

# Service Manual

## Network Audio Player

Model No. **ST-C700EB**  
**ST-C700EG**  
**ST-C700GN**  
**ST-C700PP**

Product Color: (S)...Silver 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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# 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  $\triangle$  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.
- 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.
- 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.
- After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
- After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

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

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

### 1.1.1. Leakage Current Cold Check

- Unplug the AC cord and connect a jumper between the two prongs on the plug.
- 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  $1M\Omega$  and  $5.2M\Omega$ .  
When the exposed metal does not have a return path to the chassis, the reading must be  $\infty$

### 1.1.2. Leakage Current Hot Check

- Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
- Connect a  $1.5k\Omega$ , 10 watts resistor, in parallel with a  $0.15\mu F$  capacitors, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure 1-1.
- Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
- Check each exposed metallic part, and measure the voltage at each point.
- Reverse the AC plug in the AC outlet and repeat each of the above measurements.
- 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. 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.

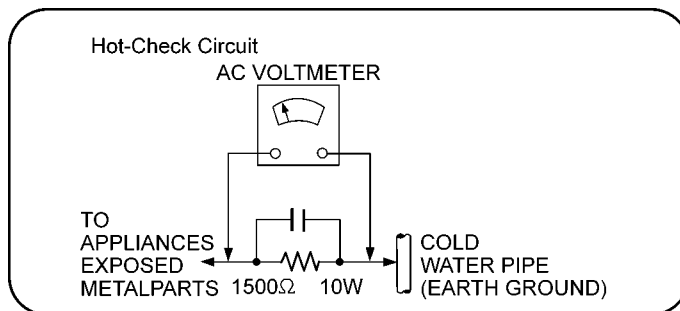


Figure 1-1

## 1.2. Before Repair and Adjustment

Disconnect Power Supply AC to discharge AC capacitor as indicate in SMPS P.C.B. through a 10 W, 10 W resistor to ground.

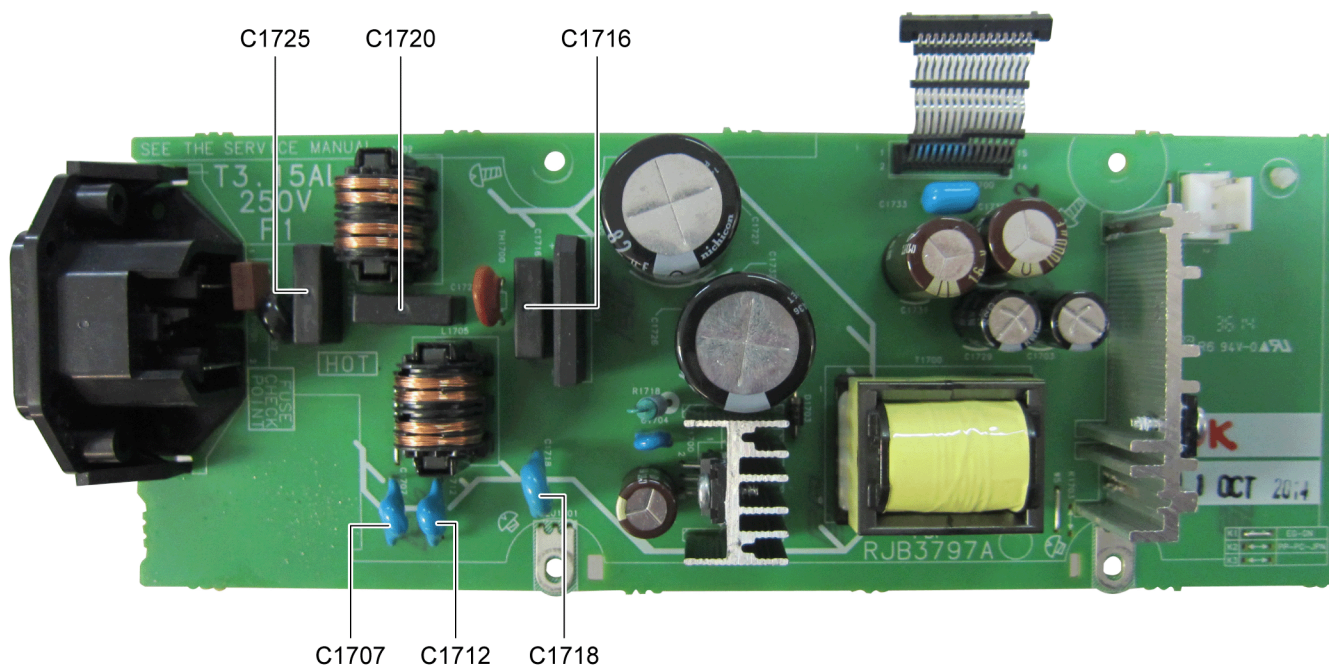


Figure 1-2

### Caution:

DO NOT SHORT-CIRCUIT DIRECTLY (with a screwdriver blade, for instance), as this may destroy solid state devices. After repairs are completed, restore power gradually using a variac to avoid overcurrent.

- Current consumption at AC 220V - 240V, should be  $\sim 70 \pm 5\text{mA}$  during power on. (In Standby mode) should be  $\sim 0.20\text{W}$ . (EB/EG/ GN)
- Current consumption at AC 120V, should be  $\sim 600 \pm 20\text{mA}$  during power on. (In Standby mode) should be  $\sim 0.20\text{W}$ . (PP)

## 1.3. Protection Circuitry

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

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

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

If this occurs, follow the procedure outlines below:

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

### Note:

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

## 1.4. Caution For AC Cord (For EB)

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

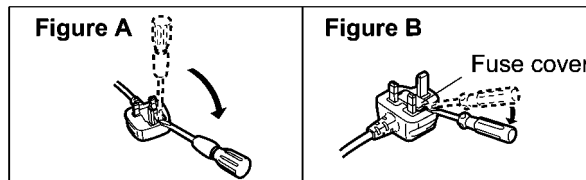
Remove the connector cover.

### 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.

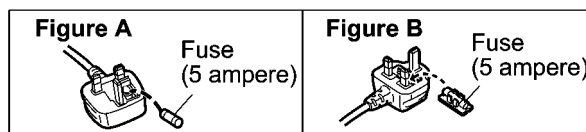

















Figure 1-3

## 1.5. Safety Parts Information

### Safety Parts List:

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

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

Safety	Ref No.	Part No.	Part Name & Description	Remarks
	13	RGR0464A-A5	REAR PANEL	EB, EG, GN
	13	RGR0464B-B4	REAR PANEL	PP
	27	RMV0447	SMPS SHEET	
	A2	K2CB2YY00098	AC CORD	PP
	A2	K2CJ2YY00097	AC CORD	GN
	A2	K2CQ2YY00127	AC CORD	EG
	A2	K2CT2YY00103	AC CORD	EB
	A3	SQT0492	OI (En)	EB, GN
	A3	SQT0493	OI (Ge, Fr, It, Du)	EG
	A3	SQT0494	OI (Sw, Da, Fi, Sp)	EG
	A3	SQT0495	OI (En)	PP
	A3	SQT0496	OI (Cf)	PP
	PCB7	REP5095A	SMPS P.C.B	EB, EG, GN
	PCB7	REP5095B	SMPS P.C.B	PP

## 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 anti-static solder removal device. Some solder removal devices not classified as "anti-static (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

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### 2.2. 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%

**2.3. Grounding 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.

**2.3.1. Worktable grounding**

- Put a conductive material (sheet) or iron sheet on the area where the optical pickup is placed and ground the sheet.

**2.3.2. Human body grounding**

- Use the anti-static wrist strap to discharge the static electricity form your body Figure 2-1.

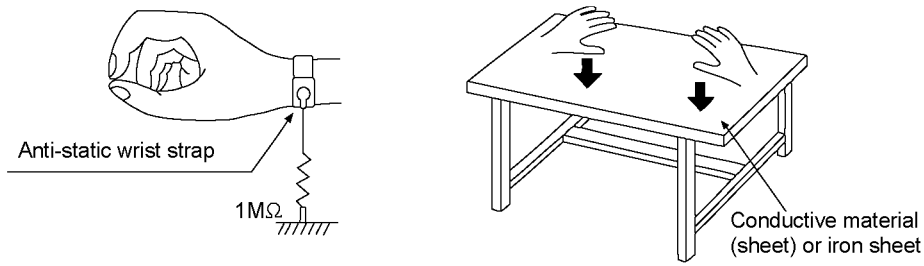


Figure 2-1



## 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.

- **PCB Replacement**

BT P.C.B. and Touch Sensor P.C.B. should be replaced at the same time as a pair. After replacement, please check NFC and Bluetooth operation.

# 4 Specifications

## ■ General

<b>Power supply</b>	AC 220 V to 240 V, 50/60 Hz (EB/EG/GN) AC 120 V, 60 Hz (PP)
<b>Power consumption</b>	26 W
<b>Power Consumption in standby mode*1</b>	
(When "Network Standby" is off)	Approx. 0.2 W
(When "Network Standby" is on)	Approx. 4 W
<b>Power Consumption in off mode</b>	Approx. 0.2 W
<b>Dimensions (W x H x D)</b>	340 mm x 78 mm x 305 mm (13 3/8" x 3 1/16" x 11 5/8")
<b>Mass</b>	Approx. 4.0 kg (8.8 lbs)
<b>Operating temperature range</b>	0 °C to +40 °C (+32 °F to +104 °F)
<b>Operating humidity range</b>	35% to 80% RH (no condensation)

## ■ Terminals section

<b>Analogue output</b>	
LINE OUT	Pin jack
<b>Digital output</b>	
Optical digital output	Optical terminal
Coaxial digital output	Pin jack
<b>System port</b>	
System control	Ø3.5 mm (1/8") jack
<b>USB</b>	
Front USB	Type A connector
Support memory capacity	2 TB (max)
Maximum number of folders (albums)	800
Maximum number of files (songs)	8000
File system	FAT16, FAT32
USB port power	DC OUT 5 V 2.1 A (max)
<b>PC</b>	
Rear USB	Type B connector
<b>Ethernet interface</b>	
LAN	10 Base-T/100 Base-TX

## ■ Format section

<b>USB-A</b>	
USB standard	USB 2.0 high-speed
USB Mass Storage class	
<b>USB-B</b>	
USB standard	USB 2.0 high-speed
USB Audio Class specification	USB Audio Class 2.0, Asynchronous mode
DSD control mode	ASIO Native mode, DoP mode DSD64/DSD128 playback

## ■ Analogue Output section

<b>Channel</b>	2 ch
<b>Output level</b>	
LINE OUT	2.0 Vrms
<b>Frequency response</b>	2 Hz to 90 kHz (—3 dB)
<b>THD+N</b>	0.0012 % (1 kHz, 0 dB)
<b>S/N</b>	112 dB (IHF-A)
<b>Dynamic range</b>	112 dB (IHF-A)

## ■ Bluetooth®/NFC section

<b>Bluetooth®</b>	
Bluetooth® system specification	Bluetooth® Ver.3.0
Wireless equipment classification	Class 2 (2.5 mW)
Supported profiles	A2DP/AVRCP

Supported codec	aptX® Low Latency, AAC, SBC
Frequency band	2.4 GHz band FH-SS
Operating distance	About 10 m Line of sight*2

## ■ Tuner section (EB/EG/GN)

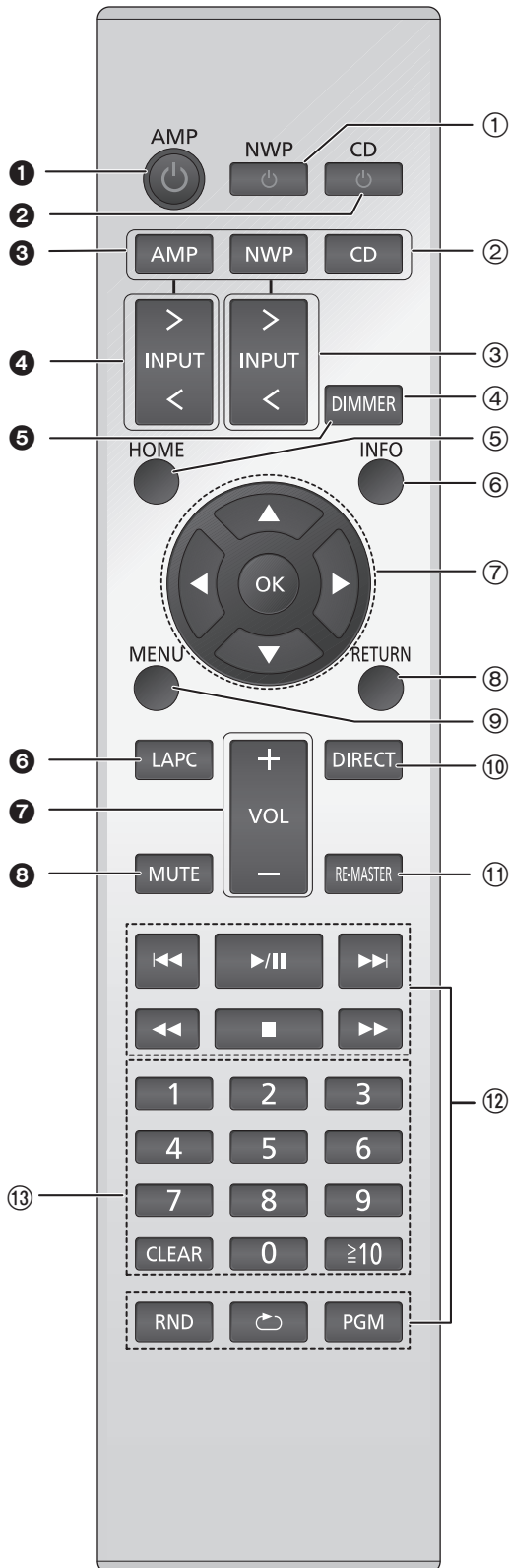
<b>Frequency modulation (FM)</b>	
Preset memory	30 stations
Frequency range	87.50 MHz to 108.00 MHz (50 kHz step)
Antenna terminals	75 Ω (unbalanced)
<b>DAB</b>	
DAB memories	20 channels
Frequency band (wavelength)	
Band III (All Band III)	5A to 13F (174.928 MHz to 239.200 MHz)
<b>Sensitivity</b>	
Min requirement	—98 dBm
DAB external antenna terminal	F-Connector (75 Ω)

### Note:

- Specifications are subject to change without notice. Mass and dimension are approximate.
  - Total harmonic distortion is measured by the digital spectrum analyzer.
- \*1 When the iPhone/iPad/iPod is not charging  
\*2 Prospective communication distance  
Measurement environment: Temperature 25 °C (77 °F)/ Height 1.0 m (3.3 ft)  
Measure in "Mode 1"

# 5 Location of Controls and Components

## 5.1. Remote Control Key Button Operation



### ■ Buttons that work for this unit

- ① **[NWP ]: 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.
  - The remote control do not operate when the power switch lever is in the lowered position.
- ② **[AMP]/[NWP]/[CD]: Select the device to be operated**
- ③ **[> INPUT <]: Select the input source**
- ④ **[DIMMER]: Adjust the brightness of the display, etc.**
- ⑤ **[HOME]: Display HOME menu**
- ⑥ **[INFO]: View content information**  
Press this button to display the track, artist, and album names, file type, sampling frequency, and other information.
- ⑦ **[▲, ▼, ◀, ▶]/[OK]: Selection/OK**
- ⑧ **[RETURN]: Return to the previous display**
- ⑨ **[MENU]: Enter menu**
- ⑩ **[DIRECT]: Turn on/off Direct mode**
- ⑪ **[RE-MASTER]: Turn on/off Re-master**
- ⑫ **Basic playback control buttons**
- ⑬ **Numeric buttons, etc.**
  - To select a 2-digit number  
Example:  
16: [≥10] → [1] → [6]
  - To select a 4-digit number  
Example:  
1234: [≥10] → [≥10] → [≥10] → [1] → [2] → [3] → [4]
  - [CLEAR]: Clear the entered value.

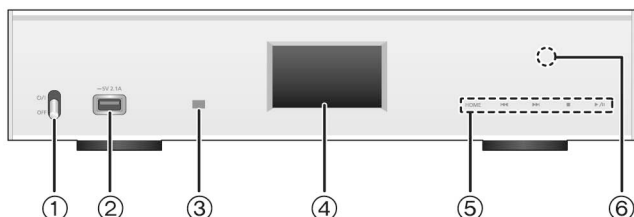
### ■ Buttons that work for the SU-C700/SL-C700

The remote control of this unit also works for the SU-C700/SL-C700.  
For information on the operations of the SU-C700/SL-C700, please also refer to their operating instructions.

- ① Standby/on switch for the SU-C700
- ② Standby/on switch for the SL-C700
- ③ Select the device to be operated
- ④ Select the input source of the SU-C700
- ⑤ Adjust the brightness of the display, etc.
- ⑥ Measure the characteristics of the amplifier and correct its output
- ⑦ Adjust the volume
- ⑧ Mute the sound

## 5.2. Main Unit Key Button Operation

### ■ Front



#### ① Power switch lever

Turn on/off this unit.

