

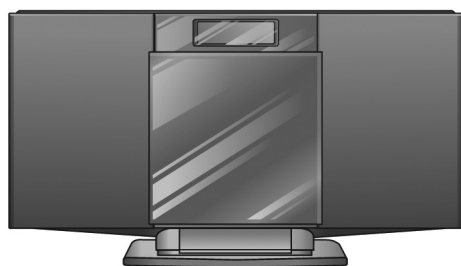
Service Manual

Compact Stereo System

Model No. **SC-HC20GA**
SC-HC20GN



Product Color: (K)...Black Type



SC-HC20



Remote Control
Transmitter

WARNING

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

IMPORTANT SAFETY NOTICE

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

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1 Safety Precautions

1.1. General Guidelines

1. 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.
2. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing, carry out 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 $1M\Omega$ and $5.2M\Omega$. 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 $1.5k\Omega$, 10 watts resistor, in parallel with a $0.15\mu F$ capacitors, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure 1.
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 be repaired and rechecked before it is returned to the customer.

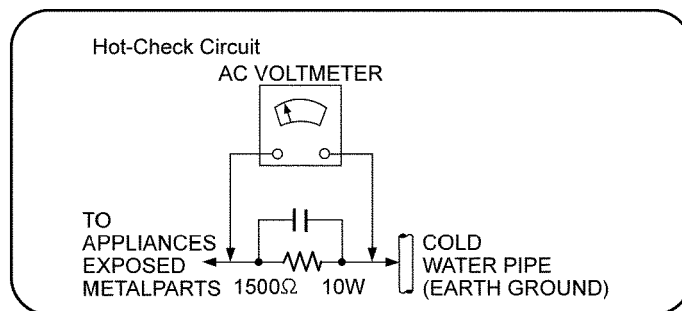


Figure. 1

1.2. Before Repair and Adjustment

Disconnect AC power, discharge unit AC Capacitors as such C702, C710, C725, C727 and C728 through a 10W, 1W resistor to ground.

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

- Current consumption at AC 110V to 240V, at 50/60Hz in NO SIGNAL mode (at volume min in FM Tuner mode) should be ~250 mA. (For GA only)
- Current consumption at AC 220V to 240V, at 50Hz in NO SIGNAL mode (at volume min in FM Tuner mode) should be ~250 mA. (For GN only)

1.3. Caution For Fuse Replacement

CAUTION:

Replace with the same type fuse:

(Manufacturer: Hollyland, Type: 50T, F751, T3.15AL 250V) (For GA only)

(Manufacturer: Hollyland, Type: 50T, F751, T1.6AL 250V) (For GN only)

1.4. Protection Circuitry

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

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

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

If this occurs, follow the procedure outlines below:

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

Note:

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

1.5. Safety Part Information

Safety Parts List:

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

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

Table 1

Safety	Ref. No.	Part No.	Part Name & Description	Remarks
⚠	16	RFKHHC20GN-K	REAR CABINET ASS'Y	GN
⚠	16	RFKHHC20GA-K	REAR CABINET ASS'Y	GA
⚠	401	RAE0165T-V	TRAVERSE	
⚠	A2	K2CJ2DA00010	AC CORD	GN
⚠	A2	K2CP2CA00001	AC CORD	GA
⚠	A2	K2CQ2CA00007	AC CORD	GA
⚠	A2	K2CZ3YY00005	AC CORD	GA
⚠	A3	RQTX1058-B	O/I BOOK (En)	GN
⚠	A3	RQTX1061-G	O/I BOOK (En/Cn/Ar)	GA
⚠	T701	ETS25BF116AD	TRANSFORMER	
⚠	Z752	ERZV10V511CS	ZNR	GN
⚠	Z752	ERZVA5Z471	ZNR	GA
⚠	PC701	B3PBA0000402	PHOTO COUPLER	
⚠	PCB12	REPX0818EA	SMPS P.C.B	GN
⚠	PCB12	REPX0818GA	SMPS P.C.B	GA
⚠	F751	K5D162BK0005	FUSE	GN
⚠	F751	K5D312BK0010	FUSE	GA
⚠	TH701	D4CAA5R10001	THERMISTOR	
⚠	TH702	D4CC11040013	THERMISTOR	
⚠	P751	K2AA2B000017	AC INLET	
⚠	C702	F0CAF104A105	0.1uF	
⚠	C710	F1BAF1020020	1000pF	
⚠	C725	F0CAF104A105	0.1uF	
⚠	C727	F1BAF1020020	1000pF	
⚠	C728	F1BAF1020020	1000pF	

2 Warning

2.1. Prevention of Electro Static 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 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 aluminium foil, to prevent electrostatic charge build up 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 remover 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, aluminium 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).

2.2. Precaution of Laser Diode

CAUTION!

THIS PRODUCT UTILIZES A LASER.

USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

Caution:

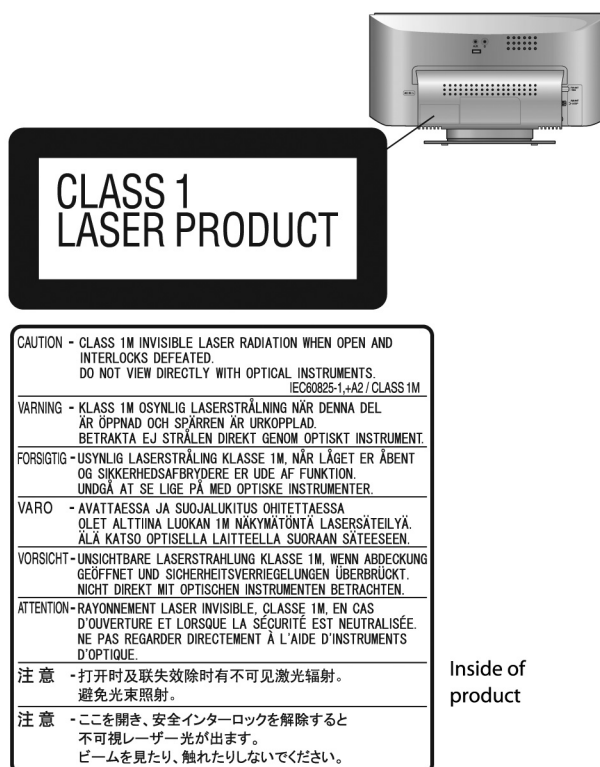
This product utilizes a laser diode with the unit turned "on", invisible laser radiation is emitted from the pickup lens.

Wavelength: 785 nm (CD)

Maximum output radiation power from pickup: 100 μ W/VDE

Laser radiation from the pickup unit is safety level, but be sure the followings:

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



2.3. Service caution based on Legal restrictions

2.3.1. 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%

2.4. Handling Precaution for Traverse Unit

The laser diode in the optical pickup unit may break down due to static electricity of clothes or human body. Special care must be taken avoid caution to electrostatic breakdown when servicing and handling the laser diode in the traverse unit.

2.4.1. Cautions to Be Taken in Handling the Optical Pickup Unit

The laser diode in the optical pickup unit may be damaged due to electrostatic discharge generating from clothes or human body. Special care must be taken avoid caution to electrostatic discharge damage when servicing the laser diode.

1. Do not give a considerable shock to the optical pickup unit as it has an extremely high-precise structure.
2. To prevent the laser diode from the electrostatic discharge damage, the flexible cable of the optical pickup unit removed should be short-circuited with a short pin or a clip.
3. The flexible cable may be cut off if an excessive force is applied to it. Use caution when handling the flexible cable.
4. The antistatic FPC is connected to the new optical pickup unit. After replacing the optical pickup unit and connecting the flexible cable, cut off the antistatic FPC.

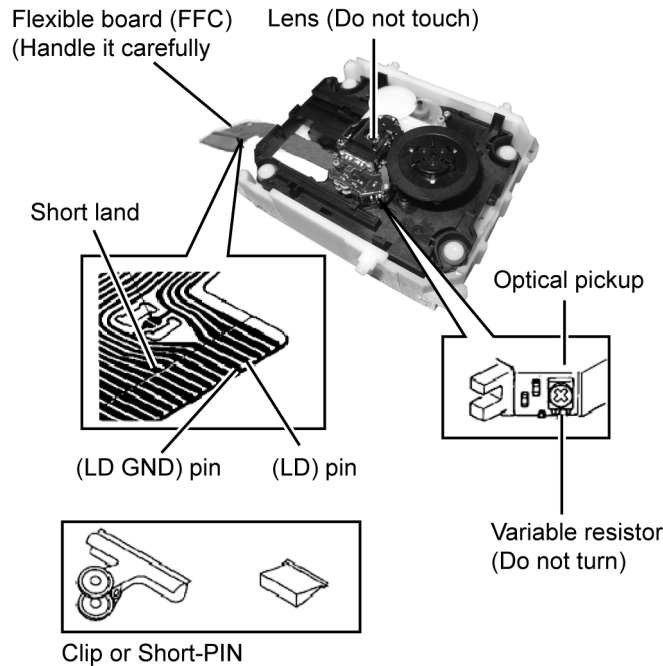


Figure 1

2.4.2. Grounding for electrostatic breakdown prevention

Some devices such as the CD player use the optical pickup (laser diode) and the optical pickup will be damaged by static electricity in the working environment. Proceed servicing works under the working environment where grounding works is completed.

2.4.2.1. Worktable grounding

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

2.4.2.2. Human body grounding

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

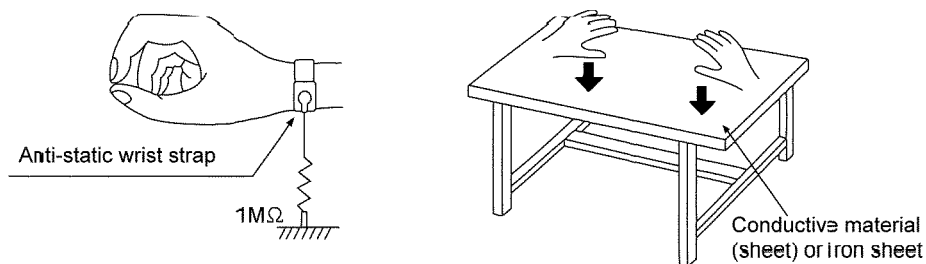


Figure 2

3 Service Navigation

3.1. Service Information

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

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

- **Micro-processor:**

- 1) The following components are supplied as an assembled part.
 - Micro-processor IC, (IC801) (RFKWMHC10EB)

4 Specifications

■ Amplifier Section

RMS Output Power Stereo Mode

Front Ch (both ch driven) 5 W per channel (6 Ω), 1 kHz,
10 % THD

PMPO output power

(For GA Only) 95 W

Phone jack

Terminal Stereo, 3.5 mm jack

Output level (CD, 1 kHz, -20 dB) max. 0.385 mW +0.385 mW, 32 Ω

Aux (Rear)

Sensitivity

Normal level 504 mV, 12.4 k Ω

High level 100 mV, 12.4 k Ω

Terminal Stereo, 3.5 mm jack

■ Tuner Section

Preset memory FM 30 stations

AM 15 stations

Frequency Modulation (FM)

Frequency range 87.50 MHz to 108.00 MHz
(50 kHz step)

Antenna terminals 75 Ω (unbalanced)

Amplitude Modulation (AM)

Frequency range 522 kHz to 1629 kHz
(9 kHz step)

520 kHz to 1630 kHz
(10 kHz step)

■ Disc Section

Disc played [8 cm or 12 cm]

(1) CD-Audio (CD-DA)

(2) CD-R/RW (CD-DA, MP3)

(3) MP3*

* MPEG-1 Layer 3, MPEG-2 Layer 3

Pick up

Wavelength 785 nm

Laser power CLASS 1

Audio output (Disc)

Number of channels FL, FR, 2 channel

■ Speaker Section

Type 1 way, 1 speaker system
(Bass reflex)

Speaker unit(s)

Full range 8 cm Cone type

Impedance 6 Ω

Output sound pressure 83 dB/W (1.0m)

Frequency range 60 Hz to 25 kHz (-16 dB)

90 Hz to 22 kHz (-10 dB)

■ General

Power supply

(For GA Only) AC 110 V to 240 V, 50/60 Hz

(For GN Only) AC 220 V to 240 V, 50 Hz

Power consumption 18 W

Dimensions (W x H x D) 384 mm x 214 mm x 112 mm

(D = 69 mm minimum)

(D = 147 mm tray open)

Mass Approx. 2.1 kg

Operating temperature range 0°C to +35°C

Operating humidity range 35% to 80 % RH
(no condensation)

Power consumption in standby mode: 0.3 W (approx)

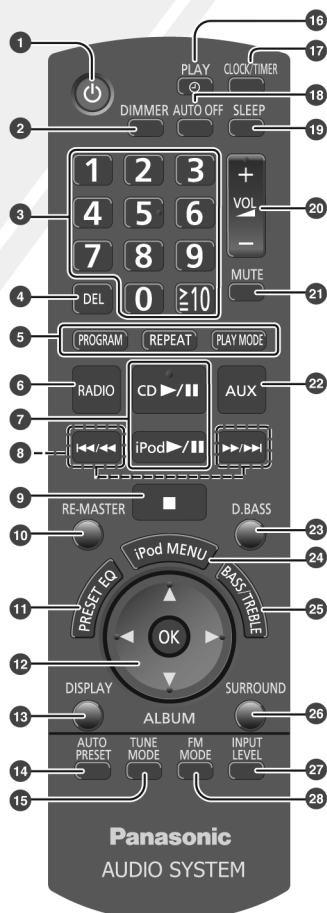
- Specifications are subject to change without notice.
- Total harmonic distortion is measured by the digital spectrum analyzer.

5 Location of Controls and Components

5.1. Main Unit & Remote Control Key Button Operations

Remote control

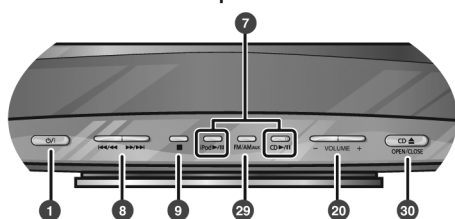
- Refer to the numbers in parentheses for page reference.



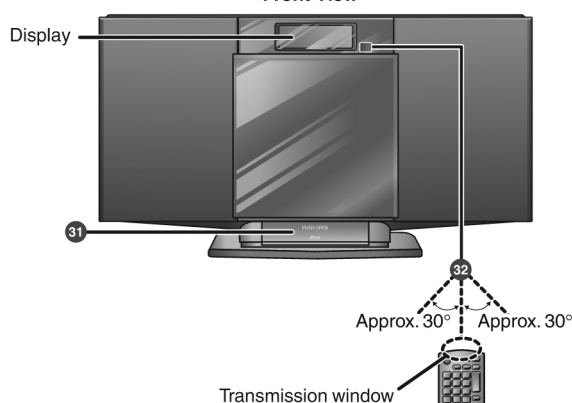
- 1 Standby/on switch** [⏻], [⏻/⏹]
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.
- 2 [DIMMER]**
Dims the display panel. Press again to cancel.
- 3 Numeric buttons [1-9, 0, ≥10]**
To select a 2-digit number
e.g. 16: [≥10] → [1] → [6]
To select a 3-digit number
e.g. 226: [≥10] → [≥10] → [2] → [2] → [6]
- 4 [DEL]**
- 5 [PROGRAM]
[REPEAT]
[PLAY MODE]**
- 6 [RADIO]**
- 7 [CD ▶/⏸]
[iPod ▶/⏸]**
- 8 [◀◀/▶▶], [▶▶▶▶]**
- 9 [■]**
- 10 [RE-MASTER]**
- 11 [PRESET EQ]**
- 12 [▲▼], [◀▶]
[OK]**
- 13 [DISPLAY]**
- 14 [AUTO PRESET]**
- 15 [TUNE MODE]**
- 16 [⏻, PLAY]**
- 17 [CLOCK/TIMER]**
- 18 [AUTO OFF]**
This function allows you to turn the unit off (except in radio mode) after the unit is left unused for about 30 minutes. Press twice to turn it on.
- 19 [SLEEP]**
- 20 [+ VOL ◀, ▶, [- VOLUME +]**
- 21 [MUTE]**
Mutes the sound. Press again to cancel. "MUTE" is also cancelled when the volume is adjusted or the unit is turned off.
- 22 [AUX]**
- 23 [D.BASS]**
- 24 [iPod MENU]**
- 25 [BASS/TREBLE]**
- 26 [SURROUND]**
- 27 [INPUT LEVEL]**
- 28 [FM MODE]**
- 29 [FM/AM/AUX]**
- 30 [CD ▲, OPEN/CLOSE]**
- 31 iPod/iPhone dock**
- 32 Remote control signal sensor**
Aim the remote control at the sensor, avoiding obstacles, at a maximum range of 7 m directly in front of the unit.

Main unit

Top View

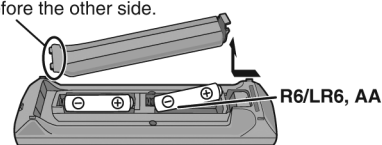


Front View



Preparing the remote control

Place this side in before the other side.



Batteries

- Use a manganese dry battery or an alkaline dry battery.
- Insert so the poles (+ and -) match those in the remote control.
- Remove if the remote control is not going to be used for a long period of time.
- Store in a cool and dark place.
- Do not heat or expose to flame.
- Do not leave the batteries in an automobile exposed to direct sunlight for a long period of time with doors and windows closed.
- Mishandling of batteries in the remote control can cause electrolyte leakage, which may cause a fire.

Do not:

- mix old and new batteries.
- use different types of batteries at the same time.
- take apart or short-circuit the batteries.
- attempt to recharge alkaline or manganese batteries.
- use the batteries if the coverings have been peeled off.

6 Operating Instructions

6.1. Connections

Back View

Ventilation holes

1 Connect the FM indoor antenna.

- Tape the antenna to a wall or column, in a position with the least amount of interference.

2 Connect the AM loop antenna.

Stand the antenna up on its base.

Click!

- Keep the loose antenna cord away from other wires and cords.

3 Connect the AC mains lead.

Connect the AC mains lead after all other connections are complete.

To household mains socket

4 Headphones (not included)

Reduce the volume level and connect the headphones.
Plug type: 3.5 mm stereo

- Avoid listening for prolonged periods of time to prevent hearing damage.
- Excessive sound pressure from earphones and headphones can cause hearing loss.
- Listening at full volume for long periods may damage the user's ears.
- Be sure to use the supplied or recommended headphones or earphones.

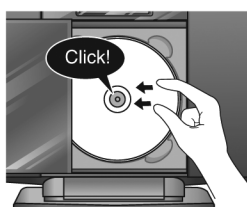
■ Notes on speakers

- These speakers do not have magnetic shielding. Do not place them near televisions, personal computers or other devices easily influenced by magnetism.
- The speaker nets cannot be removed.

■ Placing the unit

- Keep a minimum of 50 mm clearance space at the front of the unit to prevent iPod/iPhone or the unit from dropping.

6.2. Disc operations



- ① Press [⏻] to turn the unit on.
- ② Press [CD ▲, OPEN/CLOSE] on the main unit to open the sliding door.
- ③ Tilt the disc into the disc tray under the sliding door and then set the CD in place.
- ④ Press [CD ▲, OPEN/CLOSE] to close the sliding door.
Keep fingers away from the sliding door when it is closing to avoid possible minor injuries.
- ⑤ Press [CD ▶/⏮] to start play.

- Damage may occur if the sliding door is forced closed.
- Be careful of CD hitting the sliding door while being removed.

Stop	Press [■].
Pause	Press [CD ▶/⏮]. Press again to resume play.
Skip track	Press [◀/▶] or [▶/▶].
Search the current track (CD)	Press and hold [◀/▶] or [▶/▶].
Skip album (MP3)	Press [▲, ▼].
Direct access play (Play starts with the track you select.)	CD: Press the numeric buttons to select the track. MP3: ① Press [▲, ▼] to select the album. ② Press [▶/▶] once and then the numeric buttons to select the track.

6.3. Notes on CD-R and CD-RW

Notes on CD-R and CD-RW

- This unit can play CD-R and CD-RW recorded with CD-DA or MP3.
- Use an audio recording disc for CD-DA and finalise* it when you finish recording.
* A process performed after recording that enables CD-R or CD-RW players to play audio CD-R and CD-RW.
- The unit may not be able to play some discs due to the condition of the recording.
- Do not use irregularly shaped CDs.
- Do not attach extra labels and stickers.
- Do not use CDs with labels and stickers that are coming off or with excessive adhesive under the labels and stickers.
- Do not attach scratch-proof covers or any other kind of accessories.
- Do not write anything on the CDs.
- Do not clean CDs with liquids (Wipe with a soft and dried cloth).

Creating MP3 files playable on this unit

- Maximum number of tracks and albums: 999 tracks and 255 albums.
- Compatible compression rate: Between 64 kbps and 320 kbps (stereo). 128 kbps (stereo) is recommended.
- Disc formats: ISO9660 level 1 and level 2 (except for extended formats)
- The time for reading TOC depends on the number of the tracks, folders or folder structures.

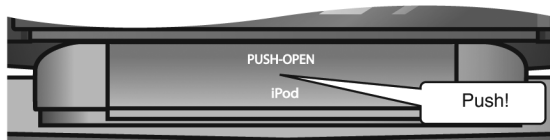
Limitations on MP3

- This unit is compatible with multi-sessions and it takes more time to start playing.
- This unit cannot play files recorded using packet write.
- If the disc includes both MP3 and normal audio data (CD-DA), the unit plays the type recorded in the inner part of the disc. If the disc includes both MP3 and other types of audio data (e.g. WMA or WAV), the unit plays only the MP3.
- Depending on how you create the MP3 files, they may not play in the order you numbered them or may not play at all.

6.4. External unit (iPod or iPhone)

■ Inserting or removing an iPod/iPhone

- ① Push to open the dock.



- ② Insert the suitable dock adapter (not included) for the iPod/iPhone.

Insert the side of the iPod/iPhone dock adapter with the clips facing towards you first and then push the opposite side until it clicks into place.

- ③ Connect the iPod/iPhone (not included) firmly.

Be sure to remove the iPod/iPhone from its case.

To remove, simply pull the iPod/iPhone straight out to disconnect it.

- When inserting an iPod/iPhone into the unit, be sure to use the dock adapter either supplied with the iPod/iPhone or commercially available from Apple Inc.
- When not using the dock, push it back until it locks.
- Reduce the volume of the main unit to minimum before connecting or disconnecting the iPod/iPhone.

Play	Press [iPod ▶/].
Pause	Press [iPod ▶/] or [■].
Skip track	Press [◀◀/▶▶] or [▶▶/▶▶].
Search the current track	Press and hold [◀◀/▶▶] or [▶▶/▶▶].
Display iPod/iPhone menu/ return to previous menu	Press [iPod MENU] in the play mode. (Remote control only)
Select contents from iPod/iPhone menu	Press [▲, ▼] and then [OK]. (Remote control only)

Notes on iPhone:

- All phone features can only be controlled by the iPhone's touch screen.
- The unit does not display incoming call or the phone status.
- The ringtone of incoming call can be heard from the iPhone's speaker. When the unit is in iPod/iPhone mode, the ringtone can also be heard from the unit's speakers.
- The voice of caller cannot be heard on the unit's speakers. The user can use the iPhone internal microphone though.
- Connecting or disconnecting the iPhone from the unit will not cancel a call.
- There is no Apple Inc. specification that will guarantee the iPhone responses above. iPhone responses may vary on new iPhone models or iPhone new software updates.

■ Charging the iPod/iPhone

- When iPod/iPhone is being charged in standby mode, "IPOD CHARGING" is shown on the main unit's display.
- Check iPod/iPhone to see if the battery is fully charged. If you are not using iPod/iPhone for an extended period of time after recharging has completed, disconnect it from the main unit as the battery will be depleted naturally. (Once fully recharged, additional recharging will not occur.)

7 Self Diagnostic and Doctor Mode Setting

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

7.1. Self Diagnostic Mode

Here is the procedures to enter into Self Diagnostic Mode.

Step 1 : Turn on the unit, and then press and hold [■] button for 2 seconds follow by [▶▶/▶▶] on the unit.

Step 2 : The display show as follow.



※ ※ ※: Error code

To exit the Self Diagnostic Mode

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

- Press the power button on the main unit.
- Unplug the AC cord.

7.1.1. Self Diagnostic Table

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

7.2. Self Diagnostic Function Error Code

7.2.1. CD Mechanism Error Code Table

Error Code	Diagnostic Contents	Description of error	Automatic FL Display	Remarks
CD H15	CD Open Abnormal	During operation POS_SW_R On fail to be detected with 3 sec. Error No. shall be clear by force or during cold start.		Press [■] on main unit for next error.
CD H16	CD Closing Abnormal	During operation POS_SW_CEN On fail to be detected with 3 sec. Error No. shall be clear by force or during cold start.		Press [■] on main unit for next error.
F15	CD REST SW Abnormal	CD traverse position initial setting operation failsafe counter (10 s) waiting for REST SW to turn on. Error No. shall be clear by force or during cold start.		Press [■] on main unit for next error.
F26	Communication between CD servo LSI and micro-p abnormal.	During switch to CD function, if SENSE = "L" within failsafe time of 20ms.		Press [■] on main unit for next error.

7.2.2. iPod Error Code Table

Error Code	Diagnostic Contents	Description of error	Automatic FL Display	Remarks
IPD H15	iPod Open Abnormal	During operation POS_SW_L On fail to be detected with 3 sec. Error No. shall be clear by force or during cold start.		Press [■] on main unit for next error.
IPD H16	iPod Closing Abnormal	During operation POS_SW_CEN On fail to be detected with 3 sec. Error No. shall be clear by force or during cold start.		Press [■] on main unit for next error.

7.2.3. Power Amp Error Code Table

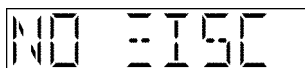
Error Code	Diagnostic Contents	Description of error	Automatic FL Display	Remarks
F61/F76	Power Amp IC output abnormal	During power-on, PDET1, PDET2 & MAINV_DET / TEMP_DET is "L" after 1 sec.	 	Press [■] on main unit for next error.

7.3. Entering Doctor Mode

Here is the procedures to enter into Doctor Mode.

Step 1 : Turn on the unit, and then pressing and holding [■] on main unit in order while press [4] and [7] on the remote control.

Step 2 : The display show as follow.



To exit the Doctor mode

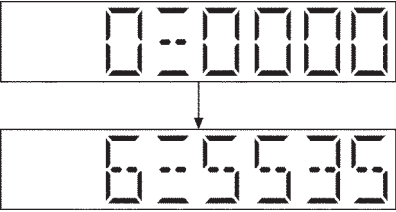
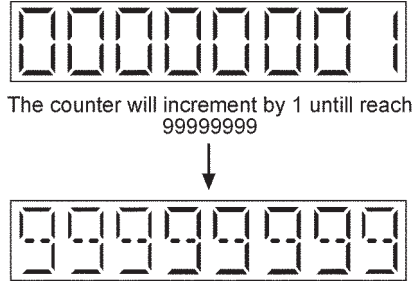
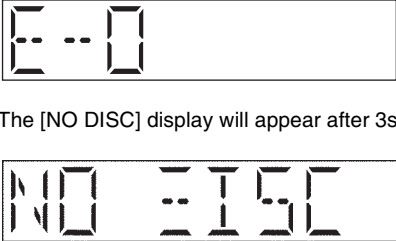
Use either one of the following methods to cancel the Doctor mode.

- Press the power button of the unit.
- Unplug the AC cord.

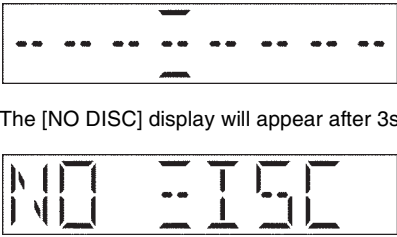
7.3.1. Doctor Mode Table 1

Item		FL Display	Key Operation
Mode Name	Description		Front Key
Doctor Mode	To enter into Doctor Mode for checking of various items and displaying EEPROM and firmware version. Note: The micro-processor version as shown is an example. It will be revise when there is an updates. FL Display sequence Display 1 → 2	(Display 1) Version Display (DEC) Check sum (HEX) Checksum : (Condition 1) Version Display (DEC) No Rom correction (a) If there is NO EEPROM header string OR (b) If there is no EEPROM (no data is received by micro-processor) [NO] is displayed. Checksum : (Condition 2) If the version of the EEPROM does not match or not working properly [NG] is display. Checksum : (Condition 3) If the EEPROM version matches, checksum [YYYYY] is displayed. (Display 2) The Checksum of EEPROM and firmware version will be display for 2 sec.	In CD mode: 1. Press [■] button on main unit follow by [4] and [7] on remote control. To exit Doctor Mode, press [⏻/I] button on main unit or remote control.

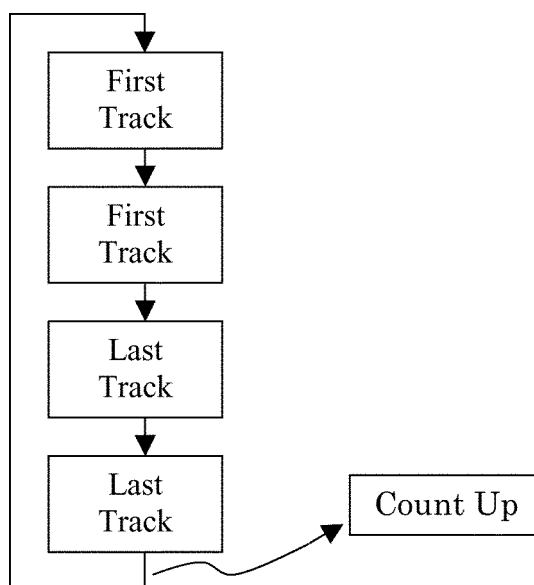
7.3.2. Doctor Mode Table 2

Item		FL Display	Key Operation
Mode Name	Description		Front Key
FL Display Test	To check the FL segments display (All segments will light up)		In Doctor Mode: 1. Press [1] button on remote control. To cancel, press [0] button on remote control. To exit Doctor Mode, press [⏻/I] button on main unit or remote control.
Volume Setting	To check for volume setting during this mode, Bass & treble is set to 0dB & EQ is switch off.		In Doctor Mode: 1. Press [7] button on remote control. To exit Doctor Mode, press [⏻/I] button on main unit or remote control.
			In Doctor Mode: 2. Press [8] button on remote control. To exit Doctor Mode, press [⏻/I] button on main unit or remote control.
			In Doctor Mode: 3. Press [9] button on remote control. To exit Doctor Mode, press [⏻/I] button on main unit or remote control.
Mecha Sliding Panel Reliability	To check the operation of sliding Panel. Sequence as follow : 1. Panel set to close position. 2. CD Open & stop at left position for 1s. 3. CD Close & stop at centre position for 1s.		In Doctor Mode: 1. Press [≥10] follow by [2] & then [1] button on remote control. To cancel, press [0] button on remote control. To exit Doctor Mode, press [⏻/I] button on main unit or remote control.
CD Traverse Unit Test Mode	To check for the traverse unit operation. In this mode, the first & last track is access & read. (TOC). It fails when TOC is not completed by IOS or the traverse is out of focus.		In Doctor Mode: 1. Press [≥10], [1], [2] button on remote control. To cancel, press [0] button on remote control. To exit Doctor Mode, press [⏻/I] button on main unit or remote control. (For more information, please refer to Section 7.3.4.)
CD Auto Adjustment Display	To display result of self adjustment for CD.		In Doctor Mode: 1. Press [≥10], [1], [4] button on remote control. To cancel, press [0] button on remote control. To exit Doctor Mode, press [⏻/I] button on main unit or remote control.

7.3.3. Doctor Mode Table 3

Item		FL Display	Key Operation
Mode Name	Description		Front Key
Cold Start	To activate cold start upon next AC power up.	 The [NO DISC] display will appear after 3s,	In Doctor Mode: 1. Press [SLEEP] button on remote control. To exit Doctor Mode, press [⏻/I] button on main unit or remote control.

7.3.4. CD Traverse Test (Traverse)



7.4. Sales Demonstration Lock Function Mode

7.4.1. Setting

Here is the procedures to enter into Sales Demonstration Lock.

Step 1 : Turn on the unit.

Step 2 : Select to any mode function, press and hold [CD▲(OPEN/CLOSE)] key and follow by [CD▶/||] key. It must be pressed within 0.5 sec.

Step 3 : The display will show upon entering into this mode.



Note : CD▲(OPEN/CLOSE) button is invalid and the main unit displays "LOCKED" while the lock function mode is entered.

7.4.2. Cancellation

Step 1 : To cancel only can be triggered in CD Mode and Volume 19.

Step 2 : Press and hold [CD▲(OPEN/CLOSE)] key and follow by [CD▶/||] key. It must be pressed within 0.5 sec.

Step 3 : The display will show after exit from this mode.



8 Service Fixture & Tools

Prepare service tools before process service position.

Service Tools		Remarks
Main P.C.B. (CN807) - CD Servo P.C.B. (CN7002)	REEX1182 (22P FFC)	

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)

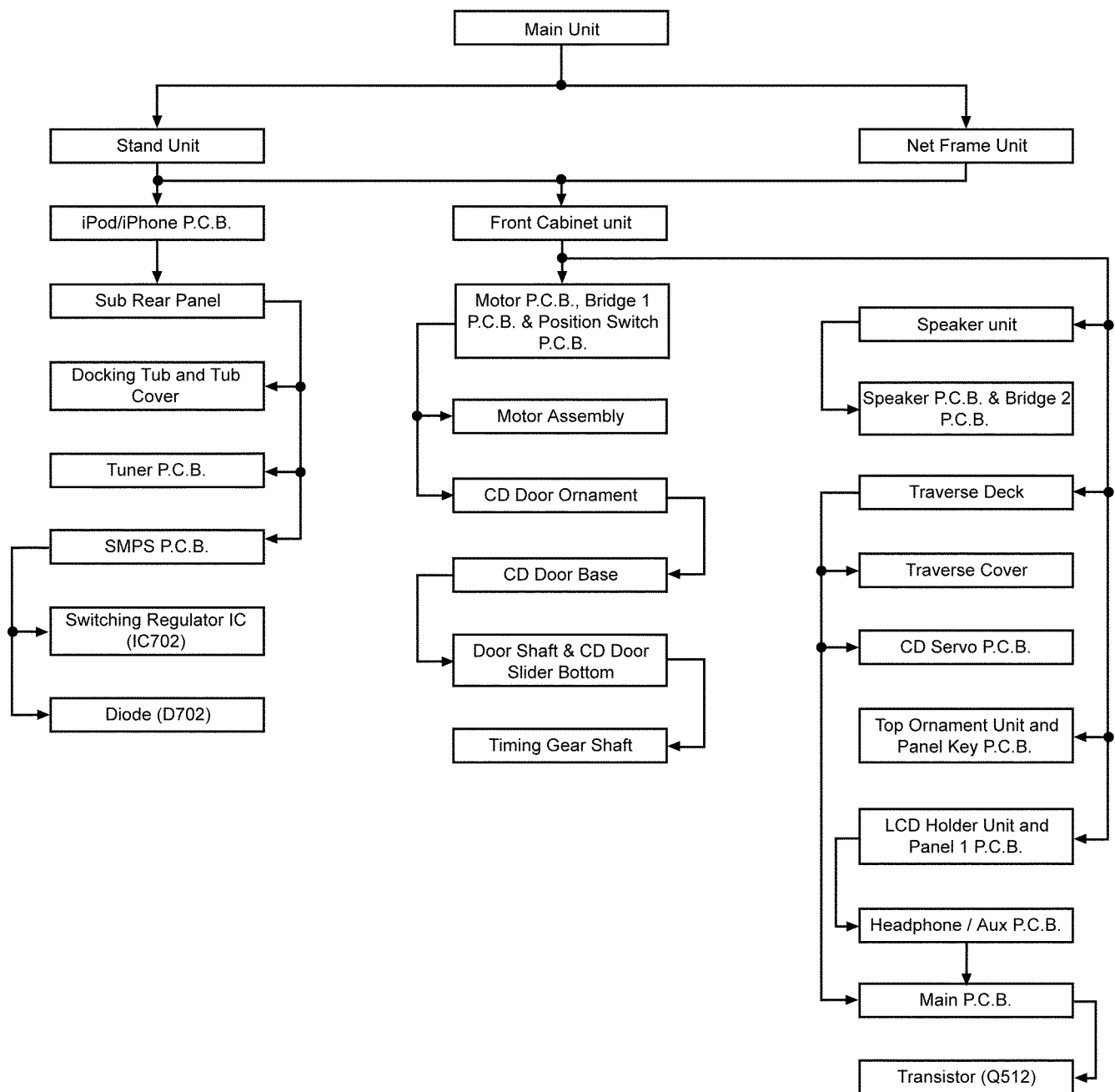
**CAUTION: HOT!!
PLEASE DO NOT
TOUCH THE HEAT SINK**

- 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 Stand Unit
 - Disassembly of iPod/iPhone P.C.B.
 - Disassembly of Sub Rear Panel
 - Disassembly of Docking Tub and Tub Cover
 - Disassembly of Tuner P.C.B.
 - Disassembly of SMPS P.C.B.
 - Replacement of Switching Regulator IC (IC702)
 - Replacement of Diode (D702)
 - Disassembly of Net Frame Unit
 - Disassembly of Front Cabinet unit
 - Disassembly of Motor P.C.B., Bridge 1 P.C.B. & Position Switch P.C.B.
 - Disassembly of Motor Assembly
 - Replacement of CD Door Ornament
 - Replacement of CD Door Base
 - Replacement of Door Shaft & CD Door Slider Bottom
 - Replacement of Rack Top, Slider Top & Timing Gear Shaft
 - Disassembly of Speaker unit
 - Disassembly of Speaker P.C.B. & Bridge 2 P.C.B.
 - Disassembly of Traverse Deck
 - Disassembly of Traverse Cover
 - Disassembly of CD Servo P.C.B.
 - Disassembly of LCD Holder Unit and Panel P.C.B.
 - Disassembly of Headphone/Aux P.C.B.
 - Disassembly of Top Ornament Unit and Panel Key P.C.B.
 - Disassembly of Main P.C.B.
 - Replacement of Transistor (Q512)

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

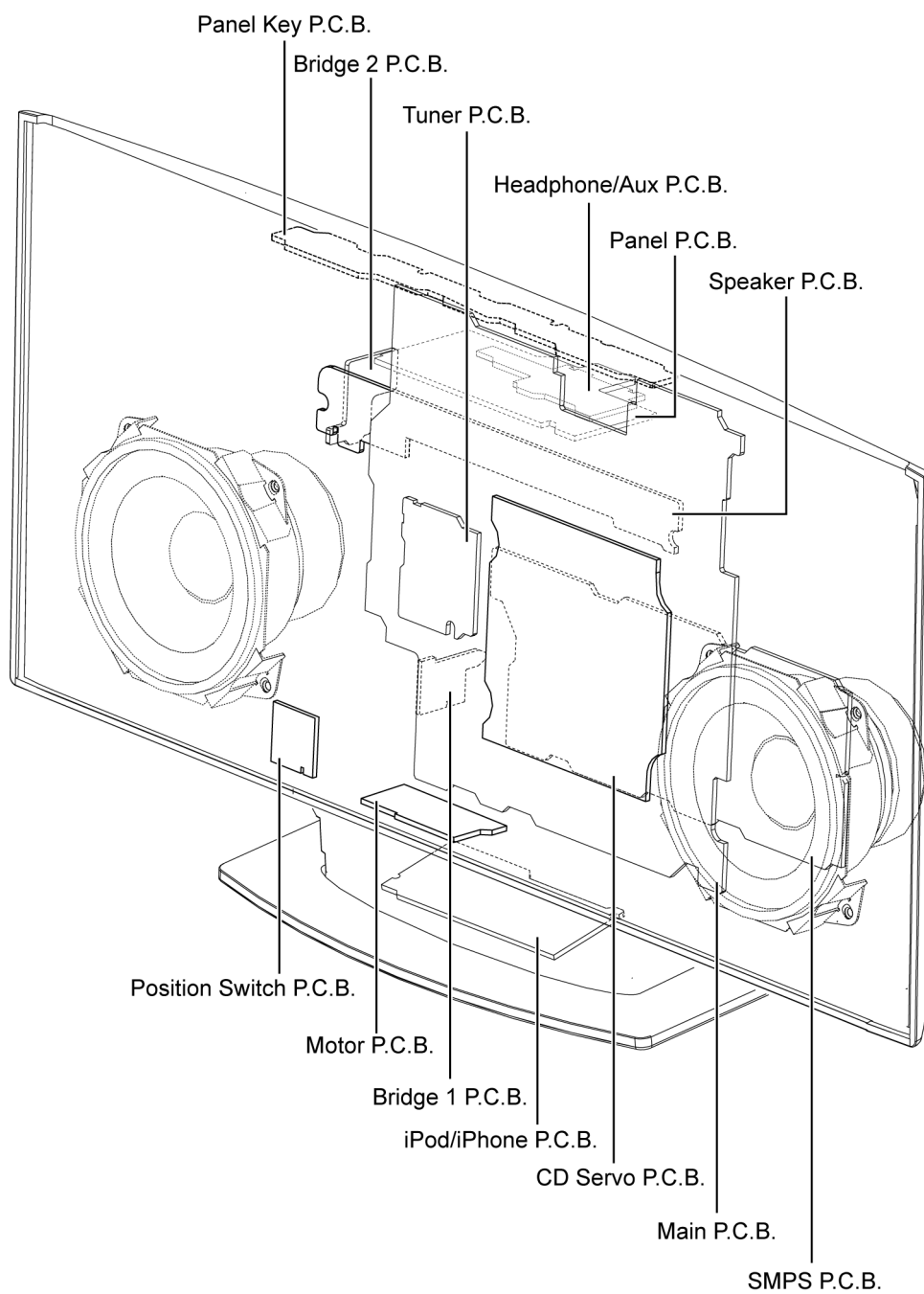
CAUTION NOTE:

Please use original screw and at correct locations.

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

- | | |
|-----------------------|----------------------|
| a : RHD26046 | e : XSN2+4FJ |
| b : VHD1224-1 | f : XTN2+6GFJ |
| c : XTW3+12TFJ | g : XTB3+8JFJ |
| d : XTW2+6SFJ | h : RMS0757-1 |

9.3. Main Parts Location Diagram

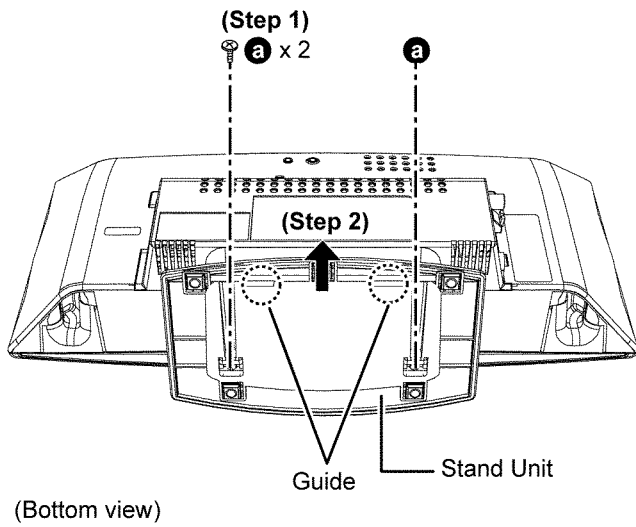


9.4. Disassembly of Stand Unit

Step 1 : Remove 2 screws.

Step 2 : Lift up the stand unit as arrow shown.

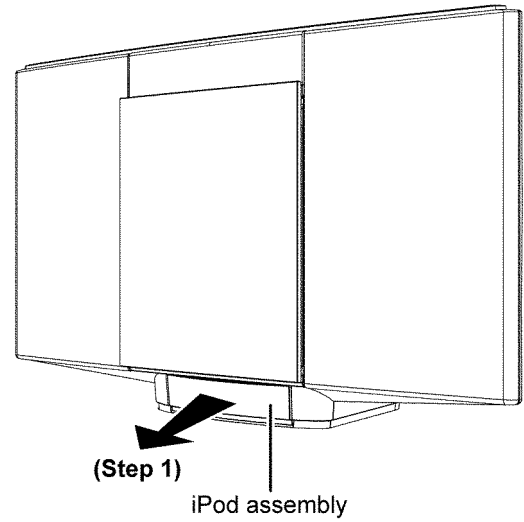
Caution : During assembling, ensure the stand unit is seated properly into the guide.



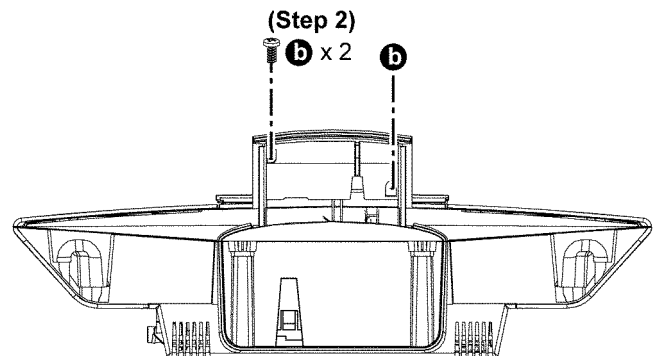
9.5. Disassembly of iPod/iPhone P.C.B.

- Refer to "Disassembly of Stand Unit"

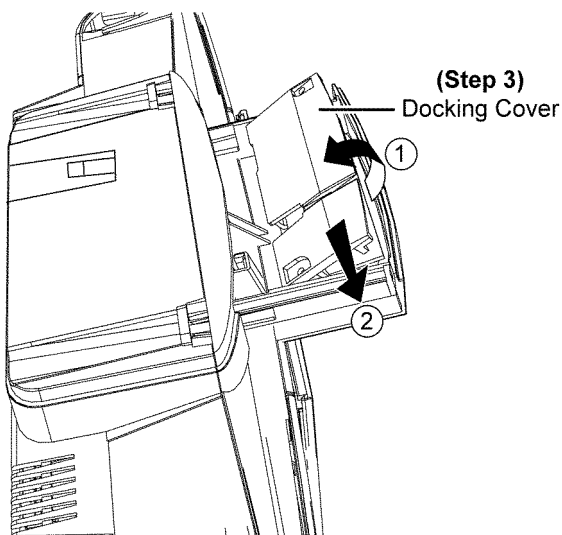
Step 1 : Press to open the iPod assembly.



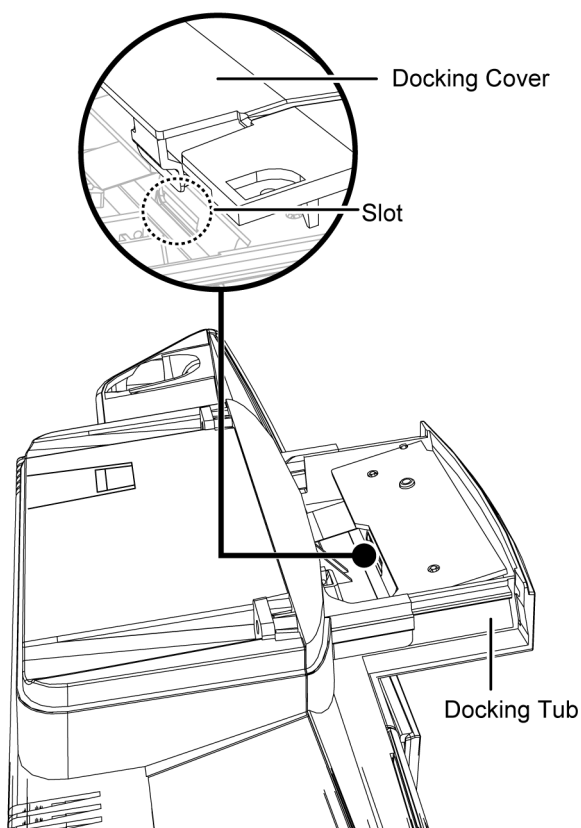
Step 2 : Remove 2 screws.



Step 3 : Lift up Docking Cover as arrow (1) and (2) shown to remove it.

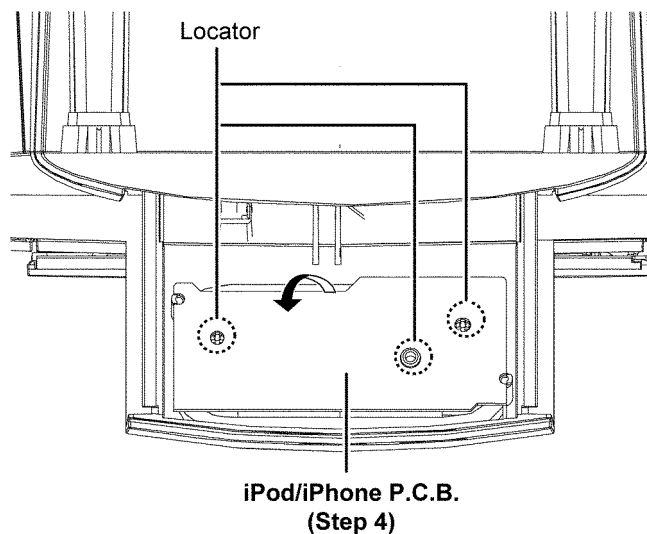


Caution : During assembling of Docking Cover, ensure it is fixed properly.



