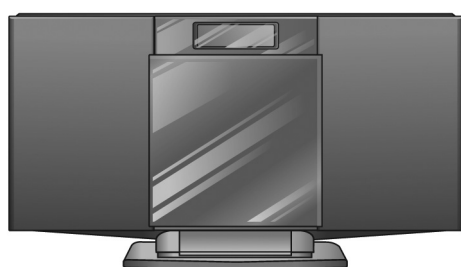


# Service Manual

Compact Stereo System

Model No. **SC-HC20P**  
**SC-HC20PC**

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.

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

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

### 1.1.1. Leakage Current Cold Check

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. measure the resistance value, with an ohmmeter between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between  $1M\Omega$  and  $5.2M\Omega$ . When the exposed metal does not have a return path to the chassis, the reading must be  $\infty$

### 1.1.2. Leakage Current Hot Check

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 repaired and rechecked before it is returned to the customer.

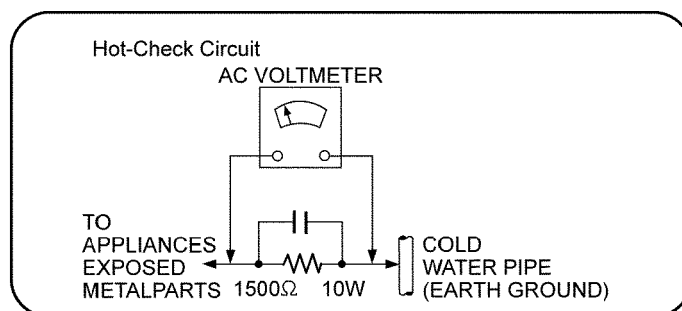


Figure. 1

## 1.2. Before Repair and Adjustment

Disconnect AC power, discharge unit AC Capacitors as such C702, C710, C725, C727, C728 and C731 through a 10W, 1W resistor to ground.

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

- Current consumption at AC 120V, at 60Hz in NO SIGNAL mode (at volume min in FM Tuner mode) should be ~250 mA.

## 1.3. Caution For Fuse Replacement

### CAUTION:

Replace with the same type fuse:

(Manufacturer: Hollyland, Type: 51MS, F751, 3A 125V)

## 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       | RFKHHC20P-K  | REAR CABINET ASS'Y      | P       |
| ⚠      | 16       | RFKHHC20PCK  | REAR CABINET ASS'Y      | PC      |
| ⚠      | 401      | RAE0165T-V   | TRAVERSE UNIT           |         |
| ⚠      | A2       | K2CB2CB00021 | AC CORD                 |         |
| ⚠      | A3       | RQTX1051-P   | O/I BOOK (En)           | P       |
| ⚠      | A3       | RQTX1133-C   | O/I BOOK (Sp/Ct)        | PC      |
| ⚠      | C702     | F0CAF104A105 | 0.1uF                   |         |
| ⚠      | C710     | F1BAF1020020 | 1000pF                  |         |
| ⚠      | C725     | F0CAF104A105 | 0.1uF                   |         |
| ⚠      | C727     | F1BAF1020020 | 1000pF                  |         |
| ⚠      | C728     | F1BAF1020020 | 1000pF                  |         |
| ⚠      | C731     | F1B3A221A027 | 220pF 1000V             |         |
| ⚠      | F751     | K5D302AQ0003 | FUSE                    |         |
| ⚠      | L702     | G0B453G00003 | LINE FILTER             |         |
| ⚠      | P751     | K2AB2B000007 | AC INLET                |         |
| ⚠      | PC701    | B3PBA0000402 | PHOTO COUPLER           |         |
| ⚠      | PCB11    | REPX0818FA   | SMPS P.C.B              | (RTL)   |
| ⚠      | T701     | ETS25BF116AD | TRANSFORMER             |         |
| ⚠      | TH701    | D4CAA5R10001 | THERMISTOR              |         |
| ⚠      | TH702    | D4CC11040013 | THERMISTOR              |         |
| ⚠      | Z752     | ERZV10V511CS | ZNR                     |         |

## 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 :**

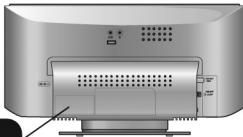
Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

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  $\mu$ 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.



|                                                                                                                                                                                 |                                                               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| CAUTION - CLASS 1M INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED.<br>DO NOT VIEW DIRECTLY WITH OPTICAL INSTRUMENTS.<br>IEC60825-1, A2 / CLASS 1M                  |                                                               |
| VARNING - KLASS 1M OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD.<br>BETRAKTA EJ STRÅLEN DIREKT GENOM OPTISKT INSTRUMENT.                             |                                                               |
| FORSIGTIG - USYNLIG LASERSTRÅLNING KLASSE 1M, NÄR LÅGET ER ÅBENT OG SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION.<br>UNDGÅ AT SE LIGE PÅ MED OPTISKE INSTRUMENTER.                    |                                                               |
| VARO - AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTIINA LUOKAN 1M NÄKYMÄTÖNTÄ LASERSÄTEILYÄ. ÄLÄ KATSO OPTISELLA LAITTEELLA SUORAAN SÄTEESEEN.                              |                                                               |
| VORSICHT - UNSICHTBARE LASERSTRAHLUNG KLASSE 1M, WENN ABDECKUNG GEÖFFNET UND SICHERHEITSVERRIEGELUNGEN ÜBERBRÜCKT.<br>NICHT DIREKT MIT OPTISCHEN INSTRUMENTEN BETRACHTEN.       |                                                               |
| ATTENTION - RAYONNEMENT LASER INVISIBLE, CLASSE 1M, EN CAS D'OUVERTURE ET LORSQUE LA SÉCURITÉ EST NEUTRALISÉE.<br>NE PAS REGARDER DIRECTEMENT À L'AIDE D'INSTRUMENTS D'OPTIQUE. |                                                               |
| 注意                                                                                                                                                                              | - 打开时及联失效除时有不可见激光辐射。<br>避免光束照射。                               |
| 注意                                                                                                                                                                              | - ここを開き、安全インターロックを解除すると不可視レーザー光が出ます。<br>ビームを見たり、触れたりしないでください。 |

Inside of product

## 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.<br>(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.

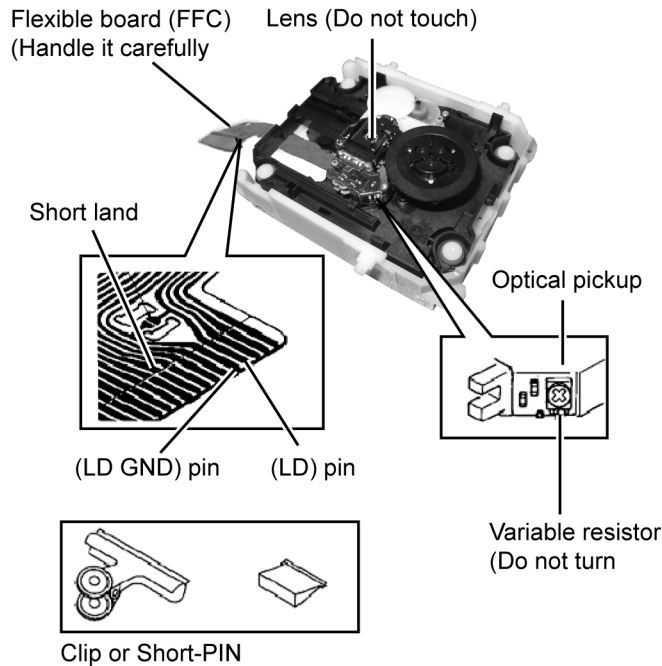


Figure 1

### 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).

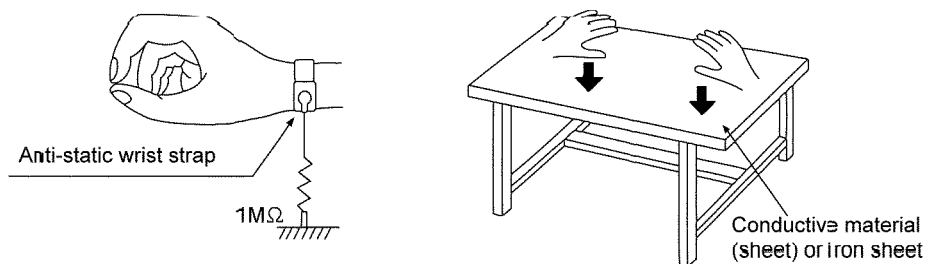


Figure 2

## 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) 6 W per channel (6  $\Omega$ ), 1 kHz,  
10 % THD

#### Phone jack

Terminal Stereo, 3.5 mm (1/8") jack

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

#### Aux (Rear)

#### Sensitivity

Normal level 504 mV, 12.4 k $\Omega$

High level 100 mV, 12.4 k $\Omega$

Terminal Stereo, 3.5 mm (1/8") jack

### ■ Tuner Section

Preset memory FM 30 stations

AM 15 stations

#### Frequency Modulation (FM)

Frequency range 87.9 MHz to 107.9 MHz  
(200 kHz step)

87.5 MHz to 108.0 MHz  
(100 kHz step)

Antenna terminals 75  $\Omega$  (unbalanced)

#### Amplitude Modulation (AM)

Frequency range 520 kHz to 1710 kHz  
(10 kHz step)

### ■ Disc Section

Disc played [8 cm (3") or 12 cm (5")]

(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 (3 1/8") Cone type

Impedance 6  $\Omega$

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 AC 120 V, 60 Hz

Power consumption 14 W

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

(15 1/8" x 8 7/16" x 4 13/32")

(D = 69 mm (2 22/32") minimum)

(D = 147 mm (5 25/32") tray open)

Mass Approx. 2.1 kg (4.6 lb.)

Operating temperature range 0°C to +35°C

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

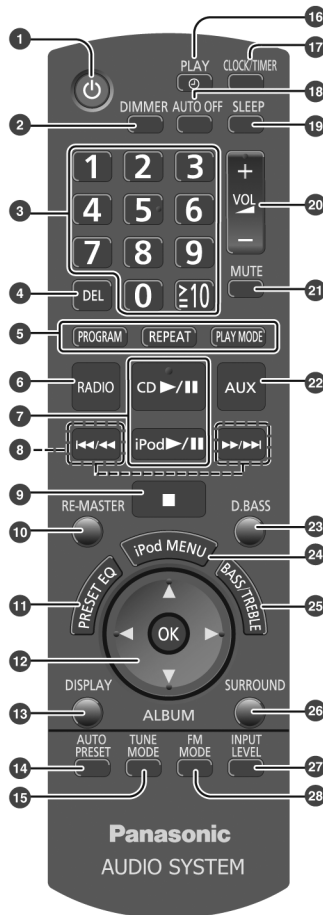
#### Power consumption in standby mode: 0.18 W (approx)

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

# 5 Location of Controls and Components

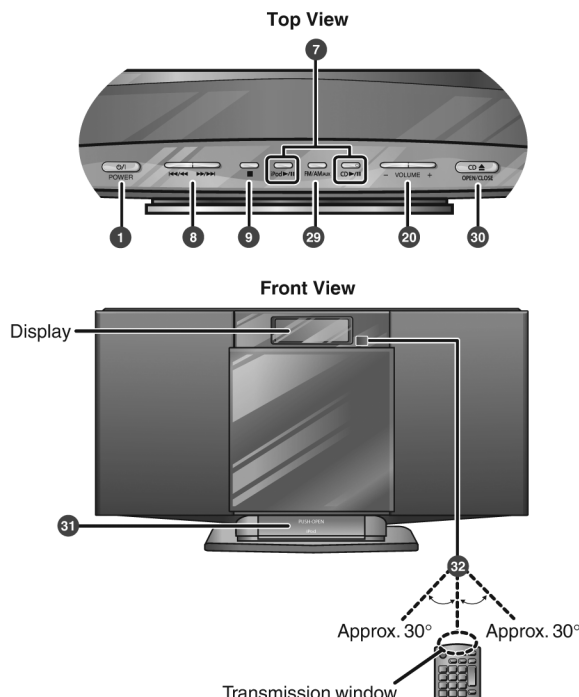
## 5.1. Main Unit & Remote Control Key Button Operations

### Remote control



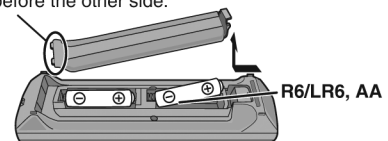
- 1 [Standby/on switch] [⏻], [⏻/I, POWER]  
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.
- 2 [DIMMER]  
Dims the display panel. Press again to cancel.
- 3 Numeric buttons [1-9, 0, ≥10]  
**To select a 2-digit number**  
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 [⏻/I, POWER]
- 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. The default setting is ON. Press twice to cancel it.
- 19 [SLEEP]
- 20 [+ VOL ▲, -], [- VOLUME +]
- 21 [MUTE]  
Mutes the sound. Press again to cancel. "MUTE" is also canceled 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 (23 feet) directly in front of the unit.

### Main unit



### Preparing the remote control

Place this side in before the other side.



#### ■ Batteries (not included)

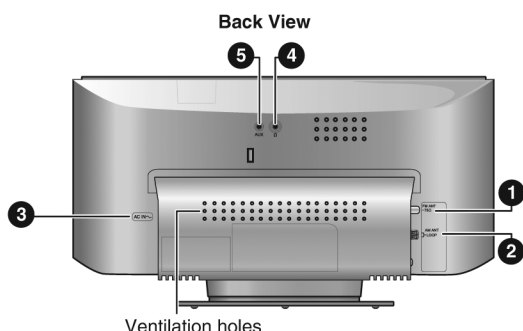
- Use a manganese dry battery or an alkaline dry battery.
- Insert so the poles (+ and -) match those in the remote control.
- Remove if the remote control is not going to be used for a long period of time.
- Store in a cool and dark place.
- Do not heat or expose to flame.
- Do not leave the batteries 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

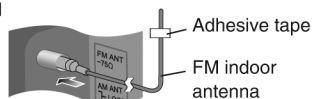


#### ■ Placing the unit

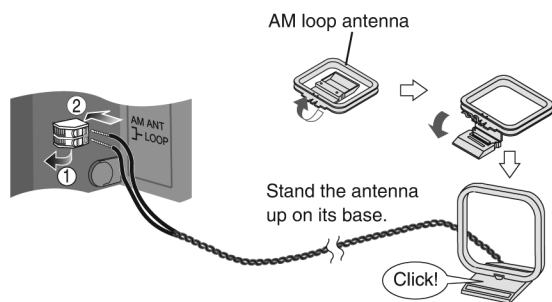
- Keep a minimum of 50 mm (1 <sup>31</sup>/<sub>32</sub>" ) clearance space at the front of the unit to prevent iPod®/iPhone or the unit from dropping.

#### ① Connect the FM indoor antenna.

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



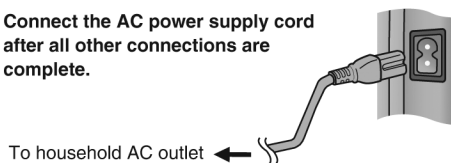
#### ② Connect the AM loop antenna.



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

#### ③ Connect the AC power supply cord.

Connect the AC power supply cord after all other connections are complete.



#### ④ Headphones (not included)

Reduce the volume level and connect the headphones.  
Plug type: 3.5 mm (1/8") stereo



- Avoid listening for prolonged periods of time to prevent hearing damage.
- Excessive sound pressure from earphones and headphones can cause hearing loss.

#### ⑤ Portable audio equipment (during AUX mode)



- Plug the audio cord into the AUX jack.  
Plug type: 3.5 mm (1/8") stereo
- Press [AUX] and start playback from the portable audio source.

You can select the sound input level of the portable audio equipment.

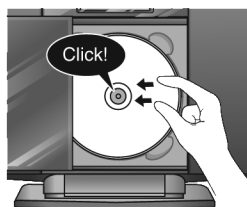
Press [INPUT LEVEL] repeatedly to select "HIGH" or "NORMAL".

- Switch the equalizer off or turn the volume of the portable equipment down to reduce the input signal. High level of input signal will distort the sound.
- For details, refer to the instruction manual of the other equipment.
- Cords and equipment are not included.

#### ■ 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.

### 6.2. Disc operations



- Press [⏻] to turn the unit on.
- Press [CD ▲, OPEN/CLOSE] on the main unit to open the sliding door.
- Tilt the disc into the disc tray under the sliding door and then set the CD in place.
- 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.
- 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.<br>MP3: ① Press [▲, ▼] to select the album.<br>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 finalize\* 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).

#### Note about using a DualDisc

The digital audio content side of a DualDisc does not meet the technical specifications of the Compact Disc Digital Audio (CD-DA) format so play may not be possible.

### 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.

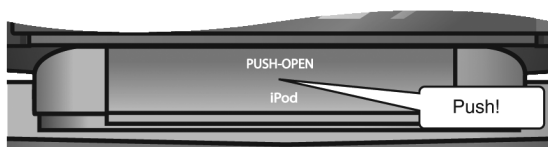
### Limitations on MP3

- 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 ▶/II].                                           |
| Pause                                                 | Press [iPod ▶/II] or [■].                                    |
| Skip track                                            | Press [◀◀/▶▶] or [▶▶/▶▶].                                    |
| Search the current track                              | Press and hold [◀◀/▶▶] or [▶▶/▶▶].                           |
| Display iPod®/iPhone menu/<br>return to previous menu | Press [iPod MENU] in the play mode.<br>(Remote control only) |
| Select contents from<br>iPod®/iPhone menu             | Press [▲, ▼] and then [OK].<br>(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                                |                 | <ol style="list-style-type: none"> <li>1. Select CD mode (Ensure no CD inserted).</li> <li>2. Press and hold [■] for 2 seconds follow by [▶▶/▶▶] on main unit.</li> </ol> |
| Error code information | System will perform a check on any unusual/error code from the memory | <p>Example:</p> | <ol style="list-style-type: none"> <li>1. In self diagnostic mode, Press [STOP] on main unit.</li> </ol> <p>To exit, press [b/1] on main unit or remote control.</p>      |
| Delete Error code      | To clear the stored in memory (EEPROM IC)                             |                 | <ol style="list-style-type: none"> <li>1. In self diagnostic mode, Press [0] on remote control.</li> </ol> <p>To exit, press [b/1] on main unit or remote control.</p>    |

## 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

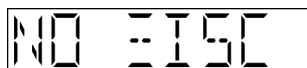
| Error Code | Diagnostic Contents          | Description of error                                                     | Automatic FL Display                                                                                                                                                         | Remarks                                |
|------------|------------------------------|--------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| F61/F76    | Power Amp IC output abnormal | During power-on, PDET1, PDET2 & MAINV_DET / TEMP_DET is "L" after 1 sec. | <br> | 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

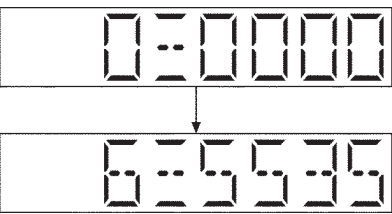
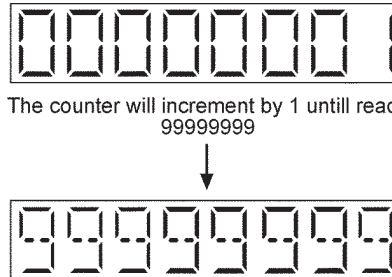
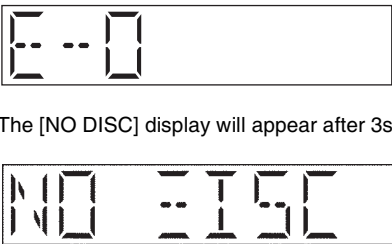
Use either one of the following methods to cancel the Doctor mode.

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

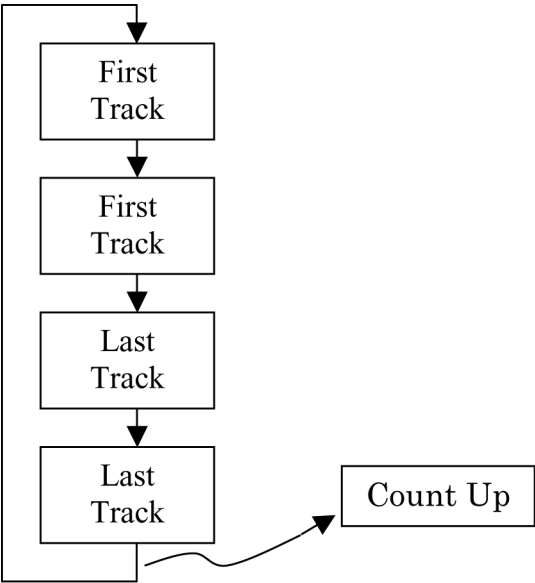
### 7.3.2. Doctor Mode Table 2

| 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:<br>1. Press [1] button on remote control.<br>To cancel, press [0] button on remote control.<br>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:<br>1. Press [7] button on remote control.<br>To exit Doctor Mode, press [⏮/I] button on main unit or remote control.                                                                                                                             |
|                                 |                                                                                                                                                                                                    |    | In Doctor Mode:<br>2. Press [8] button on remote control.<br>To exit Doctor Mode, press [⏮/I] button on main unit or remote control.                                                                                                                             |
|                                 |                                                                                                                                                                                                    |    | In Doctor Mode:<br>3. Press [9] button on remote control.<br>To exit Doctor Mode, press [⏮/I] button on main unit or remote control.                                                                                                                             |
| Mecha Sliding Panel Reliability | To check the operation of sliding Panel.<br>Sequence as follow :<br>1. Panel set to close position.<br>2. CD Open & stop at left position for 1s.<br>3. CD Close & stop at centre position for 1s. |   | In Doctor Mode:<br>1. Press [≥10] follow by [2] & then [1] button on remote control.<br>To cancel, press [0] button on remote control.<br>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:<br>1. Press [≥10], [1], [2] button on remote control.<br>To cancel, press [0] button on remote control.<br>To exit Doctor Mode, press [⏮/I] button on main unit or remote control.<br><br>(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:<br>1. Press [≥10], [1], [4] button on remote control.<br>To cancel, press [0] button on remote control.<br>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. | <div></div> <p>The [NO DISC] display will appear after 3s,</p> <div></div> | In Doctor Mode:<br>1. Press [SLEEP] button on remote control.<br><br>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)

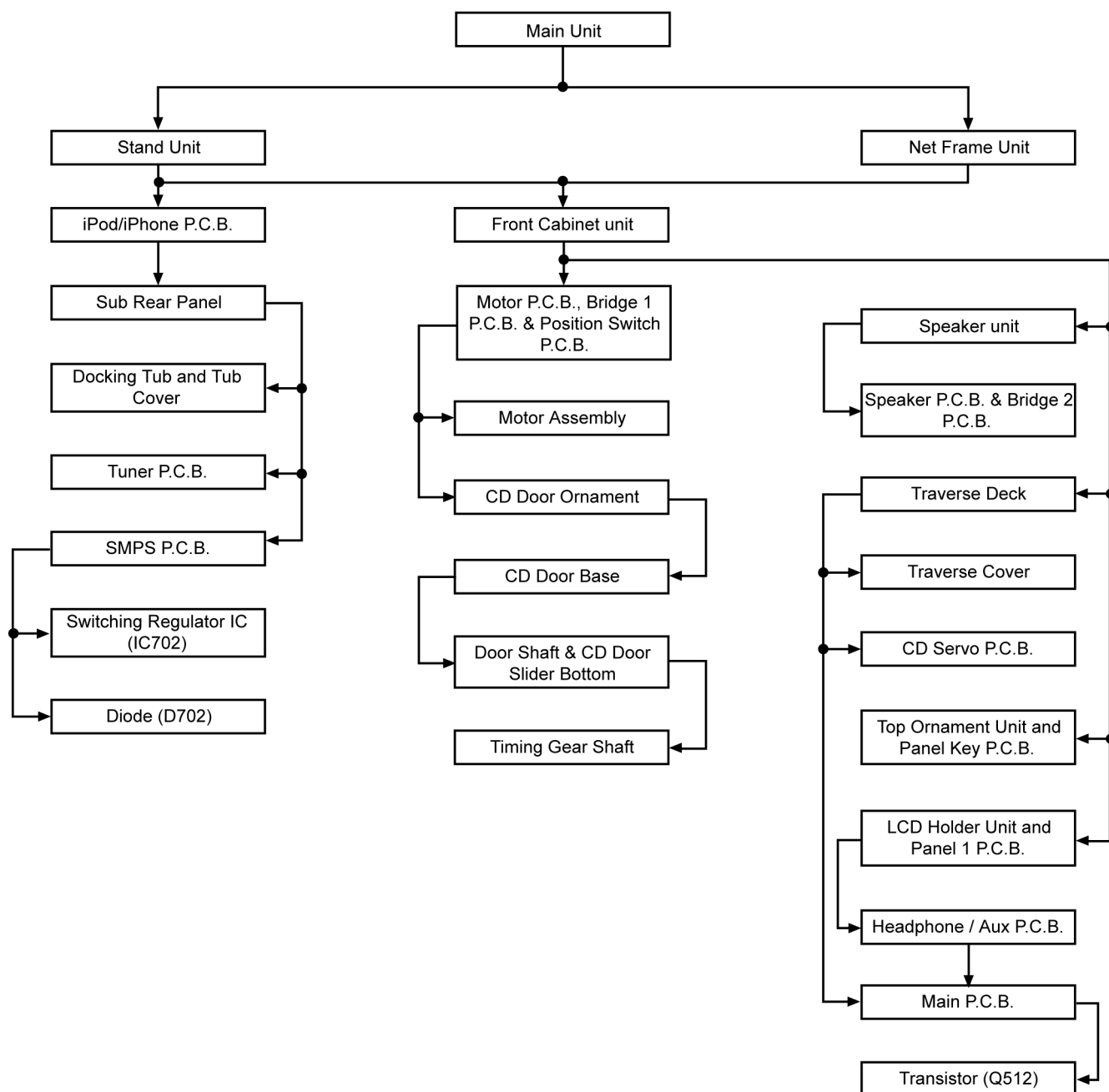
**CAUTION: HOT!!  
PLEASE DO NOT  
TOUCH THE HEAT SINK**

- 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

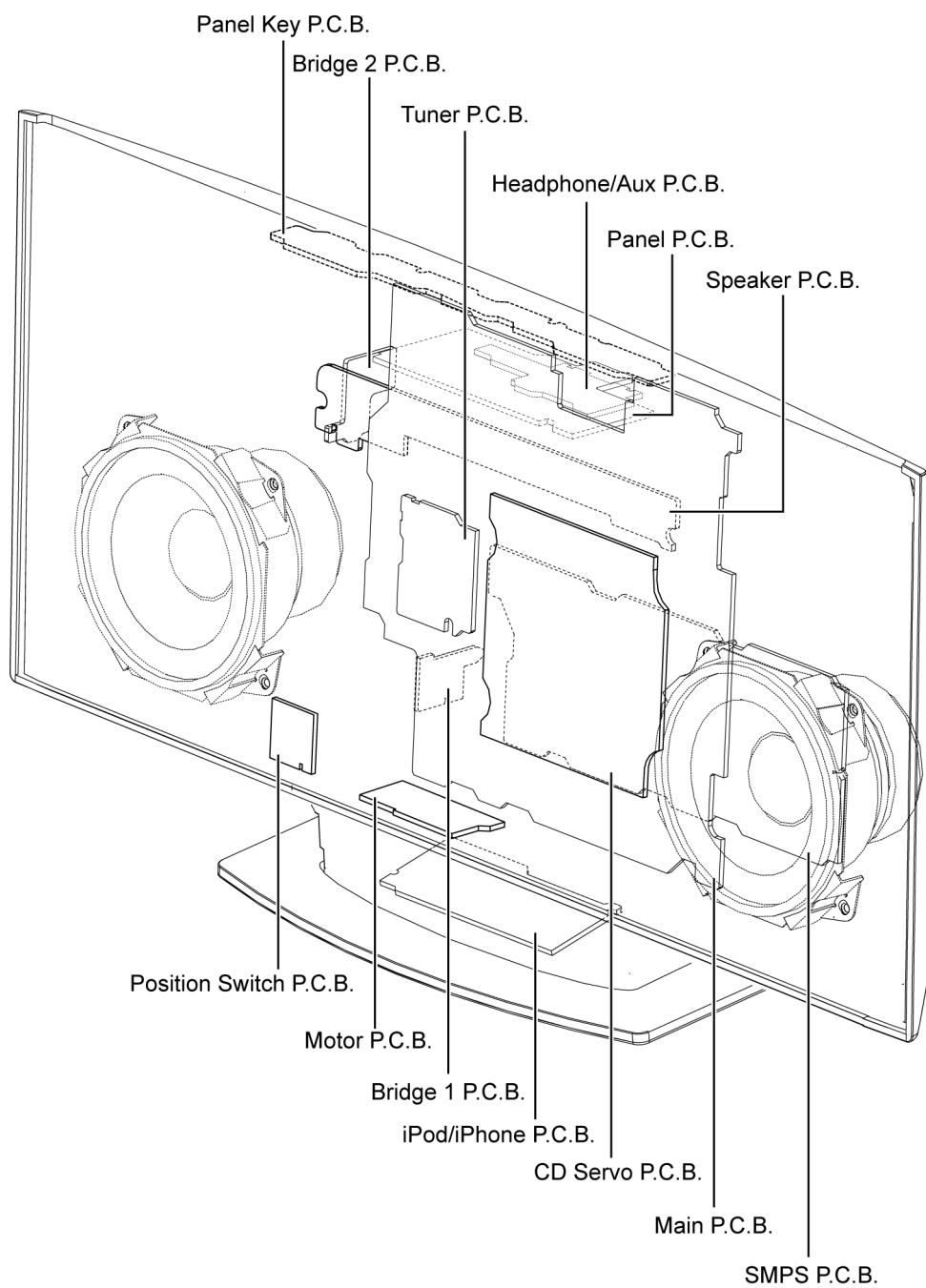
### CAUTION NOTE:

Please use original screw and at correct locations.

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

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

### 9.3. Main Parts Location Diagram

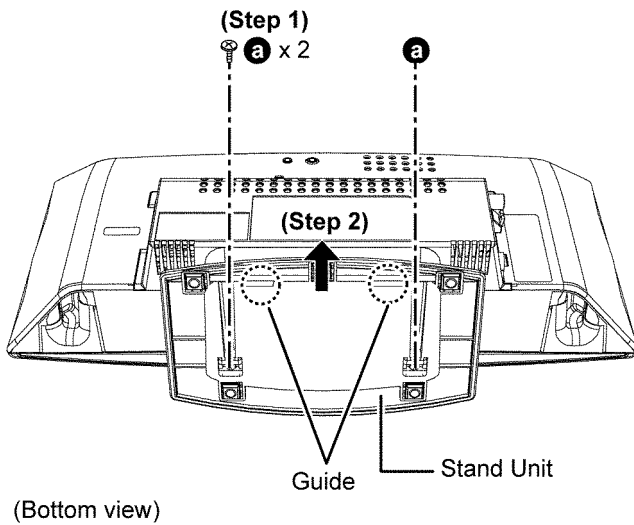


## 9.4. Disassembly of Stand Unit

**Step 1 :** Remove 2 screws.

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

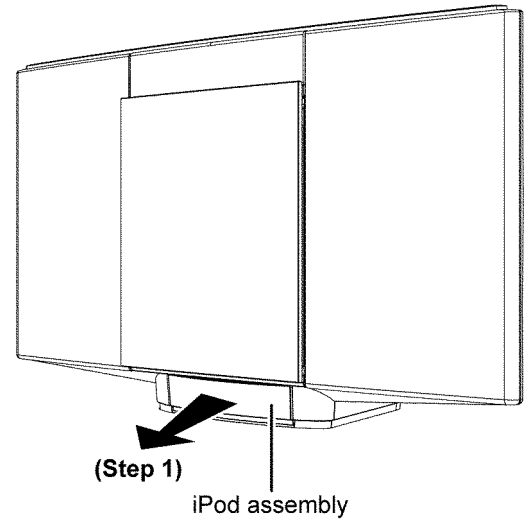
**Caution :** During assembly, ensure the stand unit is seated properly into the guide.



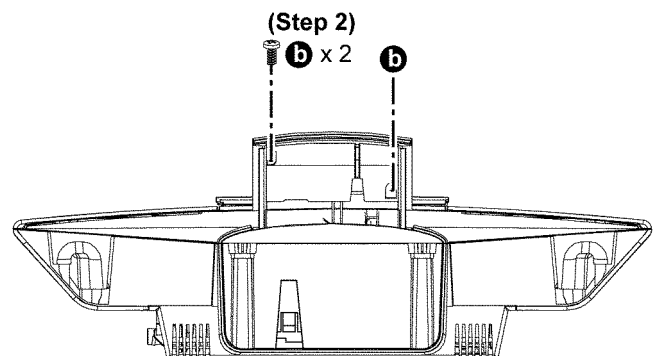
## 9.5. Disassembly of iPod/iPhone P.C.B.

• Refer to "Disassembly of Stand Unit"

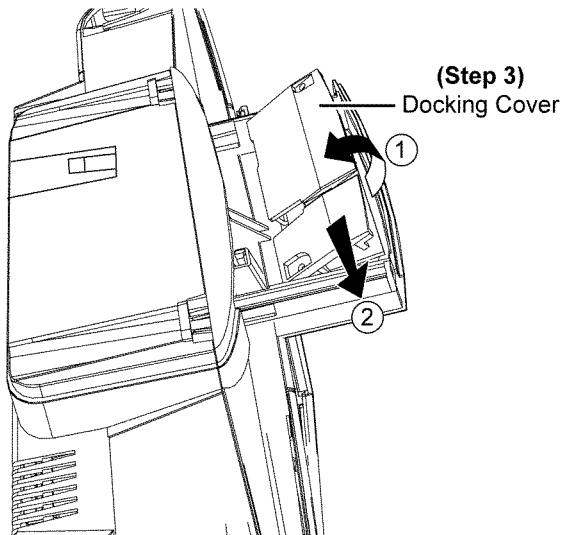
**Step 1 :** Press to open the iPod assembly.



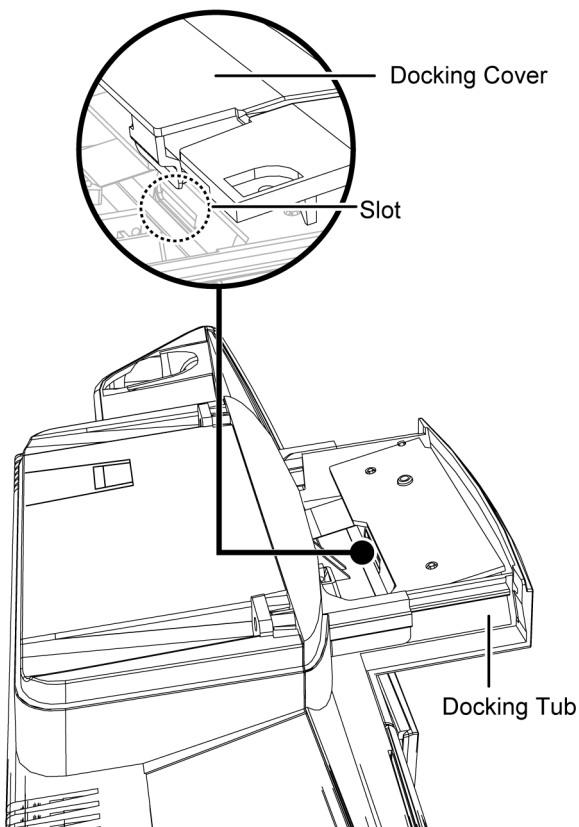
**Step 2 :** Remove 2 screws.



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

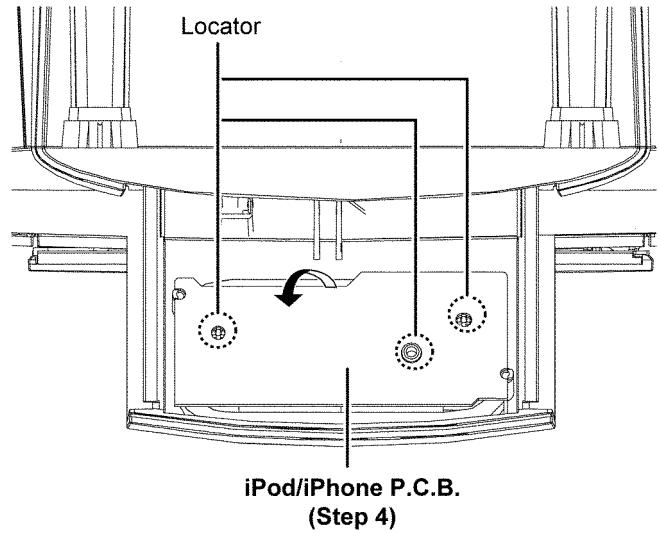


**Caution :** During assembly of Docking Cover, ensure it is fixed properly.



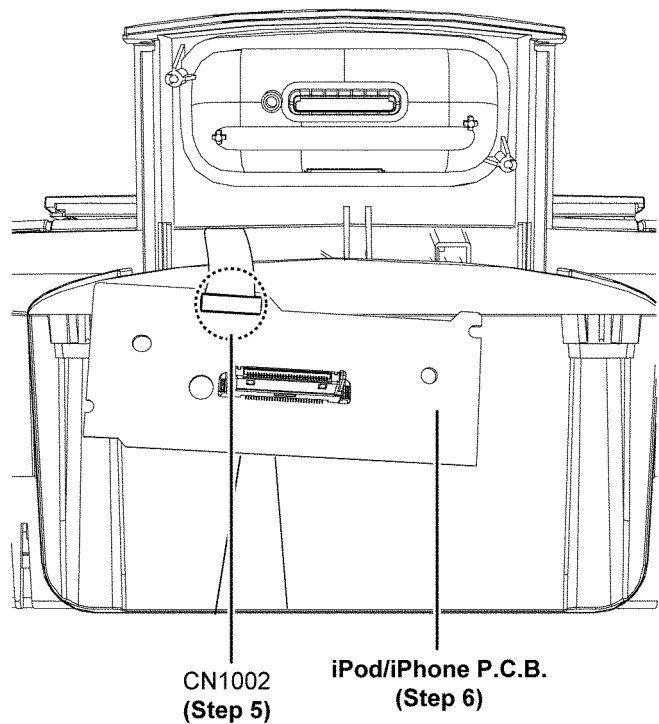
**Step 4 :** Flip iPod/iPhone P.C.B..

**Caution :** During assembly, 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..

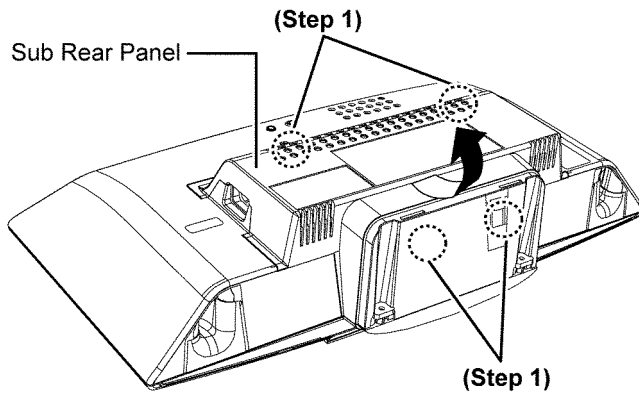


## 9.6. Disassembly of Sub Rear Panel

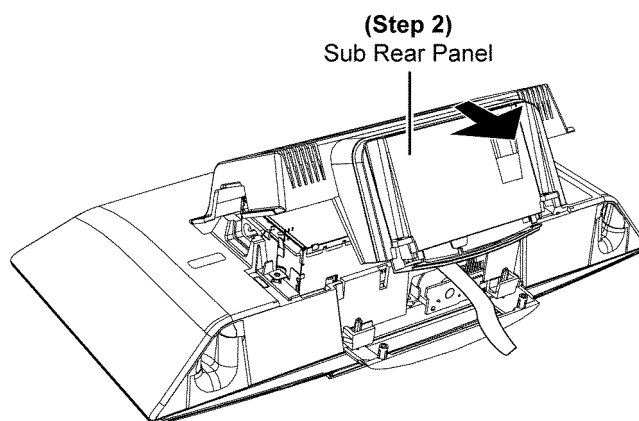
- Refer to "Disassembly of Stand Unit"
- Refer to "Disassembly of iPod/iPhone P.C.B."

**Note :** Ensure the iPod is closed properly

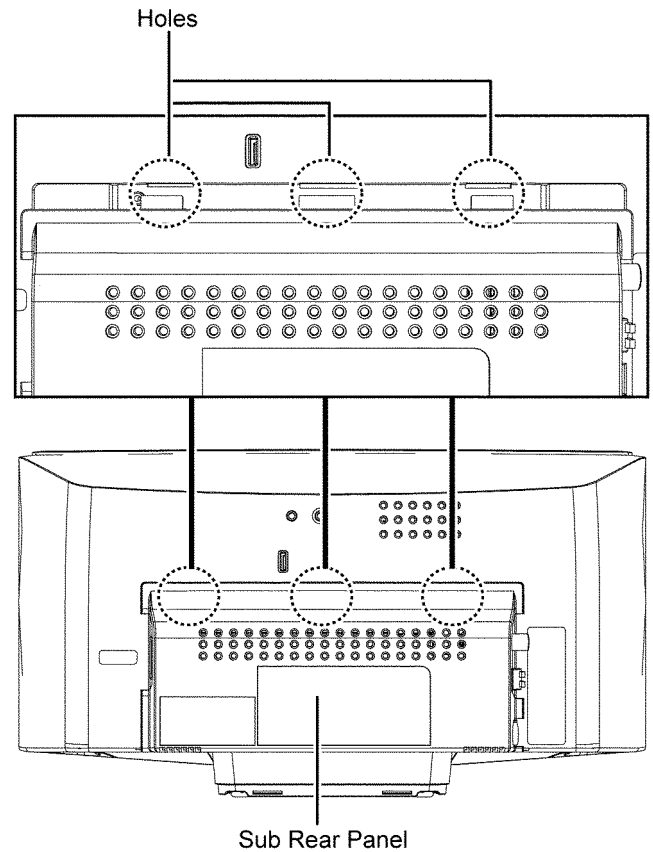
**Step 1 :** Press to lift up the Sub Rear Panel.



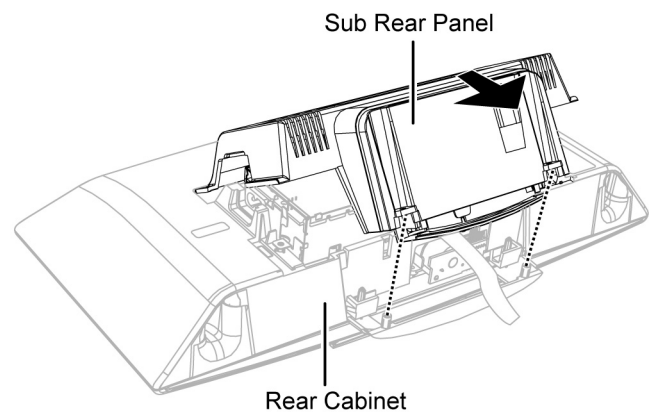
**Step 2 :** Remove Sub Rear Panel.



