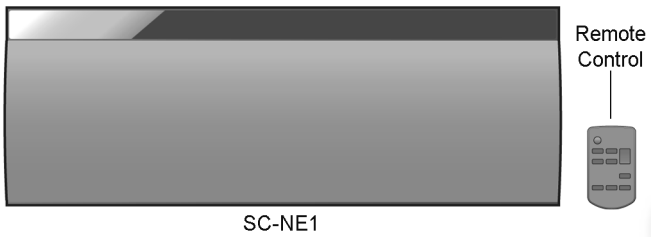
PSG1302001CE
A6

Service Manual

Wireless Speaker System

Model No. SC-NE1P
SC-NE1PC

Product Color: (K)...Black Type



SC-NE1

⚠ WARNING

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

IMPORTANT SAFETY NOTICE

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

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Panasonic

1 Safety Precautions

1.1. General Guidelines

1. **IMPORTANT SAFETY NOTICE**

   There are special components used in this equipment which are important for safety. These parts are marked by ⚠ in the Schematic Diagrams, Circuit Board Layout, Exploded Views and Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent X-RADIATION, shock, fire, or other hazards. Do not modify the original design without permission of manufacturer.
2. An Isolation Transformer should always be used during the servicing of AC Adaptor whose chassis is not isolated from the AC power line. Use a transformer of adequate power rating as this protects the technician from accidents resulting in personal injury from electrical shocks. It will also protect AC Adaptor from being damaged by accidental shorting that may occur during servicing.
3. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
4. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
5. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

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

1. Before servicing, unplug the power cord to prevent an electric shock.
2. When replacing parts, use only manufacturer's recommended components for safety.
3. Check the condition of the power cord. Replace if wear or damage is evident.
4. After servicing, be sure to restore the lead dress, insulation barriers, insulation papers, shields, etc.
5. 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

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 1MΩ and 5.2MΩ. When the exposed metal does not have a return path to the chassis, the reading must be ∞

1.1.2. Leakage Current Hot Check

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a 1.5kΩ, 10 watts resistor, in parallel with a 0.15μF capacitors, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure 1-1.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 or equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 milliamp. 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.

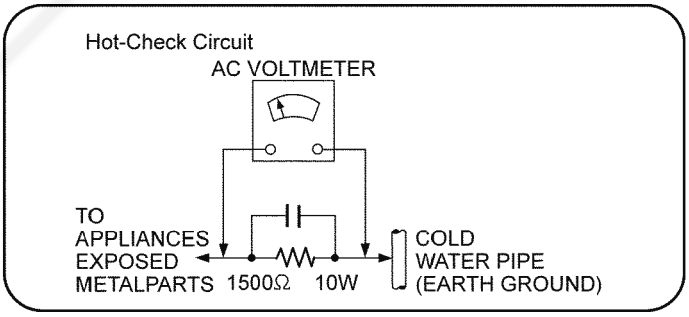

Figure 1-1

1.2. Before Repair and Adjustment

Disconnect AC power, discharge unit AC Capacitors (C1702, C1710, C1725, C1727 and C1728) through a 10W, 1W resistor to ground.
Caution: DO NOT SHORT-CIRCUIT DIRECTLY (with a screwdriver blade, for instance), as this may destroy solid state devices.
After repairs are completed, restore power gradually using a variac, to avoid overcurrent.

- Current consumption at AC 120V, at 60Hz in NO SIGNAL mode (at volume min in AUX mode) should be ~200 mA.

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 Fuse Replacement

CAUTION:

Replace with the same type fuse:
(Manufacturer: Skygate Co., Ltd, Type: SCT, F1, T2A, 250V)

1.5. Safety Part Information

Safety Parts List:

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

Safety	Ref No.	Part No.	Part Name & Description	Remarks
⚠	9	RFKHCNE1P-K	REAR CABINET ASS'Y	P
⚠	9	RFKHCNE1PC-K	REAR CABINET ASS'Y	PC
⚠	A1	N2QAYC000091	REMOTE CONTROL	
⚠	A2	K2CB2CB00022	AC CORD	
⚠	A3	VQT4T91	O/I BOOK (En/Sp)	
⚠	A3	VQT4T92	O/I BOOK (Cf)	PC
⚠	PCB3	REP4848E	SMPS P.C.B.	(RTL)
⚠	L1702	G0B183E00004	LINE FILTER	
⚠	T1700	G4DYZ0000059	TRANSFORMER	
⚠	Z1752	ERZE08A471CS	VARISTOR	
⚠	PC1701	B3PBA0000503	PHOTO COUPLER	
⚠	F1	K5G202Y00006	FUSE	
⚠	P1751	K2AB2B000007	AC INLET	
⚠	R1724	ERJ12YJ105U	1M 1/2W	
⚠	R1726	ERJ12YJ105U	1M 1/2W	
⚠	C1702	F0CAF224A105	0.22uF	
⚠	C1710	F1BAF471A013	470pF	
⚠	C1725	F0CAF154A105	0.15uF	
⚠	C1727	F1BAF1020020	1000pF	
⚠	C1728	F1BAF1020020	1000pF	

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).

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2.2. Service caution based on Legal restrictions

2.2.1. General description about Lead Free Solder (PbF)

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

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

Definition of PCB Lead Free Solder being used

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

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

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

Recommended Lead Free Solder (Service Parts Route.)

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

Note

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

3 Service Navigation

3.1. Service Information

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

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

- **Micro-processor:**

1) The following components are supplied as an assembled part.
   - Micro-processor IC, (IC51002) (RFKWMNE1PM)

4 Specifications

■ GENERAL

Power consumption	11 W
Power consumption in standby mode	Approx. 0.1 W
Power supply	AC 120 V, 60 Hz
Dimensions (W × H × D)	570 mm × 206 mm × 100 mm ($22\ ^{7}/_{16}$" × $8\ ^{1}/_{8}$" × $3\ ^{15}/_{16}$")
Mass (Weight)	Approx. 2.7 kg (5.95 lbs)
Operating temperature range	0 °C to +40 °C (+32 °F to +104 °F)
Operating humidity range	35% to 80 % RH (no condensation)

■ AMPLIFIER SECTION

RMS Output Power Stereo mode	
Front Ch (both ch driven)	20 W per channel (6 Ω), 1 kHz, 10% THD
Total RMS Stereo mode power	40 W
FTC Output Power Stereo mode	
Front Ch (both ch driven)	15 W per channel (6 Ω), 20 Hz to 20 kHz, 1% THD
Total FTC stereo mode power	30 W

■ SPEAKER SECTION

Type	2 way, 2 speaker system (Bass reflex)
Speaker unit(s)	
1. Woofer	8 cm ($3\ ^{1}/_{8}$") × 1 per channel
2. Tweeter	2.5 cm (1") × 1 per channel
Impedance	6 Ω
Output sound pressure	83.5 dB/W (1 m (3.3 ft))
Frequency range	52 Hz to 25 kHz (—16 dB), 75 Hz to 22 kHz (—10 dB)

■ BLUETOOTH SECTION

Version	Bluetooth® Ver.2.1 +EDR
Output	Class 2 (2.5 mW)
Communication distance	About 10 m (33 ft)*
Communication method	2.4 GHz band FH-SS
Communication profile	A2DP

* Prospective communication distance
Measurement environment:
Temperature 25 °C (77 °F) / Height 1 m (3.3 ft)
Measure in “MODE 1”

■ TERMINALS SECTION

AUX Terminal	Stereo, Ø3.5 mm ($^{1}/_{8}$") jack

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

4.1. License

5 General/Introduction

5.1. Bluetooth® Operations

By using the Bluetooth® connection, you can listen to the sound from the Bluetooth® audio device from this unit wirelessly.

Pairing Bluetooth® devices

Preparation

- Turn on the Bluetooth® feature of the device and place the device near this unit.
- If this unit is already connected to a Bluetooth® device, disconnect it.

1. Press [, AUX] to select “BLUETOOTH”.
   - If “PAIRING” is indicated on the display, go to step 3.
2. Press [PLAY MENU] to select “NEW DEV.” and then press [OK].
   ↳ “PAIRING” is indicated on the display.
3. Select “SC-NE1” from the Bluetooth® device’s Bluetooth® menu.
4. Start play on the Bluetooth® device.

- If prompted for the passkey, input “0000”.
- You can register up to 8 devices with this unit. If a 9th device is paired, the device that has not been used for the longest time will be replaced.

Connecting a paired Bluetooth® device

Preparation

- Turn on the Bluetooth® feature of the device and place the device near this unit.
- If this unit is already connected to a Bluetooth® device, disconnect it.

1. Press [, AUX] to select “BLUETOOTH”.
   ↳ “READY” is indicated on the display.
2. Select “SC-NE1” from the Bluetooth® device’s Bluetooth® menu.
   ↳ The name of the connected device is indicated on the display for 2 seconds.
3. Start play on the Bluetooth® device.

- This unit can only be connected to one device at a time.
- When “BLUETOOTH” is selected as the source, this unit will automatically try and connect to the last connected Bluetooth® device.
- The Bluetooth® device will be disconnected if “AUX” is selected as an audio source.

Bluetooth® transmission mode

You can change the transmission speed to prioritize transmission quality or sound quality.

Preparation

- Press [, AUX] to select “BLUETOOTH”.
- If a Bluetooth® device is already connected, disconnect it.

1. Press [PLAY MENU] repeatedly to select “LINK MODE”.
2. Press [▲, ▼] to select the mode and then press [OK].
   MODE 1: Emphasis on connectivity
   MODE 2: Emphasis on sound quality

- The default setting is “MODE 1”.

Bluetooth® input level

If the sound input level of the Bluetooth® transmission is too low, change the input level setting.

Preparation

- Connect a Bluetooth® device.

1. Press [PLAY MENU] repeatedly to select “INPUT LEVEL”.
2. Press [▲, ▼] to select the level and then press [OK].
   “LEVEL 0” ↔ “LEVEL +1” ↔ “LEVEL +2”

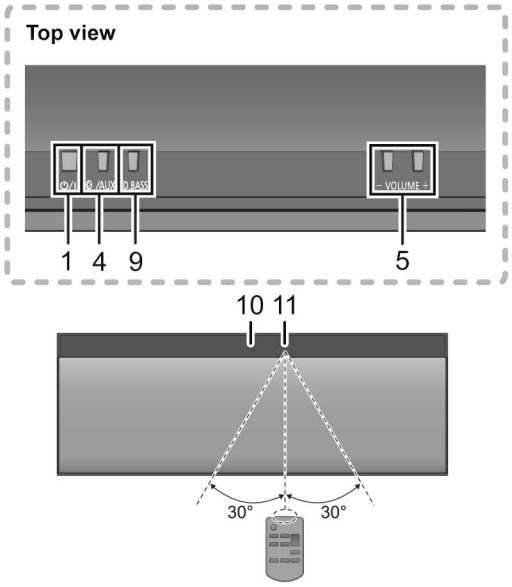
- Select “LEVEL 0” if the sound is distorted.
- The default setting is “LEVEL 0”.

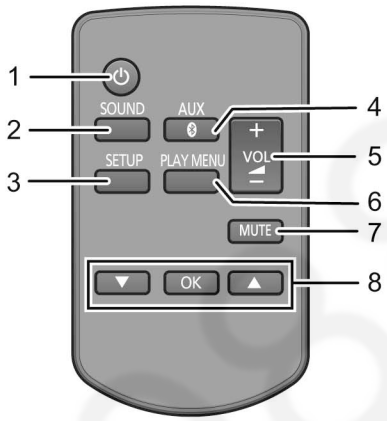
Disconnecting a Bluetooth® device

1. While a Bluetooth® device is connected: Press [PLAY MENU] to select “DISCONNECT?”.
2. Press [▲, ▼] to select “OK? YES” and then press [OK].

6 Location of Controls and Components

6.1. Main Unit and Remote Control Key Button Operations

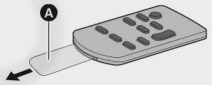




1 Standby/on switch [⏻/I] ([⏻])
Press to switch the unit from on to standby mode or vice versa.
In standby mode, the unit is still consuming a small amount of power.
2 Enter sound menu
3 Enter setup menu
4 Select Bluetooth®/AUX
5 Adjust the volume (0 (min) to 50 (max))
6 Enter the Bluetooth® menu/
Change the sound input level of the external device
7 Mute the sound
Mutes the sound. Press again to cancel.
"MUTE" is also canceled when the volume is adjusted or the unit is turned off.
8 Selection/OK
9 Dynamic Bass sound effect selector
10 Display
11 Remote control signal sensor
Distance: Within approx. 7 m (23 ft) directly in front.
- To avoid interference, please do not put any objects in front of signal sensor.

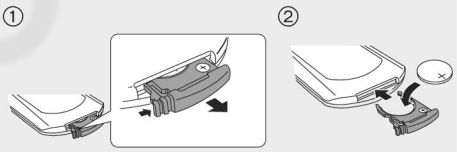
■ **Before using for the first time**

Remove the insulation sheet Ⓐ .



■ **To replace a button-type battery**

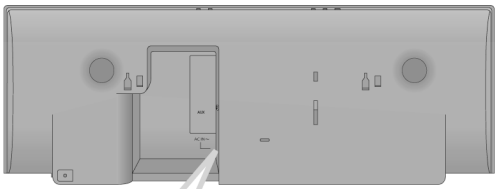
Battery type: CR2025 (Lithium battery)



- Set the button-type battery with its (+) mark facing upward.
- Keep the button-type battery out of reach of children to prevent swallowing.

7 Installation Instructions

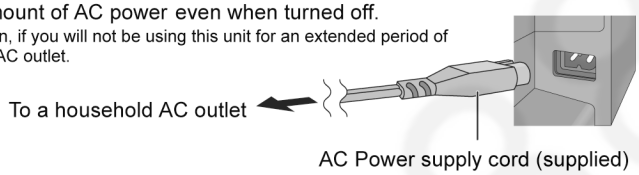
7.1. Connections



Connect the AC power supply cord.

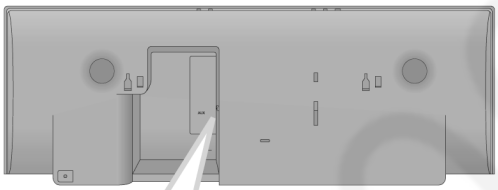
This unit consumes a small amount of AC power even when turned off.

- In the interest of power conservation, if you will not be using this unit for an extended period of time, unplug it from the household AC outlet.



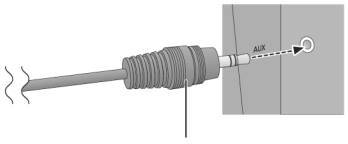
- These speakers do not have magnetic shielding. Do not place them near a television, personal computer or other devices easily influenced by magnetism.

Additional Connection



Connect an external music device (for AUX mode).

① Plug the audio cable (not supplied) into the AUX jack.
Plug type: ∅3.5 mm (1/8″) stereo
② Press [, AUX] to select “AUX” and start playback on the connected device.



■ To select the sound input level of the external device

① While in “AUX” mode, press [PLAY MENU] repeatedly to select “INPUT LEVEL” and then press [OK].
② Press [▲, ▼] to select “NORMAL” or “HIGH”.
- The default setting is “NORMAL”.

- Switch the equalizer off or turn the volume of the external device down to reduce the input signal. High level of input signal will distort the sound.
- For details, refer to the instruction manual of the other equipment.
- The cables and the devices are not supplied.

8 Service Mode

This unit is equipped with features of self diagnostic & doctor mode setting for checking the functions & reliability.

8.1. Self Diagnostic Mode

Here is the procedures to enter into Self Diagnostic Mode.
Step 1: Turn on the unit.
Step 2: Select Bluetooth/AUX mode.
Step 3: Press and hold [Bluetooth/AUX] button for 2 seconds follow by [VOL+] on the unit.
Step 4: The display show as follow.

To exit the Self Diagnostic Mode

Use either one of the following methods to cancel the Self Diagnostic Mode.

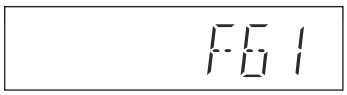
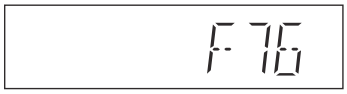
- Press the power button on the main unit or using the remote control.
- Unplug the AC cord.

8.1.1. Self Diagnostic Table

Item		FL display	Key operation
Mode name	**Description**		
Self Diagnostic Mode	To enter into self diagnostic checking.		Step 1 : Select CD mode (Ensure no disc is inserted). Step 2 : Press and hold [BT/AUX] follow by [VOL+] on main unit for 2 second.
Error code information	System will perform a check on any unusual/error code from the memory.	Example: 	Step 1 : In self diagnostic mode, Press [STOP] on main unit. To exit, press [⏻/I] on main unit or remote control.
Delete Error code	To clear the stored in memory (EEPROM IC).		Step 1 : In self diagnostic mode, Press [0] on remote control. To exit, press [⏻/I] on main unit or remote control.

8.2. Self Diagnostic Function Error Code

8.2.1. Power Amp Error Code Table

Error Code	Diagnostic Contents	Description of error	Automatic FL Display	Remarks
F61/F76	Power Amp IC output abnormal.	During power-on, PDET1, PDET2 & MAINV_DET / TEMP_DET is “L” after 1 sec.	 	Press [■] on main unit for next error.

8.2.2. Bluetooth Error Code Table

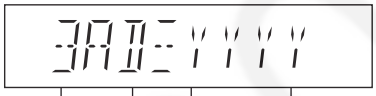
Error Code	Diagnostic Contents	Description of error	Automatic FL Display	Remarks
F70	Bluetooth Communication	Communication between module and micro-p abnormal.		Press [■] on main unit for next error.

8.3. Doctor Mode Table

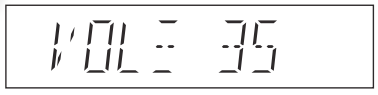
Note: To enter the Doctor Mode, please use HC55 remote control.
Here is the procedures to enter into Doctor Mode.
Step 1: Turn on the unit.
Step 2: Select Bluetooth/AUX mode.
Step 3: Pressing and hold [Bluetooth/AUX] on main unit then press [4] follow by [7] using the remote control.
Step 4: The display show as follow.

To exit the Doctor mode
Use either one of the following methods to cancel the Doctor mode.
- Press the power button of the unit or using the remote control.
- Unplug the AC cord.

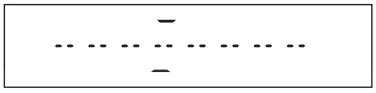
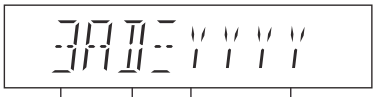
8.3.1. Doctor Mode Table 1

Item		FL display	Key operation
Mode name	**Description**		**Front Key**
Doctor Mode	To enter into Doctor Mode for checking of various items and displaying EEPROM and firmware version. Note: The micro-processor version as shown is an example. It will be revise when there is an updates. FL Display sequence Display 1→2	(Display 1)  Version Display (DEC) Check sum (HEX) Checksum: (Condition 1)  No Rom correction (Display 2)  The Checksum of EEPROM and firmware version will be display for 2 sec.	In any mode: Press [BT/AUX] button on main unit follow by [4] and the [7] on the remote control of HC55. To exit Doctor Mode, press [⏻/I] button on main unit or on the remote control of HC55.

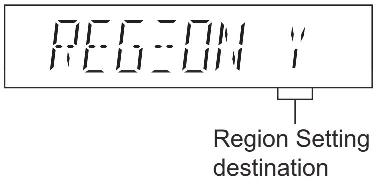
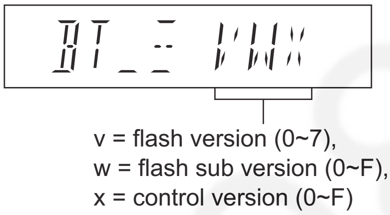
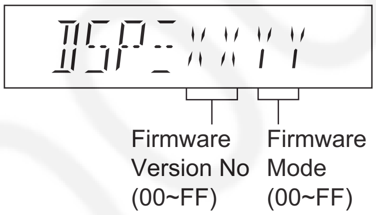
8.3.2. Doctor Mode Table 2

<table>
<tr><th colspan="2">Item</th><th>FL display</th><th>Key operation</th></tr>
<tr><th>Mode name</th><th>Description</th><th></th><th>Front Key</th></tr>
<tr><td>FL Display Test</td><td>To check the FL segments display (All segments will light up).</td><td>  </td><td>In Doctor mode:
Press [1] button on the remote control of HC55.
To cancel, press [0] button on remote control. It returns Doctor Mode.
To exit Doctor Mode, press [⏻/I] button on main unit or on the remote control of HC55.</td></tr>
<tr><td>Tact SW Inspection</td><td>To conduct the acceptance of all keys on the main set.</td><td>
<table>
<tr><th>No</th><th>NE3/5 (SP unit)</th><th>NE1</th><th>FL Display</th><th>Remarks</th></tr>
<tr><td>1</td><td>POWER</td><td>POWER</td><td></td><td>1st digit of FL</td></tr>
<tr><td>2</td><td>SELEC-TOR</td><td>SELEC-TOR</td><td></td><td>2nd digit of FL</td></tr>
<tr><td>3</td><td>WPS</td><td>D.BASS</td><td></td><td>3rd digit of FL</td></tr>
<tr><td>4</td><td>VOL-</td><td>VOL-</td><td></td><td>4th digit of FL</td></tr>
<tr><td>5</td><td>VOL+</td><td>VOL+</td><td></td><td>5th digit of FL</td></tr>
</table>
</td><td>In Doctor mode:
Press [2] button on the remote control of HC55.
To cancel, press [0] button on remote control. It returns Doctor Mode.
To exit Doctor Mode, press [⏻/I] button on main unit or on the remote control of HC55.</td></tr>
<tr><td rowspan="3">Volume Setting</td><td rowspan="3">To check for preset volume setting.
Note : In tuner mode this function is not possible.</td><td>  </td><td>In Doctor mode:
Press [7] button on the remote control of HC55.
To cancel, press [0] button on remote control. It returns Doctor Mode.
To exit Doctor Mode, press [⏻/I] button on main unit or on the remote control of HC55.</td></tr>
<tr><td>  </td><td>In Doctor mode:
Press [8] button on the remote control of HC55.
To cancel, press [0] button on remote control. It returns Doctor Mode.
To exit Doctor Mode, press [⏻/I] button on main unit or on the remote control of HC55.</td></tr>
<tr><td>  </td><td>In Doctor mode:
Press [9] button on the remote control of HC55.
To cancel, press [0] button on remote control. It returns Doctor Mode.
To exit Doctor Mode, press [⏻/I] button on main unit or on the remote control of HC55.</td></tr>
</table>

8.3.3. Doctor Mode Table 3

Item		FL display	Key operation
Mode name	Description		Front Key
Cold Start	To activate cold start upon next power up. (Backup date are initialized)	 The [NO DISC] display will appear after 2s. 	In Doctor mode: Press [SLEEP] button on the remote control of HC55. To cancel, press [0] button on remote control. It returns Doctor Mode. To exit Doctor Mode, press [⏻/I] button on main unit or on the remote control of HC55.
EEPROM Checksum	To check sum of EEPROM for a simplified ROM correction. 1. When EEPROM is not detected, the only micro-p's version shall be displayed without an EEPROM's check sum.	 Version Display (DEC) Check sum (HEX) EEPROM not detected only firmware is display. 	In any mode: Press [BT/AUX] button on main unit follow by [4] and the [7] on the remote control of HC55. To cancel, press [0] button on remote control. It returns Doctor Mode. To exit Doctor Mode, press [⏻/I] button on main unit or on the remote control of HC55.

8.3.4. Doctor Mode Table 4

Item		FL display	Key operation
Mode name	Description		Front Key
Region Checking	To check Region setting of unit. Refer to 8.3.5 for the Region Setting destination.		In Doctor mode: Press [▶10] button follow by [1] and then [6] button on the remote control of HC55. To cancel, press [0] button on remote control. It returns Doctor Mode. To exit Doctor Mode, press [⏻/I] button on main unit or on the remote control of HC55.
Bluetooth Version Check	To check Bluetooth version setting of unit.		In Doctor mode: Press [Play Timer] button on the remote control of HC55. To cancel, press [0] button on remote control. It returns Doctor Mode. To exit Doctor Mode, press [⏻/I] button on main unit or on the remote control of HC55.
Yamaha DSP Version Check	To check DSP Firmware mode and Version No.		In Doctor mode: Press [6] button on the remote control of HC55. To cancel, press [0] button on remote control. It returns Doctor Mode. To exit Doctor Mode, press [⏻/I] button on main unit or on the remote control of HC55.

8.3.5. Region Check Table

Region	Model	Series	Country
1	NE5/3/1	P/PC	North America
2 (D)	NE5/3/1	Japan	Japan
4	NE5/3/1	EG	UK, Germany, France
5	NE5/3	EB	UK
7	NE5/1	PU/GS	S.E. Asia
9	NE5/3/1	GN	Oceania

9 Service Fixture & Tools

Prepare service tools before process service position.