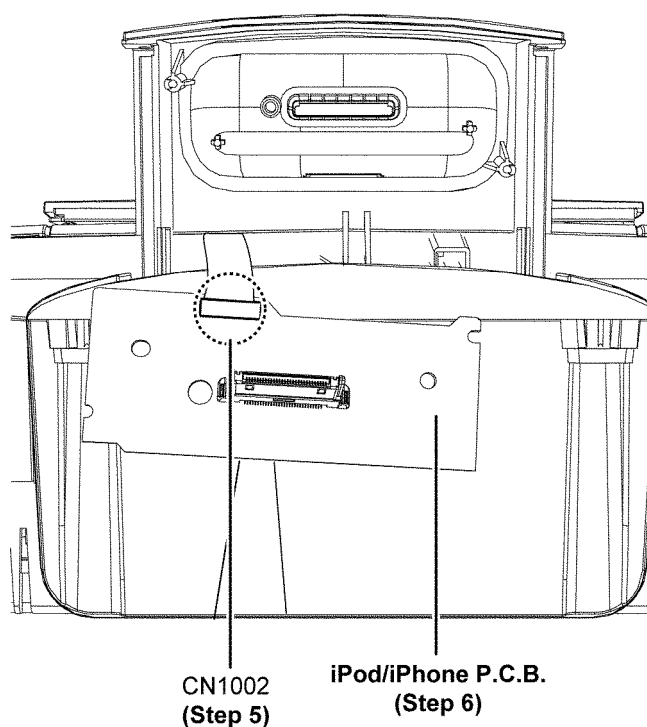
Step 4 : Flip iPod/iPhone P.C.B..

Caution : During assembling, ensure that the iPod/iPhone P.C.B. is properly seated onto the 3 locators.



Step 5 : Detach 15P FFC at the connector (CN1002) on iPod/iPhone P.C.B..

Step 6 : Remove iPod/iPhone P.C.B..

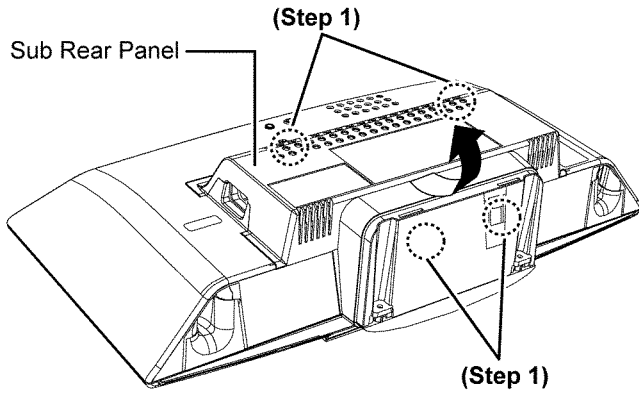


9.6. Disassembly of Sub Rear Panel

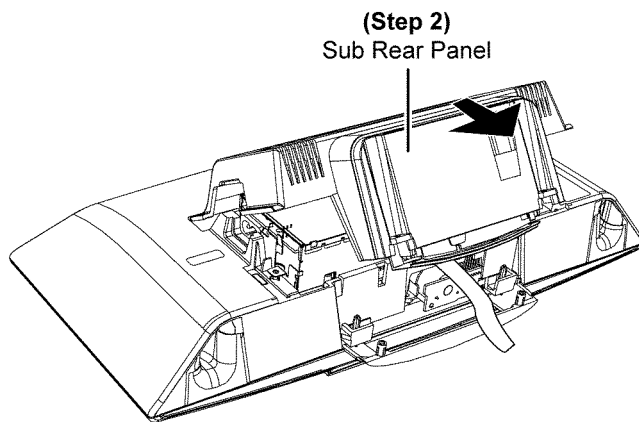
- Refer to "Disassembly of Stand Unit"
- Refer to "Disassembly of iPod/iPhone P.C.B."

Note : Ensure the iPod is closed properly

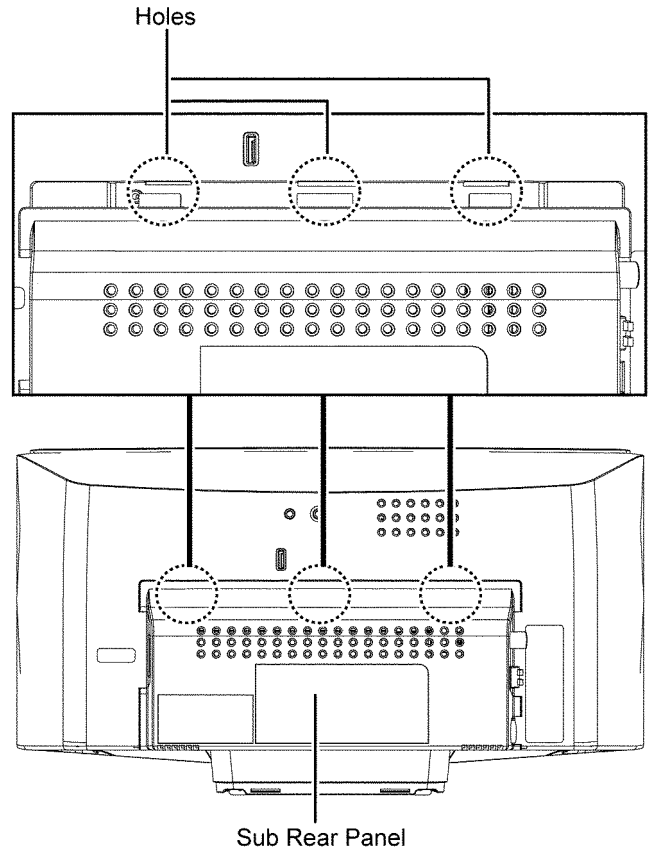
Step 1 : Press to lift up the Sub Rear Panel.



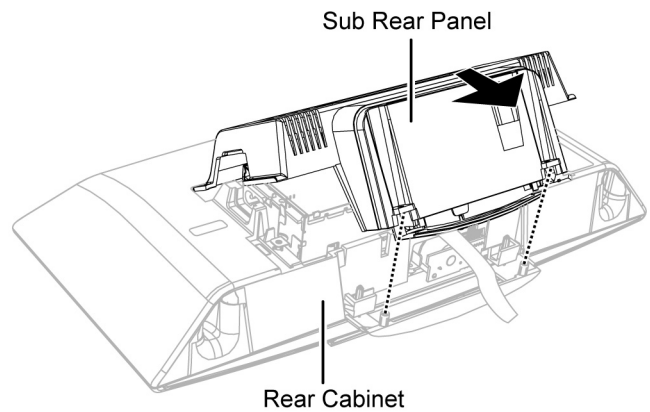
Step 2 : Remove Sub Rear Panel.



Caution 1 : During assembling, ensure the Sub Rear Panel is properly slot into the holes.



Caution 2 : During assembling, ensure Sub Rear Panel properly seated on the Rear Cabinet.

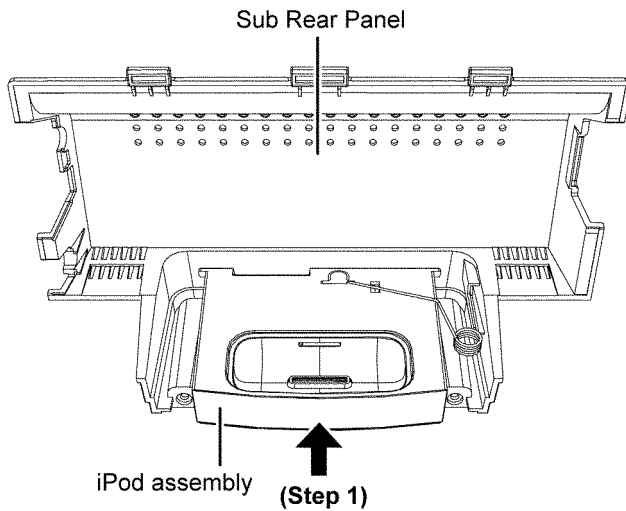


9.7. Disassembly of Docking Tub and Tub Cover

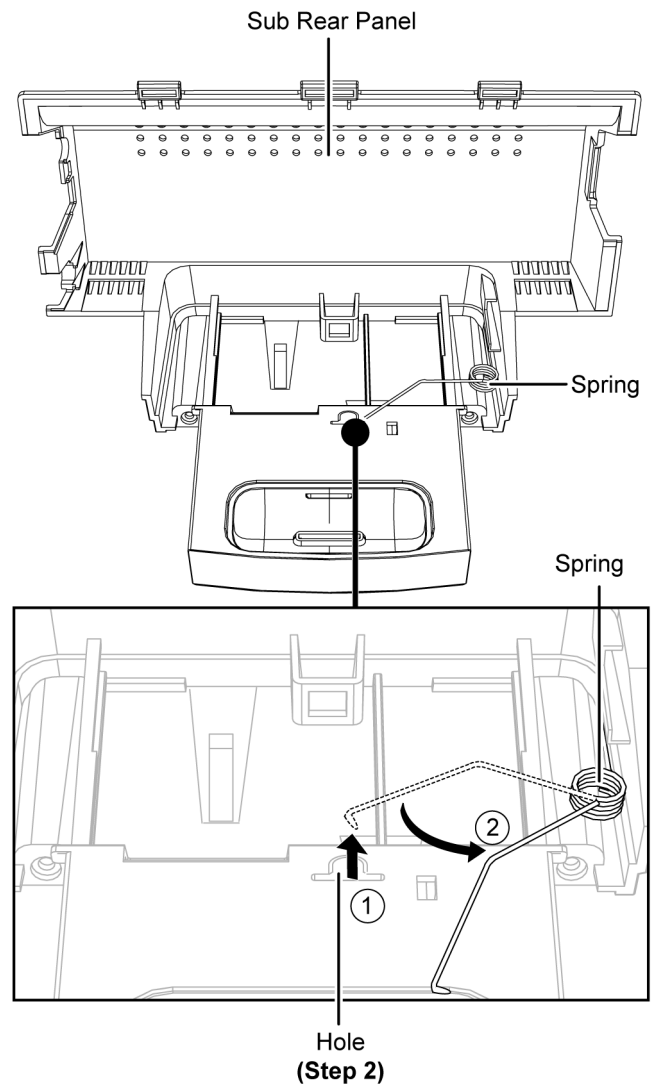
- Refer to "Disassembly of Stand Unit"
- Refer to "Disassembly of iPod/iPhone P.C.B."
- Refer to "Disassembly of Sub Rear Panel"

9.7.1. Disassembly of Docking Tub

Step 1 : Press to open the iPod assembly.

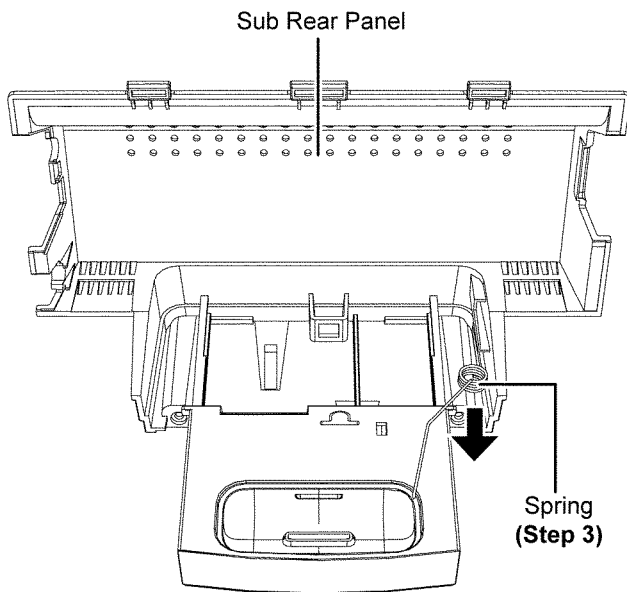


Step 2 : Release Spring from the docking tub hole as arrow shown.



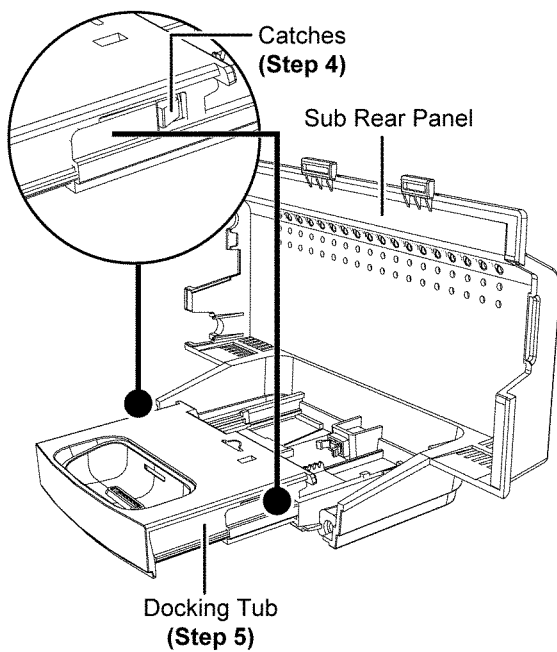
Step 3 : Remove Spring as arrow shown.

Caution : Keep springs in the safe place and place them back during assembling.



Step 4 : Release 2 catches.

Step 5 : Remove Docking Tub.

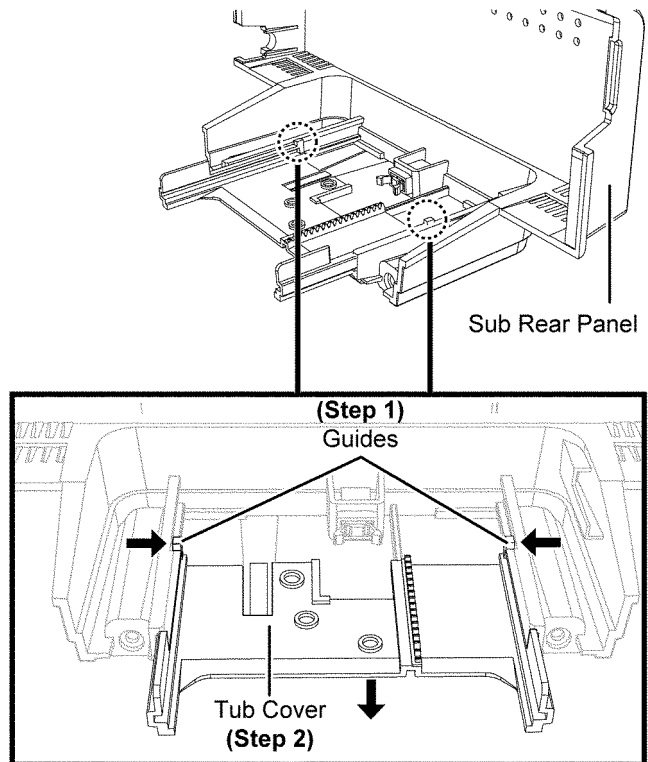


9.7.2. Disassembly of Tub Cover

- Refer to "Disassembly of Docking Tub"

Step 1 : Release 2 Guides.

Step 2 : Remove Tub Cover.

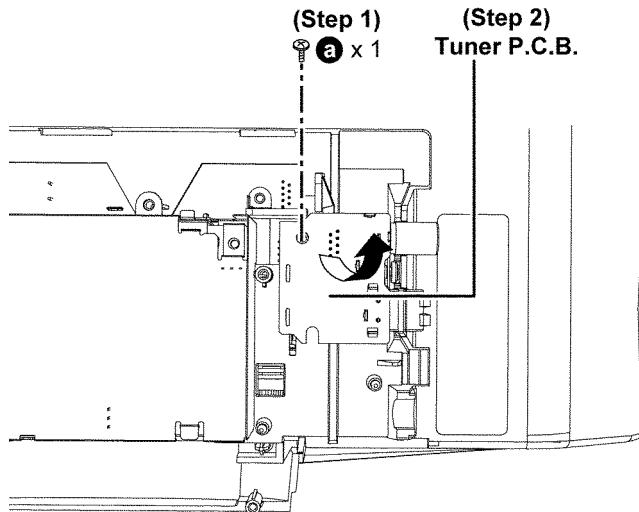


9.8. Disassembly of Tuner P.C.B.

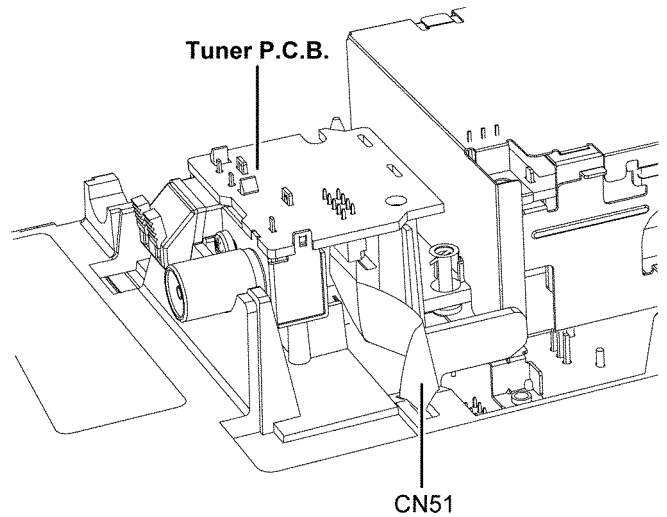
- Refer to "Disassembly of Stand Unit"
- Refer to "Disassembly of iPod/iPhone P.C.B."
- Refer to "Disassembly of Sub Rear Panel"

Step 1 : Remove 1 screw.

Step 2 : Lift & flip Tuner P.C.B..

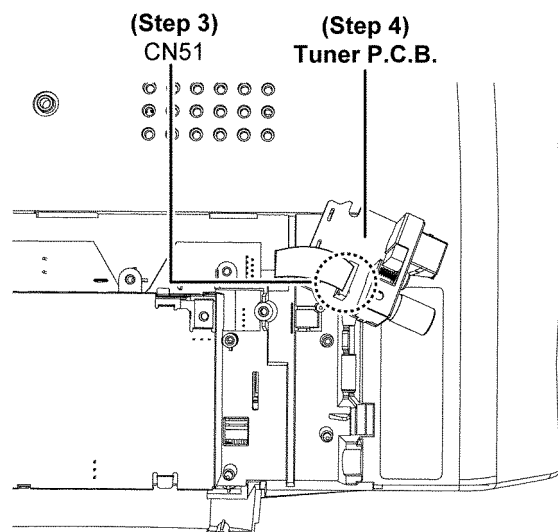


Caution : Ensure the 9P FFC (CN51) wire is dressed as diagram shown.



Step 3 : Detach 9P FFC at the connector (CN51) on Tuner P.C.B..

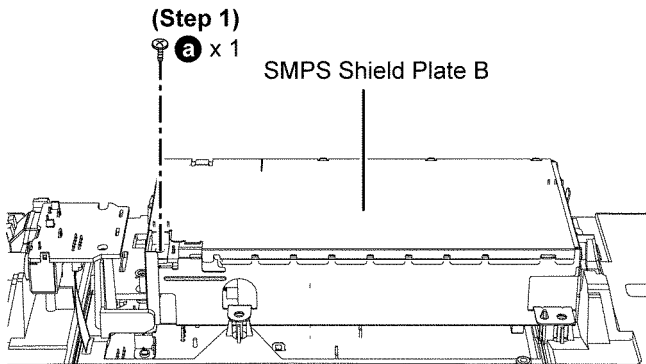
Step 4 : Remove Tuner P.C.B..



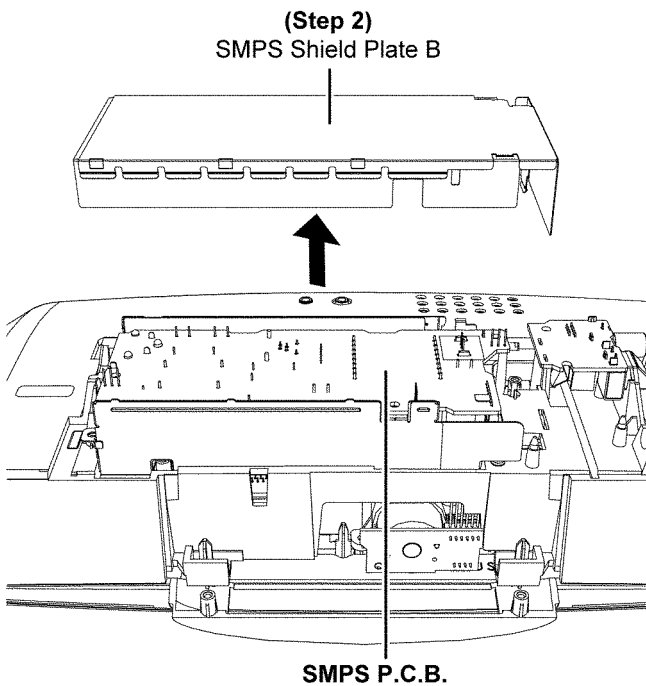
9.9. Disassembly of SMPS P.C.B.

- Refer to "Disassembly of Stand Unit"
- Refer to "Disassembly of iPod/iPhone P.C.B."
- Refer to "Disassembly of Sub Rear Panel"

Step 1 : Remove 1 screw.



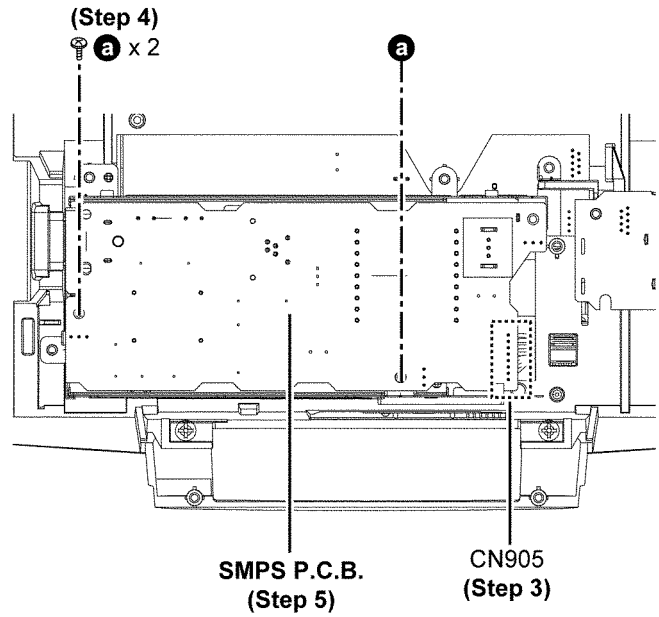
Step 2 : Remove SMPS Shield Plate B.



Step 3 : Desolder 8P cable at the connector (CN905) on the SMPS P.C.B..

Step 4 : Remove 2 screws.

Step 5 : Remove SMPS P.C.B..



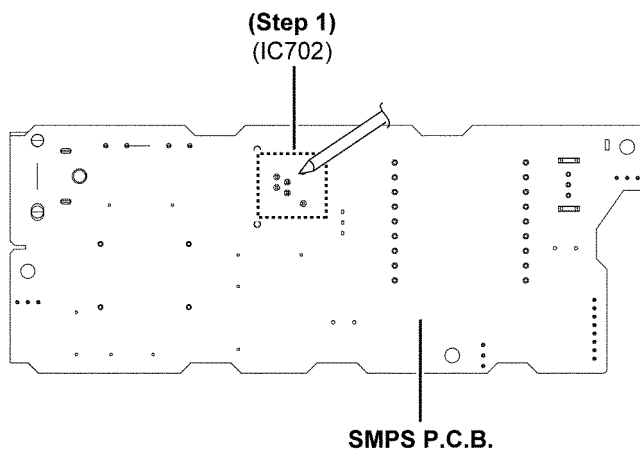
9.10. Replacement of Switching Regulator IC (IC702)

- Refer to "Disassembly of SMPS P.C.B."

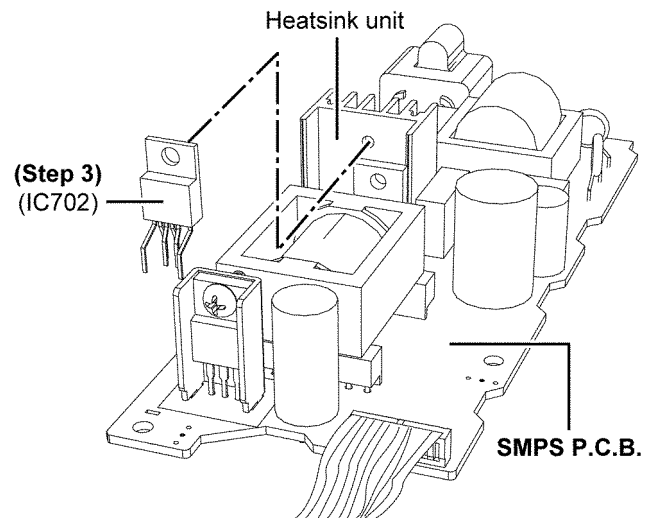
9.10.1. Disassembly of Switching Regulator IC (IC702)

Caution : Handle the heatsink unit and P.C.B. with caution due to its high temperature after prolonged use. Touching it may lead to injuries.

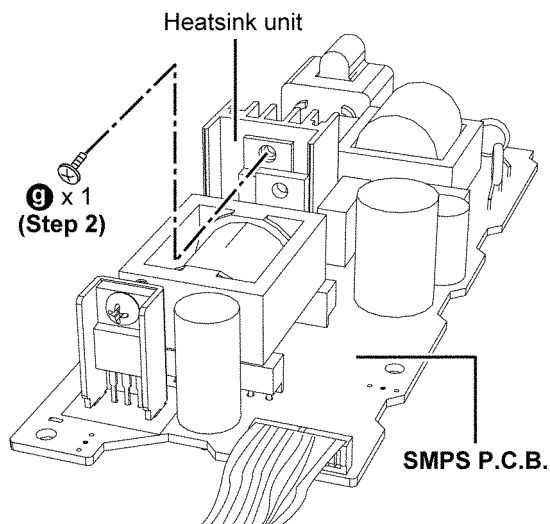
Step 1 : Desolder pins of the Switching Regulator IC (IC702) on the solder side of SMPS P.C.B..



Step 3 : Remove the Switching Regulator IC (IC702).



Step 2 : Remove 1 screw.



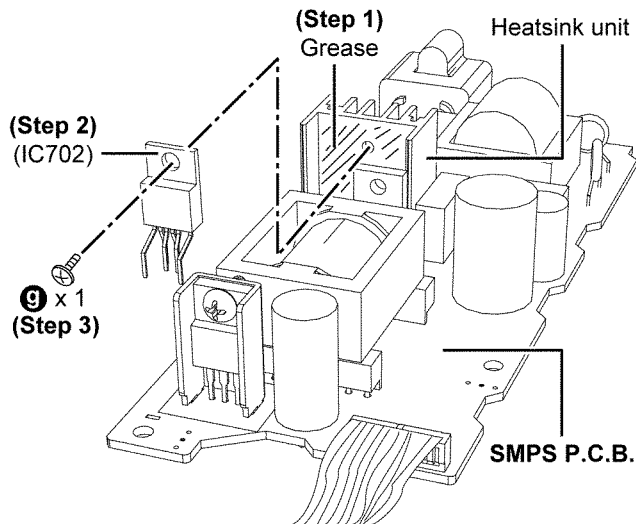
9.10.2. Assembly of Switching Regulator IC (IC702)

Step 1 : Apply grease to the heatsink unit.

Step 2 : Install the Switching Regulator IC (IC702) onto SMPS P.C.B.

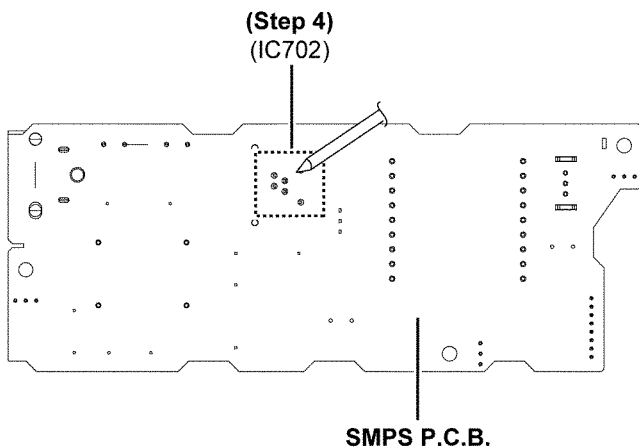
Step 3 : Fix the Switching Regulator IC (IC702) onto the heatsink unit with 1 screws.

Caution : Ensure the Switching Regulator IC (IC702) is fixed properly to the heatsink.



Step 4 : Solder pins of the Switching Regulator IC (IC702).

Caution : Ensure the Switching Regulator IC (IC702) is seated properly onto the SMPS P.C.B. before soldering



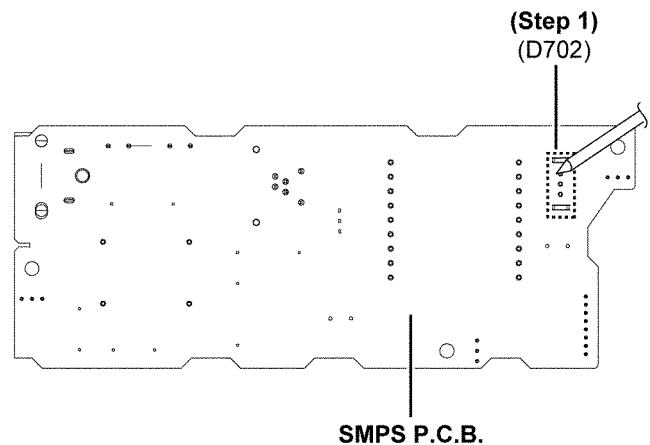
9.11. Replacement of Diode (D702)

• Refer to "Disassembly of SMPS P.C.B."

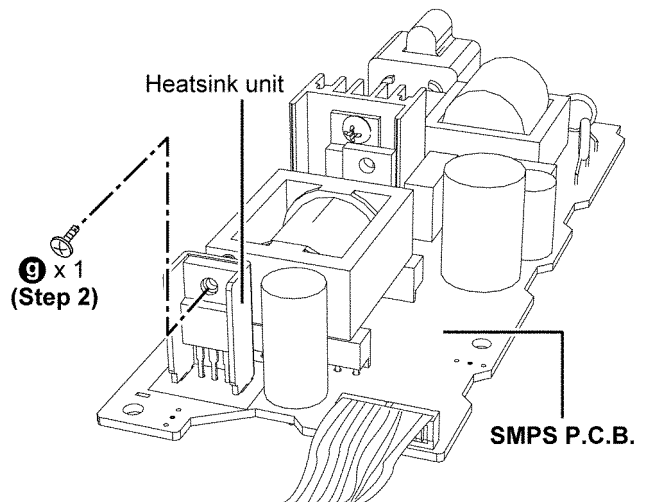
9.11.1. Disassembly of Diode (D702)

Caution : Handle the heatsink unit and P.C.B. with caution due to its high temperature after prolonged use. Touching it may lead to injuries.

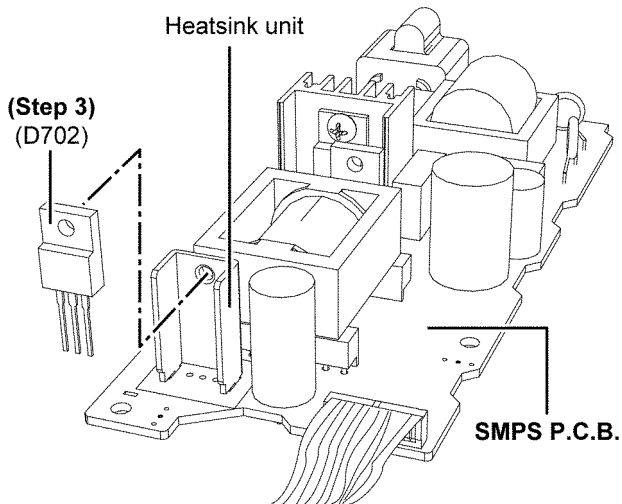
Step 1 : Desolder pins of the Diode (D702) on the solder side of SMPS P.C.B..



Step 2 : Remove 1 screw.



Step 3 : Remove the Diode (D702).



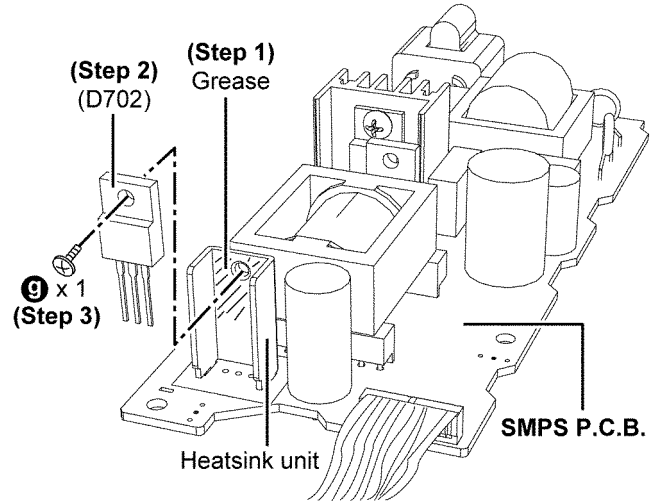
9.11.2. Assembly of Diode (D702)

Step 1 : Apply grease to the heatsink unit.

Step 2 : Install the Diode (D702) onto SMPS P.C.B..

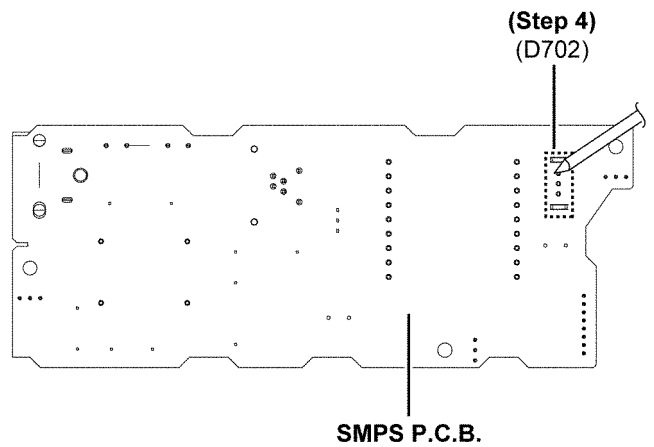
Step 3 : Fix the Diode (D702) onto the heatsink unit with 1 screws.

Caution : Ensure the Diode (D702) is fixed properly to the heatsink.



Step 4 : Solder pins of the Diode (D702).

Caution : Ensure the Diode (D702) is seated properly onto the SMPS P.C.B. before soldering

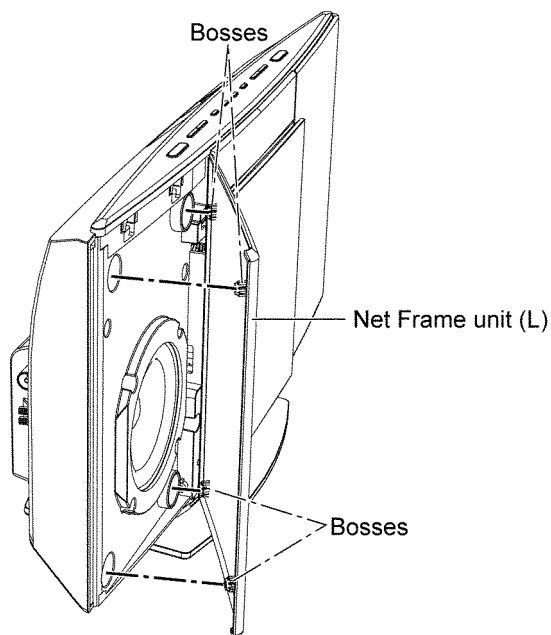
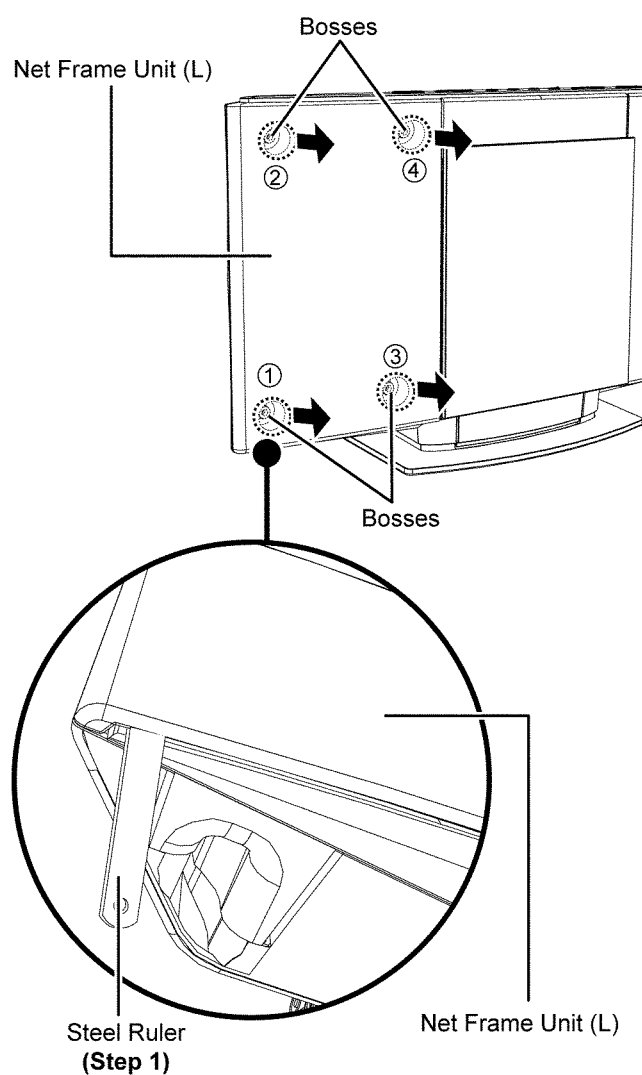


9.12. Disassembly of Net Frame Unit

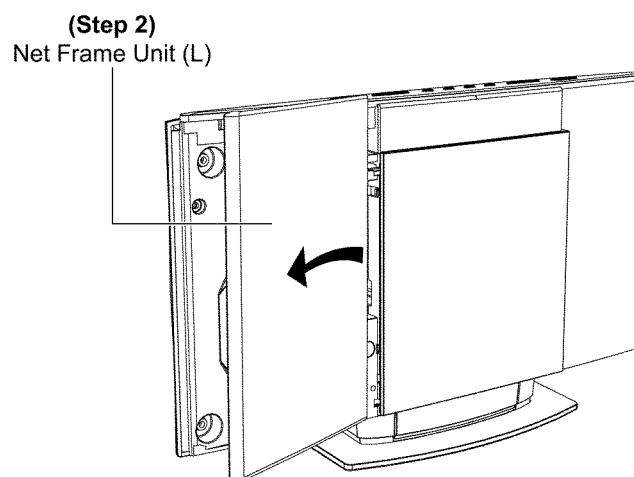
9.12.1. Disassembly of Net Frame unit (L)

Step 1 : Insert a steel rule in between the Net Frame Unit (L) gently to release the 4 bosses in order as arrows shown.

Caution : During assembling of Net Frame Unit (L), ensure it is fixed properly.

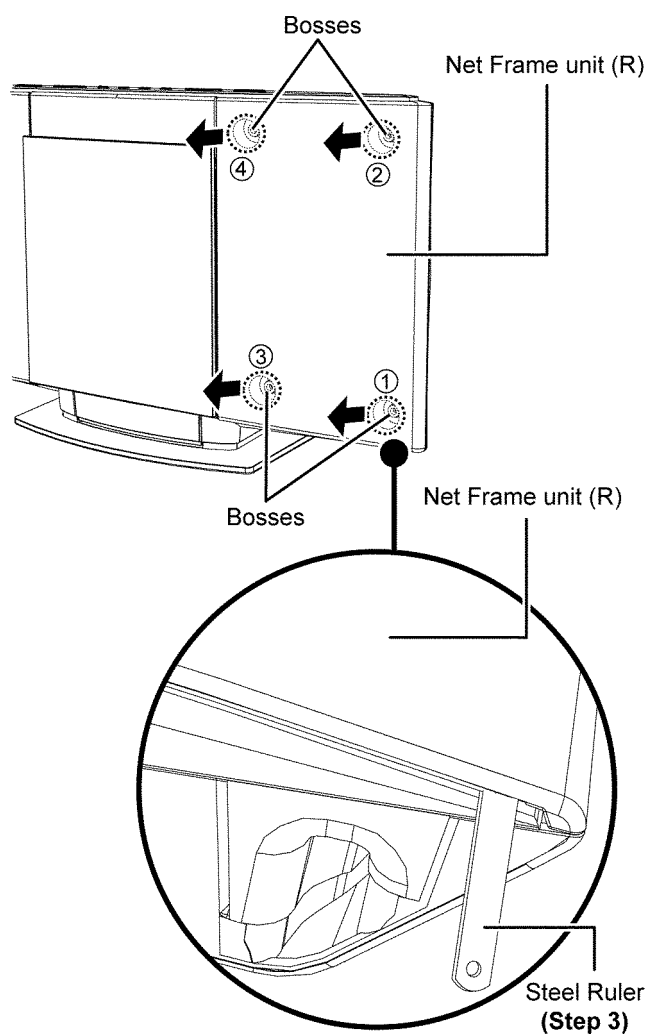


Step 2 : Remove Net Frame Unit (L) as arrow shown.

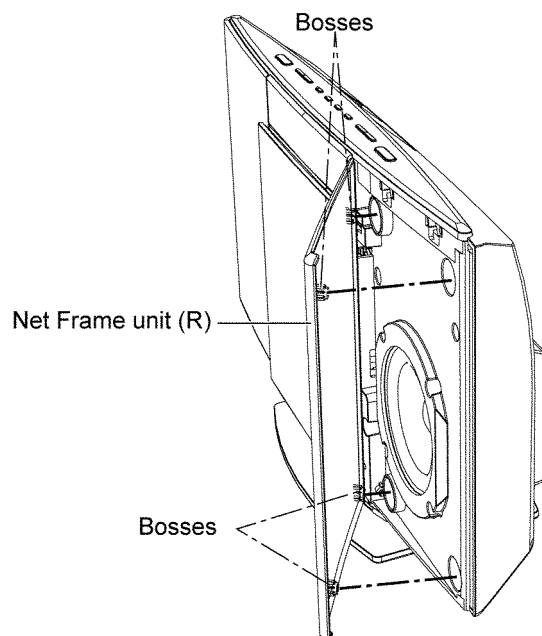


9.12.2. Disassembly of Net Frame unit (R)

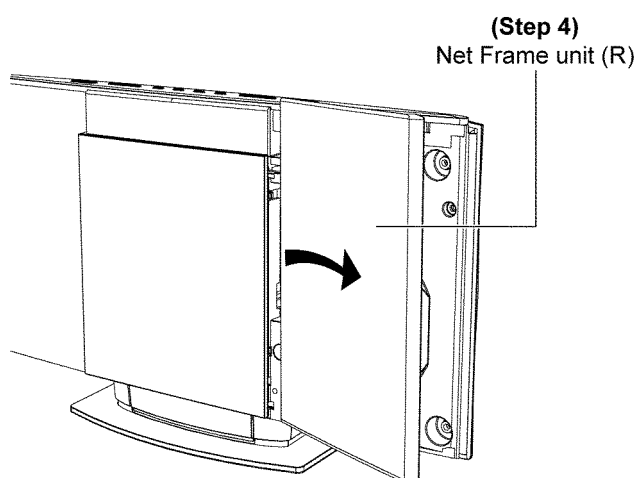
Step 3 : Insert a steel rule in between the Net Frame Unit (R) gently to release the 4 bosses in order as arrows shown.



Caution : During assembling of Net Frame Unit (R), ensure it is fixed properly.



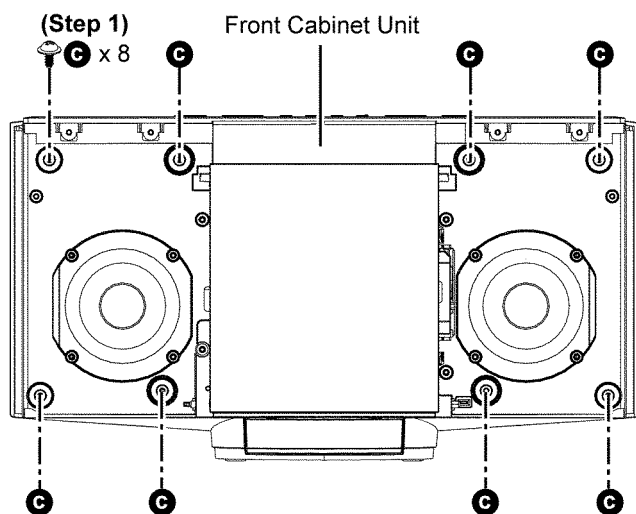
Step 4 : Remove Net Frame Unit (R) as arrow shown.



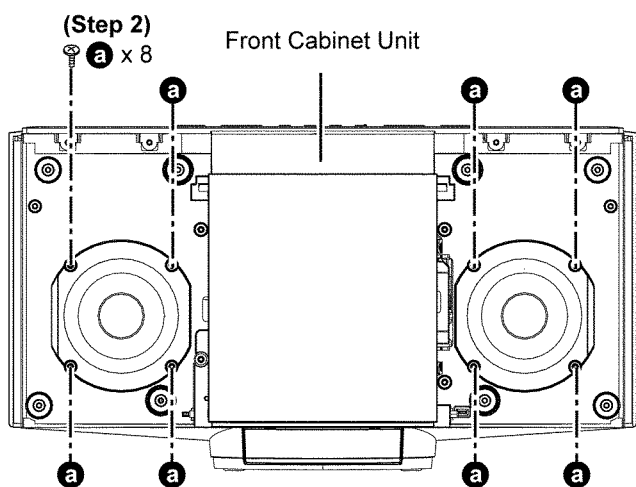
9.13. Disassembly of Front Cabinet unit

- Refer to "Disassembly of Stand Unit"
- Refer to "Disassembly of Net Frame Unit"

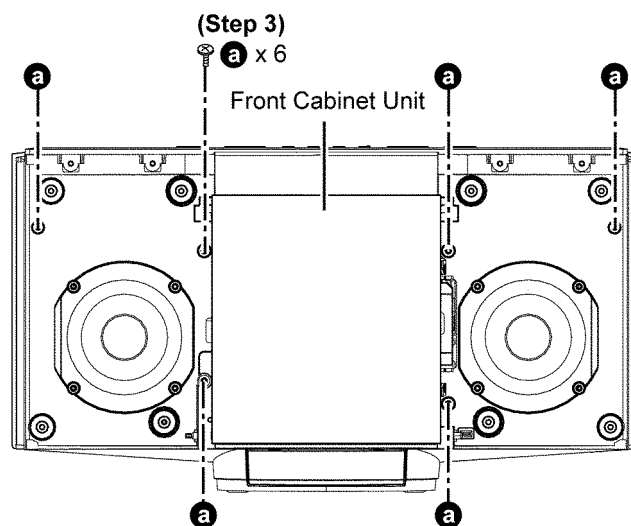
Step 1 : Remove 8 screws.



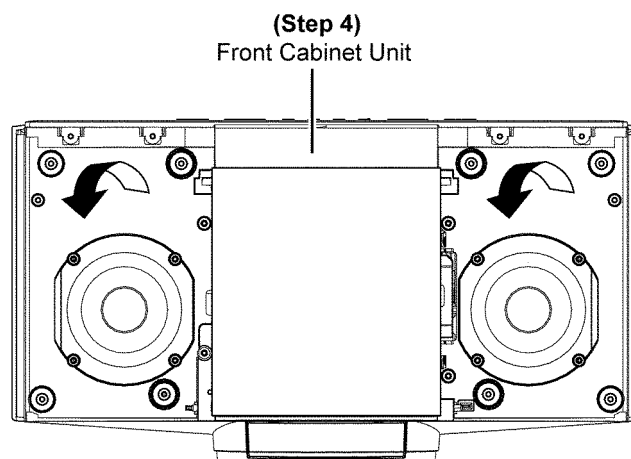
Step 2 : Remove 8 screws.



Step 3 : Remove 6 screws.

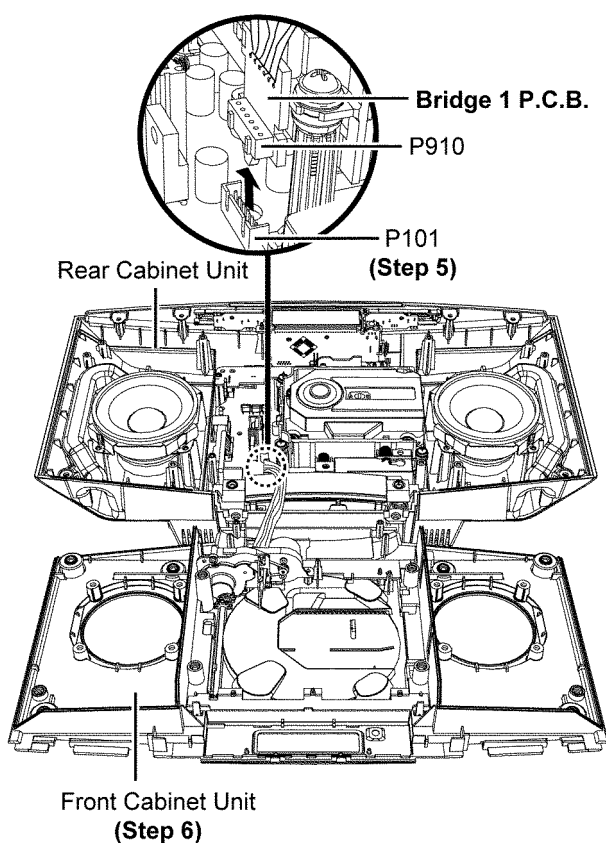


Step 4 : Lift up the Front Cabinet Unit as arrow shown.



