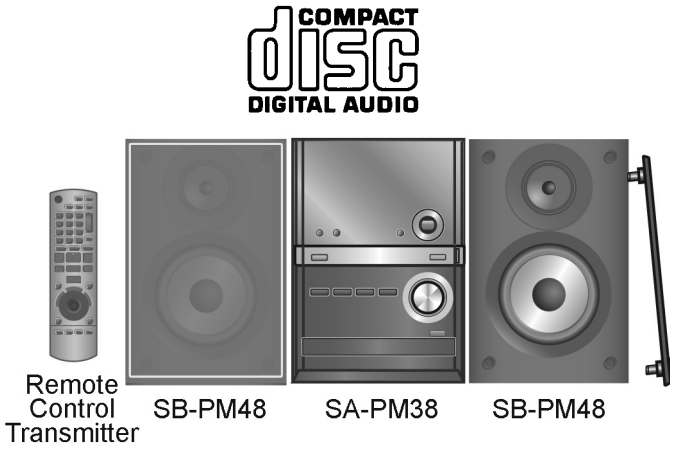
PSG0903001CE
A6

Service Manual

CD Stereo System

Model No. SA-PM38PP

Product Color: (K)...Black Type



Notes: This model's CD mechanism unit is DLS6C. Please refer to the Original Service Manual (Order No. MD0803034CE) for this mechanism.

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

1.1.2. Leakage Current Hot Check

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a 1.5kΩ, 10 watts resistor, in parallel with a 0.15μF capacitors, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure 1.
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.

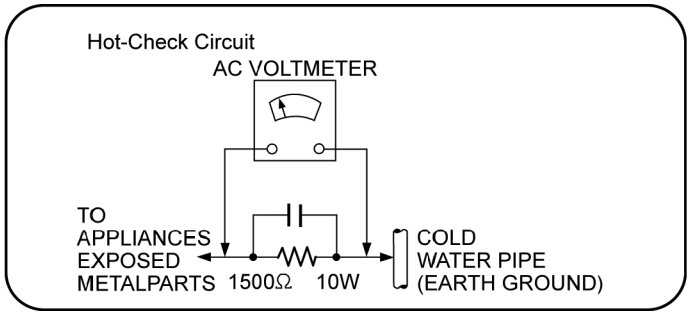


Figure. 1

1.2. Before Repair and Adjustment

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 ~150 mA.

1.3. Protection Circuitry

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

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

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

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

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

1.4. 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
⚠	301	RAEX0190Z-V	TRV UNIT (W/O SERVO P.C.B.)	(RTL)
⚠	A2	K2CB2CB00021	AC CORD	
⚠	A3	RQTX0192-P	O/I BOOK	
⚠	A7	J0KG00000037	AC CLAMP FILTER	
⚠	PCB7	REPX0708F	TRANSFORMER P.C.B	(RTL)
⚠	L5901	ELF15N035AN	LINE FILTER	
⚠	T5901	G4CYBYY00025	MAIN TRANSFORMER	
⚠	T5902	G4C2AAD00004	SUB TRANSFORMER	
⚠	Z5901	ERZVA5Z471	ZENER	
⚠	F5901	K5D162APA008	FUSE	
⚠	RL5901	K6B1AEA00003	RELAY	
⚠	FP5901	K5G502AA0002	FUSE PROTECTOR	
⚠	JK5901	K2AB2B000007	AC INLET	

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-equiped 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 equiped 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).

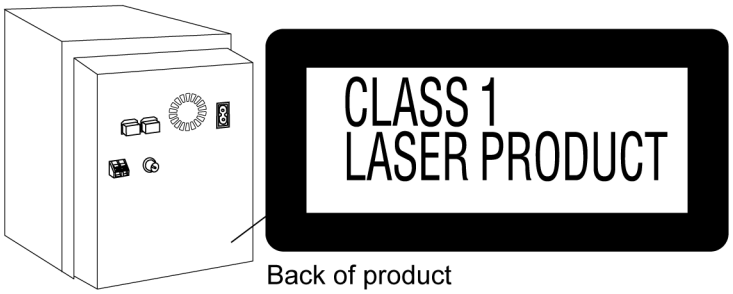
2.2. Precaution of Laser Diode

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.

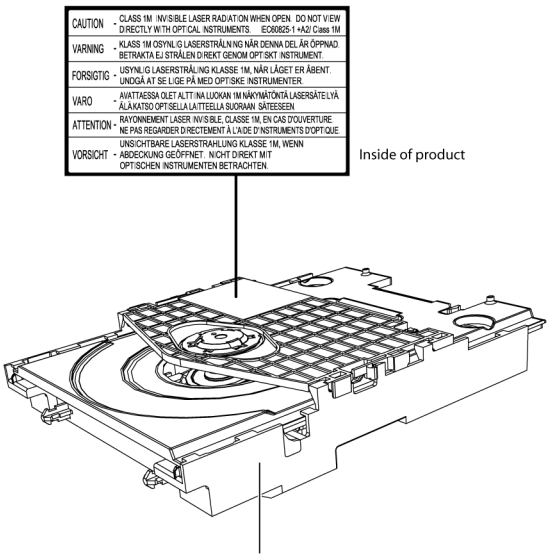
Caution:

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 μW/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.



Back of product



CD Mechanism Unit (DLS6C)

2.3. Service caution based on Legal restrictions

2.3.1. General description about Lead Free Solder (PbF)

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

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

Definition of PCB Lead Free Solder being used

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

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

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

Recommended Lead Free Solder (Service Parts Route.)

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

Note

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

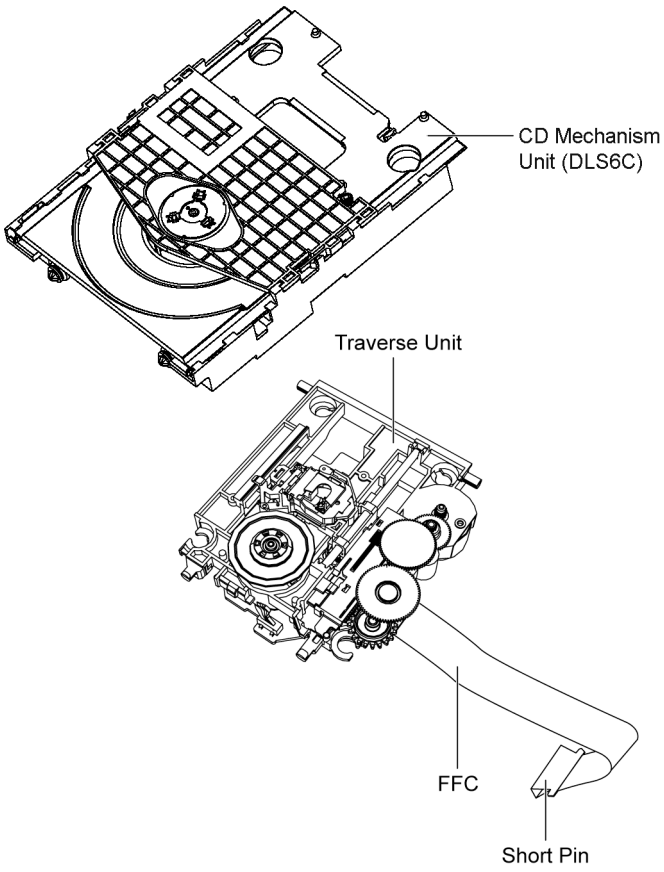
2.4. Handling Precaution for Traverse Unit

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

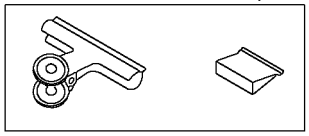
2.4.1. Cautions to Be Taken in Handling the Optical Pickup Unit

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

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



[Caution]
Ground the cable with a clip or a short pin.



Clip or Short Pin

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).

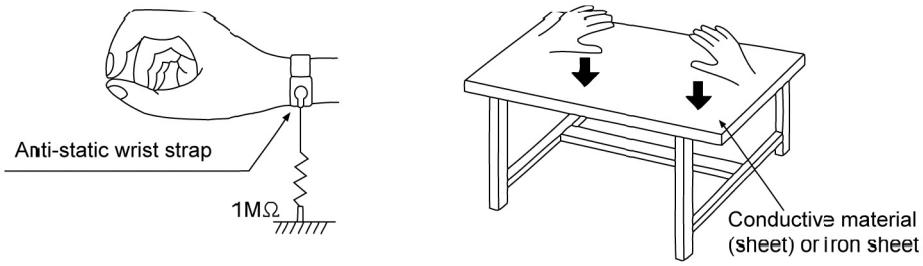


Figure 2

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.

1. **CD Mechanism Unit:**
   - This model uses CD Mechanism Unit (DLS6C).
   - This service manual does not contain the following information on CD Mechanism Unit (DLS6C).
     - CD Mechanism Unit P.C.B..
     - Parts List for individual parts of CD Mechanism Unit (DLS6C).
     - Exploded View and Part List for individual parts of CD Mechanism Unit (DLS6C).
       Please refer to original service manual (Order No. MD0803034CE).

2. **Micro-processor:**
   - Micro-processor IC, (IC800) is supplied as assembled part (RFKWMPM38EG).

4 Specifications

■ Amplifier Section	
RMS Output Power Stereo Mode	
Front Ch (both ch driven)	20 W per channel (4 Ω), 1 kHz, 10% THD
FTC Output Power Stereo Mode	
Front Ch (both ch driven)	15 W per channel (4 Ω), 60 Hz to 20 kHz, 10% THD
Phone jack	
Terminal	Stereo, 3.5 mm (1/8”)
■ Tuner Section	
Preset station	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 Ω (unbalanced)
Amplitude Modulation (AM)	
Frequency range	520 kHz to 1710 kHz (10 kHz step)
■ USB Section	
Supported audio file format	MP3 (*.mp3)
Maximum port power	500 mA
■ CD Section	
Disc played [8 cm (3”) or 12 cm (5”)]	
(1) CD-Audio (CD-DA)	
(2) CD-R/RW (CD-DA, MP3)	
(3) MP3	
Pickup	
Wavelength	785 nm
Laser power	CLASS I (CD)
Audio output (Disc)	
Number of channels	FL, FR, 2 channel
■ General	
Power supply	AC 120 V, 60 Hz
Power consumption	70 W
Dimensions (W x H x D)	153 mm x 226 mm x 292 mm (6 1/32” x 8 29/32” x 11 1/2”)
Mass	2.5 kg (5.5 lbs.)
Operating temperature range	0°C to +40°C (+32°F to +104°F)
Operating humidity range	35% to 80 % RH (no condensation)

Power consumption in standby mode 0.35 W (approx)

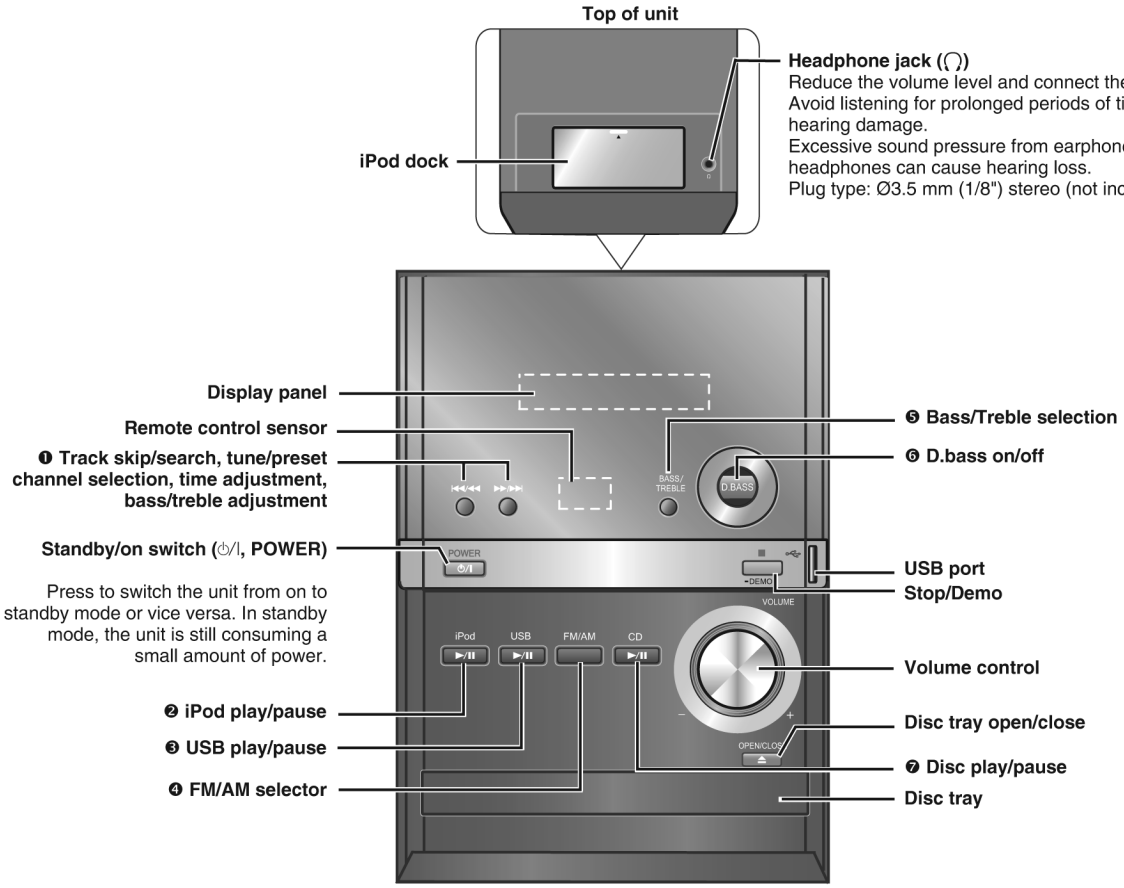
Notes :

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

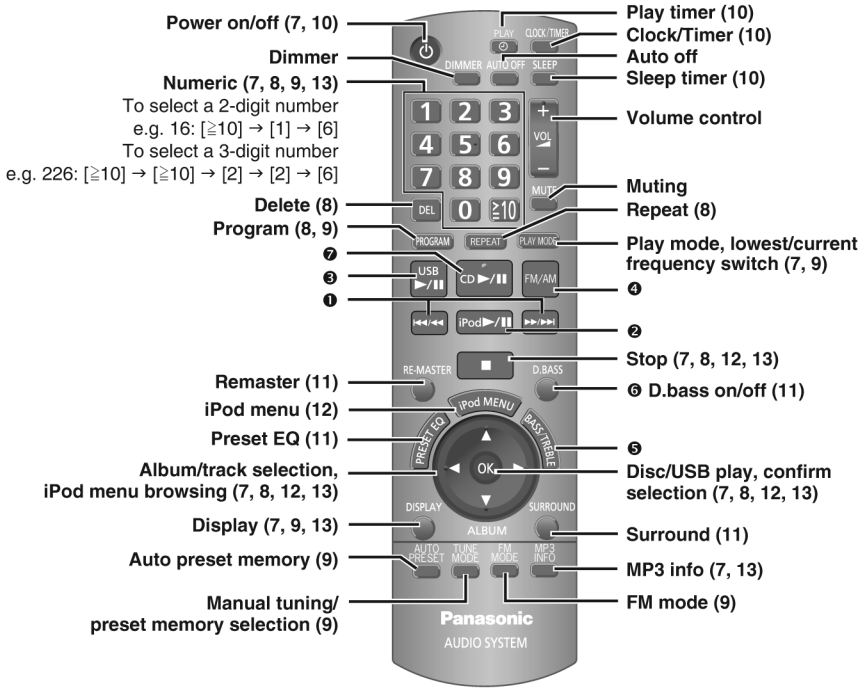
■ System : SC-PM38PP-K	Music center: SA-PM38PP-K Speaker: SB-PM48EG-KC

5 Location of Controls and Components

5.1. Main Unit Key Button Operations



5.2. Remote Control Key Button Operations



AUTO OFF

This function allows you to turn off the unit in **disc** or **USB** mode only after the unit is left unused for 10 minutes.
The setting is maintained even if the unit is turned off.

DIMMER

Dims the display panel.

MUTE

Mutes the sound.

- Press the button to activate.
- Press again to cancel.

6 Operating Instructions

6.1. Disc Information

Note

This unit can play MP3 files and CD-DA format audio CD-R/RW that have been finalized.

CD

- This unit can access up to 99 tracks.
- It may not be able to play some CD-R/RW depending on the condition of the recording.
- Do not use irregularly shaped discs.
- Do not use discs with labels and stickers that are coming off or with adhesive exuding from under labels and stickers.
- Do not attach extra labels or stickers on the disc.
- Do not write anything on the disc.

Using DualDiscs

The “CD” sides of DualDiscs do not meet the CD-DA standard so it may not be possible to play them on this unit.

MP3

Files are treated as tracks and folders are treated as albums.

