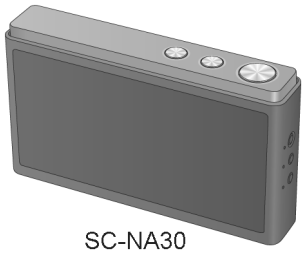
PSG1310005CE
A6

Service Manual

Wireless Speaker System

Model No. SC-NA30GN
SC-NA30P
SC-NA30PC

Product Color: (K)...Black Type (For NA30P/PC)
(S)...Silver Type (For NA30GN/P)



SC-NA30

⚠ 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.

TABLE OF CONTENTS

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.

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.

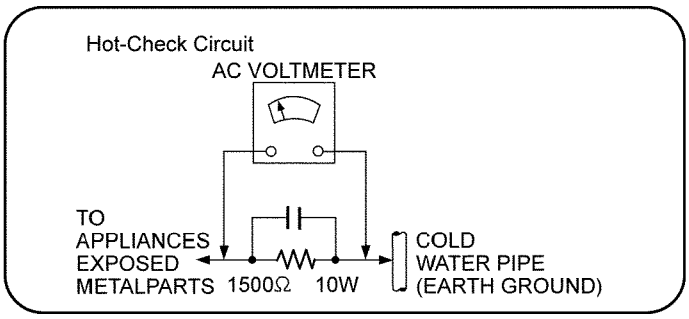


Figure 1-1

1.2. Before Repair and Adjustment

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 240V, at 50Hz during power on at volume minimum, (Selector : AUX mode) should be ~200 mA. (For GN)
- Current consumption at AC 120V, at 60Hz during power on at volume minimum, (Selector : AUX mode) should be ~200 mA. (For P/PC)

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. 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
⚠	2	N4HULQZ00001	BATTERY PACK	
⚠	10	RFKGCNA30EBS	FRONT CABINET ASS'Y	GN-S
⚠	10	RFKGCNA30P-S	FRONT CABINET ASS'Y	P-S
⚠	10	RFKGCNA30PCK	FRONT CABINET ASS'Y	P/PC-K
⚠	A1	K2CJ2YY00093	AC CORD	GN-S
⚠	A2	RFEA228C-AG	AC ADAPTOR	P-K, P-S, PC-K
⚠	A2	RFEA229E-AH	AC ADAPTOR	GN-S
⚠	A3	VQT5C36	O/I BOOK (En)	P-K, P-S, PC-K
⚠	A3	VQT5C37	O/I BOOK (Cf)	PC-K
⚠	A3	VQT5C51	O/I BOOK (En)	GN-S
⚠	IP1891	D4FB1R100015	RESETTABLE FUSE	
⚠	IP1901	D1JBR015A007	PROTECTOR	

2 Warning

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

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

Examples of typical ES devices are IC (integrated circuits) and some field-effect transistors and semiconductor "chip" components.

The following techniques should be used to help reduce the incidence of component damage caused by electrostatic discharge (ESD).

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

IMPORTANT SAFETY NOTICE

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2.2. 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.

4 Specifications

■ Amplifier Section

RMS Output Power (AC Adaptor)

Normal Mode

10% total harmonic distortion

Front ch (each ch driven):	5 W per channel (1 kHz, 6 Ω)
Subwoofer:	10 W per channel (100 Hz, 3 Ω)
Total RMS output power	20 W

RMS Output Power (Battery)

Normal Mode

10% total harmonic distortion

Front ch (each ch driven):	4 W per channel (1 kHz, 6 Ω)
Subwoofer:	8 W per channel (100 Hz, 3 Ω)
Total RMS output power	16 W

RMS Output Power (AC Adaptor/Battery)

Long Play Mode

10% total harmonic distortion

Front ch (each ch driven):	2 W per channel (1 kHz, 6 Ω)
Subwoofer:	4 W per channel (100 Hz, 3 Ω)
Total RMS output power	8 W

FTC Output Power (AC Adaptor) (For P/PC)

1.0% total harmonic distortion

Front ch (both ch driven):	250 Hz - 16 kHz 3.5 W per channel (6 Ω)
Subwoofer:	70 Hz - 500 Hz 3 W (3 Ω)
Total FTC power	10 W

■ Speaker Section

Front Speaker (L/R)

Type	1 way, 1 speaker system (Closed type)
Unit(s)	5 cm x 2 (2” x 2)
Impedance	6 Ω

SUBWOOFER

Type	1 way, 1 speaker system (passive radiator type)
Unit(s)	8 cm x 1 (3 1/8” x 1)
Impedance	3 Ω

Passive Radiator

Unit	8 cm x 2 (3 1/8” x 2)

■ Bluetooth Section

Bluetooth® system specification:	Ver. 3.0
Wireless equipment classification:	Class 2 (2.5 mW)
Supported profiles:	A2DP/AVRCP/HFP
Supported codec:	aptX®, AAC, SBC
Frequency band:	2.4 GHz band FH-SS
Operating distance:	Approx. 10 m (33 ft.) Line of Sight Prospective communication distance.
Measurement environment:	Height 1.0 m (3.3 ft.)

■ Microphone Section

Type:	Mono

■ Terminal Section

DC IN:	12 V 3 A
AUX input:	Stereo, Ø 3.5 mm (1/8”) jack
DC OUT (USB A type):	(5 V 1 A) Supply output only power-on

■ Accessories Section

AC Adaptor

Input: (For GN)	AC 100 V to 240 V 50/60 Hz 1000 mA
Input: (For P/PC)	AC 100 V to 240 V 50/60 Hz 800 mA
Output:	DC 12 V 3A

■ General

Power supply:	DC 12 V 3 A
Internal Battery:	7.2 V (Li-ion: 2900 mAh)
Power consumption:	Approx. 16 W
Power consumption in standby mode:	Approx. 0.4 W

Battery Life in Use (Bluetooth® : SBC mode)

Normal Mode:	Approx. 14 h*
LP Mode:	Approx. 20 h*
Battery Charge Time (25 °C) (77 °F)	Approx. 3 h
Dimensions (W x H x D):	244 mm x 144 mm x 48 mm (9 5/8” x 5 11/16” x 1 29/32”)
Mass: (Weight)	Approx. 930 g (2.05 lbs)
Operating temperature range	0 °C to +40 °C (+32 °F to +104 °F)
Charge temperature range	10 °C to +35 °C (+50 °F to +95 °F)
Operating humidity range	35% to 80 % RH (no condensation)

Note:

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

* By the measurement method prescribed in the provisions

4.1. Others (Licenses)

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5 General/Introduction

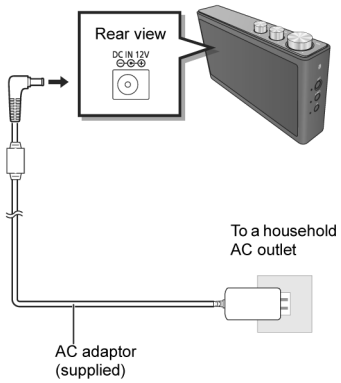
5.1. About the power of this unit

This unit has a built-in battery. Please charge the battery before using this unit for the first time.

■ **Charging the battery**

Connect the AC adaptor to the household AC outlet.

- If charging is necessary, the Battery indicator (red) lights. When charging is complete, the Battery indicator goes off.



About the battery status

Battery indicator (red)	Battery status
Fast blinking (at approximately 1 second intervals)	About 5%*1
Slow blinking (at approximately 2 second intervals)	About 15%*1

*1 These battery statuses of the unit serve only as an approximation, and may vary according to the conditions of use.

Battery life in use/Battery charge time/Rechargeable times

Battery life in use	Approx. 14 hours*2
Battery life in use (LP mode)	Approx. 20 hours*2
Battery Charge time	Approx. 3 hours*3
Rechargeable times	About 500 times

*2 Calculated by the test method established by the company [while connecting with Bluetooth®, using at the surrounding temperature of 25 °C (+77 °F)]

*3 When charging at the surrounding temperature of 25 °C (+77 °F) after the battery is depleted.

■ **Using the unit by connecting it to a household AC outlet**

Press [⏻/I] to turn on the unit. Connecting the AC adaptor before turning on the unit allows you to supply power from a household AC outlet during use.

- It takes longer to charge while this unit is turned on.

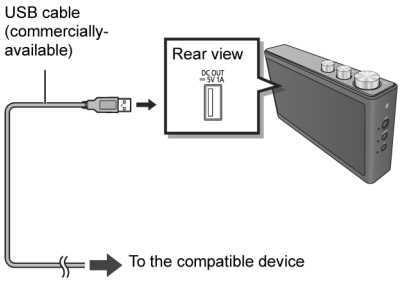
5.2. About the DC OUT terminal (USB)

The DC OUT terminal of this unit is for supplying/charging power to a connected device (rated value: 5 V/1 A). Note that the port cannot be used for purposes other than supplying/charging power.
Note that when the unit is turned off, charging is not possible.

Preparation
Turn on the unit.

1 Using a USB cable (commercially-available), connect the unit and a compatible device.

2 Once fully charged, remove the USB cable (commercially-available) from the DC OUT terminal.



Note

- A cable compatible with your device is required. If a cable is supplied with your device, use the cable.
- Even if you connect a cable compatible with the DC OUT terminal of this unit, your device may not be charged. In that case, use a charger supplied with your device.
- Depending on your device, charging methods other than the specified one may not be allowed. Check the operating instructions of your device before use.
- Do not connect a device with a rated value higher than 5 V/1 A to this unit. Doing so may cause malfunction.
- To check if charging is complete, look at the screen of the connected device, etc.
- After charging, pull out the compatible cable.

5.3. One-Touch Connection (Connecting by NFC)

For NFC-compatible Android™ devices only
Just placing an NFC (Near Field Communication)-compatible Bluetooth® device on the unit, you can complete all preparations, from registering a Bluetooth® device to establishing a connection.

Preparation
Enable the NFC function on the Bluetooth® device

1 Download the app "Panasonic Music Streaming" (free of charge) to your Bluetooth® device from Google Play™.
- Enter "Panasonic Music Streaming" in the search box of Google Play™ and search → select "Panasonic Music Streaming" to download the app

2 Start the app "Panasonic Music Streaming" on your Bluetooth® device.
- Follow on-screen instructions on your device.
- Always use the latest version of the app.

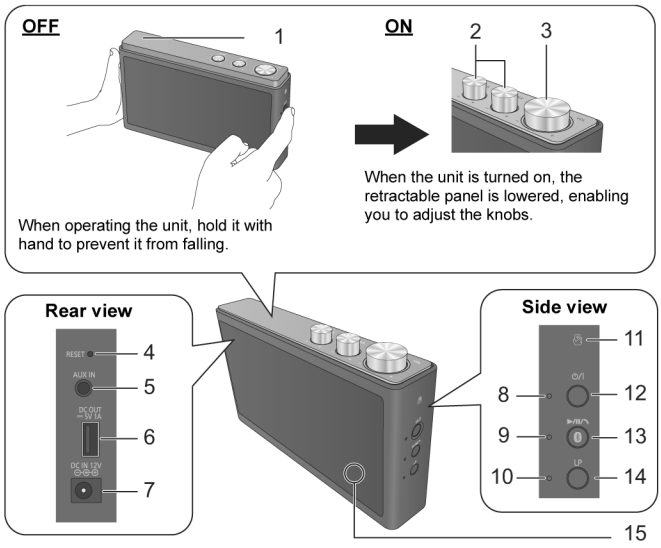
3 Touch and hold your device on the NFC touch area of this unit. (Until a pop-up window on your device indicates that the connection is established.)
When the unit recognises your device, a beep sound is emitted.
- When the Bluetooth® device is paired and connected, the Bluetooth® indicator (blue) on the unit lights up. Once the registration and connection of the Bluetooth® device is complete, move the device away from the unit.
- When the Bluetooth® indicator (blue) does not light up even if you have touched the NFC touch area, change the touching position.

4 Start playing back music, a movie, etc. on your Bluetooth® device.

■ **Connecting to another device**
If you touch another device to this unit, you can update the Bluetooth® connection. The previously connected device will be disconnected automatically.

6 Location of Controls and Components

6.1. Main Unit Key Button Operations



1 Retractable panel
2 BASS/TREBLE knob
- Adjusts low/high-pitched tones

3 Volume knob: Adjusts the volume
- When the maximum or minimum volume is reached, you will be notified by a beep sound.

4 RESET switch [RESET]
- Use a paper clip, etc., to press the switch if this unit does not operate correctly, like when you cannot turn off/on the power.

5 AUX IN jack
6 DC OUT terminal
- When using this port, use a USB cable (commercially-available).

7 DC IN terminal
8 Battery indicator (red)
9 Bluetooth® indicator (blue)
10 LP Mode indicator (green)
11 NFC touch area
12 Standby/on switch [⏻/I]
13 Bluetooth® pairing button/ Play button/Pause button/Call button
14 LP button [LP]
15 Microphone

7 Service Mode

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

7.1. Service Mode

Here is the procedures to enter into Service Mode.
Step 1 : Turn on the unit.
Step 2 : Press and hold [BT] → [BT + POWER] → [BT + POWER + VOL+] on the unit.
Step 3 : LP LED start blinking with 250ms (Refer to Figure 7-1).

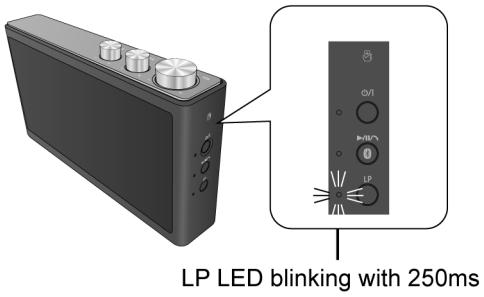


Figure 7-1

To exit the Service Mode
- Press the power button on the main unit.

7.1.1. Service Mode Table

Mode Name	Key Buttons	Panel Key				LED Indicators			Mode Description
		SELECTOR	LP	OTHER SETTING	VOLUME SETTING	LED 1 (Battery)	LED 2 (BT)	LED 3 (LP)	
Software Version	Volume Up (clockwise rotation)	No Change	No Change	-	No Change	Bit 2	Bit 1	Bit 0	Firmware version (Refer to Table 7-1)
BT Version	BT	No Change	No Change	-	No Change	Bit 2	Bit 1	Bit 0	BT version (Refer to Table 7-1)
Exit Service mode and power OFF	POWER	Exit Service Mode and Power Off				X	X	X	Exit Service Mode and clear all setting without total Running Time, Error History
Link Status "O" means LED on "X" means LED off "*" means LED blink 125ms									

7.2. Doctor Mode

Here is the procedures to enter into Doctor Mode.
Step 1 : Turn on the unit.
Step 2 : Press and hold [LP] → [LP + POWER] → [LP + POWER + VOL+] on the unit.
Step 3 : LP LED start blinking with 250ms (Refer to Figure 7-2).

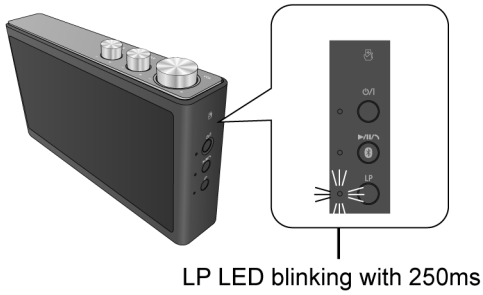


Figure 7-2

To exit the Doctor Mode
• Press the power button on the main unit.

7.2.1. Doctor Mode Table

Mode Name	Key Buttons	Panel Key				LED Indicators			Mode Description
		SELECTOR	LP	OTHER SETTING	VOLUME SETTING	LED 1 (Battery)	LED 2 (BT)	LED 3 (LP)	
B.B.D check Mode	LP	No Change	OFF (Default)	(Default)	VOL 10	-	O	*	LP mode = OFF
Software Version	Volume Up (clockwise rotation)	No Change	No Change	-	No Change	Bit 2	Bit 1	Bit 0	Firmware version (Refer to Table 7-1)
BASS/ TREBLE knob check	Volume Down	No Change	No Change	-	No Change	X	X	X	This check is compatible with "Key LED check". Rotate BASS/TREBLE knob to any direction, and then buzzer sounds.
Key LED Check	Volume Down (anticlockwise rotation)	No Change	No Change	-	No Change	X	X	X	Volume Up (Power) → LP (LP led) → BT (BT led) → power (END)
NFC Lock Release (NFC_INIT)	press and hold [BT] for 2sec	No Change	No Change	-	No Change	-	Blink Once	*	Opecon send "INIT" command to NFC_IC_CHIP
BT connection codec check	No Operation (Default)	BT	No Change	(Default)	No Change	-	depends on BT codec	*	BT LED lights up or blinks like following: - BT connected via aptX: on - BT connected via SBC: blink (100msOn/100msOff)
Exit Doctor mode and power OFF	POWER	Exit Doctor Mode and Power Off				X	X	X	Clear all setting and memory

Link Status
"O" means LED on
"X" means LED off
"*" means LED blink 125ms

7.3. Version Display Mapping

Version	POWER	BT	LP	Remarks
	Bit 2	Bit 1	Bit 0	
-	X	X	X	No use in this blank pattern
01,08,15,22,,,,,71,78,85,92,99…	X	X	O	
02,09,16,23,,,,,72,79,86,93,100…	X	O	X	
03,10,17,24,,,,73,80,87,94,101...	X	O	O	
04,11,18,25,,,,,74,81,88,95,102…	O	X	X	
05,12,19,26,,,,,75,82,89,96,103…	O	X	O	
06,13,20,27,,,,,76,83,90,97,104…	O	O	X	
07,14,21,28,,,,,77,84,91,98,105…	O	O	O	
Link Status “O” means LED on “X” means LED off “*” means LED blink 250ms				

Table 7-1

8 Troubleshooting Guide

This section is not available at the time of issue

9 Disassembly and Assembly Instructions

Caution Note:

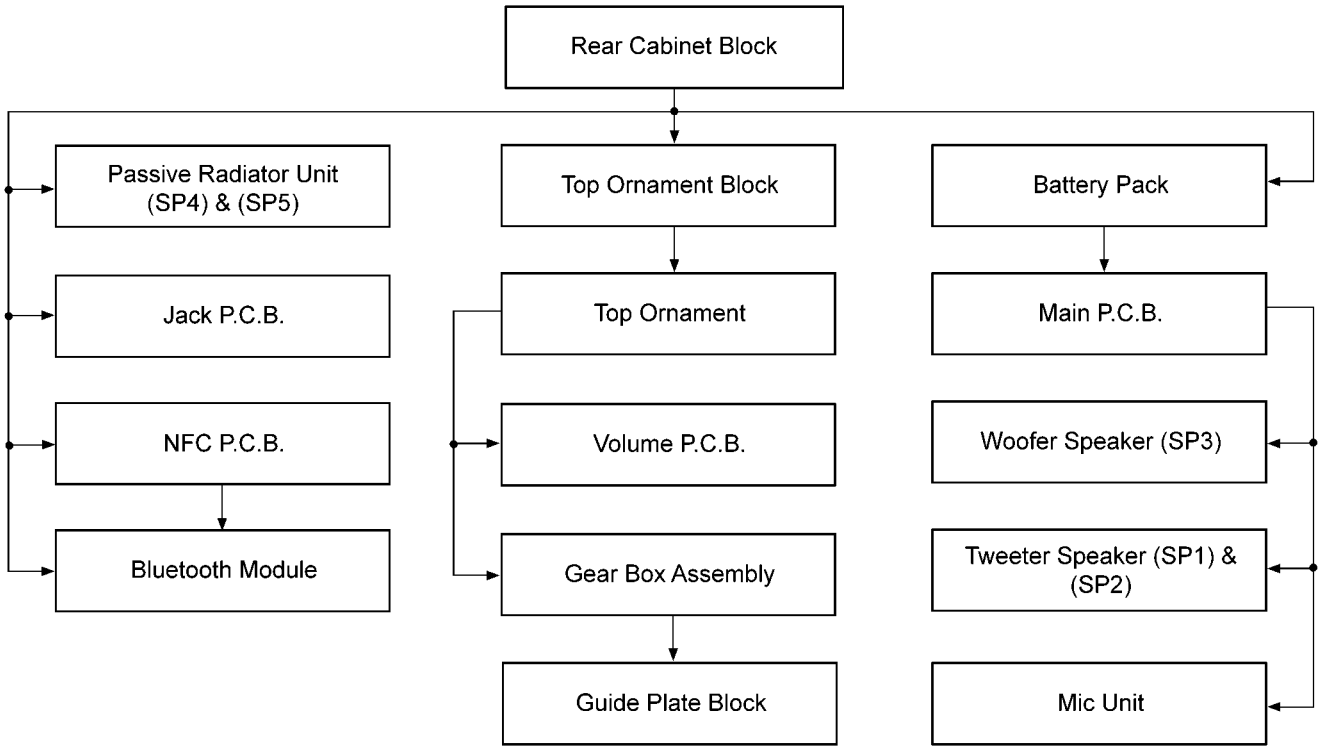
- **This section describes the disassembly and/or assembly procedures for all major printed circuit boards & main components for the unit. (You may refer to the section of “Main components and P.C.B Locations” as described in the service manual)**
- **Before carrying out the disassembly process, please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

- **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 Rear Cabinet Block**
- **Disassembly of Passive Radiator Unit (SP4) & (SP5)**
- **Disassembly of Jack P.C.B.**
- **Disassembly of NFC P.C.B.**
- **Disassembly of Bluetooth Module**
- **Disassembly of Battery Pack**
- **Disassembly of Main P.C.B.**
- **Disassembly of Woofer Speaker (SP3)**
- **Disassembly of Tweeter Speaker (SP1) & (SP2)**
- **Disassembly of Mic Unit**
- **Disassembly of Top Ornament Block**
- **Replacement of Top Ornament**
- **Disassembly of Volume P.C.B.**
- **Replacement of Gear Box Assembly**
- **Disassembly of Guide Plate Block**

9.1. Disassembly flow chart

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



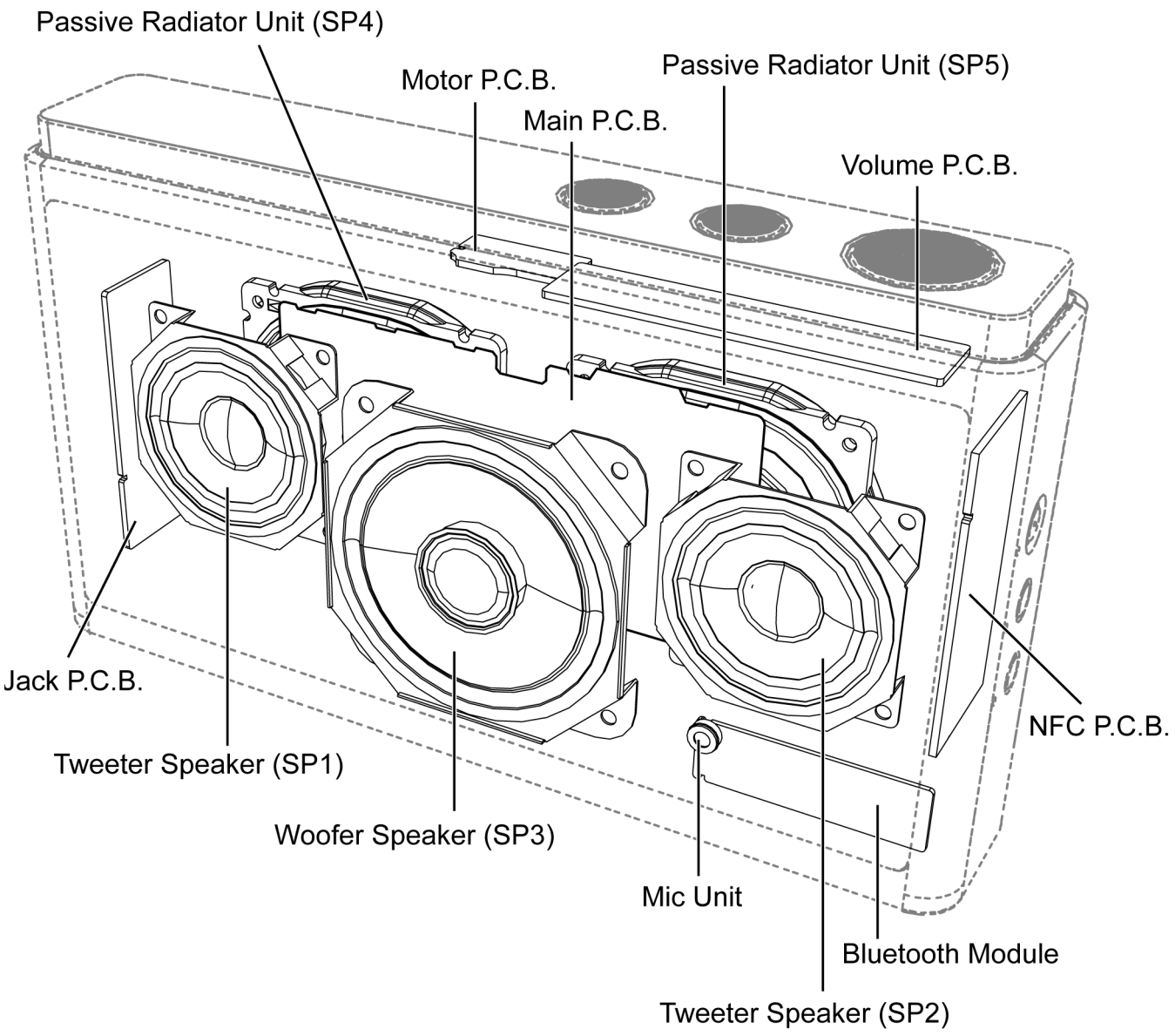
9.2. Types of Screws

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

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

- ⓐ : XTS2+8JFJK
- ⓑ : RHD26046
- ⓒ : RHD26046-K
- ⓓ : VHD1224-1A

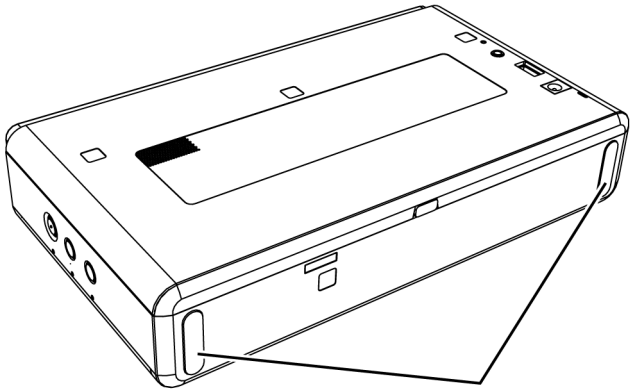
9.3. Main Parts Location Diagram

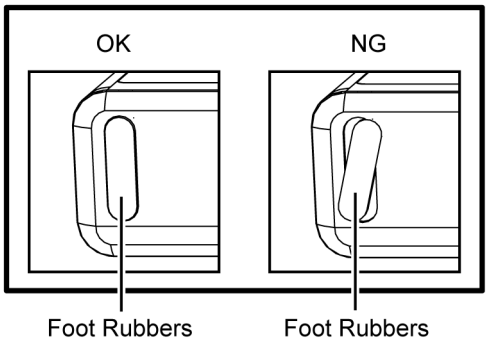


9.4. Disassembly of Rear Cabinet Block

Step 1 : Remove 2 Foot Rubbers.

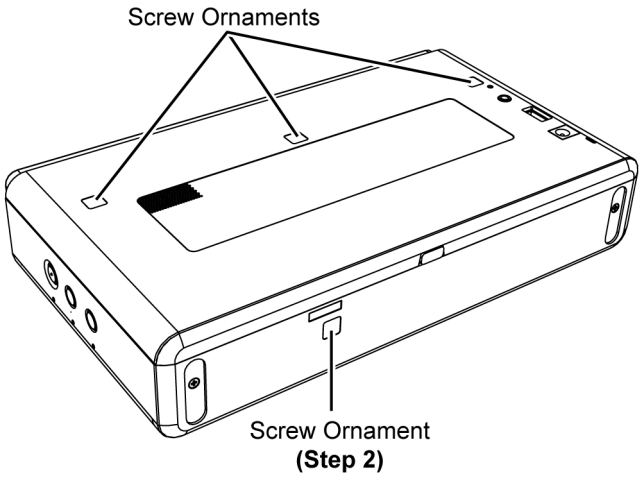
Caution : Replace the Foot Rubbers if they are torn during disassembling.