Step 5 : Detach 6P wire at the connector (P101) on Main P.C.B..

Step 6 : Remove Front Cabinet Unit.

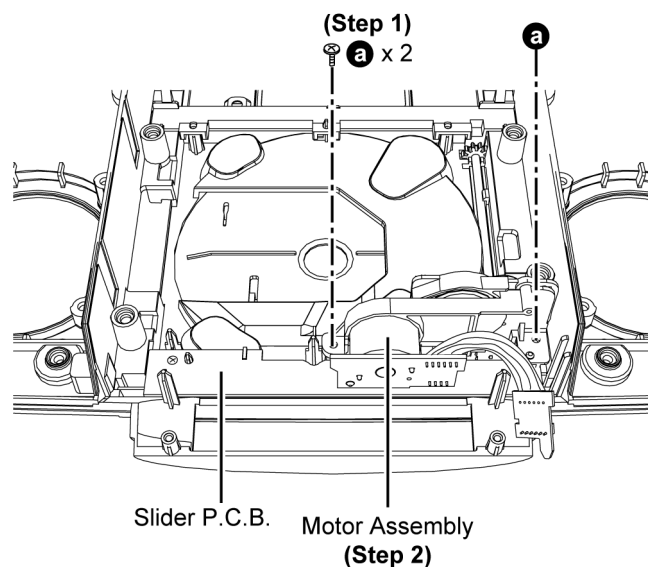


9.14. Disassembly of Motor P.C.B., Bridge 1 P.C.B. & Position Switch P.C.B.

- Refer to "Disassembly of Stand Unit"
- Refer to "Disassembly of Net Frame Unit"
- Refer to "Disassembly of Front Cabinet unit"

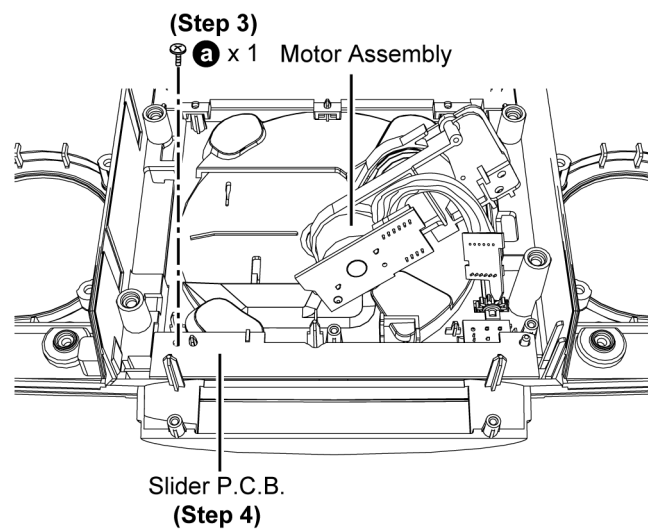
Step 1 : Remove 2 screws.

Step 2 : Lift up Motor Assembly.



Step 3 : Remove 1 screw.

Step 4 : Remove Slider P.C.B..

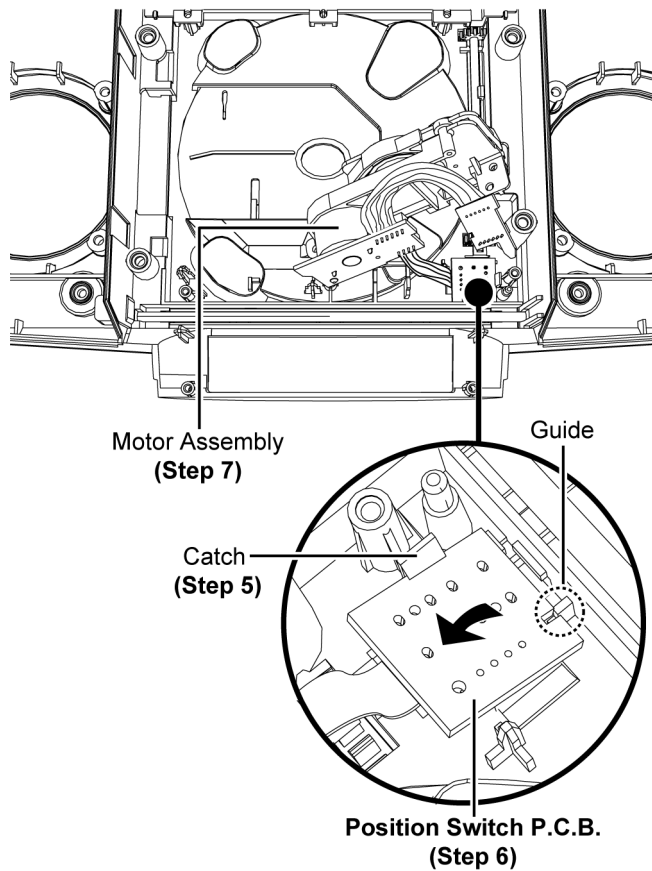


Step 5 : Release 1 catch.

Step 6 : Remove Position Switch P.C.B. as arrow shown.

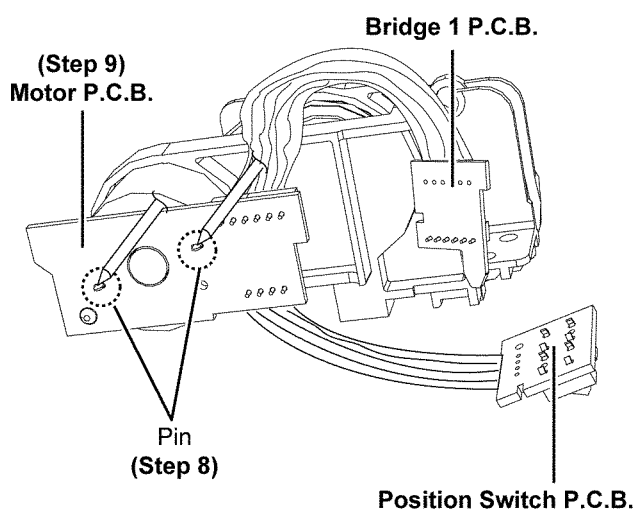
Step 7 : Remove Motor Assembly.

Caution : During assembling of Position Switch P.C.B., ensure the P.C.B. is slot into the guide first. A "Click" sound will be heard when fully caught.



Step 8 : Desolder pin on the solder side of Motor P.C.B..

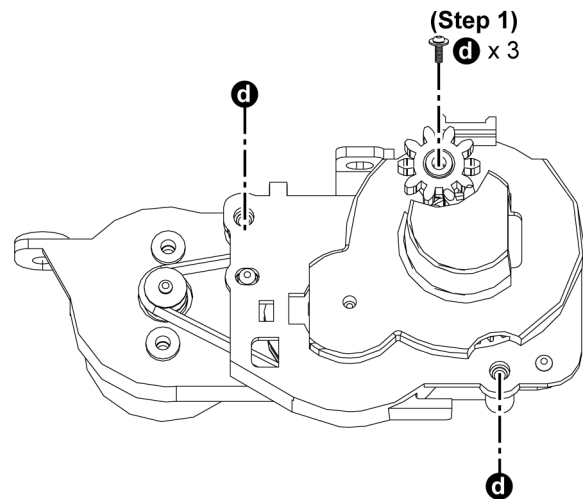
Step 9 : Remove Motor P.C.B., Bridge 1 P.C.B. & Position Switch P.C.B. altogether.



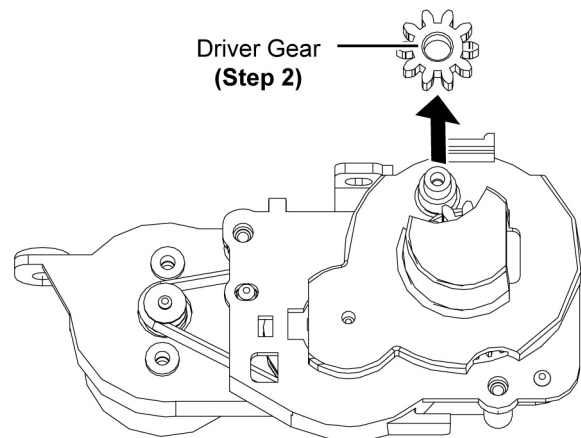
9.15. Disassembly of Motor Assembly

- Refer to "Disassembly of Motor P.C.B., Bridge 1 P.C.B. & Position Switch P.C.B."

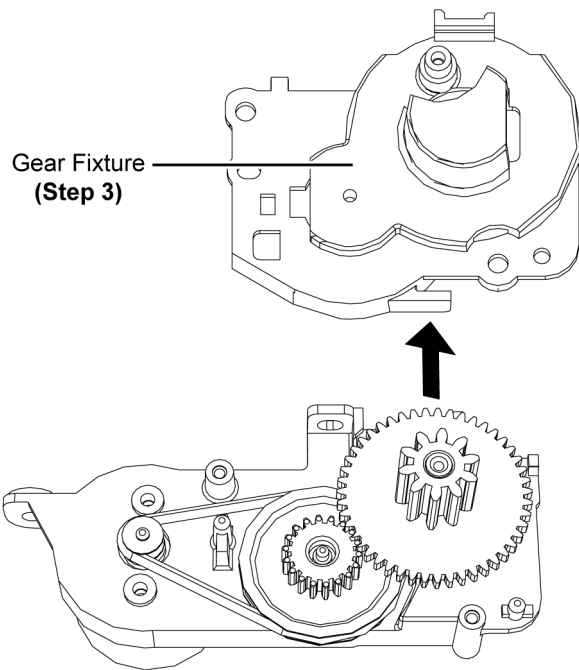
Step 1 : Remove 3 screws.



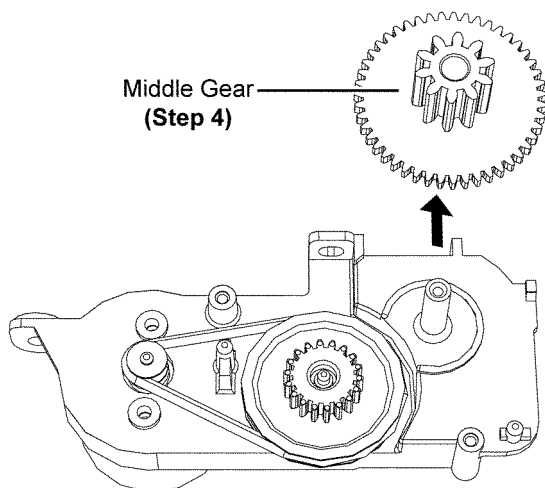
Step 2 : Remove Driver Gear.



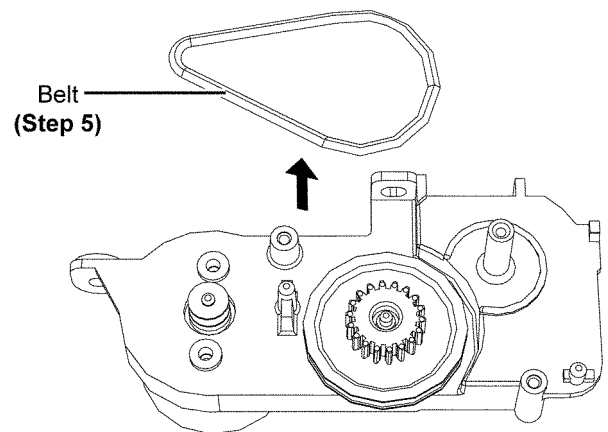
Step 3 : Remove Gear Fixture.



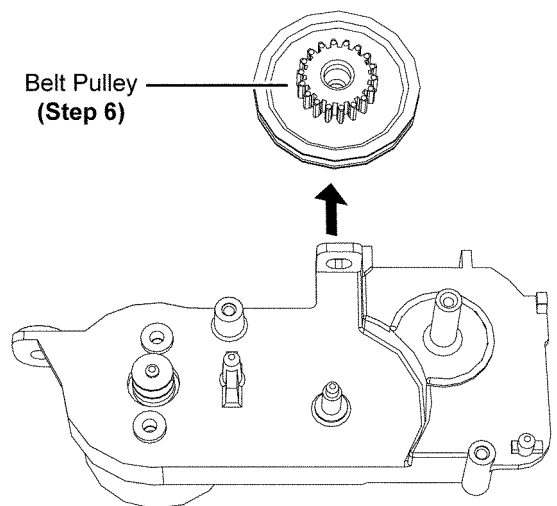
Step 4 : Remove Middle Gear.



Step 5 : Remove Belt.

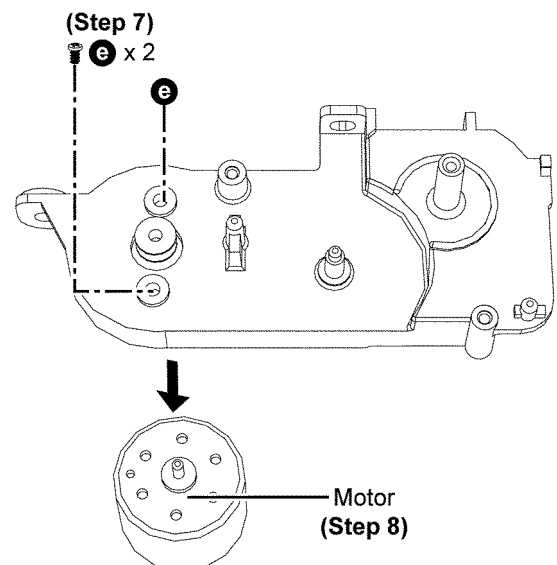


Step 6 : Remove Belt Pulley.



Step 7 : Remove 2 screws.

Step 8 : Remove Motor.



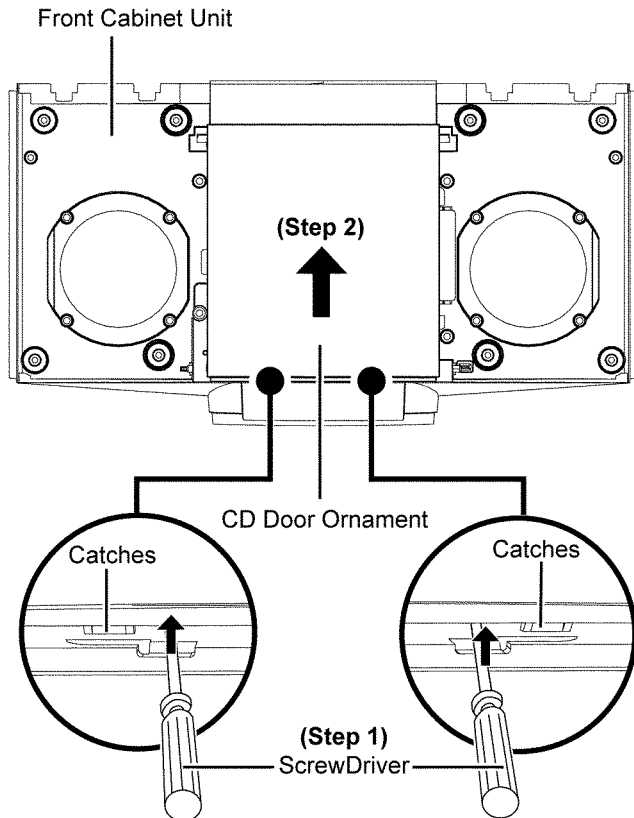
9.16. Replacement of CD Door Ornament

- Refer to "Disassembly of Stand Unit"
- Refer to "Disassembly of Net Frame Unit"
- Refer to "Disassembly of Front Cabinet unit"
- Refer to (Step 1) - (Step 7) of item 9.14.

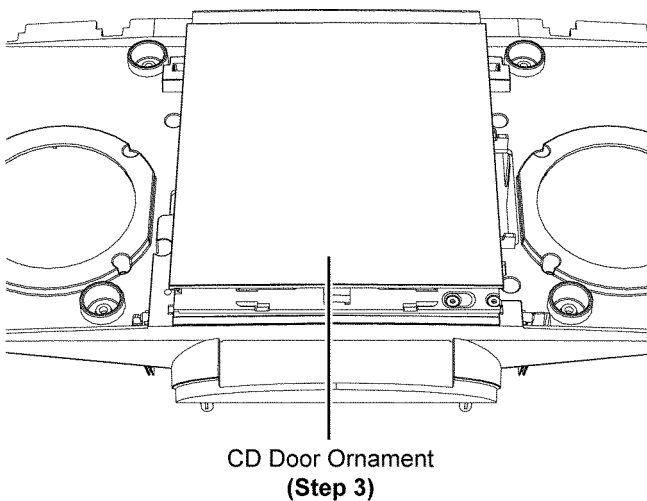
9.16.1. Disassembly of CD Door Ornament

Step 1 : Slightly push up the CD Door Ornament as arrow shown using a screwdriver to releasing both catches.

Step 2 : Push the CD Door Ornament upwards.



Step 3 : Lift up to remove CD Door Ornament.

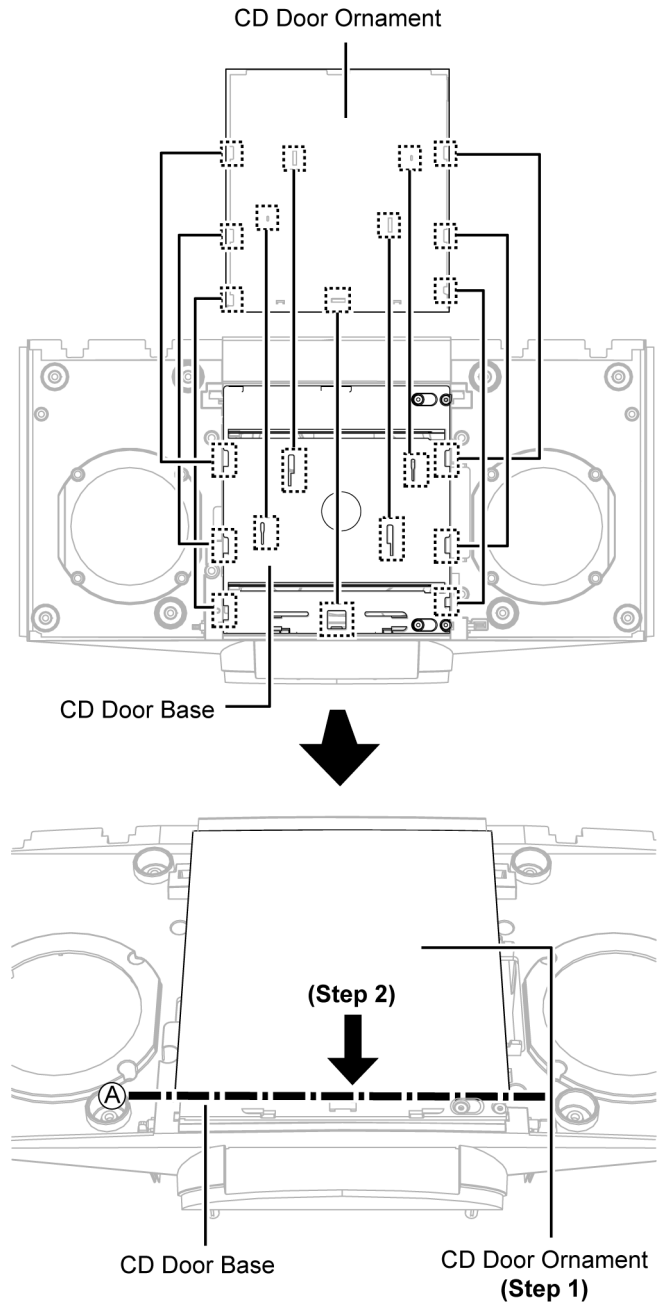


9.16.2. Assembly of CD Door Ornament

Step 1 : Align the CD Door Ornament onto the CD Door Base with the bottom end positioned at the dotted line (A).

Step 2 : Push down CD Door Ornament to Fix it.

Caution : During assembling, ensure a "click" sound is heard when the CD Door Ornament is fully caught.

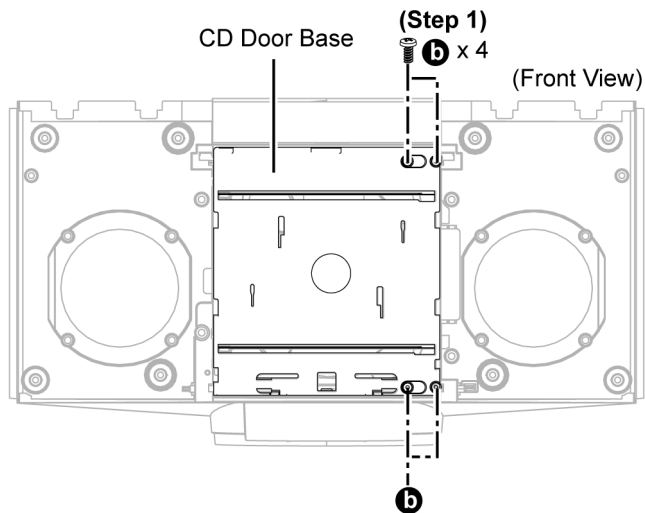


9.17. Replacement of CD Door Base

- Refer to "Disassembly of Stand Unit"
- Refer to "Disassembly of Net Frame Unit"
- Refer to "Disassembly of Front Cabinet unit"
- Refer to (Step 1) - (Step 7) of item 9.14.
- Refer to "Replacement of CD Door Ornament"

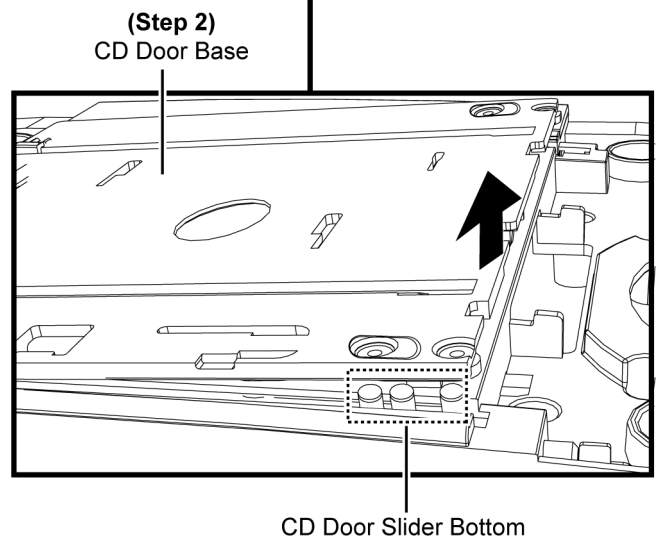
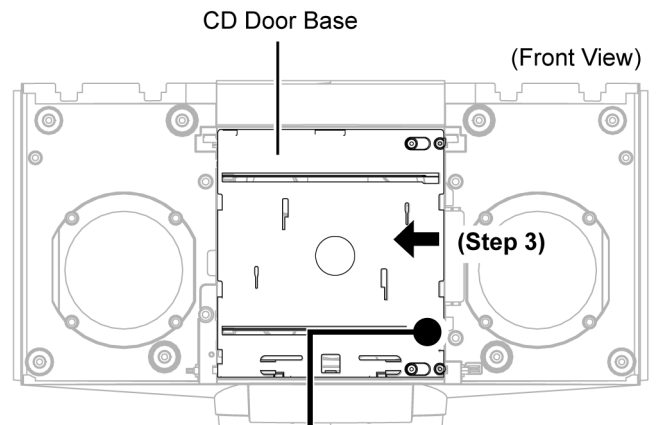
9.17.1. Disassembly of CD Door Base

Step 1 : Remove 4 screws.



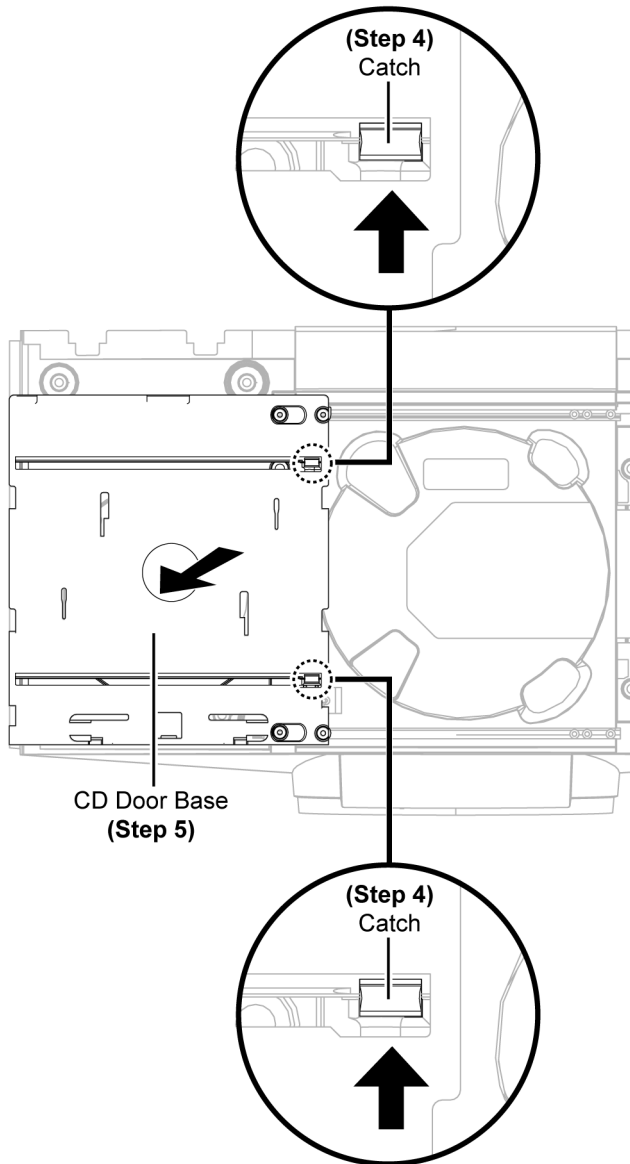
Step 2 : Slightly lift up the CD Door Base.

Step 3 : Slide the CD Door Base towards to the left.



Step 4 : Push the CD Door Base upwards.

Step 5 : Lift up and remove the CD Door Base.

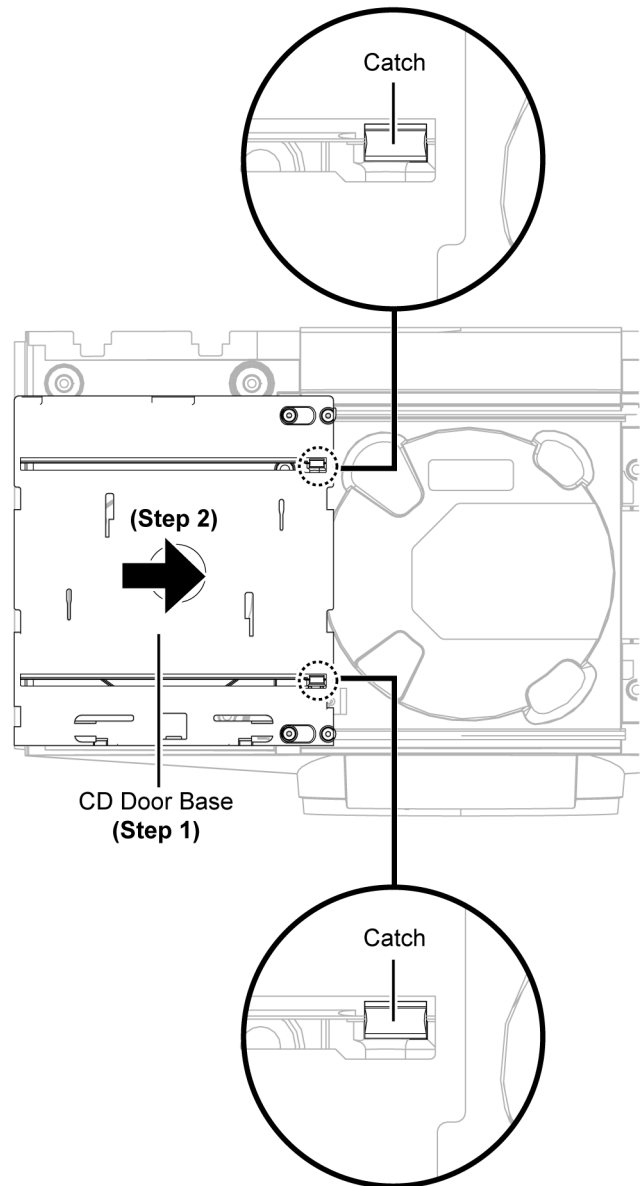


9.17.2. Assembly of CD Door Base

Caution : Ensure that the 2 catch are inserted into the respective slots of CD Door Base.

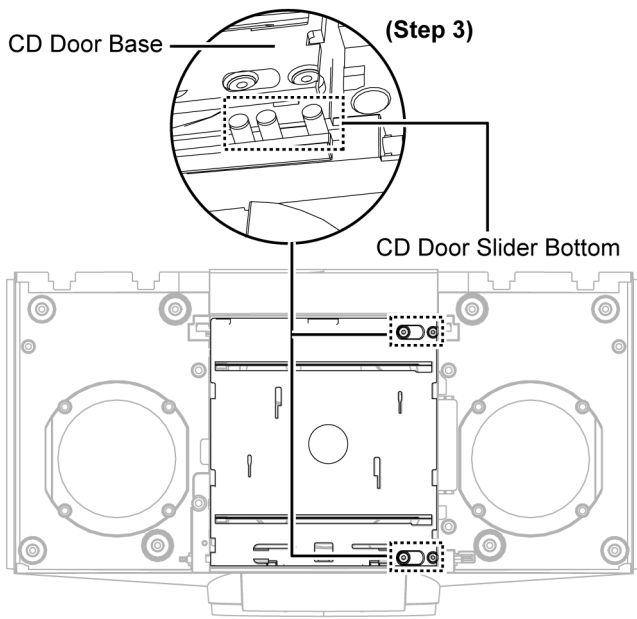
Step 1 : Place the CD Door Base onto Front Cabinet.

Step 2 : Slide CD Door Base as arrow shown.

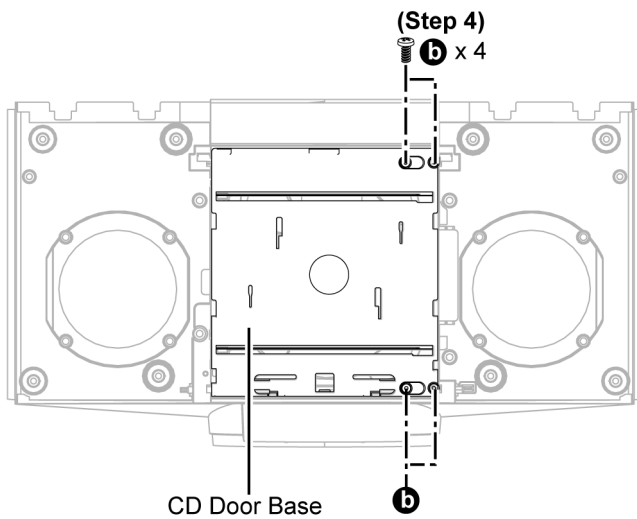


Step 3 : Place CD Door Base Onto the CD Door Slider Bottom as diagram shown.

Caution : During assembling, ensure CD Door Base is properly seated onto the CD Door Slider Bottom.



Step 4 : Fix 4 screws.



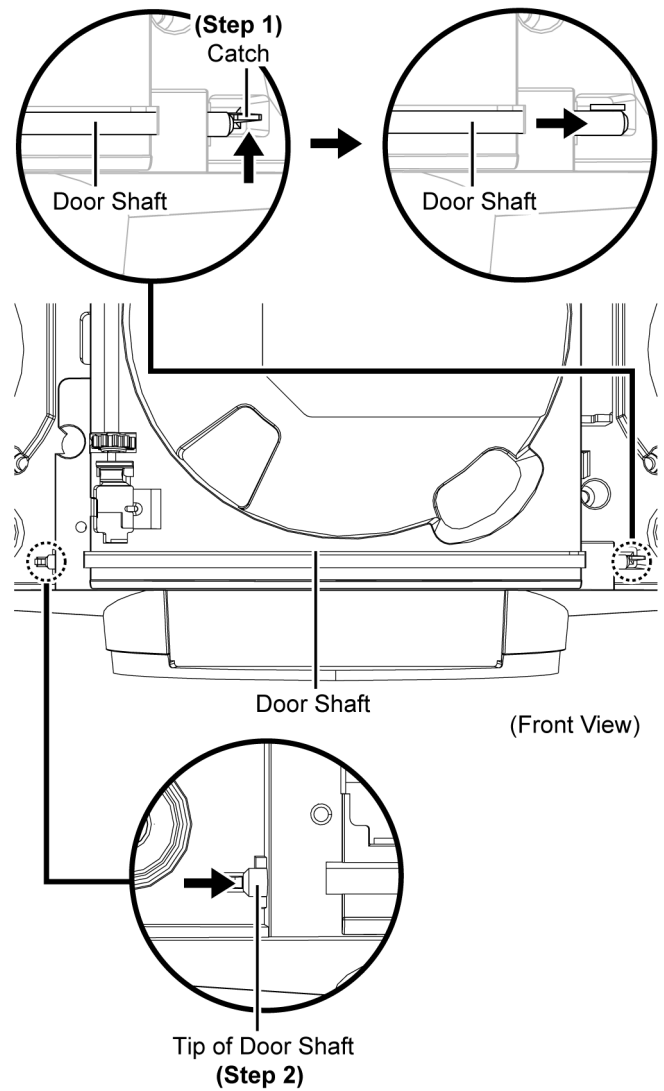
9.18. Replacement of Door Shaft & CD Door Slider Bottom

- Refer to "Disassembly of Stand Unit"
- Refer to "Disassembly of Net Frame Unit"
- Refer to "Disassembly of Front Cabinet unit"
- Refer to (Step 1) - (Step 7) of item 9.14.
- Refer to "Replacement of CD Door Ornament"
- Refer to "Replacement of CD Door Base"

9.18.1. Disassembly of Door Shaft & CD Door Slider Bottom

Step 1 : Push catch.

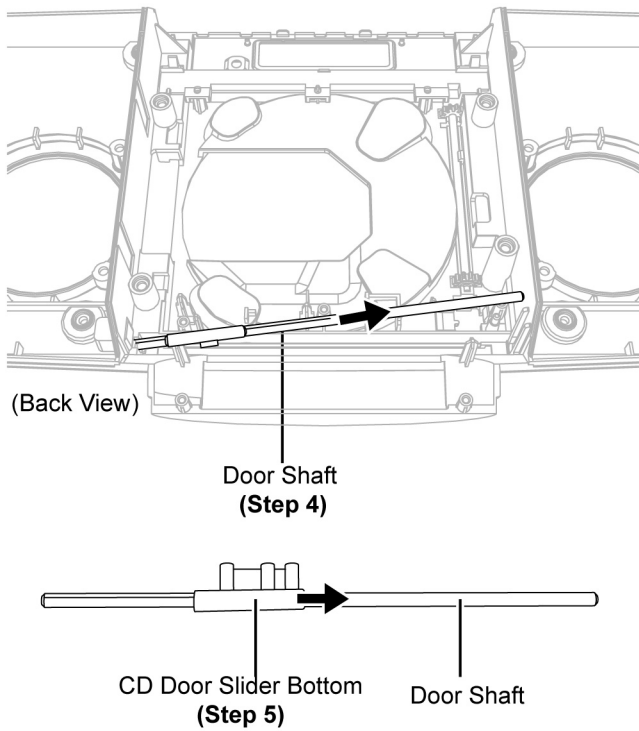
Step 2 : Push the Tip of the Door Shaft as arrow shown.



Step 3 : Upset the Front Cabinet Unit.

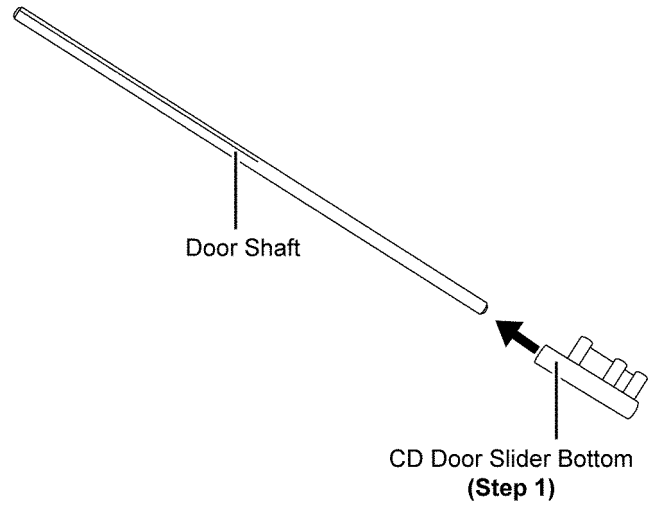
Step 4 : Remove Door Shaft.

Step 5 : Remove CD Door Slider Bottom.

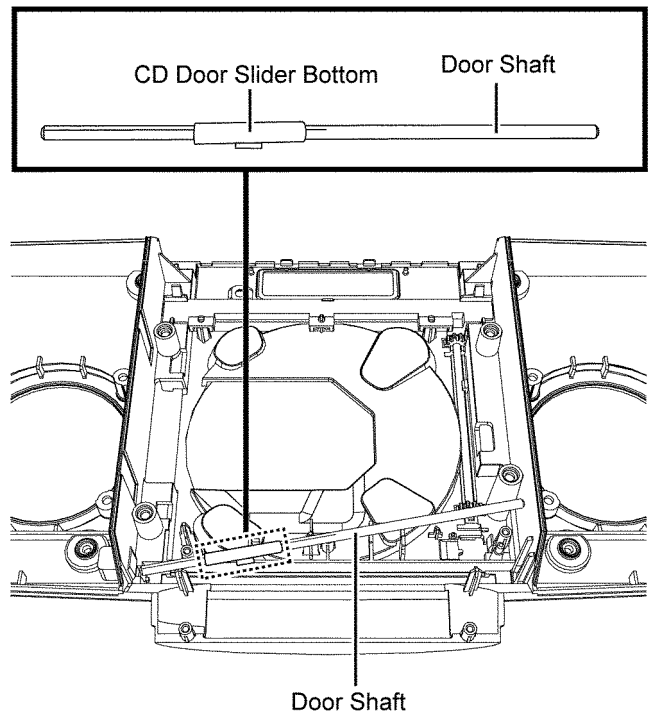


9.18.2. Assembly of Door Shaft & CD Door Slider Bottom

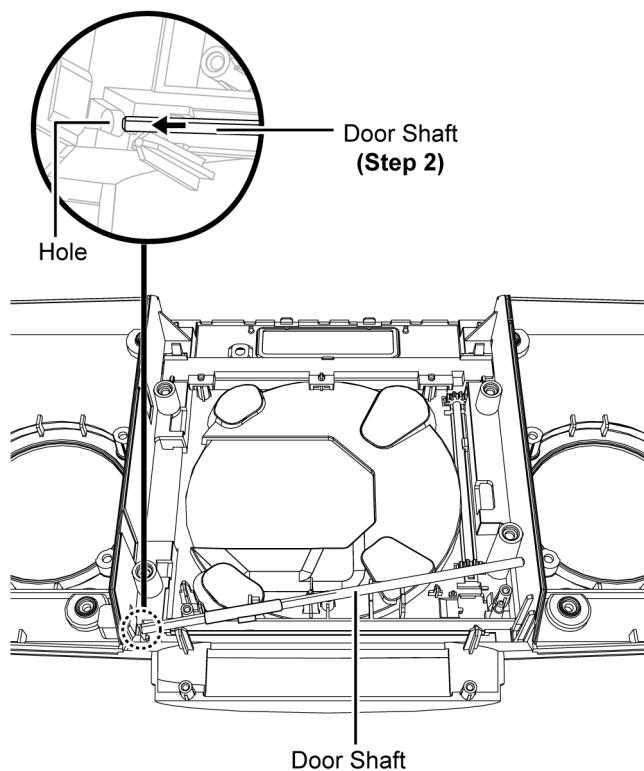
Step 1 : Slot the CD Door Slider Bottom thru the Door Shaft.



Caution : During assembling, ensure CD Door Slider Bottom is turned downwards as diagram show.



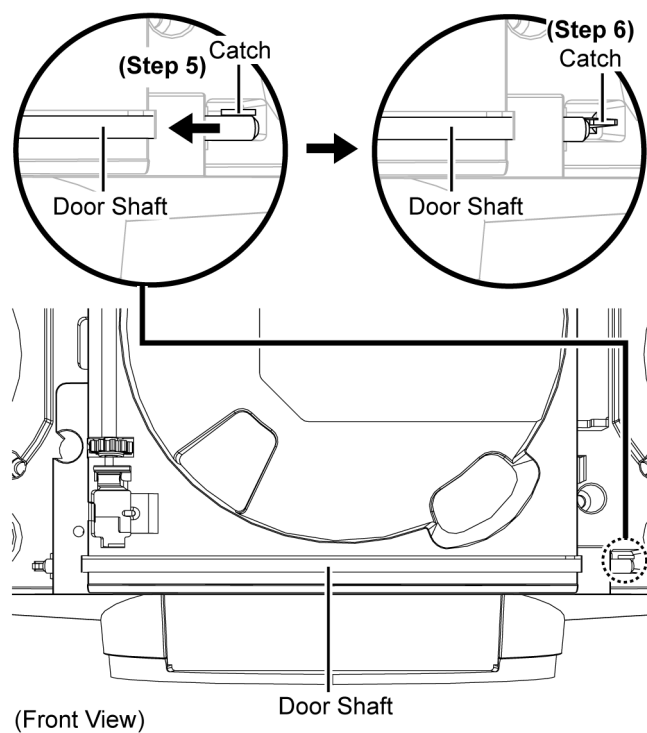
Step 2 : Slot in the one end of the Door Shaft into the hole as shown in the diagram above.



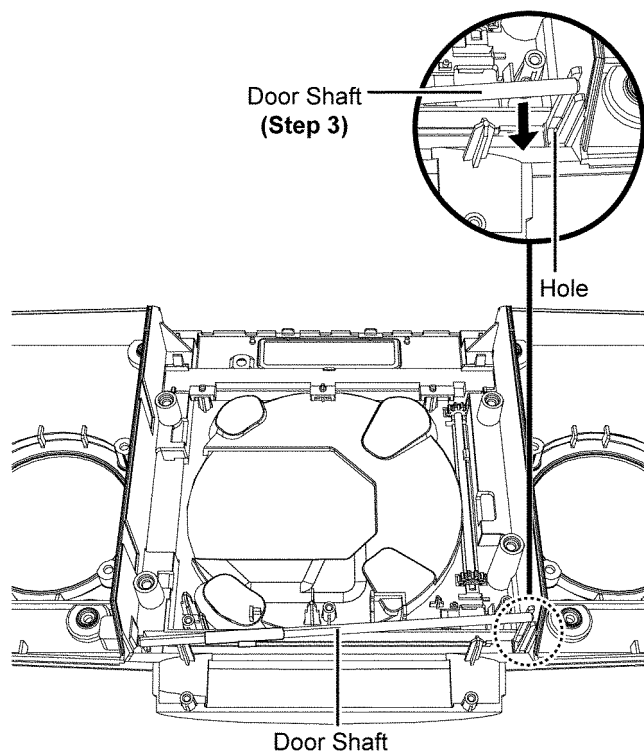
Step 4 : Upset the Front Cabinet Unit.

Step 5 : Push the Door Shaft as arrow shown.

Step 6 : Make sure that the Door Shaft is fixed by the Catch.



Step 3 : Push the Door Shaft downwards and slot it into the hole.



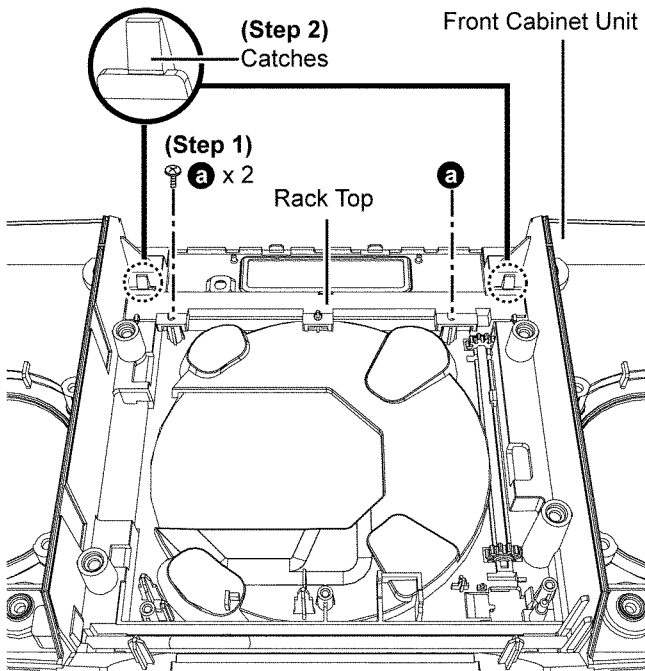
9.19. Replacement of Rack Top, Slider Top & Timing Gear Shaft

- Refer to "Disassembly of Stand Unit"
- Refer to "Disassembly of Net Frame Unit"
- Refer to "Disassembly of Front Cabinet unit"
- Refer to (Step 1) - (Step 7) of item 9.14.
- Refer to "Replacement of CD Door Ornament"
- Refer to "Replacement of CD Door Base"

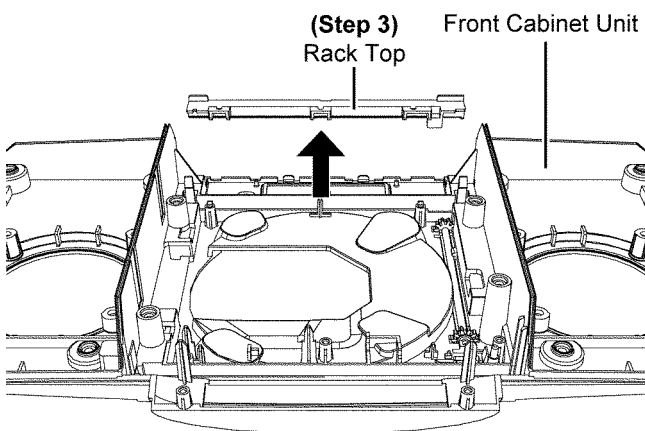
9.19.1. Disassembly of Rack Top & Slider Top

Step 1 : Remove 2 screw.

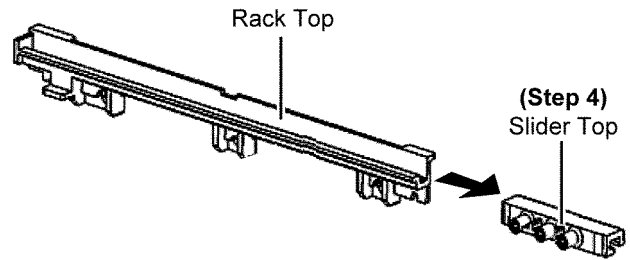
Step 2 : Release 2 catches.



Step 3 : Remove Rack Top.

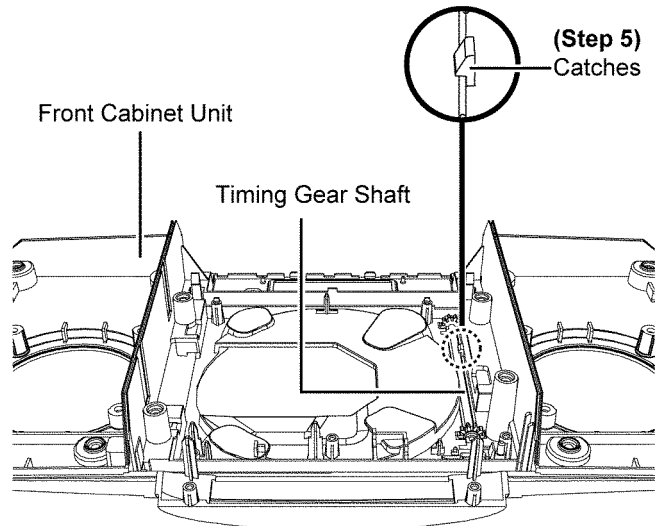


Step 4 : Remove the Slider Top.