Ref. No.	Service Tools		Remarks
SFT1	Main P.C.B. (CN58001) - SMPS P.C.B. (P1700)	REX1538 (7P Wire)	

10 Disassembly and Assembly Instructions

Caution Note:

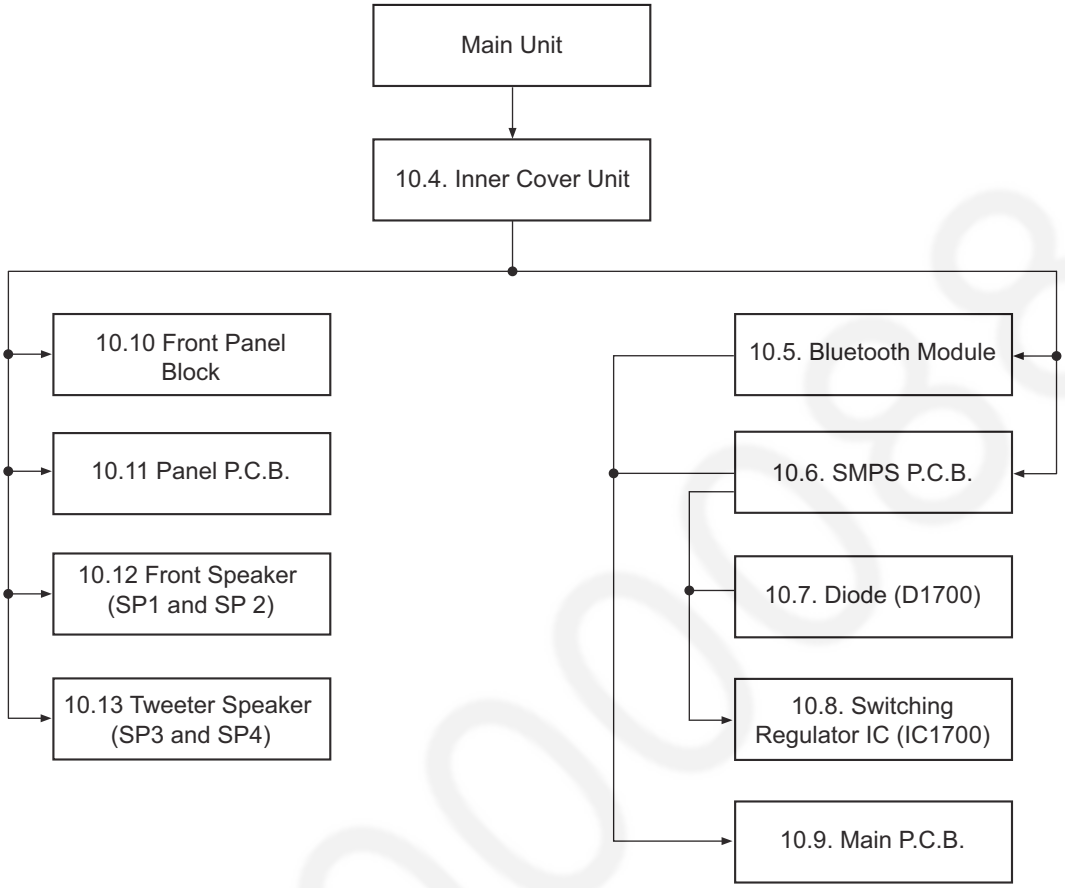
- **This section describes the disassembly and/or assembly procedures for all major printed circuit boards & main components for the unit. (You may refer to the section of “Main components and P.C.B Locations” as described in the service manual)**
- **Before carrying out the disassembly process, please ensure all the safety precautions & procedures are followed.**
- **During the disassembly and/or assembly process, please handle with care as there may be chassis components with sharp edges.**
- **Avoid touching heatsinks due to its high temperature after prolong use. (See caution as described below)**

- **During disassembly and assembly, please ensure proper service tools, equipments or jigs is being used.**
- **During replacement of component parts, please refer to the section of “Replacement Parts List” as described in the service manual.**
- **Select items from the following indexes when disassembly or replacement are required.**

- **Disassembly of Inner Cover Unit**
- **Disassembly of Bluetooth Module**
- **Disassembly of SMPS P.C.B.**
- **Replacement of Diode (D1700)**
- **Replacement of Switching Regulator IC (IC1700)**
- **Disassembly of Main P.C.B.**
- **Disassembly of Front Panel Block**
- **Disassembly of Panel P.C.B.**
- **Disassembly of Front Speaker (SP1 and SP2)**
- **Disassembly of Tweeter Speaker (SP3 and SP4)**

10.1. Disassembly flow chart

The following chart is the procedure for disassembling the casing and inside parts for internal inspection when carrying out the servicing.
To assemble the unit, reverse the steps shown in the chart below.



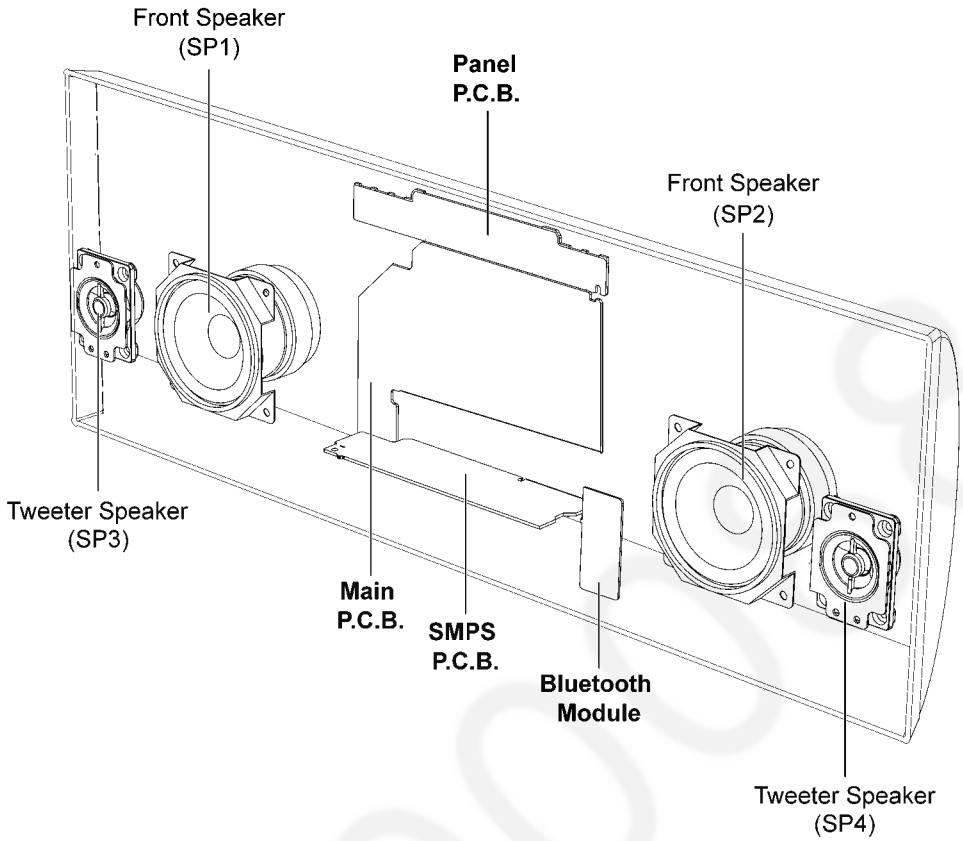
10.2. Types of Screws

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

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

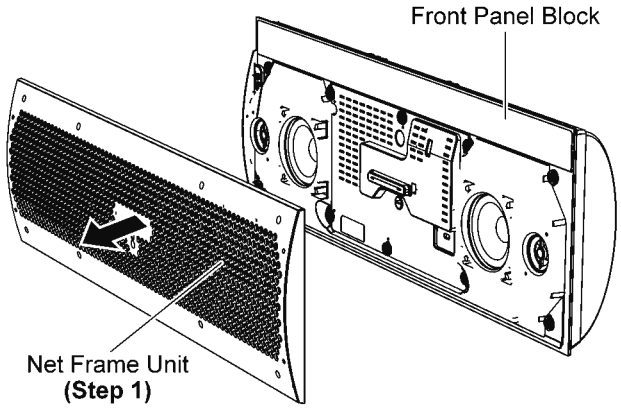
ⓐ :RHD26046
ⓑ :RHD26043-1
ⓒ :XTB3+10JFJK
ⓓ :RHD30092-1
ⓔ :XTB3+8JFJ-J

10.3. Main Parts Location Diagram

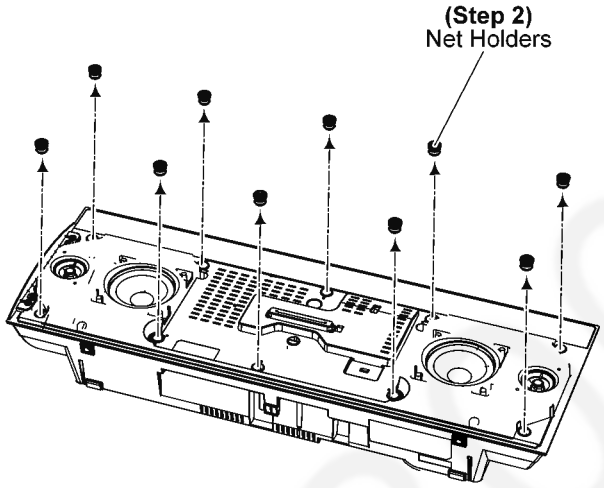


10.4. Disassembly of Inner Cover Unit

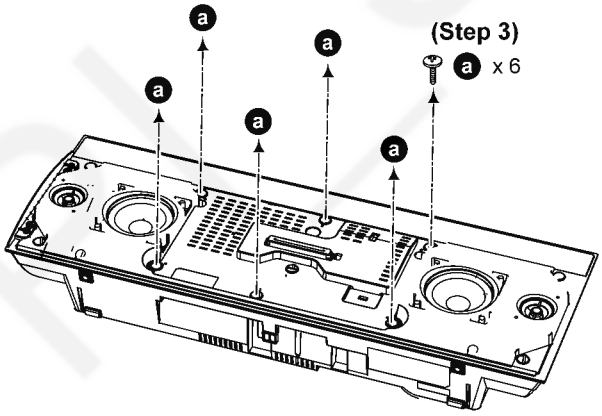
Step 1 Remove Net Frame Unit from the Front Panel Block.



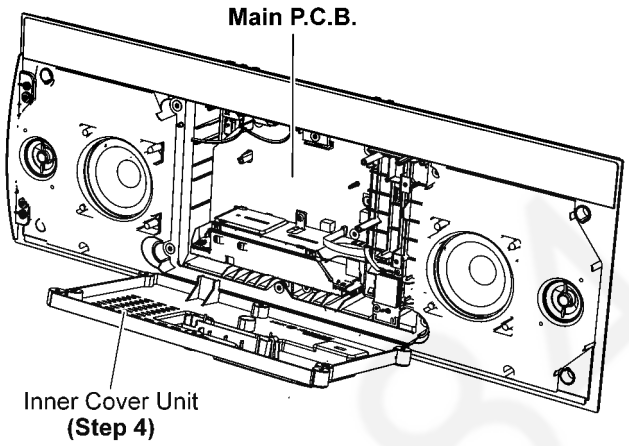
Step 2 Remove 10 Net Holders.



Step 3 Remove 6 screws.



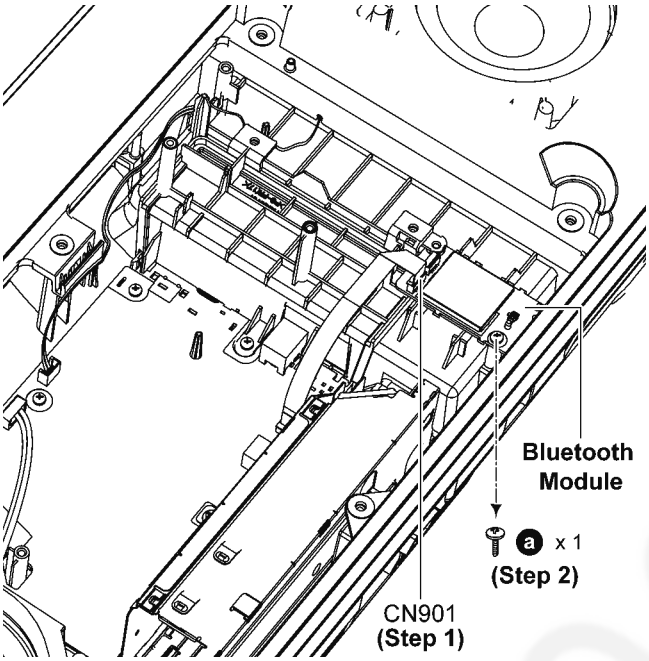
Step 4 Remove the Inner Cover Unit.



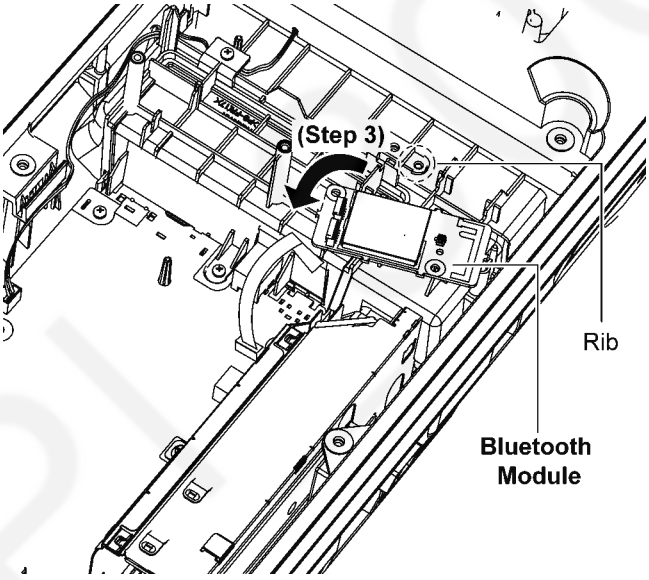
10.5. Disassembly of Bluetooth Module

• Refer to “Disassembly of Inner Cover Unit”.

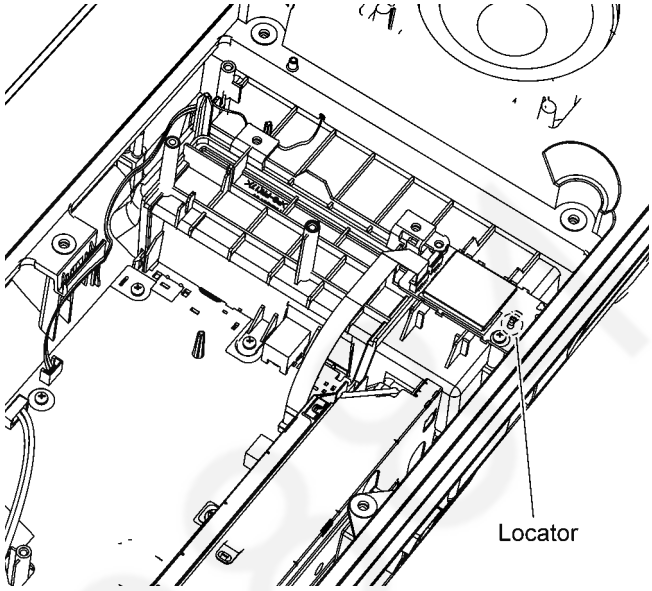
Step 1 Detach 12P FFC at the connector (CN901) on Bluetooth Module.
Step 2 Remove 1 screw.



Step 3 Lift up to remove the Bluetooth Module as shown.
Caution: During assembling, ensure the Bluetooth Module is place below the rib.



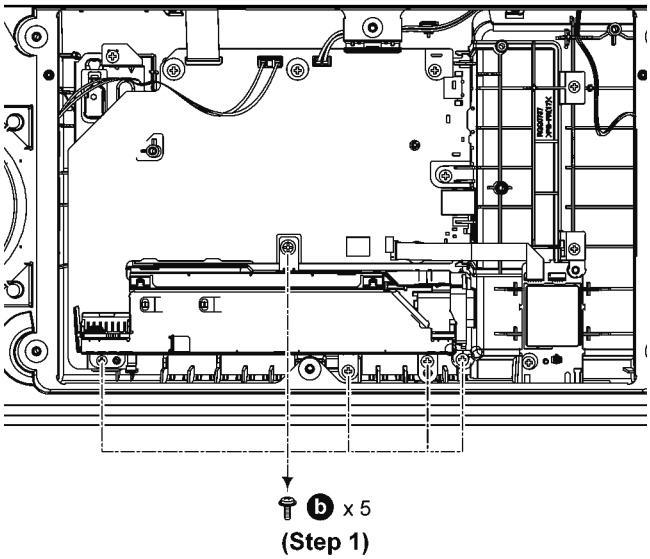
Caution: During assembling, ensure that the Bluetooth Module is properly located and fully seated onto the Unit.



10.6. Disassembly of SMPS P.C.B.

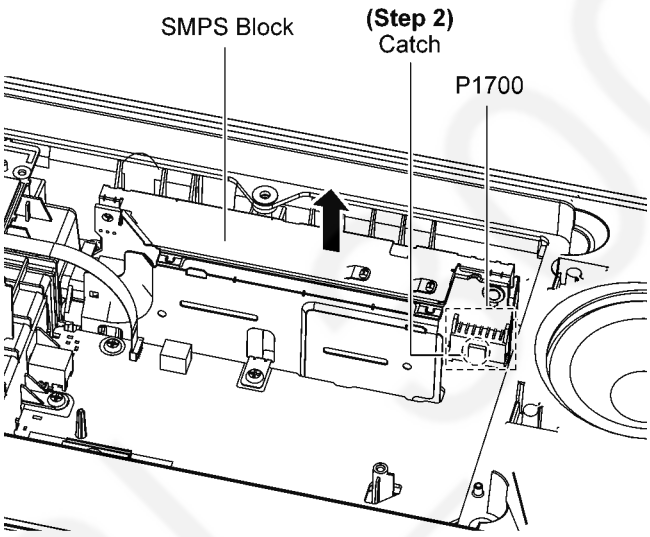
• Refer to “Disassembly of Inner Cover Unit”.

Step 1 Remove 5 screws.



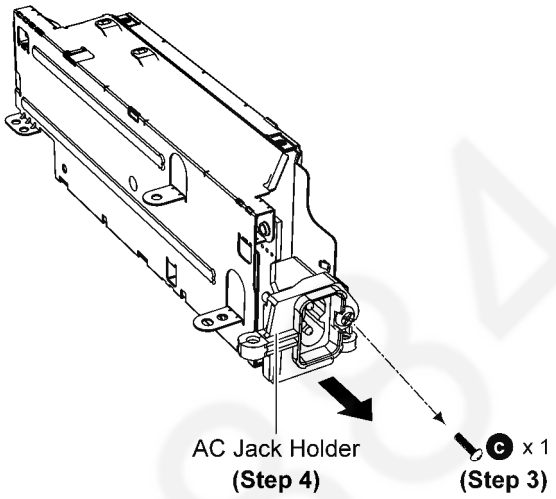
Step 2 Release the catch and lift up the SMPS Block.

Caution: During assembling, a "click" sound could be heard when the SMPS Block is attached properly to the Main P.C.B..



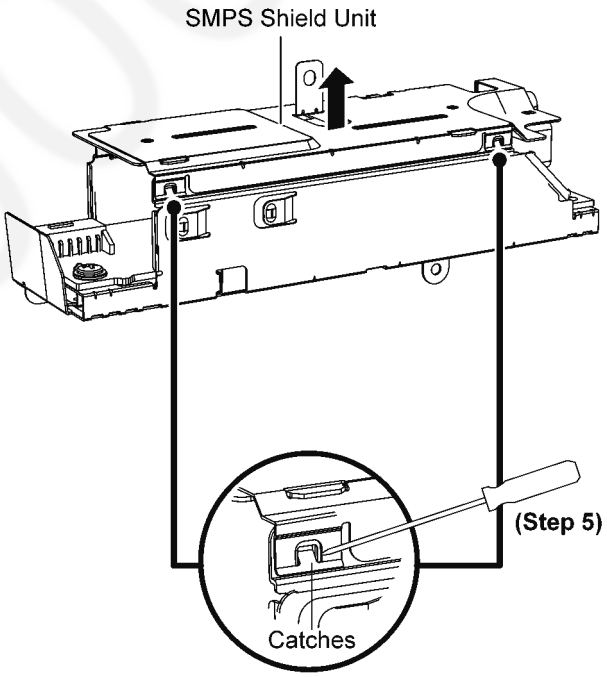
Step 3 Remove 1 screw.

Step 4 Remove AC Jack Holder.



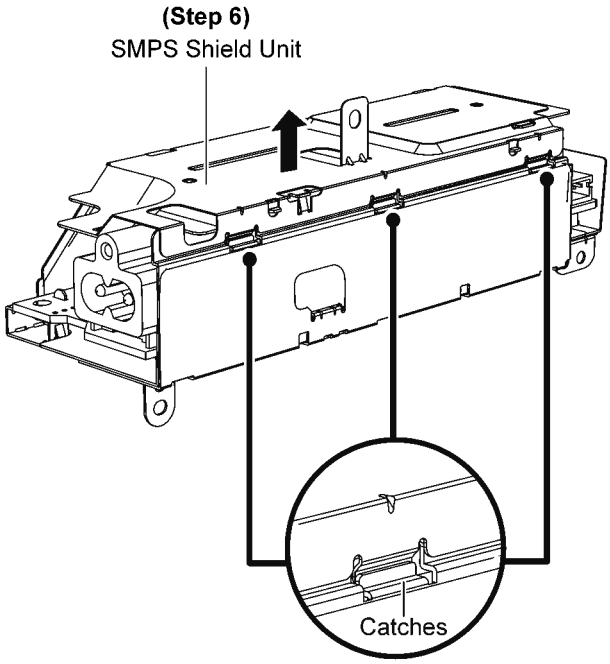
Step 5 Release 2 catches using a screwdriver and gently push up the SMPS Shield Unit.

Caution: During assembling, ensure that the SMPS Shield Unit is catched properly to the SMPS bracket as shown.

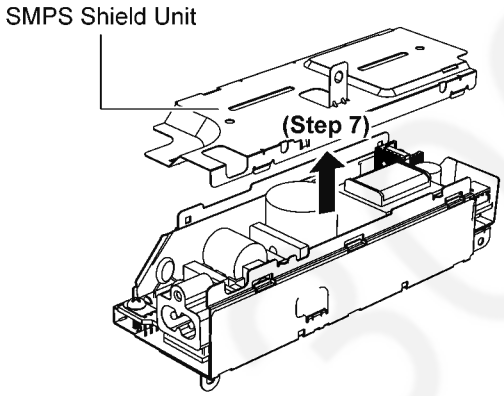


Step 6 Gently push up the SMPS Shield Unit to release the catches.

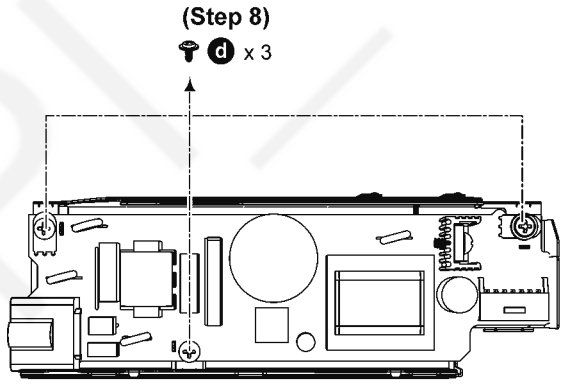
Caution: During assembling, ensure that the SMPS Shield Unit is catched properly to the SMPS bracket as shown.



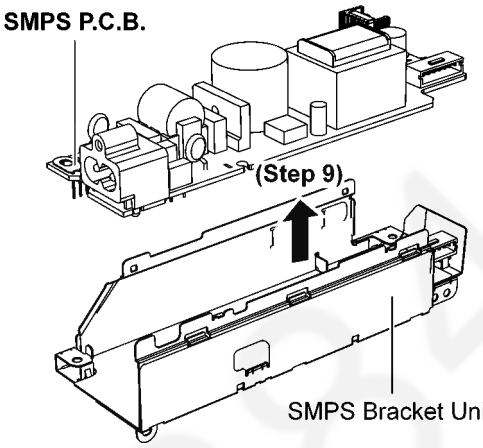
Step 7 Remove the SMPS Shield Unit.



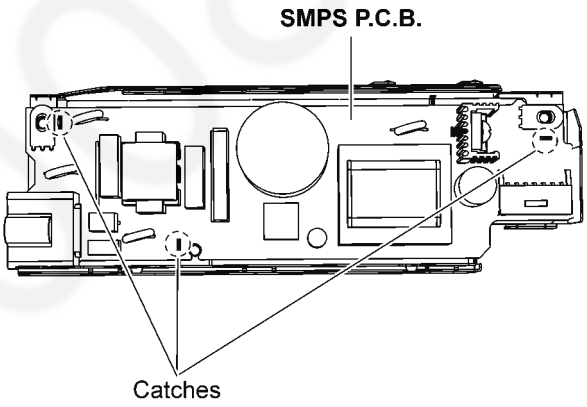
Step 8 Remove 3 screws.



Step 9 Remove the SMPS P.C.B..



Caution: During assembling, ensure that SMPS P.C.B. is properly located and fully seated onto the SMPS Bracket Unit.



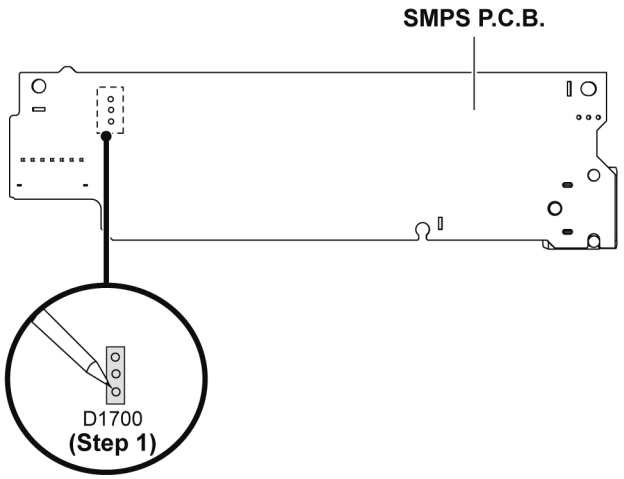
10.7. Replacement of Diode (D1700)

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

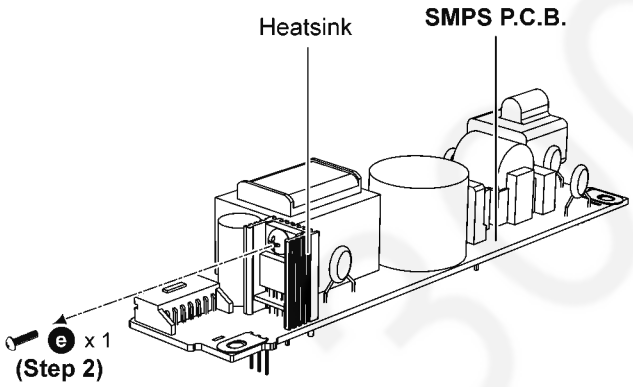
10.7.1. Disassembly of Diode (D1700)

Caution: Avoid touching the heatsink unit and SMPS P.C.B., due to its high temperature after prolonged use. Touching it may lead to injuries.

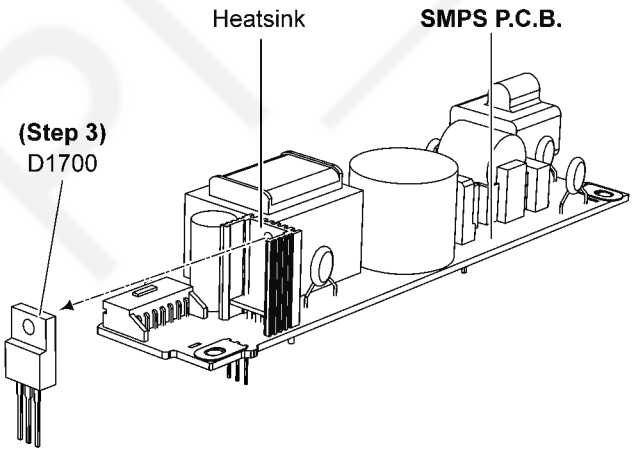
Step 1 Desolder pins of the Diode (D1700) on the solder side of SMPS P.C.B..



Step 2 Remove 1 screw.



Step 3 Remove the Diode (D1700).



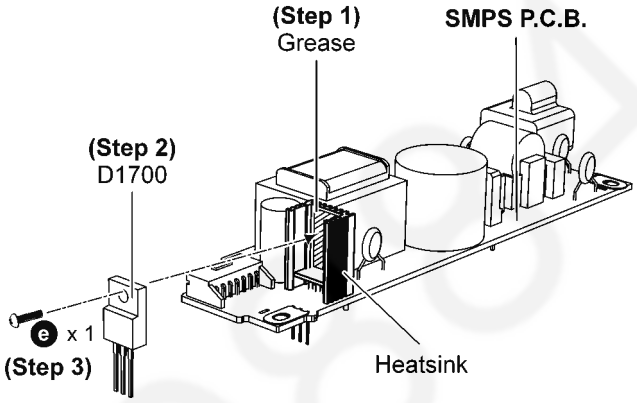
10.7.2. Assembly of Diode (D1700)

Step 1 Apply grease to the heatsink unit.