- The remote control do not operate when the power switch lever is in the lowered position.

#### ② Port for iPhone/iPad/iPod and USB devices

#### ③ Remote control signal sensor

Distance: Within approx. 7 m directly in front  
Angle: Approx. 30° left and right

#### ④ Display

#### ⑤ Basic control switches

These switches work just by touching the marks. Each time you touch the switch, there will be a beep sound.

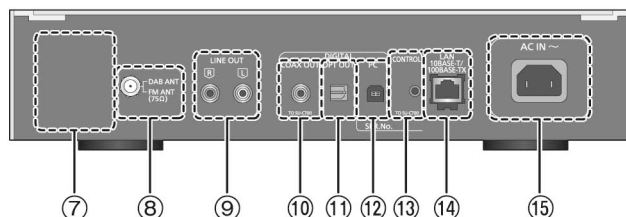
- When playback information is not shown on the display (except in NFC registration standby mode), you can perform the following operations on the touch panel:

⏮	▲ (Up)
⏭	▼ (Down)
▶/⏸	OK (OK)
■	RETURN (Return)
HOME (Touch and hold)	MENU (Enter menu)

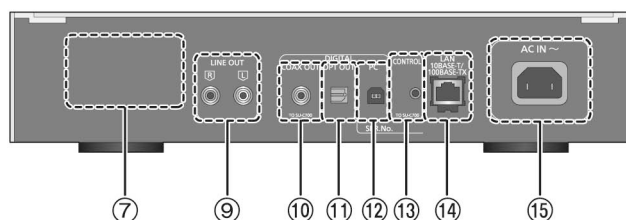
#### ⑥ NFC touch area

The NFC touch area sheet is attached to this area at the time of purchase.

### ■ Rear (For EB/EG/GN)



### ■ Rear (For PP)



#### ⑦ Product identification marking

The model number is indicated.

#### ⑧ DAB/FM terminal

#### ⑨ Analogue audio output terminal [LINE OUT]

#### ⑩ Digital audio output terminal [COAX OUT]

#### ⑪ Digital audio output terminal [OPT OUT]

#### ⑫ Digital audio input terminal [PC]

For connecting to a PC, etc.

#### ⑬ System terminal [CONTROL]

#### ⑭ LAN port [LAN]




#### ⑮ AC IN terminal [AC IN ~]

# 6 Service Mode

## 6.1. Doctor Mode

Item		FL Display	Key Operation								
Mode Name	Description										
Doctor Mode	Entering Doctor Mode		<p>Step 1 Power On the main set.</p> <p>Step 2 Press and hold the [STOP] button on Main Unit.</p> <p>Step 3 Press [4] button on remote control while holding [RETURN] button.</p> <p>Step 4 Press [7] button on remote control while holding [RETURN] button.</p>								
Model Name	Model confirmation	<p>Model Name      Region</p> <p>Main Micon is "4MB". Display Micon is "4MC". 001" means each version number.</p> <p>Example:</p> <table border="1"> <tr> <td>SOFTWARE VERSION</td> <td>OLED DISPLAY</td> </tr> <tr> <td>STC700_MAIN_B013.mot</td> <td>Main : 4MB 013</td> </tr> <tr> <td>HIFI_DISP_C013.mot</td> <td>Disp : 4MC 013</td> </tr> </table>	SOFTWARE VERSION	OLED DISPLAY	STC700_MAIN_B013.mot	Main : 4MB 013	HIFI_DISP_C013.mot	Disp : 4MC 013	<p>Step 1 Enter into Doctor Mode.</p> <p>Step 2 Press one time [1] button on remote control.</p> <p>To exit, press [0] button on remote control.</p>		
SOFTWARE VERSION	OLED DISPLAY										
STC700_MAIN_B013.mot	Main : 4MB 013										
HIFI_DISP_C013.mot	Disp : 4MC 013										
Region	Region confirmation										
Main Version	Main Version check										
Display Version	Display version check										
AirPlay Version	AirPlay version check	<p>AirPlay Micon is HiFi_BCO 001" means each version number.</p> <p>Example:</p> <table border="1"> <tr> <td>SOFTWARE VERSION</td> <td>OLED DISPLAY</td> </tr> <tr> <td>HIFI_BCO=008.zip</td> <td>AP : HiFi_BCO 008</td> </tr> <tr> <td>C700_ITFUSBDAC_001.S19</td> <td>USB-DAC : 2904</td> </tr> <tr> <td>Ver020</td> <td>Bluetooth : 020</td> </tr> </table>	SOFTWARE VERSION	OLED DISPLAY	HIFI_BCO=008.zip	AP : HiFi_BCO 008	C700_ITFUSBDAC_001.S19	USB-DAC : 2904	Ver020	Bluetooth : 020	<p>Step 1 Enter into Doctor Mode.</p> <p>Step 2 Press two times [1] button on remote control.</p> <p>To exit, press [0] button on remote control.</p>
SOFTWARE VERSION	OLED DISPLAY										
HIFI_BCO=008.zip	AP : HiFi_BCO 008										
C700_ITFUSBDAC_001.S19	USB-DAC : 2904										
Ver020	Bluetooth : 020										
USB-DAC Version	USB-DAC version check										
Bluetooth Version	Bluetooth version check										

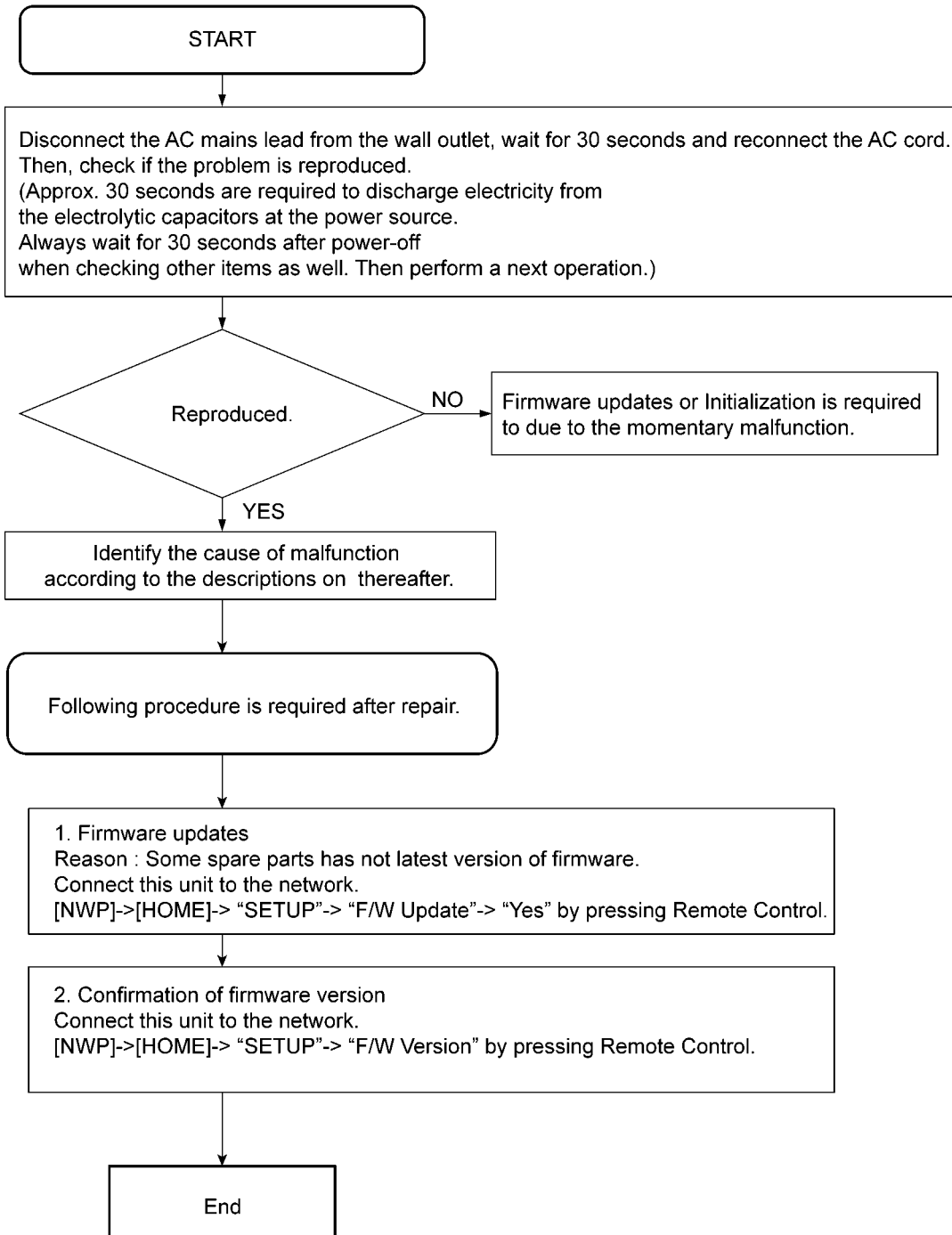
## 6.2. Service Mode

Item		FL Display	Key Operation
Mode Name	Description		
Main Set Key	Main Set Key check	<div style="text-align: center;">  </div> <p>The OLED will lights up with these words</p> <ol style="list-style-type: none"> <li>1. SW Off : Power Switch on main unit On -&gt; Off</li> <li>2. SW On : Power Switch on main unit Off -&gt; On</li> <li>3. HOME : When pushes HOME key</li> <li>4. S-F : When pushes Skip-F key</li> <li>5. S-R : When pushes Skip-R key</li> <li>6. STOP : When pushes STOP key</li> <li>7. PLAY : When pushes PLAY key</li> </ol> <p>After operate and detect all keys, OLED will light fully.</p> <div style="text-align: center;">  </div>	<p>Step 1 Enter into Doctor Mode.</p> <p>Step 2 Press [4] button on remote control to start the key test. It indicates each Switch or Button name when you operate it.</p> <p>Note: A beep sound with each key push.</p> <p>To exit, press [0] button on remote control.</p>
Shipment Mode	To initialize into shipping mode		<p>Step 1 Enter into Doctor Mode.</p> <p>Step 2 Switch off Power Switch.</p> <p>Step 3 Wait untill all Selector LED, Backlight LED OFF and then disconnect AC Cord.</p>
System Combination	To check the system combination	<p>Note: Before start this test, please connect the ST-C700 and SU-C700 with Control cable.</p> <div style="text-align: center;">  </div> <p>If communication is success, it will show</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; background-color: black; color: white;"> <b>Doctor</b>  Send : Yes  Receive : -- </div> <span>→</span> <div style="border: 1px solid black; padding: 5px; background-color: black; color: white;"> <b>Doctor</b>  Send : Yes  Receive : Yes </div> </div> <p>If communication is fail, it will show</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; background-color: black; color: white;"> <b>Doctor</b>  Send : Yes  Receive : -- </div> <span>→</span> <div style="border: 1px solid black; padding: 5px; background-color: black; color: white;"> <b>Doctor</b>  Send : Yes  Receive : No </div> </div>	<p>Step 1 Press [6] button on remote control. (For ST-C700 and SU-C700 pairing)</p> <p>To exit, press [0] button on remote control.</p>



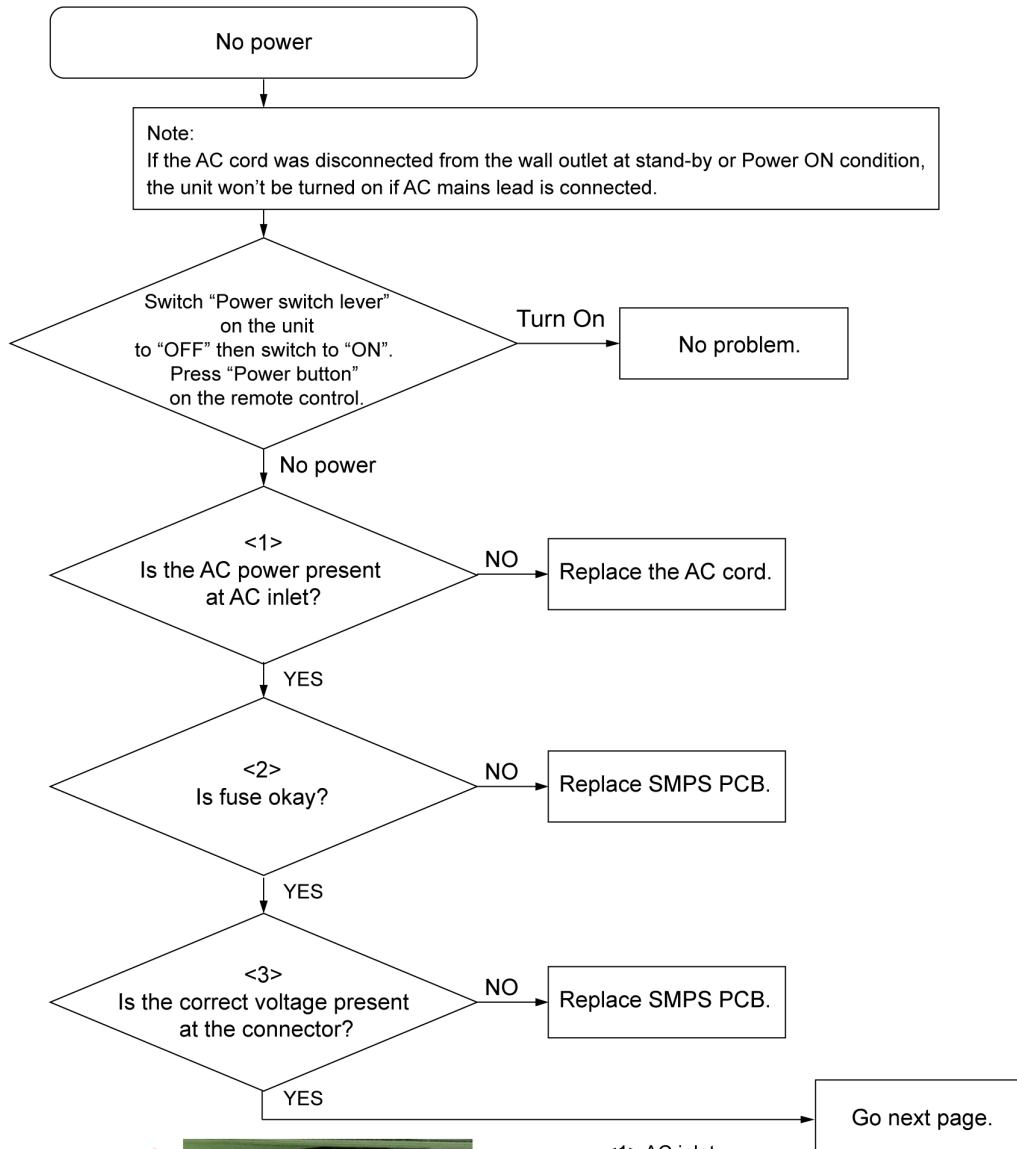
# 7 Troubleshooting Guide

## 7.1. Check the problem is reproduced

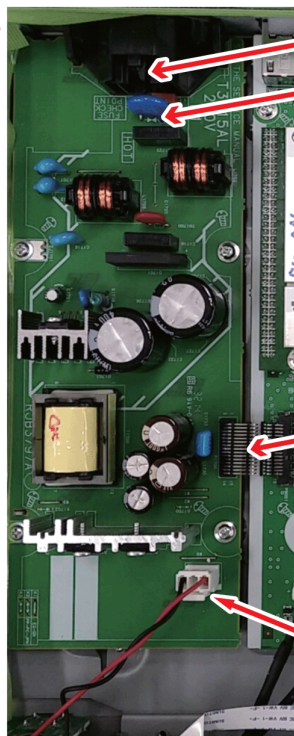




## 7.2. No power



Power PCB



<1> AC inlet

<2> FUSE CHECK POINT

<3> Connector

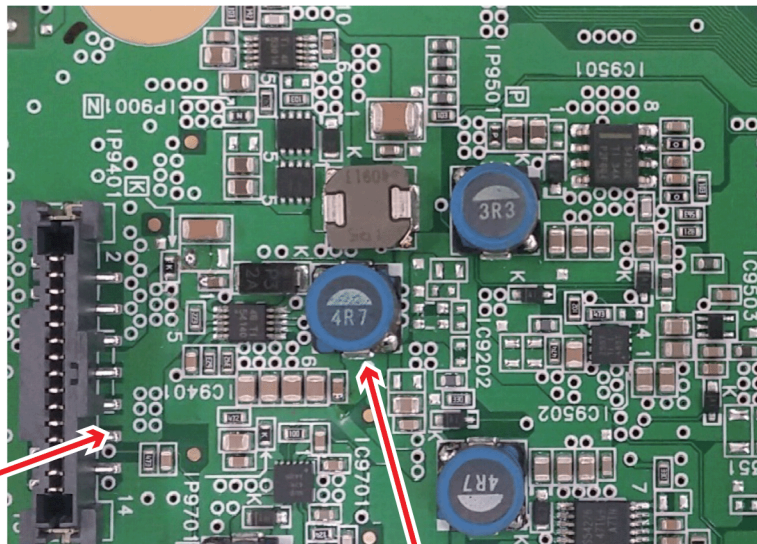
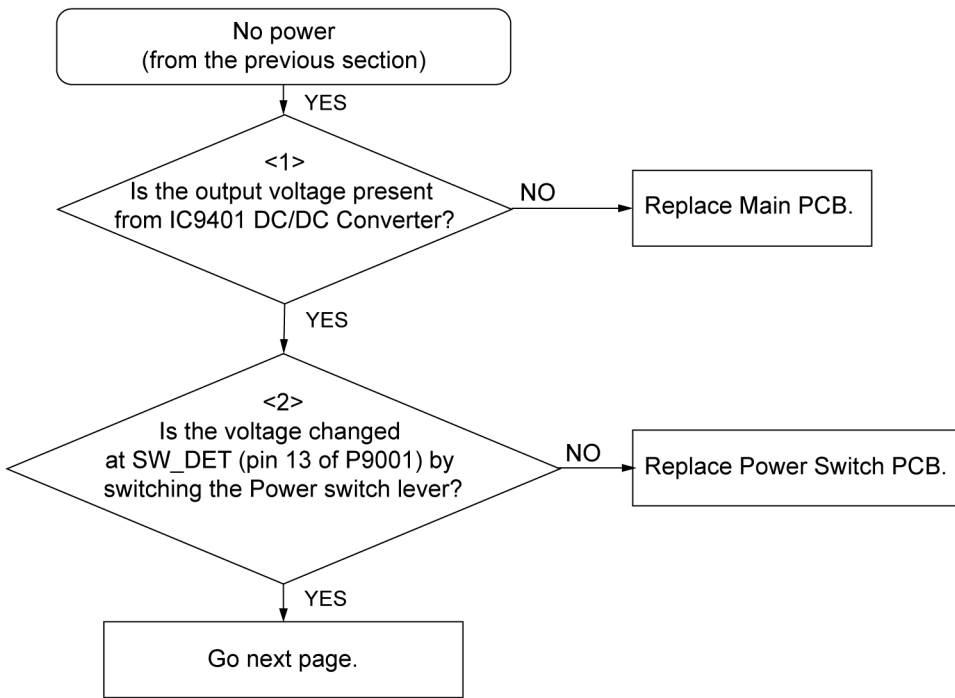
- 1 GND
- 2 GND
- 3 GND
- 4 GND
- 5 GND
- 6 GND
- 7 SW\_10.5V
- 8 SW\_10.5V
- 9 SW\_10.5V
- 10 SW\_10.5V
- 11 SW\_10.5V
- 12 SW\_10.5V
- 13 SW\_DET
- 14 GND
- 15 REGION

