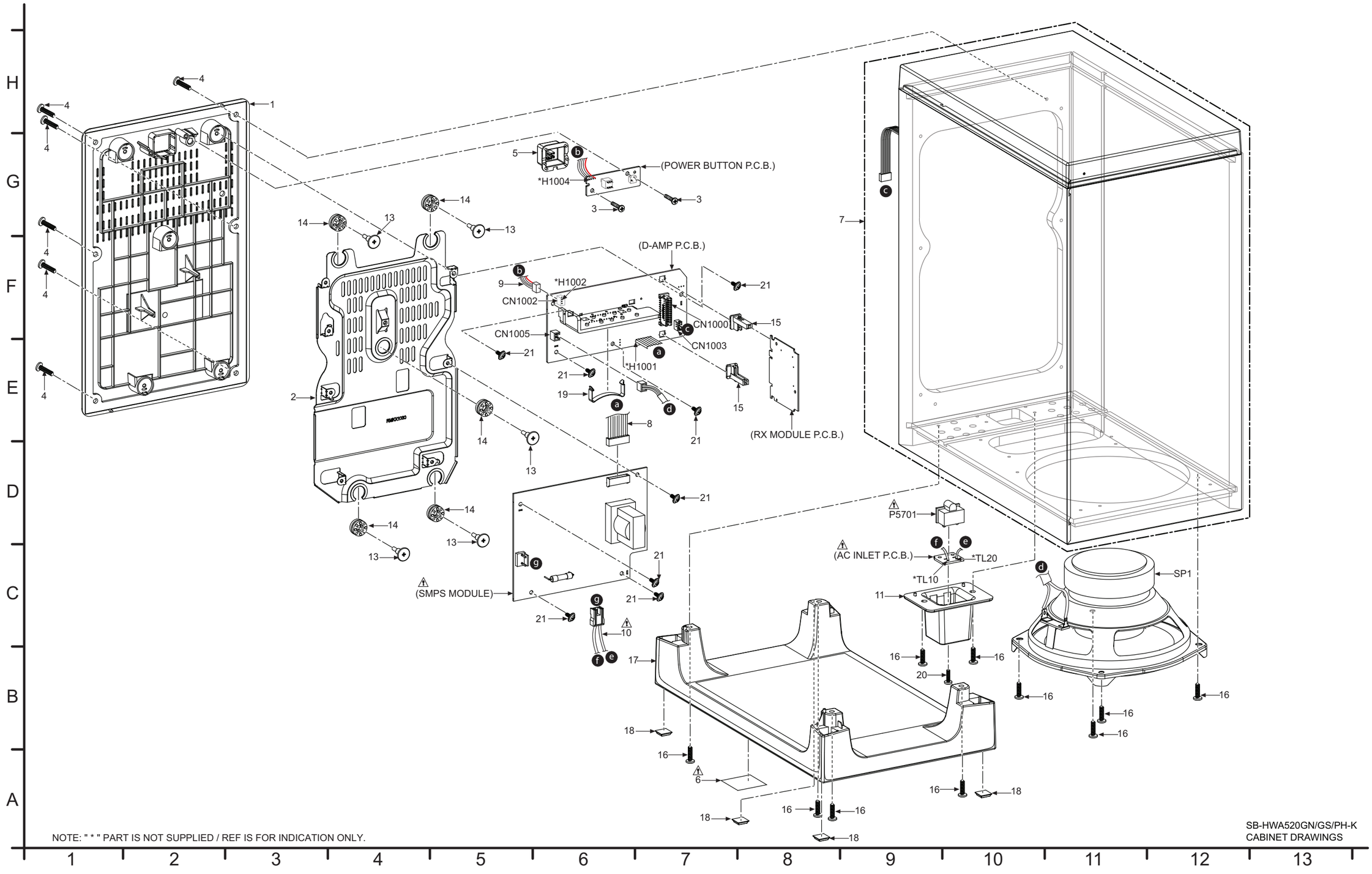




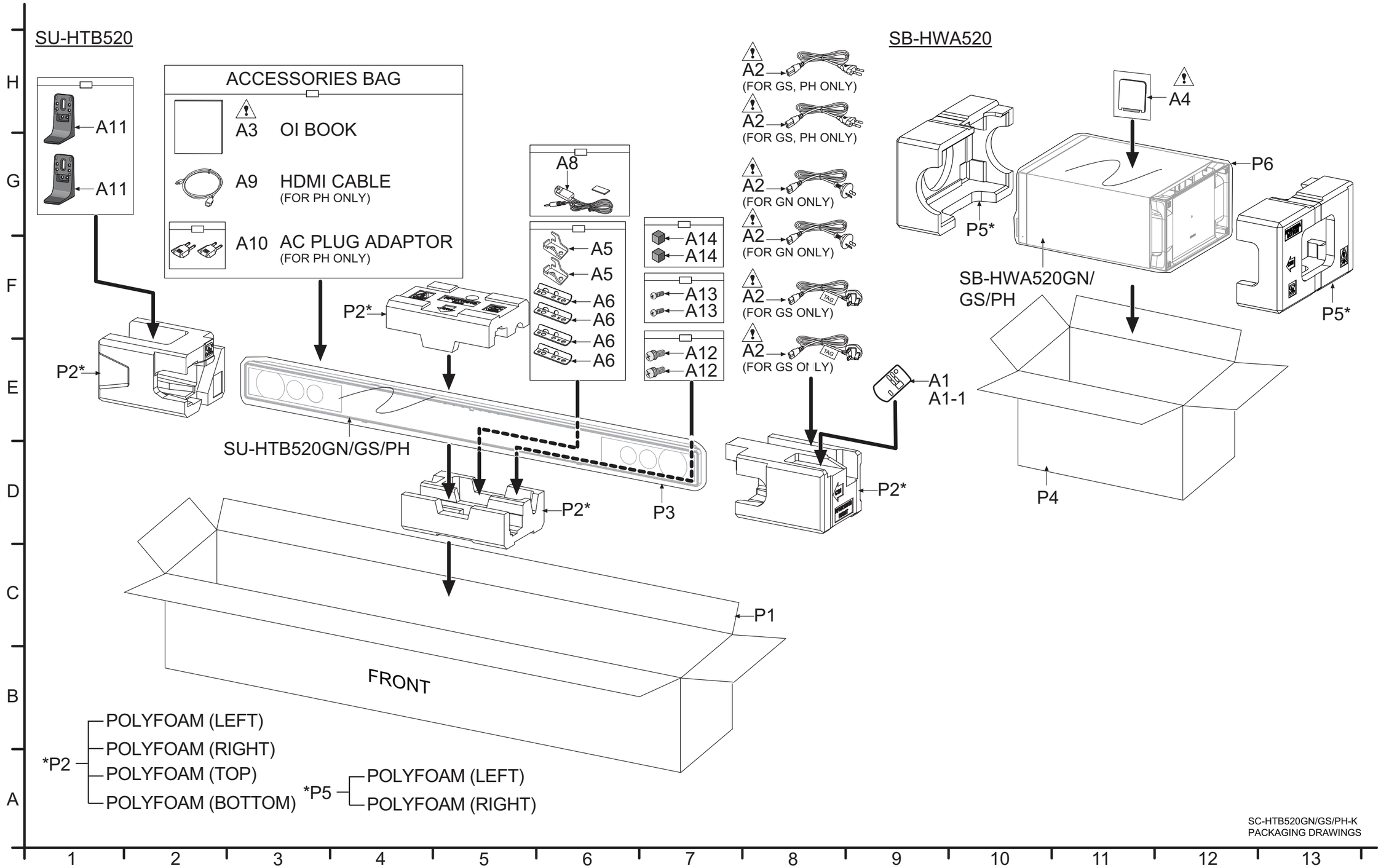
NOTE: " * " PART IS NOT SUPPLIED / REF IS FOR INDICATION ONLY.