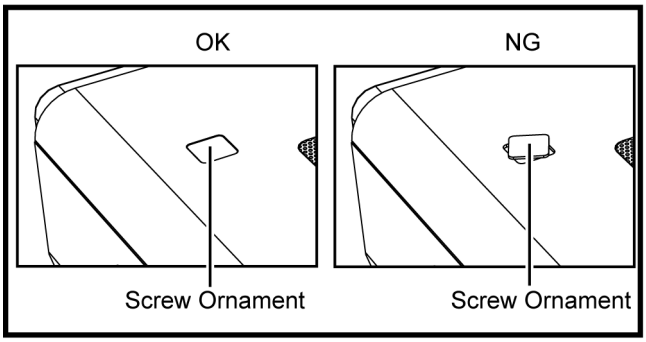




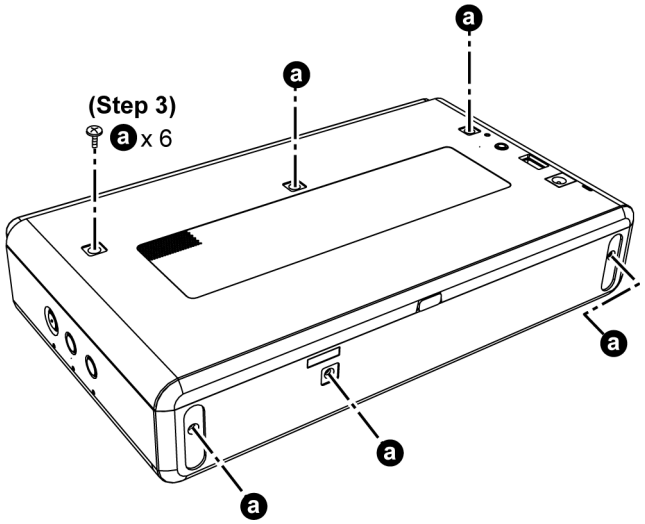
Step 2 : Remove 4 Screw Ornaments.

Caution : Replace the Screw Ornaments if they are torn during disassembling.

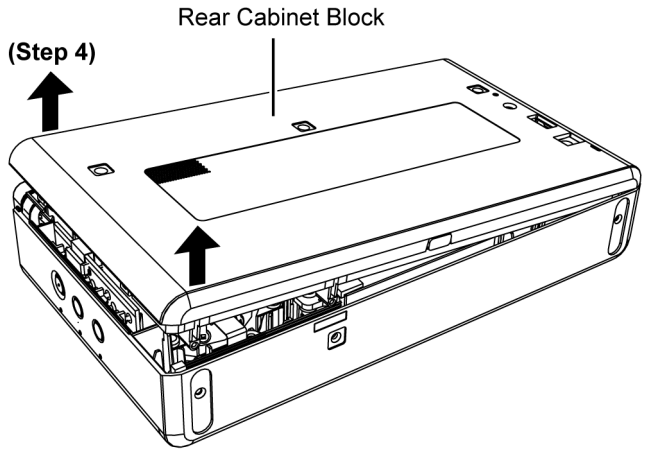




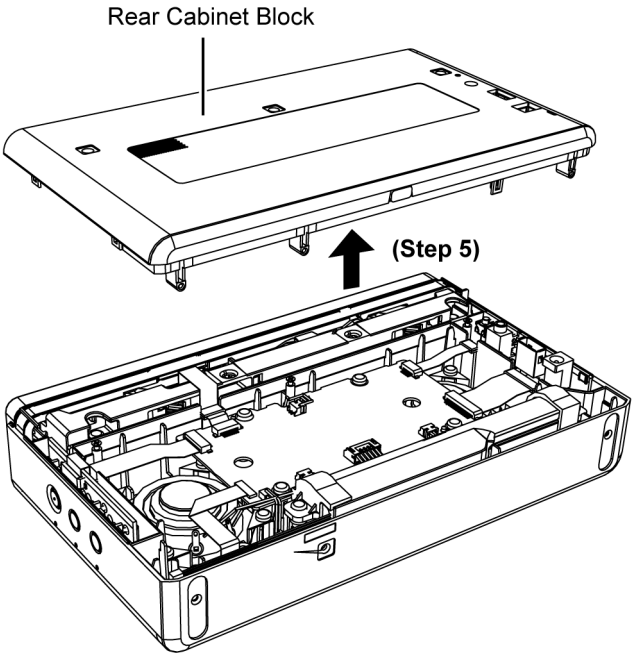
Step 3 : Remove 6 Screws.



Step 4 : Slightly lift up the Rear Cabinet Block.

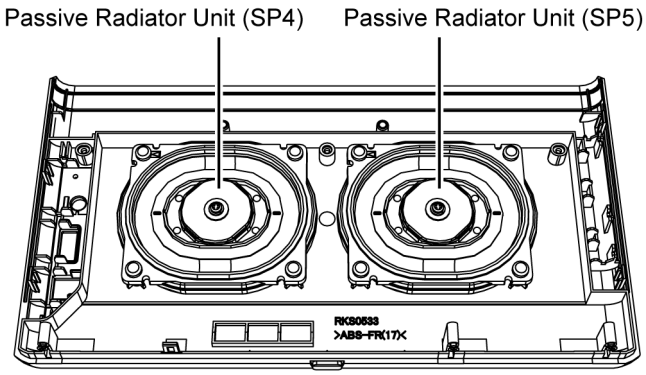


Step 5 : Remove the Rear Cabinet Block.



9.5. Disassembly of Passive Radiator Unit (SP4) & (SP5)

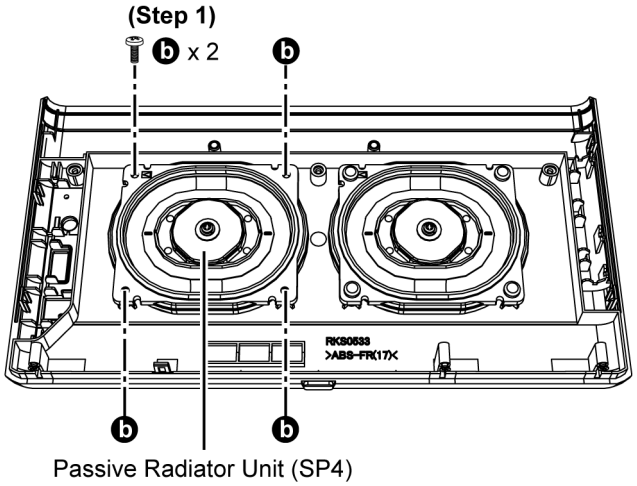
Picture shows the location of the Passive Radiator Unit (SP4) & (SP5).



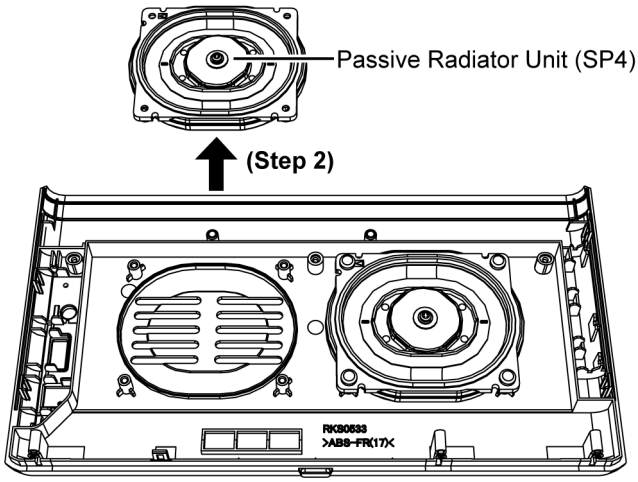
Note : The disassembling procedure for Passive Radiator Unit (SP4) will be described only.
For Passive Radiator Unit (SP5) please refer to the same procedure described here.

- Refer to “Disassembly of Rear Cabinet Block”

Step 1 : Remove 4 screws.



Step 2 : Remove the Passive Radiator Unit (SP4).

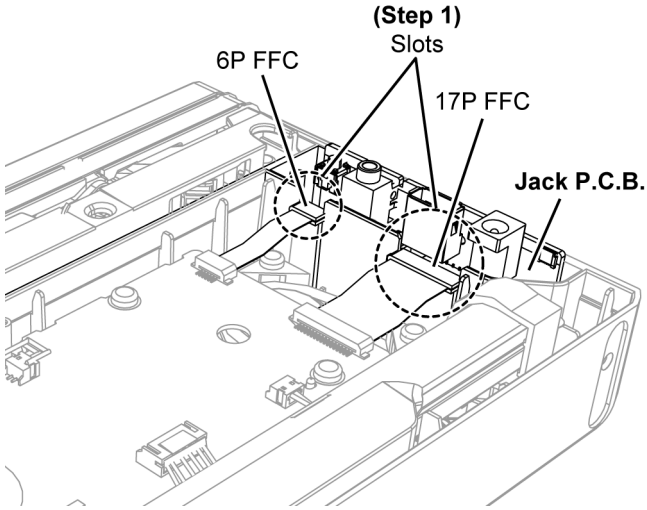


9.6. Disassembly of Jack P.C.B.

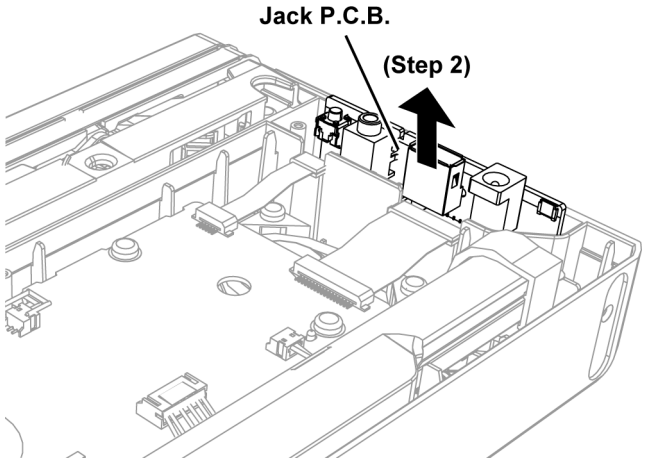
- Refer to “Disassembly of Rear Cabinet Block”

Step 1 : Lift up the 6P FFC & 17P FFC from the Slot.

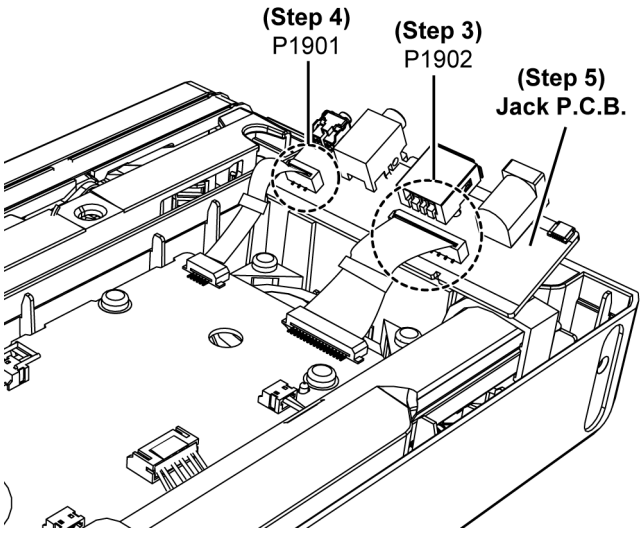
Caution : During assembling, ensure that the 6P FFC & 17P FFC is properly seated into the slots.



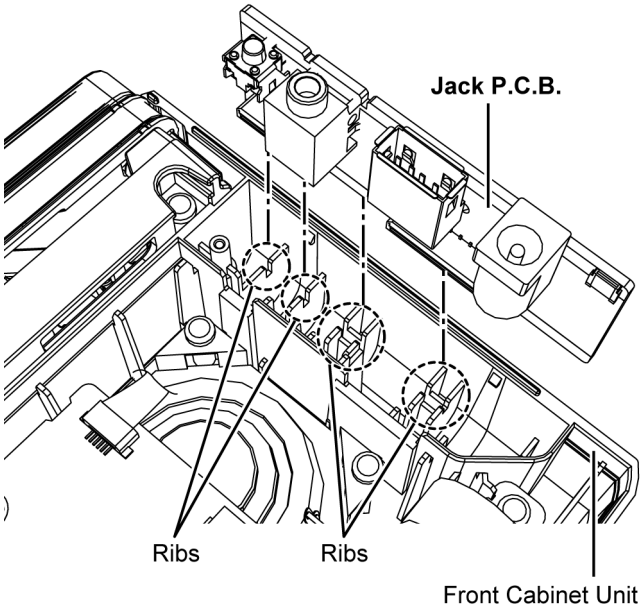
Step 2 : Lift up the Jack P.C.B..



Step 3 : Detach 17P FFC at connector (P1902) on the Jack P.C.B..
Step 4 : Detach 6P FFC at connector (P1901) on the Jack P.C.B..
Step 5 : Remove the Jack P.C.B..



Caution : During assembling, insert the Jack P.C.B. into the ribs of the Front Cabinet Unit.

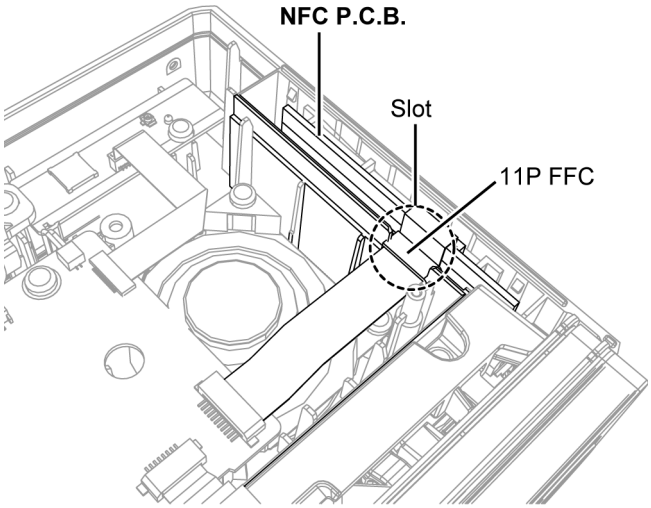


9.7. Disassembly of NFC P.C.B.

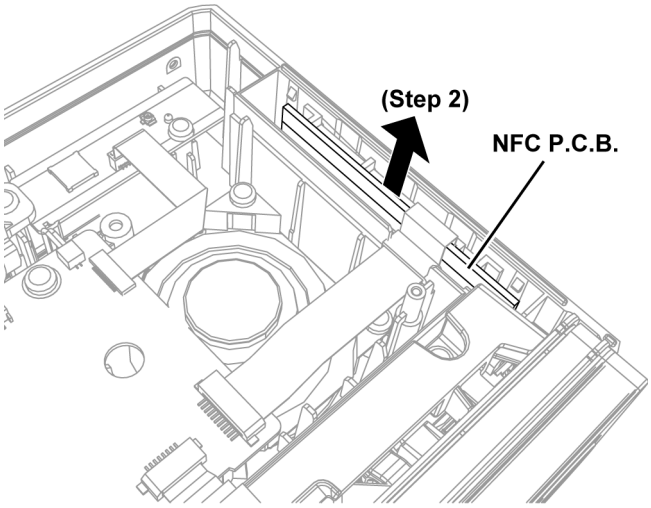
• Refer to “Disassembly of Rear Cabinet Block”

Caution:
If either Bluetooth Module or NFC P.C.B need to be change, it have to be replaced together.

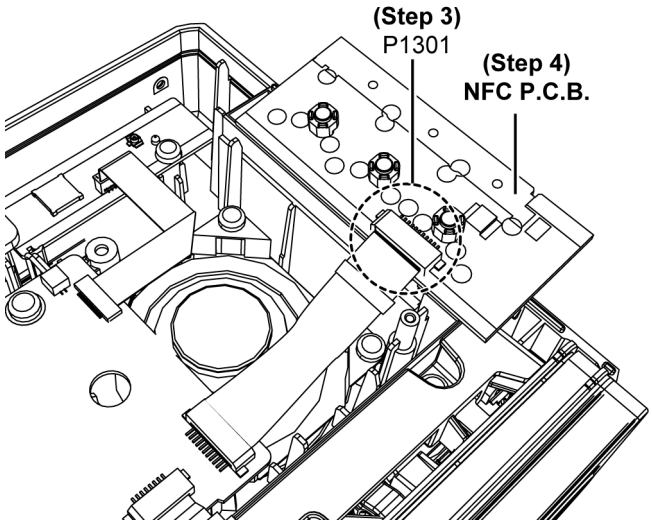
Step 1 : Lift up the 11P FFC from the Slot.
Caution : During assembling, ensure that the 11P FFC is properly seated into the slot.



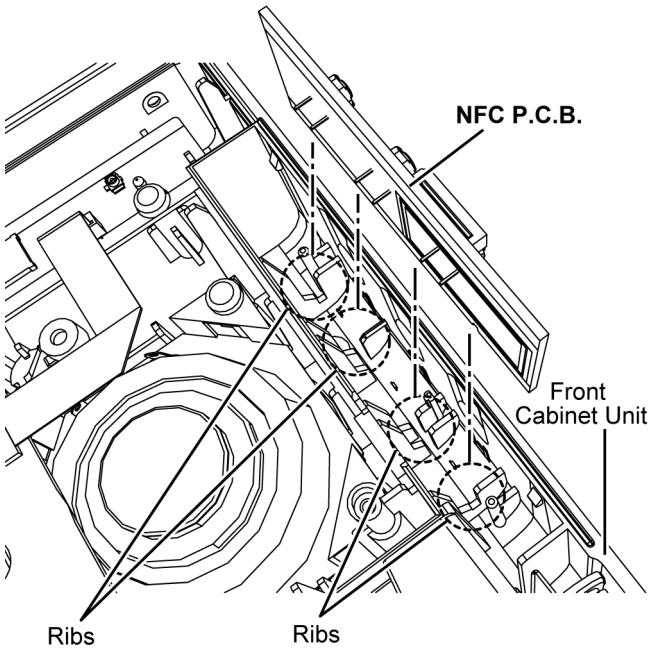
Step 2 : Lift up the NFC P.C.B..



Step 3 : Detach 11P FFC at connector (P1301) on the NFC P.C.B..
Step 4 : Remove the NFC P.C.B..



Caution : During assembling, inserted the NFC P.C.B. into the ribs of the Front Cabinet Unit.

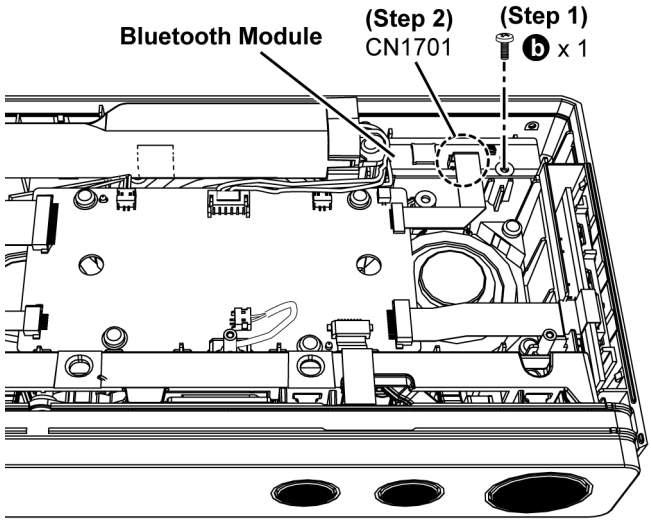


9.8. Disassembly of Bluetooth Module

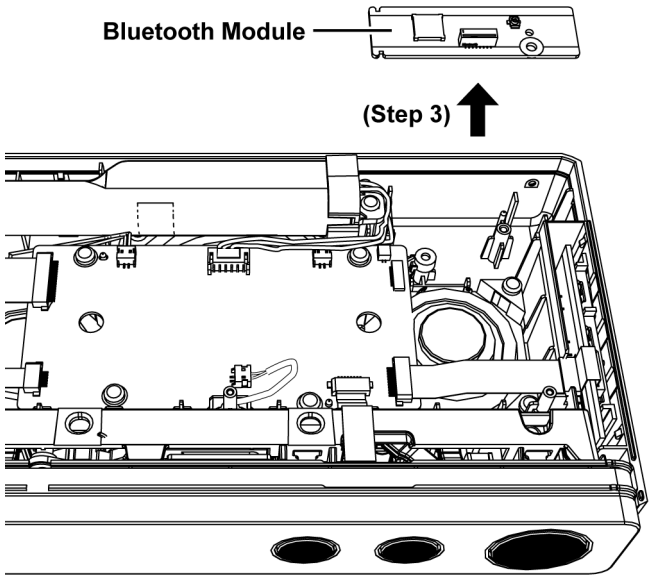
• Refer to “Disassembly of Rear Cabinet Block”

Caution:
If either Bluetooth Module or NFC P.C.B need to be change, it have to be replaced together.

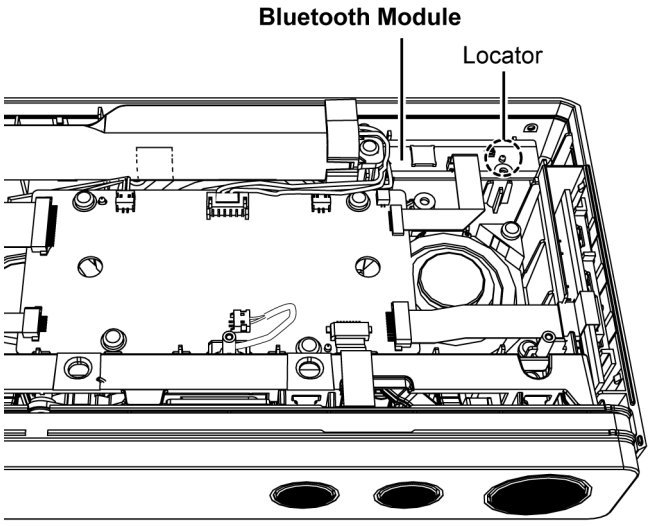
Step 1 : Remove 1 screw.
Step 2 : Detach 16P FFC at connector (CN1701) on the Bluetooth Module.



Step 3 : Remove the Bluetooth Module.



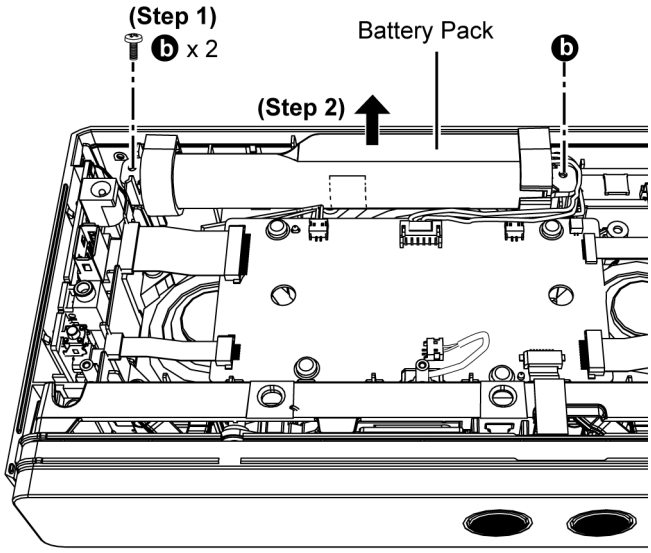
Caution : During assembling, ensure that the Bluetooth Module is properly seated into the locator.



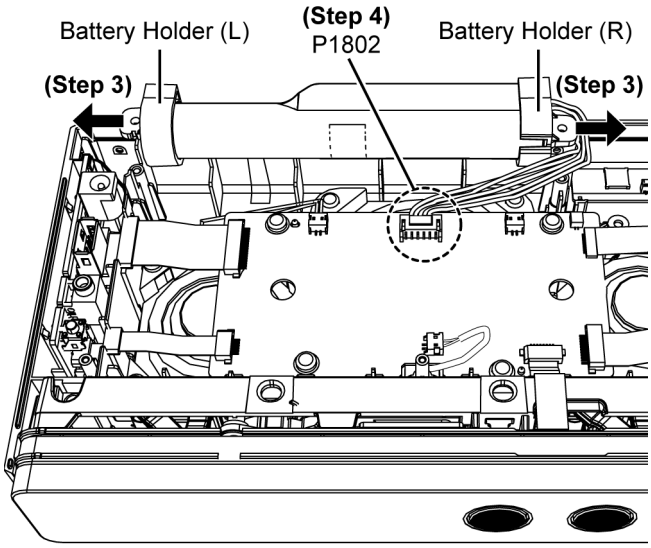
9.9. Disassembly of Battery Pack

- Refer to “Disassembly of Rear Cabinet Block”

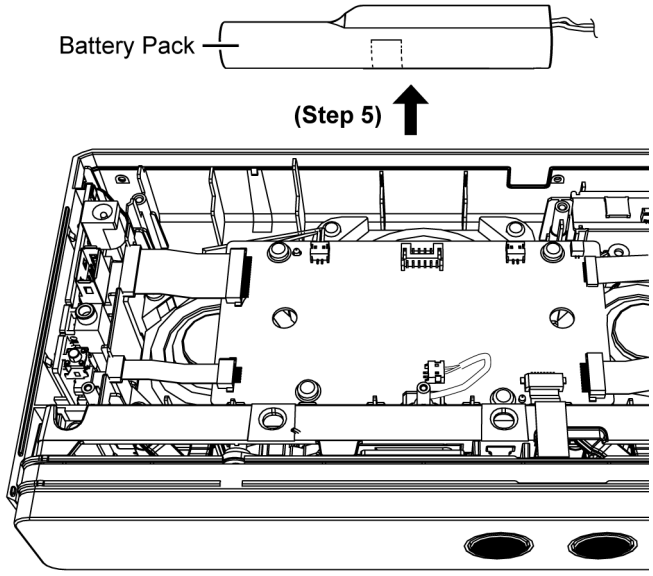
Step 1 : Remove 2 screws.
Step 2 : Slightly lift up the Battery Pack.



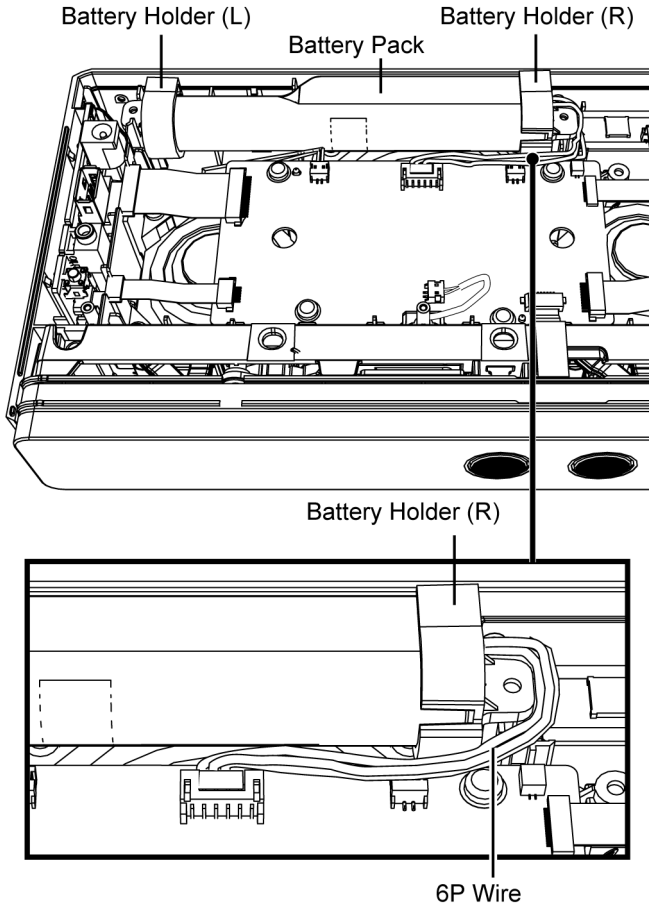
Step 3 : Remove the Battery Holder (L) and Battery Holder (R).
Step 4 : Detach 6P cable at connector (P1802) on the Main P.C.B..



Step 5 : Remove the Battery Pack.