Pin 7 - 12: SW\_10.5V  
10.5V when connect AC mains lead to wall outlet  
in both Power switch lever On and OFF condition.

Pin 13: SW\_DET  
3V: Power switch lever On condition.  
0V: Power switch lever OFF condition.  
10V: Disconnect the connector to Main PCB  
and Power Switch PCB.

Pin 15: REGION  
10V: Disconnect the connector to Main PCB  
3V: Connect the connector to Main PCB

Connector to Power Switch PCB

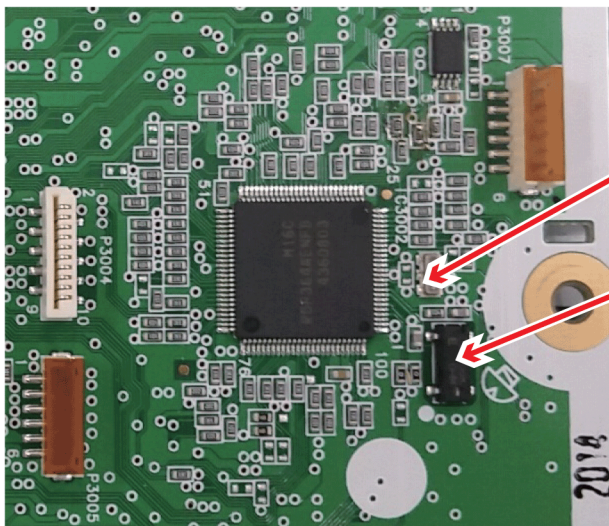
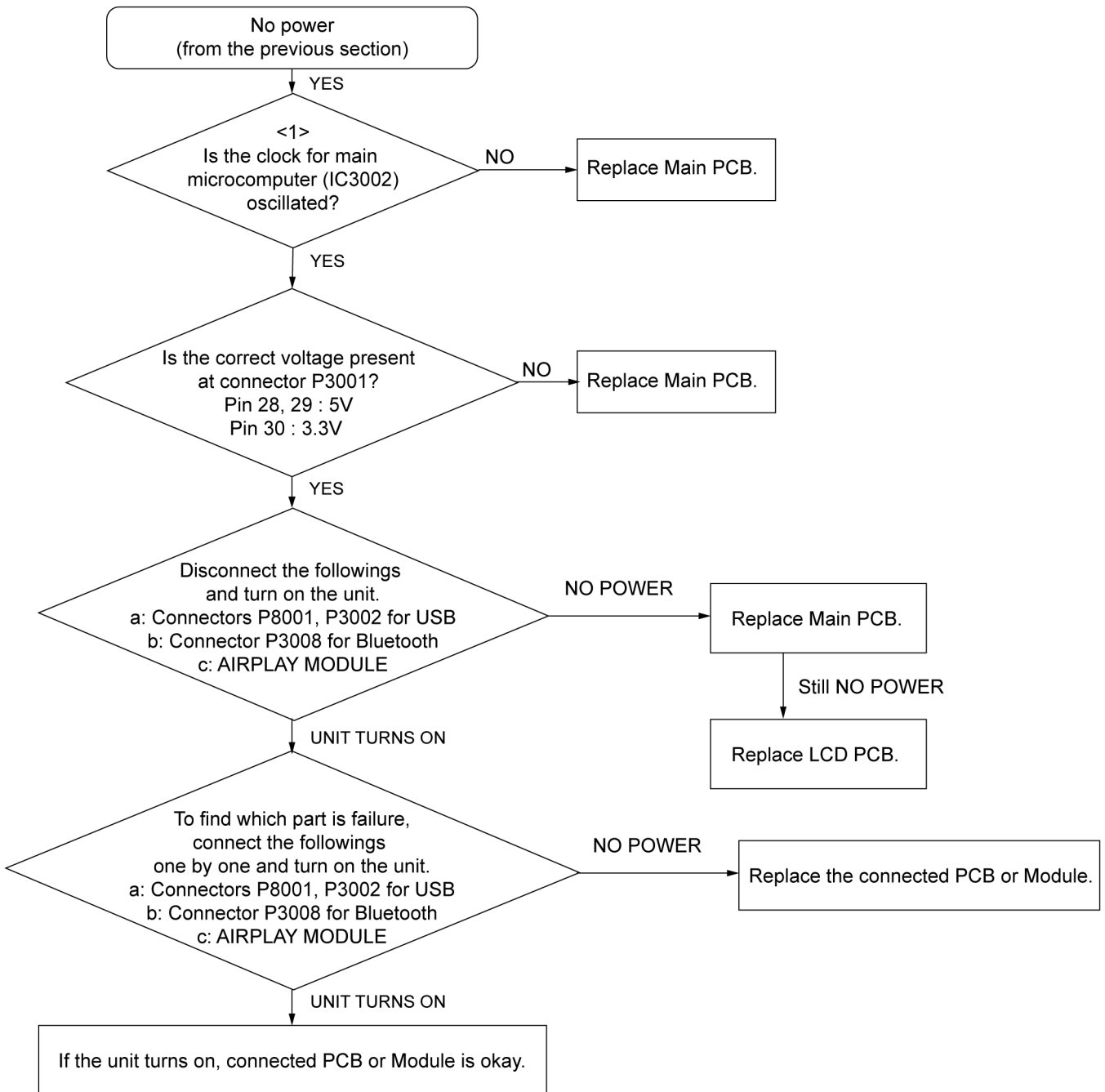


<2>  
SW\_DET:  
Pin 13 of Connector P9001

3V : Power switch lever ON position  
0V : Power switch lever OFF position

<1>  
3.3V : Output of L9401

IC9401 operates when connecting AC mains lead to the wall outlet.  
3.3 V output in both power switch lever on and off.  
If no 3.3V is output, main microcomputer won't function.

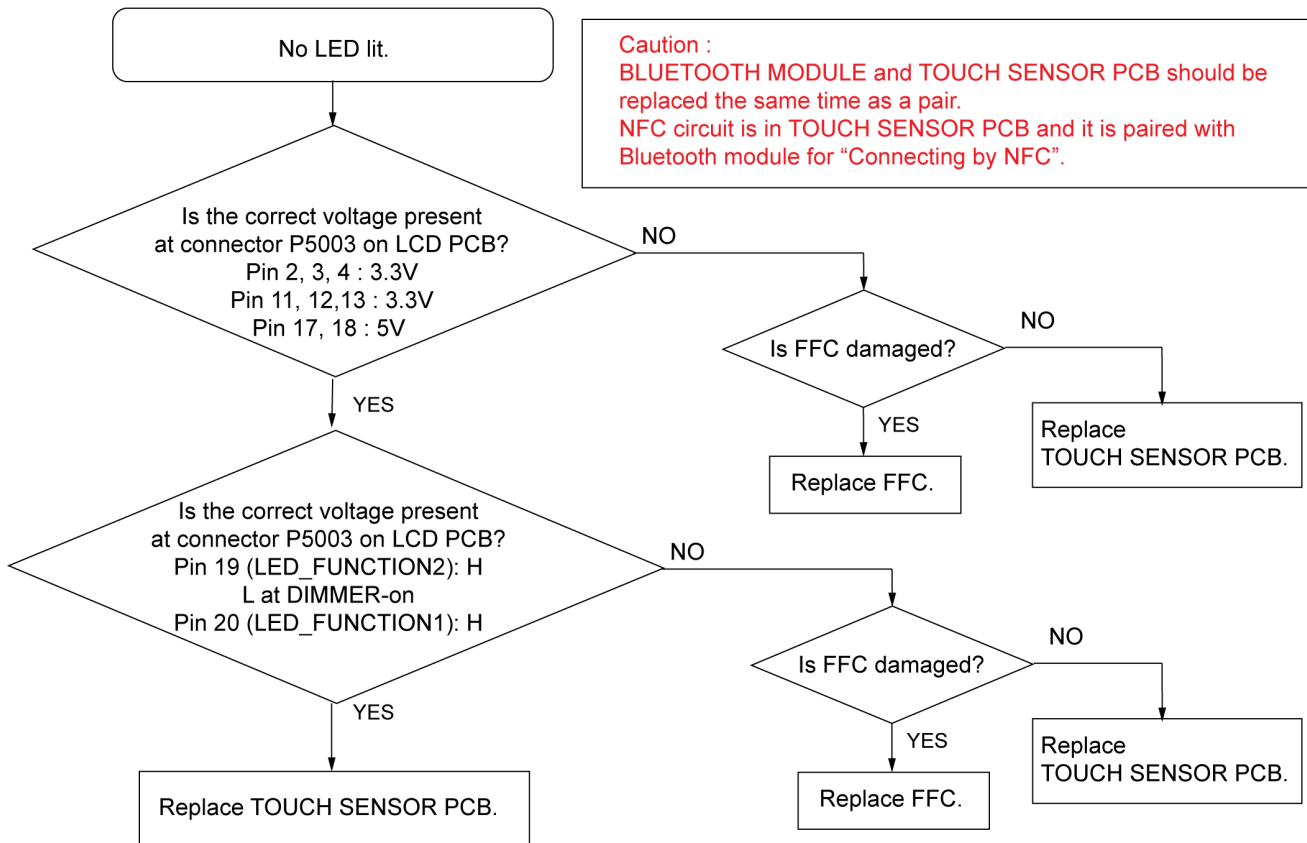


<1-1>  
X3004 : 4MHz Main clock

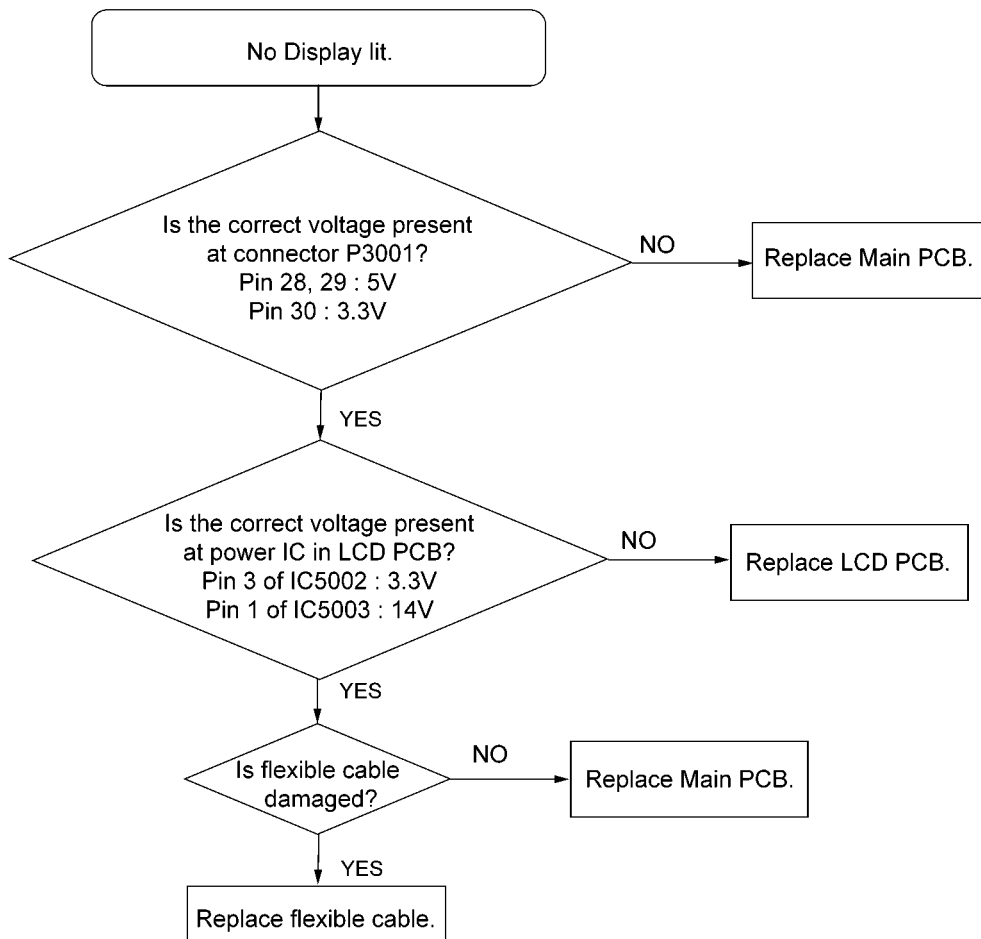
<1-2>  
X3002 : 32 kHz Clock for timer

Main microcomputer controls all function of this unit and it operates both power ON and OFF condition. 4 MHz clock will stop for energy save after some minutes passes in stand-by mode and 32kHz clock operates continuously. 4 MHz clock will operate again after turn on the unit.

