

Service Manual

DVD Home Theater Sound System

Model No. **SC-XH166GA**

SC-XH166GS

SA-XH166GA

SA-XH166GS



Color: (K).....Black Type

Notes: Please refer to the original service manual for:

- Speaker system SB-HFS4810/HFS4010/HC4010 Order No:AD1403015CE
SB-HW3010 Order No:AD1403030CE

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.

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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 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 the chassis, the reading should be between $1\text{M}\Omega$ and $5.2\text{M}\Omega$. When the exposed metal does not have a return path to the chassis, the reading must be infinity.

1.3. Leakage Current Hot Check (See Figure 1.)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a $1.5\text{k}\Omega$, 10W resistor, in parallel with a $0.15\mu\text{F}$ 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 $1\text{ k}\Omega/\text{V}$ 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 0.75V RMS . A leakage current tester (Simpson Model 229 or equivalent) may be used to make the hot checks, leakage current must not exceed $1/2\text{ mA}$. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

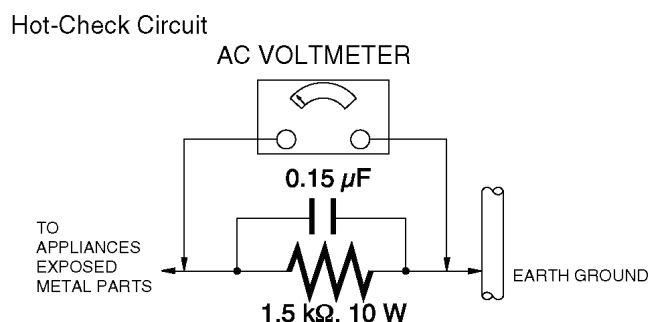


Figure. 1

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 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.

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 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.

2.2. Caution for AC Cord (For the Saudi Arabia, Kuwait and Africa)

2.2.1. Information for Your Safety

IMPORTANT

Your attention is drawn to the fact that recording of prerecorded tapes or discs or other published or broadcast material may infringe copyright laws.

WARNING

To reduce the risk of fire or shock hazard, do not expose this equipment to rain or moisture.

CAUTION

To reduce the risk of fire or shock hazard and annoying interference, use the recommended accessories only.

FOR YOUR SAFETY

DO NOT REMOVE THE OUTER COVER

To prevent electric shock, do not remove the cover. No user serviceable parts inside. Refer servicing to qualified service personnel.

2.2.2. Caution for AC Mains Lead

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 amperes and 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 after 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 Panasonic Dealer.

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 shown below.

If in any doubt, please consult a qualified electrician.

2.2.2.1. Important

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

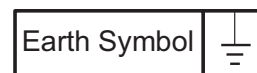
Blue	Neutral
Brown	Live

As the colours of the wires in the mains lead of this appliance 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 in the plug which is marked with the letter N or coloured BLACK.

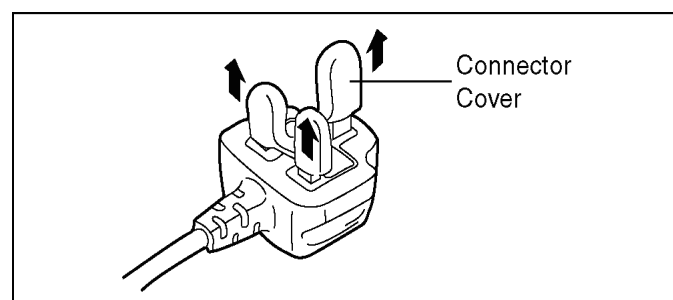
The wire which is coloured BROWN must be connected to the terminal in the plug which is marked with the letter L or coloured RED.

Under no circumstances should either of these wires be connected to the earth terminal of the three pin plug, marked with the letter E or the Earth Symbol.



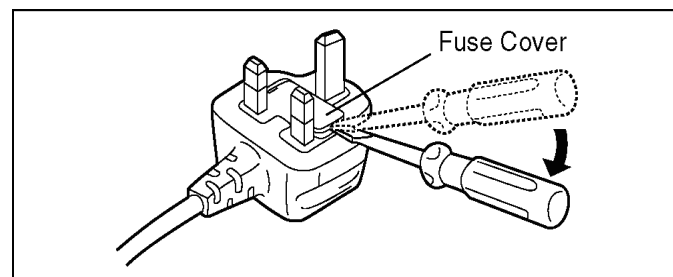
2.2.2.2. Before Use

Remove the Connector Cover as follows:

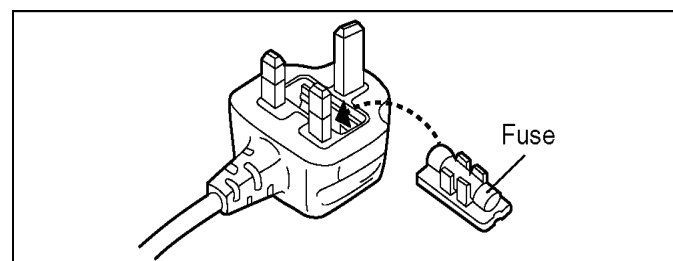


2.2.2.3. How to Replace the Fuse

1. Remove the Fuse Cover with a screwdriver.



2. Replace the Fuse and attach the Fuse cover.

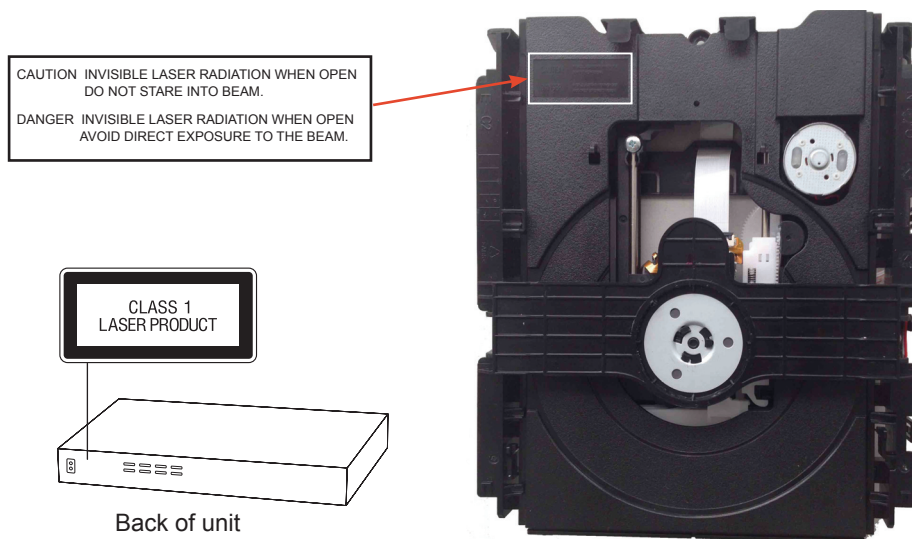


2.3. Precaution of Laser Diode

CAUTION :

This product utilizes a laser diode with the unit turned "on", invisible laser radiation is emitted from the pick-up lens. Wave length:770 to 800 nm (CDs)/645 to 660 nm (DVDs) Maximum output radiation power from pick-up:100 μ W/VDE Laser radiation from the pick-up lens is safety level, but be sure the followings:

1. Do not disassemble the optical pick-up unit, since radiation from exposed laser diode is dangerous.
2. Do not adjust the variable resistor on the pick-up unit, it was already adjusted.
3. Do not look at the focus lens using optical instruments.
4. Recommend not to look at pick-up lens for a long time.



Caution !

This unit utilizes a laser. Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

2.4. Static Electricity Protection Measures

- The laser diode in the traverse unit (optical pick-up) may break down due to potential difference caused by static electricity of clothes or human body.
So, be careful of electrostatic breakdown during repair of the traverse unit (optical pick-up).

2.5. Ground for Electrostatic Breakdown Prevention

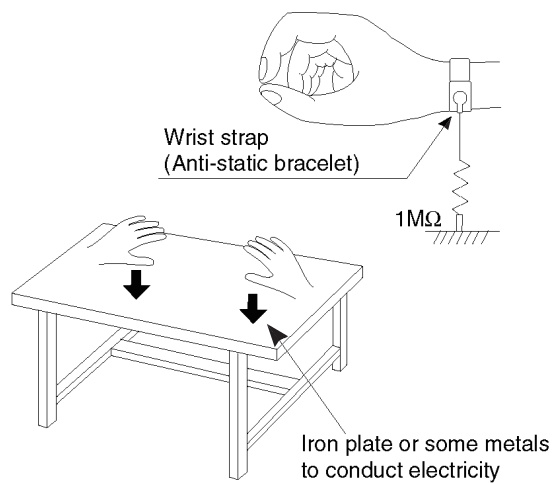
- As for parts that use optical pick-up (laser diode), the optical pick-up is destroyed by the static electricity of the working environment.
Repair in the working environment that is grounded.

2.5.1. Work table grounding

- Put a conductive material (sheet) or steel sheet on the area where the traverse unit (optical pick-up) is placed, and ground the sheet.

2.5.2. Human body grounding

- Use the anti-static wrist strap to discharge the static electricity from your body.



2.5.3. When exchanging the Drive

- Before remove the ESD prevention bag, make sure to use the anti-static wrist strap to discharge the static electricity when replace the Drive.
Note:
The ESD prevention bag is used to replace the original short-circuit point.
It can be removed while placing the Drive.

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 part numbers in the parts list, not the numbers in the exploded views. If the circuit is changed or modified, the information will be followed by service manual to be controlled with original service manual.

Note:

The replacement parts of this model is supplied as block unit.

Please use Troubleshooting Guide for your reference of the repair.

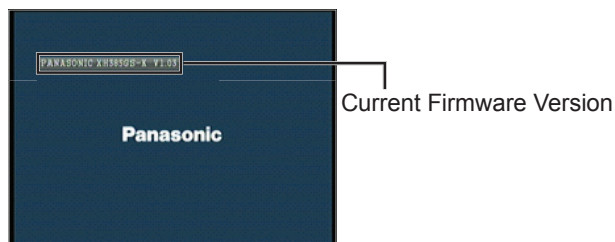
3.2. How to Update Firmware

The firmware of the DVD Theater may be renewed to improve the quality including operational performance and playability.

Make sure to refer the following procedure when performing version-up.

Step 1 Check the software version currently installed in your DVD Theater.

1. Open the disc tray.
2. Press the number button [6] on the remote control four times, then the software version number will appear.



Firmware Version Information Screen

Step 2 Download and depress the latest software.

1. **The latest firmware required for version-up can be downloaded from “Support Information from NWBG/VDBG-PAVC” web-site in “TSN system”.**

Click file name to download.