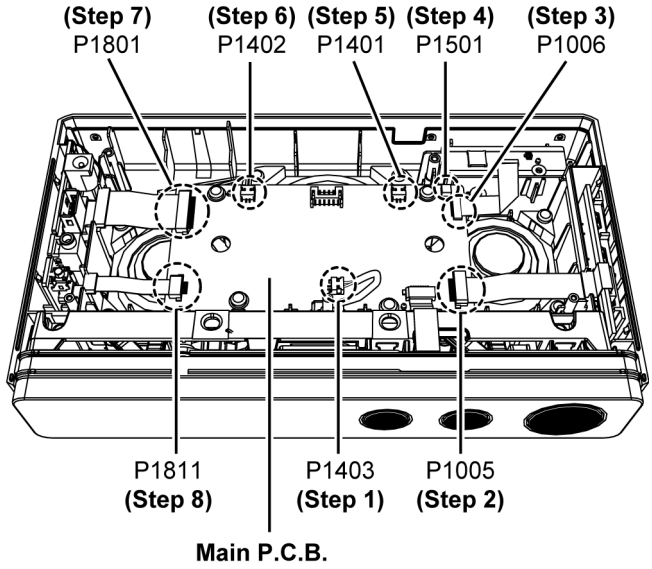
Caution 1 : During assembling, ensure that the Battery Holder (L) & Battery Holder (R) is properly fix into the Battery Pack.
Caution 2 : During assembling, dressed the 6P wire as Picture shown.



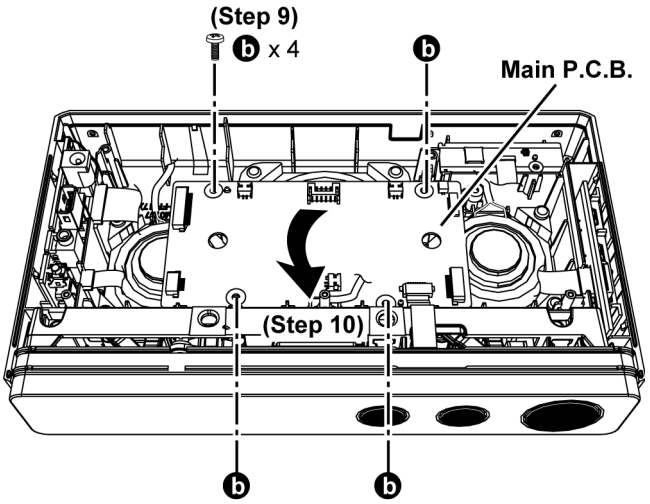
9.10. Disassembly of Main P.C.B.

- Refer to “Disassembly of Rear Cabinet Block”
- Refer to “Disassembly of Battery Pack”

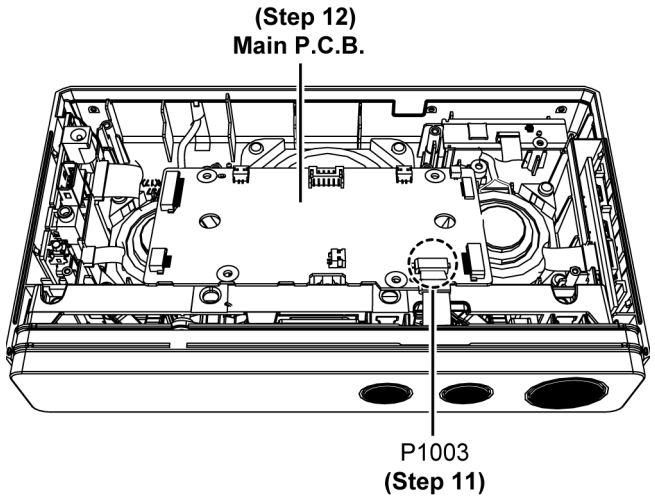
Step 1 : Detach 2P cable at connector (P1403) on the Main P.C.B..
Step 2 : Detach 11P FFC at connector (P1005) on the Main P.C.B..
Step 3 : Detach 16P FFC at connector (P1006) on the Main P.C.B..
Step 4 : Detach 2P cable at connector (P1501) on the Main P.C.B..
Step 5 : Detach 2P cable at connector (P1401) on the Main P.C.B..
Step 6 : Detach 2P cable at connector (P1402) on the Main P.C.B..
Step 7 : Detach 17P FFC at connector (P1801) on the Main P.C.B..
Step 8 : Detach 6P FFC at connector (P1811) on the Main P.C.B..



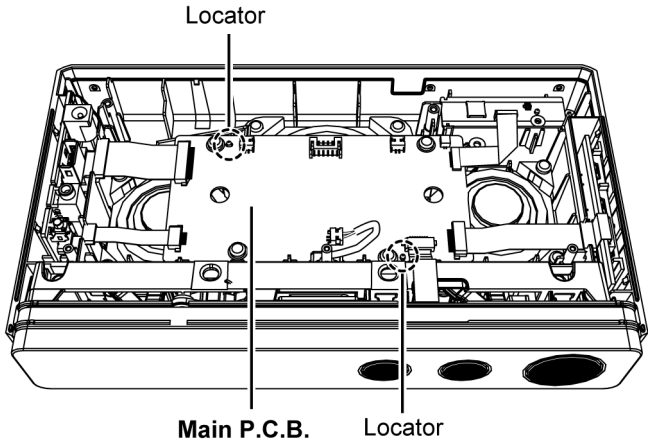
Step 9 : Remove 4 screws.
Step 10 : Slightly lift up the Main P.C.B..



Step 11 : Detach 8P FFC at connector (P1003) on the Main P.C.B..
Step 12 : Remove the Main P.C.B..



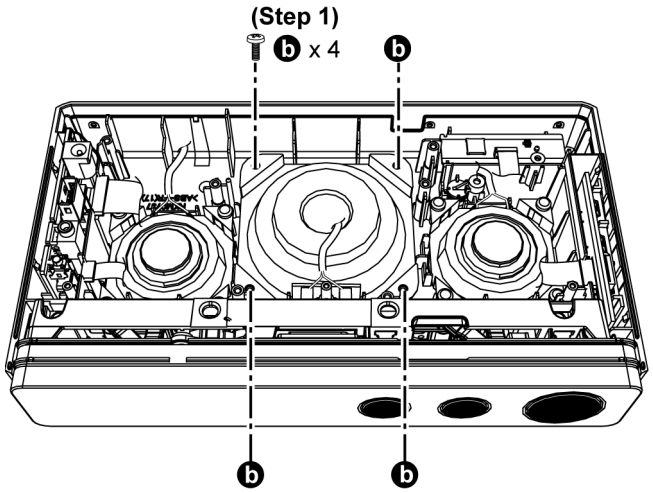
Caution : During assembling, ensure that the Main P.C.B. is properly seated into the locator.



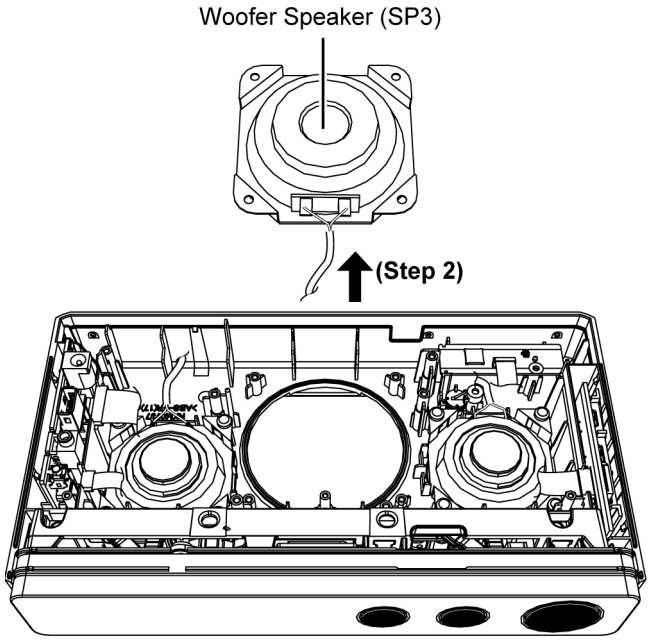
9.11. Disassembly of Woofer Speaker (SP3)

- Refer to “Disassembly of Rear Cabinet Block”
- Refer to “Disassembly of Battery Pack”
- Refer to “Disassembly of Main P.C.B.”

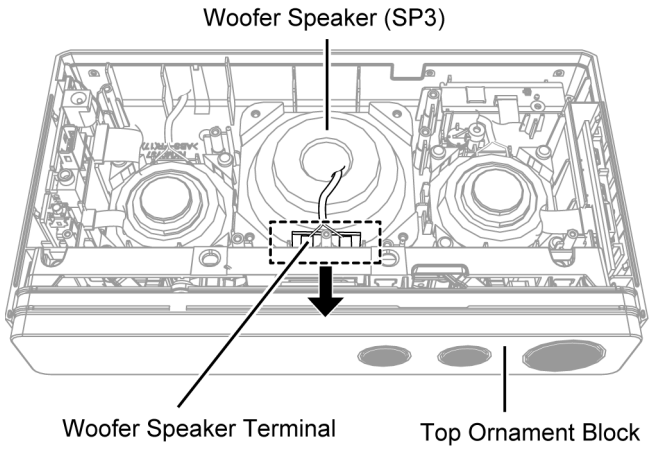
Step 1 : Remove 4 screws.



Step 2 : Remove the Woofer Speaker (SP3).

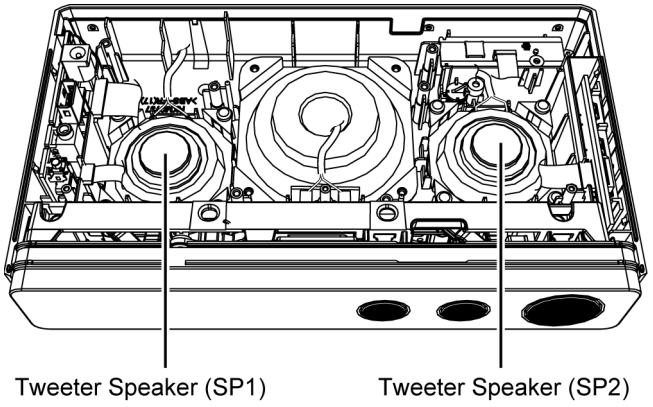


Caution : During assembling, ensure that the Woofer Speaker Terminal is facing the Top Ornament Block.



9.12. Disassembly of Tweeter Speaker (SP1) & (SP2)

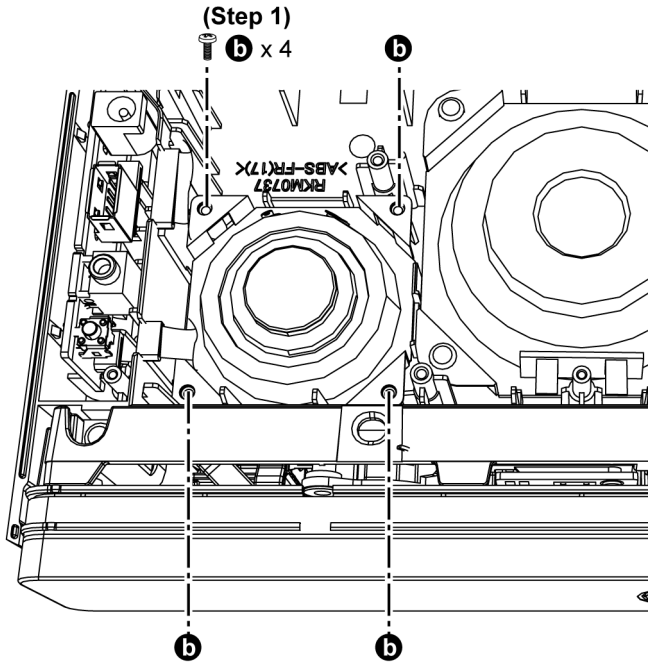
Picture shows the location of the Tweeter Speaker (SP1) & (SP2).



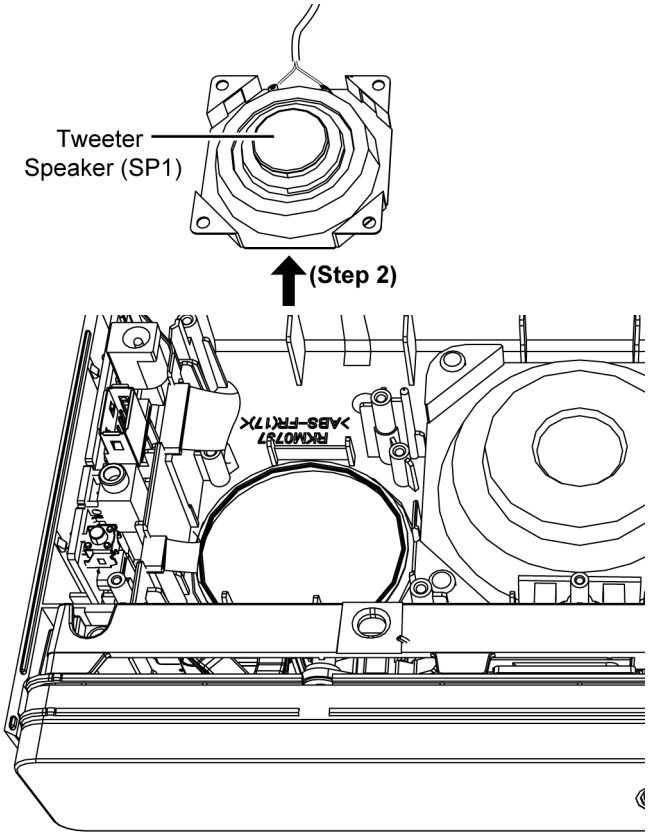
Note : The disassembling procedure for Tweeter Speaker (SP1) will be described only.
For Tweeter Speaker (SP2) please refer to the same procedure described here.

- Refer to “Disassembly of Rear Cabinet Block”
- Refer to “Disassembly of Battery Pack”
- Refer to “Disassembly of Main P.C.B.”

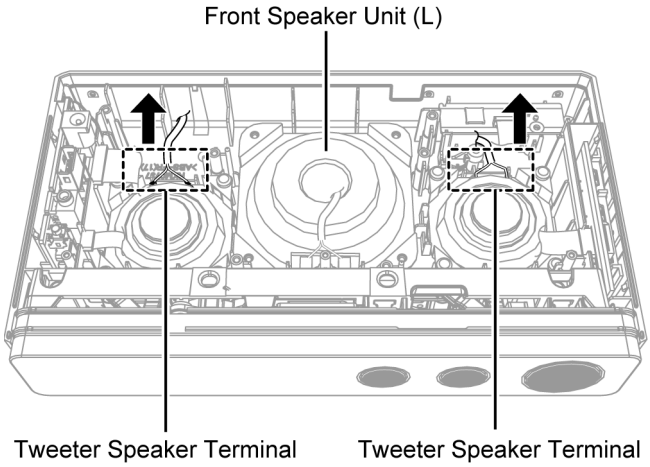
Step 1 : Remove 4 screws.



Step 2 : Remove the Tweeter Speaker (SP1).



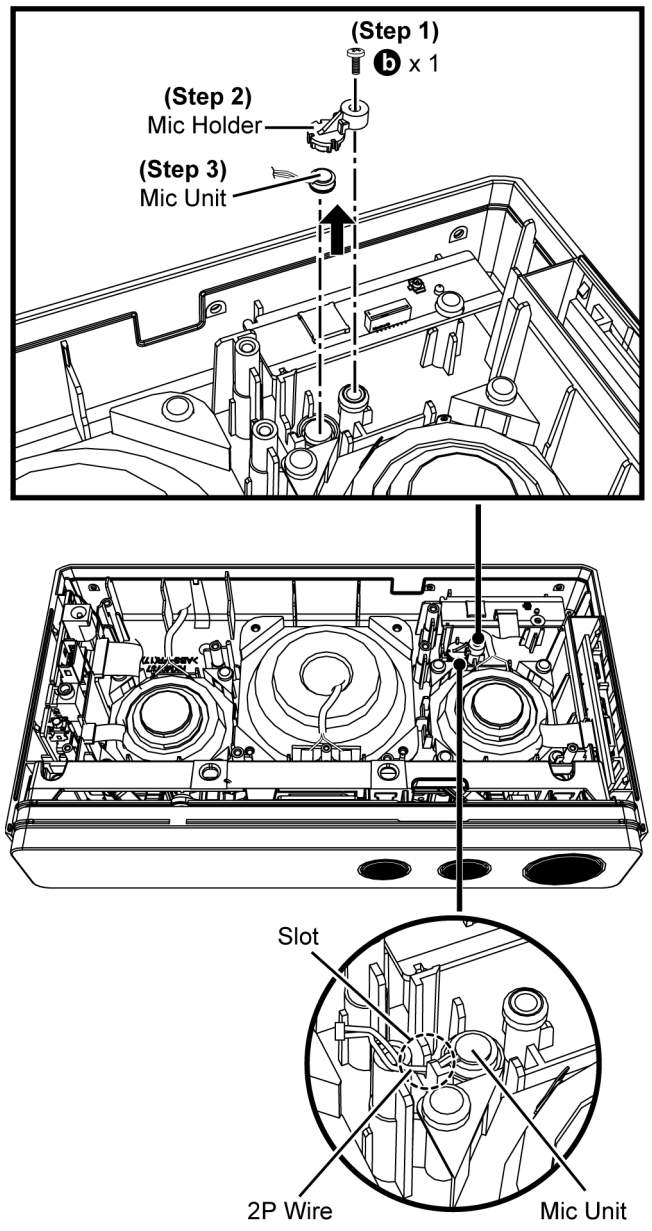
Caution : During assembling, ensure that the Tweeter Speaker Terminal are fixed as shown below.



9.13. Disassembly of Mic Unit

- Refer to “Disassembly of Rear Cabinet Block”
- Refer to “Disassembly of Battery Pack”
- Refer to “Disassembly of Main P.C.B.”

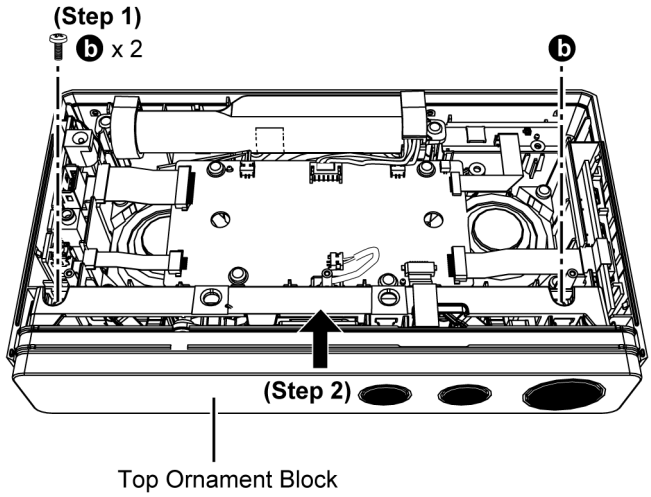
Step 1 : Remove 1 screw.
Step 2 : Remove the Mic Holder.
Step 3 : Remove the Mic Unit.
Caution : During assembling, dressed the 2P wire into the slot.



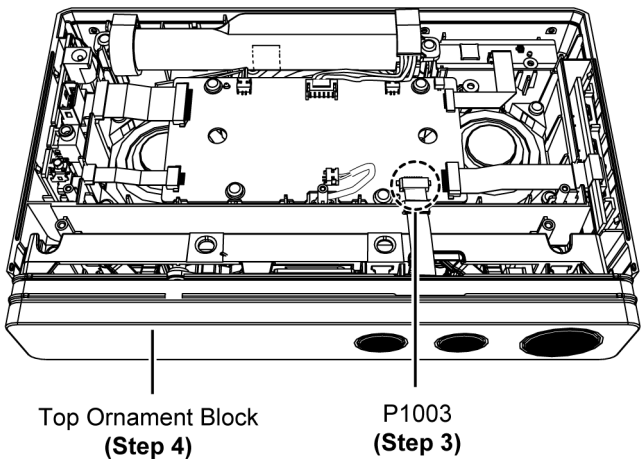
9.14. Disassembly of Top Ornament Block

- Refer to “Disassembly of Rear Cabinet Block”

Step 1 : Remove 2 screws.
Step 2 : Slightly lift up the Top Ornament Block.



Step 3 : Detach 8P FFC at connector (P1003) on the Main P.C.B..
Step 4 : Remove the Top Ornament Block.

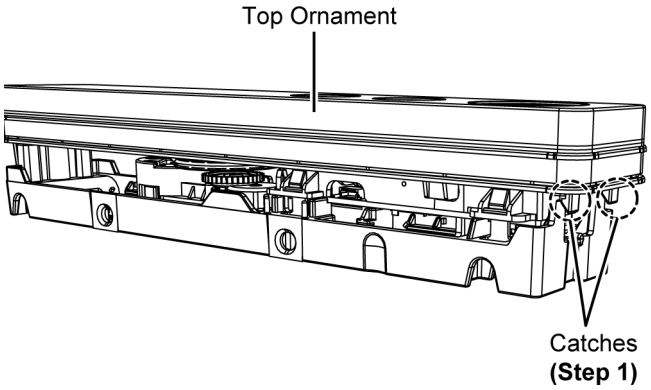


9.15. Replacement of Top Ornament

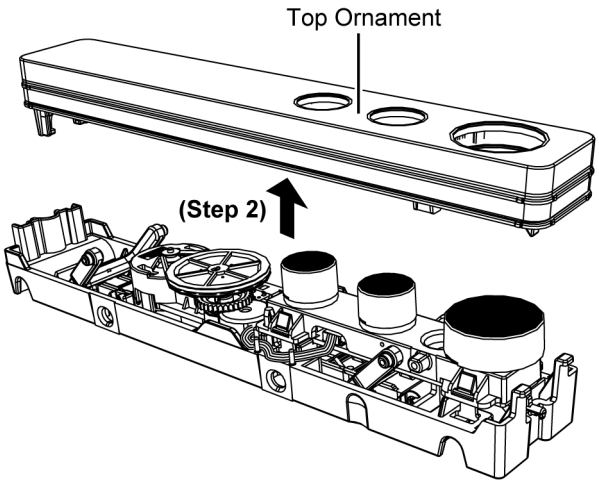
• Refer to “Disassembly of Top Ornament Block”

9.15.1. Disassembly of Top Ornament

Step 1 : Release 2 catches.

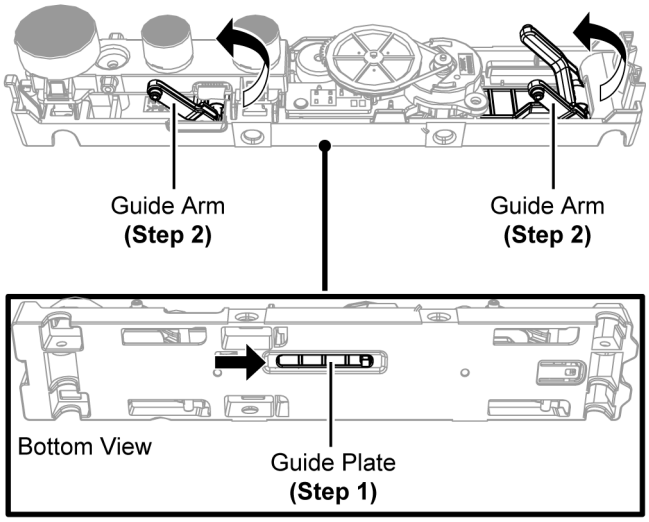


Step 2 : Remove the Top Ornament.

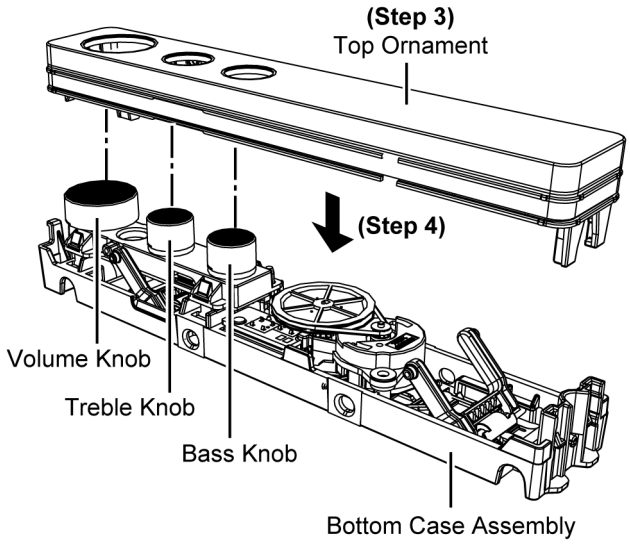


9.15.2. Assembly of Top Ornament

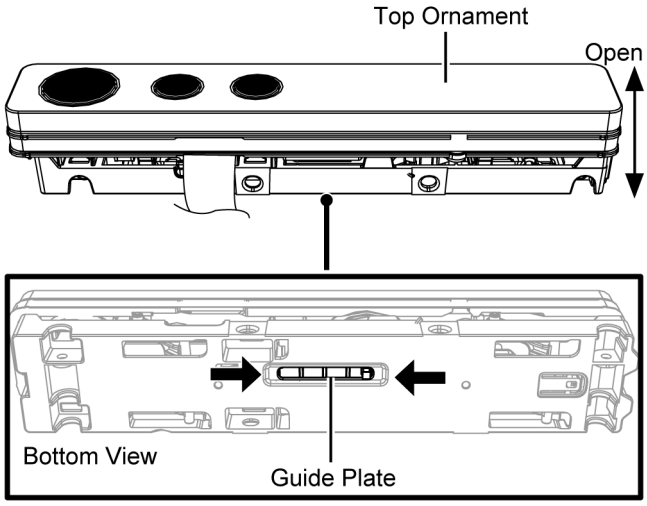
Step 1 : Slide the Guide Plate to the right until it come to a stop.
Step 2 : Ensure the Guide Arm is in left position as shown.



Step 3 : Align the Top Ornament into the Bottom Case Assembly with the Volume Knob, Treble Knob and Bass Knob.
Step 4 : Push down the Top Ornament to fix it.
Caution : Ensure a “Tick” sound is heard when the Top Ornament is fully catched.



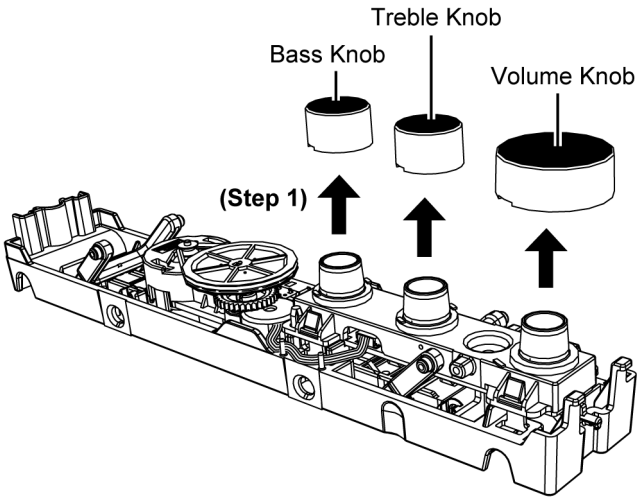
Caution 1 : Slide the Guide Plate to the Left and then to the Right to check that the Top Ornament fixed in properly.
Caution 2 : During assembling, ensure that the Top Ornament in open condition before fix to the Rear Cabinet Assembly.



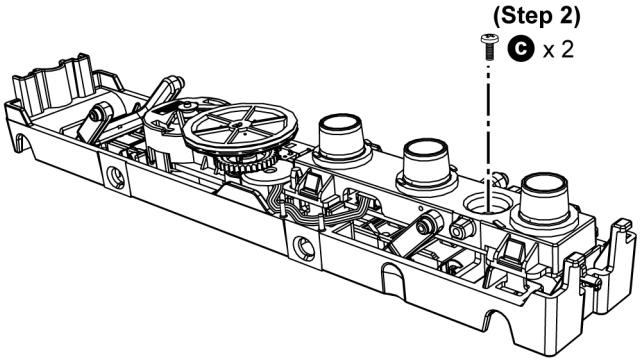
9.16. Disassembly of Volume P.C.B.

- Refer to “Disassembly of Top Ornament Block”
- Refer to “Disassembly of Top Ornament”

Step 1 : Remove the Volume Knob, Treble Knob and Bass Knob.

