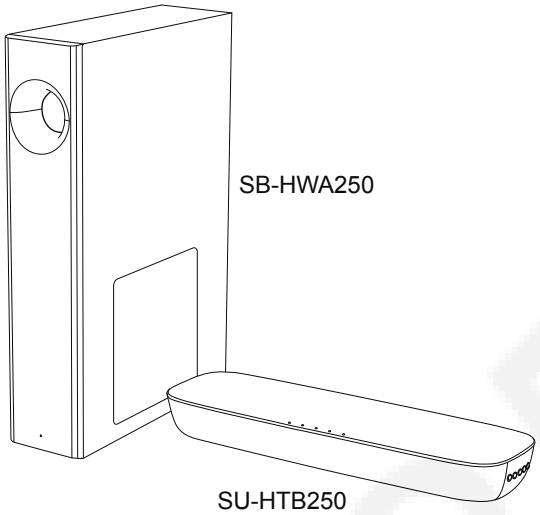
ORDER NO.PSG1804014CE

Service Manual

Home Theater Audio System

Model No. **SC-HTB250GA**
SC-HTB250GJ
SU-HTB250GA
SU-HTB250GJ
SB-HWA250GA
SB-HWA250GJ



Colour:(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.

Panasonic®

TABLE OF CONTENTS

PAGE

1 Safety Precautions ---------- 3
1.1. General Guidelines ---------- 3
1.2. Leakage Current Cold Check ---------- 3
1.3. Leakage Current Hot Check ---------- 3
1.4. Protection Circuitry ---------- 3
2 Warning ---------- 4
2.1. Prevention of Electrostatic Discharge (ESD) to Electrostatically Sensitive (ES) Devices ---------- 4
2.2. Service Caution Based on Legal Restrictions ---------- 5
3 Service Navigation ---------- 6
3.1. Service Information ---------- 6
3.2. How to Update Software ---------- 6
4 Specifications ---------- 8
5 Location of Controls and Components ---------- 9
6 Service Mode ---------- 11
7 Troubleshooting Guide ---------- 13
7.1. Main Unit (SU-HTB250) ---------- 13
7.2. Active Subwoofer (SB-HWA250) ---------- 18
8 Wiring Connection and Voltage Data ---------- 19
8.1. Main Unit (SU-HTB250) ---------- 19
8.2. Active Subwoofer (SB-HWA250) ---------- 21
9 Disassembly and Assembly Instructions ---------- 23
9.1.Disassembly Flow Chart ---------- 23
9.2.P.C.B. Positions ---------- 24
9.3.Disassembly Procedure of Main Unit (SU-HTB250) ---------- 25
9.4.Disassembly Procedure of of Active Subwoofer (SB-HWA250) ---------- 30
10 Exploded View and Replacement Parts List ---------- 32
10.1. Casing Parts & Mechanism Section (SU-HTB250) ---------- 32
10.2. Casing Parts & Mechanism Section (SB-HWA250) ---------- 33
10.3. Packing & Accessories Section (SU-HTB250) ---------- 34
10.4. Replacement Parts List ---------- 35

1 Safety Precautions

1.1. General Guidelines

1. 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 Layout, Exploded Views and Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent X-RADIATION, shock, fire, or other hazards. Do not modify the original design without permission of manufacturer.

2. An Isolation Transformer should always be used during the servicing of AC adaptor whose chassis is not isolated from the AC power line. Use a transformer of adequate power rating as this protects the technician from accidents resulting in personal injury from electrical shocks. It will also protect AC adaptor from being damaged by accidental shorting that may occur during servicing.
3. 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.
4. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.

5.After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

1.2. Leakage Current Cold Check

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohmmeter, 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 thechassis, the reading should be between 1 MΩ and 5.2 MΩ. When the exposed metal does not have a return path to the chas-sis, the reading must be infinity.

1.3. 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 1.5 kΩ, 10 W resistor, in parallel with a 0.15 μF capacitor, between each exposed metallic part on the set and a good earth ground, as shown in Figure. 1.
3. Use an AC voltmeter, with 1 kΩ/V 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 V RMS. A leakage current tester (Simpson Model 229 or equivalent) maybe used to make the hot checks, leakage current must not exceed 1/2 mA. In case a measurement is outside of the limitsspecified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned tothe customer.

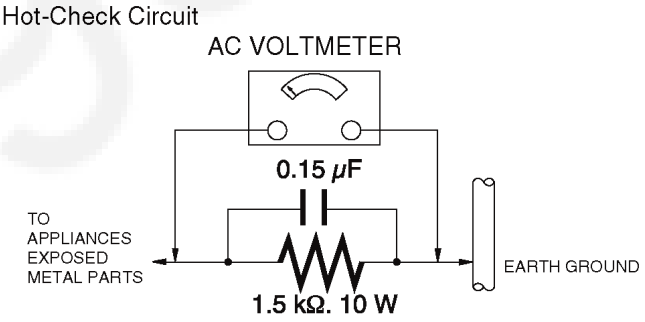


Figure. 1

1.4. 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, for example if, 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.

2 Warning

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

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices.

Examples of typical ES devices are IC(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 electrostatic discharge(ESD).

1. Immediately before handling any semiconductor component or semiconductor-equipped 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 equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an antistatic solder removal device. Some solder removal devices not classified as "antistatic (ESD protected)" can generate electrical charge sufficient 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, aluminum 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 bodily 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).

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 View 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.

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 thisequipment 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°C (86°F) more than that of thenormal solder.

Distinction of P.C.B. Lead Free Solder being used

The letter of " PbF" is printed either foil side or components side on the P.C.B.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 P.C.B. 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 P.C.B. 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°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.
  SVKZ000001----------(0.3mm 100g Reel)
  SVKZ000002----------(0.6mm 100g Reel)
  SVKZ000003----------(1.0mm 100g Reel)

Note

* Ingredient: Tin (Sn) 96.5%, Silver (Ag) 3.0%, Copper (Cu) 0.5%. (Flux cored)

3 Service Navigation

3.1. Service Information

This service manual contains technical information, which allow service personnels to understand and service this model.
Please place orders with the numbers in the parts list and not the numbers in the exploded views.
If the circuit is changed or modified, the information will be followed by supplement to be filed with original service manual.

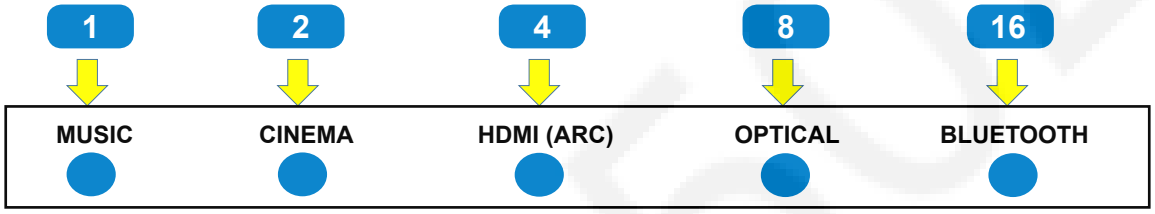
3.2. How to Update Software

The software of the unit may be renewed to improve the quality including operational performance and playability.Make sure to refer the following procedure when performing version-up.

3.2.1. Confirmation of the Software Version

Steps

1.Turn on the unit.
2.In any mode, press the combination remote control keys as below.
[MUTE] → [SUBWOOFER-] → [MUTE] → [SUBWOOFER+] within 3 seconds for each key pressed.
3. Software Version number is indicated by LED.



SW version	LEDS Indication				
	MUSIC	CINEMA	HDMI (ARC)	OPTICAL	BLUETOOTH
1 or 33	●	○	○	○	○
2 or 34	○	●	○	○	○
3 or 35	●	●	○	○	○
4 or 36	○	○	●	○	○
5 or 37	●	○	●	○	○
6 or 38	○	●	●	○	○
...					
...					
...					
28 or 60	○	○	●	●	●
29 or 61	●	○	●	●	●
30 or 62	○	●	●	●	●
31 or 63	●	●	●	●	●

Example:
a) (CINEMA + HDMI (ARC)) LED lighted
= SW Version 6 or Version 38

b) (MUSIC + HDMI(ARC) + OPT + BLUETOOTH) LED lighted
= SW Version 29 or Version 61

3.2.2. Updating process

After Main PCB replacement, software update is necessary!

① Download the software (binary file) from website below to USB
（※ Use the USB 2.0 memory and copy files to the root folder ）

http://av.jpn.support.panasonic.com/support/global/cs/audio/

Audio customer support website

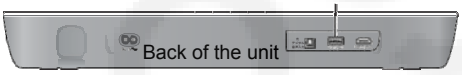
Software download

xxx.bin

Copy to USB memory

② In HDMI (ARC) mode, insert the USB Device into the USB port on the back of the unit (Theater Bar)

Insert into USB port



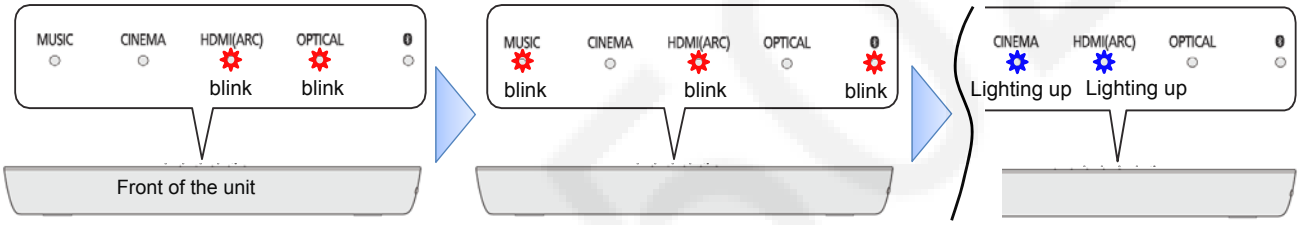
③ After a few seconds, the software is automatically updated
（※ Return back to normal power on After the software update is completed ）

Software update

■ When Plug in USB (LED Indicators of the unit)

■ Software is updating
(Note: Do not remove USB Device or Power OFF in this stage)

■ software update is completed



4 Specifications

■ AMPLIFIER SECTION

RMS output power: Dolby Digital Mode

Front ch
40 W per channel (6 Ω),1 kHz,10%, THD

Subwoofer ch
40 W per channel (4 Ω),100 Hz,10%, THD

Total RMS Dolby Digital mode power
120 W

■ TERMINALS SECTION

HDMI output (ARC)
Output connector
Type A (19 pin)

Digital audio input
Optical digital input
Optical terminal

Sampling frequency
32 kHz, 44.1 kHz, 48 kHz

Audio format
LPCM, Dolby Digital, DTS Digital Surround™

USB Port
USB standard
USB 2.0 full speed

Media file format support
MP3 (*.mp3)

Sampling frequency
32 kHz, 44.1 kHz, 48 kHz

Audio word size
16 bits

Channel count
2 channels

USB device file system
FAT16, FAT32

■ Bluetooth® SECTION

Version
Bluetooth® Ver. 2.1+EDR

Class
Class 2

Supported profiles
A2DP,AVRCP

Operating frequency
2.4 GHz band FH-SS

Operating band
2402 MHz to 2480 MHz

Operating distance
10 m line of sight

Maximum RF Power
4 dBm

Supported codec
SBC

■ SPEAKER SECTION

Front speakers (Built-in)
Full range
4 x10 cm (cone type) x 1/ch

Active subwoofer
Woofer
14 cm cone type x 1

■ WIRELESS SECTION

Wireless module
Frequency Range
2404 MHz to 2476 MHz

No. of channels
38

RF output power
7 dBm (max.)

■ GENERAL

Power supply
AC 220 V to 240 V, 50/60 Hz

Power consumption
Main unit
15 W

Active subwoofer
7.5 W

Dimensions (W x H x D)
Main unit
450 mm x 51 mm x 135 mm

Active subwoofer
97 mm x 451 mm x 307 mm

Mass
Main unit
1.6 kg

Active subwoofer
4.4 kg

Operating temperature range
0°C to +40°C

Operating humidity range
20% to 80%RH(no condensation)

Power consumption in standby mode (approximate)
Main unit
When Bluetooth® standby is off
0.5 W
When Bluetooth® standby is on
2.0 W

Active subwoofer
0.5 W
When wireless activated in network standby
2.0W

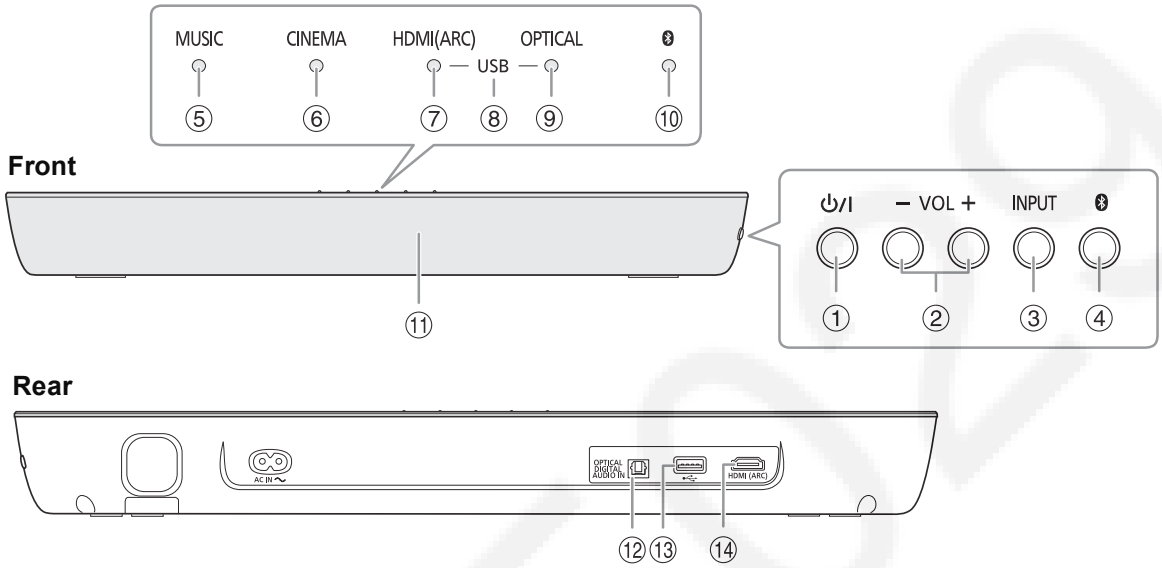
Note:

- Specifications are subject to change without notice. Mass and dimensions are approximate.
- Total harmonic distortion is measured by a digital spectrum analyzer.

5 Location of Controls and Components

Overview of controls

Main unit



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 level

③ **Select the input source**
→ HDMI (ARC) → OPTICAL → USB → ᛒ →

④ **Select the Bluetooth® device as the source**
To start Bluetooth® pairing, press and hold [ᛒ].