SU-HTB520GN/GS/PH-K
CABINET DRAWINGS

19.1.2. Cabinet Parts Location (SB-HWA520)



19.1.3. Packaging (SC-HTB520)



SC-HTB520GN/GS/PH-K
PACKAGING DRAWINGS

19.1.4. Mechanical Repacement Parts List

Important Safety Notice

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

RTL (Retention Time Limited)

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

Note:

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

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

19.1.4.1. Main Unit (SU-HTB520)

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
			CABINET AND CHASSIS		
	1	REXX1194	2P CABLE WIRE (SMPS-DAMP)	1	
	2	REXX1195	9P CABLE WIRE (SMPS-HDMI)	1	
	3	REXX1211	5P CABLE WIRE (BUTTON-LED)	1	
	4	REZX1019	26 FFC (DAMP-HDMI)	1	
	5	RHNX1002-1	INSERT NUT	2	
	6	REZX1020	12P FFC (HDMI-LED)	1	
	7	REZX1021	20P FFC (HDMI-WIRELESS)	1	
	8	REXX1196	4P WIRE (DAMP-SPKR)	1	
	9	RGUX1037-K	POWER BUTTON	1	
	10	RHD14136	SCREW	8	
	11	RHD26056	SCREW	24	
	12	RHD30119-S	SCREW	2	
	13	RHDX30005-1	SCREW	2	
	14	RHDX301005	SCREW	10	
	15	RKAX0028-K	LEG CUSHION	2	
	16	RMFX1071	PORT SHEET	2	
	17	RMF0458-J	TWEETER SHEET	2	
	18	XTB3+10JFJ	SCREW	20	
	19	RXQX1071	PARTITION UNIT	2	
	20	RYQX1058	PORT ASS'Y L	1	
	21	RYQX1059	PORT ASS'Y R	1	
	22	XTB3+10JFJK	SCREW	2	
	23	RMFX1017	EVA (ANCHOR NUT)	2	
	24	RMAX1013	BUTTON HOLDER	1	
	25	RFKGUHTB520K	FRONT PANEL ASS'Y	1	GS,PH
	25	RFKGUHTB520G	FRONT PANEL ASS'Y	1	GN
	26	RFKHUHTB520E	REAR CABINET ASS'Y	1	
	27	RXQ1992	D-AMP SHIELD PLATE UNIT	1	
	28	RYQ0846-K	TX PCB HOLDER UNIT	1	
	29	RYQX1068	MAIN CHASSIS UNIT	1	
	30	RMKX1032	HDMI SUB CHASSIS	1	
	31	RMKX1034-K	AC INLET HOLDER	1	
	32	RMFX1075	ACOUSTIC ABSORBER	2	
⚠	33	RGNX1204-K1	SPEC LABEL	1	GS
⚠	33	RGNX1205-K1	SPEC LABEL	1	PH
⚠	33	RGNX1249-K1	SPEC LABEL	1	GN
	34	RMFX1070B	HIMELON	1	
	35	RMQX1099-Q	DAMP PC SHEET	2	
	37	RMZX1018-1	HEATSINK SPACER A	2	
	38	RMQX1101-Q1	HDMI PC SHEET	1	
	40	RMG0851-K1	EVA (TWEETER)	2	
	41	RMFX1070C	HIMELON	1	
	42	RMQ1933	GASKET	1	
	43	RMQ1959	PC SHEET (BUTTOM)	3	
			SPEAKERS		
	SP1	EAS65P151A	SPEAKER	1	
	SP2	EAS65P151A	SPEAKER	1	
	SP3	L0AZ03A00014	TWEETER	1	
	SP4	L0AZ03A00014	TWEETER	1	
			PACKING MATERIALS		

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
	P1	RPGX3444	PACKING CASE	1	GS
	P1	RPGX3445	PACKING CASE	1	PH
	P1	RPGX3553	PACKING CASE	1	GN
	P2	RPNX1091	POLYFOAM	1	
	P3	RPFX1032	MIRAMAT	1	
			ACCESSORIES		
	A1	N2QAYC000043	REMOTE CONTROL	1	
	A1-1	RKK-HTB10GNK	R/C BATTERY COVER	1	
⚠	A2	K2CJ2DA00010	AC CORD	2	GN
⚠	A2	K2CQ2CA00007	AC CORD	2	GS,PH
⚠	A2	K2CZ3YY00005	AC CORD	2	GS
⚠	A3	RQTX1279-1B	O/I BOOK (En)	1	GN,GS
⚠	A3	RQTX1282-G	O/I BOOK (Cn/Ar/Pe)	1	GS
⚠	A3	RQTX1283-M	O/I BOOK	1	PH
	A5	RMQX1082-K	WALL MOUNT BRACKET	2	
	A6	RFA3321-K	SUPPORT ANGLE	4	
	A8	K2ZZ02C00007	IR BLASTER	1	
	A9	K1HA19CY0001	HDMI CABLE	1	PH
	A10	K2DAYYY00002	AC PLUG ADAPTOR	2	PH
	A11	RYQX1070C-K	LEG STAND UNIT	2	
	A12	XYN5+J14FJK	SCREW	2	
	A13	XSN4+8FJK	SCREW	2	
	A14	RMG0850-K	CUSHION	2	

19.1.4.2. Speaker Unit (SB-HWA520)

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
			CABINET AND CHASSIS		
	1	RXKX1003C-K	REAR PANEL ASS'Y	1	GN
	1	RXKX1003-K	REAR PANEL ASS'Y	1	GS,PH
	2	RMKX1030	METAL CHASSIS	1	
	3	RHD26046	SCREW (POWER BUTTON P.C.B.)	2	
	4	XTB4+16AFJK	SCREW (FOR REAR PANEL ASS'Y)	6	
	5	RGUX1021-K1	POWER BUTTON	1	
⚠	6	RGNX1251-K	SPEC LABEL	1	GN
⚠	6	RGNX1200-K	SPEC LABEL	1	PH
⚠	6	RGNX1199-K	SPEC LABEL	1	GS
	7	RFKHBHWA520E	SPEAKER CABINET ASS'Y	1	
	8	REXX1205	WIRE	1	
	9	REX1436	4P CABLE WIRE	1	
⚠	10	REEX1265	AC WIRE WITH CONNECTOR	1	
	11	RGPX1067A-K	AC COVER	1	
	13	RHDX03001	SCREW	5	
	14	VMG1719	DAMPER	5	
	15	RMNX0224-1	PCB HOLDER	2	
	16	XTB4+16AFJK	SCREW	10	
	17	RGPX1068-KJ	BOTTOM PANEL	1	
	18	RKA0072-KJ	LEG RUBBER	4	
	19	RMCX0035	LEAF SPRING	1	
	20	XTB3+10JFJK	SCREW (FOR AC INLET P.C.B)	1	
	21	RHD30111-31	SCREW	8	
			SPEAKER		
	SP1	L0AA16A00046	WOOFER SPEAKER	1	
			SERVICE FIXTURE & TOOLS		
	SFT1	REZX1019-1	FFC (26P)	1	
	SFT2	REXX1194	2P CABLE WIRE	1	

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
			PACKING MATERIALS		
	P4	RPGX3555	PACKING CASE	1	GN
	P4	RPGX3450	PACKING CASE	1	GS
	P4	RPGX3451	PACKING CASE	1	PH
	P5	RPNX1090	POLYFOAM (SB-HW)	1	
	P6	RPFX1044RD	MIRAMAT	1	GS
	P6	RPFX1044BK	MIRAMAT	1	GN,PH
			ACCESSORIES		
⚠	A4	RFAX1036C	TRANSMITTER UNIT	1	GS
⚠	A4	RFAX1036D	TRANSMITTER UNIT	1	PH
⚠	A4	RFAX1036F	TRANSMITTER UNIT	1	GN

19.2. Electrical Replacement Parts List

Important Safety Notice

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

RTL (Retention Time Limited)

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

Note:

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

19.2.1. Main Unit (SU-HTB520)

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
			PRINTED CIRCUIT BOARDS		
⚠	PCB1	N0AE2FH00001	SMPS P.C.B	1	
	PCB2	RFKBX0909D	HDMI P.C.B.	1	(RTL)
	PCB3	REPX0910AA	D-AMP P.C.B.	1	(RTL)
	PCB4	REPX0910AB	WIRELESS P.C.B	1	(RTL)
	PCB5	REPX0910AC	BUTTON P.C.B	1	(RTL)
	PCB6	REPX0910AD	LED P.C.B	1	(RTL)
			INTEGRATED CIRCUITS		
	IC2001	C2HBCY000067	IC	1	
	IC2002	C0JBAR000396	IC	1	
	IC2003	C3ABMY000022	IC	1	
	IC2201	RFKWMHTB520M	IC	1	
	IC2202	C0EBG0000107	IC	1	
	IC2203	C3EBEC000060	IC	1	
	IC2301	RFKWHTB520PH	IC	1	
	IC2302	C3EBEC000047	IC	1	
	IC2401	C1AB00003174	IC	1	
	IC2402	C2CBYY001016	IC	1	
	IC2501	C1AB00002975	IC	1	
	IC2502	C0JBAB000986	IC	1	
	IC2601	C1AB00002989	IC	1	
	IC2602	C0JBAZ001466	IC	1	
	IC2603	C3EBEC000047	IC	1	
	IC2901	C0CBABC00117	IC	1	
	IC2902	C0CBCAG00015	IC	1	
	IC2906	C0DBAYH00005	IC	1	
	IC2907	C0DBAYH00005	IC	1	
	IC2908	C0DBAYH00005	IC	1	