- This unit can access up to 999 tracks, 255 albums and 20 sessions.
- Files must have the extension: “.MP3” or “.mp3”
- Disc must conform to ISO9660 level 1 or 2 (except for extended formats).
- To play in a certain order, prefix the folder and file names with the 3-digit numbers in the order you want to play them.

7 Self diagnosis and special mode setting

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

7.1. Service Mode Summary Table

The service modes can be activated by pressing various button combination on the main unit and remote control unit.
Below is the summary for the various modes for checking:

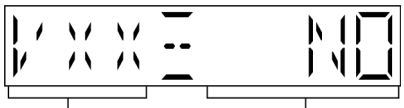
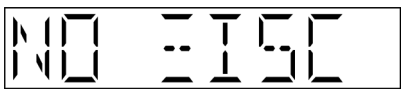
Player buttons	Remote control unit buttons	Application	Note
■, -DEMO	[4], [7]	To Enter into Doctor Mode for various checking	(Refer to the section “7.2.1 Service Mode Table 1.)

Player buttons	Remote control unit buttons	Mode Name	Note
Note : Applicable in Doctor Mode	[DIMMER]	FL Display Test	(Refer to the section “7.2.2 service mode Table 2 for more information.)
	[7]	VOLUME setting (50dB)	(Refer to the section “7.2.2 service mode Table 2 for more information.)
	[8]	VOLUME setting (29dB)	(Refer to the section “7.2.2 service mode Table 2 for more information.)
	[9]	VOLUME setting (0dB)	(Refer to the section “7.2.2 service mode Table 2 for more information.)
	[≧10], [1], [1]	CD Loading Test Mode (DLS6C)	(Refer to the section “7.2.2 service mode Table 2 for more information.)
	[≧10], [1], [2]	CD Traverse Unit Test Mode (DLS6C)	(Refer to the section “7.2.2 service mode Table 2 for more information.)
	[≧10], [1], [3]	CD Combination Test Mode (DLS6C)	(Refer to the section “7.2.2 service mode Table 2 for more information.)
	[SLEEP]	Cold Start	(Refer to the section “7.2.2 service mode Table 2 for more information.)
	[2]	USB Test Mode	(Refer to the section “7.2.2 service mode Table 2 for more information.)

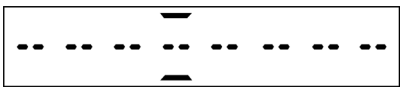
7.2. Service Mode Table

Below is the various special modes for checking:-

7.2.1. Service Mode Table 1

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

7.2.2. Service Mode Table 2

Item		FL Display	Key Operation
Mode Name	Description		Front Key
FL Display Test	To check the FL segments display (All segments will light up)		In Doctor Mode: 1. Press [DIMMER] button on remote control. To cancel, press [0] button on remote control. To exit Doctor Mode, press **[⏻/I]** button on main unit or remote control.
Volume Setting	To check for volume setting during this mode, Bass & treble is set to 0dB & EQ is switch off.		In Doctor Mode: 1. Press [7] button on remote control. To exit Doctor Mode, press **[⏻/I]** button on main unit or remote control.
			In Doctor Mode: 2. Press [8] button on remote control. To exit Doctor Mode, press **[⏻/I]** button on main unit or remote control.
			In Doctor Mode: 3. Press [9] button on remote control. To exit Doctor Mode, press **[⏻/I]** button on main unit or remote control.
CD Loading Test Mode (DLS6C)	To determine the reliability of CD Loading unit. To check for the Open/Close operation for the CD loading unit. It fails when there is abnormality in opening or closing.	 The counter will increment by 1 untill reach 99999999 	In Doctor Mode: 1. Press [≧10], [1], [1] button on remote control. To cancel, press [0] button on remote control. To exit Doctor Mode, press **[⏻/I]** button on main unit or remote control.
CD Traverse Unit Test Mode (DLS6C)	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.	 The counter will increment by 1 untill reach 99999999 	In Doctor Mode: 1. Press [≧10], [1], [2] button on remote control. To cancel, press [0] button on remote control. To exit Doctor Mode, press **[⏻/I]** button on main unit or remote control.
CD Combination Test Mode (DLS6C)	A combination of CD loading & traverse unit test.	 The counter will increment by 1 untill reach 99999999 	In Doctor Mode: 1. Press [≧10], [1], [3] button on remote control. To cancel, press [0] button on remote control. To exit Doctor Mode, press **[⏻/I]** button on main unit or remote control.
Cold Start	To activate cold start upon next AC power up.		In Doctor Mode: 1. Press [SLEEP] button on remote control. To exit Doctor Mode, press **[⏻/I]** button on main unit or remote control.

Item		FL Display	Key Operation
Mode Name	**Description**		**Front Key**
USB Test Mode	To Inspect USB Testing.	 The display will appear after 3s, 	In Doctor Mode: 1. Select to USB mode. 2. Press [2] button on remote control. To exit Doctor Mode, press **[⏻/I]** button on main unit or remote control.

7.3. Error Code Table

Self-Diagnosis Function provides information on any problems occuring for the unit and its respective components by displaying error codes. Thesed error code such as U**, H** and F** are stored in memory and held unless it is cleared.
The error code is automatically display after entering into self-diagnostic mode.

Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
H15	CD Open SW Abnormal	During normal operation CD OPEN SW On fail to be detected with 4 sec. Error No. shall be clear by force or during cold start.		For CD Mechanism Unit (DLS6C). Press [■, -DEMO] on main unit for next error.
F15	CD REST SW Abnormal	CD traverse position intial setting operation failsafe counter (1000 ms) waiting for REST SW to turn on. Error No. shall be clear by force or during cold start.		For CD Mechanism Unit (DLS6C). Press [■, -DEMO] on main unit for next error.
F26	Communication between CD servo LSI and micro-p abnormal.	CD function DTMS command, after system setting, If SENSE = 'L' cannot be detected. Memory shall contain F26 code. After Power on, CD function shall continue, error display shall be "NO DISC". Error No. shall be clear by force or cold start.		For CD Mechanism Unit (DLS6C). Press [■, -DEMO] on main unit for next error.
F76	Power Amp IC output abnormal	DCDET1 = L (NG)		For power. Press [■, -DEMO] on main unit for next error.

8 Troubleshooting Guide

Symptom	Checking items	Repair Items	Remark
No display after power-up	• Check AC supply to unit. • Check fuse, F5901. • Check +3.3V supply to micro-processor, IC800 (Pin 17,89) • Check +Vref to micro-processor, IC800 (Pin 100) • Check –VP supply to FL display and VDD/-VP supply to FL Driver IC (Pin 43/30) • Check oscillator circuit at X801/X802	Change defective parts if found any abnormality: • F5901 • L801 • IC800 • L800 • IC800 • FL900 • IC900 • L900/D901 • X801/X802	Main / Transformer P.C.B
No CD operation	• Check +3.3V supply to Servo-Processor IC • Check Pin 56, 59 of Servo-Processor IC for output • Check +7.5V supply to IC7002 • Check Traverse & spindle motor operation. • Check output for traverse/spindle at Pin 21,23 of IC7001 • Check Pin 80, 81 of IC7001 for the oscillator clock circuit (X7201)	Change defective parts if found any abnormality: • IC7001 • IC7002 • Traverse assembly • X7201	CD Servo P.C.B
No audio sound output.	• Check speaker connection to main unit. • Check solderability at speaker jack, JK5101. • Check output of Power IC, IC5101 (Pin 2,4,10,12) • Check supply VCC to IC5101 • Check FP5901 for open circuit. • Check output of ASP IC, IC200 (Pin 17,22) • Check supply voltage +9V to ASPC IC, IC200 • Check pin 64 of IC800 (ASP_CLK) • Check pin 9 of Power IC (Muting always ‘ON’ • Check pin 90 of IC800 (Muting always ‘ON’)	Change defective parts if found any abnormality: • IC5101 • FP5901 • IC200 • IC800 • JK5101	Main / Power P.C.B
No headphone output	• Check solderability of JK950 • Check connection between Main P.C.B & Headphone P.C.B • Check Q761 & Q762 (Muting always ‘ON’) • Check Pin 5 of IC800 (Muting always ‘ON’) • Check Pin 1,7 of IC700 • Check output of ASP IC, IC200 (Pin 17,22) • Check supply voltage +9V to ASPC IC, IC200	Change defective parts if found any abnormality: • JK950 • L950,L952 • Q761 • IC700 • IC200	Main / Headphone P.C.B

9 Service Fixture & Tools

Prepare service tools before process service position.

Service Tools		Remarks
Main P.C.B. (CN901) - Panel P.C.B. (CN900)	REEX1022 (11P FFC)	(RTL)

10 Disassembly and Assembly Instructions

"ATTENTION SERVICER"
Be careful when disassembling and servicing.
Some chassis components may have sharp edges

Special Note:

1. This section describes the disassembly procedures for all the major printed circuit boards and main components.
2. Before the disassembly process was carried out, do take special note that all safety precautions are to be carried out. (Ensure that no AC power supply is connected during disassembling.)
3. For assembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.
4. Do take note of the locators on each printed circuit board during reassembling procedures.
5. The Switch Regulator IC may have high temperature after prolonged use.
6. Use caution when removing the top cabinet and avoid touching heat sinks located in the unit.

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

7. Select items from the following index when checks or replacement are required.

- **Disassembly of Top Cabinet Assembly**
- **Disassembly of Headphone P.C.B.**
- **Disassembly of iPod P.C.B.**
- **Disassembly of Front Panel Assembly**
- **Disassembly of USB P.C.B.**
- **Disassembly of Panel P.C.B.**
- **Disassembly of FL Window**
- **Disassembly of Centre Ornament**
- **Disassembly of CD Lid**
- **Disassembly of CD Mechanism Unit (DLS6C)**
- **Disassembly of Power P.C.B.**
- **Replacement of Power Amp IC (IC5101)**
- **Disassembly of Main P.C.B.**
- **Disassembly of Fan Unit**
- **Disassembly of Transformer P.C.B.**
- **Replacement of Transistor (Q5901)**
- **Disassembly of CD Servo P.C.B.**

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

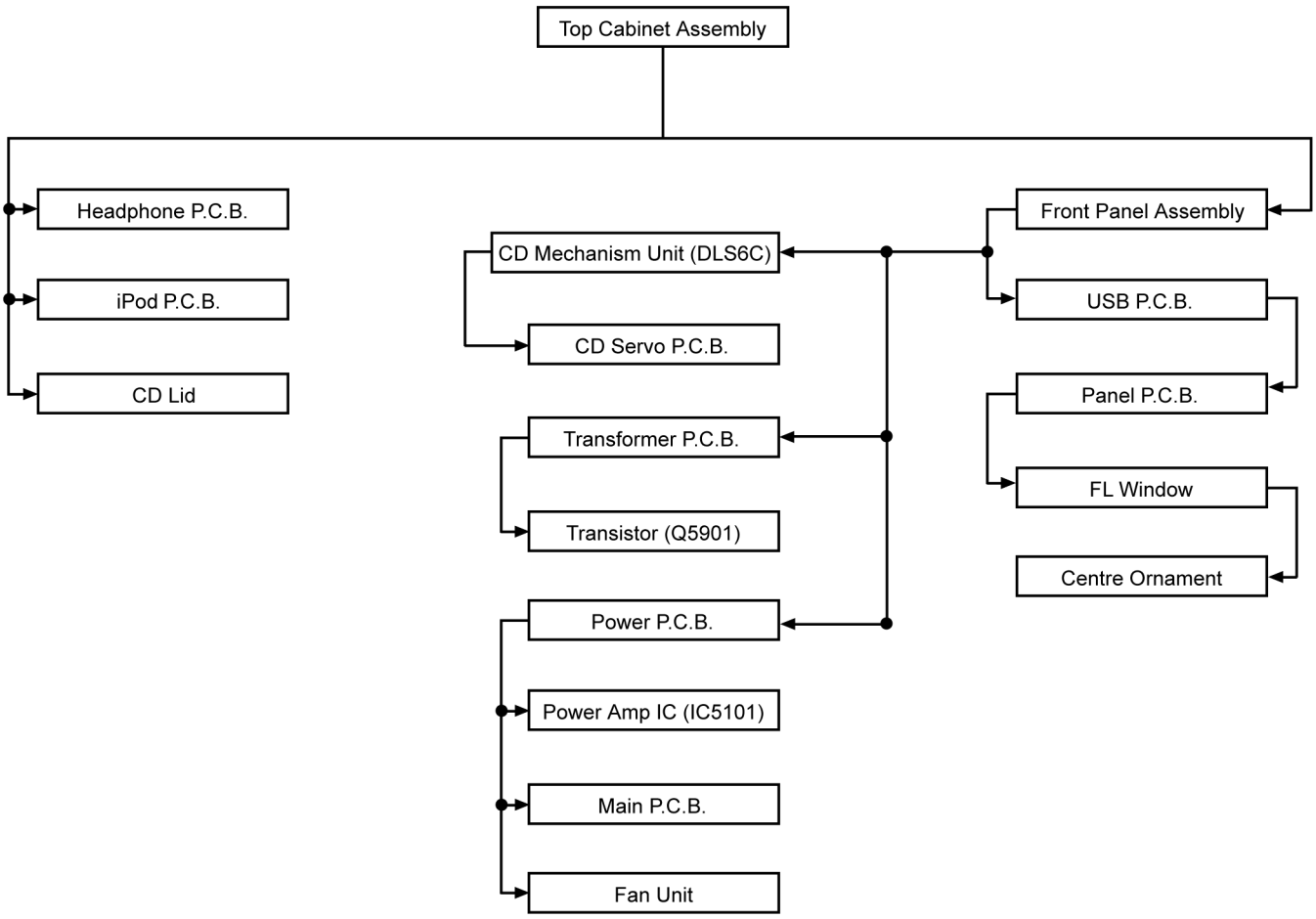
Below shown is part no. of different screw types used:

ⓐ : XTB3+10JFJ
ⓑ : XTW3+10SFJK
ⓒ : RHD26046-L
ⓓ : RHDX03001
ⓔ : VHD1224-1
ⓕ : RHDC0023
ⓖ : XTN2+6GFJ

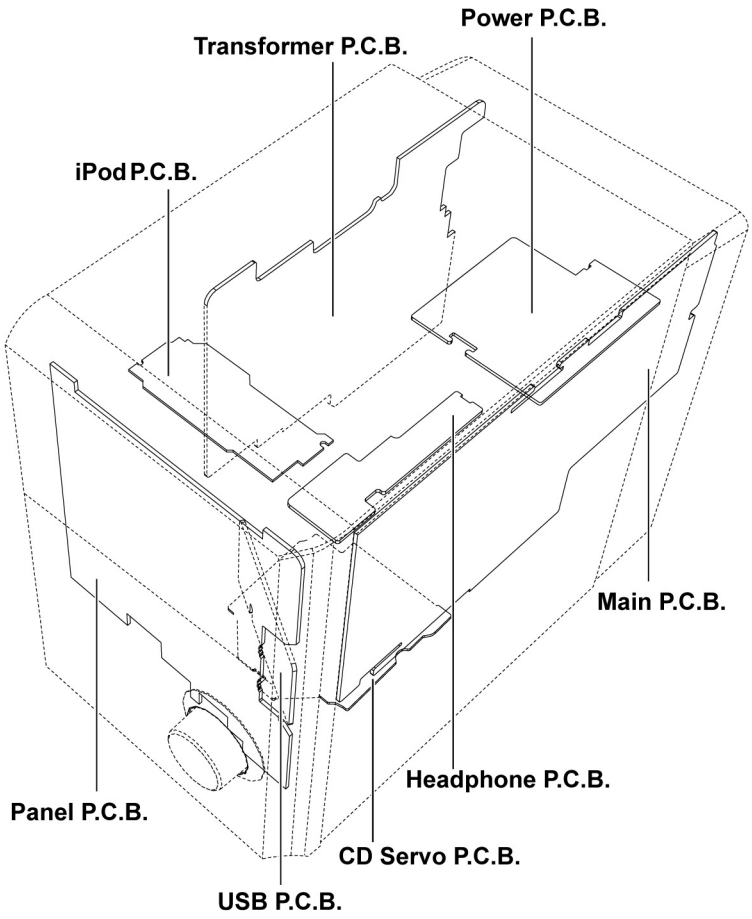
10.1. Disassembly flow chart

The following chart is the procedure for disassembling the casing and inside parts for internal inspection when carrying out the servicing.

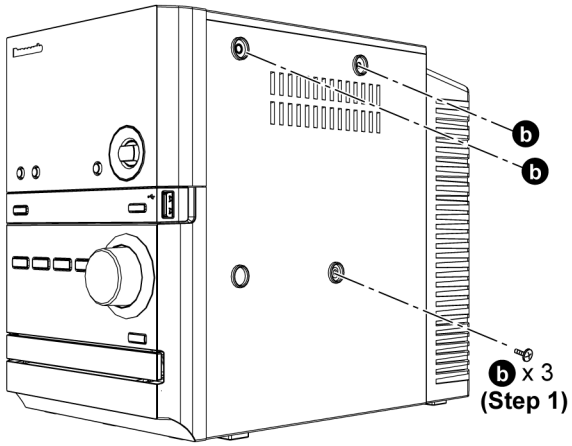
To assemble the unit, reverse the steps shown in the chart below.