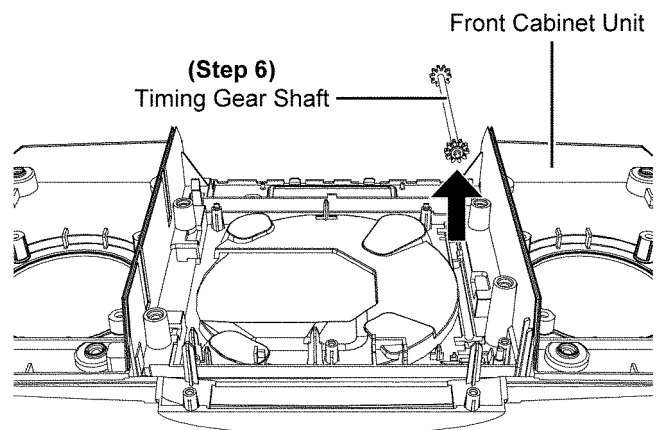


9.19.2. Disassembly of Timing Gear Shaft

Step 5 : Release 1 catch.



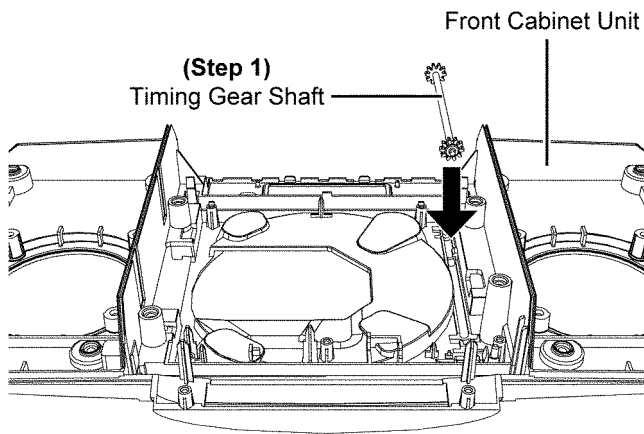
Step 6 : Remove Timing Gear Shaft.



9.19.3. Assembly of Timing Gear Shaft

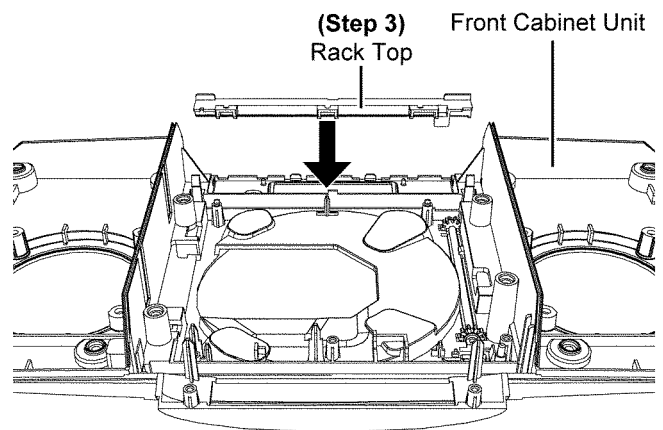
Step 1 : Fix Timing Gear Shaft.

Caution : During assembling, ensure that the Timing Gear Shaft is properly inserted & seated onto the Front Cabinet Unit.

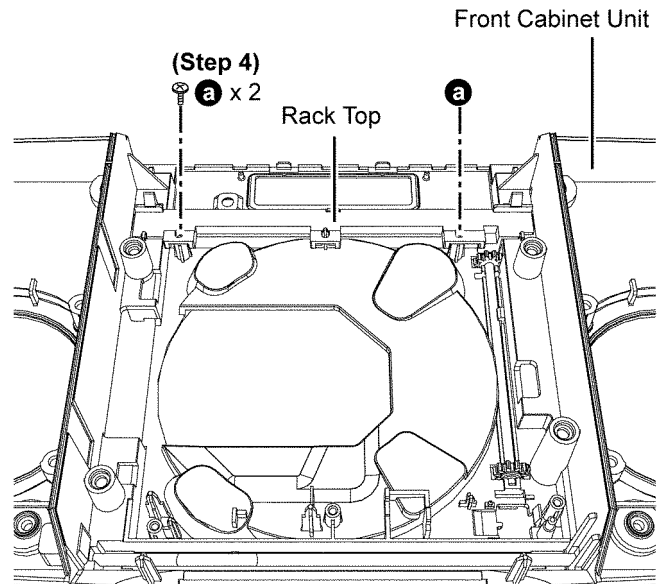


Step 3 : Fix Rack Top.

Caution : During assembling, ensure that the Rack Top is properly inserted & seated onto the Front Cabinet Unit.

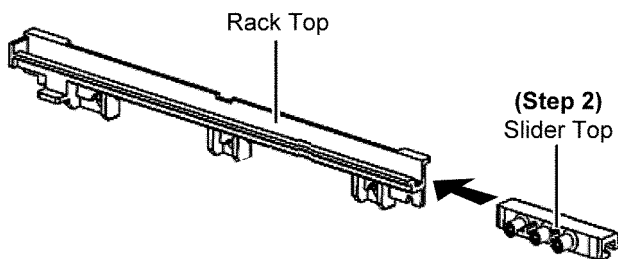


Step 4 : Fix 2 screw.



9.19.4. Assembly of Rack Top & Slider Top

Step 2 : Slide in the Slider Top.



9.20. Disassembly of Speaker unit

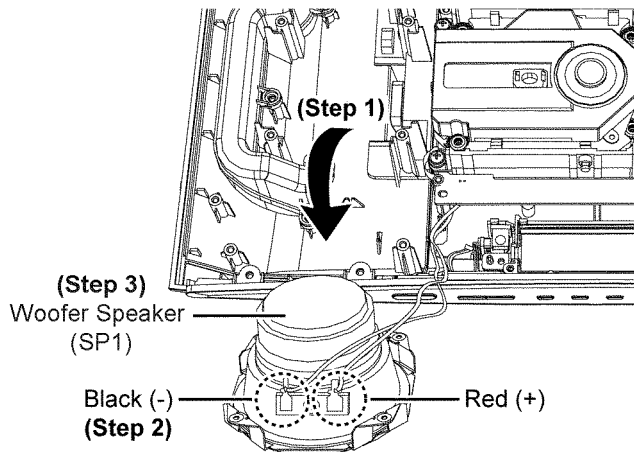
- Refer to "Disassembly of Stand Unit"
- Refer to "Disassembly of iPod/iPhone P.C.B."
- Refer to "Disassembly of Net Frame Unit"
- Refer to "Disassembly of Front Cabinet unit"

9.20.1. Disassembly of Woofer Speaker (SP1)

Step 1 : Lift up the woofer speaker (SP1).

Step 2 : Desolder the red (+) and black (-) speaker wires.

Step 3 : Remove Woofer Speaker (SP1).

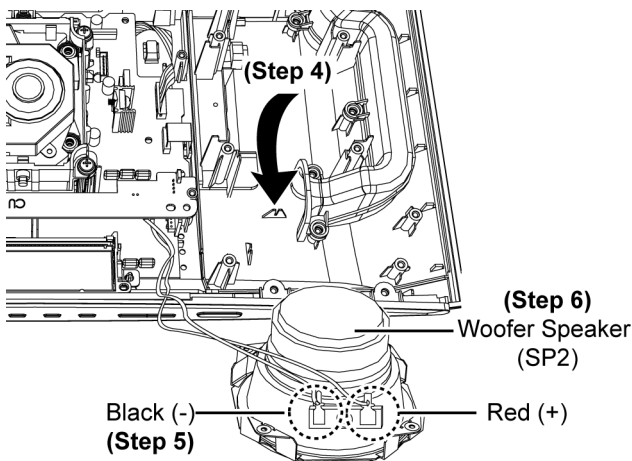


9.20.2. Disassembly of Woofer Speaker (SP2)

Step 4 : Lift up the woofer speaker (SP2).

Step 5 : Desolder the red (+) and black (-) speaker wires.

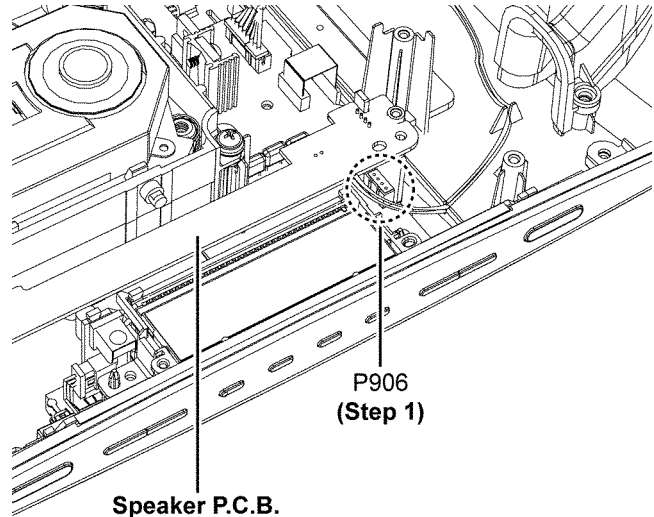
Step 6 : Remove Woofer Speaker (SP2).



9.21. Disassembly of Speaker P.C.B. & Bridge 2 P.C.B.

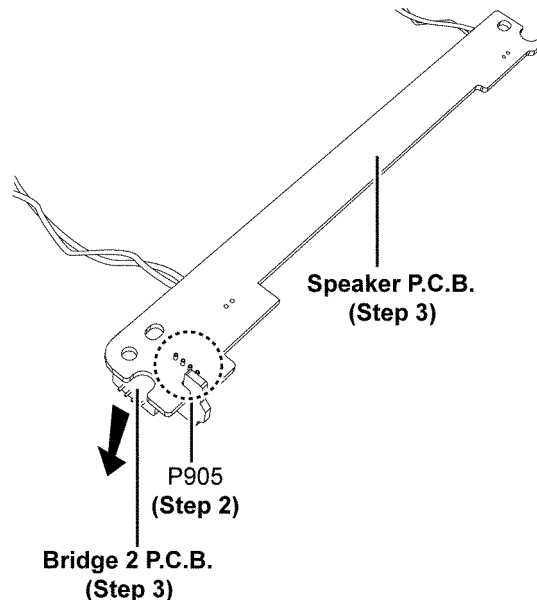
- Refer to "Disassembly of Stand Unit"
- Refer to "Disassembly of iPod/iPhone P.C.B."
- Refer to "Disassembly of Net Frame Unit"
- Refer to "Disassembly of Front Cabinet unit"
- Refer to (Step 2) & (Step 5) of item 9.20.

Step 1 : Detach 4P connector (P906) at the connector (P2) on Main P.C.B..

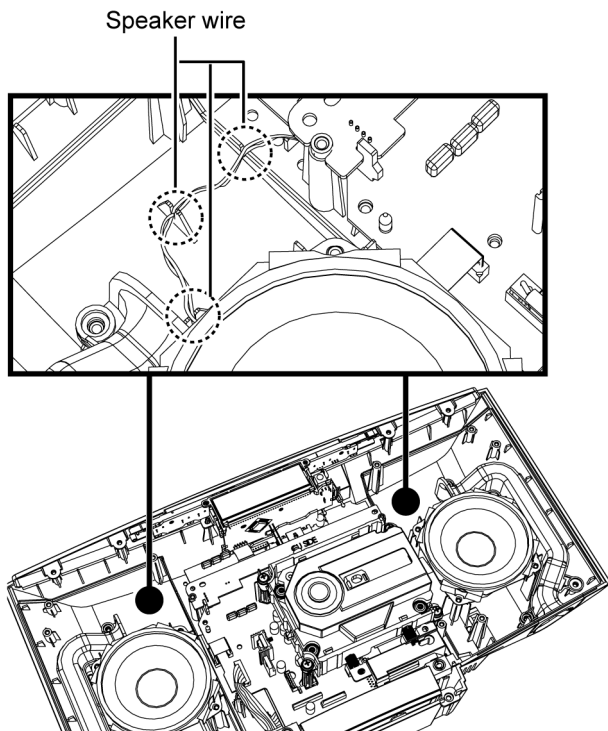


Step 2 : Desolder P905 on the Speaker P.C.B..

Step 3 : Detach Bridge 2 P.C.B. and Speaker P.C.B..



Caution : During assembling of the Speaker unit, ensure that the wire is dressed as shown in the diagram above.



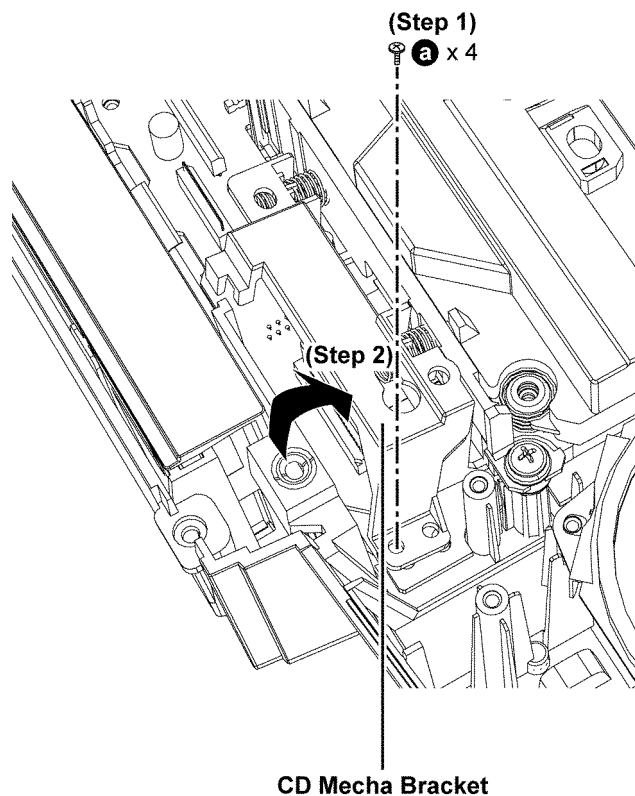
9.22. Disassembly of Traverse Deck

- Refer to "Disassembly of Stand Unit"
- Refer to "Disassembly of iPod/iPhone P.C.B."
- Refer to "Disassembly of Net Frame Unit"
- Refer to "Disassembly of Front Cabinet unit"

Step 1 : Remove 1 screw.

Step 2 : Remove CD Mecha bracket as arrow shown.

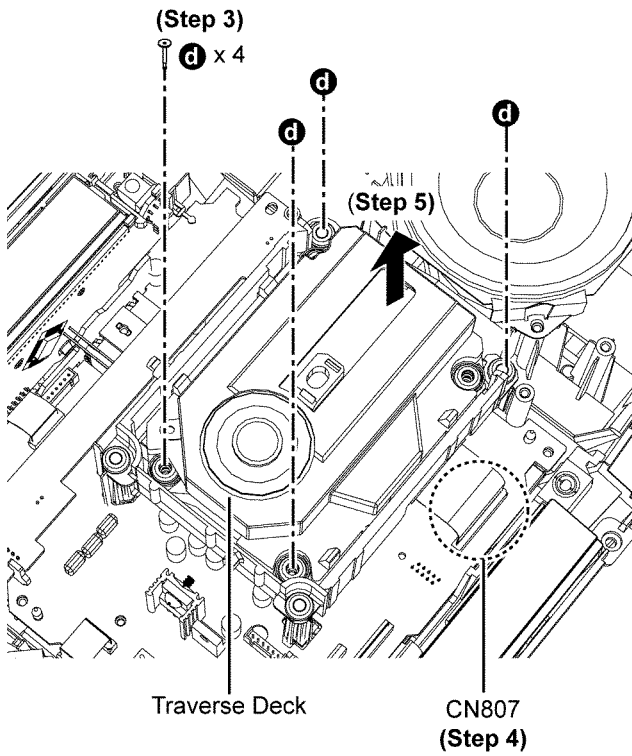
Caution : Keep springs in the safe place and place them back during assembling.



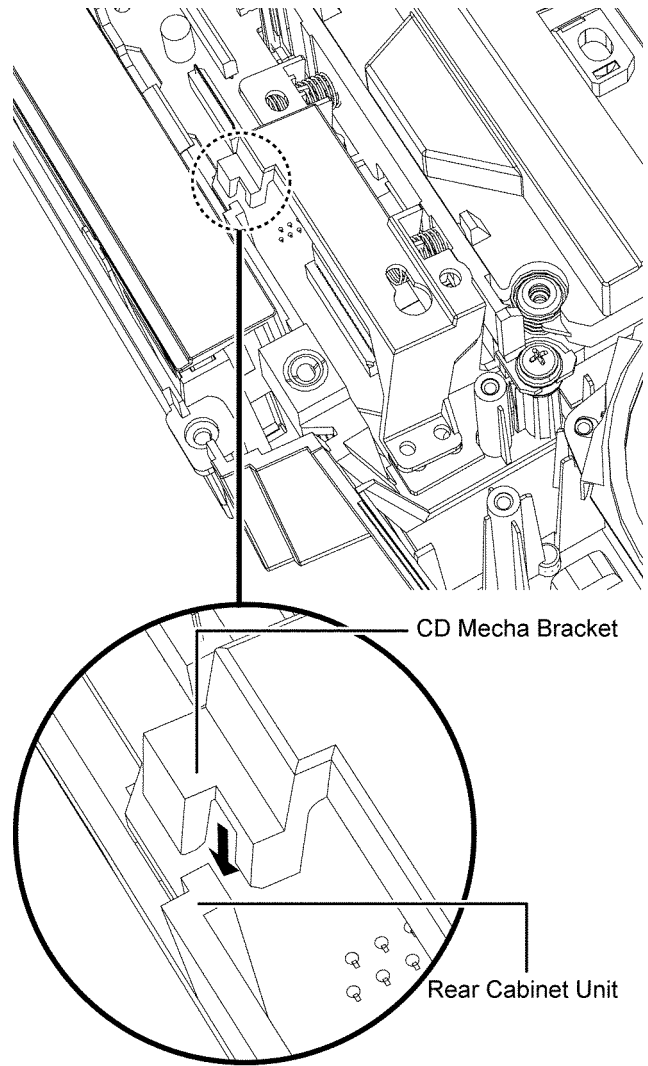
Step 3 : Remove 4 screws.

Step 4 : Detach 22P FFC at the connector (CN807) on Main P.C.B..

Step 5 : Remove Traverse Deck.



Caution : During assembling, ensure the CD Mecha Bracket is properly slot into the rear cabinet unit.

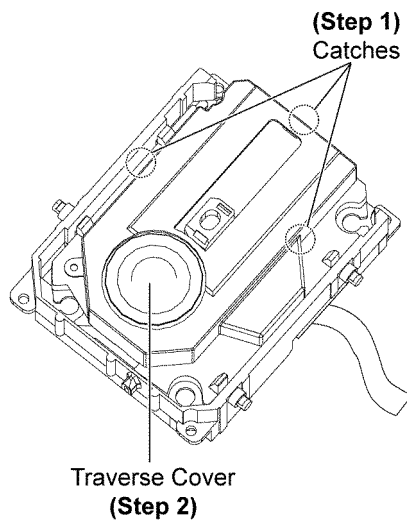


9.23. Disassembly of Traverse Cover

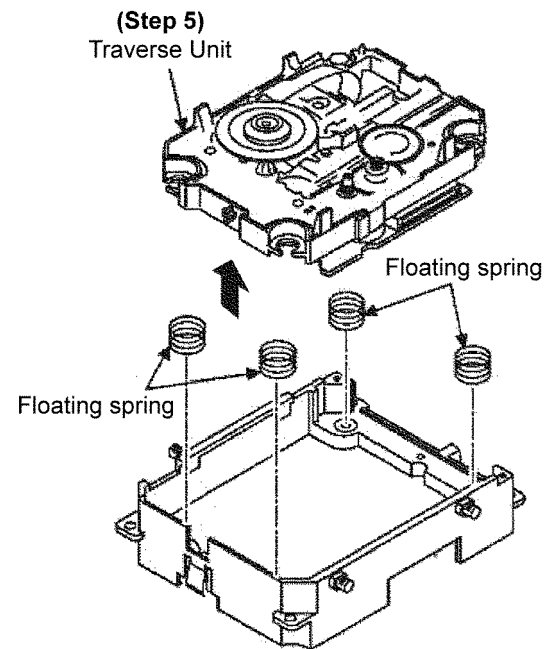
- Refer to "Disassembly of Traverse Deck"

Step 1 : Release 3 catches.

Step 2 : Remove the Traverse Cover.

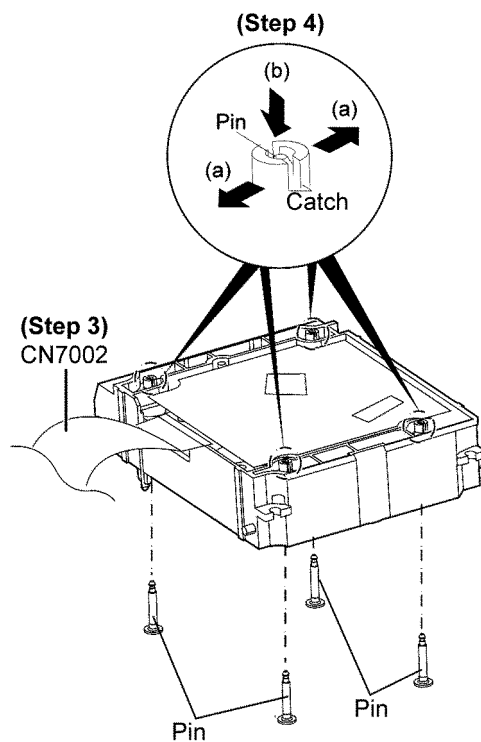


Step 5 : Lift up the traverse unit to remove it.



Step 3 : Detach 25P FFC at the connector (CN7002) on the CD Servo P.C.B..

Step 4 : Release both catches and push down the fixed pin as arrow shown.

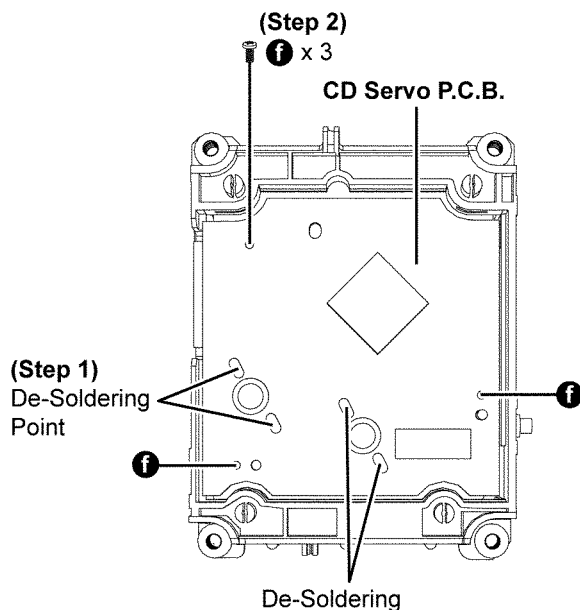


9.24. Disassembly of CD Servo P.C.B.

- Refer to "Disassembly of Traverse Deck"

Step 1 : Desolder the terminal.

Step 2 : Remove 3 screws.

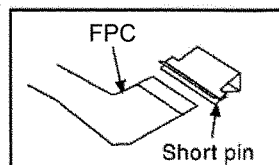
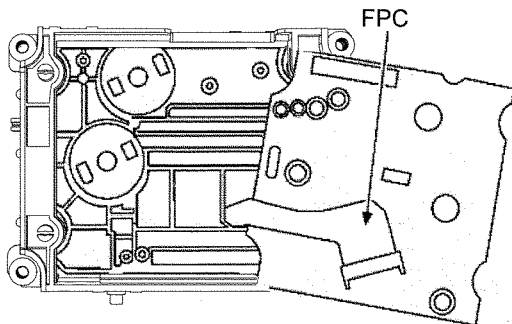


Step 3 : Flip the CD Servo P.C.B. over to one side.

Step 4 : Detach FPC out from the connector.

Step 5 : Attach a short pin to the unit.

Caution : Insert a short pin into FPC of the optical pickup.
[See "Handling Precautions for traverse unit"]



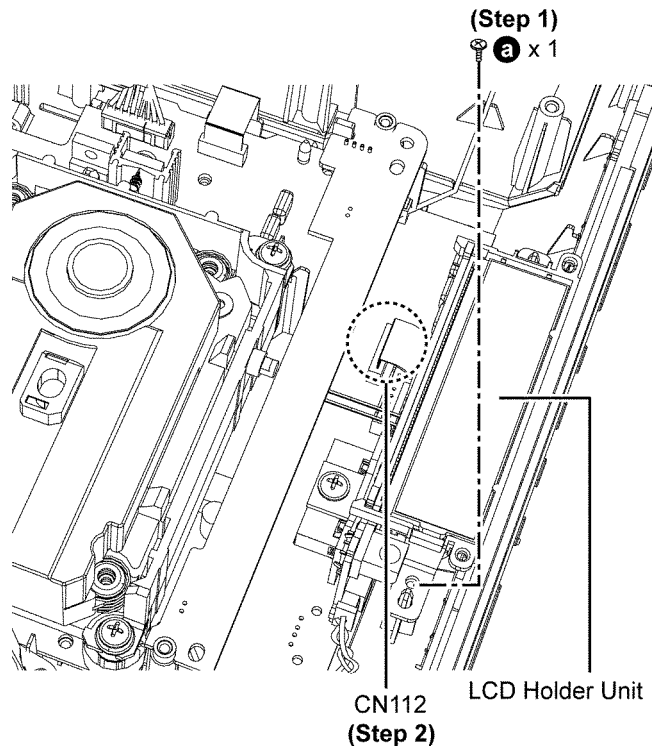
9.25. Disassembly of LCD Holder Unit and Panel P.C.B.

- Refer to "Disassembly of Stand Unit"
- Refer to "Disassembly of iPod/iPhone P.C.B."
- Refer to "Disassembly of Net Frame Unit"
- Refer to "Disassembly of Front Cabinet unit"

9.25.1. Disassembly of LCD Holder Unit

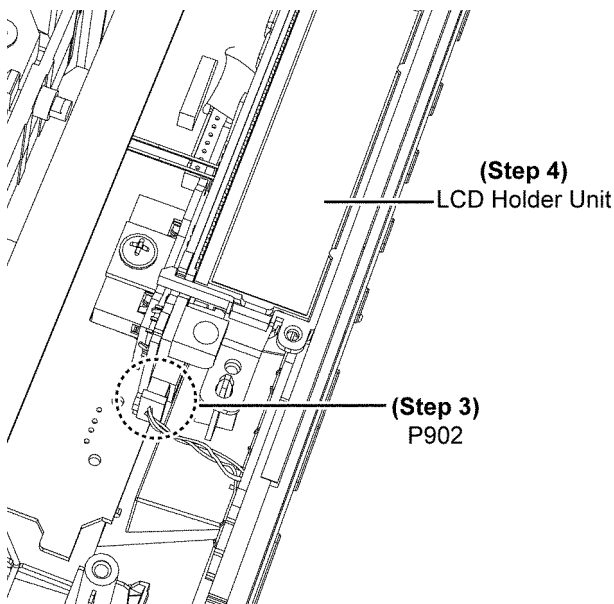
Step 1 : Remove 1 screw.

Step 2 : Detach 11P FFC at the connector (CN112) on Main P.C.B..



Step 3 : Detach 3P wire at the connector (P902) on Panel P.C.B..

Step 4 : Remove LCD Holder Unit.

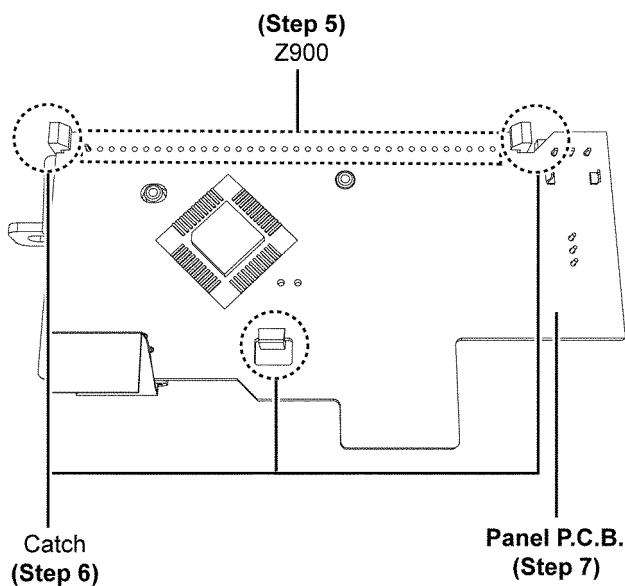


9.25.2. Disassembly of Panel P.C.B.

Step 5 : Desolder (Z900) on Panel P.C.B..

Step 6 : Release 3 catches.

Step 7 : Remove Panel P.C.B..

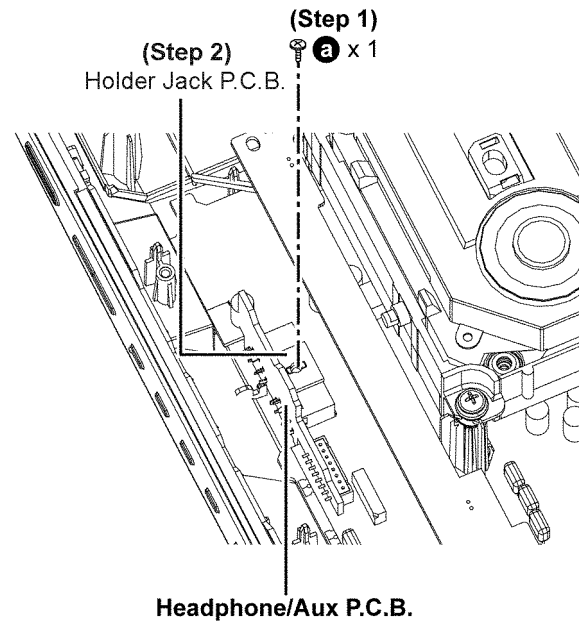


9.26. Disassembly of Headphone/ Aux P.C.B.

- Refer to "Disassembly of Stand Unit"
- Refer to "Disassembly of iPod/iPhone P.C.B."
- Refer to "Disassembly of Net Frame Unit"
- Refer to "Disassembly of Front Cabinet unit"
- Refer to (Step 1) & (Step 4) of item 9.25.

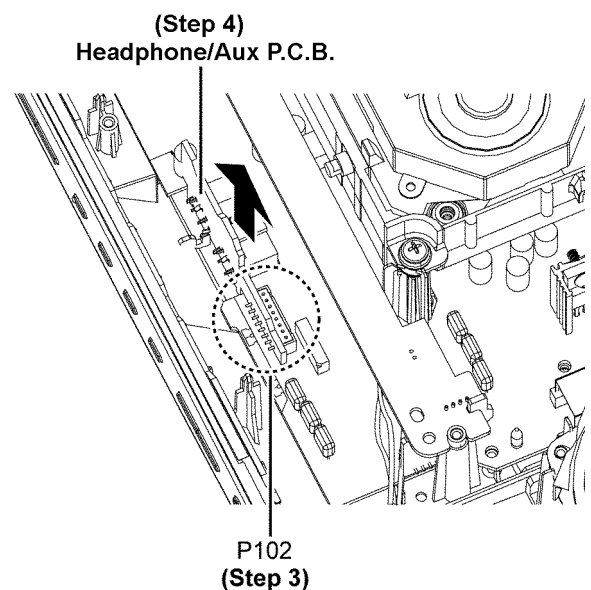
Step 1 : Remove 1 screw.

Step 2 : Remove Holder Jack P.C.B..



Step 3 : Detach 8P connector at the connector (P102) on Main P.C.B..

Step 4 : Remove Headphone/Aux P.C.B..



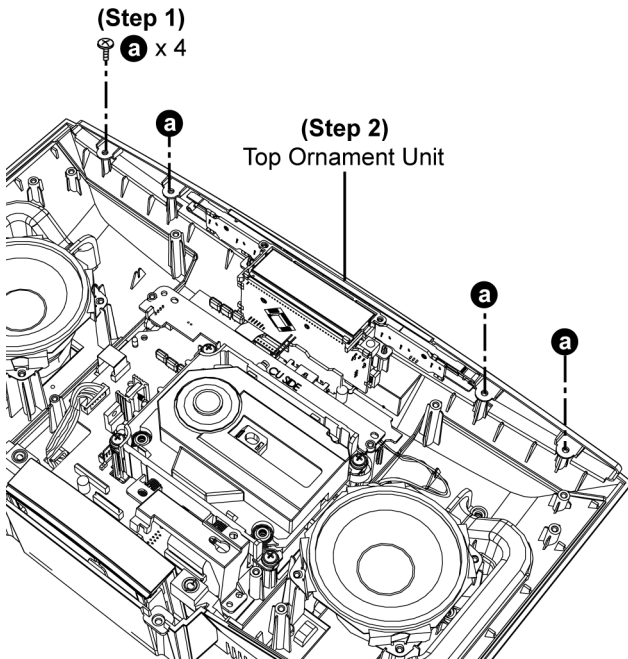
9.27. Disassembly of Top Ornament Unit and Panel Key P.C.B.

- Refer to "Disassembly of Stand Unit"
- Refer to "Disassembly of iPod/iPhone P.C.B."
- Refer to "Disassembly of Net Frame Unit"
- Refer to "Disassembly of Front Cabinet unit"
- Refer to (Step 3) of item 9.25.

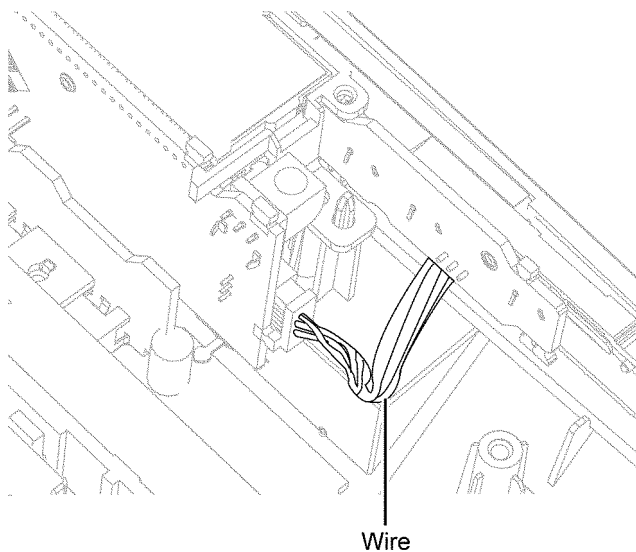
9.27.1. Disassembly of Top Ornament Unit

Step 1 : Remove 4 screw.

Step 2 : Remove Top Ornament Unit.



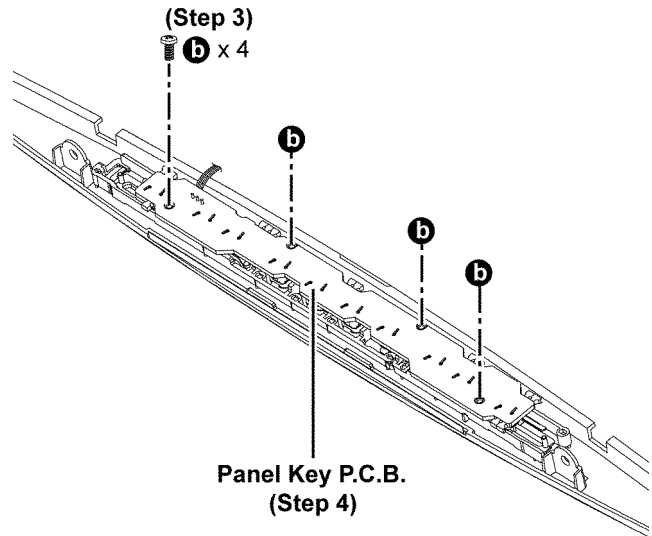
Caution : During assembling of the Top Ornament Unit, ensure that the wire are dressed as diagram shown.



9.27.2. Disassembly of Panel Key P.C.B.

Step 3 : Remove 4 screw.

Step 4 : Remove Panel Key P.C.B..

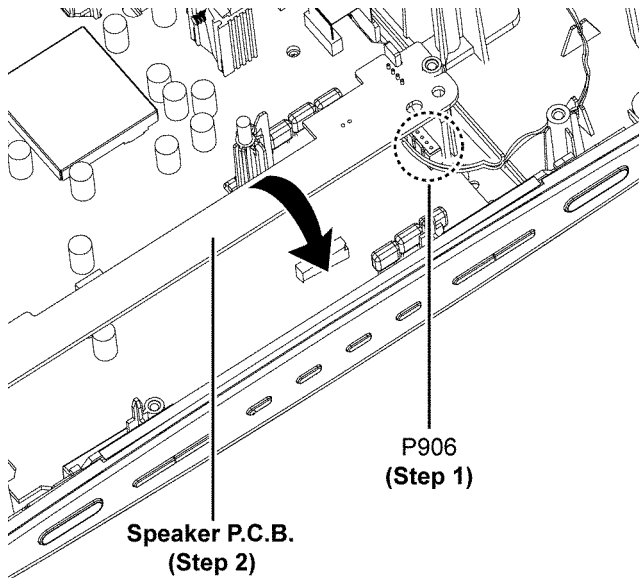


9.28. Disassembly of Main P.C.B.

- Refer to "Disassembly of Stand Unit"
- Refer to "Disassembly of iPod/iPhone P.C.B."
- Refer to "Disassembly of Net Frame Unit"
- Refer to "Disassembly of Front Cabinet unit"
- Refer to "Disassembly of Traverse Deck"
- Refer to (Step 1) & (Step 4) of item 9.25.
- Refer to "Disassembly of Headphone/Aux P.C.B."

Step 1 : Detach 4P connector (P906) at the connector (P2) on Main P.C.B..

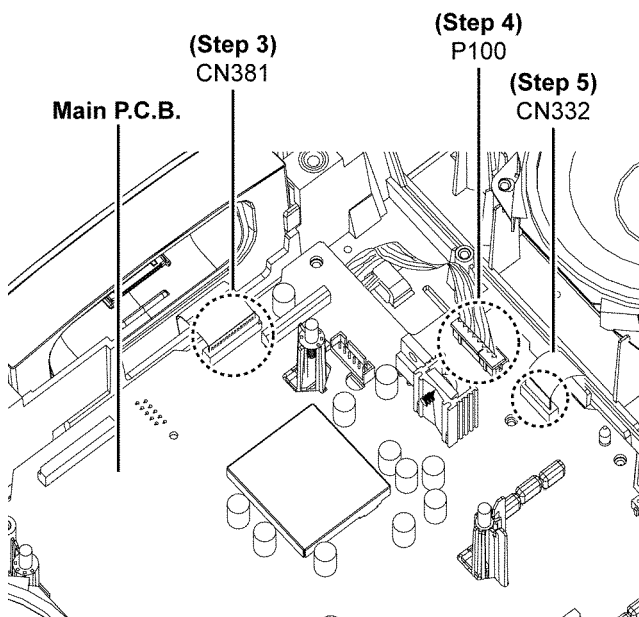
Step 2 : Flip over Speaker P.C.B. as arrow shown.



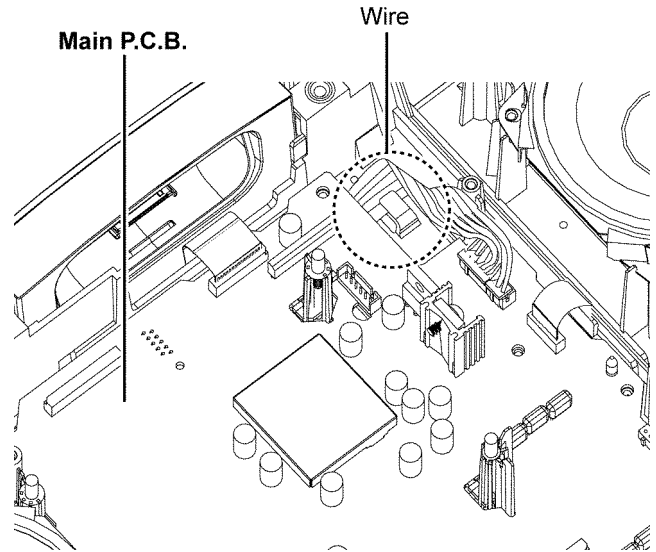
Step 3 : Detach 15P FFC at the connector (CN381) on Main P.C.B..

Step 4 : Detach 8P wire at the connector (P100) on Main P.C.B..

Step 5 : Detach 9P FFC at the connector (CN332) on Main P.C.B..

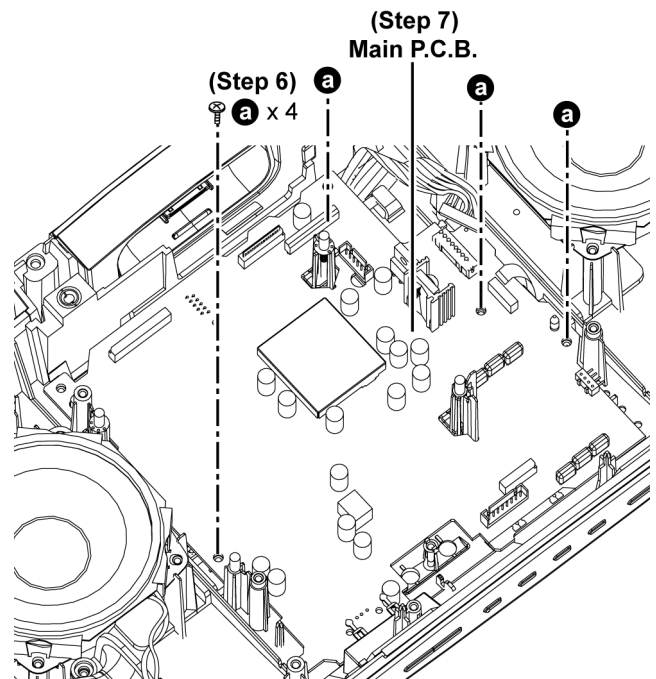


Caution: During assembling, ensure 8P wire dressed as diagram shown.

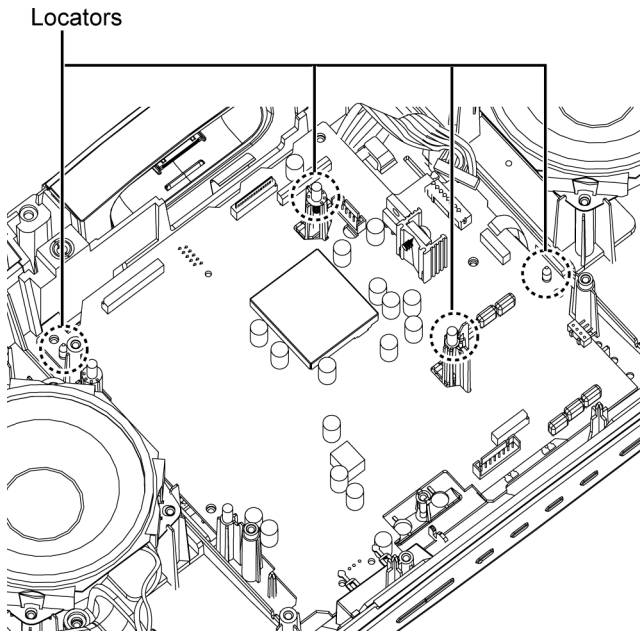


Step 6 : Remove 4 screws.

Step 7 : Remove Main P.C.B..



Caution: During assembling of Main P.C.B., ensure that the Main P.C.B. is properly seated on the locators.



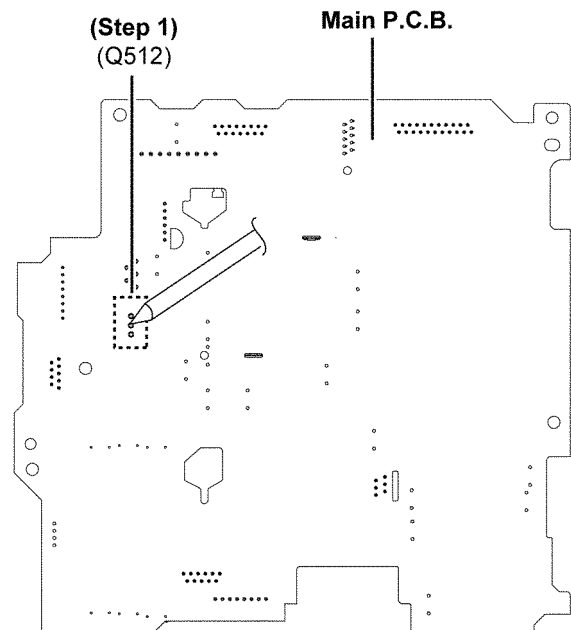
9.29. Replacement of Transistor (Q512)

- Refer to "Disassembly of Main P.C.B."

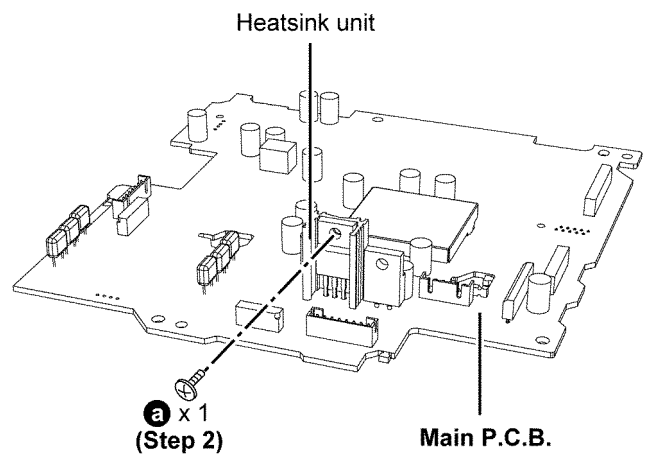
9.29.1. Disassembly of Transistor (Q512)

Caution : Handle the heatsink unit and P.C.B. with caution due to its high temperature after prolonged use. Touching it may lead to injuries.

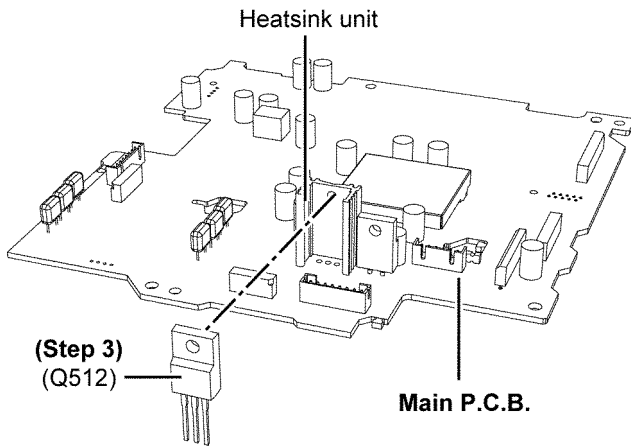
Step 1 : Desolder pins of the Transistor (Q512) on the solder side of Main P.C.B..



Step 2 : Remove 1 screw.



Step 3 : Remove the Transistor (Q512).



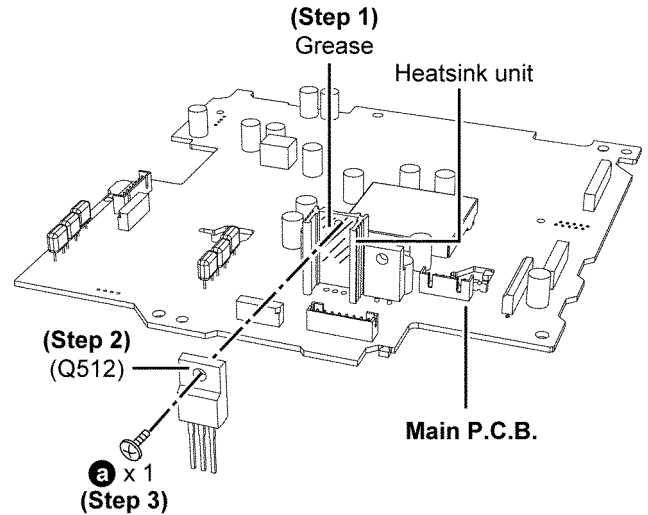
9.29.2. Assembly of Transistor (Q512)

Step 1 : Apply grease to the heatsink unit.

Step 2 : Install the Transistor (Q512) onto Main P.C.B..

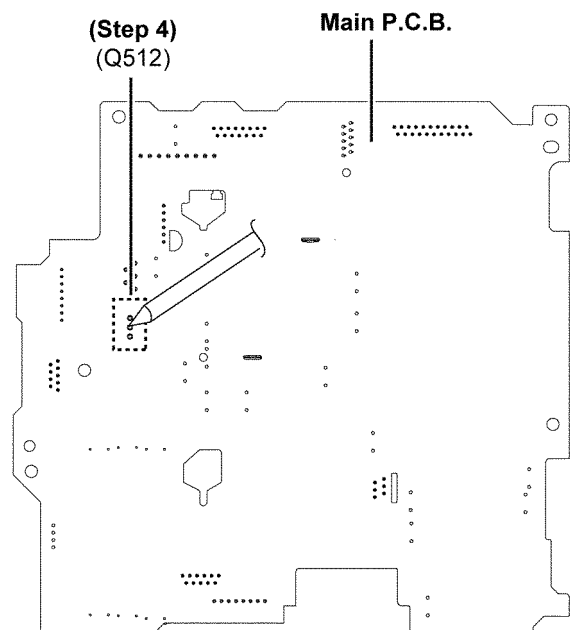
Step 3 : Fix the Transistor (Q512) onto the heatsink unit with 1 screws.

Caution : Ensure the Transistor (Q512) is fixed properly to the heatsink.



Step 4 : Solder pins of the Transistor (Q512).