⑤ MUSIC indicator

⑥ CINEMA indicator

⑦ HDMI (ARC) indicator

⑧ USB indicators

⑨ OPTICAL indicator

⑩ ᛒ (Bluetooth®) indicator

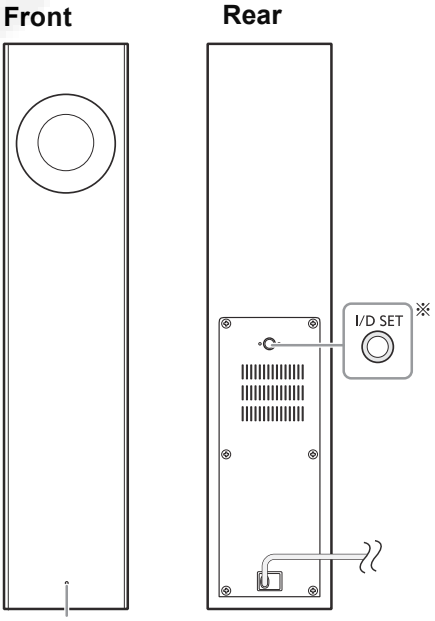
⑪ **Remote control sensor**
Distance: Within approximately 7 m
Angle: Approximately 20° up and down, 30° left and right

⑫ OPTICAL DIGITAL AUDIO IN terminal

⑬ USB port

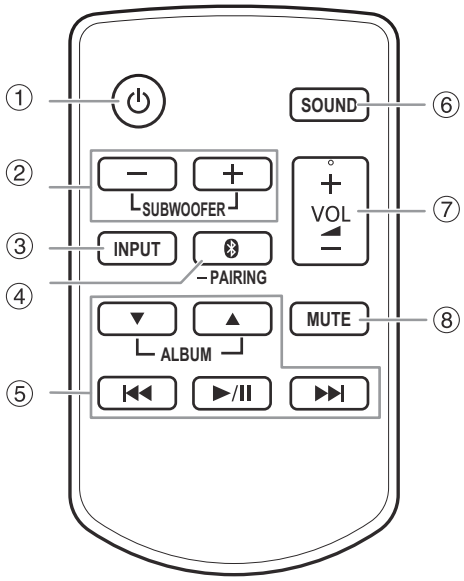
⑭ HDMI (ARC) terminal (ARC compatible)

Active subwoofer



※ The I/D SET button is only used when the main unit is not paired with the active subwoofer.

Remote control



① Switch the main unit on or off

② Adjust the subwoofer level

③ Select the input source

HDMI (ARC) → OPTICAL → USB →

④ **Select the Bluetooth® device as the source**
To start Bluetooth® pairing, press and hold [-PAIRING].

⑤ USB playback operation

⑥ Select the sound mode

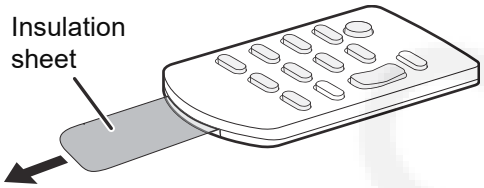
⑦ Adjust the volume level

⑧ Mute the sound

Preparing the remote control

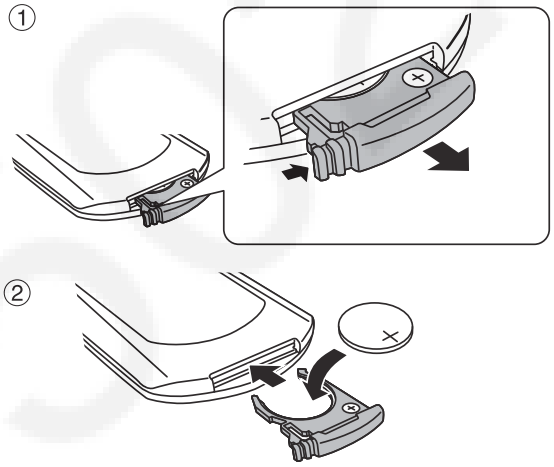
Before using for the first time

Remove the insulation sheet.



Replacing the battery

Replace with a new battery (CR2025 lithium battery).



Insert a new battery with the (+) side facing up.

6 Service Mode

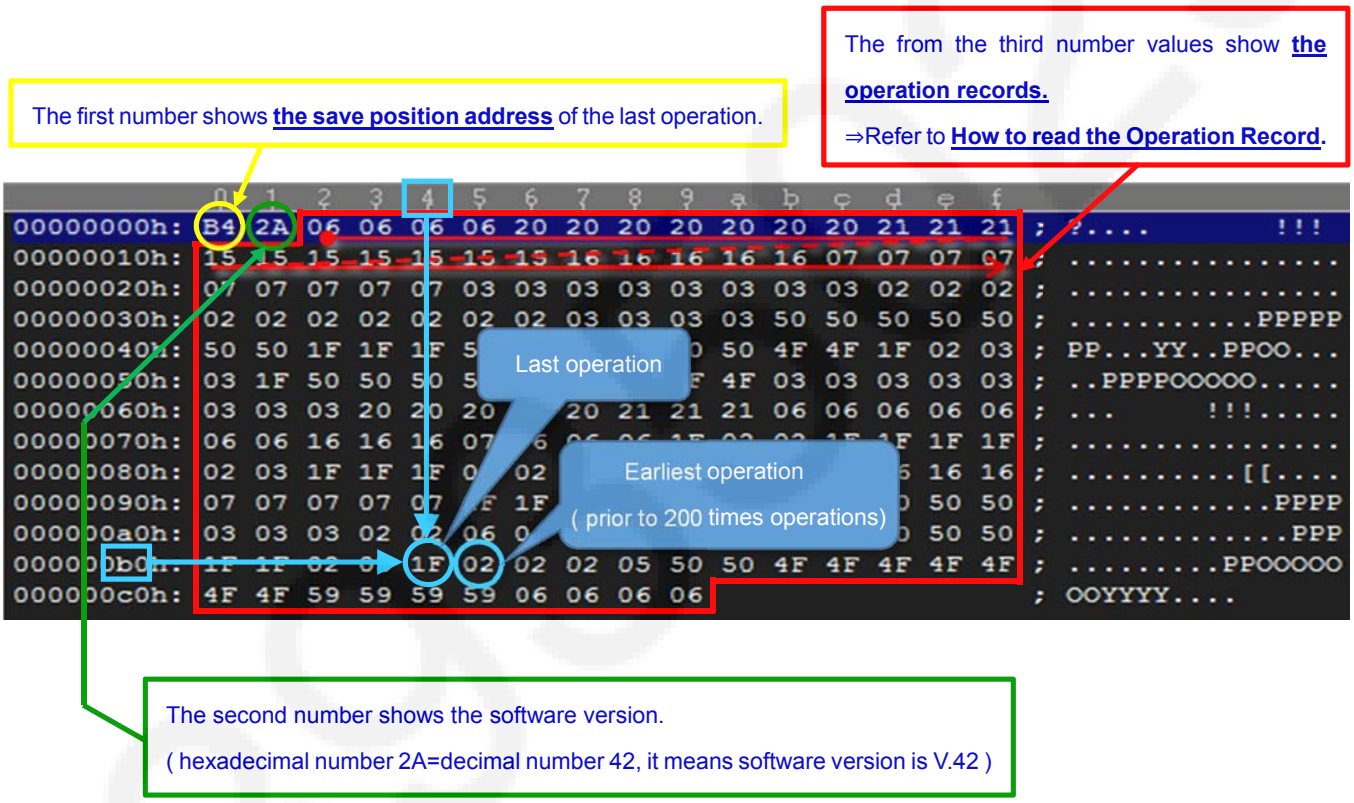
This unit has service mode function that can resave the operation record of unit keys or the remote controller from the flash memory to USB device for service personnel confirmation use.

Steps

1.Turn on the unit.
2.In any mode, press the combination remote control keys as below.
[MUTE]→ [SUBWOOFER+] → [SUBWOOFER-] → [MUTE] within 3 seconds.
3.After key pressed is successful, both “MUSIC”&“OPTICAL” LED will blink.
4.Insert USB device into USB port of the Unit.
5.Wait until both “MUSIC”&“OPTICAL” LED stop blinking and then return to normal condition.
6.A service mode (.TXT) file will be created and stored in the USB stick.
7.Open the file with Binary Editor to confirm the operation record.

Display Example when Using Binary Editor

※The display image may differ due to various software being used.



How to read the Operation Record

- Last 200 times operations are recorded.(May more or less due to different status. This chapter describes the case based on the 200 times.)
- The last 200 times operations are recorded following left to right, top to down order started from the third number at the up left corner.
- When exceeding 200 times, the 3rd operation record will be covered once the 201st operation occurs, the 4th operation record will be covered once the 202nd operation occurs, then covering the fifth, the sixth……in sequence.
- Please follow below steps to confirm the last operation of this unit.
  1) .Confirm the 1st number (address).
  2) .Confirm the value which shown at the step 1) address.
  3) .Check the last operation with below shown list.

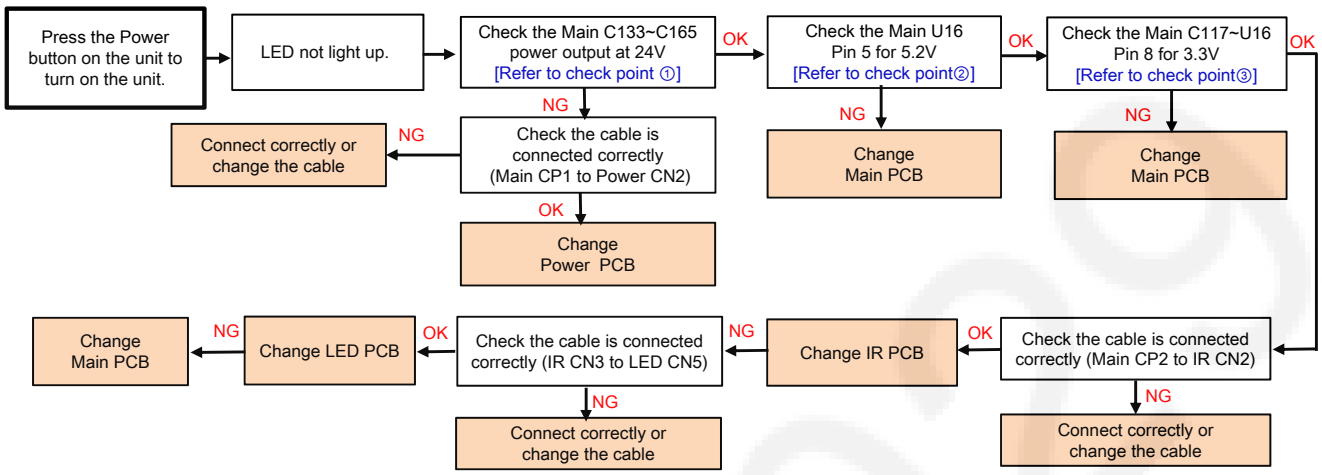
※ Refer to the display shown above,
1) the first number is [B5].
2) Value at address B5 is [1F].
3) Check with the below list, 1F indicates the unit last operation is [MUTE].

Value	Operation
03	Key operation: SUBWOOFER-
02	Key operation: SUBWOOFER +
4F	Key operation: VOL+
50	Key operation: VOL-
05	Key operation: SOUND
06	Key operation: INPUT
1F	Key operation: MUTE
59	Key operation: -PAIRING
21	Key operation: ALBUM UP
20	Key operation: ALBUM DOWN
5B	Key operation: POWER
16	Key operation: REV SKIP
15	Key operation: FWD SKIP
07	Key operation: PLAY/PAUSE