10.2. Main Parts Location Diagram

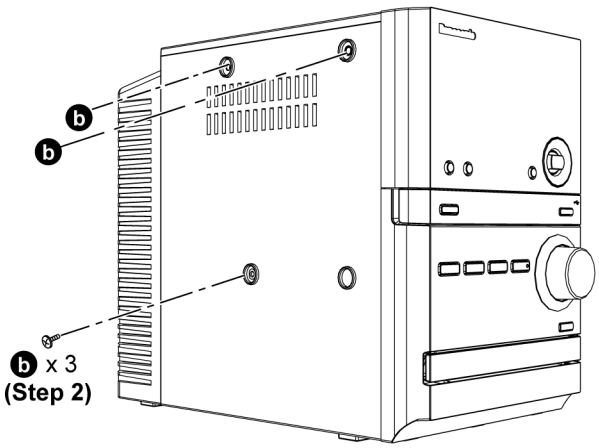


10.3. Disassembly of Top Cabinet Assembly



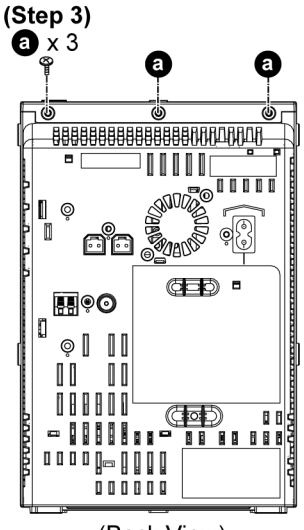
(Side View)

Step 1 : Remove 3 screws.



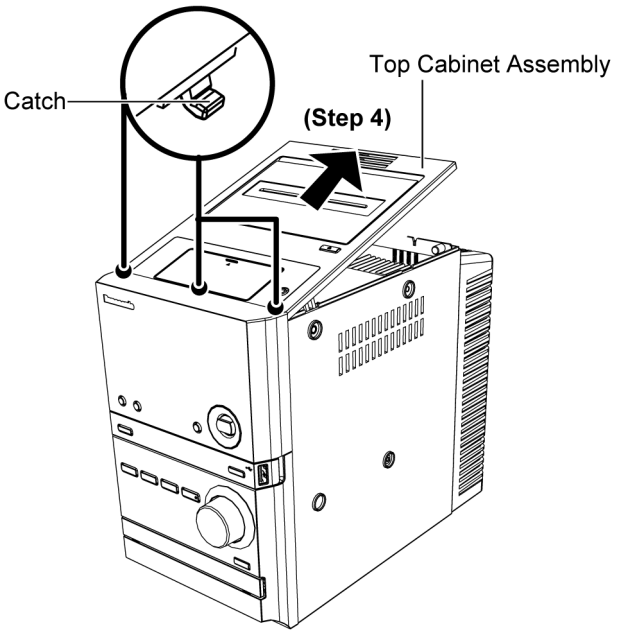
(Side View)

Step 2 : Remove 3 screws.

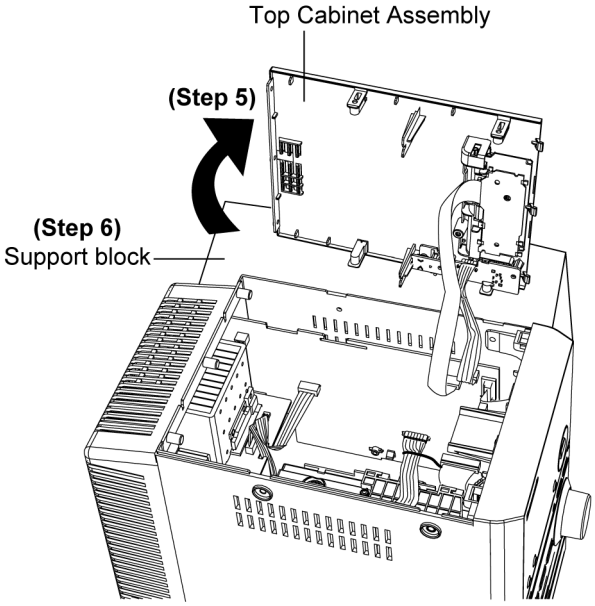


(Back View)

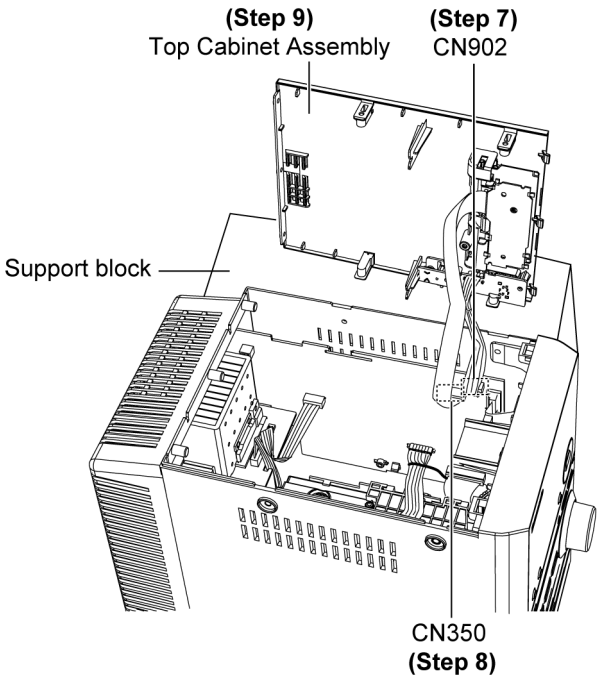
Step 3 : Remove 3 screws.



Step 4 : Lift the Top Cabinet Assembly as arrow shown to release 3 catches.



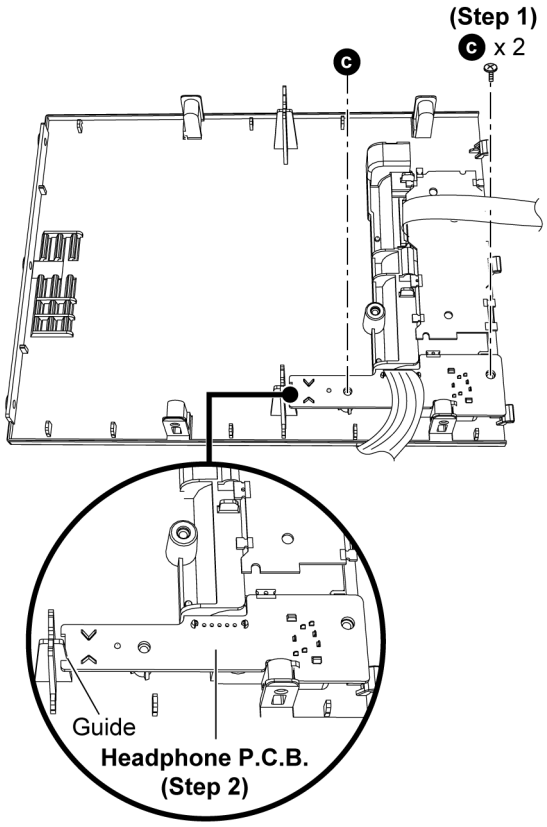
Step 5 : Upset the Top Cabinet Assembly as arrow shown.
Step 6 : Place a support block underneath the Top Cabinet Assembly.



Step 7 : Detach 5P cable at connector (CN902) on Main P.C.B..
Step 8 : Detach 14P FFC at connector (CN350) on Main P.C.B..
Step 9 : Remove Top Cabinet Assembly.

10.4. Disassembly of Headphone P.C.B.

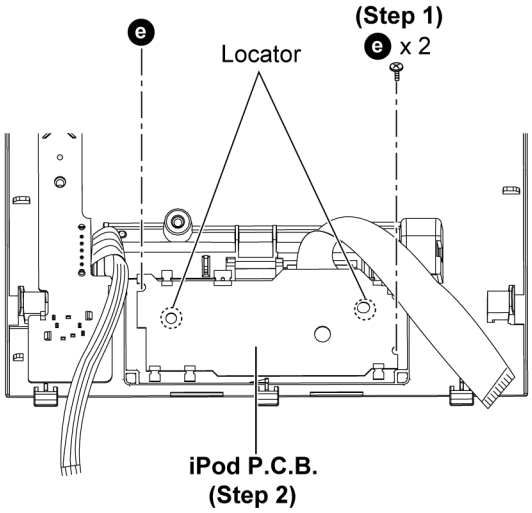
• Follow the (Step 1) - (Step 9) of item 10.3.



Step 1 : Remove 2 screws.
Step 2 : Release guide and remove Headphone P.C.B..

10.5. Disassembly of iPod P.C.B.

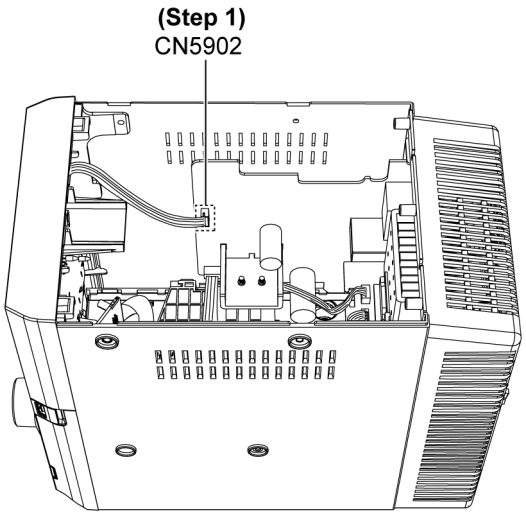
• Follow the (Step 1) - (Step 9) of item 10.3.



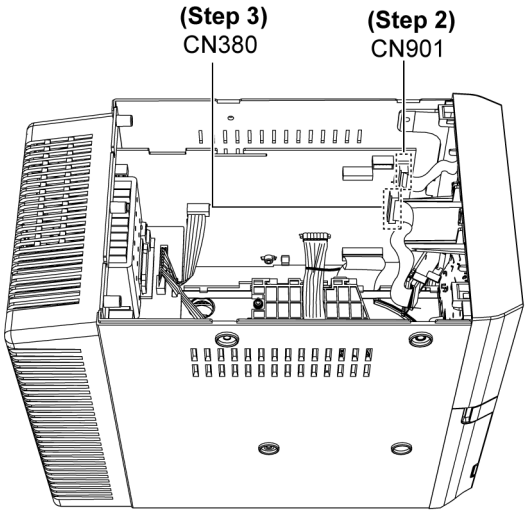
Step 1 : Remove 2 screws.
Step 2 : Remove iPod P.C.B..
Caution : Ensure the iPod P.C.B. is seated properly on the locator after assembled.

10.6. Disassembly of Front Panel Assembly

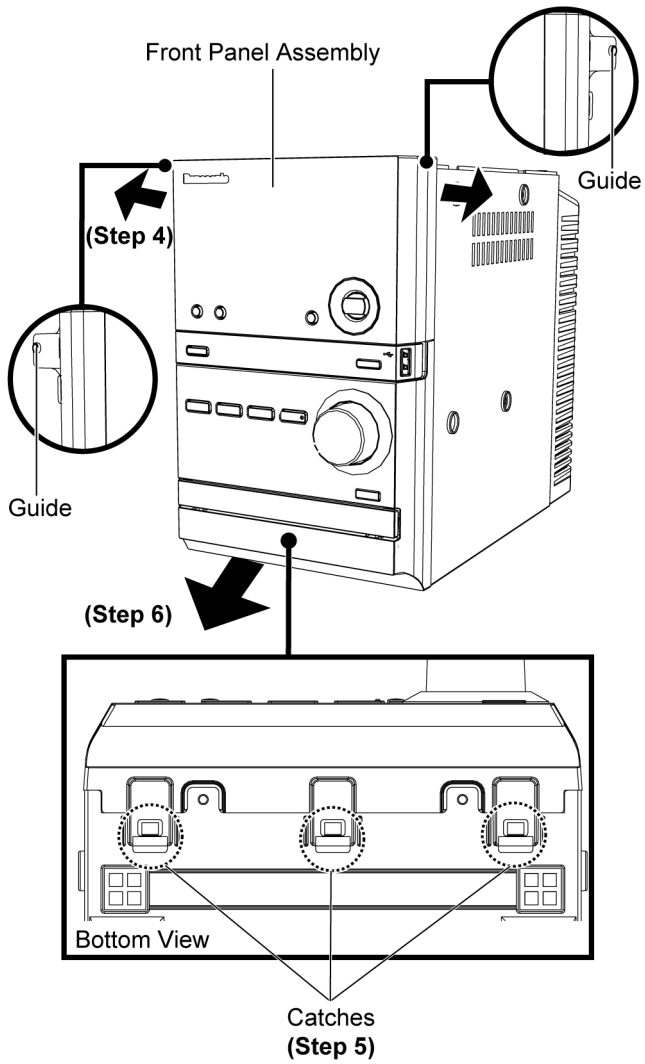
• Follow the (Step 1) - (Step 9) of item 10.3.



Step 1 : Detach 4P cable at connector (CN5902) on Transformer P.C.B..



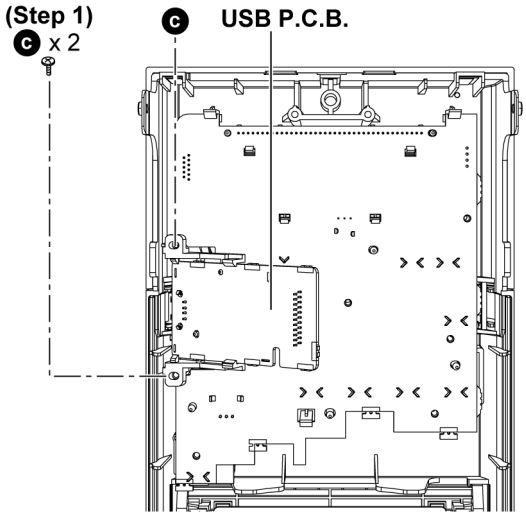
Step 2 : Detach 11P FFC at connector (CN901) on Main P.C.B..
Step 3 : Detach 22P FFC at connector (CN380) on Main P.C.B..



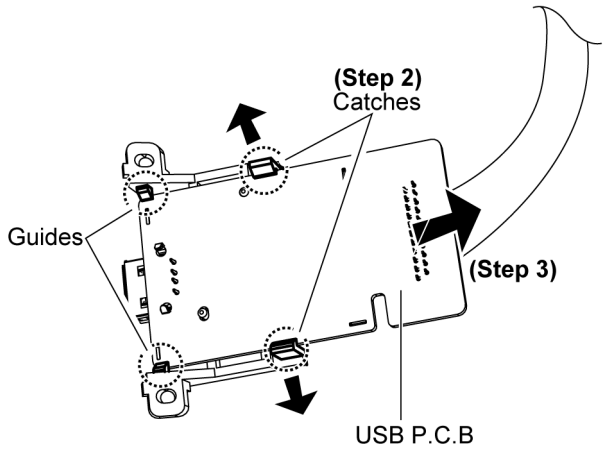
Step 4 : Release both guides.
Step 5 : Release 3 Catches from the bottom.
Step 6 : Remove the Front Panel Assembly.
Caution : Do not attempt to exert strong force when detaching the front panel assembly.

10.7. Disassembly of USB P.C.B.

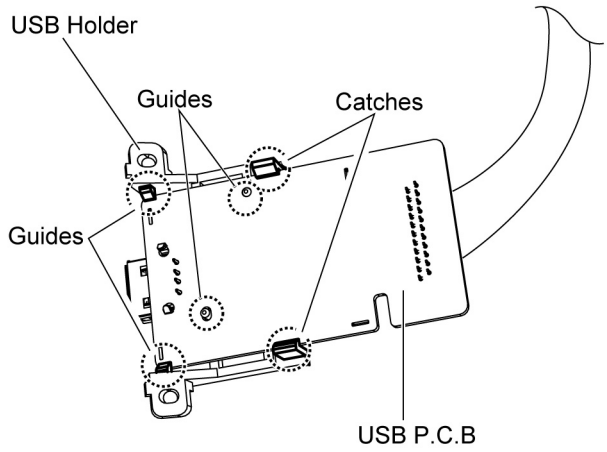
- Follow the (Step 1) - (Step 9) of item 10.3.
- Follow the (Step 1) - (Step 6) of item 10.6.



Step 1 : Remove 2 screws.