Caution : Ensure the Transistor (Q512) is seated properly onto the SMPS P.C.B. before soldering



10 Service Position

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

10.1. Checking & Repairing of SMPS P.C.B.

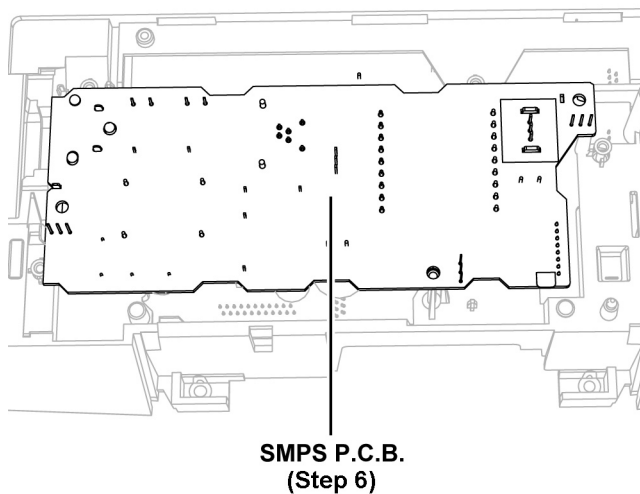
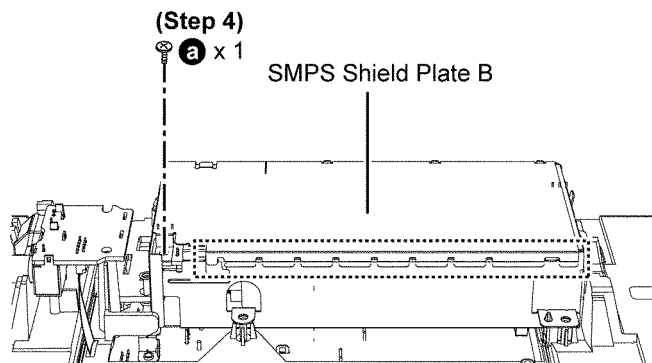
Step 6 : Check and repair SMPS P.C.B. according to the diagram shown..

Step 1 : Remove Stand Unit.

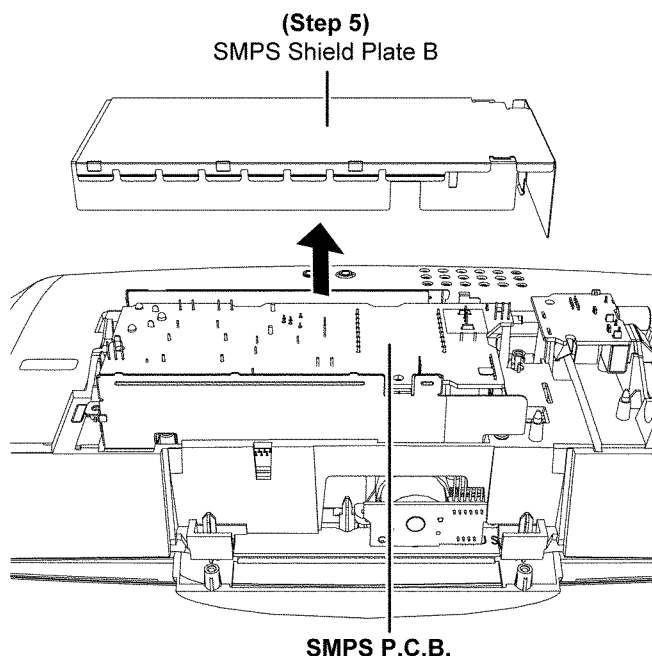
Step 2 : Remove iPod/iPhone P.C.B..

Step 3 : Remove Sub Rear Panel.

Step 4 : Remove 1 screw.

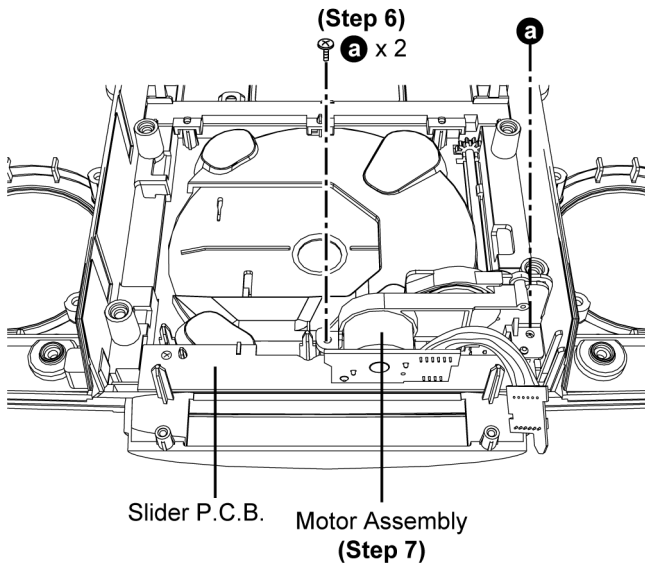


Step 5 : Remove SMPS Shield Plate B.

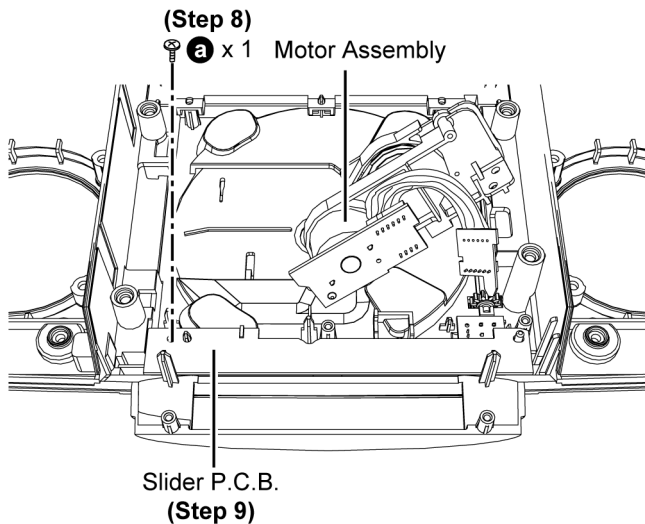


10.2. Checking & Repairing of Panel P.C.B.

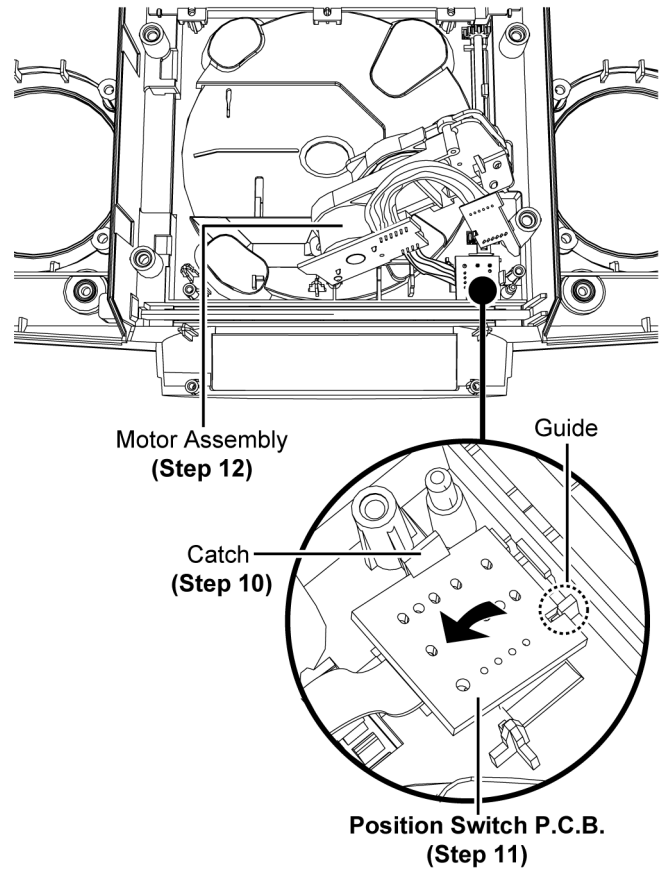
- Step 1 :** Remove Stand Unit.
- Step 2 :** Remove Net Frame Unit.
- Step 3 :** Detach Front Cabinet Unit.
- Step 4 :** Remove LCD Holder Unit.
- Step 5 :** Remove Top Ornament Unit.
- Step 6 :** Remove 2 screws.
- Step 7 :** Lift up Motor Assembly.



- Step 8 :** Remove 1 screw.
- Step 9 :** Remove Slider P.C.B..

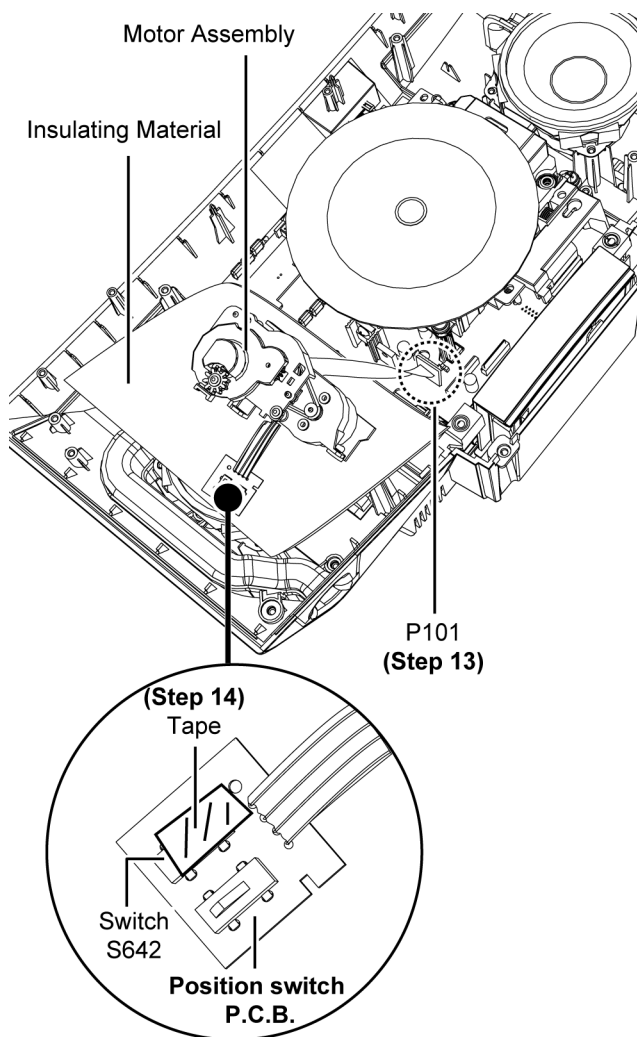


- Step 10 :** Release 1 catch.
- Step 11 :** Remove Position Switch P.C.B. as arrow shown.
- Step 12 :** Remove Motor Assembly.



Step 13 : Connect 6P wire at the connector (P101) on Main P.C.B..

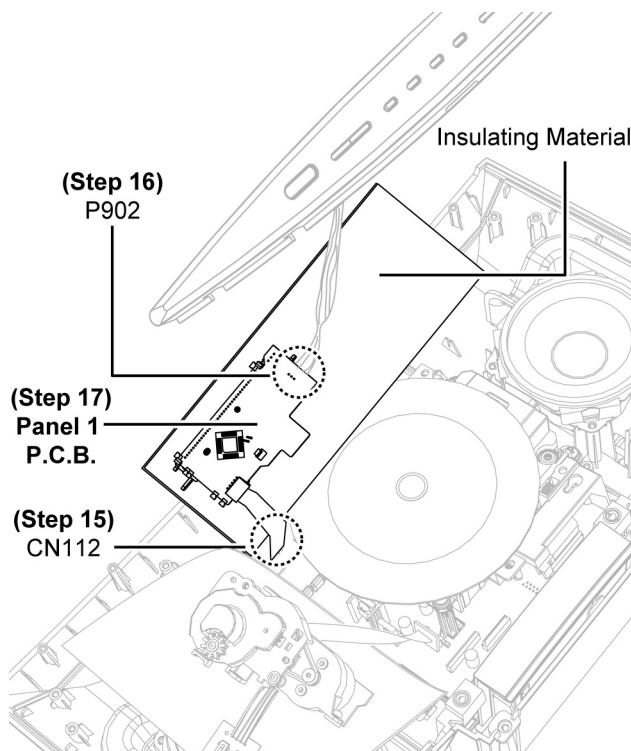
Step 14 : Use a tape to keep the close switch (S642) depressed.



Step 15 : Connect 11P FFC at the connector (CN112) on Main P.C.B..

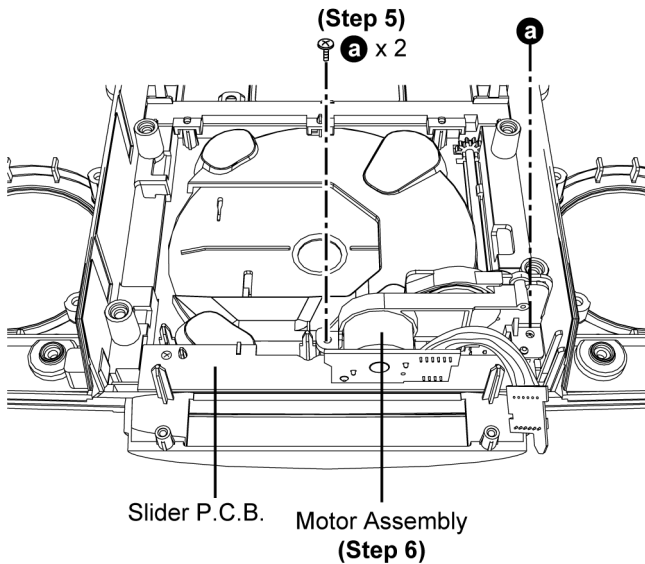
Step 16 : Connect 3P wire at the connector (P902) on Panel P.C.B..

Step 17 : Check and repair Panel P.C.B. according to the diagram shown.

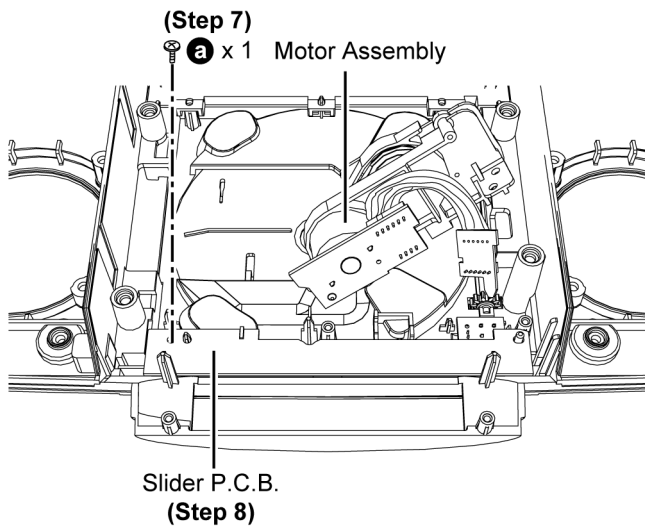


10.3. Checking & Repairing of CD Servo P.C.B.

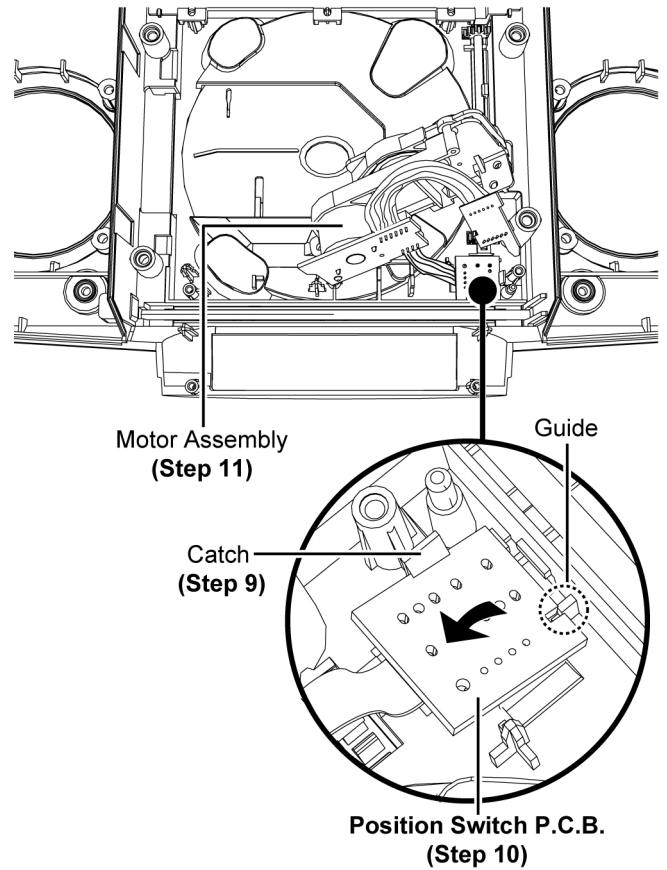
- Step 1 :** Remove Stand Unit.
- Step 2 :** Remove Net Frame Unit.
- Step 3 :** Detach Front Cabinet Unit.
- Step 4 :** Remove Traverse Deck.
- Step 5 :** Remove 2 screws.
- Step 6 :** Lift up Motor Assembly.



- Step 7 :** Remove 1 screw.
- Step 8 :** Remove Slider P.C.B..

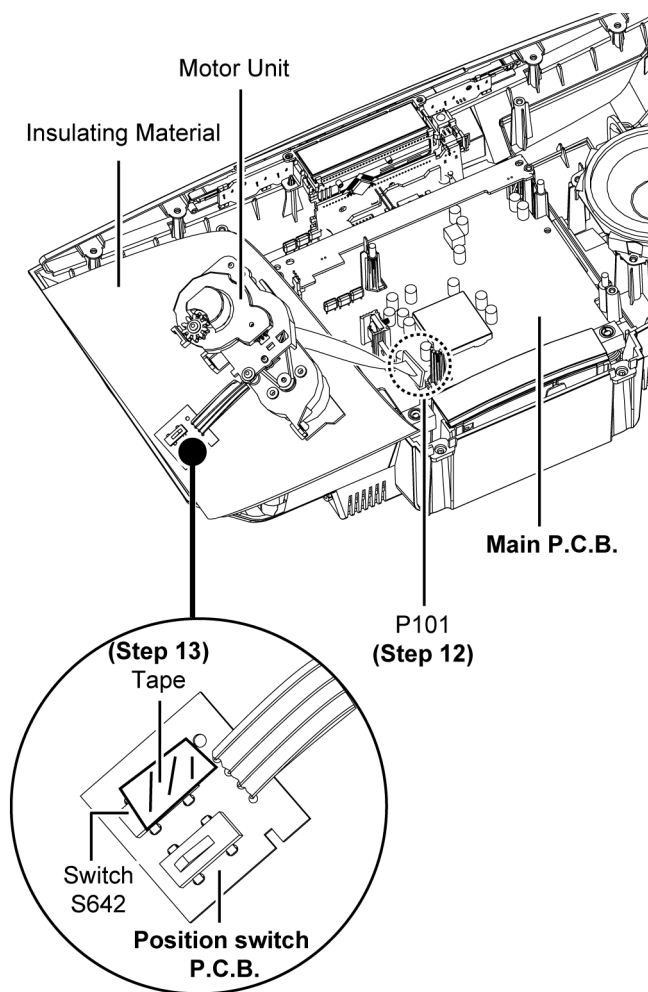


- Step 9 :** Release 1 catch.
- Step 10 :** Remove Position Switch P.C.B. as arrow shown.
- Step 11 :** Remove Motor Assembly.



Step 12 : Connect 6P wire at the connector (P101) on Main P.C.B..

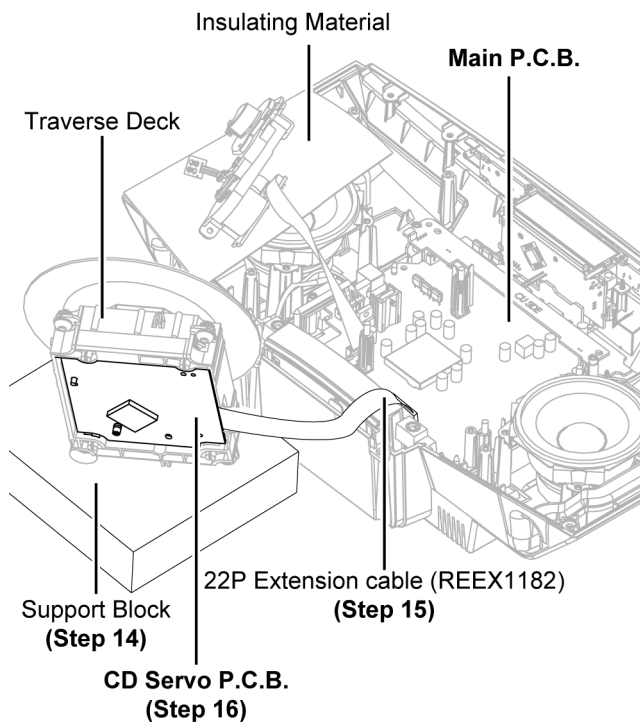
Step 13 : Use a tape to keep the close switch (S642) depressed.



Step 14 : Place the Traverse Deck on the Support Block.

Step 15 : Connect 22P extension cable (REEX1182) from CN807 on the Main P.C.B. to CN7002 on the CD Servo P.C.B..

Step 16 : Check and repair CD Servo P.C.B. according to the diagram shown.



10.4. Checking & Repairing of Main P.C.B. (Side B)

Step 1 : Remove Stand Unit.

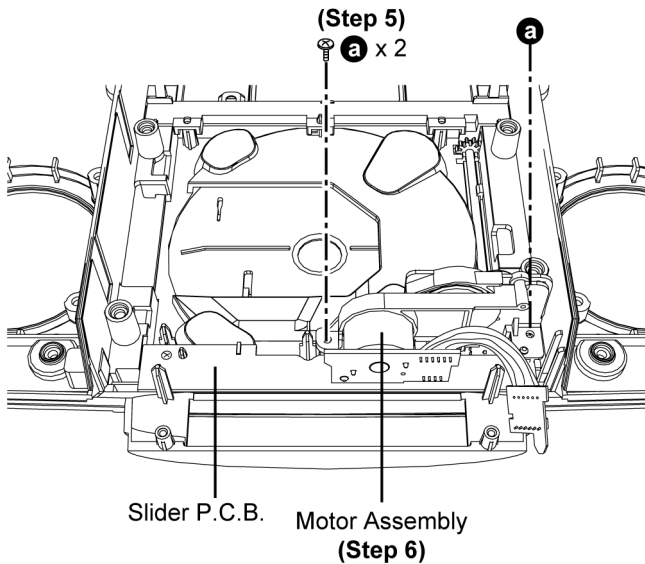
Step 2 : Remove Net Frame Unit.

Step 3 : Detach Front Cabinet Unit.

Step 4 : Remove Traverse Deck.

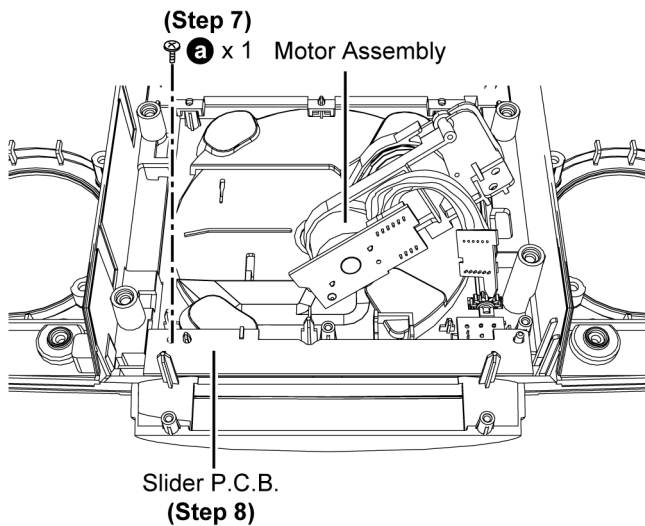
Step 5 : Remove 2 screws.

Step 6 : Lift up Motor Assembly.



Step 7 : Remove 1 screw.

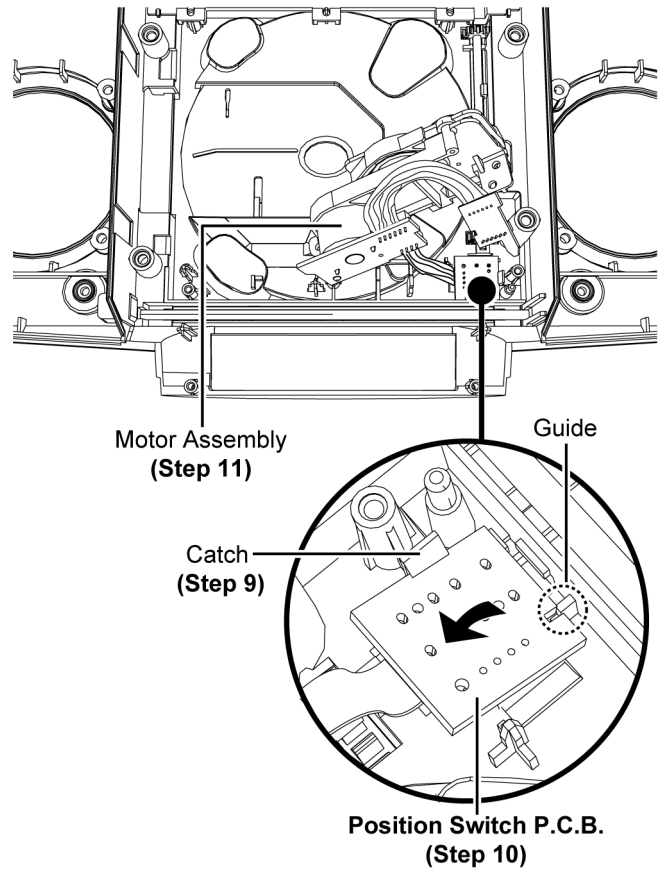
Step 8 : Remove Slider P.C.B..



Step 9 : Release 1 catch.

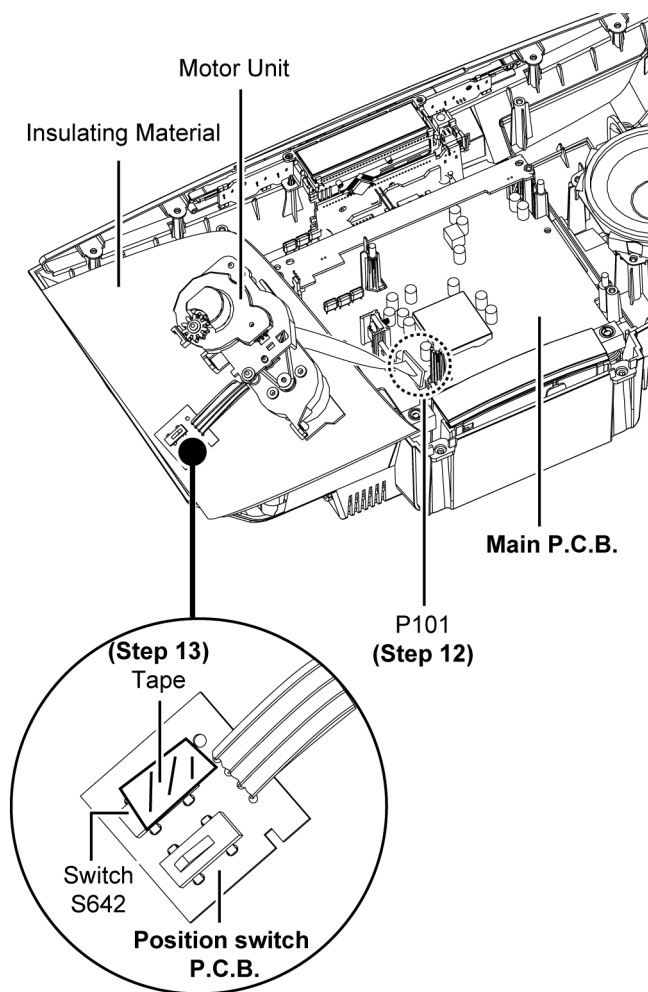
Step 10 : Remove Position Switch P.C.B. as arrow shown.

Step 11 : Remove Motor Assembly.



Step 12 : Connect 6P wire at the connector (P101) on Main P.C.B..

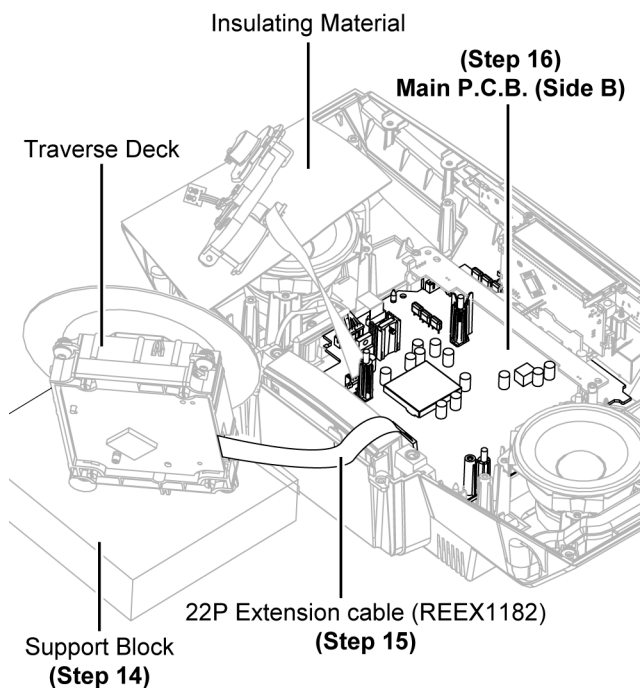
Step 13 : Use a tape to keep the close switch (S642) depressed.



Step 14 : Place the Traverse Deck on the Support Block.

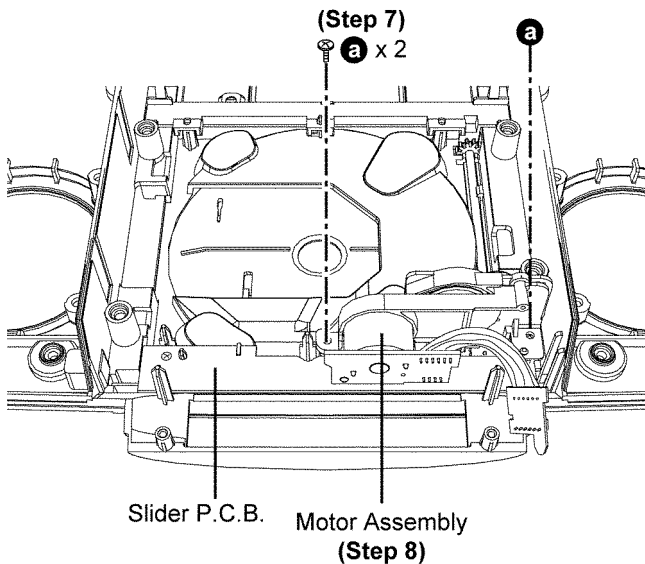
Step 15 : Connect 22P extension cable (REEX1182) from CN807 on the Main P.C.B. to CN7002 on the CD Servo P.C.B..

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

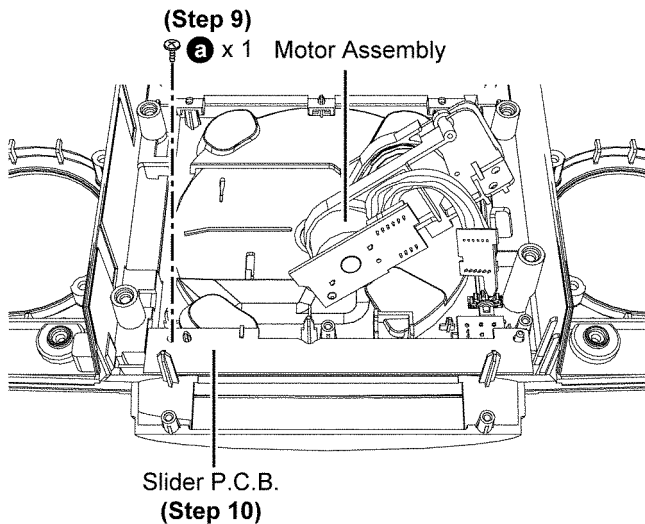


10.5. Checking & Repairing of Main P.C.B. (Side A)

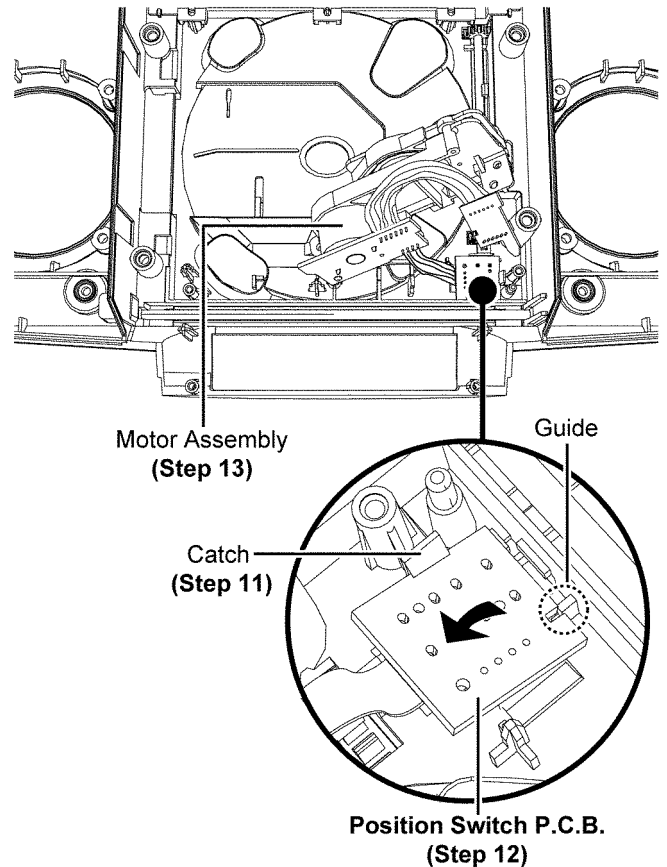
- Step 1 :** Remove Stand Unit.
- Step 2 :** Remove Net Frame Unit.
- Step 3 :** Detach Front Cabinet Unit.
- Step 4 :** Remove Traverse Deck.
- Step 5 :** Remove LCD Holder Unit.
- Step 6 :** Remove Top Ornament Unit.
- Step 7 :** Remove 2 screws.
- Step 8 :** Lift up Motor Assembly.



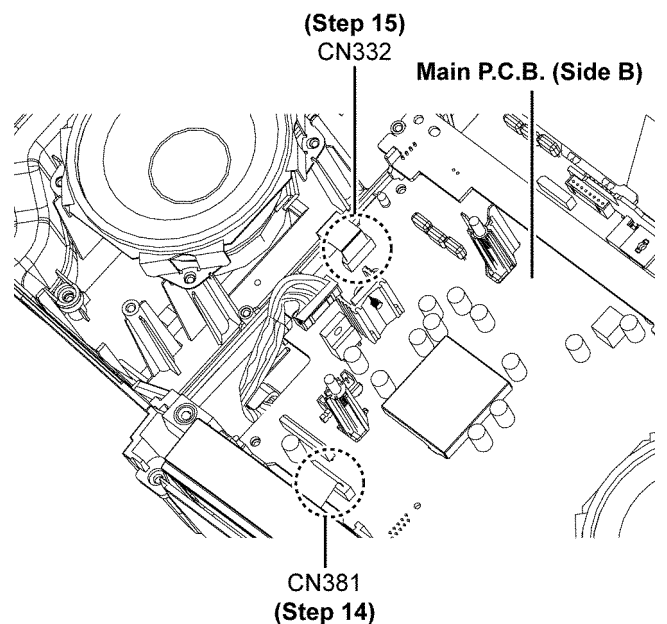
- Step 9 :** Remove 1 screw.
- Step 10 :** Remove Slider P.C.B..



- Step 11 :** Release 1 catch.
- Step 12 :** Remove Position Switch P.C.B. as arrow shown.
- Step 13 :** Remove Motor Assembly.

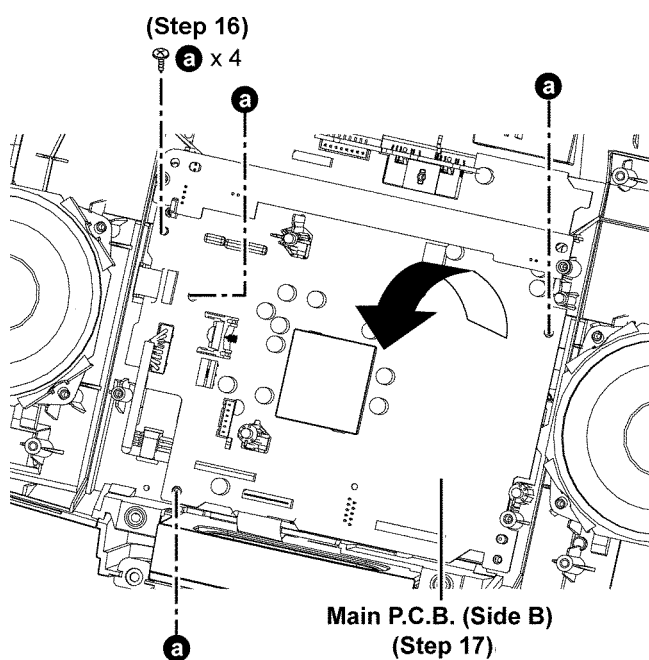


- Step 14 :** Detach 15P FFC at the connector (CN381) on Main P.C.B..
- Step 15 :** Detach 9P FFC at the connector (CN332) on Main P.C.B..

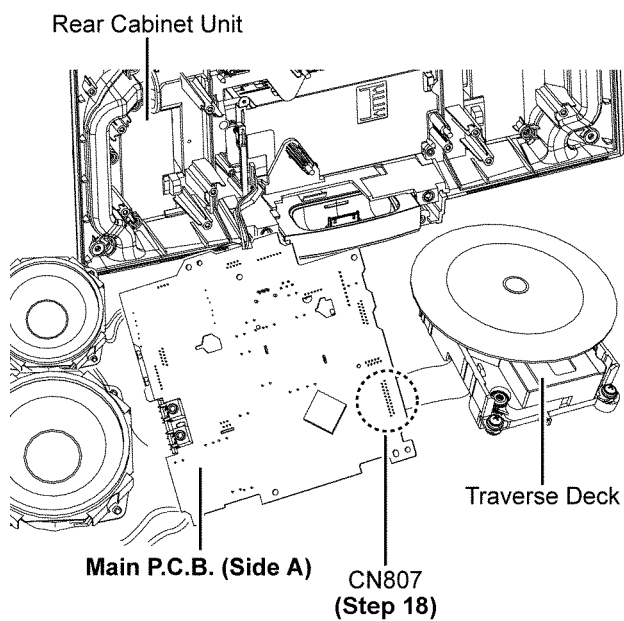


Step 16 : Remove 4 screws.

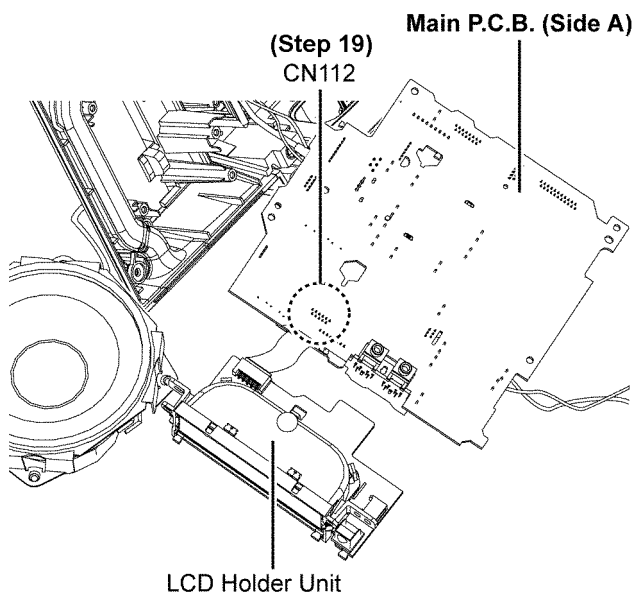
Step 17 : Flip Over Main P.C.B. & Speaker Unit as arrow shown.



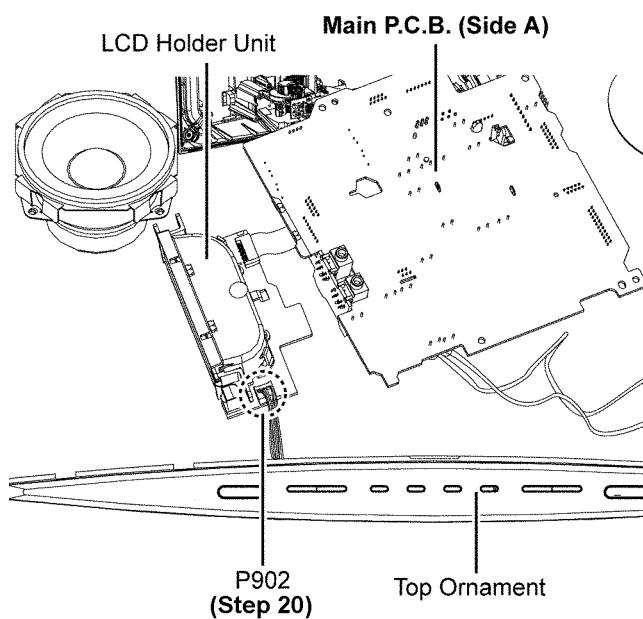
Step 18 : Connect 22P FFC at the connector (CN807) on Main P.C.B..



Step 19 : Connect 11P FFC at the connector (CN112) on Main P.C.B..

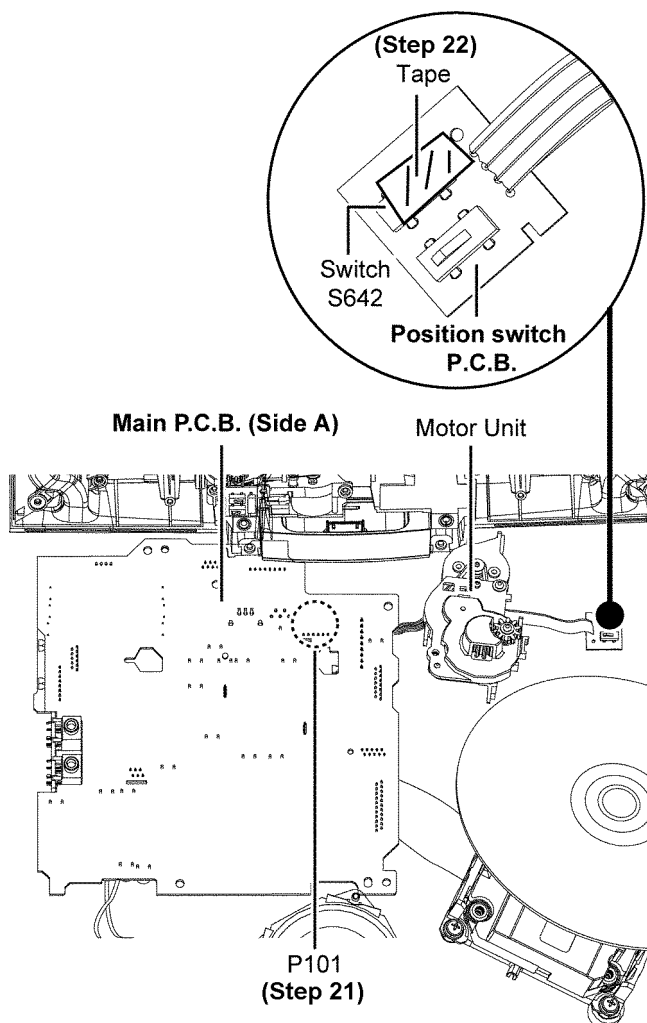


Step 20 : Connect 3P wire at the connector (P902) on Panel P.C.B..

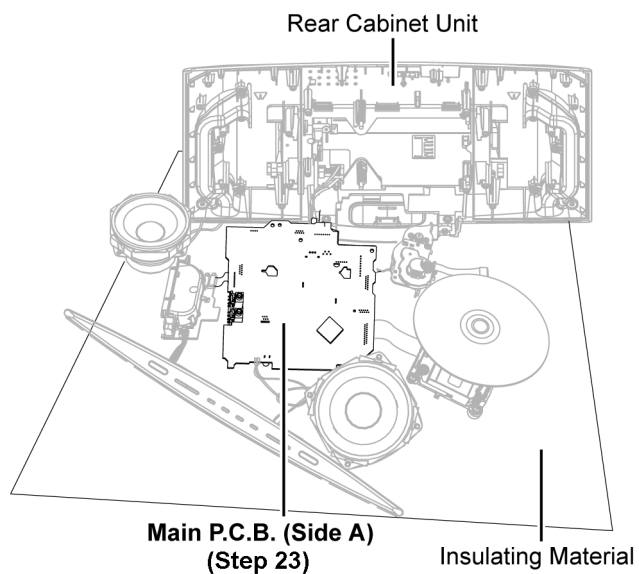


Step 21 : Connect 6P wire at the connector (P101) on Main P.C.B..

Step 22 : Use a tape to keep the close switch (S642) depressed.



Step 23 : Check and repair Main P.C.B. (Side A) according to the diagram shown.



11 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.

11.1. CD SERVO P.C.B.

REF NO.	IC7001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0	1.6	3.2
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.6	3.4

REF NO.	IC7001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	1.6	0	1.6	1.7	1.7	0	3.1	1.5	3.1	3.1	0	1.6	1.5	1.6	1.9	1.9	1.7	1.8	1.8	1.7
STANDBY	1.7	3.4	1.7	1.7	1.7	0	3.4	1.5	3.4	3.4	0	1.7	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.7

REF NO.	IC7001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	0.2	2.4	1.9	1.7	1.2	1.8	3.2	1.2	1.3	1.3	1.7	1.7	0.9	1.5	1.5	1.5	0	3.3	1.5	0
STANDBY	0	3.4	1.6	1.7	1.7	1.8	3.4	1.2	1.2	1.2	1.7	1.7	0.9	1.1	1.1	1.6	0	3.3	1.6	0

REF NO.	IC7001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
CD PLAY	3.2	0	0	0	0	0	3.0	1.5	3.3	1.0	0.1	3.3	0	1.6	0	1.5	3.2	0	3.3	3.0
STANDBY	3.4	0	0	0	3.3	0	3.3	0	3.3	0	0.1	3.3	0	1.6	3.4	1.5	3.4	0	3.4	3.0

REF NO.	IC7001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
CD PLAY	3.1	3.3	0	0	0	0	0	0	0	0	0	0	3.2	0	0	0	0	0	0	0
STANDBY	3.1	3.4	0	0	0	0	0	0	0	0	0	0	3.4	0	0	0	0	0	0	0

REF NO.	IC7002																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	1.6	0	1.6	0	0	0	0	0	0	7.7	4.4	3.5	3.6	3.6	3.5	3.8	3.7	3.6	7.7	0
STANDBY	1.7	0	1.7	3.3	0	0	0	0	0	7.7	4.0	4.0	3.6	3.6	3.6	3.6	3.6	3.6	7.7	0

REF NO.	IC7002																			
MODE	21	22	23	24	25	26	27	28	29	30										
CD PLAY	7.7	0	0	0	7.7	1.6	1.6	1.6	0	0										
STANDBY	7.7	0	0	0	7.7	1.7	1.7	1.7	0	0										

REF NO.	Q7601																			
MODE	E	C	B																	
CD PLAY	3.1	2.0	2.4																	
STANDBY	3.4	0	3.4																	

SC-HC20GA/GN CD SERVO P.C.B.

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

REF NO.	IC1																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	0	0	5.6	5.6	0	0	0	11.5	15.0	0	0	15.0	11.5	0	0	0	2.3	2.4	11.5
STANDBY	0	0	0	5.6	5.6	0	0	0	11.5	15.0	0	0	15.0	11.5	0	0	0	2.3	2.4	11.5

REF NO.	IC1																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	9.9	0	0	4.8	0	0	0	0	0	11.5	15.0	0	0	15.0	11.5	0	0	0	0	2.4
STANDBY	9.9	0	0	4.8	0	0	0	0	0	11.5	15.0	0	0	15.0	11.5	0	0	0	0	2.4

REF NO.	IC1																			
MODE	41	42																		
CD PLAY	2.4	0																		
STANDBY	2.4	0																		

REF NO.	IC101																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9.0	0	3.3	3.3	0
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9.0	0	3.3	3.3	0

REF NO.	IC101																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32								
CD PLAY	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	0	0								
STANDBY	3.4	3.3	3.4	3.3	3.4	3.3	3.3	3.3	3.3	3.3	0	0								

REF NO.	IC103																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	0	0	0	0	0	0	0	6.9												
STANDBY	0	0	0	0	0	0	0	6.9												

REF NO.	IC300																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	3.3	0	3.3	3.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STANDBY	0	3.3	0	3.3	3.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

REF NO.	IC500																			
MODE	1	2	3	4	5															
CD PLAY	0	5.0	0	0	0															
STANDBY	0	5.0	0	0	0															

REF NO.	IC503																			
MODE	1	2	3	4	5															
CD PLAY	5.2	0	5.2	0	3.3															
STANDBY	5.3	0	5.3	0	3.3															

REF NO.	IC650																			
MODE	1	2	3	4	5	6	7	8	9											
CD PLAY	0	0	0	0	0	5.9	1.2	0	1.2											
STANDBY	0	0	0	0	0	5.9	1.2	0	1.2											

SC-HC20GA/GN MAIN P.C.B.