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



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

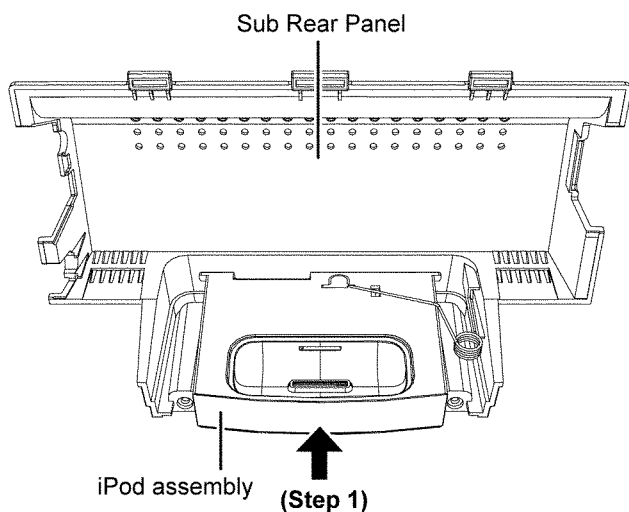


## 9.7. Disassembly of Docking Tub and Tub Cover

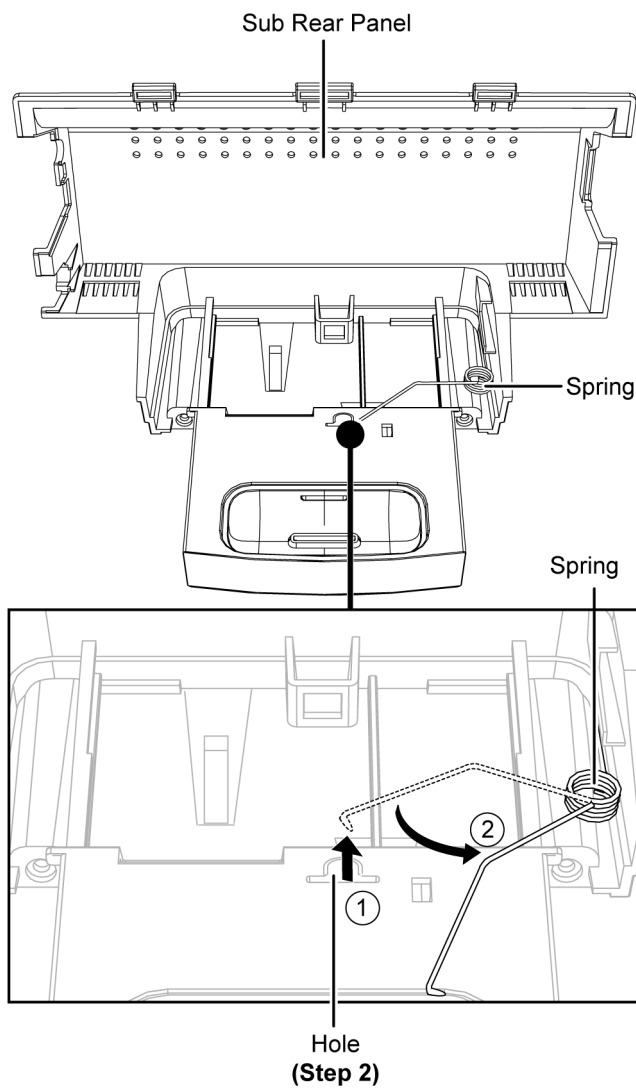
- Refer to "Disassembly of Stand Unit"
- Refer to "Disassembly of iPod/iPhone P.C.B."
- Refer to "Disassembly of Sub Rear Panel"

### 9.7.1. Disassembly of Docking Tub

**Step 1 :** Press to open the iPod assembly.

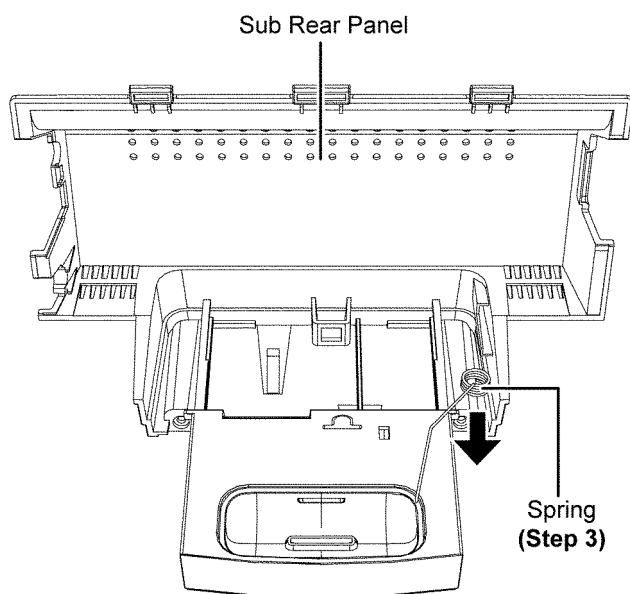


**Step 2 :** Release Spring from the docking tub hole as arrow shown.



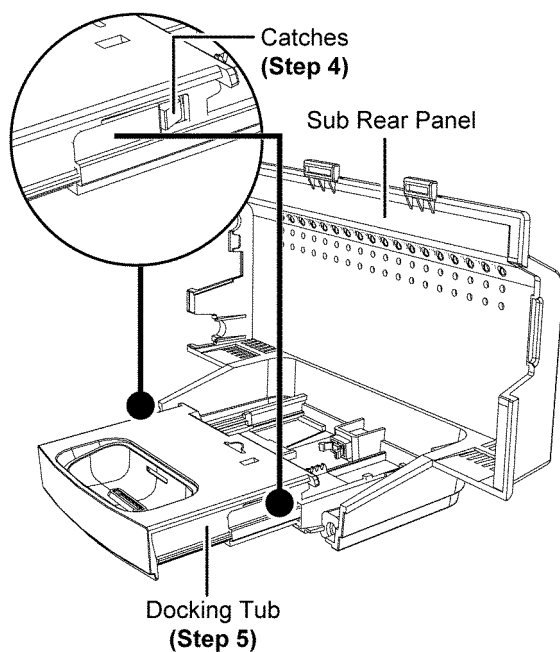
**Step 3 :** Remove Spring as arrow shown.

**Caution :** Keep springs in the safe place and place them back During assembly.



**Step 4 :** Release 2 catches.

**Step 5 :** Remove Docking Tub.

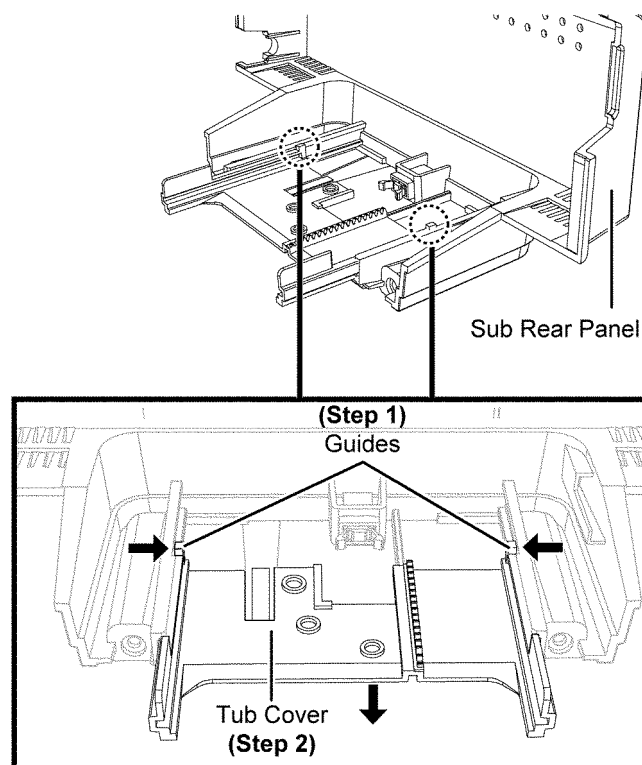


## 9.7.2. Disassembly of Tub Cover

• Refer to "Disassembly of Docking Tub"

**Step 1 :** Release 2 Guides.

**Step 2 :** Remove Tub Cover.

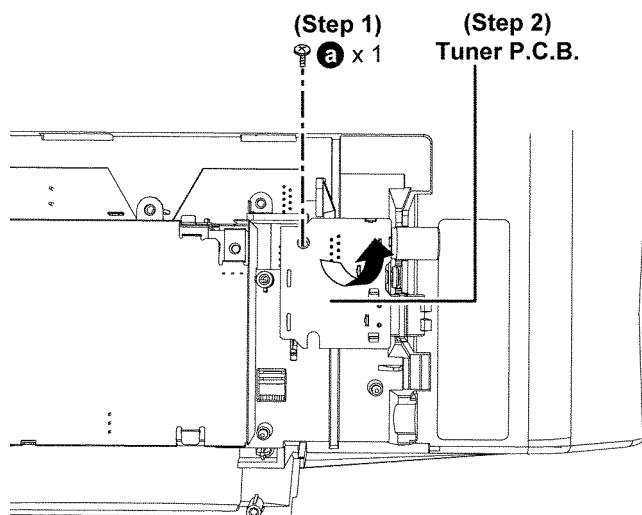


## 9.8. Disassembly of Tuner P.C.B.

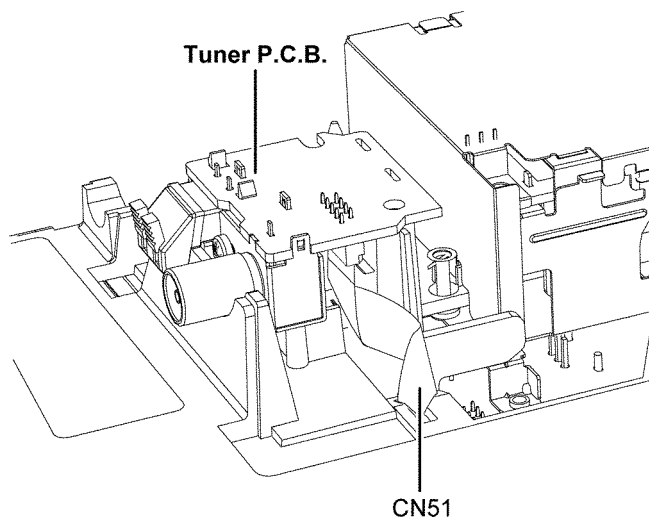
- Refer to "Disassembly of Stand Unit"
- Refer to "Disassembly of iPod/iPhone P.C.B."
- Refer to "Disassembly of Sub Rear Panel"

**Step 1 :** Remove 1 screw.

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

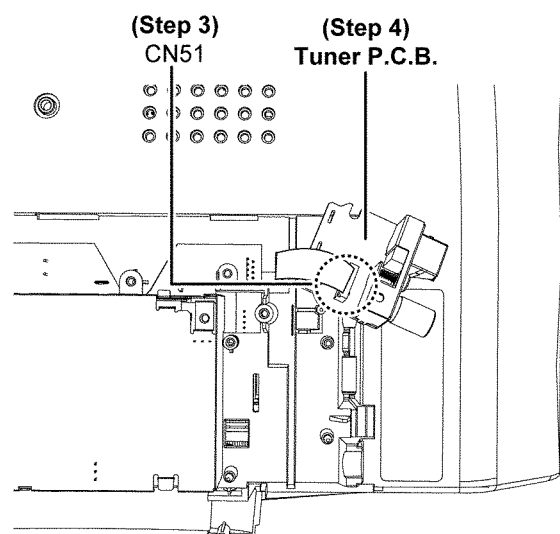


**Caution :** Ensure the 9P FFC (CN51) wire is dressed as diagram shown.



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

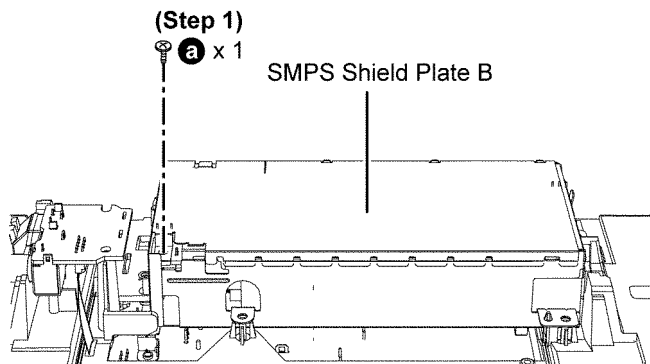
**Step 4 :** Remove Tuner P.C.B..



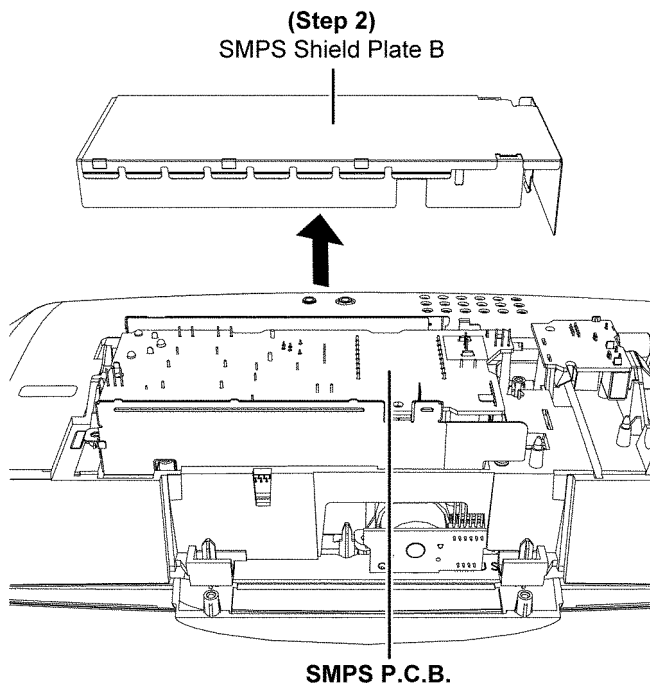
## 9.9. Disassembly of SMPS P.C.B.

- 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.



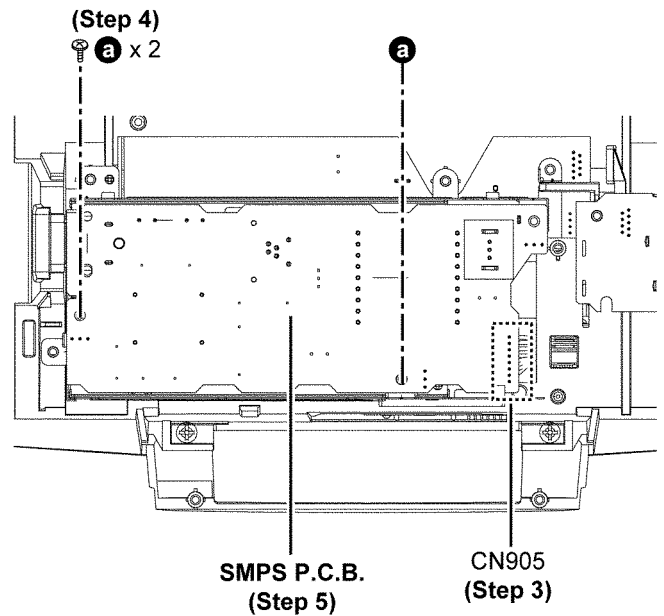
**Step 2 :** Remove SMPS Shield Plate B.



**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..



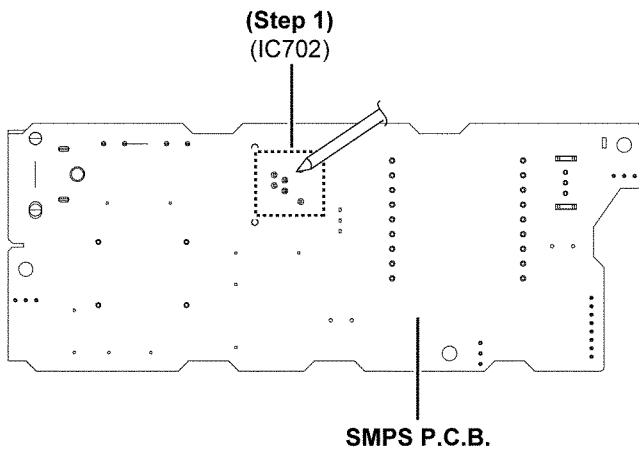
## 9.10. Replacement of Switching Regulator IC (IC702)

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

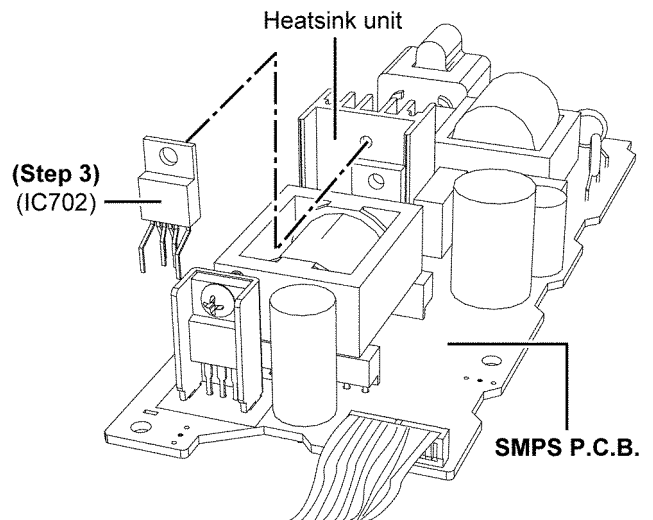
### 9.10.1. Disassembly of Switching Regulator IC (IC702)

**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.

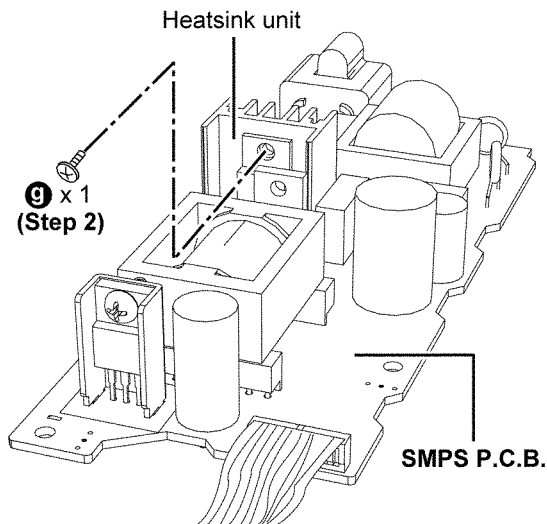
**Step 1 :** Desolder pins of the Switching Regulator IC (IC702) on the solder side of SMPS P.C.B..



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



**Step 2 :** Remove 1 screw.



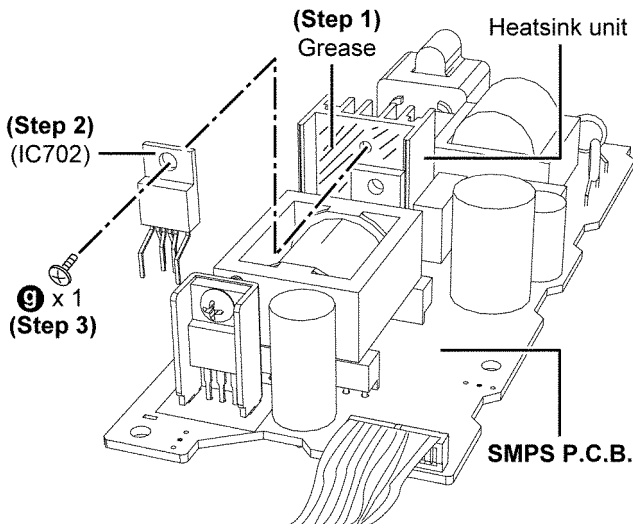
### 9.10.2. Assembly of Switching Regulator IC (IC702)

**Step 1 :** Apply grease to the heatsink unit.

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

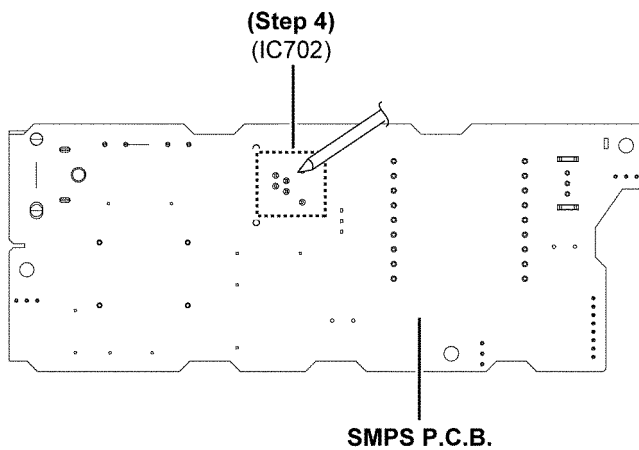
**Step 3 :** Fix the Switching Regulator IC (IC702) onto the heatsink unit with 1 screws.

**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



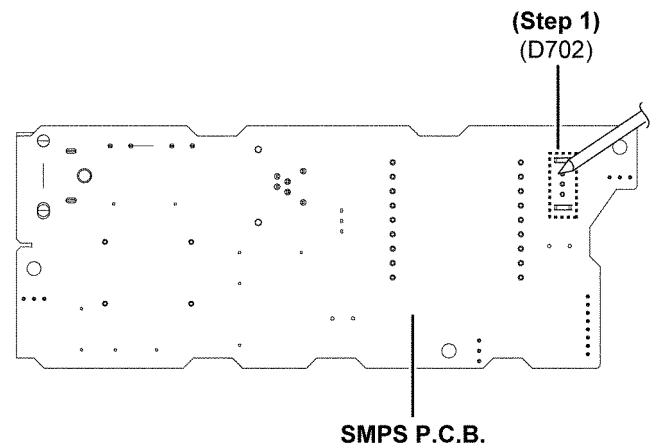
### 9.11. Replacement of Diode (D702)

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

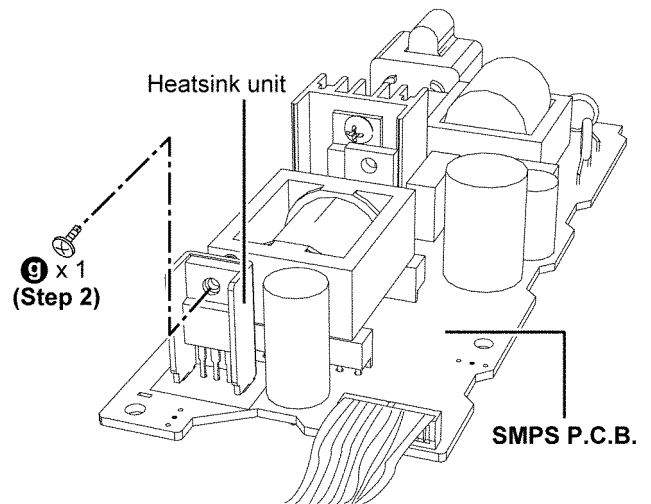
#### 9.11.1. Disassembly of Diode (D702)

**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.

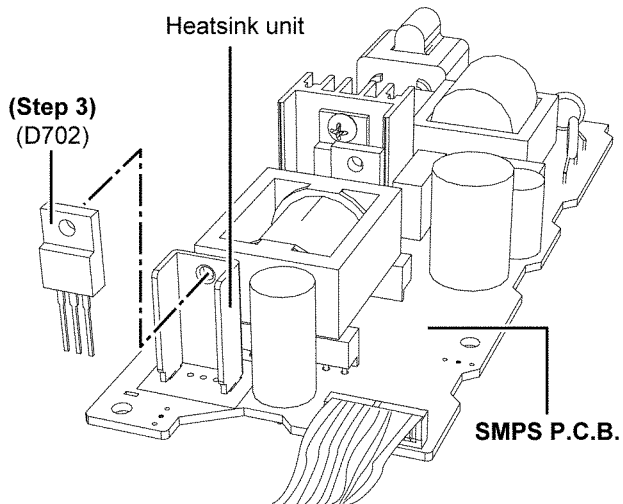
**Step 1 :** Desolder pins of the Diode (D702) on the solder side of SMPS P.C.B..



**Step 2 :** Remove 1 screw.



**Step 3 :** Remove the Diode (D702).



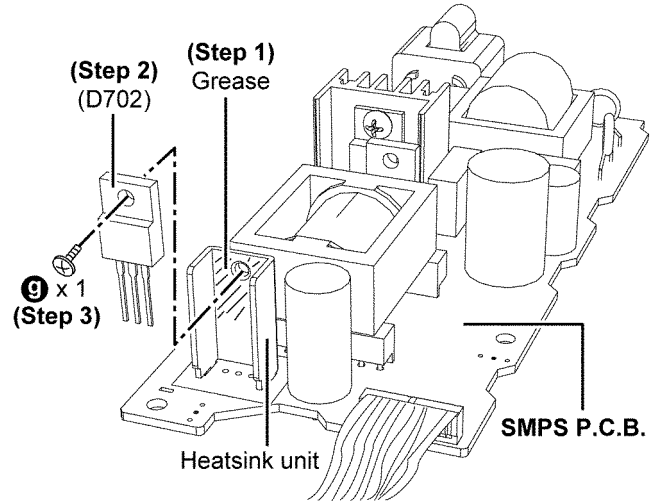
### 9.11.2. Assembly of Diode (D702)

**Step 1 :** Apply grease to the heatsink unit.

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

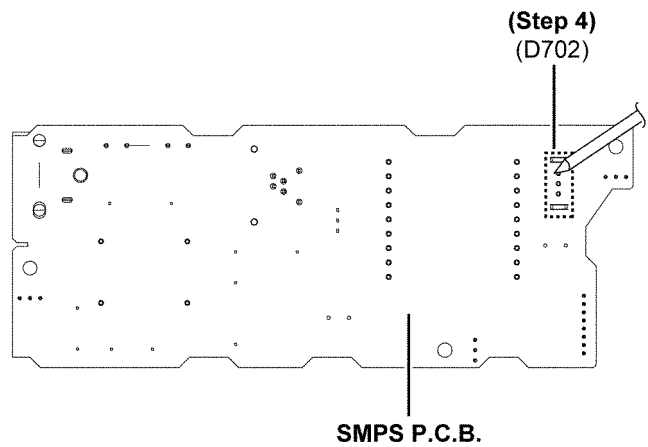
**Step 3 :** Fix the Diode (D702) onto the heatsink unit with 1 screws.

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



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

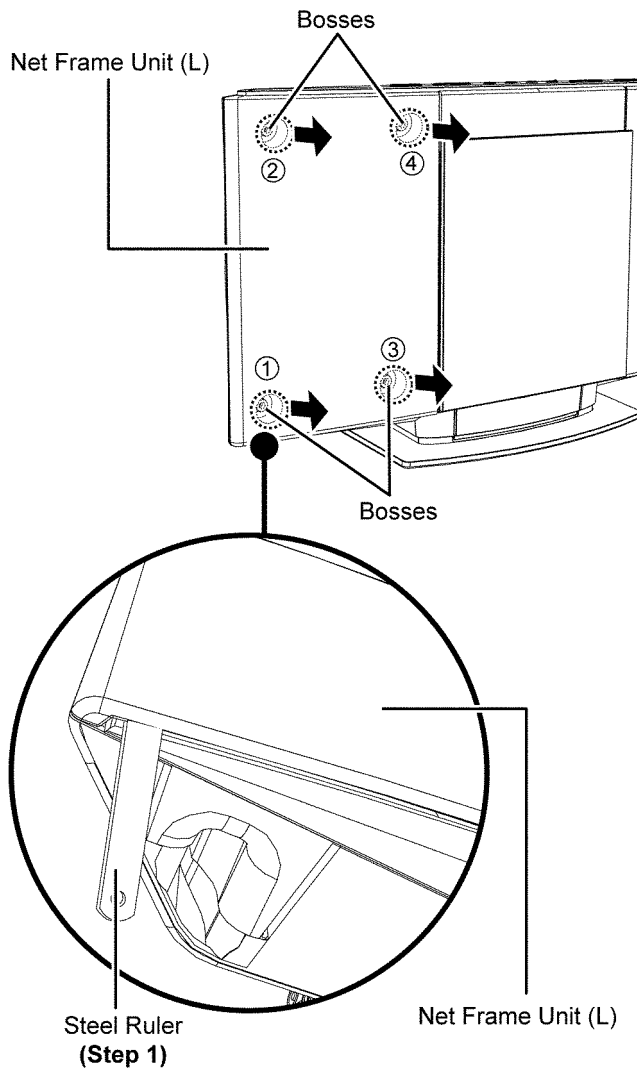
**Caution :** Ensure the Diode (D702) is seated properly onto the SMPS P.C.B. before soldering



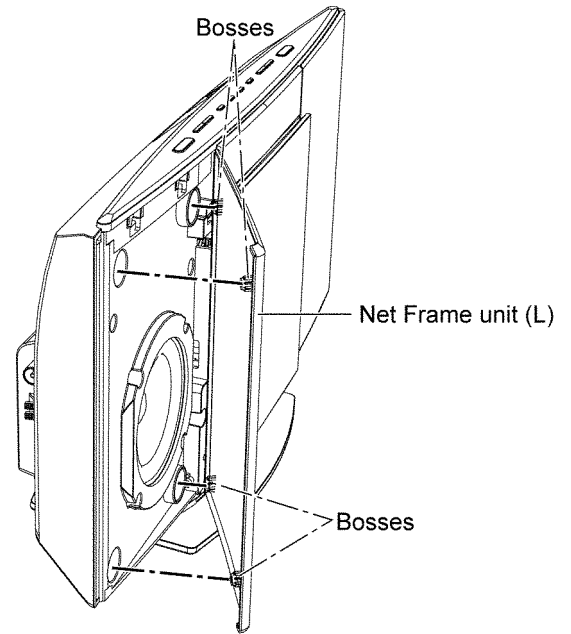
## 9.12. Disassembly of Net Frame Unit

### 9.12.1. Disassembly of Net Frame unit (L)

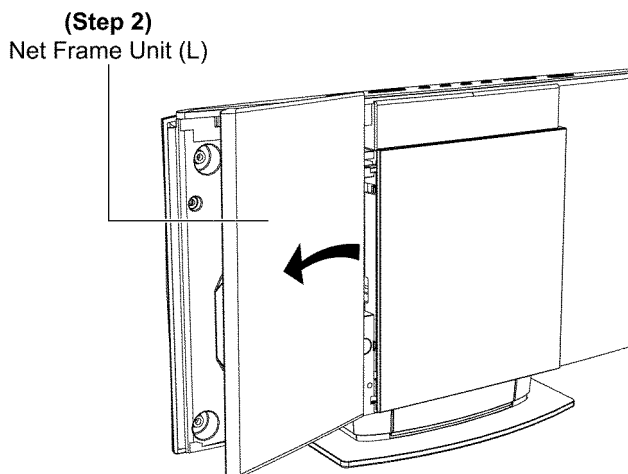
**Step 1 :** Insert a steel rule in between the Net Frame Unit (L) gently to release the 4 bosses in order as arrows shown.



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



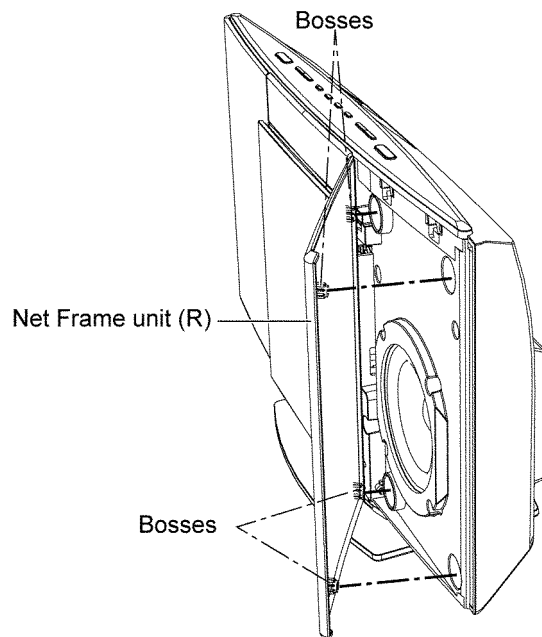
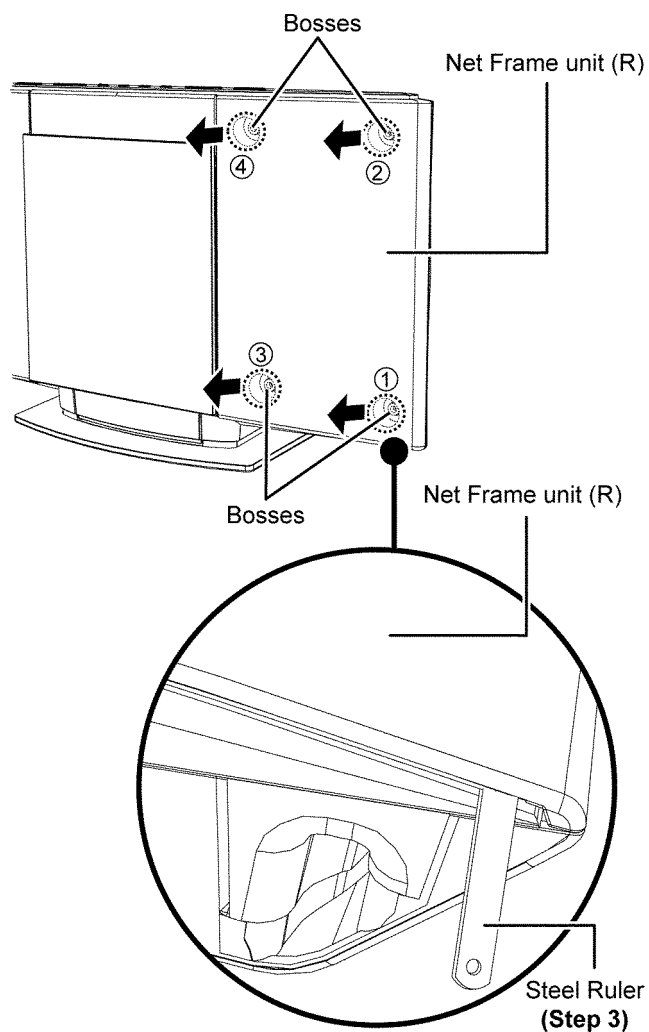
**Step 2 :** Remove Net Frame Unit (L) as arrow shown.



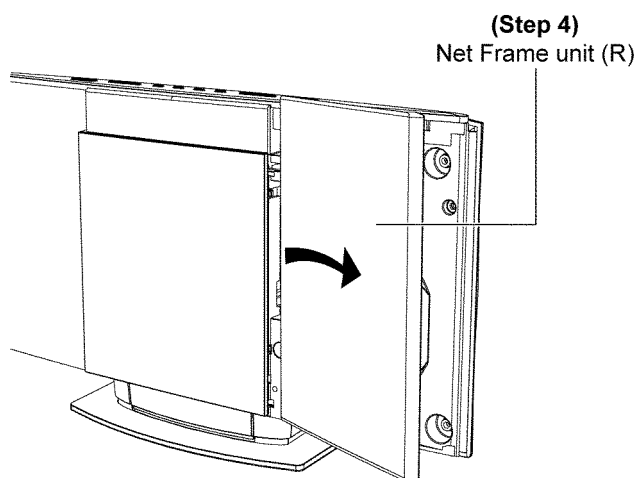
### 9.12.2. Disassembly of Net Frame unit (R)

**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 assembly of Net Frame Unit (R), ensure it is fixed properly.



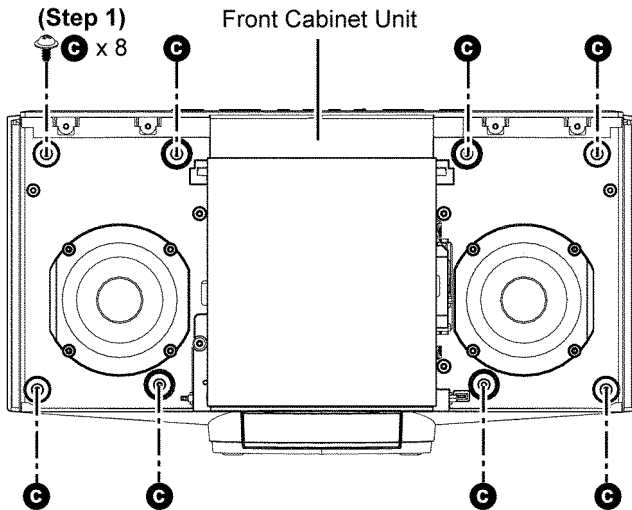
**Step 4 :** Remove Net Frame Unit (R) as arrow shown.



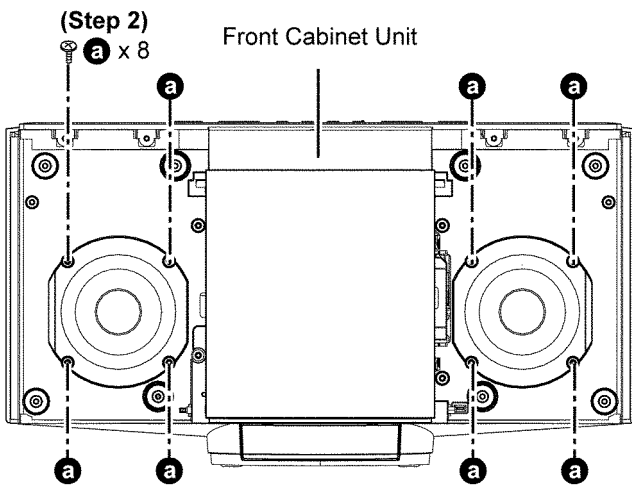
## 9.13. Disassembly of Front Cabinet unit

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

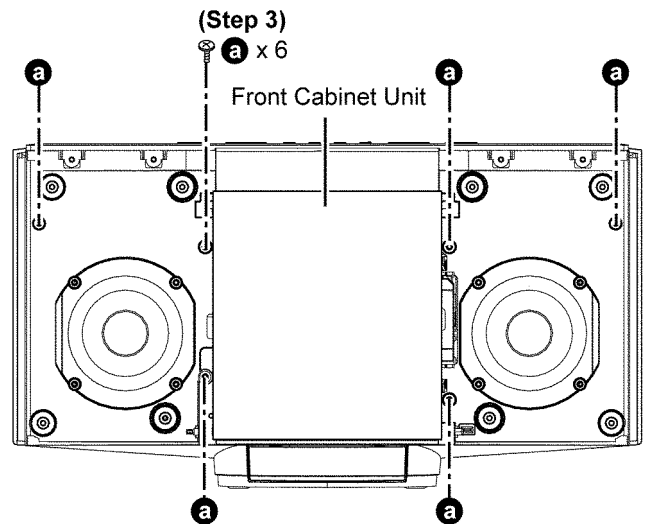
**Step 1 :** Remove 8 screws.



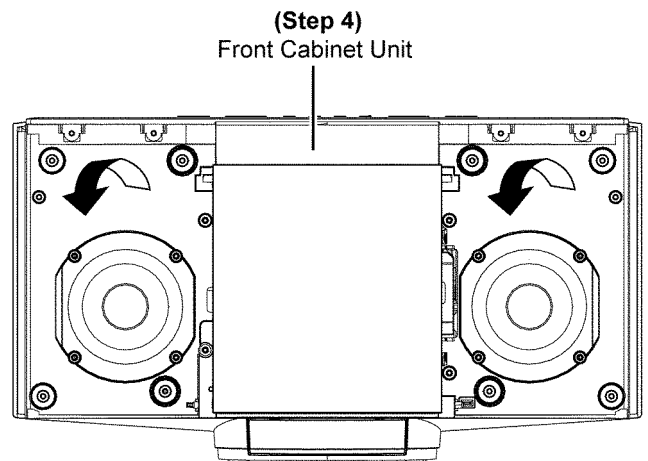
**Step 2 :** Remove 8 screws.



**Step 3 :** Remove 6 screws.

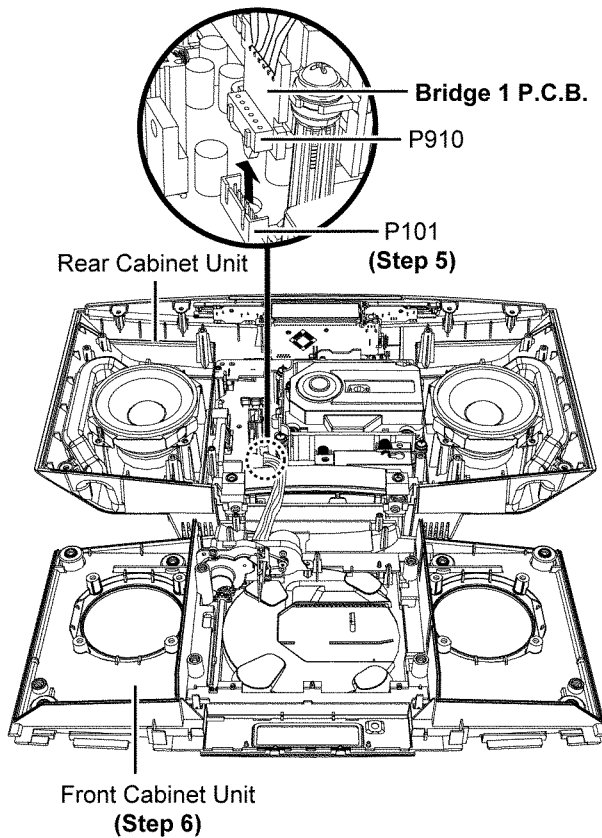


**Step 4 :** Lift up the Front Cabinet Unit as arrow shown.



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

**Step 6 :** Remove Front Cabinet Unit.

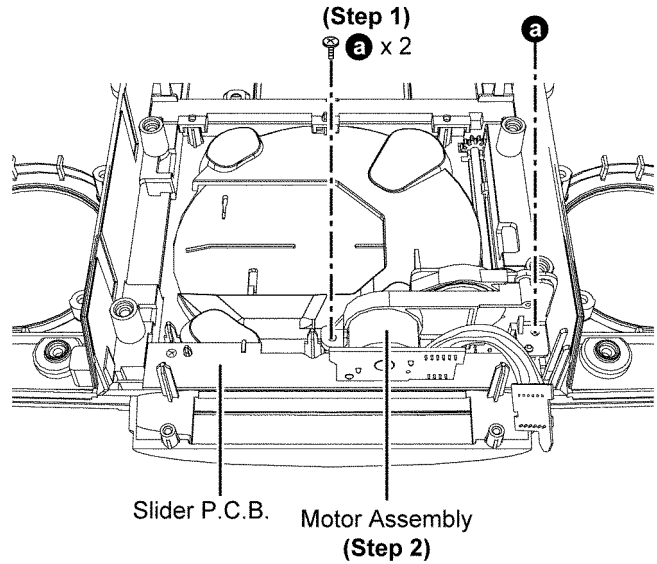


## 9.14. Disassembly of Motor P.C.B., Bridge 1 P.C.B. & Position Switch P.C.B.

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

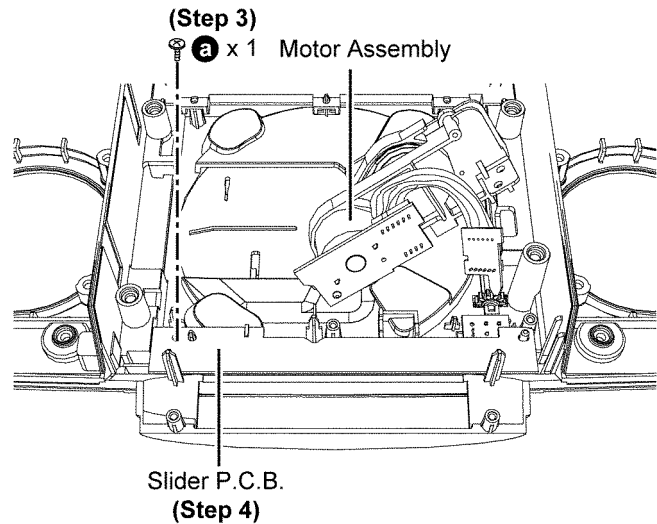
**Step 1 :** Remove 2 screws.