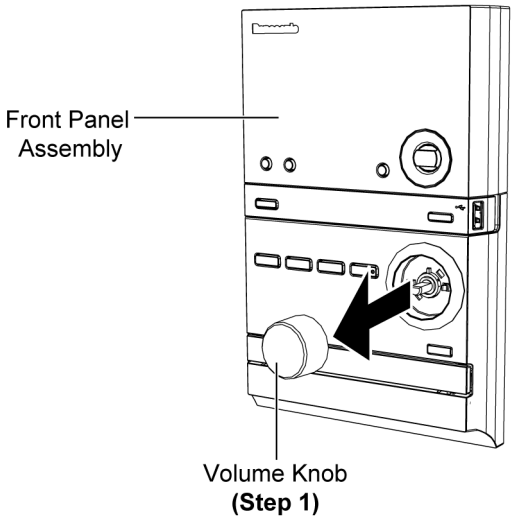
Step 2 : Release both catches as arrows shown.
Step 3 : Detach the USB P.C.B as arrow shown to release from both guides.



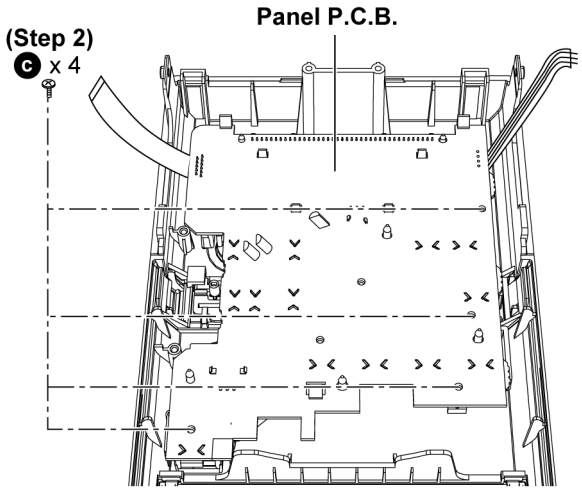
Caution : Ensure that the USB P.C.B. is firmly catched and properly seated on the guides during assembly of the USB P.C.B..

10.8. Disassembly of Panel P.C.B.

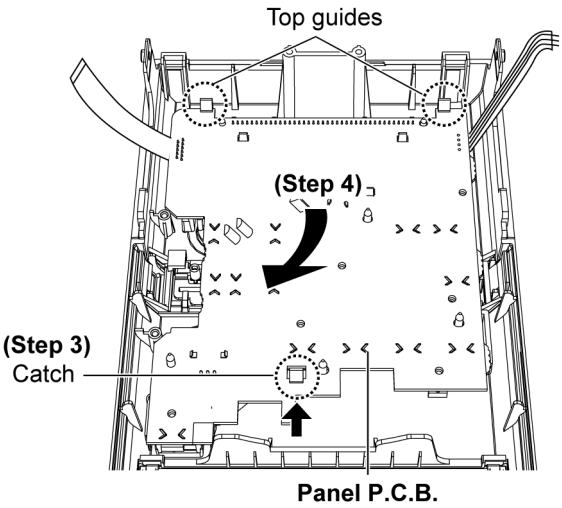
- Follow the (Step 1) - (Step 9) of item 10.3.
- Follow the (Step 1) - (Step 6) of item 10.6.
- Follow the (Step 1) - (Step 3) of item 10.7.



Step 1 : Remove Volume Knob.



Step 2 : Remove 4 screws.



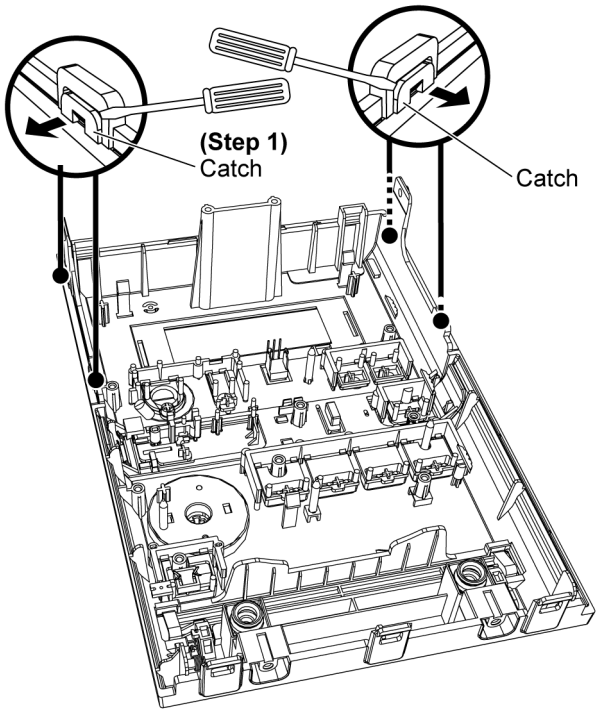
Step 3 : Release the catch

Step 4 : Remove the Panel P.C.B. as arrow shown.

Caution : During assembly ensure that Panel P.C.B. are slot under the top guides. A 'click' sound will be heard when fully catched.

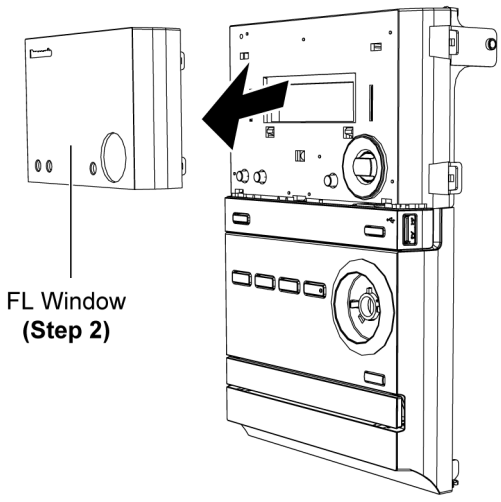
10.9. Disassembly of FL Window

- Follow the (Step 1) - (Step 9) of item 10.3.
- Follow the (Step 1) - (Step 6) of item 10.6.
- Follow the (Step 1) - (Step 3) of item 10.7.
- Follow the (Step 1) - (Step 4) of item 10.8.



Step 1 : Release all catches by pushing the edge of the catches as arrows shown.

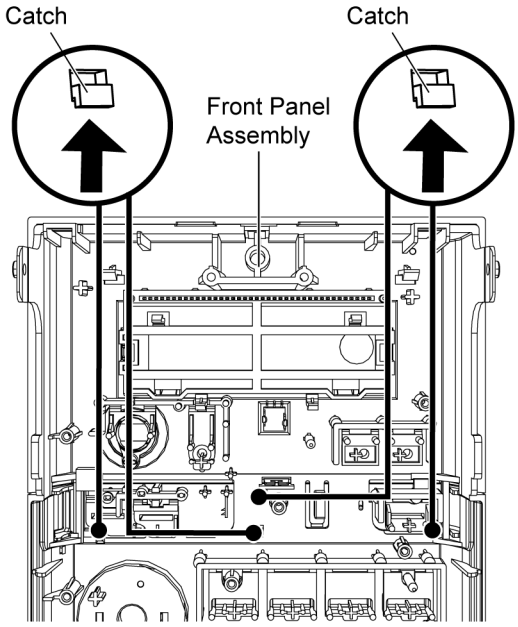
Caution : Do not apply strong force in releasing the catches to avoid damage to the Front Panel Assembly & FL Window.



Step 2 : Remove FL Window.

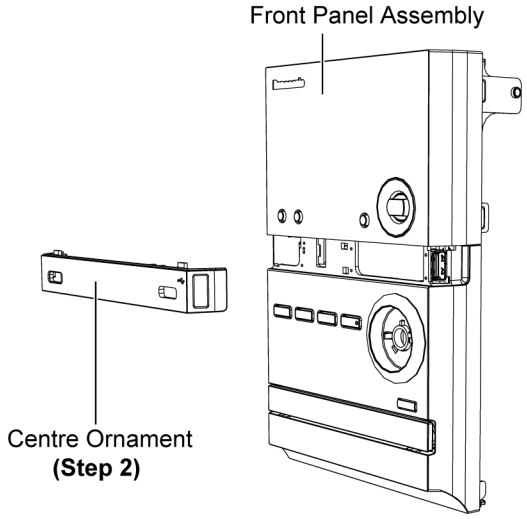
10.10. Disassembly of Centre Ornament

- Follow the (Step 1) - (Step 9) of item 10.3.
- Follow the (Step 1) - (Step 6) of item 10.6.
- Follow the (Step 1) - (Step 3) of item 10.7.
- Follow the (Step 1) - (Step 4) of item 10.8.
- Follow the (Step 1) - (Step 2) of item 10.9.



Step 1 : Release 4 catches as arrows shown.

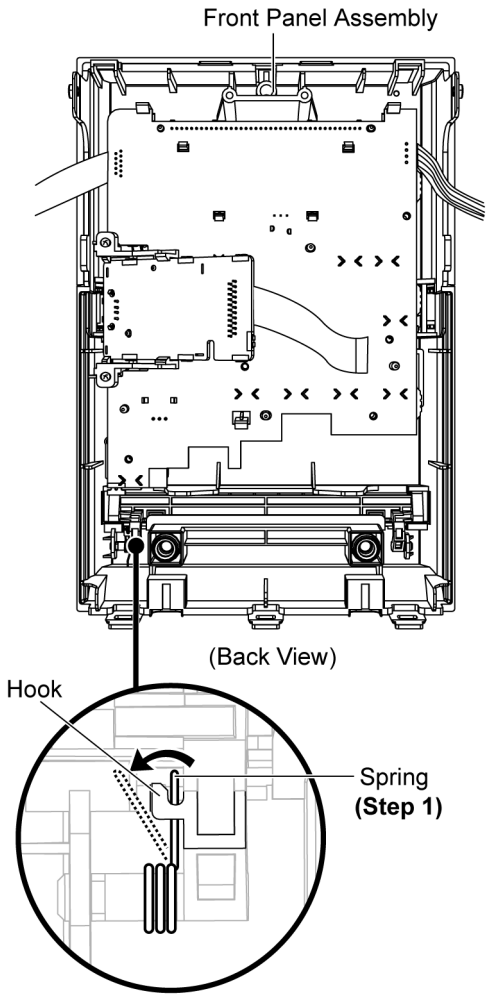
Caution : During assembly ensure that centre ornament are properly catched to the Front Panel Assembly.



Step 2 : Remove Centre Ornament.

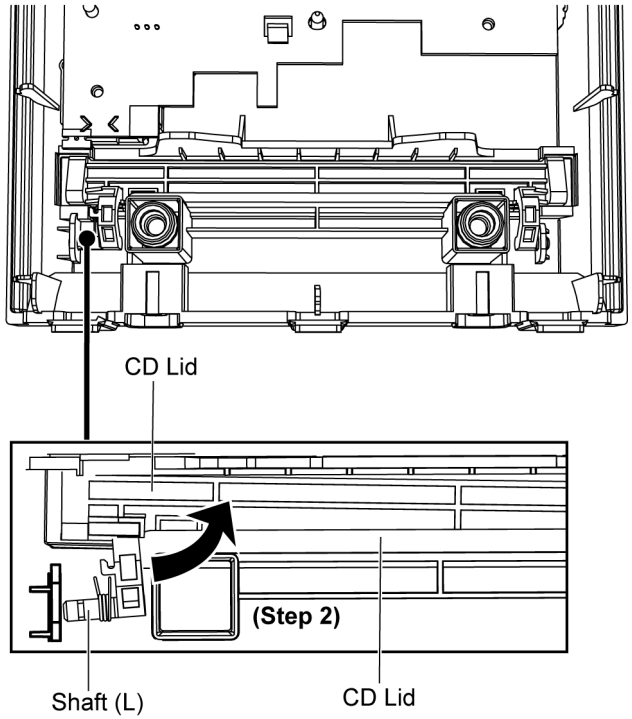
10.11. Disassembly of CD Lid

- Follow the (Step 1) - (Step 9) of item 10.3.

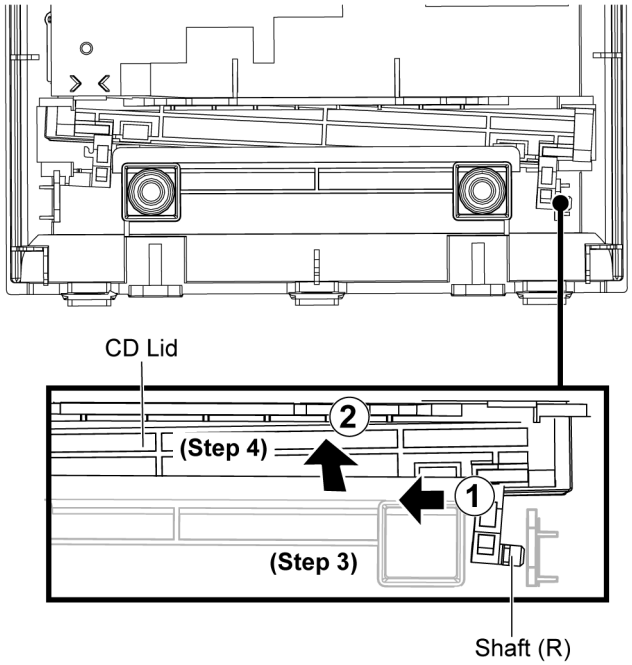


Step 1 : Lift the spring out of the hook.

Caution : Keep the spring in a safe place and place it back during assembling.



Step 2 : Move the shaft (L) of the CD Lid in the direction of arrow shown.



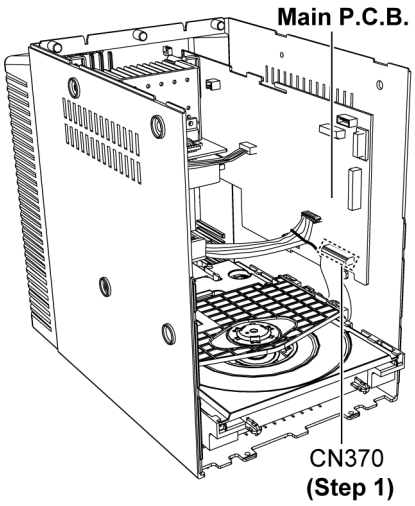
Step 3 : Move the shaft (R) of the CD Lid in the direction of arrow shown.

Step 4 : Remove the CD Lid in the direction of arrow shown.

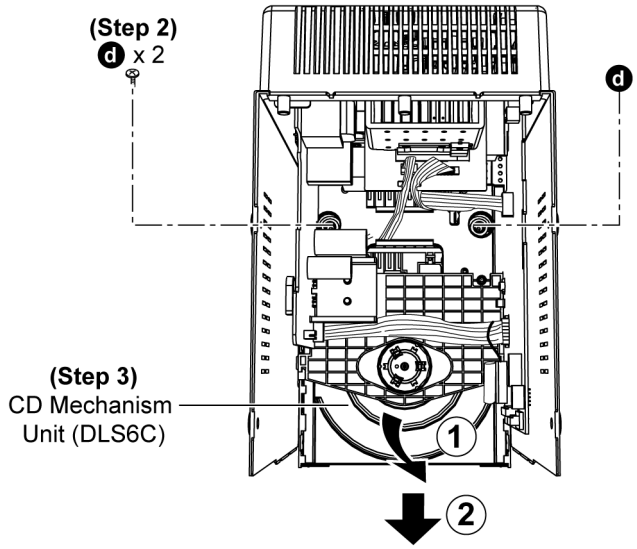
Caution : Do not excert strong force to the shafts during removal and assembly of the CD Lid.

10.12. Disassembly of CD Mechanism Unit (DLS6C)

- Follow the (Step 1) - (Step 9) of item 10.3.
- Follow the (Step 1) - (Step 6) of item 10.6.



Step 1 : Detach 22P FFC at connector (CN370) on Main P.C.B..

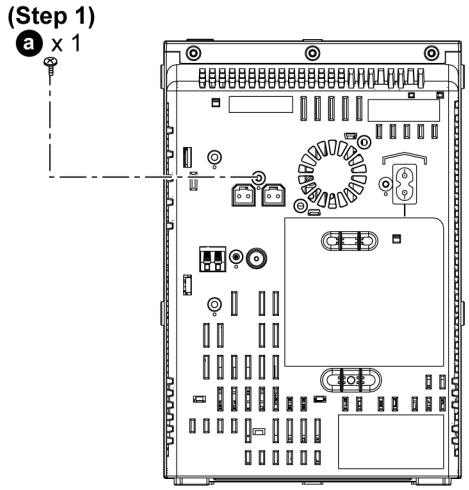


Step 2 : Remove 2 screws.

Step 3 : Slightly tilt and remove the CD Mechanism Unit (DLS6C) as arrow shown.

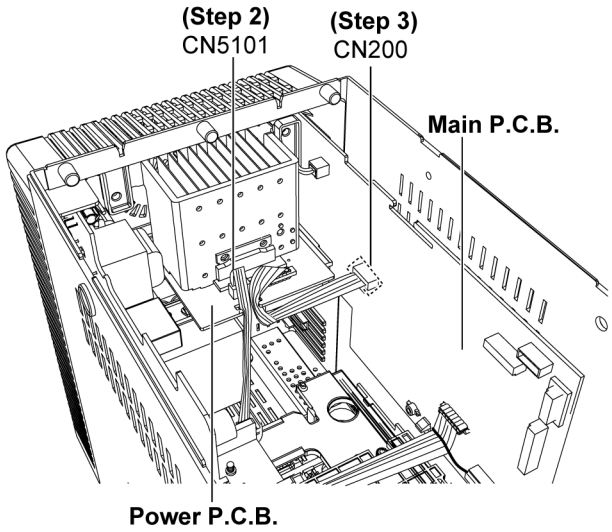
10.13. Disassembly of Power P.C.B.