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

REF NO.	IC800																					
MODE	1	2	3	4	5	6	7	8														
CD PLAY	0	0	0	0	0	0	0	3.3														
STANDBY	0	0	0	0	0	0	0	3.1														
REF NO.	IC801																					
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
CD PLAY	0	0	3.2	3.3	0	0	3.3	0	0	0	0	1.5	1.5	0	1.3	1.7	3.3	1.8	3.3	0		
STANDBY	0	0	3.2	3.3	0	0	3.3	0	0	0	0	1.5	1.5	0	1.3	1.7	3.3	1.8	3.3	0		
REF NO.	IC801																					
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40		
CD PLAY	0	0	0	0	3.3	0	0	0	3.3	0	3.3	0	3.3	3.2	2.8	3.2	1.8	0	0	3.3		
STANDBY	0	0	0	0	3.3	0	0	0	3.3	0	3.3	0	3.3	3.3	0	3.3	1.8	0	0	3.3		
REF NO.	IC801																					
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60		
CD PLAY	3.3	3.3	3.2	3.3	3.3	0	0	3.3	0	0	0	0	3.3	0	0	0	0	0	0	0		
STANDBY	3.3	3.3	3.3	3.3	0	0	0	3.3	0	0	0	0	3.3	0	0	0	0	0	0	0		
REF NO.	IC801																					
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80		
CD PLAY	0	3.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.3	0	3.3		
STANDBY	0	3.3	0	0	0	0	0	0	0	0	0	0	0	0	0	2.5	0	0	3.3	0		
REF NO.	IC801																					
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100		
CD PLAY	0	0	0	0	0	3.3	3.0	3.2	3.3	0	0	3.3	0.2	3.3	0	3.3	1.3	0	1.8	3.3		
STANDBY	0	0	0	0	0	3.3	3.0	3.3	3.3	0	0	3.3	0.2	3.3	0	3.3	1.3	0	0	3.3		
REF NO.	IC802																					
MODE	1	2	3	4	5																	
CD PLAY	5.7	0	5.7	0	3.3																	
STANDBY	5.6	0	5.6	0	3.3																	
REF NO.	IC803																					
MODE	1	2	3	4																		
CD PLAY	3.3	3.3	0	0																		
STANDBY	3.3	3.3	0	0																		
REF NO.	Q101							Q102							Q103							
MODE	1	2	3	4	5	6		1	2	3	4	5	6		E	C	B					
CD PLAY	0	0	0	0	0	0		0	0	0	0	0	0		3.9	6.8	4.5					
STANDBY	0	0.7	0	0	0.7	0		0	0.7	0	0	0.7	0		3.9	6.9	4.5					
REF NO.	Q104				Q302				Q382				Q509				Q511					
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B			
CD PLAY	3.9	6.8	4.5		0	3.3	0		1.3	1.3	1.3		5.9	7.5	6.2		6.8	7.9	7.4			
STANDBY	3.9	6.9	4.5		0	3.3	0		1.4	1.3	1.4		5.9	7.5	6.2		6.8	8.3	7.4			

SC-HC20GA/GN MAIN P.C.B

SC-HC20GA/GN MAIN P.C.B.

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

REF NO.	Q512				Q580				Q581				Q582				Q2501			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	8.6	7.5	7.9		0	3.2	0		8.6	8.6	0		3.3	3.2	0		0	2.0	0.4	
STANDBY	9.0	7.6	8.3		0	3.3	0		9.0	9.0	0		3.3	3.3	0		0	2.8	0.6	

REF NO.	QR2				QR4				QR5				QR101				QR384			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	0.7	0		0	5.6	0		0	5.6	0		2.0	1.9	0		0	1.4	0	
STANDBY	0	0.7	0		0	5.6	0		0	5.6	0		2.0	1.9	0		0	1.4	0	

REF NO.	QR804				QR805				QR806				QR807				QR808			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	3.3	0	3.3		0	1.2	0		0	1.3	0		0	0	3.0		0	0	3.3	
STANDBY	3.3	3.3	0.3		0	1.2	0		0	1.3	0		0	0	3.0		0	0	3.3	

SC-HC20GA/GN MAIN P.C.B.

11.5. PANEL P.C.B.

REF NO.	IC900																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	3.2	3.2	3.2	3.3	0	2.9	3.3	0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.4	1.3	1.4	1.3
STANDBY	3.2	3.2	3.2	3.2	0	2.8	3.3	0	1.5	1.5	1.5	1.5	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4

REF NO.	IC900																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	1.3	1.5	1.4	1.4	1.5	1.5	1.5	1.5	1.4	1.3	1.3	1.3	1.3	1.4	1.5	1.5	1.4	1.5	1.4	1.4
STANDBY	1.4	1.5	1.4	1.4	1.5	1.5	1.5	1.5	1.4	1.5	1.5	1.5	1.4	1.5	1.5	1.5	1.4	1.5	1.4	1.4

REF NO.	IC900																			
MODE	41	42	43	44																
CD PLAY	1.4	1.5	1.4	1.4																
STANDBY	1.4	1.5	1.4	1.4																

REF NO.	Q900																			
MODE	E	C	B																	
CD PLAY	0	0	0																	
STANDBY	0	0	0																	

SC-HC20GA/GN PANEL 1 P.C.B.

11.6. TUNER P.C.B.

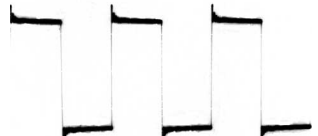
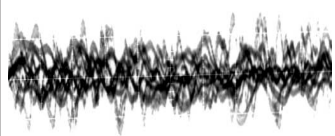
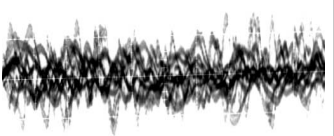
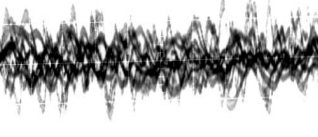
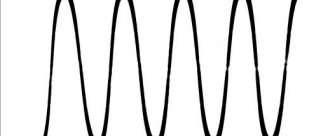
REF NO.	IC52																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	0	3.0	3.0	0	0	0	0	0	0	3.3	3.3	1.4	0.3	0.3	0.3	0	0	0	0
STANDBY	0	0	3.0	3.0	0	0	0	0	0	0	3.3	3.3	1.4	0.3	0.3	0.3	0	0	0	0

SC-HC20GA/GN TUNER P.C.B.

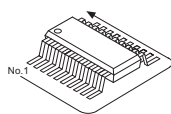
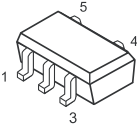
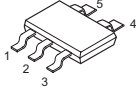
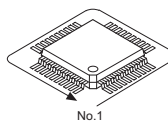
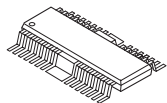
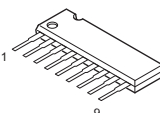
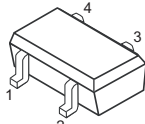
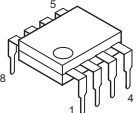
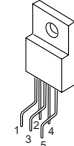
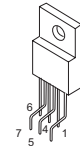
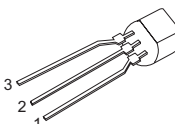
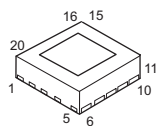
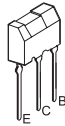
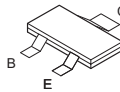
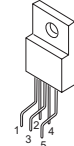
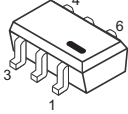
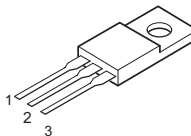
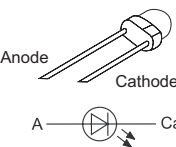
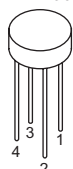
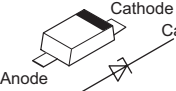
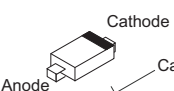
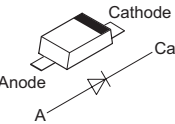
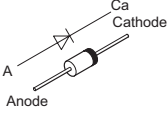
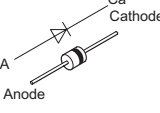
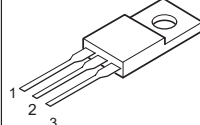
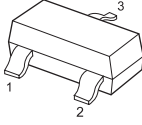
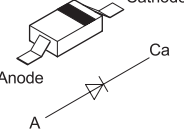
11.7. SMPS P.C.B.

REF NO.	IC701																			
MODE	1	2	3																	
CD PLAY	10.1	0	2.5																	
STANDBY	10.3	0	2.5																	
REF NO.	IC702																			
MODE	1	2	3	4	5	6	7													
CD PLAY	5.8	1.7	1.3	0	11.7	0	165.2													
STANDBY	5.8	1.7	1.3	0	11.7	0	165.2													
SC-HC20GA/GN SMPS P.C.B.																				

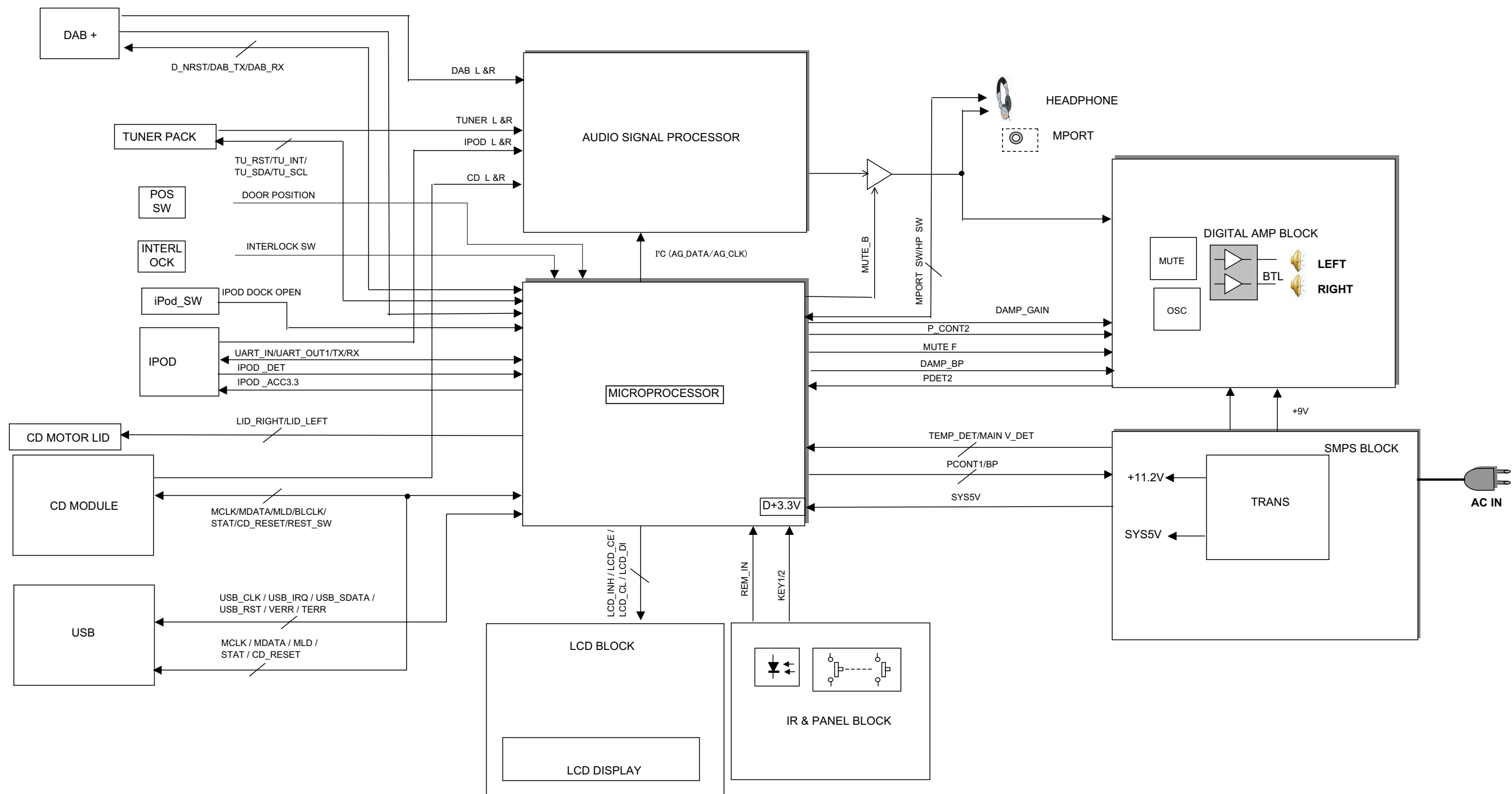
11.8. Waveform Chart

WF No. IC1-3,40 (PLAY)  0.24Vp-p(500nsec/div)	WF No. IC1-8,15,28,36 (PLAY)  20Vp-p(1usec/div)	WF No. IC52-2,13,14 (TUNER)  0.4Vp-p(100usec/div)	WF No. IC52-4 (TUNER)  1Vp-p(5usec/div)
WF No. IC101-1,13 (PLAY)  0.4Vp-p(200usec/div)	WF No. IC101-2,12 (TUNER)  0.4Vp-p(100usec/div)	WF No. IC101-31,32 (PLAY)  2.2Vp-p(200usec/div)	WF No. IC801-12 (PLAY)  4Vp-p(50nsec/div)
WF No. IC801-13 (PLAY)  2.2Vp-p(50nsec/div)	WF No. IC801-15 (PLAY)  1.7Vp-p(10usec/div)	WF No. IC801-16 (PLAY)  2Vp-p(10usec/div)	WF No. IC7001-56,59 (PLAY)  2.4Vp-p(100nsec/div)
WF No. IC7001-80 (PLAY)  4.8Vp-p(20nsec/div)	WF No. IC7001-81 (PLAY)  1.9Vp-p(20nsec/div)		

12 Illustration of IC's, Transistors and Diodes

C1BB00001151 (17P) C1AB00003282 (42P) C0ABBB000179 (8P) 	C0DBFY00049 	C0CBCBC00090 	C0HBA0000268 (48P) MFI341S2164 (15P) MN6627954AMA (100P) RFKWMHC10EB (100P) 	BA5948FPE2 (28P) 	
C0GAE0000007 	C0EBE0000434 	C3EBFY000006 C0ABBB000216 	C0DAEJG00001 	MIP2G40MDSLJ 	C0DAEMZ00001 
VUEALLPT031 	B1BAAJ000003 	B1ABCF000176 B1GDCFJJ0044 	B1ADCF000001 B1GBCFLL0037 B1GBCFJN0033 B1ADCE000012 B1GBCFJJ0051 B1GDCFGG0026 B1ABDF000026 	B1GFGCAA0001 	B1BCCG000023 
B3AEA0000129 	B0EBKR000067 	B0BC7R5A0266 MAZ8056GML B0BC3R0A0262 B0BC6R100010 B0BC7R500001 	B0HCMM000019 	MA2J7290GL B0ACCK000012 	
B0EAKU000001 B0EAKM000117 B0HAJM000005 	B0JAMF000011 	B0ABSM000008 	B0ADEJ000041 	B0ACCK000005 	

13 Overall Simplified Block



14.1. SERVO/SYSTEM CONTROL BLOCK DIAGRAM

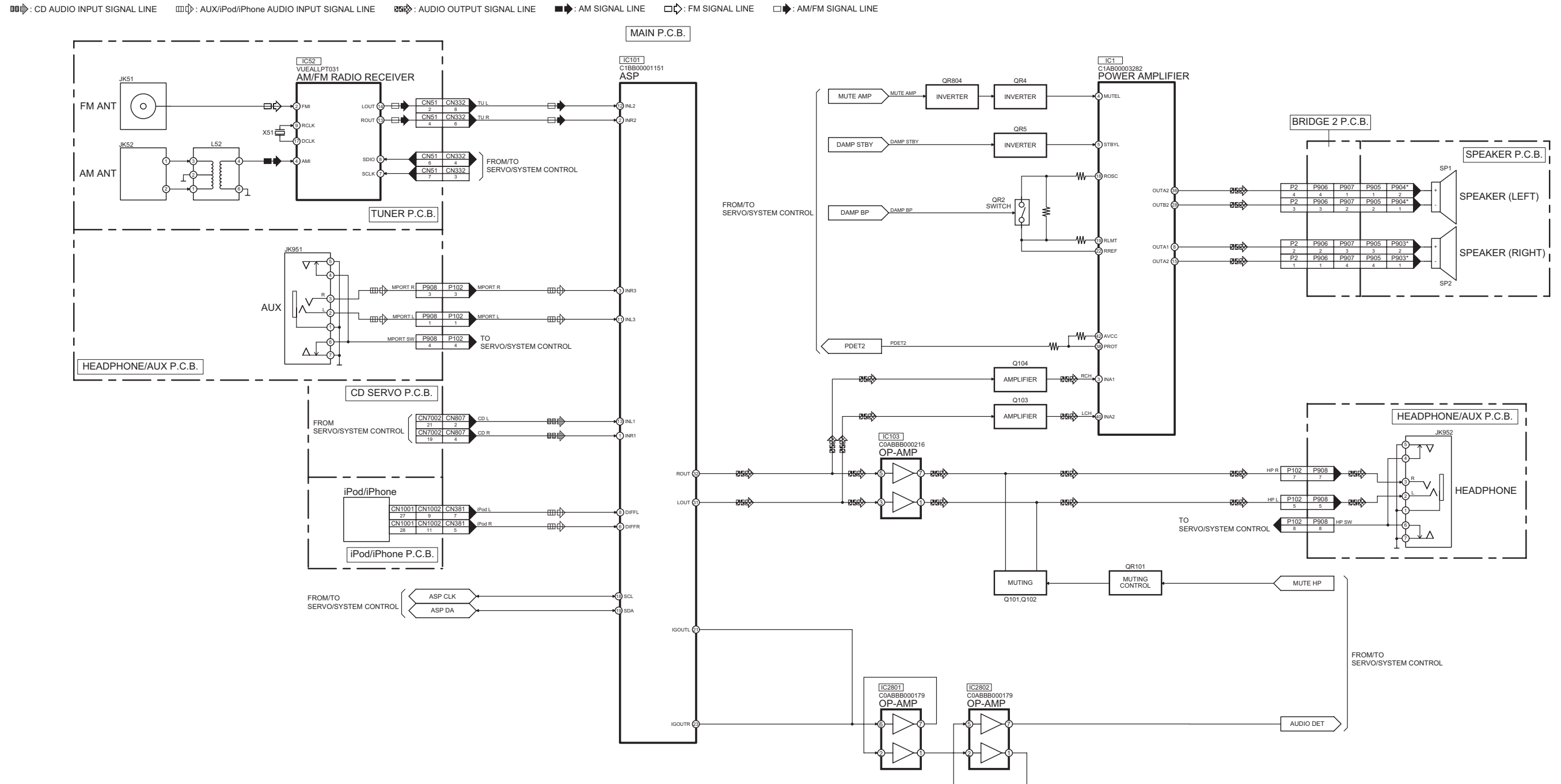
The diagram illustrates the electrical architecture of a portable CD player, organized into several functional blocks and PCBs:

- Optical Pickup Unit:** Contains an actuator, laser diode, and photo diode, interfaced with the CD Servo Processor via connectors CN7001.
- CD Servo Processor (IC7001):** Controls the traverse motor (M7301) and spindle motor (M7302) via drivers IC7002 and IC7003. It also manages the laser drive (Q7801) and the photo diode output (PD).
- Micro Processor (IC801) & Micro Controller (IC300):** The central control unit, interfaced with an EEPROM (IC800) and a reset switch (Q302). It manages the system's logic and data flow.
- Position Switch PCB:** Includes a position switch (S642) and a motor (MT1) for the CD tray, interfaced with the Micro Processor.
- Motor PCB:** Controls the motor (MT1) via a motor driver (IC650).
- Bridge 1 PCB:** A central hub for the system, interfacing the Micro Processor with various peripheral components.
- Panel PCB:** Contains the user interface, including a 7-segment display (Z900), a remote control sensor (IR921), and a LED drive (Q900).
- Headphone/Aux PCB:** Manages audio output, including a headphone switch (HP SW) and an auxiliary switch (AUX SW).
- iPod/iPhone PCB:** Interfaces the system with external devices like iPod and iPhone, handling data and power signals.
- SMPS PCB:** Manages the power supply, including an ACC power control (Q580) and a temperature detector (TEMP DET).
- Tuner PCB:** Manages the tuner and audio signals, including a tuner switch (TU SW) and an audio switch (AUX SW).
- Panel Key PCB:** Contains the physical buttons for the system, including a stop button (S915), play/pause button (S913), and a power button (S901).

The diagram shows the detailed wiring and signal flow between these components, ensuring the CD player operates correctly and efficiently.

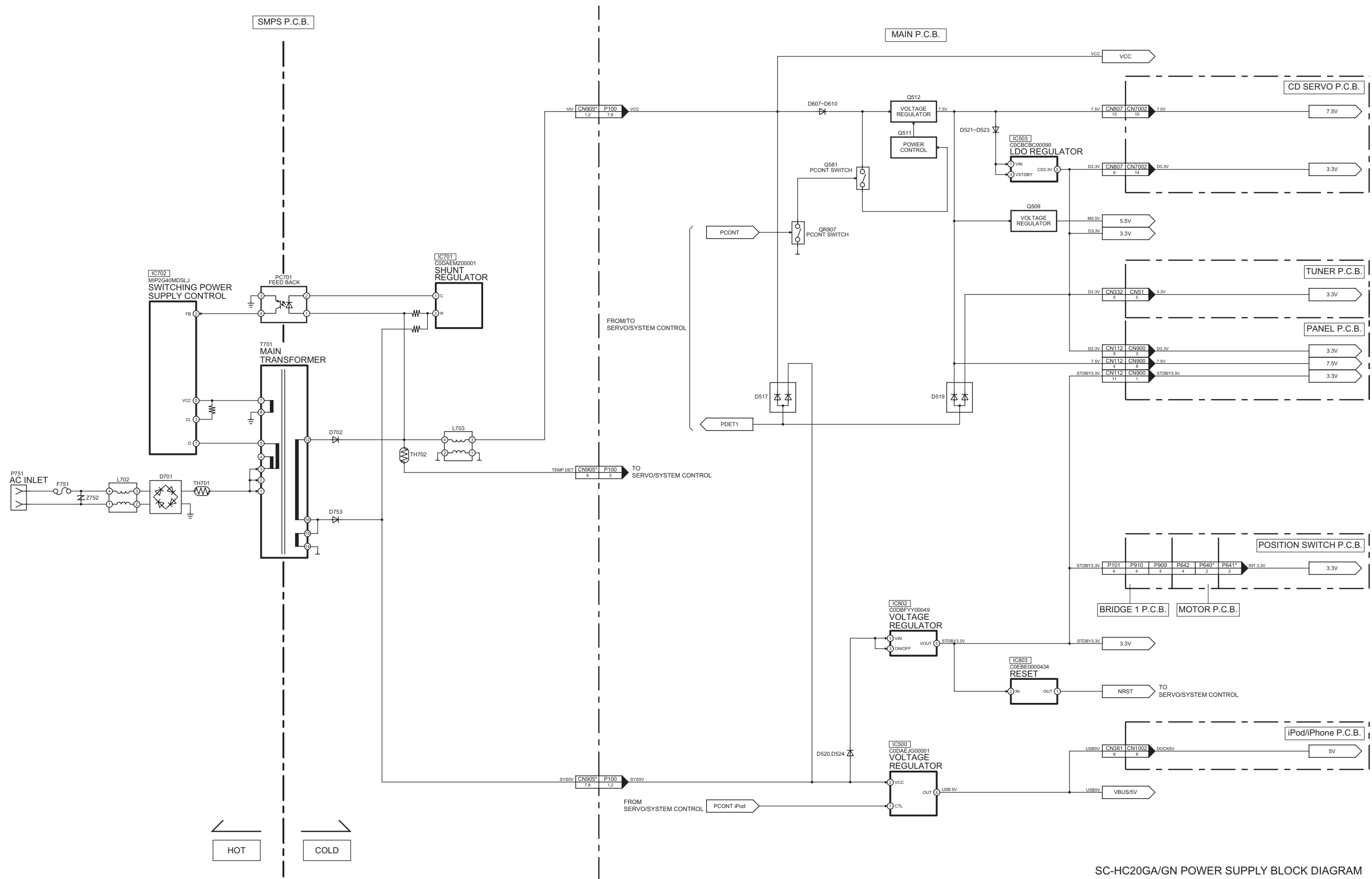
78

14.2. AUDIO BLOCK DIAGRAM



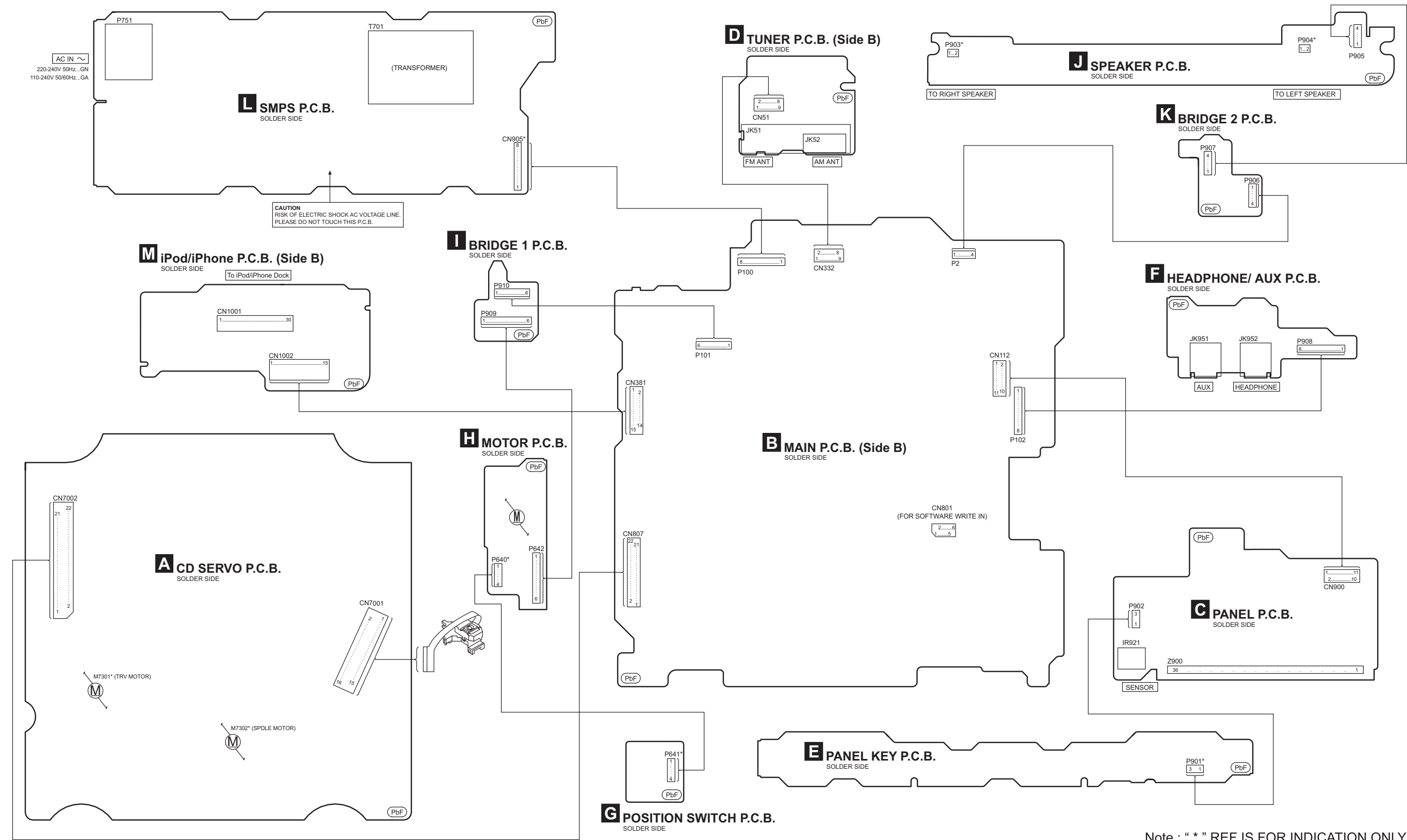
SC-HC20GA/GN AUDIO BLOCK DIAGRAM

14.3. POWER SUPPLY BLOCK DIAGRAM



SC-HC20GA/GN POWER SUPPLY BLOCK DIAGRAM

15 Wiring Connection Diagram



16 Schematic Diagram Notes

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

Notes:

S641:	OPEN switch.
S642:	CLOSE switch.
S901:	POWER switch ().
S903:	iPod PLAY/PAUSE switch (iPod ).
S904:	FM/AM/AUX switch.
S906:	CD PLAY/PAUSE switch (CD ).
S907:	CD OPEN/CLOSE switch (CD ).
S911:	REV SKIP switch ().
S912:	FWD SKIP switch ().
S913:	STOP switch ().
S914:	VOL- switch.
S915:	VOL+ switch.
S7201:	REST 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 μ F, unless otherwise noted. F=Farads, pF=pico-Farad.

• Coil

Unit of inductance is H, unless otherwise noted.

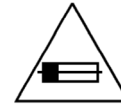
• *

REF IS FOR INDICATION ONLY.

• Voltage and signal line

	: +B Signal Line
	: -B Signal Line
	: CD Audio Input Signal Line
	: AM/FM Signal Line
	: Audio Output Signal Line
	: AM Signal Line
	: FM Signal Line
	: Aux/iPod/iPhone Audio Input Signal Line

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE F751 T1.6AL, 250V FUSE (GN) TYPE F751 T3.15AL, 250V FUSE (GA)



RISK OF FIRE-REPLACE FUSE AS MARKED.

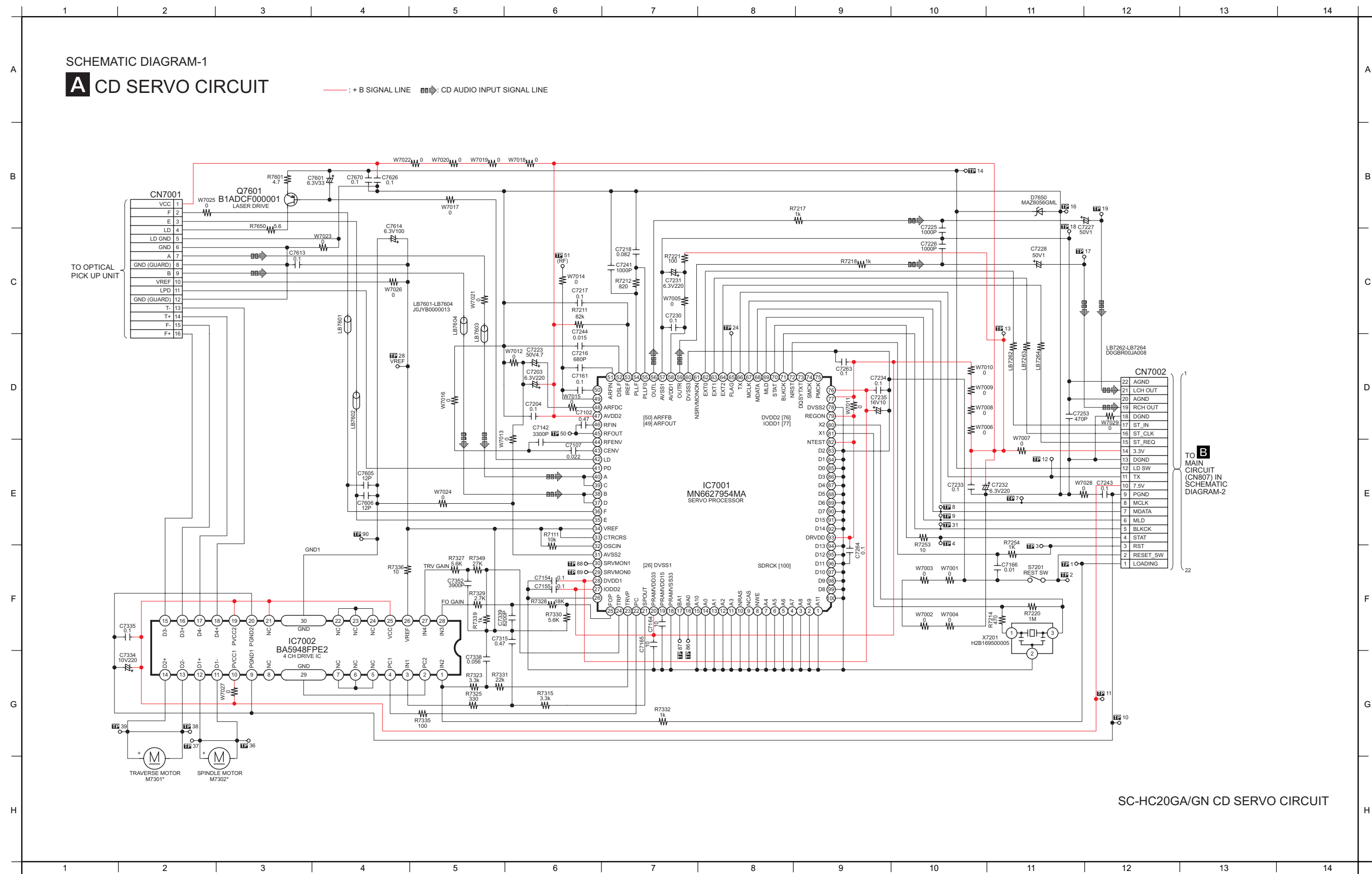
FUSE CAUTION



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

17 Schematic Diagram

17.1. CD SERVO CIRCUIT



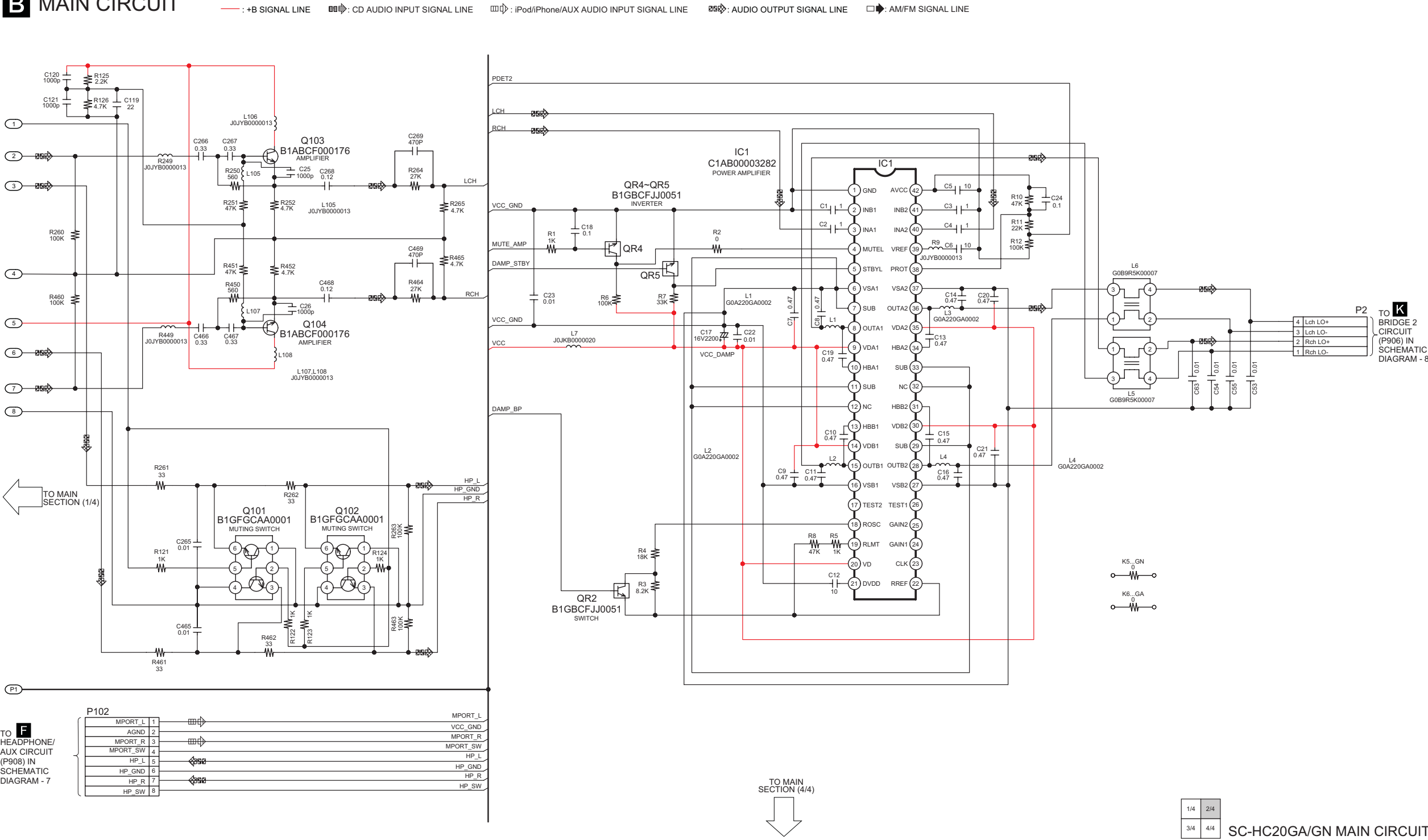
— : +B SIGNAL LINE : CD AUDIO INPUT SIGNAL LINE : iPod/iPhone/AUX AUDIO INPUT SIGNAL LINE : AUDIO OUTPUT SIGNAL LINE : AM/FM SIGNAL LINE



17.3. MAIN CIRCUIT (2/4)

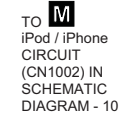
SCHEMATIC DIAGRAM - 3

B MAIN CIRCUIT

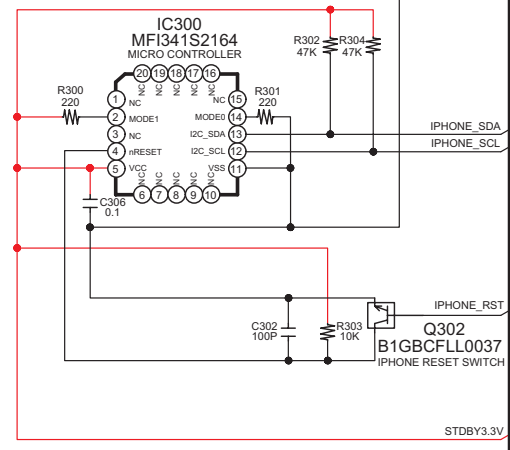


I
J
K
L
M
N
O
P

B MAIN CIRCUIT



FOR SOFTWARE



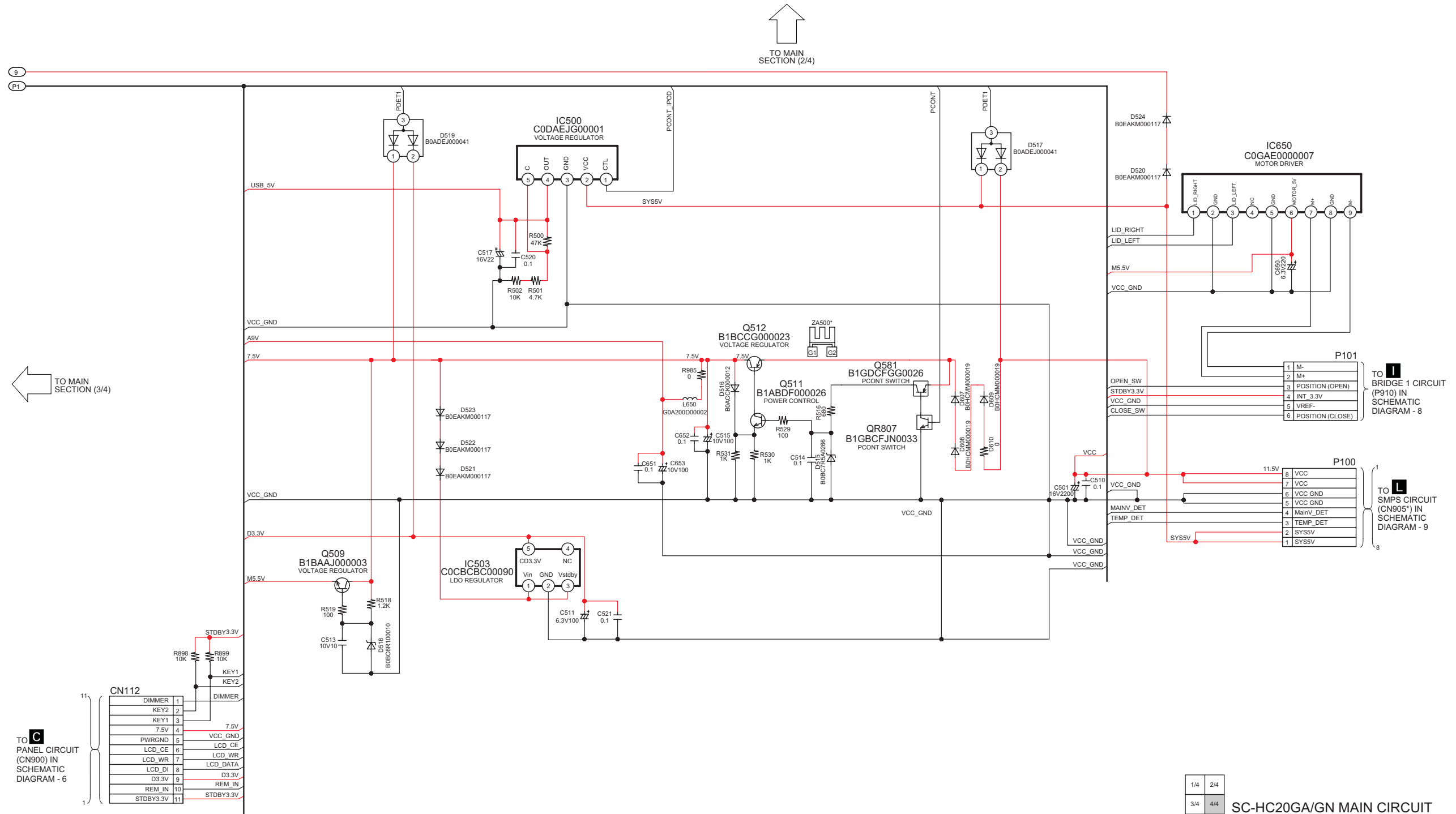
SC-HC20GA/GN MAIN CIRCUIT

17.5. MAIN CIRCUIT (4/4)

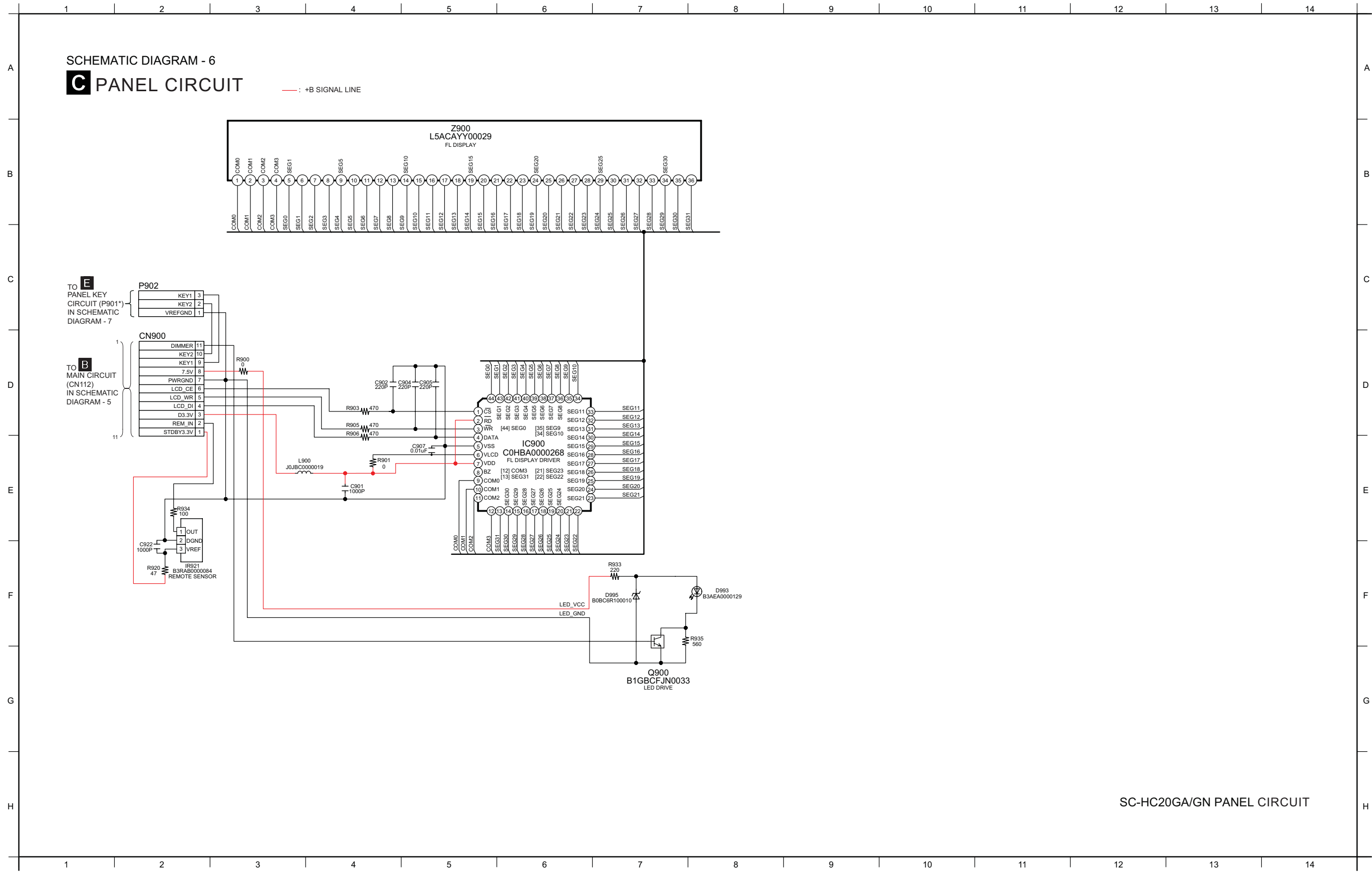
SCHEMATIC DIAGRAM - 5

B MAIN CIRCUIT

— : +B SIGNAL LINE : CD AUDIO INPUT SIGNAL LINE : iPod/iPhone/AUX AUDIO INPUT SIGNAL LINE : AUDIO OUTPUT SIGNAL LINE : AM/FM SIGNAL LINE