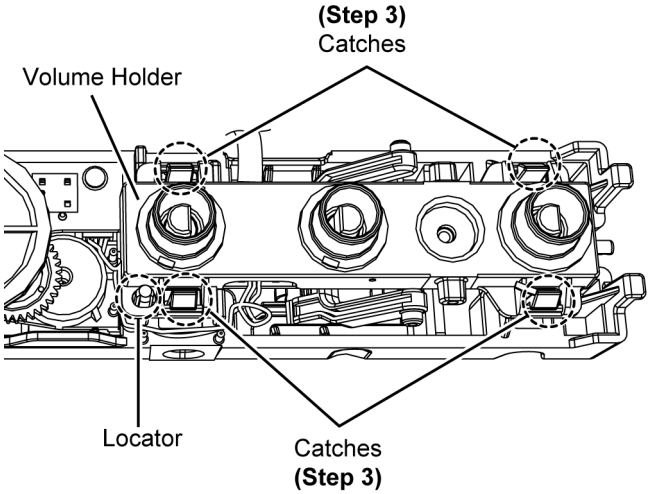


Step 2 : Remove 1 screw.



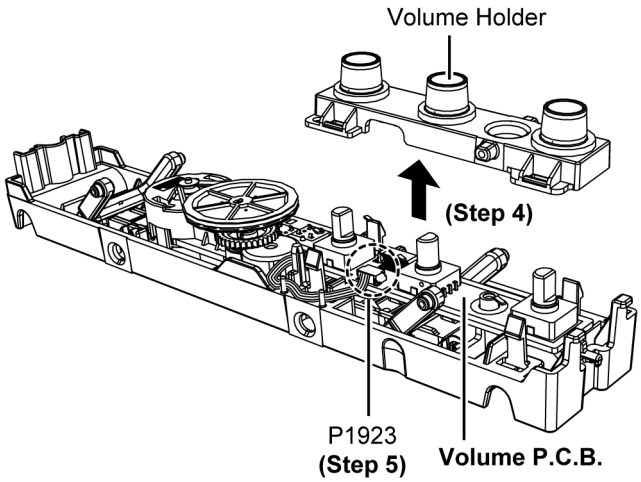
Step 3 : Release 4 catches.

Caution : During assembling, ensure the Volume Holder is fully catched and properly seated on the locator.

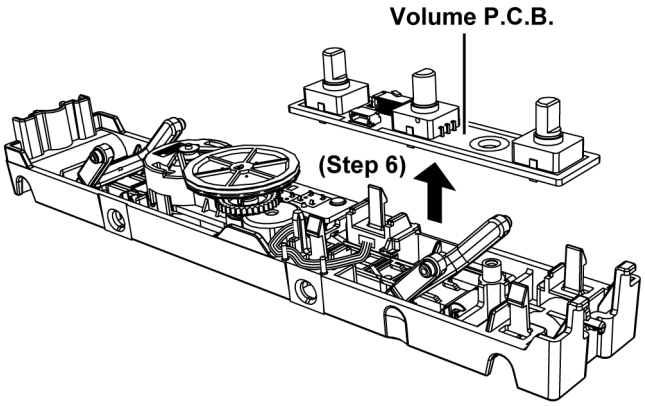


Step 4 : Remove the Volume Holder.

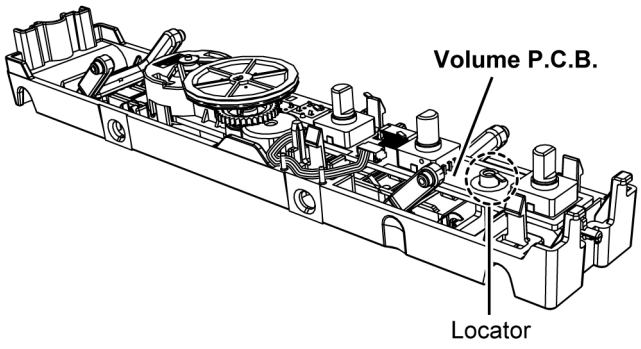
Step 5 : Detach 5P wire at connector (P1923) on the Volume P.C.B..



Step 6 : Remove the Volume P.C.B..



Caution : During assembling, ensure the Volume P.C.B. is properly seated on the locator.

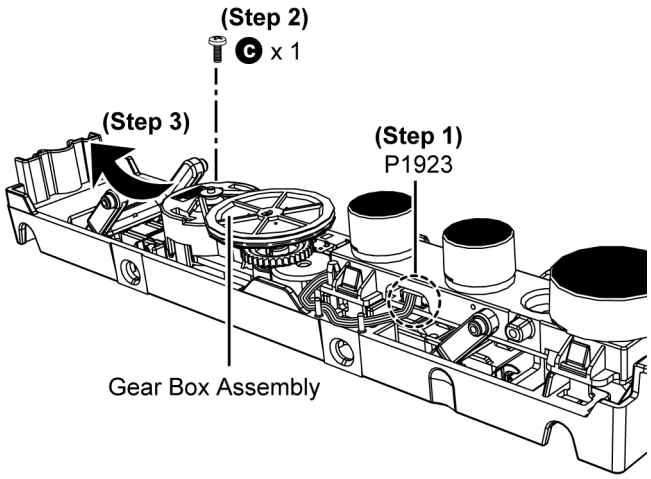


9.17. Replacement of Gear Box Assembly

- Refer to “Disassembly of Top Ornament Block”
- Refer to “Disassembly of Top Ornament”

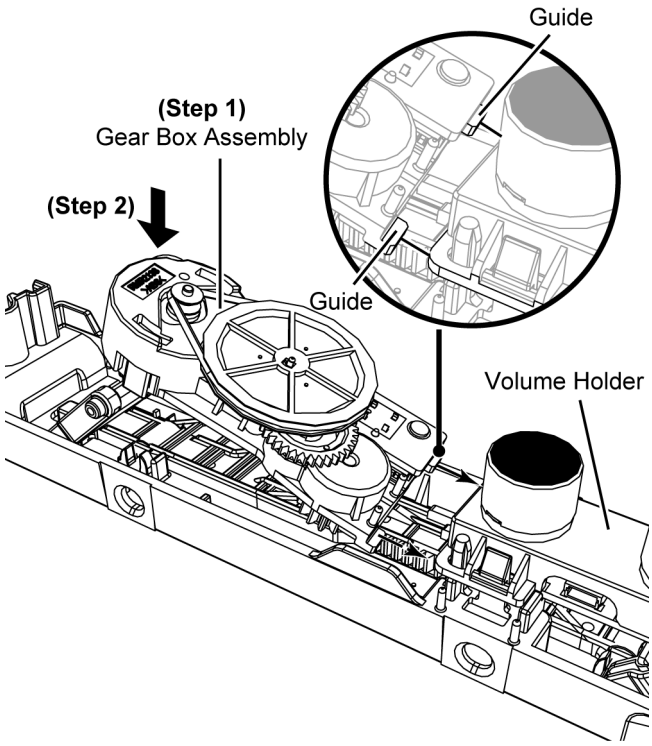
9.17.1. Disassembly of Gear Box Assembly

Step 1 : Detach 5P wire at connector (P1923) on the Volume P.C.B..
Step 2 : Remove 1 screw.
Step 3 : Remove the Gear Box Assembly.

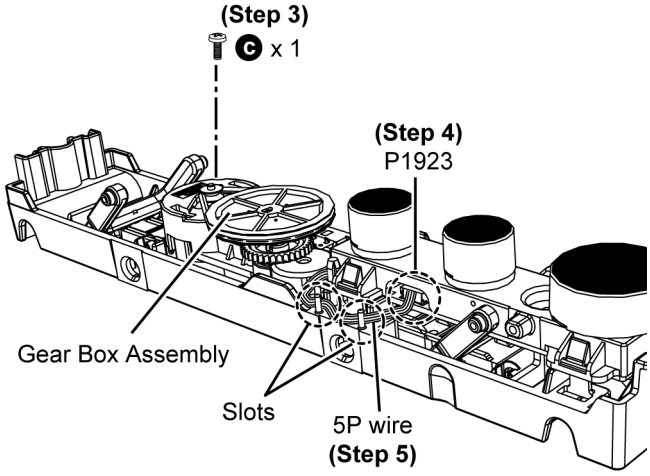


9.17.2. Assembly of Gear Box Assembly

Step 1 : Slot in the Gear Box Assembly into Volume Holder.
Step 2 : Press down the Gear Box Assembly.



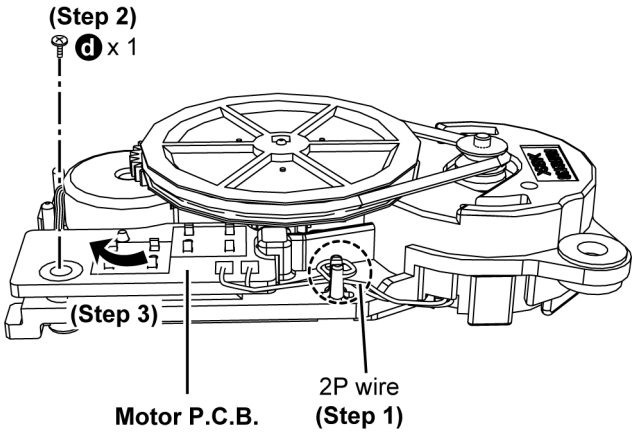
Step 3 : Fix 1 screw.
Step 4 : Connect 5P wire at connector (P1923) on the Volume P.C.B..
Step 5 : Dressed the 5P wire into the slot.



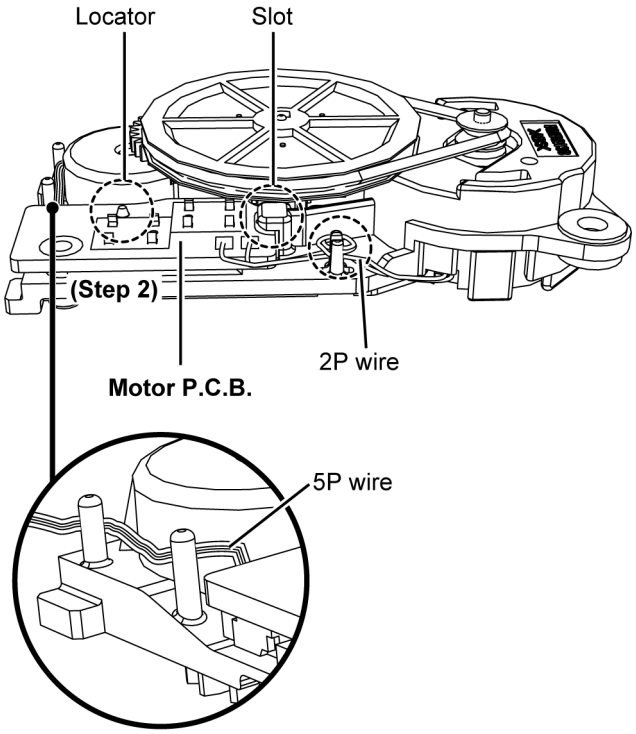
9.17.3. Disassembly of Motor P.C.B.

• Refer to “Disassembly of Gear Box Assembly”

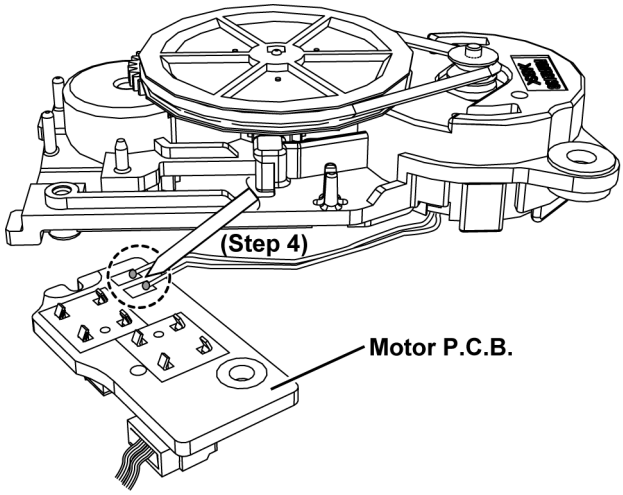
Step 1 : Release the 2P Wire from the slots.
Step 2 : Remove 1 screw.
Step 3 : Slightly lift up Motor P.C.B..



Caution 1 : During assembling, ensure the Motor P.C.B. fully insert into the slot of motor base and seated on the locator.
Caution 2 : During assembling, dressed the 2P & 5P wires as shown.



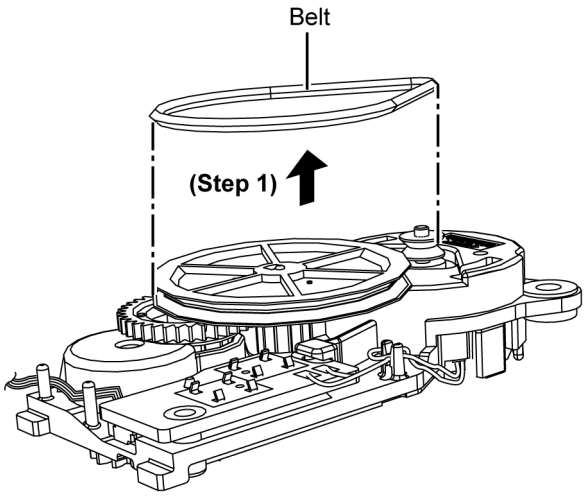
Step 4 : Desolder pins on the solder side of the Motor P.C.B. and remove the Motor P.C.B..



9.17.4. Disassembly of Belt & Pulley Gear

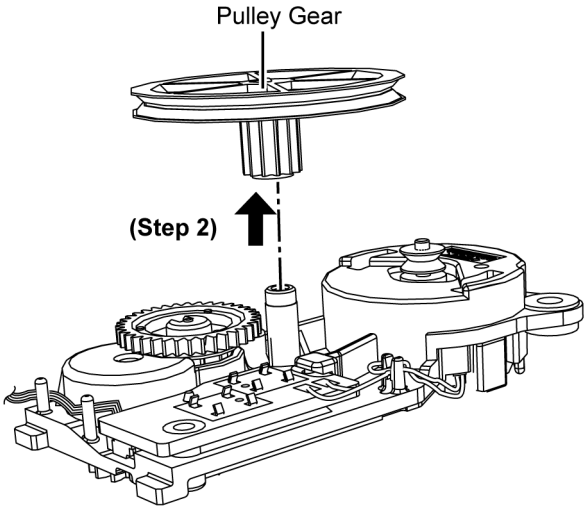
• Refer to “Disassembly of Gear Box Assembly”

Step 1 : Remove the Belt.



Step 2 : Remove the Pulley Gear.

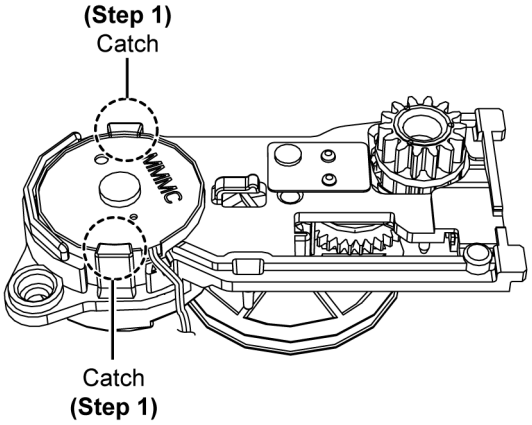
Caution : During assembling, a “click” sound could be heard when the Pulley Gear is fully catched.



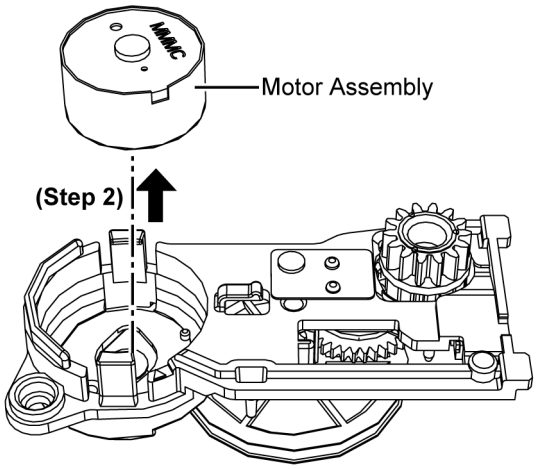
9.17.5. Disassembly of Motor Assembly

• Refer to “Disassembly of Gear Box Assembly”
• Refer to “Disassembly of Motor P.C.B.”
• Refer to (Step 1) of item 9.17.4.

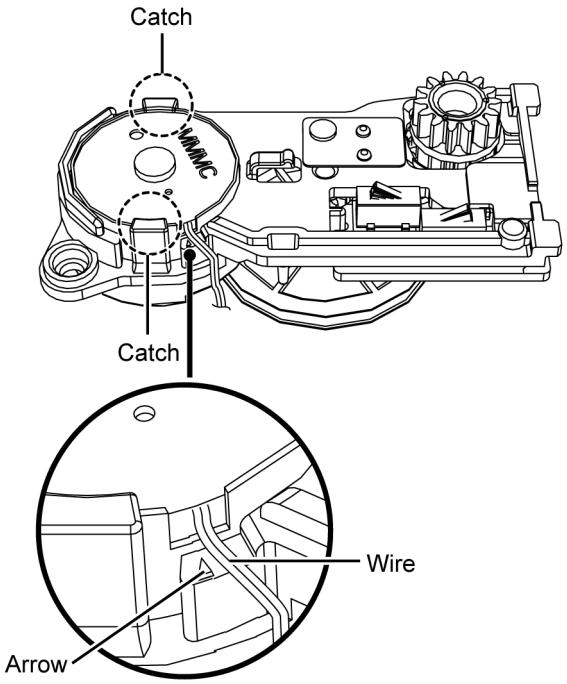
Step 1 : Release 2 catches.



Step 2 : Remove the Motor Assembly.



Caution 1 : During assembling, position & align the Motor wire with the indicated arrow on the Gear Box Assembly.
Caution 2 : During assembling, ensure the Motor Assembly is fully catched & seated properly.

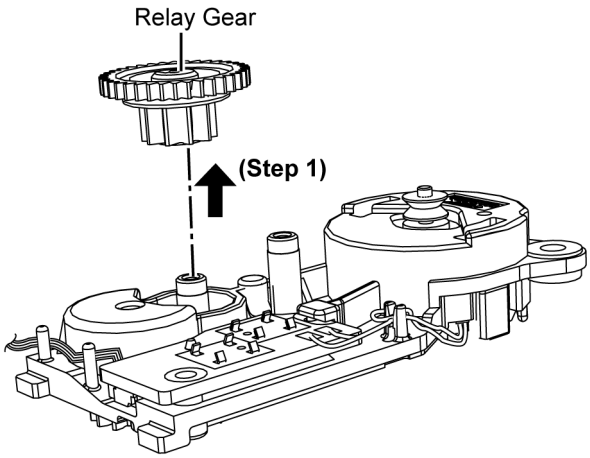


9.17.6. Disassembly of Relay Gear

- Refer to “Disassembly of Gear Box Assembly”
- Refer to “Disassembly of Belt & Pulley Gear”

Step 1 : Remove the Relay Gear.

Caution : During assembling, a “click” sound could be heard when the Relay Gear is fully catched.

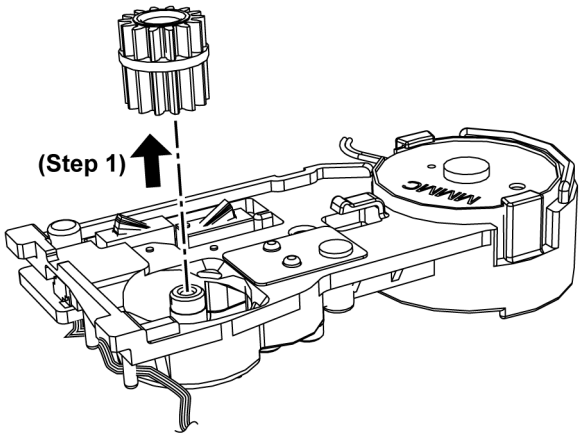


9.17.7. Disassembly of Drive Gear

- Refer to “Disassembly of Gear Box Assembly”
- Refer to “Disassembly of Belt & Pulley Gear”
- Refer to “Disassembly of Relay Gear”

Step 1 : Remove the Drive Gear.

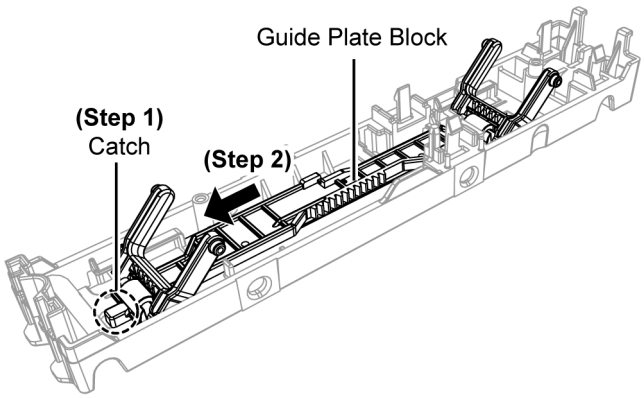
Caution : During assembling, a “click” sound could be heard when the Drive Gear is fully catched.



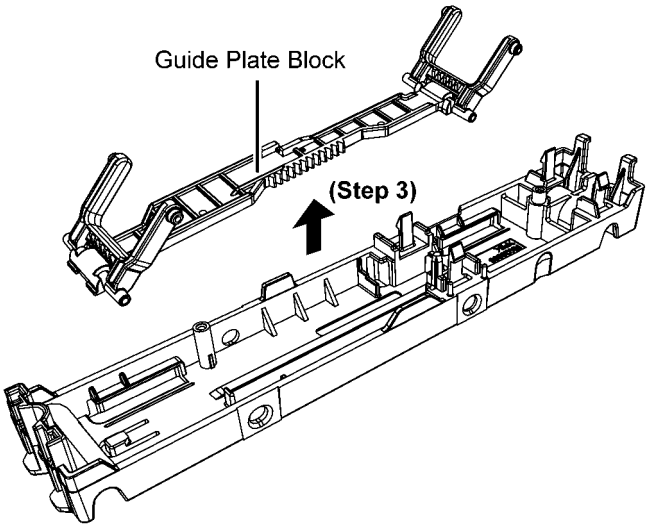
9.18. Disassembly of Guide Plate Block

- Refer to “Disassembly of Top Ornament Block”
- Refer to “Disassembly of Top Ornament”
- Refer to ““Disassembly of Volume P.C.B.”
- Refer to ““Disassembly of Gear Box Assembly”

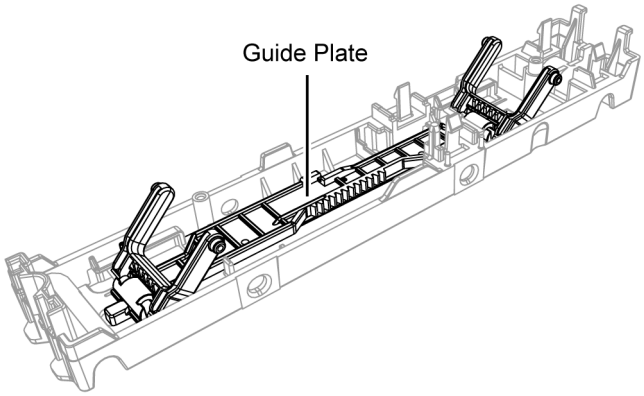
Step 1 : Press to release 1 catch.
Step 2 : Slide the Guide Plate Block to the Left.



Step 3 : Remove the Guide Plate Block.



Caution : During assembling, ensure the Guide Plate is properly fixed as picture shown.

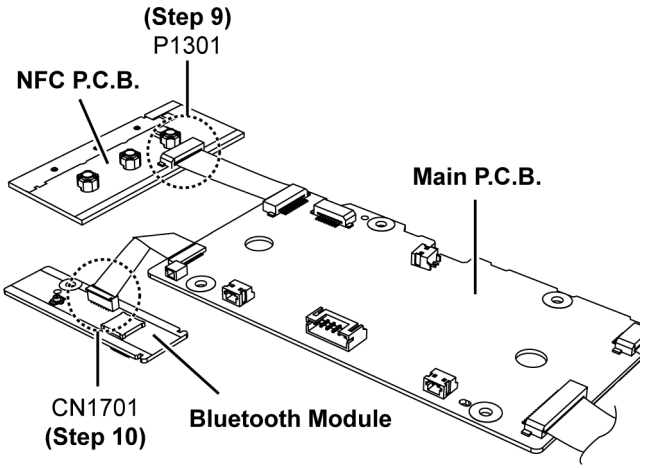


10 Service Position

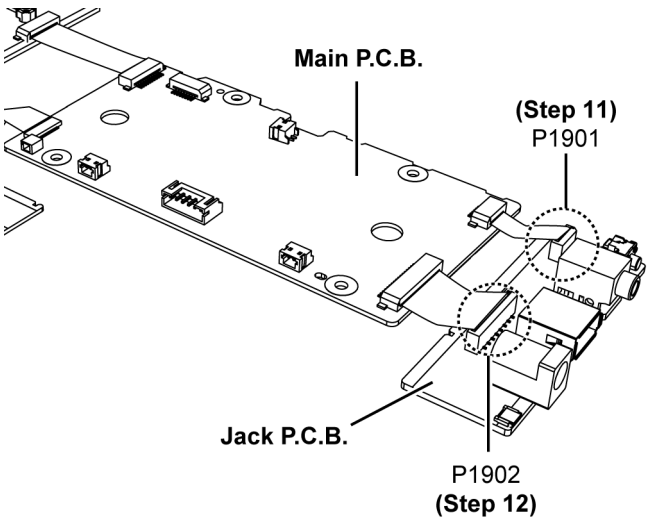
Note: For description of the disassembly procedures, see the Section 9

10.1. Checking of Main P.C.B. (Side B)

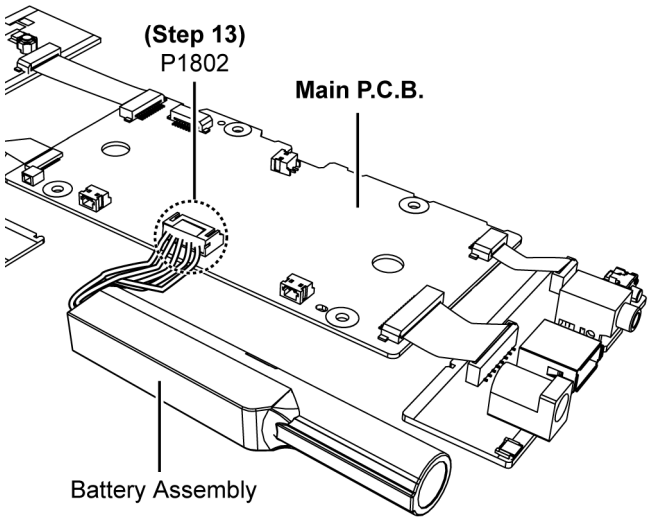
Step 1 : Remove the Rear Cabinet Block.
Step 2 : Remove the Jack P.C.B..
Step 3 : Remove the NFC P.C.B..
Step 4 : Remove the Bluetooth Module.
Step 5 : Remove the Battery Pack.
Step 6 : Remove the Main P.C.B..
Step 7 : Remove the Woofer Speaker (SP3).
Step 8 : Remove the Top Ornament Block.
Step 9 : Connect 11P FFC at connector (P1301) on the NFC P.C.B..
Step 10 : Connect 16P FFC at connector (CN1701) on the Bluetooth Module.



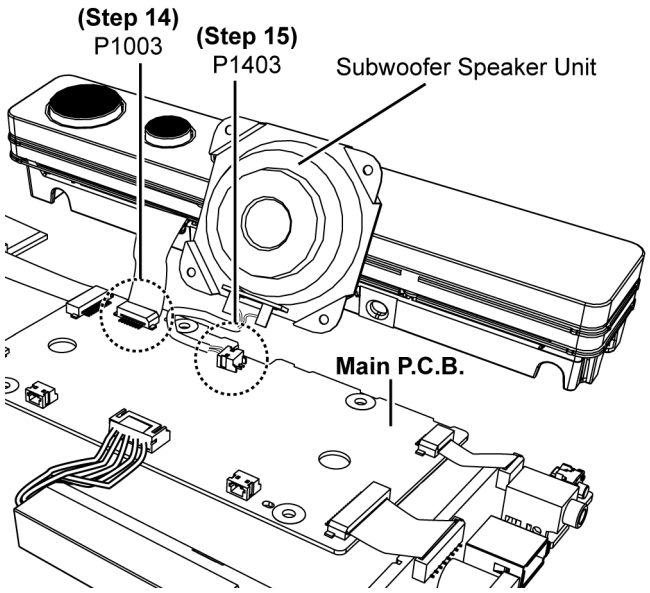
Step 11 : Connect 6P FFC at connector (P1901) on the Jack P.C.B..
Step 12 : Connect 17P FFC at connector (P1902) on the Jack P.C.B..