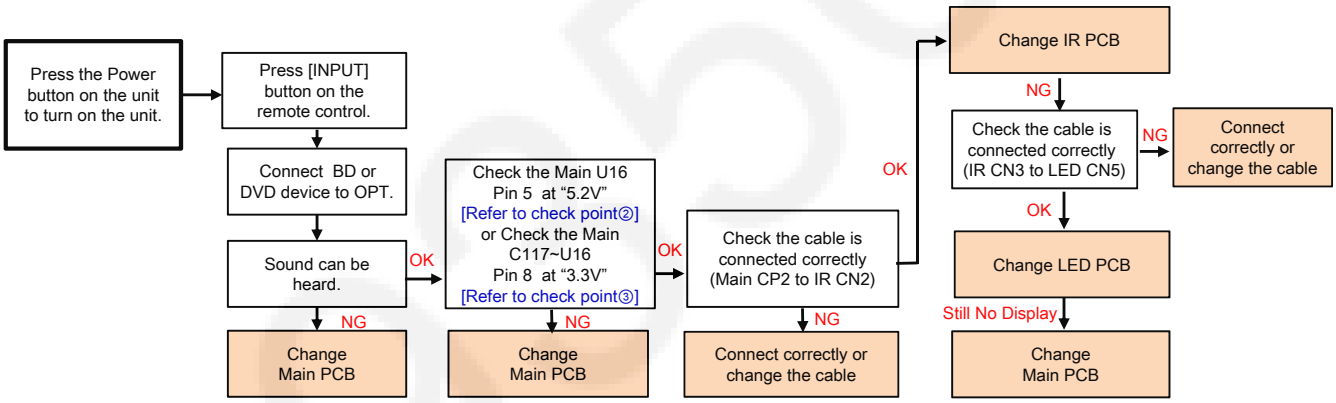
7 Troubleshooting Guide

7.1 Main Unit (SU-HTB250)

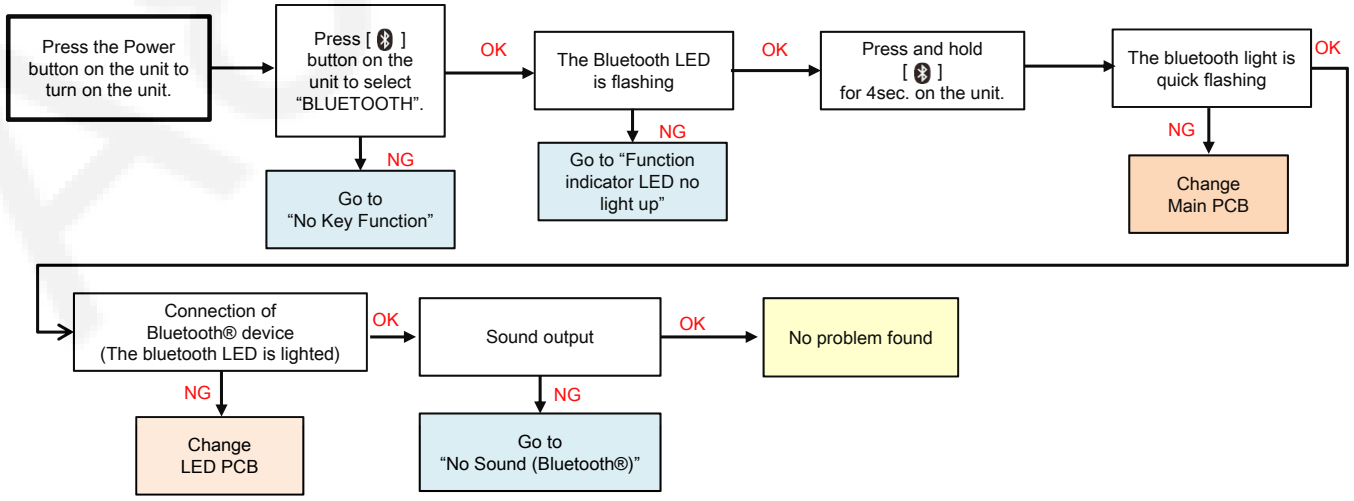
7.1.1 No power



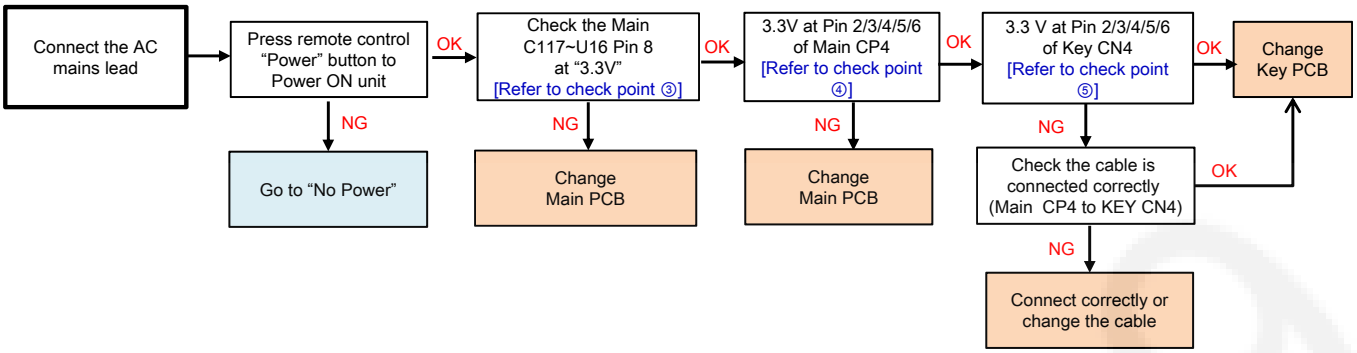
7.1.2. Function indicator LED no light up



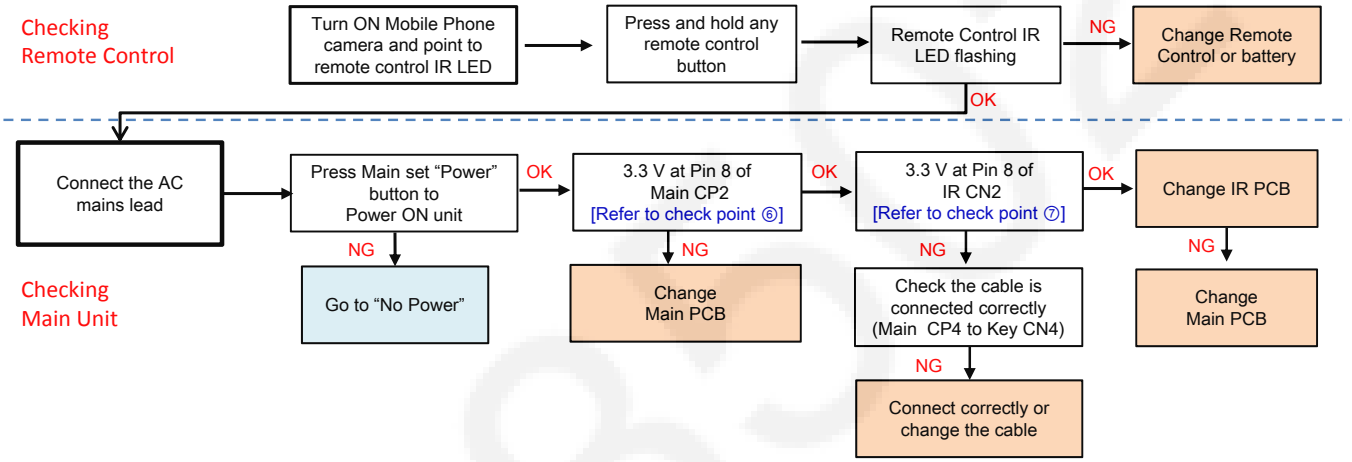
7.1.3. Bluetooth® pairing failure



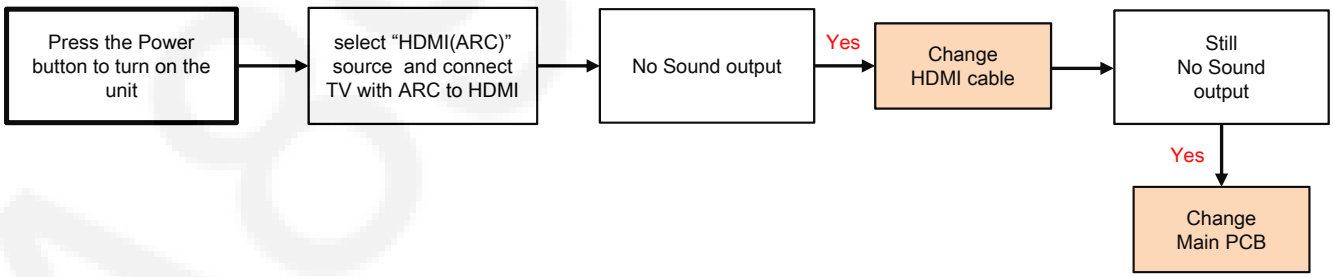
7.1.4. No Key Function



7.1.5. No remote control function

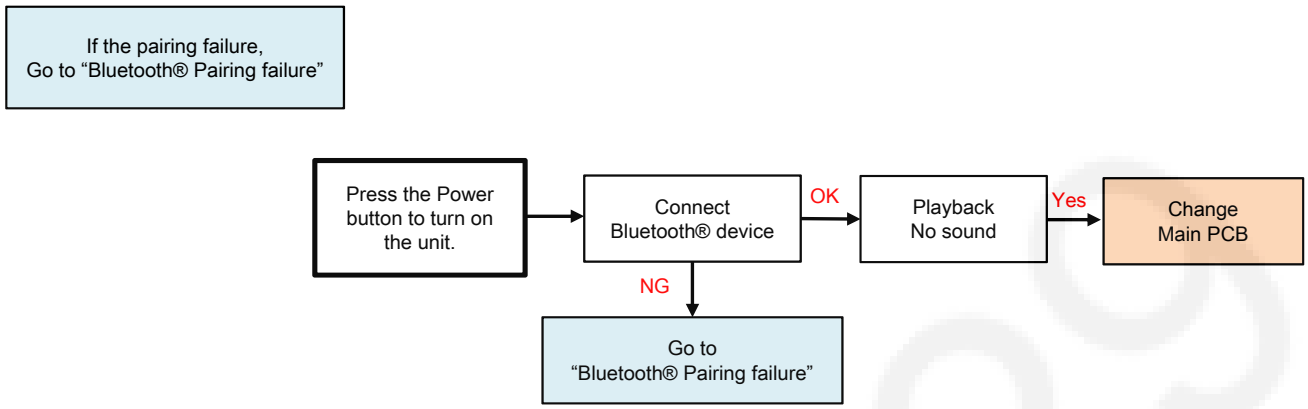


7.1.6. No HDMI out

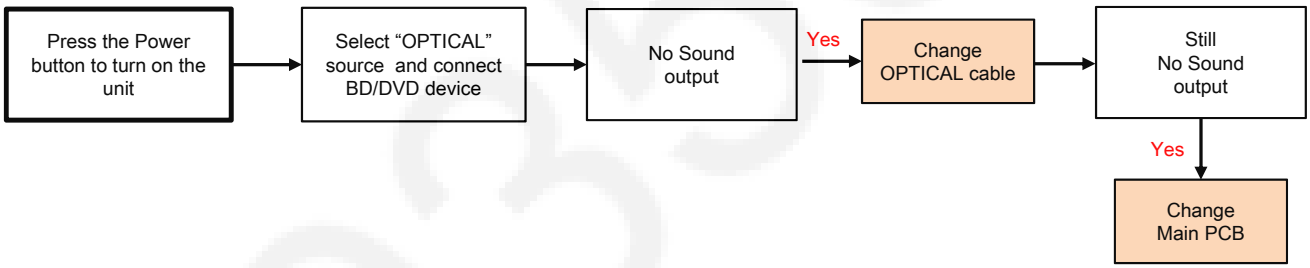


7.1.7. No Sound

7.1.7.1. No Sound (Bluetooth®)

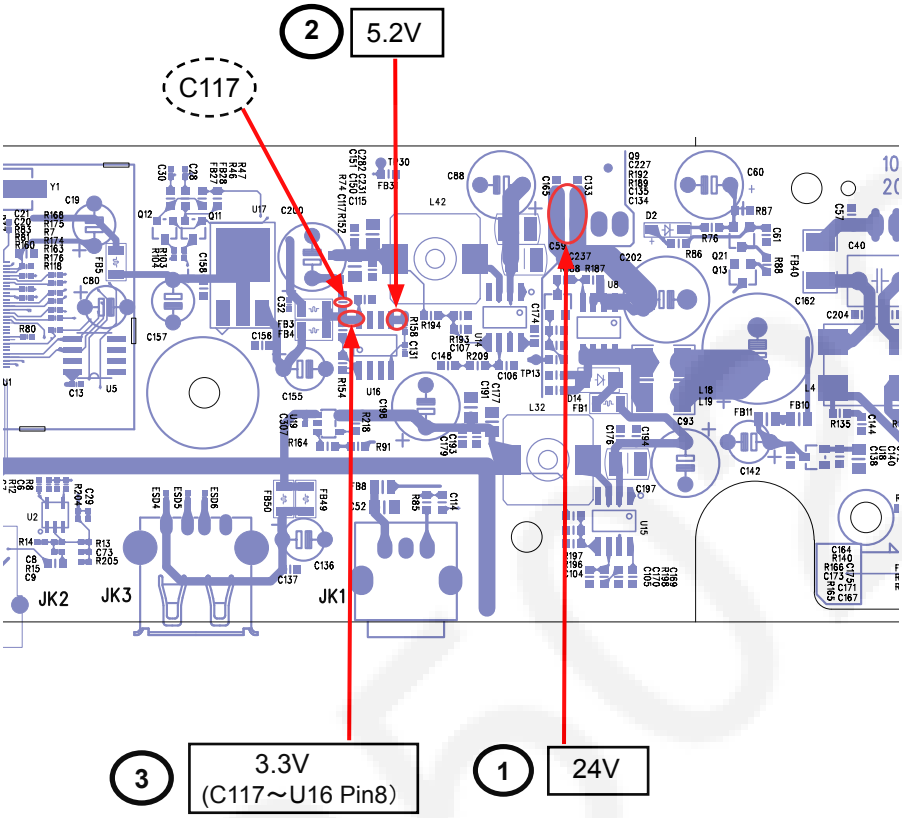


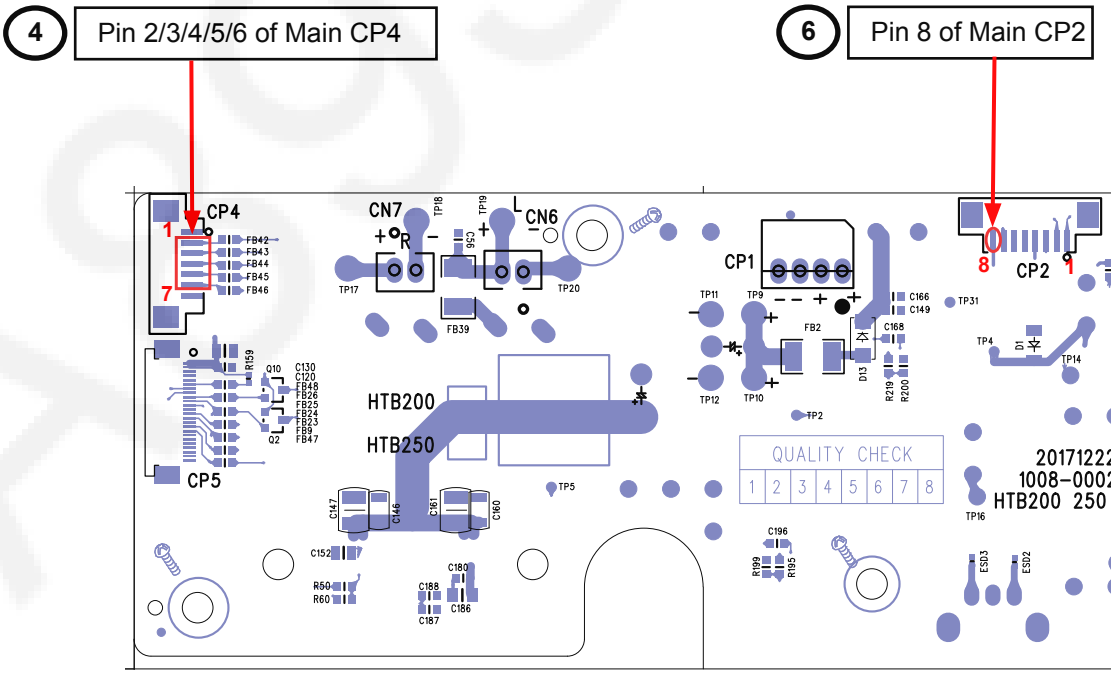
7.1.7.2. No Sound (Optical)



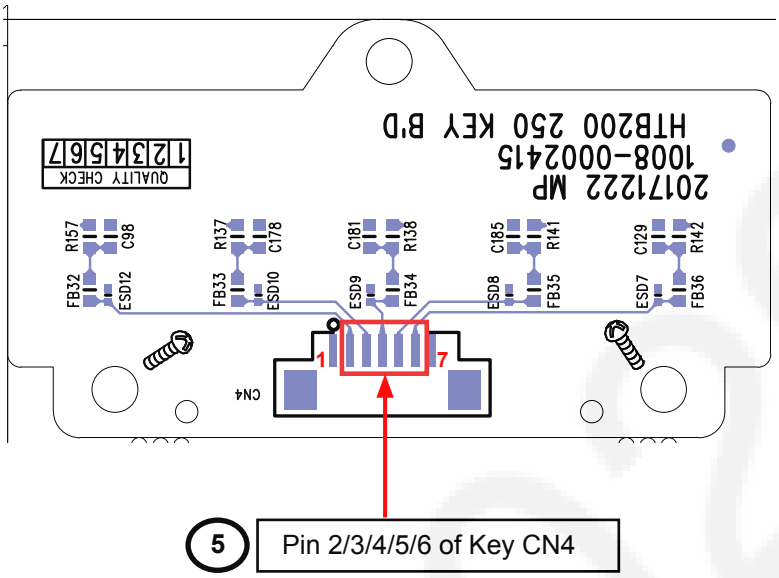
7.1.8. Check Points

MAIN P.C.B.