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
	IC5100	C1AB00003217	IC	1	
	IC5200	C1AB00003216	IC	1	
	IC5900	C0DBAYH00005	IC	1	
	IC6101	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	
	Q2901	B1ADCE000012	TRANSISTOR	1	
	Q5401	B1GBCFGG0030	TRANSISTOR	1	
	Q5402	B1ABCF000011	TRANSISTOR	1	
	Q5403	B1ADBL000010	TRANSISTOR	1	
	Q5404	B1ABCF000011	TRANSISTOR	1	
	Q5405	B1ABCF000011	TRANSISTOR	1	
	QR2301	B1GBCFJJ0007	TRANSISTOR	1	
	QR2302	B1GBCFJJ0007	TRANSISTOR	1	
	QR2601	B1GBCFJJ0007	TRANSISTOR	1	
	QR2602	B1GBCFJJ0007	TRANSISTOR	1	
	QR2902	B1GBCFNN0004	TRANSISTOR	1	
	QR2904	B1GBCFNN0004	TRANSISTOR	1	
	QR2905	B1GBCFJJ0051	TRANSISTOR	1	
	QR3401	B1ABMF000020	TRANSISTOR	1	
	QR5201	B1GBCFJJ0007	TRANSISTOR	1	
	QR5202	B1GDCFJJ0008	TRANSISTOR	1	
	QR5203	B1GDCFJJ0008	TRANSISTOR	1	
	QR5204	B1GDCFJJ0044	TRANSISTOR	1	
	QR5205	B1GBCFJJ0051	TRANSISTOR	1	
			DIODES		

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
	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	
	D2501	B0JCCD000017	DIODE	1	
	D2901	B0JCPG000005	DIODE	1	
	D2902	B0JCPG000005	DIODE	1	
	D2903	B0ECKP000002	DIODE	1	
	D2904	B0ECKP000002	DIODE	1	
	D2905	B0JCPG000005	DIODE	1	
	D5105	B3ABB0000086	DIODE	1	
	D5106	B3ADB0000026	DIODE	1	
	D5107	B3ABB0000086	DIODE	1	
	D5110	B3ABB0000086	DIODE	1	
	D5111	B3ABB0000086	DIODE	1	
	D5112	B3ABB0000086	DIODE	1	
	D5201	B0ACCK000005	DIODE	1	
	D5202	B0ACCK000005	DIODE	1	
	D5203	B0ACCK000005	DIODE	1	
	D5401	B0ACCK000005	DIODE	1	
	D5402	B0BC030A0264	DIODE	1	
	D5403	B0ACCK000005	DIODE	1	
	D5404	B0ACCK000005	DIODE	1	
	D5901	B0JCPG000005	DIODE	1	
	D6101	B0ZBZ0000156	DIODE	1	
	D6102	B0ZBZ0000156	DIODE	1	
	D6103	B0ACCK000005	DIODE	1	
	D6104	B0ACCK000005	DIODE	1	
			VARISTORS		
	VA2501	B0ZBZ0000156	VARISTOR	1	
	VA2502	B0ZBZ0000156	VARISTOR	1	
	VA2503	B0ZBZ0000156	VARISTOR	1	
	VA2504	B0ZBZ0000156	VARISTOR	1	
	VA2505	B0ZBZ0000156	VARISTOR	1	
	VA2506	B0ZBZ0000156	VARISTOR	1	
	VA2507	B0ZBZ0000156	VARISTOR	1	
	VA2508	B0ZBZ0000156	VARISTOR	1	
	VA2601	B0ZBZ0000156	VARISTOR	1	
	VA2602	B0ZBZ0000156	VARISTOR	1	
	VA2603	B0ZBZ0000156	VARISTOR	1	
	VA2604	B0ZBZ0000156	VARISTOR	1	
	VA2605	B0ZBZ0000156	VARISTOR	1	
	VA2606	B0ZBZ0000156	VARISTOR	1	
	VA2607	B0ZBZ0000156	VARISTOR	1	
	VA2608	B0ZBZ0000156	VARISTOR	1	
	VA2509	EZJZ0V80008B	VARISTOR	1	
	VA2510	EZJZ0V80008B	VARISTOR	1	
	VA2511	EZJZ0V80008B	VARISTOR	1	
	VA2512	EZJZ0V80008B	VARISTOR	1	
	VA2513	EZJZ0V80008B	VARISTOR	1	
	VA2609	EZJZ0V80008B	VARISTOR	1	
	VA2610	EZJZ0V80008B	VARISTOR	1	
	VA2611	EZJZ0V80008B	VARISTOR	1	
	VA2612	EZJZ0V80008B	VARISTOR	1	
			SWITCHES		
	S6201	K0H1BA000267	SW POWER	1	
	S6202	K0H1BA000267	SW VOLUME UP	1	
	S6203	K0H1BA000267	SW SELECTOR	1	
	S6204	K0H1BA000267	SW VOLUME DOWN	1	
			CONNECTORS		
	CN2201	K1MN20AA0046	20P CONNECTOR	1	
	CN2202	K1MN26BA0033	26P CONNECTOR	1	
	CN2203	K1MN12BA0026	12P CONNECTOR	1	
	CN2204	K1MN10AA0046	10P CONNECTOR	1	

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
	CN2301	K1MY16AA0021	16P CONNECTOR	1	
	CN2901	K1KA09A00226	9P CONNECTOR	1	
	CN3000	K1MN20AA0046	20P CONNECTOR	1	
	CN3001	K1MY22A00003	22P CONNECTOR	1	
	CN5100	K1KA04AA0193	4P CONNECTOR	1	
	CN5200	K1MN26BA0033	26P CONNECTOR	1	
	CN6101	K1MN12BA0026	12P CONNECTOR	1	
	CN6103	K1KA05BA0014	5P CONNECTOR	1	
			COILS AND INDUC-TORS		
	L2001	J0JBC0000014	INDUCTOR	1	
	L2003	J0JBC0000014	INDUCTOR	1	
	L2004	J0JBC0000014	INDUCTOR	1	
	L2005	J0JBC0000014	INDUCTOR	1	
	L2601	G1CR82KA0010	CHIP INDUCTOR	1	
	L2901	G1A330ZA0007	COIL	1	
	L2904	G1A330ZA0007	COIL	1	
	L2905	G1A330ZA0007	COIL	1	
	L5101	G0A100H00018	CHOKE COIL	1	
	L5102	G0A100H00018	CHOKE COIL	1	
	L5103	G0A100H00018	CHOKE COIL	1	
	L5104	G0A100H00018	CHOKE COIL	1	
	L5201	J0JBC0000015	INDUCTOR	1	
	L5202	J0JBC0000072	INDUCTOR	1	
	L5901	J0JKB0000020	INDUCTOR	1	
	L5902	J0JKB0000020	INDUCTOR	1	
	L5903	G1A330ZA0007	COIL	1	
	L5904	G0A200D00002	CHOKE COIL	1	
	R2202	J0JBC0000072	INDUCTOR	1	
	R2203	J0JBC0000072	INDUCTOR	1	
	LB2001	J0JYC0000096	INDUCTOR	1	
	LB2002	J0JYC0000096	INDUCTOR	1	
	LB2003	J0JYC0000096	INDUCTOR	1	
	LB2004	J0JYC0000096	INDUCTOR	1	
	LB2005	J0JYC0000096	INDUCTOR	1	
	LB2006	J0JHC0000078	INDUCTOR	1	
	LB2007	J0JHC0000078	INDUCTOR	1	
	LB2008	J0JYC0000096	INDUCTOR	1	
	LB2009	J0JBC0000072	INDUCTOR	1	
	LB2010	J0JBC0000072	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	
	LB2901	J0JHC0000078	INDUCTOR	1	
	LB2903	J0JHC0000078	INDUCTOR	1	
	LB2904	J0JHC0000078	INDUCTOR	1	
	LB2905	J0JHC0000078	INDUCTOR	1	
	LB2907	J0JHC0000078	INDUCTOR	1	