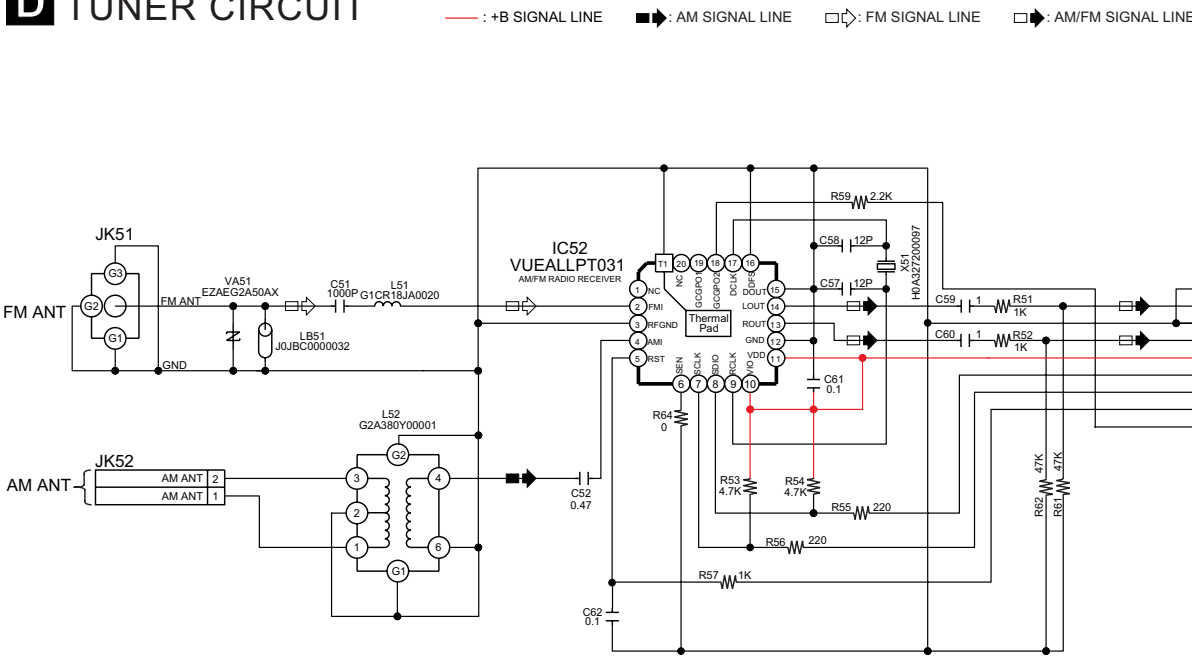
17.6. PANEL CIRCUIT



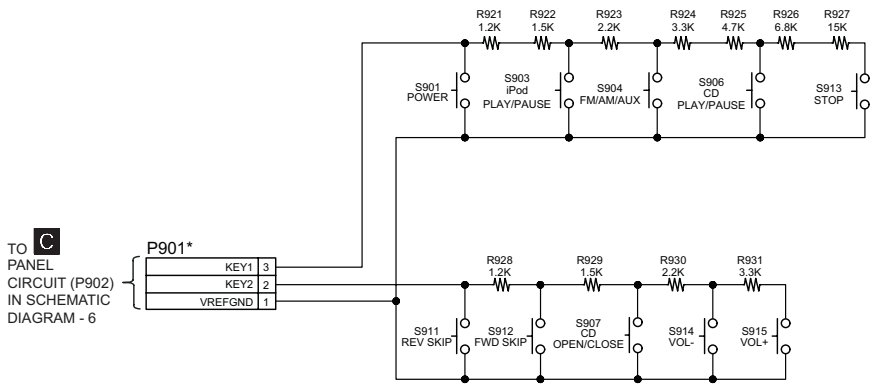
17.7. TUNER, PANEL KEY, HEADPHONE/AUX & POSITION SWITCH CIRCUIT

SCHEMATIC DIAGRAM - 7

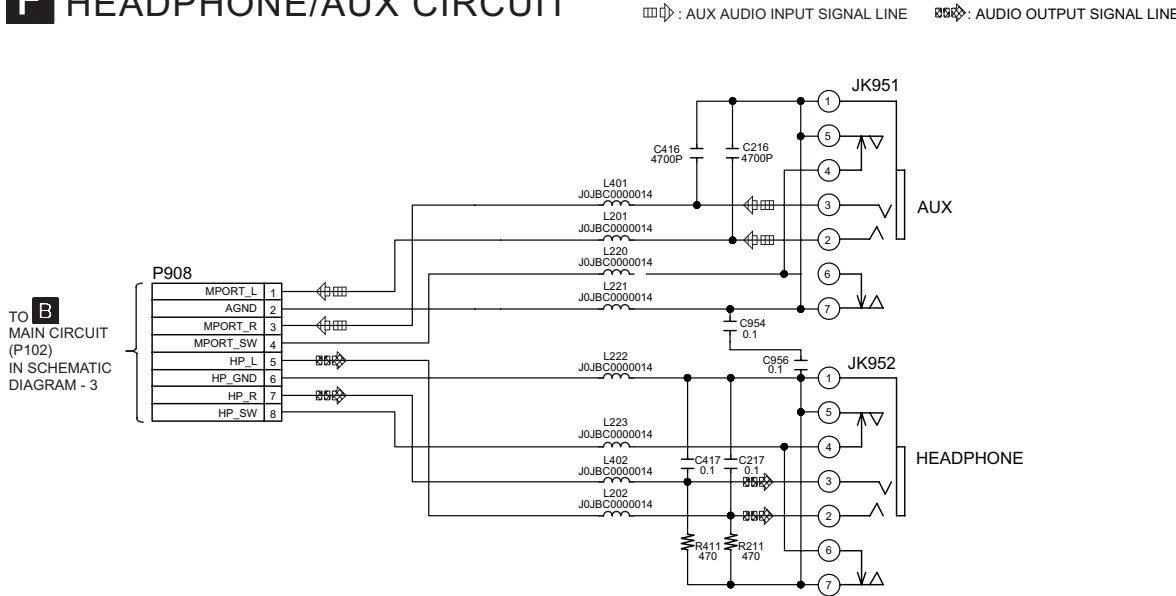
D TUNER CIRCUIT



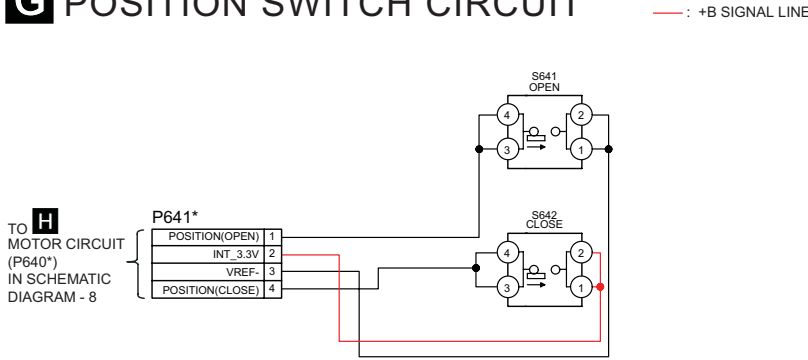
E PANEL KEY CIRCUIT



F HEADPHONE/AUX CIRCUIT

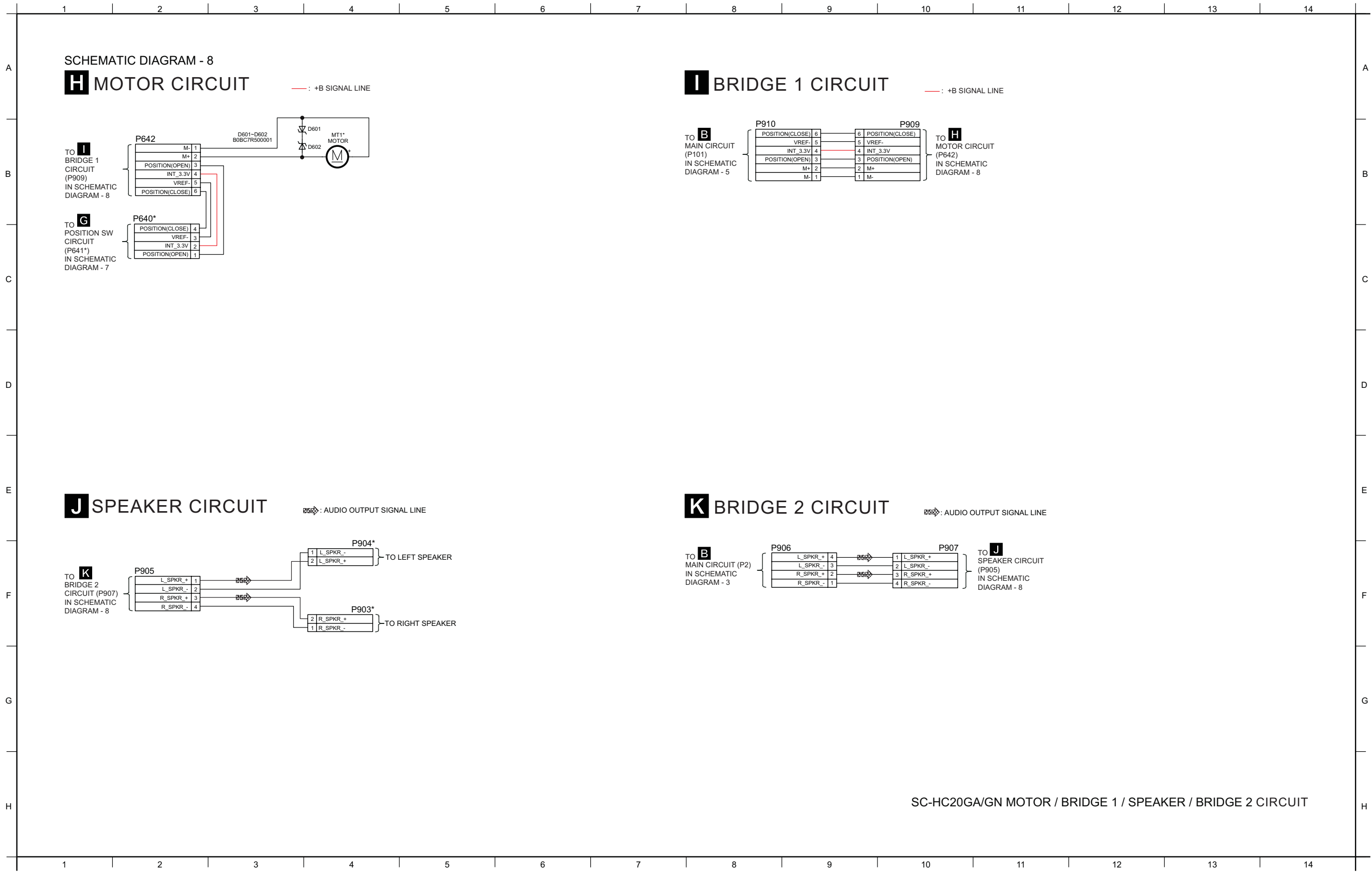


G POSITION SWITCH CIRCUIT

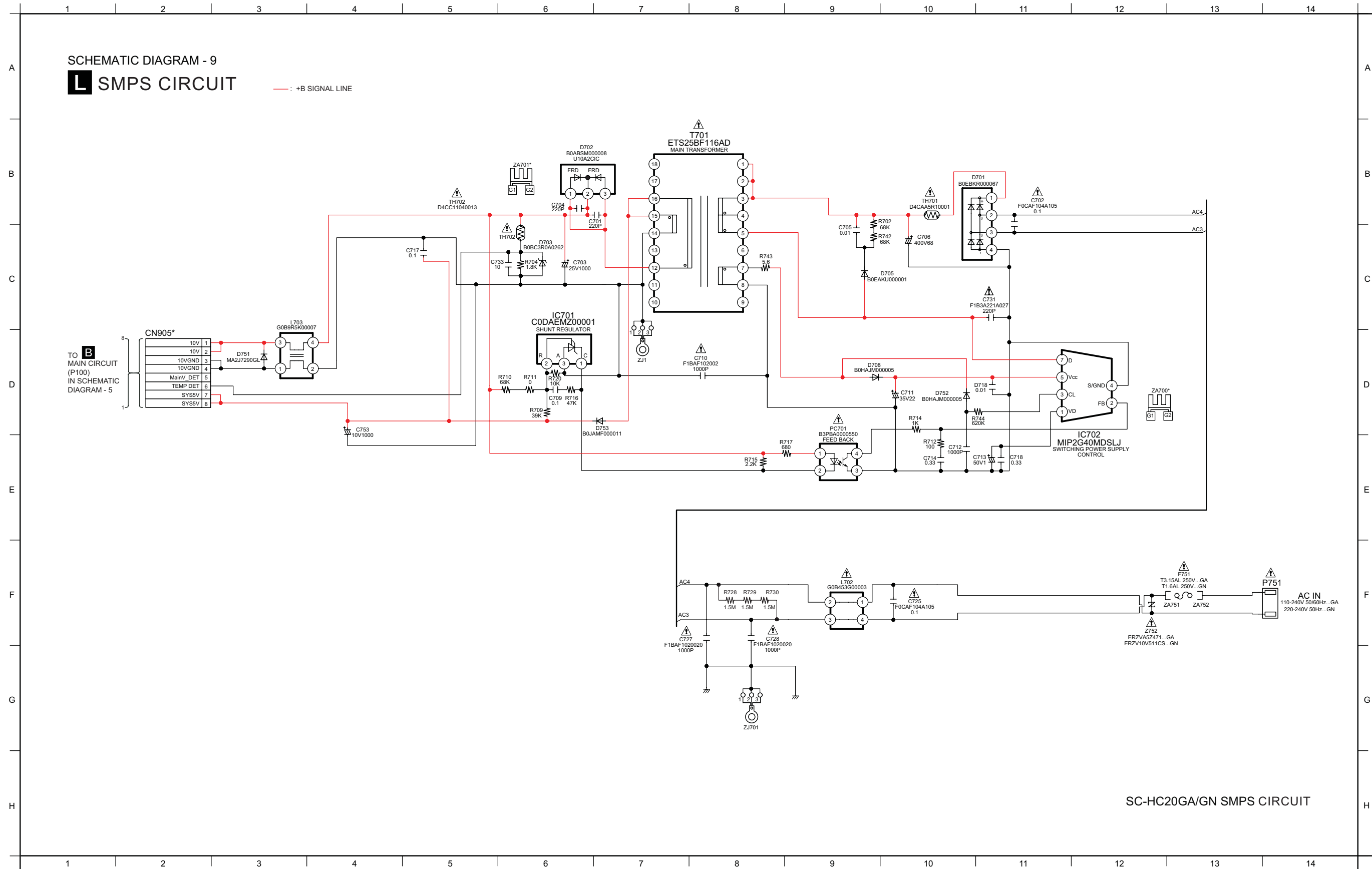


SC-HC20GA/GN TUNER / PANEL KEY / HEADPHONE/AUX / POSITION SWITCH CIRCUIT

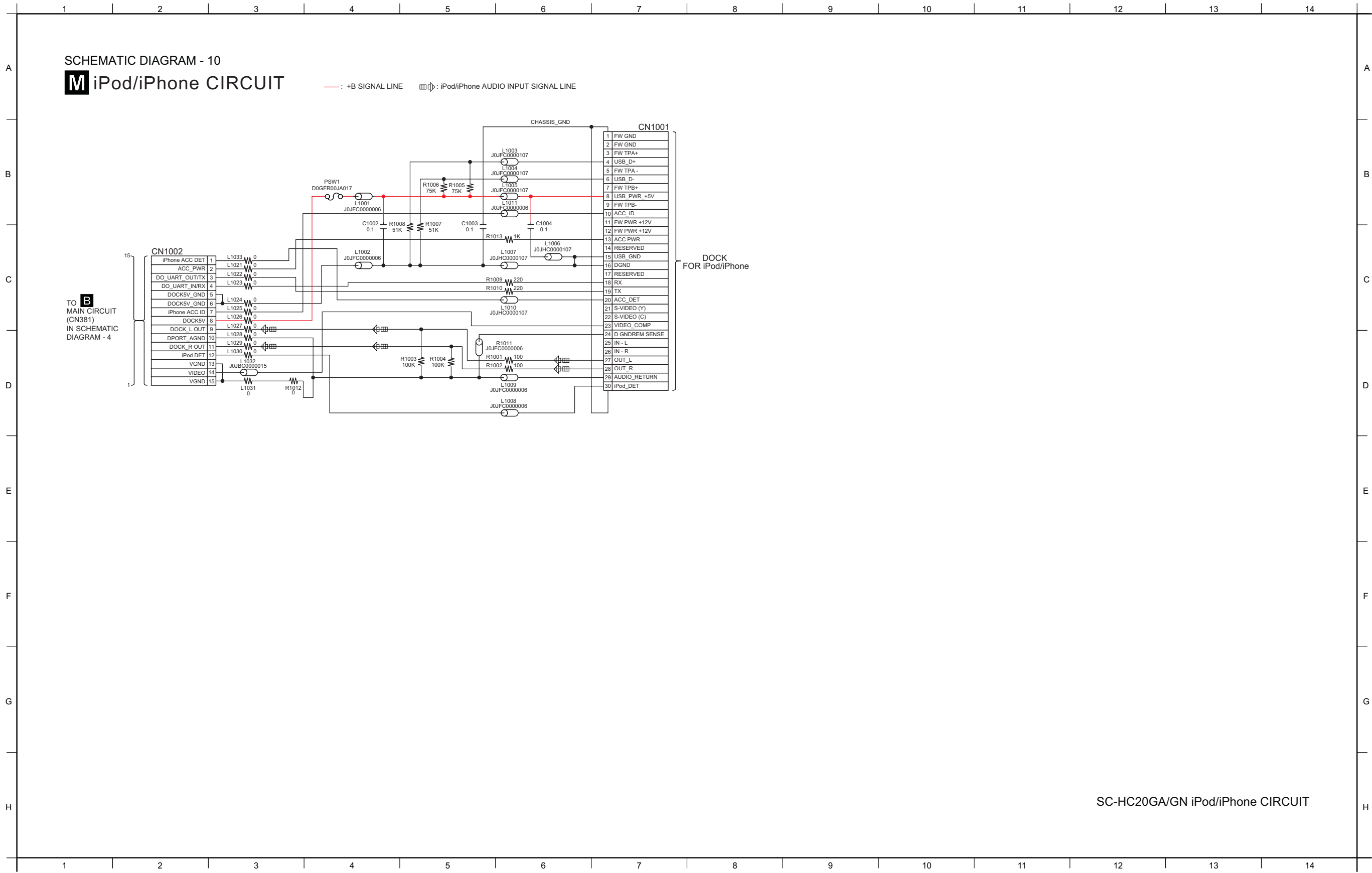
17.8. MOTOR, BRIDGE 1, SPEAKER & BRIDGE 2 CIRCUIT



17.9. SMPS CIRCUIT



17.10. iPod/iPhone CIRCUIT



18.1. CD SERVO, TUNER & iPod/iPhone P.C.B.

A B C D E F G H



SC-HC20GA/GN
CD SERVO/ TUNER/ iPod/iPhone P.C.B.

A vertical scale with labels A, B, C, D, E, F, G, H from bottom to top.

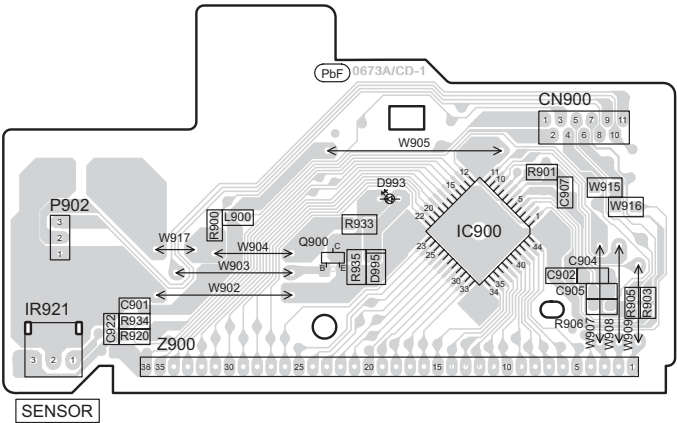
(SIDE A)



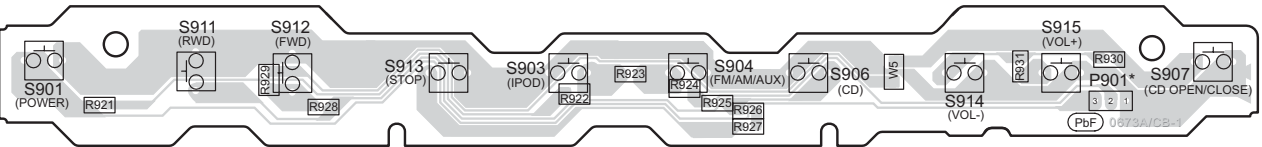
96

18.3. PANEL, PANEL KEY, HEADPHONE/AUX, POSITION SWITCH & MOTOR P.C.B.

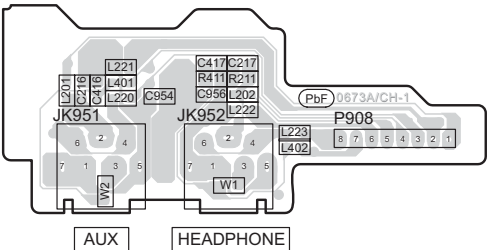
C PANEL P.C.B. (REPX0818ED...GN)
(REPX0818GD...GA)



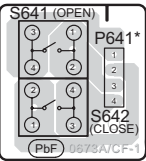
E PANEL KEY P.C.B. (REPX0818EB...GN)
(REPX0818GB...GA)



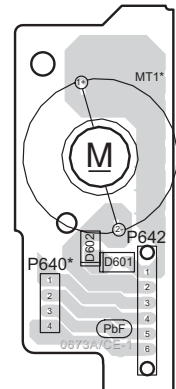
F HEADPHONE/ AUX P.C.B. (REPX0818EH...GN)
(REPX0818GH...GA)



G POSITION SWITCH P.C.B. (REPX0818EE...GN)
(REPX0818GE...GA)



H MOTOR P.C.B. (REPX0818EE...GN)
(REPX0818GE...GA)



NOTE “*” REF IS FOR INDICATION ONLY

SC-HC20GA/GN
PANEL/ PANEL KEY/ HEADPHONE/AUX/ POSITION SWITCH/ MOTOR P.C.B.

A vertical scale with labels A, B, C, D, E, F, G, H from bottom to top.

Diagram of the bottom of the speaker assembly showing the P903* and P904* connectors. The P903* connector is labeled "TO RIGHT SPEAKER" and the P904* connector is labeled "TO LEFT SPEAKER". The diagram also shows the P905 connector and the PbF 0673A/CG-1 component.

[illegible]

SC-HC20GA/GN
BRIDGE 1/ SPEAKER/ BRIDGE 2/ SMPS P.C.B.

19 Terminal Function of IC's

19.1. IC801 (RFKWMHC10EB) MICRO PROCESSOR IC

Pin No.	Mark	I/O	Function
1	NC	-	No connection
2	NC	-	No connection
3	LCD_CE	O	Chip Selection Output
4	OCD_SDA	O	On Chip Debugger Data
5	NC	-	No connection
6	OCD_SCK	O	On Chip Debugger Clock
7	PCONT_POW	O	Power Control
8	PCONT_iPod	O	iPod POWER CONTROL
9	MODEL_SEL	I	Mode Select
10	NC	-	No connection
11	GND_MMOD	I	Ground
12	OSC2(OUT)	O	Main Oscillator output
13	OSC1(IN)	I	Main Oscillator input
14	VSS	-	Ground
15	XI	O	Slow Oscillator I/P
16	XO	O	Slow Oscillator O/P
17	VDD33	-	3.3V Voltage Supply
18	VDD18	-	1.8V Votage Supply
19	NRST	I	Micro-P Reset
20	NC	-	No connection
21	NC	-	No connection
22	NC	-	No connection
23	NC	-	No connection
24	NC	-	No connection
25	REM_IN	I	Remote Control Input
26	NC	-	No connection
27	NC	-	No connection
28	iPod_ACC_CTRL	O	iPod Autorisation Control
29	CD_BLKCK	I	CD Subcode Block Clock Input
30	NC	-	No connection
31	LCD_DATA	O	Serial Data Output
32	NC	-	No connection
33	LCD_WR	O	Write Clock Output
34	CD_MDATA	O	CD LSI Command Data
35	CD_STATUS	I	CD LSI Status Input
36	CD_MCLK	O	CD LSI Command Clock
37	VDD18	-	1.8V Votage Supply
38	DAMP_STBY	O	D-AMP Muting Control
39	VSS	-	Ground
40	ASP_CLK	O	ASPC Clock
41	ASP_DATA	I/O	ASPC Data
42	CD_MLD	O	CD LSI Command Load
43	REST_SW	I	CD Rest Switch
44	CD_RESET	O	CD Reset
45	MUTE_AMP	O	Audio muting
46	NC	-	No connection
47	CLOSE_SW	I	Position Switch Center Control
48	OPEN_SW	I	Position Switch Right Control
49	CP_NRST	O	Reset Signal to iPhone
50	CP_SCL	O	12C Clock to iPod IC (Software 12C Control)
51	CP_SDA	I/O	12C Data to iPod IC (Software 12C Control)
52	AUX_SW	I	Music Port Switch
53	HP_SW	I	Headphone Switch
54	DIGAMP_GAIN	O	SMPS Beatproof
55	DAMP_BP	O	D-AMP Beatproof
56	APD_CHK	-	No connection
57	NC	-	No connection
58	NC	-	No connection
59	EE_CS	O	EEPROM Control Signal

Pin No.	Mark	I/O	Function
60	EE_SCL	O	EEPROM Clock Signal
61	EE_SDA	I/O	EEPROM Data Signal
62	CRTIMER	I	CR Timer
63	VSS	-	GND
64	NC	-	No connection
65	LID_LEFT	O	CD LID Left
66	LID_RIGHT	O	CD LID Right
67	NC	-	No connection
68	NC	-	No connection
69	NC	-	No connection
70	NC	-	No connection
71	NC	-	No connection
72	NC	-	No connection
73	NC	-	No connection
74	NC	-	No connection
75	MUTE_HP	I/O	Mute Signal for Headphone
76	UART_IN (iPod)	O	Serial UART I/P Communication (iPod)
77	UART_OUT (iPod)	I	Serial UART O/P Communication (iPod)
78	DIMMER	O	Tuner Stereo Signal
79	TU_SDA	I/O	IIC Serial Data for Tuner (PLL Data I/O)
80	iPod_DET	I	iPod detection. (Output L if NO iPod)
81	TU_SCLK	O	IIC Serial Clock for Tuner (PLL Clock Output)
82	NC	-	No connection
83	NC	-	No connection
84	NC	-	No connection
85	TU_RST	O	Tuner Reset
86	MAIN_VDET	I	Main Supply Voltage Detect
87	TU_INT	I	Interrupt from Tuner
88	iPod_ACC3.3	I	3.3V Voltage Supply (For iPod)
89	VDD	-	Micro-P +5V Voltage Supply
90	NC	-	No connection
91	VSS	-	GND
92	KEY1	I	Key 1 input
93	TEMP_DET	I	Temperature Detec
94	KEY2	I	Key 2 Input
95	PDET2(DAMP)	I	Power Detect 2 (For D-AMP)
96	PDET1(REG)	I	Power Detect 1
97	REGION	I	Region Setting
98	iPod_PDET	I	iPod Power Detect
99	AUDIO_DET	I	Audio Detect
100	VREF+	-	3.3V Reference Voltage

19.2. IC7001 (MN6627954AMA) IC SERVO PROCESSOR

Pin No.	Mark	I/O	Function
1	A9	O	DRAM address signal O/P 9
2	A11	O	DRAM address signal O/P 11
3	A8	O	DRAM address signal O/P 8
4	A7	O	DRAM address signal O/P 7
5	A6	O	DRAM address signal O/P 6
6	A5	O	DRAM address signal O/P 5
7	A4	O	DRAM address signal O/P 4
8	NWE	O	Write Enable Signal (DRAM)
9	NCAS	O	DRAM CAS Control Signal
10	NRAS	O	DRAM ARS Control Signal
11	A3	O	DRAM address Signal O/P 3
12	A2	O	DRAM address Signal O/P 2
13	A1	O	DRAM address Signal O/P 1
14	A0	O	DRAM address Signal O/P 0
15	A10	O	DRAM address Signal O/P 10
16	BA0	-	Motor O/P (0);/Serial I/P
17	BA1	-	Motor O/P (1);/Serial I/P
18	PRAMVSS33	-	GND (DRAM)
19	PRAMVDD33	-	Power Supply Voltage (+1.6V)
20	PRAMVDD15	-	Power Supply Voltage (DRAM)
21	SPOUT	O	Spindle Drive O/P
22	PC	I/O	Spindle motor drive O/P signal serial data/Monitoring I/P
23	TRVP	O	Traverse Drive O/P (+ve)
24	TRP	O	Tracking Drive O/P (+ve)
25	FOP	O	Focusing Drive O/P (+ve)
26	DVSS1	-	GND
27	IODD2	-	Digital Power Supply Voltage 2 (I/O)
28	DVDD1	-	Digital Power Supply Voltage 1 (Built-In)
29	SRVMON0	-	No Connection
30	SRVMON1	-	No Connection
31	AVSS2	-	GND
32	OSCIN	I	Oscillating Input
33	CTRCRS	-	Tracking Cross Comparator
34	VREF	-	+Vref Supply Voltage
35	E	I	Tracking Input Signal 1
36	F	I	Tracking Input Signal 2
37	D	I	Focusing Input Signal 4
38	B	I	Focusing Input Signal 2
39	C	I	Focusing Input Signal 3
40	A	I	Focusing Input Signal 1
41	PD	I	APC Amp I/P
42	LD	O	Laser Drive Current O/P
43	CENV	-	Detection Capacitance Connection terminal
44	RFENV	O	RF Envelope O/P
45	RFOUT	O	RF Summing Amp O/P
46	RFIN	I	SGC I/P
47	AVDD2	-	Analog Power Supply voltage 2 (For DSL/PLL)
48	ARFDC	-	AGC Capacitive Connection Terminal
49	ARFOUT	O	AGC Output
50	ARFFB	I	ARF Feedback Signal I/P
51	ARFIN	I	Audio RF Signal I/P
52	DSLIF	I	Loop Filter Terminal (For DSL)
53	IREF	-	Reference I/P
54	PLLIF	-	PLL Loop Filter Terminal (Phase Compare)
55	PLLFO	-	PLL Loop Filter Terminal (Speed Compare)
56	OUTL	O	Audio O/P (LCH)
57	AVSS1	-	GND

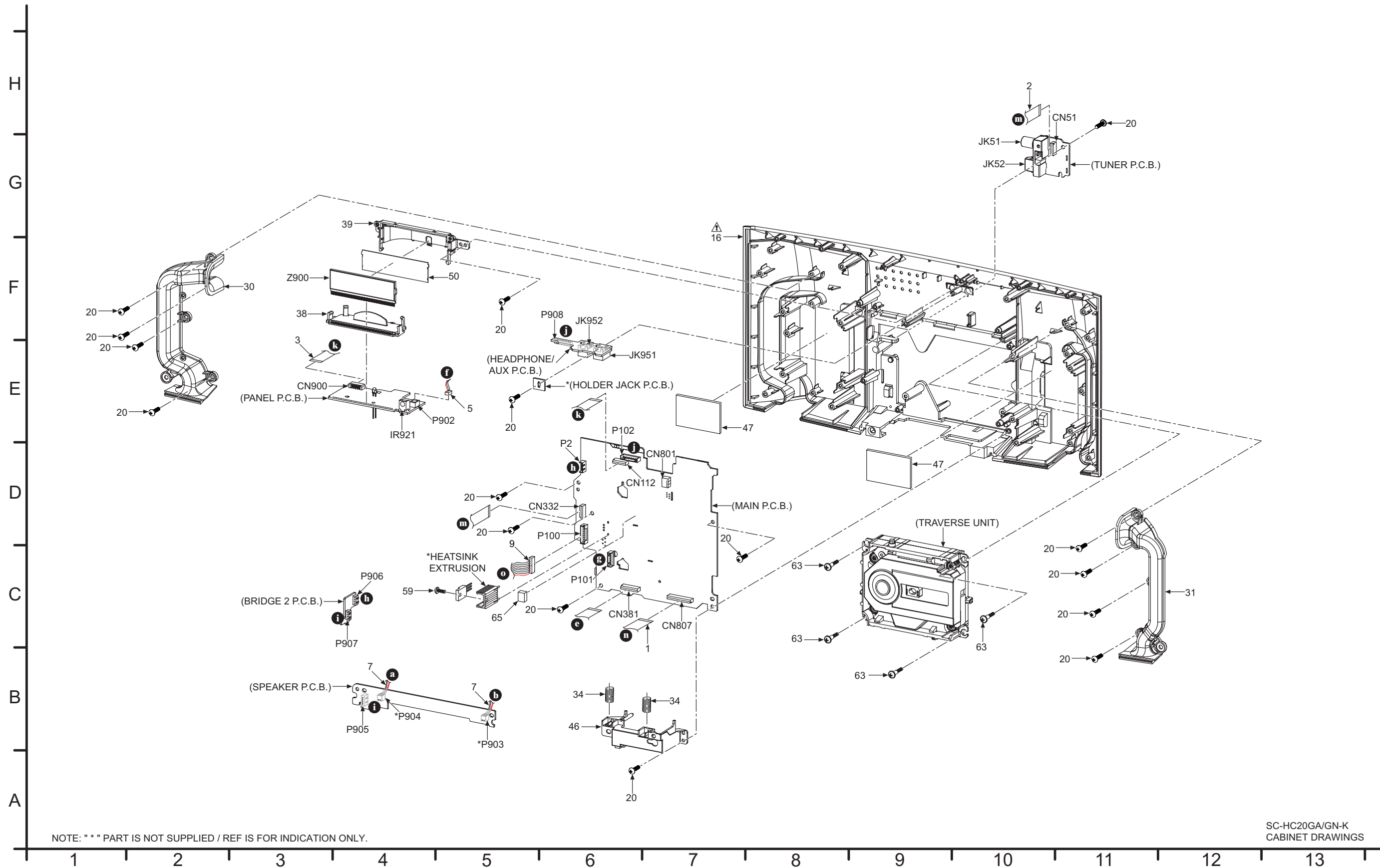
Pin No.	Mark	I/O	Function
58	AVDD1	-	Analog Power Supply Voltage 1
59	OUTR	O	Audio O/P (RCH)
60	DVSS3	-	GND3 (Digital Circuit)
61	NSRVMONON	I	Servo Motor O/P Enabling
62	EXT0 / SRDATA (ST_IN)	-	Expansion O/P Port 0
63	EXT1 / LRCK (ST_REQ)	-	Expansion O/P Port 1
64	EXT2 / BCLK (ST_CLK)	-	Expansion O/P Port 2
65	FLAG	-	Flag Signal O/P
66	TX	-	Digital Audio Interface O/P signal
67	MCLK	I	Micro-Computer Command Clock I/P
68	MDATA	I	Micro-Computer Data I/P
69	MLD	I	Micro-Computer Load I/P
70	STAT	O	Status Signal O/P
71	BLKCK	O	Subcode Blk Clock
72	NRST	O	LSI Reset Signal
73	DQSYTXT	-	Pack Signal O/P for CD-Text data
74	SMCK	-	Micro-Computer Clock O/P
75	PMCK	-	IOCNT Serial data O/P (Synchronous O/P)
76	DVDD2	-	Digital Power Supply Voltage 2 (+1.5V)
77	IODD1	-	Digital Power Supply Voltage 1 (For I/O)
78	DVSS2	-	GND2 (For Digital Circuit)
79	NTEST2	I	Test Mode Setting (ON:H)
80	X2	O	Crystal Oscillating Circuit O/P
81	X1	I	Crystal Oscillating Circuit I/P
82	NTEST	I	Test Mode Setting I/P (ON:H)
83	D2	O	Data Signal O/P 2
84	D1	O	Data Signal O/P 1
85	D0	O	Data Signal O/P 0
86	D3	O	Data Signal O/P 3
87	D4	O	Data Signal O/P 4
88	D5	O	Data Signal O/P 5
89	D6	O	Data Signal O/P 6
90	D7	O	Data Signal O/P 7
91	D15	O	Data Signal O/P 15
92	D14	O	Data Signal O/P 14
93	DRVDD	-	I/O Power Supply Voltage (DRAM)
94	D13	O	Data Signal O/P 13
95	D12	O	Data Signal O/P 12
96	D11	O	Data Signal O/P 11
97	D10	O	Data Signal O/P 10
98	D9	O	Data Signal O/P 9
99	D8	O	Data Signal O/P 8
100	SDRCK	O	Clock Signal O/P

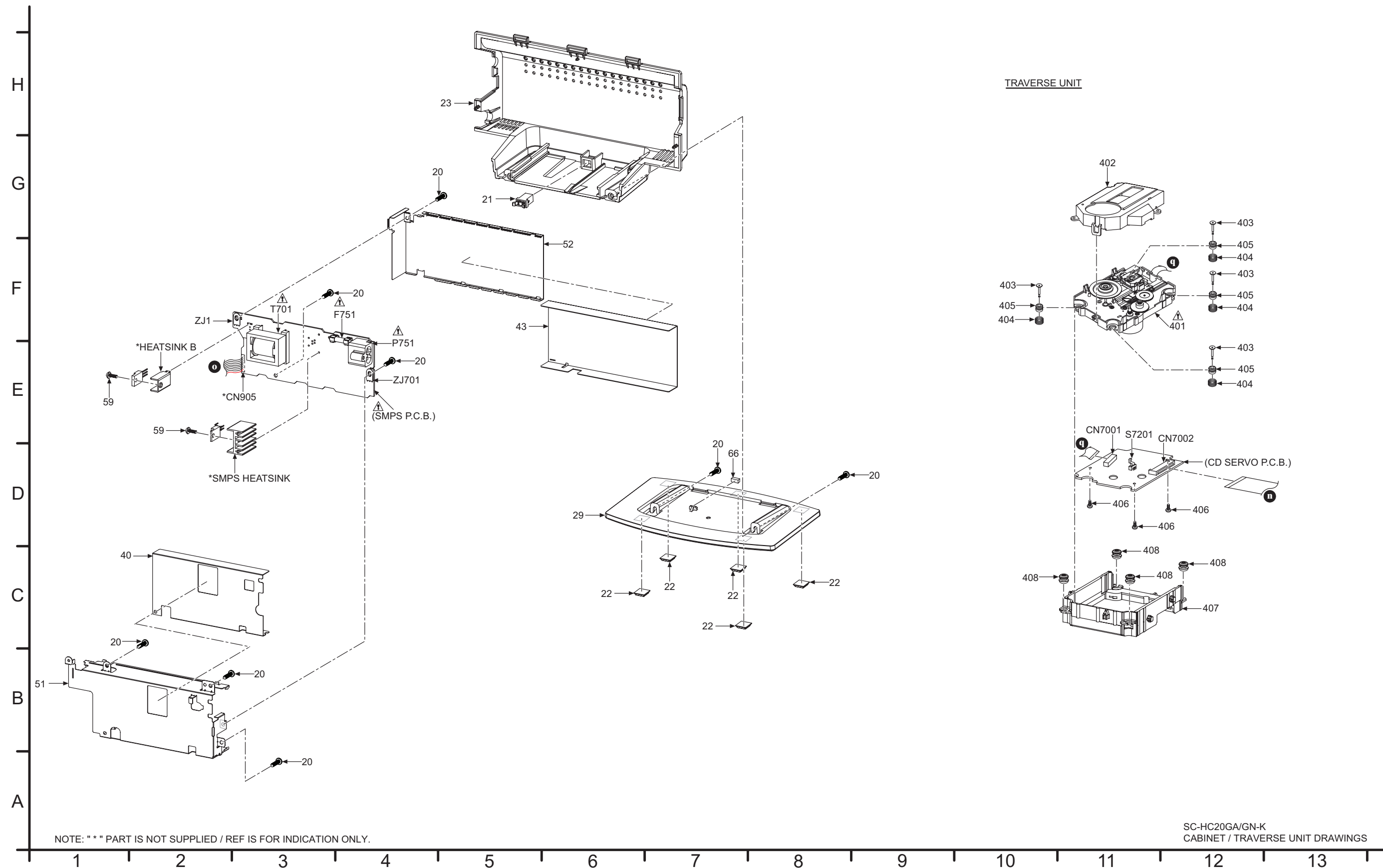
19.3. IC7002 (BA5948FPE2) IC 4CH Drive

Pin No.	Mark	I/O	Function
1	IN2	I	Motor Driver Input
2	PC2	I	Turntable Motor Drive Signal (L:ON)
3	IN1	I	Motor Drive (1) Input
4	PC1	-	Traverse Motor Drive Signal (L): ON)
5-8	N.C.	-	No Connection
9	PGND1	-	Ground Connection (1) for Drive
10	PVCC1	-	Power Supply (1) for Drive
11	D1-	O	Motor Drive (1) reverse - action output
12	D1+	O	Motor Drive (1) forward - action output
13	D2-	O	Motor Drive (2) reverse - action output
14	D2+	O	Motor Drive (2) forward - action output
15	D3-	O	Motor Drive (3) reverse - action output
16	D3+	O	Motor Drive (3) forward - action output
17	D4-	O	Motor Drive (4) reverse - action output
18	D4+	O	Motor Drive (4) forward - action output
19	PVCC2	-	Power Supply (2) for Driver
20	PGND2	-	Ground Connection (2) for Driver
21-24	N.C.	-	No Connection
25	VCC	I	Power Supply terminal
26	VREF	I	Reference Voltage Input
27	IN4	I	Motor Driver (4) Input
28	IN3	I	Motor Driver (3) Input

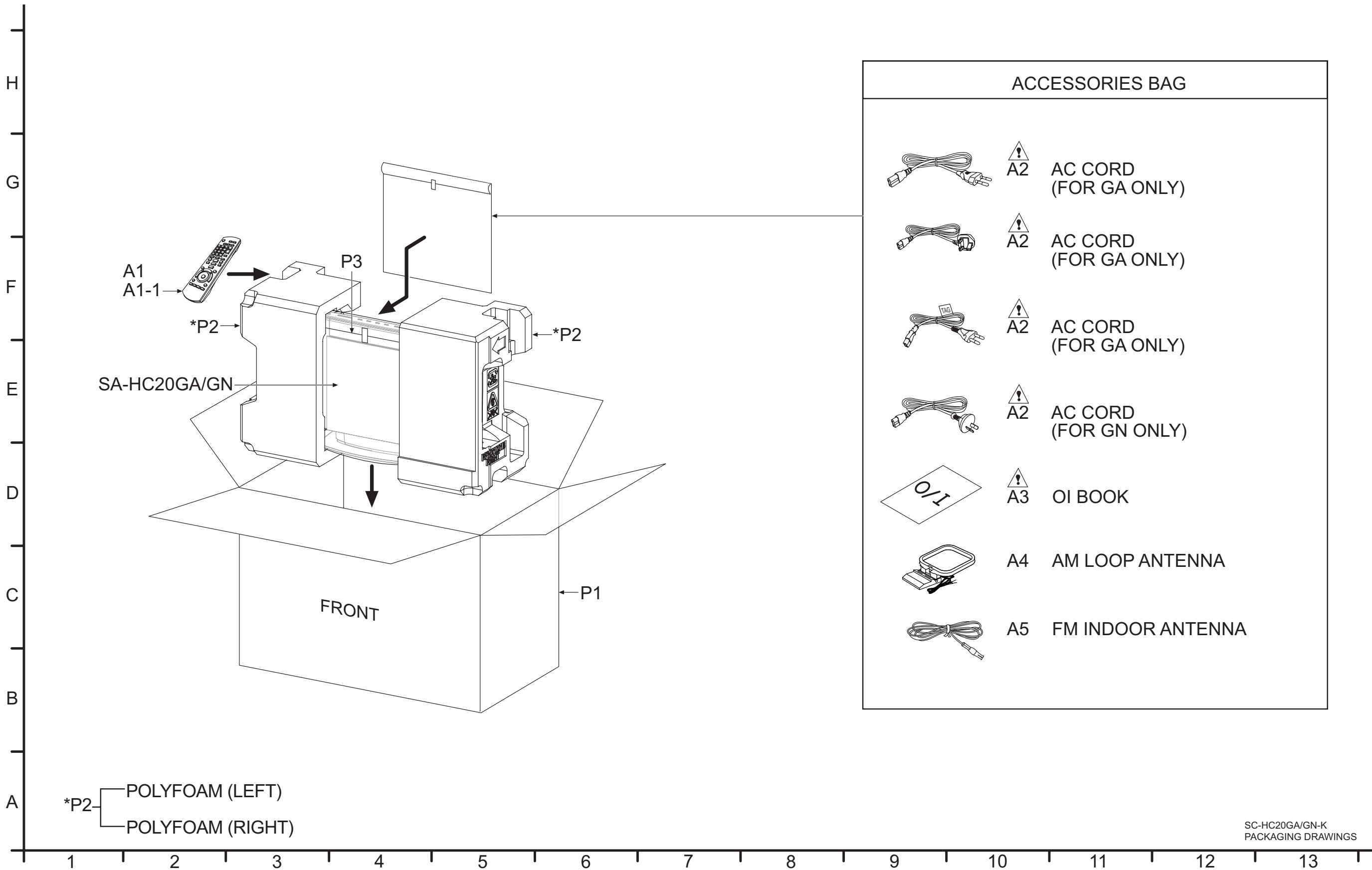
20.1.1. Cabinet Parts Location







20.1.2. Packaging



20.1.3. Mechanical Replacement Parts List

Important Safety Notice

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

RTL (Retention Time Limited)

Note: The marking (RTL) indicates that the Retention Time is Limited for this item.

After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependant on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be available.

Note:

- When replacing any of these components, be sure to use only manufacturer's specified parts shown in the replacement part list.
- The parenthesized indications on the Remarks column specify the destination & product color (Refer to the cover page for the information).
- Parts without these indications shall be used for all areas.
- This product uses a laser diode. Refer to "Precaution of Laser Diode".
- All parts mentioned are supplied by PAVCSG unless indicated likewise.
- Parts mentioned [SPG] in the Remarks column are supplied by PAVC-CSG.
- 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		

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
			CABINET AND CHASSIS		
	1	REEX1134	22P FFC (CD-MAIN)	1	
	2	REEX1135	9P FFC (TUNER-MAIN)	1	
	3	REEX1136	11P FFC (PANEL-MAIN)	1	
	4	REEX1139	15P FFC (iPhone-MAIN)	1	
	5	REXX1050	3P CABLE WIRE (PANEL KEY-PANEL)	1	
	6	REXX1053-1	6P CABLE WIRE (MOTOR-BRIDGE 1)	1	
	7	REXX1054	2P CABLE WIRE (SP PCB-SPK)	2	
	8	REXX1082	4P CABLE WIRE (POSITION SW-MOTOR)	1	
	9	REXX1095	8P CABLE WIRE (SMPS-MAIN)	1	
	10	RDVX0001	BELT	1	
	11	RGKX1018-Q	LCD WINDOW	1	
	12	RGKX1019C-K	CD DOOR ORNAMENT	1	
	13	RGKX1020-K2	DOCKING TUB	1	
	14	RGKX1021-K1	DOCKING COVER	1	
	15	RGPX1017-K1	FRONT PANEL	1	
	16	RFKHHC20GN-K	REAR CABINET ASS'Y	1	GN
	16	RFKHHC20GA-K	REAR CABINET ASS'Y	1	GA

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	17	RGPX1023-K1	CD DOOR BASE	1	
	18	RGUX1012-S	CD EJECT BUTTON	1	
	19	RGUX1015-S	POWER BUTTON	1	
	20	RHD26046	SCREW	47	
	21	RHGX0002	LATCH	1	
	22	RKA0072-KJ	LEG CUSHION	5	
	23	RKQX1003-K1	REAR COVER	1	GA
	23	RKQX1003C-K1	REAR COVER	1	GN
	24	RDG0546	BELT PULLEY	1	
	25	RDGX1006-K	DRIVE GEAR	1	
	26	RDGX1007-K	MIDDLE GEAR	1	
	27	RDGX1008	TIMING GEAR	2	
	28	RGKX1033-K	TUB COVER	1	
	29	RKQX1004-K	BASE STAND	1	
	30	RKTX1012-K	PORT LEFT	1	
	31	RKTX1013-K	PORT RIGHT	1	
	33	RMBX1009-1	iPod DOCKING SPRING	1	
	34	RMBX1011	MIDDLE CHASSIS SPRING	2	
	35	RMKX1007	GEAR FIXTURE	1	
	36	RMKX1008-1	GEAR BASE	1	
	37	RMKX1014-K1	TOP RACK	1	
	38	RMNX1011-W1	LCD HOLDER BASE	1	
	39	RMNX1012-W1	LCD HOLDER COVER	1	
	40	RMNX1013	SMPS INSULATOR A	1	
	43	RMNX1020-1	SMPS INSULATOR D	1	
	44	RMQX1026-K	CD DOOR SLIDER BOTTOM	1	
	45	RMQX1027-K	CD DOOR SLIDER TOP	1	
	46	RMQX1043	CD MECHA BRACKET	1	
	47	RMQX1045	SPEAKER CUSHION	2	
	48	RMUX1002	DOOR SHAFT	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	49	RMUX1003	TIMING GEAR SHAFT	1	
	50	RMXX1007-1	LCD DIFFUSER	1	
	51	RSCX1020	SMPS SHIELD PLATE A	1	
	52	RSCX1021	SMPS SHIELD PLATE B	1	
	53	RXGX1003	DAMPER GEAR	1	
	54	RXQ1690	MOTOR ASS'Y	1	
	55	RYBX1006-K1	NET FRAME UNIT (L)	1	
	56	RYBX1007-K1	NET FRAME UNIT (R)	1	
	57	VHD1224-1	SCREW	10	
	58	XSN2+4FJ	SCREW	2	
	59	XTB3+8JFJ	SCREW	3	
	60	XTW2+6SFJ	SCREW	3	
	61	XTW3+12TFJ	SCREW	8	
	62	RGKX1022-S1	TOP ORNAMENT	1	
	63	RHDY261004	SCREW	4	
	65	RKAX1010	MECHA SUPPORT CUSHION	1	
	66	RMG0547-K	CUSHION	1	
			SPEAKERS		
	SP1	L0AA08A00026	SPEAKER	1	
	SP2	L0AA08A00026	SPEAKER	1	
			TRAVERSE DECK		
⚠	401	RAE0165T-V	TRAVERSE	1	
	402	RMR1396-K	TRAVERSE COVER	1	
	403	RMS0757-1	FIXED PIN	4	
	404	RME0369-1	PRESS SPRING	4	
	405	RMG0730-G	FLOATING RUBBER	4	
	406	XTN2+6GFJ	SCREW	3	
	407	RMRX1014A-X	MIDDLE CHASSIS	1	
	408	RMGX1003-B	OUTTER DAMPER	4	
			PACKING MATERIALS		
	P1	RPGX3088	PACKING CASE	1	GN
	P1	RPGX3089	PACKING CASE	1	GA
	P2	RPNX1021	POLYFOAM	1	
	P3	RPF0262-1	MIRAMAT SHEET	1	
			ACCESSORIES		
	A1	N2QAYB000518	REMOTE CONTROL	1	
	A1-1	RKK-PT470EBK	R/C BATTERY COVER	1	
⚠	A2	K2CJ2DA00010	AC CORD	1	GN
⚠	A2	K2CP2CA00001	AC CORD	1	GA
⚠	A2	K2CQ2CA00007	AC CORD	1	GA
⚠	A2	K2CZ3YY00005	AC CORD	1	GA
⚠	A3	RQTX1058-B	O/I BOOK (En)	1	GN
⚠	A3	RQTX1061-G	O/I BOOK (En/Cn/Ar)	1	GA
	A4	N1DY0000010	AM LOOP ANTENNA	1	
	A5	RSAX0002	FM INDOOR ANTENNA	1	

20.2. Electrical Replacement Parts List

Important Safety Notice

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

RTL (Retention Time Limited)

Note: The marking (RTL) indicates that the Retention Time is Limited for this item.