2. Decompress the downloaded file.

Click file to decompress. (Total: 1 file)

The decompressed file will be named as below. (Confirm the model No.)

File Name: PANASONIC_HTSXXX.BIN

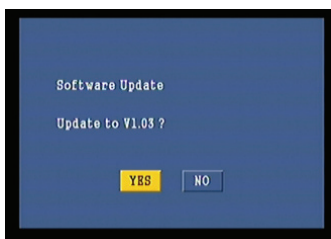
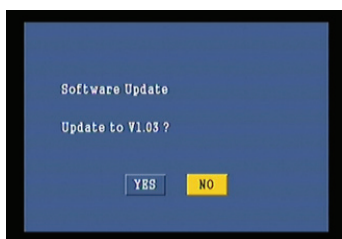
(300W Model: PANASONIC_HTS105.bin; 1000W Model: PANASONIC_HTS333.bin)

Step 3 Burn all files to a blank CD-R disc or USB memory device by the writing software.

Use only CD-R or USB memory device.

(Burning method to CD-R disc is not image data writing but normal data writing.)

Step 4 Playback the CD-R disc or USB memory device by the DVD Theater.
Set the CD-R disc or USB memory device into the DVD Theater and playback it.

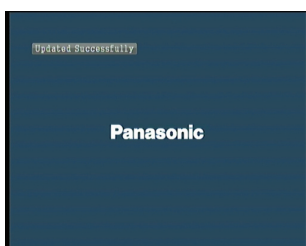


When the message of recommending the "Software Update" appears on the display monitor, select the Left cursor button: [Yes] or the Right cursor buttons :[No] and press the [OK] button with the remote control.



If you choose the Left cursor buttons: [Yes], the DVD Theater is automatically updated.

Step 5 Software update is completed.



4 Specifications

GENERAL

Power consumption	Approx. 41 W
Power consumption in standby mode	Approx. 0.5 W
Power supply	AC 220 V to 240 V, 50 Hz/60 Hz
Dimensions (W×H×D)	430 mm × 55 mm × 322 mm
Mass	Approx. 2.3 kg
Operating temperature range	0 °C to 40 °C
Operating humidity range	35 % to 80 % RH (no condensation)
LASER Specification	Class 1 LASER Product Wave length: 785 nm (CDs)/ 655 nm (DVDs) Laser power: No hazardous radiation is emitted with the safety protection

AMPLIFIER SECTION

RMS TTL POWER OUTPUT	300 W
	1 kHz, 30 % total harmonic distortion
	FRONT: 50 W per ch (4 Ω)
	CENTRE: 50 W (4 Ω)
	SURROUND: 50 W per ch (4 Ω)
	70 Hz, 30 % total harmonic distortion
	SUBWOOFER: 50 W (8 Ω)
Audio Input	AUX × 1

TERMINAL SECTION

USB slot	USB2.0 1 system
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FM TUNER SECTION

Frequency range	87.50 MHz to 108.00 MHz (50 kHz step)
Antenna terminals	1 with Antenna Cable (1.2 m)

VIDEO SECTION

Signal system	PAL/NTSC
Video output	Output level: 1.0 V _{p-p} (75 Ω)
	Output connector: Pin jack (1 system)
HDMI AV output*	Output connector: Type A (19 pin) 1 system

* This unit supports "HDMI CEC" function.

SPEAKER SECTION

	Woofer CONE TYPE (cm)	Full range CONE TYPE (cm)	Super tweeter Piezo type
Front	—	6.5	×1
Centre	—	6.5	×2
Surround	—	6.5	×1
Subwoofer	16	—	—

	Dimensions (W (mm)×H (mm)×D (mm))	Mass (Approx. kg)
Front	270 × 1181 × 270	2.7
Centre	304 × 87 × 77	0.7
Surround	83 × 141 × 75	0.5
Subwoofer	156 × 290 × 263	3.1

- The impedance of speakers:
 - Front speakers, Centre speaker, Surround speakers: 4 Ω.
 - Subwoofer: 8 Ω.

Specifications are subject to change without notice.

File format

File format	Extension	Reference
Xvid	“.AVI”, “.avi”	- The video file and subtitles text file are inside the same folder, and the file names are the same except for the file extensions. - Some Xvid files may not be played back correctly, depending on the video resolution, frame rate condition, subtitle format and so on.
	Except South East Asia Subtitles text file “.SRT”, “.srt”, “.SUB”, “.sub”, “.TXT”, “.txt”	
FLV	“.FLV”, “.flv”	Some FLV/MOV files may not be played back correctly, depending on the video resolution, frame rate condition and so on.
MOV	“.MOV”, “.mov”	
JPEG	“.JPG”, “.jpg”, “.jpeg”	- MOTION JPEG and Progressive JPEG are not supported. - You may not be able to play back the file if you have edited the folder structure or the file name on a PC or other device.
MP3	“.MP3”, “.mp3”	This unit supports ID3 tags, but only titles, artist names and album names can be displayed.

- With certain recording states and folder structures, the play order may differ or playback may not be possible.

4.1. Others (Licenses)

Manufactured under license from Dolby Laboratories.
Dolby, Pro Logic, and the double-D symbol are trademarks of Dolby Laboratories.

For DTS patents, see <http://patents.dts.com>. Manufactured under license from DTS Licensing Limited. DTS, the Symbol, & DTS and the Symbol together are registered trademarks, and DTS 2.0+Digital Out is a trademark of DTS, Inc. © DTS, Inc. All Rights Reserved.

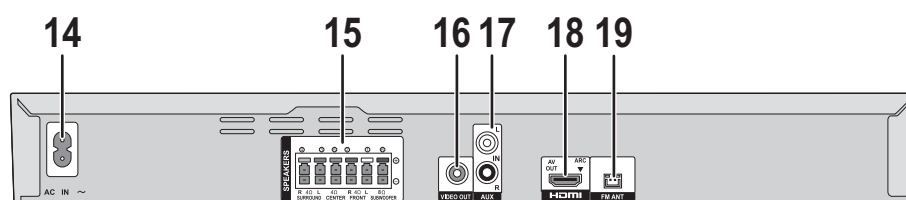
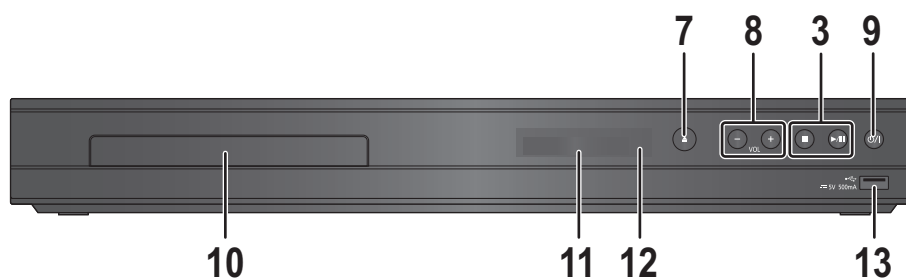
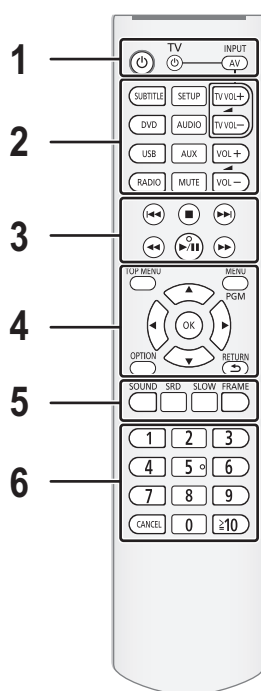
This item incorporates copy protection technology that is protected by U.S. patents and other intellectual property rights of Rovi Corporation. Reverse engineering and disassembly are prohibited.

HDMI, the HDMI Logo, and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries.

MPEG Layer-3 audio coding technology licensed from Fraunhofer IIS and Thomson.

“DVD Logo” is a trademark of DVD Format/Logo Licensing Corporation.

5 Location of Controls and Components



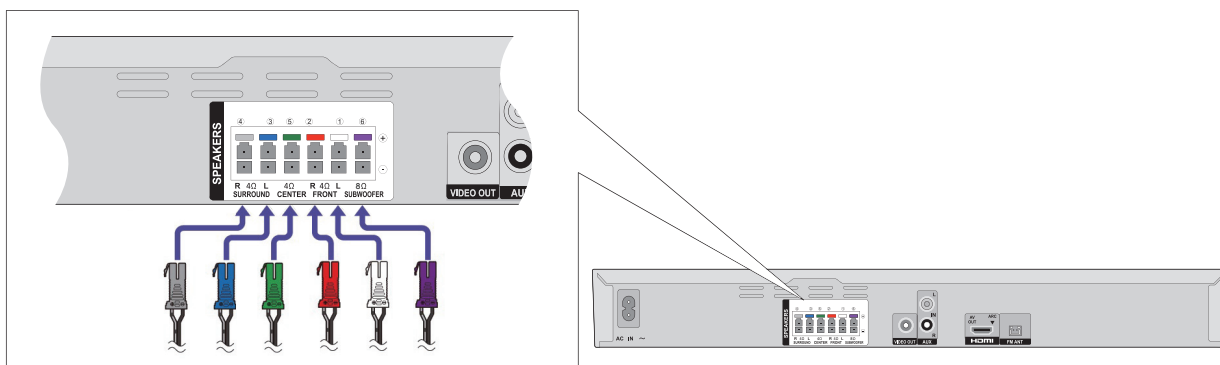
- 1 **[⏻]**
Turn the unit on and off
[⏻ TV]
Turn the TV on and off
[AV, INPUT]
Switch the input select of TV
- 2 **[SUBTITLE]**
Change the subtitle settings.
[DVD], [USB], [RADIO], [AUX]
Select an audio or video source
[SETUP]
Show Setup menu
[AUDIO]
Change the audio channel number or soundtrack language, etc.
[MUTE]
Mute the sound
 - "MUTE" flashes on the unit's display, while the function is on.
 - To cancel, press the button again or adjust the volume.
 - Muting is cancelled if the unit is turned off.**[TV VOL + -]**
Adjust the volume of TV
[VOL + -]
Adjust the volume of the main unit
- 3 **[▶/⏸] (Play/Pause)**
Start or pause playback.
[■] (Stop)
Stops playback and remembers the resume point.
[⏮] / [⏭] (Skip)
Skip to the title, chapter or track.
[⏪] / [⏩] (Search)
Start fast reverse or fast forward.
- 4 **[TOP MENU]**
Show Top Menu
[MENU]/[PGM]
Show Menu /
Register radio broadcasts /
Set the playback order of music tracks
 - ① Press **[▲, ▼, ◀, ▶]** to select the item.
 - ② Press [0] to [9] to specify the order.
To cancel: Press [CANCEL].
 - ③ Press **[▲, ▼, ◀, ▶]** to select "PLAY".
To clear the whole program:
Press **[▲, ▼, ◀, ▶]** to select "CLEAR".
 - ④ Press [OK].
- [▲, ▼, ◀, ▶]**
Move the highlight for selection
- [OK]**
Confirm the selection
- [OPTION]**
Show Option menu
- [RETURN↵]**
Return to previous screen
- 5 **[SOUND]**
Set the sound effects
[SRD]
Set the surround effects
[SLOW]
Start slow motion playback
[FRAME]
Play video frame-by-frame
- 6 Select title numbers, etc./Enter numbers
[CANCEL]: Cancel
- 7 Open or close the disc tray
- 8 Adjust the volume of the main unit
- 9 **Standby/on switch (⏻/⏻)**
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.
- 10 Disc tray
- 11 Display
Unit's display list
- 12 Remote control signal sensor
Distance: Within approx. 7 m.
Angle: Approx. 20° up and down, 30° left and right
- 13 USB port
- 14 AC IN terminal
- 15 Speaker terminals
- 16 VIDEO OUT terminal
- 17 AUX terminal
- 18 HDMI AV OUT (ARC) terminal
- 19 FM radio antenna terminal

6 Installation Instructions

Turn off all equipment before connection and read the appropriate operating instructions.
Do not connect the AC power supply cord until all other connections are completed.