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
	LB2910	J0JHC0000078	INDUCTOR	1	
	LB2912	J0JHC0000078	INDUCTOR	1	
	LB3001	J0JBC0000015	INDUCTOR	1	
	LB3002	J0JBC0000015	INDUCTOR	1	
	LB3004	J0JBC0000015	INDUCTOR	1	
	LB3005	J0JBC0000015	INDUCTOR	1	
	LB3401	J0JBC0000015	INDUCTOR	1	
	LB3402	J0JCC0000308	INDUCTOR	1	
			FILTERS		
	L2501	J0MAB0000235	FILTER	1	
	L2502	J0MAB0000235	FILTER	1	
			COMPOMENT COMBINA-TION		
	Z6101	B3RBB0000013	COMPOMENT COMBINA-TION	1	
			OSCILLATORS		
	X2001	H0J245500101	CRYSTAL OSCILLATOR	1	
	X2201	H2D100500004	CRYSTAL OSCILLATOR	1	
	X2301	H2D400400018	CRYSTAL OSCILLATOR	1	
	X2302	H0J327200172	CRYSTAL OSCILLATOR	1	
	X2601	H0J283500022	CRYSTAL OSCILLATOR	1	
	X5200	H0J135500035	CRYSTAL OSCILLATOR	1	
			JACKS		
	JK2501	K1FY119E0014	JK HDMI OUT	1	
	JK2601	K1FY119E0014	JK HDMI IN	1	
	JK3401	K2HC103A0031	JK Ir BLASTER	1	
	IC3000	B3RAB0000056	IC	1	
			CHIP JUMPERS		
	K103	D0GAR00J0008	0 1/16W	1	
	K107	D0GAR00J0008	0 1/16W	1	
	LB2201	D0GBR00JA008	0 1/16W	1	
	LB2202	D0GBR00JA008	0 1/16W	1	
	LB2203	D0GBR00JA008	0 1/16W	1	
	LB2204	D0GBR00JA008	0 1/16W	1	
	LB2205	D0GBR00JA008	0 1/16W	1	
	LB2206	D0GBR00JA008	0 1/16W	1	
	LB2207	D0GBR00JA008	0 1/16W	1	
	LB2208	D0GBR00JA008	0 1/16W	1	
	LB2209	D0GBR00JA008	0 1/16W	1	
	LB2210	D0GBR00JA008	0 1/16W	1	
	LB2211	D0GBR00JA008	0 1/16W	1	
	LB2610	D0GAR00J0008	0 1/16W	1	
	LB2908	D0GBR00JA008	0 1/16W	1	
	LB3003	D0GBR00JA008	0 1/16W	1	
	LB3006	D0GBR00JA008	0 1/16W	1	
			RESISTORS		
	R2001	D0GA330JA023	33 1/16W	1	
	R2002	D0GA330JA023	33 1/16W	1	
	R2003	D0GA330JA023	33 1/16W	1	
	R2004	D0GAR00J0008	0 1/16W	1	
	R2005	D0GAR00J0008	0 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	
	R2012	D0GA330JA023	33 1/16W	1	
	R2013	D0GA330JA023	33 1/16W	1	
	R2014	D0GA330JA023	33 1/16W	1	
	R2015	D0GA330JA023	33 1/16W	1	
	R2016	D0GA330JA023	33 1/16W	1	

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
	R2017	D0GAR00J0008	0 1/16W	1	
	R2018	D0GA330JA023	33 1/16W	1	
	R2019	D0GA330JA023	33 1/16W	1	
	R2021	D0GA332JA023	3.3K 1/16W	1	
	R2022	D0GA332JA023	3.3K 1/16W	1	
	R2023	D0GA101JA023	100 1/16W	1	
	R2024	D0GA101JA023	100 1/16W	1	
	R2025	D0GA101JA023	100 1/16W	1	
	R2026	D0GA101JA023	100 1/16W	1	
	R2027	D0GA101JA023	100 1/16W	1	
	R2028	D0GA101JA023	100 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 1/16W	1	
	R2034	D0GB330JA008	33 1/16W	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	D0GA102JA023	1K 1/16W	1	
	R2043	D0GA102JA023	1K 1/16W	1	
	R2044	D0GA101JA023	100 1/16W	1	
	R2045	ERJ2GEJ202X	2K 1/16W	1	
	R2201	D0GBR00JA008	0 1/16W	1	
	R2204	D0GBR00JA008	0 1/16W	1	
	R2205	D0GBR00JA008	0 1/16W	1	
	R2206	D0GBR00JA008	0 1/16W	1	
	R2207	D0GA101JA023	100 1/16W	1	
	R2208	D0GA101JA023	100 1/16W	1	
	R2209	D0GA101JA023	100 1/16W	1	
	R2210	D0GB103JA008	10K 1/16W	1	
	R2212	D0GA101JA023	100 1/16W	1	
	R2216	D0GA153JA023	15K 1/16W	1	
	R2217	D0GA153JA023	15K 1/16W	1	
	R2218	D0GA224JA023	220K 1/16W	1	
	R2219	D0GA103JA023	10K 1/16W	1	
	R2220	D0GA472JA023	4.7K 1/16W	1	
	R2221	D0GA103JA023	10K 1/16W	1	
	R2222	D0GB472JA008	4.7K 1/16W	1	
	R2223	D0GB101JA008	100 1/16W	1	
	R2224	D0GA101JA023	100 1/16W	1	
	R2225	D0GA101JA023	100 1/16W	1	
	R2226	D0GA103JA023	10K 1/16W	1	
	R2227	D0GA101JA023	100 1/16W	1	
	R2229	D0GA102JA023	1K 1/16W	1	
	R2230	D0GA102JA023	1K 1/16W	1	
	R2231	D0GBR00JA008	0 1/16W	1	
	R2233	D0GB473JA008	47K 1/16W	1	
	R2234	D0GA473JA023	47K 1/16W	1	
	R2235	D0GA101JA023	100 1/16W	1	
	R2236	D0GA101JA023	100 1/16W	1	
	R2238	D0GA101JA023	100 1/16W	1	
	R2239	D0GA101JA023	100 1/16W	1	
	R2240	D0GA101JA023	100 1/16W	1	
	R2241	D0GA101JA023	100 1/16W	1	
	R2242	D0GA101JA023	100 1/16W	1	
	R2243	D0GA101JA023	100 1/16W	1	
	R2245	D0GB101JA008	100 1/16W	1	
	R2246	D0GB101JA008	100 1/16W	1	
	R2247	D0GB101JA008	100 1/16W	1	
	R2248	D0GB101JA008	100 1/16W	1	
	R2249	D0GA101JA023	100 1/16W	1	
	R2250	D0GA103JA023	10K 1/16W	1	
	R2251	D0GA154JA023	150K 1/16W	1	
	R2252	D0GA102JA023	1K 1/16W	1	
	R2253	D0GA104JA023	100K 1/16W	1	
	R2254	D0GA103JA023	10K 1/16W	1	
	R2255	D0GA103JA023	10K 1/16W	1	