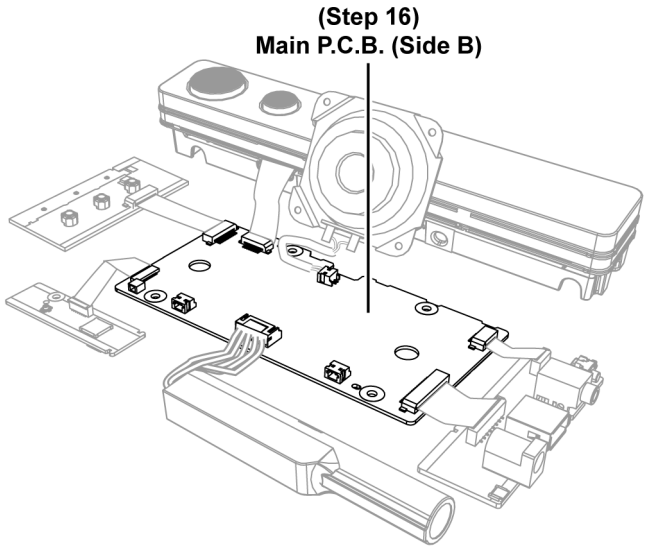
Step 13 : Connect 6P wire at connector (P1802) on the Main P.C.B..



Step 14 : Connect 8P FFC at connector (P1003) on the Main P.C.B..
Step 15 : Connect 2P wire at connector (P1403) on the Main P.C.B..



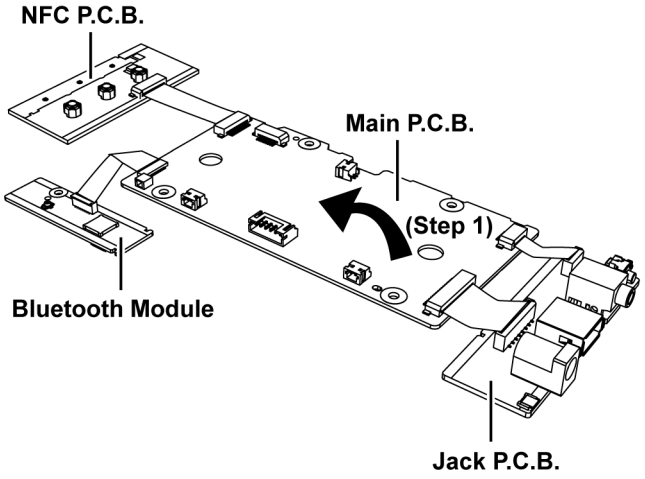
Step 16 : Check the Main P.C.B. (Side B) according to the diagram shown.



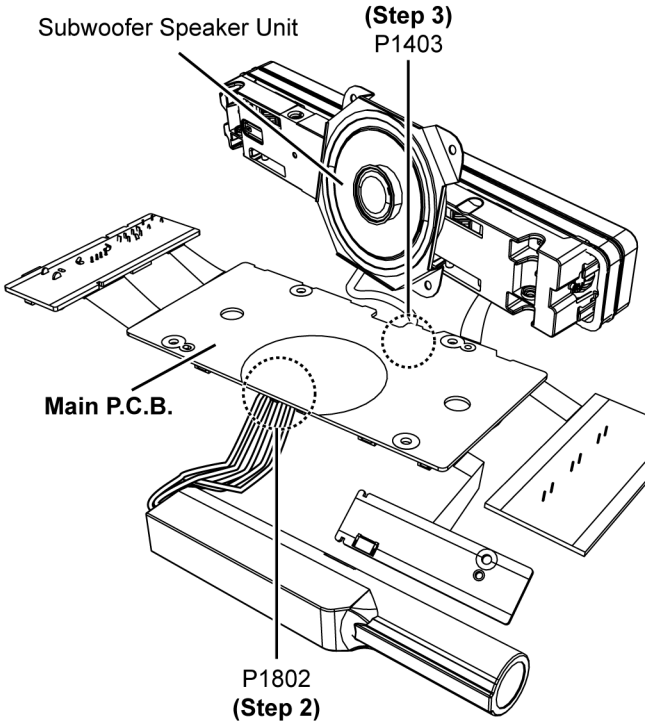
10.2. Checking of Main P.C.B. (Side A)

- Refer to (Step 1) - (Step 12) of item 10.1.

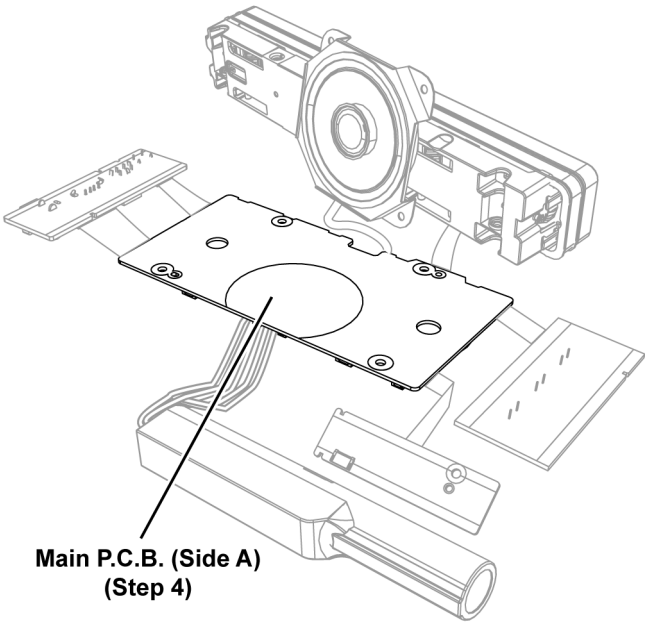
Step 1 : Flip over the Main P.C.B., NFC P.C.B., Bluetooth Module & Jack P.C.B..



Step 2 : Connect 6P wire at connector (P1802) on the Main P.C.B..
Step 3 : Connect 2P wire at connector (P1403) on the Main P.C.B..



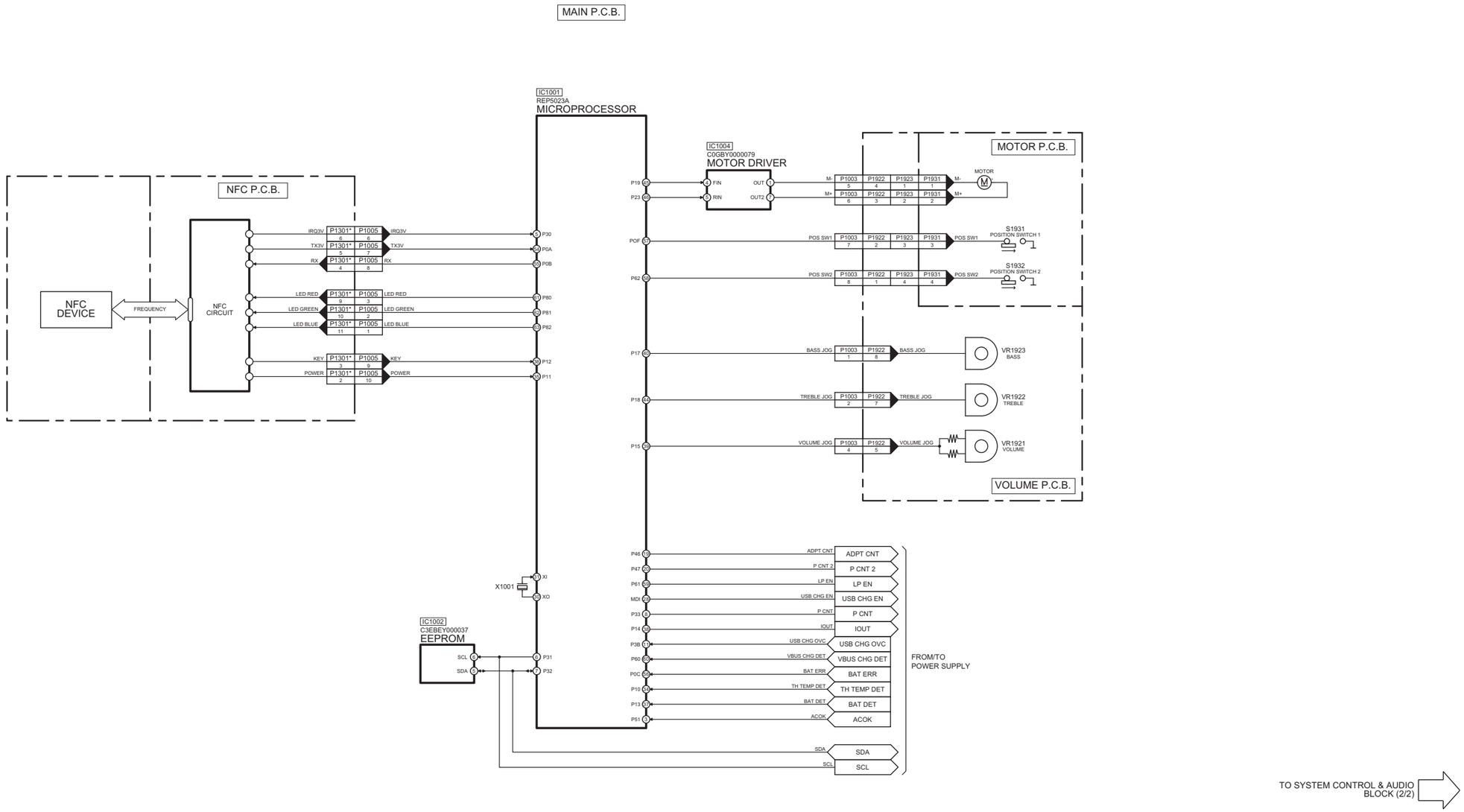
Step 4 : Check the Main P.C.B. (Side A) according to the diagram shown.



11 Block Diagram

11.1. SYSTEM CONTROL & AUDIO (1/2) BLOCK DIAGRAM

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

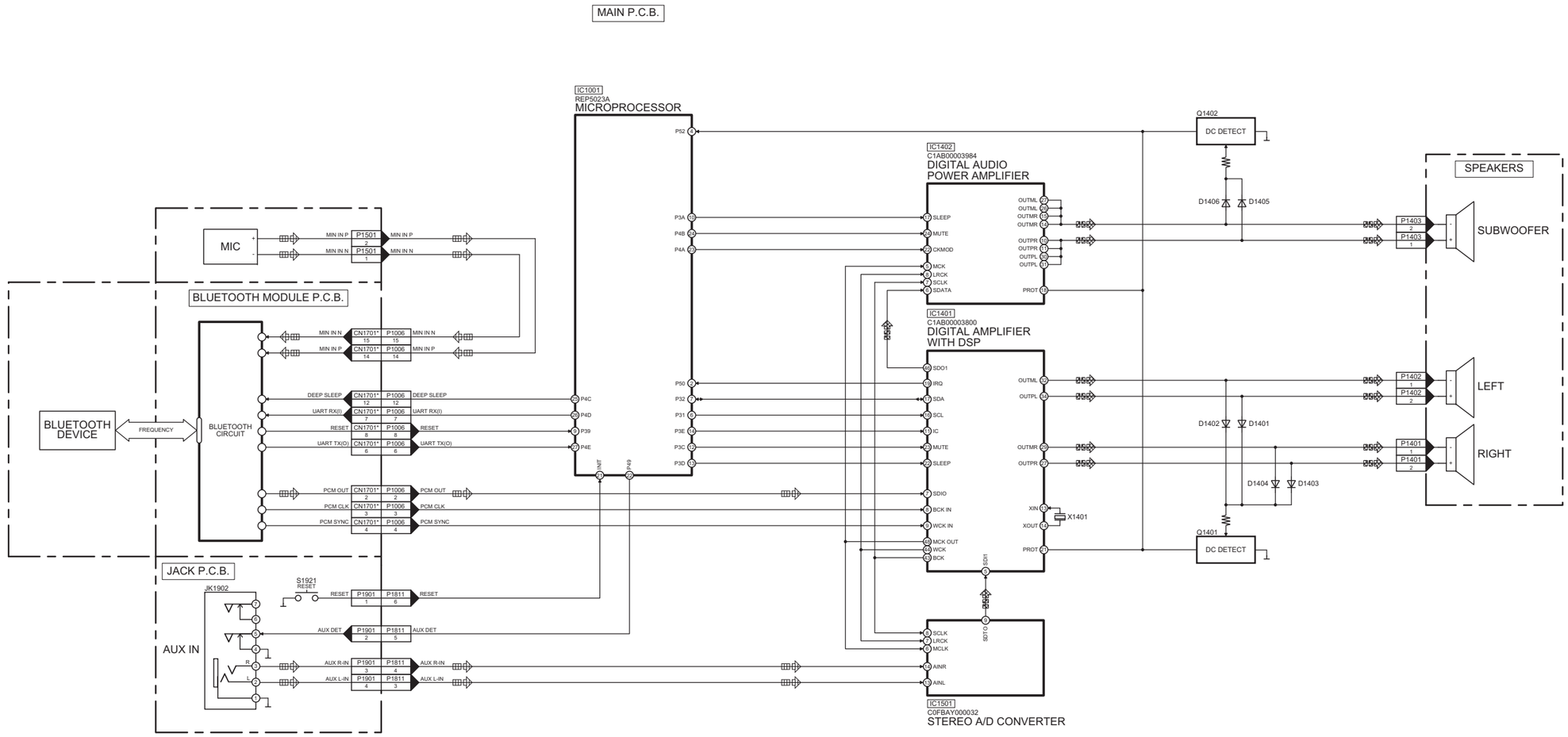


NOTE: “ * ” REF IS FOR INDICATION ONLY

SC-NA30GN/P/PC SYSTEM CONTROL & AUDIO (1/2) BLOCK DIAGRAM

11.2. SYSTEM CONTROL & AUDIO (2/2) BLOCK DIAGRAM

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

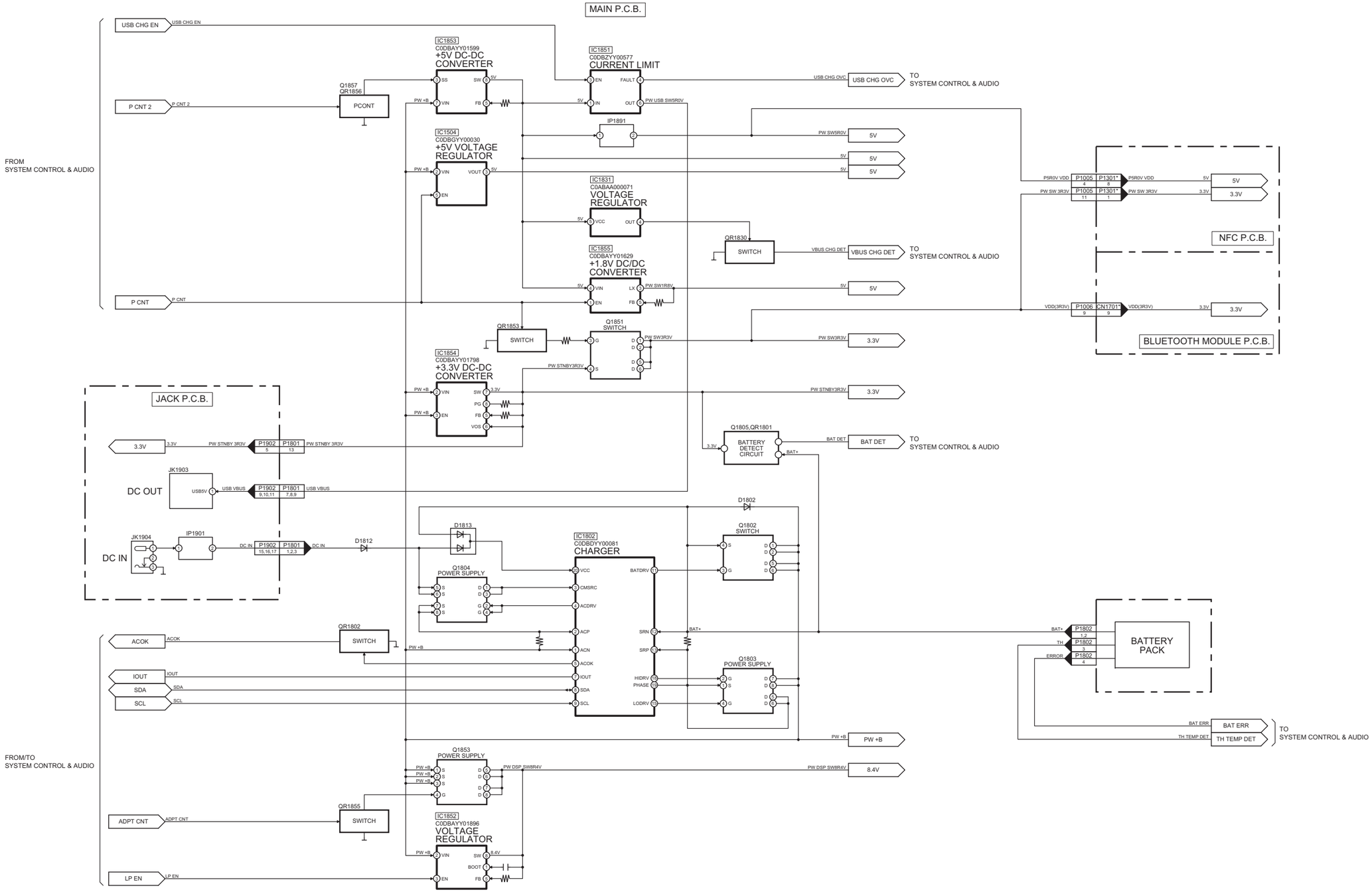


TO SYSTEM CONTROL & AUDIO BLOCK (1/2)

NOTE: " * " REF IS FOR INDICATION ONLY

SC-NA30GN/P/PC SYSTEM CONTROL & AUDIO (2/2) BLOCK DIAGRAM

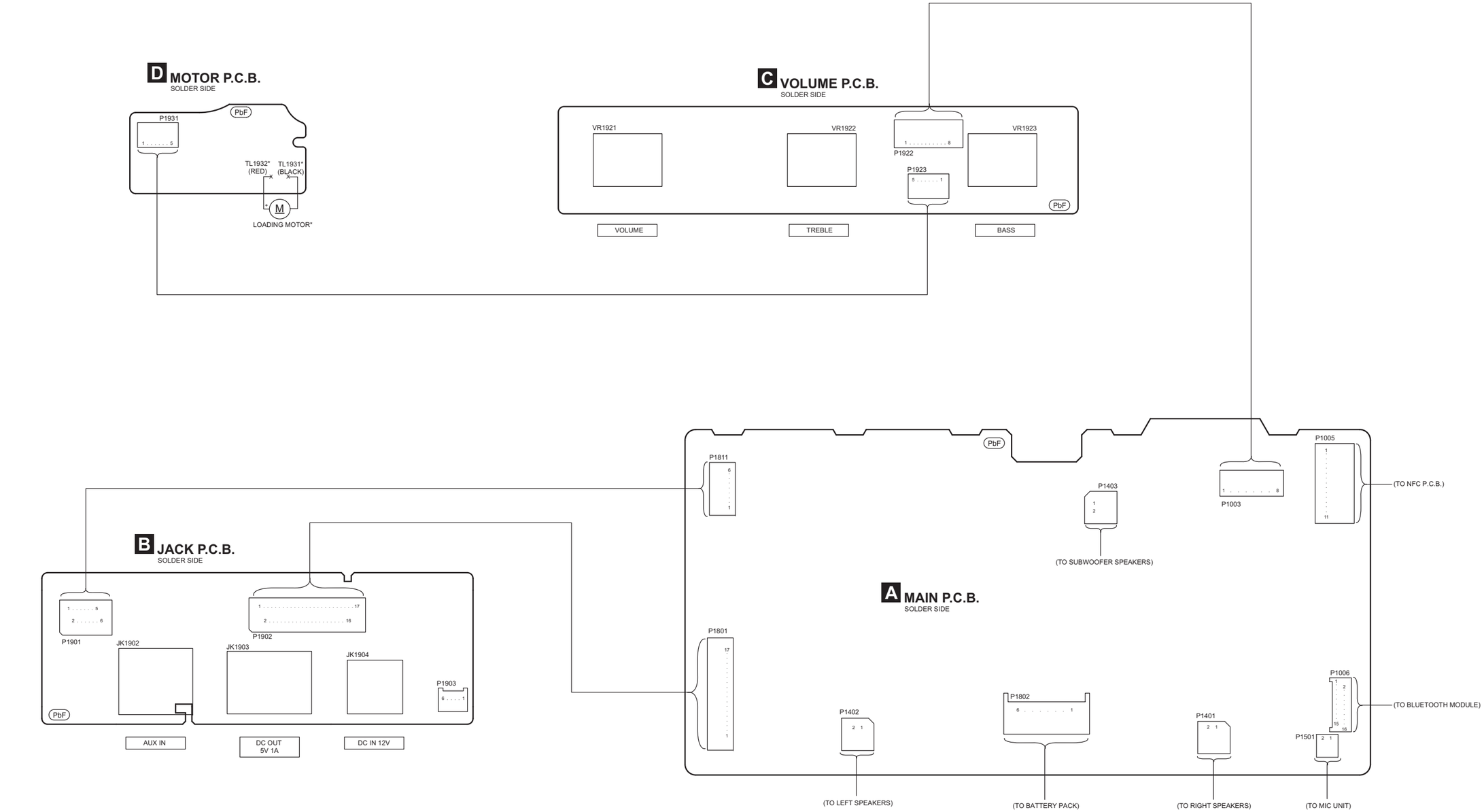
11.3. POWER SUPPLY BLOCK DIAGRAM



NOTE: “ * ” REF IS FOR INDICATION ONLY

SC-NA30GN/P/PC POWER SUPPLY BLOCK DIAGRAM

12 Wiring Connection Diagram



Note : “ * ” REF IS FOR INDICATION ONLY.

SC-NA30P/PC/GN
WIRING CONNECTION DIAGRAM

13 Schematic Diagram

13.1. Schematic Diagram Notes

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

Notes:

S1921: RESET switch.
S1931: POS_SW1 switch.
S1932: POS_SW2 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.

- **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.

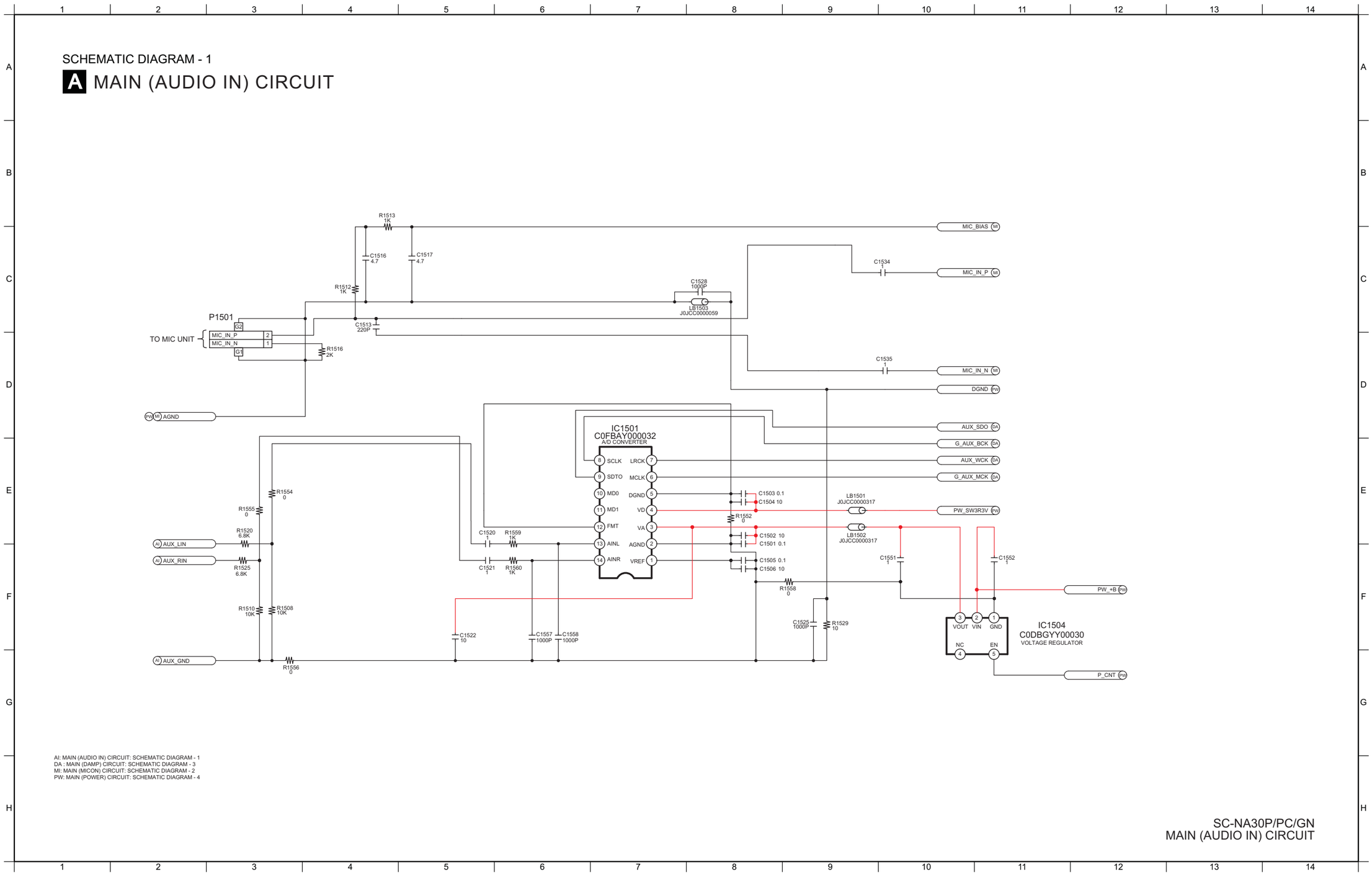
- Voltage and signal line

  : +B Signal Line

13.2. MAIN (AUDIO IN) CIRCUIT

SCHEMATIC DIAGRAM - 1

A MAIN (AUDIO IN) CIRCUIT



AI: MAIN (AUDIO IN) CIRCUIT: SCHEMATIC DIAGRAM - 1
DA : MAIN (DAMP) CIRCUIT: SCHEMATIC DIAGRAM - 3
MI: MAIN (MICON) CIRCUIT: SCHEMATIC DIAGRAM - 2
PW: MAIN (POWER) CIRCUIT: SCHEMATIC DIAGRAM - 4