6.1. Speaker Connections

Connect the speaker cables to the terminals of the same color.



6.2. Connection to a TV

■ HDMI

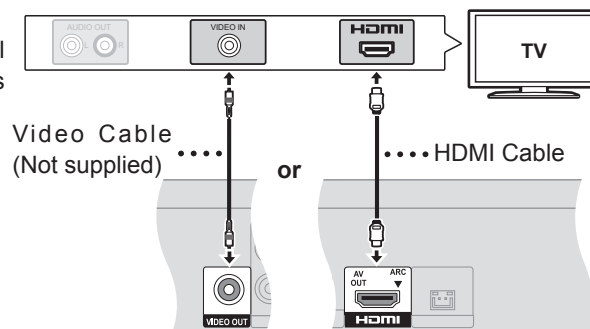
If you use an optional HDMI cable, use the ARC* compatible High Speed HDMI cables.

Non-HDMI-compliant cables cannot be utilized. It is recommended that you use Panasonic's HDMI cable. When outputting 1080p signal, please use HDMI cables 5.0 meters or less.

* ARC is an abbreviation of Audio Return Channel, also known as HDMI ARC. This feature allows a home theatre system to receive and play audio from the TV through a single HDMI cable without additional wiring.

Step 1

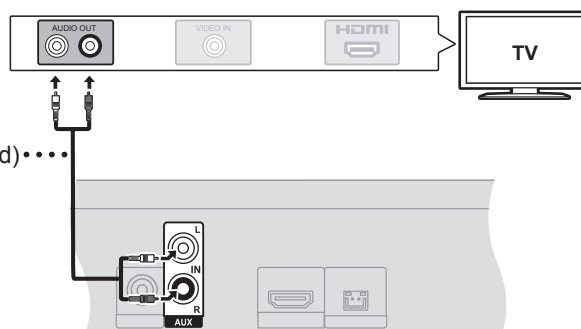
If the HDMI terminal of your TV supports ARC, skip Step 2.



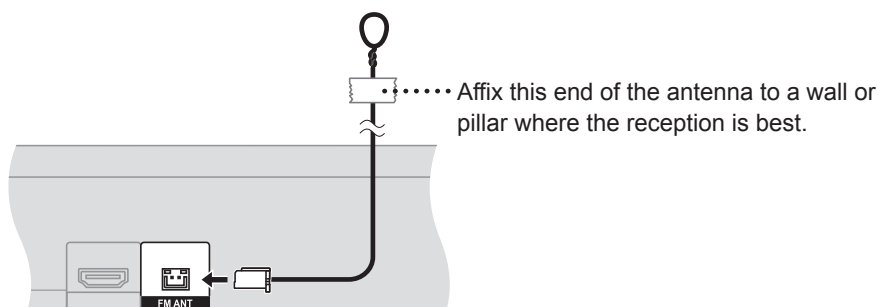
Step 2

When the HDMI terminal of your TV does not support ARC,

Audio Cable (Not supplied).....



6.3. FM Antenna Connection

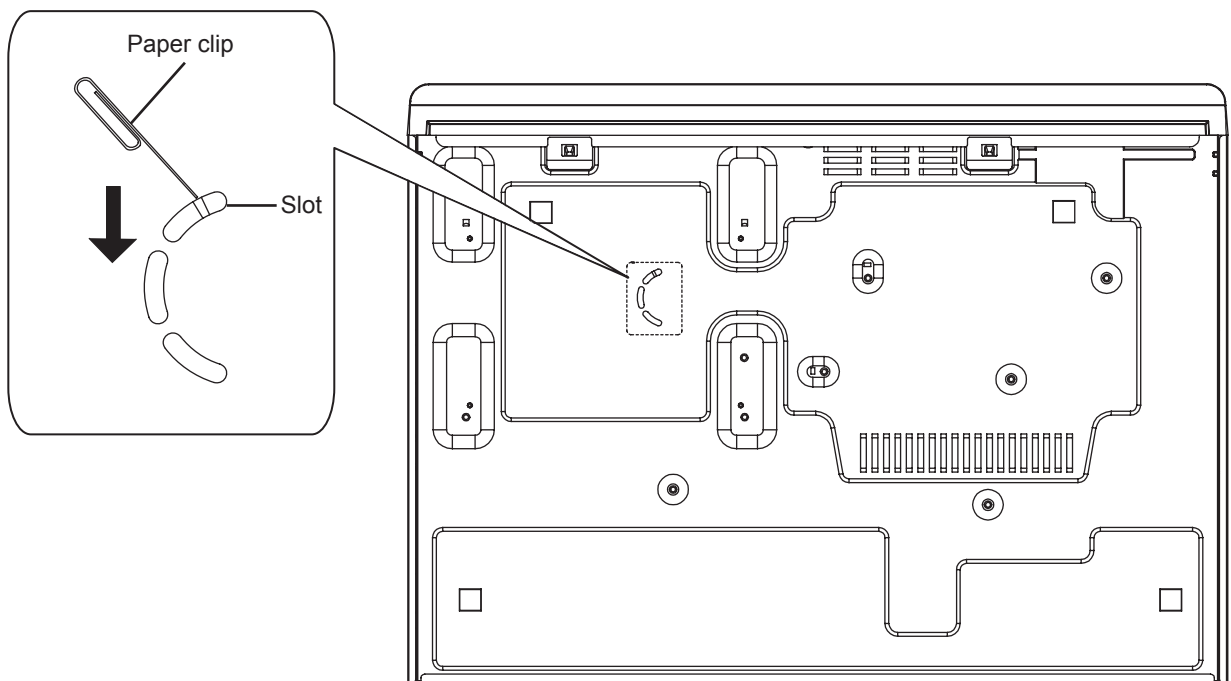


7 Operating Instruction

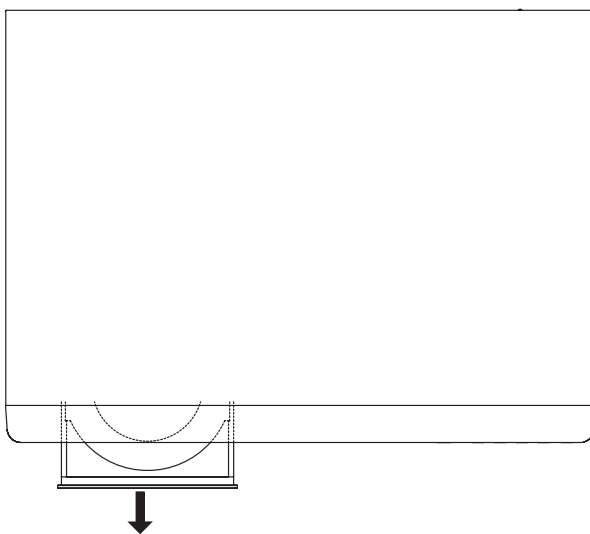
7.1. Take out the Disc from the Drive Unit when the Disc cannot be ejected by the OPEN/CLOSE button

7.1.1. When the Disc Eject can not be done.

1. Turn off the power and pull out the AC cord.
2. Put the unit upside down so that the bottom can be seen.
3. Insert the paper clip into the slot and slide the gear in the direction of the arrow to eject the tray slightly.



4. Put the unit upward, and pull out the tray.



8 Troubleshooting Guide

8.1. About Operation of Set

General operation

To return to the factory defaults.

- Select "Restore" in "Default" in the Setup menu.

To return all settings to the factory preset.

- Reset the unit as follows:
 - ① Turn the unit on.
 - ② Press [▲] to open the disc tray.
 - ③ Press and hold [■] and [▶/III] on the main unit at the same time for more than 5 seconds.

You have forgotten your ratings password.
You want to cancel the ratings level.

- The ratings level returns to the factory defaults.
 - Restore the default settings following the steps described in "To return all settings to the factory preset." (⇒ above)

This unit does not recognize the USB connection correctly.

- Disconnect and re-connect the USB cable. If it still does not recognize the connection, turn this unit off and on again.
- USB devices may not be recognized by this unit when connected using the following :
 - a USB hub
 - a USB extension cable
- If you connect USB HDD to this unit, use the USB cable that is supplied with the HDD.

Picture

The images from this unit do not appear on the TV.

Picture is distorted.
Jittering occurs.

- The "Resolution" setting is incorrect or the "TV System" setting of the unit and that of the TV do not match.
 - Restore the default settings.
- PAL discs cannot be correctly viewed on an NTSC TV.
- If irregular colouring occurs on your TV, turn the TV off for about 30 minutes.
If it persists, move the speakers further away from the TV.

Sound

No sound.

Low volume.

Distorted sound.

Cannot hear the desired audio type.

- Depending on the connected equipment, the sound may be distorted if this unit is connected with an HDMI cable.

Playback

Disc cannot be played.

- The disc is dirty.

Alternative subtitles cannot be selected.

- You may not be able to use the Option menu to change the subtitles on some discs. Use the disc's menus to make changes.

Radio

Distorted sound or noise is heard.

- Adjust the position of the antenna.

A beat sound is heard.

- Try to keep a certain amount of distance between the antenna and the TV.

Messages on the screen

Error Disc

- You inserted an incompatible disc.
- The disc may be upside down.