Step 2 Fix the Diode (D1700) onto SMPS P.C.B..

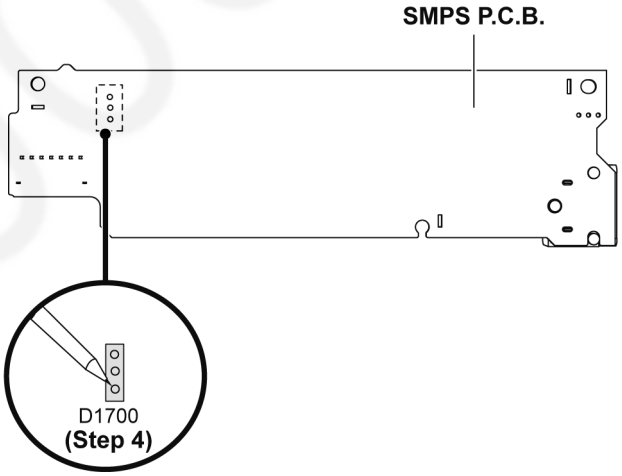
Step 3 Fix the Diode (D1700) onto the heatsink unit with 1 screw.

Caution: Ensure the Diode (D1700) is fixed properly to the heatsink.



Step 4 Solder pins of the Diode (D1700).

Caution: Ensure the Diode (D1700) is seated properly onto the SMPS P.C.B. before soldering.



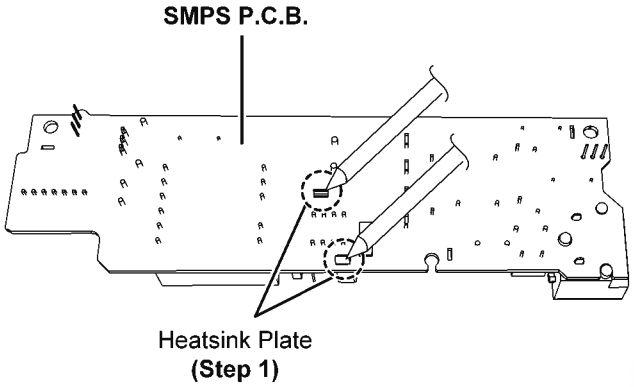
10.8. Replacement of Switching Regulator IC (IC1700)

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

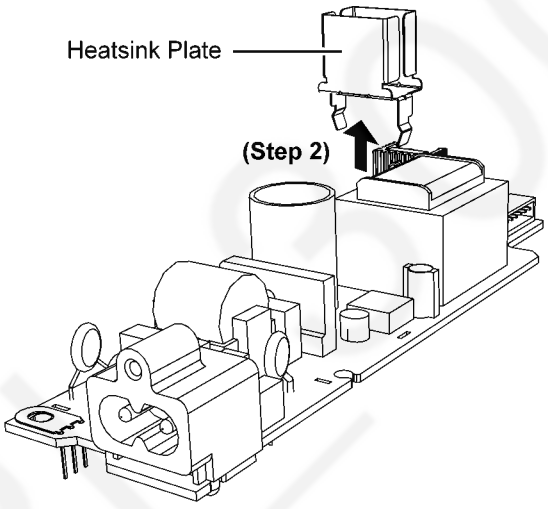
10.8.1. Disassembly of Switching Regulator IC (IC1700)

Caution: Avoid touching the heatsink unit and SMPS P.C.B., due to its high temperature after prolonged use. Touching it may lead to injuries.

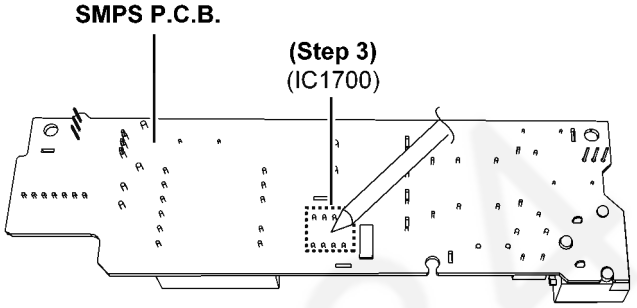
Step 1 Desolder pins of the Heatsink Plate on the solder side of SMPS P.C.B..



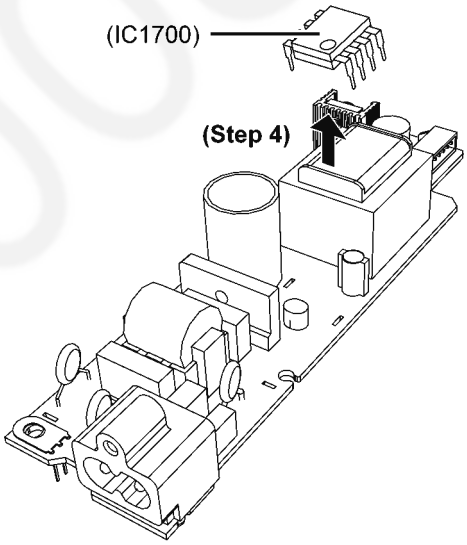
Step 2 Remove the Heatsink Plate.



Step 3 Desolder pins of the Switching Regulator IC (IC1700) on the solder side of SMPS P.C.B..

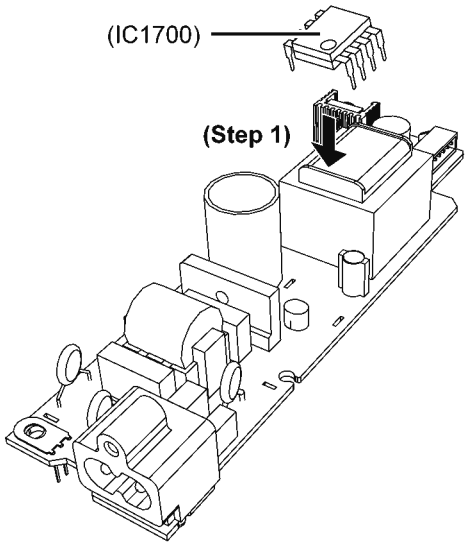


Step 4 Remove the Switching Regulator IC (IC1700).



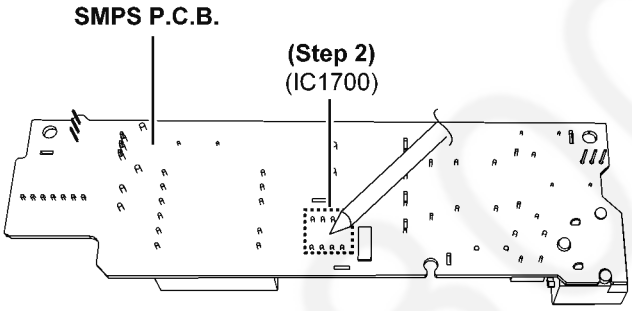
10.8.2. Assembly of Switching Regulator IC (IC1700)

Step 1 Fix the Switching Regulator IC (IC1700) onto SMPS P.C.B..

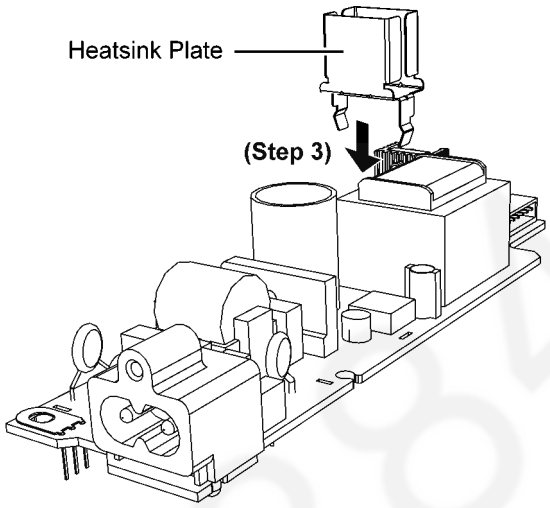


Step 2 Solder pins of the Switching Regulator IC (IC1700).

Caution : Ensure the Switching Regulator IC (IC1700) is seated properly onto the SMPS P.C.B. before soldering.

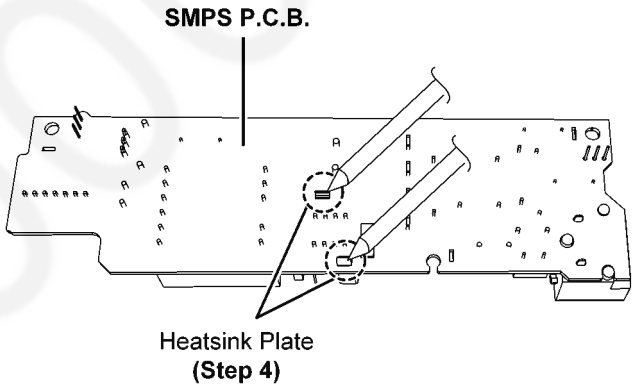


Step 3 Fix the Heatsink Plate onto SMPS P.C.B..



Step 4 Solder pins of the Heatsink Plate.

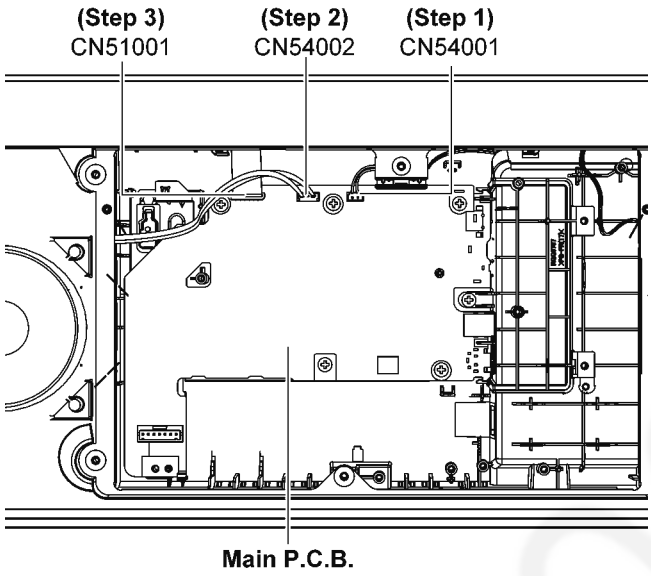
Caution : Ensure the Heatsink Plate is seated properly onto the SMPS P.C.B. before soldering.



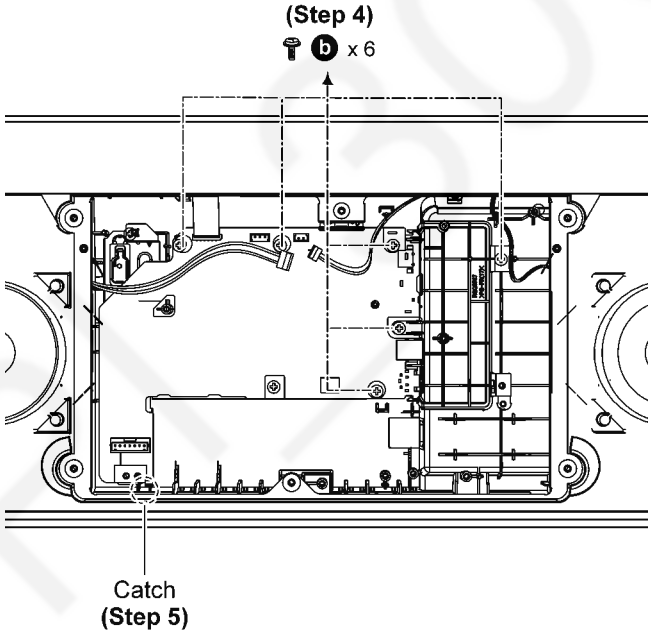
10.9. Disassembly of Main P.C.B.

- Refer to “Disassembly of Inner Cover Unit”.
- Refer to “Disassembly of Bluetooth Module.”.
- Refer to (Step 1) - (Step 2) of Item 10.6.

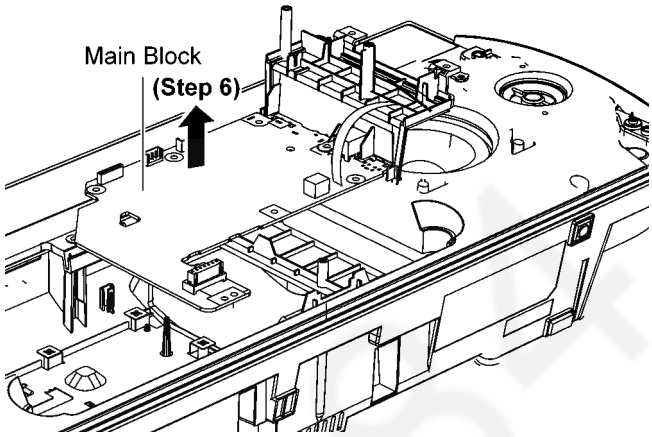
Step 1 Detach 2P Wire at the connector (CN54001) on Main P.C.B..
Step 2 Detach 2P Wire at the connector (CN54002) on Main P.C.B..
Step 3 Detach 12P FFC at the connector (CN51001) on Main P.C.B..



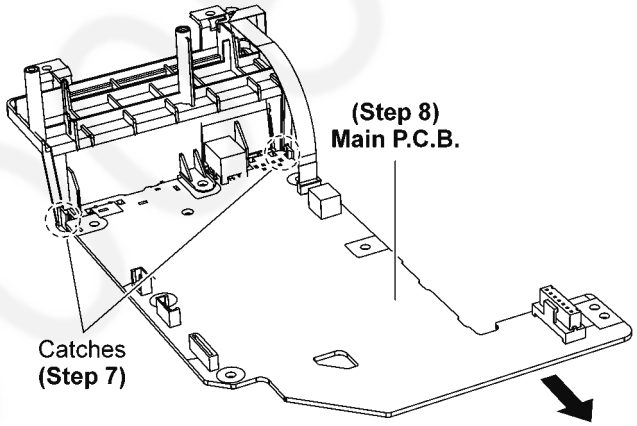
Step 4 Remove 6 screws.
Step 5 Release 1 catch.



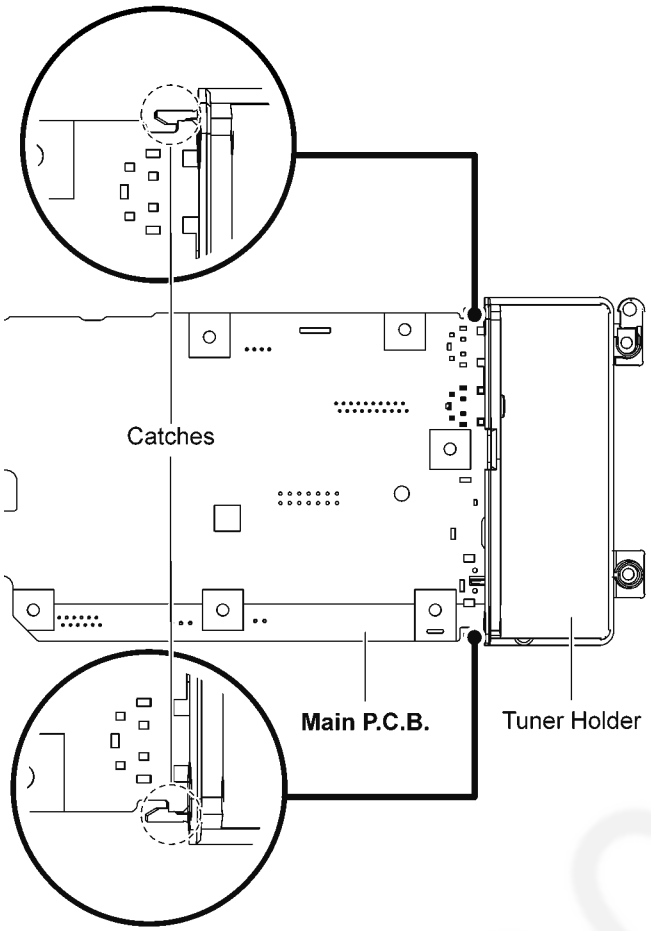
Step 6 Remove the Main Block.



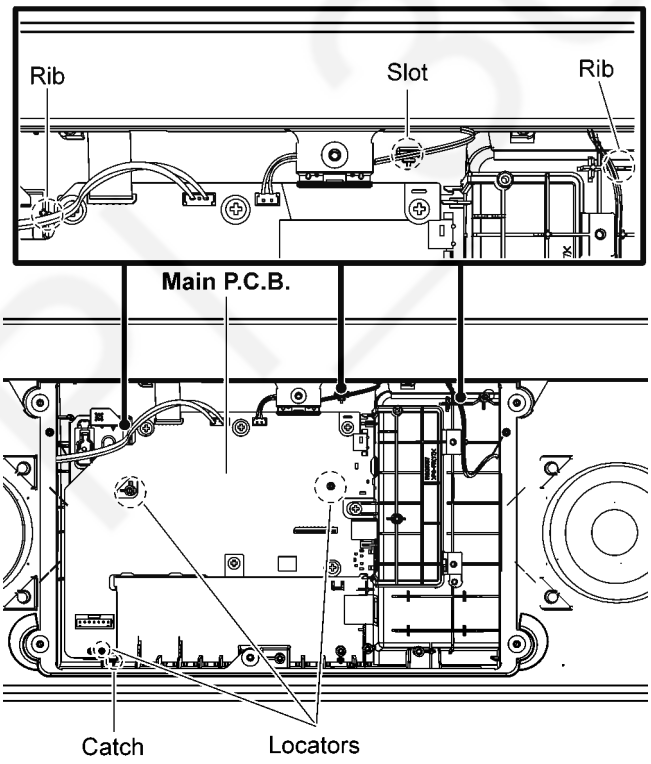
Step 7 Release 2 catches.
Step 8 Remove the Main P.C.B..



Caution: During assembling, ensure that Tuner Holder is properly located and fully seated onto the Main P.C.B..



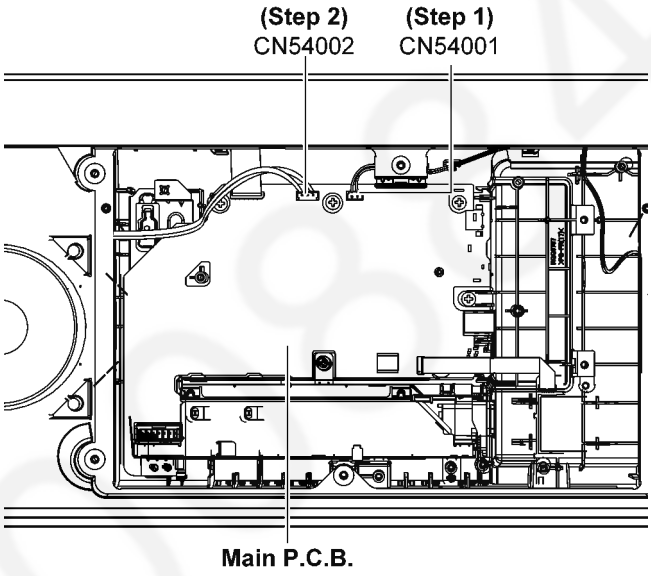
Caution 1: During assembling, ensure that the (SP1 and SP2) 2P Wire are dressed into the ribs and slot as shown.
Caution 2: During assembling, ensure that Main P.C.B. is properly located and fully seated onto the Unit.



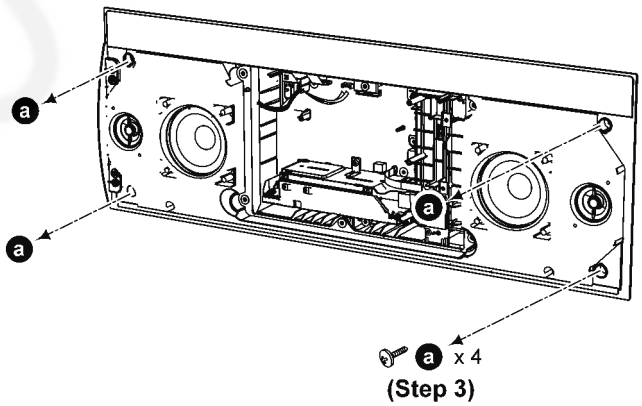
10.10. Disassembly of Front Panel Block

• Refer to “Disassembly of Inner Cover Unit”.

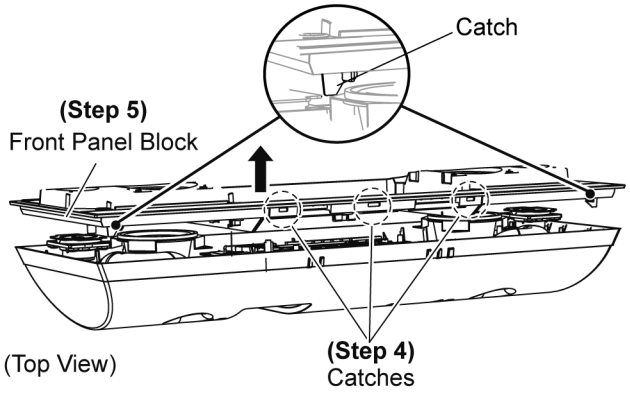
Step 1 Detach 2P Wire at the connector (CN54001) on Main P.C.B..
Step 2 Detach 2P Wire at the connector (CN54002) on Main P.C.B..



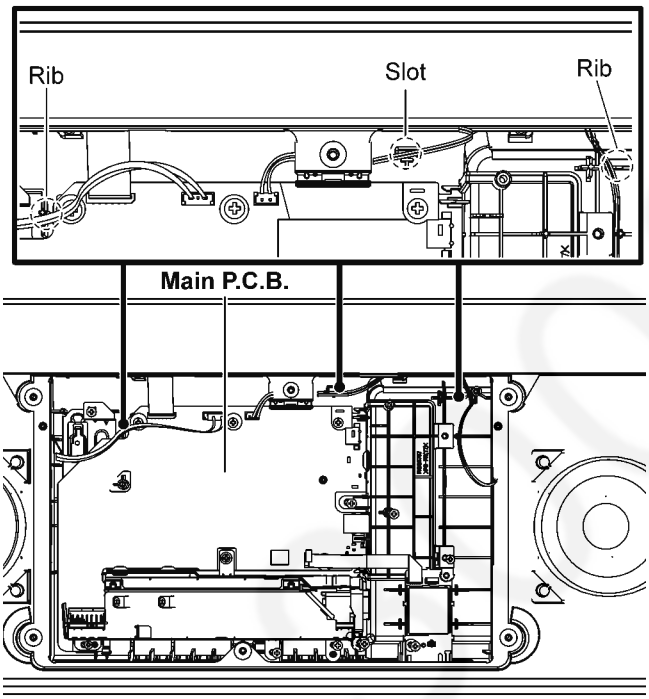
Step 3 Remove 4 screws.



Step 4 Release 5 catches.
Step 5 Remove the Front Panel Block as arrow shown.



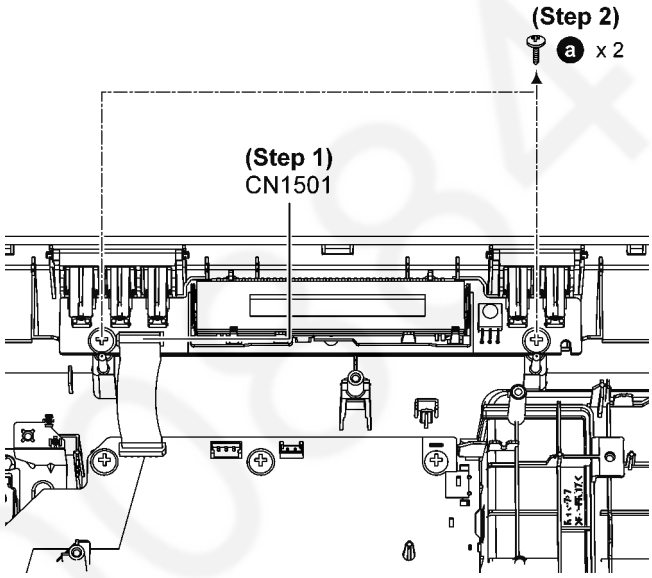
Caution: During assembling, ensure that the (SP1 and SP2) 2P Wire are dressed into the ribs and slot as shown.



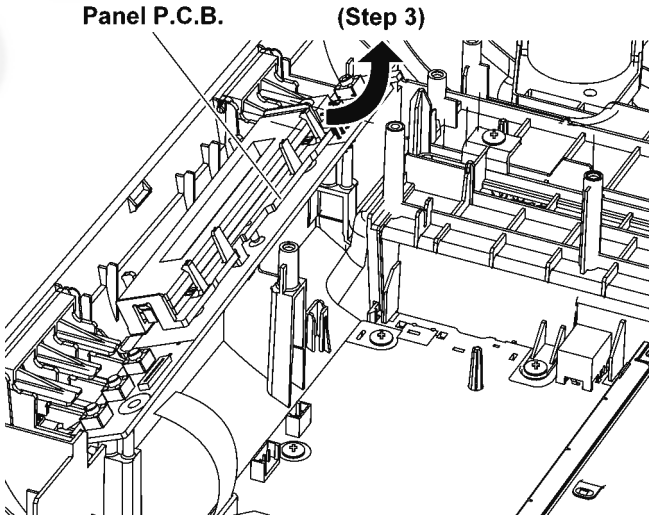
10.11. Disassembly of Panel P.C.B.

- Refer to “Disassembly of Inner Cover Unit”
- Refer to “Disassembly of Front Panel Block”

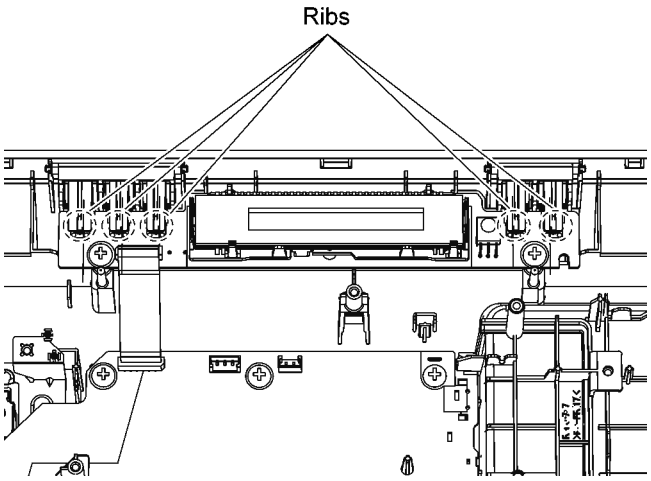
Step 1 Detach 12P FFC at the connector (CN1501) on Panel P.C.B..
Step 2 Remove 2 screws.



Step 3 Lift up and remove the Panel P.C.B..
Caution: During assembling, ensure that the Panel P.C.B. is properly and fully seated onto the unit.



Caution: During assembling, ensure that the Panel P.C.B. is placed properly below the ribs.