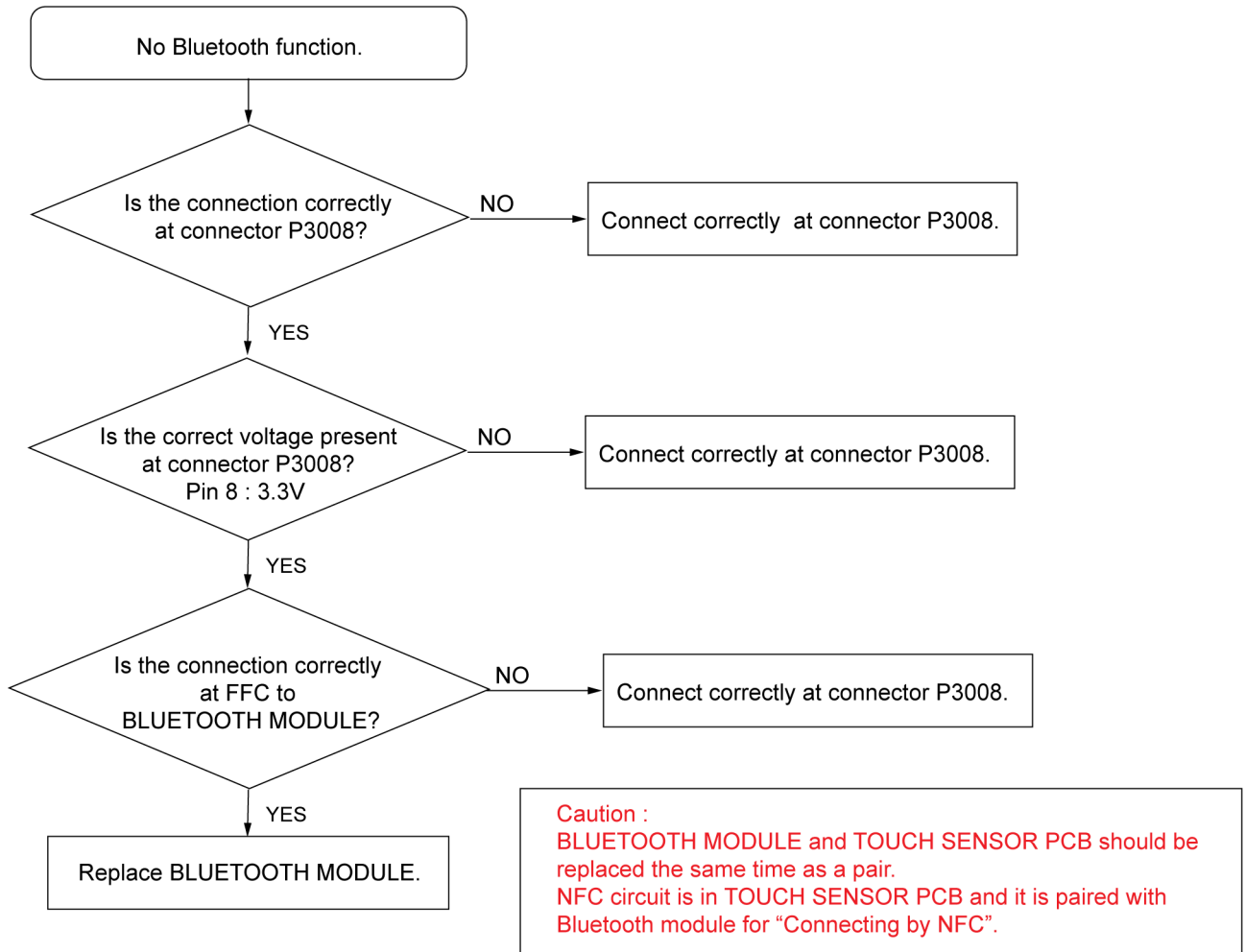
### 7.3. No LED for Basic control switches



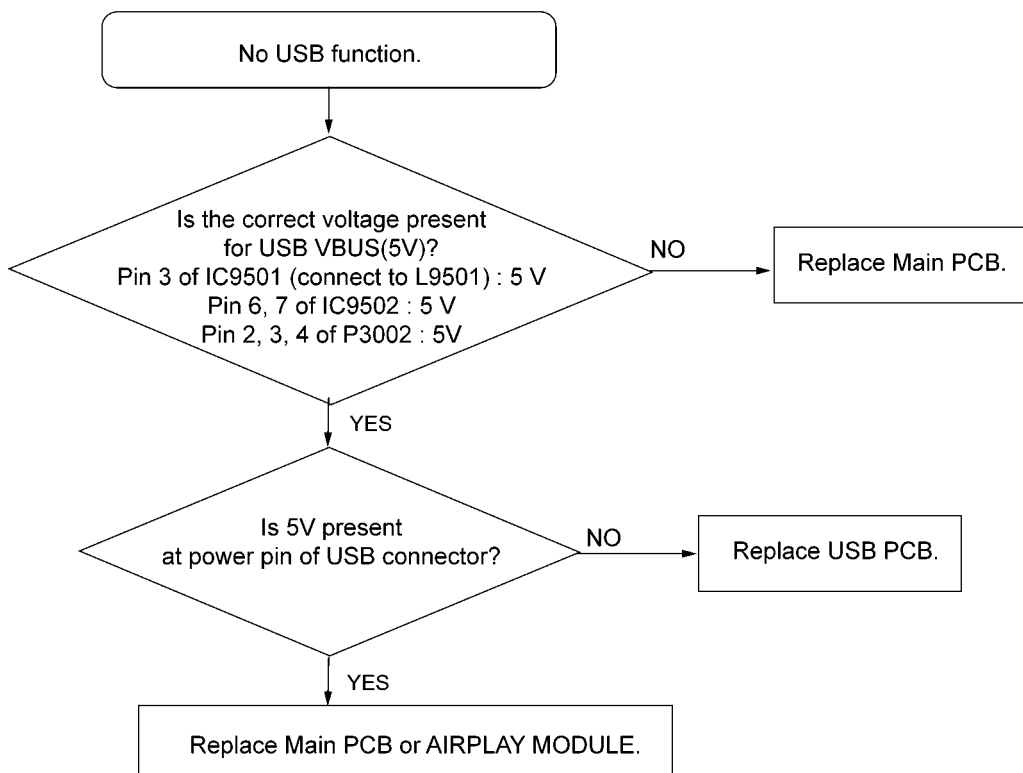
### 7.4. No Display



## 7.5. No Bluetooth Function



## 7.6. No USB Function



## 7.7. Pin function of each connectors

**Connector P3001 on MAIN PCB**

1	GND	
2	GND/7V	
3	A0	
4	DISP_ON_H	
5	RD	
6	WR	
7	CS	
8	D7	
9	D6	
10	D5	
11	D4	
12	D3	
13	D2	
14	D1	
15	D0	
16	RST	
17	IR	
18	GND	
19	I2CSCL	
20	I2CSDA	
21	INT	
22	LED_FUNCTION1	
23	LED_FUNCTION2	
24	NFC_IRQ3V	
25	LCD_DIM	
26	GND	
27	GND	
28	SW_5R1V	5V
29	SW_5R1V	5V
30	NSW3R3V	3.3V

**Connector P5003 on LCD PCB**

1	GND	
2	PW_XSW3R3V	3.3V
3	PW_XSW3R3V	3.3V
4	PW_XSW3R3V	3.3V
5	GND	
6	GND	
7	NFC_IRQ3V	
8	NFC_IRQ3V	
9	GND	
10	GND	
11	LCD3R3V	3.3V
12	LCD3R3V	3.3V
13	LCD3R3V	3.3V
14	GND	
15	GND	
16	X_SW_5R1V	5V
17	X_SW_5R1V	5V
18	GND	
19	LED_FUNCTION2	
20	LED_FUNCTION1	
21	GND	
22	INT	
23	INT	
24	GND	
25	I2CSDA	
26	I2CSDA	
27	GND	
28	I2CSCL	
29	I2CSCL	
30	GND	

**Connector P5001 on LCD PCB**

1	NSW3R3V	3.3V
2	X_SW_5R1V	5V
3	X_SW_5R1V	5V
4	GND	
5	GND	
6	LCD_DIM	
7	NFC_IRQ3V	
8	LED_FUNCTION2	
9	LED_FUNCTION1	
10	INT	
11	I2CSDA	
12	I2CSCL	
13	GND	
14	IR	
15	RST	
16	D0(SPI_CLK)	
17	D1(SPI_WDATA)	
18	D2	
19	D3	
20	D4	
21	D5	
22	D6	
23	D7(SPI_RDATA)	
24	CS	
25	WR	
26	RD	
27	DISP_ON_H	
28	A0	
29	GND/7V	
30	GND	

**Connector P3002 on MAIN PCB**

1	DGND	
2	USB_5V	5V
3	USB_5V	5V
4	USB_5V	5V
5	DGND	
6	DGND	

**Connector P3008 on MAIN PCB**

1	MIC_BIAS	
2	MIC_IN_N	
3	MIC_IN_P	
4	AGND	
5	DEEP_SLEEP	
6	PCM_IN	
7	GND	
8	VDD(3R3V)	3.3V
9	RESET	
10	UART_RX	
11	UART_TX	
12	GND	
13	PCM_SYNC	
14	PCM_CLK	
15	PCM_OUT	
16	GND	

**Connector P1700 on SMPS PCB**

1	GND	
2	GND	
3	GND	
4	GND	
5	GND	
6	GND	
7	10.5V	10V
8	10.5V	10V
9	10.5V	10V
10	10.5V	10V
11	10.5V	10V
12	10.5V	10V
13	SW_DET	
14	GND	
15	REGION	

## 7.8. Function and Possible failure PCB or Module

This is a table for shown the possible failure PCB or Module for each function.

Item No.	Function	Possible failure PCB or Module
1	USB_A	Air Play Module / MAIN / USB
2	Bluetooth	Bluetooth Module / MAIN
3	LAN/Air Play/DLNA	Air Play Module / MAIN
4	PC(USB DAC)	MAIN
5	Control	MAIN
6	Digital output (OPT/COAX)	MAIN
7	LINE OUT	MAIN
8	Display (Electro Luminescence)	LCD / MAIN
9	Touch SW	Touch Sensor / LCD / MAIN
10	NFC	Touch Sensor / LCD / MAIN
11	IR (Remote Control)	IR / LCD / MAIN

## 8 Disassembly and Assembly Instructions

- 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 this 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.
- Be sure to use proper service tools, equipments or jigs during repair.
- Select items from the following indexes when disassembly or replacement are required.
  - Disassembly of Top Cabinet Block
  - Disassembly of Front Panel Unit
  - Disassembly of Touch Sensor P.C.B.
  - Disassembly of LCD P.C.B.
  - Disassembly of BT P.C.B.
  - Disassembly of IR P.C.B.
  - Disassembly of USB P.C.B.
  - Disassembly of Power Switch P.C.B.
  - Disassembly of AirPlay Module
  - Disassembly of DAB Module (For EB/EG/GN)
  - Disassembly of Main P.C.B. Ass'y
  - Disassembly of SMPS P.C.B.

### 8.1. Type of Screws

#### **CAUTION NOTE:**

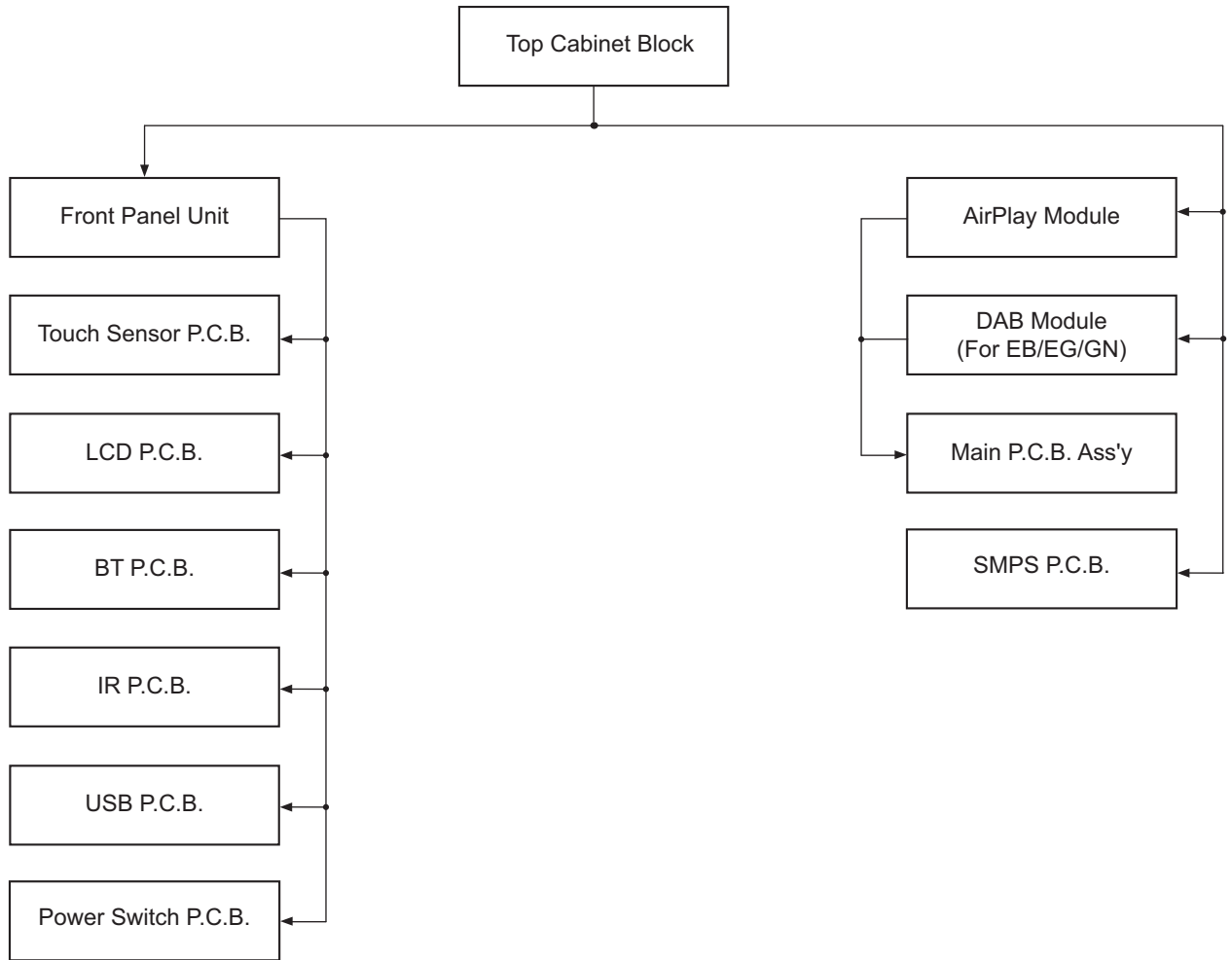
Please use original screw and at correct locations.

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

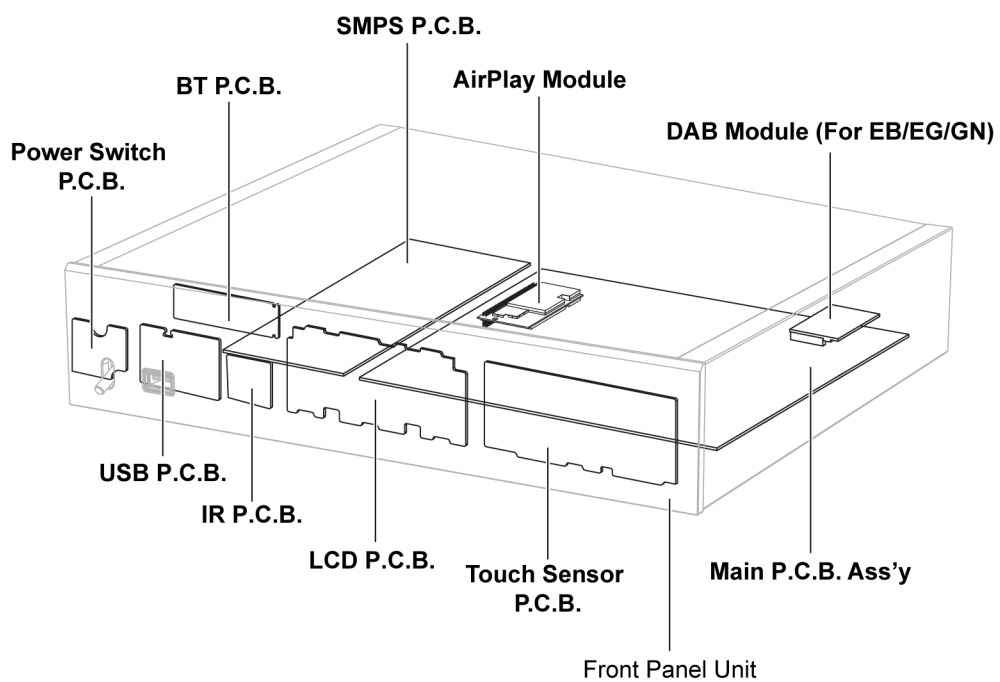
- |                      |                       |
|----------------------|-----------------------|
| <b>a</b> :RHD30119-K | <b>e</b> :XYN3+C8FJK  |
| <b>b</b> :RHD40040   | <b>f</b> :XTB4+10AFJK |
| <b>c</b> :RHD26045-L | <b>g</b> :RHD30111-31 |
| <b>d</b> :XYN3+F6FJ  | <b>h</b> :RHDC0023    |



## 8.2. Disassembly Flow Chart

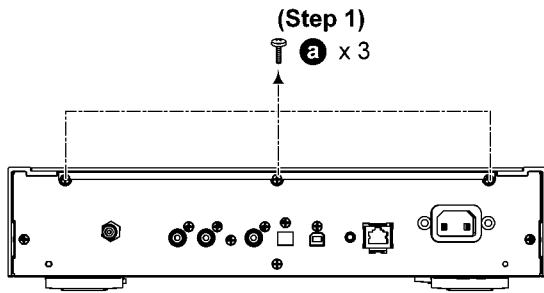


## 8.3. Main Components and P.C.B. Locations

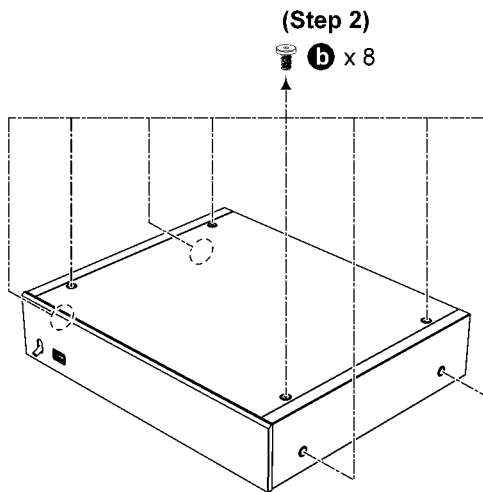


## 8.4. Disassembly of Top Cabinet Block

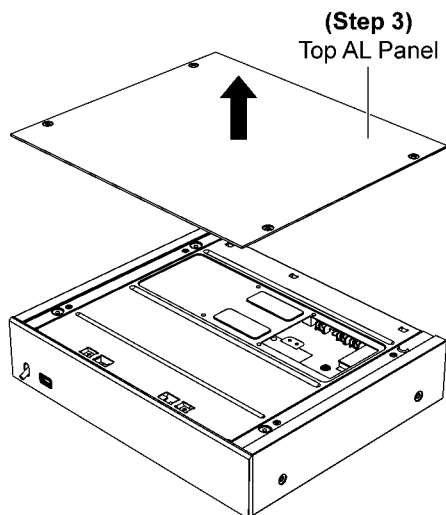
**Step 1** Remove 3 screws.