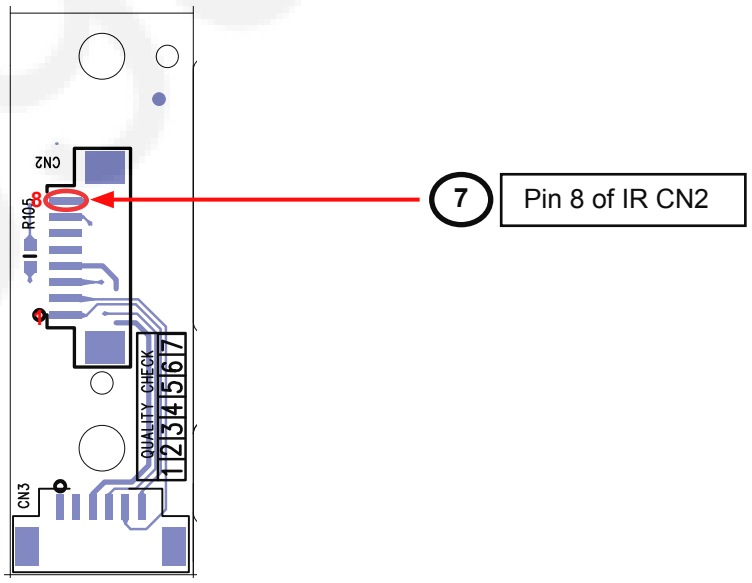




KEY P.C.B.

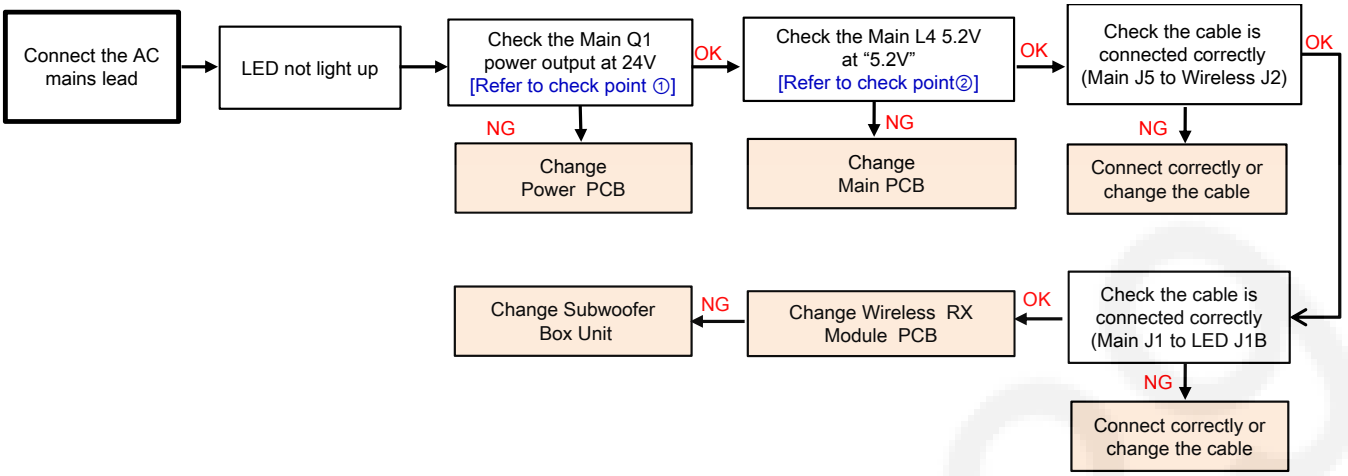


IR P.C.B.

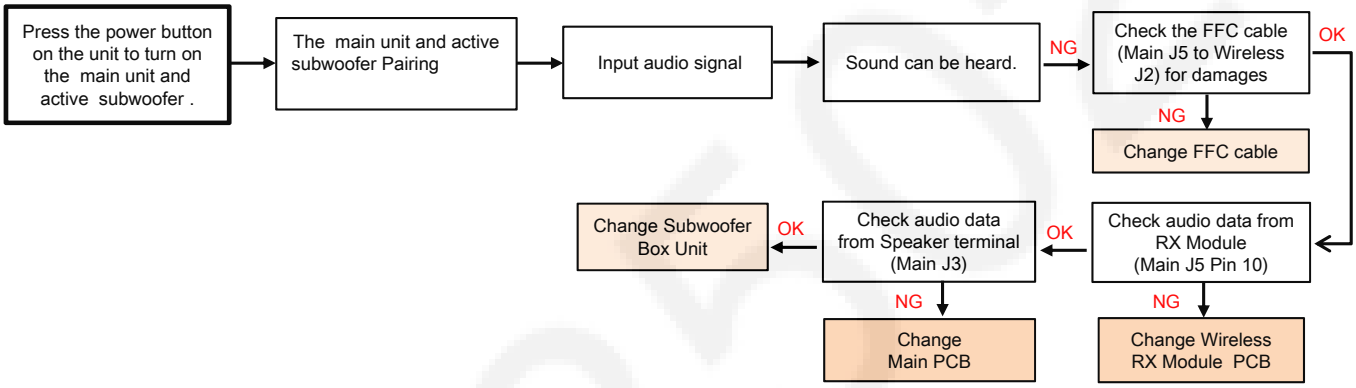


7.2 Active Subwoofer (SB-HWA250)

7.2.1 No power

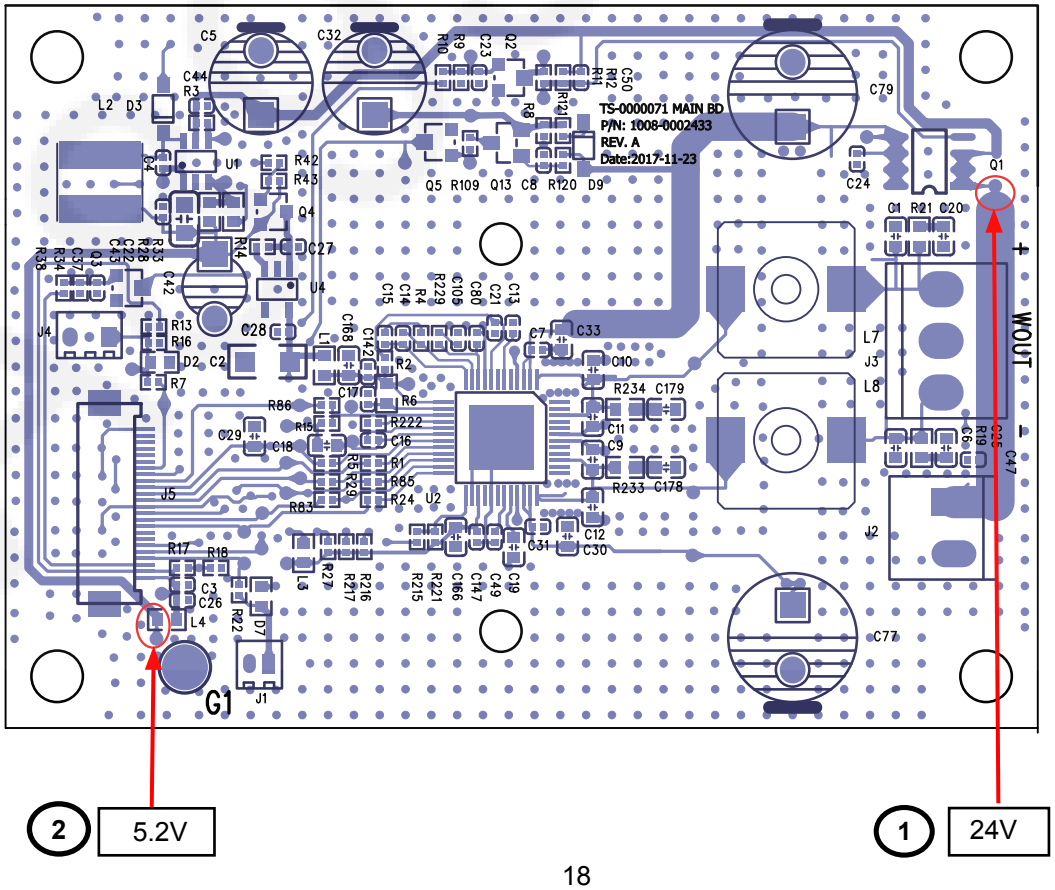


7.2.2 No sound



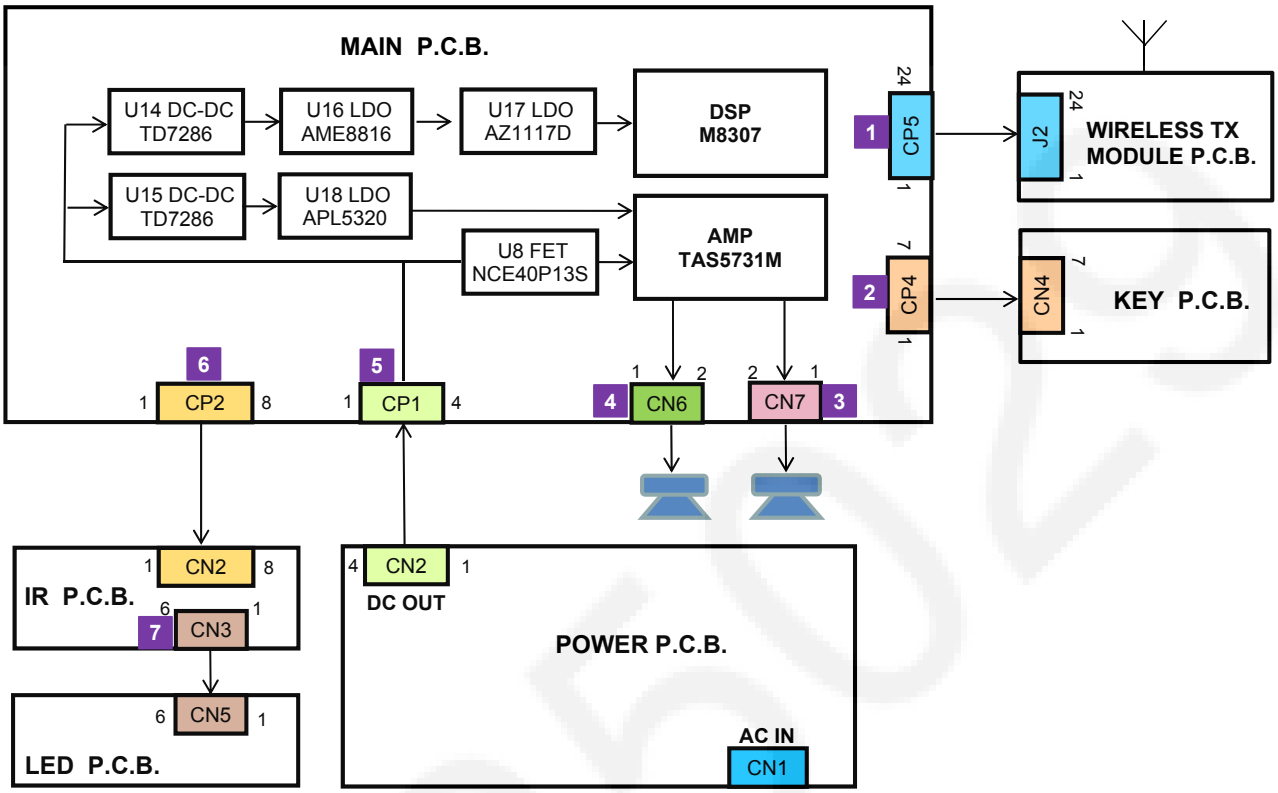
7.2.3. Check Points

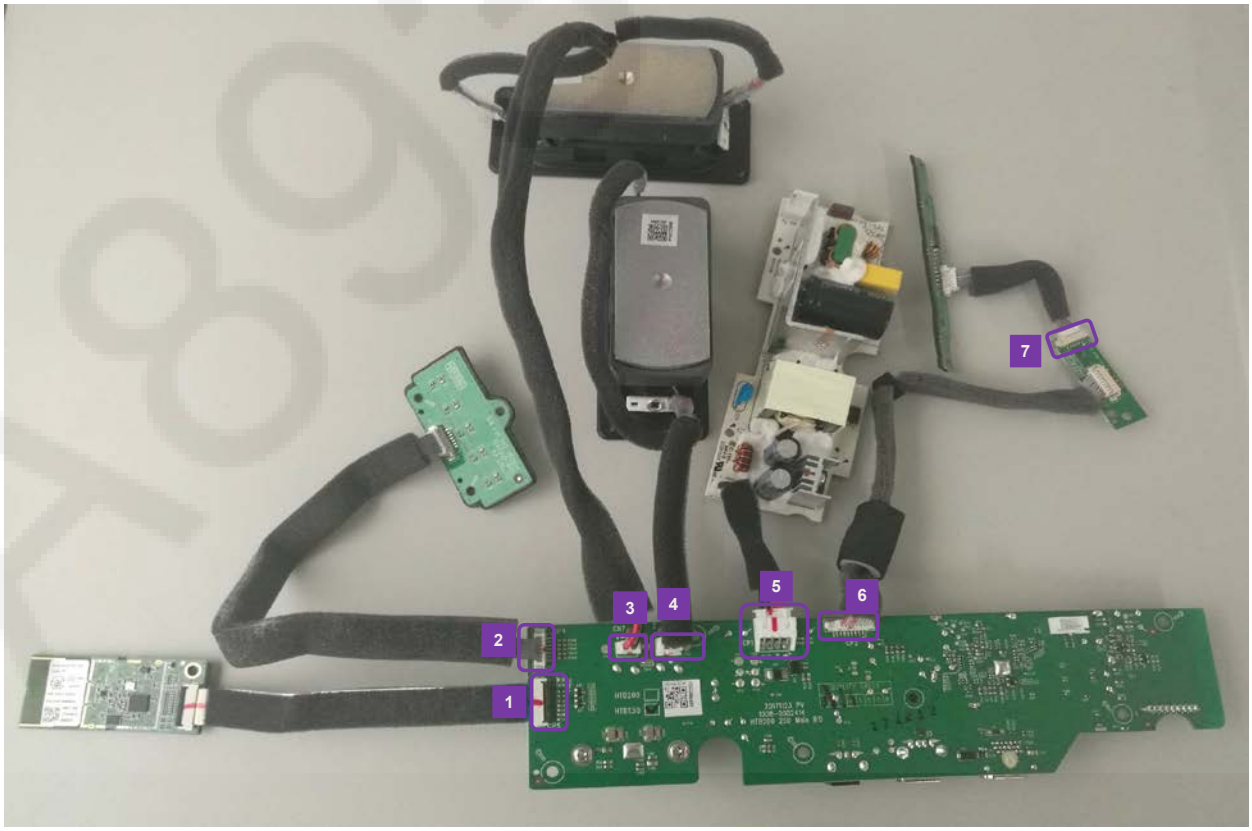
MAIN P.C.B.