Safety	Ref. No.	Part No.	Part Name & Description		QTY	Remarks
	R2256	D0GA103JA023	10K	1/16W	1	
	R2257	D0GA104JA023	100K	1/16W	1	
	R2259	D0GA101JA023	100	1/16W	1	
	R2260	D0GA102JA023	1K	1/16W	1	
	R2261	D0GA103JA023	10K	1/16W	1	
	R2262	D0GA103JA023	10K	1/16W	1	
	R2263	D0GA101JA023	100	1/16W	1	
	R2264	D0GA101JA023	100	1/16W	1	
	R2265	D0GA102JA023	1K	1/16W	1	
	R2266	D0GA102JA023	1K	1/16W	1	
	R2267	D0GBR00JA008	0	1/16W	1	
	R2268	D0GA103JA023	10K	1/16W	1	
	R2269	D0GA102JA023	1K	1/16W	1	
	R2270	D0GA102JA023	1K	1/16W	1	
	R2271	D0GA103JA023	10K	1/16W	1	
	R2272	D0GA102JA023	1K	1/16W	1	
	R2273	D0GA102JA023	1K	1/16W	1	
	R2274	D0GA102JA023	1K	1/16W	1	
	R2275	D0GA101JA023	100	1/16W	1	
	R2276	D0GA101JA023	100	1/16W	1	
	R2277	D0GA101JA023	100	1/16W	1	
	R2278	D0GA101JA023	100	1/16W	1	
	R2279	D0GA103JA023	10K	1/16W	1	
	R2280	D0GA101JA023	100	1/16W	1	
	R2281	D0GA101JA023	100	1/16W	1	
	R2282	D0GA101JA023	100	1/16W	1	
	R2283	D0GA101JA023	100	1/16W	1	
	R2284	D0GA101JA023	100	1/16W	1	
	R2285	D0GA101JA023	100	1/16W	1	
	R2286	D0GA101JA023	100	1/16W	1	
	R2287	D0GB682JA008	6.8K	1/16W	1	
	R2288	D0GB682JA008	6.8K	1/16W	1	
	R2289	D0GA103JA023	10K	1/16W	1	
	R2290	D0GA103JA023	10K	1/16W	1	
	R2291	D0GA101JA023	100	1/16W	1	
	R2292	D0GB105JA008	1M	1/16W	1	
	R2293	D0GBR00JA008	0	1/16W	1	
	R2301	D0GB153JA008	15K	1/16W	1	
	R2302	D0GB104JA008	100K	1/16W	1	
	R2303	D0GB104JA008	100K	1/16W	1	
	R2304	D0GB472JA008	4.7K	1/16W	1	
	R2305	D0GA102JA023	1K	1/16W	1	
	R2306	D0GB104JA008	100K	1/16W	1	
	R2307	D0GA182JA023	1.8K	1/16W	1	
	R2308	D0GA101JA023	100	1/16W	1	
	R2309	D0GA101JA023	100	1/16W	1	
	R2310	D0GA101JA023	100	1/16W	1	
	R2311	D0GA154JA023	150K	1/16W	1	
	R2312	D0GA820JA023	82	1/16W	1	
	R2313	D0GA820JA023	82	1/16W	1	
	R2314	D0GB104JA008	100K	1/16W	1	
	R2315	D0GB104JA008	100K	1/16W	1	
	R2316	D0GA101JA023	100	1/16W	1	
	R2317	D0GA101JA023	100	1/16W	1	
	R2318	D0GA473JA023	47K	1/16W	1	
	R2319	D0GA473JA023	47K	1/16W	1	
	R2320	D0GA472JA023	4.7K	1/16W	1	
	R2321	D0GA472JA023	4.7K	1/16W	1	
	R2322	D0GA472JA023	4.7K	1/16W	1	
	R2324	D0GA101JA023	100	1/16W	1	
	R2325	D0GA101JA023	100	1/16W	1	
	R2326	D0GA103JA023	10K	1/16W	1	
	R2327	D0GA470JA023	47	1/16W	1	
	R2328	D0GA470JA023	47	1/16W	1	
	R2329	D0GA101JA023	100	1/16W	1	
	R2330	D0GA101JA023	100	1/16W	1	
	R2331	D0GA472JA023	4.7K	1/16W	1	
	R2332	D0GA472JA023	4.7K	1/16W	1	
	R2333	D0GA101JA023	100	1/16W	1	
	R2334	D0GA101JA023	100	1/16W	1	
	R2335	D0GA101JA023	100	1/16W	1	
	R2336	D0GA101JA023	100	1/16W	1	
	R2337	D0GA182JA023	1.8K	1/16W	1	
	R2338	D0GA182JA023	1.8K	1/16W	1	
	R2339	D0GA101JA023	100	1/16W	1	
	R2340	D0GA101JA023	100	1/16W	1	
	R2341	D0GA101JA023	100	1/16W	1	
	R2342	D0GA101JA023	100	1/16W	1	
	R2343	D0GA101JA023	100	1/16W	1	
	R2344	D0GA101JA023	100	1/16W	1	
	R2345	D0GA103JA023	10K	1/16W	1	
	R2347	D0GA472JA023	4.7K	1/16W	1	
	R2348	D0GA472JA023	4.7K	1/16W	1	
	R2349	D0GA151JA023	150	1/16W	1	
	R2350	D0GA151JA023	150	1/16W	1	
	R2351	D0GAR00J0008	0	1/16W	1	
	R2352	D0GB105JA008	1M	1/16W	1	
	R2401	D0GBR00JA008	0	1/16W	1	
	R2407	D0GBR00JA008	0	1/16W	1	
	R2408	D0GA472JA023	4.7K	1/16W	1	
	R2409	D0GA472JA023	4.7K	1/16W	1	
	R2410	D0GA101JA023	100	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	
	R2421	D0GA101JA023	100	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	
	R2429	D0GA102JA023	1K	1/16W	1	
	R2431	D0GA102JA023	1K	1/16W	1	
	R2433	D0GA302JA023	3.0K	1/16W	1	
	R2503	D0GA101JA023	100	1/16W	1	
	R2504	D0GA101JA023	100	1/16W	1	
	R2505	D0GA510JA023	51	1/16W	1	
	R2506	D0GA103JA023	10K	1/16W	1	
	R2507	D0GA473JA023	47K	1/16W	1	
	R2508	D0GA273JA023	27K	1/16W	1	
	R2509	D0GA102JA023	1K	1/16W	1	
	R2510	D0GA103JA023	10K	1/16W	1	
	R2511	D0GA182JA023	1.8K	1/16W	1	
	R2512	D0GA182JA023	1.8K	1/16W	1	
	R2517	D0GA221JA023	220	1/16W	1	
	R2521	D0GB103JA008	10K	1/16W	1	
	R2525	D0GB103JA008	10K	1/16W	1	
	R2526	D0GB101JA008	100	1/16W	1	
	R2530	D0GB473JA008	47K	1/16W	1	
	R2531	D0GA682JA023	6.8K	1/16W	1	
	R2532	D0GA682JA023	6.8K	1/16W	1	
	R2534	D0GB180JA008	18	1/16W	1	
	R2535	D0GB681JA008	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	
	R2548	D0GBR00JA008	0	1/16W	1	
	R2549	D0GBR00JA008	0	1/16W	1	
	R2550	D0GBR00JA008	0	1/16W	1	
	R2601	D0GBR00JA008	0	1/16W	1	
	R2604	D0GA102JA023	1K	1/16W	1	
	R2605	D0GA510JA023	51	1/16W	1	
	R2606	D0GB473JA008	47K	1/16W	1	
	R2607	D0GB473JA008	47K	1/16W	1	
	R2608	D0GA470JA023	47	1/16W	1	

Safety	Ref. No.	Part No.	Part Name & Description		QTY	Remarks
	R2609	D0GA470JA023	47	1/16W	1	
	R2610	D0GA473JA023	47K	1/16W	1	
	R2611	D0GB473JA008	47K	1/16W	1	
	R2612	D0GA104JA023	100K	1/16W	1	
	R2613	D0GB103JA008	10K	1/16W	1	
	R2614	D0GB101JA008	100	1/16W	1	
	R2615	D0GB103JA008	10K	1/16W	1	
	R2616	D0GB223JA008	22K	1/16W	1	
	R2617	D0GB223JA008	22K	1/16W	1	
	R2618	D0GB102JA008	1K	1/16W	1	
	R2619	D0GB223JA008	22K	1/16W	1	
	R2620	D0GB223JA008	22K	1/16W	1	
	R2621	D0GB153JA008	15K	1/16W	1	
	R2622	D0GB823JA008	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	D0GB820JA008	82	1/16W	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	D0GB182JA008	1.8K	1/16W	1	
	R2640	D0GB182JA008	1.8K	1/16W	1	
	R2641	D0GA820JA023	82	1/16W	1	
	R2642	D0GA820JA023	82	1/16W	1	
	R2643	D0GB820JA008	82	1/16W	1	
	R2644	D0GB152JA008	1.5K	1/16W	1	
	R2645	D0GB105JA008	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	
	R2652	D0GB470JA008	47	1/16W	1	
	R2653	D0GB470JA008	47	1/16W	1	
	R2654	D0GB470JA008	47	1/16W	1	
	R2655	D0GB470JA008	47	1/16W	1	
	R2656	D0GB102JA008	1K	1/16W	1	
	R2657	D0GBR00JA008	0	1/16W	1	
	R2658	D0GBR00JA008	0	1/16W	1	
	R2659	D0GBR00JA008	0	1/16W	1	
	R2660	D0GBR00JA008	0	1/16W	1	
	R2661	D0GBR00JA008	0	1/16W	1	
	R2902	D0GB153JA008	15K	1/16W	1	
	R2903	D0GB183JA008	18K	1/16W	1	
	R2905	D0HB102ZA002	1K	1/16W	1	
	R2906	D0GB152JA008	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	1/16W	1	
	R2917	D0GBR00JA008	0	1/16W	1	
	R2918	ERJ3RBD391V	390	1/16W	1	
	R2919	ERJ3RBD272V	2.7K	1/16W	1	
	R2920	D0HB102ZA002	1K	1/16W	1	
	R2921	D0GBR00JA008	0	1/16W	1	
	R2922	D0GBR00JA008	0	1/16W	1	
	R2923	D0GA681JA023	680	1/16W	1	
	R2924	D0GA472JA023	4.7K	1/16W	1	
	R2925	D0GBR00JA008	0	1/16W	1	
	R2926	D0GBR00JA008	0	1/16W	1	
	R3001	D0GB101JA008	100	1/16W	1	
	R3002	D0GB101JA008	100	1/16W	1	
	R3003	D0GB101JA008	100	1/16W	1	
	R3004	D0GB101JA008	100	1/16W	1	
	R3005	D0GB101JA008	100	1/16W	1	
	R3006	D0GB101JA008	100	1/16W	1	
	R3007	D0GB101JA008	100	1/16W	1	
	R3008	D0GB101JA008	100	1/16W	1	
	R3009	D0GB183JA008	18K	1/16W	1	
	R3010	D0GB103JA008	10K	1/16W	1	
	R3011	F1H1H104A783	0.1uF	50V	1	
	R3401	D0GA101JA023	100	1/16W	1	
	R3402	D0GA101JA023	100	1/16W	1	
	R3403	D0GA101JA023	100	1/16W	1	
	R3404	D0GB102JA008	1K	1/16W	1	
	R5101	D0GB100JA008	10	1/16W	1	
	R5102	D0GB101JA008	100	1/16W	1	
	R5103	D0GB101JA008	100	1/16W	1	
	R5104	D0GB223JA008	22K	1/16W	1	
	R5105	D0GB101JA008	100	1/16W	1	
	R5106	D0GB100JA008	10	1/16W	1	
	R5107	D0GB100JA008	10	1/16W	1	
	R5108	D0GB100JA008	10	1/16W	1	
	R5109	D0GB100JA008	10	1/16W	1	
	R5122	D0GB562JA008	5.6K	1/16W	1	
	R5123	D0GB562JA008	5.6K	1/16W	1	
	R5124	ERJ3GEYJ3R3V	3.3	1/10W	1	
	R5125	ERJ3GEYJ3R3V	3.3	1/10W	1	
	R5126	ERJ3GEYJ3R3V	3.3	1/10W	1	
	R5127	ERJ3GEYJ3R3V	3.3	1/10W	1	
	R5128	D0GBR00JA008	0	1/16W	1	
	R5129	D0GBR00JA008	0	1/16W	1	
	R5130	D0GBR00JA008	0	1/16W	1	
	R5131	D0GBR00JA008	0	1/16W	1	
	R5132	D0GBR00JA008	0	1/16W	1	
	R5201	D0GB221JA008	220	1/16W	1	
	R5202	D0GB221JA008	220	1/16W	1	
	R5203	ERJ3GEYJ3R3V	3.3	1/10W	1	
	R5204	D0GB105JA008	1M	1/16W	1	
	R5205	D0GA470JA023	47	1/16W	1	
	R5206	D0GA470JA023	47	1/16W	1	
	R5207	D0GA820JA023	82	1/16W	1	
	R5208	D0GA820JA023	82	1/16W	1	
	R5209	D0GA470JA023	47	1/16W	1	
	R5211	D0GA103JA023	10K	1/16W	1	
	R5212	D0GB470JA008	47	1/16W	1	
	R5213	D0GB470JA008	47	1/16W	1	
	R5214	D0GB470JA008	47	1/16W	1	
	R5215	D0GB470JA008	47	1/16W	1	
	R5216	D0GB101JA008	100	1/16W	1	
	R5218	D0GB101JA008	100	1/16W	1	
	R5219	D0GB102JA008	1K	1/16W	1	
	R5221	D0GB104JA008	100K	1/16W	1	
	R5222	D0GBR00JA008	0	1/16W	1	
	R5223	F1H1H102A219	1000pF	50V	1	
	R5224	D0GBR00JA008	0	1/16W	1	
	R5225	D0GBR00JA008	0	1/16W	1	
	R5226	D0GBR00JA008	0	1/16W	1	
	R5227	D0GBR00JA008	0	1/16W	1	
	R5228	D0GBR00JA008	0	1/16W	1	
	R5401	D0GB472JA008	4.7K	1/16W	1	
	R5402	D0GB224JA008	220K	1/16W	1	
	R5403	D0GB224JA008	220K	1/16W	1	
	R5404	D0GB473JA008	47K	1/16W	1	
	R5405	D0GB563JA008	56K	1/16W	1	
	R5406	D0GB333JA008	33K	1/16W	1	
	R5407	D0GB104JA008	100K	1/16W	1	
	R5408	D0GB104JA008	100K	1/16W	1	
	R5409	D0GB104JA008	100K	1/16W	1	
	R5410	D0GB104JA008	100K	1/16W	1	
	R5411	D0GB104JA008	100K	1/16W	1	
	R5412	D0GB562JA008	5.6K	1/16W	1	
	R5413	D0GB562JA008	5.6K	1/16W	1	
	R5901	D0GBR00JA008	0	1/16W	1	
	R5902	D0GBR00JA008	0	1/16W	1	
	R5905	ERJ3RBD103V	10K	1/16W	1	