**Step 2 :** Lift up Motor Assembly.



**Step 3 :** Remove 1 screw.

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

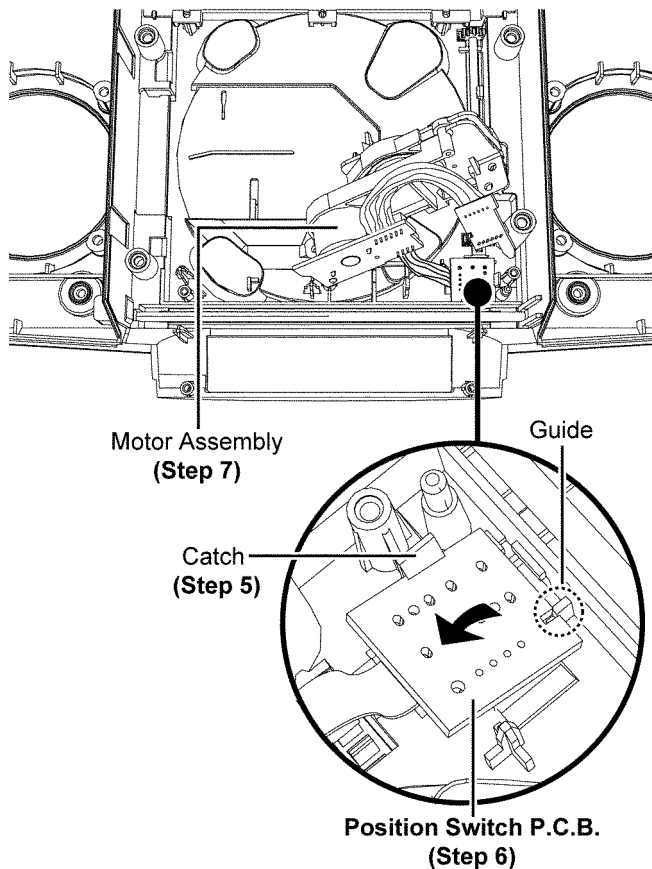


**Step 5 :** Release 1 catch.

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

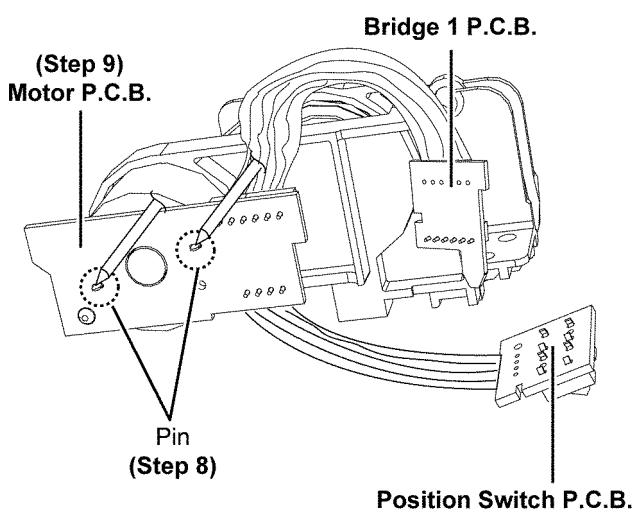
**Step 7 :** Remove Motor Assembly.

**Caution :** During assembly 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..

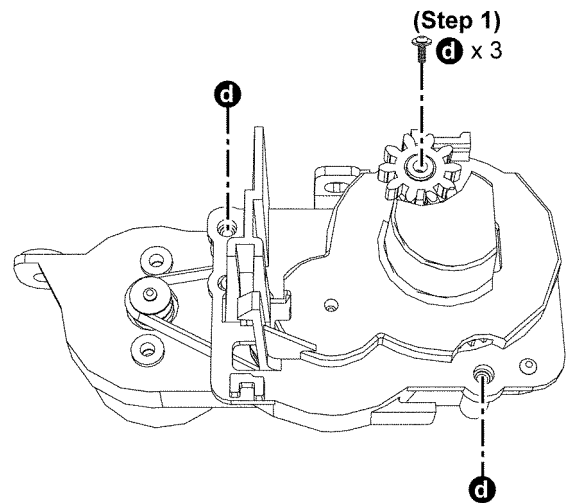
**Step 9 :** Remove Motor P.C.B., Bridge 1 P.C.B. & Position Switch P.C.B. altogether.



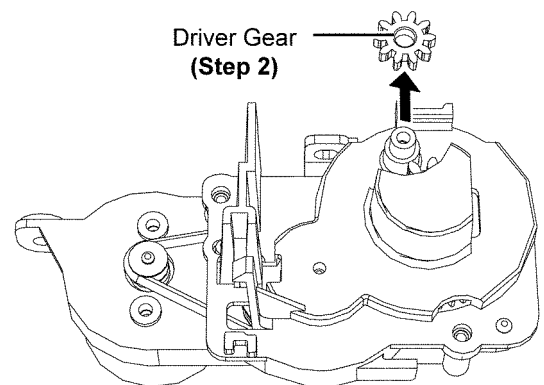
## 9.15. Disassembly of Motor Assembly

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

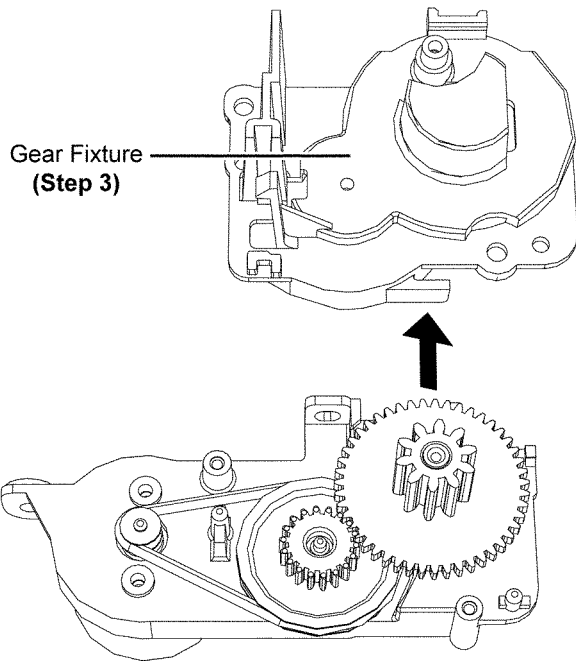
**Step 1 :** Remove 3 screws.



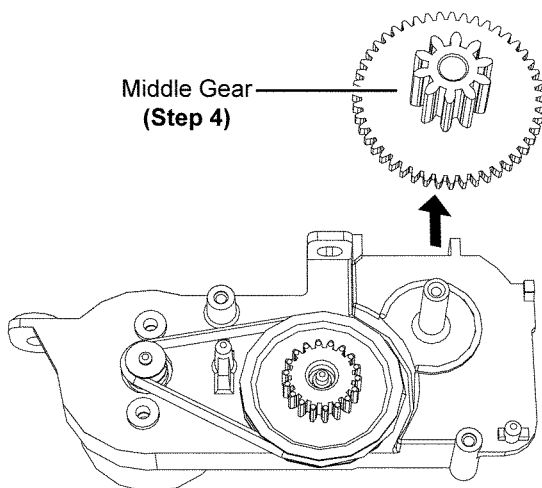
**Step 2 :** Remove Driver Gear.



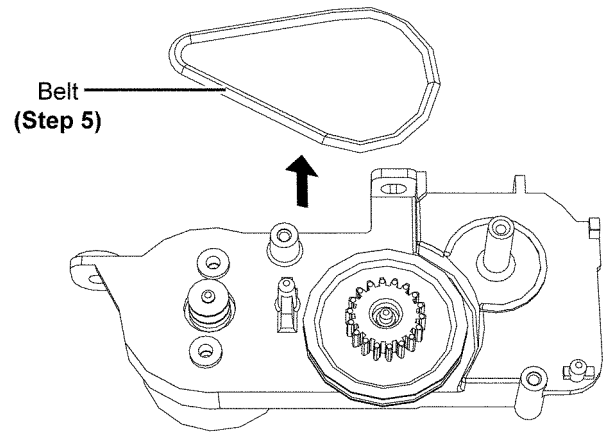
**Step 3 : Remove Gear Fixture.**



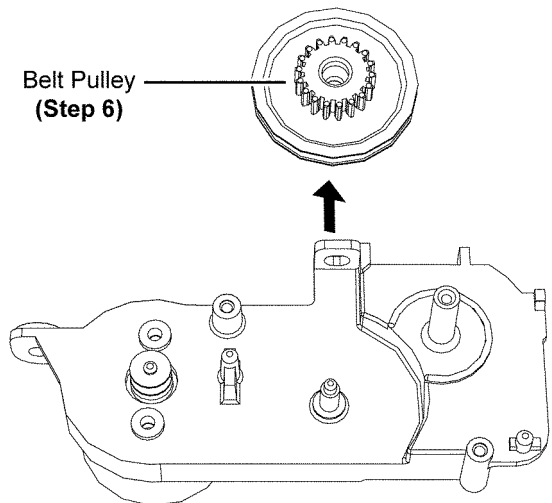
**Step 4 : Remove Middle Gear.**



**Step 5 : Remove Belt.**

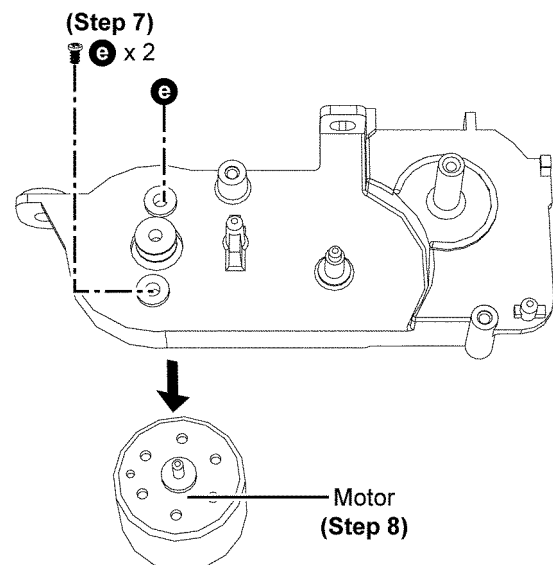


**Step 6 : Remove Belt Pulley.**



**Step 7 : Remove 2 screws.**

**Step 8 : Remove Motor.**



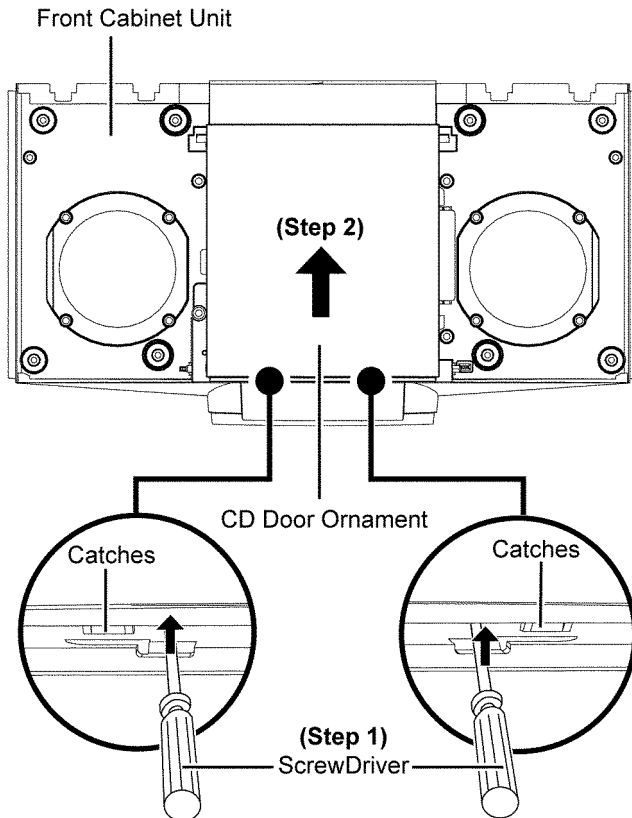
## 9.16. Replacement of CD Door Ornament

- 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.

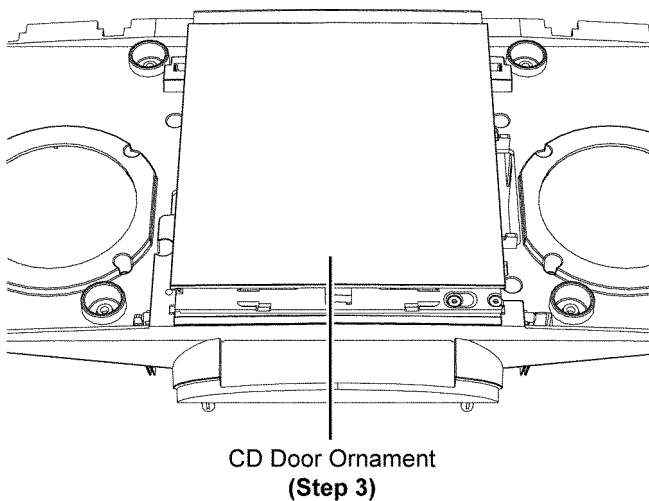
### 9.16.1. Disassembly of CD Door Ornament

**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.

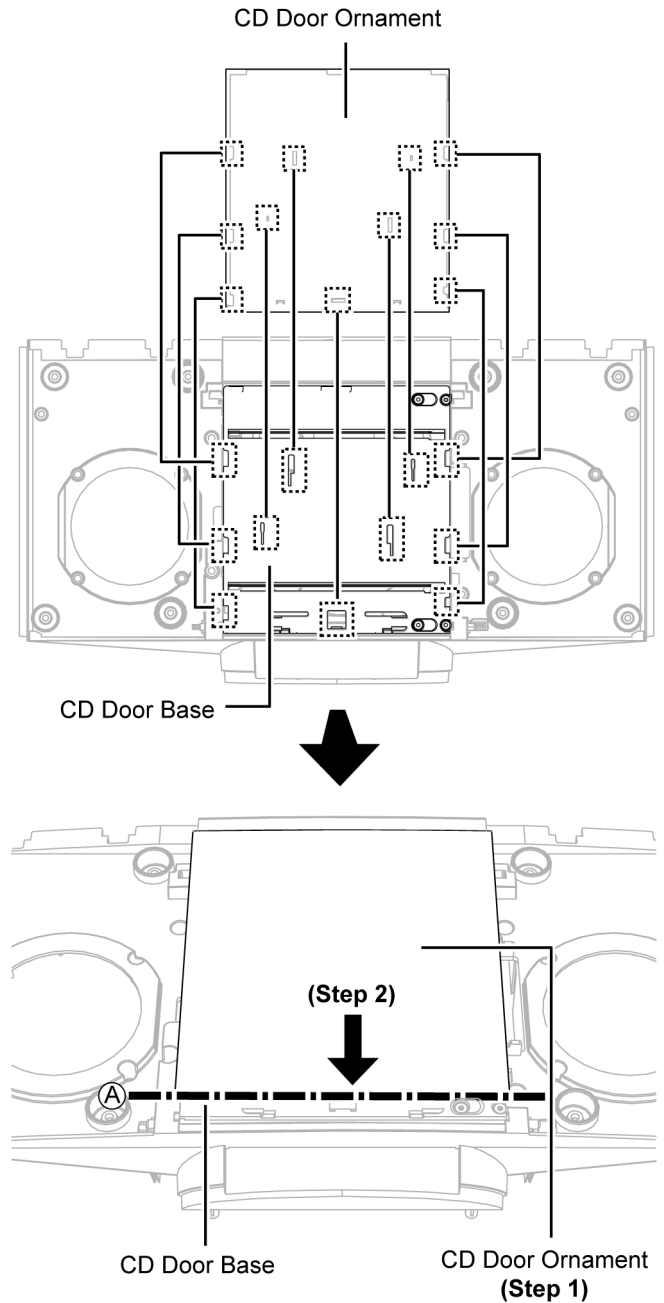


### 9.16.2. Assembly of CD Door Ornament

**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 assembly, ensure a "click" sound is heard when the CD Door Ornament is fully caught.

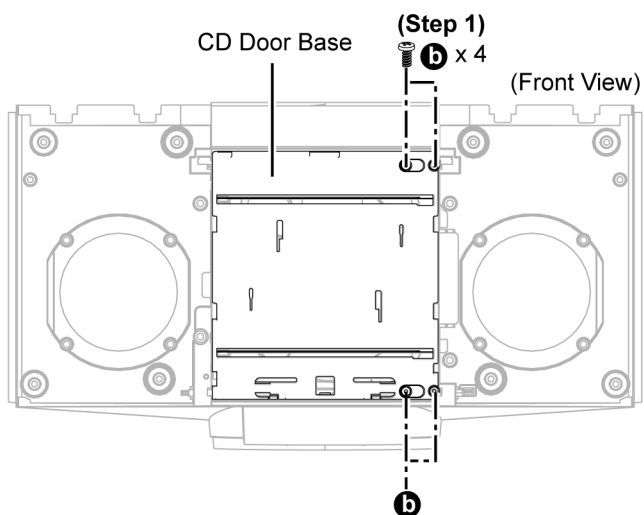


## 9.17. Replacement of CD Door Base

- 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"

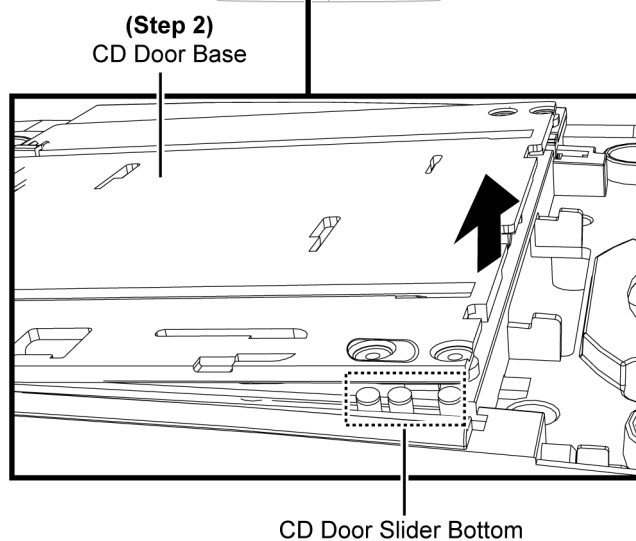
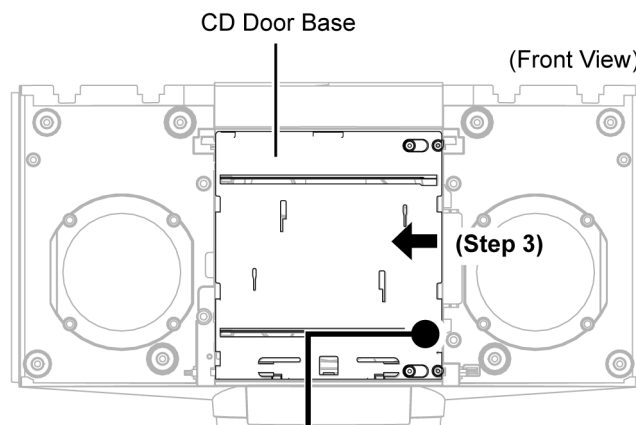
### 9.17.1. Disassembly of CD Door Base

**Step 1 :** Remove 4 screws.



**Step 2 :** Slightly lift up the CD Door Base.

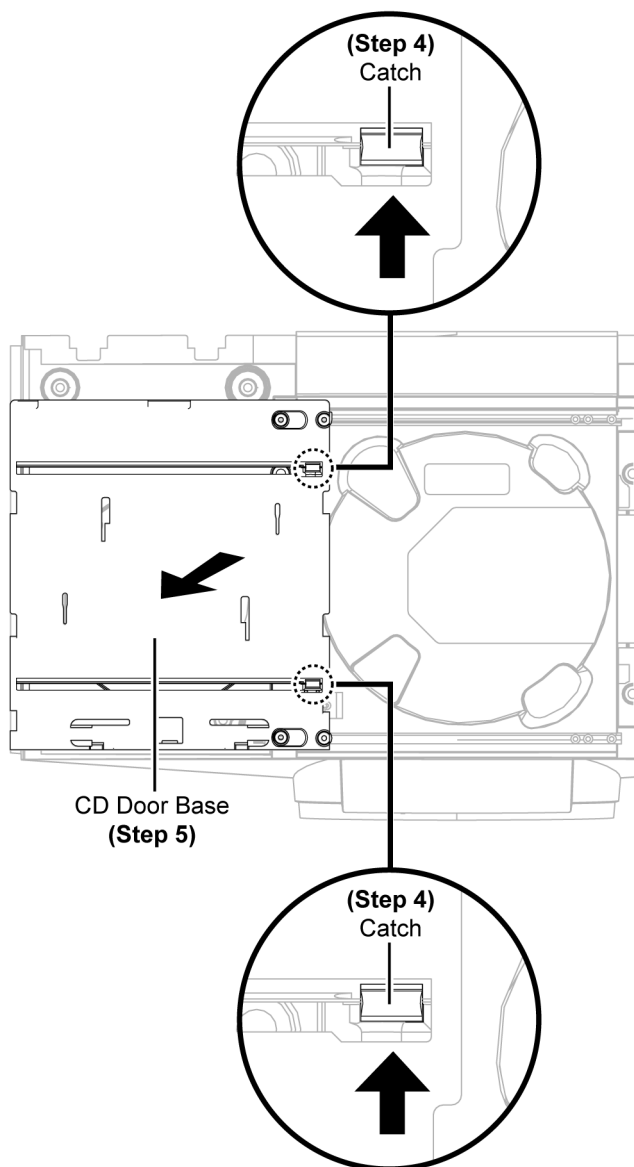
**Step 3 :** Slide the CD Door Base towards to the left.



CD Door Slider Bottom

**Step 4 :** Push the CD Door Base upwards.

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

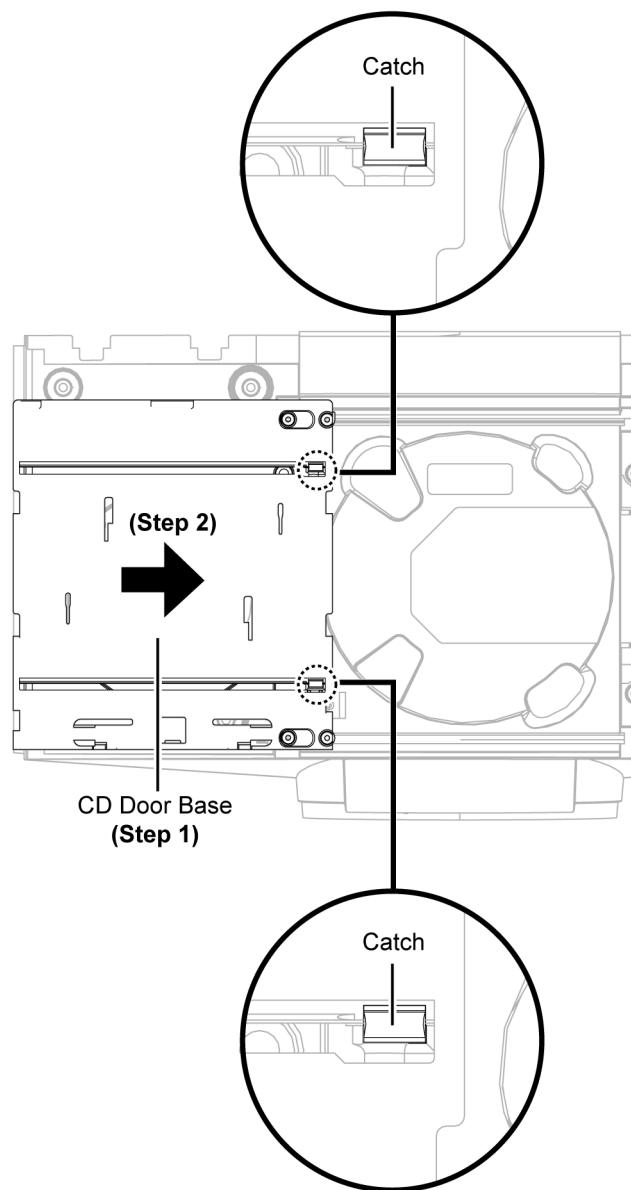


### 9.17.2. Assembly of CD Door Base

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

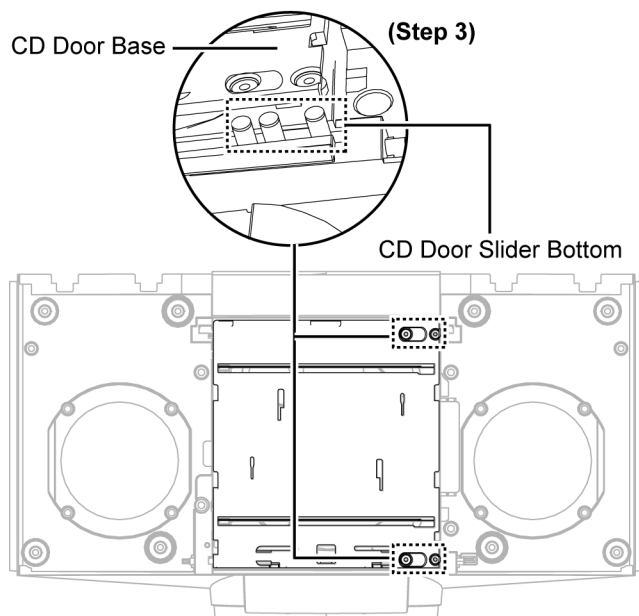
**Step 1 :** Place the CD Door Base onto Front Cabinet.

**Step 2 :** Slide CD Door Base as arrow shown.

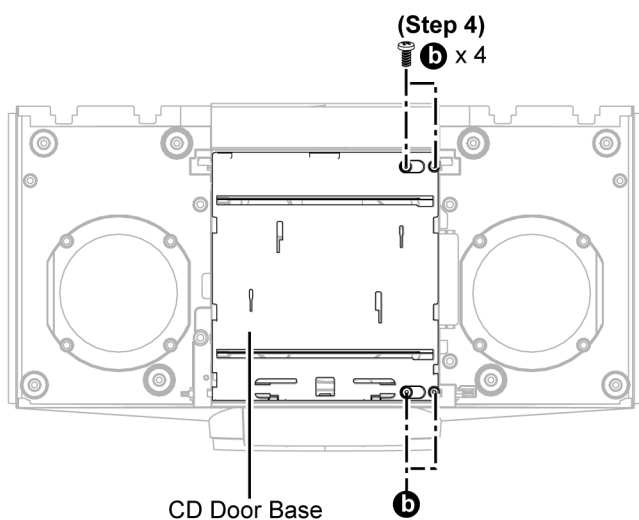


**Step 3 :** Place CD Door Base Onto the CD Door Slider Bottom as diagram shown.

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



**Step 4 :** Fix 4 screws.



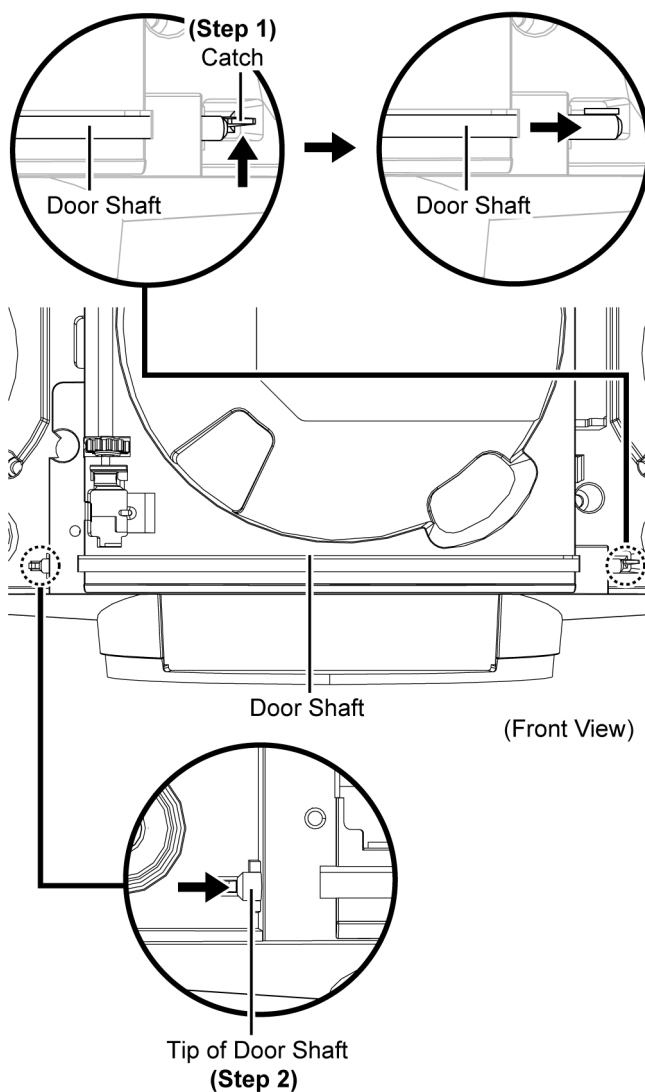
## 9.18. Replacement of Door Shaft & CD Door Slider Bottom

- 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.

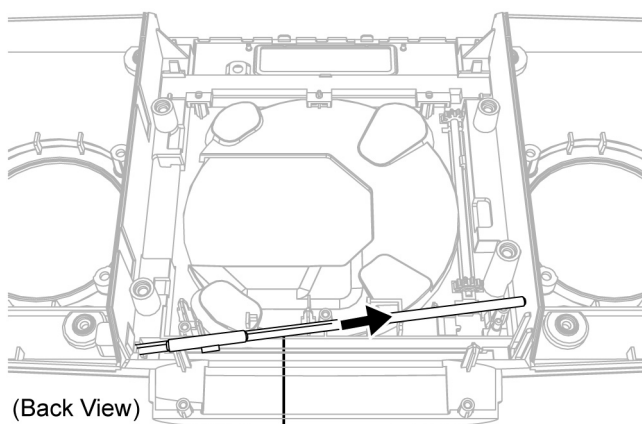
**Step 2 :** Push the Tip of the Door Shaft as arrow shown.



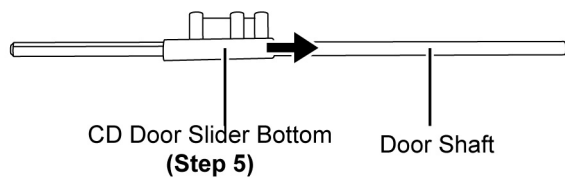
**Step 3 :** Upset the Front Cabinet Unit.

**Step 4 :** Remove Door Shaft.

**Step 5 :** Remove CD Door Slider Bottom.

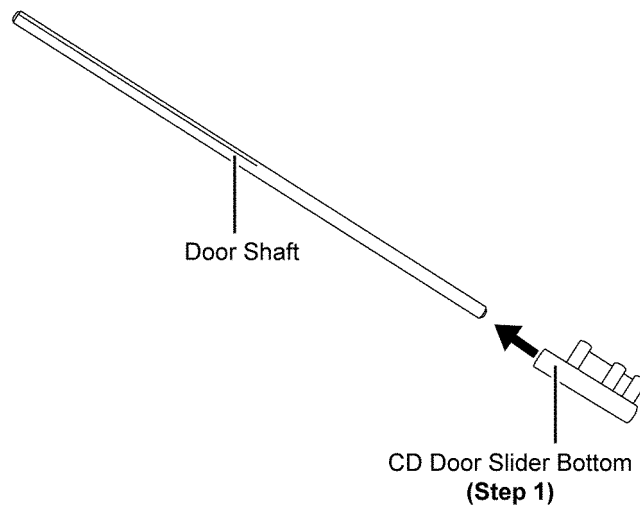


Door Shaft  
(Step 4)

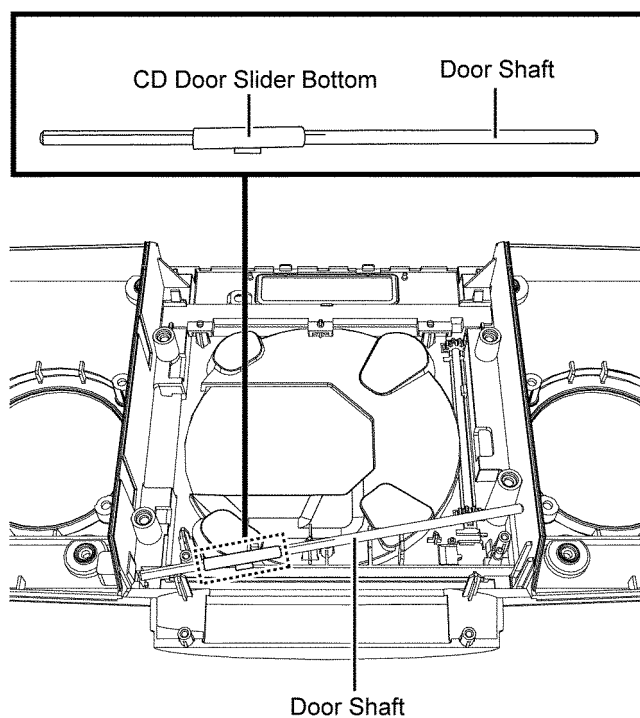


### 9.18.2. Assembly of Door Shaft & CD Door Slider Bottom

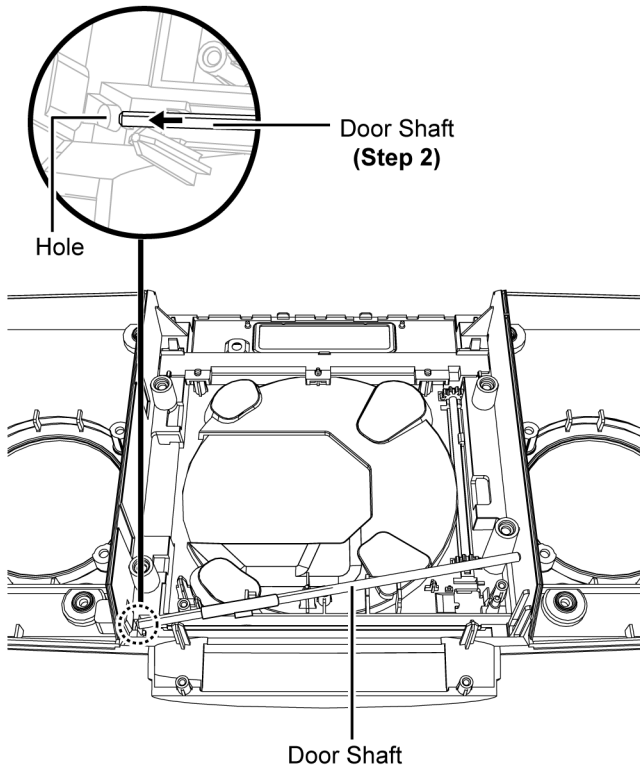
**Step 1 :** Slot the CD Door Slider Bottom thru the Door Shaft.



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



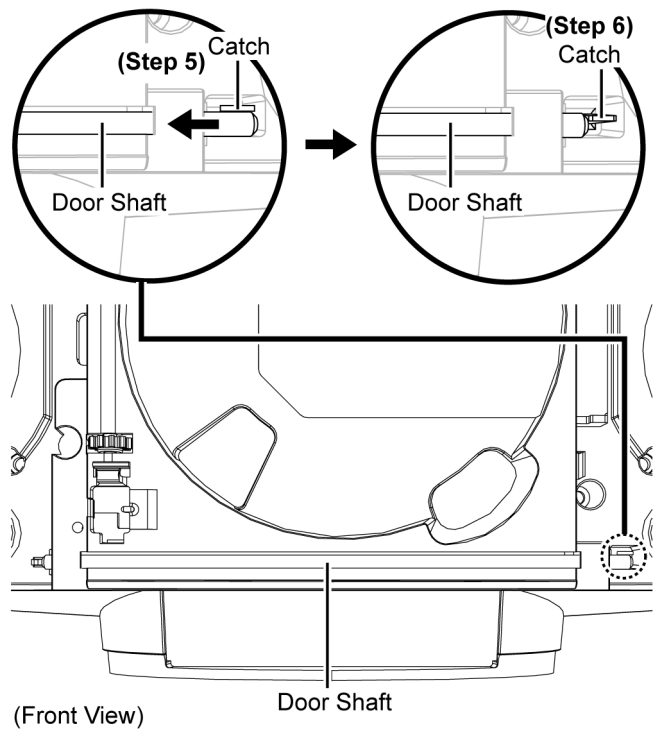
**Step 2 :** Slot in the one end of the Door Shaft into the hole as shown in the diagram above.



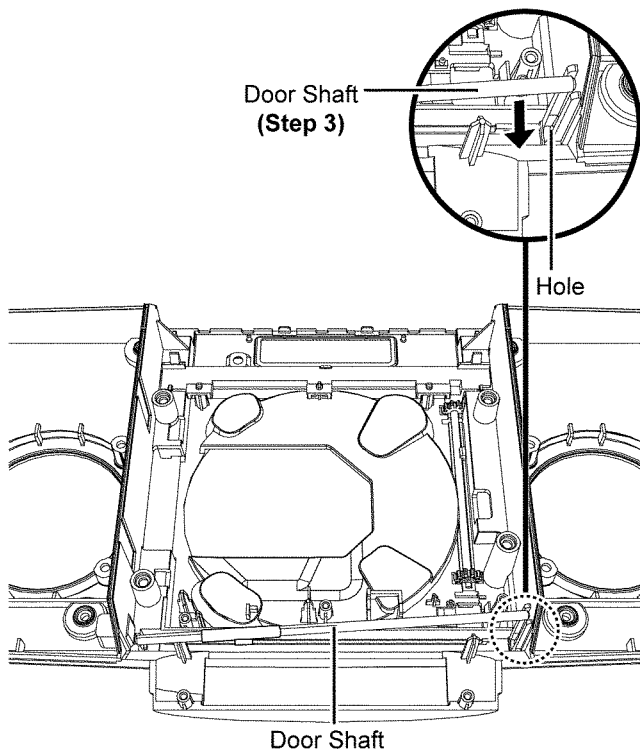
**Step 4 :** Upset the Front Cabinet Unit.

**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.



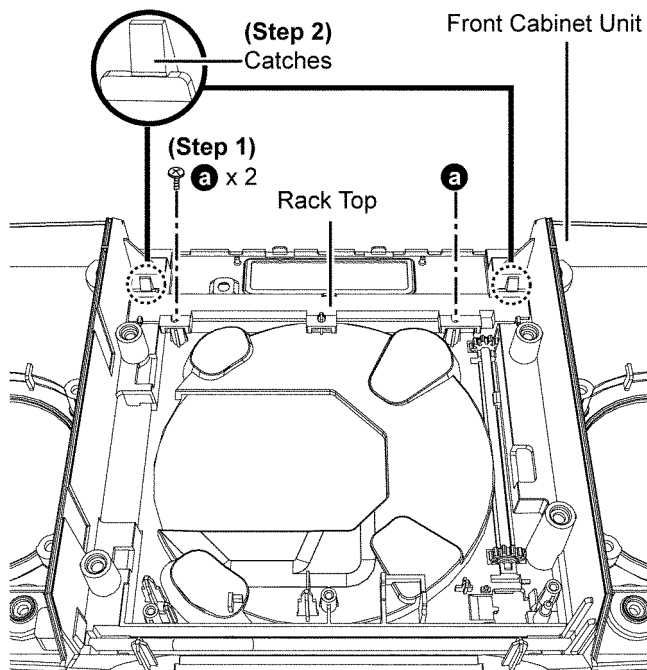
## 9.19. Replacement of Rack Top, Slider Top & Timing Gear Shaft

- 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"

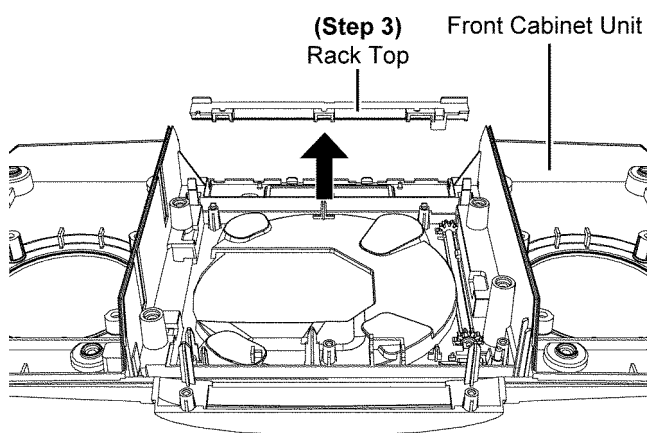
### 9.19.1. Disassembly of Rack Top & Slider Top

**Step 1 :** Remove 2 screw.

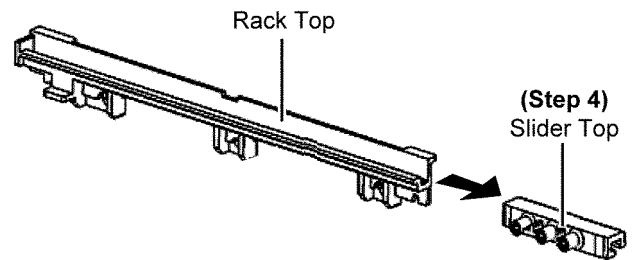
**Step 2 :** Release 2 catches.



**Step 3 :** Remove Rack Top.

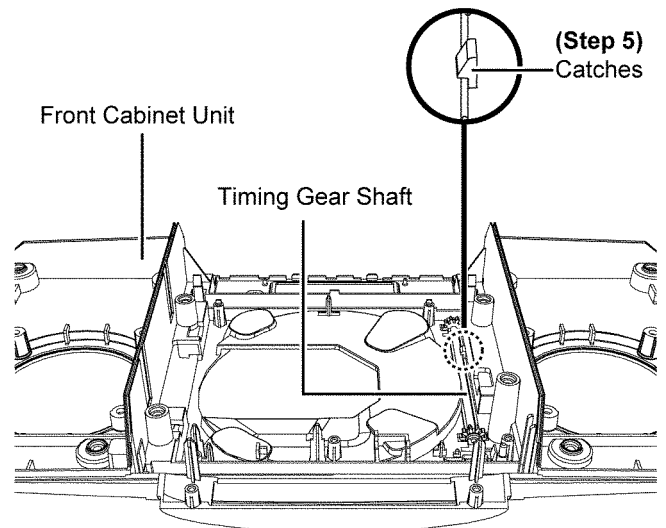


**Step 4 :** Remove the Slider Top.

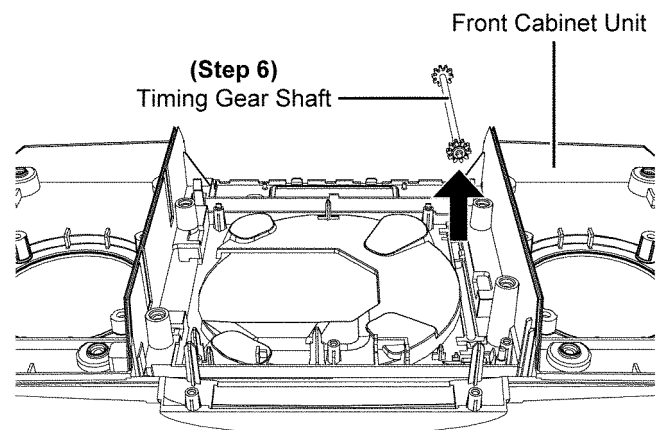


### 9.19.2. Disassembly of Timing Gear Shaft

**Step 5 :** Release 1 catch.



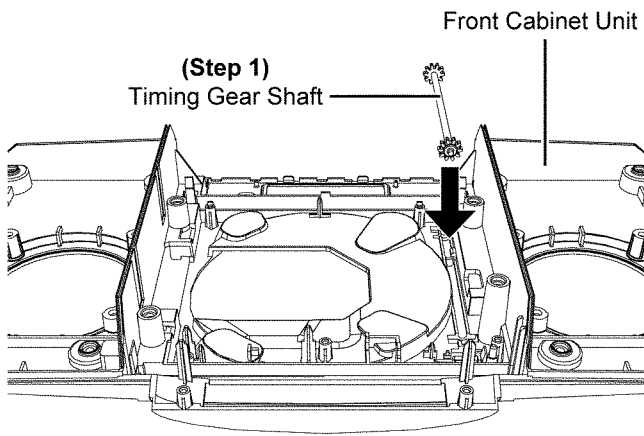
**Step 6 :** Remove Timing Gear Shaft.