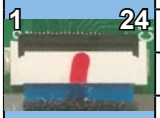
8 Wiring Connection and Voltage Data

8.1 Main Unit (SU-HTB250)





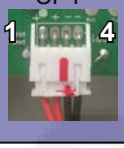
VOLTAGE DATA (measurement status:Power On and No external signal input)

1	PIN NO.	VALUE
CP5 	1	5.2V
	2	5.2V
	3	NC
	4	NC
	5	NC
	6	5.2V
	7	NC
	8	NC
	9	3.3V
	10	3.3V
	11	3.3V
	12	GND
	13	1.68V
	14	1.66V
	15	NC
	16	1.68V
	17	3.3V
	18	3.3V
	19	NC
	20	NC
	21	NC
	22	NC
	23	NC
	24	GND

2	PIN NO.	VALUE
CP4 	1	GND
	2	3.3V
	3	3.3V
	4	3.3V
	5	3.3V
	6	3.3V
	7	GND

3	PIN NO.	VALUE
CN7 	1	12V
	2	12V

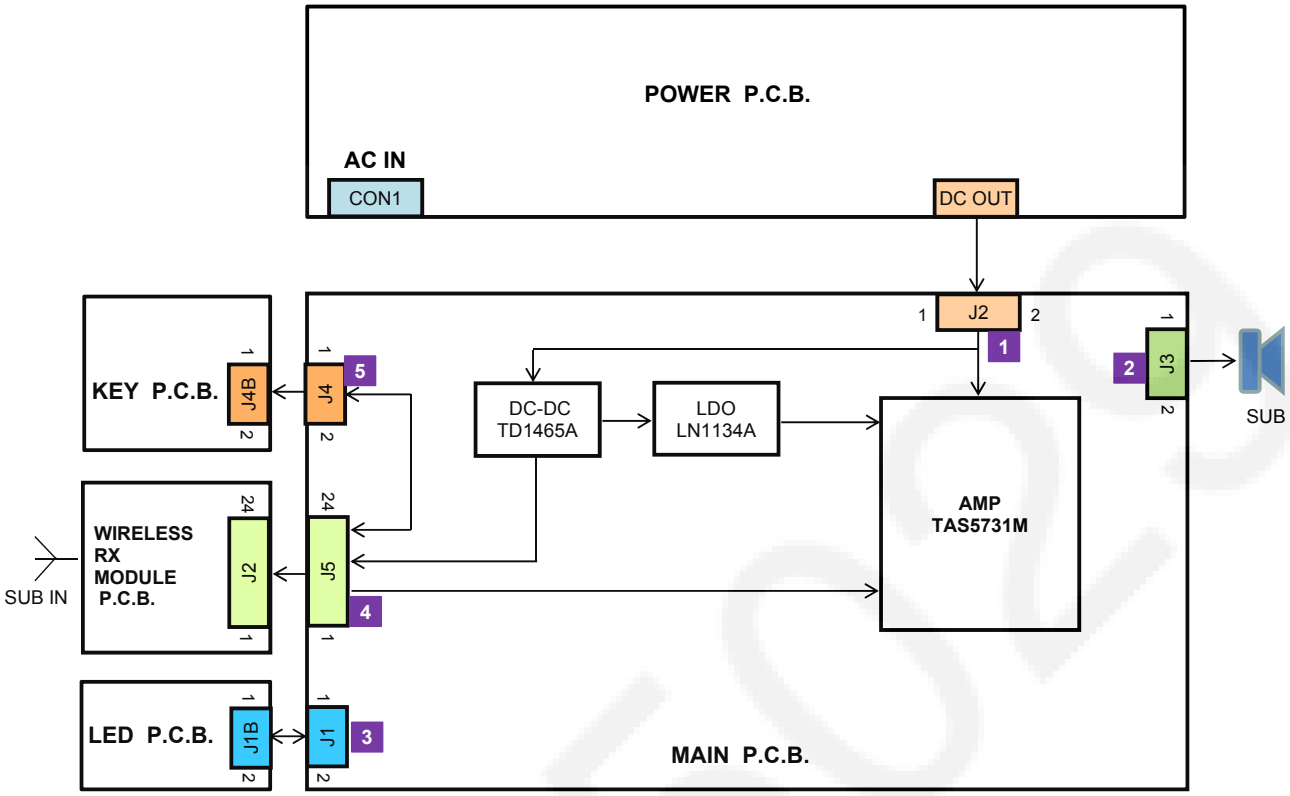
4	PIN NO.	VALUE
CN6 	1	12V
	2	12V

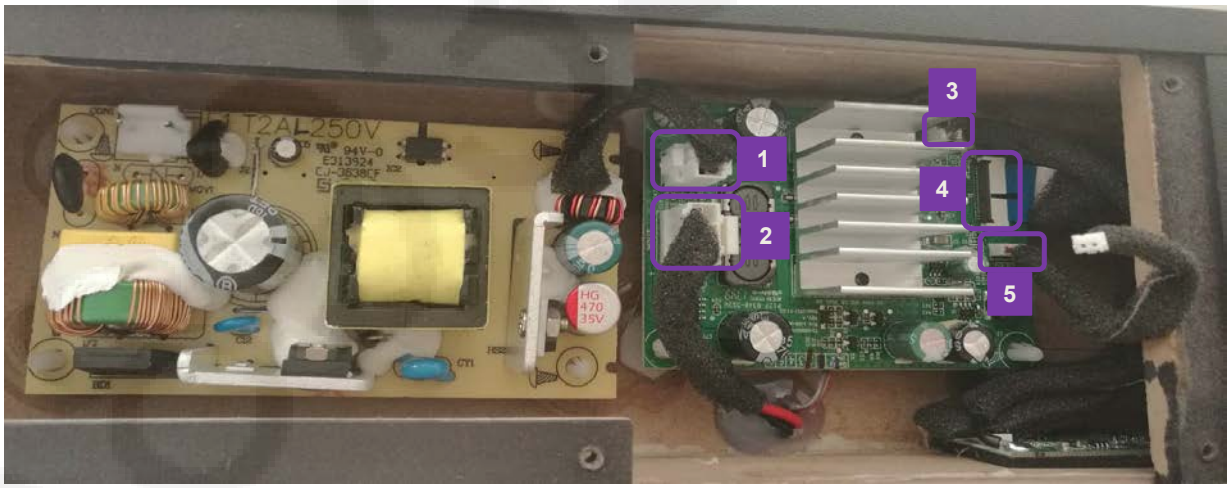
5	PIN NO.	VALUE
CP1 	1	24V
	2	24V
	3	GND
	4	GND

6	PIN NO.	VALUE
CP2 	1	3.3V
	2	3.3V
	3	3.3V
	4	3.3V
	5	GND
	6	GND
	7	3.3V
	8	3.3V

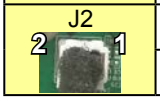
7	PIN NO.	VALUE
CN3 	1	3.3V
	2	3.3V
	3	3.3V
	4	3.3V
	5	GND
	6	GND

8.2 Active Subwoofer (SB-HWA250)

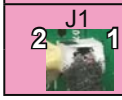


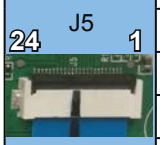


VOLTAGE DATA (measurement status:Power On and No external signal input)

1	PIN NO.	VALUE
	1	24V
	2	0V

2	PIN NO.	VALUE
	1	12V
	2	12V

3	PIN NO.	VALUE
	1	2.67V
	2	0V

4	PIN NO.	VALUE
	1	5.2V
	2	5.2V
	3	3.3V
	4	3.24V
	5	3.3V
	6	5.2V
	7	NC
	8	NC
	9	3.3V
	10	3.3V
	11	3.3V
	12	0V
	13	1.68V
	14	1.66V
	15	3.3V
	16	1.68V
	17	0V
	18	3.3V
	19	NC
	20	NC
	21	NC
	22	NC
	23	NC
	24	0V

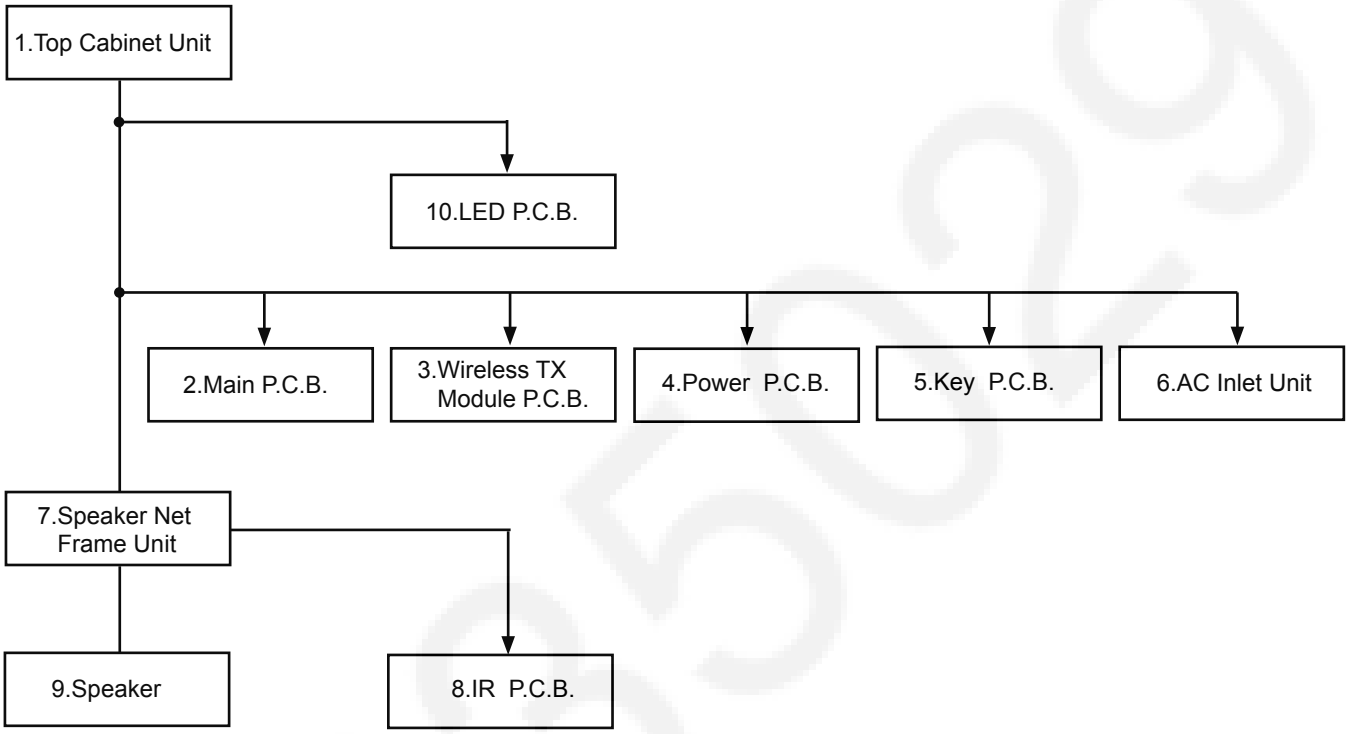
5	PIN NO.	VALUE
	1	3.2V
	2	0V

9 Disassembly and Assembly Instructions

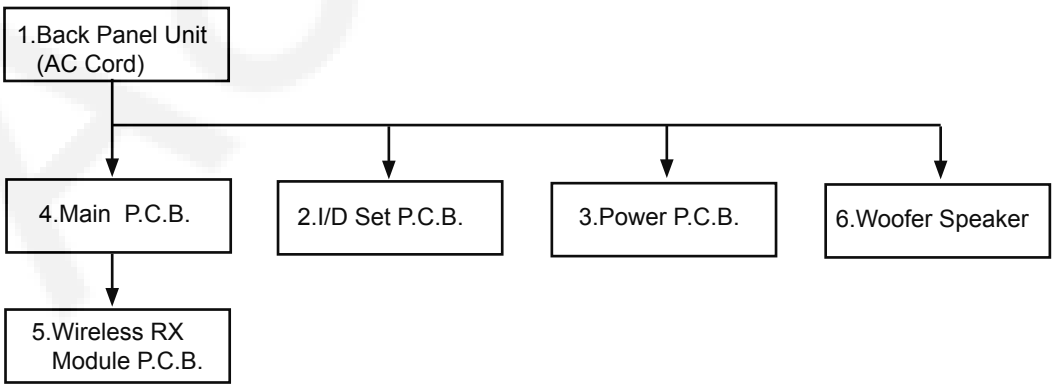
9.1. Disassembly Flow Chart

The following chart is the procedure of 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-HTB250)