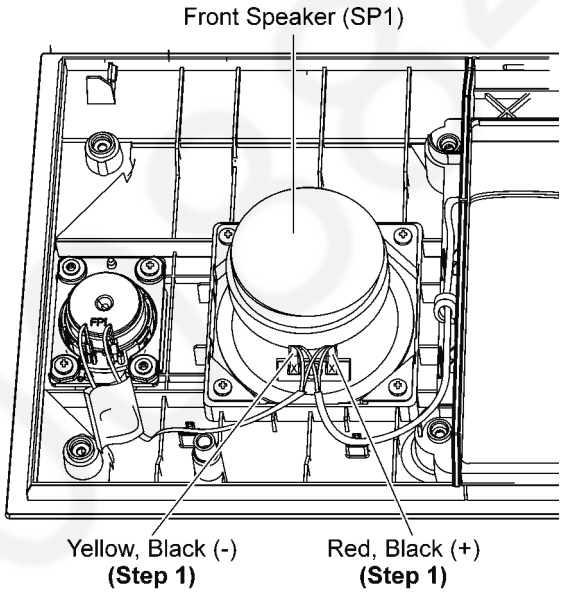


10.12. Disassembly of Front Speaker (SP1 and SP2)

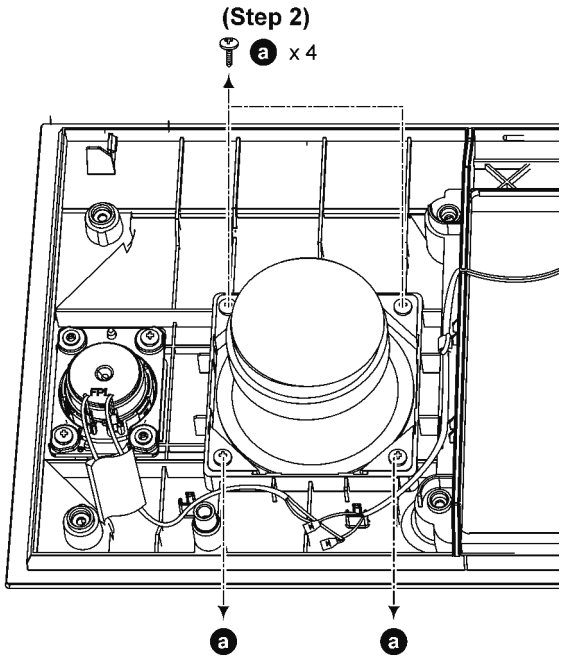
- Refer to “Disassembly of Inner Cover Unit”
- Refer to “Disassembly of Front Panel Block”

Note: Front Speaker (SP1 and SP2) have the same Mechanical structure. For disassembling of Front Speaker (SP2), repeat the (Step 1) to (Step 3) of Item 10.12.

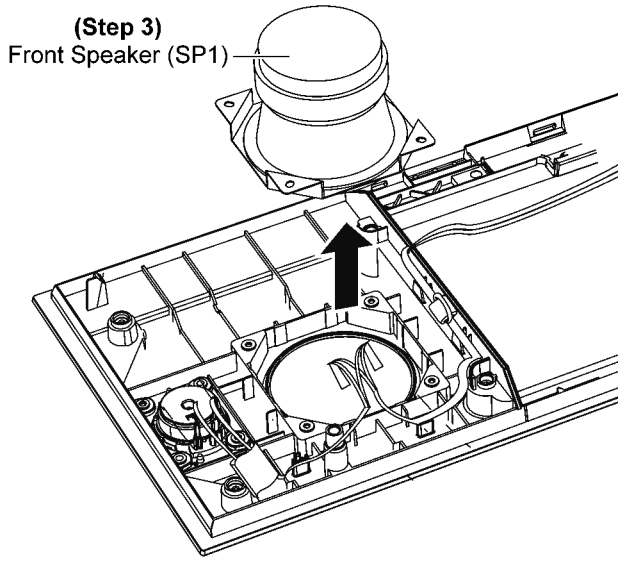
Step 1 Detach Red, Black (+) Wire and Yellow, Black (-) Wire at the terminals on the Front Speaker (SP1).



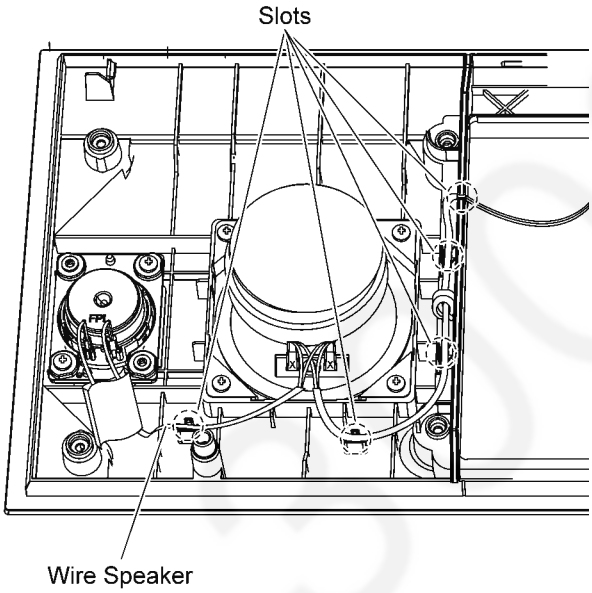
Step 2 Remove 4 screws.



Step 3 Remove the Front Speaker (SP1).



Caution: During assembling, ensure the wires of the speaker are fully catched to the slot.

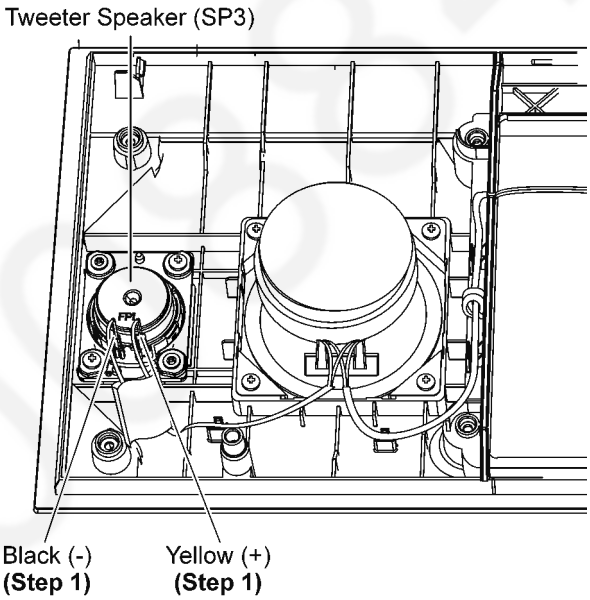


10.13. Disassembly of Tweeter Speaker (SP3 and SP4)

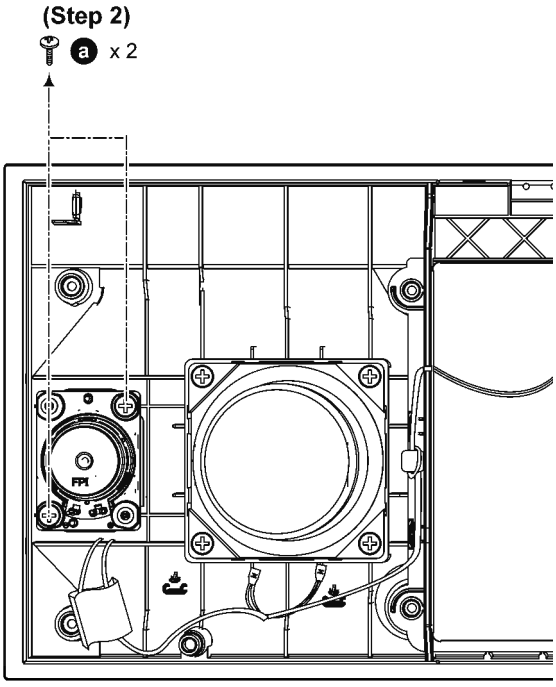
- Refer to “Disassembly of Inner Cover Unit”
- Refer to “Disassembly of Front Panel Block”

Note: Tweeter Speaker (SP3 and SP4) have the same Mechanical structure. For disassembling of Tweeter Speaker (SP4), repeat the (Step 1) to (Step 3) of Item 10.13.

Step 1 Detach Yellow (+) Wire and Black (-) Wire at the terminals on the Tweeter Speaker (SP3).

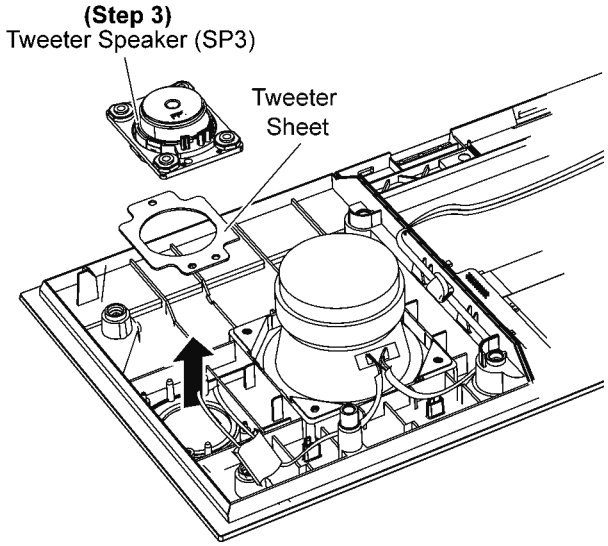


Step 2 Remove 2 screws.

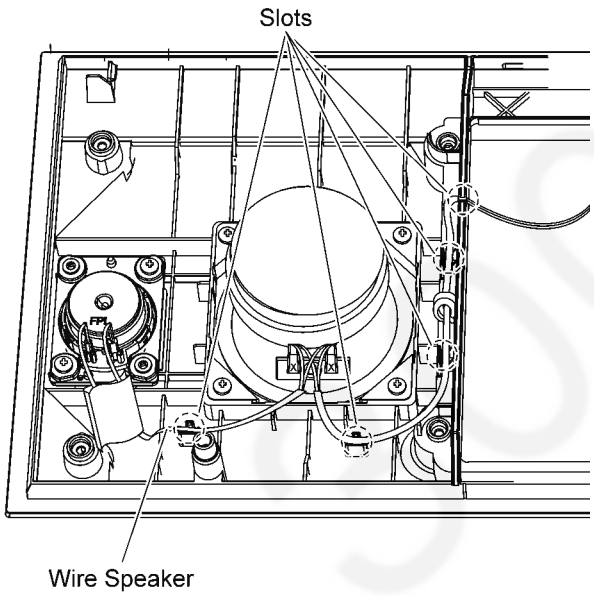


Step 3 Lift up to remove Tweeter Speaker (SP3).

Caution: During assembling, ensure the Tweeter Sheet and the Tweeter Speaker are properly fixed.



Caution: During assembling, ensure the wires of the speaker are fully catched to the slot.

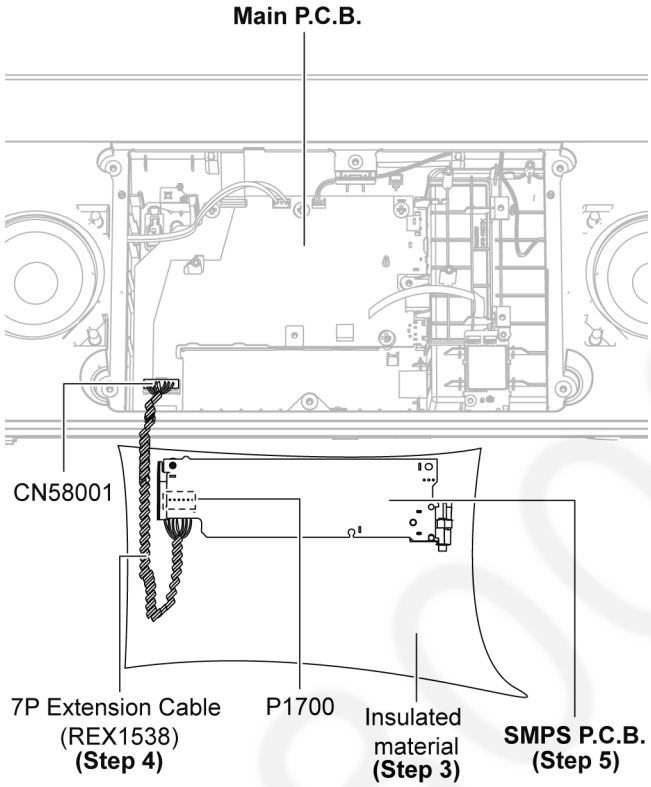


11 Service Position

Note: For description of the disassembly procedures, see the Section 10

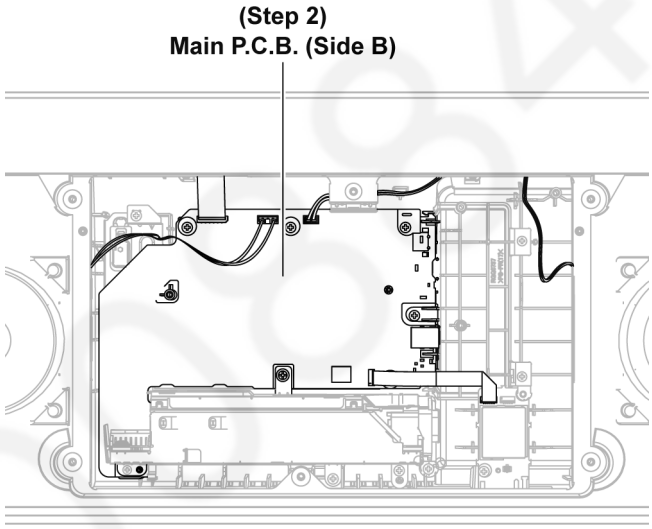
11.1. Checking and Repairing of SMPS P.C.B.

Step 1 Remove the Inner Cover Unit.
Step 2 Remove the SMPS P.C.B.
Step 3 Place the SMPS P.C.B. onto insulated material.
Step 4 Connect 7P extension cable (REX1538) from P1700 on the SMPS P.C.B. to CN58001 Main P.C.B..
Step 5 Check and repair the SMPS P.C.B. according to the diagram shown.



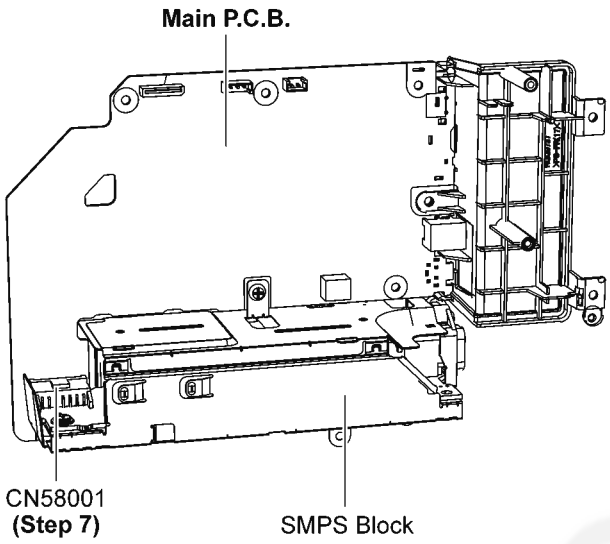
11.2. Checking and Repairing of Main P.C.B. (Side B)

Step 1 Remove the Inner Cover Unit.
Step 2 Check and repair the Main P.C.B. (Side B) according to the diagram shown.

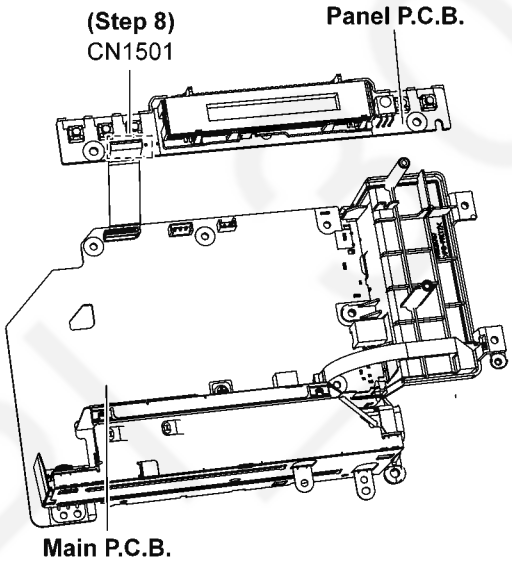


11.3. Checking and Repairing of Main P.C.B. (Side A)

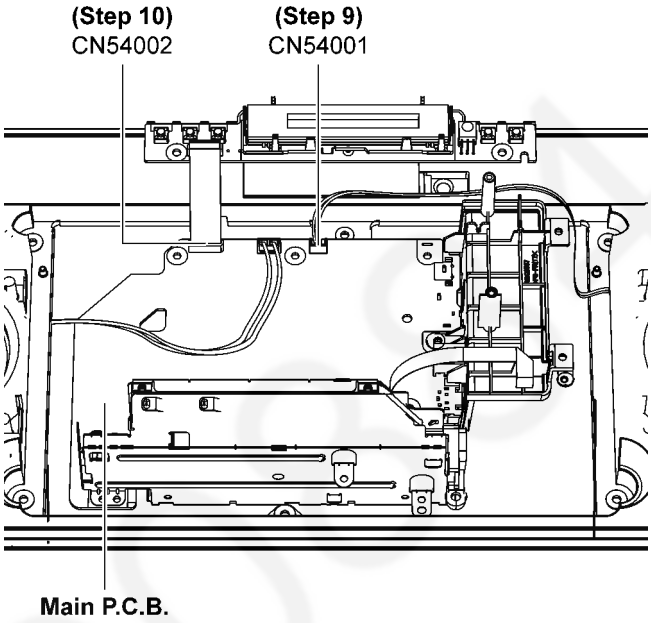
Step 1 Remove the Inner Cover Unit.
Step 2 Remove the Bluetooth Module.
Step 3 Remove the SMPS Block.
Step 4 Remove the Main P.C.B..
Step 5 Remove the Front Panel Block.
Step 6 Remove the Panel P.C.B..
Step 7 Connect 7P at the connector (CN58001) on Main P.C.B..



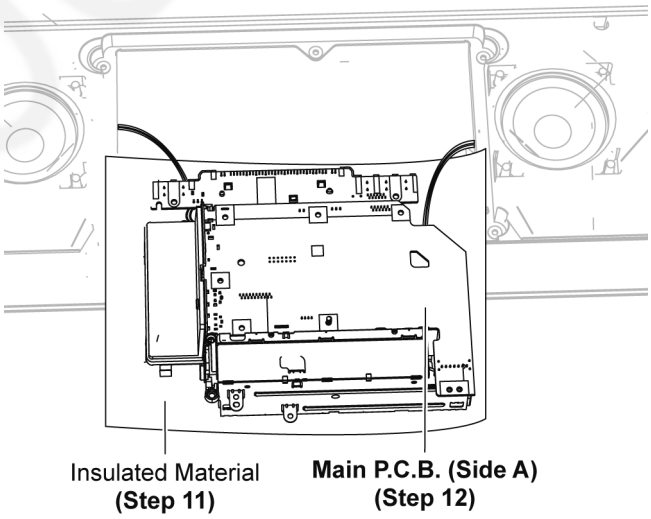
Step 8 Connect 12P FFC at the connector (CN1501) on Panel P.C.B..



Step 9 Connect 2P Wire at the connector (CN54001) on Main P.C.B..
Step 10 Connect 2P Wire at the connector (CN54002) on Main P.C.B..

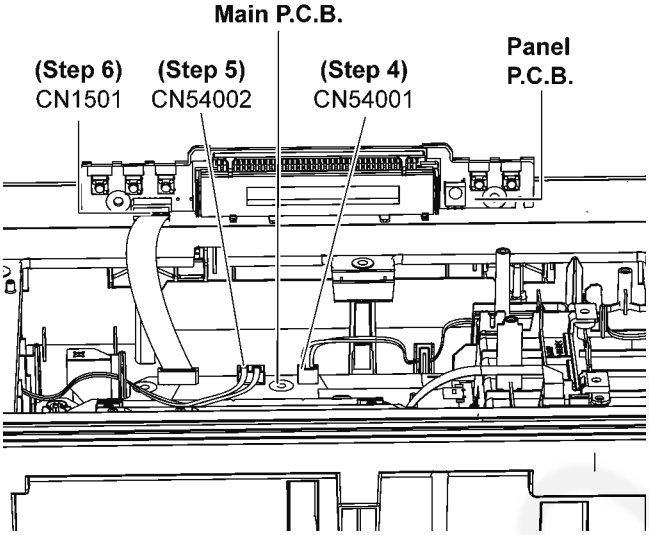


Step 11 Upset the Main P.C.B. onto insulated material.
Step 12 Check and repair the Main P.C.B. (Side A) according to the diagram shown.

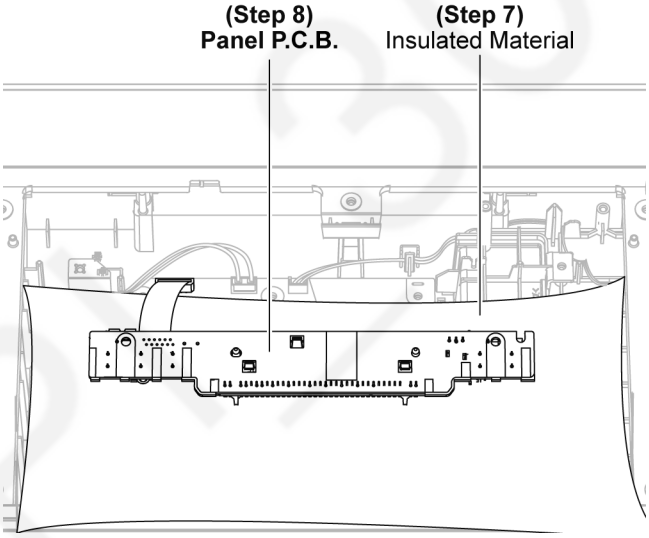


11.4. Checking and Repairing of Panel P.C.B.

Step 1 Remove the Inner Cover Unit.
Step 2 Remove the Front Panel Block.
Step 3 Remove the Panel P.C.B..
Step 4 Connect 2P Wire at the connector (CN54001) on Main P.C.B..
Step 5 Connect 2P Wire at the connector (CN54002) on Main P.C.B..
Step 6 Connect 12P FFC at the connector (CN1501) on Panel P.C.B..



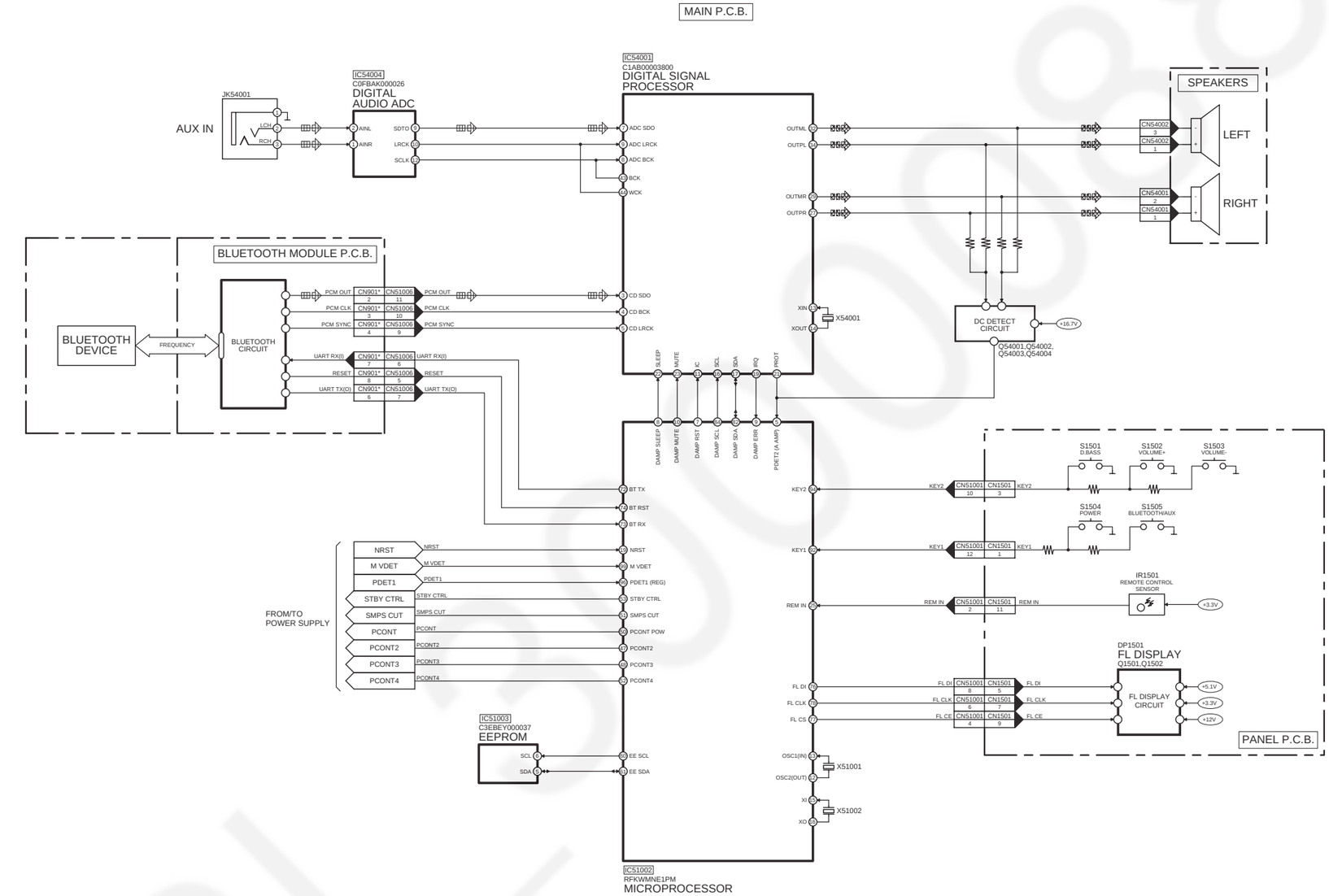
Step 7 Place the Panel P.C.B. onto insulated material.
Step 8 Check and repair the Panel P.C.B. according to the diagram shown.