### 9.19.3. Assembly of Timing Gear Shaft

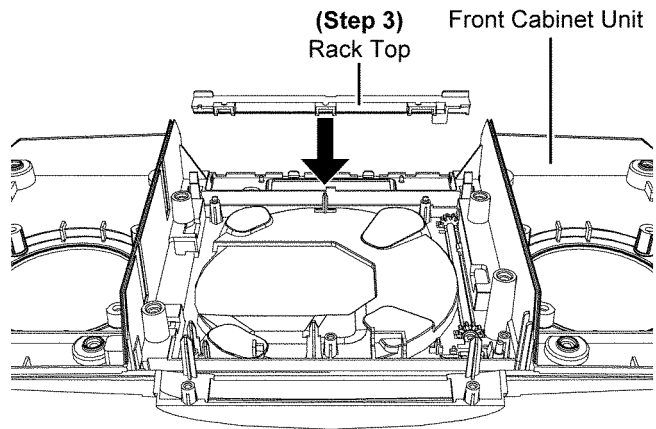
**Step 1 :** Fix Timing Gear Shaft.

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



**Step 3 :** Fix Rack Top.

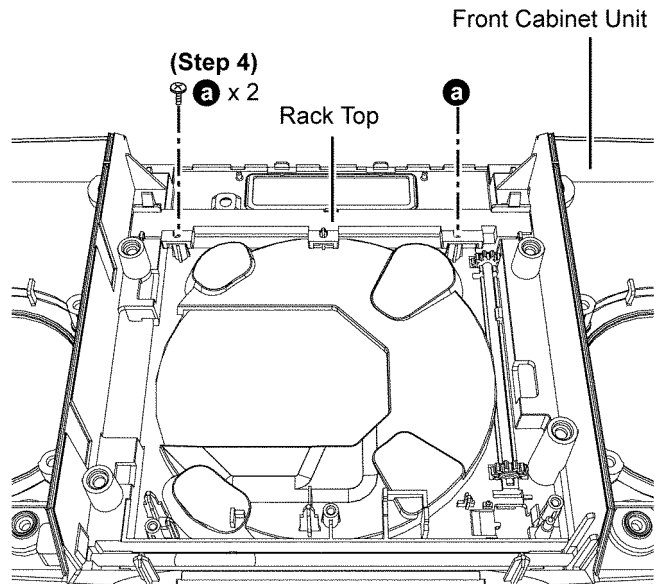
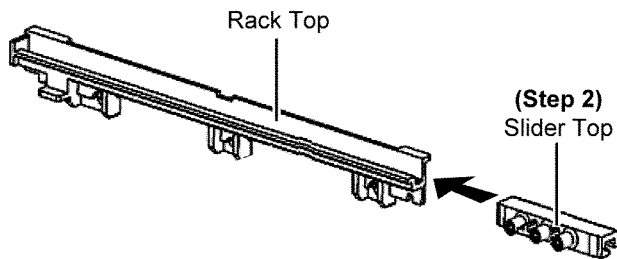
**Caution :** During assembly, ensure that the Rack Top is properly inserted & seated onto the Front Cabinet Unit.



**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

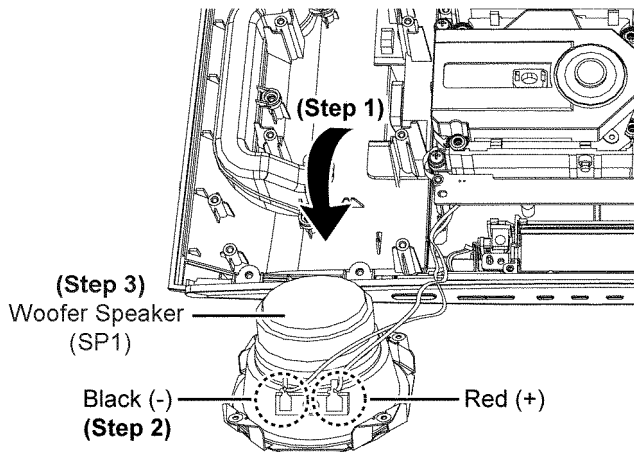
- Refer to "Disassembly of Stand Unit"
- Refer to "Disassembly of iPod/iPhone P.C.B."
- Refer to "Disassembly of Net Frame Unit"
- Refer to "Disassembly of Front Cabinet unit"

### 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).

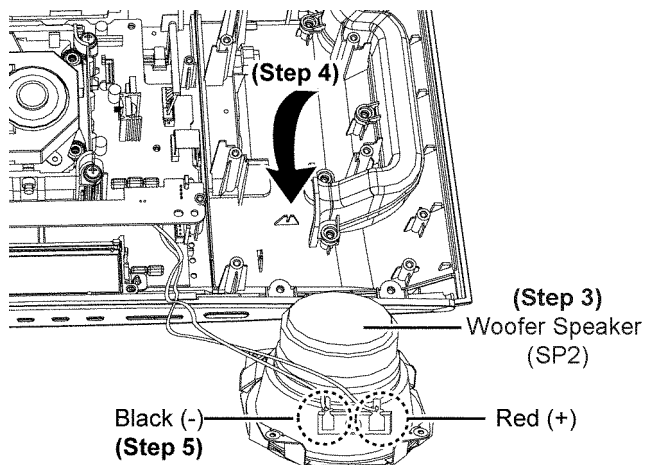


### 9.20.2. Disassembly of Woofer Speaker (SP2)

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

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

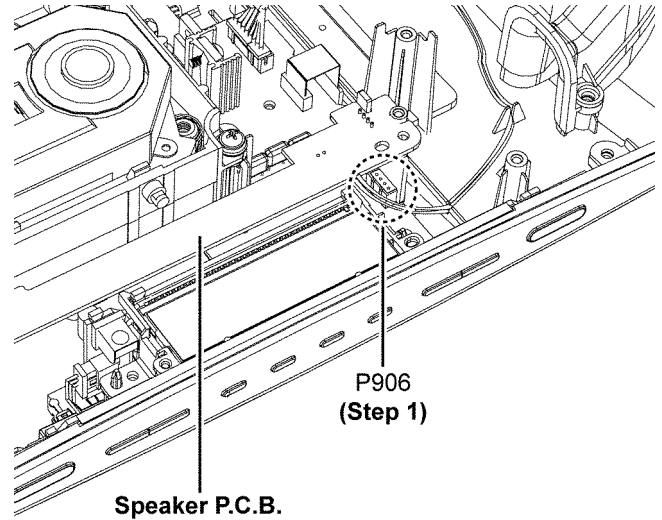
**Step 6 :** Remove Woofer Speaker (SP2).



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

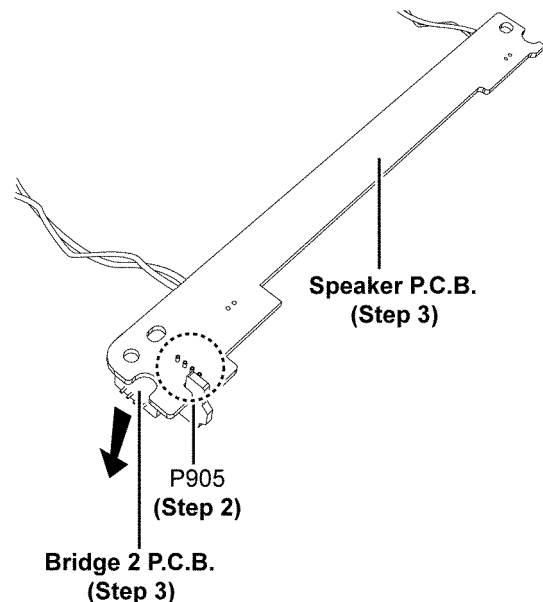
- Refer to "Disassembly of Stand Unit"
- Refer to "Disassembly of iPod/iPhone P.C.B."
- Refer to "Disassembly of Net Frame Unit"
- Refer to "Disassembly of Front Cabinet unit"
- Refer to (Step 2) & (Step 5) of item 9.20.

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

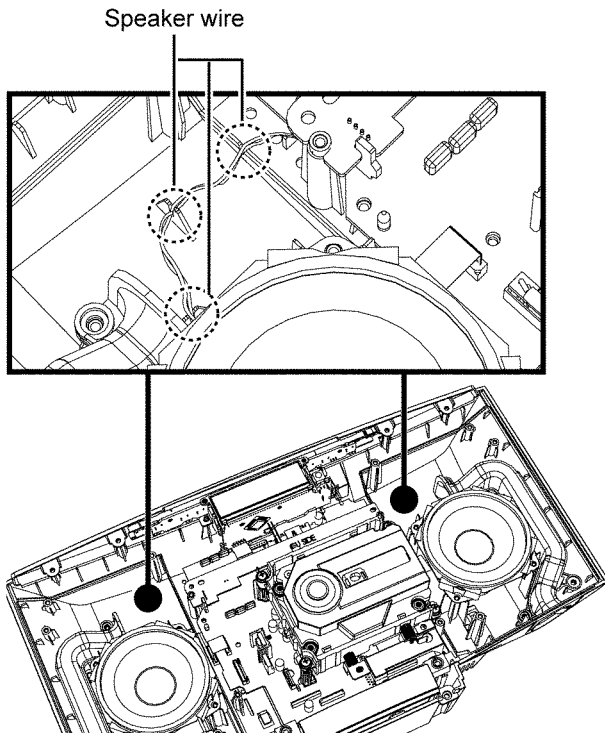


**Step 2 :** Desolder P905 on the Speaker P.C.B..

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



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



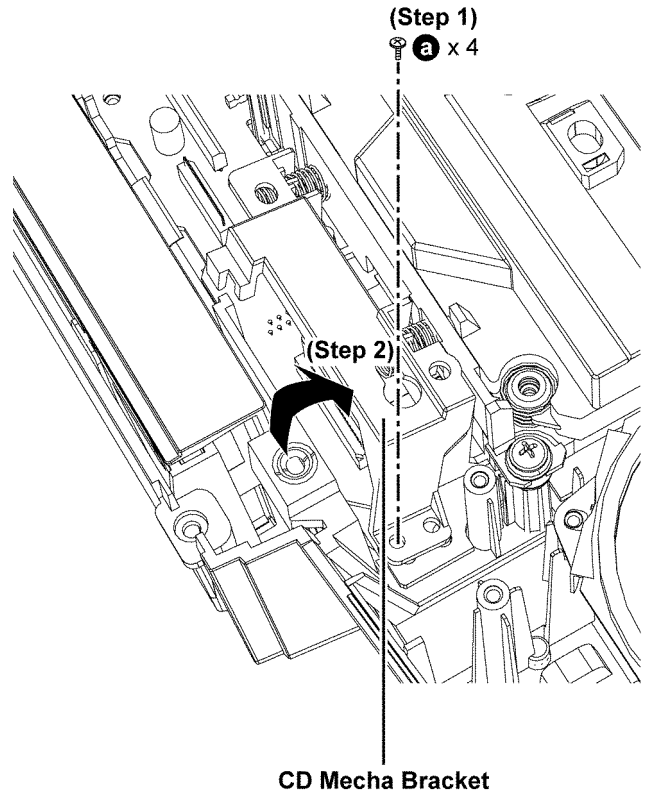
## 9.22. Disassembly of Traverse Deck

- 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.

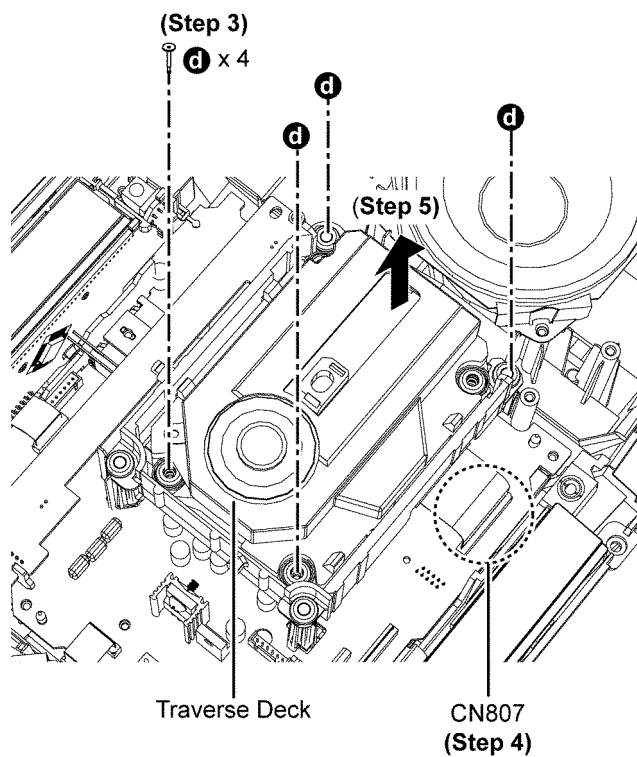
**Caution :** Keep springs in the safe place and place them back During assembly.



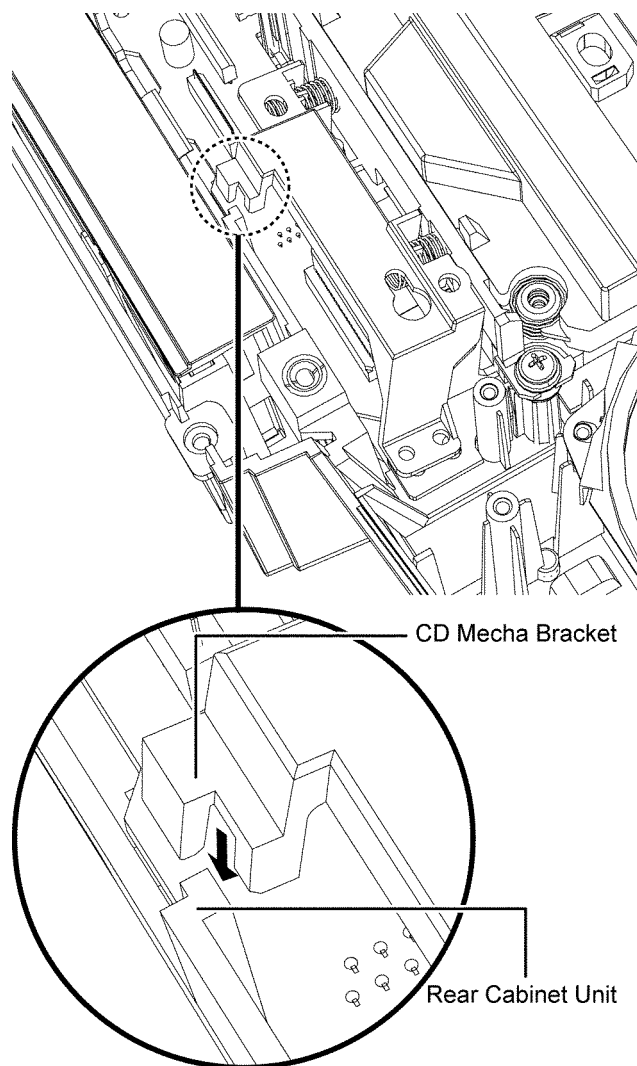
**Step 3 :** Remove 4 screws.

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

**Step 5 :** Remove Traverse Deck.



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

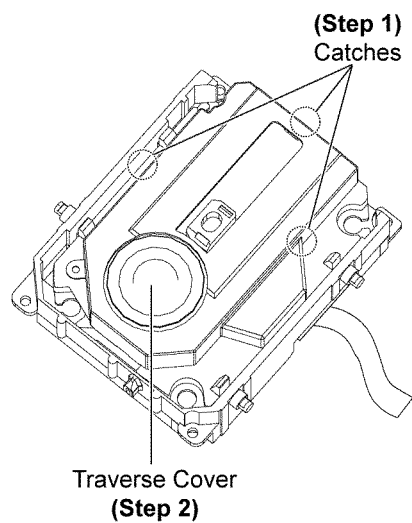


## 9.23. Disassembly of Traverse Cover

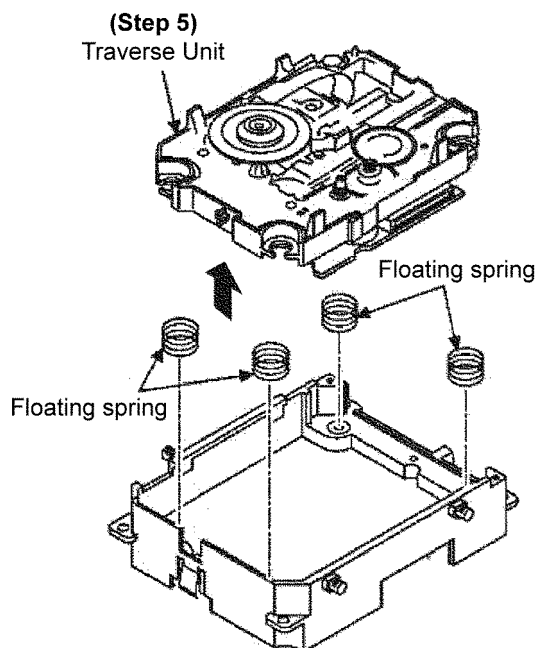
- Refer to "Disassembly of Traverse Deck"

**Step 1 :** Release 3 catches.

**Step 2 :** Remove the Traverse Cover.

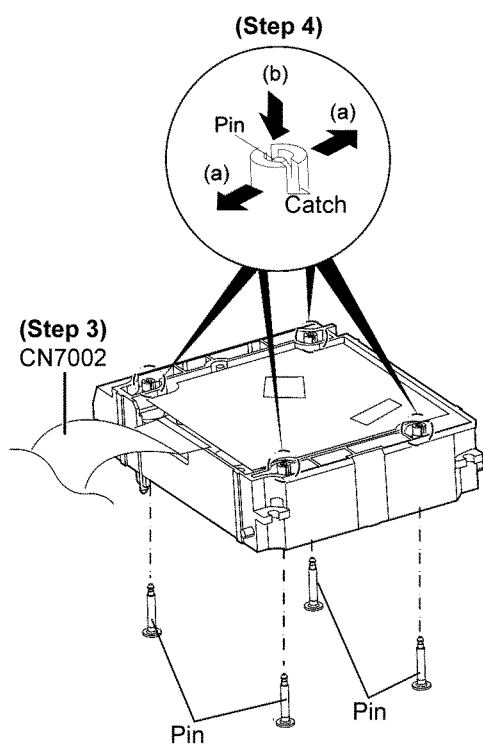


**Step 5 :** Lift up the traverse unit to remove it.



**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.

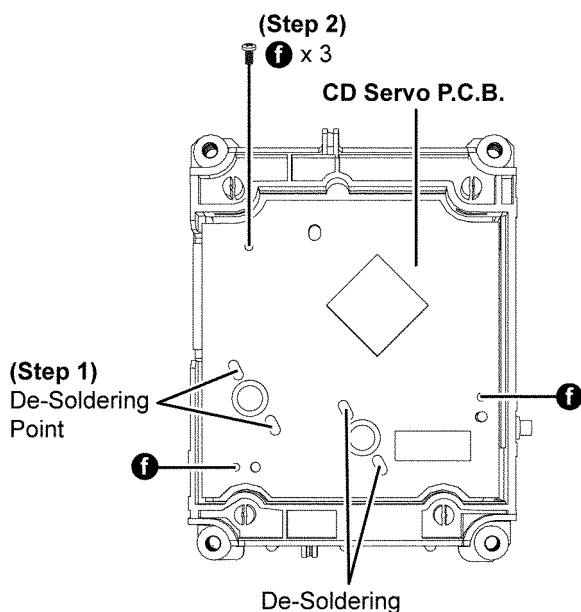


## 9.24. Disassembly of CD Servo P.C.B.

- Refer to "Disassembly of Traverse Deck"

**Step 1 :** Desolder the terminal.

**Step 2 :** Remove 3 screws.

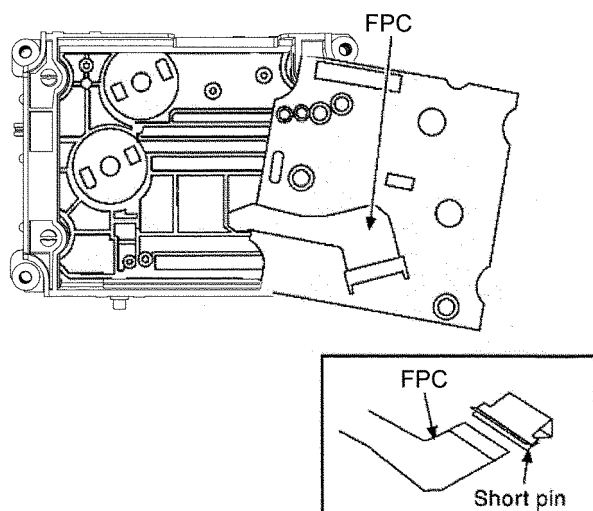


**Step 3 :** Flip the CD Servo P.C.B. over to one side.

**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"]



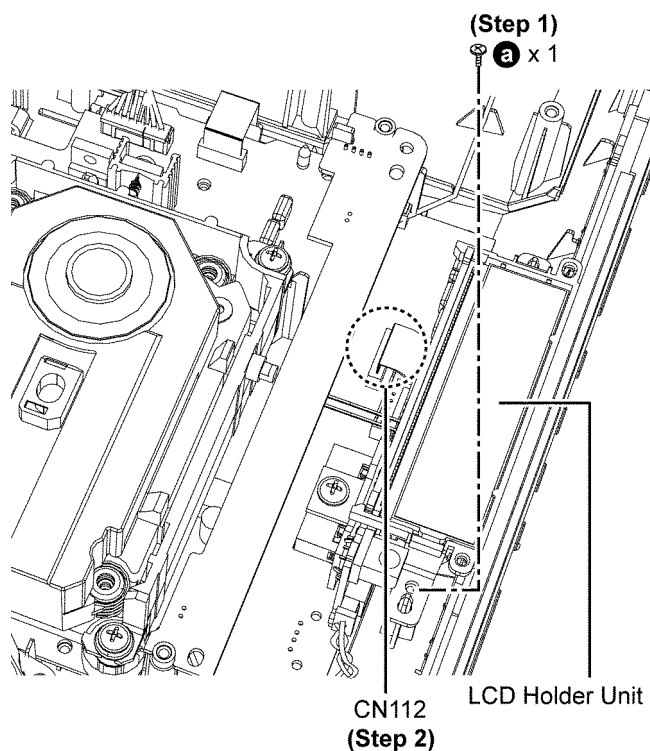
## 9.25. Disassembly of LCD Holder Unit and Panel P.C.B.

- 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

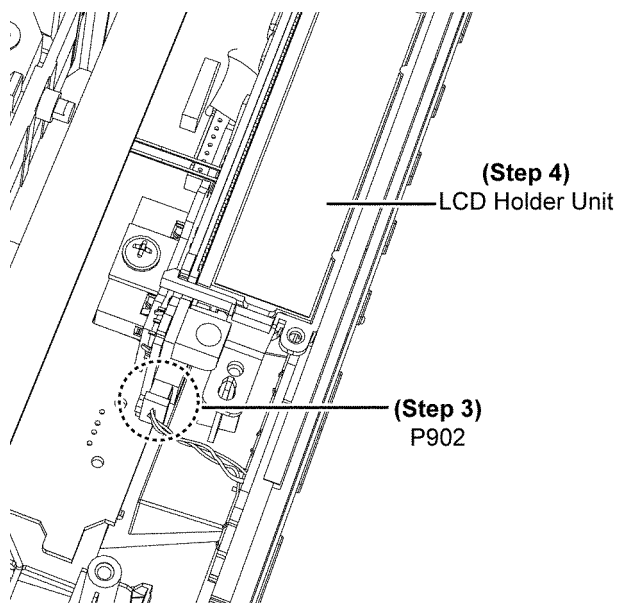
**Step 1 :** Remove 1 screw.

**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.

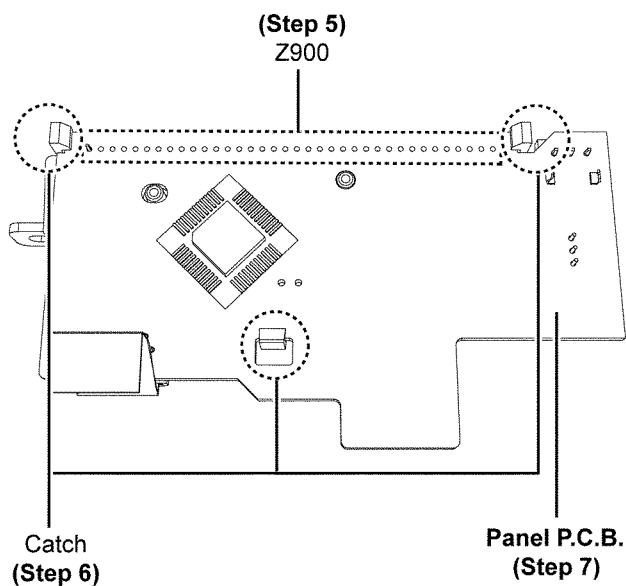


## 9.25.2. Disassembly of Panel P.C.B.

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

**Step 6 :** Release 3 catches.

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

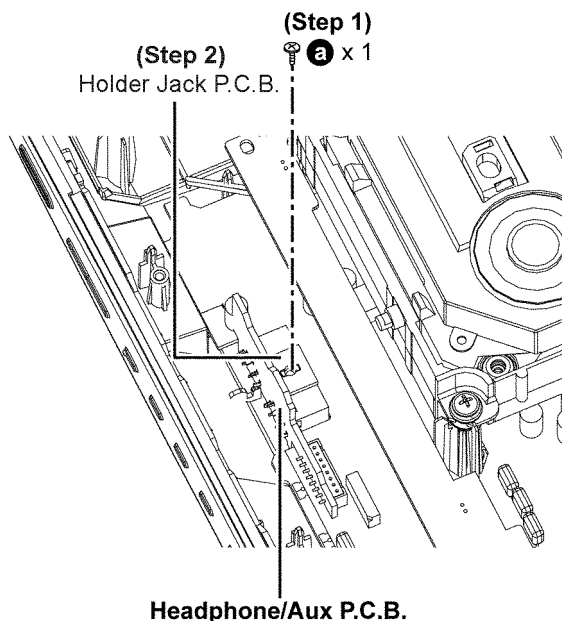


## 9.26. Disassembly of Headphone/ Aux P.C.B.

- 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.

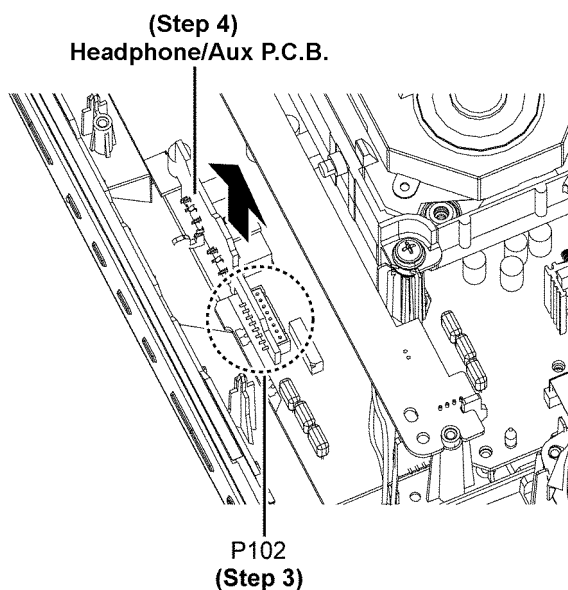
**Step 1 :** Remove 1 screw.

**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..



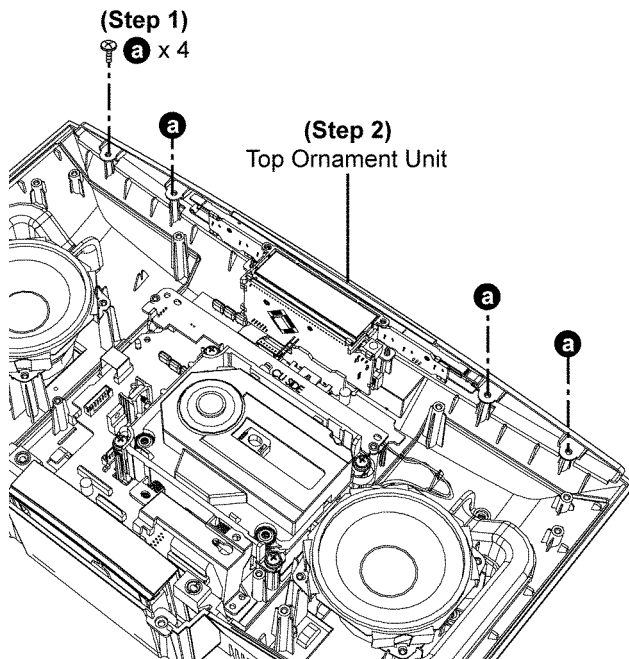
## 9.27. Disassembly of Top Ornament Unit and Panel Key P.C.B.

- 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.

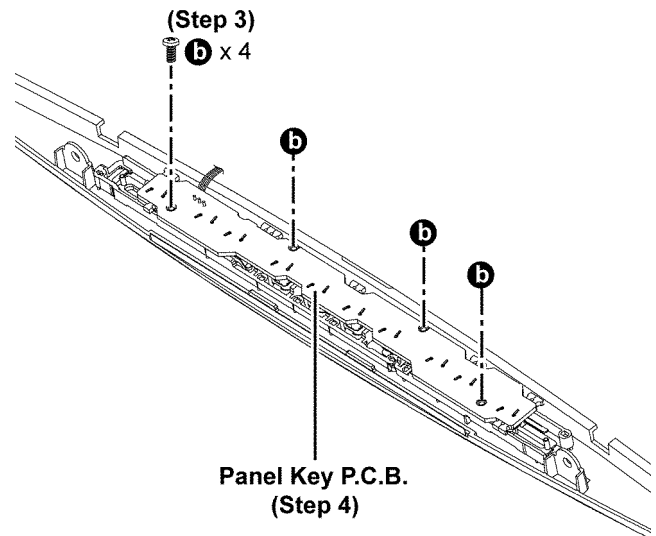
**Step 2 :** Remove Top Ornament Unit.



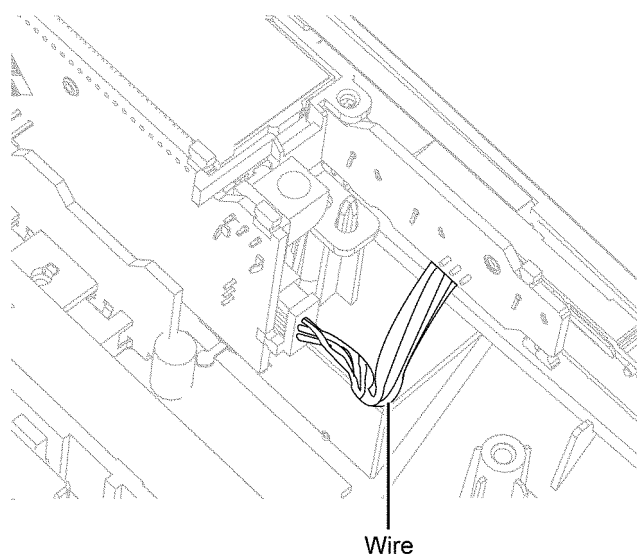
### 9.27.2. Disassembly of Panel Key P.C.B.

**Step 3 :** Remove 4 screw.

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



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

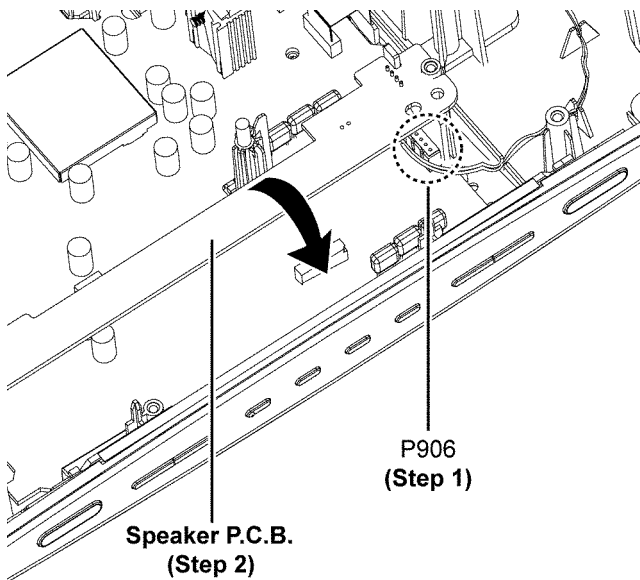


## 9.28. Disassembly of Main P.C.B.

- 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..

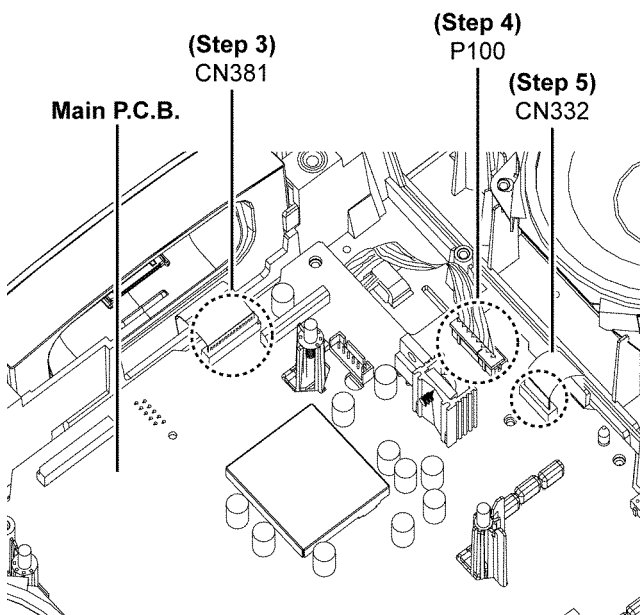
**Step 2 :** Flip over Speaker P.C.B. as arrow shown.



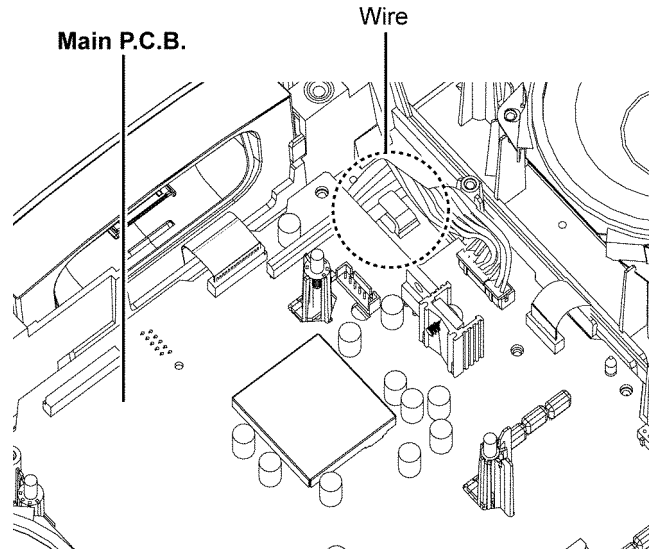
**Step 3 :** Detach 15P FFC at the connector (CN381) on Main P.C.B..

**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..

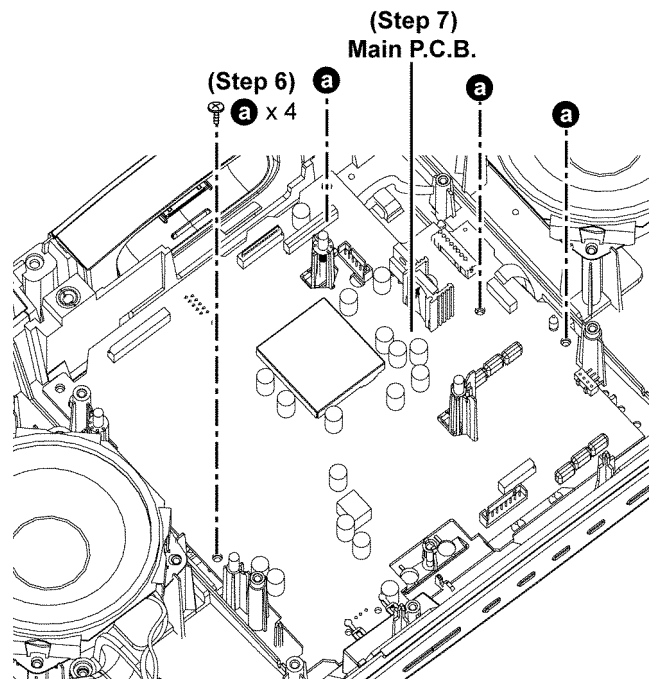


**Caution:** During assembly, ensure 8P wire dressed as diagram shown.

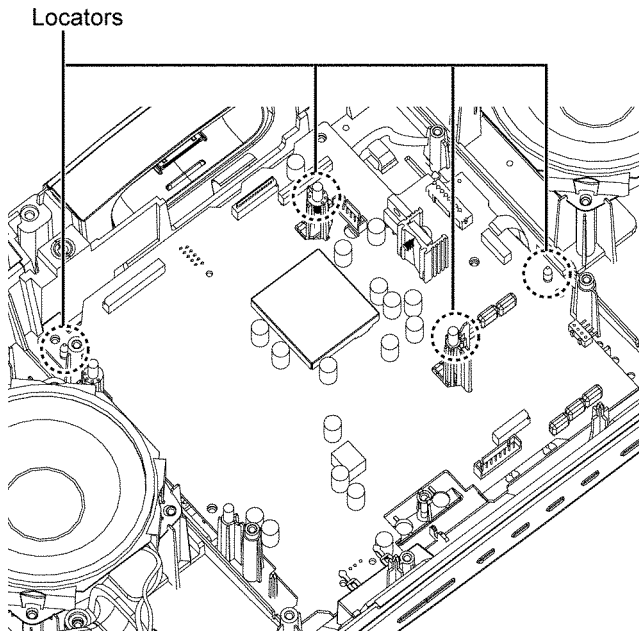


**Step 6 :** Remove 4 screws.

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



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



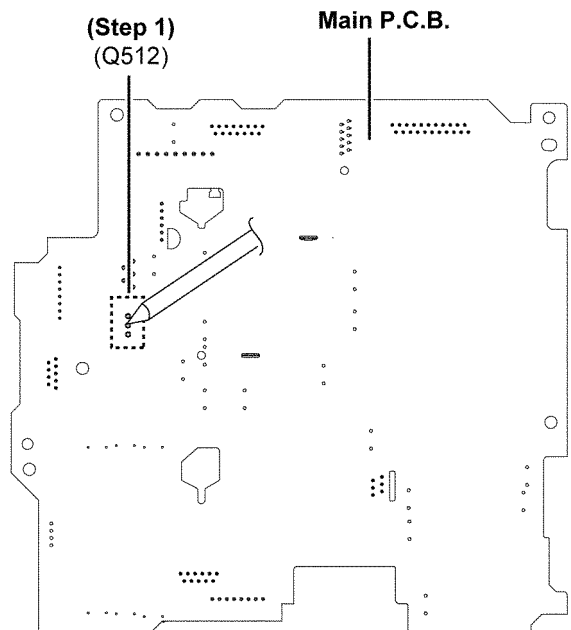
## 9.29. Replacement of Transistor (Q512)

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

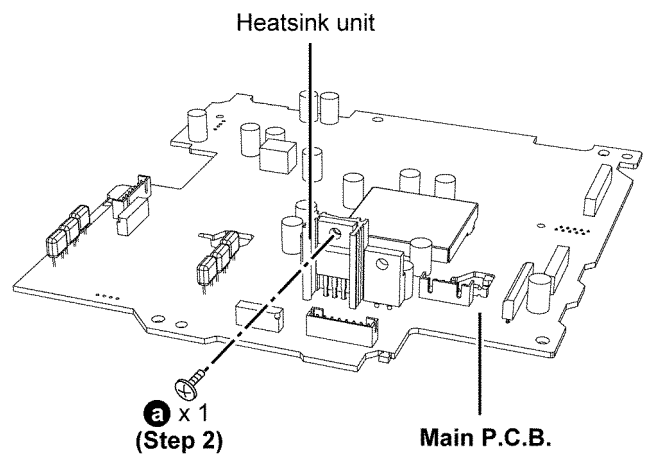
### 9.29.1. Disassembly of Transistor (Q512)

**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.

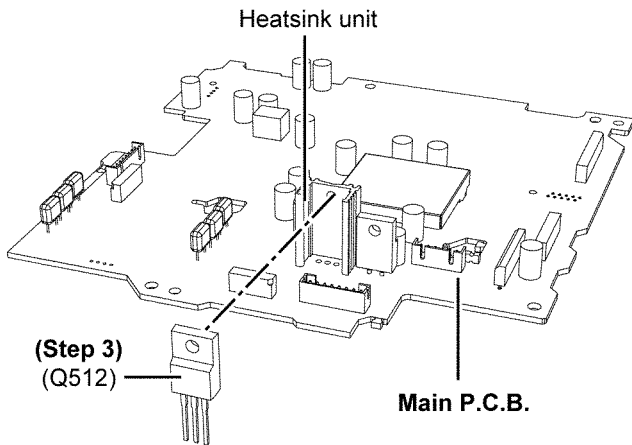
**Step 1 :** Desolder pins of the Transistor (Q512) on the solder side of Main P.C.B..