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
	R5906	ERJ3RBD563V	56K 1/16W	1	
	R5907	ERJ3RBD273V	27K 1/16W	1	
	R6101	D0GB101JA008	100 1/16W	1	
	R6102	D0GB101JA008	100 1/16W	1	
	R6103	D0GB101JA008	100 1/16W	1	
	R6104	D0GB101JA008	100 1/16W	1	
	R6105	D0GBR00JA008	0 1/16W	1	
	R6106	D0GB470JA008	47 1/16W	1	
	R6107	D0GBR00JA008	0 1/16W	1	
	R6108	D0GBR00JA008	0 1/16W	1	
	R6109	D0GBR00JA008	0 1/16W	1	
	R6110	D0GB103JA008	10K 1/16W	1	
	R6111	ERJ3GEYJ201V	200 1/10W	1	
	R6113	ERJ3GEYJ201V	200 1/10W	1	
	R6114	ERJ3GEYJ201V	200 1/10W	1	
	R6117	ERJ3GEYJ201V	200 1/10W	1	
	R6119	ERJ3GEYJ201V	200 1/10W	1	
	R6120	ERJ3GEYJ201V	200 1/10W	1	
	R6121	D0GB101JA008	100 1/16W	1	
	R6122	D0GB101JA008	100 1/16W	1	
	R6123	D0GB563JA008	56K 1/16W	1	
	R6124	D0GB332JA008	3.3K 1/16W	1	
			RESISTOR NETWORKS		
	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	
	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	

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
	C2026	F1G1A1040006	0.1uF 10V	1	
	C2027	F1J1A106A043	10uF 10V	1	
	C2028	F1J1A106A043	10uF 10V	1	
	C2029	F1G1H101A565	100pF 50V	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	
	C2037	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	
	C2201	F2G1C100A072	10uF 16V	1	
	C2204	F2G0J101A031	100uF 6.3V	1	
	C2205	F2G0J101A031	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	
	C2213	F1G1A1040006	0.1uF 10V	1	
	C2214	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	EEE0JA101WR	100uF 6.3V	1	
	C2312	F1G0J105A031	1uF 6.3V	1	
	C2401	F1G1A1040006	0.1uF 10V	1	
	C2402	EEE0JA101WR	100uF 6.3V	1	
	C2403	F1G1H101A565	100pF 50V	1	
	C2405	F1G1C1030007	0.01uF 16V	1	
	C2406	EEE0JA101WR	100uF 6.3V	1	
	C2409	F1G1A1040006	0.1uF 10V	1	
	C2410	F1G1C1030007	0.01uF 16V	1	
	C2411	F1G1C1030007	0.01uF 16V	1	
	C2412	F1G1C223A081	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	F1G1H101A565	100pF 50V	1	
	C2428	F1G1C1030007	0.01uF 16V	1	
	C2429	F1G1C1030007	0.01uF 16V	1	
	C2434	F1G1A1040006	0.1uF 10V	1	
	C2435	F1G1H101A565	100pF 50V	1	
	C2437	F1G1H101A565	100pF 50V	1	
	C2438	F1G1H220A565	22pF 50V	1	
	C2439	F1G1H220A565	22pF 50V	1	
	C2440	EEE0JA101WR	100uF 6.3V	1	
	C2441	F1G1H220A565	22pF 50V	1	
	C2442	F1J1A106A043	10uF 10V	1	
	C2443	F1G1A1040006	0.1uF 10V	1	
	C2444	F1G1H1020008	1000pF 50V	1	
	C2501	D0GBR00JA008	0 1/16W	1	

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
	C2502	D0GBR00JA008	0 1/16W	1	
	C2503	F1G0J105A031	1uF 6.3V	1	
	C2504	F1G0J105A031	1uF 6.3V	1	
	C2505	F1G1A1040006	0.1uF 10V	1	
	C2506	F1J1A106A043	10uF 10V	1	
	C2507	F1G1A1040006	0.1uF 10V	1	
	C2509	F1G0J105A031	1uF 6.3V	1	
	C2510	F1G1A1040006	0.1uF 10V	1	
	C2513	F1G1A1040006	0.1uF 10V	1	
	C2514	F1J1A106A043	10uF 10V	1	
	C2515	F1G1H1020008	1000pF 50V	1	
	C2516	F1G1H1020008	1000pF 50V	1	
	C2517	F1G1H1020008	1000pF 50V	1	
	C2518	F1G1H1020008	1000pF 50V	1	
	C2519	F1G1H1020008	1000pF 50V	1	
	C2520	F1J1A106A043	10uF 10V	1	
	C2521	F1J1A106A043	10uF 10V	1	
	C2522	F1J1A106A043	10uF 10V	1	
	C2523	F1J1A106A043	10uF 10V	1	
	C2524	F1G1A1040006	0.1uF 10V	1	
	C2525	F1G1A1040006	0.1uF 10V	1	
	C2526	F1G1H1020008	1000pF 50V	1	
	C2527	F1G1H1020008	1000pF 50V	1	
	C2528	F1G1H1020008	1000pF 50V	1	
	C2529	F1G1H1020008	1000pF 50V	1	
	C2530	F1G1A1040006	0.1uF 10V	1	
	C2531	F1G1A1040006	0.1uF 10V	1	
	C2532	F1G1A1040006	0.1uF 10V	1	
	C2533	F1J1A106A043	10uF 10V	1	
	C2534	F1J1A106A043	10uF 10V	1	
	C2535	F1G1H1020008	1000pF 50V	1	
	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	EEE0JA101WR	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	