- Follow the (Step 1) - (Step 9) of item 10.3.
- Follow the (Step 1) - (Step 6) of item 10.6.

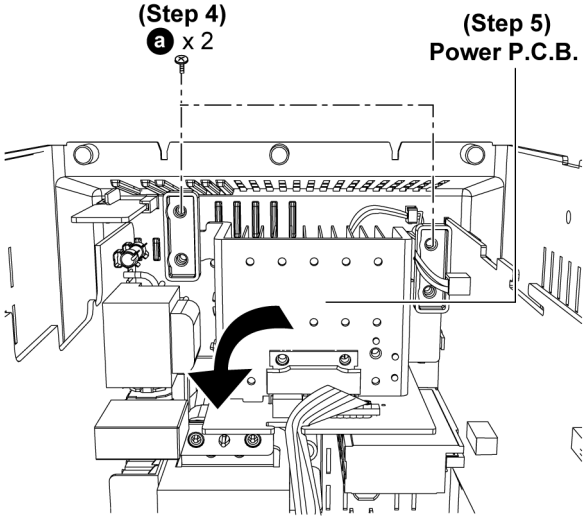


(Back View)

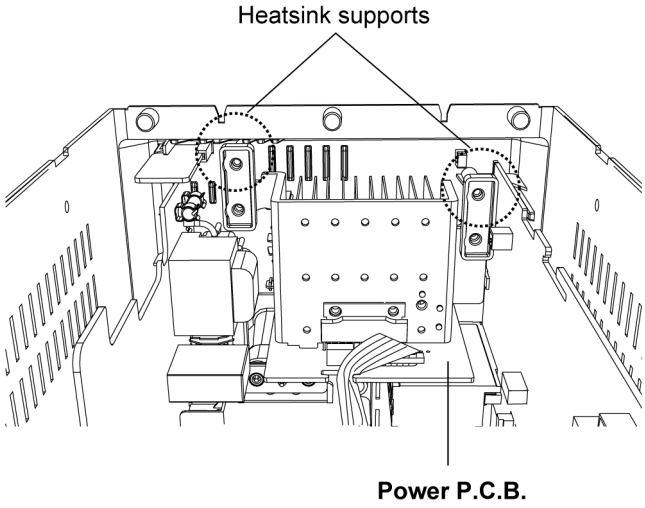
Step 1 : Remove 1 screw.



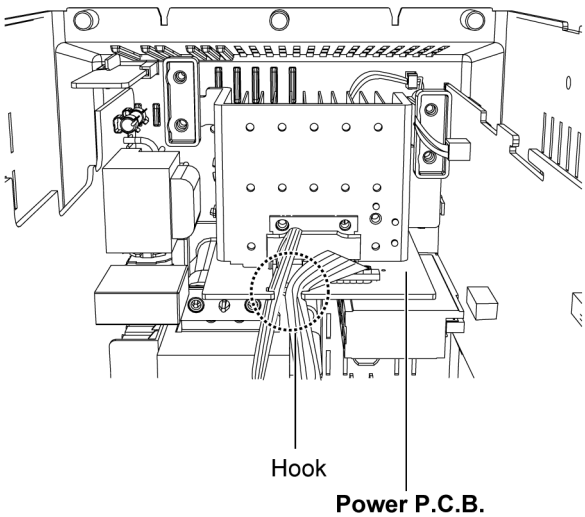
Step 2 : Detach 4P cable at connector (CN5101) on Power P.C.B..
Step 3 : Detach 6P cable at connector (CN200) on Main P.C.B..



Step 4 : Remove 2 screws.
Step 5 : Remove Power P.C.B. as arrow shown.



Caution 1 : Ensure the heatsink supports are seat properly.

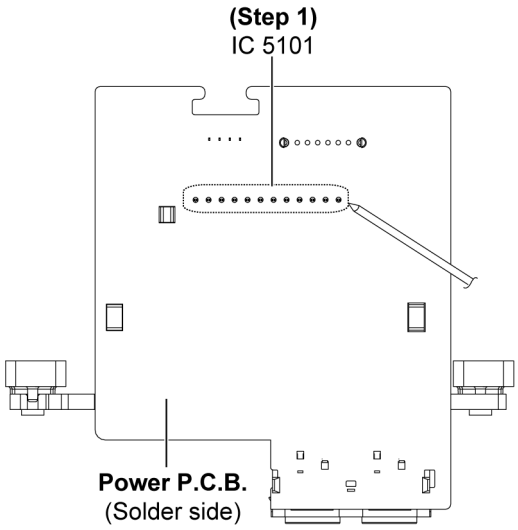


Caution 2 : Ensure the 4P wire is properly dressed into the hook of Power P.C.B. and prevent touching the heatsink unit.

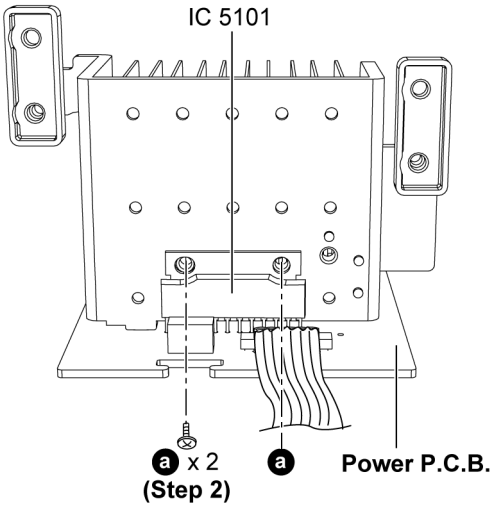
10.14. Replacement of Power Amp IC (IC5101)

- Follow the (Step 1) - (Step 9) of item 10.3.
- Follow the (Step 1) - (Step 6) of item 10.6.
- Follow the (Step 1) - (Step 5) of item 10.13.

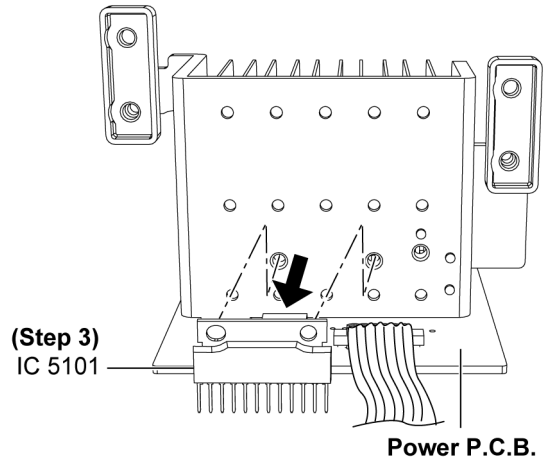
Caution : Handle the heatsink uni P.C.B. with caution due to its high temperature after prolonged use. Touching it may lead to injuries.



Step 1 : Desolder pins of Power Amp IC (IC5101).

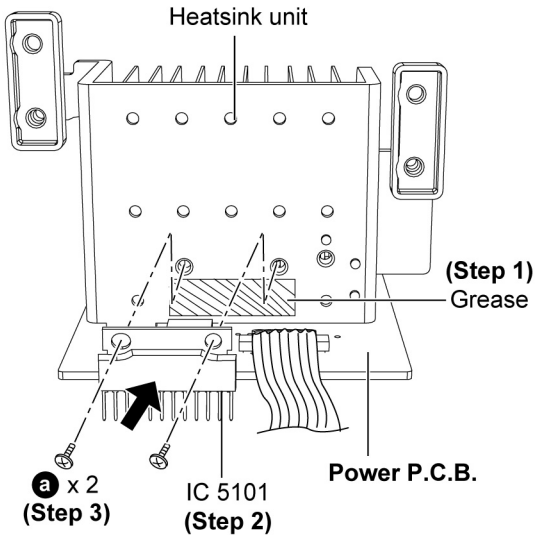


Step 2 : Remove 2 screws.

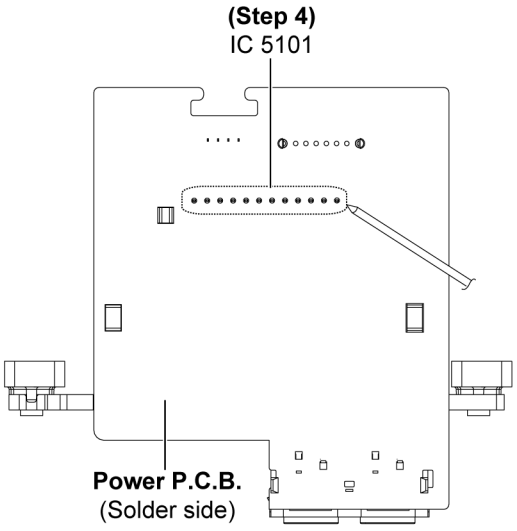


Step 3 : Remove Power Amp IC (IC5101).

• **Assembly of Power Amp IC (IC5101)**



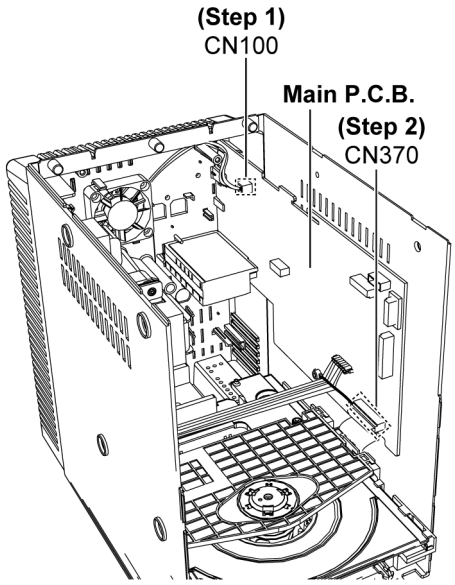
Step 1 : Apply grease to the heatsink unit.
Step 2 : Install Power Amp IC onto Power P.C.B..
Caution : Ensure the pins are inserted & seated properly on the Power P.C.B..
Step 3 : Fix the Power Amp IC (IC5101) onto the heatsink unit with 2 screws.



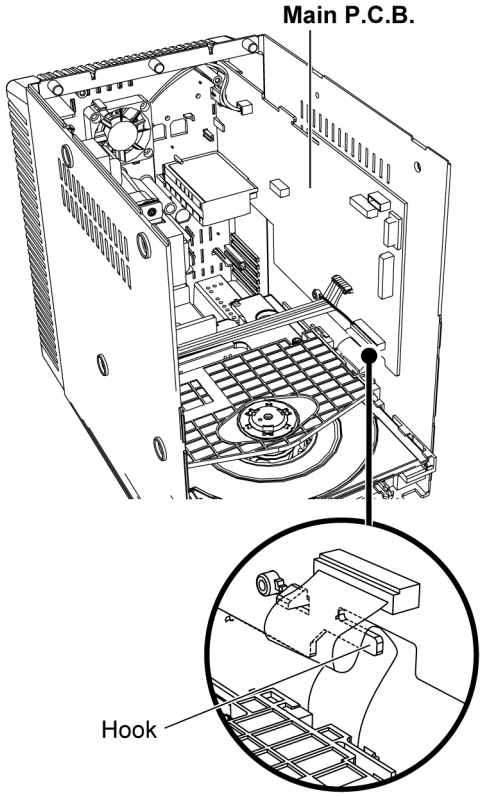
Step 4 : Solder pins of the Power Amp IC (IC5101) on the solder side of Power P.C.B..
Caution : Check for solderability of the Power Amp IC.

10.15. Disassembly of Main P.C.B.

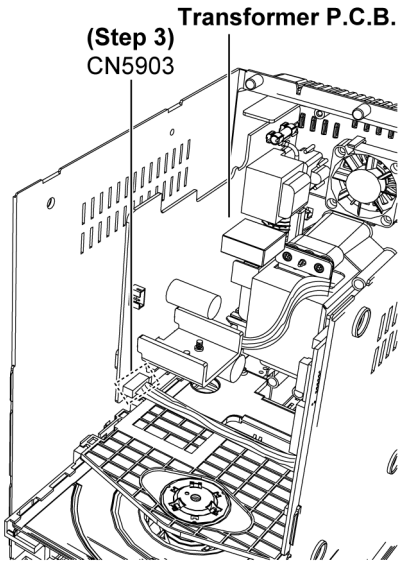
- Follow the (Step 1) - (Step 9) of item 10.3.
- Follow the (Step 1) - (Step 6) of item 10.6.
- Follow the (Step 1) - (Step 5) of item 10.13.



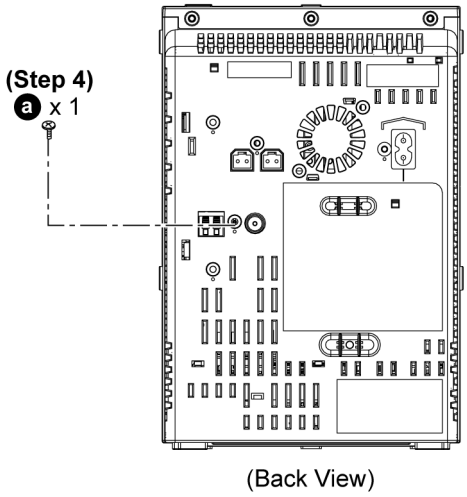
Step 1 : Detach 2P cable at connector (CN100) on Main P.C.B..
Step 2 : Detach 22P FFC at connector (CN370) on Main P.C.B..



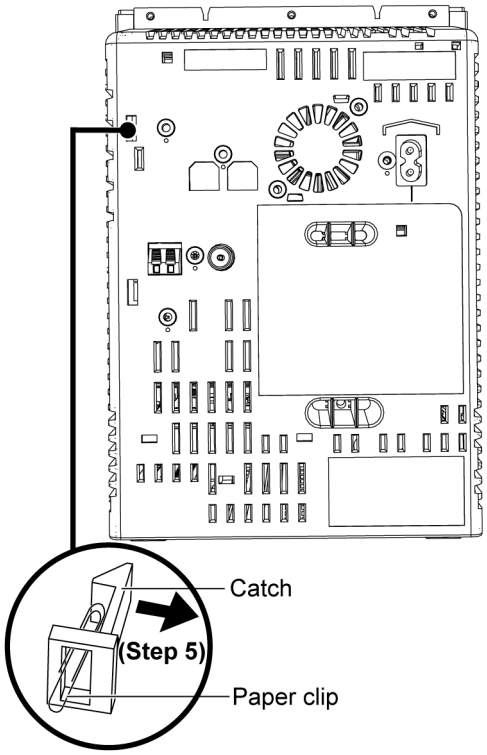
Caution : Ensure the 22P FFC properly dressed into the hook of Main P.C.B. during assembling.



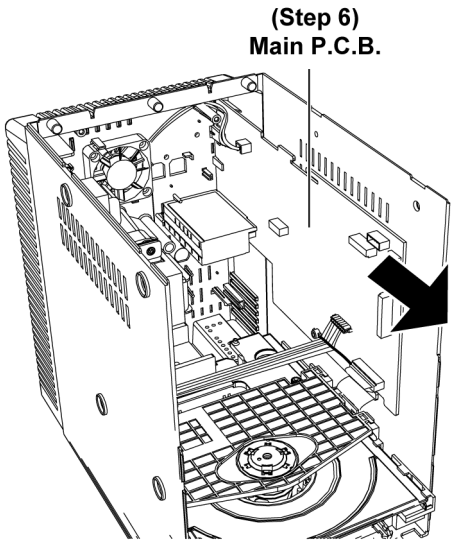
Step 3 : Detach 7P cable at connector (CN5903) on Transformer P.C.B..



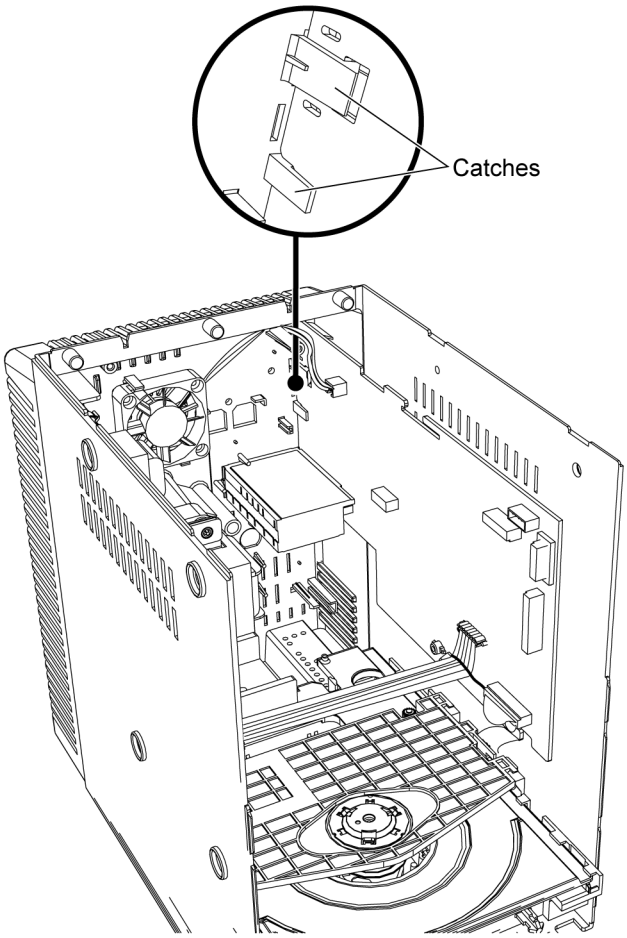
Step 4 : Remove 1 screw.