⊘ This operation is not available.

- Some operations are unsupported by the unit.

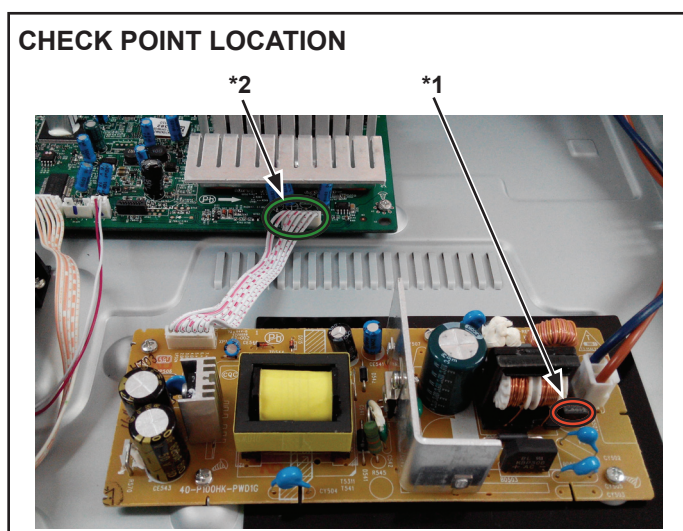
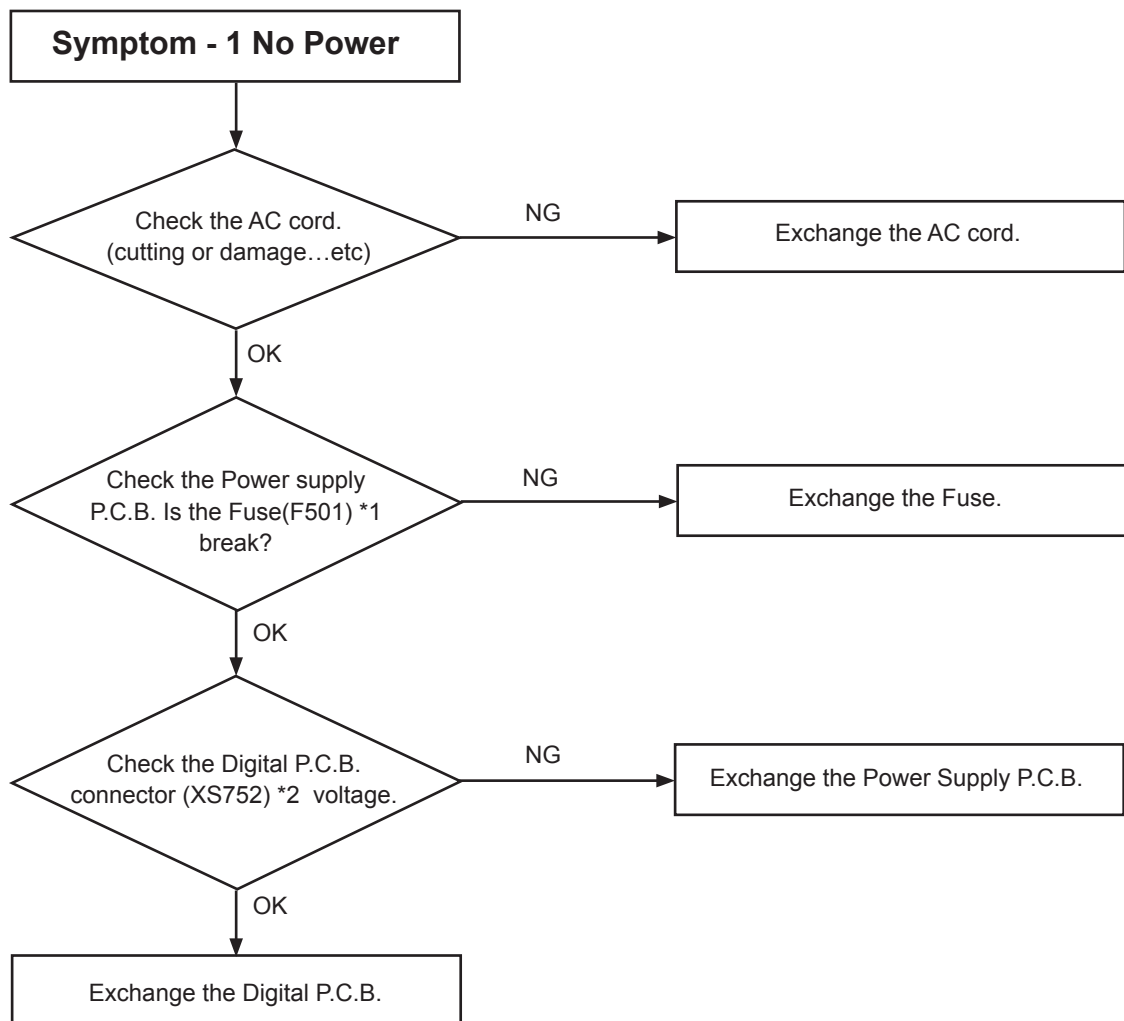
Unit's display list

This list only contains displays that are difficult to read.

Display	Reading	Display	Reading
OFF	OFF	OPEN	OPEN
LOAD	LOAD	MUTE	MUTE
STOP	STOP	SETUP	SETUP
DISC	DISC	USB	USB
AUX	AUX	ERASE	ERASE
UPD	UPD (Update)	DONE	DONE
ERR	ERR (Error)	-----	No DISC, No PLAY, No READ, UNSUPPORT

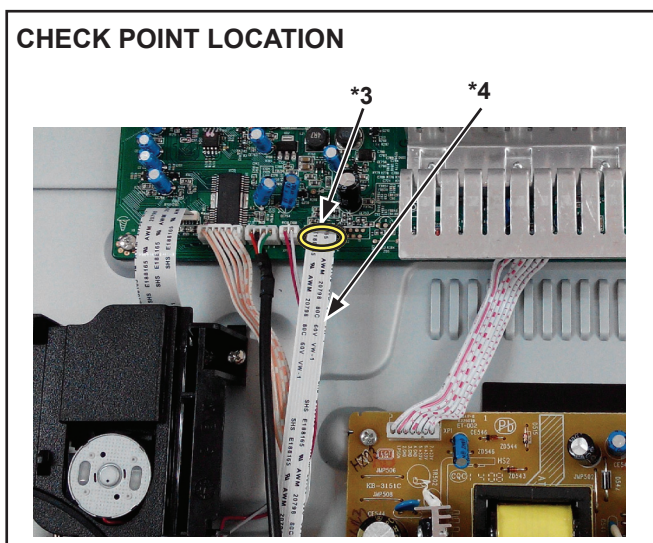
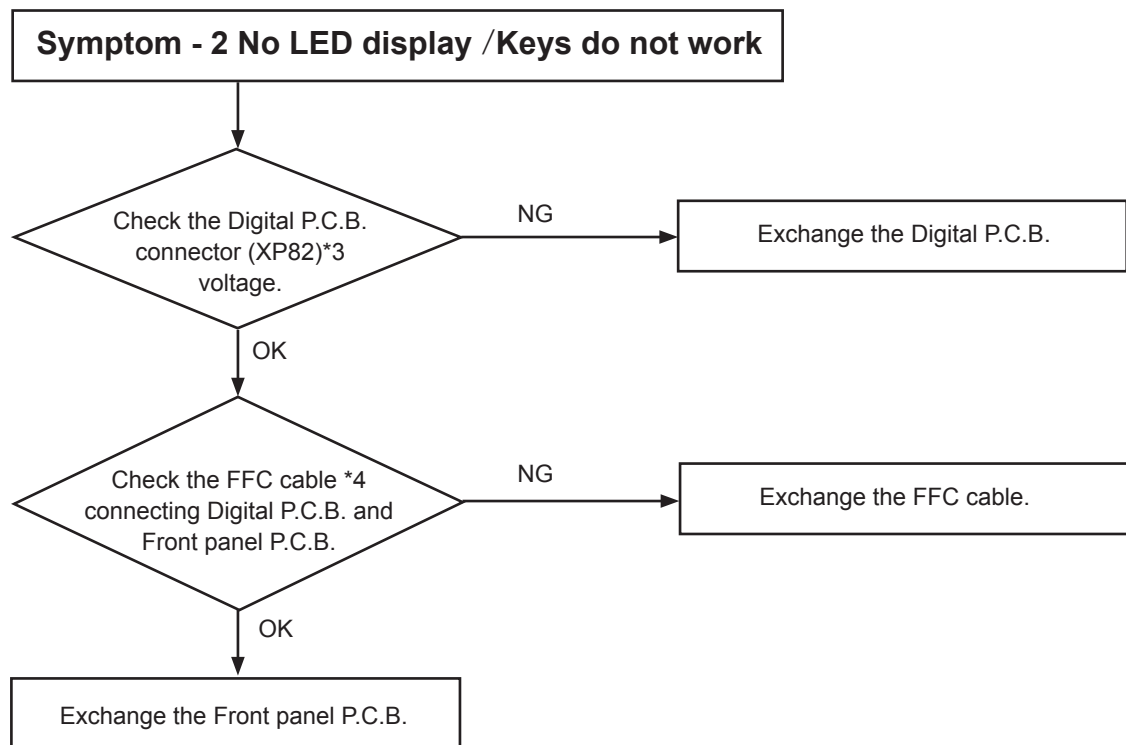
8.2. About Circuit

Before the syptom check remove the power cable and reinsert it after 10 sec. If the unit is still NG, please refer to below syptoms.