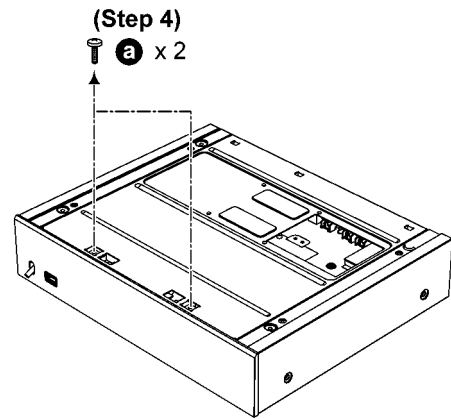
**Step 2** Remove 8 screws.



**Step 3** Remove Top AL Panel.

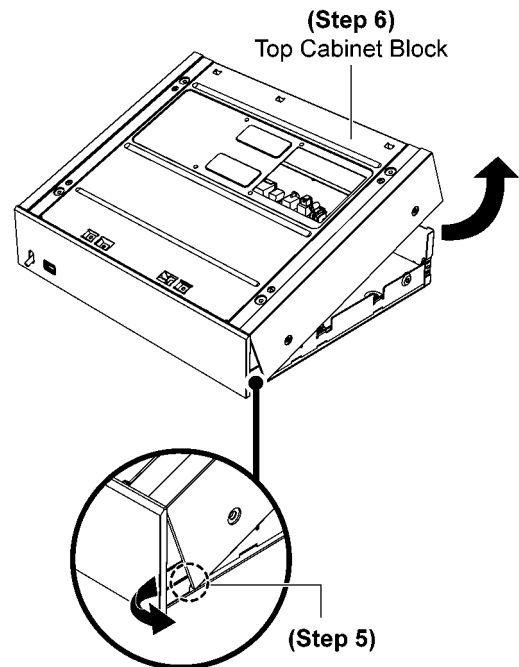


**Step 4** Remove 2 screws.



**Step 5** Release both sides of Top Cabinet Block outwards as arrow shown.

**Step 6** Lift up to remove Top Cabinet Block.



## 8.5. Disassembly of Front Panel Unit

• Refer to “Disassembly of Top Cabinet Block”.

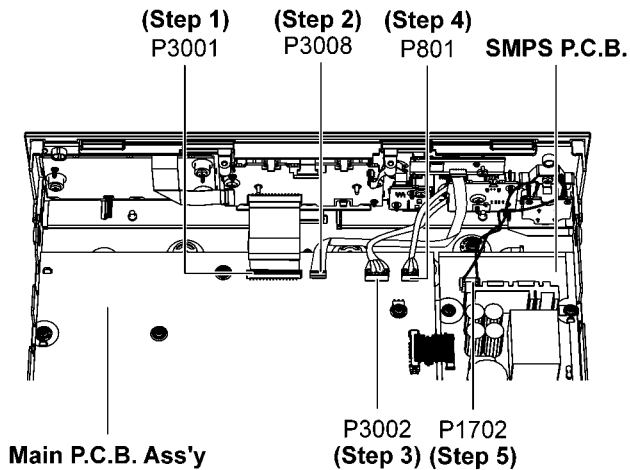
**Step 1** Detach 30P FFC at the connector (P3001) on Main P.C.B. Ass'y.

**Step 2** Detach 16P FFC at the connector (P3008) on Main P.C.B. Ass'y.

**Step 3** Detach 6P Cable at the connector (P3002) on Main P.C.B. Ass'y.

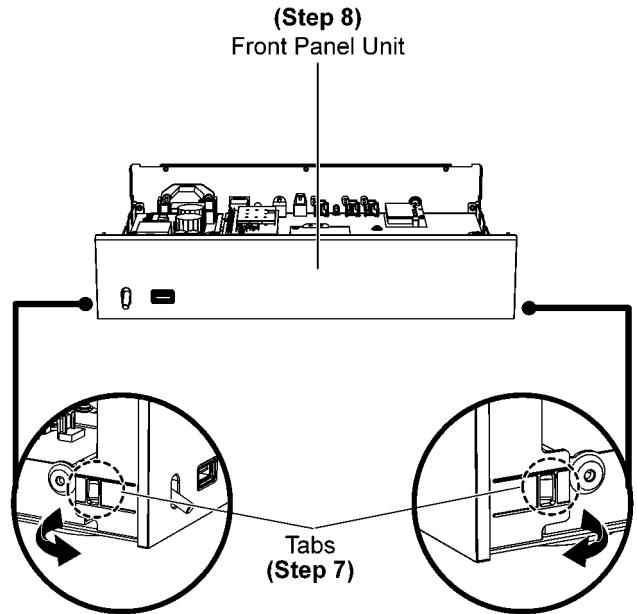
**Step 4** Detach 4P Cable at the connector (P801) on Main P.C.B. Ass'y.

**Step 5** Detach 2P Cable at the connector (P1702) on SMPS P.C.B..

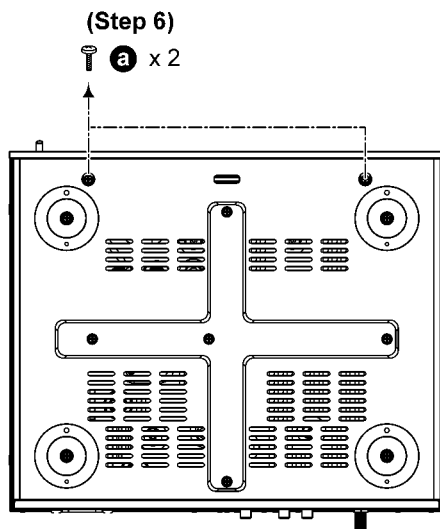


**Step 7** Release tabs on both sides of Front Panel Unit.

**Step 8** Detach to remove Front Panel Unit



**Step 6** Remove 2 screws.



## 8.6. Disassembly of Touch Sensor P.C.B.

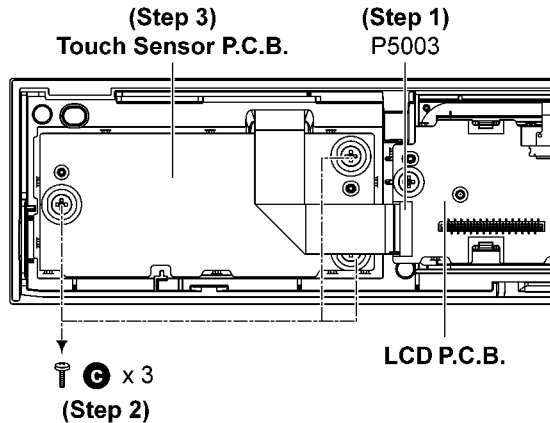
- Refer to “Disassembly of Top Cabinet Block”.
- Refer to “Disassembly of Front Panel Unit”.

**Caution:** When replacing Touch Sensor P.C.B., BT P.C.B. need to be replaced together with it.

**Step 1** Detach 30P FFC at the connector (P5003) on LCD P.C.B..

**Step 2** Remove 3 screws.

**Step 3** Remove Touch Sensor P.C.B..



## 8.8. Disassembly of LCD P.C.B.

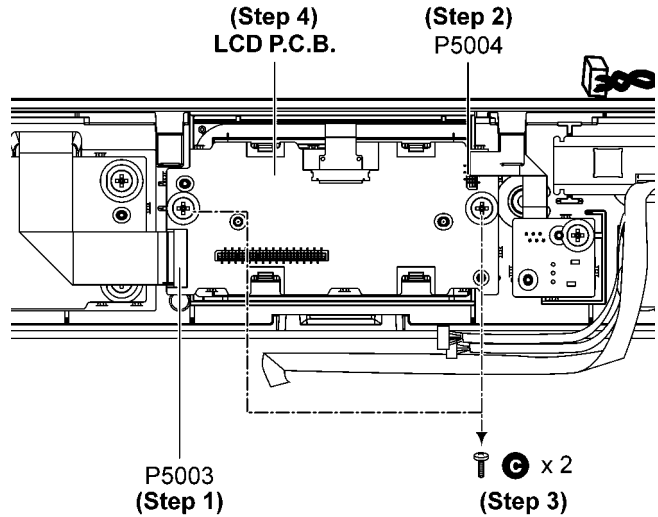
- Refer to “Disassembly of Top Cabinet Block”.
- Refer to “Disassembly of Front Panel Unit”.

**Step 1** Detach 30P FFC at the connector (P5003) on LCD P.C.B..

**Step 2** Detach 5P FFC at the connector (P5004) on LCD P.C.B..

**Step 3** Remove 2 screws.

**Step 4** Remove LCD P.C.B..



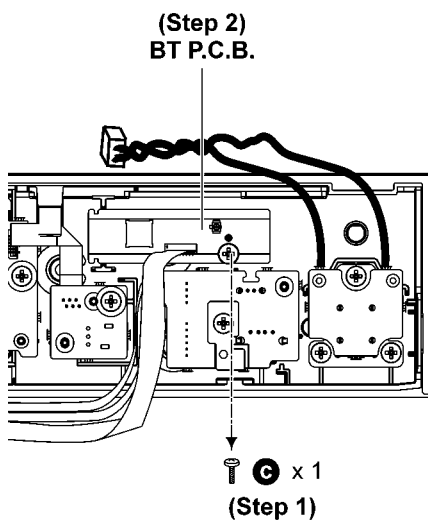
## 8.7. Disassembly of BT P.C.B.

- Refer to “Disassembly of Top Cabinet Block”.
- Refer to “Disassembly of Front Panel Unit”.

**Caution:** When replacing BT P.C.B., Touch Sensor P.C.B. need to be replaced together with it.

**Step 1** Remove screw.

**Step 2** Remove BT P.C.B..



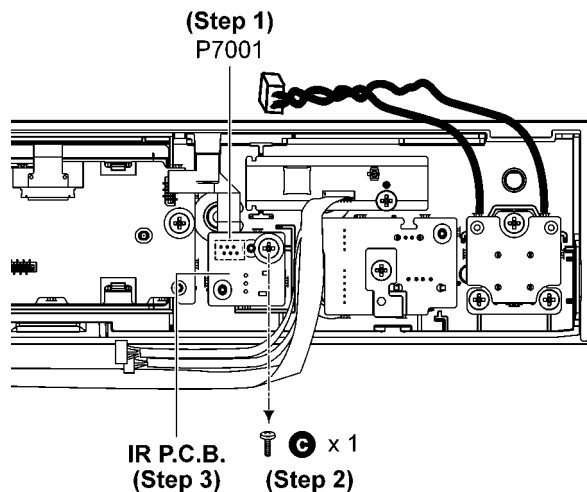
## 8.9. Disassembly of IR P.C.B.

- Refer to “Disassembly of Top Cabinet Block”.
- Refer to “Disassembly of Front Panel Unit”.

**Step 1** Detach 5P FFC at the connector (P7001) on IR P.C.B..

**Step 2** Remove screw.

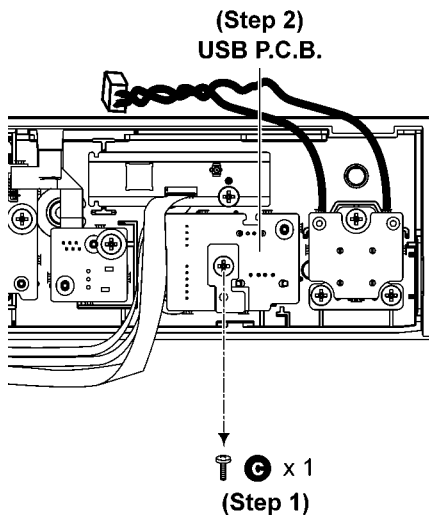
**Step 3** Remove IR P.C.B..



## 8.10. Disassembly of USB P.C.B.

- Refer to “Disassembly of Top Cabinet Block”.
- Refer to “Disassembly of Front Panel Unit”.

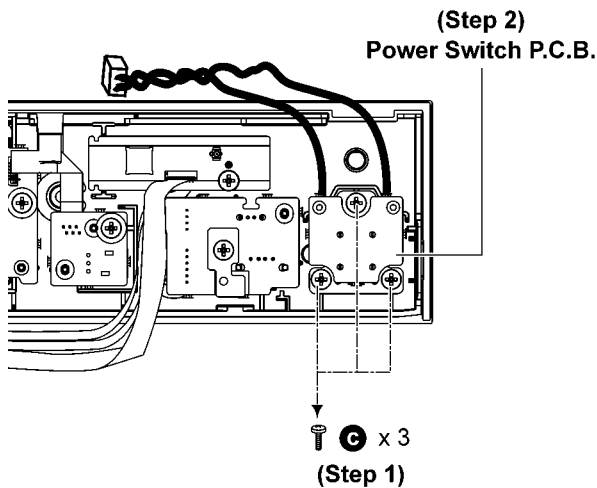
Step 1 Remove screw.  
Step 2 Remove USB P.C.B..



## 8.11. Disassembly of Power Switch P.C.B.

- Refer to “Disassembly of Top Cabinet Block”.
- Refer to “Disassembly of Front Panel Unit”.

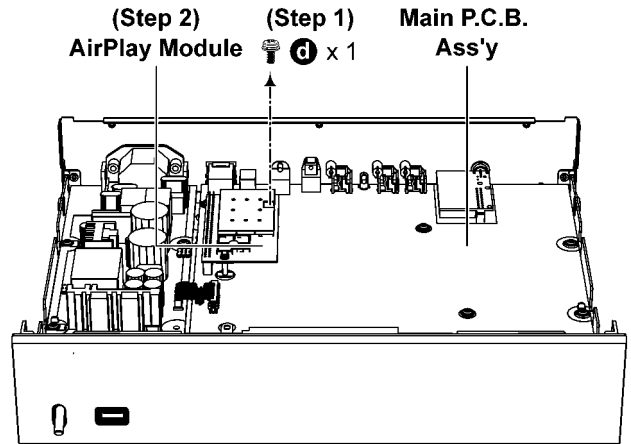
Step 1 Remove 3 screws.  
Step 2 Remove Power Switch P.C.B..



## 8.12. Disassembly of AirPlay Module

- Refer to “Disassembly of Top Cabinet Block”.

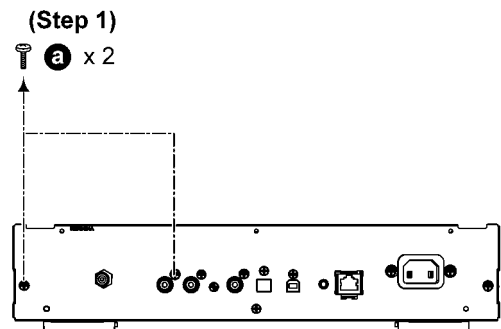
Step 1 Remove screw.  
Step 2 Remove AirPlay Module.



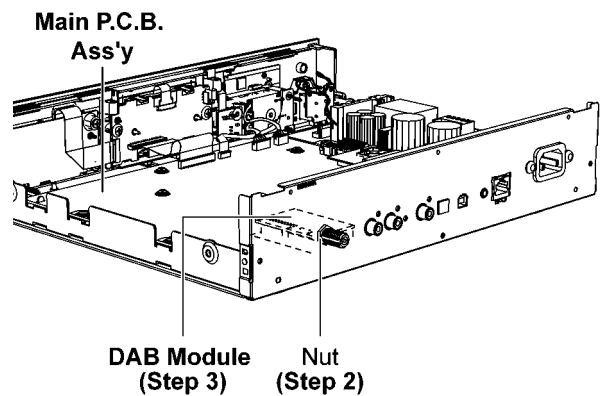
## 8.13. Disassembly of DAB Module (For EB/EG/GN)

- Refer to “Disassembly of Top Cabinet Block”.

Step 1 Remove 2 screws.



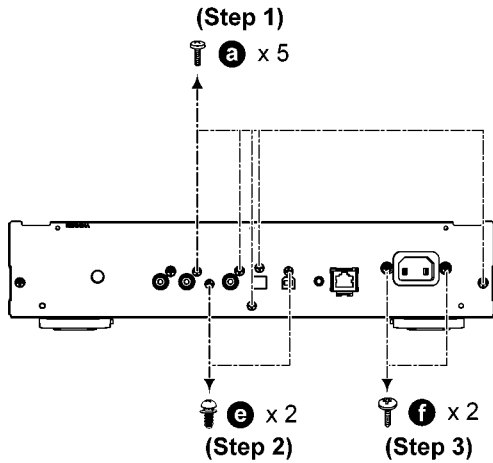
Step 2 Remove Nut.  
Step 3 Remove DAB Module.