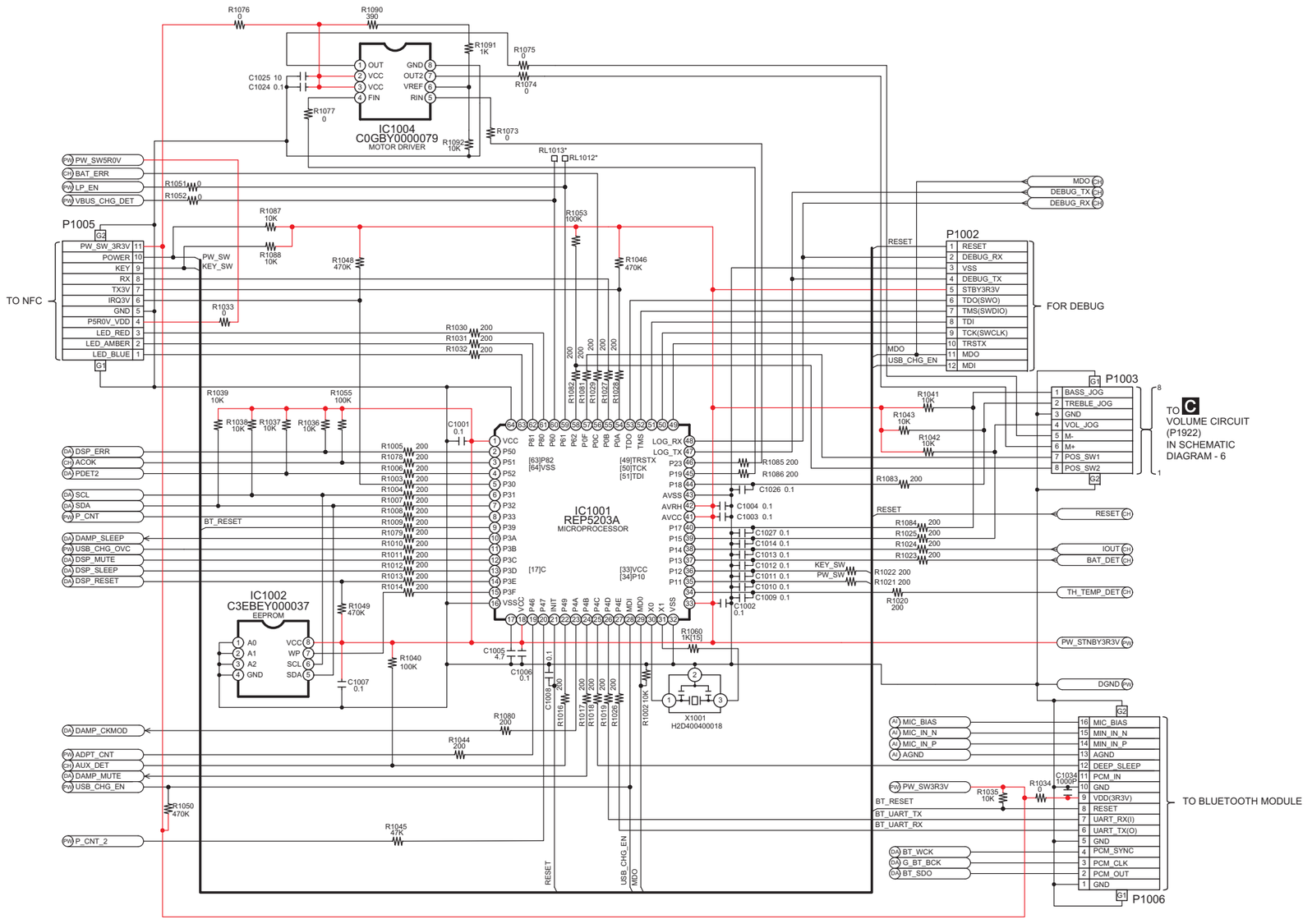
SC-NA30P/PC/GN
MAIN (AUDIO IN) CIRCUIT

13.3. MAIN (MICON) CIRCUIT

SCHEMATIC DIAGRAM - 2

A MAIN (MICON) CIRCUIT

—— : +B SIGNAL LINE



AI: MAIN (AUDIO IN) CIRCUIT: SCHEMATIC DIAGRAM - 1
CH: MAIN (CHARGER) CIRCUIT: SCHEMATIC DIAGRAM - 5
DA : MAIN (DAMP) CIRCUIT: SCHEMATIC DIAGRAM - 3
PW: MAIN (POWER) CIRCUIT: SCHEMATIC DIAGRAM - 4

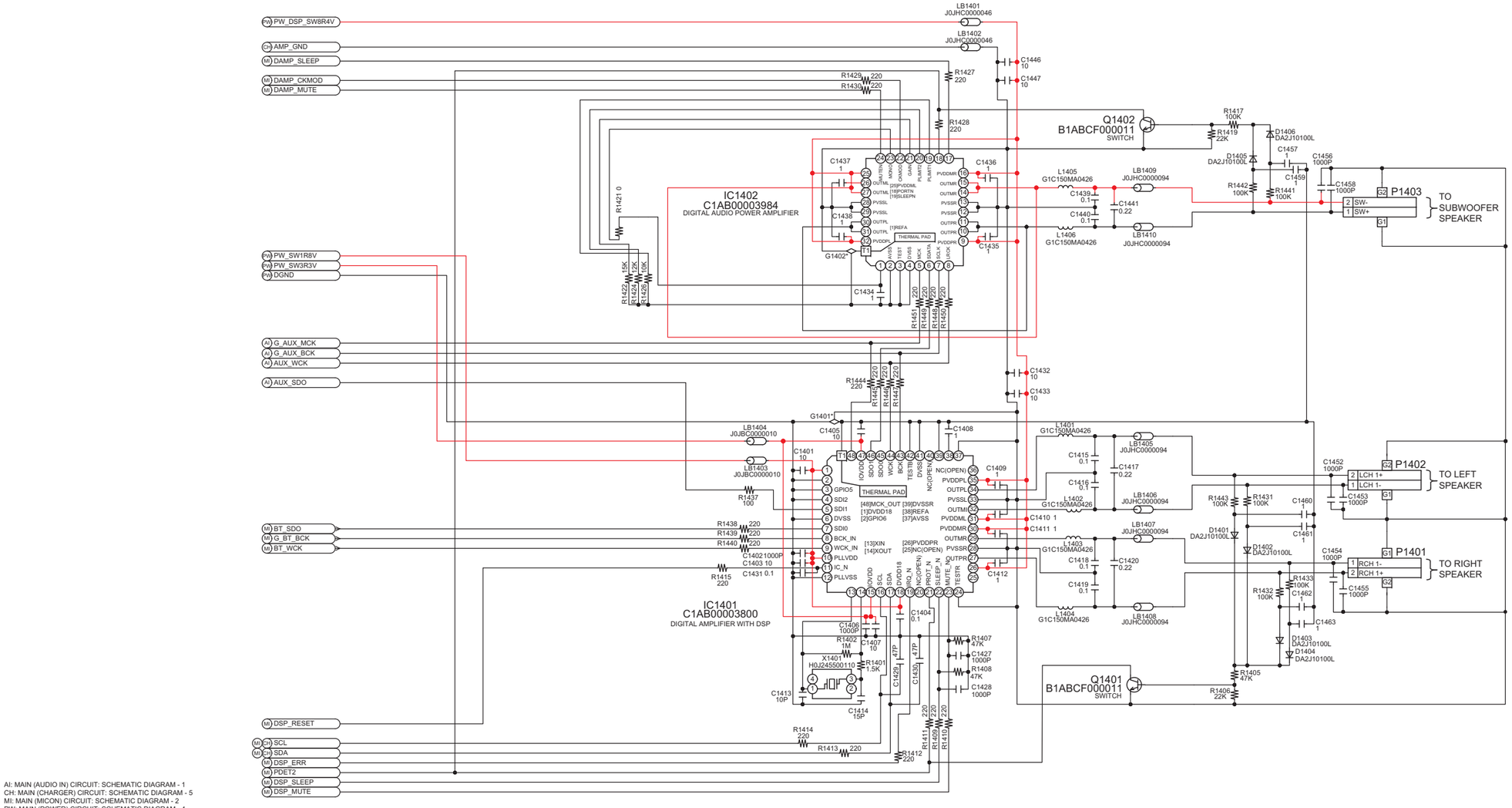
NOTE: " * " REF IS FOR INDICATION ONLY

SC-NA30P/PC/GN
MAIN (MICON) CIRCUIT

13.4. MAIN (DAMP) CIRCUIT

SCHEMATIC DIAGRAM - 3

A MAIN (DAMP) CIRCUIT



AI: MAIN (AUDIO IN) CIRCUIT: SCHEMATIC DIAGRAM - 1
CH: MAIN (CHARGER) CIRCUIT: SCHEMATIC DIAGRAM - 5
MI: MAIN (MICON) CIRCUIT: SCHEMATIC DIAGRAM - 2
PW: MAIN (POWER) CIRCUIT: SCHEMATIC DIAGRAM - 4

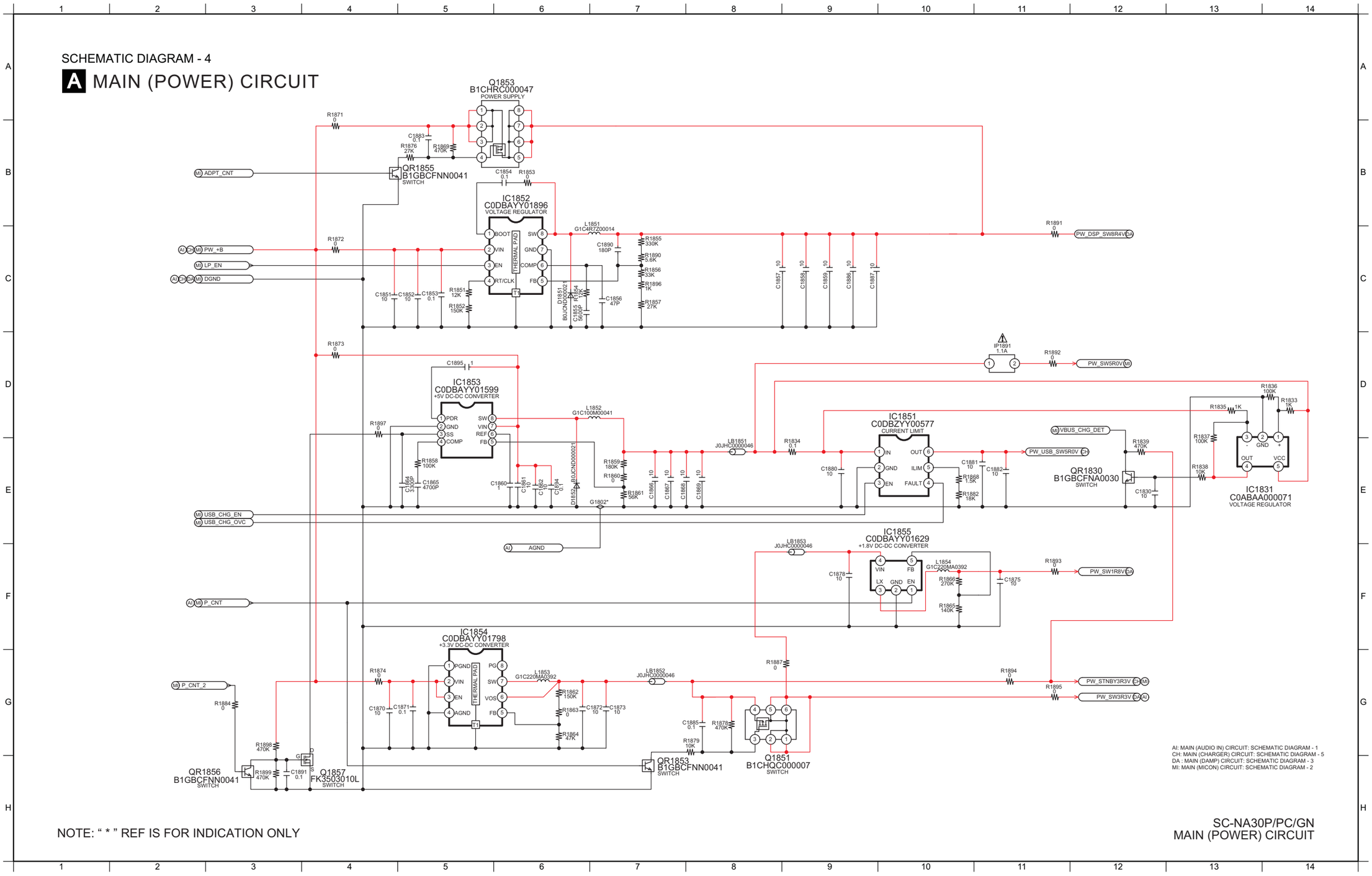
NOTE: " * " REF IS FOR INDICATION ONLY

SC-NA30P/PC/GN
MAIN (DAMP) CIRCUIT

13.5. MAIN (POWER) CIRCUIT

SCHEMATIC DIAGRAM - 4

A MAIN (POWER) CIRCUIT



NOTE: " * " REF IS FOR INDICATION ONLY

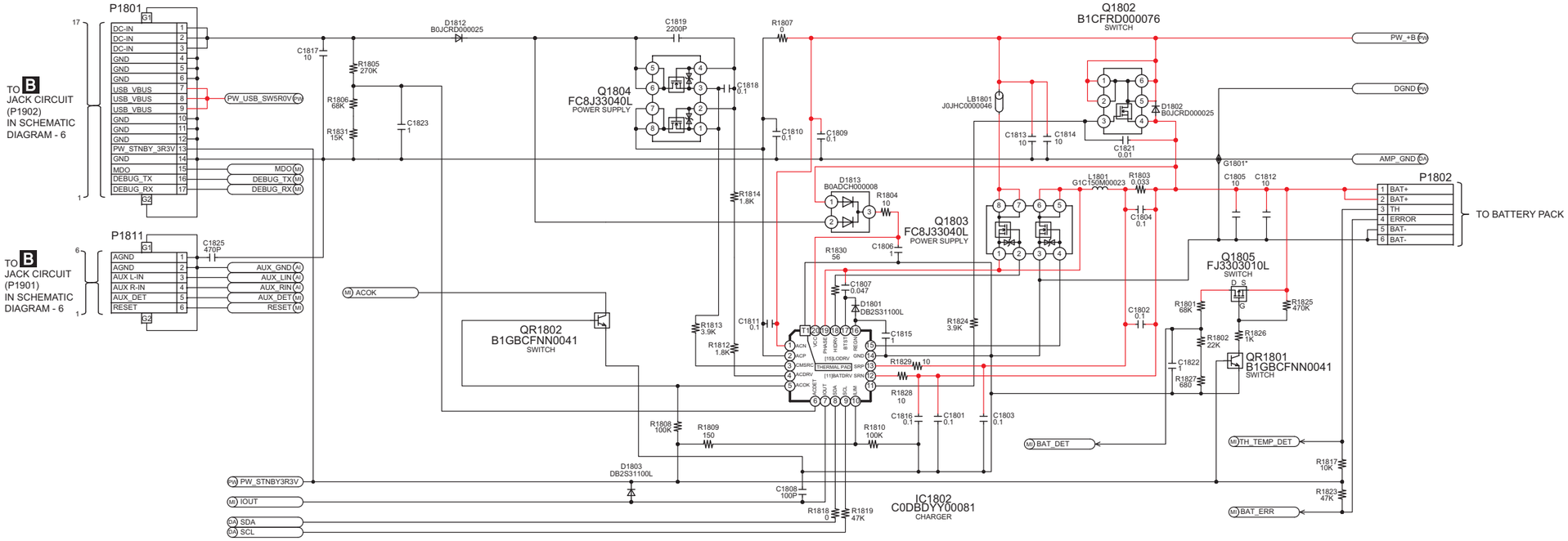
SC-NA30P/PC/GN
MAIN (POWER) CIRCUIT

13.6. MAIN (CHARGER) CIRCUIT

SCHEMATIC DIAGRAM - 5

A MAIN (CHARGER) CIRCUIT

—— : +B SIGNAL LINE



AI: MAIN (AUDIO IN) CIRCUIT: SCHEMATIC DIAGRAM - 1
DA : MAIN (DAMP) CIRCUIT: SCHEMATIC DIAGRAM - 3
MI: MAIN (MICON) CIRCUIT: SCHEMATIC DIAGRAM - 2
PW: MAIN (POWER) CIRCUIT: SCHEMATIC DIAGRAM - 4

NOTE: " * " REF IS FOR INDICATION ONLY

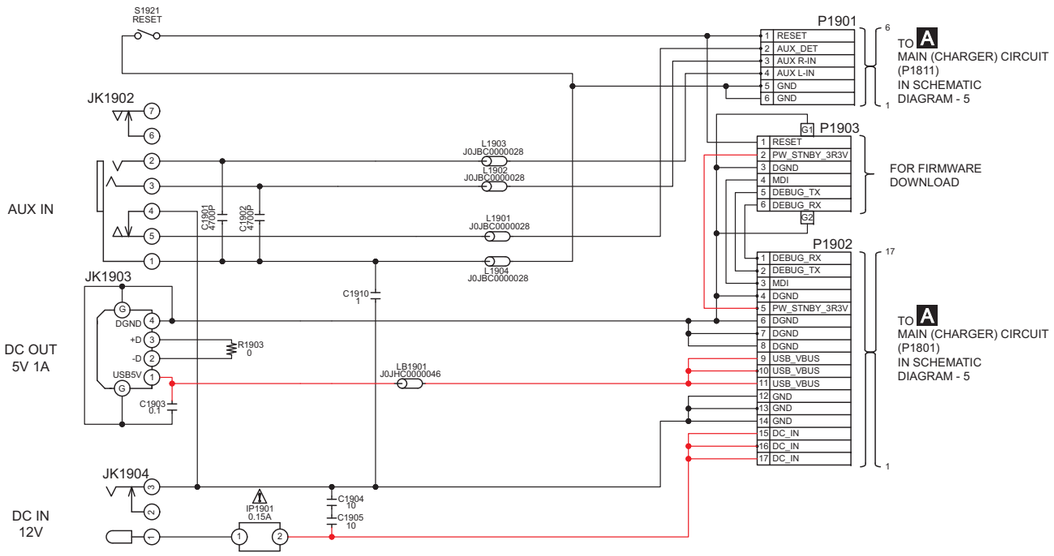
SC-NA30P/PC/GN
MAIN (CHARGER) CIRCUIT

13.7. JACK, VOLUME & MOTOR CIRCUIT

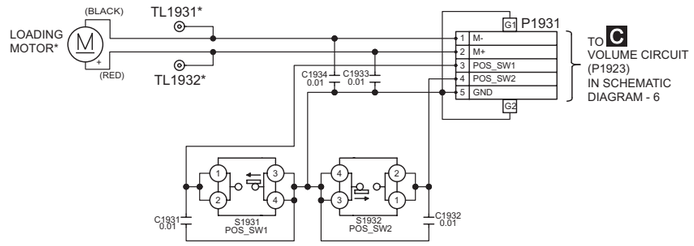
SCHEMATIC DIAGRAM - 6

B JACK CIRCUIT

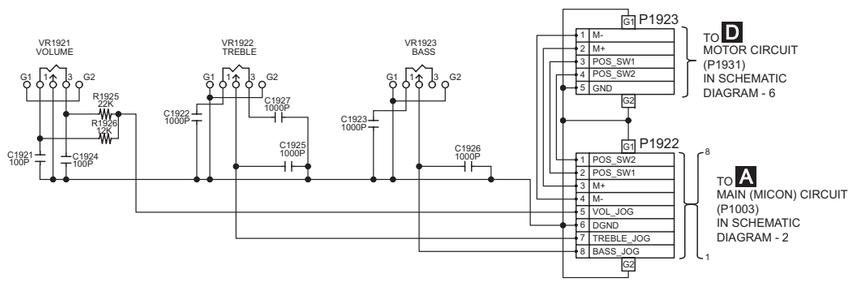
—— : +B SIGNAL LINE



D MOTOR CIRCUIT



C VOLUME CIRCUIT



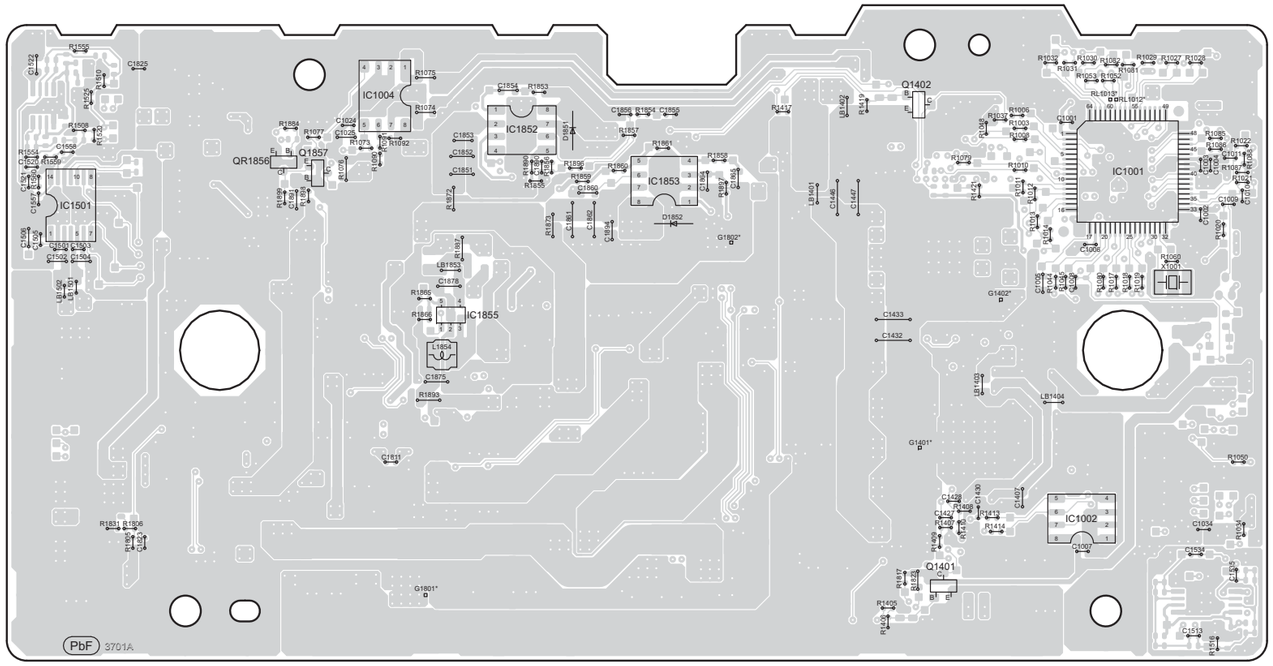
NOTE: " * " REF IS FOR INDICATION ONLY

SC-NA30P/PC/GN
JACK / VOLUME / MOTOR CIRCUIT

14 Printed Circuit Board

14.1. MAIN P.C.B. (Side A)

A MAIN P.C.B. (REP5023A)



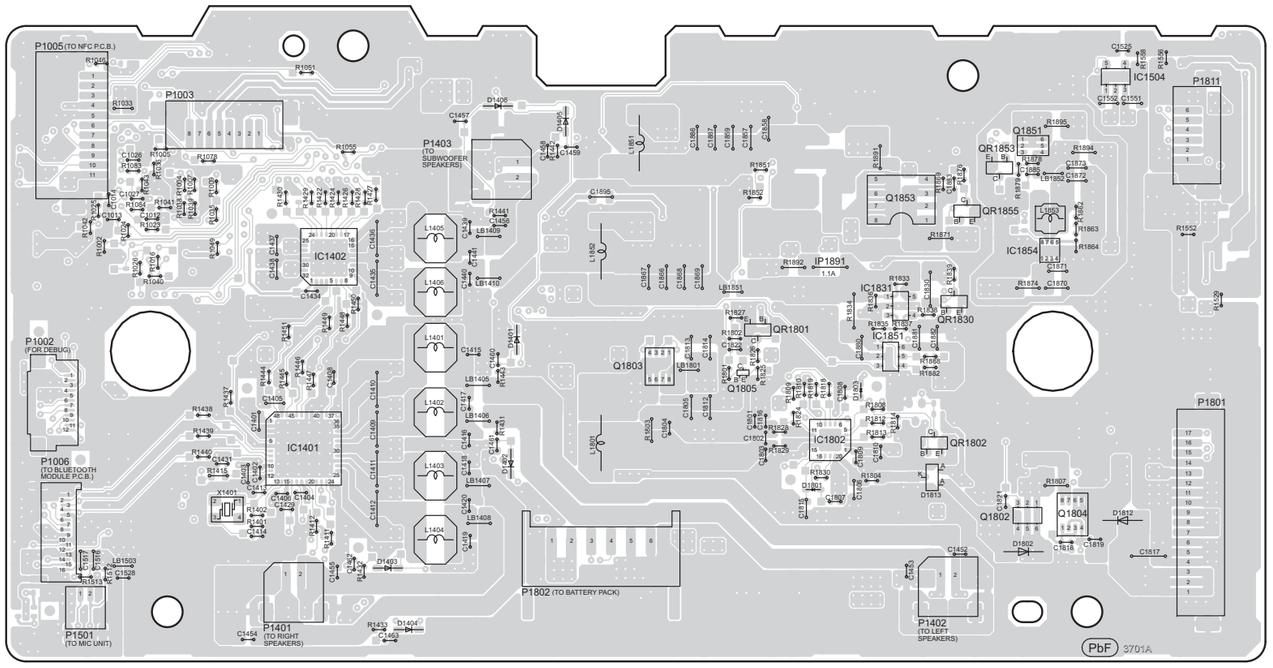
(SIDE A)

NOTE: " * " REF IS FOR INDICATION ONLY

SC-NA30P/PC/GN
MAIN P.C.B.

14.2. MAIN P.C.B. (Side B)

A MAIN P.C.B. (REP5023A)

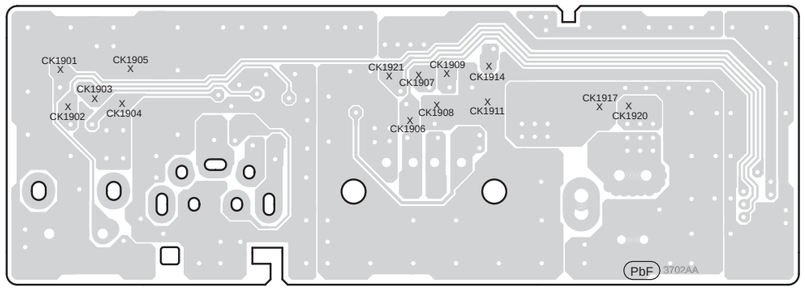


(SIDE B)

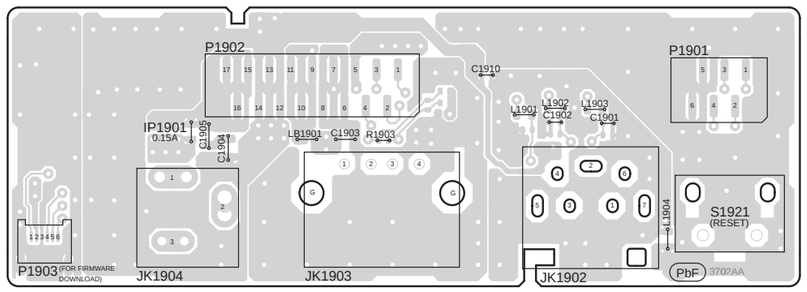
SC-NA30P/PC/GN
MAIN P.C.B.

14.3. JACK, VOLUME & MOTOR P.C.B.

B JACK P.C.B. (REP5024AA)

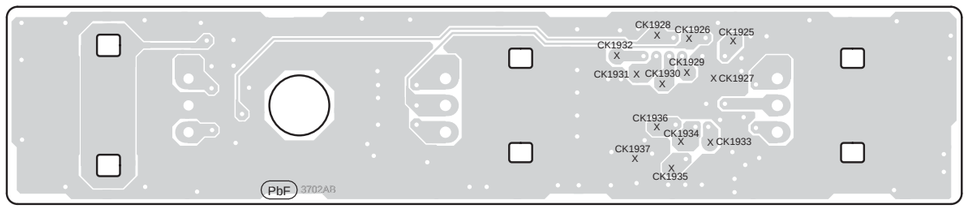


(SIDE A)

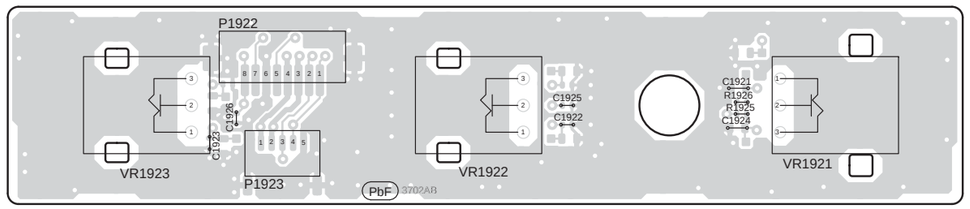


(SIDE B)

C VOLUME P.C.B. (REP5024AB)

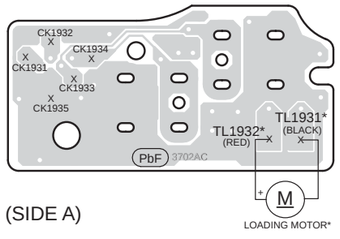


(SIDE A)

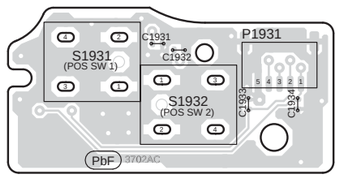


(SIDE B)

D MOTOR P.C.B. (REP5024AC)



(SIDE A)



(SIDE B)

NOTE: " * " REF IS FOR INDICATION ONLY

SC-NA30P/PC/GN
JACK / VOLUME / MOTOR P.C.B.