Step 5 : Use a paper clip to release the catch.



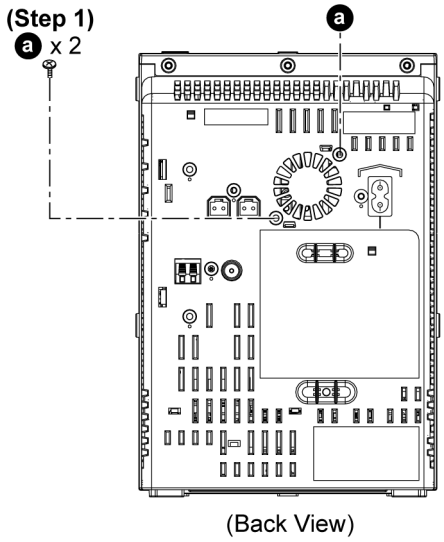
Step 6 : Remove Main P.C.B..



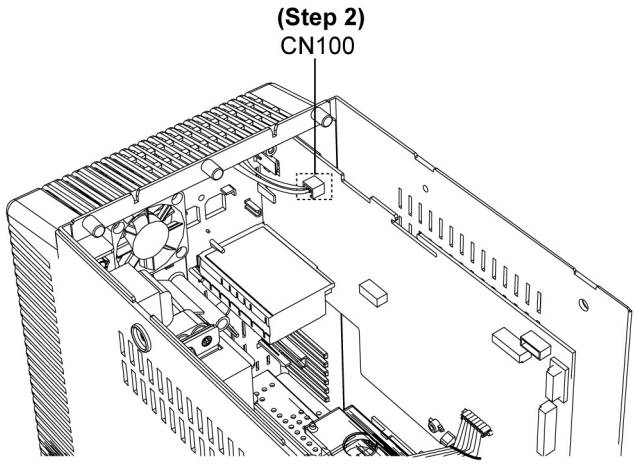
Caution : Ensure the Main P.C.B. fix onto the catches.

10.16. Disassembly of Fan Unit

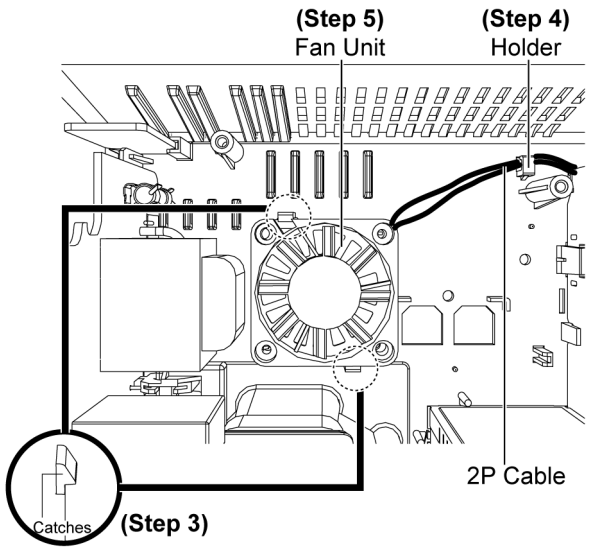
- Follow the (Step 1) - (Step 9) of item 10.3.
- Follow the (Step 1) - (Step 6) of item 10.6.
- Follow the (Step 1) - (Step 5) of item 10.13.



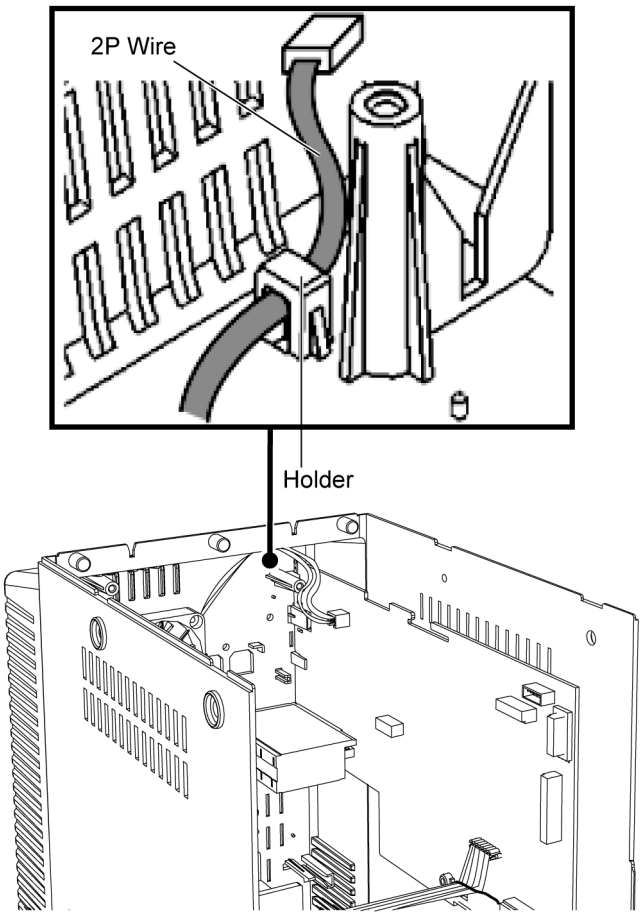
Step 1 : Remove 2 screws.



Step 2 : Detach 2P cable at connector (CN100) on Main P.C.B..



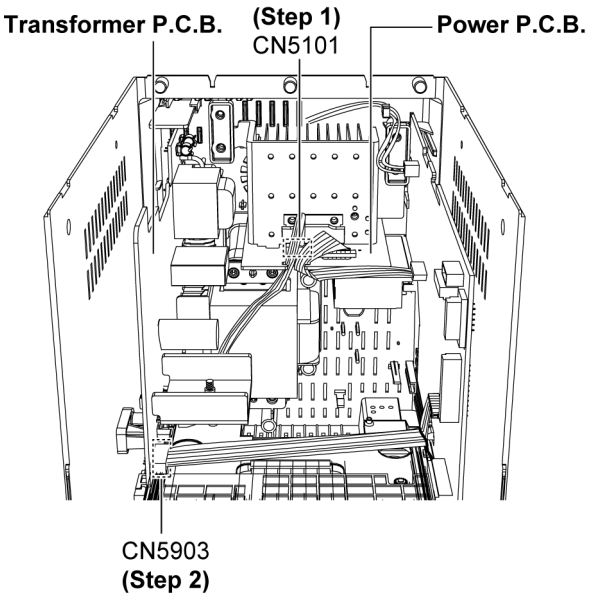
Step 3 : Release 2 catches.
Step 4 : Remove 2P cable from the holder.
Step 5 : Remove Fan Unit.
Caution : Ensure the Fan Unit is seated properly onto the rear panel assembly.



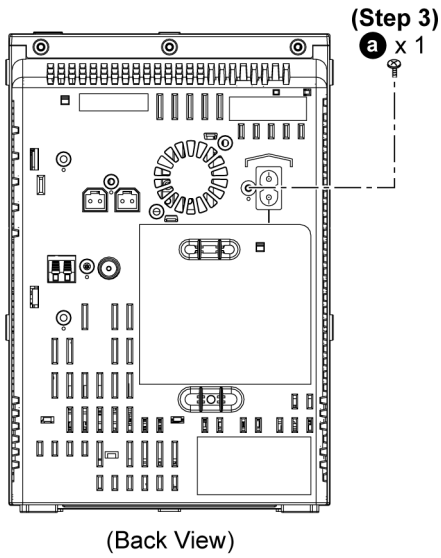
Caution : Ensure the 2P wire inserted into the Holder.

10.17. Disassembly of Transformer P.C.B.

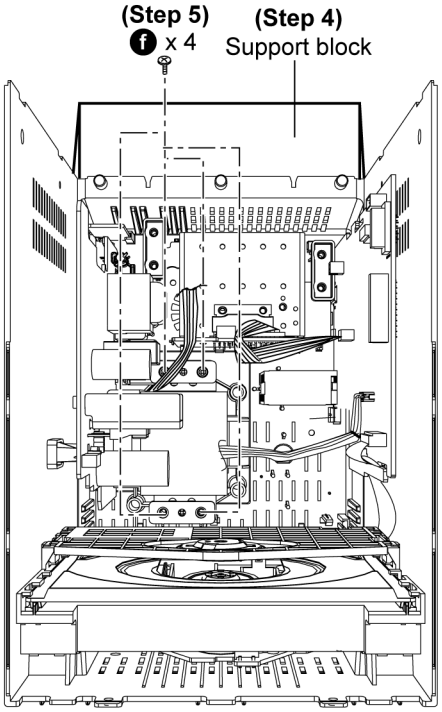
- Follow the (Step 1) - (Step 9) of item 10.3.
- Follow the (Step 1) - (Step 6) of item 10.6.



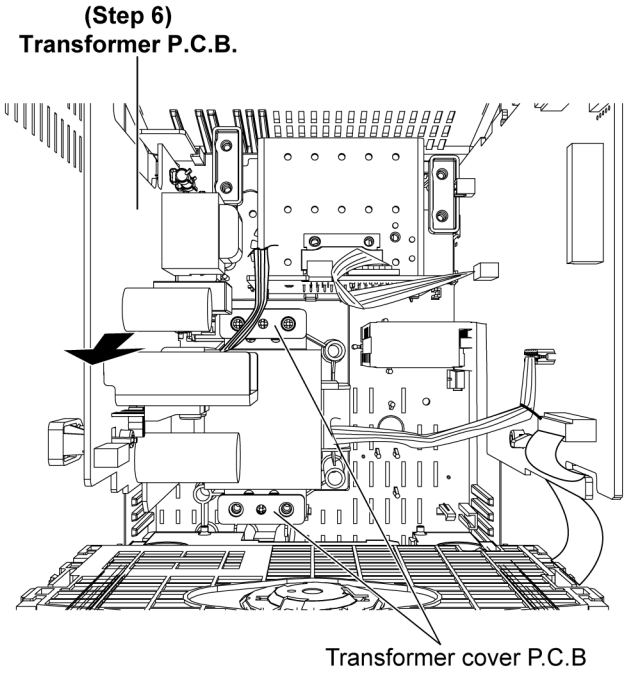
Step 1 : Detach 4P cable at connector (CN5101) on Power P.C.B..
Step 2 : Detach 7P cable at connector (CN5903) on Transformer P.C.B..



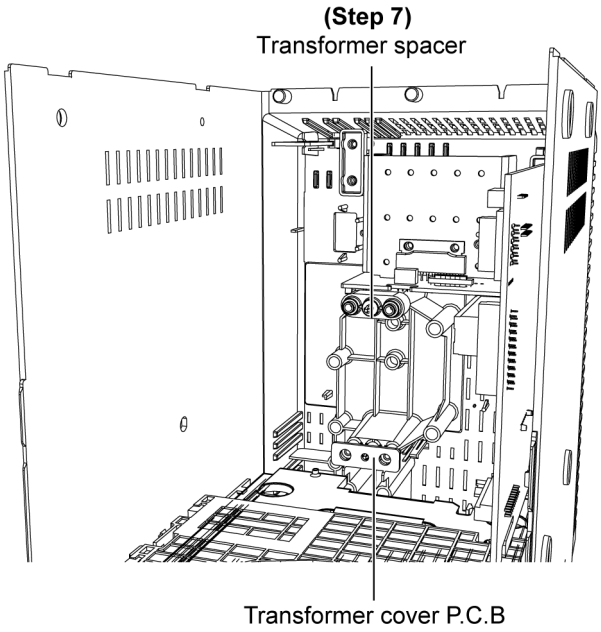
Step 3 : Remove 1 screw.



Step 4 : Place a support block to tilt the unit as shown.
Step 5 : Remove 4 screws.



Step 6 : Remove Transformer P.C.B..
Caution : Keep Transformer cover P.C.B. in safe place for assembling use.

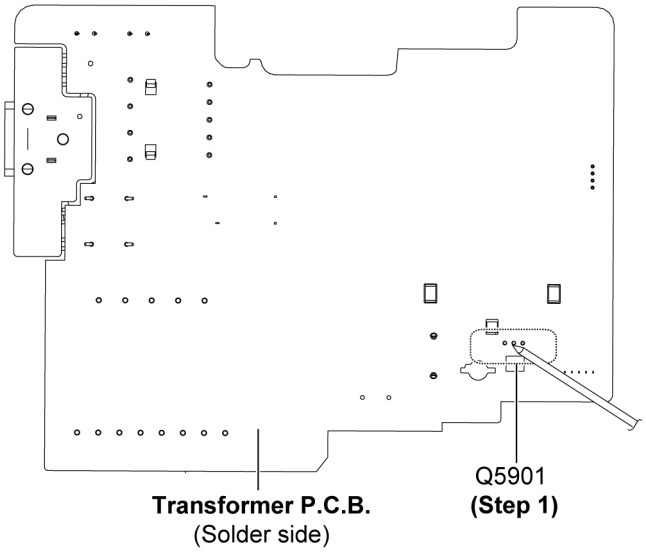


Step 7 : Remove Transformer cover P.C.B. and Trans spacer.
Caution : Keep them in safe place for assembling use.

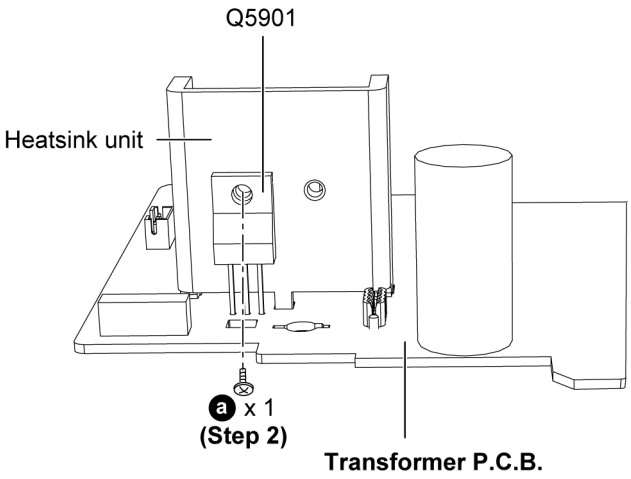
10.18. Replacement of Transistor (Q5901)

- Follow the (Step 1) - (Step 9) of item 10.3.
- Follow the (Step 1) - (Step 6) of item 10.6.
- Follow the (Step 1) - (Step 6) of item 10.17.

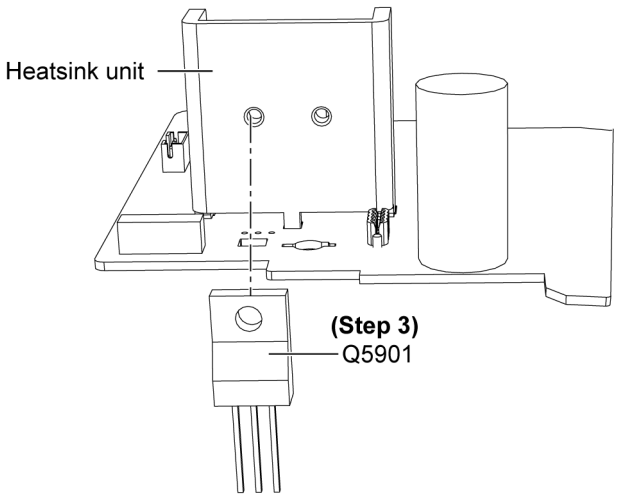
Caution : Handle the heatsink unit and P.C.B. with caution due to its high temperature after prolonged use. Touching it may lead to injuries .



Step 1 : Desolder pins of Transistor (Q5901).