12 Block Diagram

12.1. System Control and Audio

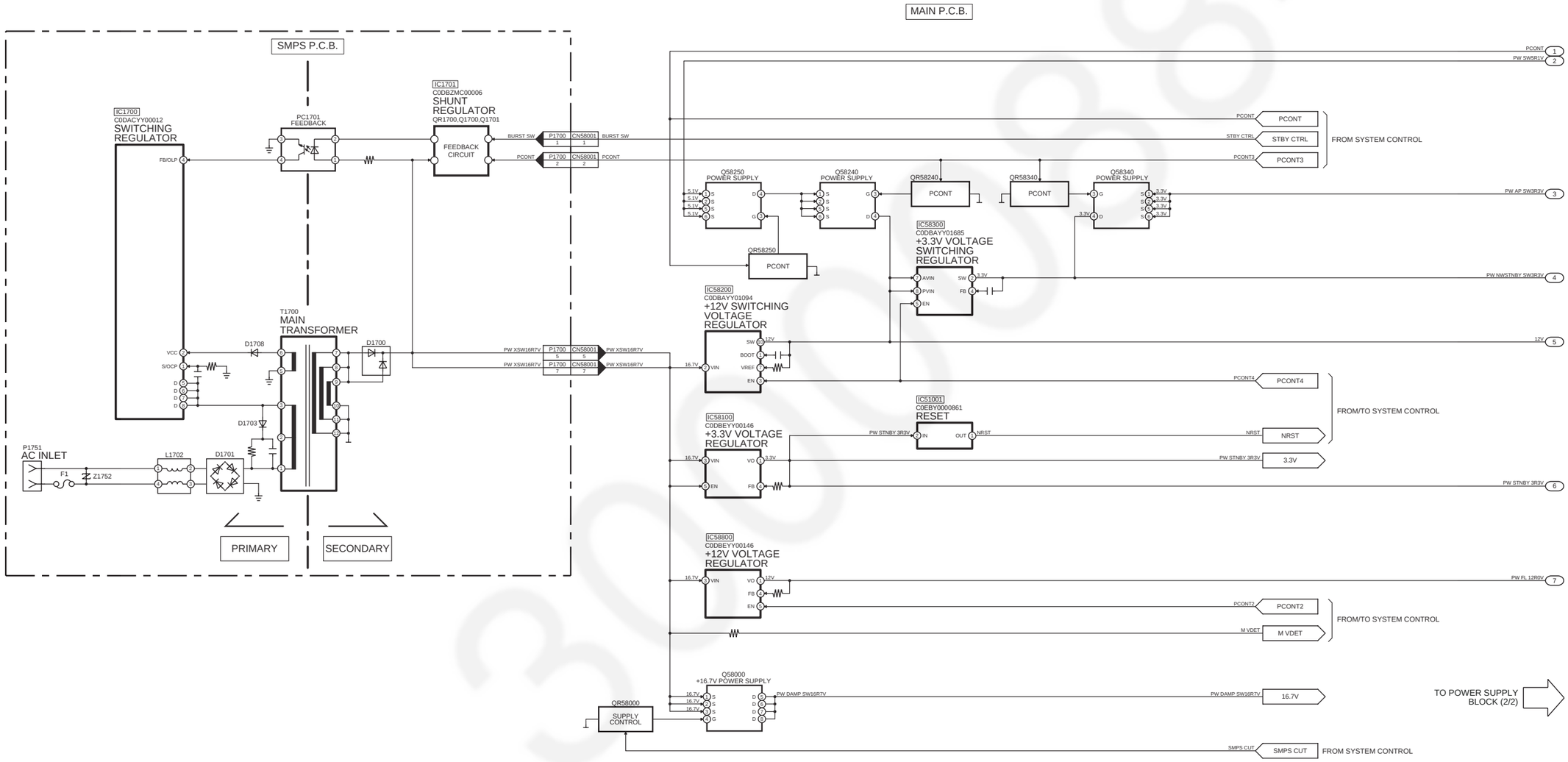
: AUX/BLUETOOTH AUDIO INPUT SIGNAL LINE : AUDIO OUTPUT SIGNAL LINE



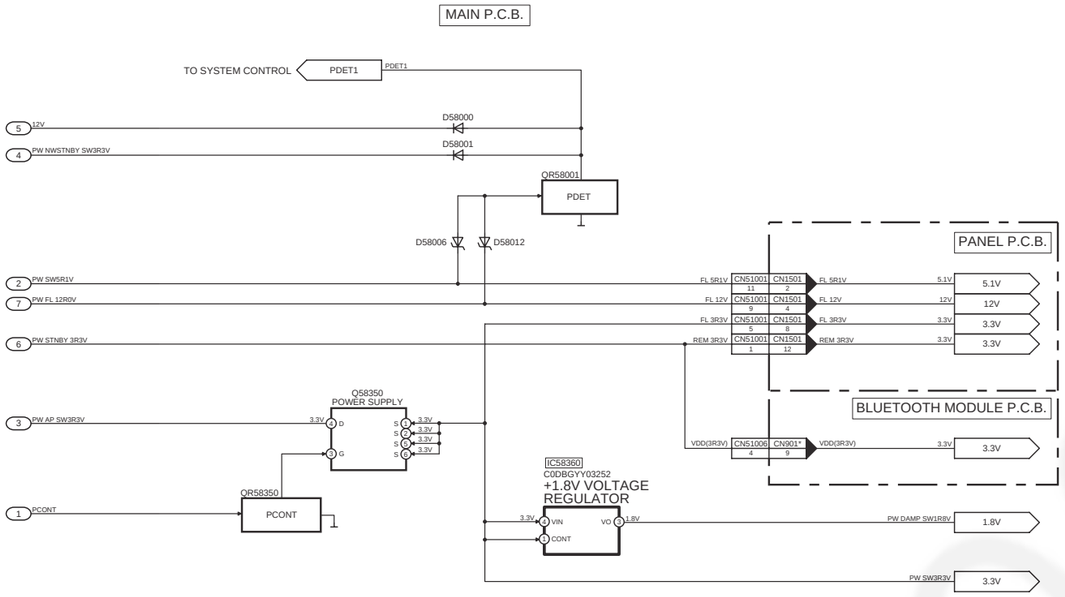
NOTE: “ * ” REF IS FOR INDICATION ONLY

SC-NE1P/PC SYSTEM CONTROL & AUDIO BLOCK DIAGRAM

12.2. Power Supply



SC-NE1P/PC POWER SUPPLY (1/2) BLOCK DIAGRAM

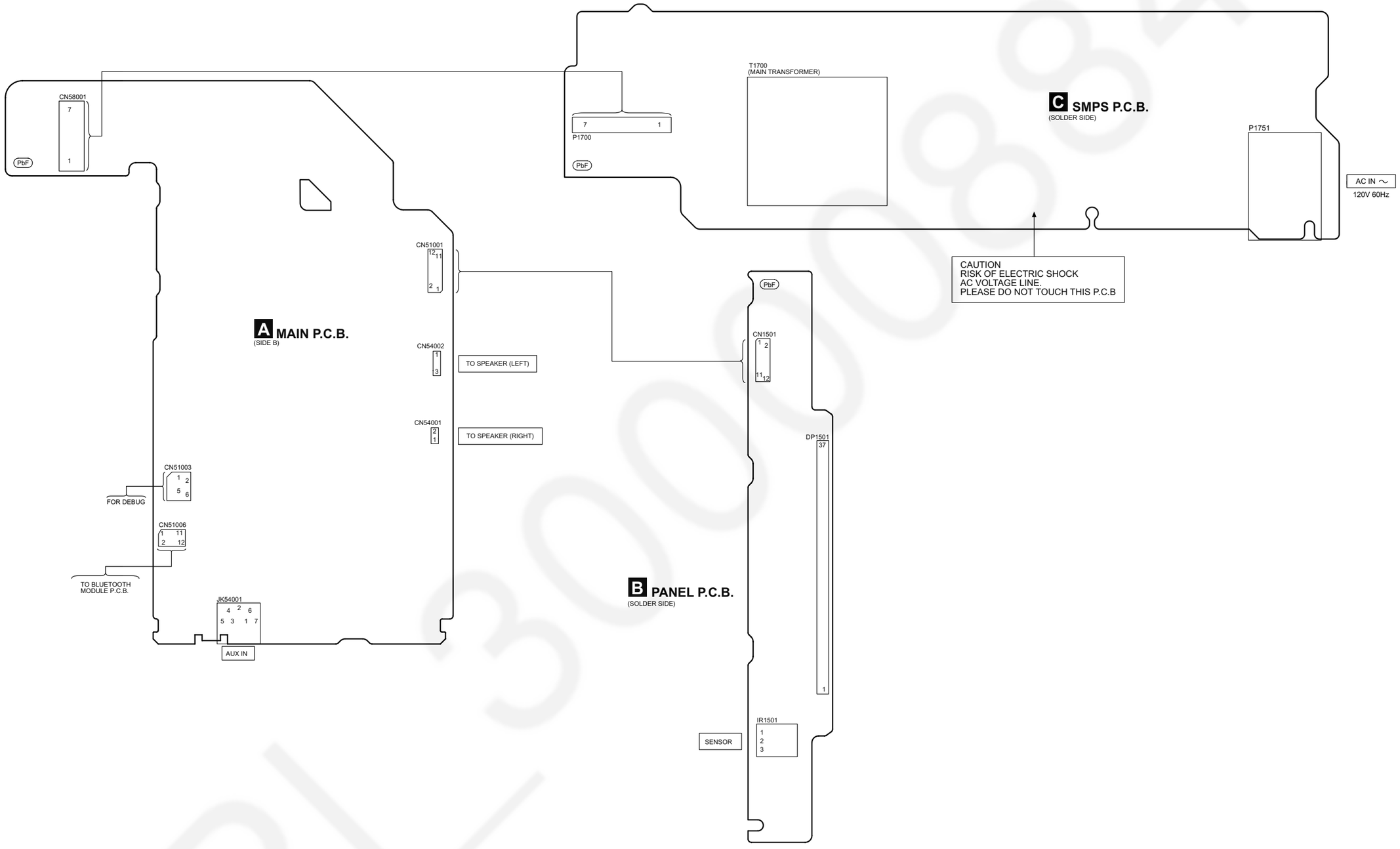


TO POWER SUPPLY
BLOCK (1/2)

NOTE: “ * ” REF IS FOR INDICATION ONLY

SC-NE1P/PC POWER SUPPLY (2/2) BLOCK DIAGRAM

13 Wiring Connection Diagram



SC-NE1P/PC WIRING CONNECTION DIAGRAM

14 Schematic Diagram

14.1. Schematic Diagram Notes

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

Notes:

S1501: D. BASS switch.
S1502: VOLUME (+) switch.
S1503: VOLUME (-) switch.
S1504: POWER switch (⏻/I).
S1505: BLUETOOTH/AUX switch.

- Important safety notice:
  Components identified by ⚠ mark have special characteristics important for safety.
  Furthermore, special parts which have purposes of fire-retardant (resistors), high quality sound (capacitors), low-noise (resistors), etc are used.
  When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

- In case of AC rated voltage Capacitors, the part no. and values will be indicated in the Schematic Diagram.
  AC rated voltage capacitors:
  C1702, C1710, C1725, C1727, C1728

- **Resistor**
  Unit of resistance is OHM [Ω] (K=1,000, M=1,000,000).

- **Capacitor**
  Unit of capacitance is μF, unless otherwise noted. F=Farads, pF=pico-Farad.

- **Coil**
  Unit of inductance is H, unless otherwise noted.

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

- Voltage and signal line

  : +B Signal Line

  :AUX/Bluetooth Audio Input Signal Line

  : Audio Output Signal Line

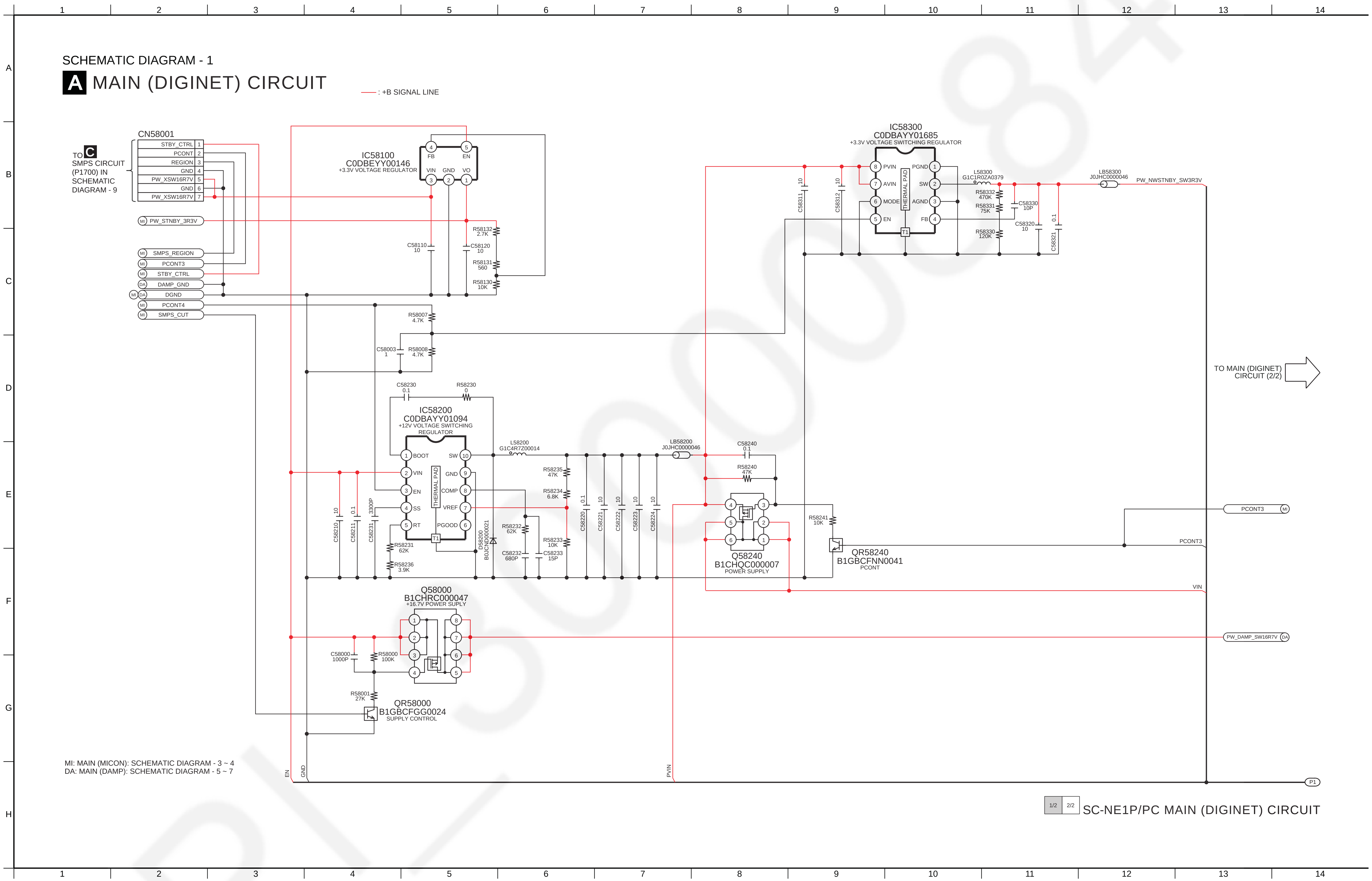
FUSE CAUTION

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

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE F1 T2A, 250V FUSE

RISK OF FIRE-REPLACE FUSE AS MARKED.

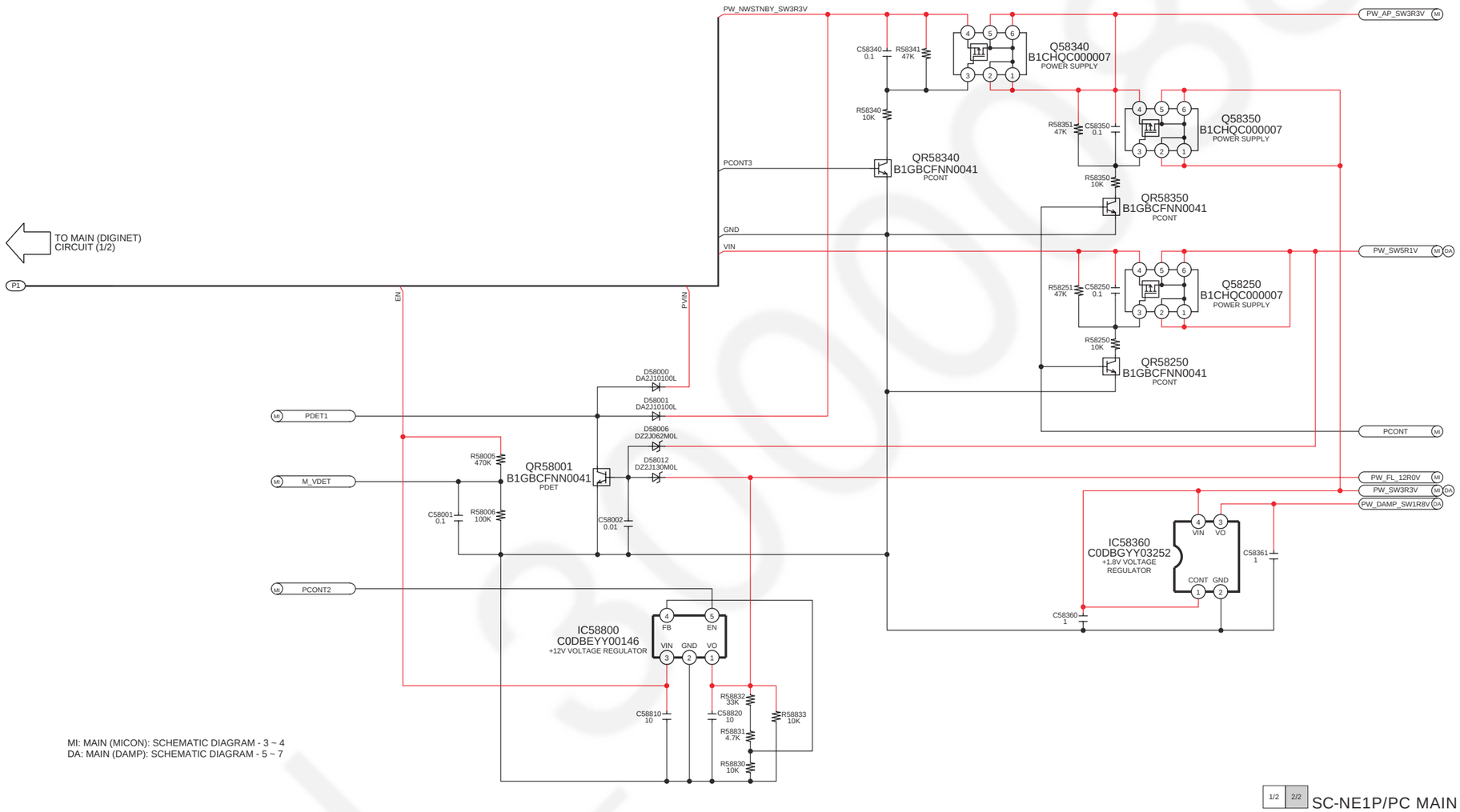
14.2. Main (Diginet/Micon/Damp) Circuit



SCHEMATIC DIAGRAM - 2

A MAIN (DIGINET) CIRCUIT

—— : +B SIGNAL LINE



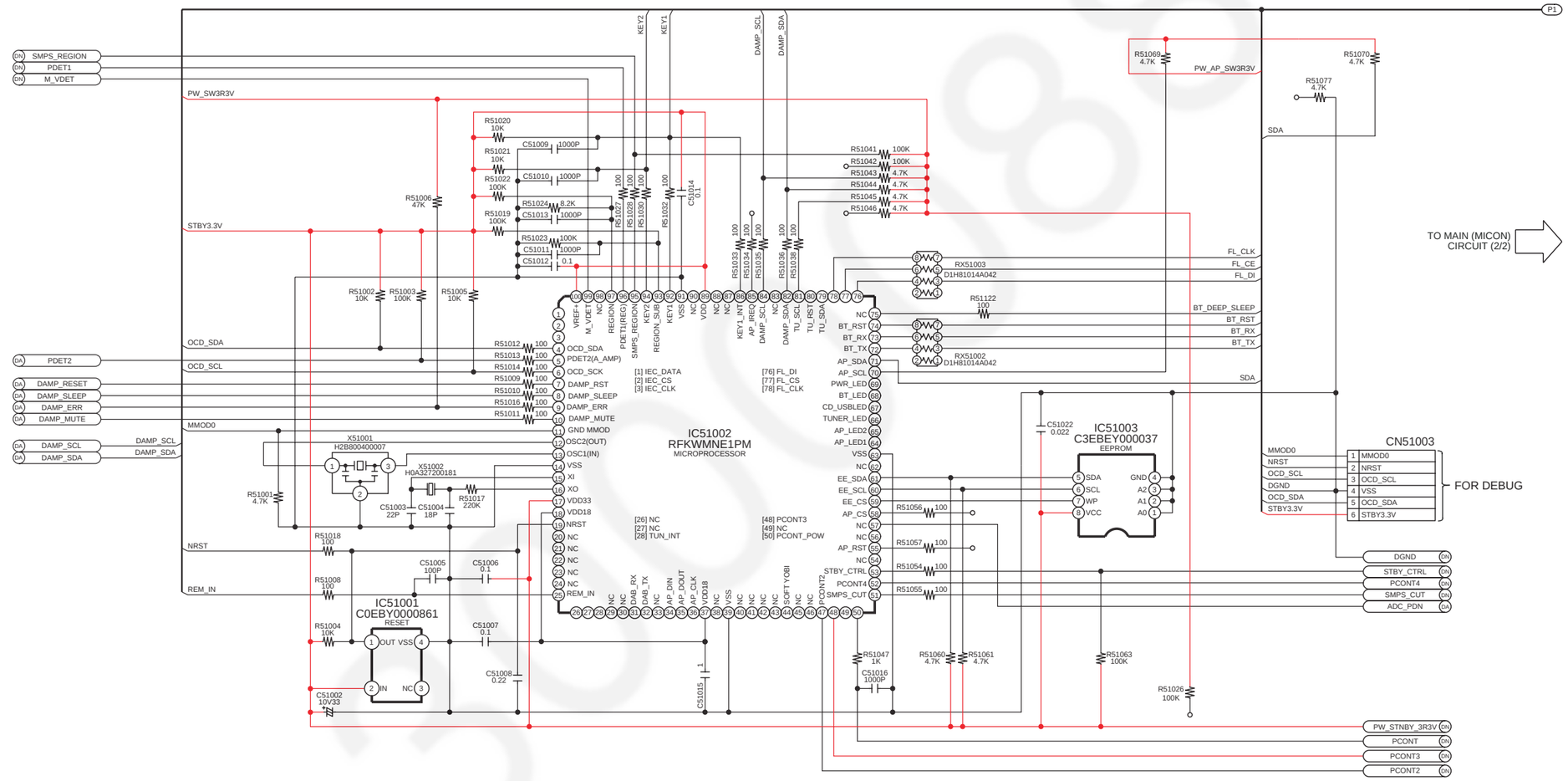
MI: MAIN (MICON): SCHEMATIC DIAGRAM - 3 ~ 4
DA: MAIN (DAMP): SCHEMATIC DIAGRAM - 5 ~ 7

1/2 2/2 SC-NE1P/PC MAIN (DIGINET) CIRCUIT

SCHEMATIC DIAGRAM - 3

A MAIN (MICON) CIRCUIT

—— : +B SIGNAL LINE ⫸ : BLUETOOTH AUDIO INPUT SIGNAL LINE



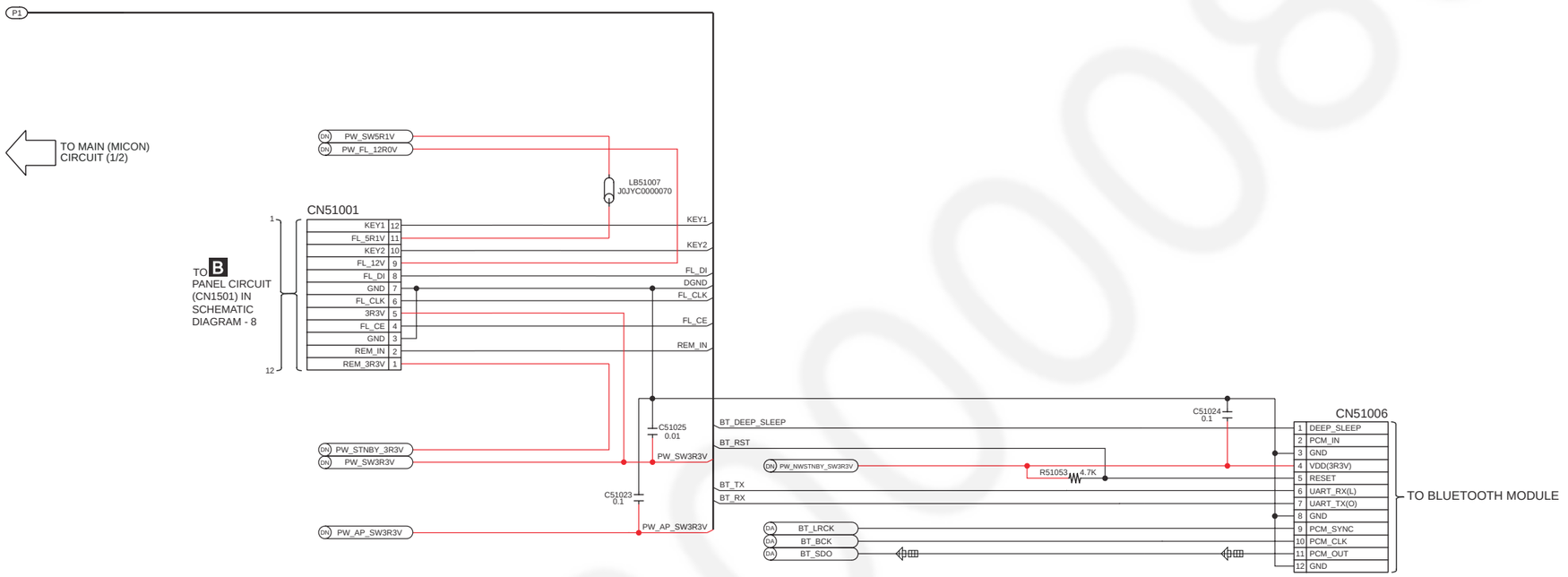
DN: MAIN (DIGINET): SCHEMATIC DIAGRAM - 1 ~ 2
DA: MAIN (DAMP): SCHEMATIC DIAGRAM - 5 ~ 7