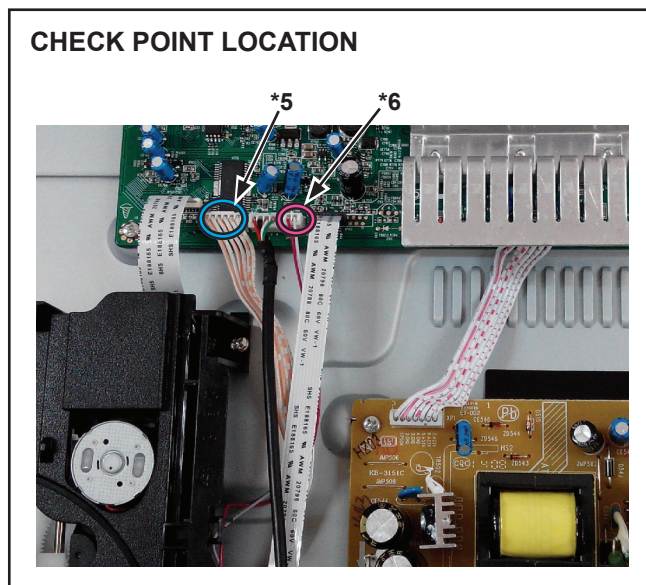
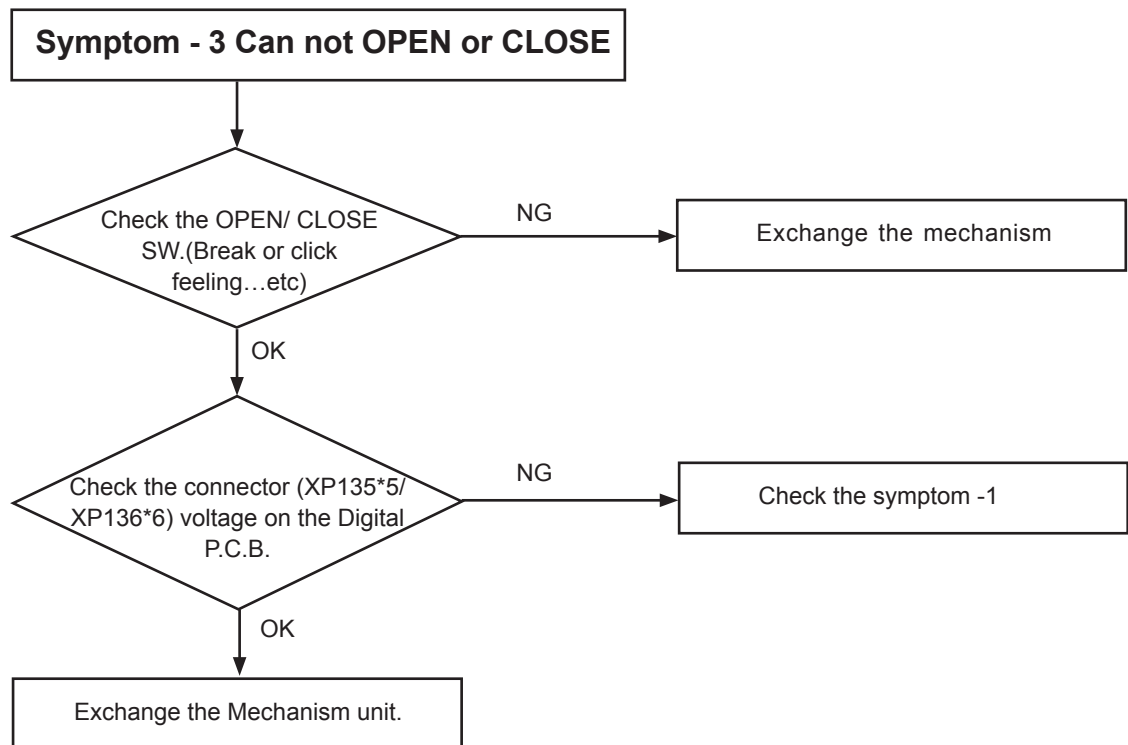
VOLTAGE DATA (measurement value)

*2	
	
1	0V
2	GND
3	GND
4	GND
5	34.5V
6	34.5V
7	34.5V



VOLTAGE DATA (measurement value)

*3	
1	5.1V
2	GND
3	5.1V
4	2.7V
5	2.8V
6	3.0V
7	5.1V
8	5.1V



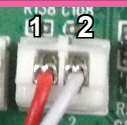
VOLTAGE DATA (measurement value)

***5**

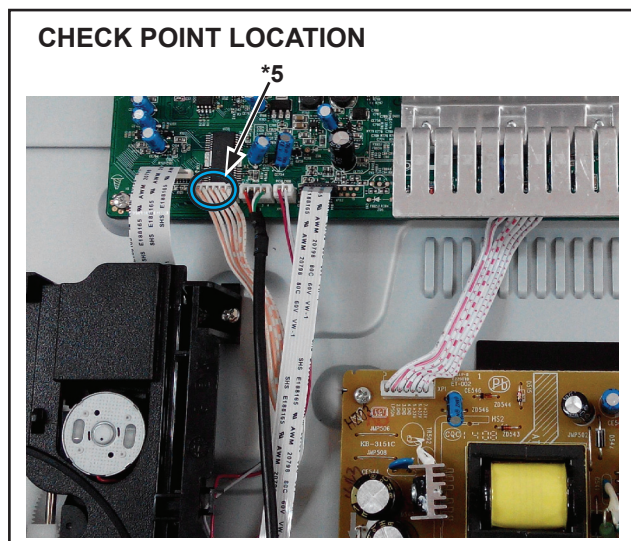
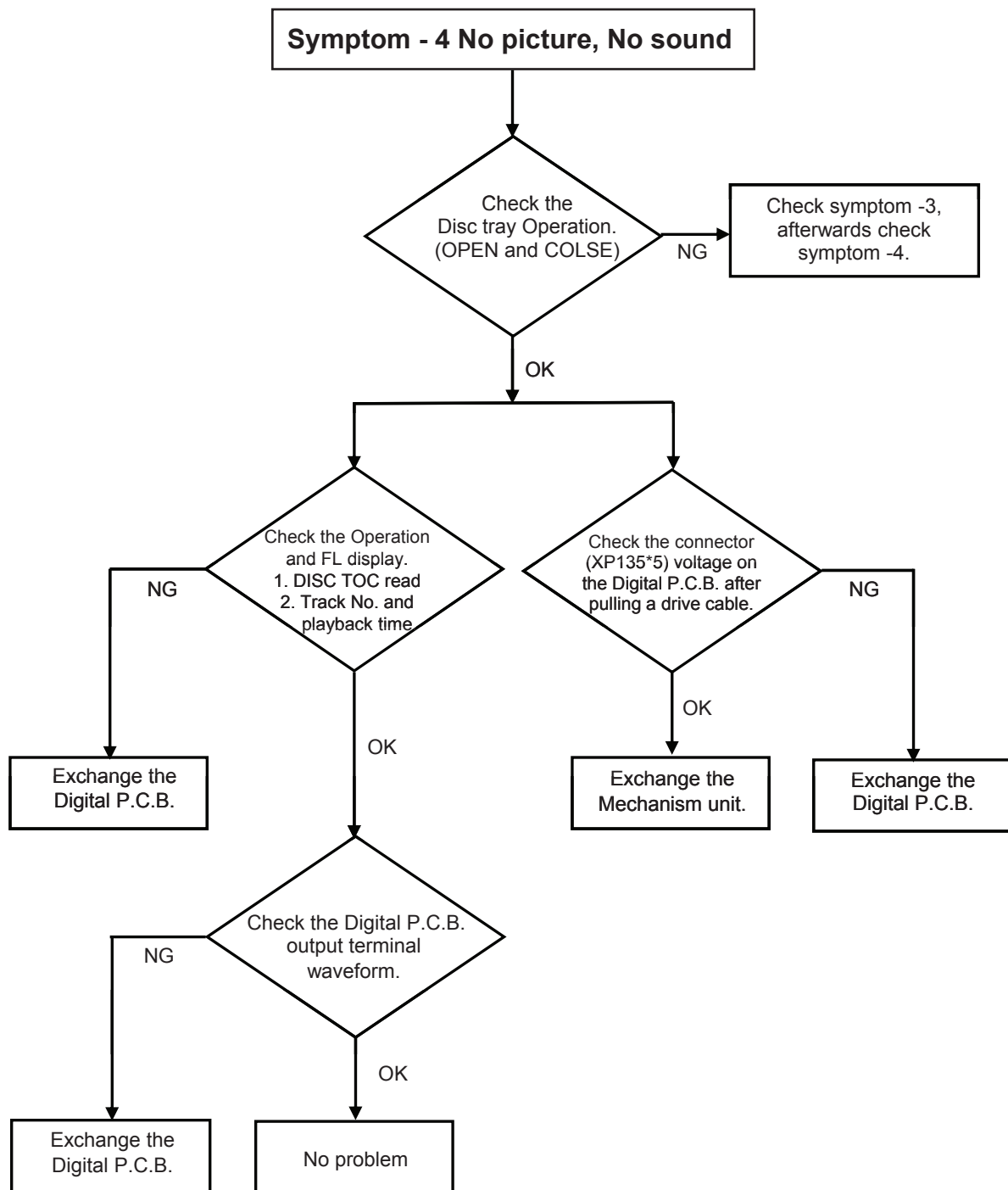