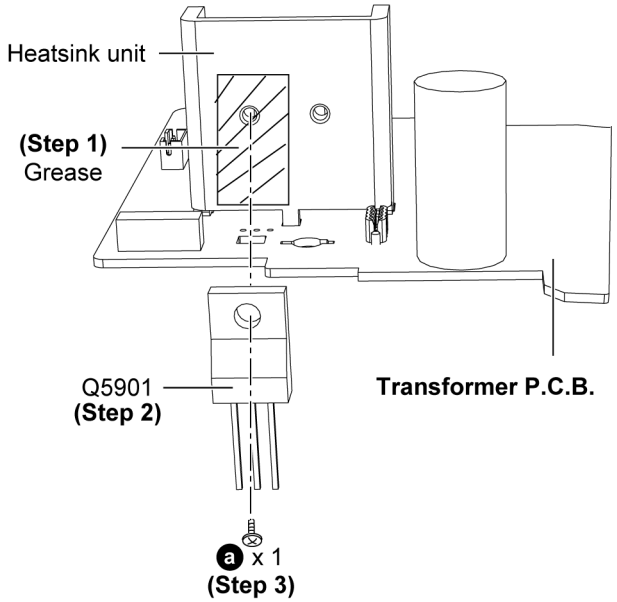


Step 2 : Remove 1 screw.

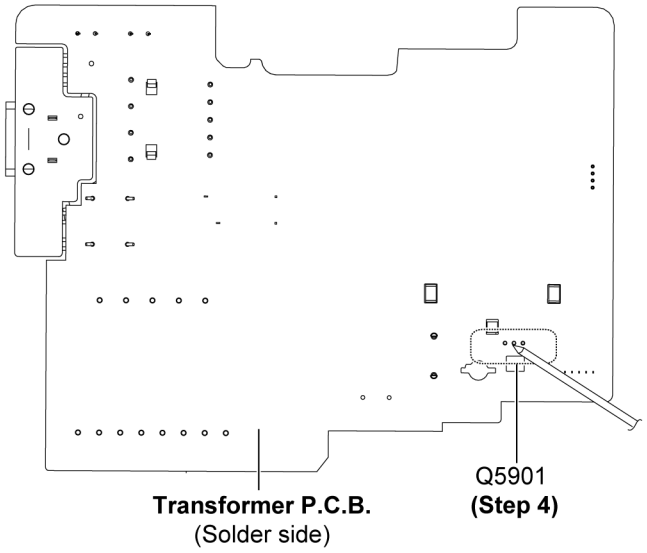


Step 3 : Remove Transistor (Q5901).

• **Assembly of Transistor (Q5901)**



Step 1 : Apply grease to the heatsink unit.
Step 2 : Install Transistor (Q5901) onto Transformer P.C.B..
Caution : Ensure the pins are inserted & seated properly on Transformer P.C.B..
Step 3 : Fix the Transistor (Q5901) onto the heatsink unit with 1 screw.

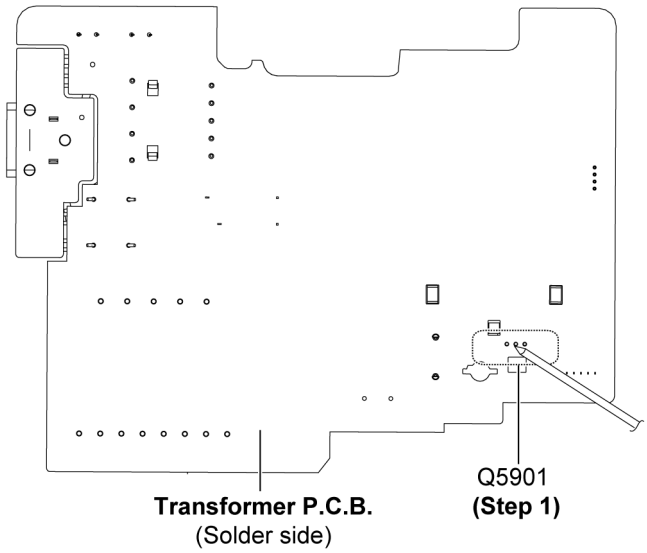


Step 4 : Solder pin of the Transistor (Q5901) on the solder side of Main P.C.B..

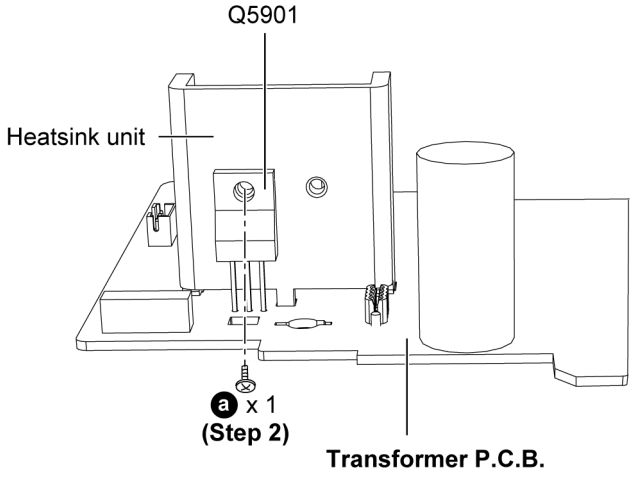
Caution : Check for solderability of the Transistor (Q5901).

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

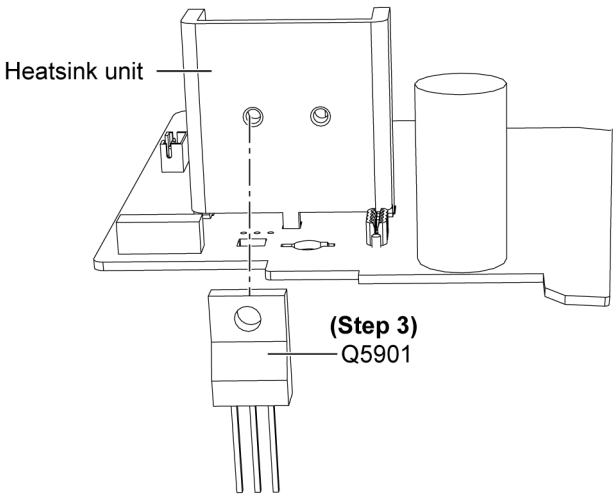
• Follow the (Step 1) - (Step 9) of item 10.3.
• Follow the (Step 1) - (Step 6) of item 10.6.
• Follow the (Step 1) - (Step 3) of item 10.12.



Step 1 : Remove 3 screws.
Step 2 : Unsolder 4 points.



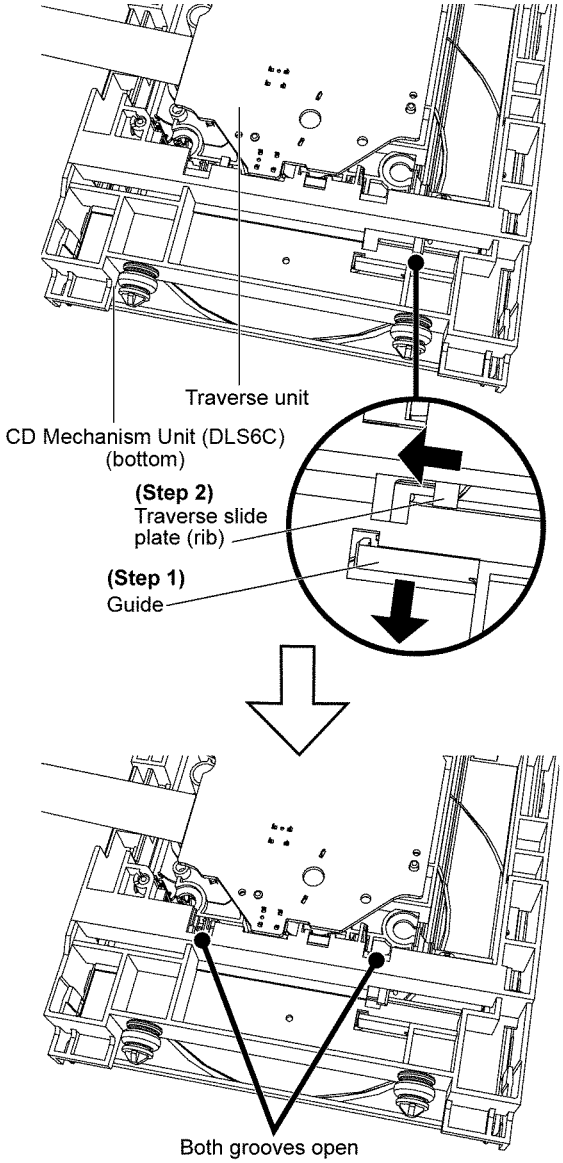
Step 3 : Move up the CD Servo P.C.B.
Step 4 : Flip the CD Servo P.C.B.



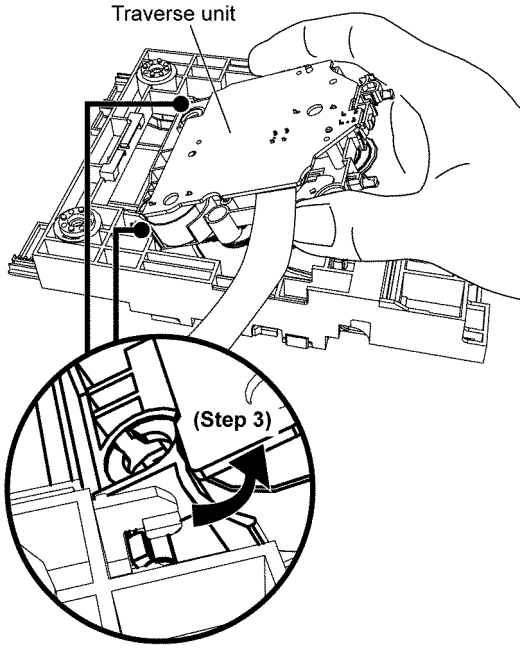
Step 5 : Detach 16P FPC at the connector (CN7001) on CD Servo P.C.B.

11 Disassembly and Assembly of Traverse Unit

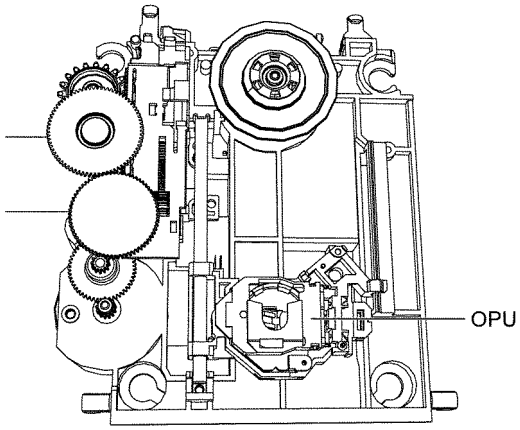
11.1. Disassembling Procedures



Step 1 : Release the guide.
Step 2 : Push the traverse slide plate (rib), ensure both grooves are opened.

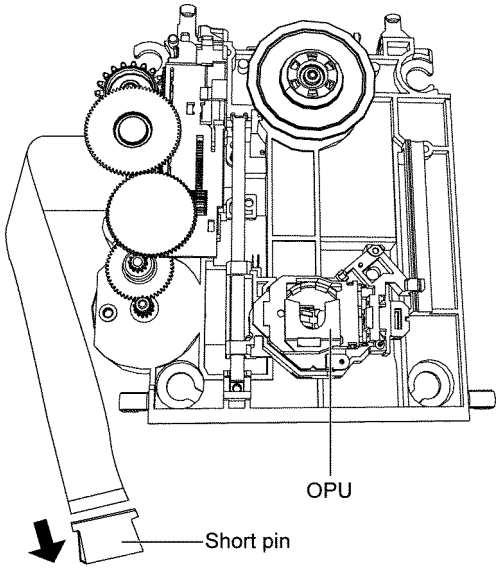


Step 3 : Slide out the traverse unit as arrow shown.

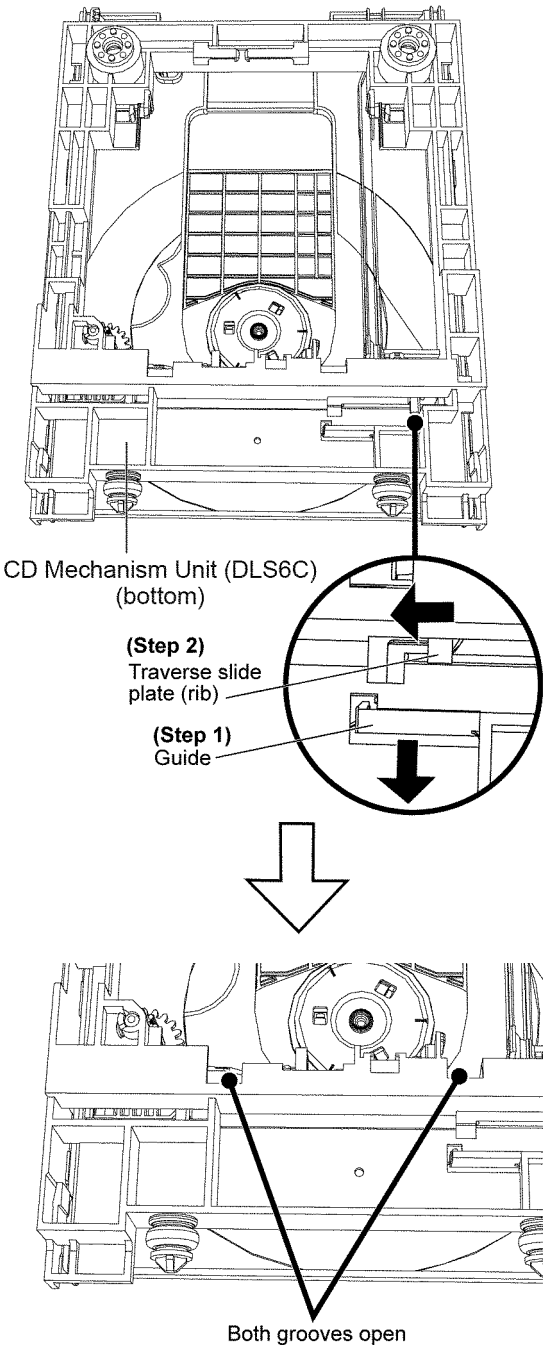


Caution : Ensure the OPU is face upwards, avoid touching the surface of the traverse unit.

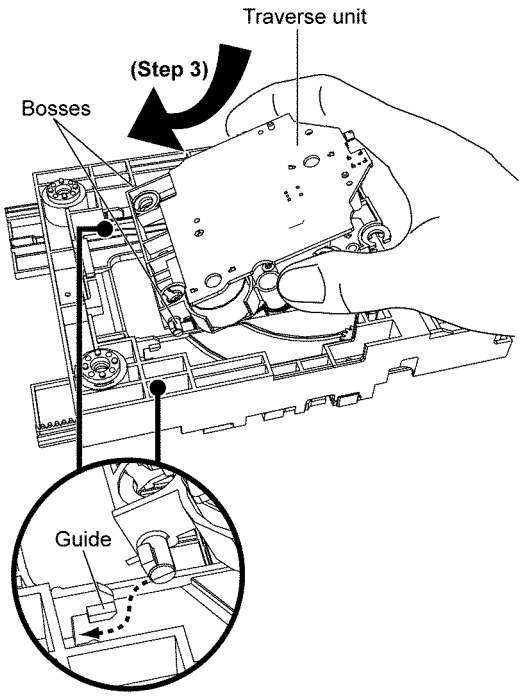
11.2. Assembling Procedure



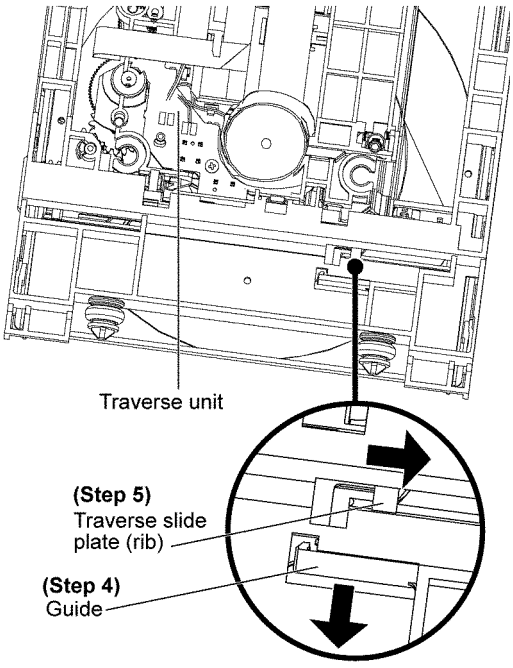
Caution : Removal of the short pin is necessary for replacement of new traverse unit.



Step 1 : Release the guide.
Step 2 : Push the traverse slide plate (rib), ensure both grooves are opened.



Step 3 : Slot the traverse unit at approximately 45° into the mecha chassis as arrow shown.
Caution : Ensure the bosses fix exactly onto the guides.



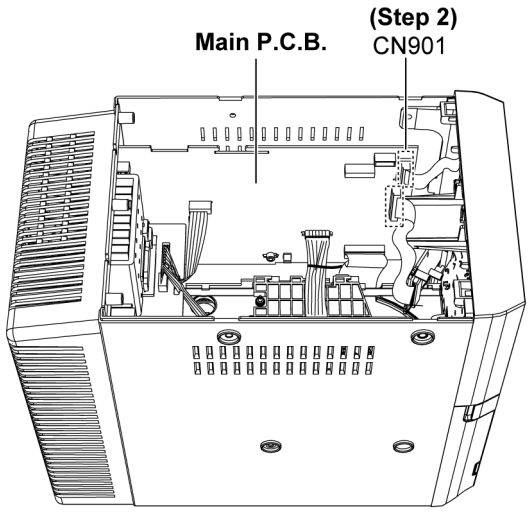
Step 4 : Release the guide.
Step 5 : Push the traverse slide plate (rib) to lock the traverse unit in.