After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependant on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be available.

Note:

- When replacing any of these components, be sure to use only manufacturer's specified parts shown in the replacement part list.
- The parenthesized indications on the Remarks column specify the destination & product color (Refer to the cover page for the information).
- Parts without these indications shall be used for all areas.
- This product uses a laser diode. Refer to "Precaution of Laser Diode".
- Capacitor value are in microfarads (uF) unless specified otherwise, P=Pico-farads (pF), F=Farads.
- Resistance values are in ohms, unless specified otherwise, 1K=1000 (OHM).
- All parts mentioned are supplied by PAVCSG unless indicated likewise.
- Parts mentioned [SPG] in the Remarks column are supplied by PAVC-CSG.

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
			PRINTED CIRCUIT BOARDS		
	PCB1	REPX0817EA	MAIN P.C.B.	1	GN (RTL)
		REPX0817FA	MAIN P.C.B.	1	GA (RTL)
	PCB2	REPX0817EB	TUNER P.C.B.	1	GN (RTL)
		REPX0817FB	TUNER P.C.B.	1	GA (RTL)
	PCB3	REPX0817EC	iPod/Phone P.C.B.	1	GN (RTL)
		REPX0817FC	iPod/Phone P.C.B.	1	GA (RTL)
	PCB4	REPX0818ED	PANEL P.C.B.	1	GN (RTL)
		REPX0818GD	PANEL P.C.B.	1	GA (RTL)
	PCB5	REPX0818EB	PANEL KEY P.C.B.	1	GN (RTL)
		REPX0818GB	PANEL KEY P.C.B.	1	GA (RTL)
	PCB6	REPX0818EH	HEADPHONE AUX P.C.B.	1	GN (RTL)
		REPX0818GH	HEADPHONE AUX P.C.B.	1	GA (RTL)
	PCB7	REPX0818EE	MOTOR P.C.B.	1	GN (RTL)
		REPX0818GE	MOTOR P.C.B.	1	GA (RTL)
	PCB8	REPX0818EE	POSITION SWITCH P.C.B.	1	GN (RTL)
		REPX0818GE	POSITION SWITCH P.C.B.	1	GA (RTL)
	PCB9	REPX0818EI	BRIDGE 2 P.C.B.	1	GN (RTL)
		REPX0818GI	BRIDGE 2 P.C.B.	1	GA (RTL)

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	PCB10	REPX0818EE	BRIDGE 1 P.C.B.	1	GN (RTL)
		REPX0818GE	BRIDGE 1 P.C.B.	1	GA (RTL)
	PCB11	REPX0818GG	SPEAKER P.C.B.	1	GA (RTL)
		REPX0818EG	SPEAKER P.C.B.	1	GN (RTL)
⚠	PCB12	REPX0818EA	SMPS P.C.B.	1	GN (RTL)
		REPX0818GA	SMPS P.C.B.	1	GA (RTL)
	PCB13	REPX0845A	CD SERVO P.C.B.	1	(RTL)
			INTEGRATED CIRCUITS		
	IC1	C1AB00003282	IC	1	
	IC52	VUEALLPT031	IC	1	[SPG]
	IC101	C1BB00001151	IC	1	
	IC103	C0ABBB000216	IC	1	
	IC300	MF1341S2164	IC	1	
	IC500	C0DAEJG00001	IC	1	
	IC503	C0CBCBC00090	IC	1	
	IC650	C0GAE0000007	IC	1	
	IC701	C0DAEMZ00001	IC	1	
	IC702	MIP2G40MDSLJ	IC	1	
	IC800	C3EBFY000006	IC	1	
	IC801	RFKWMHC10EB	IC	1	
	IC802	C0DBFYY00049	IC	1	
	IC803	C0EBE0000434	IC	1	
	IC900	C0HBA0000268	IC	1	
	IC2801	C0ABBB000179	IC	1	
	IC2802	C0ABBB000179	IC	1	
	IC7001	MN6627954AMA	IC	1	
	IC7002	BA5948FPE2	IC	1	
			TRANSISTORS		

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	Q101	B1GFGCAA0001	TRANSISTOR	1	
	Q102	B1GFGCAA0001	TRANSISTOR	1	
	Q103	B1ABCF000176	TRANSISTOR	1	
	Q104	B1ABCF000176	TRANSISTOR	1	
	Q302	B1GBCFLL0037	TRANSISTOR	1	
	Q382	B1ADCE000012	TRANSISTOR	1	
	Q509	B1BAAJ000003	TRANSISTOR	1	
	Q511	B1ABDF000026	TRANSISTOR	1	
	Q512	B1BCCG000023	TRANSISTOR	1	
	Q580	B1ABDF000026	TRANSISTOR	1	
	Q581	B1GDCFGG0026	TRANSISTOR	1	
	Q582	B1ADCE000012	TRANSISTOR	1	
	Q900	B1GBCFJN0033	TRANSISTOR	1	
	Q7601	B1ADCF000001	TRANSISTOR	1	
	QR2	B1GBCFJJ0051	TRANSISTOR	1	
	QR4	B1GBCFJJ0051	TRANSISTOR	1	
	QR5	B1GBCFJJ0051	TRANSISTOR	1	
	QR101	B1GDCFGG0026	TRANSISTOR	1	
	QR384	B1GBCFJJ0051	TRANSISTOR	1	
	QR804	B1GDCFJJ0044	TRANSISTOR	1	
	QR805	B1GBCFJJ0051	TRANSISTOR	1	
	QR806	B1GBCFJJ0051	TRANSISTOR	1	
	QR807	B1GBCFJN0033	TRANSISTOR	1	
	QR808	B1GBCFJJ0051	TRANSISTOR	1	
			DIODES		
	D515	B0BC7R5A0266	DIODE	1	
	D516	B0ACCK000012	DIODE	1	
	D517	B0ADEJ000041	DIODE	1	
	D518	B0BC6R100010	DIODE	1	
	D519	B0ADEJ000041	DIODE	1	
	D520	B0EAKM000117	DIODE	1	
	D521	B0EAKM000117	DIODE	1	
	D522	B0EAKM000117	DIODE	1	
	D523	B0EAKM000117	DIODE	1	
	D524	B0EAKM000117	DIODE	1	
	D601	B0BC7R500001	DIODE	1	
	D602	B0BC7R500001	DIODE	1	
	D607	B0HCMM000019	DIODE	1	
	D608	B0HCMM000019	DIODE	1	
	D609	B0HCMM000019	DIODE	1	
	D701	B0EBKR000067	DIODE	1	
	D702	B0ABSM000008	DIODE	1	
	D703	B0BC3R0A0262	DIODE	1	
	D705	B0EAKU000001	DIODE	1	
	D708	B0HAJM000005	DIODE	1	
	D751	MA2J7290GL	DIODE	1	
	D752	B0HAJM000005	DIODE	1	
	D753	B0JAMF000011	DIODE	1	
	D851	B0ACCK000012	DIODE	1	
	D993	B3AEA0000129	DIODE	1	
	D995	B0BC6R100010	DIODE	1	
	D2800	B0ACCK000005	DIODE	1	
	D7650	MAZ8056GML	DIODE	1	
			VARISTORS		
	VA51	EZAEG2A50AX	ESD SUPRESSOR	1	
			SWITCHES		
	S641	K0L1BA000078	SW OPEN	1	
	S642	K0L1BA000078	SW CLOSE	1	
	S901	EVQ11G04M	SW POWER	1	
	S903	EVQ11G04M	SW iPod PLAY/PAUSE	1	
	S904	EVQ11G04M	SW FM/AM/AUX	1	
	S906	EVQ11G04M	SW CD PLAY/PAUSE	1	
	S907	EVQ11G04M	SW CD OPEN/CLOSE	1	
	S911	EVQ11G04M	SW REV SKIP	1	
	S912	EVQ11G04M	SW FWD SKIP	1	
	S913	EVQ11G04M	SW STOP	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	S914	EVQ11G04M	SW VOL-	1	
	S915	EVQ11G04M	SW VOL+	1	
	S7201	RSH1A048-A	SW REST	1	
			CONNECTORS		
	CN51	K1MN09AA0003	9P CONNECTOR	1	
	CN112	K1MN11AA0003	11P CONNECTOR	1	
	CN332	K1MN09AA0003	9P CONNECTOR	1	
	CN381	K1MN15AA0003	15P CONNECTOR	1	
	CN801	K1MN06C00005	6P CONNECTOR	1	
	CN807	K1MN22AA0004	22P CONNECTOR	1	
	CN900	K1MN11BA0004	11P CONNECTOR	1	
	CN1001	MF1514S0117	30P CONNECTOR	1	
	CN1002	K1MN15BA0147	15P CONNECTOR	1	
	CN7001	K1MN16B00154	16P CONNECTOR	1	
	CN7002	K1MN22BA0005	22P CONNECTOR	1	
	P2	K1KA04AA0031	4P CONNECTOR	1	
	P100	K1KA08AA0193	8P CONNECTOR	1	
	P101	K1KA06AA0031	6P CONNECTOR	1	
	P102	K1KA08AA0031	8P CONNECTOR	1	
	P642	K1YF06000001	6P CABLE HOLDER	1	
	P902	K1KA03BA0061	3P CONNECTOR	1	
	P905	K1KA04AA0031	4P CONNECTOR	1	
	P906	K1KB04A00046	4P CONNECTOR	1	
	P907	K1KB04A00046	4P CONNECTOR	1	
	P908	K1KB08B00041	8P CONNECTOR	1	
	P909	K1YF06000001	6P CABLE HOLDER	1	
	P910	K1KB06B00038	6P CONNECTOR	1	
			COILS AND INDUC-TORS		
	L1	G0A220GA0002	CHOKE COIL	1	
	L2	G0A220GA0002	CHOKE COIL	1	
	L3	G0A220GA0002	CHOKE COIL	1	
	L4	G0A220GA0002	CHOKE COIL	1	
	L5	G0B9R5K00007	LINE FILTER	1	
	L6	G0B9R5K00007	LINE FILTER	1	
	L7	J0JKB0000020	INDUCTOR	1	
	L51	G1CR18JA0020	INDUCTOR	1	
	L52	G2A380Y00001	ANTENNA COIL	1	
	L100	J0JYB0000013	INDUCTOR	1	
	L101	J0JYB0000013	INDUCTOR	1	
	L102	J0JYB0000013	INDUCTOR	1	
	L103	J0JYB0000013	INDUCTOR	1	
	L104	J0JYB0000013	INDUCTOR	1	
	L105	J0JYB0000013	INDUCTOR	1	
	L106	J0JYB0000013	INDUCTOR	1	
	L107	J0JYB0000013	INDUCTOR	1	
	L108	J0JYB0000013	INDUCTOR	1	
	L109	J0JYB0000013	INDUCTOR	1	
	L110	J0JYB0000013	INDUCTOR	1	
	L111	J0JYB0000013	INDUCTOR	1	
	L201	J0JBC0000014	INDUCTOR	1	
	L202	J0JBC0000014	INDUCTOR	1	
	L220	J0JBC0000014	INDUCTOR	1	
	L221	J0JBC0000014	INDUCTOR	1	
	L222	J0JBC0000014	INDUCTOR	1	
	L223	J0JBC0000014	INDUCTOR	1	
	L381	J0JHC0000034	INDUCTOR	1	
	L382	J0JHC0000034	INDUCTOR	1	
	L383	J0JHC0000034	INDUCTOR	1	
	L384	J0JHC0000034	INDUCTOR	1	
	L385	J0JHC0000034	INDUCTOR	1	
	L388	J0JHC0000034	INDUCTOR	1	
	L401	J0JBC0000014	INDUCTOR	1	
	L402	J0JBC0000014	INDUCTOR	1	
	L650	G0A200D00002	CHOKE COIL	1	
	L702	G0B453G00003	LINE FILTER	1	
	L703	G0B9R5K00007	LINE FILTER	1	
	L900	J0JBC0000019	INDUCTOR	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	L1001	J0JFC0000006	INDUCTOR	1	
	L1002	J0JFC0000006	INDUCTOR	1	
	L1003	J0JHC0000107	INDUCTOR	1	
	L1004	J0JHC0000107	INDUCTOR	1	
	L1005	J0JHC0000107	INDUCTOR	1	
	L1006	J0JHC0000107	INDUCTOR	1	
	L1007	J0JHC0000107	INDUCTOR	1	
	L1008	J0JFC0000006	INDUCTOR	1	
	L1009	J0JFC0000006	INDUCTOR	1	
	L1010	J0JHC0000107	INDUCTOR	1	
	L1011	J0JFC0000006	INDUCTOR	1	
	L1032	J0JBC0000015	INDUCTOR	1	
	LB51	J0JBC0000032	INDUCTOR	1	
	LB7601	J0JYB0000013	INDUCTOR	1	
	LB7602	J0JYB0000013	INDUCTOR	1	
	LB7603	J0JYB0000013	INDUCTOR	1	
	LB7604	J0JYB0000013	INDUCTOR	1	
			TRANSFORMER		
△	T701	ETS25BF116AD	TRANSFORMER	1	
			COMPONENT COMBI- NATION		
△	Z752	ERZV10V511CS	ZNR	1	GN
△	Z752	ERZVA5Z471	ZNR	1	GA
	IR921	B3RAB0000084	REMOTE CONTROL SENSOR	1	
			FL DISPLAY		
	Z900	L5ACAY000029	LCD DISPLAY	1	
			PHOTO COUPLER		
△	PC701	B3PBA0000402	PHOTO COUPLER	1	
			EARTH TERMINALS		
	ZJ1	K4CZ01000027	TERMINAL	1	
	ZJ701	K4CZ01000027	TERMINAL	1	
			OSCILLATORS		
	X51	H0A327200097	CRYSTAL OSCILLA- TOR	1	
	X801	H0A327200097	CRYSTAL OSCILLA- TOR	1	
	X802	H2B800400005	CRYSTAL OSCILLA- TOR	1	
	X7201	H2B169500005	CRYSTAL OSCILLA- TOR	1	
			FUSES		
△	F751	K5D162BK0005	FUSE	1	GN
△	F751	K5D312BK0010	FUSE	1	GA
			FUSE HOLDERS		
	ZA751	K3GE1ZZ000001	FUSE HOLDER	1	
	ZA752	K3GE1ZZ000001	FUSE HOLDER	1	
			THERMISTORS		
△	TH701	D4CAA5R10001	THERMISTOR	1	
△	TH702	D4CC11040013	THERMISTOR	1	
			JACKS		
	JK51	K4ZZ02000103	JK FM ANT	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	JK52	K4AC02B00042	JK AM ANT	1	
	JK951	K2HC1YYB0033	JK AUX	1	
	JK952	K2HC1YYB0033	JK HEADPHONE	1	
△	P751	K2AA2B000017	AC INLET	1	
			CHIP JUMPERS		
	D610	D0GFR00JA017	0 1/10W	1	
	K5	D0GBR00JA008	0 1/16W	1	GN
	K6	D0GBR00JA008	0 1/16W	1	GA
	L1021	D0GBR00JA008	0 1/16W	1	
	L1022	D0GBR00JA008	0 1/16W	1	
	L1023	D0GBR00JA008	0 1/16W	1	
	L1024	D0GBR00JA008	0 1/16W	1	
	L1025	D0GBR00JA008	0 1/16W	1	
	L1026	D0GBR00JA008	0 1/16W	1	
	L1027	D0GBR00JA008	0 1/16W	1	
	L1028	D0GBR00JA008	0 1/16W	1	
	L1029	D0GBR00JA008	0 1/16W	1	
	L1030	D0GBR00JA008	0 1/16W	1	
	L1031	D0GBR00JA008	0 1/16W	1	
	L1033	D0GBR00JA008	0 1/16W	1	
	LB7262	D0GBR00JA008	0 1/16W	1	
	LB7263	D0GBR00JA008	0 1/16W	1	
	LB7264	D0GBR00JA008	0 1/16W	1	
	K200	D0GDR00JA017	0 1/10W	1	
	PSW1	D0GFR00JA017	0 1/8W	1	
	W1	D0GBR00JA008	0 1/16W	1	
	W2	D0GBR00JA008	0 1/16W	1	
	W5	D0GDR00JA017	0 1/10W	1	
	W715	D0GDR00JA017	0 1/10W	1	
	W915	D0GDR00JA017	0 1/10W	1	
	W916	D0GDR00JA017	0 1/10W	1	
	W7001	D0GDR00JA017	0 1/10W	1	
	W7002	D0GDR00JA017	0 1/10W	1	
	W7003	D0GDR00JA017	0 1/10W	1	
	W7004	D0GBR00JA008	0 1/16W	1	
	W7005	D0GBR00JA008	0 1/16W	1	
	W7006	D0GFR00JA017	0 1/8W	1	
	W7007	D0GFR00JA017	0 1/8W	1	
	W7008	D0GDR00JA017	0 1/10W	1	
	W7009	D0GBR00JA008	0 1/16W	1	
	W7010	D0GBR00JA008	0 1/16W	1	
	W7011	D0GBR00JA008	0 1/16W	1	
	W7012	D0GBR00JA008	0 1/16W	1	
	W7013	D0GBR00JA008	0 1/16W	1	
	W7014	D0GBR00JA008	0 1/16W	1	
	W7015	D0GBR00JA008	0 1/16W	1	
	W7016	D0GBR00JA008	0 1/16W	1	
	W7017	D0GBR00JA008	0 1/16W	1	
	W7018	D0GBR00JA008	0 1/16W	1	
	W7019	D0GBR00JA008	0 1/16W	1	
	W7020	D0GBR00JA008	0 1/16W	1	
	W7022	D0GBR00JA008	0 1/16W	1	
	W7023	D0GBR00JA008	0 1/16W	1	
	W7024	D0GBR00JA008	0 1/16W	1	
	W7026	D0GBR00JA008	0 1/16W	1	
	W7027	D0GBR00JA008	0 1/16W	1	
	W7028	D0GBR00JA008	0 1/16W	1	
	W7029	D0GBR00JA008	0 1/16W	1	
			RESISTORS		
	R1	D0GB102JA008	1K 1/16W	1	
	R2	D0GBR00JA008	0 1/16W	1	
	R3	D0GB822JA008	8.2K 1/16W	1	
	R4	D0GB183JA008	18K 1/16W	1	
	R5	D0GB102JA008	1K 1/16W	1	
	R6	D0GB104JA008	100K 1/16W	1	
	R7	D0GB333JA008	33K 1/16W	1	
	R8	D0GB473JA008	47K 1/16W	1	
	R9	J0JYB0000013	INDUCTOR	1	
	R10	D0GB473JA008	47K 1/16W	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	R11	D0GB223JA008	22K 1/16W	1	
	R12	D0GB104JA008	100K 1/16W	1	
	R51	D0GB102JA008	1K 1/16W	1	
	R52	D0GB102JA008	1K 1/16W	1	
	R53	D0GA472JA023	4.7K 1/16W	1	
	R54	D0GA472JA023	4.7K 1/16W	1	
	R55	D0GA221JA023	220 1/16W	1	
	R56	D0GB221JA007	220 1/10W	1	
	R57	D0GA102JA023	1K 1/16W	1	
	R59	D0GB222JA008	2.2K 1/16W	1	
	R61	D0GB473JA008	47K 1/16W	1	
	R62	D0GB473JA008	47K 1/16W	1	
	R64	D0GBR00JA008	0 1/16W	1	
	R115	D0GB101JA008	100 1/16W	1	
	R116	J0JYB0000013	INDUCTOR	1	
	R117	D0GD102JA017	1K 1/10W	1	
	R118	D0GD122JA017	1.2K 1/10W	1	
	R119	ERJ6GEYJ104V	100K 1/10W	1	
	R120	ERJ6GEYJ104V	100K 1/10W	1	
	R121	D0GB102JA008	1K 1/16W	1	
	R122	D0GB102JA008	1K 1/16W	1	
	R123	D0GB102JA008	1K 1/16W	1	
	R124	D0GB102JA008	1K 1/16W	1	
	R125	D0GD222JA017	2.2K 1/10W	1	
	R126	D0GD472JA017	4.7K 1/10W	1	
	R137	D0GB101JA008	100 1/16W	1	
	R201	D0GBR00JA008	0 1/16W	1	
	R203	D0GB562JA008	5.6K 1/16W	1	
	R204	D0GB682JA008	6.8K 1/16W	1	
	R205	ERJ6GEYJ560V	56 1/8W	1	
	R206	D0GB822JA008	8.2K 1/16W	1	
	R207	D0GB392JA008	3.9K 1/16W	1	
	R208	D0GB562JA008	5.6K 1/16W	1	
	R211	D0GB471JA008	470 1/16W	1	
	R211	D0GBR00JA008	0 1/16W	1	
	R249	J0JYB0000013	INDUCTOR	1	
	R250	D0GB561JA008	560 1/16W	1	
	R251	D0GB473JA008	47K 1/16W	1	
	R252	D0GB472JA008	4.7K 1/16W	1	
	R254	D0GB221JA008	220 1/16W	1	
	R256	D0GB104JA008	100K 1/16W	1	
	R257	D0GD123JA017	12K 1/10W	1	
	R258	D0GD822JA017	8.2K 1/10W	1	
	R260	ERJ6GEYJ104V	100K 1/10W	1	
	R261	ERJ6GEYJ330V	33 1/8W	1	
	R262	ERJ6GEYJ330V	33 1/8W	1	
	R263	ERJ6GEYJ104V	100K 1/10W	1	
	R264	ERJ6GEYJ273V	27K 1/8W	1	
	R265	D0GD472JA017	4.7K 1/10W	1	
	R300	D0GB221JA008	220 1/16W	1	
	R301	D0GB221JA008	220 1/16W	1	
	R302	D0GB473JA008	47K 1/16W	1	
	R303	D0GB103JA008	10K 1/16W	1	
	R304	D0GB473JA008	47K 1/16W	1	
	R392	D0GB104JA008	100K 1/16W	1	
	R393	D0GB472JA008	4.7K 1/16W	1	
	R394	D0GB473JA008	47K 1/16W	1	
	R401	D0GBR00JA008	0 1/16W	1	
	R403	D0GB562JA008	5.6K 1/16W	1	
	R404	D0GB682JA008	6.8K 1/16W	1	
	R406	D0GB822JA008	8.2K 1/16W	1	
	R407	D0GB392JA008	3.9K 1/16W	1	
	R408	D0GB562JA008	5.6K 1/16W	1	
	R411	D0GB471JA008	470 1/16W	1	
	R449	J0JYB0000013	INDUCTOR	1	
	R450	D0GB561JA008	560 1/16W	1	
	R451	D0GB473JA008	47K 1/16W	1	
	R452	D0GB472JA008	4.7K 1/16W	1	
	R454	D0GB221JA008	220 1/16W	1	
	R456	D0GB104JA008	100K 1/16W	1	
	R457	D0GD123JA017	12K 1/10W	1	
	R458	D0GD822JA017	8.2K 1/10W	1	
	R460	ERJ6GEYJ104V	100K 1/10W	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	R461	ERJ6GEYJ330V	33 1/8W	1	
	R462	ERJ6GEYJ330V	33 1/8W	1	
	R463	ERJ6GEYJ104V	100K 1/10W	1	
	R464	ERJ6GEYJ273V	27K 1/8W	1	
	R465	D0GD472JA017	4.7K 1/10W	1	
	R500	D0GB473JA008	47K 1/16W	1	
	R501	D0GB472JA008	4.7K 1/16W	1	
	R502	D0GB103JA008	10K 1/16W	1	
	R516	D0GB681JA008	680 1/16W	1	
	R518	D0GB122JA008	1.2K 1/16W	1	
	R519	D0GB101JA008	100 1/16W	1	
	R529	D0GB101JA008	100 1/16W	1	
	R530	D0GB102JA008	1K 1/16W	1	
	R531	D0GB102JA008	1K 1/16W	1	
	R584	D0GB104JA008	100K 1/16W	1	
	R585	D0GB472JA008	4.7K 1/16W	1	
	R586	D0GB473JA008	47K 1/16W	1	
	R702	ERJ8GEYJ683V	68K 1/4W	1	
	R704	ERJ6GEYJ182V	1.8K 1/8W	1	
	R709	D0GD393JA017	39K 1/10W	1	
	R710	D0GD683JA017	68K 1/10W	1	
	R711	D0GDR00JA017	0 1/10W	1	
	R712	D0GD101JA017	100 1/10W	1	
	R714	D0GD102JA017	1K 1/10W	1	
	R715	D0GD222JA017	2.2K 1/10W	1	
	R716	D0GD473JA017	47K 1/10W	1	
	R717	D0GD681JA017	680 1/10W	1	
	R720	D0GD103JA017	10K 1/10W	1	
	R728	ERJ8GEYJ155V	1.5M 1/4W	1	
	R729	ERJ8GEYJ155V	1.5M 1/4W	1	
	R730	ERJ8GEYJ155V	1.5M 1/4W	1	
	R742	ERJ8GEYJ683V	68K 1/4W	1	
	R743	D0GF5R6JA017	5.6 1/10W	1	
	R744	D0GD624JA017	620K 1/10W	1	
	R801	D0GBR00JA008	0 1/16W	1	
	R802	D0GB224JA008	220K 1/16W	1	
	R803	D0GB102JA008	1K 1/16W	1	
	R805	D0GB472JA008	4.7K 1/16W	1	
	R807	D0GB101JA008	100 1/16W	1	
	R808	D0GB102JA008	1K 1/16W	1	
	R809	D0GB101JA008	100 1/16W	1	
	R812	D0GB102JA008	1K 1/16W	1	
	R813	D0GB472JA008	4.7K 1/16W	1	
	R814	D0GB104JA008	100K 1/16W	1	
	R817	D0GB104JA008	100K 1/16W	1	
	R819	D0GB102JA008	1K 1/16W	1	
	R820	D0GB104JA008	100K 1/16W	1	
	R821	D0GB102JA008	1K 1/16W	1	
	R822	D0GB102JA008	1K 1/16W	1	
	R823	D0GB102JA008	1K 1/16W	1	
	R824	D0GB102JA008	1K 1/16W	1	
	R825	D0GB102JA008	1K 1/16W	1	
	R827	D0GB102JA008	1K 1/16W	1	
	R828	D0GB101JA008	100 1/16W	1	
	R829	D0GB101JA008	100 1/16W	1	
	R830	D0GB101JA008	100 1/16W	1	
	R831	D0GB102JA008	1K 1/16W	1	
	R832	D0GB104JA008	100K 1/16W	1	
	R833	D0GB102JA008	1K 1/16W	1	
	R834	D0GB102JA008	1K 1/16W	1	
	R835	D0GB102JA008	1K 1/16W	1	
	R836	D0GB473JA008	47K 1/16W	1	
	R837	D0GB473JA008	47K 1/16W	1	
	R838	D0GB103JA008	10K 1/16W	1	
	R839	D0GB223JA008	22K 1/16W	1	
	R840	D0GB223JA008	22K 1/16W	1	
	R841	D0GB102JA008	1K 1/16W	1	
	R842	D0GB102JA008	1K 1/16W	1	
	R843	D0GB102JA008	1K 1/16W	1	
	R845	D0GB472JA008	4.7K 1/16W	1	
	R846	D0GB472JA008	4.7K 1/16W	1	
	R850	D0GB392JA008	3.9K 1/16W	1	
	R853	D0GB101JA008	100 1/16W	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	R854	D0GB101JA008	100 1/16W	1	
	R855	D0GB101JA008	100 1/16W	1	
	R856	D0GB564JA008	560K 1/16W	1	
	R862	D0GB102JA008	1K 1/16W	1	
	R867	D0GB101JA008	100 1/16W	1	
	R868	D0GB102JA008	1K 1/16W	1	
	R870	D0GB101JA008	100 1/16W	1	
	R871	D0GB102JA008	1K 1/16W	1	
	R872	D0GB472JA008	4.7K 1/16W	1	
	R873	D0GB473JA008	47K 1/16W	1	
	R874	D0GB154JA008	150K 1/16W	1	GA
	R874	D0GB224JA008	220K 1/16W	1	GN
	R875	D0GB104JA008	100K 1/16W	1	
	R876	D0GB104JA008	100K 1/16W	1	
	R877	D0GB104JA008	100K 1/16W	1	
	R880	D0GB101JA008	100 1/16W	1	
	R881	D0GB334JA008	330K 1/16W	1	
	R882	D0GB224JA008	220K 1/16W	1	
	R883	D0GB101JA008	100 1/16W	1	
	R884	D0GB101JA008	100 1/16W	1	
	R885	D0GB104JA008	100K 1/16W	1	
	R886	D0GB101JA008	100 1/16W	1	
	R887	D0GB101JA008	100 1/16W	1	
	R888	D0GB104JA008	100K 1/16W	1	
	R889	D0GB123JA008	12K 1/16W	1	
	R891	D0GB102JA008	1K 1/16W	1	
	R893	D0GB101JA008	100 1/16W	1	
	R897	D0GB472JA008	4.7K 1/16W	1	
	R898	D0GB103JA008	10K 1/16W	1	
	R899	D0GB103JA008	10K 1/16W	1	
	R900	D0GBR00JA008	0 1/16W	1	
	R901	D0GBR00JA008	0 1/16W	1	
	R903	D0GB471JA008	470 1/16W	1	
	R905	D0GB471JA008	470 1/16W	1	
	R906	D0GB471JA008	470 1/16W	1	
	R920	D0GB470JA008	47 1/16W	1	
	R921	D0GB122JA008	1.2K 1/16W	1	
	R922	D0GB152JA008	1.5K 1/16W	1	
	R923	D0GB222JA008	2.2K 1/16W	1	
	R924	D0GB332JA008	3.3K 1/16W	1	
	R925	D0GB472JA008	4.7K 1/16W	1	
	R926	D0GB682JA008	6.8K 1/16W	1	
	R927	D0GB153JA008	15K 1/16W	1	
	R928	D0GB122JA008	1.2K 1/16W	1	
	R929	D0GB152JA008	1.5K 1/16W	1	
	R930	D0GB222JA008	2.2K 1/16W	1	
	R931	D0GB332JA008	3.3K 1/16W	1	
	R933	ERJ6GEYJ221V	220 1/8W	1	
	R934	D0GB101JA008	100 1/16W	1	
	R935	D0GB561JA017	560 1/8W	1	
	R956	D0GB102JA008	1K 1/16W	1	
	R964	D0GB101JA008	100 1/16W	1	
	R965	D0GB101JA008	100 1/16W	1	
	R966	D0GB102JA008	1K 1/16W	1	
	R973	D0GB473JA008	47K 1/16W	1	
	R974	D0GB102JA008	1K 1/16W	1	
	R981	D0GB104JA008	100K 1/16W	1	
	R982	D0GB102JA008	1K 1/16W	1	
	R983	D0GB104JA008	100K 1/16W	1	
	R985	D0GBR00JA008	0 1/16W	1	
	R1001	D0GA221JA023	220 1/16W	1	
	R1002	D0GA221JA023	220 1/16W	1	
	R1003	D0GA104JA023	100K 1/16W	1	
	R1004	D0GA104JA023	100K 1/16W	1	
	R1005	ERJ3GEYF753V	75K 1/10W	1	
	R1006	ERJ3GEYF753V	75K 1/10W	1	
	R1007	ERJ3GEYF513V	51K 1/10W	1	
	R1008	ERJ3GEYF513V	51K 1/10W	1	
	R1009	ERJ2GEJ151X	150 1/16W	1	
	R1010	ERJ2GEJ151X	150 1/16W	1	
	R1011	J0JFC000006	INDUCTOR	1	
	R1012	D0GBR00JA008	0 1/16W	1	
	R1013	D0GA102JA023	1K 1/16W	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	R2827	D0GB104JA008	100K 1/16W	1	
	R2828	D0GB104JA008	100K 1/16W	1	
	R2829	D0GB104JA008	100K 1/16W	1	
	R2830	D0GB104JA008	100K 1/16W	1	
	R2831	D0GB104JA008	100K 1/16W	1	
	R2832	D0GB103JA008	10K 1/16W	1	
	R2833	D0GB103JA008	10K 1/16W	1	
	R2834	D0GB104JA008	100K 1/16W	1	
	R2835	D0GB103JA008	10K 1/16W	1	
	R2836	D0GB101JA008	100 1/16W	1	
	R2837	D0GB103JA008	10K 1/16W	1	
	R2838	D0GB102JA008	1K 1/16W	1	
	R2839	D0GB104JA008	100K 1/16W	1	
	R2840	D0GB103JA008	10K 1/16W	1	
	R2841	D0GB682JA008	6.8K 1/16W	1	
	R2842	D0GB102JA008	1K 1/16W	1	
	R2843	D0GB102JA008	1K 1/16W	1	
	R7111	D0GB103JA008	10K 1/16W	1	
	R7211	D0GB823JA008	82K 1/16W	1	
	R7212	D0GB821JA008	820 1/16W	1	
	R7214	D0GB471JA008	470 1/16W	1	
	R7217	D0GB102JA008	1K 1/16W	1	
	R7218	D0GB102JA008	1K 1/16W	1	
	R7220	D0GB105JA008	1M 1/16W	1	
	R7221	D0GB101JA008	100 1/16W	1	
	R7253	D0GB100JA008	10 1/16W	1	
	R7254	D0GB102JA008	1K 1/16W	1	
	R7315	D0GB332JA008	3.3K 1/16W	1	
	R7323	D0GB332JA008	3.3K 1/16W	1	
	R7325	D0GB331JA008	330 1/16W	1	
	R7327	D0GB562JA008	5.6K 1/16W	1	
	R7328	D0GB183JA008	18K 1/16W	1	
	R7329	D0GB272JA008	2.7K 1/16W	1	
	R7330	D0GB562JA008	5.6K 1/16W	1	
	R7331	D0GB223JA008	22K 1/16W	1	
	R7332	D0GB102JA008	1K 1/16W	1	
	R7335	D0GB101JA008	100 1/16W	1	
	R7336	D0GB100JA008	10 1/16W	1	
	R7339	D0GB102JA008	1K 1/16W	1	
	R7349	D0GB273JA008	27K 1/16W	1	
	R7601	D0GB4R7JA008	4.7 1/16W	1	
	R7650	D0GB5R6JA008	5.6 1/16W	1	
			CAPACITORS		
	C1	F1H1A105A025	1uF 10V	1	
	C2	F1H1A105A025	1uF 10V	1	
	C3	F1H1A105A025	1uF 10V	1	
	C4	F1H1A105A025	1uF 10V	1	
	C5	F1J1A106A043	10uF 10V	1	
	C6	F1J1A106A043	10uF 10V	1	
	C7	F1H1C474A008	0.47uF 16V	1	
	C8	F1H1E474A068	0.47uF 25V	1	
	C9	F1H1C474A008	0.47uF 16V	1	
	C10	F1H1E474A068	0.47uF 25V	1	
	C11	F1H1E474A068	0.47uF 25V	1	
	C12	F1J1C106A059	10uF 16V	1	
	C13	F1H1E474A068	0.47uF 25V	1	
	C14	F1H1E474A068	0.47uF 25V	1	
	C15	F1H1E474A068	0.47uF 25V	1	
	C16	F1H1E474A068	0.47uF 25V	1	
	C17	F2A1C2220080	2200pF 16V	1	
	C18	F1H1H104A783	0.1uF 50V	1	
	C19	F1H1E474A068	0.47uF 25V	1	
	C20	F1H1C474A008	0.47uF 16V	1	
	C21	F1H1C474A008	0.47uF 16V	1	
	C22	F1H1H103A219	0.01uF 50V	1	
	C23	F1H1H103A219	0.01uF 50V	1	
	C24	F1H1H104A913	0.1uF 50V	1	
	C25	F1H1H102A219	1000pF 50V	1	
	C26	F1H1H102A219	1000pF 50V	1	
	C51	F1H1H102A219	1000pF 50V	1	
	C52	F1H1A474A025	0.47uF 10V	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	C53	F1H1H103A219	0.01uF 50V	1	
	C54	F1H1H103A219	0.01uF 50V	1	
	C55	F1H1H103A219	0.01uF 50V	1	
	C57	F1H1H120A230	12pF 50V	1	
	C58	F1H1H120A230	12pF 50V	1	
	C59	F1H1A105A025	1uF 10V	1	
	C60	F1H1A105A025	1uF 10V	1	
	C61	F1G1C104A077	0.1uF 16V	1	
	C62	F1G1C104A077	0.1uF 16V	1	
	C63	F1H1H103A219	0.01uF 50V	1	
	C114	F1J0J226A014	22uF 6.3V	1	
	C115	F1H1H220A004	22pF 50V	1	
	C116	F1H1H220A004	22pF 50V	1	
	C117	F1H1H103A219	0.01uF 50V	1	
	C118	ERJ8GEYJ821V	820 1/4W	1	
	C119	F1J0J226A014	22uF 6.3V	1	
	C120	F1H1H102A219	1000pF 50V	1	
	C121	F1H1H102A219	1000pF 50V	1	
	C122	F1J1E4750002	4.7uF 25V	1	
	C201	F1H1A105A025	1uF 10V	1	
	C202	F1H1A105A025	1uF 10V	1	
	C203	F1H1A105A025	1uF 10V	1	
	C204	F1H1A105A025	1uF 10V	1	
	C205	F1H1H221A792	220pF 50V	1	
	C206	F1H1H221A792	220pF 50V	1	
	C207	F1H1H221A792	220pF 50V	1	
	C208	F1H1H221A792	220pF 50V	1	
	C210	F1H1C823A001	0.082uF 16V	1	
	C211	F1H1H104A783	0.1uF 50V	1	
	C212	F1H1H152A219	1500pF 50V	1	
	C213	F1H1A225A051	2.2uF 10V	1	
	C214	F1H1A105A025	1uF 10V	1	
	C215	F1H1H221A792	220pF 50V	1	
	C216	F1H1H472A219	4700pF 50V	1	
	C217	F1H1C104A042	0.1uF 16V	1	
	C218	F1H1H102A219	1000pF 50V	1	
	C220	F1H0J106A009	10uF 6.3V	1	
	C221	F1H1A224A007	0.22uF 10V	1	
	C222	F1H0J1050013	1uF 6.3V	1	
	C223	F2A1A101A204	100uF 10V	1	
	C224	F1H1H220A004	22pF 50V	1	
	C255	F1K1A1060017	10uF 10V	1	
	C258	F1H1A105A025	1uF 10V	1	
	C259	F1H1H220A004	22pF 50V	1	
	C260	F1H1H220A004	22pF 50V	1	
	C261	D0GBR00JA008	0 1/16W	1	
	C262	F1H1H104A913	0.1uF 50V	1	
	C263	F1J1A106A043	10uF 10V	1	
	C264	F1K1A226A005	22uF 10V	1	
	C265	F1H1H103A219	0.01uF 50V	1	
	C266	F1H1A334A028	0.33uF 10V	1	
	C267	F1H1A334A028	0.33uF 10V	1	
	C268	F1H1A124A012	0.12uF 10V	1	
	C269	F1H1H471A971	470pF 50V	1	
	C301	F1H1H102A219	1000pF 50V	1	
	C302	F1H1H101A230	100pF 50V	1	
	C303	F1H1H102A219	1000pF 50V	1	
	C304	F1H1H102A219	1000pF 50V	1	
	C305	F1H1A105A025	1uF 10V	1	
	C306	F1H1C104A042	0.1uF 16V	1	
	C350	F1J1A106A043	10uF 10V	1	
	C401	F1H1A105A025	1uF 10V	1	
	C402	F1H1A105A025	1uF 10V	1	
	C403	F1H1A105A025	1uF 10V	1	
	C404	F1H1A105A025	1uF 10V	1	
	C405	F1H1H221A792	220pF 50V	1	
	C406	F1H1H221A792	220pF 50V	1	
	C407	F1H1H221A792	220pF 50V	1	
	C408	F1H1H221A792	220pF 50V	1	
	C410	F1H1C823A001	0.082uF 16V	1	
	C411	F1H1H104A783	0.1uF 50V	1	
	C412	F1H1H152A219	1500pF 50V	1	
	C413	F1H1A225A051	2.2uF 10V	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	C414	F1H1A105A025	1uF 10V	1	
	C415	F1H1H221A792	220pF 50V	1	
	C416	F1H1H472A219	4700pF 50V	1	
	C417	F1H1C104A042	0.1uF 16V	1	
	C444	F1H1H220A004	22pF 50V	1	
	C455	F1K1A1060017	10uF 10V	1	
	C458	F1H1A105A025	1uF 10V	1	
	C459	F1H1H220A004	22pF 50V	1	
	C460	F1H1H220A004	22pF 50V	1	
	C461	D0GBR00JA008	0 1/16W	1	
	C462	F1H1H104A913	0.1uF 50V	1	
	C463	F1J1A106A043	10uF 10V	1	
	C464	F1K1A226A005	22uF 10V	1	
	C465	F1H1H103A219	0.01uF 50V	1	
	C466	F1H1A334A028	0.33uF 10V	1	
	C467	F1H1A334A028	0.33uF 10V	1	
	C468	F1H1A124A012	0.12uF 10V	1	
	C469	F1H1H471A971	470pF 50V	1	
	C501	F2A1C2220080	2200pF 16V	1	
	C510	F1H1H104A783	0.1uF 50V	1	
	C511	F2A0J101A245	100uF 6.3V	1	
	C513	F1J1A106A043	10uF 10V	1	
	C514	F1H1C104A042	0.1uF 16V	1	
	C515	F2A1A101A159	100uF 10V	1	
	C517	F2A1C220A180	22uF 16V	1	
	C520	F1H1C104A042	0.1uF 16V	1	
	C521	F1H1C104A042	0.1uF 16V	1	
	C545	F1H1A224A007	0.22uF 10V	1	
	C650	F2A0J221A211	220uF 6.3V	1	
	C651	F1H1C104A042	0.1uF 16V	1	
	C652	F1H1C104A042	0.1uF 16V	1	
	C653	F2A1A101A159	100uF 10V	1	
⚠	C702	F0CAF104A105	0.1uF	1	
	C703	F2A1E102B427	1000uF 25V	1	
	C705	ECQE6103KF	0.01uF 630V	1	
	C706	F2A2G6800007	68uF 400V	1	
	C709	F1H1E104A030	0.1uF 25V	1	
⚠	C710	F1BAF1020020	1000pF	1	
	C711	F2A1V220A184	22uF 35V	1	
	C712	F1H1H102A219	1000pF 50V	1	
	C713	F2A1H1R0A213	1.0uF 50V	1	
	C714	F1H1E334A068	0.33uF 25V	1	
	C717	F1H1E104A030	0.1uF 25V	1	
	C718	F1H1E334A068	0.33uF 25V	1	
⚠	C725	F0CAF104A105	0.1uF	1	
⚠	C727	F1BAF1020020	1000pF	1	
⚠	C728	F1BAF1020020	1000pF	1	
	C731	F1B3A221A027	220pF 1000V	1	
	C733	F1J0J106A014	10uF 6.3V	1	
	C753	F2A1A102A470	1000pF 10V	1	
	C805	F1H1H220A004	22pF 50V	1	
	C806	F1H1H220A004	22pF 50V	1	
	C807	F1H1H102A219	1000pF 50V	1	
	C808	F1H1C104A042	0.1uF 16V	1	
	C813	F1H1H472A219	4700pF 50V	1	
	C814	F1H1H102A219	1000pF 50V	1	
	C815	F1H1H681A013	680pF 50V	1	
	C816	F1H1H681A013	680pF 50V	1	
	C817	F1H1H102A219	1000pF 50V	1	
	C818	F1H1H103A219	0.01uF 50V	1	
	C825	F1H1A105A025	1uF 10V	1	
	C827	F2A0J221A211	220uF 6.3V	1	
	C828	F2A0J101A245	100uF 6.3V	1	
	C830	F1H1H331A013	330pF 50V	1	
	C831	F1H1H331A013	330pF 50V	1	
	C832	F1H1H331A013	330pF 50V	1	
	C833	F1H1H223A219	0.022uF 50V	1	
	C853	F1J1A106A043	10uF 10V	1	
	C871	F1H1H102A219	1000pF 50V	1	
	C872	F1H1H102A219	1000pF 50V	1	
	C873	F1H1H102A219	1000pF 50V	1	
	C874	F1H1H102A219	1000pF 50V	1	
	C875	F1H1H102A219	1000pF 50V	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	C901	F1H1H102A219	1000pF 50V	1	
	C902	F1H1H221A748	220pF 50V	1	
	C904	F1H1H221A748	220pF 50V	1	
	C905	F1H1H221A748	220pF 50V	1	
	C907	F1H1H103A219	0.01uF 50V	1	
	C922	F1H1H102A219	1000pF 50V	1	
	C954	F1H1C104A042	0.1uF 16V	1	
	C956	F1H1C104A042	0.1uF 16V	1	
	C1002	F1G1C104A083	0.1uF 16V	1	
	C1003	F1G1C104A083	0.1uF 16V	1	
	C1004	F1G1C104A083	0.1uF 16V	1	
	C2509	F1H1H123A219	0.012uF 50V	1	
	C2510	F1H1H123A219	0.012uF 50V	1	
	C2808	F1H1A105A025	1uF 10V	1	
	C2821	F1H1A105A025	1uF 10V	1	
	C2822	F1H0J106A009	10uF 6.3V	1	
	C2823	F1H1H470A004	47pF 50V	1	
	C2824	F1H1H470A004	47pF 50V	1	
	C2825	F1H1A105A025	1uF 10V	1	
	C2826	F1H1H104A783	0.1uF 50V	1	
	C2827	F1H1H104A783	0.1uF 50V	1	
	C2828	F1J1H104A459	0.1uF 50V	1	
	C7102	F1H1A474A025	0.47uF 10V	1	
	C7107	F1H1H223A219	0.022uF 50V	1	
	C7142	F1H1H332A013	3300pF 50V	1	
	C7154	F1H1C104A042	0.1uF 16V	1	
	C7155	F1H1C104A042	0.1uF 16V	1	
	C7161	F1H1C104A042	0.1uF 16V	1	
	C7164	F1J1A106A076	10uF 10V	1	
	C7165	F1J1A106A076	10uF 10V	1	
	C7166	F1H1H103A219	0.01uF 50V	1	
	C7203	F2A0J221A200	220uF 6.3V	1	
	C7204	F1H1C104A042	0.1uF 16V	1	
	C7216	F1H1H681A013	680pF 50V	1	
	C7217	F1H1C104A042	0.1uF 16V	1	
	C7218	F1H1C823A001	0.082uF 16V	1	
	C7223	F2A1H4R70037	4.7uF 50V	1	
	C7225	F1H1H102A219	1000pF 50V	1	
	C7226	F1H1H102A219	1000pF 50V	1	
	C7227	ECA1HAK010XI	1uF 50V	1	
	C7228	ECA1HAK010XI	1uF 50V	1	
	C7230	F1H1C104A042	0.1uF 16V	1	
	C7231	F2A0J221A200	220uF 6.3V	1	
	C7232	F2A0J221A200	220uF 6.3V	1	
	C7233	F1H1C104A008	0.1uF 16V	1	
	C7234	F1H1C104A042	0.1uF 16V	1	
	C7235	F2A1C100A133	10uF 16V	1	
	C7241	F1H1H102A219	1000pF 50V	1	
	C7243	F1H1C104A008	0.1uF 16V	1	
	C7244	F1H1C153A001	0.015uF 16V	1	
	C7253	F1H1H471A219	470pF 50V	1	
	C7263	F1H1C104A042	0.1uF 16V	1	
	C7264	F1H1C104A042	0.1uF 16V	1	
	C7315	F1H1A474A025	0.47uF 10V	1	
	C7334	ECEA1AKA221I	220uF 10V	1	
	C7335	F1H1C104A008	0.1uF 16V	1	
	C7338	F1H1C563A055	0.056uF 16V	1	
	C7339	F1H1H822A013	8200pF 50V	1	
	C7352	F1H1H392A013	3900pF 50V	1	
	C7601	ECEA0JKA330I	33uF 6.3V	1	
	C7605	F1H1H120A230	12pF 50V	1	
	C7606	F1H1H120A230	12pF 50V	1	
	C7613	F1H1C104A042	0.1uF 16V	1	
	C7614	F2A0J101A198	100uF 6.3V	1	
	C7626	F1H1C104A042	0.1uF 16V	1	
	C7670	F1H1C104A042	0.1uF 16V	1	
	D718	F1J2E1030004	0.01uF 250V	1	

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