1	1.5V
2	3.5V
3	3.3V
4	GND
5	2.6V
6	2.4V

***6**



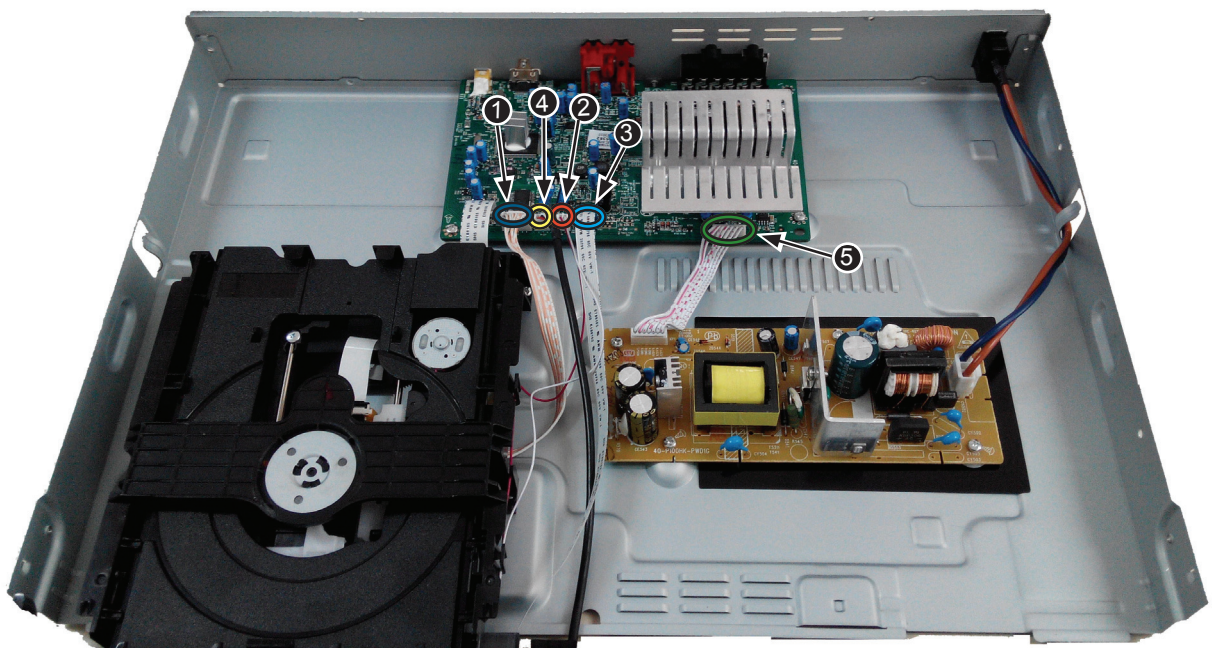
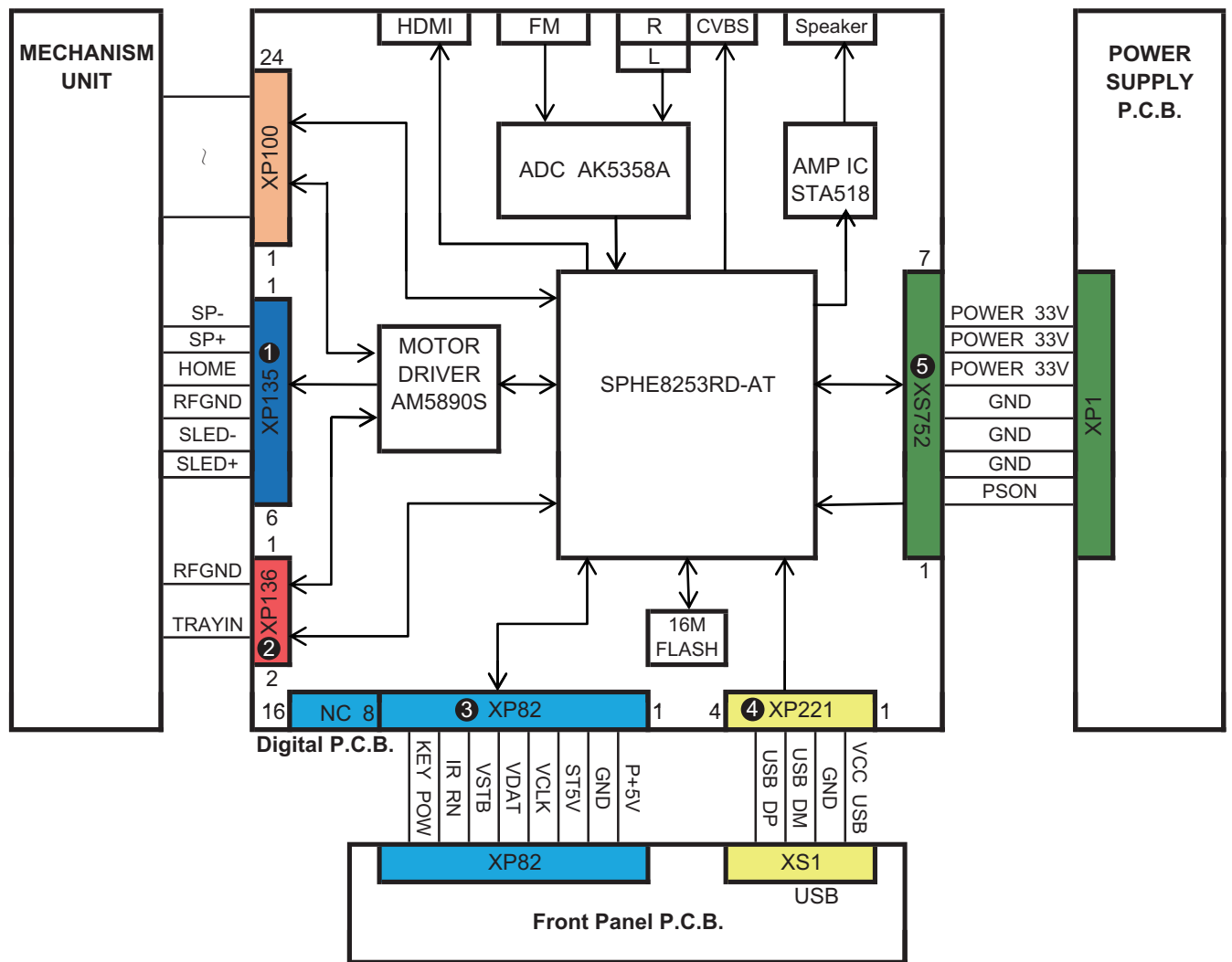
1	GND
2	3.3V



VOLTAGE DATA (measurement value)

*5	
	
1	1.5V
2	3.5V
3	3.3V
4	GND
5	2.6V
6	2.4V

9 Wiring Connection and Voltage Data



SA-XH105GA/GS VOLTAGE DATA (measurement value)

①	PIN NO.	VALUE
	1	1.5V
	2	3.5V
	3	3.3V
	4	GND
	5	2.6V
	6	2.4V

②	PIN NO.	VALUE
	1	GND
	2	3.3V

③	PIN NO.	VALUE
	1	5.1V
	2	GND
	3	5.1V
	4	2.7V
	5	2.8V
	6	3.0V
	7	5.1V
	8	5.1V

④	PIN NO.	VALUE
	1	5.1V
	2	GND
	3	0V
	4	0V

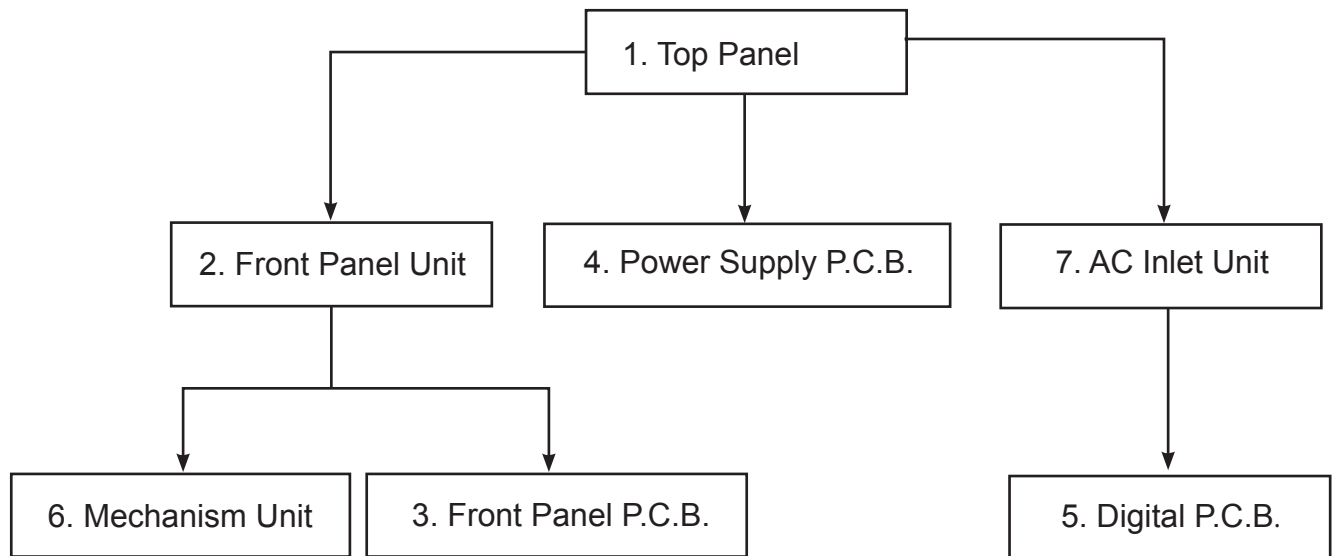
⑤	PIN NO.	VALUE
	1	0V
	2	GND
	3	GND
	4	GND
	5	34.5V
	6	34.5V
	7	34.5V

10 Disassembly and Assembly Instructions

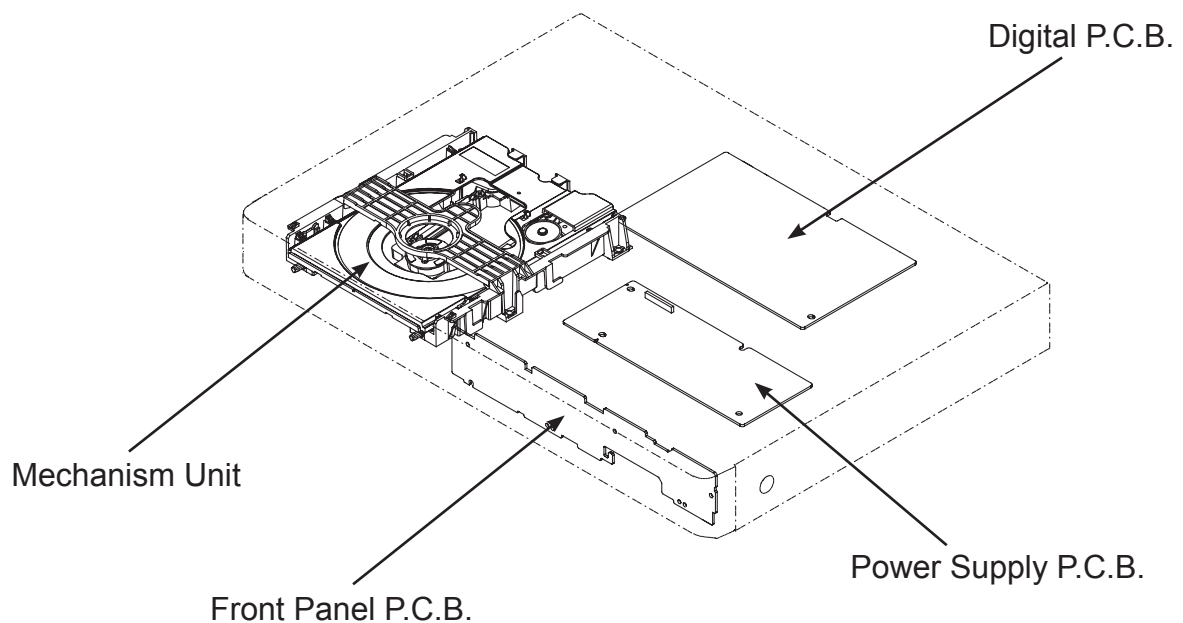
10.1. Disassembly Flow Chart

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.