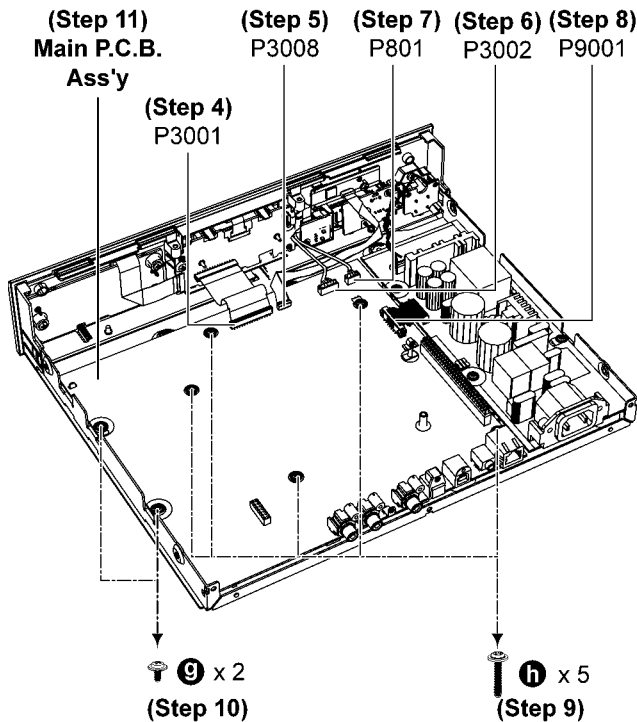
## 8.14. Disassembly of Main P.C.B. Ass'y

- Refer to "Disassembly of Top Cabinet Block".
- Refer to "Disassembly of AirPlay Module".
- Refer to "Disassembly of DAB Module".

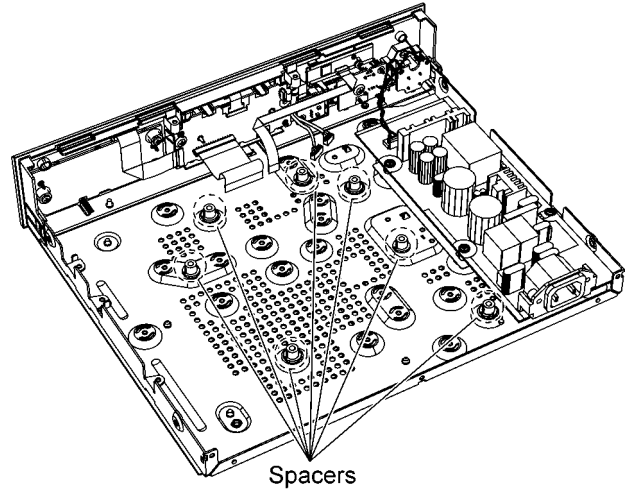
- Step 1** Remove 5 screws.  
**Step 2** Remove 2 screws.  
**Step 3** Remove 2 screws.



- Step 4** Detach 30P FFC at the connector (P3001) on Main P.C.B. Ass'y.  
**Step 5** Detach 16P FFC at the connector (P3008) on Main P.C.B. Ass'y.  
**Step 6** Detach 6P Cable at the connector (P3002) on Main P.C.B. Ass'y.  
**Step 7** Detach 4P Cable at the connector (P801) on Main P.C.B. Ass'y.  
**Step 8** Detach 15P Bridge Connector at the connector (P9001) on Main P.C.B. Ass'y.  
**Step 9** Remove 5 screws.  
**Step 10** Remove 2 screws.  
**Step 11** Remove Main P.C.B. Ass'y.



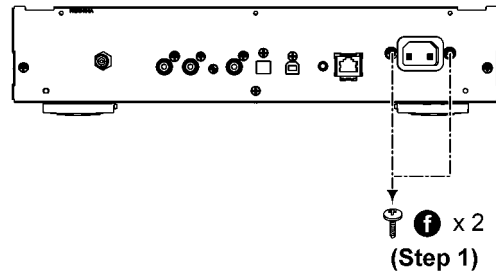
During assembling, ensure the spacers are placed at correct position as shown.



## 8.15. Disassembly of SMPS P.C.B.

- Refer to "Disassembly of Top Cabinet Block".

- Step 1** Remove 2 screws.



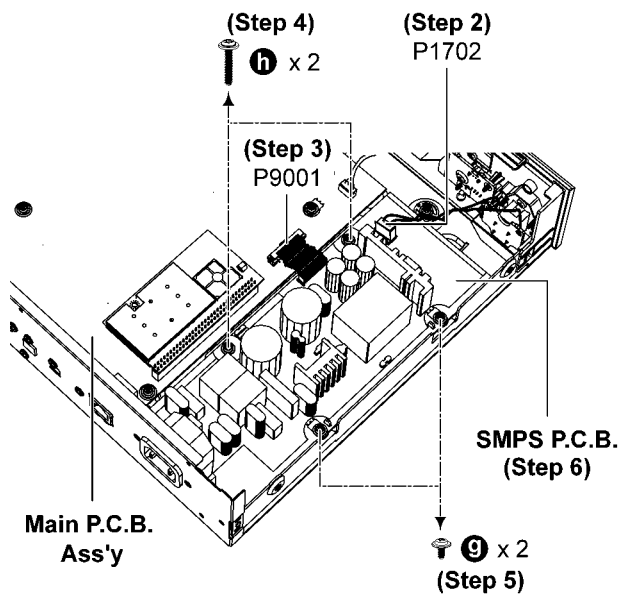
**Step 2** Detach 2P Cable at the connector (P1702) on SMPS P.C.B..

**Step 3** Detach 15P Bridge Connector at the connector (P9001) on Main P.C.B. Ass'y.

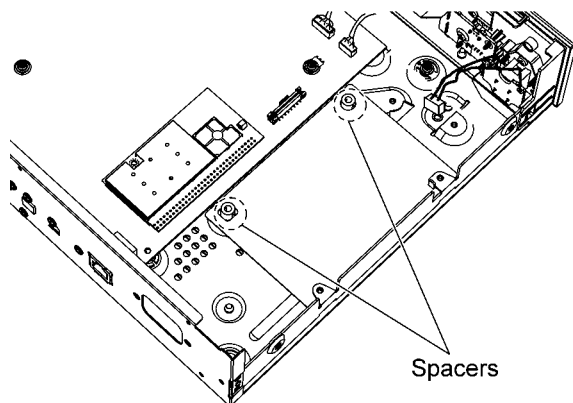
**Step 4** Remove 2 screws.

**Step 5** Remove 2 screws.

**Step 6** Remove SMPS P.C.B..



During assembling, ensure the spacers are placed at correct position as shown.

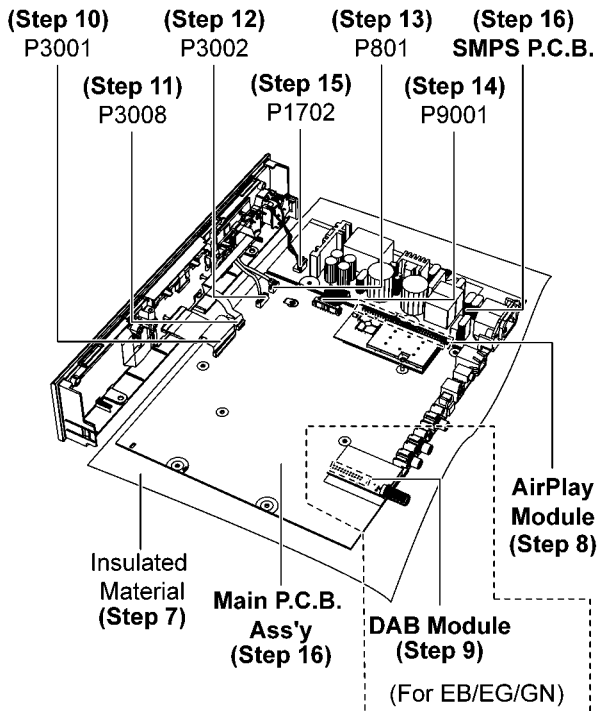


# 9 Service Position

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

## 9.1. Checking and Repairing of Main P.C.B. Ass'y and SMPS P.C.B.

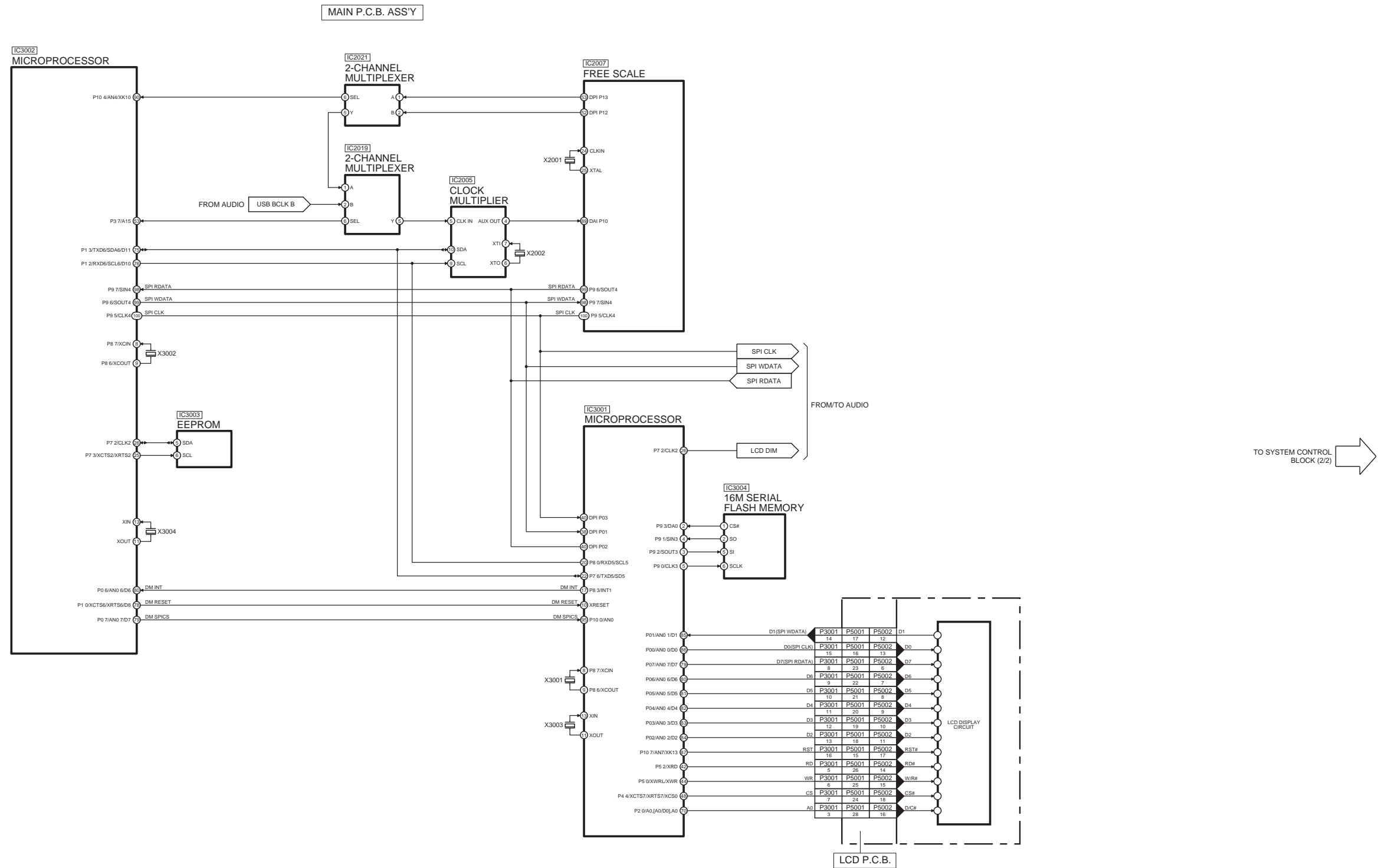
- Step 1** Remove Top Cabinet Block.
- Step 2** Remove Front Panel Unit.
- Step 3** Remove AirPlay Module.
- Step 4** Remove DAB Module.
- Step 5** Remove Main P.C.B. Ass'y.
- Step 6** Remove SMPS P.C.B..
- Step 7** Place Main P.C.B. Ass'y and SMPS P.C.B. on the insulated material.
- Step 8** Connect AirPlay Module to Main P.C.B. Ass'y.
- Step 9** Connect DAB Module to Main P.C.B. Ass'y (For EB/EG/GN).
- Step 10** Attach 30P FFC at the connector (P3001) on Main P.C.B. Ass'y.
- Step 11** Attach 16P FFC at the connector (P3008) on Main P.C.B. Ass'y.
- Step 12** Attach 6P Cable at the connector (P3002) on Main P.C.B. Ass'y.
- Step 13** Attach 4P Cable at the connector (P801) on Main P.C.B. Ass'y.
- Step 14** Attach 15P Bridge Connector at the connector (P9001) on Main P.C.B. Ass'y.
- Step 15** Attach 2P Cable at the connector (P1702) on SMPS P.C.B..
- Step 16** Main P.C.B. Ass'y and SMPS P.C.B. can be checked as diagram shown.