15 Appendix Information of Schematic Diagram

15.1. Voltage Measurement & Waveform Chart

Note:

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

15.1.1. MAIN P.C.B. (1/3)

REF NO.	IC1001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
POWER ON	3.3	3.3	0	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	0	1.8	3.3	3.3	3.3
STANDBY	3.3	3.3	0	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	0	1.8	3.3	3.3	3.3

REF NO.	IC1001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
POWER ON	3.3	0	0	3.3	0	3.3	3.3	0	0	0	0	0	3.3	3.3	3.3	3.3	2.1	2.1	0.1	3.3
STANDBY	3.3	0	0	3.3	0	3.3	3.3	0	0	0	0	0	3.3	3.3	3.3	3.3	2.1	2.1	0.1	3.3

REF NO.	IC1001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
POWER ON	3.3	0	0	3.3	0	0	3.3	0	0	0	1.4	1.4	1.4	3.3	0	0	3.3	3.3	0	3.3
STANDBY	3.3	0	0	3.3	0	0	3.3	0	0	0	1.4	1.4	1.4	3.3	0	0	3.3	3.3	0	3.3

REF NO.	IC1001																			
MODE	61	62	63	64																
POWER ON	1.7	3.3	3.3	0																
STANDBY	1.7	3.3	3.3	0																

REF NO.	IC1002																			
MODE	1	2	3	4	5	6	7	8												
POWER ON	0	0	0	0	3.3	3.3	3.3	3.3												
STANDBY	0	0	0	0	3.3	3.3	3.3	3.3												

REF NO.	IC1004																			
MODE	1	2	3	4	5	6	7	8												
POWER ON	0	3.3	3.3	0	0	3.3	0.3	0												
STANDBY	0	3.3	3.3	0	0	3.3	0.3	0												

REF NO.	IC1401																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
POWER ON	1.77	0	0	0	0	1.2	0	1.4	1.6	1.7	3.0	0	0	1.5	3.3	2.5	3.3	1.9	0	14
STANDBY	1.77	0	0	0	0	1.2	0	1.4	1.6	1.7	3.0	0	0	1.5	3.3	2.5	3.3	1.9	0	14

REF NO.	IC1401																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
POWER ON	3.2	3.3	3.3	0	0.8	11.9	2.0	0	2.0	2.0	2.0	2.2	0	2.2	2.2	0.8	0	0	3.4	0
STANDBY	3.2	3.3	3.3	0	0.8	11.9	2.0	0	2.0	2.0	2.0	2.2	0	2.2	2.2	0.8	0	0	3.4	0

REF NO.	IC1401																			
MODE	41	42	43	44	45	46	47	48												
POWER ON	1.6	0	0	1.6	1.6	0	0.6	1.6												
STANDBY	1.6	0	0	1.6	1.6	0	0.6	1.6												

REF NO.	IC1402																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
POWER ON	3.4	0	0	0	1.6	0.6	1.6	1.6	11.8	1.3	0	0	0	0	1.3	0.2	3.3	3.3	3.3	1.1
STANDBY	3.4	0	0	0	1.6	0.6	1.6	1.6	11.8	1.3	0	0	0	0	1.3	0.2	3.3	3.3	3.3	1.1

SC-NA30P/PC/GN MAIN P.C.B.

15.1.2. MAIN P.C.B. (2/3)

REF NO.	IC1402																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32								
POWER ON	0	0	3.4	3.4	3.3	11.8	1.3	1.3	0	0	0.2	11.8								
STANDBY	0	0	3.4	3.4	3.3	11.8	1.3	1.3	0	0	0.2	11.8								

REF NO.	IC1501																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
POWER ON	2.6	0	5.2	3.3	0	1.6	1.6	1.6	0	0	0	0	2.6	2.6						
STANDBY	2.6	0	5.2	3.3	0	1.6	1.6	1.6	0	0	0	0	2.6	2.6						

REF NO.	IC1802																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
POWER ON	0	11.3	11.9	11.8	0	0	0	0	0	0	7.2	7.3	7.3	0	2.0	6.0	13.2	10.4	7.0	11.1
STANDBY	0	11.3	11.9	11.8	0	0	0	0	0	0	7.2	7.3	7.3	0	2.0	6.0	13.2	10.4	7.0	11.1

REF NO.	IC1831																			
MODE	1	2	3	4	5															
POWER ON	0	0	0	0	0															
STANDBY	0	0	0	0	0															

REF NO.	IC1851																			
MODE	1	2	3	4	5	6														
POWER ON	5.2	0	1.6	3.3	0.4	5.2														
STANDBY	5.2	0	1.6	3.3	0.4	5.2														

REF NO.	IC1852																			
MODE	1	2	3	4	5	6	7	8												
POWER ON	11.7	12.0	0	0	12.0	0	0.2	1.7												
STANDBY	11.7	12.0	0	0	12.0	0	0.2	1.7												

REF NO.	IC1853																			
MODE	1	2	3	4	5	6	7	8												
POWER ON	7.0	0	4.2	0.8	1.3	4.3	12.0	5.2												
STANDBY	7.0	0	4.2	0.8	1.3	4.3	12.0	5.2												

REF NO.	IC1854																			
MODE	1	2	3	4	5	6	7	8												
POWER ON	0	11.8	11.8	0	0.8	3.3	3.3	3.3												
STANDBY	0	11.8	11.8	0	0.8	3.3	3.3	3.3												

REF NO.	IC1855																			
MODE	1	2	3	4	5															
POWER ON	3.3	0	1.8	5.2	0.6															
STANDBY	3.3	0	1.8	5.2	0.6															

REF NO.	Q1401				Q1402				Q1802											
MODE	E	C	B		E	C	B		1	2	3	4	5	6						
POWER ON	0	3.3	0.3		0	3.3	0.1		11.8	11.8	7.3	7.3	11.8	11.8						
STANDBY	0	3.3	0.3		0	3.3	0.1		11.8	11.8	7.3	7.3	11.8	11.8						

SC-NA30P/PC/GN MAIN P.C.B.

15.1.3. MAIN P.C.B. (3/3)

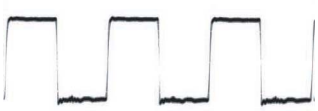
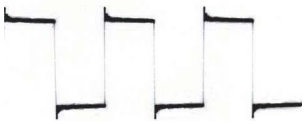
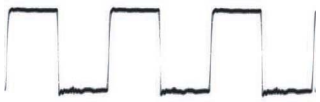
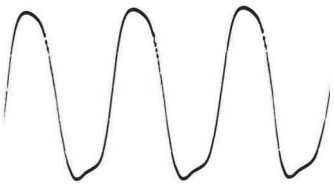
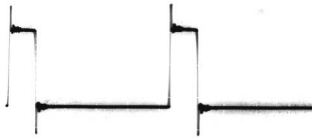
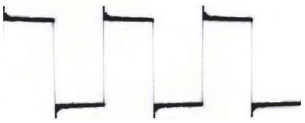
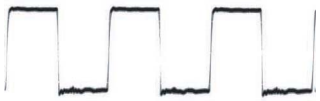
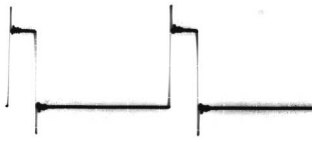
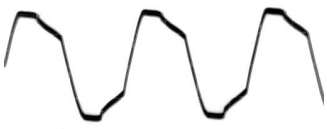
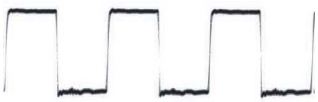
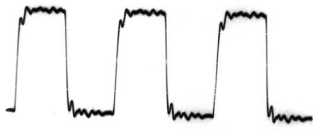
REF NO.	Q1803									Q1804										
MODE	1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8			
POWER ON	9.0	0	0	0	0	0	0	0		11.9	18	12	18	12	11.8	11.8	11.9			
STANDBY	9.0	0	0	0	0	0	0	0		11.9	18	12	18	12	11.8	11.8	11.9			

REF NO.	Q1851							Q1853									QR1801			
MODE	1	2	3	4	5	6		1	2	3	4	5	6	7	8		E	C	B	
POWER ON	3.3	3.3	0.6	3.3	3.3	3.3		11.8	11.8	11.8	2.5	11.8	11.8	11.8	11.8		0	0	3.3	
STANDBY	3.3	3.3	0.6	3.3	3.3	3.3		11.8	11.8	11.8	2.5	11.8	11.8	11.8	11.8		0	0	3.3	

REF NO.	QR1802				QR1830				QR1853				QR1855				QR1856			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
POWER ON	0	0	2.8		0	3.3	0		0	0	3.3		0	0	3.2		0	0	3.2	
STANDBY	0	0	2.8		0	3.3	0		0	0	3.3		0	0	3.2		0	0	3.2	

SC-NA30P/PC/GN MAIN P.C.B.

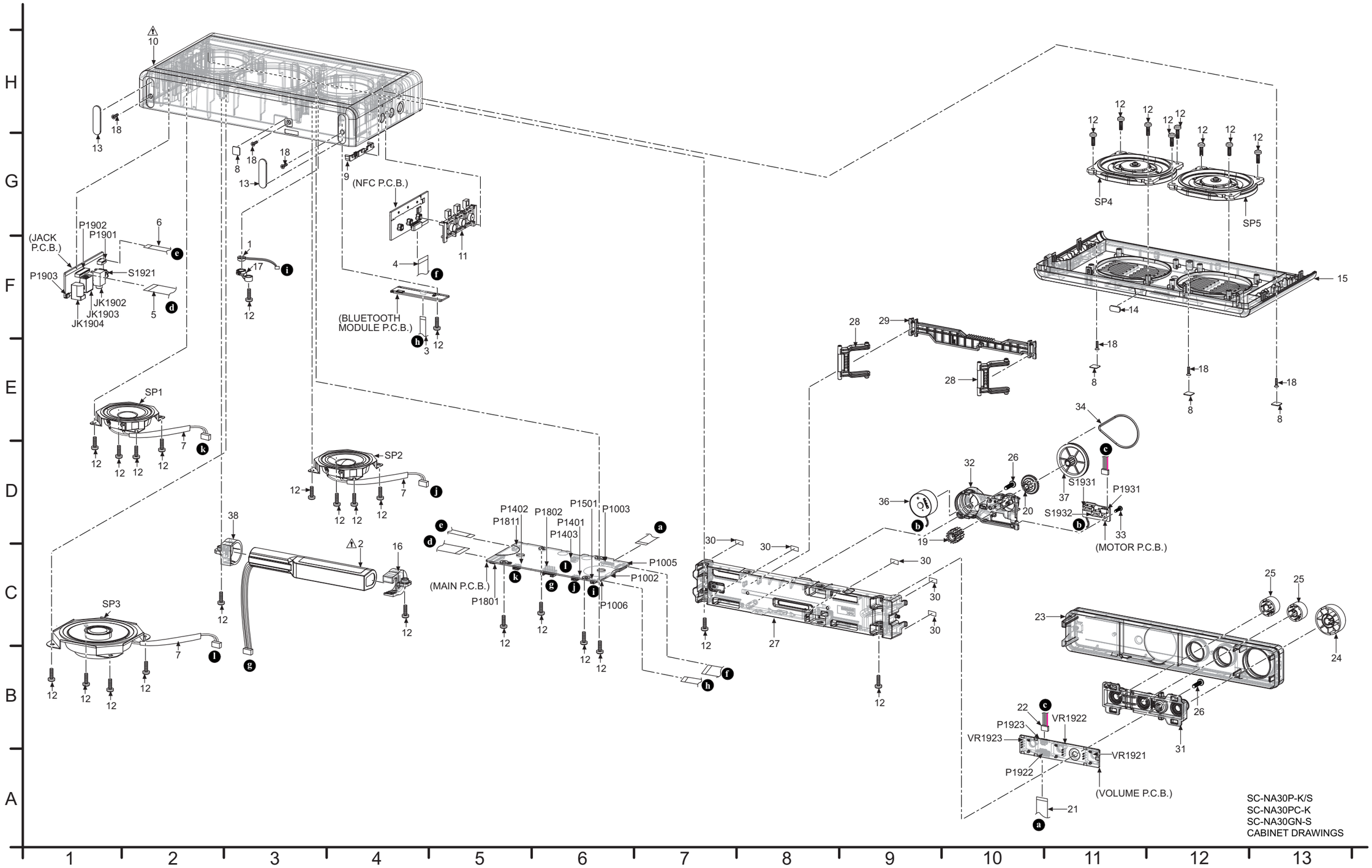
15.1.4. Waveform Chart

WF No. IC1001-31 (PLAY)  4Vp-p(100nsec/div)	WF No. IC1401-8 (PLAY)  4Vp-p(100nsec/div)	WF No. IC1401-9 (PLAY)  4Vp-p(10usec/div)	WF No. IC1401-14 (PLAY)  8Vp-p(20nsec/div)
WF No. IC1401-27,29,32,34 (PLAY)  20Vp-p(500nsec/div)	WF No. IC1402-5 (PLAY)  3Vp-p(20nsec/div)	WF No. IC1402-7 (PLAY)  4Vp-p(100nsec/div)	WF No. IC1402-8 (PLAY)  4Vp-p(5usec/div)
WF No. IC1402-10,11,14,26,27, 30,31 (PLAY)  20Vp-p(2usec/div)	WF No. IC1501-6 (PLAY)  4Vp-p(20nsec/div)	WF No. IC1501-7 (PLAY)  4Vp-p(5usec/div)	WF No. IC1501-8 (PLAY)  4Vp-p(100nsec/div)

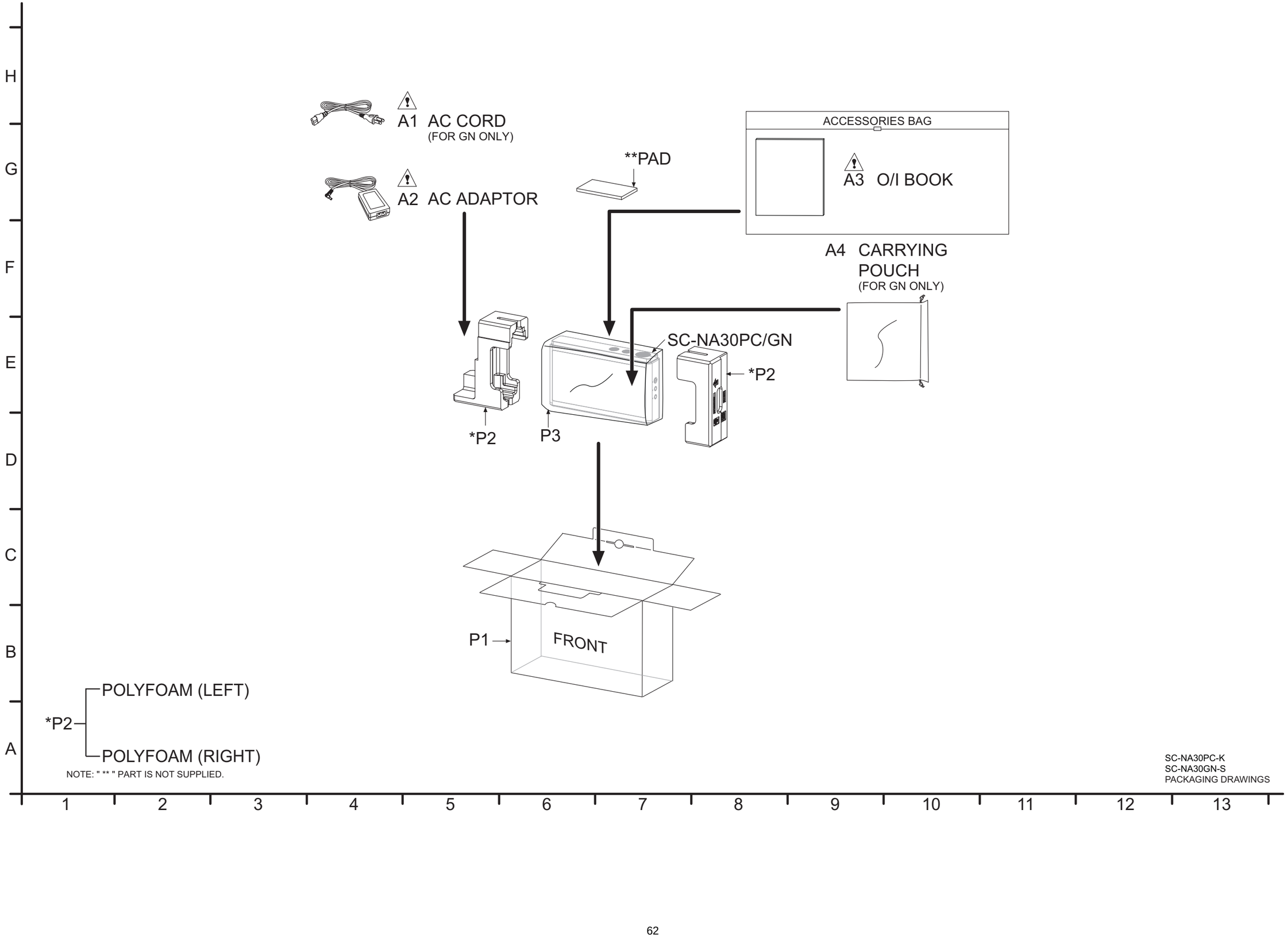
16 Exploded View and Replacement Parts List

16.1. Exploded View and Mechanical replacement Parts List

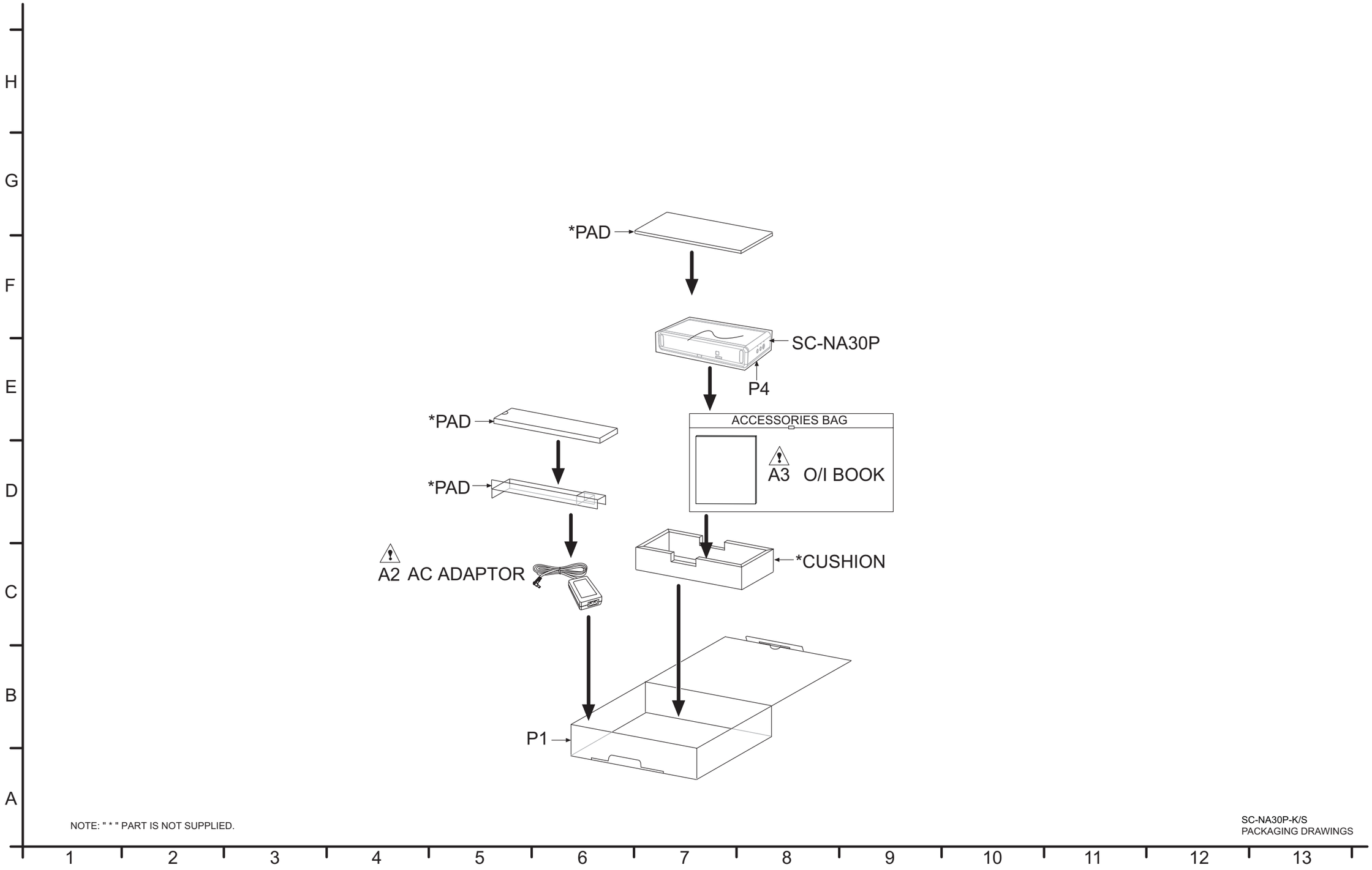
16.1.1. Cabinet Parts Location



16.1.2. Packaging (for SC-NA30PC-K SC-NA30GN-S)



16.1.3. Packaging (for SC-NA30P-K/S)



16.1.4. 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.
- 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	L0CZAY000015	MIC UNIT	1	
⚠	2	N4HULQZ00001	BATTERY PACK	1	
	3	REE1860	16P FFC (BLUE-TOOTH - MAIN)	1	
	4	REE1861	11P FFC (NFC - MAIN)	1	
	5	REE1862	17P FFC (JACK - MAIN)	1	
	6	REE1868	6P FFC (JACK - MAIN)	1	
	7	REX1654	SPEAKER WIRE UNIT	3	
	8	RGK2527-K	SCREW ORNAMENT	4	P/PC-K
	8	RGK2527-S	SCREW ORNAMENT	4	P/GN-S
	9	RGL0796-Q	LED LIGHTING PIECE	1	
⚠	10	RFKGCNA30EBS	FRONT CABINET ASS'Y	1	GN-S
⚠	10	RFKGCNA30P-S	FRONT CABINET ASS'Y	1	P-S
⚠	10	RFKGCNA30PCK	FRONT CABINET ASS'Y	1	P/PC-K
	11	RGU2931-K	POWER BUTTON	1	P/PC-K
	11	RGU2931-S	POWER BUTTON	1	P/GN-S
	12	RHD26046	SCREW	30	
	13	RKA0306-K1	FOOT RUBBER	2	
	14	RKA0310-K1	FOOT RUBBER	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	15	RFKHCNA30EBK	REAR CABINET ASS'Y	1	P/PC-K
	15	RFKHCNA30EBS	REAR CABINET ASS'Y	1	P/GN-S
	16	RMN1071A	BATTERY HOLDER R	1	
	17	RMR2139-C	MIC HOLDER	1	
	18	XTS2+8JFJK	SCREW	6	
	19	RDG0663	DRIVE GEAR	1	
	20	RDG0664	RELAY GEAR	1	
	21	REE1859	8P FFC(MAIN - VOLUME)	1	
	22	REX1659	5P CABLE WIRE (VOLUME - MOTOR)	1	
	23	RYQ1321-K	TOP ORNAMENT UNIT	1	P/PC-K
	23	RYQ1321-S	TOP ORNAMENT UNIT	1	P/GN-S
	24	RGW0443-K	VOLUME KNOB	1	P/PC-K
	24	RGW0443-S	VOLUME KNOB	1	P/GN-S
	25	RGW0444-K1	BASS/TREBLE KNOB	2	P/PC-K
	25	RGW0444-S1	BASS/TREBLE KNOB	2	P/GN-S
	26	RHD26046-K	SCREW	2	
	27	RKQ0365-K	TOP CASE	1	
	28	RML0765	GUIDE ARM	2	
	29	RMM0315	GUIDE PLATE	1	
	30	RMQ2233	EPT SEALER	5	
	31	RMR2137-K2	VOLUME HOLDER	1	
	32	RMR2138-C	MOTOR BASE	1	
	33	VHD1224-1A	SCREW	1	
	34	VMG1720	BELT	1	
	36	RFKPHC37P-K	MOTOR PULLEY ASS'Y	1	
	37	RDG0658-1	PULLEY GEAR	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	38	RMN1071	BATTERY HOLDER L	1	
			SPEAKERS		
	SP1	L0AA05A00104	TWEETER SPEAKER	1	
	SP2	L0AA05A00104	TWEETER SPEAKER	1	
	SP3	L0AA08A00041	WOOFER SPEAKER	1	
	SP4	RAQ0102	PASSIVE RADIA-TOR UNIT	1	
	SP5	RAQ0102	PASSIVE RADIA-TOR UNIT	1	
			PACKING MATERI-ALS		
	P1	RPK3022	PACKING CASE	1	P-S
	P1	RPK3023	PACKING CASE	1	PC-K
	P1	RPK3026	PACKING CASE	1	GN-S
	P1	RPK3058	PACKING CASE	1	P-K
	P2	RPN2606	POLYFOAM	1	PC-K, GN-S
	P3	RPF0682	PROTECTION SHEET	1	PC-K, GN-S
	P4	RPF0694	POLY BAG	1	P-K, P-S
			ACCESSORIES		
⚠	A1	K2CJ2YY00093	AC CORD	1	GN-S
⚠	A2	RFEA228C-AG	AC ADAPTOR	1	P-K, P-S, PC-K
⚠	A2	RFEA229E-AH	AC ADAPTOR	1	GN-S
⚠	A3	VQT5C36	O/I BOOK (En)	1	P-K, P-S, PC-K
⚠	A3	VQT5C37	O/I BOOK (Cf)	1	PC-K
⚠	A3	VQT5C51	O/I BOOK (En)	1	GN-S
	A4	RFC0160-K	CARRYING POUCH	1	GN-S

16.2. 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.
- 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.