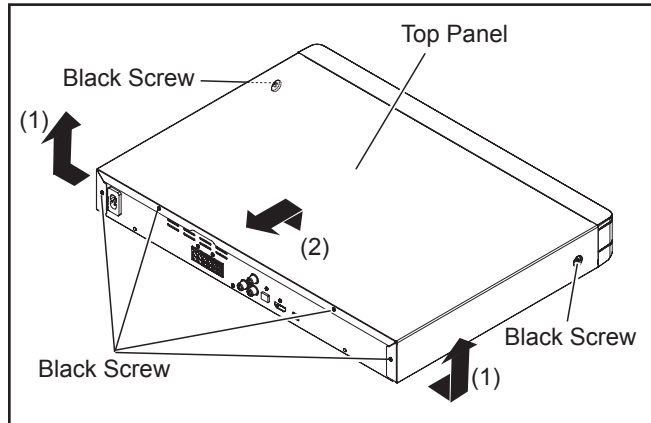
10.2. P.C.B. Positions



10.3. Disassembly Procedure

10.3.1. Top Panel

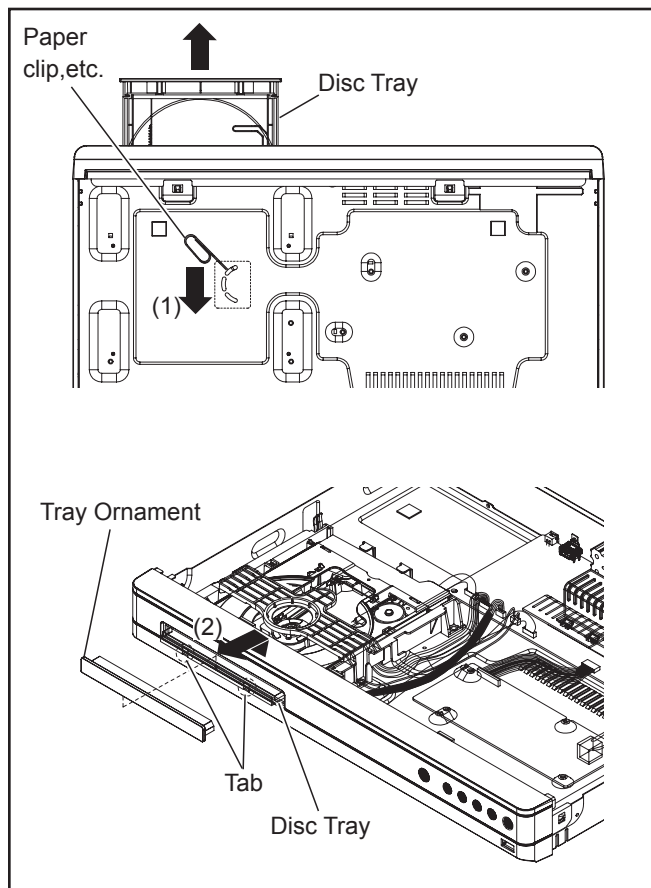
1. Remove the 6 Black Screws.
2. Open the both ends at the rear side of the Top Panel in the direction of arrow (1), then pull up the top panel in the direction of arrow (2) to remove it.



10.3.2. Front Panel Unit

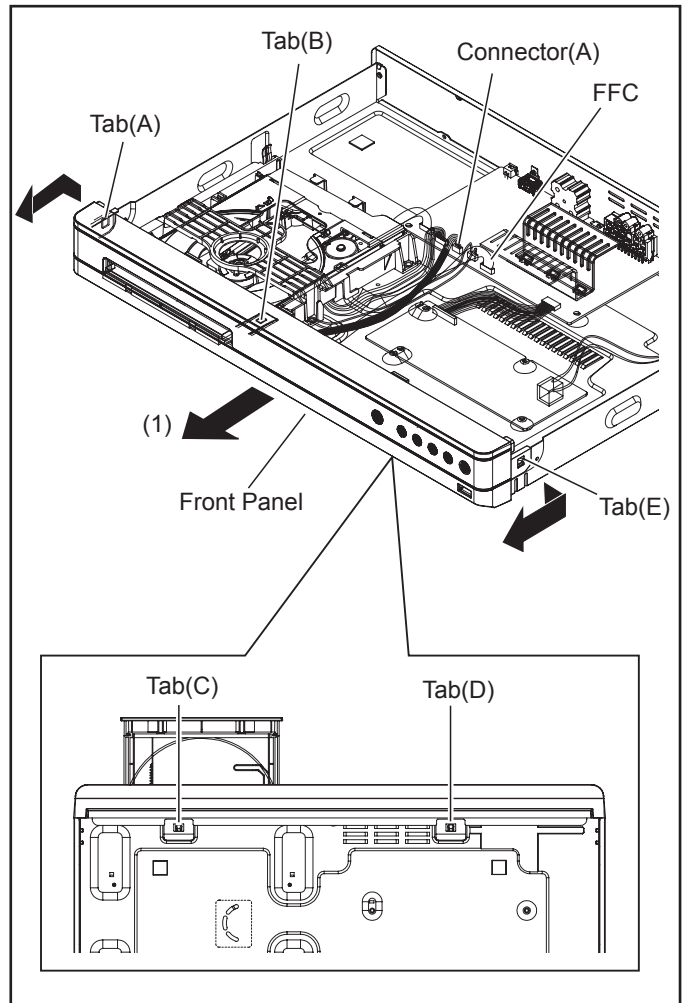
10.3.2.1. Tray Ornament

1. Insert paper clips, etc. into the hole on the unit bottom, then slide the gear in the direction of arrow (1) to eject the tray slightly.
2. Unlock 2 tabs.
3. Pull the Tray Ornament in direction of arrow (2).



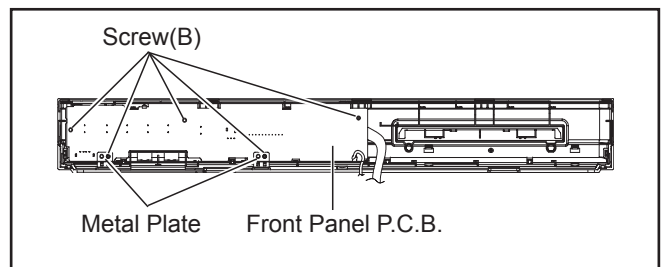
10.3.2.2. Front Panel Unit

1. Disconnect the connector (A) and FFC cable.
2. Unlock 5 tabs (A) - (E).
3. Pull the Front Panel Unit in the direction (1).



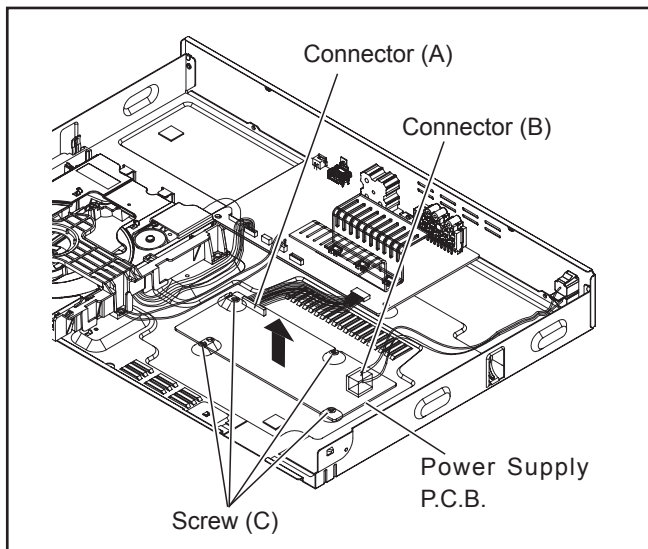
10.3.3. Front Panel P.C.B.

1. Remove 5 Screws (B).
2. Remove two Metal Plates to remove the Front Panel P.C.B.



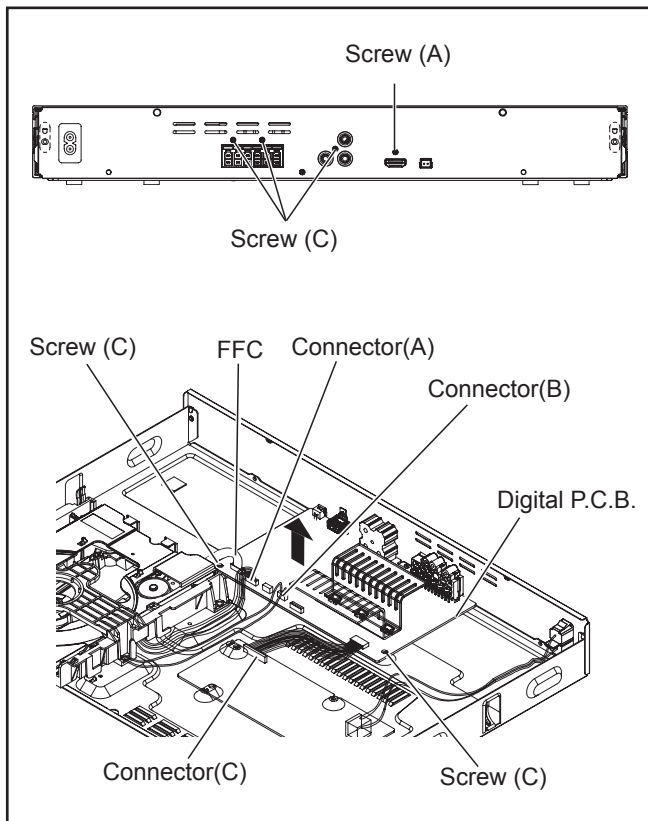
10.3.4. Power Supply P.C.B.

1. Disconnect the connector (A) and connect (B).
2. Remove 4 Screws (C) to remove the Power Supply P.C.B..



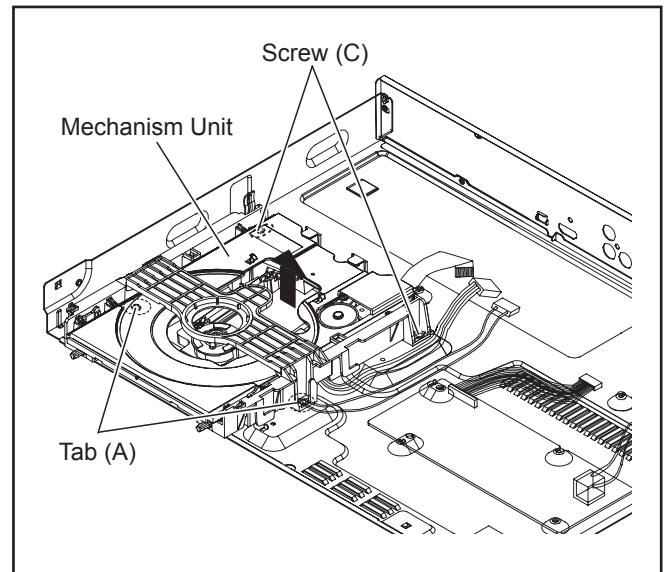
10.3.5. Digital P.C.B.

1. Remove 5 Screws (C) and 1 Screw (A) on the back panel.
2. Disconnect FFC cable and connector (A), (B) and (C).
3. Lift upward the Digital P.C.B. to remove it.