1/2 2/2 SC-NE1P/PC MAIN (MICON) CIRCUIT

SCHEMATIC DIAGRAM - 4

A MAIN (MICON) CIRCUIT

: +B SIGNAL LINE : BLUETOOTH AUDIO INPUT SIGNAL LINE



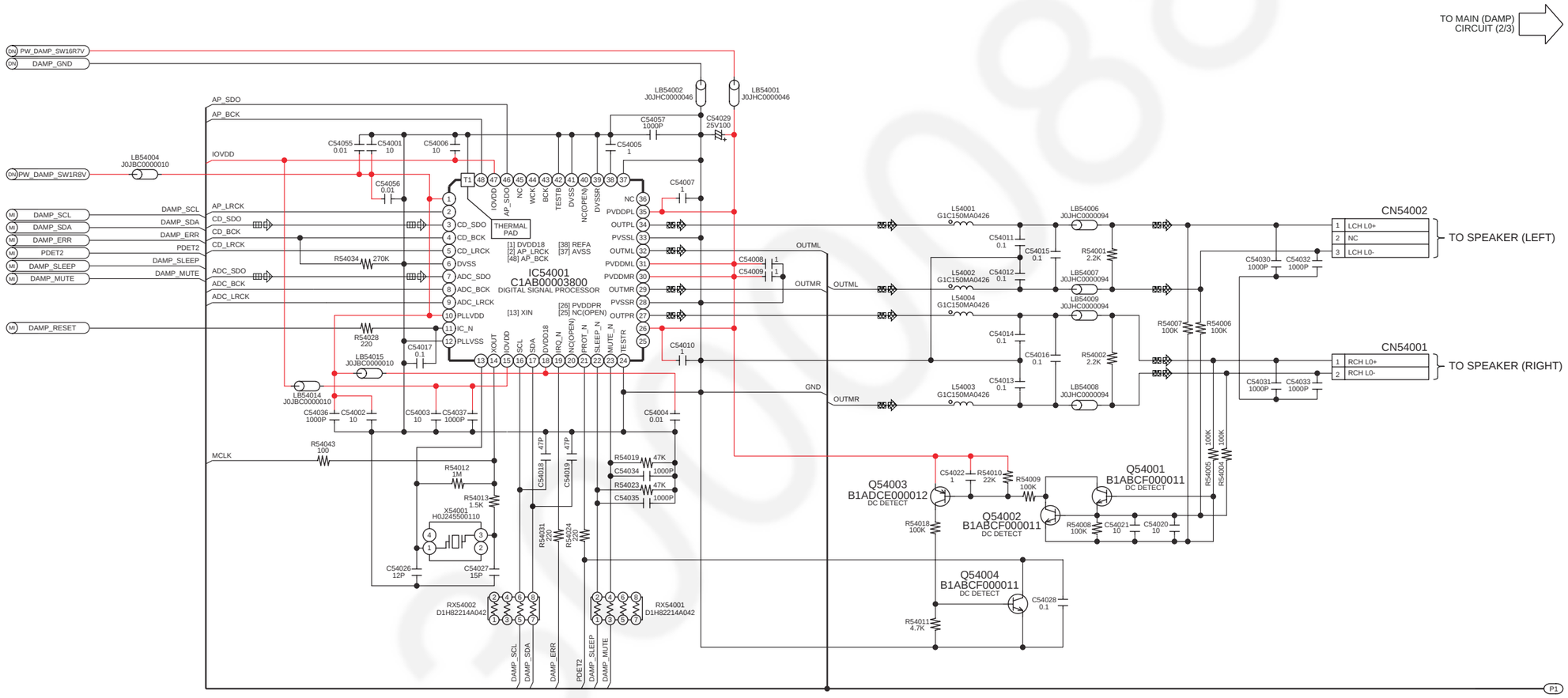
DN: MAIN (DIGINET): SCHEMATIC DIAGRAM - 1 ~ 2
DA: MAIN (DAMP): SCHEMATIC DIAGRAM - 5 ~ 7

1/2 2/2 SC-NE1P/PC MAIN (MICON) CIRCUIT

SCHEMATIC DIAGRAM - 5

A MAIN (DAMP) CIRCUIT

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



DN: MAIN (DIGINET): SCHEMATIC DIAGRAM - 1 ~ 2
MI: MAIN (MICON): SCHEMATIC DIAGRAM - 3 ~ 4

1/3 2/3 3/3 SC-NE1P/PC MAIN (DAMP) CIRCUIT

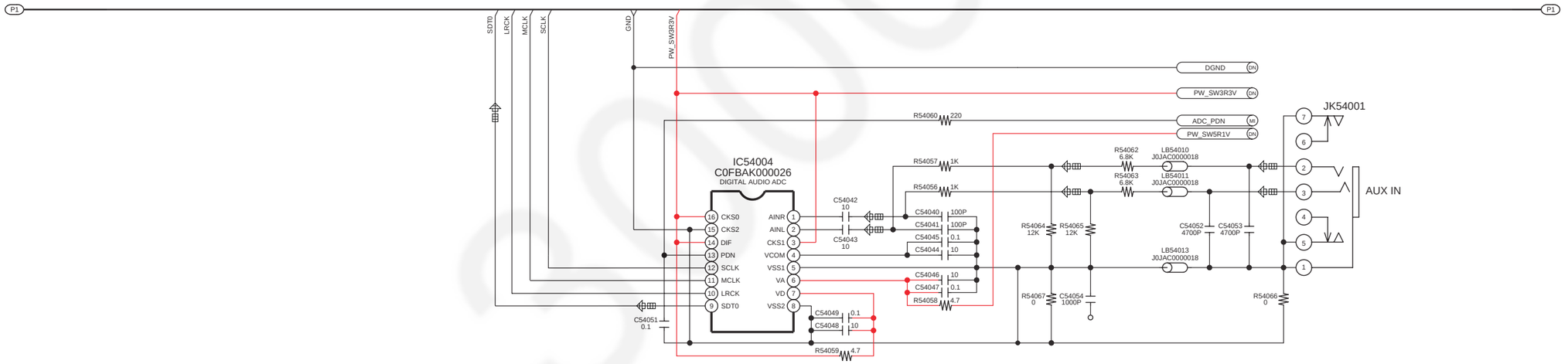
SCHEMATIC DIAGRAM - 6

A MAIN (DAMP) CIRCUIT

: +B SIGNAL LINE : AUX AUDIO INPUT SIGNAL LINE : AUDIO OUTPUT SIGNAL LINE

TO MAIN (DAMP) CIRCUIT (1/3)

TO MAIN (DAMP) CIRCUIT (3/3)



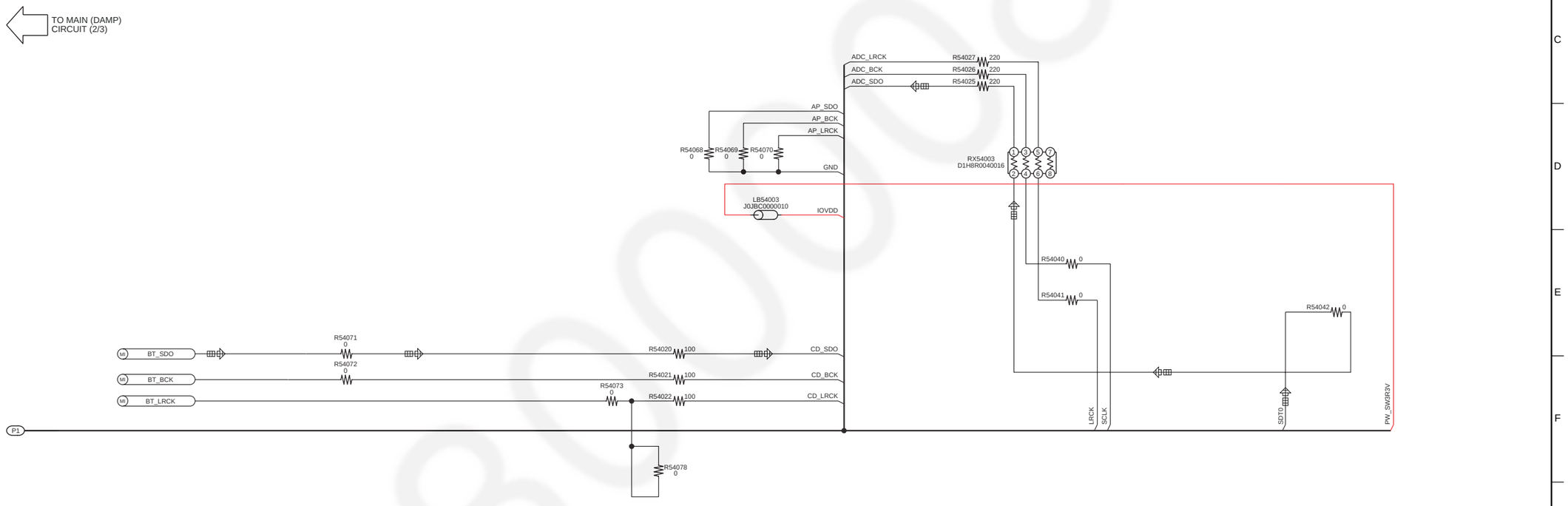
DN: MAIN (DIGINET): SCHEMATIC DIAGRAM - 1 ~ 2
MI: MAIN (MICON): SCHEMATIC DIAGRAM - 3 ~ 4

SCHEMATIC DIAGRAM - 7

A MAIN (DAMP) CIRCUIT

: +B SIGNAL LINE : AUX AUDIO INPUT SIGNAL LINE : AUDIO OUTPUT SIGNAL LINE

TO MAIN (DAMP) CIRCUIT (2/3)



DN: MAIN (DIGINET): SCHEMATIC DIAGRAM - 1 ~ 2
MI: MAIN (MICON): SCHEMATIC DIAGRAM - 3 ~ 4

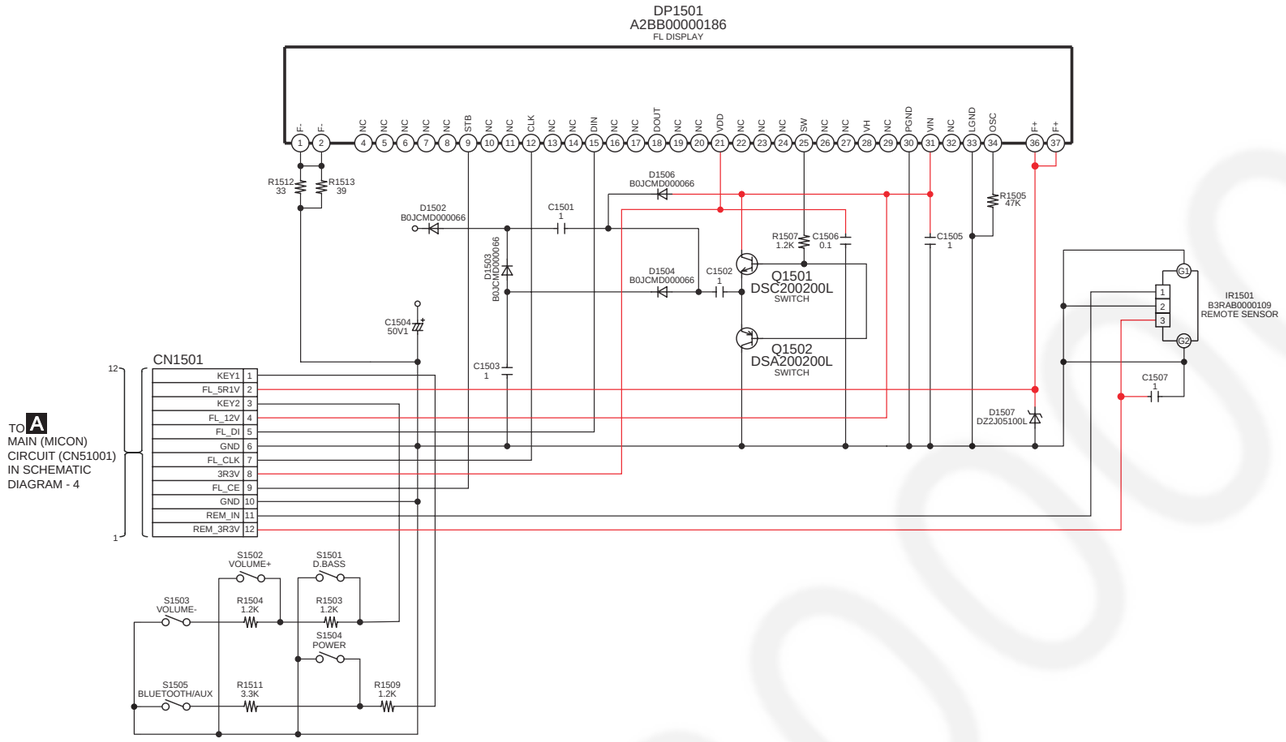
1/3 2/3 3/3 SC-NE1P/PC MAIN (DAMP) CIRCUIT

14.3. Panel Circuit

SCHEMATIC DIAGRAM - 8

B PANEL CIRCUIT

—— : +B SIGNAL LINE



SC-NE1P/PC PANEL CIRCUIT

14.4. SMPS Circuit

SCHEMATIC DIAGRAM - 9

C SMPS CIRCUIT

—— : +B SIGNAL LINE

TO **A** MAIN (DIGINET) CIRCUIT (CN58001) IN SCHEMATIC DIAGRAM - 1

P1700: PW_XSW16R7V 7, GND 6, PW_XSW16R7V 5, GND 4, REGION 3, PCONT 2, STBY_CTRL 1

C1710 F1BAF471A013 470P

T1700 G4DYZ0000059 MAIN TRANSFORMER

D1700 B0ABSM000008

ZA1701* HEATSINK

D1701 B0EBNR000049

C1702 F0CAF224A105 0.22

R1726 1M

R1724 1M

C1727 F1BAF1020020 1000P

C1728 F1BAF1020020 1000P

L1702 G0B183E00004

C1725 F0CAF154A105 0.15

Z1752 ERZE08A471CS

TH1701*

F1 T2A 250V

K1700*

K1701*

P1751

AC IN 120V 60Hz

ZJ1701

R1704 33K

C1705 4700P

R1708 22

D1703 B0EAKT000063

L1700 J0JHC0000048

R1700 4.7

D1708 DA2ZF2100L

C1720 10P

C1717 200V100

C1706 200V100

IC1700 C0DACYY00012 SWITCHING REGULATOR

S/OCP VCC GND FB/OLP

R1707 56K

C1703 25V1000

C1713 220P

R1717 1.2K

Q1701 DSA500100L STANDBY SWITCH

R1701 1.5K

PC1701 FEEDBACK

C1719 0.47

C1714 0.1

R1706 22K

C1709 0.1

R1710 47K

R1711 10K

R1703 3.3K

R1705 10K

R1716 390K

R1728 8.2K

QR1700 B1GBCFJJ0041 STANDBY CONTROL

IC1701 C0DBZMC00006 SHUNT REGULATOR

D1710 DZ2W22300L

D1702 DZ3075M0L

R1718 0.22

C1715 0.1

C1712 0.1

C1700 390P

R1702 6.8K

C1701 50V10

C1708 1000P

D1709 DZ2355M0L

Q1700 B1ABGC000001 PCONT SWITCH

R1729 22

R1725 22K

R1727 100K

C1716 0.01

R1730 6.8K

C1704 1000P

ZJ1702

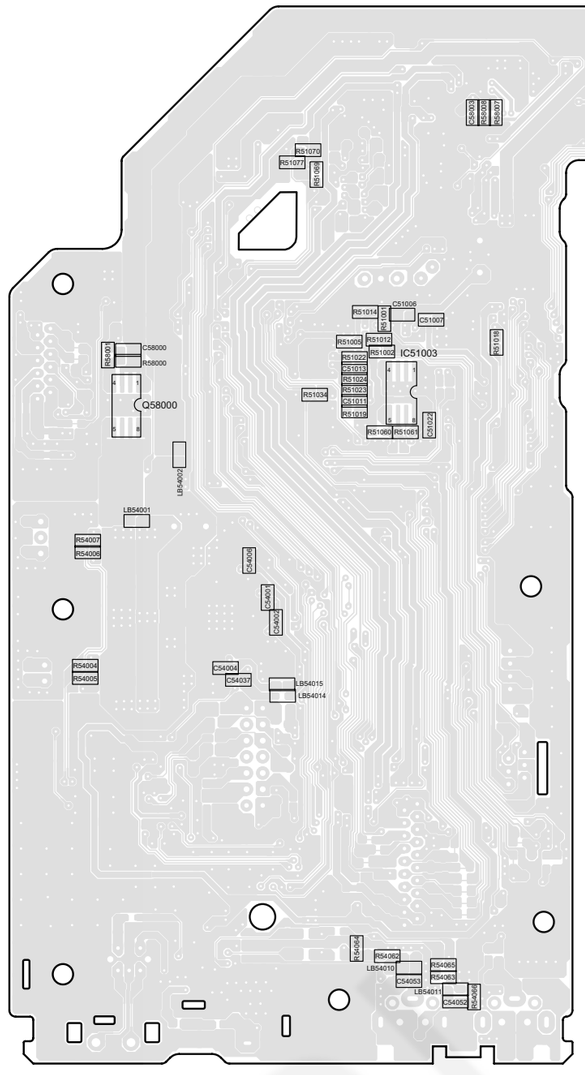
NOTE: " * " REF IS FOR INDICATION ONLY

SC-NE1P/PC SMPS CIRCUIT

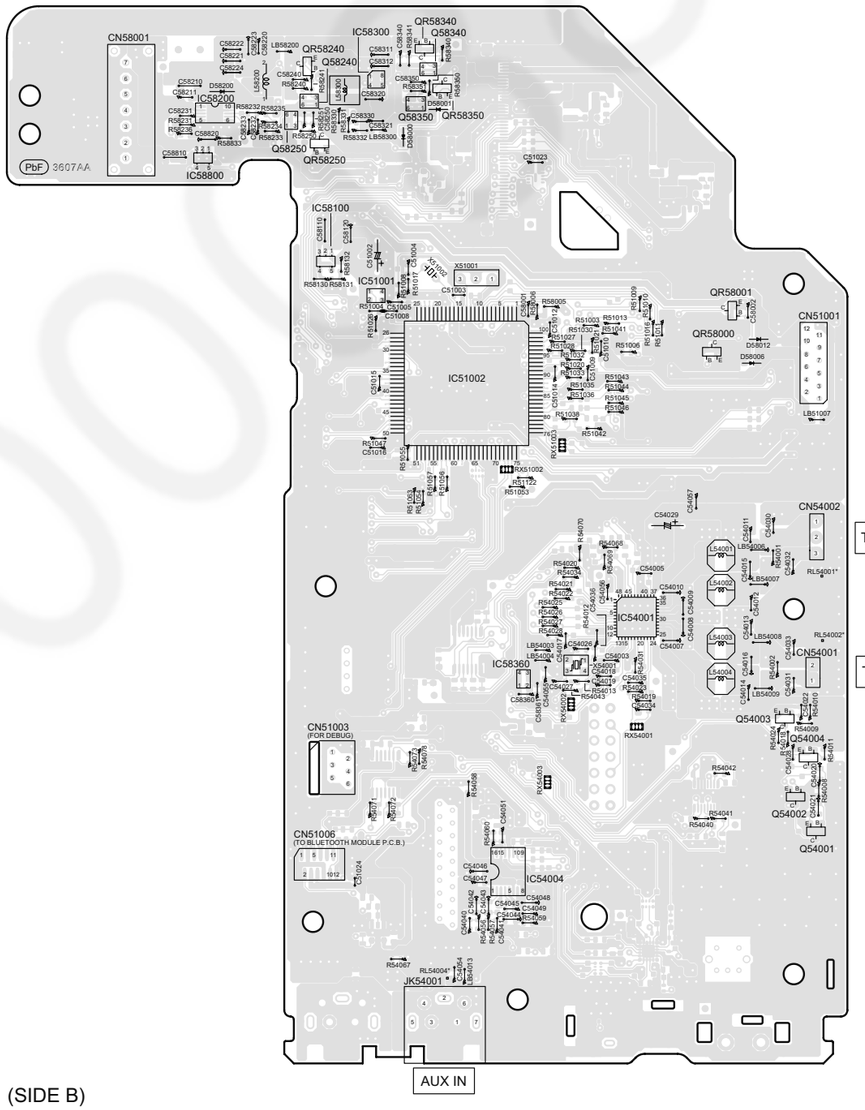
15 Printed Circuit Board

15.1. Main P.C.B.

A MAIN P.C.B. (REP4846PA)



(SIDE A)



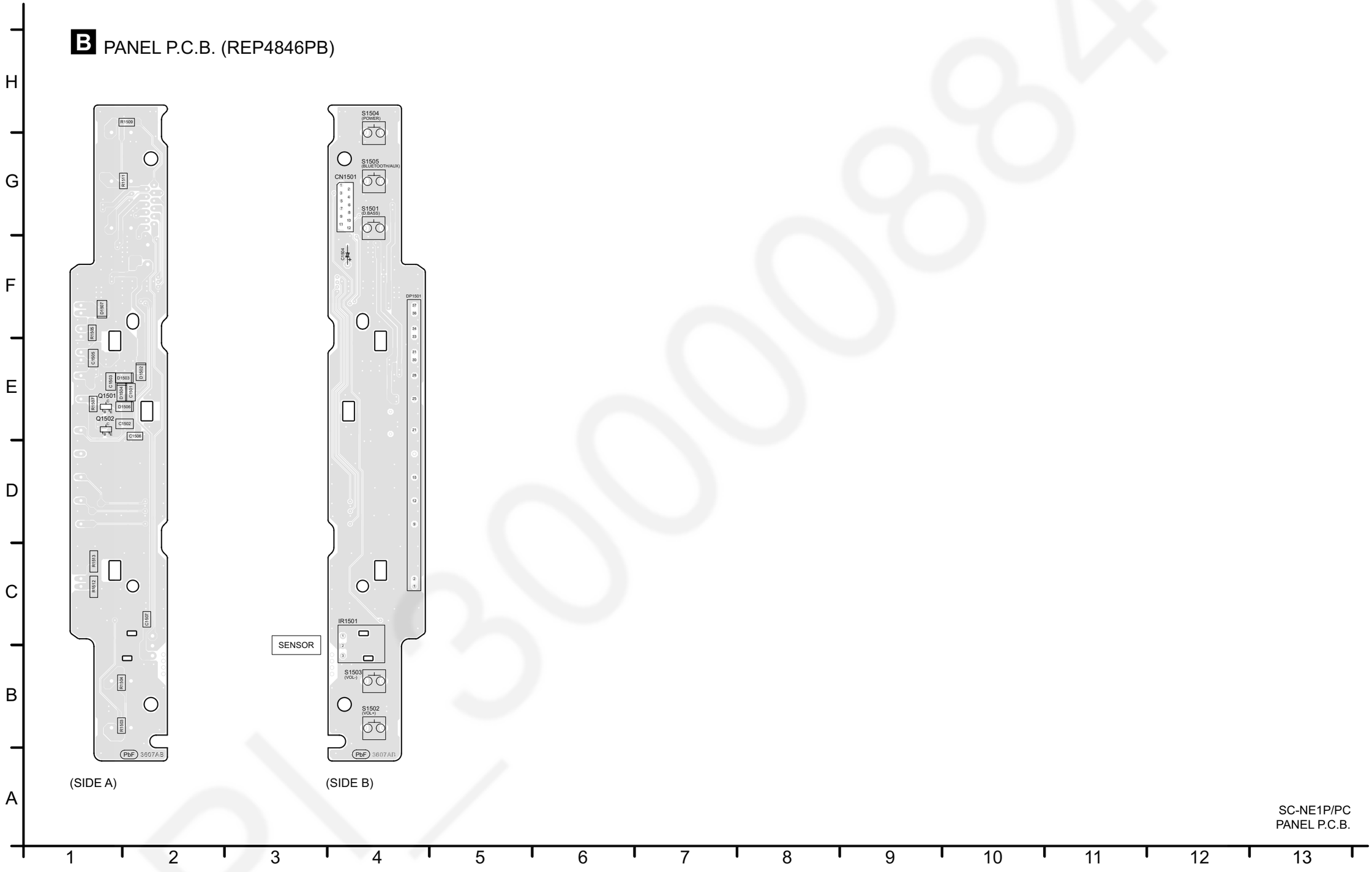
(SIDE B)

NOTE: " * " REF IS FOR INDICATION ONLY.

SC-NE1P/PC
MAIN P.C.B.

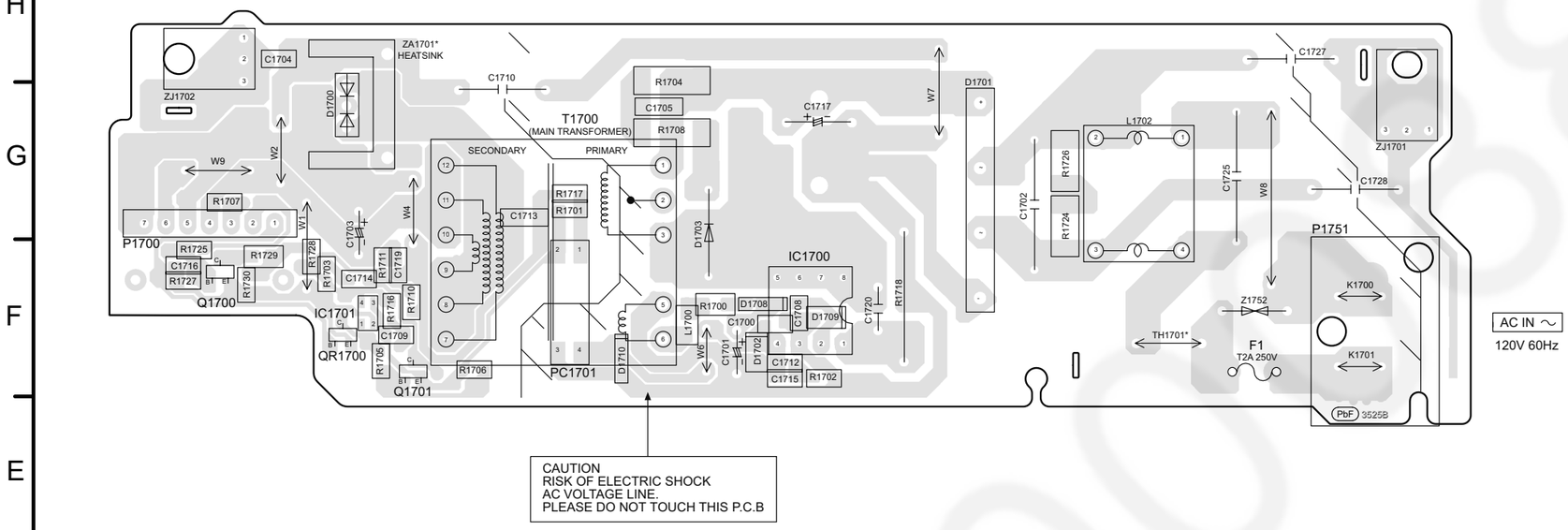
15.2. Panel P.C.B.

B PANEL P.C.B. (REP4846PB)



15.3. SMPS P.C.B.

C SMPS P.C.B. (REP4848E)



NOTE: " * " REF IS FOR INDICATION ONLY

SC-NE1P/PC
SMPS P.C.B.

16 Appendix Information of Schematic Diagram

16.1. Voltage Measurement and Waveform Chart

Note:

- Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard.
  Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.
- Circuit voltage and waveform described herein shall be regarded as reference information when probing defect point because it may differ from actual measuring value due to difference of Measuring instrument and its measuring condition and product itself.