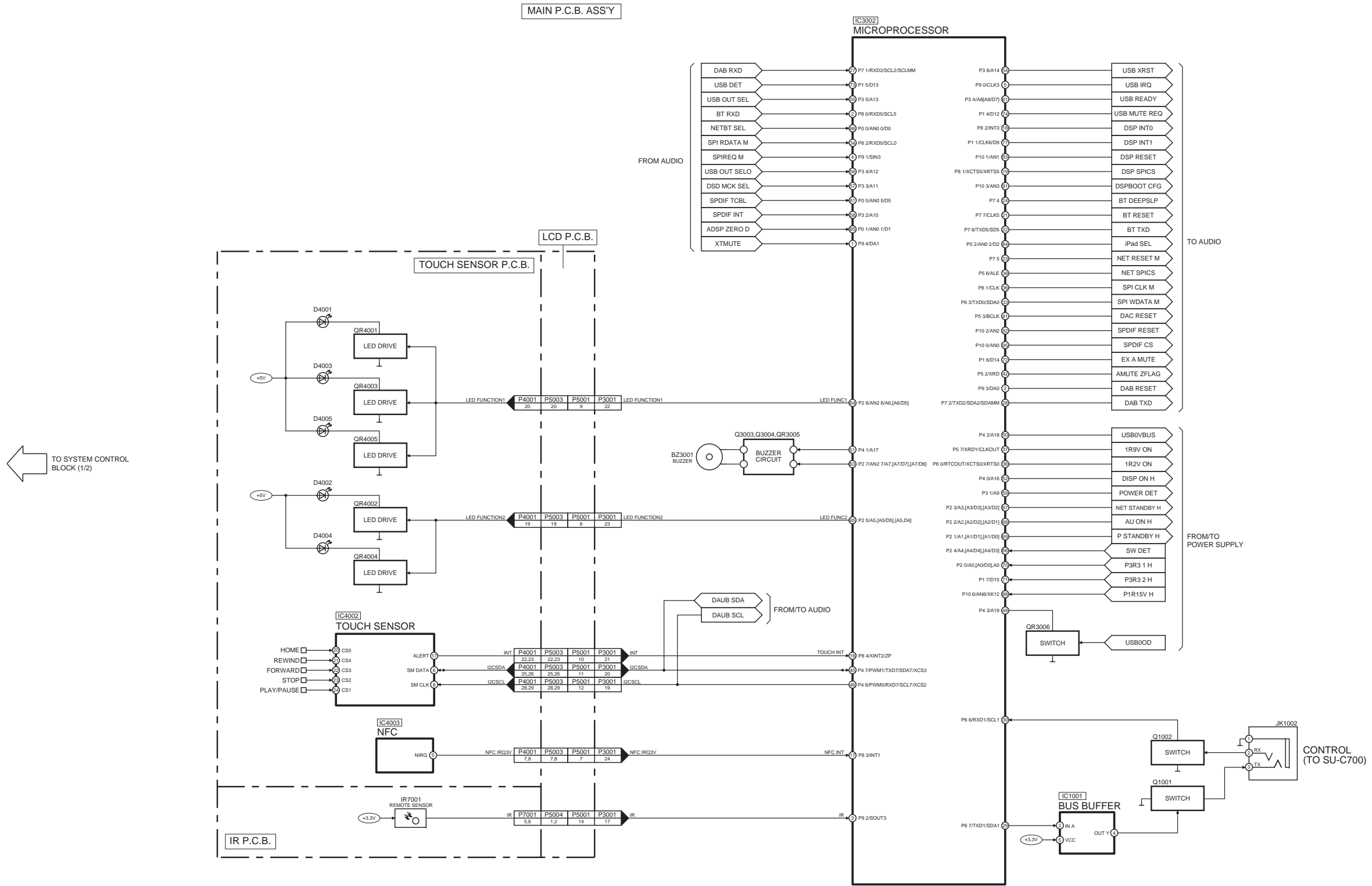


# 10 Block Diagram

## 10.1. System Control



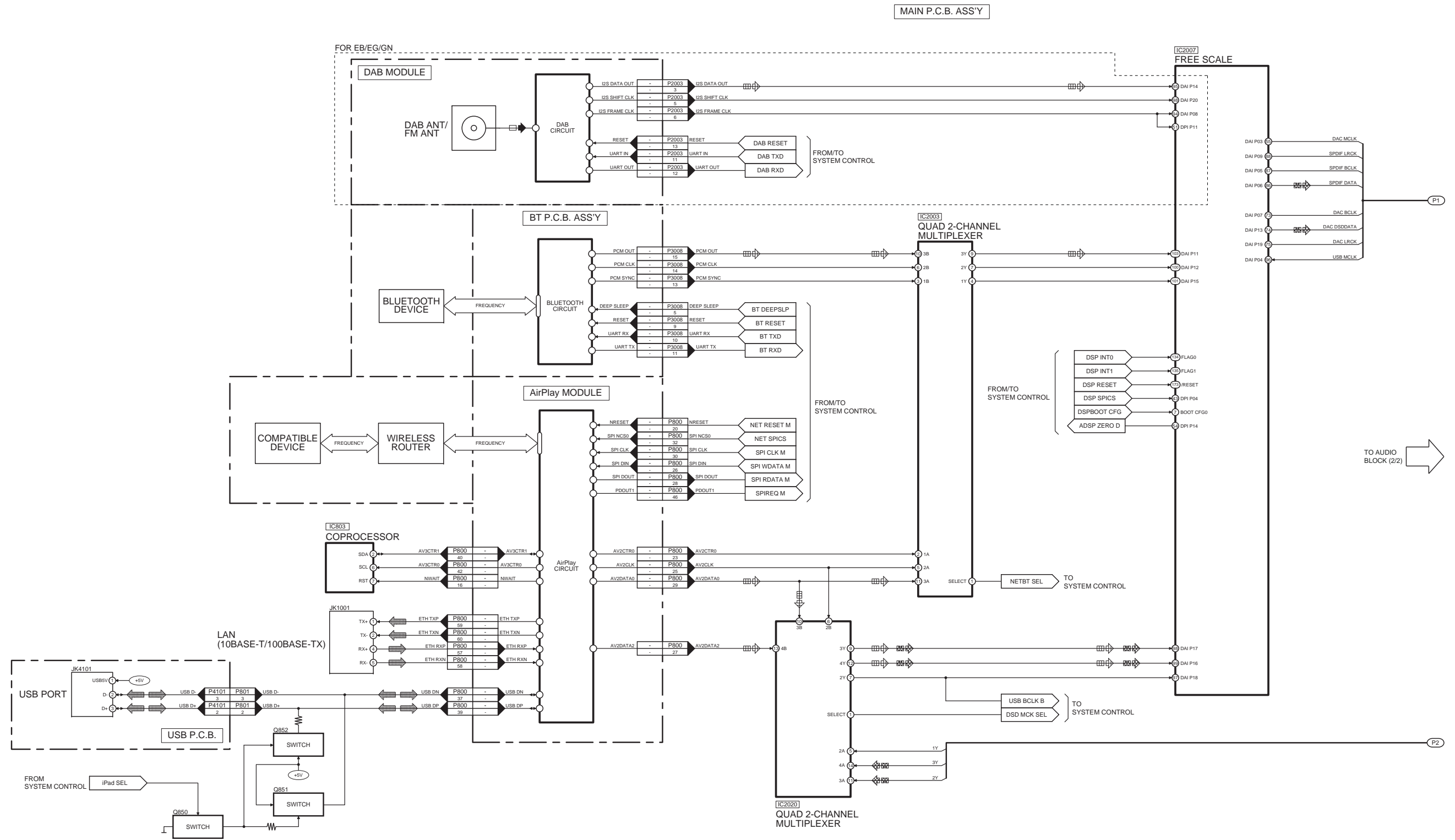
ST-C700EB/EG/GN/PP SYSTEM CONTROL (1/2) BLOCK DIAGRAM



ST-C700EB/EG/GN/PP SYSTEM CONTROL (2/2) BLOCK DIAGRAM

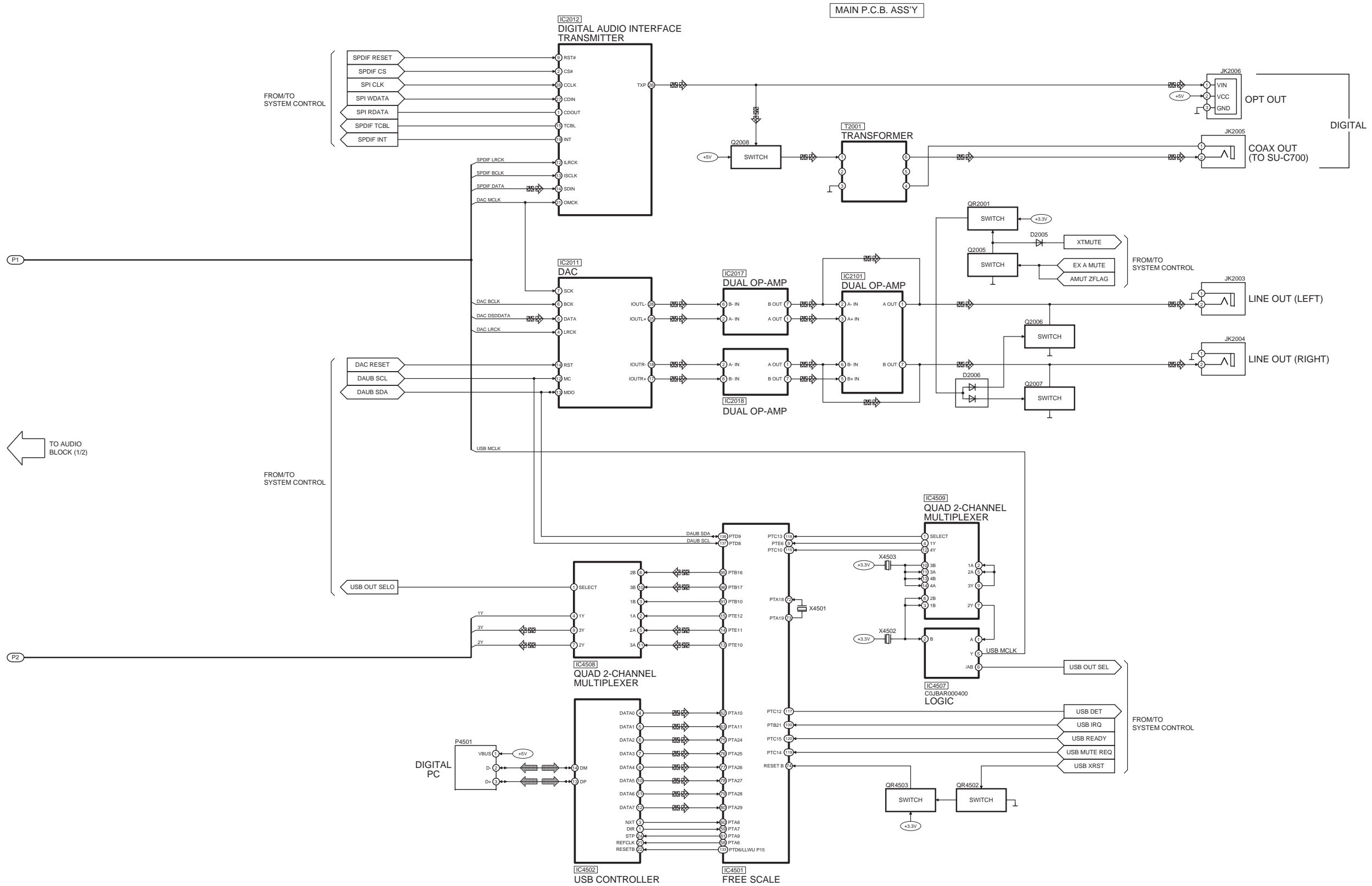
# 10.2. Audio

: AirPlay/BLUETOOTH/TUNER AUDIO INPUT SIGNAL LINE  
 : AUDIO OUTPUT SIGNAL LINE  
 : USB/LAN SIGNAL LINE  
 : DAB/FM SIGNAL LINE



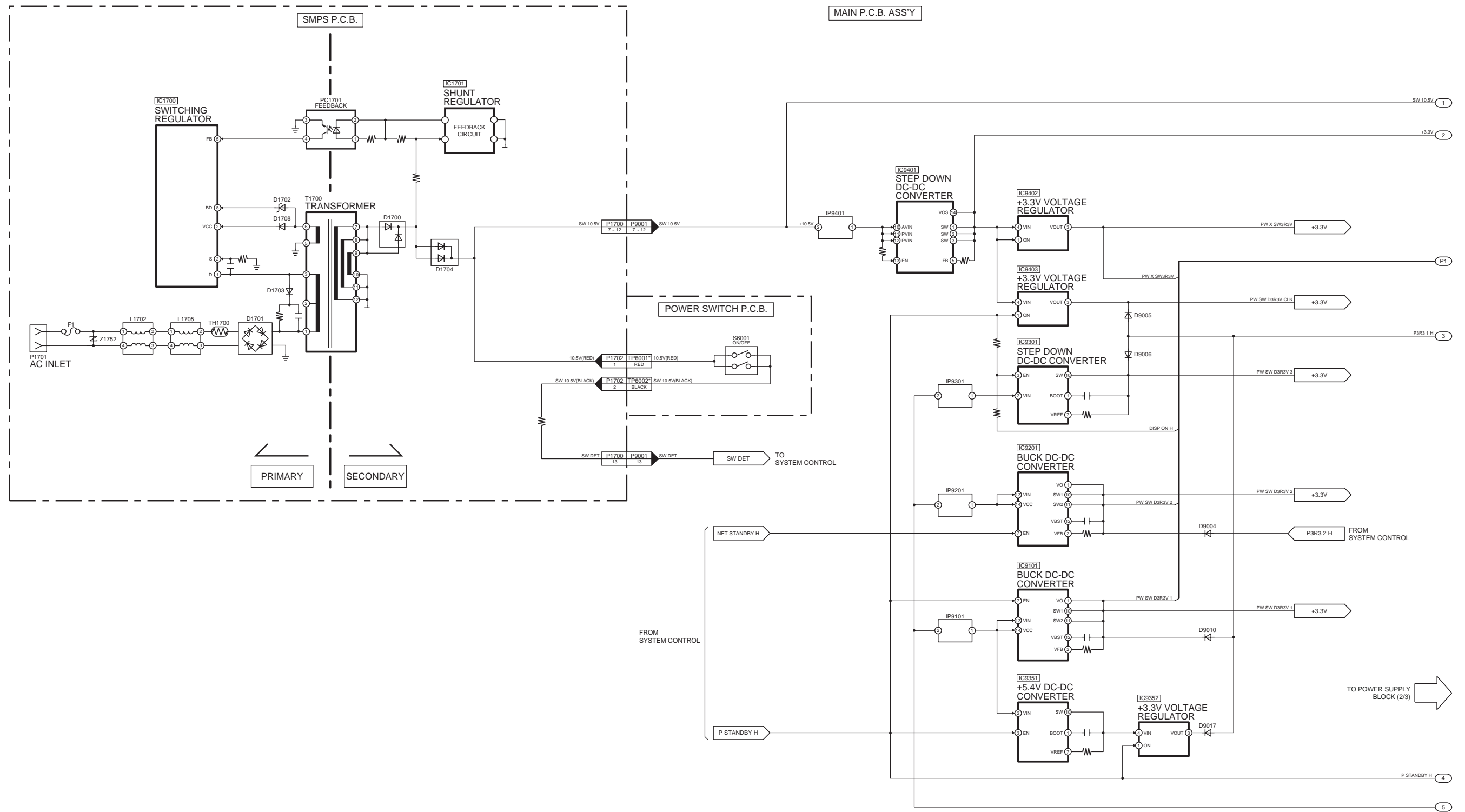
ST-C700EB/EG/GN/PP AUDIO (1/2) BLOCK DIAGRAM

: AirPlay/BLUETOOTH/TUNER AUDIO INPUT SIGNAL LINE  
 : AUDIO OUTPUT SIGNAL LINE  
 : USB/LAN SIGNAL LINE  
 : DAB/FM SIGNAL LINE



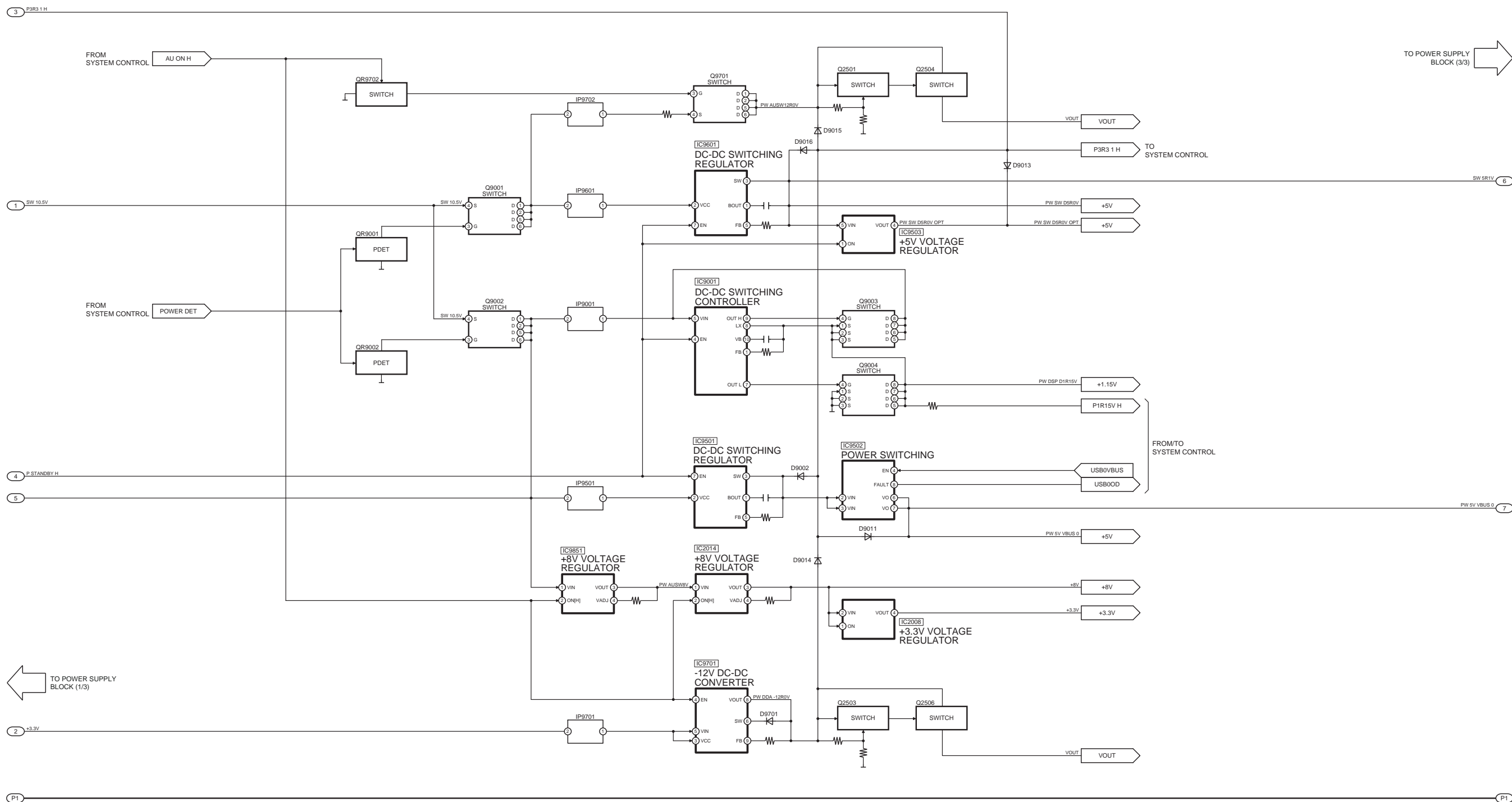
ST-C700EB/EG/GN/PP AUDIO (2/2) BLOCK DIAGRAM