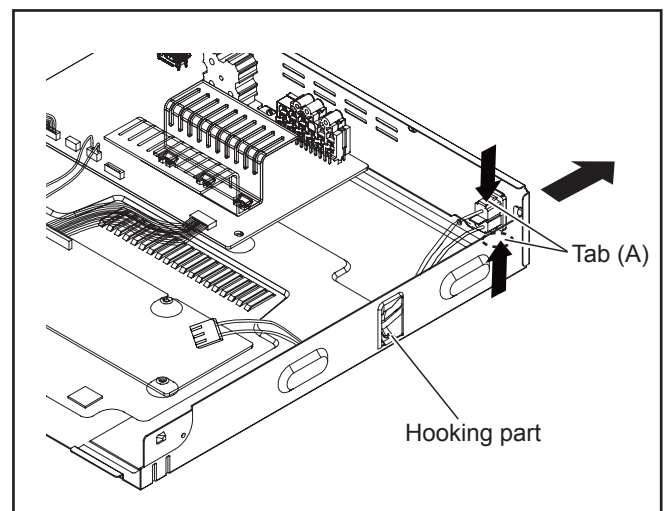
10.3.6. Mechanism Unit

1. Remove 2 Screws (C) .
2. Lift upward the Mechanism unit to remove it.
(When assembling, first set the Mechanism unit to tabs (A) then tighten the 2 Screws (C).)



10.3.7. AC Inlet Unit

1. Detach the lead wires fixed at the hooking part.
2. Unlock the 2 tabs (A) and remove the AC Inlet Unit.



11 Replacement Parts List and Exploded View

11.1. Replacement Parts List

Notes:

*Important safety notice:

Components identified by  mark have special characteristics important for safety.

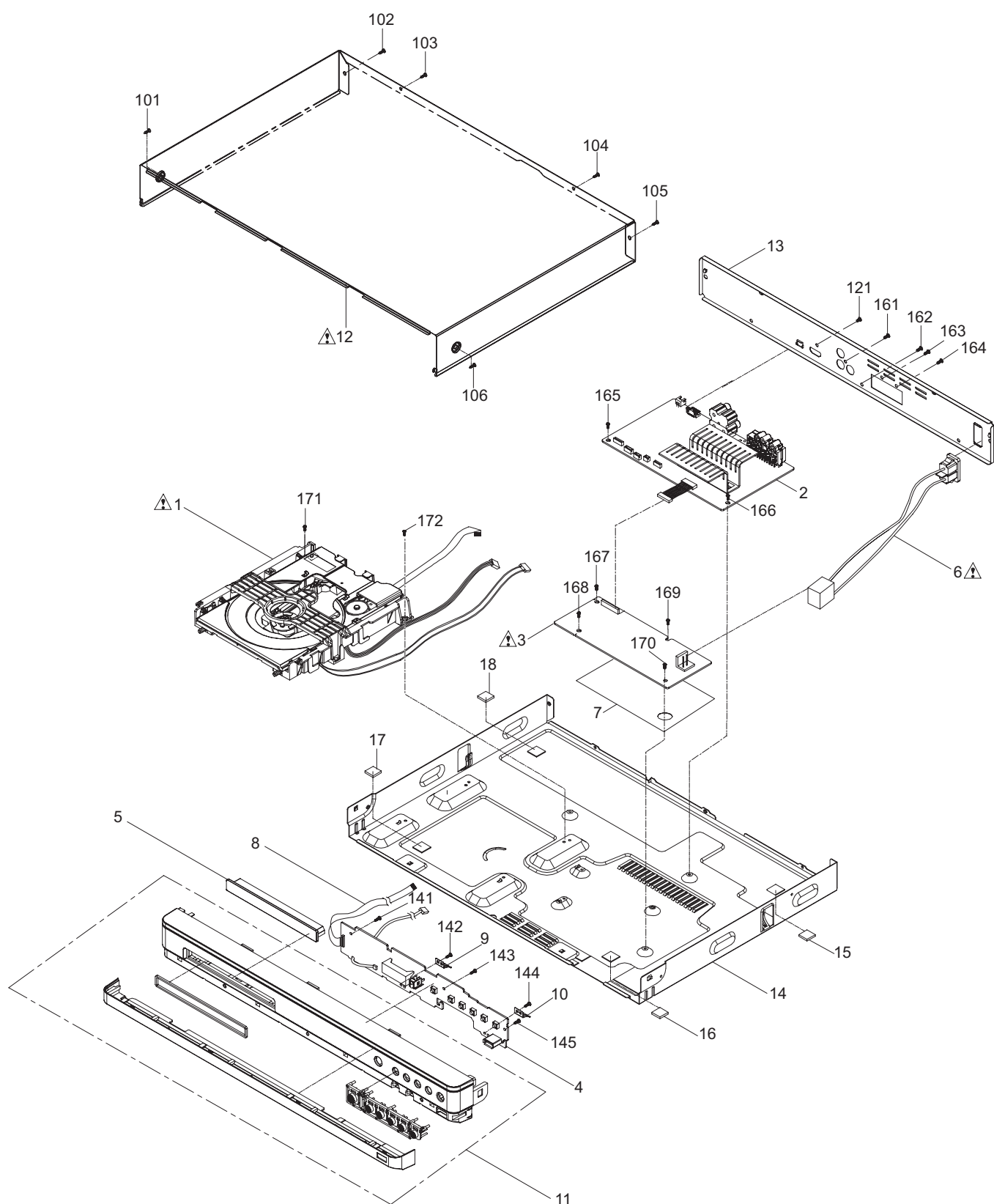
When replacing any of components, be sure to use only manufacture's specified parts shown in the parts list.

*Parts marked with [PJM] in the remarks column are supplied by PAVJM, others are supplied by PHK.

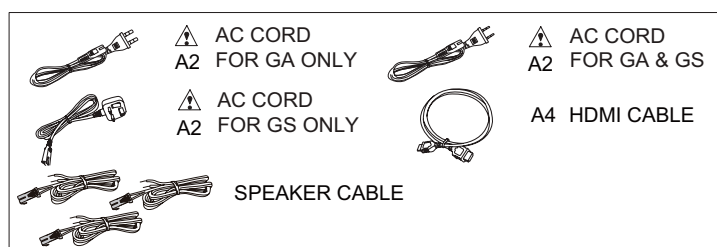
Safety	Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
	1	VXY2211	MECHANISM UNIT	1	
	2	REP1660CA	DIGITAL P.C.B.UNIT	1	XH166GA
	2	REP1660CB	DIGITAL P.C.B.UNIT	1	XH166GS
	3	REP1051F	POWER SUPPLY P.C.B.UNIT	1	
	4	REP1050N	FRONT P.C.B. UNIT	1	
	5	RGK2583-K	TRAY ORNAMENT	1	
	6	REK0124	AC INLET UNIT	1	
	7	RMV0440	INSULATION SHEET	1	
	8	REZ2119	FFC	1	
	9	RMC0830	METAL PLATE	1	
	10	RMC0830	METAL PLATE	1	
	11	RYP2009D-K	FRONT PANEL UNIT	1	
	12	RKM0762-K	TOP PANEL	1	
	13	RGR0465D-A	REAR CABINET	1	XH166GA
	13	RGR0465D-B	REAR CABINET	1	XH166GS
	14	RMK0882B	BOTTOM CABINET	1	
	15	RKA0327-K	RUBBER LEG	1	
	16	RKA0327-K	RUBBER LEG	1	
	17	RKA0327-K	RUBBER LEG	1	
	18	RKA0327-K	RUBBER LEG	1	
	101	RHD30210	BLACK SCREW	1	
	102	RHD30210	BLACK SCREW	1	
	103	RHD30210	BLACK SCREW	1	
	104	RHD30210	BLACK SCREW	1	
	105	RHD30210	BLACK SCREW	1	
	106	RHD30210	BLACK SCREW	1	
	121	RHD30211	SILVER SCREW (A)	1	
	141	RHD26077	SILVER SCREW (B)	1	
	142	RHD26077	SILVER SCREW (B)	1	
	143	RHD26077	SILVER SCREW (B)	1	
	144	RHD26077	SILVER SCREW (B)	1	
	145	RHD26077	SILVER SCREW (B)	1	
	161	RHD30212	SILVER SCREW (C)	1	
	162	RHD30212	SILVER SCREW (C)	1	
	163	RHD30212	SILVER SCREW (C)	1	

Safety	Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
	164	RHD30212	SILVER SCREW (C)	1	
	165	RHD30212	SILVER SCREW (C)	1	
	166	RHD30212	SILVER SCREW (C)	1	
	167	RHD30212	SILVER SCREW (C)	1	
	168	RHD30212	SILVER SCREW (C)	1	
	169	RHD30212	SILVER SCREW (C)	1	
	170	RHD30212	SILVER SCREW (C)	1	
	171	RHD30212	SILVER SCREW (C)	1	
	172	RHD30212	SILVER SCREW (C)	1	
	A1	N2QAYB000974	REMOTE CONTROLLER	1	
	A2	K2CP2YY00073	AC CORD	1	XH166GA
	A2	K2CT2YY00106	AC CORD	1	XH166GS
	A2	K2CQ2YY00130	AC CORD	1	XH166GA/GS
	A3	RSA0044	FM ANTENNA	1	
	A4	K1HA19CY0001	HDMI CABLE	1	
	A5	VQT5F14	OPERATING INSTRUCTIONS (En)	1	XH166GA/GS
	A5	VQT5F15	OPERATING INSTRUCTIONS (Ar, Pe)	1	XH166GS
	A5	VQT5F17	OPERATING INSTRUCTIONS (Cn)	1	XH166GA
	A6	VQT5G40	QSG(O/I (Preparation Ver.)) (En, Cn, Ar, Pe)	1	
	A7	RQCXA1002	SPEAKER CABLE STICKER	1	PJM
	P1	RPG0N49	PACKING CASE	1	XH166GA
	P1	RPG0N50	PACKING CASE	1	XH166GS
	P2	SVKU000020	POLYFOAM (LEFT)	1	
	P3	SVKU000021	POLYFOAM (RIGHT)	1	
	P4	RPF0730	MIRROR BAG	1	

11.2. Casing Parts & Mechanism Section



11.3. Packing & Accessories Section



ACCESSORIES BAG	
	A3 FM INDOOR ANTENNA
	A5 OI BOOK
	A6 QSG (OI PREPARATIOPN VER.)
	A7 SPEAKER CABLE STICKER
	BATTERIES (NOT SUPPLIED)
	SCREWS (NOT SUPPLIED)