16.1.1. Main P.C.B. (1/3)

REF NO.	IC51001																			
MODE	1	2	3	4																
CD PLAY	3.3	3.3	0	0																
STANDBY	3.3	3.3	0	0																

REF NO.	IC51002																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	0	0	3.3	3.3	0	3.3	3.3	3.3	3.3	0	1.6	1.6	0	1.1	1.7	3.3	1.8	3.3	0
STANDBY	0	0	0	3.3	3.3	0	3.3	3.3	3.3	3.3	0	1.6	1.6	0	1.1	1.7	3.3	1.8	3.3	0

REF NO.	IC51002																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	0	0	0	0	3.3	0	0	0	0	0	0	0	0	3.3	3.2	3.3	1.8	0	0	0
STANDBY	0	0	0	0	3.3	0	0	0	0	0	0	0	0	3.3	3.2	3.3	1.8	0	0	0

REF NO.	IC51002																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	0	0	0	0	0	3.3	3.3	3.3	0	3.3	3.3	3.3	0	0	3.3	0	0	3.3	0	3.3
STANDBY	0	0	0	0	0	3.3	3.3	3.3	0	3.3	3.3	3.3	0	0	3.3	0	0	3.3	0	3.3

REF NO.	IC51002																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
CD PLAY	3.3	0	0	0	0	0	0	0	0	3.3	3.3	3.3	3.3	3.3	0	0	1.5	0	3.3	3.3
STANDBY	3.3	0	0	0	0	0	0	0	0	3.3	3.3	3.3	3.3	3.3	0	0	1.5	0	3.3	3.3

REF NO.	IC51002																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
CD PLAY	3.3	3.3	0	3.3	0	3.3	0	0	3.3	0	0	3.3	0.3	3.3	1.2	3.3	0.3	0	3	3.3
STANDBY	3.3	3.3	0	3.3	0	3.3	0	0	3.3	0	0	3.3	0.3	3.3	1.2	3.3	0.3	0	3	3.3

REF NO.	IC51003																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	0	0	0	0	3.3	3.3	0	3.3												
STANDBY	0	0	0	0	3.3	3.3	0	3.3												

REF NO.	IC54001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	1.8	0	3.0	1.7	1.8	0	0.8	1.2	1.2	1.8	3.3	0	1.3	1.6	3.3	3.3	3.3	1.8	3.3	0
STANDBY	1.8	0	3.0	1.7	1.8	0	0.8	1.2	1.2	1.8	3.3	0	1.3	1.6	3.3	3.3	3.3	1.8	3.3	0

REF NO.	IC54001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	3.3	3.3	3.3	0	0	16.8	0	0	3.0	16.8	16.8	0.6	0	3.0	16.8	0	0	0.3	0	0
STANDBY	3.3	3.3	3.3	0	0	16.8	0	0	3.0	16.8	16.8	0.6	0	3.0	16.8	0	0	0.3	0	0

REF NO.	IC54001																			
MODE	41	42	43	44	45	46	47	48												
CD PLAY	0	0	0	0	0	1.5	3.3	1.6												
STANDBY	0	0	0	0	0	1.5	3.3	1.6												

SC-NE1P/PC MAIN P.C.B.

16.1.2. Main P.C.B. (2/3)

REF NO.	IC54004																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
CD PLAY	1.8	2.0	3.3	0	0	5.1	3.3	0	0.8	1.0	0.8	1.2	3.3	3.3	0	3.3				
STANDBY	1.8	2.0	3.3	0	0	5.1	3.3	0	0.8	1.0	0.8	1.2	3.3	3.3	0	3.3				

REF NO.	IC58100																			
MODE	1	2	3	4	5															
CD PLAY	3.3	0	16.8	2.5	16.8															
STANDBY	3.3	0	16.8	2.5	16.8															

REF NO.	IC58200																			
MODE	1	2	3	4	5	6	7	8	9	10										
CD PLAY	11.2	16.8	3.3	2.2	0.5	0	3.3	0.7	0	5.1										
STANDBY	11.2	16.8	3.3	2.3	0.5	0	3.3	0.7	0	5.1										

REF NO.	IC58300																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	0	3.3	0	0.6	1.6	0	5.1	5.1												
STANDBY	0	3.3	0	0.6	1.6	0	5.1	5.1												

REF NO.	IC58360																			
MODE	1	2	3	4																
CD PLAY	3.3	0	1.8	3.3																
STANDBY	3.3	0	1.8	3.3																

REF NO.	IC58800																			
MODE	1	2	3	4	5															
CD PLAY	12.0	0	16.8	2.5	3.3															
STANDBY	12.0	0	16.8	2.5	3.3															

REF NO.	Q54001				Q54002				Q54003				Q54004							
MODE	E	C	B		E	C	B		E	C	B		E	C	B					
CD PLAY	3.5	16.6	3.5		3.5	16.6	3.5		16.7	0	16.8		0	3.3	0					
STANDBY	3.5	16.6	3.5		3.5	16.6	3.5		16.8	0	16.8		0	3.3	0					

REF NO.	Q58000									Q58240										
MODE	1	2	3	4	5	6	7	8		1	2	3	4	5	6					
CD PLAY	16.8	16.8	16.8	3.6	16.8	16.8	16.8	16.8		5.1	5.1	0.9	5.1	5.1	5.1					
STANDBY	16.8	16.8	16.8	3.6	16.8	16.8	16.8	16.8		5.1	5.1	0.9	5.1	5.1	5.1					

REF NO.	Q58250							Q58340							Q58350					
MODE	1	2	3	4	5	6		1	2	3	4	5	6		1	2	3	4	5	6
CD PLAY	5.1	5.1	0.9	5.1	5.1	5.1		3.3	3.3	0.6	3.3	3.3	3.3		3.3	3.3	0.6	3.3	3.3	3.3
STANDBY	5.1	5.1	0.9	5.1	5.1	5.1		3.3	3.3	0.6	3.3	3.3	3.3		3.3	3.3	0.6	3.3	3.3	3.3

REF NO.	QR58000				QR58001				QR58240				QR58250				QR58340			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	0	3.2		0	3.3	0		0	0	3.3		0	0	3.2		0	0	3.3	
STANDBY	0	0	3.2		0	3.3	0		0	0	3.3		0	0	3.2		0	0	3.3	

SC-NE1P/PC MAIN P.C.B.

16.1.3. Main P.C.B. (3/3)

REF NO.	QR58350																			
MODE	E	C	B																	
CD PLAY	0	0	3.2																	
STANDBY	0	0	3.2																	

SC-NE1P/PC MAIN P.C.B.

16.1.4. Panel P.C.B.

REF NO.	Q1501				Q1502																
MODE	E	C	B		E	C	B														
POWER ON	6.0	12.0	6.1		6.0	0	6.1														
STANDBY	6.0	12.0	6.1		6.0	0	6.1														

SC-NE1P/PC PANEL P.C.B.

16.1.5. SMPS P.C.B.

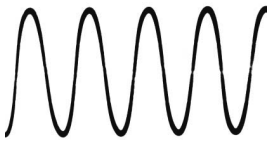
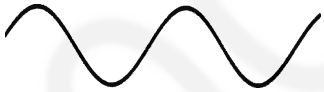
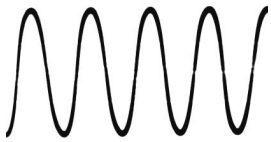
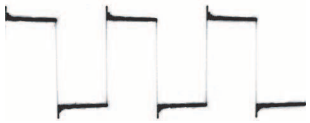
REF NO.	IC1700																				
MODE	1	2	3	4	5	6	7	8													
POWER ON	3.0	20.2	0	2.0	1.0	1.0	1.0	1.0													
STANDBY	3.0	20.2	0	2.0	1.0	1.0	1.0	1.0													

REF NO.	IC1701																				
MODE	1	2	3	4																	
POWER ON	0	0	2.5	18.0																	
STANDBY	0	0	2.5	18.0																	

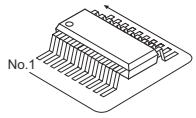
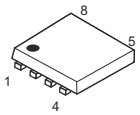
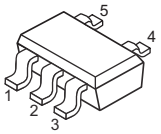
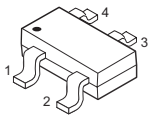
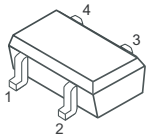
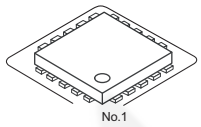
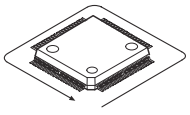
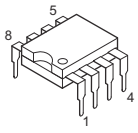
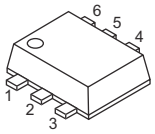
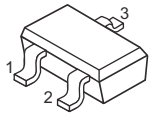
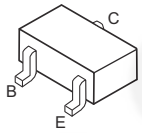
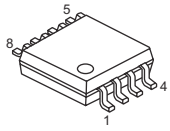
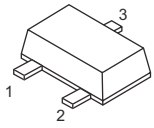
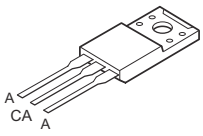
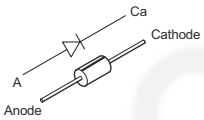
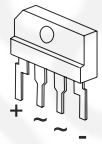
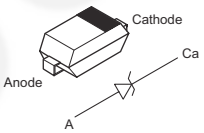
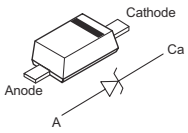
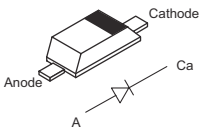
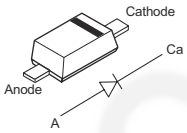
REF NO.	Q1700				Q1701				QR1700												
MODE	E	C	B		E	C	B		E	C	B										
POWER ON	0	18.0	5.0		18.0	18.0	5.0		0	5.0	0										
STANDBY	0	18.0	5.0		18.0	18.0	5.0		0	5.0	0										

SC-NE1P/PC SMPS P.C.B.

16.1.6. Waveform Chart

WF No. IC51002-12 (PLAY)  3.8Vp-p(50nsec/div)	WF No. IC51002-13 (PLAY)  3Vp-p(50nsec/div)	WF No. IC51002-15 (PLAY)  1.3Vp-p(10usec/div)	WF No. IC51002-16 (PLAY)  2.4Vp-p(10usec/div)
WF No. IC54001-3 (PLAY)  4.8Vp-p(5usec/div)	WF No. IC54001-13 (PLAY)  1.4Vp-p(20nsec/div)	WF No. IC54001-14 (PLAY)  5.6Vp-p(20nsec/div)	WF No. IC54001-27,29,32,34 (PLAY)  28Vp-p(1usec/div)

16.2. Illustration of IC's, Transistors and Diodes

C0DBAYY01094 (10P) C0FBAK000026 (16P) C3EBEY000037 (8P) 	C0DBAYY01685 	C0DBEYY00146 	C0DBGYY03252 C0DBZMC00006 	C0EBY0000861 	C1AB00003800 (48P) 
RFKWMNE1PM (100P) 	C0DACYY00012 	B1CHQC000007 	DSA200200L DSC200200L 		B1ABCF000011 B1ABGC000001 B1ADCE000012 B1GBCFGG0024 B1GBCFJJ0041 B1GBCFNN0041
B1CHRC000047 	DSA500100L 	B0ABSM000008 	B0EAKT000063 	B0EBNR000049 	B0JCND000021 
B0JCMD000066 	DA2J10100L 		DA22F2100L DZ2J05100L DZ2J062M0L DZ2J075M0L DZ2J130M0L DZ2J330M0L DZ2W22000L		

16.3. Terminal Function of IC's

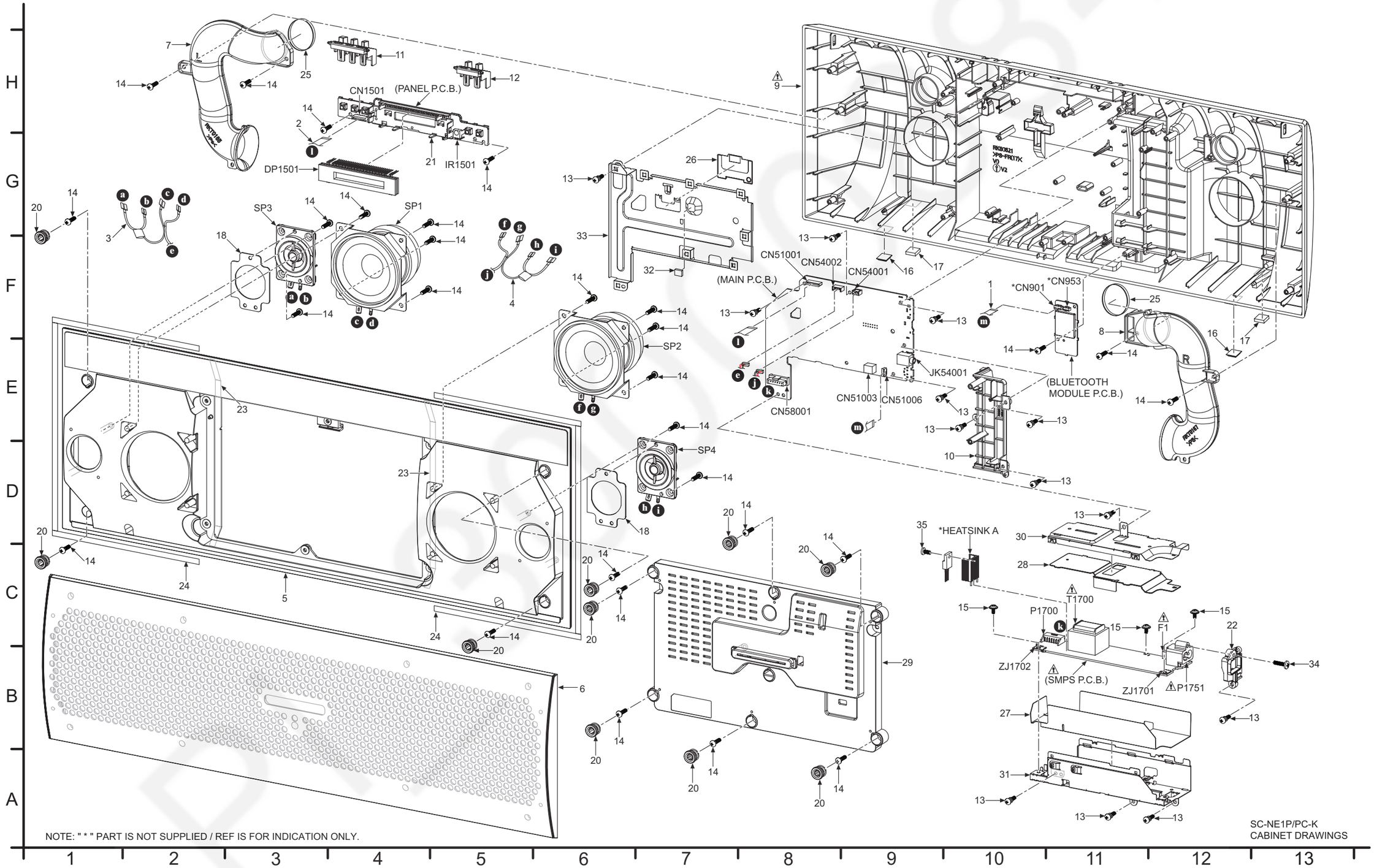
16.3.1. IC51002 (RFKWMNE1PM) MICROPROCESSOR IC

Pin No.	Mark	I/O	Function
1	NC	-	NO CONNECTION
2	NC	-	NO CONNECTION
3	NC	-	NO CONNECTION
4	OCD_SDA	O/I	DEBUG PROCESS
5	PDET2 (D_AMP)	I	AMP ABNORMAL (LOW: ABNORMAL, HI: NORMAL)
6	OCD_SDC	O	DEBUG PROCESS
7	DAMP_RESET	O	DAMP DIGITAL RESET
8	DAMP_SLEEP	I	DAMP POWER DOWN
9	DAMP_ERR	I	DSP ERROR INFO
10	DAMP_MUTE	O	DAMP MUTE
11	GND_MM0D	I	MMOD (MEMORY MODE)
12	OSC2(OUT)	O	MAIN CLOCK (OUT)
13	OSC1(IN)	I	MAIN CLOCK (IN)
14	VSS	-	GROUND
15	XI	I	SUB CLOCK (IN)
16	XO	O	SUB CLOCK (OUT)
17	VDD33	-	+3.3 VOLTAGE SUPPLY
18	VDD18	-	+1.8 VOLTAGE SUPPLY
19	NRST	I	RESET
20	NC	-	NO CONNECTION
21	NC	-	NO CONNECTION
22	NC	-	NO CONNECTION
23	NC	-	NO CONNECTION
24	NC	-	NO CONNECTION
25	REM_IN	I	REMOTE CONTROL SIGNAL INPUT
26	NC	-	NO CONNECTION
27	NC	-	NO CONNECTION
28	TUN_INT	I	TUNER INTERRUPT
29	NC	-	NO CONNECTION
30	NC	-	NO CONNECTION
31	DAB/RX	I/O	DAB TUNER DATA CONTROL TX
32	DAB/TX	I/O	DAB TUNER DATA CONTROL RX
33	NC	-	NO CONNECTION
34	AP_DIN	I/O	AIRPLAY RX
35	AP_DOUT	I/O	AIRPLAY TX
36	AP_CLK	O	AIRPLAY COMMUNICATION CLOCK
37	VDD18	-	+1.8 VOLTAGE SUPPLY
38	NC	-	NO CONNECTION
39	VSS	-	GROUND
40	NC	-	NO CONNECTION
41	NC	-	NO CONNECTION
42	DAB_AUX_SEL	O	DAB/AUX SWITCHING SIGNAL
43	NC	-	NO CONNECTION
44	NC	-	NO CONNECTION
45	NC	-	NO CONNECTION
46	CEC	I/O	CONTROL SIGNAL
47	PCONT2	O	POWER CONTROL (PCONT2)
48	PCONT3	O	POWER CONTROL (PCONT3)
49	NC	-	NO CONNECTION
50	PCONT_POW	O	POWER CONTROL (PCONT)
51	SMPS_CUT	O	POWER CUT
52	PCONT4	O	POWER CONTROL (PCONT4)
53	STBY_CTRL	O	SMPS BURST CONTROL
54	NC	-	NO CONNECTION
55	AP_RST	O	AIRPLAY RESET
56	NC	-	NO CONNECTION
57	ADC_PDN	O	ADC RESET
58	AP_CS	O	AIRPLAY CHIP SELECT
59	EE_CS	O	EEPROM CS
60	EE_SCL	I/O	EEPROM SCL (12C)
61	EE_SDA	O	EEPROM DATA (12C)
62	NC	-	NO CONNECTION
63	VSS	-	GROUND
64	WPS1	0	WPS (BLUE) TO WPS (RED)
65	WPS2	O	WPS (RED) TO WPS (BLUE)
66	NC	-	NO CONNECTION
67	NC	-	NO CONNECTION
68	NC	-	NO CONNECTION
69	NC	-	NO CONNECTION
70	AP_SCL	O	OLD AIRPLAY SUPPORT (12C)
71	AP_SDA	I/O	OLD AIRPLAY SUPPORT (12C)
72	BT_TX	I/O	BLUETOOTH TX
73	BT_RX	I/O	BLUETOOTH RX
74	BT_RST	O	BLUETOOTH RESET
75	BT_DEEP_ SLEEP	I/O	BLUETOOTH DEEP SLEEP MODE CONTROL
76	FL_DI	I/O	FL DATA
77	FL_CS	O	FL CHIP SELECT
78	FL_CLK	O	FL CLOCK
79	TU_SDA	I/O	TUNER SERIAL DATA
80	TU_RST	O	TUNER RESET
81	TU_SCL	O	TUNER SERIAL CLOCK
82	DAMP_SDA	I/O	DAMP CONTROL DATA
83	NC	-	NO CONNECTION
84	DAMP_SCL	I/O	DAMP CONTROL CLOCK
85	AP_IRQ	O	AIRPLAY IRQ
86	KEY1_INT	I	KEY1 INTERRUPT
87	NC	-	NO CONNECTION
88	NC	-	NO CONNECTION
89	VDD	-	VOLTAGE SUPPLY (+3.3v)
90	NC	-	NO CONNECTION
91	VSS	-	GROUND
92	KEY1	I	KEY INPUT 1
93	REGION_SUB	I	RESISTOR DIVIDE
94	KEY2	I	KEY INPUT 2
95	SMPS_REGION	I	SMPS DESTINATION DETECT
96	PDET1 (REG)	I	POWER ERROR DETECT
97	REGION	I	LED SETTING
98	NC	-	NO CONNECTION
99	M_VDET	I	MAIN POWER DETECT
100	VREF	-	VREF

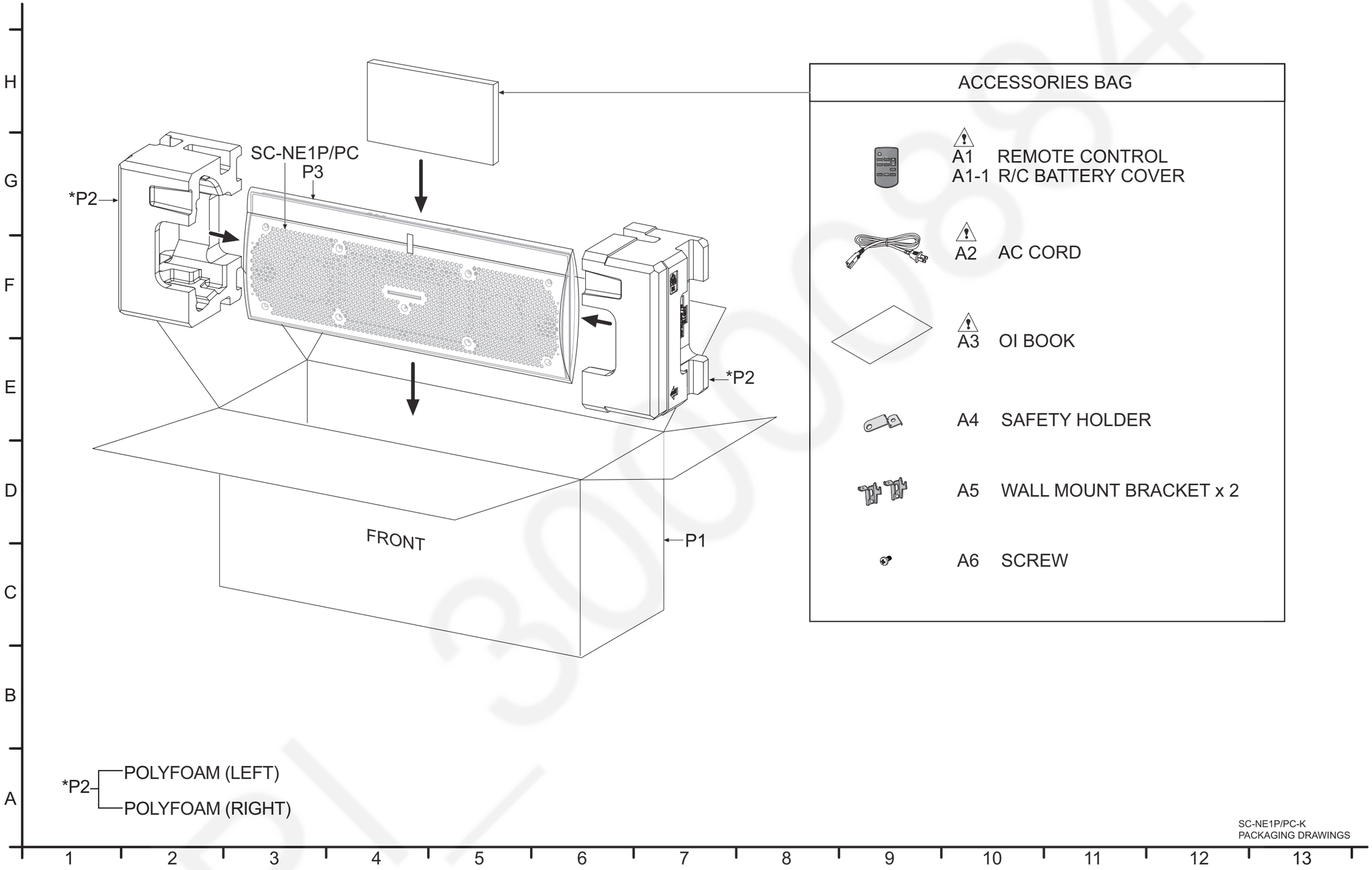
17 Exploded View and Replacement Parts List

17.1. Exploded View and Mechanical replacement Parts List

17.1.1. Cabinet Parts Location



17.1.2. Packaging



17.1.3. Mechanical Replacement Parts List

Important Safety Notice

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

RTL (Retention Time Limited)

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

Note:

- When replacing any of these components, be sure to use only manufacturer's specified parts shown in the replacement part list.
- The parenthesized indications on the Remarks column specify the destination & product color (Refer to the cover page for the information).
- Parts without these indications shall be used for all areas.
- This product uses a laser diode. Refer to "Precaution of Laser Diode".
- All parts mentioned are supplied by 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	REE1767	12P FFC (BLUE-TOOTH - MAIN)	1	
	2	REE1769	12P FFC (PANEL - MAIN)	1	
	3	REX1596	1P WIRE (SPK L - MAIN)	1	
	4	REX1597	1P WIRE (SPK R - MAIN)	1	
	5	RFKGCNE1P-K	FRONT CABINET ASS'Y	1	
	6	RYB0395A	SPEAKER NET FRAME	1	
	7	RXQ2156	SPEAKER LEFT PORT UNIT	1	
	8	RXQ2157	SPEAKER RIGHT PORT UNIT	1	
⚠	9	RFKHCNE1P-K	REAR CABINET ASS'Y	1	P
⚠	9	RFKHCNE1PC-K	REAR CABINET ASS'Y	1	PC
	10	RGQ0737C-K1	TUNER HOLDER	1	
	11	RGU2864-K	POWER BUTTON	1	
	12	RGU2865-K	VOLUME BUTTON	1	
	13	RHD26043-1	SCREW	13	
	14	RHD26046	SCREW	29	
	15	RHD30092-1	SCREW	3	
	16	RKA0253-H	LEG CUSHION	2	
	17	RKA0294-K	LEG CUSHION	2	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	18	RMF0458-J	TWEETER SHEET	2	
	20	RMG0520-H	NET HOLDER	10	
	21	RMN1049-1	FL HOLDER	1	
	22	RMN1055	AC JACK HOLDER	1	
	23	RMQ2156	EPT SEALER A	2	
	24	RMQ2157	EPT SEALER B	2	
	25	RMQ2158	EPT SEALER C	2	
	26	RMQ2159	SP HOLE COVER	1	
	27	RMV0410	SMPS INSULATOR SHEET C	1	
	28	RMV0411	SMPS INSULATOR SHEET D	1	
	29	RMV0416A-1	SPEAKER INNER COVER	1	
	30	RSC1067	SMPS SHIELD	1	
	31	RSC1068-1	SMPS BRACKET	1	
	32	RSC1097	D-AMP HEAT ABSORBER	1	
	33	RSC1200	SPEAKER REAR SHIELD	1	
	34	XTB3+10JFJK	SCREW	1	
	35	XTB3+8JFJ-J	SCREW	1	
			SPEAKERS		
	SP1	EAS8P231A	FRONT SPEAKER	1	
	SP2	EAS8P231A	FRONT SPEAKER	1	
	SP3	L0AZ03A00017	TWEETER SPEAKER	1	
	SP4	L0AZ03A00017	TWEETER SPEAKER	1	
			PACKING MATERI-ALS		