### 10.3. Power Supply

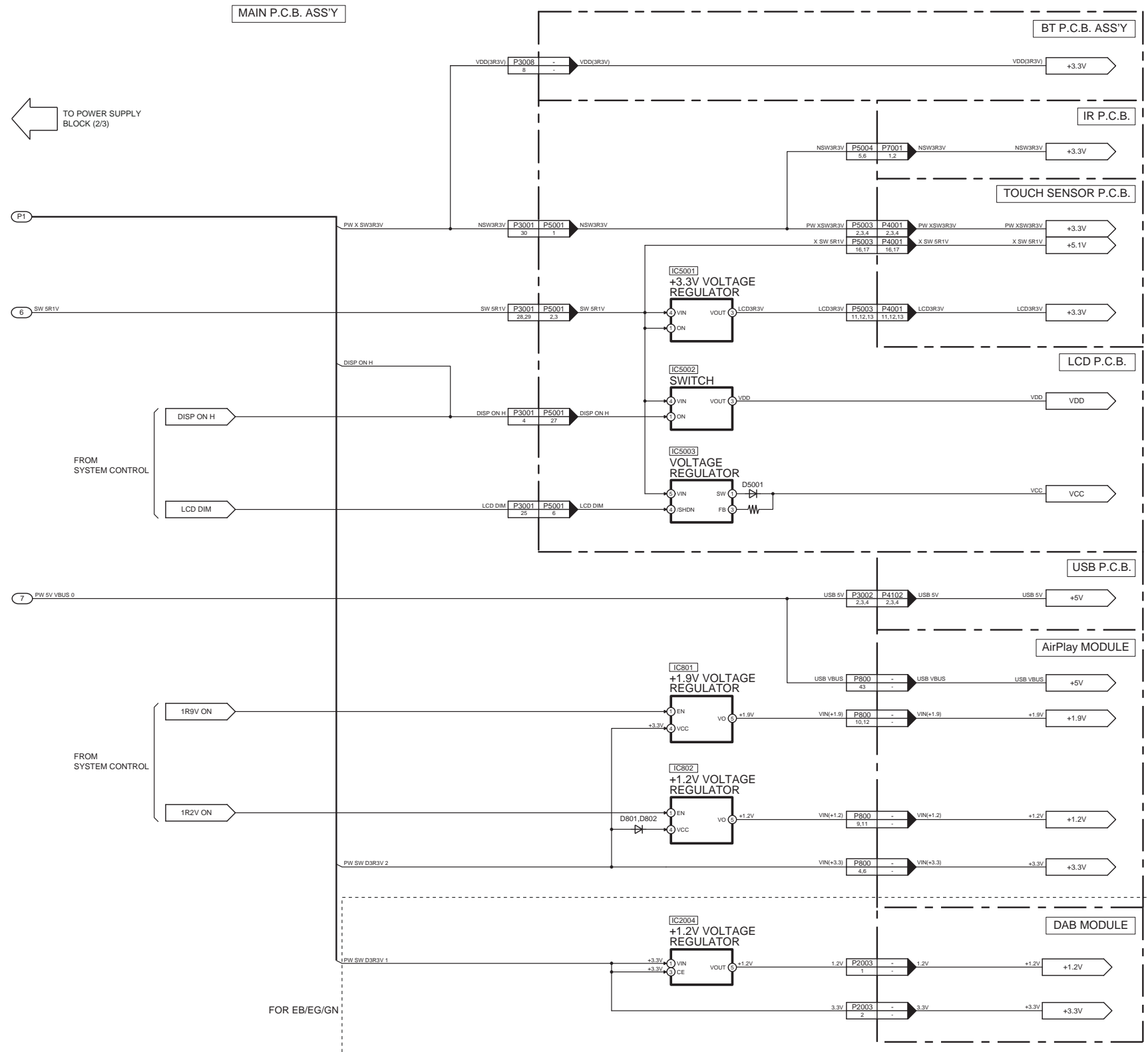


ST-C700EB/EG/GN/PP POWER SUPPLY (1/3) BLOCK DIAGRAM

MAIN P.C.B. ASS'Y



ST-C700EB/EG/GN/PP POWER SUPPLY (2/3) BLOCK DIAGRAM



ST-C700EB/EG/GN/PP POWER SUPPLY (3/3) BLOCK DIAGRAM

# 11 Wiring Connection Diagram



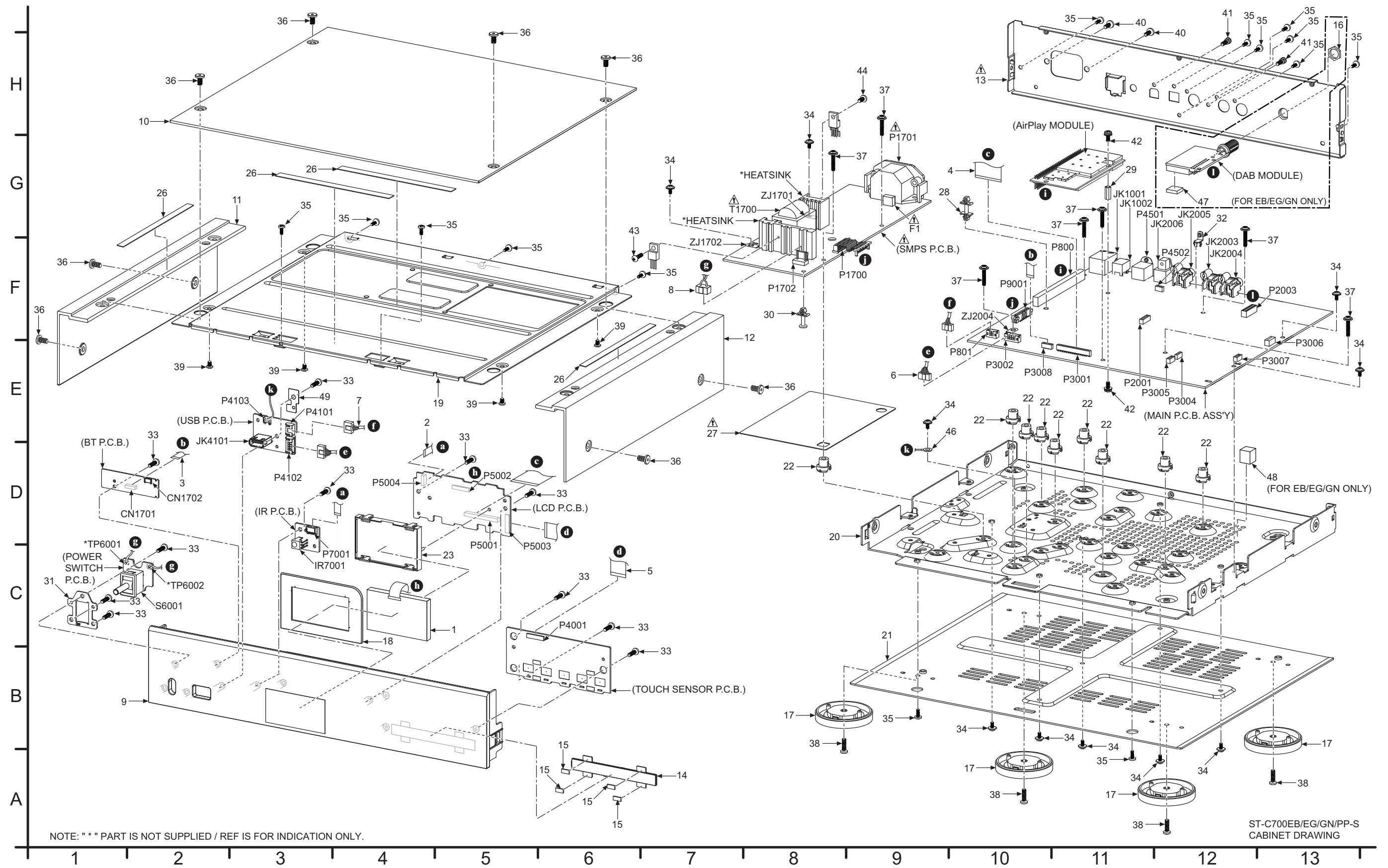
NOTE: "\*" REF IS FOR INDICATION ONLY.

ST-C700EB/EG/GN/PP WIRING CONNECTION DIAGRAM



# 12 Exploded View and Replacement Parts List

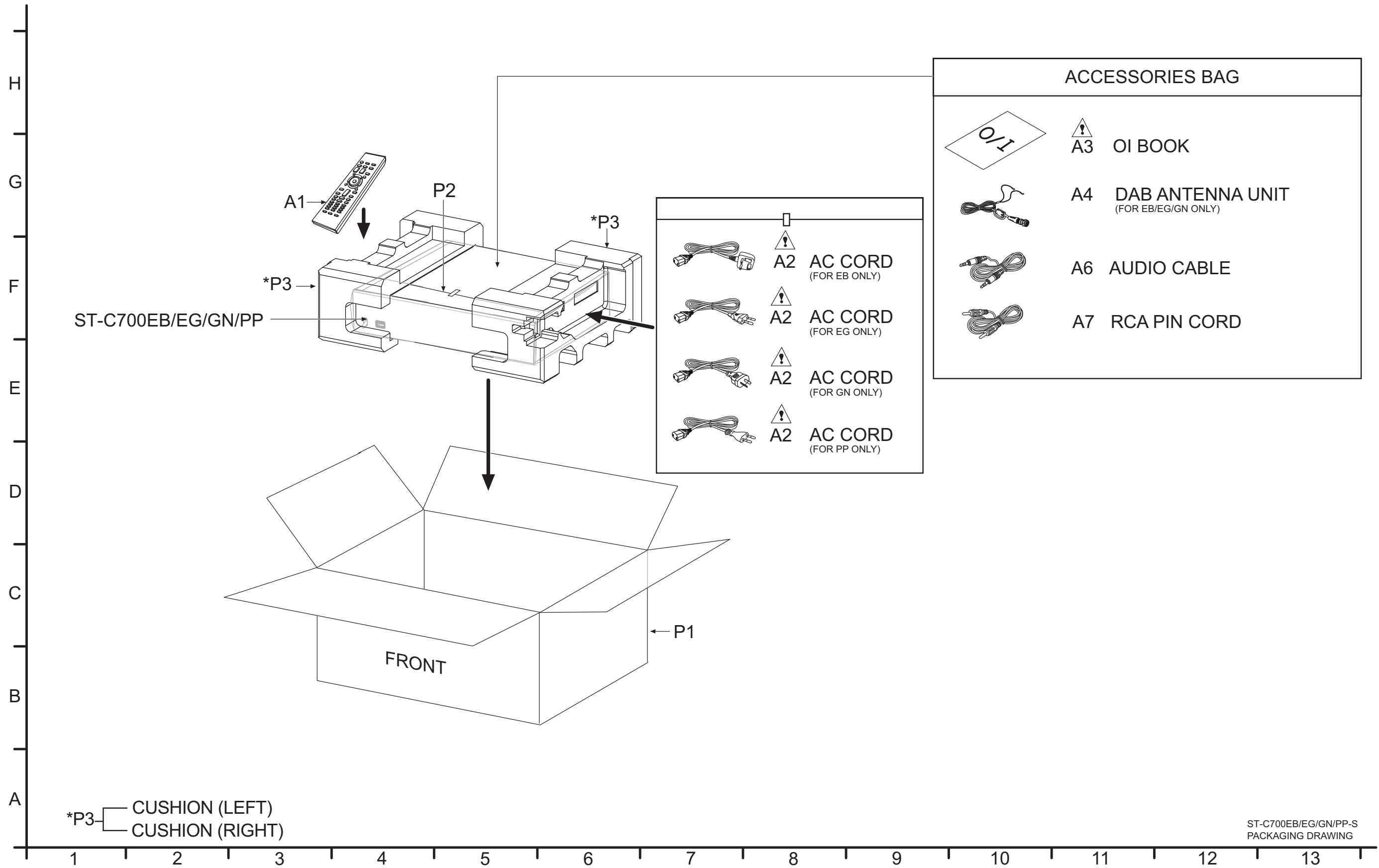
## 12.1. Cabinet Parts Location



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

ST-C700EB/EG/GN/PP-S  
CABINET DRAWING

## 12.2. Packaging



## 12.3. Mechanical Replacement Part List

### Important Safety Notice

Components identified by  $\triangle$  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 PAVCJM unless indicated likewise.
- 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	Fi:	Finnish

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
			CABINET AND CHASSIS		
1		L5HAAYY00004	ELECTROLUMINESCENCE MODULE	1	
2		REE2002	6P FFC (LCD-IR)	1	
3		REE2003	16P FFC (BT-MAIN)	1	
4		REE2004	30P FFC (LCD-MAIN)	1	
5		REE2005	30P FFC (LCD-TOUCH SENSOR)	1	
6		REX1748	6P WIRE (USB-MAIN)	1	
7		REX1749	4P WIRE (USB-MAIN)	1	
8		REX1751	2P WIRE (POWER SW-SMPS)	1	
9		RYP2019-S	FRONT PANEL ASS'Y	1	
10		RGG0254-S	TOP AL PANEL	1	
11		RGG0255A-S	SIDE AL PANEL L	1	
12		RGG0255-S	SIDE AL PANEL R	1	
$\triangle$	13	RGR0464A-A5	REAR PANEL	1	EB, EG, GN
$\triangle$	13	RGR0464B-B4	REAR PANEL	1	PP
	14	RGL0810-Q	PICT LIGHTING WINDOW	1	
	15	RMQ2367	PICT WINDOW CUSHION	4	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	16	RHN95002	DAB NUT	1	EB, EG, GN
	17	RKA0325-K	SET LEG UNIT	4	
	18	RYQ1491-H	ORGANIC EL FILTER ASSY	1	
	19	RMA2508A	TOP ANGLE	1	
	20	RMK0880	INNER CHASSIS	1	
	21	RMK0881	OUTER CHASSIS	1	
	22	RMN1082	PCB SUPPORT	9	
	23	RMN1111	YUUKI EL HOLDER	1	
	26	RMQ2437	EPT SEALER	4	
$\triangle$	27	RMV0447	SMPS SHEET	1	
	28	RMX0286	PLASTIC SPACER	1	
	29	RMX0528	SPACER	1	
	30	VKC0392	PCB SUPPORT	1	
	31	RMN1083	POWER SW ANGLE	1	
	32	RMA2255-J	GND ANGLE	1	
	33	RHD26045-L	SCREW	11	
	34	RHD30111-31	SCREW	10	
	35	RHD30119-K	SCREW	14	
	36	RHD40040	HEX SCREW	8	
	37	RHDC0023	SCREW	7	
	38	XTB3+12JFJK	SCREW (FOR SET LEG UNIT)	4	
	39	XTB3+4JFJ	SCREW	4	
	40	XTB4+10AFJK	SCREW	2	
	41	XYN3+C8FJK	SCREW	2	
	42	XYN3+F6FJ	SCREW	2	
	43	RHD26046	SCREW	1	
	44	XTB3+8JFJ	SCREW	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks	
	46	REX1849	1P WIRE (USB-INNER CHASSIS)	1		
	47	RKAX0028-K	LEG FELT	1	EB,EG,GN	
	48	RKAX0035	PCB CUSHION	1	EB,EG,GN	
	49	RMV0449	PROTECTION SHEET	1		
			PACKING MATERIALS			
	P1	SPG0032-1	PACKING CASE	1	EG	
	P1	SPG0033-1	PACKING CASE	1	EB	
	P1	SPG0035	PACKING CASE	1	PP	
	P1	SPG0036-1	PACKING CASE	1	GN	
	P2	SPH0003	MIRAMAT SHEET	1		
	P3	SPN0085-1	CUSHION	1		
			ACCESSORIES			
	A1	N2QAYA000096	REMOTE CONTROL	1		
	△	A2	K2CB2YY00098	AC CORD	1	PP
	△	A2	K2CJ2YY00097	AC CORD	1	GN
	△	A2	K2CQ2YY00127	AC CORD	1	EG
	△	A2	K2CT2YY00103	AC CORD	1	EB
	△	A3	SQT0492	OI (En)	1	EB,GN
	△	A3	SQT0493	OI (Ge,Fr,It,Du)	1	EG
	△	A3	SQT0494	OI (Sw,Da,Fi,Sp)	1	EG
	△	A3	SQT0495	OI (En)	1	PP
	△	A3	SQT0496	OI (Cf)	1	PP
	A4	RFA3654	DAB ANTENNA UNIT	1	EB,EG,GN	
	A6	K2KYYYY00233	AUDIO CABLE	1		
	A7	K2KYYYY00251	RCA PIN CORD	1		

## 12.4. Electrical Replacement Parts List

### Important Safety Notice

Components identified by  $\triangle$  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 PAVCJM unless indicated likewise.
- Parts mentioned [SPG] in the Remarks column are supplied by JAPAN.

**E.S.D. standards for Electrostatically Sensitive Devices, refer to "PREVENTION OF ELECTROSTATIC DISCHARGE (ESD) TO ELECTROSTATIC SENSITIVE (ES) DEVICES" section.**

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
			PRINTED CIRCUIT BOARDS		
	PCB1	RFKB5097A	MAIN P.C.B ASS'Y	1	EB,EG,GN (JIGS & ADJ)
	PCB1	RFKB5097B	MAIN P.C.B ASS'Y	1	PP (JIGS & ADJ)
	PCB2	REP5096AA	LCD P.C.B	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	PCB3	RFKV5025A	BT P.C.B ASS'Y	1	EB,EG,GN
	PCB3	RFKV5025D	BT P.C.B ASS'Y	1	PP
	PCB4	REP5096AC	IR P.C.B	1	
	PCB5	REP5096AD	POWER SWITCH P.C.B	1	
	PCB6	REP5096AE	USB P.C.B	1	
	$\triangle$ PCB7	REP5095A	SMPS P.C.B	1	EB,EG,GN
	$\triangle$ PCB7	REP5095B	SMPS P.C.B	1	PP
	PCB9	RFKZC700APK	AirPlay MODULE	1	
	PCB10	J3CZBC000013	DAB MODULE	1	EB,EG,GN

MMH1412