**Step 2 :** Remove 1 screw.



**Step 3 :** Remove the Transistor (Q512).



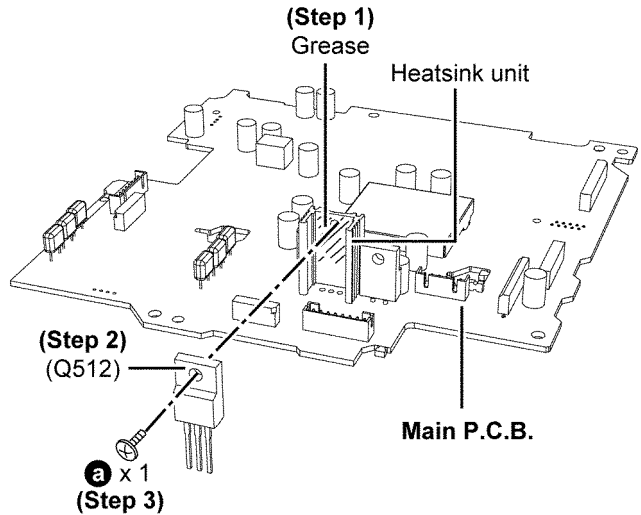
## 9.29.2. Assembly of Transistor (Q512)

**Step 1 :** Apply grease to the heatsink unit.

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

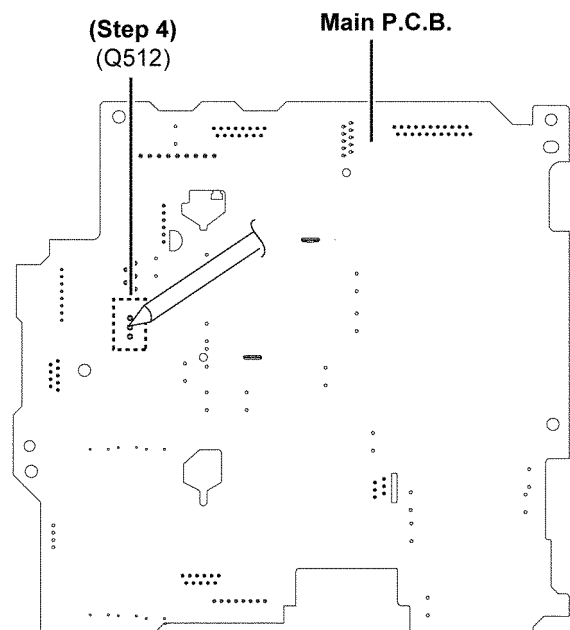
**Step 3 :** Fix the Transistor (Q512) onto the heatsink unit with 1 screws.

**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.

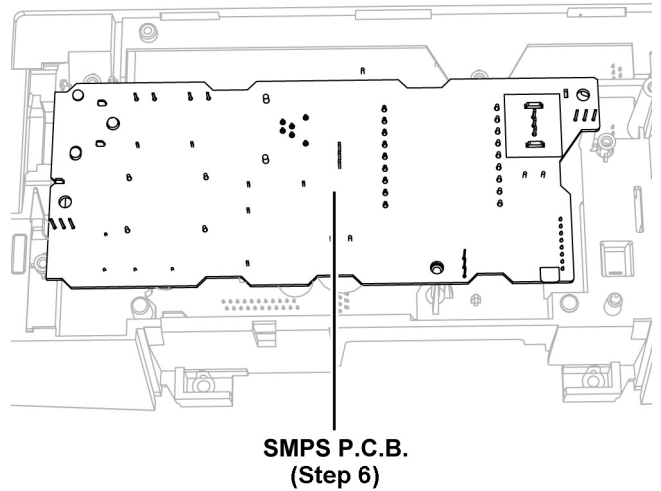
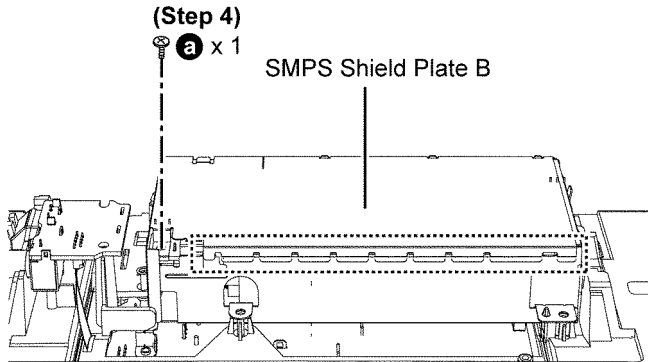
**Step 6 :** Check and repair SMPS P.C.B. according to the diagram shown..

**Step 1 :** Remove Stand Unit.

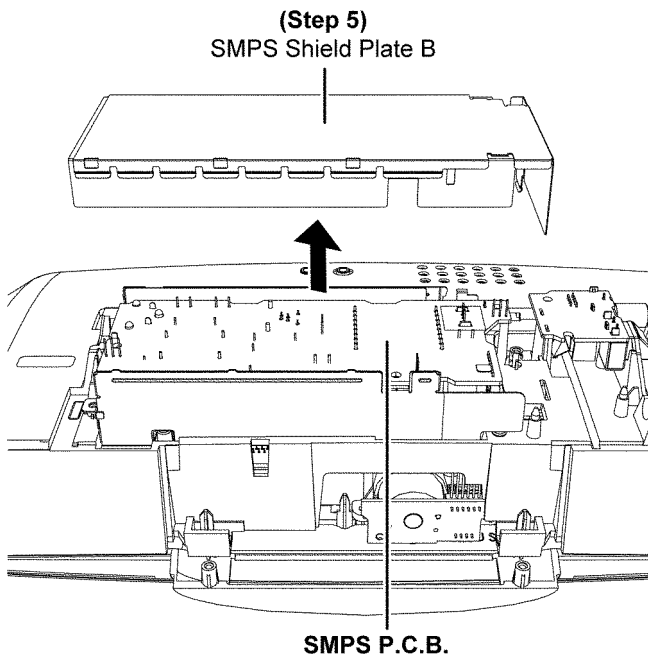
**Step 2 :** Remove iPod/iPhone P.C.B..

**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.

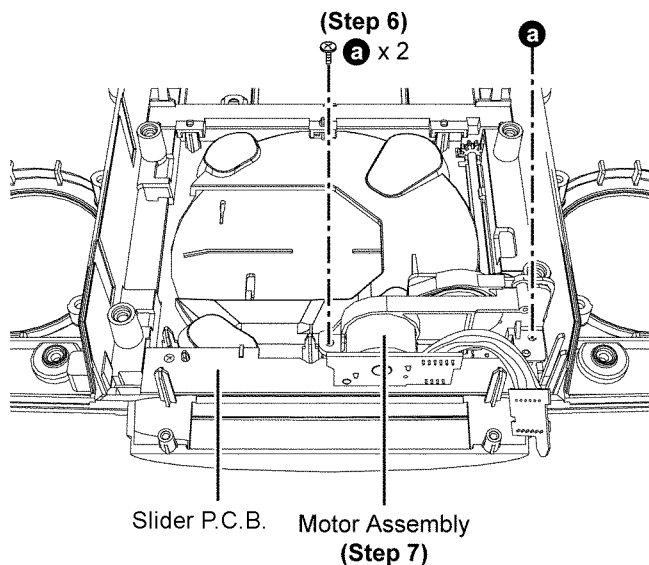
**Step 3 :** Detach Front Cabinet Unit.

**Step 4 :** Remove LCD Holder Unit.

**Step 5 :** Remove Top Ornament Unit.

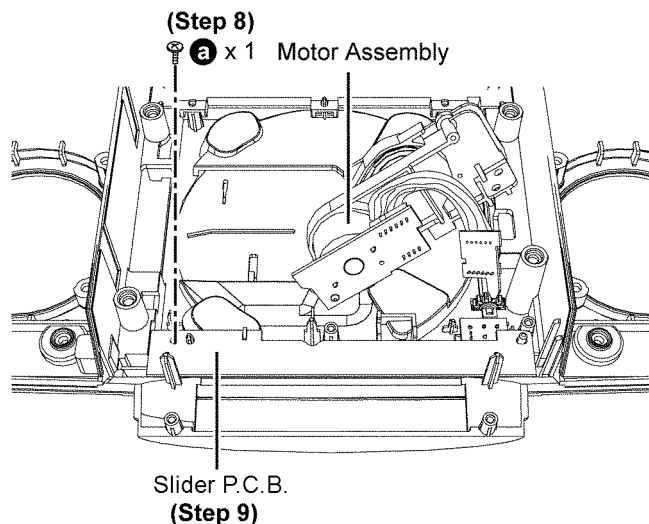
**Step 6 :** Remove 2 screws.

**Step 7 :** Lift up Motor Assembly.



**Step 8 :** Remove 1 screw.

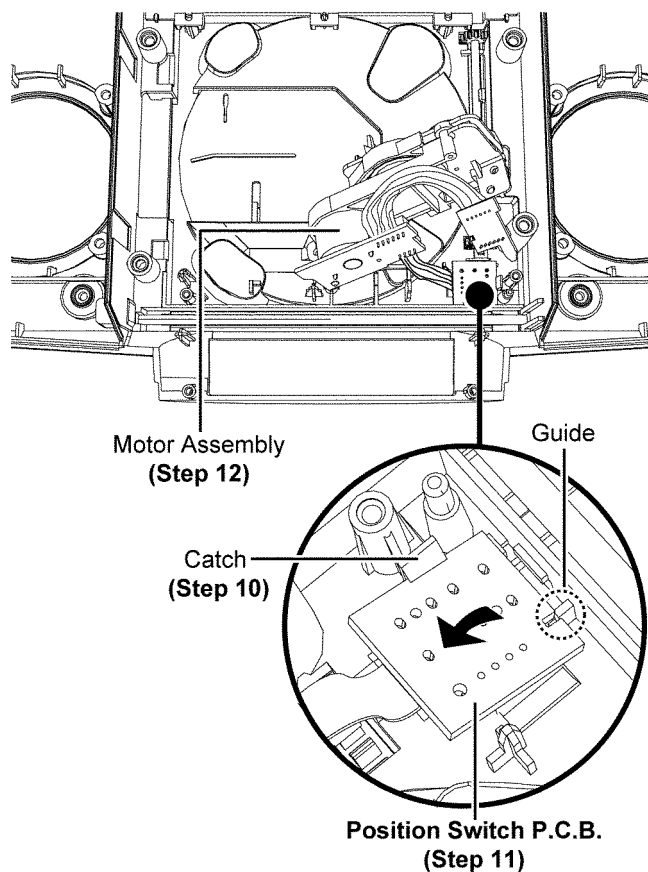
**Step 9 :** Remove Slider P.C.B..



**Step 10 :** Release 1 catch.

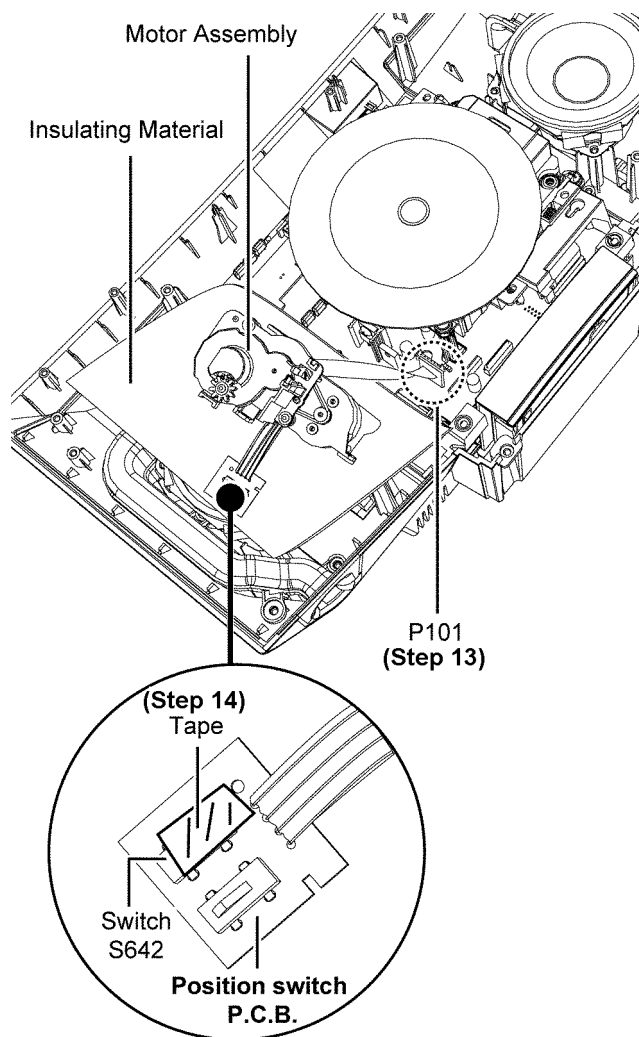
**Step 11 :** Remove Position Switch P.C.B. as arrow shown.

**Step 12 :** Remove Motor Assembly.



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

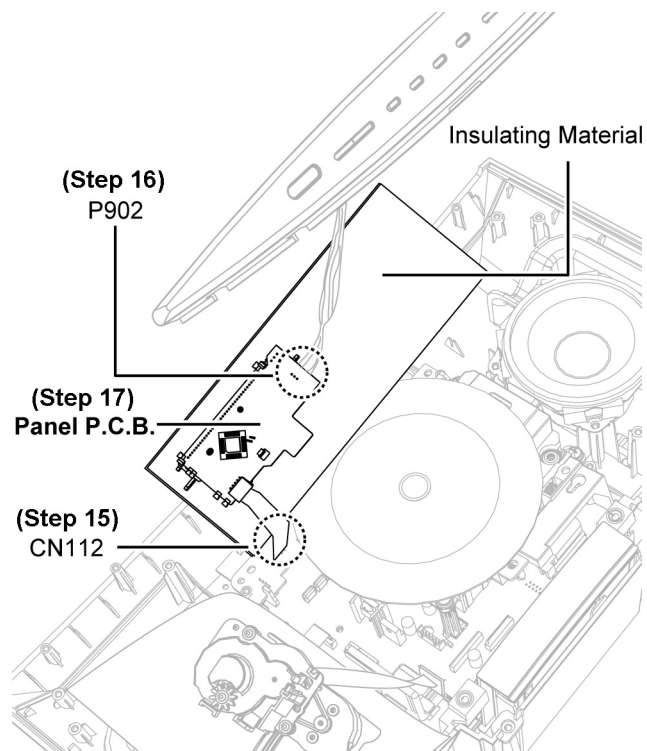
**Step 14 :** Use a tape to keep the close switch (S642) depressed.



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

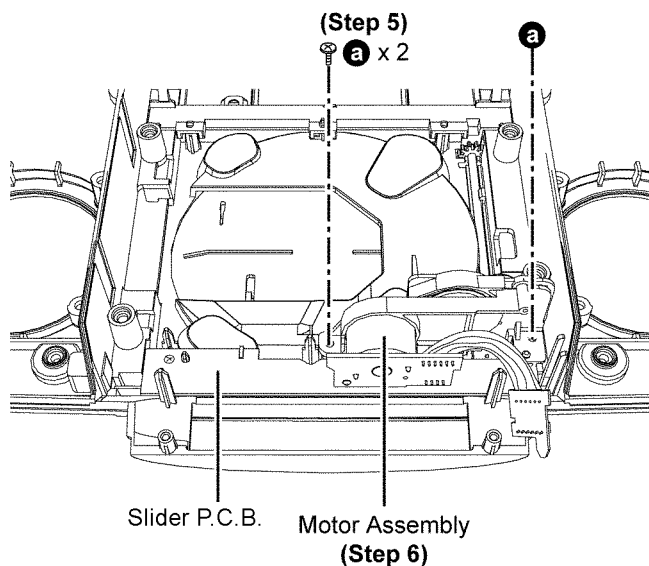
**Step 16 :** Connect 3P wire at the connector (P902) on Panel P.C.B..

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

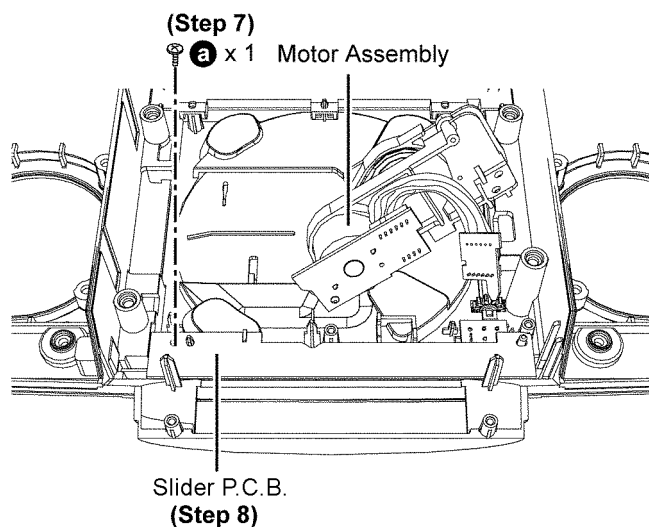


## 10.3. Checking & Repairing of CD Servo P.C.B.

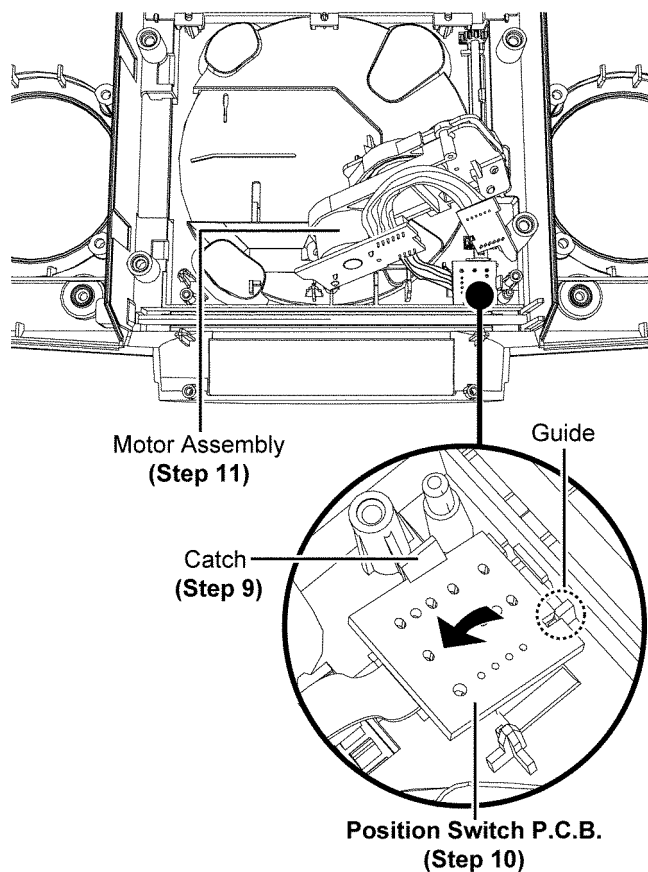
- Step 1 :** Remove Stand Unit.  
**Step 2 :** Remove Net Frame Unit.  
**Step 3 :** Detach Front Cabinet Unit.  
**Step 4 :** Remove Traverse Deck.  
**Step 5 :** Remove 2 screws.  
**Step 6 :** Lift up Motor Assembly.



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

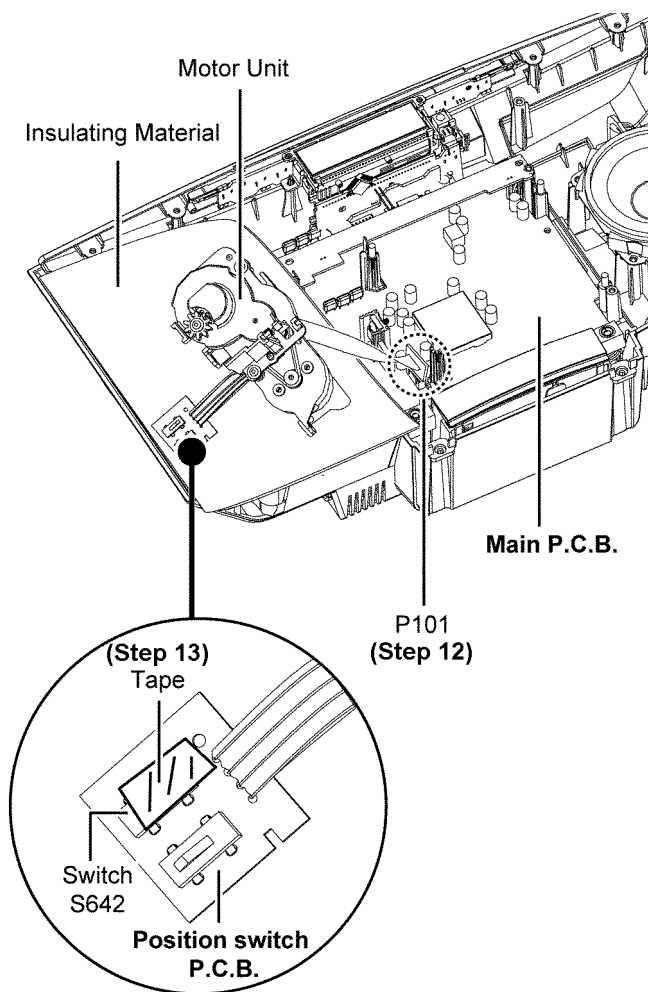


- Step 9 :** Release 1 catch.  
**Step 10 :** Remove Position Switch P.C.B. as arrow shown.  
**Step 11 :** Remove Motor Assembly.



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

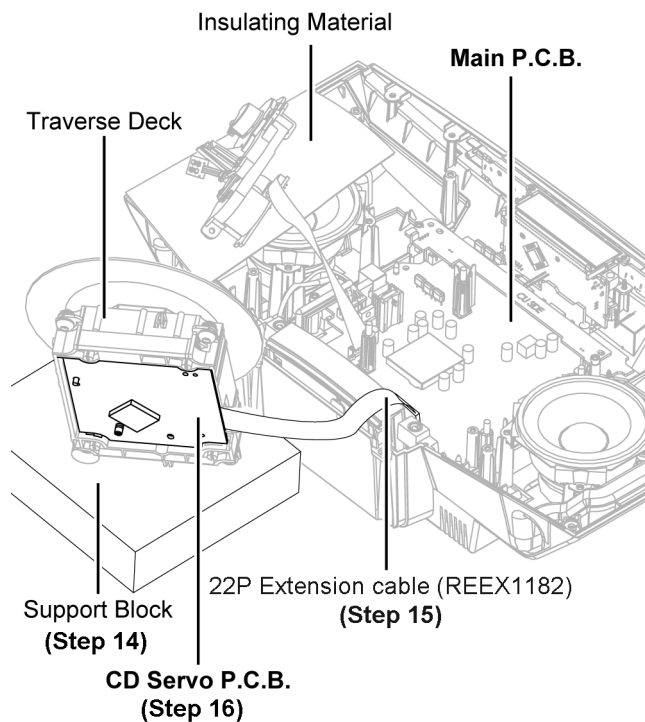
**Step 13 :** Use a tape to keep the close switch (S642) depressed.



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

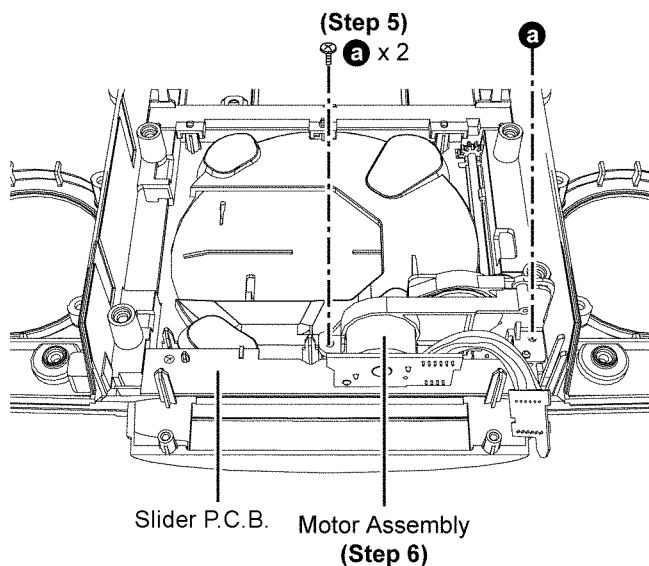
**Step 15 :** Connect 22P extension cable (REEX1182) from CN807 on the Main P.C.B. to CN7002 on the CD Servo P.C.B..

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

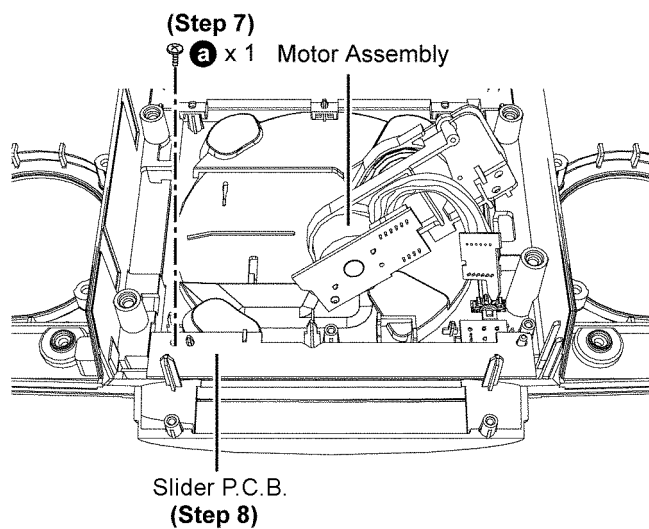


## 10.4. Checking & Repairing of Main P.C.B. (Side B)

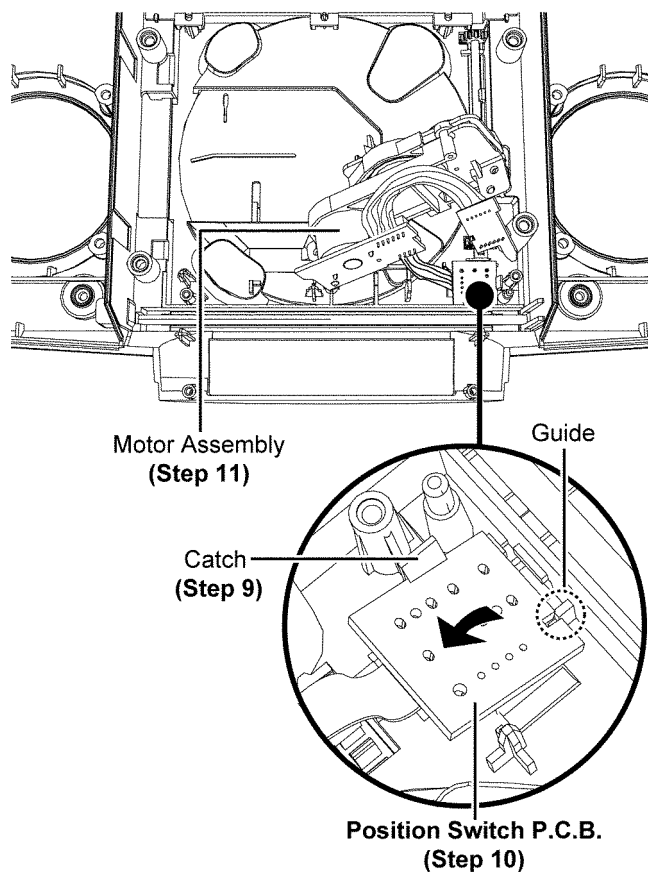
- Step 1 :** Remove Stand Unit.  
**Step 2 :** Remove Net Frame Unit.  
**Step 3 :** Detach Front Cabinet Unit.  
**Step 4 :** Remove Traverse Deck.  
**Step 5 :** Remove 2 screws.  
**Step 6 :** Lift up Motor Assembly.



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

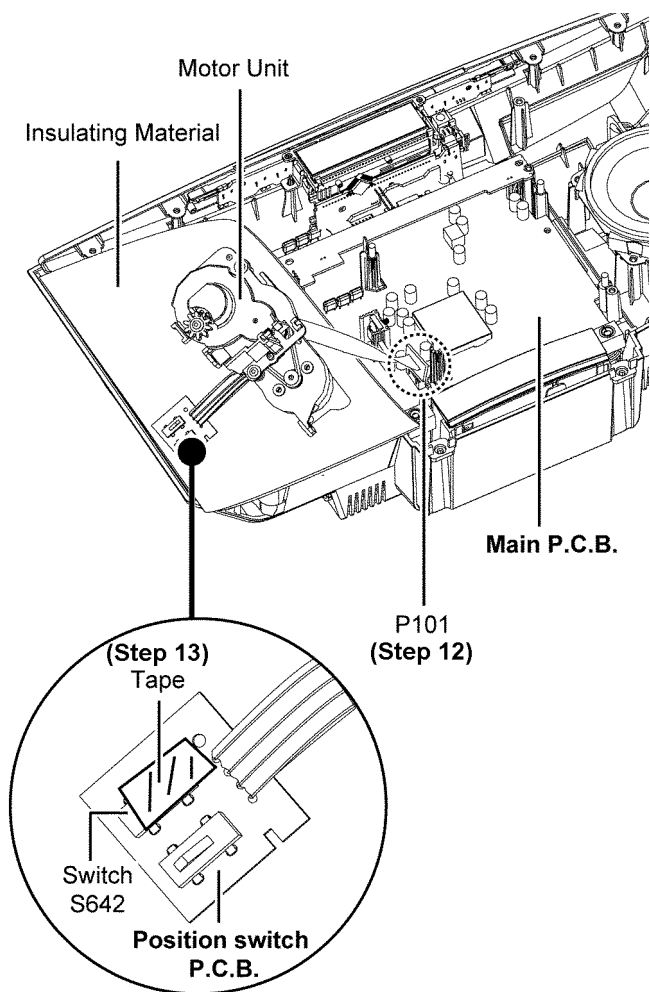


- Step 9 :** Release 1 catch.  
**Step 10 :** Remove Position Switch P.C.B. as arrow shown.  
**Step 11 :** Remove Motor Assembly.



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

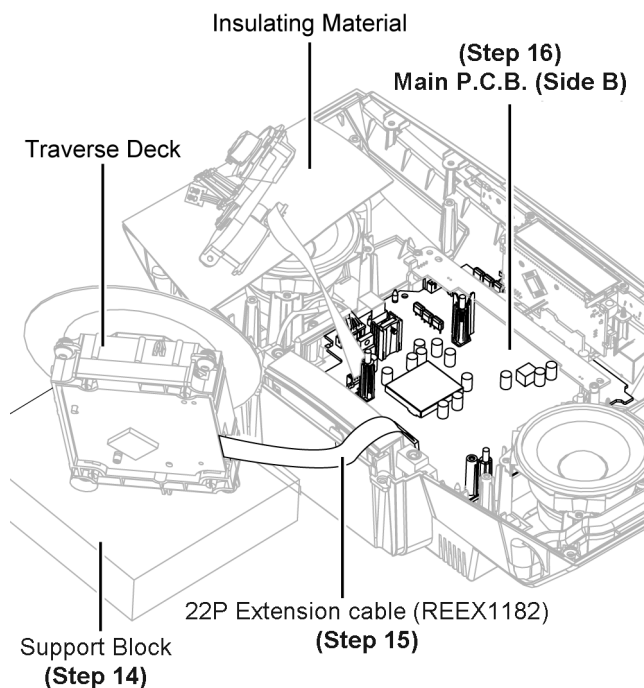
**Step 13 :** Use a tape to keep the close switch (S642) depressed.



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

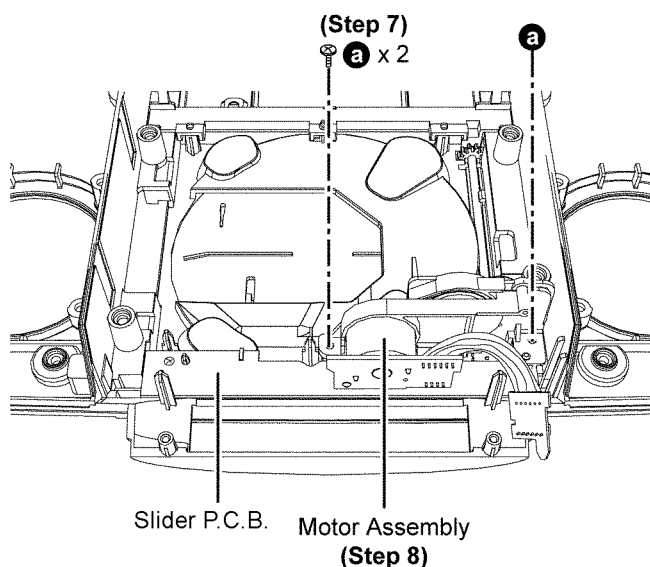
**Step 15 :** Connect 22P extension cable (REEX1182) from CN807 on the Main P.C.B. to CN7002 on the CD Servo P.C.B..

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

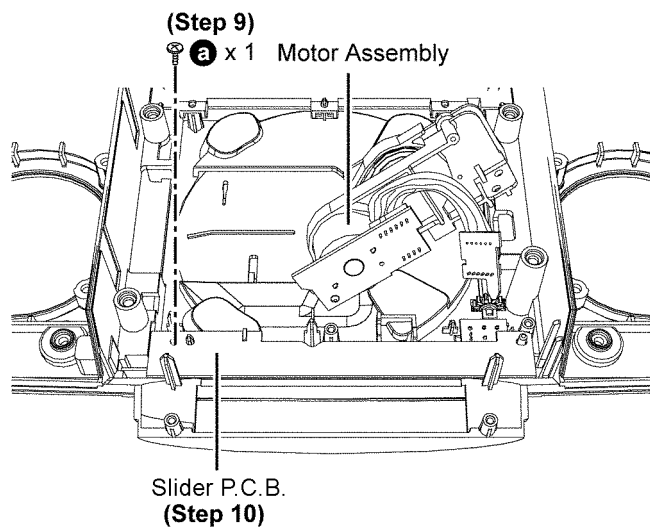


## 10.5. Checking & Repairing of Main P.C.B. (Side A)

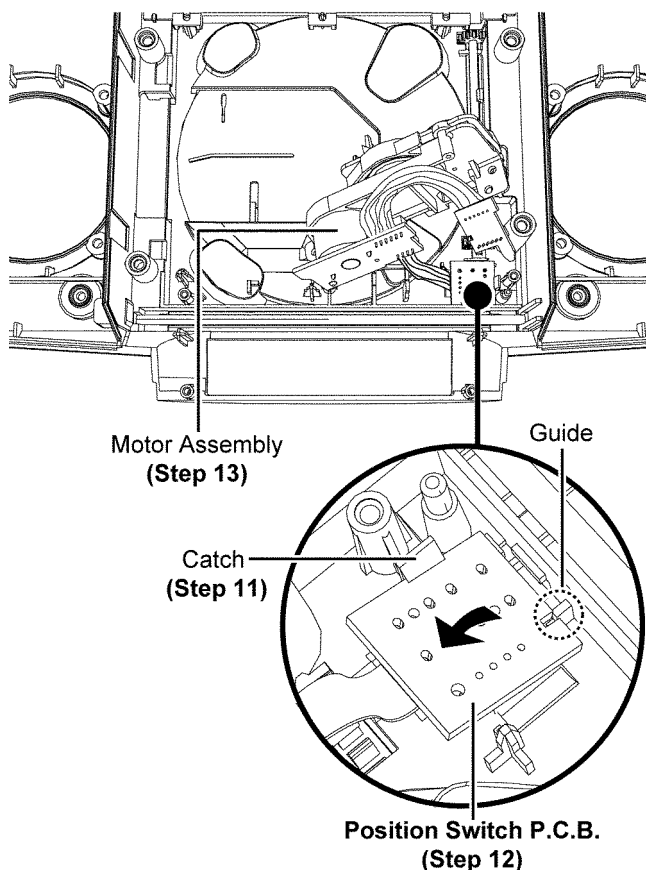
- Step 1 :** Remove Stand Unit.  
**Step 2 :** Remove Net Frame Unit.  
**Step 3 :** Detach Front Cabinet Unit.  
**Step 4 :** Remove Traverse Deck.  
**Step 5 :** Remove LCD Holder Unit.  
**Step 6 :** Remove Top Ornament Unit.  
**Step 7 :** Remove 2 screws.  
**Step 8 :** Lift up Motor Assembly.



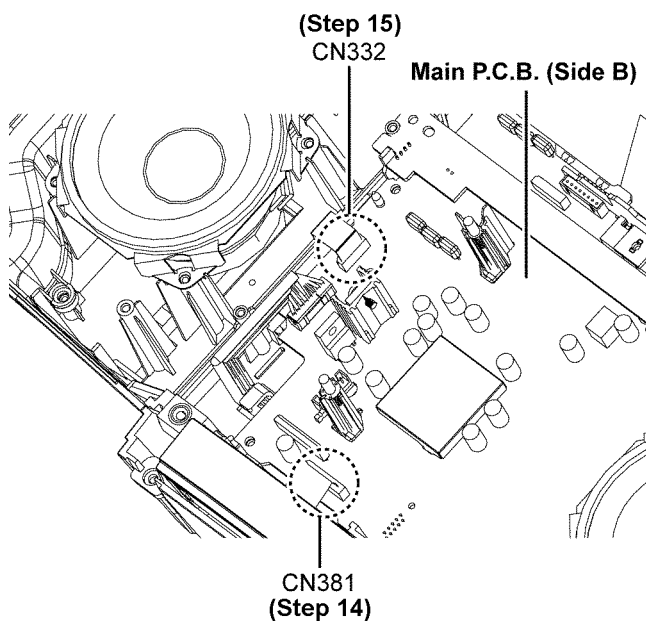
- Step 9 :** Remove 1 screw.  
**Step 10 :** Remove Slider P.C.B..



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

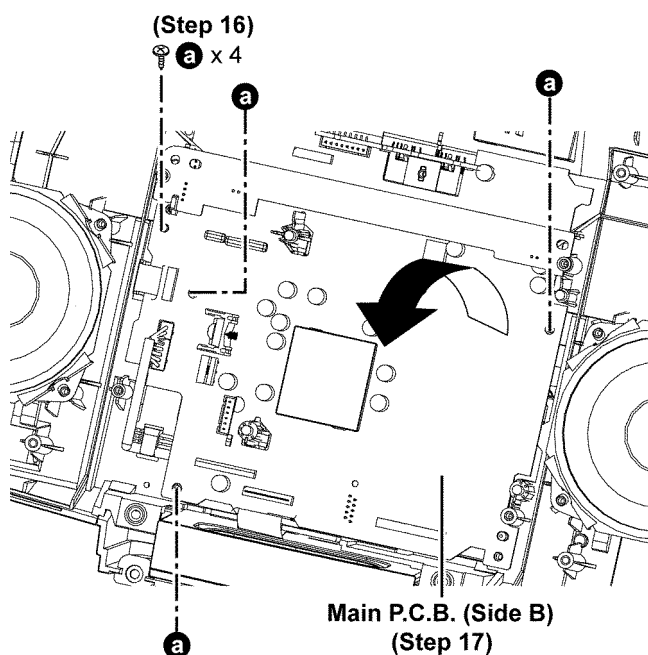


- Step 14 :** Detach 15P FFC at the connector (CN381) on Main P.C.B..  
**Step 15 :** Detach 9P FFC at the connector (CN332) on Main P.C.B..

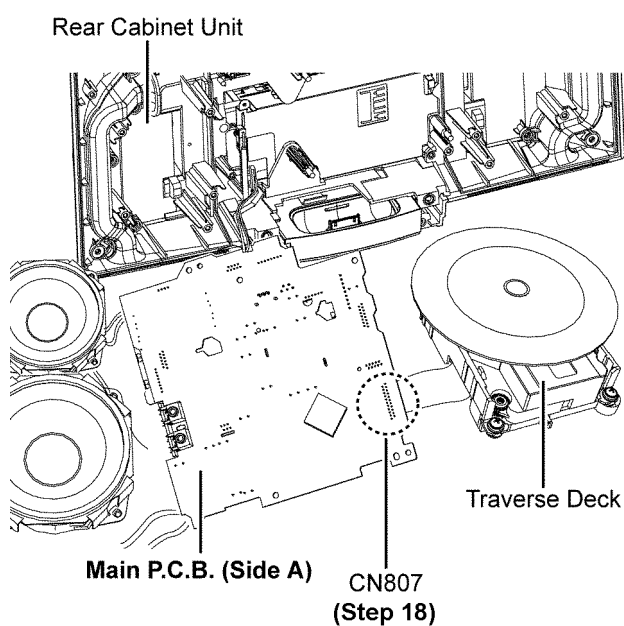


**Step 16 :** Remove 4 screws.

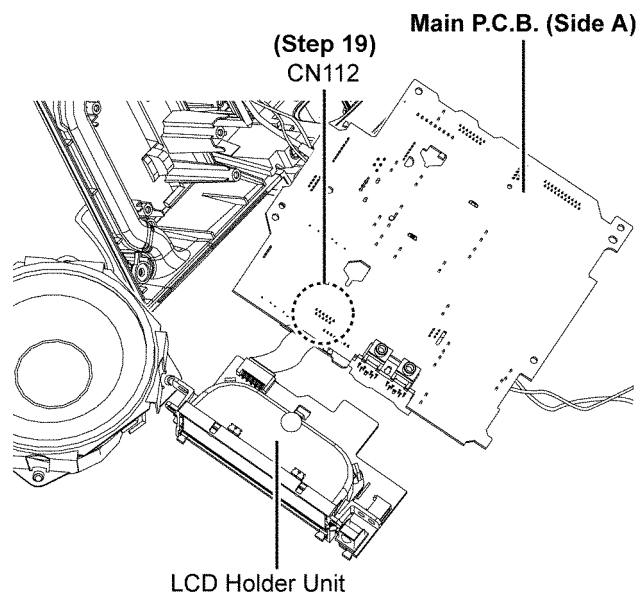
**Step 17 :** Flip Over Main P.C.B. & Speaker Unit as arrow shown.



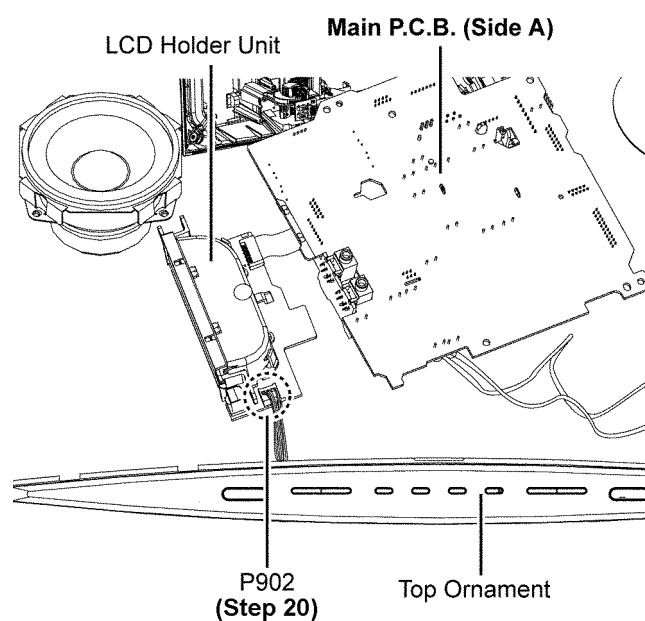
**Step 18 :** Connect 22P FFC at the connector (CN807) on Main P.C.B..