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	P1	RPG0E25-1	PACKING CASE	1	P
	P1	RPG0E26-1	PACKING CASE	1	PC
	P2	RPN2557	CUSHION	1	
	P3	RPF0657	MIRAMAT SHEET	1	
			ACCESSORIES		
⚠	A1	N2QAYC000091	REMOTE CONTROL	1	
	A1-1	RKK-HTB10GNK	R/C BATERY COVER	1	
⚠	A2	K2CB2CB00022	AC CORD	1	
⚠	A3	VQT4T91	O/I BOOK (En/Sp)	1	
⚠	A3	VQT4T92	O/I BOOK (Cf)	1	PC
	A4	RGQ0660-K	SAFETY HOLDER	1	
	A5	RMQX1082-S	WALL MOUNT BRACKET	2	
	A6	XTB3+8JFJK-J	SCREW	1	

17.2. Electrical Replacement Parts List

Important Safety Notice

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

RTL (Retention Time Limited)

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

Note:

- When replacing any of these components, be sure to use only manufacturer's specified parts shown in the replacement part list.
- The parenthesized indications on the Remarks column specify the destination & product color (Refer to the cover page for the information).
- Parts without these indications shall be used for all areas.
- This product uses a laser diode. Refer to "Precaution of Laser Diode".
- Capacitor value are in microfarads (uF) unless specified otherwise, P=Pico-farads (pF), F=Farads.
- Resistance values are in ohms, unless specified otherwise, 1K=1000 (OHM).
- All parts mentioned are supplied by 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 CIR-CUITS BOARDS		
	PCB1	REP4846PA	MAIN P.C.B.	1	(RTL)
	PCB2	REP4846PB	PANEL P.C.B.	1	(RTL)
⚠	PCB3	REP4848E	SMPS P.C.B.	1	(RTL)
	PCB4	REP4912B	BLUETOOTH MOD-ULE P.C.B.	1	
			INTEGRATED CIR-CUITS		
	IC1700	C0DACYY00012	IC	1	(E.S.D)
	IC1701	C0DBZMC00006	IC	1	(E.S.D)
	IC51001	C0EBY0000861	IC	1	(E.S.D)
	IC51002	RFKWMNE1PM	IC	1	(E.S.D)
	IC51003	C3EBEY000037	IC	1	(E.S.D)
	IC54001	C1AB00003800	IC	1	(E.S.D)
	IC54004	C0FBAK000026	IC	1	(E.S.D)
	IC58100	C0DBEYY00146	IC	1	(E.S.D)
	IC58200	C0DBAYY01094	IC	1	(E.S.D)
	IC58300	C0DBAYY01685	IC	1	(E.S.D)
	IC58360	C0DBGYY03252	IC	1	(E.S.D)
	IC58800	C0DBEYY00146	IC	1	(E.S.D)
			TRANSISTORS		
	Q1501	DSC200200L	TRANSISTOR	1	(E.S.D)
	Q1502	DSA200200L	TRANSISTOR	1	(E.S.D)
	Q1700	B1ABGC000001	TRANSISTOR	1	(E.S.D)
	Q1701	DSA500100L	TRANSISTOR	1	(E.S.D)
	Q54001	B1ABCF000011	TRANSISTOR	1	(E.S.D)
	Q54002	B1ABCF000011	TRANSISTOR	1	(E.S.D)

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	Q54003	B1ADCE000012	TRANSISTOR	1	(E.S.D)
	Q54004	B1ABCF000011	TRANSISTOR	1	(E.S.D)
	Q58000	B1CHRC000047	TRANSISTOR	1	(E.S.D)
	Q58240	B1CHQC000007	TRANSISTOR	1	(E.S.D)
	Q58250	B1CHQC000007	TRANSISTOR	1	(E.S.D)
	Q58340	B1CHQC000007	TRANSISTOR	1	(E.S.D)
	Q58350	B1CHQC000007	TRANSISTOR	1	(E.S.D)
	QR1700	B1GBCFJJ0041	TRANSISTOR	1	(E.S.D)
	QR58000	B1GBCFGG0024	TRANSISTOR	1	(E.S.D)
	QR58001	B1GBCFNN0041	TRANSISTOR	1	(E.S.D)
	QR58240	B1GBCFNN0041	TRANSISTOR	1	(E.S.D)
	QR58250	B1GBCFNN0041	TRANSISTOR	1	(E.S.D)
	QR58340	B1GBCFNN0041	TRANSISTOR	1	(E.S.D)
	QR58350	B1GBCFNN0041	TRANSISTOR	1	(E.S.D)
			DIODES		
	D1502	B0JCMD000066	DIODE	1	(E.S.D)
	D1503	B0JCMD000066	DIODE	1	(E.S.D)
	D1504	B0JCMD000066	DIODE	1	(E.S.D)
	D1506	B0JCMD000066	DIODE	1	(E.S.D)
	D1507	DZ2J05100L	DIODE	1	(E.S.D)
	D1700	B0ABSM000008	DIODE	1	(E.S.D)
	D1701	B0EBNR000049	DIODE	1	(E.S.D)
	D1702	DZ2J075M0L	DIODE	1	(E.S.D)
	D1703	B0EAKT000063	DIODE	1	(E.S.D)
	D1708	DA22F2100L	DIODE	1	(E.S.D)
	D1709	DZ2J330M0L	DIODE	1	(E.S.D)
	D1710	DZ2W22000L	DIODE	1	(E.S.D)
	D58000	DA2J10100L	DIODE	1	(E.S.D)
	D58001	DA2J10100L	DIODE	1	(E.S.D)
	D58006	DZ2J062M0L	DIODE	1	(E.S.D)
	D58012	DZ2J130M0L	DIODE	1	(E.S.D)
	D58200	B0JCND000021	DIODE	1	(E.S.D)

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
			SWITCHES		
	S1501	EVQ21405R	SW D.BASS	1	
	S1502	EVQ21405R	SW VOLUME (+)	1	
	S1503	EVQ21405R	SW VOLUME (-)	1	
	S1504	EVQ21405R	SW POWER	1	
	S1505	EVQ21405R	SW BT/AUX	1	
			CONNECTORS		
	CN1501	K1MN12A00011	12P CONNECTOR	1	
	CN51001	K1MN12A00011	12P CONNECTOR	1	
	CN51003	K1MN06C00005	6P CONNECTOR	1	
	CN51006	K1MY12AA0021	12P CONNECTOR	1	
	CN54001	K1KA02AA0180	2P CONNECTOR	1	
	CN54002	K1KA03AA0180	3P CONNECTOR	1	
	CN58001	K1KB07AA0076	7P CONNECTOR	1	
	P1700	K1KA07BA0117	7P CONNECTOR	1	
			COILS AND INDUCTORS		
	L1700	J0JHC0000048	INDUCTOR	1	
⚠	L1702	G0B183E00004	LINE FILTER	1	
	L54001	G1C150MA0426	INDUCTOR	1	
	L54002	G1C150MA0426	INDUCTOR	1	
	L54003	G1C150MA0426	INDUCTOR	1	
	L54004	G1C150MA0426	INDUCTOR	1	
	L58200	G1C4R7Z00014	INDUCTOR	1	
	L58300	G1C1R0ZA0379	INDUCTOR	1	
	LB51007	J0JYC0000070	INDUCTOR	1	
	LB54001	J0JHC0000046	INDUCTOR	1	
	LB54002	J0JHC0000046	INDUCTOR	1	
	LB54003	J0JBC0000010	INDUCTOR	1	
	LB54004	J0JBC0000010	INDUCTOR	1	
	LB54006	J0JHC0000094	INDUCTOR	1	
	LB54007	J0JHC0000094	INDUCTOR	1	
	LB54008	J0JHC0000094	INDUCTOR	1	
	LB54009	J0JHC0000094	INDUCTOR	1	
	LB54010	J0JAC0000018	INDUCTOR	1	
	LB54011	J0JAC0000018	INDUCTOR	1	
	LB54013	J0JAC0000018	INDUCTOR	1	
	LB54014	J0JBC0000010	INDUCTOR	1	
	LB54015	J0JBC0000010	INDUCTOR	1	
	LB58200	J0JHC0000046	INDUCTOR	1	
	LB58300	J0JHC0000046	INDUCTOR	1	
			TRANSFORMER		
⚠	T1700	G4DYZ0000059	TRANSFORMER	1	
			VARISTOR		
⚠	Z1752	ERZE08A471CS	VARISTOR	1	
			PHOTO COUPLER		
⚠	PC1701	B3PBA0000503	PHOTO COUPLER	1	
			TERMINALS		
	ZJ1701	K4CZ01000027	TERMINAL	1	
	ZJ1702	K4CZ01000027	TERMINAL	1	
			OSCILLATORS		
	X51001	H2B800400007	OSCILLATOR	1	
	X51002	H0A327200181	OSCILLATOR	1	
	X54001	H0J245500110	OSCILLATOR	1	
			LCD DISPLAY		
	DP1501	A2BB00000186	LCD DISPLAY	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
			FUSE		
⚠	F1	K5G202Y00006	FUSE	1	
			JACKS		
	JK54001	K2HC1YYB0032	JK AUX IN	1	
⚠	P1751	K2AB2B000007	AC INLET	1	
			REMOTE SENSOR		
	IR1501	B3RAB0000109	REMOTE SENSOR	1	
			RESISTORS		
	R1503	D0GB122JA065	1.2K 1/10W	1	
	R1504	D0GB122JA065	1.2K 1/10W	1	
	R1505	D0GB473JA065	47K 1/10W	1	
	R1507	D0GB122JA065	1.2K 1/10W	1	
	R1509	D0GB122JA065	1.2K 1/10W	1	
	R1511	D0GB332JA065	3.3K 1/10W	1	
	R1512	D0GF330JA048	33 1/4W	1	
	R1513	D0GF390JA048	39 1/4W	1	
	R1700	D0GD4R7JA017	4.7 1/8W	1	
	R1701	D0GB152JA065	1.5K 1/10W	1	
	R1702	D0GB682JA065	6.8K 1/10W	1	
	R1703	D0GB332JA065	3.3K 1/10W	1	
	R1704	ERJ1TYJ333U	33K 1W	1	
	R1705	D0GB103JA065	10K 1/10W	1	
	R1706	D0GB223JA065	22K 1/10W	1	
	R1707	D0GB563JA065	56K 1/10W	1	
	R1708	ERJ1TYJ220U	22 1W	1	
	R1710	D1BB4702A074	47K 1/10W	1	
	R1711	D0GB103JA065	10K 1/10W	1	
	R1716	D0GB394JA008	390K 1/10W	1	
	R1717	D0GB122JA065	1.2K 1/10W	1	
	R1718	ERX2SJR22P	0.22 2W	1	
⚠	R1724	ERJ12YJ105U	1M 1/2W	1	
	R1725	D0GB223JA065	22K 1/10W	1	
⚠	R1726	ERJ12YJ105U	1M 1/2W	1	
	R1727	D0GB104JA065	100K 1/10W	1	
	R1728	D0HB822ZA002	8.2K 1/16W	1	
	R1729	D0GD220JA017	22 1/8W	1	
	R1730	D1BB6801A074	6.8K 1/10W	1	
	R51001	D0GB472JA065	4.7K 1/10W	1	
	R51002	D0GB103JA065	10K 1/10W	1	
	R51003	D0GB104JA065	100K 1/10W	1	
	R51004	D0GB103JA065	10K 1/10W	1	
	R51005	D0GB103JA065	10K 1/10W	1	
	R51006	D0GB473JA065	47K 1/10W	1	
	R51008	D0GB101JA065	100 1/10W	1	
	R51009	D0GB101JA065	100 1/10W	1	
	R51010	D0GB101JA065	100 1/10W	1	
	R51011	D0GB101JA065	100 1/10W	1	
	R51012	D0GB101JA065	100 1/10W	1	
	R51013	D0GB101JA065	100 1/10W	1	
	R51014	D0GB101JA065	100 1/10W	1	
	R51016	D0GB101JA065	100 1/10W	1	
	R51017	D0GB224JA065	220K 1/10W	1	
	R51018	D0GB101JA065	100 1/10W	1	
	R51019	D0GB104JA065	100K 1/10W	1	
	R51020	D0GB103JA065	10K 1/10W	1	
	R51021	D0GB103JA065	10K 1/10W	1	
	R51022	D0GB104JA065	100K 1/10W	1	
	R51023	D0GB104JA065	100K 1/10W	1	
	R51024	D0GB822JA065	8.2K 1/10W	1	
	R51026	D0GB104JA065	100K 1/10W	1	
	R51027	D0GB101JA065	100 1/10W	1	
	R51028	D0GB101JA065	100 1/10W	1	
	R51030	D0GB101JA065	100 1/10W	1	
	R51032	D0GB101JA065	100 1/10W	1	
	R51033	D0GB101JA065	100 1/10W	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	R51034	D0GB101JA065	100 1/10W	1	
	R51035	D0GB101JA065	100 1/10W	1	
	R51036	D0GB101JA065	100 1/10W	1	
	R51038	D0GB101JA065	100 1/10W	1	
	R51041	D0GB104JA065	100K 1/10W	1	
	R51042	D0GB104JA065	100K 1/10W	1	
	R51043	D0GB472JA065	4.7K 1/10W	1	
	R51044	D0GB472JA065	4.7K 1/10W	1	
	R51045	D0GB472JA065	4.7K 1/10W	1	
	R51046	D0GB472JA065	4.7K 1/10W	1	
	R51047	D0GB102JA065	1K 1/10W	1	
	R51053	D0GB472JA065	4.7K 1/10W	1	
	R51054	D0GB101JA065	100 1/10W	1	
	R51055	D0GB101JA065	100 1/10W	1	
	R51056	D0GB101JA065	100 1/10W	1	
	R51057	D0GB101JA065	100 1/10W	1	
	R51060	D0GB472JA065	4.7K 1/10W	1	
	R51061	D0GB472JA065	4.7K 1/10W	1	
	R51063	D0GB104JA065	100K 1/10W	1	
	R51069	D0GB472JA065	4.7K 1/10W	1	
	R51070	D0GB472JA065	4.7K 1/10W	1	
	R51077	D0GB472JA065	4.7K 1/10W	1	
	R51122	D0GB101JA065	100 1/10W	1	
	R54001	D0GB222JA065	2.2K 1/10W	1	
	R54002	D0GB222JA065	2.2K 1/10W	1	
	R54004	D0GB104JA065	100K 1/10W	1	
	R54005	D0GB104JA065	100K 1/10W	1	
	R54006	D0GB104JA065	100K 1/10W	1	
	R54007	D0GB104JA065	100K 1/10W	1	
	R54008	D0GB104JA065	100K 1/10W	1	
	R54009	D0GB104JA065	100K 1/10W	1	
	R54010	D0GB223JA065	22K 1/10W	1	
	R54011	D0GB472JA065	4.7K 1/10W	1	
	R54012	D0GB105JA065	1M 1/10W	1	
	R54013	D0GB152JA065	1.5K 1/10W	1	
	R54018	D0GB104JA065	100K 1/10W	1	
	R54019	D0GB473JA065	47K 1/10W	1	
	R54020	D0GB101JA065	100 1/10W	1	
	R54021	D0GB101JA065	100 1/10W	1	
	R54022	D0GB101JA065	100 1/10W	1	
	R54023	D0GB473JA065	47K 1/10W	1	
	R54024	D0GB221JA065	220 1/10W	1	
	R54025	D0GB221JA065	220 1/10W	1	
	R54026	D0GB221JA065	220 1/10W	1	
	R54027	D0GB221JA065	220 1/10W	1	
	R54028	D0GB221JA065	220 1/10W	1	
	R54031	D0GB221JA065	220 1/10W	1	
	R54034	D0GB274JA065	270K 1/10W	1	
	R54040	D0GBR00J0004	0 1/10W	1	
	R54041	D0GBR00J0004	0 1/10W	1	
	R54042	D0GBR00J0004	0 1/10W	1	
	R54043	D0GB101JA065	100 1/10W	1	
	R54056	D0GB102JA065	1K 1/10W	1	
	R54057	D0GB102JA065	1K 1/10W	1	
	R54058	D0GB4R7JA065	4.7 1/10W	1	
	R54059	D0GB4R7JA065	4.7 1/10W	1	
	R54060	D0GB221JA065	220 1/10W	1	
	R54062	D0GB682JA065	6.8K 1/10W	1	
	R54063	D0GB682JA065	6.8K 1/10W	1	
	R54064	D0GB123JA065	12K 1/10W	1	
	R54065	D0GB123JA065	12K 1/10W	1	
	R54066	D0GBR00J0004	0 1/10W	1	
	R54067	D0GBR00J0004	0 1/10W	1	
	R54068	D0GBR00J0004	0 1/10W	1	
	R54069	D0GBR00J0004	0 1/10W	1	
	R54070	D0GBR00J0004	0 1/10W	1	
	R54071	D0GBR00J0004	0 1/10W	1	
	R54072	D0GBR00J0004	0 1/10W	1	
	R54073	D0GBR00J0004	0 1/10W	1	
	R54078	D0GBR00J0004	0 1/10W	1	
	R58000	D0GB104JA008	100K 1/10W	1	
	R58001	D0GB273JA008	27K 1/10W	1	
	R58005	D0GB474JA008	470K 1/10W	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	R58006	D0GB104JA008	100K 1/10W	1	
	R58007	D0GB472JA008	4.7K 1/10W	1	
	R58008	D0GB472JA008	4.7K 1/10W	1	
	R58130	ERJ3RBD103V	10K 1/16W	1	
	R58131	ERJ3RBD561V	560 1/16W	1	
	R58132	ERJ3RBD272V	2.7K 1/16W	1	
	R58230	D0GBR00JA008	0 1/10W	1	
	R58231	ERJ3RBD623V	62K 1/16W	1	
	R58232	ERJ3GEYJ623V	62K 1/10W	1	
	R58233	ERJ3RBD103V	10K 1/16W	1	
	R58234	ERJ3RBD682V	6.8K 1/16W	1	
	R58235	ERJ3RBD473V	47K 1/16W	1	
	R58236	D0HB392ZA002	3.9K 1/16W	1	
	R58240	D0GB473JA008	47K 1/10W	1	
	R58241	D0GB103JA008	10K 1/10W	1	
	R58250	D0GB103JA008	10K 1/10W	1	
	R58251	D0GB473JA008	47K 1/10W	1	
	R58330	ERJ3RED124V	120K 1/16W	1	
	R58331	ERJ3RBD753V	75K 1/16W	1	
	R58332	ERJ3RED474V	470K 1/16W	1	
	R58340	D0GB103JA008	10K 1/10W	1	
	R58341	D0GB473JA008	47K 1/10W	1	
	R58350	D0GB103JA008	10K 1/10W	1	
	R58351	D0GB473JA008	47K 1/10W	1	
	R58830	ERJ3RBD103V	10K 1/16W	1	
	R58831	ERJ3RBD472V	4.7K 1/16W	1	
	R58832	ERJ3RBD333V	33K 1/16W	1	
	R58833	D0GB103JA008	10K 1/10W	1	
			RESISTOR NET-WORKS		
	RX51002	D1H81014A042	RESISTOR NETWORK	1	
	RX51003	D1H81014A042	RESISTOR NETWORK	1	
	RX54001	D1H82214A042	RESISTOR NETWORK	1	
	RX54002	D1H82214A042	RESISTOR NETWORK	1	
	RX54003	D1H8R0040016	RESISTOR NETWORK	1	
			CAPACITORS		
	C1501	F1J1E105A171	1uF 25V	1	
	C1502	F1J1E105A171	1uF 25V	1	
	C1503	F1J1V1050001	1uF 35V	1	
	C1504	F2A1H1R0A013	1uF 50V	1	
	C1505	F1J1E105A171	1uF 25V	1	
	C1506	F1H1H104A013	0.1uF 50V	1	
	C1507	F1H1A105A028	1uF 10V	1	
	C1700	F1H1H391A889	390pF 50V	1	
	C1701	F2A1H100A454	10uF 50V	1	
⚠	C1702	F0CAF224A105	0.22uF	1	
	C1703	F2A1E1020114	1000uF 25V	1	
	C1704	F1H1H102B047	1000pF 50V	1	
	C1705	F1K2J4720001	4700pF 630V	1	
	C1708	F1H1H102B047	1000pF 50V	1	
	C1709	F1H1H104B047	0.1uF 50V	1	
⚠	C1710	F1BAF471A013	470pF	1	
	C1712	F1H1H104B047	0.1uF 50V	1	
	C1713	F1K2J2210005	220pF 630V	1	
	C1714	F1H1H104B047	0.1uF 50V	1	
	C1715	F1H1H104B047	0.1uF 50V	1	
	C1716	F1H1H103B047	0.01uF 50V	1	
	C1717	F2B2D1010003	100uF 200V	1	
	C1719	F1H1E4740005	0.47uF 25V	1	
	C1720	F1A3D100A009	10pF 2000V	1	
⚠	C1725	F0CAF154A105	0.15uF	1	
⚠	C1727	F1BAF1020020	1000pF	1	
⚠	C1728	F1BAF1020020	1000pF	1	
	C51002	F2A1A330A010	33uF 10V	1	
	C51003	F1H1H220A889	22pF 50V	1	
	C51004	F1H1H180A889	18pF 50V	1	
	C51005	F1H1H1010005	100pF 50V	1	
	C51006	F1H1C104A120	0.1uF 16V	1	
	C51007	F1H1C104A120	0.1uF 16V	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	C51008	F1H1A224A061	0.22uF 10V	1	
	C51009	F1H1H102A885	1000pF 50V	1	
	C51010	F1H1H102A885	1000pF 50V	1	
	C51011	F1H1H102A885	1000pF 50V	1	
	C51012	F1H1C104A120	0.1uF 16V	1	
	C51013	F1H1H102A885	1000pF 50V	1	
	C51014	F1H1C104A120	0.1uF 16V	1	
	C51015	F1H1A105A028	1uF 10V	1	
	C51016	F1H1H102A885	1000pF 50V	1	
	C51022	F1H1H223A219	0.022uF 50V	1	
	C51023	F1H1C104A120	0.1uF 16V	1	
	C51024	F1G1A1040006	0.1uF 10V	1	
	C54001	F1H0J106A009	10uF 6.3V	1	
	C54002	F1H0J106A009	10uF 6.3V	1	
	C54003	F1H0J106A009	10uF 6.3V	1	
	C54004	F1H1H103A219	0.01uF 50V	1	
	C54005	F1H1A105A028	1uF 10V	1	
	C54006	F1H0J106A009	10uF 6.3V	1	
	C54007	F1J1E105A171	1uF 25V	1	
	C54008	F1J1E105A171	1uF 25V	1	
	C54009	F1J1E105A171	1uF 25V	1	
	C54010	F1J1E105A171	1uF 25V	1	
	C54011	F1H1H104A783	0.1uF 50V	1	
	C54012	F1H1H104A783	0.1uF 50V	1	
	C54013	F1H1H104A783	0.1uF 50V	1	
	C54014	F1H1H104A783	0.1uF 50V	1	
	C54015	F1J1H104A717	0.1uF 50V	1	
	C54016	F1J1H104A717	0.1uF 50V	1	
	C54017	F1H1C104A041	0.1uF 16V	1	
	C54018	F1H1H4700006	47pF 50V	1	
	C54019	F1H1H4700006	47pF 50V	1	
	C54020	F1J1A106A043	10uF 10V	1	
	C54021	F1J1A106A043	10uF 10V	1	
	C54022	F1H1E105A116	1uF 25V	1	
	C54026	F1H1H1200004	12pF 50V	1	
	C54027	F1H1H1500009	15pF 50V	1	
	C54028	F1H1H104A013	0.1uF 50V	1	
	C54029	F2A1E1010099	100uF 25V	1	
	C54030	F1H1H102A831	1000pF 50V	1	
	C54031	F1H1H102A831	1000pF 50V	1	
	C54032	F1H1H102A831	1000pF 50V	1	
	C54033	F1H1H102A831	1000pF 50V	1	
	C54034	F1H1H102A831	1000pF 50V	1	
	C54035	F1H1H102A831	1000pF 50V	1	
	C54036	F1H1H102A831	1000pF 50V	1	
	C54037	F1H1H102A831	1000pF 50V	1	
	C54040	F1H1H1010005	100pF 50V	1	
	C54041	F1H1H1010005	100pF 50V	1	
	C54042	F1J1A106A043	10uF 10V	1	
	C54043	F1J1A106A043	10uF 10V	1	
	C54044	F1J1A106A043	10uF 10V	1	
	C54045	F1H1C104A041	0.1uF 16V	1	
	C54046	F1J1A106A043	10uF 10V	1	
	C54047	F1H1C104A041	0.1uF 16V	1	
	C54048	F1J1A106A043	10uF 10V	1	
	C54049	F1H1C104A041	0.1uF 16V	1	
	C54051	F1H1C104A041	0.1uF 16V	1	
	C54052	F1H1H472A219	4700pF 50V	1	
	C54053	F1H1H472A219	4700pF 50V	1	
	C54054	F1H1H102A831	1000pF 50V	1	
	C54055	F1H1H103A219	0.01uF 50V	1	
	C54056	F1H1H103A219	0.01uF 50V	1	
	C54057	F1H1H102A831	1000pF 50V	1	
	C58000	F1H1H102A219	1000pF 50V	1	
	C58001	F1H1C104A041	0.1uF 16V	1	
	C58002	F1H1H103A219	0.01uF 50V	1	
	C58003	F1H1A105A036	1uF 10V	1	
	C58110	F1K1E1060001	10uF 25V	1	
	C58120	F1J0J106A014	10uF 6.3V	1	
	C58210	F1K1E1060008	10uF 25V	1	
	C58211	F1H1E104A002	0.1uF 25V	1	
	C58220	F1H1C104A071	0.1uF 16V	1	
	C58221	F1J0J106A014	10uF 6.3V	1	
	C58222	F1J0J106A014	10uF 6.3V	1	
	C58223	F1J0J106A014	10uF 6.3V	1	
	C58224	F1J0J106A014	10uF 6.3V	1	
	C58230	F1H1E104A002	0.1uF 25V	1	
	C58231	F1H1H332A219	3300pF 50V	1	
	C58232	F1H1H6810005	680pF 50V	1	
	C58233	F1H1H1500009	15pF 50V	1	
	C58240	F1H1C104A041	0.1uF 16V	1	
	C58250	F1H1C104A041	0.1uF 16V	1	
	C58311	F1J0J106A014	10uF 6.3V	1	
	C58312	F1J0J106A014	10uF 6.3V	1	
	C58320	F1J0J106A014	10uF 6.3V	1	
	C58321	F1H1E104A002	0.1uF 25V	1	
	C58330	F1H1H100A831	10pF 50V	1	
	C58340	F1H1C104A041	0.1uF 16V	1	
	C58350	F1H1C104A041	0.1uF 16V	1	
	C58360	F1H1A105A028	1uF 10V	1	
	C58361	F1H1A105A028	1uF 10V	1	
	C58810	F1K1E1060001	10uF 25V	1	
	C58820	F1J1C1060001	10uF 16V	1	
			SERVICE FIXTURE AND TOOLS		
	SFT1	REX1538	7P WIRE (MAIN - SMPS)	1	

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