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
	C2646	F1G1A1040006	0.1uF 10V	1	
	C2647	F1G0J105A031	1uF 6.3V	1	
	C2648	F1G0J105A031	1uF 6.3V	1	
	C2649	F1G1C1030007	0.01uF 16V	1	
	C2901	F1H1H104A783	0.1uF 50V	1	
	C2907	F1K1H105A149	1uF 50V	1	
	C2908	F1K1H105A149	1uF 50V	1	
	C2909	EEE0GA331WP	330uF 4V	1	
	C2910	EEE0GA331WP	330uF 4V	1	
	C2911	F1G1A1040006	0.1uF 10V	1	
	C2912	F1G1H1020008	1000pF 50V	1	
	C2913	EEE0GA331WP	330uF 4V	1	
	C2914	EEE0GA331WP	330uF 4V	1	
	C2915	F1G1A1040006	0.1uF 10V	1	
	C2916	EEE0GA331WP	330uF 4V	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	EEEFK0J471P	470uF 6.3V	1	
	C2924	F1H1C474A008	0.47uF 16V	1	
	C2925	EEE1VA330WP	33uF 35V	1	
	C2926	F1H1H102A219	1000pF 50V	1	
	C3002	F2A0J101A024	100uF 6.3V	1	
	C3003	F1H1H103A219	0.01uF 50V	1	
	C3004	F2A0J221A211	220uF 6.3V	1	
	C3005	F1H1H103A219	0.01uF 50V	1	
	C3401	F1H1C104A008	0.1uF 16V	1	
	C5101	F1H1H104A783	0.1uF 50V	1	
	C5102	F1H1H104A783	0.1uF 50V	1	
	C5103	F2G1C100A072	10uF 16V	1	
	C5104	EEE1CA330WR	33uF 16V	1	
	C5105	F1H1H104A783	0.1uF 50V	1	
	C5106	F1H1H104A783	0.1uF 50V	1	
	C5107	F1H1H104A783	0.1uF 50V	1	
	C5108	F1H1H104A783	0.1uF 50V	1	
	C5109	F1H1H333A220	0.033uF 50V	1	
	C5110	F1H1H104A783	0.1uF 50V	1	
	C5111	F1H1H104A783	0.1uF 50V	1	
	C5112	F1H1H333A220	0.033uF 50V	1	
	C5113	F1K1H105A149	1uF 50V	1	
	C5114	F1K1H105A149	1uF 50V	1	
	C5115	F2A1E471B424	470uF 25V	1	
	C5118	F1H1H333A220	0.033uF 50V	1	
	C5119	F1H1H104A783	0.1uF 50V	1	
	C5120	F1H1H104A783	0.1uF 50V	1	
	C5121	F1H1H333A220	0.033uF 50V	1	
	C5122	F1K1H105A149	1uF 50V	1	
	C5123	F1K1H105A149	1uF 50V	1	
	C5124	F2A1E471B424	470uF 25V	1	
	C5127	F1J1H4740002	0.47uF 50V	1	
	C5128	F1H1H104A783	0.1uF 50V	1	
	C5129	F1H1H104A783	0.1uF 50V	1	
	C5134	F1J1H4740002	0.47uF 50V	1	
	C5135	F1H1H104A783	0.1uF 50V	1	
	C5136	F1H1H104A783	0.1uF 50V	1	
	C5141	F1H1H103A219	0.01uF 50V	1	
	C5142	F1H1H103A219	0.01uF 50V	1	
	C5143	F1H1H102A219	1000pF 50V	1	
	C5144	F1H1H102A219	1000pF 50V	1	
	C5145	F1H1H103A219	0.01uF 50V	1	
	C5146	F1H1H103A219	0.01uF 50V	1	
	C5147	F1H1H102A219	1000pF 50V	1	
	C5148	F1H1H102A219	1000pF 50V	1	
	C5149	F1H1H102A219	1000pF 50V	1	
	C5150	F1H1H102A219	1000pF 50V	1	
	C5151	F1H1H102A219	1000pF 50V	1	
	C5152	F1H1H102A219	1000pF 50V	1	
	C5153	D0GBR00JA008	0 1/16W	1	
	C5154	F1H1H104A783	0.1uF 50V	1	
	C5155	D0GBR00JA008	0 1/16W	1	

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
	C5156	D0GBR00JA008	0 1/16W	1	
	C5201	F1H1H104A783	0.1uF 50V	1	
	C5202	F1H1H103A219	0.01uF 50V	1	
	C5203	F1H1H104A783	0.1uF 50V	1	
	C5204	F1H1H104A783	0.1uF 50V	1	
	C5205	F1H1H104A783	0.1uF 50V	1	
	C5206	F1H1H104A783	0.1uF 50V	1	
	C5207	F1H1H102A219	1000pF 50V	1	
	C5208	F2G1C100A072	10uF 16V	1	
	C5209	F2G1C100A072	10uF 16V	1	
	C5210	F1H1H104A783	0.1uF 50V	1	
	C5211	F1H1H103A219	0.01uF 50V	1	
	C5212	F1H1H104A783	0.1uF 50V	1	
	C5213	F1H1H100A831	10pF 50V	1	
	C5214	F1H1H100A831	10pF 50V	1	
	C5215	F1H1H104A783	0.1uF 50V	1	
	C5216	F1H1H104A783	0.1uF 50V	1	
	C5217	F2G1C100A072	10uF 16V	1	
	C5218	F1H1H104A783	0.1uF 50V	1	
	C5219	F2G1C100A072	10uF 16V	1	
	C5220	F1H1H104A783	0.1uF 50V	1	
	C5221	F1H1H1500009	15pF 50V	1	
	C5222	F1H1H1500009	15pF 50V	1	
	C5223	F1H1H1500009	15pF 50V	1	
	C5225	F1H1H104A783	0.1uF 50V	1	
	C5226	F1H1H104A783	0.1uF 50V	1	
	C5401	F1H1H104A783	0.1uF 50V	1	
	C5402	EEE1HA100SP	1uF 50V	1	
	C5403	F1H1H104A783	0.1uF 50V	1	
	C5404	EEE1HA010SR	1uF 50V	1	
	C5901	F1H1C104A042	0.1uF 16V	1	
	C5902	D0GBR00JA008	0 1/16W	1	
	C5904	F1H1C474A008	0.47uF 16V	1	
	C5905	F1H1H102A219	1000pF 50V	1	
	C5906	EEE1VA330WP	33uF 35V	1	
	C5907	EEEFK1C100R	10uF 16V	1	
	C5908	F2A1E471B424	470uF 25V	1	
	C6101	F1H1H104A783	0.1uF 50V	1	
	C6102	F1H1C105A008	1uF 16V	1	
	C6103	F1H1H1010005	100pF 50V	1	
	C6108	F1H1C105A008	1uF 16V	1	
	C6109	F1H1H1010005	100pF 50V	1	
	C6110	F1H1H1010005	100pF 50V	1	
	C6111	F1H1H1010005	100pF 50V	1	
	C6112	F1H1H1010005	100pF 50V	1	
	C6113	F1H1H1010005	100pF 50V	1	
	C6114	F1H1H1010005	100pF 50V	1	