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

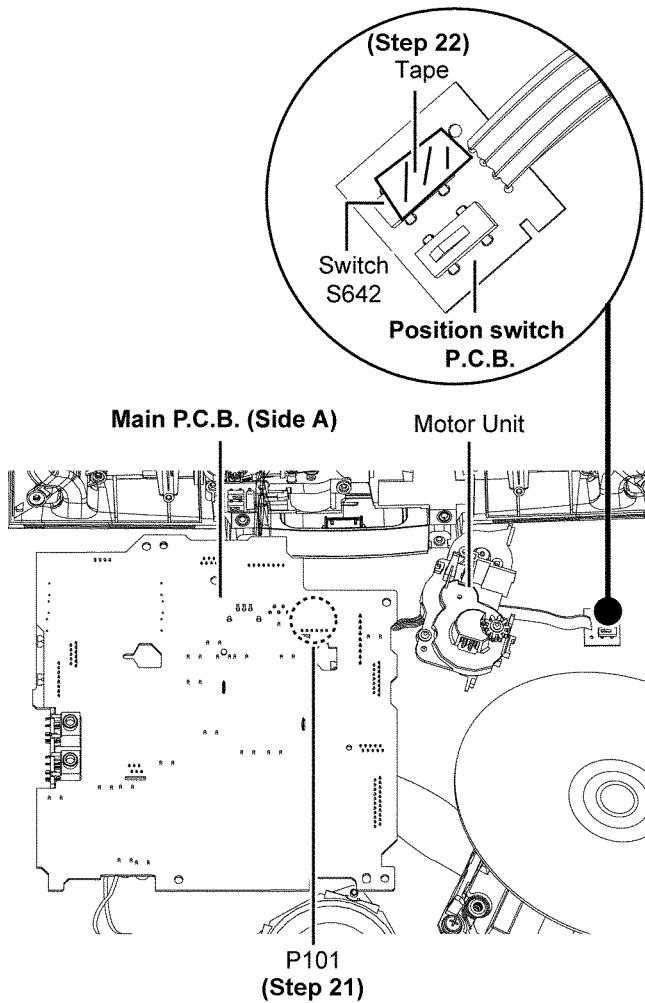


**Step 20 :** Connect 3P wire at the connector (P902) on Panel P.C.B..

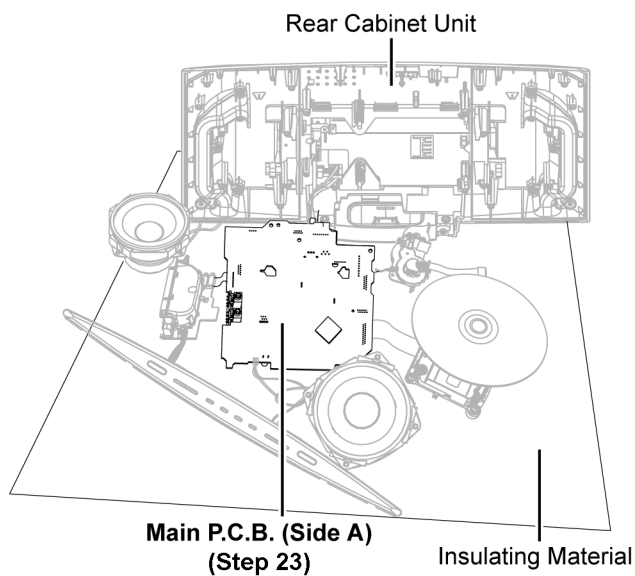


**Step 21 :** Connect 6P wire at the connector (P101) on Main P.C.B..

**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 | 3.4 | 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 | 3.4 | 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-HC20P/PC 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  | 0  |
| 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  | 0  |

| REF NO. | IC1 |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---------|-----|----|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| MODE    | 41  | 42 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CD PLAY | 0   | 0  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| STANDBY | 0   | 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 | 4.1   | 4.1 | 4.1 | 0 | 4.1 | 4.1 | 4.1 | 6.9 |  |  |  |  |  |  |  |  |  |  |  |  |
| STANDBY | 4.1   | 4.1 | 4.1 | 0 | 4.1 | 4.1 | 4.1 | 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-HC20P/PC 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  | 1.7 | 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  | 1.7 | 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   | 2.5  | 0   | 0    | 3.3 | 0   | 3.3 |
| 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-HC20P/PC 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 | 2.5 |  | 0.1   | 2.0 | 0.4 |  |
| STANDBY | 9.0  | 7.6 | 8.3 |  | 0    | 3.3 | 0 |  | 9.0  | 9.0 | 0 |  | 3.3  | 3.3 | 2.5 |  | 0     | 2.8 | 0.6 |  |

| REF NO. | QR1 |     |   |  | QR2 |     |   |  | QR4 |     |   |  | QR5 |     |   |  | QR101 |     |   |  |
|---------|-----|-----|---|--|-----|-----|---|--|-----|-----|---|--|-----|-----|---|--|-------|-----|---|--|
| MODE    | E   | C   | B |  | E   | C   | B |  | E   | C   | B |  | E   | C   | B |  | E     | C   | B |  |
| CD PLAY | 0   | 4.7 | 0 |  | 0   | 0.7 | 0 |  | 0   | 5.6 | 0 |  | 0   | 5.6 | 0 |  | 2.0   | 1.9 | 0 |  |
| STANDBY | 0   | 4.7 | 0 |  | 0   | 0.7 | 0 |  | 0   | 5.6 | 0 |  | 0   | 5.6 | 0 |  | 2.0   | 1.9 | 0 |  |

| REF NO. | QR384 |     |   |  | QR804 |     |     |  | QR805 |     |   |  | QR806 |     |   |  | QR807 |   |     |  |
|---------|-------|-----|---|--|-------|-----|-----|--|-------|-----|---|--|-------|-----|---|--|-------|---|-----|--|
| MODE    | E     | C   | B |  | E     | C   | B   |  | E     | C   | B |  | E     | C   | B |  | E     | C | B   |  |
| CD PLAY | 0     | 1.4 | 0 |  | 3.3   | 0   | 3.3 |  | 0     | 1.2 | 0 |  | 0     | 1.3 | 0 |  | 0     | 0 | 3.0 |  |
| STANDBY | 0     | 1.4 | 0 |  | 3.3   | 3.3 | 0.3 |  | 0     | 1.2 | 0 |  | 0     | 1.3 | 0 |  | 0     | 0 | 3.0 |  |

| REF NO. | QR808 |   |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---------|-------|---|-----|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| MODE    | E     | C | B   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CD PLAY | 0     | 0 | 3.3 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| STANDBY | 0     | 0 | 3.3 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

**SC-HC20P/PC 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 | 1.2 | 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 | 0.9 | 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-HC20P/PC PANEL 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  |

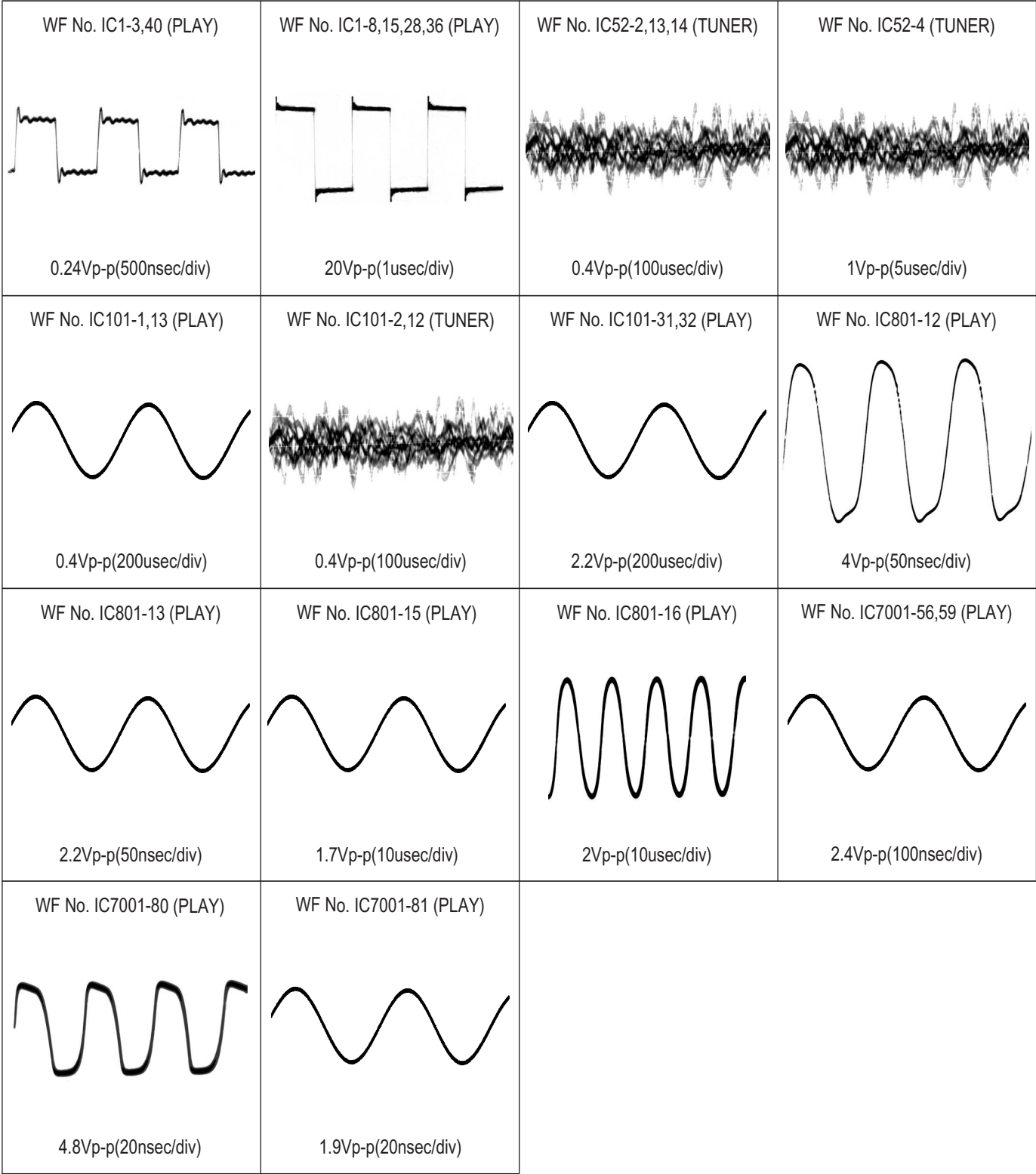
**SC-HC20P/PC TUNER P.C.B.**

## 11.7. SMPS P.C.B.

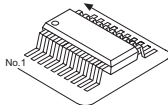
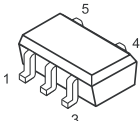
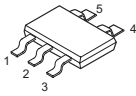
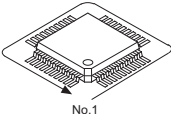
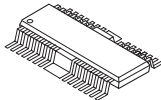
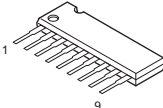
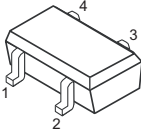
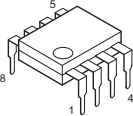
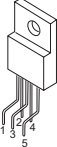
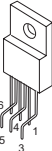
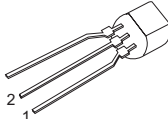
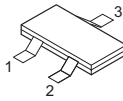
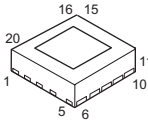
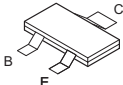
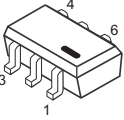
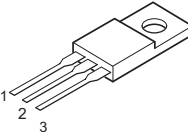
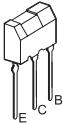
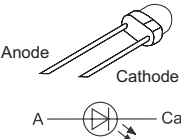
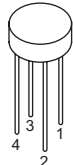
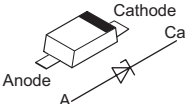
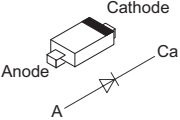
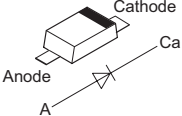
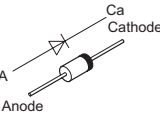
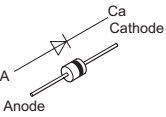
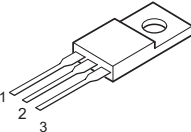
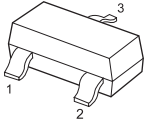
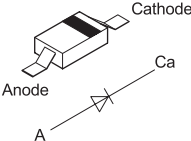
| REF NO. | IC701 |     |     |   |      |   |       |  |  |  |  |  |  |  |  |  |  |  |  |
|---------|-------|-----|-----|---|------|---|-------|--|--|--|--|--|--|--|--|--|--|--|--|
| MODE    | 1     | 2   | 3   |   |      |   |       |  |  |  |  |  |  |  |  |  |  |  |  |
| CD PLAY | 10.1  | 0   | 2.5 |   |      |   |       |  |  |  |  |  |  |  |  |  |  |  |  |
| 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 |  |  |  |  |  |  |  |  |  |  |  |  |
| REF NO. | IC705 |     |     |   |      |   |       |  |  |  |  |  |  |  |  |  |  |  |  |
| MODE    | 1     | 2   | 3   |   |      |   |       |  |  |  |  |  |  |  |  |  |  |  |  |
| CD PLAY | 0     | 7.1 | 3.3 |   |      |   |       |  |  |  |  |  |  |  |  |  |  |  |  |
| STANDBY | 0     | 7.0 | 3.3 |   |      |   |       |  |  |  |  |  |  |  |  |  |  |  |  |

SC-HC20P/PC SMPS P.C.B.

11.8. Waveform Chart

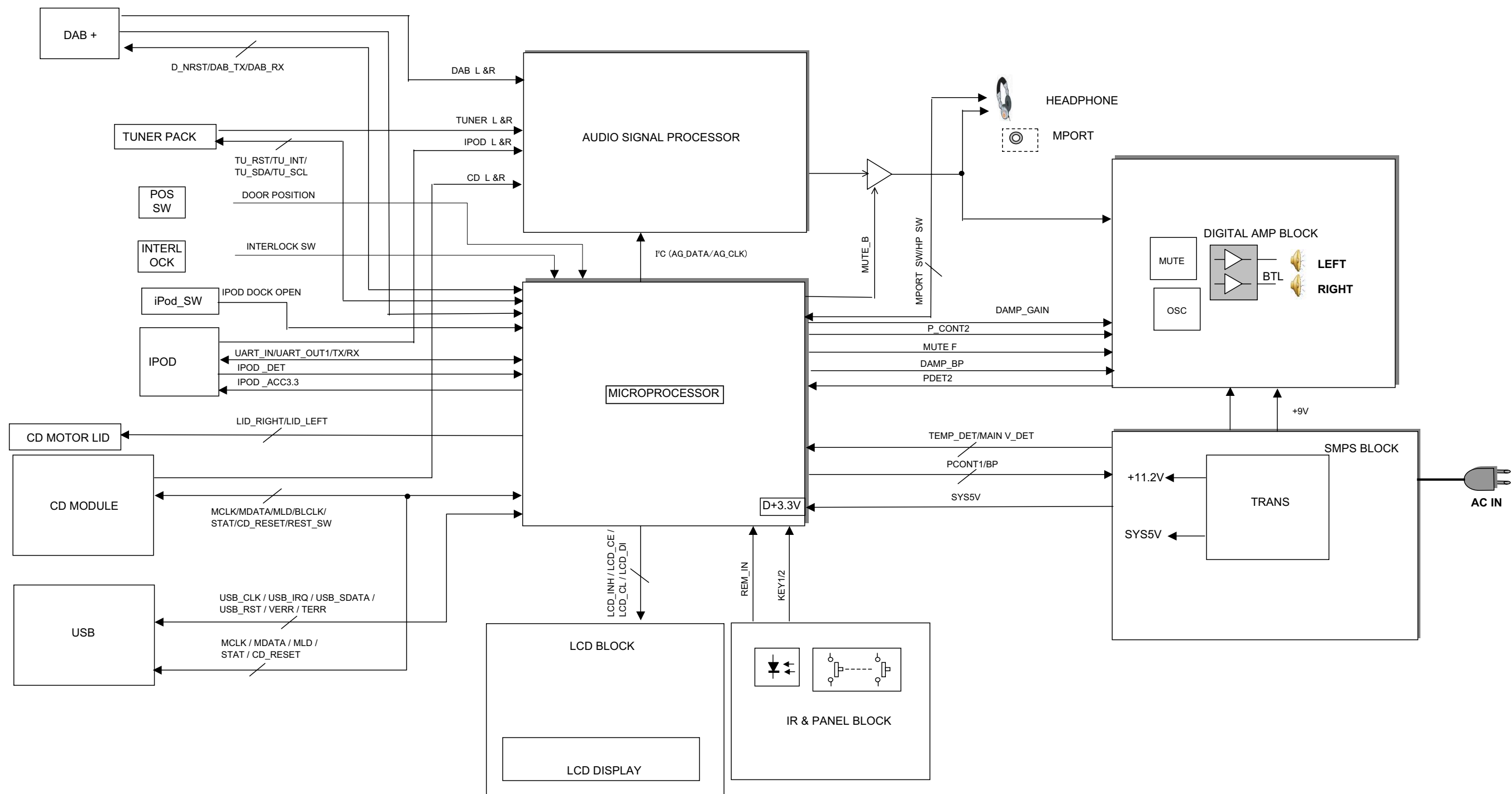


## 12 Illustration of IC's, Transistors and Diodes

|                                                                                     |                                                                                     |                                                                                     |                                                                                                              |                                                                                       |                                                                                      |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| C1BB00001151 (17P)<br>C1AB00003282 (42P)<br>C0ABBB000179 (8P)                       | C0DBFY00049                                                                         | C0CBCBC00090                                                                        | C0HBA0000268 (48P)<br>MFI341S2164 (15P)<br>MN6627954AMA (100P)<br>RFKWMHC10EB (100P)                         | BA5948FPE2 (28P)                                                                      |                                                                                      |
|    |    |    |                            |    |                                                                                      |
| C0GAE0000007                                                                        | C0EBE0000434                                                                        | C3EBFY000006<br>C0ABBB000216                                                        | C0DAEJG00001                                                                                                 | MIP2G40MDSLJ                                                                          | C0DAEMZ00001                                                                         |
|    |    |    |                             |    |   |
| C0EBM0000024                                                                        | VUEALLPT031                                                                         | B1ABCF000176<br>B1GDCFJJ0044                                                        | B1ADCF000001<br>B1GBCFLL0037<br>B1GBCFJN0033<br>B1ADCE000012<br>B1GBCFJJ0051<br>B1GDCFFG0026<br>B1ABDF000026 | B1GFGCAA0001                                                                          | B1BCCG000023                                                                         |
|    |    |    |                            |    |   |
| B1BAAJ000003                                                                        | B3AEA0000129                                                                        | B0EBKR000067                                                                        | B0BC7R5A0266<br>MAZ8056GML<br>B0BC3R0A0262<br>B0BC6R100010                                                   | B0HCMM000019                                                                          | MA2J7290GL<br>B0ACCK000012                                                           |
|   |   |   |                           |   |  |
| B0EAKU000001<br>B0EAKM000117<br>B0HAJM000005                                        | B0JAMF000011                                                                        | B0ABSM000008                                                                        | B0ADEJ000041                                                                                                 | B0ACCK000005                                                                          |                                                                                      |
|  |  |  |                          |  |                                                                                      |

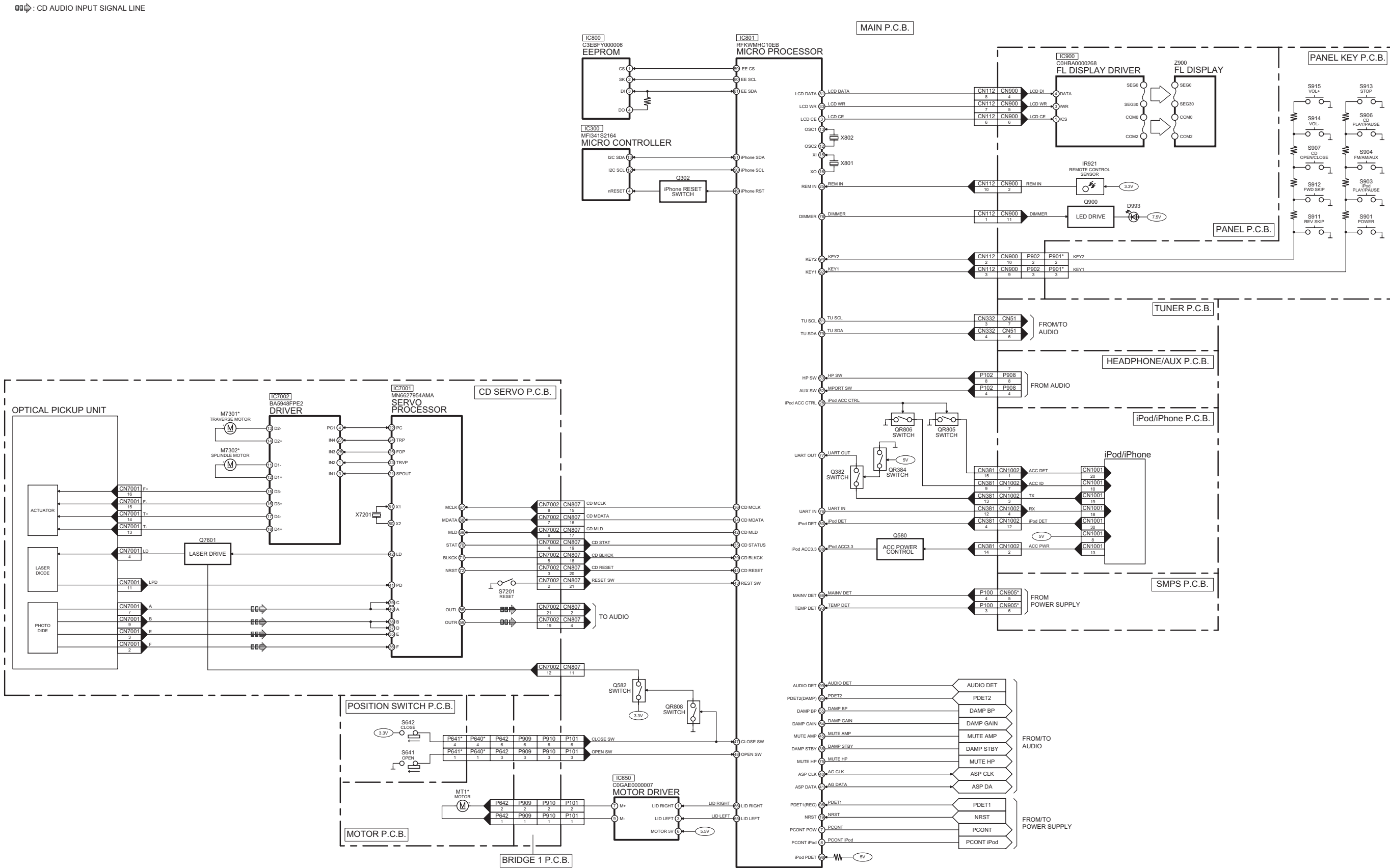


# 13 Overall Simplified Block

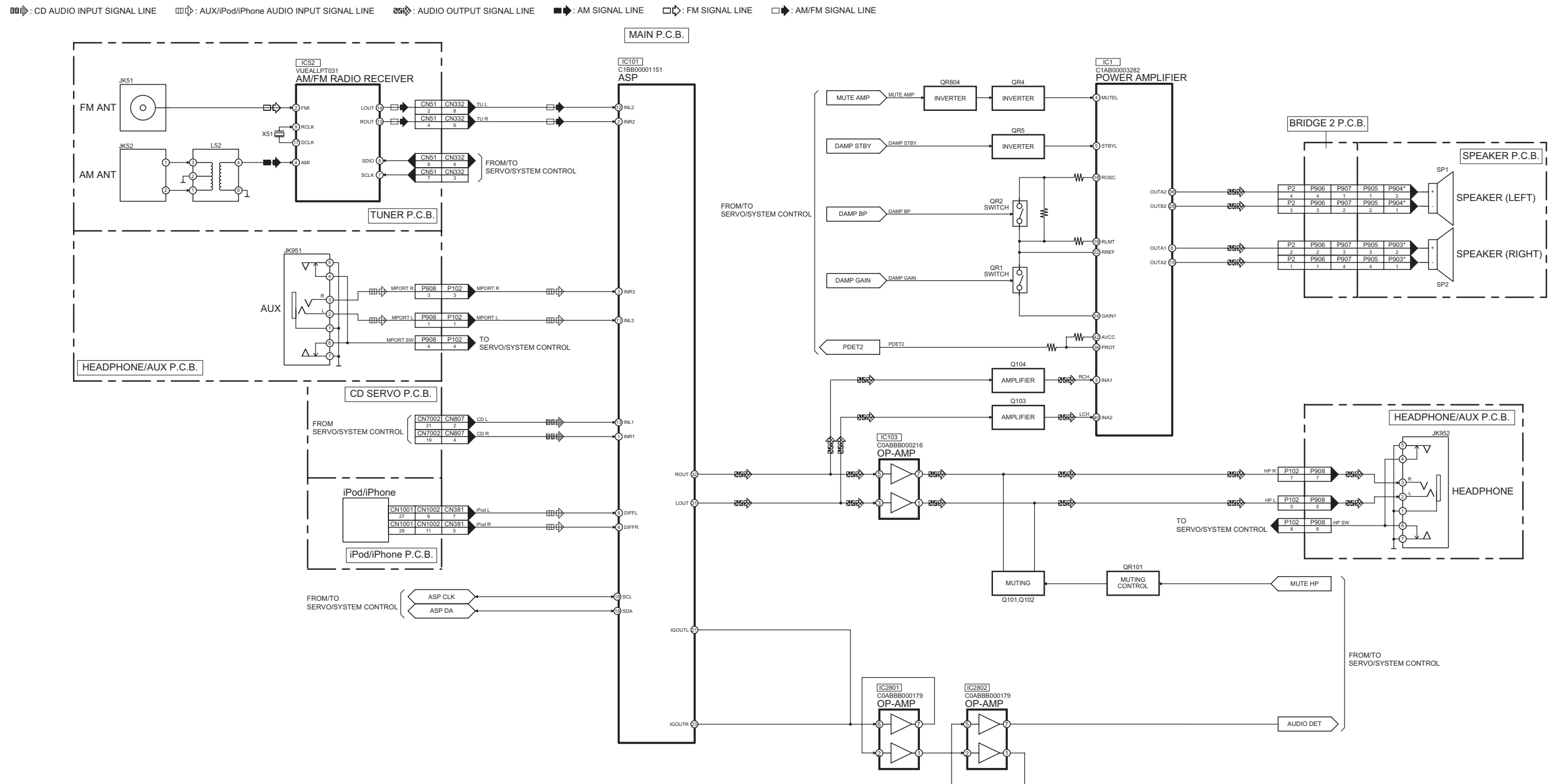


14 Block Diagram

14.1. SERVO/SYSTEM CONTROL BLOCK DIAGRAM

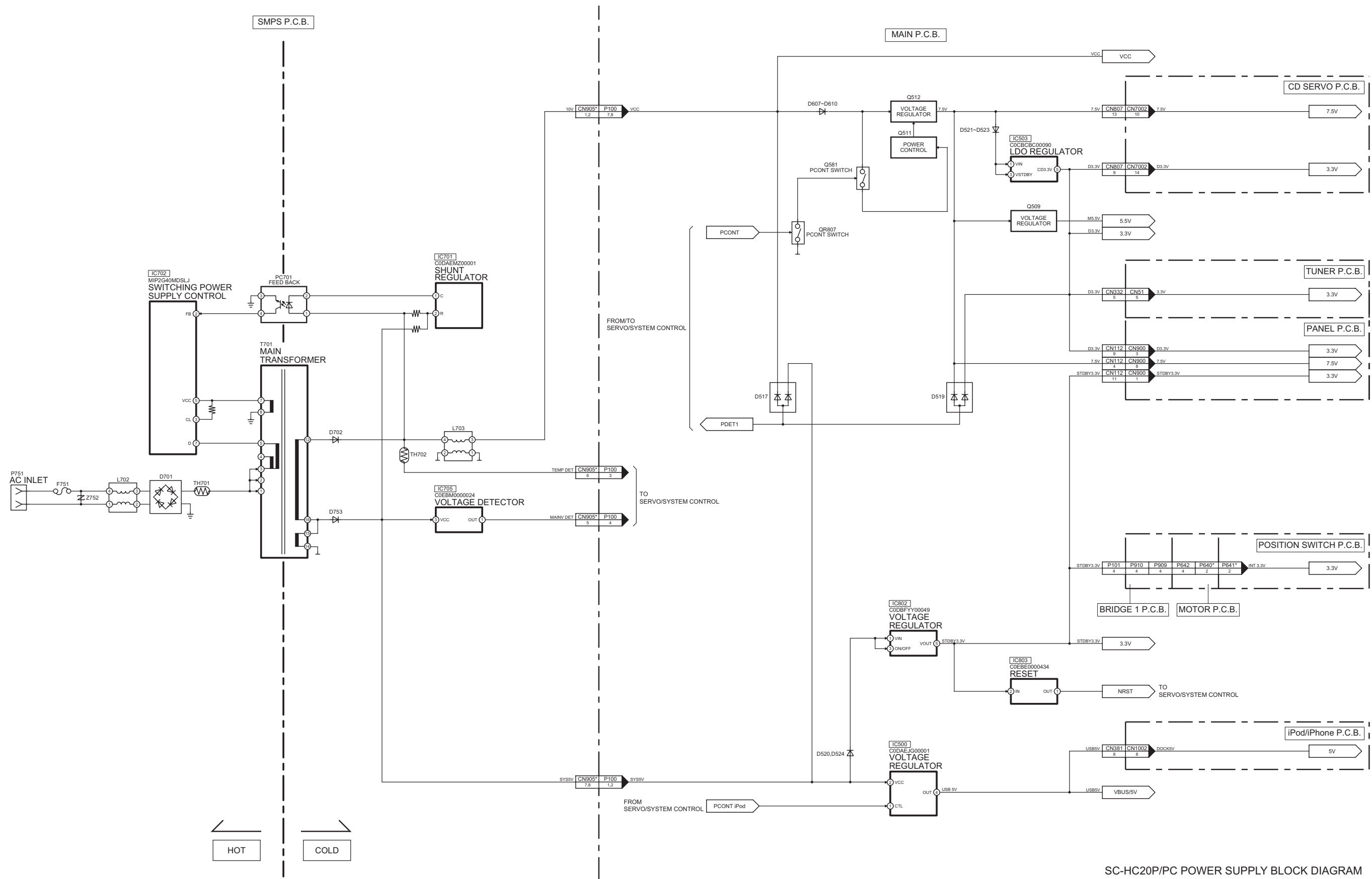


## 14.2. AUDIO BLOCK DIAGRAM



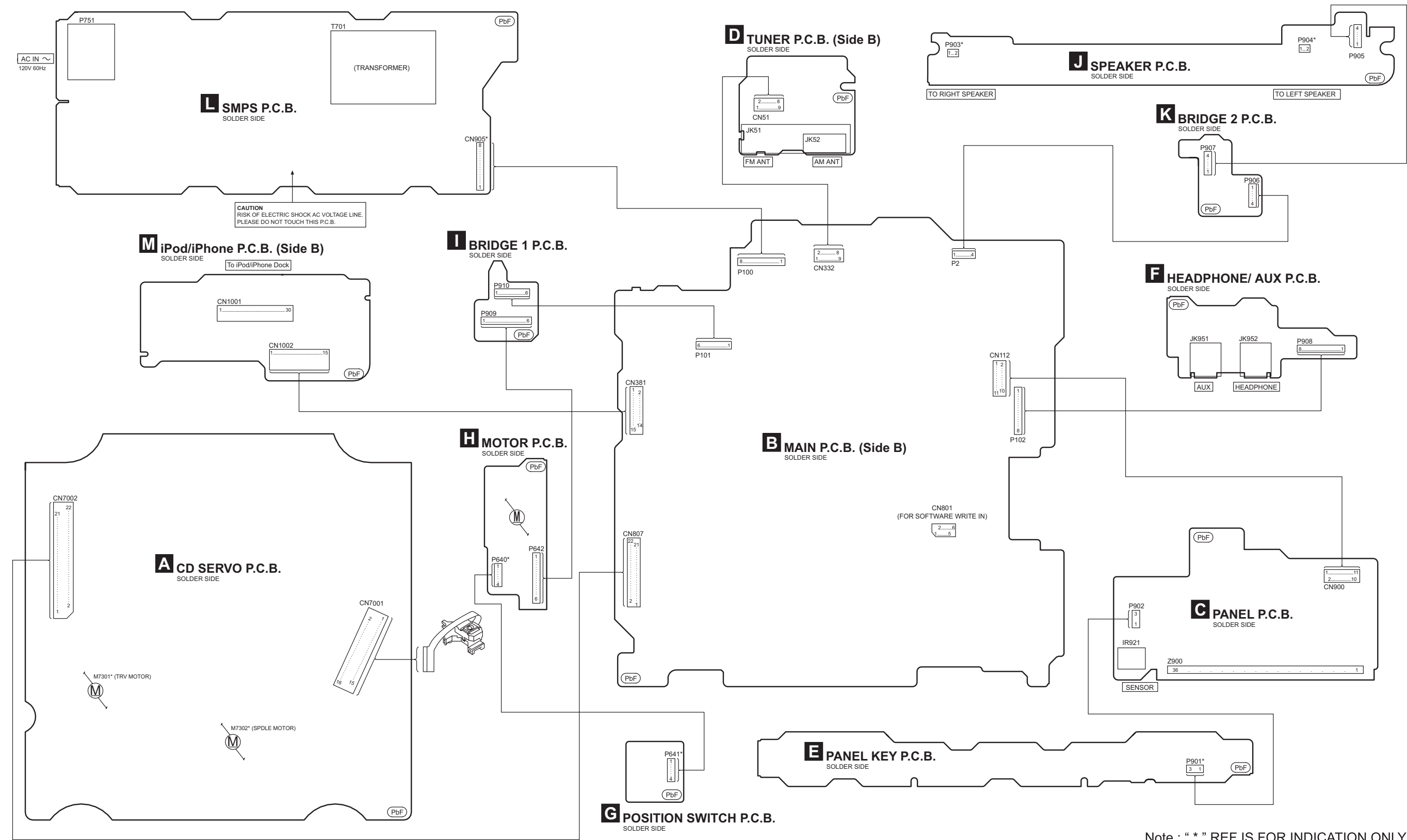
SC-HC20P/PC AUDIO BLOCK DIAGRAM

### 14.3. POWER SUPPLY BLOCK DIAGRAM



### SC-HC20P/PC 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:

|               |                                                                                                                                                                                                       |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>S641:</b>  | OPEN switch.                                                                                                                                                                                          |
| <b>S642:</b>  | CLOSE switch.                                                                                                                                                                                         |
| <b>S901:</b>  | POWER switch (  ).                                                                                                   |
| <b>S903:</b>  | IPOD PLAY/PAUSE switch (iPod  /  ). |
| <b>S904:</b>  | FM/AM/AUX switch.                                                                                                                                                                                     |
| <b>S906:</b>  | CD PLAY/PAUSE switch (CD  /  ).     |
| <b>S907:</b>  | CD OPEN/CLOSE switch (CD  ).                                                                                         |
| <b>S911:</b>  | REV SKIP switch (  /  ).            |
| <b>S912:</b>  | FWD SKIP switch (  /  ).            |
| <b>S913:</b>  | STOP switch (  ).                                                                                                    |
| <b>S914:</b>  | VOL- switch.                                                                                                                                                                                          |
| <b>S915:</b>  | VOL+ switch.                                                                                                                                                                                          |
| <b>S7201:</b> | 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 [ $\Omega$ ] (K=1,000, M=1,000,000).

## • Capacitor

Unit of capacitance is  $\mu$ 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 3A, 125V FUSE



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.

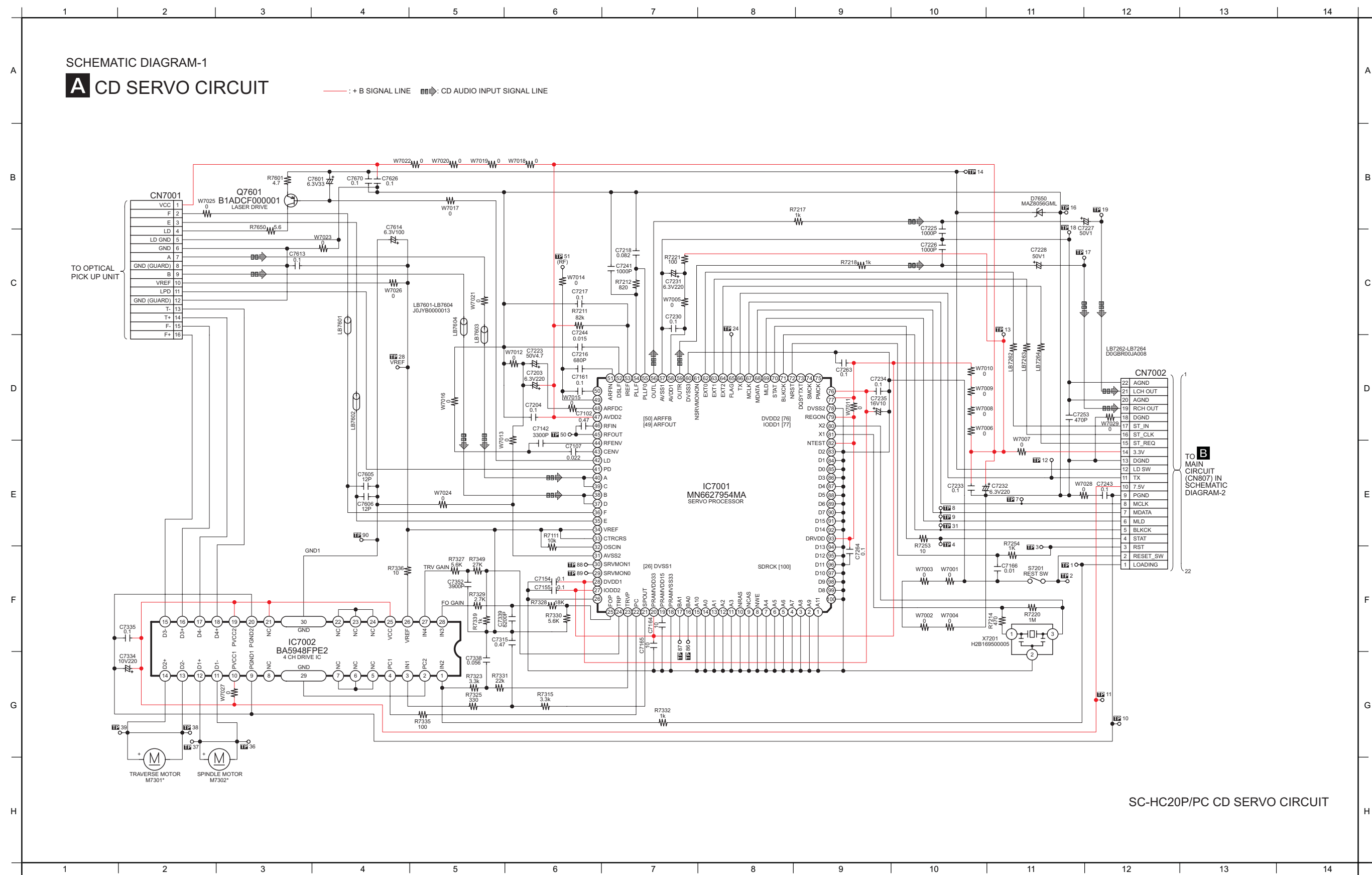


Ce symbole indique que le fusible utilisé est à rapide. Pour une protection permanente, n' utiliser que des fusibles de même type. Ce dernier est indiqué là où le présent symbole est apposé.



# 17 Schematic Diagram

## 17.1. CD SERVO CIRCUIT

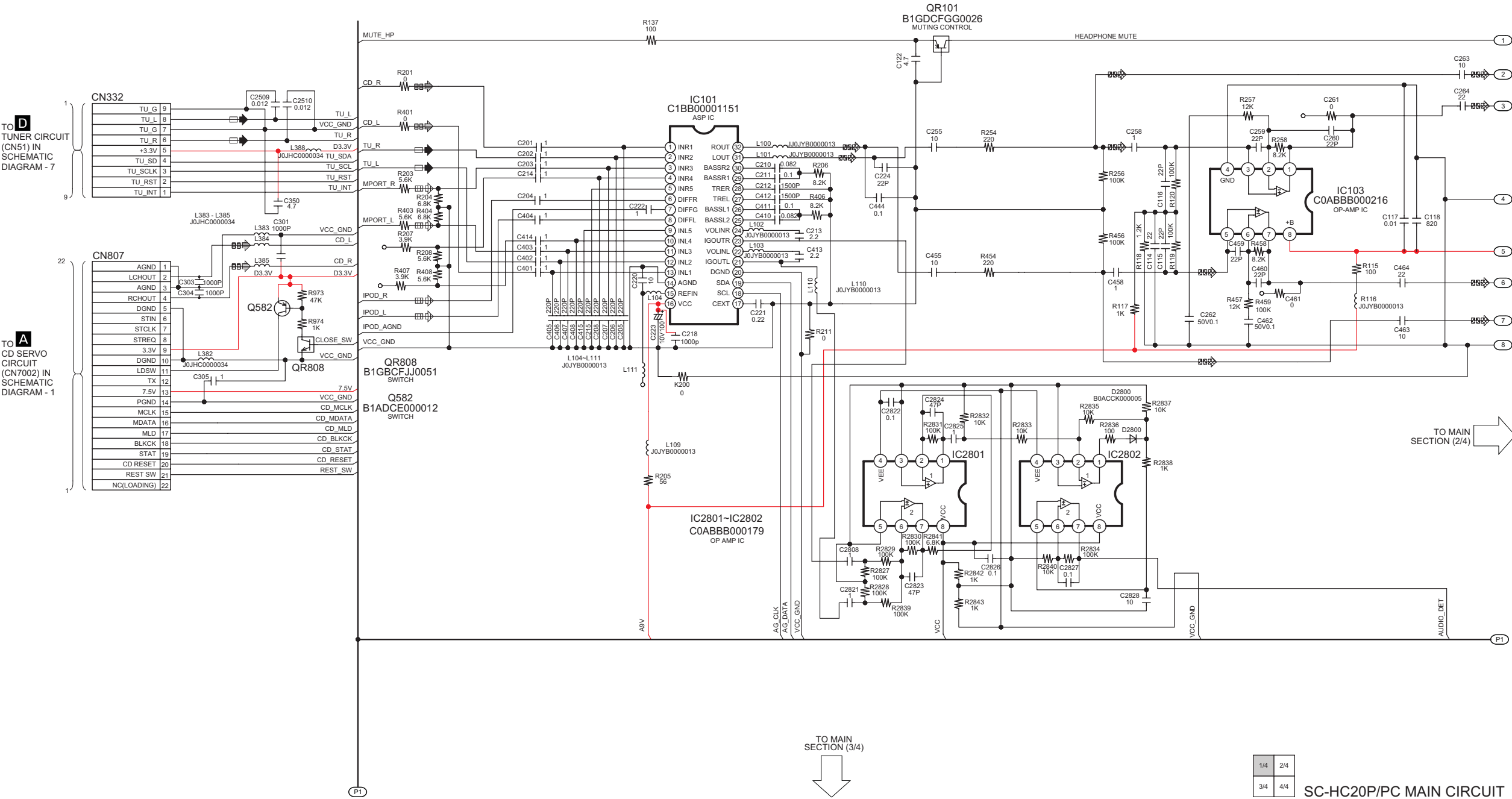


17.2. MAIN CIRCUIT (1/4)

SCHEMATIC DIAGRAM - 2

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



|    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|

## B MAIN CIRCUIT

The schematic diagram illustrates the main circuit of the SC-HC20P/PC, featuring a central IC1 (C1AB00003282) and several supporting components. The circuit is divided into sections for input, amplification, and output.