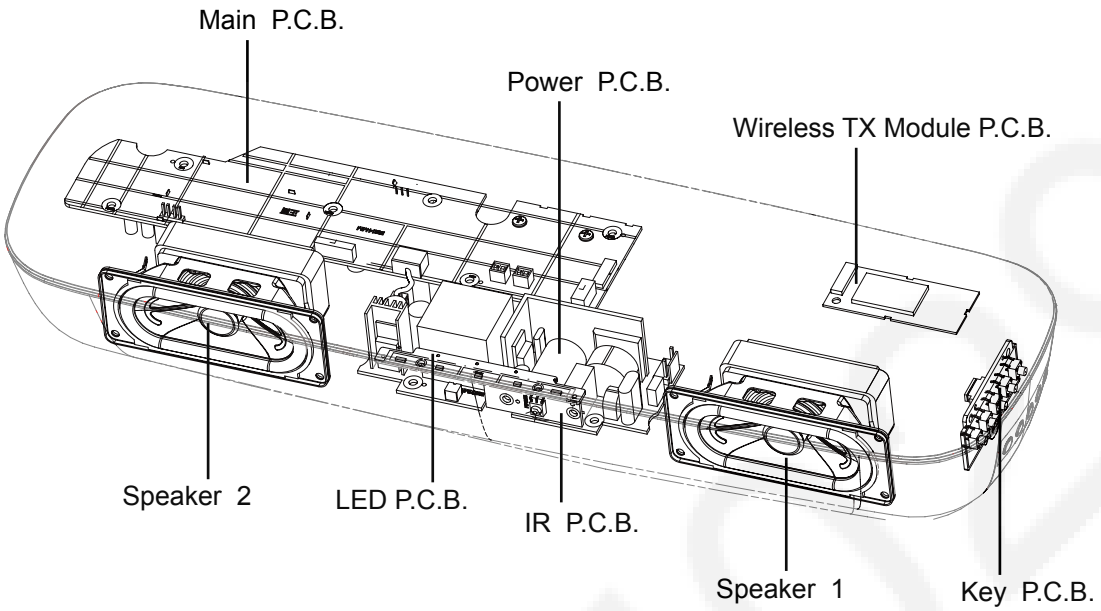


9.1.2 Active Subwoofer (SB-HWA250)

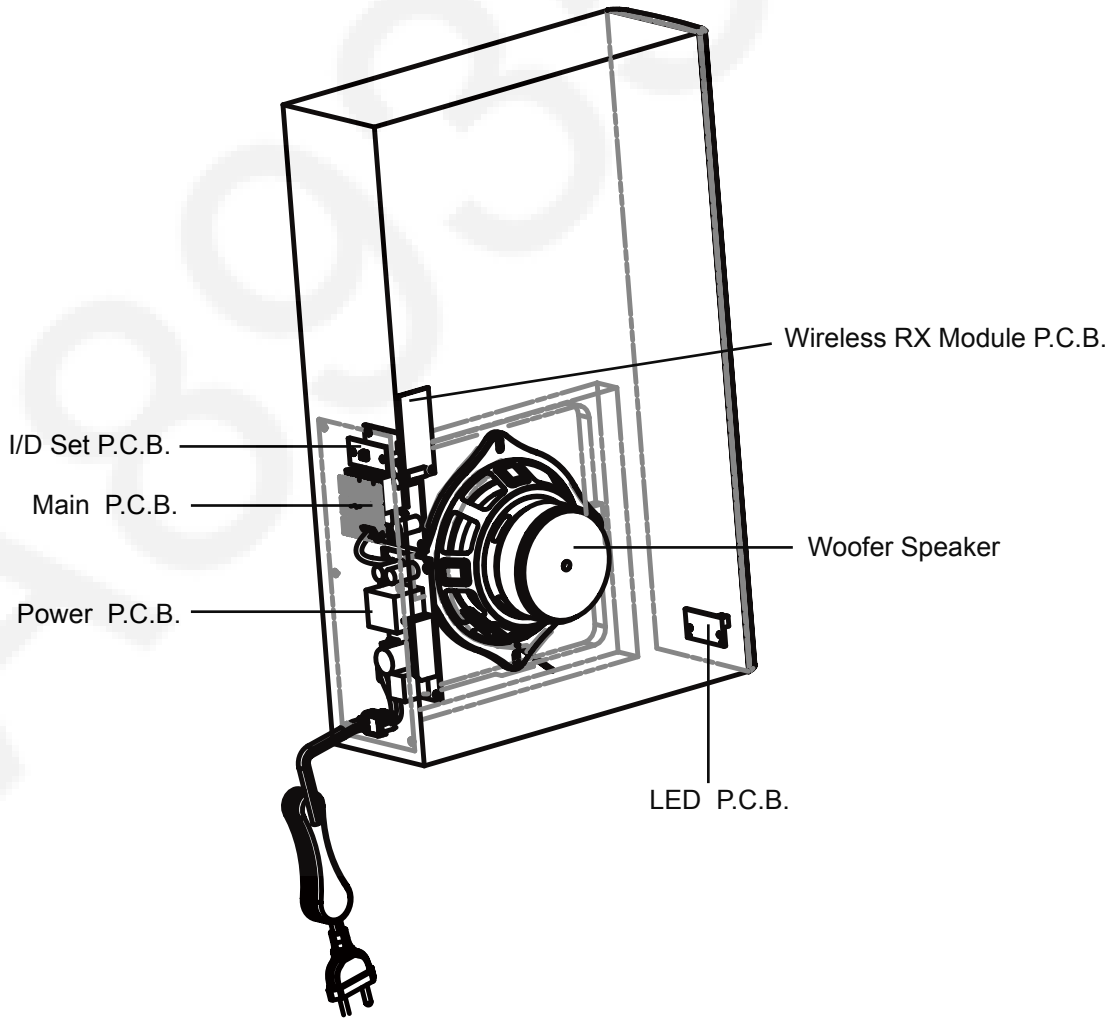


9.2. P.C.B. Positions

9.2.1 Main Unit (SU-HTB250)



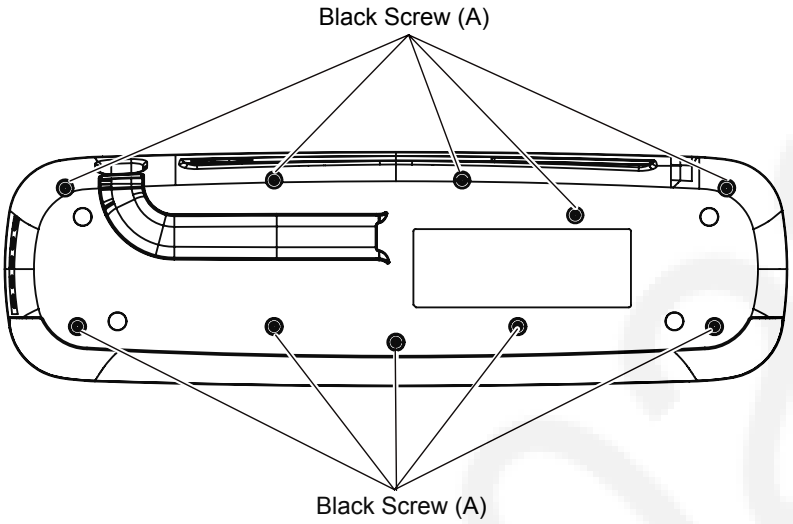
9.2.2 Active Subwoofer (SB-HWA250)



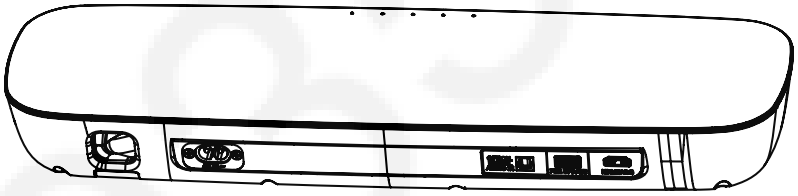
9.3. Disassembly Procedure of Main Unit (SU-HTB250)

9.3.1. Top Cabinet Unit

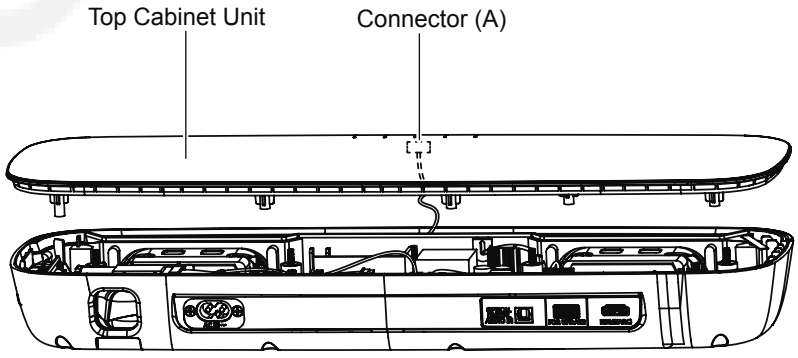
1. Remove 10 Black Screws (A) on the bottom cabinet.



2. Upset main unit and lift up the Top Cabinet Unit.

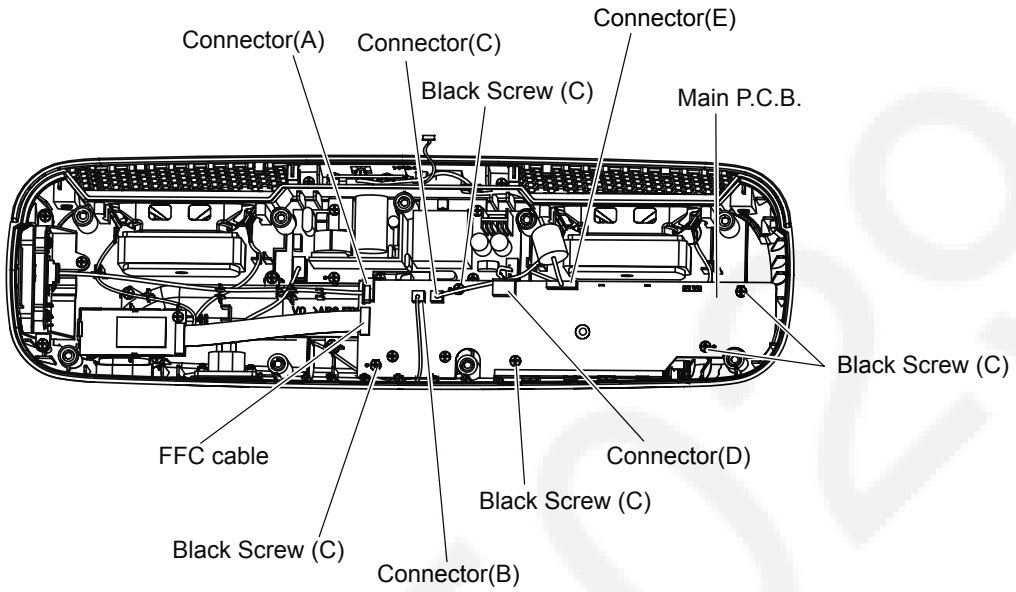


3. Disconnect connector (A) and remove the Top Cabinet Unit.



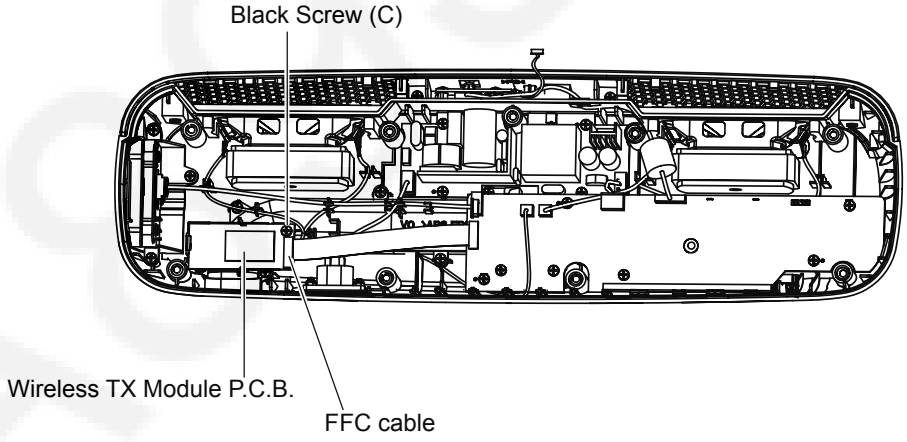
9.3.2. Main P.C.B.

1. Remove 5 Black Screws (C).
2. Disconnect connector (A)-(E) and FFC cable.
3. Remove the Main P.C.B..



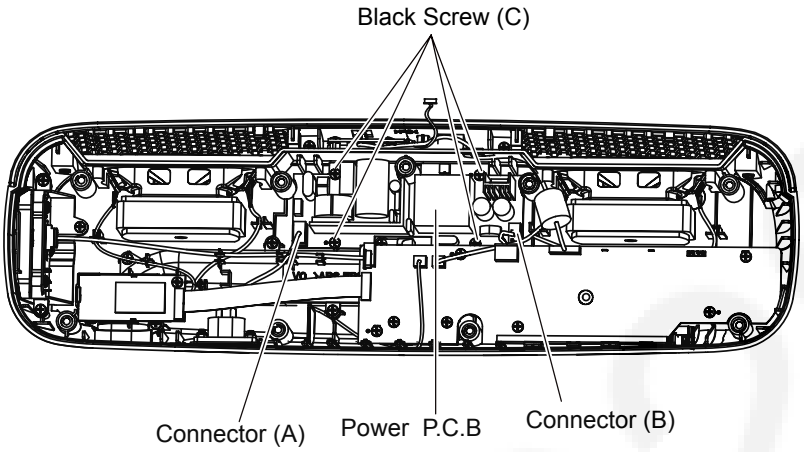
9.3.3. Wireless TX Module P.C.B.

1. Remove 1 Black Screw (C).
2. Disconnect FFC cable.
3. Remove the Wireless TX Module P.C.B..



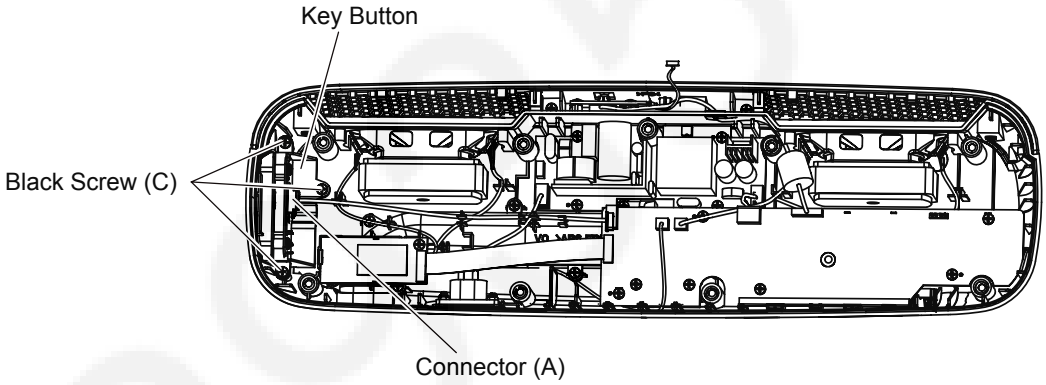
9.3.4. Power P.C.B.