19.2.2. Speaker Unit (SB-HWA520)

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
			PRINTED CIRCUITS BOARDS		
	PCB1	REPX0911BA	D-AMP P.C.B.	1	
	PCB2	REPX0911BC	POWER BUTTON P.C.B.	1	
⚠	PCB3	REPX0911BD	AC INLET P.C.B	1	
⚠	PCB4	N0AE3ZJ00001	SMPS MODULE	1	
⚠	PCB5	REPX0771D	RX MODULE	1	
			INTEGRATED CIR-CUITS		
	IC3002	C0ABBB000244	IC	1	
	IC5200	C1BA00000497	IC	1	
			TRANSISTORS		
	Q1003	B1ACKD000006	TRANSISTOR	1	
	Q1004	B1ADCE000012	TRANSISTOR	1	
	Q1005	B1GBCFJJ0051	TRANSISTOR	1	
	Q1006	B1GBCFGG0030	TRANSISTOR	1	
	Q1007	B1ABCF000176	TRANSISTOR	1	
	Q1008	B1ABCF000176	TRANSISTOR	1	
	Q1009	B1GBCFJJ0051	TRANSISTOR	1	
	Q2002	B1AAKD000012	TRANSISTOR	1	
	Q2010	B1ACCF000094	TRANSISTOR	1	
	Q2011	B1ACKD000006	TRANSISTOR	1	
	Q4000	B1GBCFGG0030	TRANSISTOR	1	
	Q4001	B1GDCFGG0026	TRANSISTOR	1	
			DIODES		
	D2000	B0BC01600013	DIODE	1	
	D4000	B0ACCK000012	DIODE	1	
	D4001	B3AGA0000124	DIODE	1	
			SWITCHES		
	S1000	EVQ21405R	SW	1	
	S1001	K0F122B00107	SW	1	
			COILS AND INDUCTOR		
	L1000	G0A150L00003	CHOKE COIL	1	
	L1003	J0JKB0000020	INDUCTOR	1	
	L1004	J0JKB0000020	INDUCTOR	1	
			CONNECTORS		
	CN1000	K1MY22A00003	22P CONNECTOR	1	
	CN1002	K1KA04BA0061	4P CONNECTOR	1	
	CN1003	K1KA03AA0193	3P CONNECTOR	1	
	CN1005	K1KA02AA0186	2P CONNECTOR	1	
	CN4000	K1KA03BA0061	3P CONNECTOR	1	
			JACK		
⚠	P5701	K2AAYA000001	AC INLET	1	
			TERMINALS		
	Z1000	K4CZ01000027	TERMINAL	1	
	Z1001	K4CZ01000027	TERMINAL	1	
	Z1002	K4CZ01000027	TERMINAL	1	
	Z1003	K4CZ01000027	TERMINAL	1	
			CHIP JUMPERS		
	D1000	D0GDR00JA017	0 1/8W	1	
	K1004	D0GBR00JA008	0 1/16W	1	
	L1005	D0GBR00JA008	0 1/16W	1	
	L1006	D0GBR00JA008	0 1/16W	1	
	W1003	D0GBR00JA008	0 1/16W	1	
	W1031	D0GBR00JA008	0 1/16W	1	
	W1052	D0GBR00JA008	0 1/16W	1	
	W1055	D0GDR00JA017	0 1/8W	1	
	W1057	D0GBR00JA008	0 1/16W	1	
			RESISTORS		
	R1000	D0GB154JA008	150K 1/16W	1	
	R1001	ERG2SJ122E	1.2K 2W	1	
	R1002	ERG2SJ122E	1.2K 2W	1	
	R1003	D0GBR00JA008	0 1/16W	1	
	R1007	D0GB122JA008	1.2K 1/16W	1	
	R1008	D0GB122JA008	1.2K 1/16W	1	
	R1009	D0GB472JA008	4.7K 1/16W	1	
	R1010	D0GBR00JA008	0 1/16W	1	
	R1011	D0GB822JA008	8.2K 1/16W	1	
	R1013	D0GB104JA008	100K 1/16W	1	
	R1014	D0GB823JA008	82K 1/16W	1	
	R1015	D0GB333JA008	33K 1/16W	1	
	R1020	D0GB102JA008	1K 1/16W	1	

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
	R1034	D0GBR00JA008	0 1/16W	1	
	R1107	ERJ1TYJ220U	22 1W	1	
	R1108	D0GB562JA008	5.6K 1/16W	1	
	R1207	ERJ1TYJ220U	22 1W	1	
	R1208	D0GB562JA008	5.6K 1/16W	1	
	R2000	D0GB220JA008	22 1/16W	1	
	R2004	D0GB272JA008	2.7K 1/16W	1	
	R2005	D0GB270JA007	27 1/16W	1	
	R2006	D0GB103JA008	10K 1/16W	1	
	R2010	D0GB220JA008	22 1/16W	1	
	R2012	D0GB272JA008	2.7K 1/16W	1	
	R2013	D0GB822JA008	8.2K 1/16W	1	
	R2014	D0GB561JA008	560 1/16W	1	
	R3107	D0GB391JA008	390 1/16W	1	
	R3108	D0GB682JA008	6.8K 1/16W	1	
	R3113	D0GBR00JA008	0 1/16W	1	
	R3114	D0GBR00JA008	0 1/16W	1	
	R3204	D0GB103JA008	10K 1/16W	1	
	R3206	D0GBR00JA008	0 1/16W	1	
	R3211	D0GBR00JA008	0 1/16W	1	
	R3212	D0GBR00JA008	0 1/16W	1	
	R4001	D0GB271JA008	270 1/16W	1	
	R4002	D0GB221JA007	220 1/16W	1	
	R4003	D0GBR00JA008	0 1/16W	1	
	R5200	D0GF100JA014	10 1/4W	1	
	R5201	D0GF100JA014	10 1/4W	1	
	R5204	D0GB152JA008	1.5K 1/16W	1	
	R5205	D0GB562JA008	5.6K 1/16W	1	
	R5206	D0GB562JA008	5.6K 1/16W	1	
	R5207	D0GB562JA008	5.6K 1/16W	1	
	R5208	D0GB562JA008	5.6K 1/16W	1	
	R5210	D0GF100JA014	10 1/4W	1	
	R5211	D0GF100JA014	10 1/4W	1	
	R5769	D0GB122JA008	1.2K 1/16W	1	
	R5770	D0GB103JA008	10K 1/16W	1	
			CAPACITORS		
	C1000	D0GBR00JA008	0 1/16W	1	
	C1002	F1H1H104A013	0.1uF 50V	1	
	C1003	F1H1H104A013	0.1uF 50V	1	
	C1004	F2A1E1020114	1000uF 25V	1	
	C1005	F1H1H104A013	0.1uF 50V	1	
	C1006	F1H1H104A013	0.1uF 50V	1	
	C1007	F1H1H104A013	0.1uF 50V	1	
	C1009	F2A0J681A550	680uF 6.3V	1	
	C1010	D0GBR00JA008	0 1/16W	1	
	C1011	F2A1E1020114	1000uF 25V	1	
	C1012	F1H1H104A013	0.1uF 50V	1	
	C1014	F2A0J101A245	100uF 6.3V	1	
	C1116	ECQV1H684JL3	0.68uF 50V	1	
	C1117	F1H1H104A013	0.1uF 50V	1	
	C1118	F1H1H104A013	0.1uF 50V	1	
	C1216	ECQV1H684JL3	0.68uF 50V	1	
	C1217	F1H1H104A013	0.1uF 50V	1	
	C1218	F1H1H104A013	0.1uF 50V	1	
	C2000	F1H1H104A013	0.1uF 50V	1	
	C2001	F2A1E101A205	100uF 25V	1	
	C2006	F1H1H104A013	0.1uF 50V	1	
	C2010	F2A1E101A205	100uF 25V	1	
	C2011	F1H1H104A013	0.1uF 50V	1	
	C2015	F1H1H104A013	0.1uF 50V	1	
	C3105	F1H1H102A219	1000pF 50V	1	
	C3106	F1H1H101A230	100pF 50V	1	
	C3205	D0GB103JA008	10K 1/16W	1	
	C4000	F1H1H104A013	0.1uF 50V	1	
	C5200	F1H1H104A013	0.1uF 50V	1	
	C5201	F1H1H153A219	0.015uF 50V	1	
	C5202	F1H1C224A068	0.22uF 16V	1	
	C5203	F1J2A221A030	220pF 100V	1	
	C5204	F1H1H153A219	0.015uF 50V	1	
	C5205	F1J2A221A030	220pF 100V	1	
	C5206	F1H1H104A013	0.1uF 50V	1	

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
	C5207	F1H1H104A013	0.1uF 50V	1	
	C5208	F1H1H104A013	0.1uF 50V	1	
	C5209	F1H1H104A013	0.1uF 50V	1	
	C5210	F1K2A1040007	0.1uF 100V	1	
	C5211	F1J2A221A030	220pF 100V	1	
	C5212	F1H1H221A792	220pF 50V	1	
	C5213	F1H1H104A013	0.1uF 50V	1	
	C5214	F1H1H104A013	0.1uF 50V	1	
	C5215	F1K2A1040007	0.1uF 100V	1	
	C5216	F1H1H331A013	330pF 50V	1	
	C5218	F1J2A221A030	220pF 100V	1	
	C5219	F1K2A1040007	0.1uF 100V	1	
	C5220	F1H1H104A013	0.1uF 50V	1	
	C5221	F1H1H102A219	1000pF 50V	1	
	C5222	F1H1A474A025	0.47uF 10V	1	
	C5223	F1H1A474A025	0.47uF 10V	1	
	C5224	F1H1H331A013	330pF 50V	1	
	C5231	F1H1H102A219	1000pF 50V	1	
	C5232	F1H1A474A025	0.47uF 10V	1	
	C5233	F1H1A474A025	0.47uF 10V	1	
	C5234	F1H1H102A219	1000pF 50V	1	
	C5240	F2A1J470A050	47uF 63V	1	
	C5522	F1H1H104A013	0.1uF 50V	1	
	C5523	F1H1H104A013	0.1uF 50V	1	
	C5602	F2A1C100A234	10uF 16V	1	
	C5603	F1H1H104A013	0.1uF 50V	1	

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