**Input Section (P102):** This section includes connectors for MPORT\_L, AGND, MPORT\_R, MPORT\_SW, HP\_L, HP\_GND, HP\_R, and HP\_SW. It is connected to the main section (1/4) and the main section (4/4).

**Amplification Section:** The central IC1 (C1AB00003282) is a power amplifier. It is connected to various components, including resistors (R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, R12, R13, R14, R15, R16, R17, R18, R19, R20, R21, R22, R23, R24, R25, R26, R27, R28, R29, R30, R31, R32, R33, R34, R35, R36, R37, R38, R39, R40, R41, R42, R43, R44, R45, R46, R47, R48, R49, R50, R51, R52, R53, R54, R55, R56, R57, R58, R59, R60, R61, R62, R63, R64, R65, R66, R67, R68, R69, R70, R71, R72, R73, R74, R75, R76, R77, R78, R79, R80, R81, R82, R83, R84, R85, R86, R87, R88, R89, R90, R91, R92, R93, R94, R95, R96, R97, R98, R99, R100), capacitors (C1, C2, C3, C4, C5, C6, C7, C8, C9, C10, C11, C12, C13, C14, C15, C16, C17, C18, C19, C20, C21, C22, C23, C24, C25, C26, C27, C28, C29, C30, C31, C32, C33, C34, C35, C36, C37, C38, C39, C40, C41, C42, C43, C44, C45, C46, C47, C48, C49, C50, C51, C52, C53, C54, C55, C56, C57, C58, C59, C60, C61, C62, C63, C64, C65, C66, C67, C68, C69, C70, C71, C72, C73, C74, C75, C76, C77, C78, C79, C80, C81, C82, C83, C84, C85, C86, C87, C88, C89, C90, C91, C92, C93, C94, C95, C96, C97, C98, C99, C100), and inductors (L1, L2, L3, L4, L5, L6, L7, L8, L9, L10, L11, L12, L13, L14, L15, L16, L17, L18, L19, L20, L21, L22, L23, L24, L25, L26, L27, L28, L29, L30, L31, L32, L33, L34, L35, L36, L37, L38, L39, L40, L41, L42, L43, L44, L45, L46, L47, L48, L49, L50, L51, L52, L53, L54, L55, L56, L57, L58, L59, L60, L61, L62, L63, L64, L65, L66, L67, L68, L69, L70, L71, L72, L73, L74, L75, L76, L77, L78, L79, L80, L81, L82, L83, L84, L85, L86, L87, L88, L89, L90, L91, L92, L93, L94, L95, L96, L97, L98, L99, L100).

**Output Section (P2):** This section includes connectors for Lch LO+, Lch LO-, Rch LO+, and Rch LO-. It is connected to the main section (1/4) and the main section (4/4).

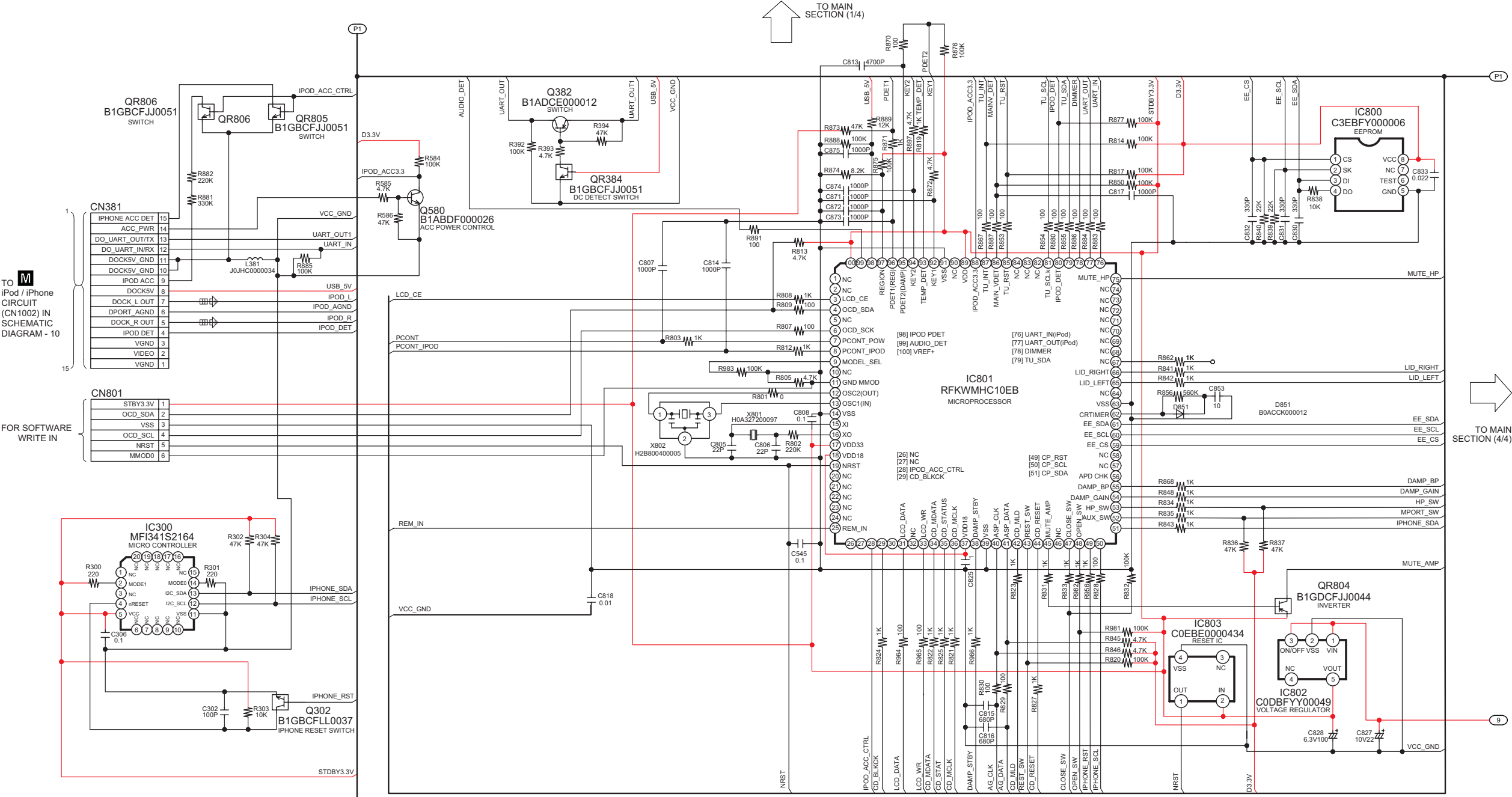
**Other Components:** The circuit includes several other components, such as resistors (R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, R12, R13, R14, R15, R16, R17, R18, R19, R20, R21, R22, R23, R24, R25, R26, R27, R28, R29, R30, R31, R32, R33, R34, R35, R36, R37, R38, R39, R40, R41, R42, R43, R44, R45, R46, R47, R48, R49, R50, R51, R52, R53, R54, R55, R56, R57, R58, R59, R60, R61, R62, R63, R64, R65, R66, R67, R68, R69, R70, R71, R72, R73, R74, R75, R76, R77, R78, R79, R80, R81, R82, R83, R84, R85, R86, R87, R88, R89, R90, R91, R92, R93, R94, R95, R96, R97, R98, R99, R100), capacitors (C1, C2, C3, C4, C5, C6, C7, C8, C9, C10, C11, C12, C13, C14, C15, C16, C17, C18, C19, C20, C21, C22, C23, C24, C25, C26, C27, C28, C29, C30, C31, C32, C33, C34, C35, C36, C37, C38, C39, C40, C41, C42, C43, C44, C45, C46, C47, C48, C49, C50, C51, C52, C53, C54, C55, C56, C57, C58, C59, C60, C61, C62, C63, C64, C65, C66, C67, C68, C69, C70, C71, C72, C73, C74, C75, C76, C77, C78, C79, C80, C81, C82, C83, C84, C85, C86, C87, C88, C89, C90, C91, C92, C93, C94, C95, C96, C97, C98, C99, C100), and inductors (L1, L2, L3, L4, L5, L6, L7, L8, L9, L10, L11, L12, L13, L14, L15, L16, L17, L18, L19, L20, L21, L22, L23, L24, L25, L26, L27, L28, L29, L30, L31, L32, L33, L34, L35, L36, L37, L38, L39, L40, L41, L42, L43, L44, L45, L46, L47, L48, L49, L50, L51, L52, L53, L54, L55, L56, L57, L58, L59, L60, L61, L62, L63, L64, L65, L66, L67, L68, L69, L70, L71, L72, L73, L74, L75, L76, L77, L78, L79, L80, L81, L82, L83, L84, L85, L86, L87, L88, L89, L90, L91, L92, L93, L94, L95, L96, L97, L98, L99, L100).

17.4. MAIN CIRCUIT (3/4)

SCHEMATIC DIAGRAM - 4

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

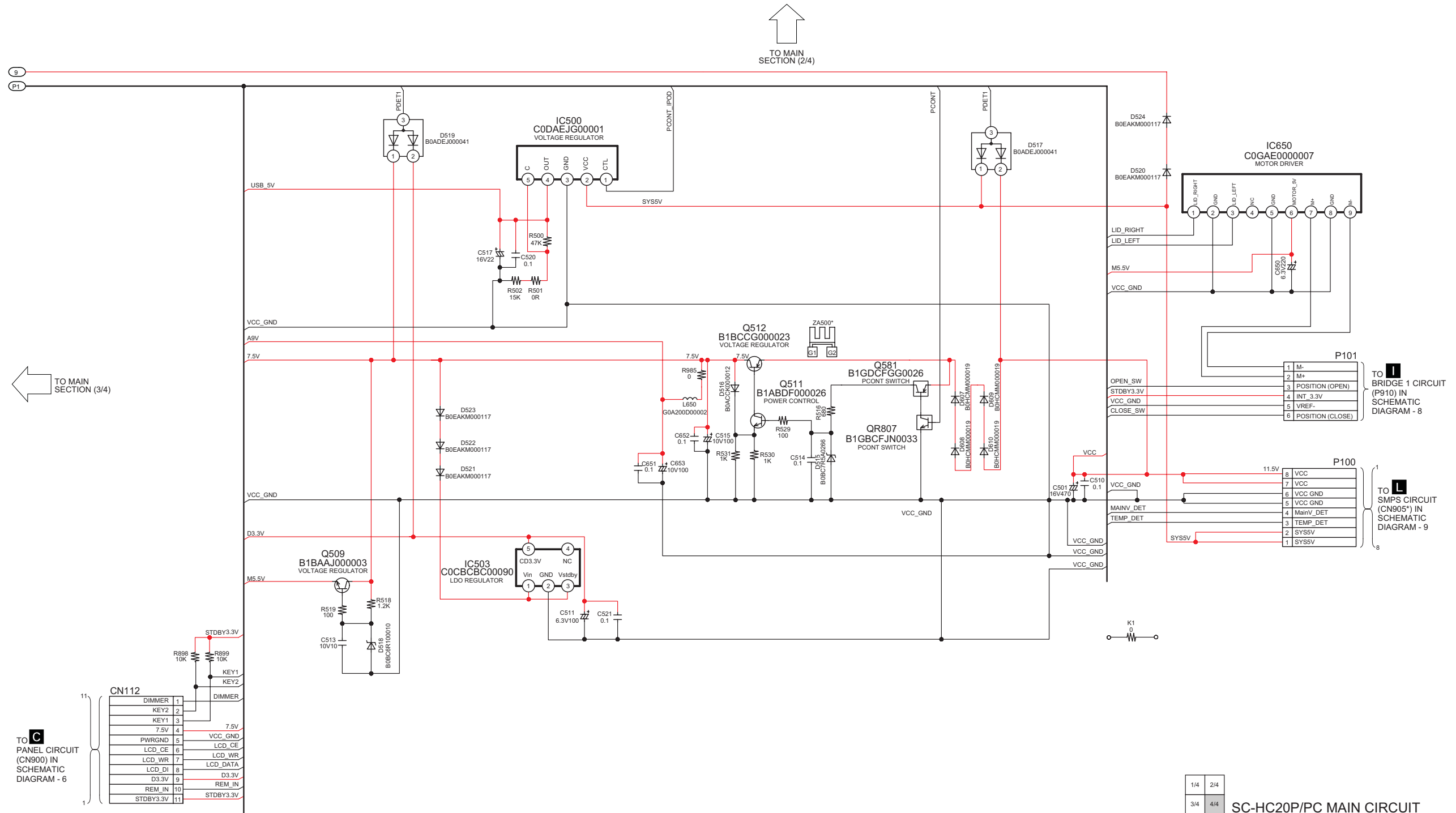


## 17.5. MAIN CIRCUIT (4/4)

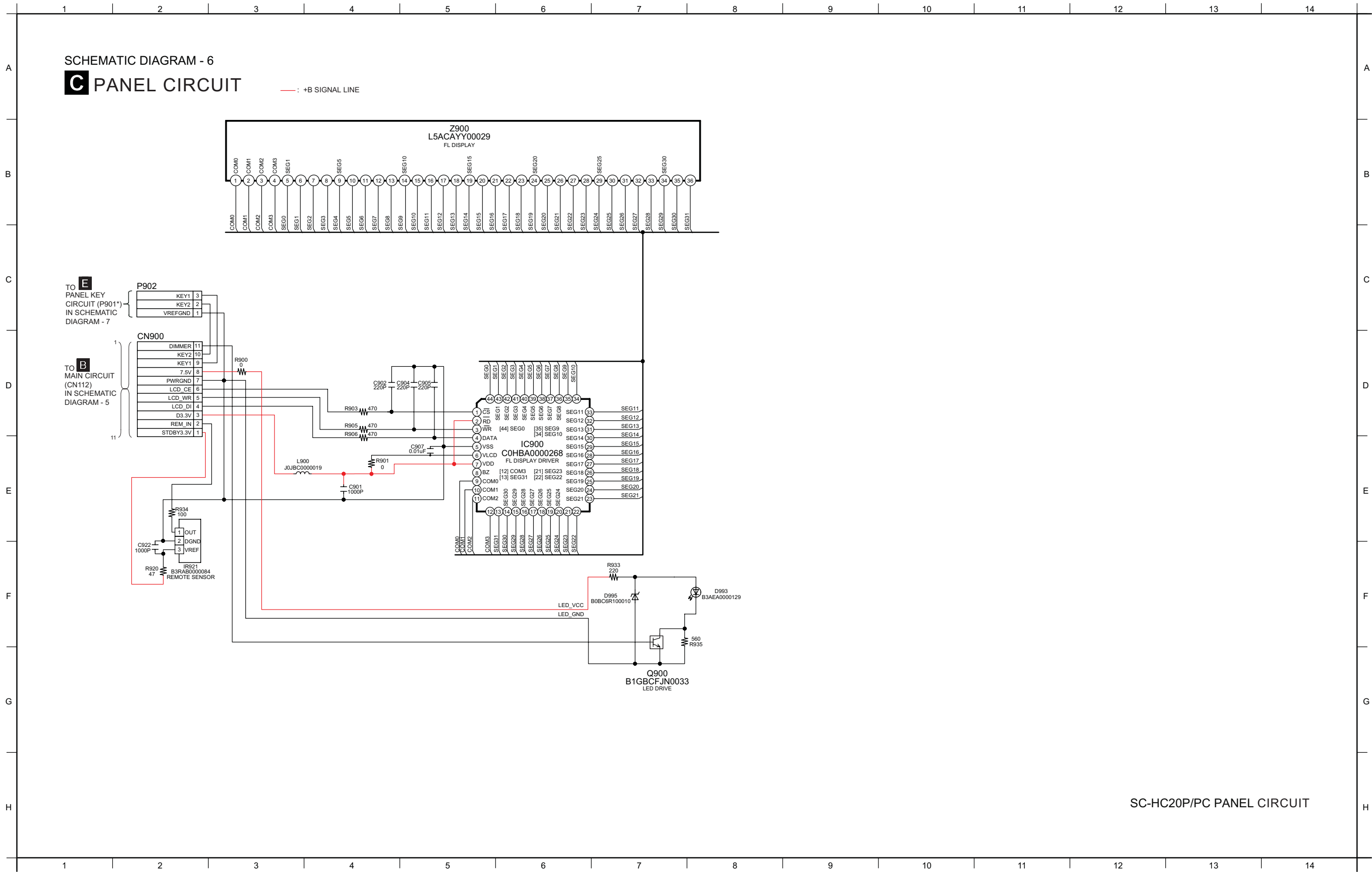
SCHEMATIC DIAGRAM - 5

## 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



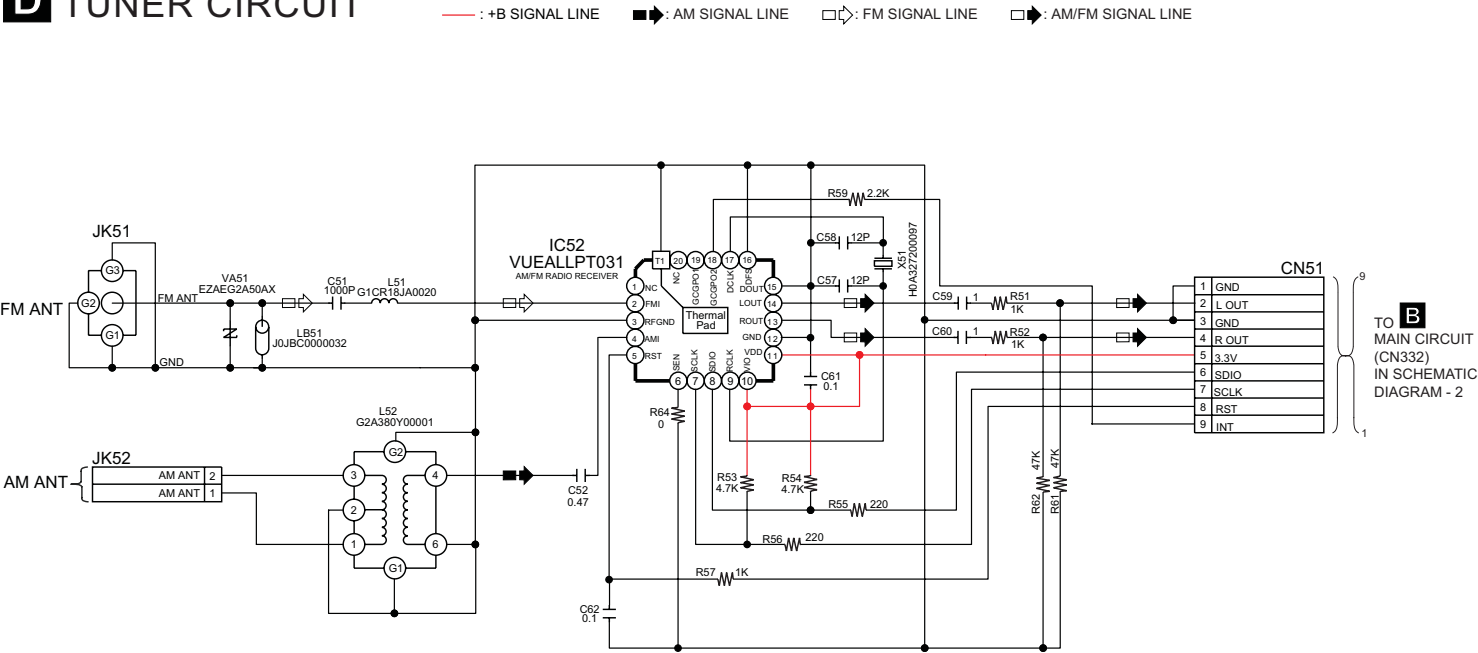
17.6. PANEL CIRCUIT



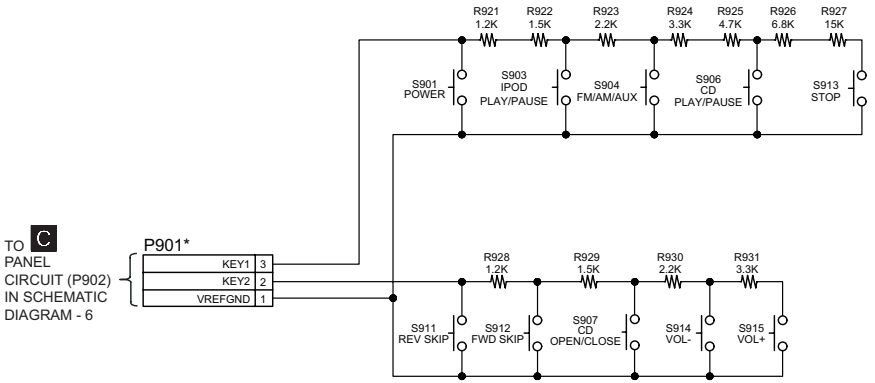
17.7. TUNER / PANEL KEY / HEADPHONE/AUX / POSITION SWITCH CIRCUIT

SCHEMATIC DIAGRAM - 7

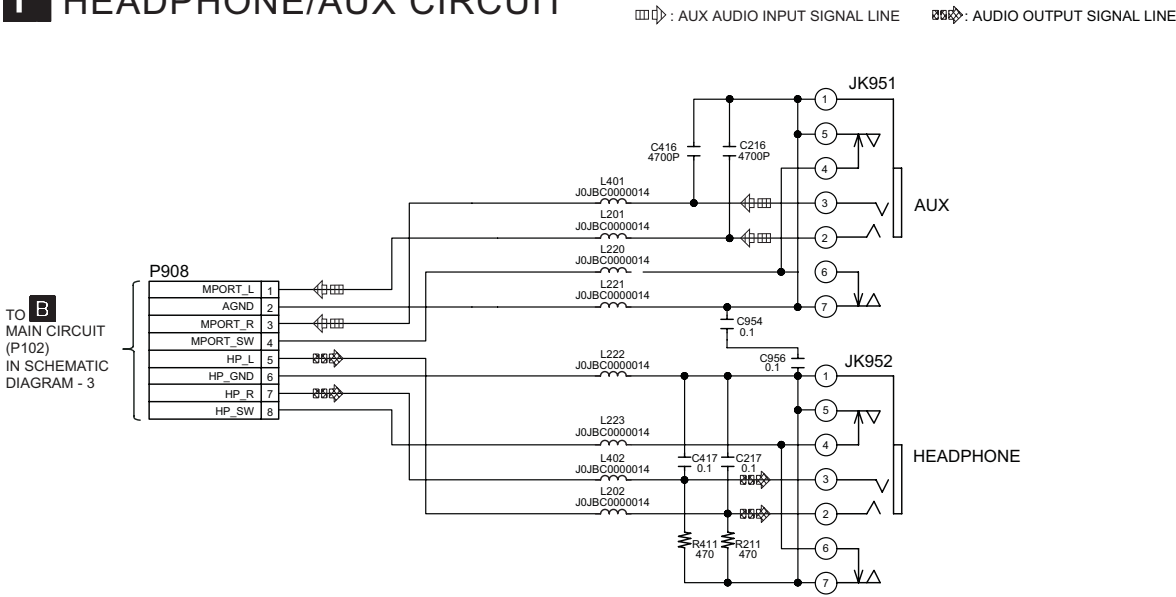
**D** TUNER CIRCUIT



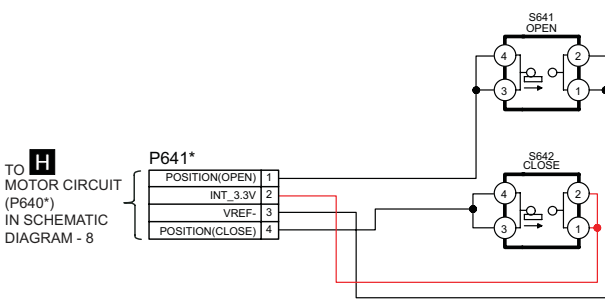
**E** PANEL KEY CIRCUIT



**F** HEADPHONE/AUX CIRCUIT

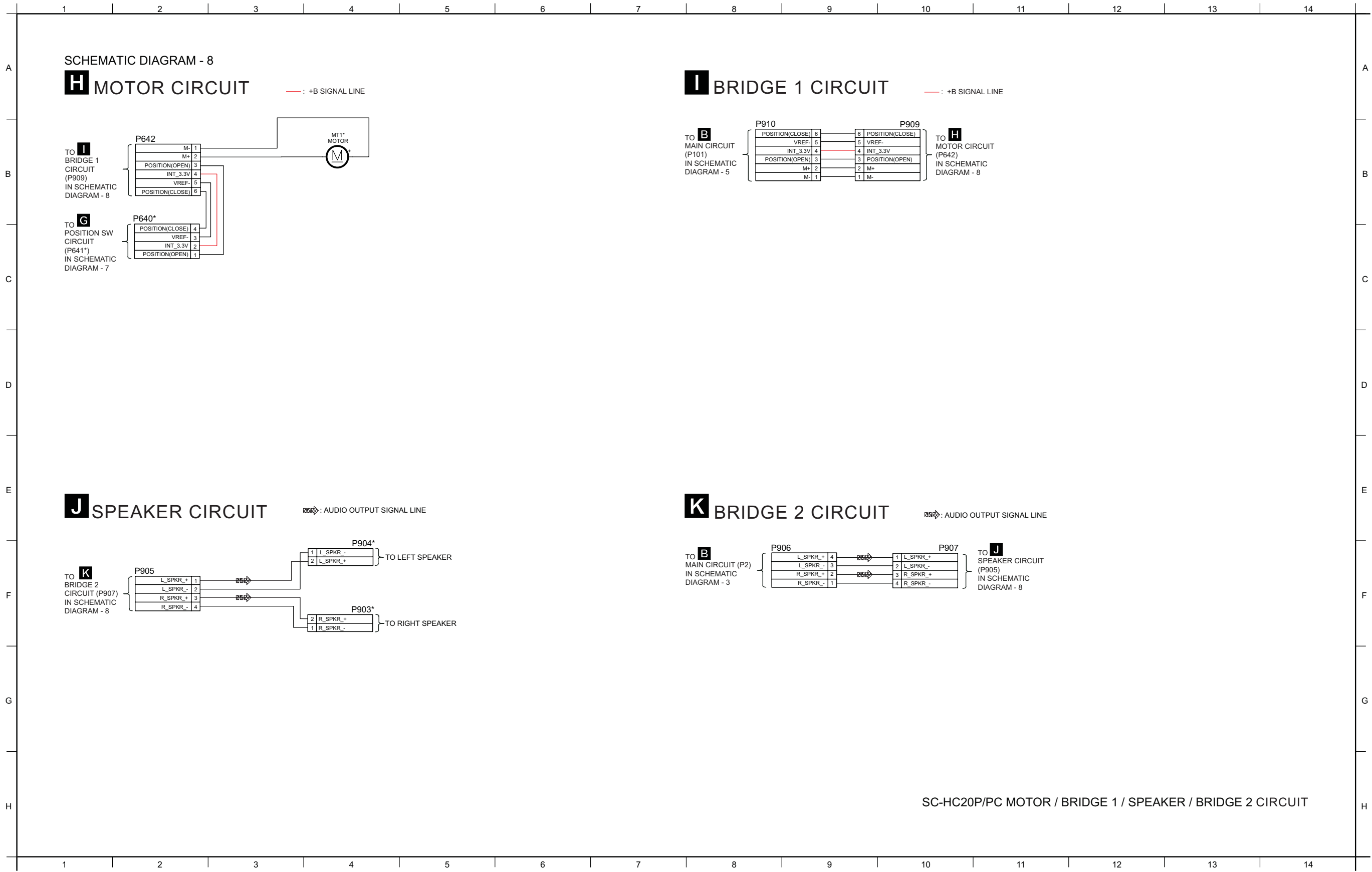


**G** POSITION SWITCH CIRCUIT

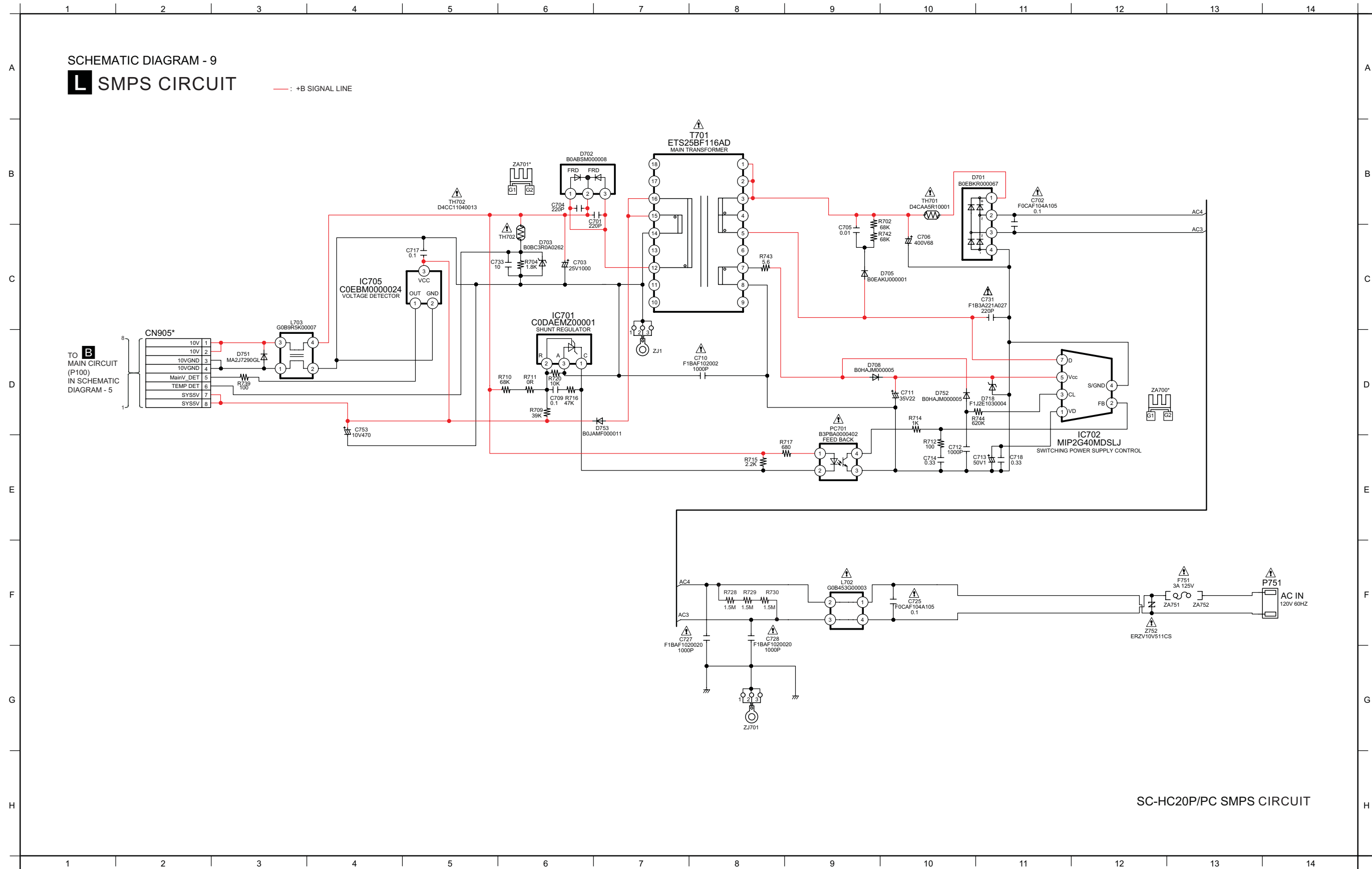


SC-HC20P/PC TUNER / PANEL KEY / HEADPHONE/AUX / POSITION SWITCH CIRCUIT

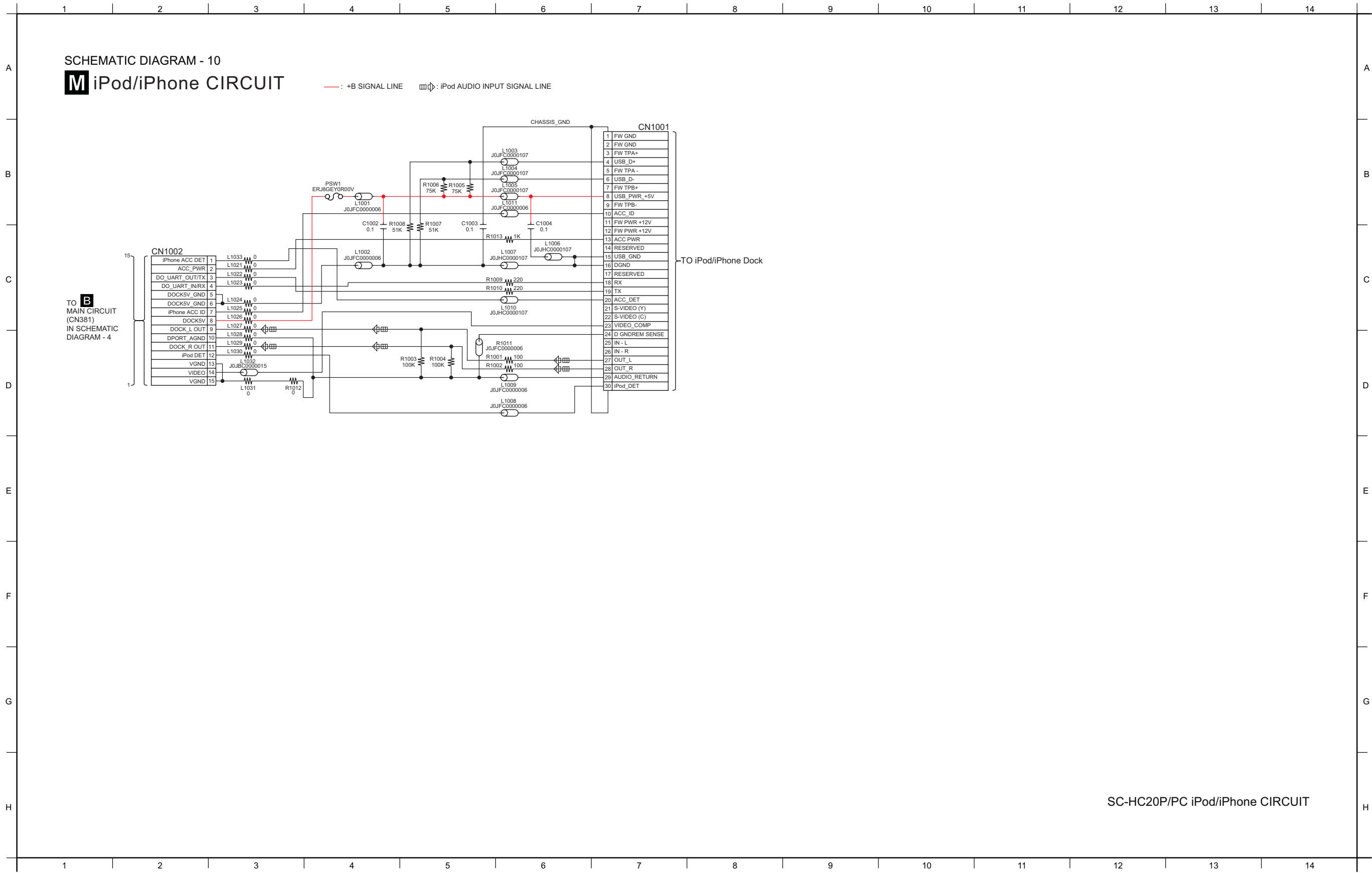
17.8. MOTOR / BRIDGE 1 / SPEAKER / BRIDGE 2 CIRCUIT



# 17.9. SMPS CIRCUIT



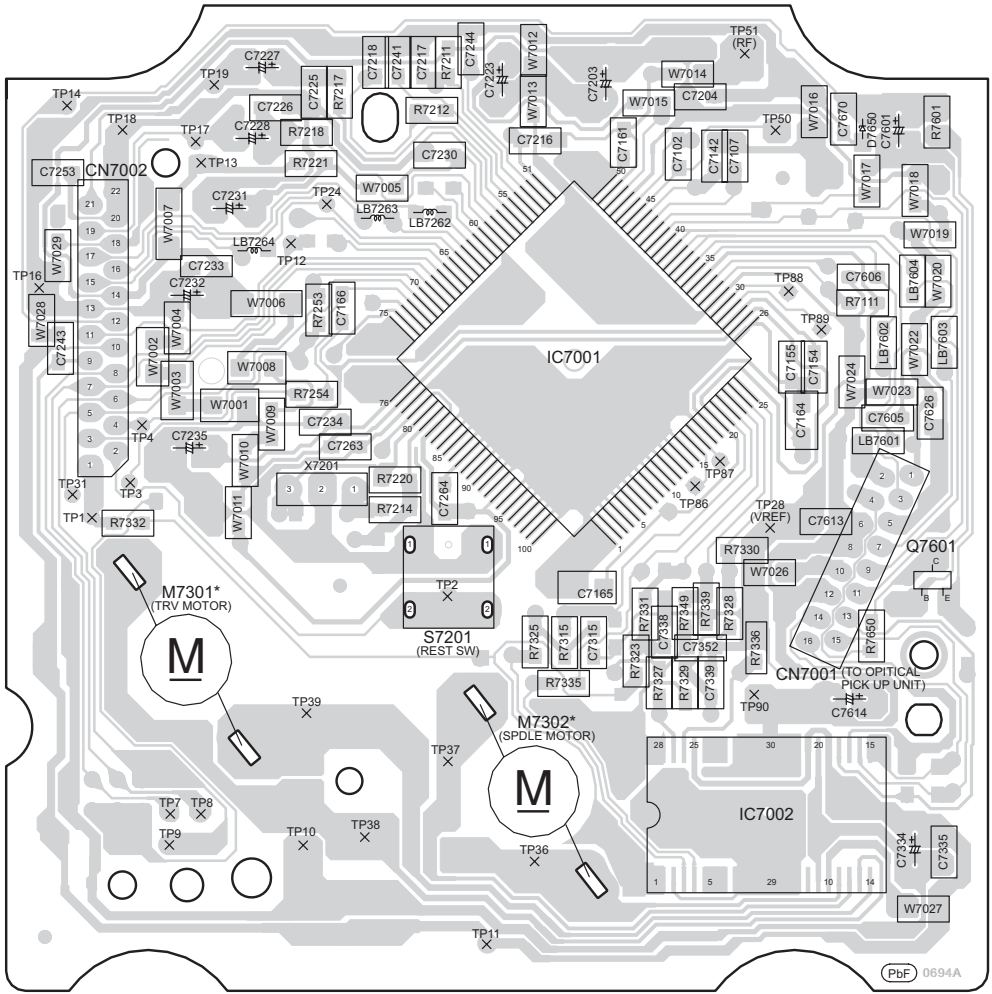
17.10. iPod/iPhone CIRCUIT



# 18 Printed Circuit Board

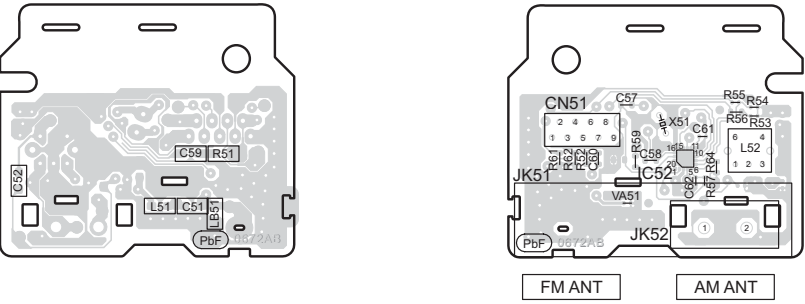
## 18.1. CD SERVO/ TUNER/ iPod/iPhone P.C.B.

**A** CD SERVO P.C.B (REPX0845A)



NOTE “\*” REF IS FOR INDICATION ONLY

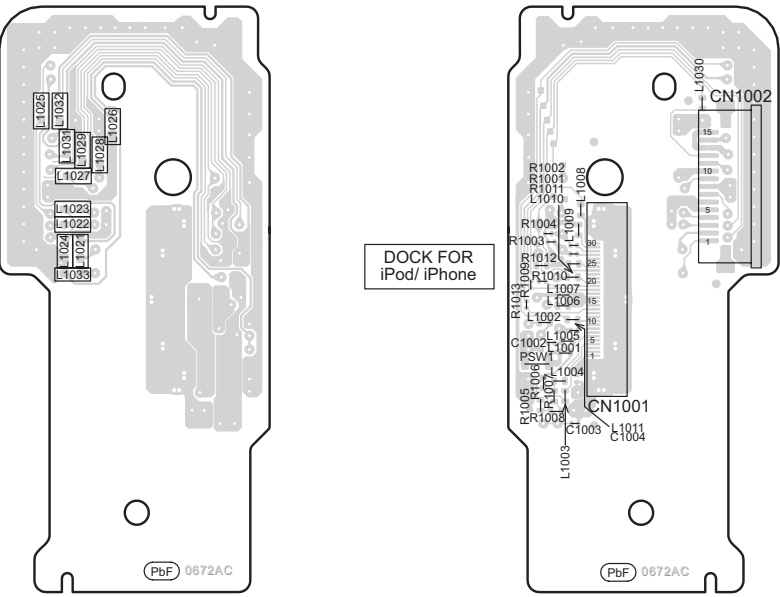
**D** TUNER P.C.B. (REPX0817AB)



(SIDE A)

(SIDE B)

**M** iPod/iPhone P.C.B. (REPX0817AC)



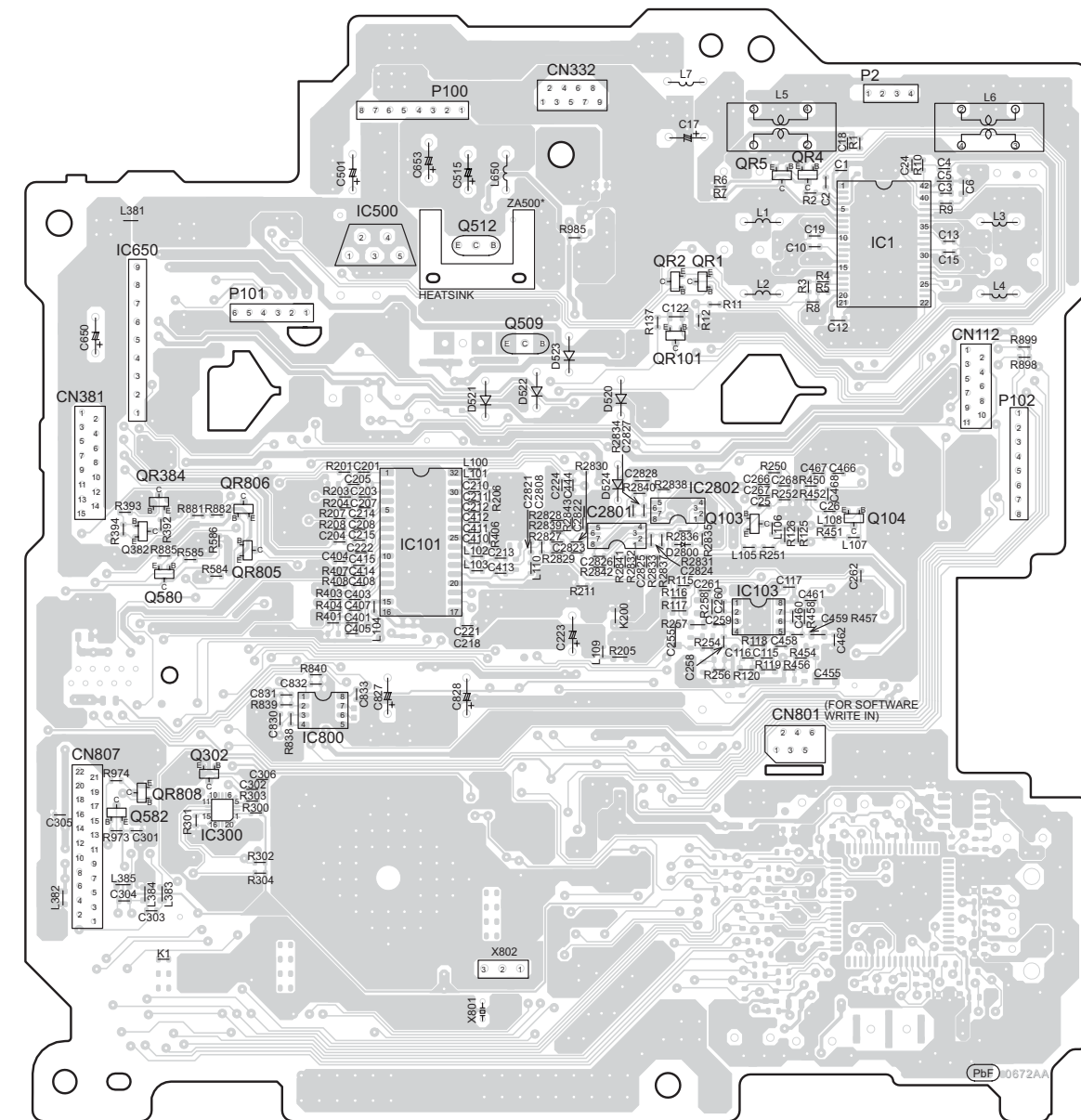
(SIDE A)

(SIDE B)

SC-HC20P/PC  
CD SERVO/ TUNER/ iPod/iPhone P.C.B.