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 BOARD		
	PCB1	REP5023A	MAIN P.C.B.	1	(RTL)
	PCB2	REP5024AA	JACK P.C.B.	1	(RTL)
	PCB3	REP5024AB	VOLUME P.C.B.	1	(RTL)
	PCB4	REP5024AC	MOTOR P.C.B.	1	(RTL)
	PCB5	REP5024AD	NFC P.C.B.	1	
	PCB6	REP5025A	BLUETOOTH MODULE	1	
			INTEGRATED CIR-CUITS		
	IC1001	REP5023A	IC	1	(E.S.D) JIGS&ADJ
	IC1002	C3EBEY000037	IC	1	(E.S.D)
	IC1004	C0GBY0000079	IC	1	(E.S.D)
	IC1401	C1AB00003800	IC	1	(E.S.D)
	IC1402	C1AB00003984	IC	1	(E.S.D)
	IC1501	C0FBAY000032	IC	1	(E.S.D)
	IC1504	C0DBGYY00030	IC	1	(E.S.D)
	IC1802	C0DBDYY00081	IC	1	(E.S.D)
	IC1831	C0ABAA000071	IC	1	(E.S.D)
	IC1851	C0DBZYY00577	IC	1	(E.S.D)
	IC1852	C0DBAYY01896	IC	1	(E.S.D)
	IC1853	C0DBAYY01599	IC	1	(E.S.D)
	IC1854	C0DBAYY01798	IC	1	(E.S.D)
	IC1855	C0DBAYY01629	IC	1	(E.S.D)
			TRANSISTORS		
	Q1401	B1ABCF000011	TRANSISTOR	1	(E.S.D)

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	Q1402	B1ABCF000011	TRANSISTOR	1	(E.S.D)
	Q1802	B1CFRD000076	TRANSISTOR	1	(E.S.D)
	Q1803	FC8J33040L	TRANSISTOR	1	(E.S.D)
	Q1804	FC8J33040L	TRANSISTOR	1	(E.S.D)
	Q1805	FJ3303010L	TRANSISTOR	1	(E.S.D)
	Q1851	B1CHQC000007	TRANSISTOR	1	(E.S.D)
	Q1853	B1CHRC000047	TRANSISTOR	1	(E.S.D)
	Q1857	FK3503010L	TRANSISTOR	1	(E.S.D)
	QR1801	B1GBCFNN0041	TRANSISTOR	1	(E.S.D)
	QR1802	B1GBCFNN0041	TRANSISTOR	1	(E.S.D)
	QR1830	B1GBCFNA0030	TRANSISTOR	1	(E.S.D)
	QR1853	B1GBCFNN0041	TRANSISTOR	1	(E.S.D)
	QR1855	B1GBCFNN0041	TRANSISTOR	1	(E.S.D)
	QR1856	B1GBCFNN0041	TRANSISTOR	1	(E.S.D)
			DIODES		
	D1401	DA2J10100L	DIODE	1	(E.S.D)
	D1402	DA2J10100L	DIODE	1	(E.S.D)
	D1403	DA2J10100L	DIODE	1	(E.S.D)
	D1404	DA2J10100L	DIODE	1	(E.S.D)
	D1405	DA2J10100L	DIODE	1	(E.S.D)
	D1406	DA2J10100L	DIODE	1	(E.S.D)
	D1801	DB2S31100L	DIODE	1	(E.S.D)
	D1802	B0JCRD000025	DIODE	1	(E.S.D)
	D1803	DB2S31100L	DIODE	1	(E.S.D)
	D1812	B0JCRD000025	DIODE	1	(E.S.D)
	D1813	B0ADCH000008	DIODE	1	(E.S.D)
	D1851	B0JCND000021	DIODE	1	(E.S.D)
	D1852	B0JCND000021	DIODE	1	(E.S.D)
			VARIABLE RESIS-TORS		
	VR1921	K0N201C00005	VOLUME JOG	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	VR1922	D2BDA14Y0003	TREBLE JOG	1	
	VR1923	D2BDA14Y0003	BASS JOG	1	
			SWITCHES		
	S1921	EVQPC105K	SW RESET	1	
	S1931	K0L1BA000078	SW POS_SW1	1	
	S1932	K0L1BA000078	SW POS_SW2	1	
			COILS AND INDUC-TORS		
	L1401	G1C150MA0426	INDUCTOR	1	
	L1402	G1C150MA0426	INDUCTOR	1	
	L1403	G1C150MA0426	INDUCTOR	1	
	L1404	G1C150MA0426	INDUCTOR	1	
	L1405	G1C150MA0426	INDUCTOR	1	
	L1406	G1C150MA0426	INDUCTOR	1	
	L1801	G1C150M00023	INDUCTOR	1	
	L1851	G1C4R7Z00014	INDUCTOR	1	
	L1852	G1C100M00041	INDUCTOR	1	
	L1853	G1C220MA0392	INDUCTOR	1	
	L1854	G1C220MA0392	INDUCTOR	1	
	L1901	J0JBC0000028	INDUCTOR	1	
	L1902	J0JBC0000028	INDUCTOR	1	
	L1903	J0JBC0000028	INDUCTOR	1	
	L1904	J0JBC0000028	INDUCTOR	1	
	LB1401	J0JHC0000046	INDUCTOR	1	
	LB1402	J0JHC0000046	INDUCTOR	1	
	LB1403	J0JBC0000010	INDUCTOR	1	
	LB1404	J0JBC0000010	INDUCTOR	1	
	LB1405	J0JHC0000094	INDUCTOR	1	
	LB1406	J0JHC0000094	INDUCTOR	1	
	LB1407	J0JHC0000094	INDUCTOR	1	
	LB1408	J0JHC0000094	INDUCTOR	1	
	LB1409	J0JHC0000094	INDUCTOR	1	
	LB1410	J0JHC0000094	INDUCTOR	1	
	LB1501	J0JCC0000317	INDUCTOR	1	
	LB1502	J0JCC0000317	INDUCTOR	1	
	LB1503	J0JCC0000059	INDUCTOR	1	
	LB1801	J0JHC0000046	INDUCTOR	1	
	LB1851	J0JHC0000046	INDUCTOR	1	
	LB1852	J0JHC0000046	INDUCTOR	1	
	LB1853	J0JHC0000046	INDUCTOR	1	
	LB1901	J0JHC0000046	INDUCTOR	1	
			CONNECTORS		
	P1002	K1MN12BA0189	12P CONNECTOR	1	
	P1003	K1MN08BA0147	8P CONNECTOR	1	
	P1005	K1MN11BA0147	11P CONNECTOR	1	
	P1006	K1MY16BA0641	16P CONNECTOR	1	
	P1401	K1KA02BA0047	2P CONNECTOR	1	
	P1402	K1KA02BA0047	2P CONNECTOR	1	
	P1403	K1KA02BA0047	2P CONNECTOR	1	
	P1501	K1KA02BA0014	2P CONNECTOR	1	
	P1801	K1MN17BA0147	17P CONNECTOR	1	
	P1802	K1KA06BA0050	6P CONNECTOR	1	
	P1811	K1MN06BA0147	6P CONNECTOR	1	
	P1901	K1MN06AA0046	6P CONNECTOR	1	
	P1902	K1MN17AA0046	17P CONNECTOR	1	
	P1903	K1MY06BA0641	6P CONNECTOR	1	
	P1922	K1MN08BA0147	8P CONNECTOR	1	
	P1923	K1KA05BA0014	5P CONNECTOR	1	
	P1931	K1KA05BA0014	5P CONNECTOR	1	
	JK1903	K1FY104B0076	JK DC OUT	1	
			OSCILLATORS		
	X1001	H2D400400018	OSCILLATOR	1	
	X1401	H0J245500110	OSCILLATOR	1	
			RESETTABLE FUSE		

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
⚠	IP1891	D4FB1R100015	RESETTABLE FUSE	1	
			PROTECTOR		
⚠	IP1901	D1JBR015A007	PROTECTOR	1	
			JACKS		
	JK1902	K2HC1YYB0033	JK AUX IN	1	
	JK1904	K2EZYB000009	JK DC IN	1	
			RESISTORS		
	R1002	D0GA103JA023	10K 1/16W	1	
	R1003	ERJ2GEJ201X	200 1/16W	1	
	R1004	ERJ2GEJ201X	200 1/16W	1	
	R1005	ERJ2GEJ201X	200 1/16W	1	
	R1006	ERJ2GEJ201X	200 1/16W	1	
	R1007	ERJ2GEJ201X	200 1/16W	1	
	R1008	ERJ2GEJ201X	200 1/16W	1	
	R1009	ERJ2GEJ201X	200 1/16W	1	
	R1010	ERJ2GEJ201X	200 1/16W	1	
	R1011	ERJ2GEJ201X	200 1/16W	1	
	R1012	ERJ2GEJ201X	200 1/16W	1	
	R1013	ERJ2GEJ201X	200 1/16W	1	
	R1014	ERJ2GEJ201X	200 1/16W	1	
	R1016	ERJ2GEJ201X	200 1/16W	1	
	R1017	ERJ2GEJ201X	200 1/16W	1	
	R1018	ERJ2GEJ201X	200 1/16W	1	
	R1019	ERJ2GEJ201X	200 1/16W	1	
	R1020	ERJ2GEJ201X	200 1/16W	1	
	R1021	ERJ2GEJ201X	200 1/16W	1	
	R1022	ERJ2GEJ201X	200 1/16W	1	
	R1023	ERJ2GEJ201X	200 1/16W	1	
	R1024	ERJ2GEJ201X	200 1/16W	1	
	R1025	ERJ2GEJ201X	200 1/16W	1	
	R1026	ERJ2GEJ201X	200 1/16W	1	
	R1027	ERJ2GEJ201X	200 1/16W	1	
	R1028	ERJ2GEJ201X	200 1/16W	1	
	R1029	ERJ2GEJ201X	200 1/16W	1	
	R1030	ERJ2GEJ201X	200 1/16W	1	
	R1031	ERJ2GEJ201X	200 1/16W	1	
	R1032	ERJ2GEJ201X	200 1/16W	1	
	R1033	D0GBR00JA008	0 1/10W	1	
	R1034	ERJ2GE0R00X	0 1/16W	1	
	R1035	D0GA104JA023	100K 1/16W	1	
	R1036	D0GA104JA023	100K 1/16W	1	
	R1037	D0GA103JA023	10K 1/16W	1	
	R1038	D0GA103JA023	10K 1/16W	1	
	R1039	D0GA103JA023	10K 1/16W	1	
	R1040	D0GA104JA023	100K 1/16W	1	
	R1041	ERJ2RHD103X	10K 1/16W	1	
	R1042	D0GA103JA023	10K 1/16W	1	
	R1043	ERJ2RHD103X	10K 1/16W	1	
	R1044	ERJ2GEJ201X	200 1/16W	1	
	R1045	D0GA473JA023	47K 1/16W	1	
	R1046	ERJ2GEJ474X	470K 1/16W	1	
	R1048	ERJ2GEJ474X	470K 1/16W	1	
	R1049	ERJ2GEJ474X	470K 1/16W	1	
	R1050	ERJ2GEJ474X	470K 1/16W	1	
	R1051	ERJ2GE0R00X	0 1/16W	1	
	R1052	ERJ2GE0R00X	0 1/16W	1	
	R1053	D0GA104JA023	100K 1/16W	1	
	R1055	D0GA104JA023	100K 1/16W	1	
	R1060	D0GA102JA023	1K 1/16W	1	
	R1073	ERJ2GE0R00X	0 1/16W	1	
	R1074	D0GBR00JA008	0 1/10W	1	
	R1075	D0GBR00JA008	0 1/10W	1	
	R1076	D0GDR00JA017	0 1/8W	1	
	R1077	ERJ2GE0R00X	0 1/16W	1	
	R1078	ERJ2GEJ201X	200 1/16W	1	
	R1079	ERJ2GEJ201X	200 1/16W	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	R1080	ERJ2GEJ201X	200 1/16W	1	
	R1081	ERJ2GEJ201X	200 1/16W	1	
	R1082	ERJ2GEJ201X	200 1/16W	1	
	R1083	ERJ2GEJ201X	200 1/16W	1	
	R1084	ERJ2GEJ201X	200 1/16W	1	
	R1085	ERJ2GEJ201X	200 1/16W	1	
	R1086	ERJ2GEJ201X	200 1/16W	1	
	R1087	D0GA103JA023	10K 1/16W	1	
	R1088	D0GA103JA023	10K 1/16W	1	
	R1090	ERJ2GEJ391X	390 1/16W	1	
	R1091	D0GA102JA023	1K 1/16W	1	
	R1092	D0GA103JA023	10K 1/16W	1	
	R1401	D0GA152JA023	1.5K 1/16W	1	
	R1402	D0GA105JA023	1M 1/16W	1	
	R1405	D0GA473JA023	47K 1/16W	1	
	R1406	D0GA223JA023	22K 1/16W	1	
	R1407	D0GA473JA023	47K 1/16W	1	
	R1408	D0GA473JA023	47K 1/16W	1	
	R1409	D0GA221JA023	220 1/16W	1	
	R1410	D0GA221JA023	220 1/16W	1	
	R1411	D0GA221JA023	220 1/16W	1	
	R1412	D0GA221JA023	220 1/16W	1	
	R1413	D0GA221JA023	220 1/16W	1	
	R1414	D0GA221JA023	220 1/16W	1	
	R1415	D0GB221JA007	220 1/10W	1	
	R1417	D0GA104JA023	100K 1/16W	1	
	R1419	D0GA223JA023	22K 1/16W	1	
	R1421	ERJ2GE0R00X	0 1/16W	1	
	R1422	ERJ2GE0R00X	0 1/16W	1	
	R1424	ERJ2GE0R00X	0 1/16W	1	
	R1426	ERJ2GE0R00X	0 1/16W	1	
	R1427	D0GA221JA023	220 1/16W	1	
	R1428	D0GA221JA023	220 1/16W	1	
	R1429	D0GA221JA023	220 1/16W	1	
	R1430	D0GA221JA023	220 1/16W	1	
	R1431	D0GA104JA023	100K 1/16W	1	
	R1432	D0GA104JA023	100K 1/16W	1	
	R1433	D0GA104JA023	100K 1/16W	1	
	R1437	D0GA101JA023	100 1/16W	1	
	R1438	D0GA221JA023	220 1/16W	1	
	R1439	D0GA221JA023	220 1/16W	1	
	R1440	D0GA221JA023	220 1/16W	1	
	R1441	D0GA104JA023	100K 1/16W	1	
	R1442	D0GA104JA023	100K 1/16W	1	
	R1443	D0GA104JA023	100K 1/16W	1	
	R1444	D0GA221JA023	220 1/16W	1	
	R1445	D0GA221JA023	220 1/16W	1	
	R1446	D0GA221JA023	220 1/16W	1	
	R1447	D0GA221JA023	220 1/16W	1	
	R1448	D0GA221JA023	220 1/16W	1	
	R1449	D0GA221JA023	220 1/16W	1	
	R1450	D0GA221JA023	220 1/16W	1	
	R1451	D0GA221JA023	220 1/16W	1	
	R1508	D0GA103JA023	10K 1/16W	1	
	R1510	D0GA103JA023	10K 1/16W	1	
	R1512	D0GA102JA023	1K 1/16W	1	
	R1513	D0GA102JA023	1K 1/16W	1	
	R1516	ERJ2GEJ202X	2K 1/16W	1	
	R1520	D0GA123JA023	12K 1/16W	1	
	R1525	D0GA123JA023	12K 1/16W	1	
	R1529	D0GA100JA023	10 1/16W	1	
	R1552	ERJ2GE0R00X	0 1/16W	1	
	R1554	ERJ2GE0R00X	0 1/16W	1	
	R1555	ERJ2GE0R00X	0 1/16W	1	
	R1556	ERJ2GE0R00X	0 1/16W	1	
	R1558	ERJ2GE0R00X	0 1/16W	1	
	R1559	D0GA102JA023	1K 1/16W	1	
	R1560	D0GA102JA023	1K 1/16W	1	
	R1801	ERJ2RHD683X	68K 1/16W	1	
	R1802	ERJ2RHD223X	22K 1/16W	1	
	R1803	D1BDR033A111	0.033 1/3W	1	
	R1804	D0GA100JA023	10 1/16W	1	
	R1805	ERJ2RKD274X	270K 1/16W	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	R1806	ERJ2RHD683X	68K 1/16W	1	
	R1807	D0GDR00JA017	0 1/8W	1	
	R1808	D0GA104JA023	100K 1/16W	1	
	R1809	D0GA151JA023	150 1/16W	1	
	R1810	D0GA104JA023	100K 1/16W	1	
	R1812	ERJ2GEJ182X	1.8K 1/16W	1	
	R1813	ERJ2GEJ392X	3.9K 1/16W	1	
	R1814	ERJ2GEJ182X	1.8K 1/16W	1	
	R1817	ERJ2RHD103X	10K 1/16W	1	
	R1818	ERJ2GE0R00X	0 1/16W	1	
	R1819	D0GA473JA023	47K 1/16W	1	
	R1823	D0GB473JA008	47K 1/10W	1	
	R1824	ERJ2GEJ392X	3.9K 1/16W	1	
	R1825	ERJ2GEJ474X	470K 1/16W	1	
	R1826	D0GA102JA023	1K 1/16W	1	
	R1827	ERJ2RHD681X	680 1/16W	1	
	R1828	D0GA100JA023	10 1/16W	1	
	R1829	D0GA100JA023	10 1/16W	1	
	R1830	D0GA560JA023	56 1/16W	1	
	R1831	ERJ2RHD153X	15K 1/16W	1	
	R1833	ERJ2RHD102X	1K 1/16W	1	
	R1834	D0GZR10JA027	0.1 1/2W	1	
	R1835	ERJ2RHD102X	1K 1/16W	1	
	R1836	ERJ2RHD104X	100K 1/16W	1	
	R1837	ERJ2RHD104X	100K 1/16W	1	
	R1838	D0GA103JA023	10K 1/16W	1	
	R1839	ERJ2GEJ474X	470K 1/16W	1	
	R1851	D0GA123JA023	12K 1/16W	1	
	R1852	ERJ2GEJ154X	150K 1/16W	1	
	R1853	ERJ2GE0R00X	0 1/16W	1	
	R1854	D0GA123JA023	12K 1/16W	1	
	R1855	ERJ2RKD334X	330K 1/16W	1	
	R1856	ERJ2RHD333X	33K 1/16W	1	
	R1857	ERJ2RHD273X	27K 1/16W	1	
	R1858	D0GA104JA023	100K 1/16W	1	
	R1859	ERJ2RKD184X	180K 1/16W	1	
	R1860	ERJ2GE0R00X	0 1/16W	1	
	R1861	ERJ2RHD563X	56K 1/16W	1	
	R1862	ERJ2RKD154X	150K 1/16W	1	
	R1863	ERJ2GE0R00X	0 1/16W	1	
	R1864	ERJ2RHD473X	47K 1/16W	1	
	R1865	ERJ2RKD1403X	140K 1/16W	1	
	R1866	ERJ2RKD2703X	270K 1/16W	1	
	R1868	ERJ2RHD152X	1.5K 1/16W	1	
	R1869	ERJ2GEJ474X	470K 1/16W	1	
	R1871	D0GDR00JA017	0 1/8W	1	
	R1872	D0GDR00JA017	0 1/8W	1	
	R1873	D0GDR00JA017	0 1/8W	1	
	R1874	D0GDR00JA017	0 1/8W	1	
	R1876	D0GA273JA023	27K 1/16W	1	
	R1878	ERJ2GEJ474X	470K 1/16W	1	
	R1879	D0GA103JA023	10K 1/16W	1	
	R1882	ERJ2RHD183X	18K 1/16W	1	
	R1884	ERJ2GE0R00X	0 1/16W	1	
	R1887	D0GDR00JA017	0 1/8W	1	
	R1890	ERJ2RHD562X	5.6K 1/16W	1	
	R1891	D0GDR00JA017	0 1/8W	1	
	R1892	D0GDR00JA017	0 1/8W	1	
	R1893	D0GDR00JA017	0 1/8W	1	
	R1894	D0GDR00JA017	0 1/8W	1	
	R1895	D0GDR00JA017	0 1/8W	1	
	R1896	ERJ2RHD102X	1K 1/16W	1	
	R1897	ERJ2GE0R00X	0 1/16W	1	
	R1898	ERJ2GEJ474X	470K 1/16W	1	
	R1899	ERJ2GEJ474X	470K 1/16W	1	
	R1903	ERJ2GE0R00X	0 1/16W	1	
	R1925	D0GA223JA023	22K 1/16W	1	
	R1926	D0GA123JA023	12K 1/16W	1	
			CAPACITORS		
	C1001	F1G1A1040006	0.1uF 10V	1	
	C1002	F1G1A1040006	0.1uF 10V	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	C1003	F1G1A1040006	0.1uF 10V	1	
	C1004	F1G1A1040006	0.1uF 10V	1	
	C1005	F1H0J4750005	4.7uF 6.3V	1	
	C1006	F1G1A1040006	0.1uF 10V	1	
	C1007	F1G1A1040006	0.1uF 10V	1	
	C1008	F1G1A1040006	0.1uF 10V	1	
	C1009	F1G1A1040006	0.1uF 10V	1	
	C1010	F1G1A1040006	0.1uF 10V	1	
	C1011	F1G1A1040006	0.1uF 10V	1	
	C1012	F1G1A1040006	0.1uF 10V	1	
	C1013	F1G1A1040006	0.1uF 10V	1	
	C1014	F1G1A1040006	0.1uF 10V	1	
	C1024	F1G1A1040006	0.1uF 10V	1	
	C1025	F1H0J1060006	10uF 6.3V	1	
	C1026	F1G1A1040006	0.1uF 10V	1	
	C1027	F1G1A1040006	0.1uF 10V	1	
	C1034	F1G1E102A086	1000pF 25V	1	
	C1401	F1H0J1060006	10uF 6.3V	1	
	C1402	F1G1E102A086	1000pF 25V	1	
	C1403	F1H0J1060006	10uF 6.3V	1	
	C1404	F1G1A1040006	0.1uF 10V	1	
	C1405	F1H0J1060006	10uF 6.3V	1	
	C1406	F1G1E102A086	1000pF 25V	1	
	C1407	F1H0J1060006	10uF 6.3V	1	
	C1408	F1G0J1050007	1uF 6.3V	1	
	C1409	F1K1E105A090	1uF 25V	1	
	C1410	F1K1E105A090	1uF 25V	1	
	C1411	F1K1E105A090	1uF 25V	1	
	C1412	F1K1E105A090	1uF 25V	1	
	C1413	F1G1H100A834	10pF 50V	1	
	C1414	F1G1H150A541	15pF 50V	1	
	C1415	F1G1C104A077	0.1uF 16V	1	
	C1416	F1G1C104A077	0.1uF 16V	1	
	C1417	F1G1E2240002	0.22uF 25V	1	
	C1418	F1G1C104A077	0.1uF 16V	1	
	C1419	F1G1C104A077	0.1uF 16V	1	
	C1420	F1G1E2240002	0.22uF 25V	1	
	C1427	F1G1E102A086	1000pF 25V	1	
	C1428	F1G1E102A086	1000pF 25V	1	
	C1429	F1G1H4700003	47pF 50V	1	
	C1430	F1G1H4700003	47pF 50V	1	
	C1431	F1G1A1040006	0.1uF 10V	1	
	C1432	F1K1E1060008	10uF 25V	1	
	C1433	F1K1E1060008	10uF 25V	1	
	C1434	F1G0J1050007	1uF 6.3V	1	
	C1435	F1K1E105A090	1uF 25V	1	
	C1436	F1K1E105A090	1uF 25V	1	
	C1437	F1H1E105A116	1uF 25V	1	
	C1438	F1H1E105A116	1uF 25V	1	
	C1439	F1G1C104A077	0.1uF 16V	1	
	C1440	F1G1C104A077	0.1uF 16V	1	
	C1441	F1G1E2240002	0.22uF 25V	1	
	C1446	F1K1E1060008	10uF 25V	1	
	C1447	F1K1E1060008	10uF 25V	1	
	C1452	F1G1E102A086	1000pF 25V	1	
	C1453	F1G1E102A086	1000pF 25V	1	
	C1454	F1G1E102A086	1000pF 25V	1	
	C1455	F1G1E102A086	1000pF 25V	1	
	C1456	F1G1E102A086	1000pF 25V	1	
	C1457	F1G0J1050007	1uF 6.3V	1	
	C1458	F1G1E102A086	1000pF 25V	1	
	C1459	F1G0J1050007	1uF 6.3V	1	
	C1460	F1G0J1050007	1uF 6.3V	1	
	C1461	F1G0J1050007	1uF 6.3V	1	
	C1462	F1G0J1050007	1uF 6.3V	1	
	C1463	F1G0J1050007	1uF 6.3V	1	
	C1501	F1G1A1040006	0.1uF 10V	1	
	C1502	F1H0J1060006	10uF 6.3V	1	
	C1503	F1G1A1040006	0.1uF 10V	1	
	C1504	F1H0J1060006	10uF 6.3V	1	
	C1505	F1G1A1040006	0.1uF 10V	1	
	C1506	F1H0J1060006	10uF 6.3V	1	
	C1513	F1G1H221A541	220pF 50V	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	C1516	F1H0J4750004	4.7uF 6.3V	1	
	C1517	F1H0J4750004	4.7uF 6.3V	1	
	C1520	F1G0J1050007	1uF 6.3V	1	
	C1521	F1G0J1050007	1uF 6.3V	1	
	C1522	F1H0J1060006	10uF 6.3V	1	
	C1525	F1G1E102A086	1000pF 25V	1	
	C1528	F1G1E102A086	1000pF 25V	1	
	C1534	F1G0J1050007	1uF 6.3V	1	
	C1535	F1G0J1050007	1uF 6.3V	1	
	C1551	F1H1E105A116	1uF 25V	1	
	C1552	F1H1E105A116	1uF 25V	1	
	C1557	F1G1E102A086	1000pF 25V	1	
	C1558	F1G1E102A086	1000pF 25V	1	
	C1801	F1G1C104A077	0.1uF 16V	1	
	C1802	F1G1A1040006	0.1uF 10V	1	
	C1803	F1G1C104A077	0.1uF 16V	1	
	C1804	F1G1C104A077	0.1uF 16V	1	
	C1805	F1J1A106A043	10uF 10V	1	
	C1806	F1H1E105A116	1uF 25V	1	
	C1807	F1G1E473A091	0.047uF 25V	1	
	C1808	F1G1H101A541	100pF 50V	1	
	C1809	F1G1E1040001	0.1uF 25V	1	
	C1810	F1G1E1040001	0.1uF 25V	1	
	C1811	F1G1E1040001	0.1uF 25V	1	
	C1812	F1J1A106A043	10uF 10V	1	
	C1813	F1J1A106A043	10uF 10V	1	
	C1814	F1J1A106A043	10uF 10V	1	
	C1815	F1H1E105A116	1uF 25V	1	
	C1816	F1G1A1040006	0.1uF 10V	1	
	C1817	F1K1E1060008	10uF 25V	1	
	C1818	F1G1A1040006	0.1uF 10V	1	
	C1819	F1G1E222A086	2200pF 25V	1	
	C1821	F1G1C1030008	0.01uF 16V	1	
	C1822	F1G0J1050007	1uF 6.3V	1	
	C1823	F1G0J1050007	1uF 6.3V	1	
	C1825	F1G1H471A459	470pF 50V	1	
	C1830	F1K1E1060008	10uF 25V	1	
	C1851	F1J1C1060001	10uF 16V	1	
	C1852	F1J1C1060001	10uF 16V	1	
	C1853	F1H1E104A029	0.1uF 25V	1	
	C1854	F1H1E104A029	0.1uF 25V	1	
	C1855	F1G1E562A086	5600pF 25V	1	
	C1856	F1G1H4700003	47pF 50V	1	
	C1857	F1J1A1060011	10uF 10V	1	
	C1858	F1J1A1060011	10uF 10V	1	
	C1859	F1J1A1060011	10uF 10V	1	
	C1860	F1H1A105A036	1uF 10V	1	
	C1861	F1K1E1060008	10uF 25V	1	
	C1862	F1K1E1060008	10uF 25V	1	
	C1864	F1H1H332A219	3300pF 50V	1	
	C1865	F1H1H472A219	4700pF 50V	1	
	C1866	F1J1A1060011	10uF 10V	1	
	C1867	F1J1A1060011	10uF 10V	1	
	C1868	F1J1A1060011	10uF 10V	1	
	C1869	F1J1A1060011	10uF 10V	1	
	C1870	F1J1C1060001	10uF 16V	1	
	C1871	F1H1E104A029	0.1uF 25V	1	
	C1872	F1H0J1060006	10uF 6.3V	1	
	C1873	F1H0J1060006	10uF 6.3V	1	
	C1875	F1J1A106A043	10uF 10V	1	
	C1878	F1J1A106A043	10uF 10V	1	
	C1880	F1J1A1060011	10uF 10V	1	
	C1881	F1J1A1060011	10uF 10V	1	
	C1882	F1J1A1060011	10uF 10V	1	
	C1883	F1G1C104A077	0.1uF 16V	1	
	C1885	F1G1C104A077	0.1uF 16V	1	
	C1886	F1J1A1060011	10uF 10V	1	
	C1887	F1J1A1060011	10uF 10V	1	
	C1890	F1G1H181A551	180pF 50V	1	
	C1891	F1H1E104A029	0.1uF 25V	1	
	C1894	F1H1E104A029	0.1uF 25V	1	
	C1895	F1J1E105A171	1uF 25V	1	
	C1901	F1G1E472A086	4700pF 25V	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	C1902	F1G1E472A086	4700pF 25V	1	
	C1903	F1H1C104A178	0.1uF 16V	1	
	C1904	F1J1A106A043	10uF 10V	1	
	C1905	F1J1A106A043	10uF 10V	1	
	C1910	F1G0J1050007	1uF 6.3V	1	
	C1921	F1H1H101B052	100pF 50V	1	
	C1922	F1G1E102A086	1000pF 25V	1	
	C1923	F1G1E102A086	1000pF 25V	1	
	C1924	F1H1H101B052	100pF 50V	1	
	C1925	F1G1E102A086	1000pF 25V	1	
	C1926	F1G1E102A086	1000pF 25V	1	
	C1931	F1G1C1030008	0.01uF 16V	1	
	C1932	F1G1C1030008	0.01uF 16V	1	
	C1933	F1G1C1030008	0.01uF 16V	1	
	C1934	F1G1C1030008	0.01uF 16V	1	

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