1. Remove 4 Black Screws (C).
2. Disconnect connector (A),(B).
3. Remove the Power P.C.B..

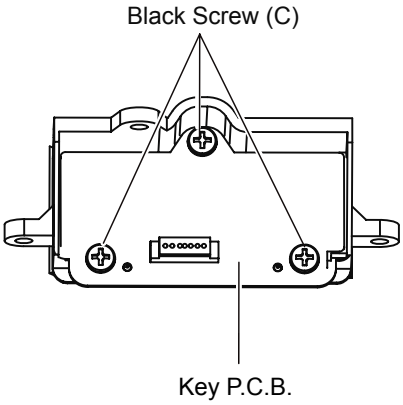


9.3.5. Key P.C.B.

1. Remove 3 Black Screws (C).
2. Lift up the the Key P.C.B. & Key Button straightly.
3. Disconnect connector (A).

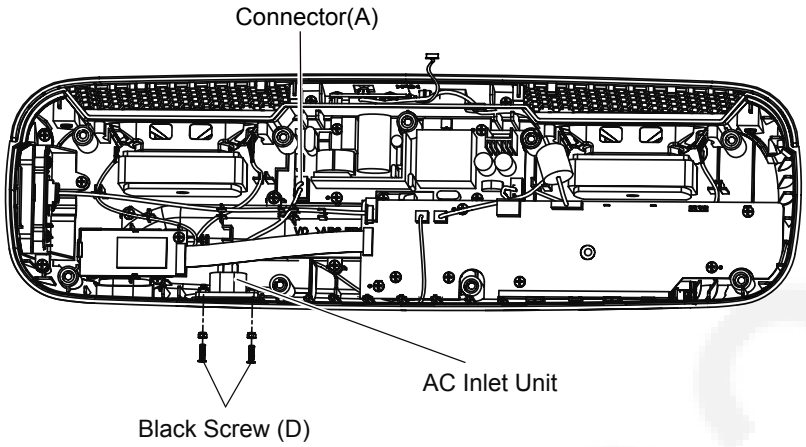


4. Remove 3 Black Screws (C).
5. Remove the Key P.C.B..



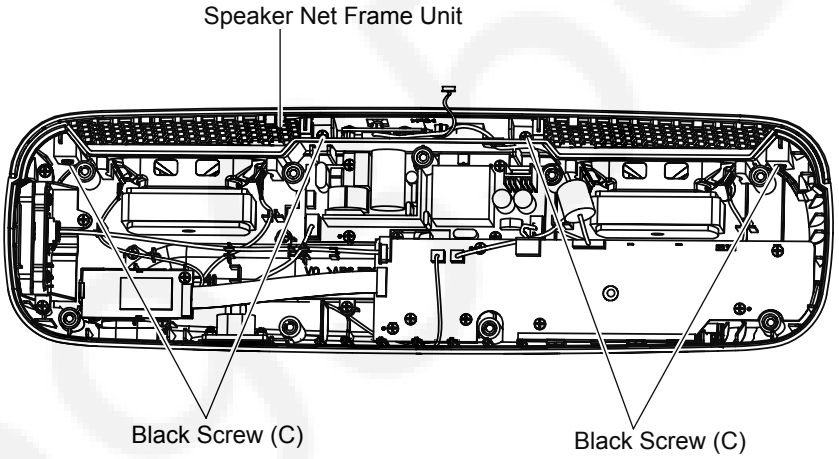
9.3.6. AC Inlet Unit

1. Remove 2 Black Screws (D).
2. Disconnect connector (A).
3. Remove the AC Inlet Unit.



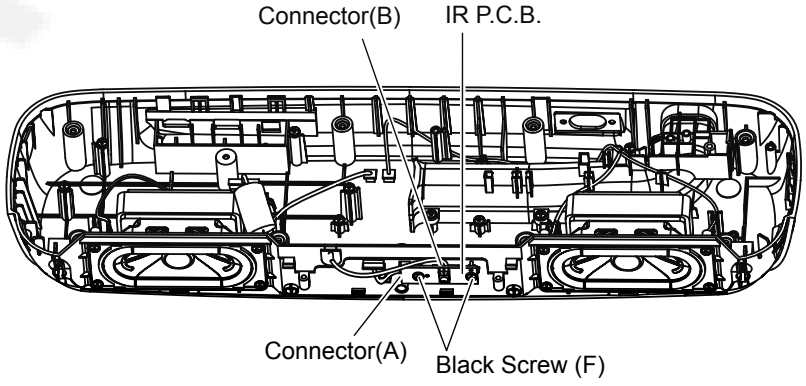
9.3.7. Speaker Net Frame Unit

1. Remove 4 Black Screws (C).
2. Remove the Speaker Net Frame Unit.



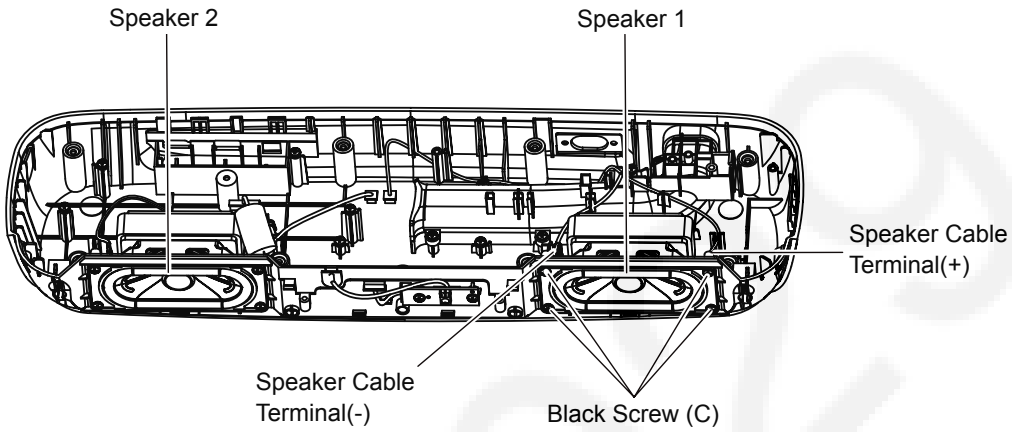
9.3.8. IR P.C.B.

1. Remove 2 Black Screws (F).
2. Disconnect connector (A),(B).
3. Pull the IR P.C.B. to your side and remove it.



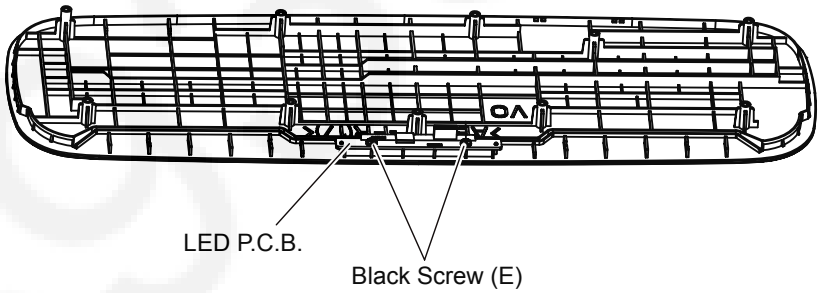
9.3.9. Speaker

1. Disconnect 2 Speaker Cable Terminals.
2. Remove 4 Black Screws (C).
3. Remove Speaker 1.
4. Remove Speaker 2 in the same way.



9.3.10. LED P.C.B.

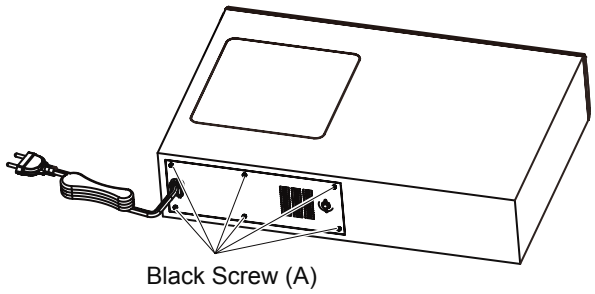
1. Remove 2 Black Screws (E).
2. Remove the LED P.C.B..



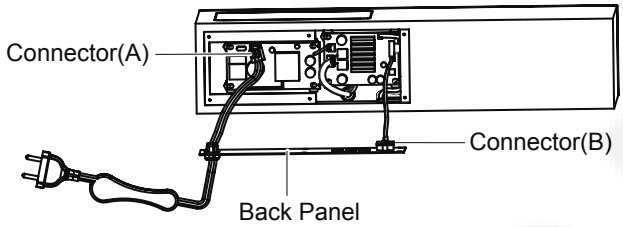
9.4. Disassembly Procedure of Active Subwoofer (SB-HWA250)

9.4.1. Back Panel Unit (AC Cord)

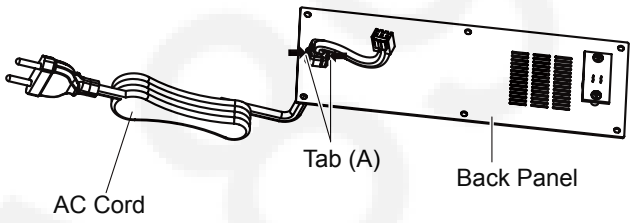
1. Remove 6 Black Screws (A).



2. Pull the Back Panel Unit to your side.
3. Disconnect connector (A),(B).

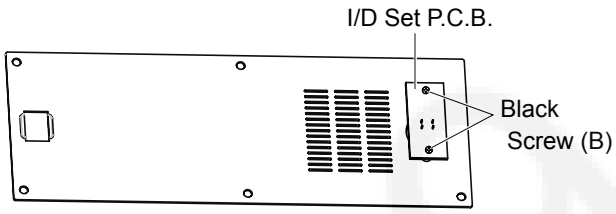


4. Press tab (A) on the AC cord connector simultaneously in the direction of arrows to pull the AC Cord out from the rear side of the Back Panel.



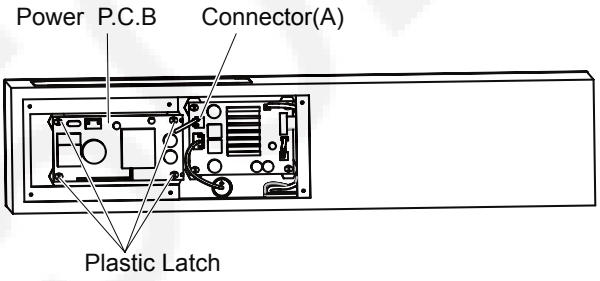
9.4.2. I/D Set P.C.B.

1. Remove 2 Black Screws (B).
2. Remove the I/D Set P.C.B..



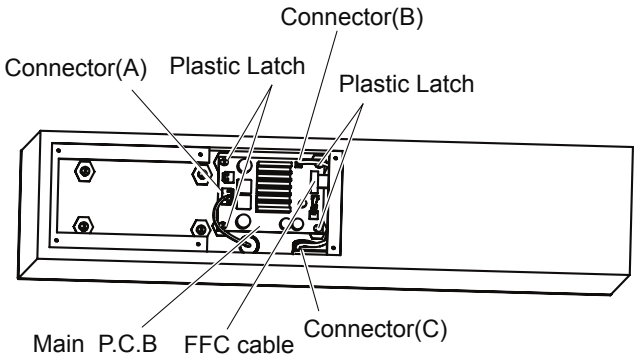
9.4.3. Power P.C.B

1. Disconnect connector (A).
2. Press tab on the Plastic Latch by the nipper pliers or other tools and lift up the Power P.C.B. straightly to remove it.



9.4.4. Main P.C.B

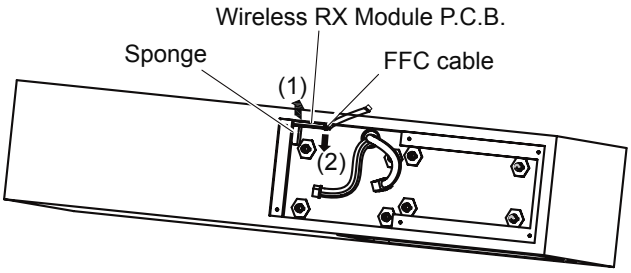
1. Disconnect connector (A)-(C) and FFC cable.
2. Press tab on the Plastic Latch by the nipper pliers or other tools and lift up the Main P.C.B.straightly to remove it.



9.4.5. Wireless RX Module P.C.B.

1. Disconnect FFC cable.
2. Pull out the Sponge by thin brade driver in the direction of arrow (1).
3. Pull out the Wireless RX Module P.C.B by thin brade driver in the direction of arrow (2).

Note:Before the installment,wipe off the double sticky tape left on the subwoofer box unit completely.Moreover when installing press the Wireless RX Module P.C.B. onto the subwoofer box unit tightly.



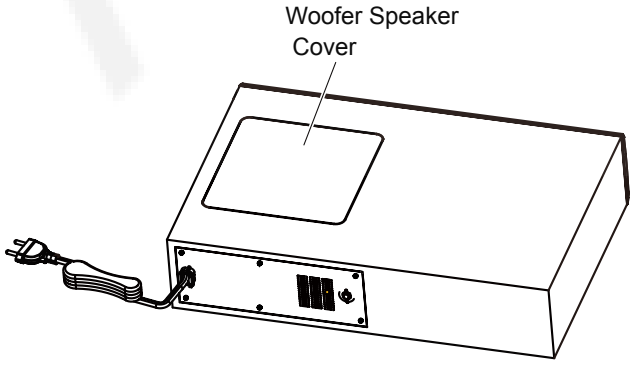
9.4.6. Woofer Speaker

1. Remove the Woofer Speaker Cover by below method,as shown in Figure. 2,3.

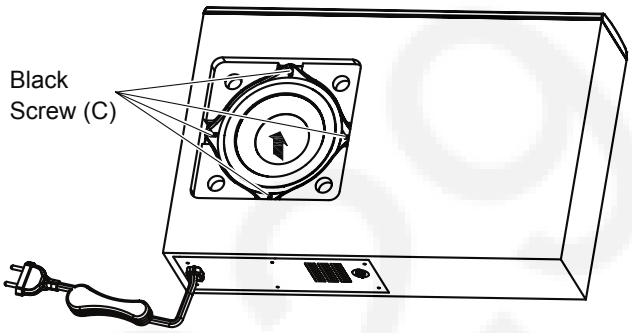
Caution : Be sure to wear gloves when disconnecting the speaker cover.Do not exert too much force as it may damage the Woofer Speaker Cover.