A B C D E F G H

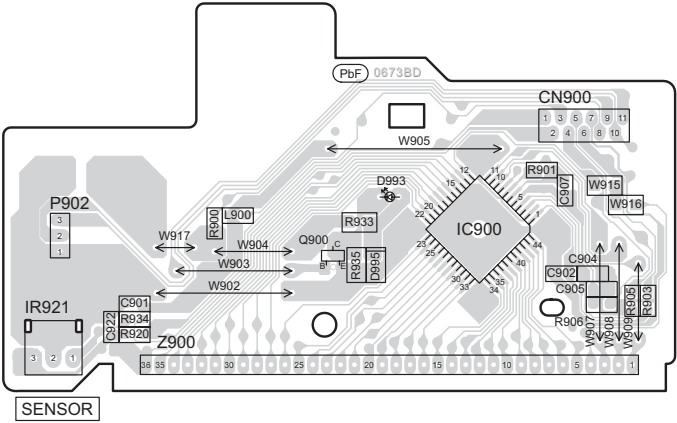
NOTE "\*" REF IS FOR INDICATION ONLY



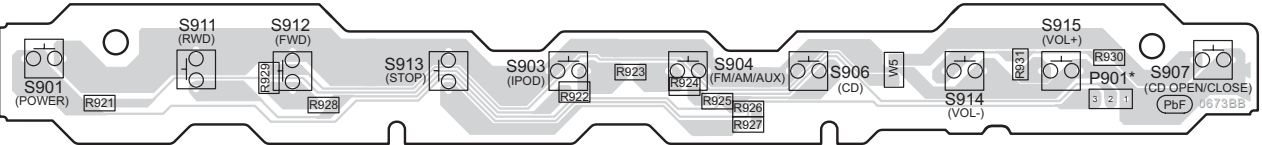
SC-HC20P/PC  
MAIN P.C.B.

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

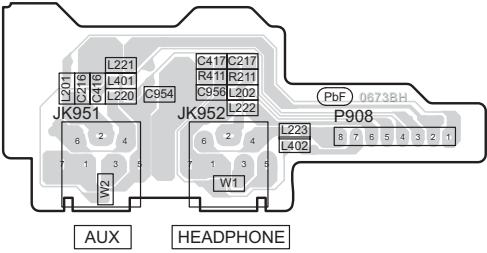
**C** PANEL P.C.B. (REPX0818FD)



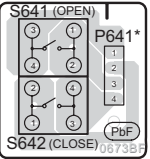
**E** PANEL KEY P.C.B. (REPX0818FB)



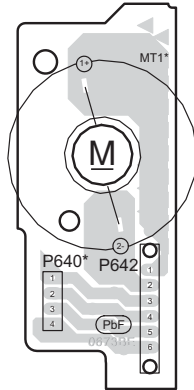
**F** HEADPHONE/ AUX P.C.B. (REPX0818FH)



**G** POSITION SWITCH P.C.B. (REPX0818FE)



**H** MOTOR P.C.B. (REPX0818FE)



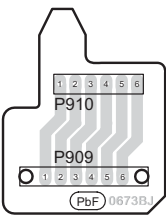
NOTE “\*” REF IS FOR INDICATION ONLY

SC-HC20P/PC  
PANEL/ PANEL KEY/ HEADPHONE/AUX/ POSITION SWITCH/ MOTOR P.C.B.

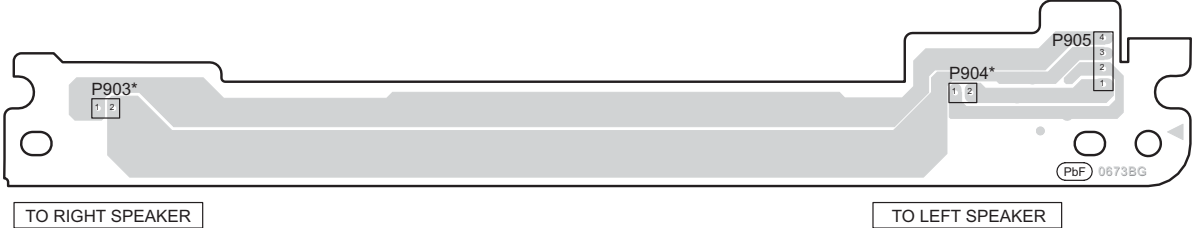
18.4. BRIDGE 1/ SPEAKER/ BRIDGE 2/ SMPS P.C.B.

H  
G  
F  
E  
D  
C  
B  
A

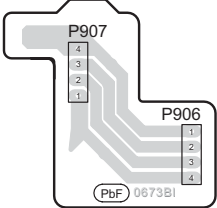
**I** BRIDGE 1 P.C.B. (REPX0818FE)



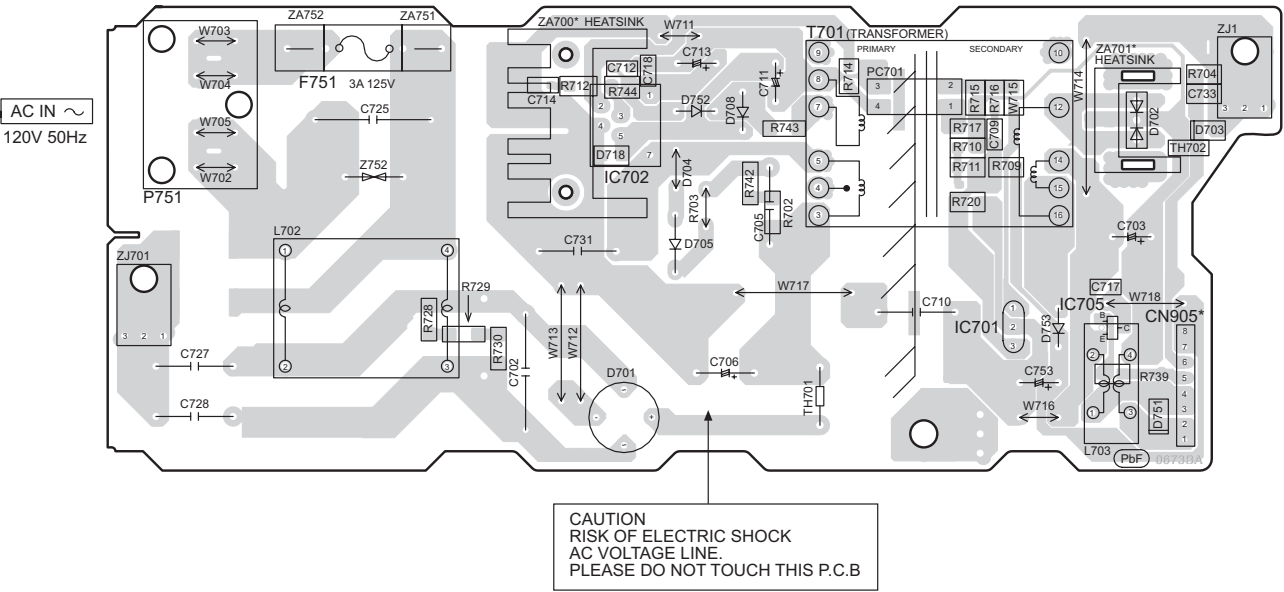
**J** SPEAKER P.C.B. (REPX0818FG)



**K** BRIDGE 2 P.C.B. (REPX0818FI)



**L** SMPS P.C.B. (REPX0818FA)



NOTE "\*" REF IS FOR INDICATION ONLY

SC-HC20P/PC  
BRIDGE 1/ SPEAKER/ BRIDGE 2/ SMPS P.C.B.

1 2 3 4 5 6 7 8 9 10 11 12 13

# 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_OPEN        | O   | CD LID Left                                   |
| 66      | LID_CLOSE       | 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

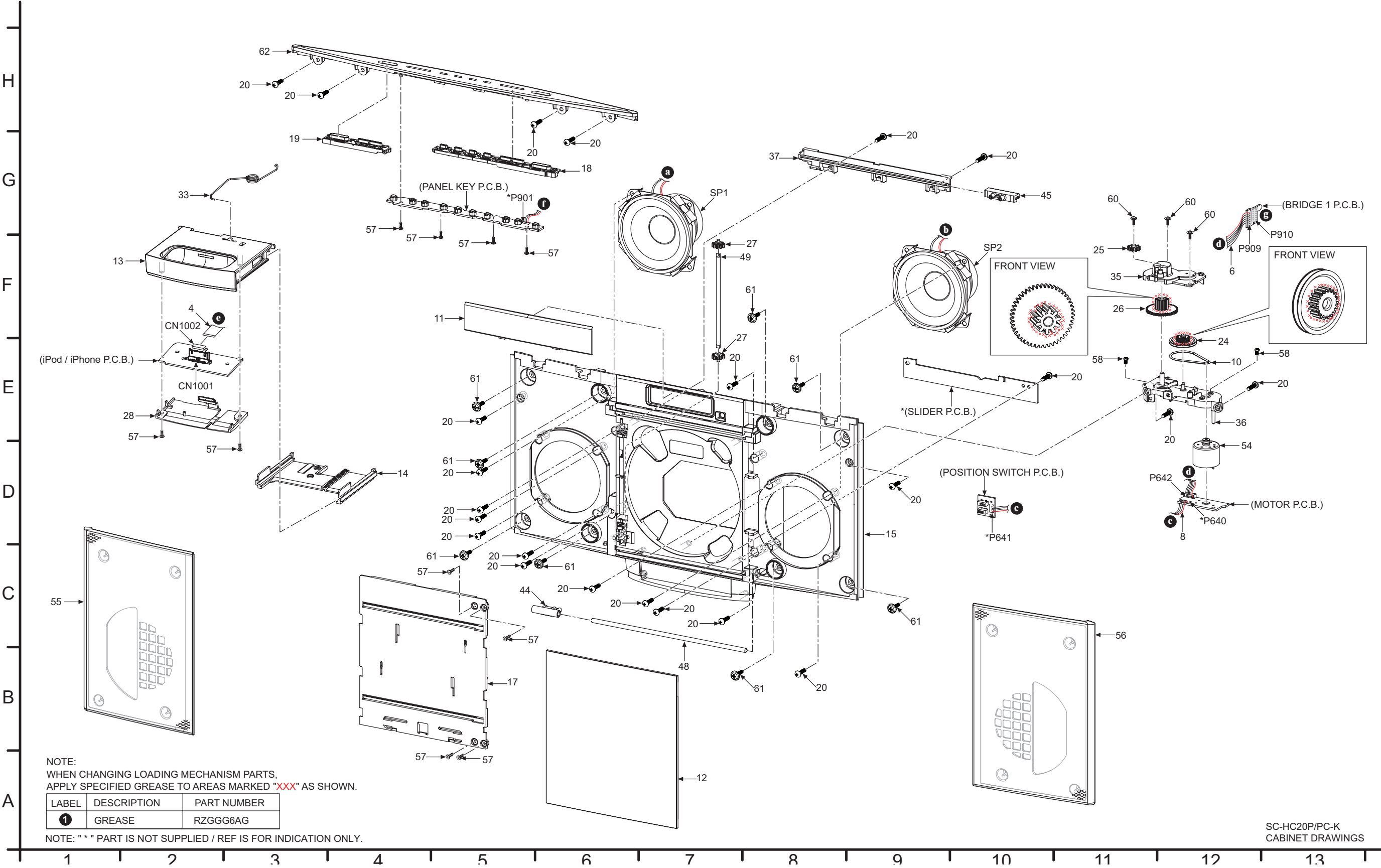
| Pin No. | Mark  | I/O | Function                                |
|---------|-------|-----|-----------------------------------------|
| 1       | IN2   | I   | Motor Driver Input                      |
| 2       | PC2   | I   | Turntable Motor Drive Signal (L:ON)     |
| 3       | IN1   | I   | Motor 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                  |

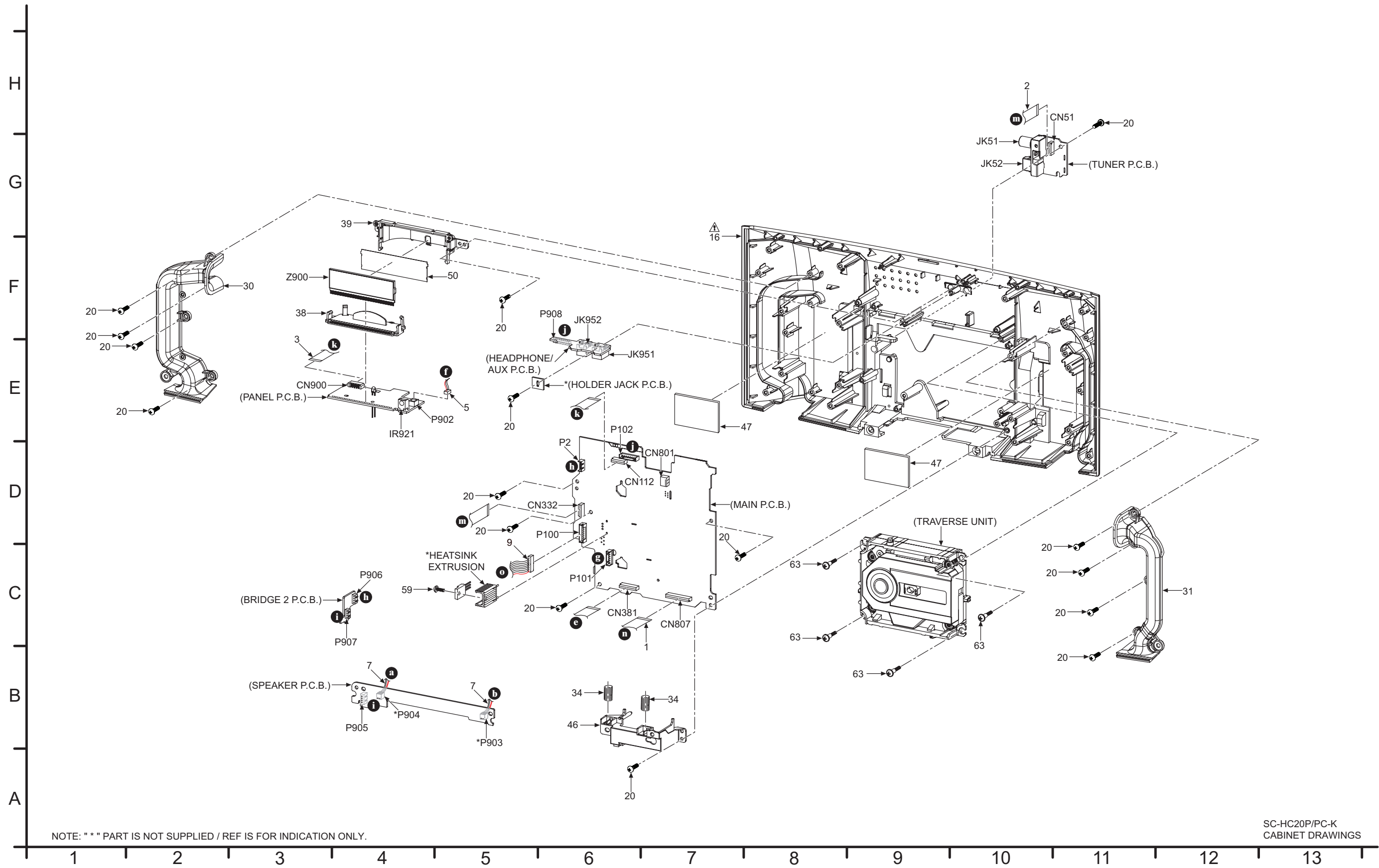


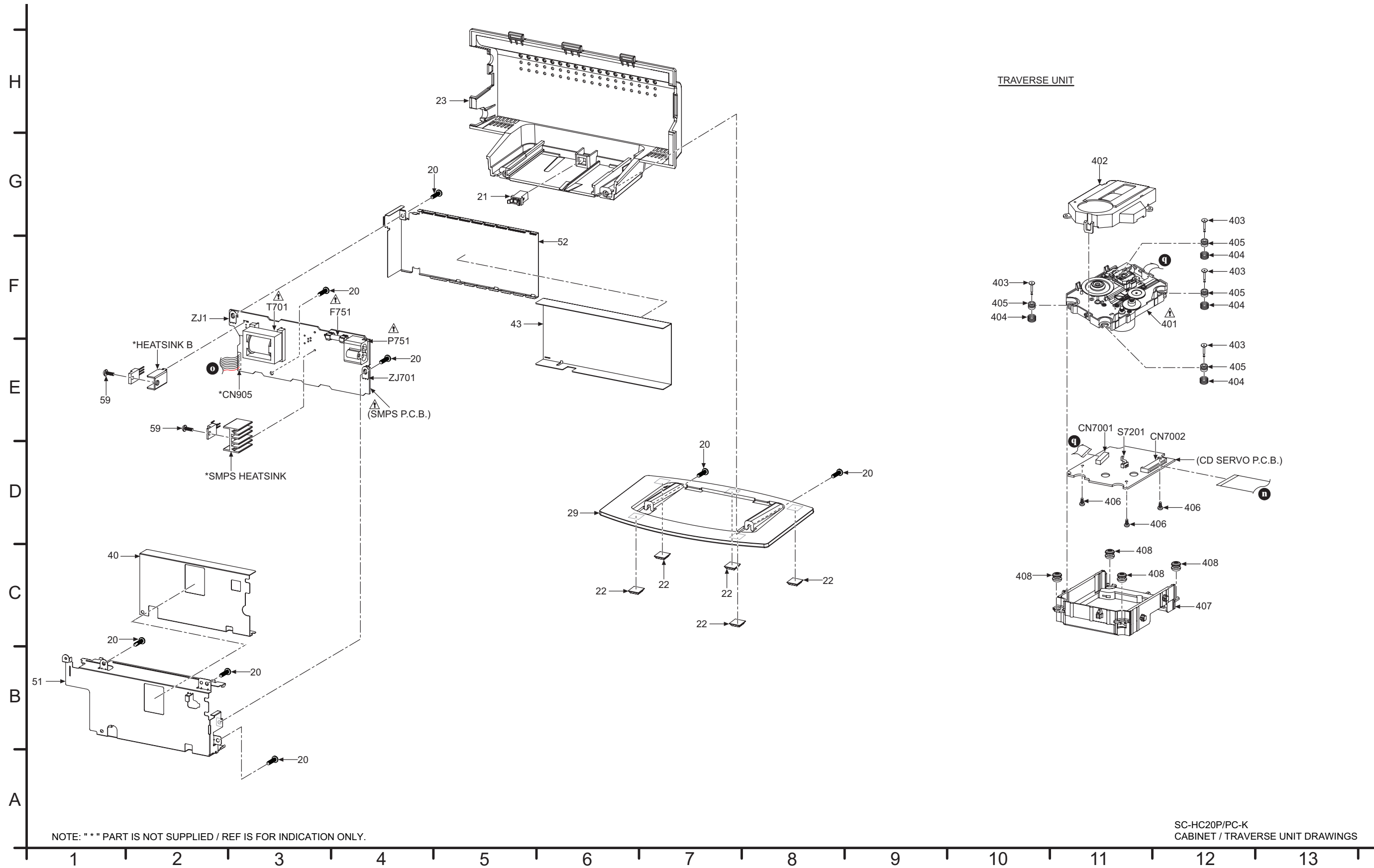
# 20 Exploded View and Replacement Parts List

## 20.1. Exploded View and Mechanical replacement Parts List

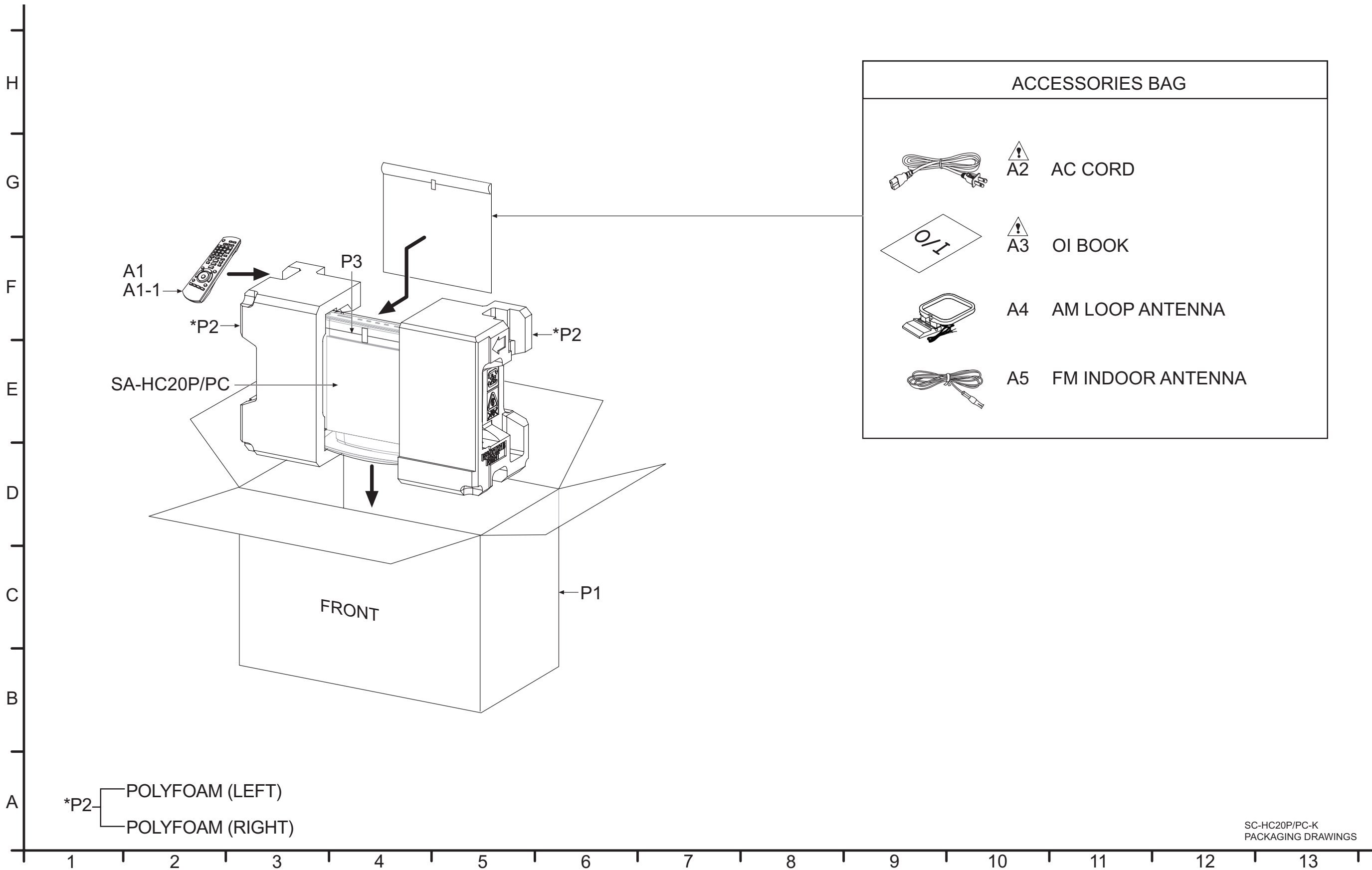
### 20.1.1. Cabinet Parts Location







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    | 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       | RGKX1019A-K | CD DOOR ORNAMENT                  | 1   |         |
|                                                                                     | 13       | RGKX1020-K  | DOCKING TUB                       | 1   |         |
|                                                                                     | 14       | RGKX1021-K  | DOCKING COVER                     | 1   |         |
|                                                                                     | 15       | RGPX1017A-K | FRONT PANEL                       | 1   |         |
|  | 16       | RFKHHC20P-K | REAR CABINET ASS'Y                | 1   | P       |
|  | 16       | RFKHHC20PCK | REAR CABINET ASS'Y                | 1   | PC      |

| Safety | Ref. No. | Part No.   | Part Name & Description | Qty | Remarks |
|--------|----------|------------|-------------------------|-----|---------|
|        | 17       | RGPX1023-K | 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-K  | LEG CUSHION             | 5   |         |
|        | 23       | RKQX1003-K | REAR COVER              | 1   |         |
|        | 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 OPEN SPRING        | 1   |         |
|        | 34       | RMBX1011   | MIDDLE CHASSIS SPRING   | 2   |         |
|        | 35       | RMKX1007   | GEAR FIXTURE            | 1   |         |
|        | 36       | RMKX1008   | GEAR BASE               | 1   |         |
|        | 37       | RMKX1014-K | RACK TOP                | 1   |         |
|        | 38       | RMNX1011-W | LCD HOLDER BASE         | 1   |         |
|        | 39       | RMNX1012-W | LCD HOLDER COVER        | 1   |         |
|        | 40       | RMNX1013   | SMPS INSULATOR A        | 1   |         |
|        | 43       | RMNX1020   | 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   |         |
|        | 49       | RMUX1003   | TIMING GEAR SHAFT       | 1   |         |

| Safety | Ref. No. | Part No.     | Part Name & Description | Qty | Remarks |
|--------|----------|--------------|-------------------------|-----|---------|
|        | 50       | RMXX1007     | LCD DIFFUSER            | 1   |         |
|        | 51       | RSCX1020     | SMPS SHIELD PLATE A     | 1   |         |
|        | 52       | RSCX1021     | SMPS SHIELD PLATE B     | 1   |         |
|        | 54       | RXQ1690      | MOTOR ASS'Y             | 1   |         |
|        | 55       | RYBX1006-K   | NET FRAME UNIT (L)      | 1   |         |
|        | 56       | RYBX1007-K   | NET FRAME UNIT (R)      | 1   |         |
|        | 57       | VHD1224-1    | ADJ SPRING HOLDER SCREW | 10  |         |
|        | 58       | XSN2+4FJ     | SCREW                   | 2   |         |
|        | 59       | XTB3+8JFJ    | SCREW                   | 3   |         |
|        | 60       | XTW2+6SFJ    | SCREW                   | 3   |         |
|        | 61       | XTW3+12TFJ   | SCREW                   | 8   |         |
|        | 62       | RGKX1022A-S  | TOP ORNAMENT            | 1   |         |
|        | 63       | RHDX261004   | SCREW                   | 4   |         |
|        |          |              |                         |     |         |
|        |          |              | TRAVERSE DECK           |     |         |
|        |          |              |                         |     |         |
| ⚠      | 401      | RAE0165T-V   | TRAVERSE UNIT           | 1   |         |
|        | 402      | RMR1396-K    | TRV. COVER              | 1   |         |
|        | 403      | RMS0757-1    | FIXED PIN               | 4   |         |
|        | 404      | RME0109-1    | FLOATING SPRING         | 4   |         |
|        | 405      | RMG0730-G    | FLOATING RUBBER         | 4   |         |
|        | 406      | XTN2+6GFJ    | SCREW                   | 3   |         |
|        | 407      | RMRX1014A-X  | MIDDLE CHASSIS          | 1   |         |
|        | 408      | RMGX1003-B   | OUTER DAMPER            | 4   |         |
|        |          |              |                         |     |         |
|        |          |              | SPEAKERS                |     |         |
|        |          |              |                         |     |         |
|        | SP1      | L0AA08A00026 | SPEAKER                 | 1   |         |
|        | SP2      | L0AA08A00026 | SPEAKER                 | 1   |         |
|        |          |              |                         |     |         |
|        |          |              | PACKING MATERIALS       |     |         |
|        |          |              |                         |     |         |
|        | P1       | RPGX3081     | PACKING CASE            | 1   | P       |
|        | P1       | RPGX3082     | PACKING CASE            | 1   | PC      |
|        | P2       | RPNX1021     | POLYFOAM                | 1   |         |
|        | P3       | RPFX0262-1   | MIRAMAT SHEET           | 1   |         |
|        |          |              |                         |     |         |
|        |          |              | ACCESSORIES             |     |         |
|        |          |              |                         |     |         |
|        | A1       | N2QAYB000518 | REMOTE CONTROL          | 1   |         |
|        | A1-1     | RKK-PT470EBK | R/C BATTERY COVER       | 1   |         |
| ⚠      | A2       | K2CB2CB00021 | AC CORD                 | 1   |         |
| ⚠      | A3       | RQTX1051-P   | O/I BOOK (En)           | 1   | P       |
| ⚠      | A3       | RQTX1133-C   | O/I BOOK (Sp/Cf)        | 1   | PC      |
|        | A4       | N1DY00000010 | AM LOOP ANTENNA         | 1   |         |
|        | A5       | RSAX0002     | FM INDOOR ANTENNA       | 1   |         |

## 20.2. Electrical Replacement Parts List

### Important Safety Notice

Components identified by  $\Delta$  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     | REPX0845A    | CD SERVO P.C.B.                           | 1   | (RTL)   |
|          | PCB2     | REPX0817AA   | MAIN P.C.B.                               | 1   | (RTL)   |
|          | PCB3     | REPX0817AB   | TUNER P.C.B.                              | 1   | (RTL)   |
|          | PCB4     | REPX0817AC   | iPod/iPhone P.C.B.                        | 1   | (RTL)   |
|          | PCB5     | REPX0818FD   | PANEL P.C.B.                              | 1   | (RTL)   |
|          | PCB6     | REPX0818FB   | PANEL KEY P.C.B.                          | 1   | (RTL)   |
|          | PCB7     | REPX0818FH   | HEADPHONE/AUX P.C.B.                      | 1   | (RTL)   |
|          | PCB8     | REPX0818FI   | BRIDGE 2 P.C.B.                           | 1   | (RTL)   |
|          | PCB9     | REPX0818FE   | MOTOR / POSITION SWITCH / BRIDGE 1 P.C.B. | 1   | (RTL)   |
|          | PCB10    | REPX0818FG   | SPEAKER P.C.B.                            | 1   | (RTL)   |
| $\Delta$ | PCB11    | REPX0818FA   | SMPS 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   |         |
|          | IC705    | C0EBM0000024 | IC                                        | 1   |         |
|          | IC800    | C3EBFY000006 | IC                                        | 1   |         |
|          | IC801    | RFKWMHC10EB  | IC                                        | 1   |         |
|          | IC802    | C0DBFYY00049 | IC                                        | 1   |         |

| Safety | Ref. No. | Part No.     | Part Name & Description | Qty | Remarks |
|--------|----------|--------------|-------------------------|-----|---------|
|        | 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             |     |         |
|        | Q101     | B1GFGCAA0001 | TRANSISTOR              | 1   |         |
|        | Q102     | B1GFGCAA0001 | TRANSISTOR              | 1   |         |
|        | Q103     | B1ABCF000176 | TRANSISTOR              | 1   |         |
|        | Q104     | B1ABCF000176 | TRANSISTOR              | 1   |         |
|        | Q302     | B1GBCFL0037  | TRANSISTOR              | 1   |         |
|        | Q382     | B1ADCE000012 | TRANSISTOR              | 1   |         |
|        | Q509     | B1BAJ000003  | TRANSISTOR              | 1   |         |
|        | Q511     | B1ABDF000026 | TRANSISTOR              | 1   |         |
|        | Q512     | B1BCCG000023 | TRANSISTOR              | 1   |         |
|        | Q580     | B1ABDF000026 | TRANSISTOR              | 1   |         |
|        | Q581     | B1GDCFG00026 | TRANSISTOR              | 1   |         |
|        | Q582     | B1ADCE000012 | TRANSISTOR              | 1   |         |
|        | Q900     | B1GBCFJN0033 | TRANSISTOR              | 1   |         |
|        | Q7601    | B1ADCF000001 | TRANSISTOR              | 1   |         |
|        | QR1      | B1GBCFJJ0051 | TRANSISTOR              | 1   |         |
|        | QR2      | B1GBCFJJ0051 | TRANSISTOR              | 1   |         |
|        | QR4      | B1GBCFJJ0051 | TRANSISTOR              | 1   |         |
|        | QR5      | B1GBCFJJ0051 | TRANSISTOR              | 1   |         |
|        | QR101    | B1GDCFG00026 | 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   |         |

| Safety | Ref. No. | Part No.     | Part Name & Description | Qty | Remarks |
|--------|----------|--------------|-------------------------|-----|---------|
|        | 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   |         |
|        | D607     | B0HCMM000019 | DIODE                   | 1   |         |
|        | D608     | B0HCMM000019 | DIODE                   | 1   |         |
|        | D609     | B0HCMM000019 | DIODE                   | 1   |         |
|        | D610     | 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   |         |
|        |          |              | VARISTOR                |     |         |
|        | 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   |         |
|        | 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   | MFI514S0117  | 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 | 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 | CABLE HOLDER            | 1   |         |
|        | P910     | K1KB06B00038 | 6P CONNECTOR            | 1   |         |

| Safety | Ref. No. | Part No.     | Part Name & Description | Qty | Remarks |
|--------|----------|--------------|-------------------------|-----|---------|
|        |          |              | COILS AND INDUCTORS     |     |         |
|        | 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   |         |
|        | 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 COMBINATION   |     |         |
| ⚠      | Z752     | ERZV10V511CS | ZNR                     | 1   |         |
|        | IR921    | B3RAB0000084 | REMOTE CONTROL SENSOR   | 1   |         |

| Safety | Ref. No. | Part No.     | Part Name & Description | Qty | Remarks |
|--------|----------|--------------|-------------------------|-----|---------|
|        |          |              | PHOTO COUPLER           |     |         |
| △      | PC701    | B3PBA0000402 | PHOTO COUPLER           | 1   |         |
|        |          |              | EARTH TERMINALS         |     |         |
|        | ZJ1      | K4CZ01000027 | TERMINAL                | 1   |         |
|        | ZJ701    | K4CZ01000027 | TERMINAL                | 1   |         |
|        |          |              | OSCILLATORS             |     |         |
|        | X51      | H0A327200097 | CRYSTAL OSCILLATOR      | 1   |         |
|        | X801     | H0A327200097 | CRYSTAL OSCILLATOR      | 1   |         |
|        | X802     | H2B800400005 | CRYSTAL OSCILLATOR      | 1   |         |
|        | X7201    | H2B169500005 | CRYSTAL OSCILLATOR      | 1   |         |
|        |          |              | FUSE                    |     |         |
| △      | F751     | K5D302AQ0003 | FUSE                    | 1   |         |
|        |          |              | FUSE HOLDERS            |     |         |
|        | ZA751    | K3GE1ZZ00001 | FUSE HOLDER             | 1   |         |
|        | ZA752    | K3GE1ZZ00001 | FUSE HOLDER             | 1   |         |
|        |          |              | FL DISPLAY              |     |         |
|        | Z900     | L5ACAYY00029 | LCD DISPLAY             | 1   |         |
|        |          |              | THERMISTORS             |     |         |
| △      | TH701    | D4CAA5R10001 | THERMISTOR              | 1   |         |
| △      | TH702    | D4CC11040013 | THERMISTOR              | 1   |         |
|        |          |              | JACKS                   |     |         |
|        | JK51     | K4ZZ02000103 | JK FM ANT               | 1   |         |
|        | JK52     | K4AC02B00042 | JK AM ANT               | 1   |         |
|        | JK951    | K2HC1YYB0033 | JK AUX                  | 1   |         |
|        | JK952    | K2HC1YYB0033 | JK HEADPHONE            | 1   |         |
| △      | P751     | K2AB2B000007 | AC INLET                | 1   |         |
|        |          |              | CHIP JUMPERS            |     |         |
|        | 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   |         |
|        | PSW1     | ERJ8GEY0R00V | 0 1/4W                  | 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   |         |

| Safety | Ref. No. | Part No.     | Part Name & Description | Qty | Remarks |
|--------|----------|--------------|-------------------------|-----|---------|
|        | W7004    | D0GBR00JA008 | 0 1/16W                 | 1   |         |
|        | W7005    | D0GBR00JA008 | 0 1/16W                 | 1   |         |
|        | W7006    | D0GFR00JA017 | 0 1/10W                 | 1   |         |
|        | W7007    | D0GFR00JA017 | 0 1/10W                 | 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       | D0GB473JA008 | 47K 1/16W               | 1   |         |
|        | R8       | D0GB473JA008 | 47K 1/16W               | 1   |         |
|        | R9       | J0JYB0000013 | INDUCTOR                | 1   |         |
|        | R10      | D0GB473JA008 | 47K 1/16W               | 1   |         |
|        | 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 1/8W               | 1   |         |
|        | R120     | ERJ6GEYJ104V | 100K 1/8W               | 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   |         |

| Safety | Ref. No. | Part No.     | Part Name & Description | Qty | Remarks |
|--------|----------|--------------|-------------------------|-----|---------|
|        | 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 1/8W               | 1   |         |
|        | R261     | ERJ6GEYJ330V | 33 1/8W                 | 1   |         |
|        | R262     | ERJ6GEYJ330V | 33 1/8W                 | 1   |         |
|        | R263     | ERJ6GEYJ104V | 100K 1/8W               | 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 1/8W               | 1   |         |
|        | R461     | ERJ6GEYJ330V | 33 1/8W                 | 1   |         |
|        | R462     | ERJ6GEYJ330V | 33 1/8W                 | 1   |         |
|        | R463     | ERJ6GEYJ104V | 100K 1/8W               | 1   |         |
|        | R464     | ERJ6GEYJ273V | 27K 1/8W                | 1   |         |
|        | R465     | D0GD472JA017 | 4.7K 1/10W              | 1   |         |
|        | R500     | D0GB473JA008 | 47K 1/16W               | 1   |         |
|        | R501     | D0GBR00JA008 | 0 1/16W                 | 1   |         |
|        | R502     | D0GB153JA008 | 15K 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   |         |
|        | R739     | D0GD101JA017 | 100 1/10W               | 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   |         |

| Safety | Ref. No. | Part No.     | Part Name & Description | Qty | Remarks |
|--------|----------|--------------|-------------------------|-----|---------|
|        | 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   |         |
|        | R848     | D0GB102JA008 | 1K 1/16W                | 1   |         |
|        | R850     | D0GB104JA008 | 100K 1/16W              | 1   |         |
|        | R853     | D0GB101JA008 | 100 1/16W               | 1   |         |
|        | 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     | D0GB822JA008 | 8.2K 1/16W              | 1   |         |
|        | 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     | 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   |         |

| Safety | Ref. No. | Part No.     | Part Name & Description | Qty | Remarks |
|--------|----------|--------------|-------------------------|-----|---------|
|        | 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     | ERJ6GEYJ561V | 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    | J0JFC0000006 | INDUCTOR                | 1   |         |
|        | R1012    | D0GBR00JA008 | 0 1/16W                 | 1   |         |
|        | R1013    | D0GA102JA023 | 1K 1/16W                | 1   |         |
|        | 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   |         |

| Safety | Ref. No. | Part No.     | Part Name & Description | Qty | Remarks |
|--------|----------|--------------|-------------------------|-----|---------|
|        | 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   |         |
|        | K1       | D0GBR00JA008 | 0 1/16W                 | 1   |         |
|        | K200     | D0GDR00JA017 | 0 1/10W                 | 1   |         |
|        |          |              |                         |     |         |
|        |          |              | CAPACITORS              |     |         |
|        |          |              |                         |     |         |
|        | C1       | F1H1C105A097 | 1uF 16V                 | 1   |         |
|        | C2       | F1H1C105A097 | 1uF 16V                 | 1   |         |
|        | C3       | F1H1C105A097 | 1uF 16V                 | 1   |         |
|        | C4       | F1H1C105A097 | 1uF 16V                 | 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      | F2A1C471A019 | 470uF 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   |         |
|        | 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   |         |

| Safety | Ref. No. | Part No.     | Part Name & Description | Qty | Remarks |
|--------|----------|--------------|-------------------------|-----|---------|
|        | 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     | F1H1C105A097 | 1uF 16V                 | 1   |         |
|        | C306     | F1H1C104A042 | 0.1uF 16V               | 1   |         |
|        | C350     | F1J1E4750002 | 4.7uF 25V               | 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   |         |
|        | 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     | F2A1C471A019 | 470uF 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     | F1H1C104A042 | 0.1uF 16V               | 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   |         |

| Safety | Ref. No. | Part No.     | Part Name & Description | Qty | Remarks |
|--------|----------|--------------|-------------------------|-----|---------|
|        | C705     | ECQE6103KF   | 0.01uF 630V             | 1   |         |
|        | C706     | F2A2G6800007 | 68uF 400V               | 1   |         |
|        | C709     | F1H1H104A013 | 0.1uF 50V               | 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     | F2A1A471A161 | 470uF 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     | F1H1C105A097 | 1uF 16V                 | 1   |         |
|        | C827     | F2A1A220A149 | 22uF 10V                | 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   |         |
|        | 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    | F1H1H104A783 | 0.1uF 50V               | 1   |         |
|        | C2823    | F1H1H470A004 | 47uF 50V                | 1   |         |
|        | C2824    | F1H1H470A004 | 47uF 50V                | 1   |         |
|        | C2825    | F1H1A105A025 | 1uF 10V                 | 1   |         |
|        | C2826    | F1H1H104A783 | 0.1uF 50V               | 1   |         |
|        | C2827    | F1H1H104A783 | 0.1uF 50V               | 1   |         |
|        | C2828    | F1J1A106A043 | 10uF 10V                | 1   |         |
|        | C7102    | F1H1A47A025  | 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   |         |

| Safety | Ref. No. | Part No.     | Part Name & Description | Qty | Remarks |
|--------|----------|--------------|-------------------------|-----|---------|
|        | 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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