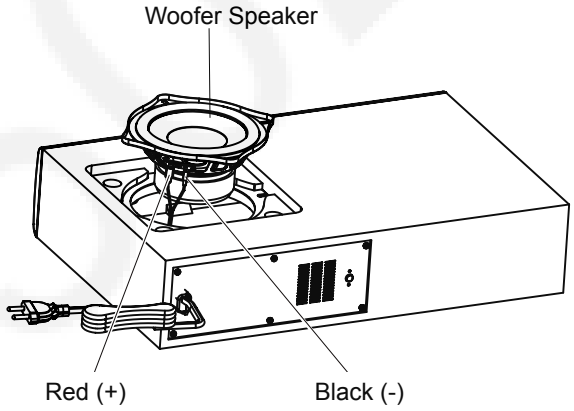
Figure. 2

Figure. 3



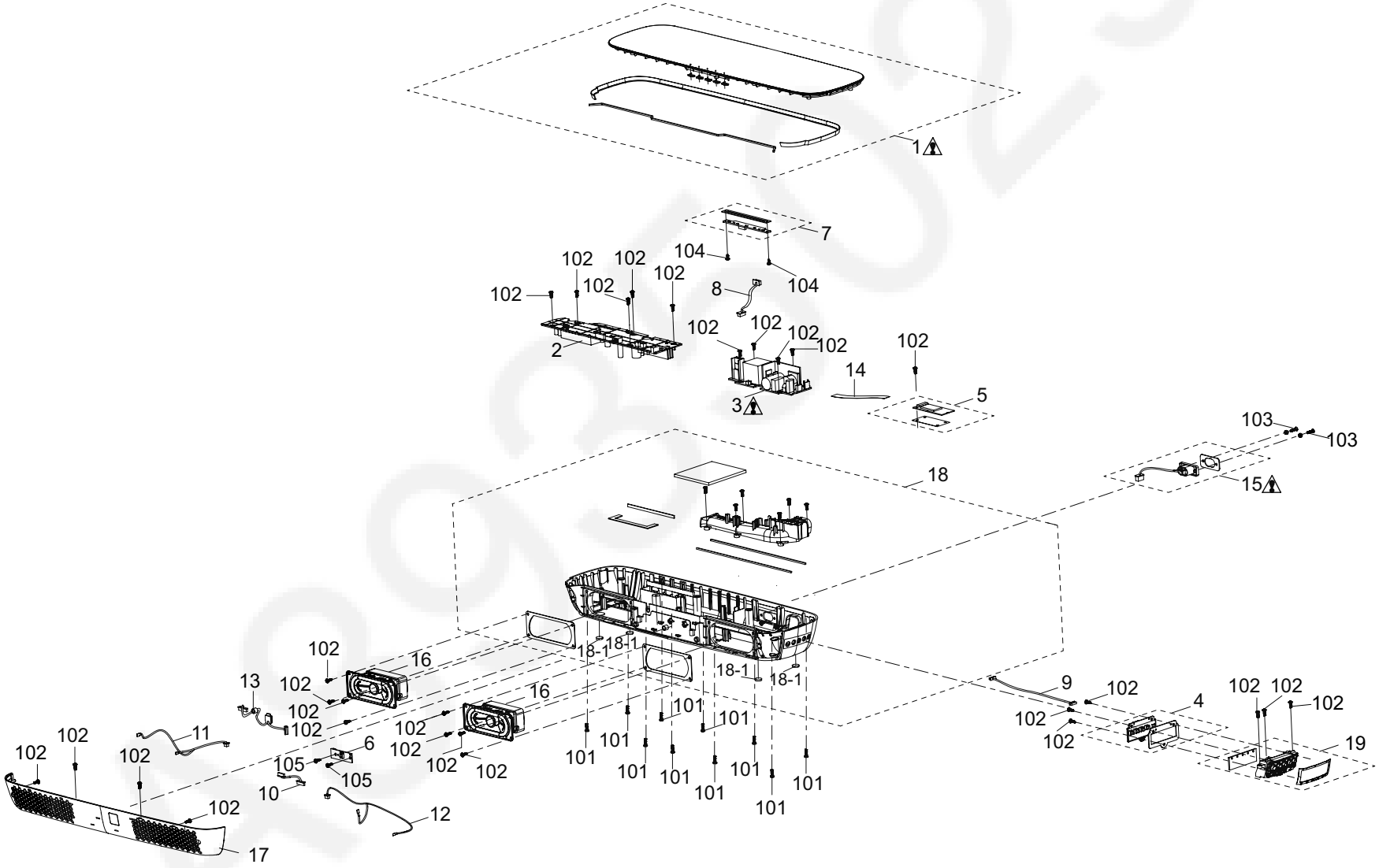
2. Remove 4 Black Screws (C).
3. Slightly lift up Woofer Speaker in the direction of arrow.
4. Disconnect speaker wire.
5. Remove the Woofer Speaker.



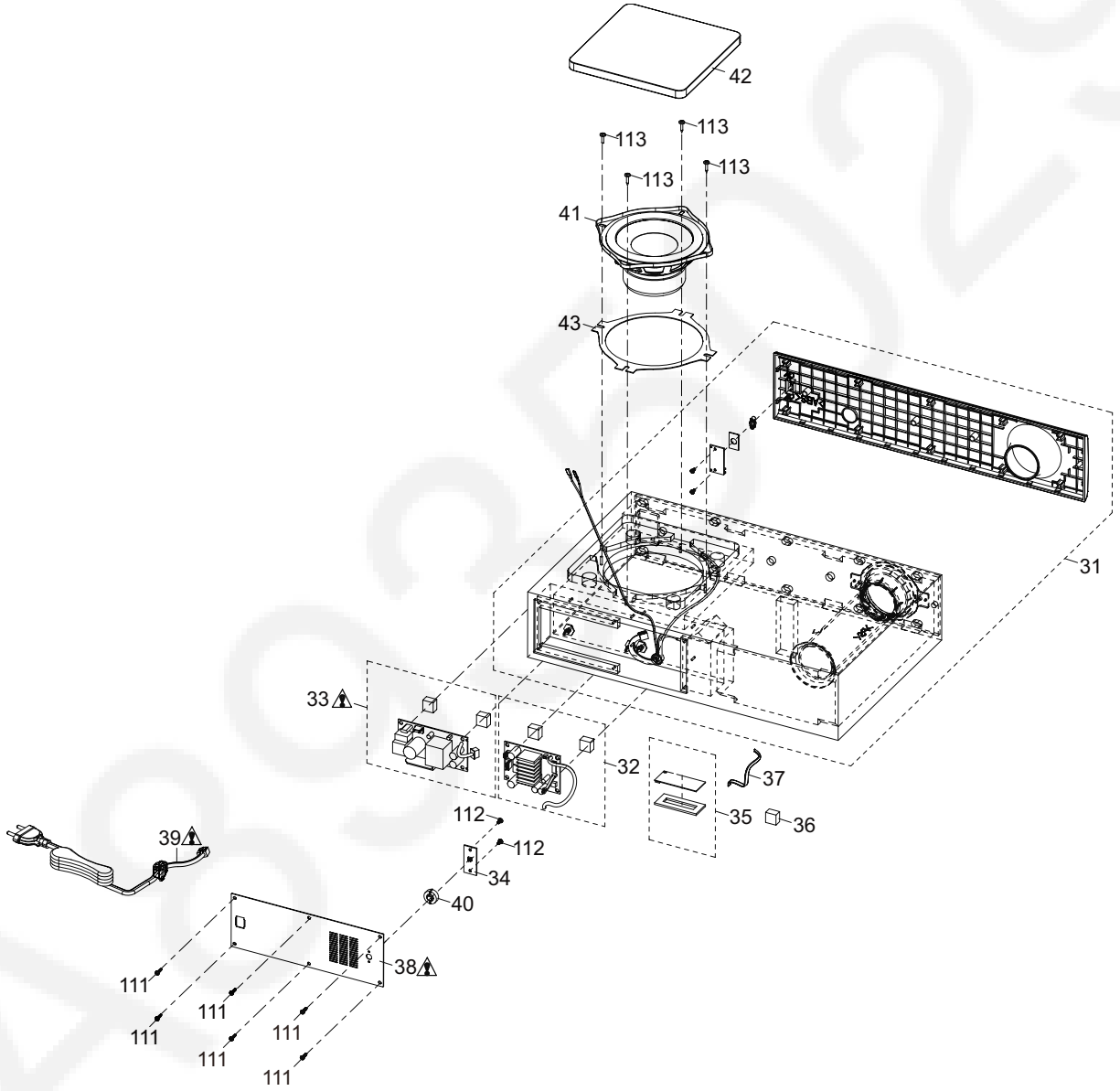


10 Exploded View and Replacement Parts List

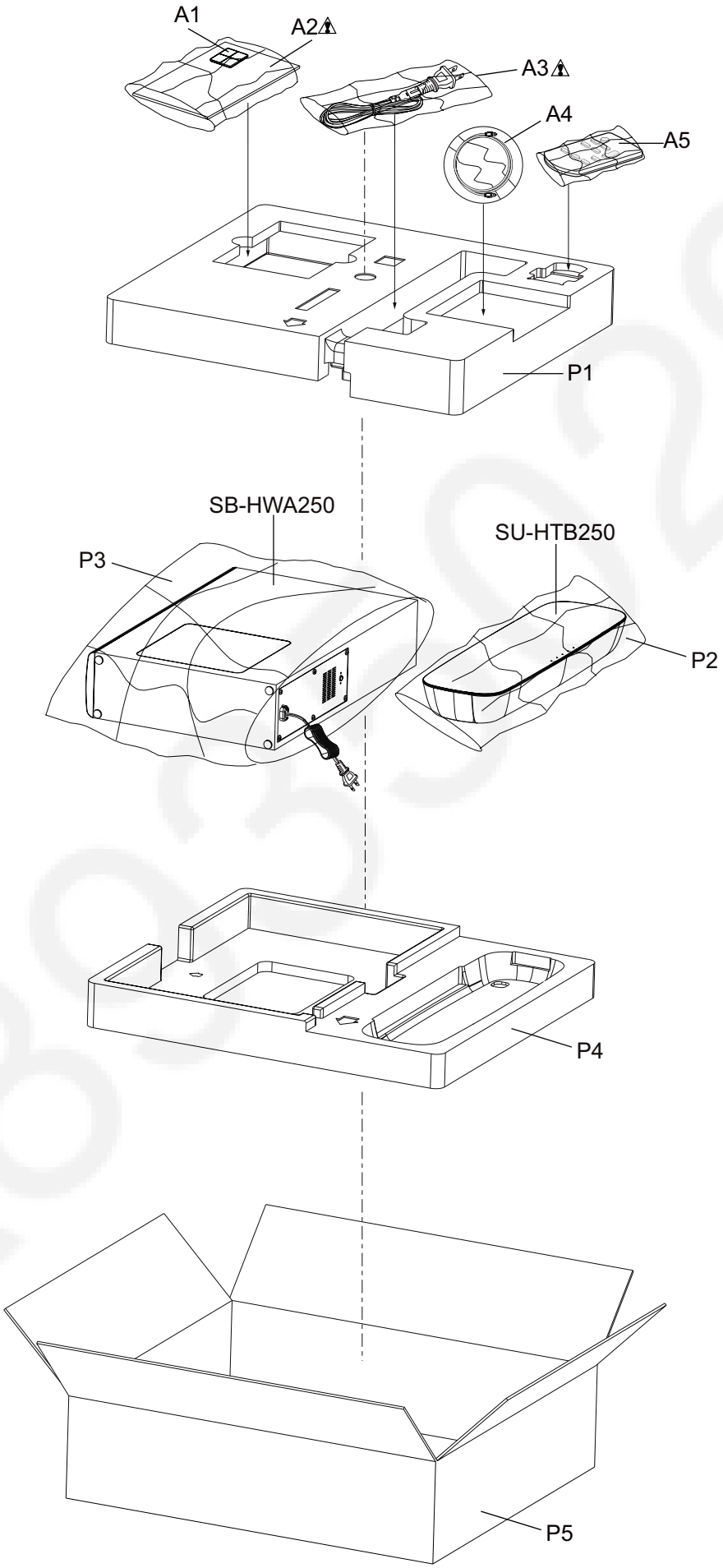
10.1. Casing Parts & Mechanism Section (SU-HTB250)



10.2. Casing Parts & Mechanism Section (SB-HWA250)



10.3. Packing & Accessories Section (SC-HTB250)



10.4. Replacement Parts List

Notes:

*Important safety notice:

Components identified by ⚠ mark have special characteristics important for safety.

When replacing any components, be sure to use only manufacture's specified parts shown in the parts list.

*All Parts are supplied by PHK.

10.4.1. Main Unit (SU-HTB250)

Safety	Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
⚠	1	TTPA0895	TOP CABINET UNIT	1	
	2	TNPA6909AC	MAIN P.C.B.	1	
⚠	3	TNPA6905	POWER P.C.B.	1	
	4	TNPA6906	KEY P.C.B.	1	
	5	TNPA6910	WIRELESS TX MODULE P.C.B.	1	
	6	TNPA6907	IR P.C.B.	1	
	7	TNPA6908	LED P.C.B.	1	
	8	TNMX158	CORD (A)	1	
	9	TNMX159	CORD (B)	1	
	10	TNMX160	CORD (C)	1	
	11	TNMX161	CORD (D)	1	
	12	TNMX162	CORD (E)	1	
	13	TNMX163	CORD (F)	1	
	14	TNMX164	FFC (A)	1	
⚠	15	TNMX165	AC INLET UNIT	1	
	16	RFZA0023	SPEAKER	2	
	17	TTPA0900	SPEAKER NET FRAME UNIT	1	
	18	TTFA0432	BOTTOM CABINET UNIT	1	250GA
	18	TTFA0433	BOTTOM CABINET UNIT	1	250GJ
	18-1	TMKK750	RUBBER LEG	4	
	19	TKXA33101	KEY BUTTON	1	
	101	XTB3+12JFJK	BLACK SCREW (A)	10	
	102	XTB3+8JFJK	BLACK SCREW (C)	28	
	103	THEC350	BLACK SCREW (D)	2	
	104	THEC351	BLACK SCREW (E)	2	
	105	XTB3+6JFJK	BLACK SCREW (F)	2	

10.4.2. Active Subwoofer (SB-HWA250)

Safety	Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
	31	TTPA0902	SUBWOOFER BOX UNIT	1	
	32	TNPA6900	MAIN P.C.B.	1	
⚠	33	TNPA6901	POWER P.C.B.	1	
	34	TNPA6903	I/D SET P.C.B.	1	
	35	TNPA6902	WIRELESS RX MODULE P.C.B.	1	
	36	TMKJ074	SPONGE	1	
	37	TNMX167	FFC (A)	1	
⚠	38	TENX0006	BACK PANEL	1	250GA
⚠	38	TENX0007	BACK PANEL	1	250GJ
⚠	39	TSXA169	AC CORD	1	250GA
⚠	39	TSXA177	AC CORD	1	250GJ
	40	TEFX0003	I/D SET BUTTON	1	
	41	RFZA0025	WOOFER SPEAKER	1	
	42	TKXA33201	WOOFER SPEAKER COVER	1	
	43	TMKB484	WOOFER EVA	1	
	111	THEC352	BLACK SCREW (A)	6	
	112	THEC353	BLACK SCREW (B)	2	
	113	THEC354	BLACK SCREW (C)	4	

10.4.3. Packaging & Accessories

(SC-HTB250)

Safety	Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
	A1	TMKK727	RUBBER LEG	4	
⚠	A2	TQBJ2089	OPERATING INSTRUCTIONS	1	
⚠	A3	TSXA168	AC CORD	1	250GA
⚠	A3	TSXA175	AC CORD	1	250GJ
	A4	RSQ0159	OPTICAL CABLE	1	
	A5	N2QAYC000125	REMOTE CONTROLLER	1	
	P1	TPDA33481	POLYFOAM (T)	1	
	P2	TPEH938	MAIN UNIT BAG	1	
	P3	TPEH940	SUBWOOFER BAG	1	
	P4	TPDA33491	POLYFOAM (B)	1	
	P5	TPCD96401	PACKING CASE	1	250GA
	P5	TPCD96501	PACKING CASE	1	250GJ