12 Service Position

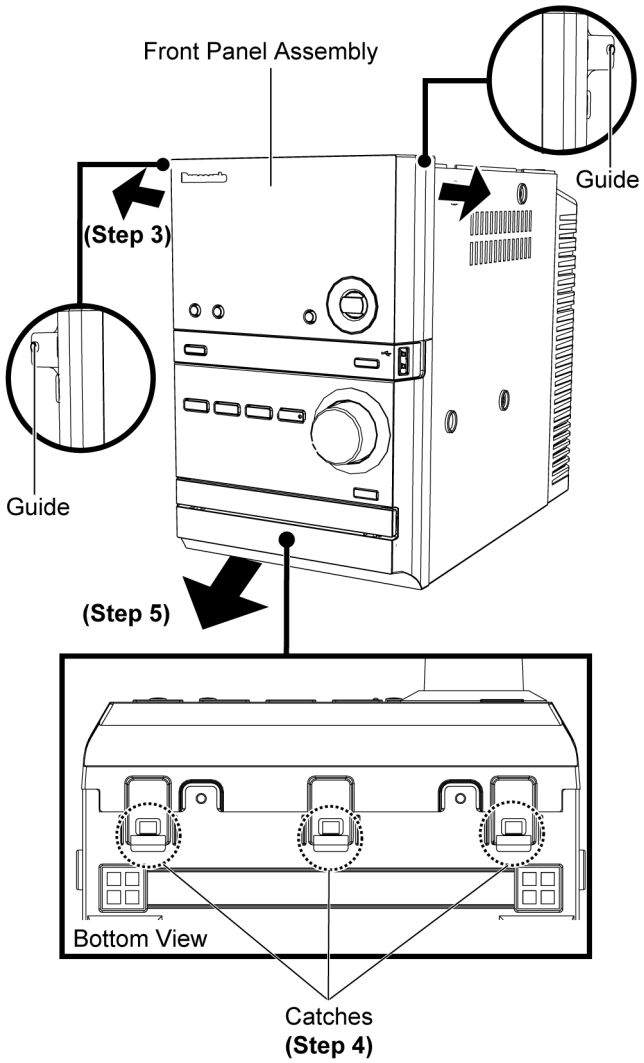
Note: For description of the disassembly procedures, see the Section 10

12.1. Checking & Repairing USB P.C.B.

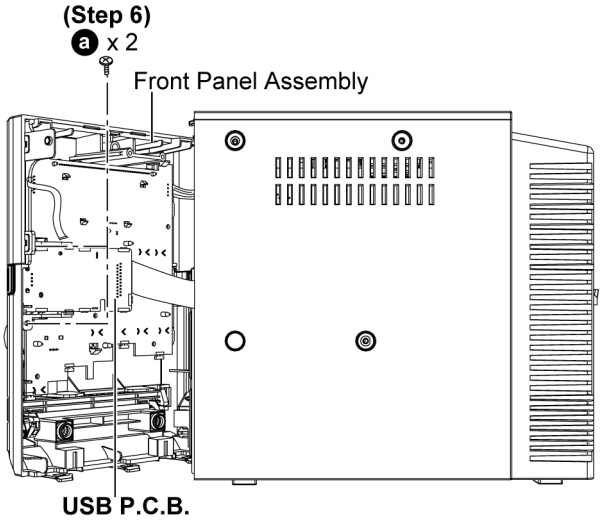
Step 1 : Remove Top Cabinet Assembly.



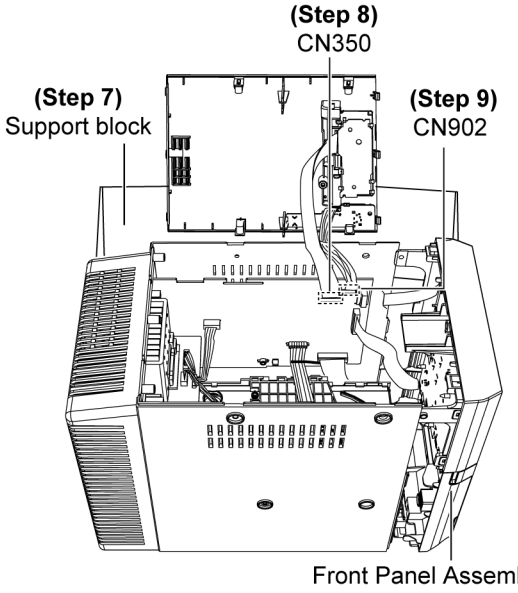
Step 2 : Detach 11P FFC at connector (CN901) on Main P.C.B..



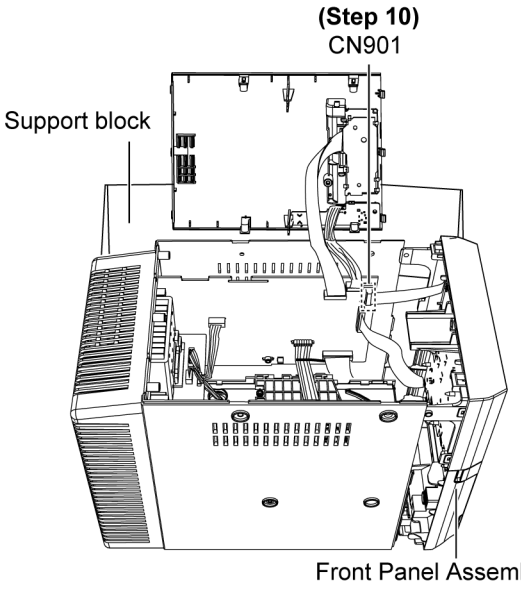
Step 3 : Release both guides.
Step 4 : Release 3 Catches.
Step 5 : Slightly remove Front Panel Assembly.



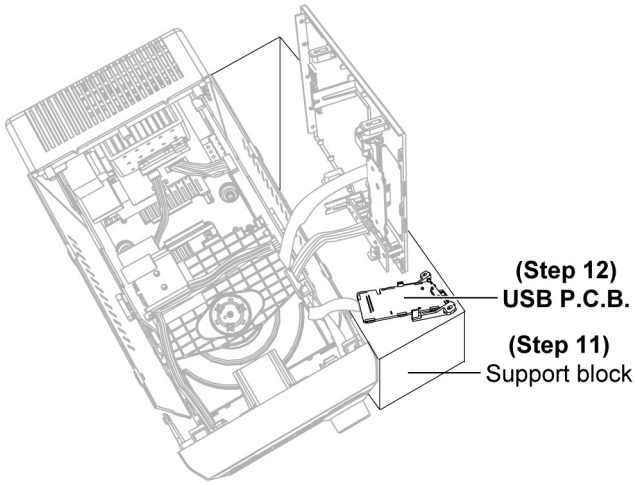
Step 6 : Remove 2 screws.



Step 7 : Place a support block underneath the Top Cabinet Assembly.
Step 8 : Connect 14P FFC at connector (CN350) on Main P.C.B..
Step 9 : Connect 5P cable at connector (CN902) on Main P.C.B..



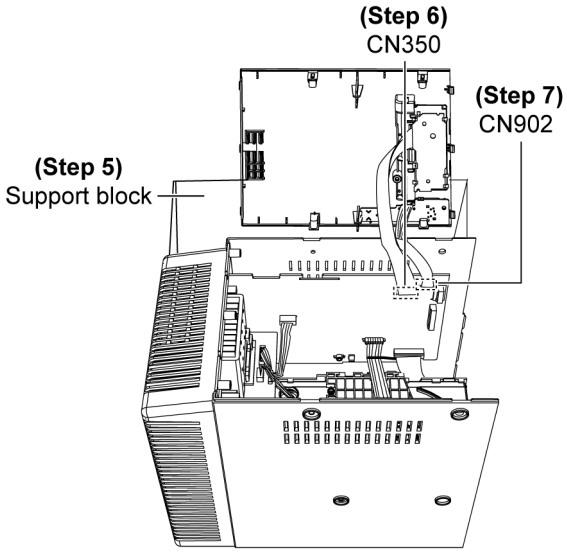
Step 10 : Connect 11P FFC at connector (CN901) on Main P.C.B..



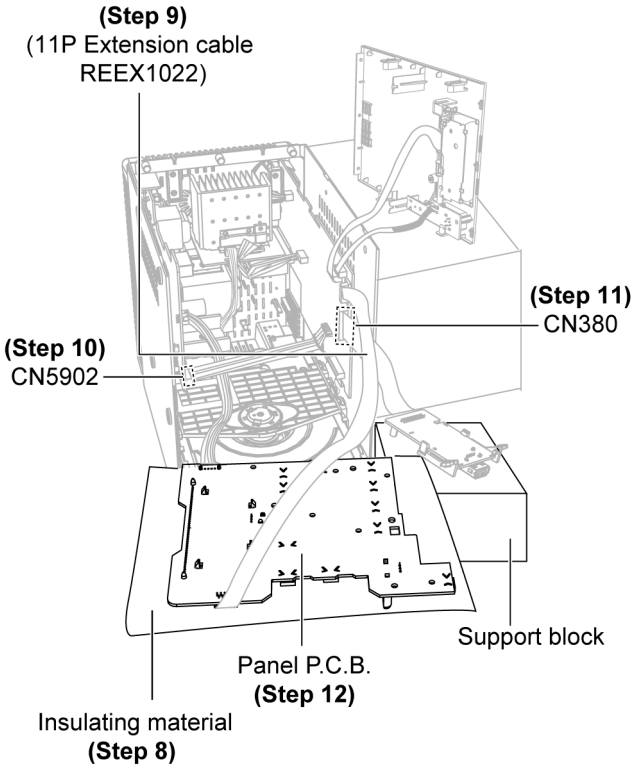
Step 11 : Place a support block underneath the USB P.C.B..
Step 12 : Check & repair USB P.C.B. according to the diagram shown.

12.2. Checking & Repairing Panel P.C.B.

Step 1 : Remove Top Cabinet Assembly.
Step 2 : Remove Front Panel Assembly.
Step 3 : Remove USB P.C.B..
Step 4 : Remove Panel P.C.B..



Step 5 : Place a support block underneath the Top Cabinet Assembly.
Step 6 : Connect 14P FFC at connector (CN350) on Main P.C.B..
Step 7 : Connect 5P cable at connector (CN902) on Main P.C.B..



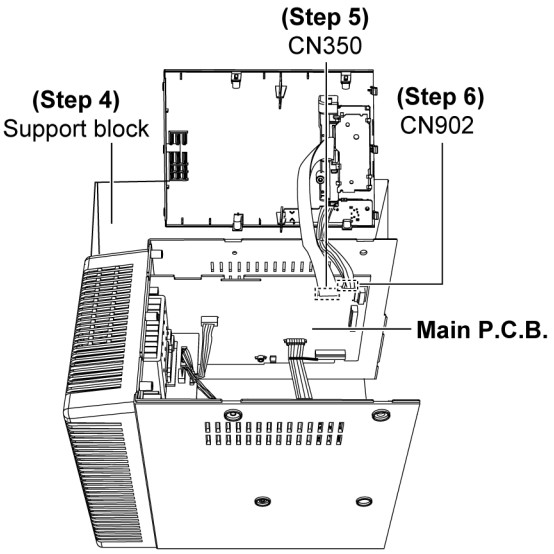
Step 8 : Lay an insulating material on Panel P.C.B..
Step 9 : Attach extension cable REEX1022 (11P FFC from CN901 on Main P.C.B. to CN900 on Panel P.C.B.).

Step 10 : Connect 4P cable at connector (CN5902) on Transformer P.C.B..
Step 11 : Connect 22P FFC at connector (CN380) on Main P.C.B..
Step 12 : Check & repair Panel P.C.B. according to the diagram shown.

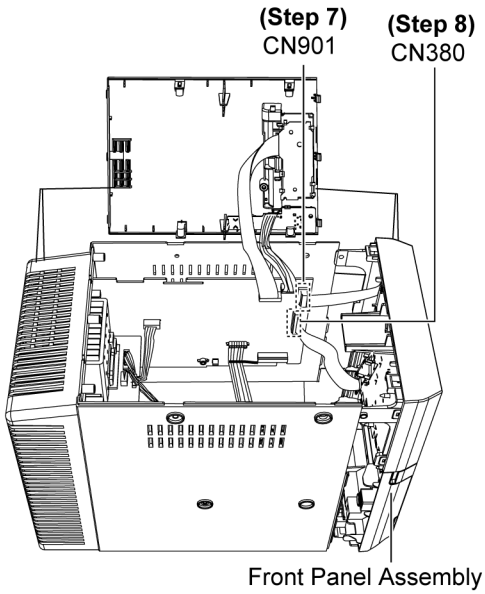
12.3. Checking & Repairing CD Servo P.C.B.

Note : Insert CD before Checking CD Servo P.C.B.

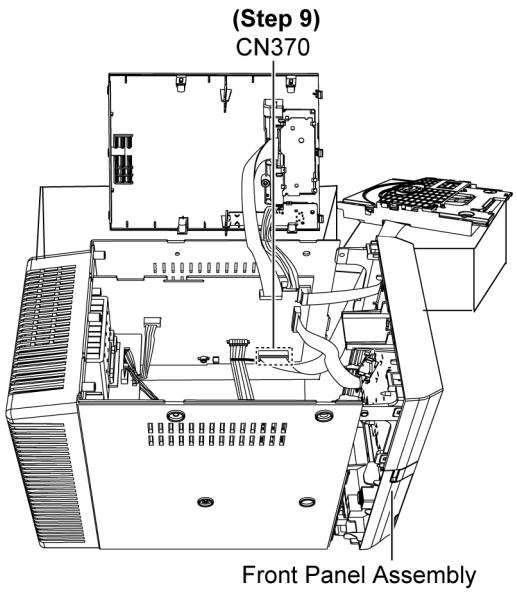
Step 1 : Remove Top Cabinet Assembly.
Step 2 : Remove Front Panel Assembly.
Step 3 : Remove CD Mechanism Unit (DLS6C).



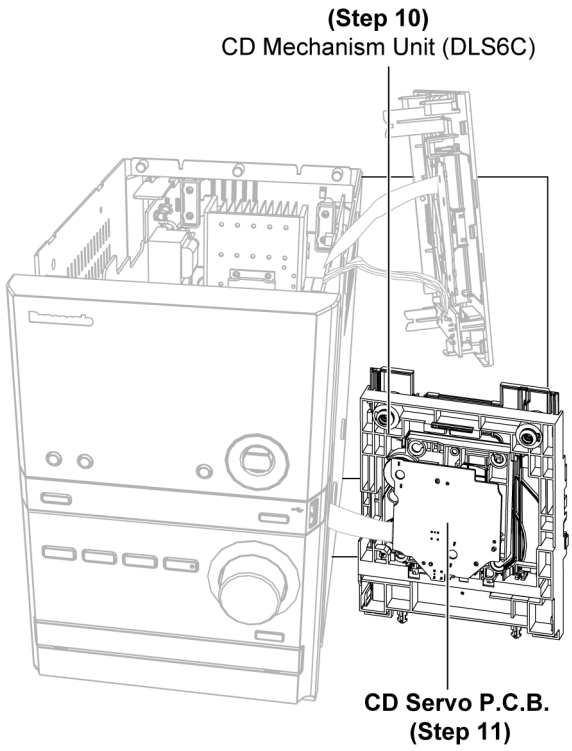
Step 4 : Place a support block underneath the Top Cabinet Assembly.
Step 5 : Connect 14P FFC at connector (CN350) on Main P.C.B..
Step 6 : Connect 5P cable at connector (CN902) on Main P.C.B..



Step 7 : Connect 11P FFC at connector (CN901) on Main P.C.B..
Step 8 : Connect 22P FFC at connector (CN380) on Main P.C.B..



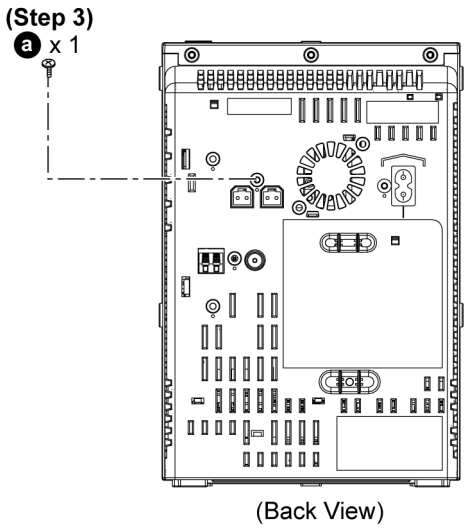
Step 9 : Connect 22P FFC at connector (CN370) on Main P.C.B..



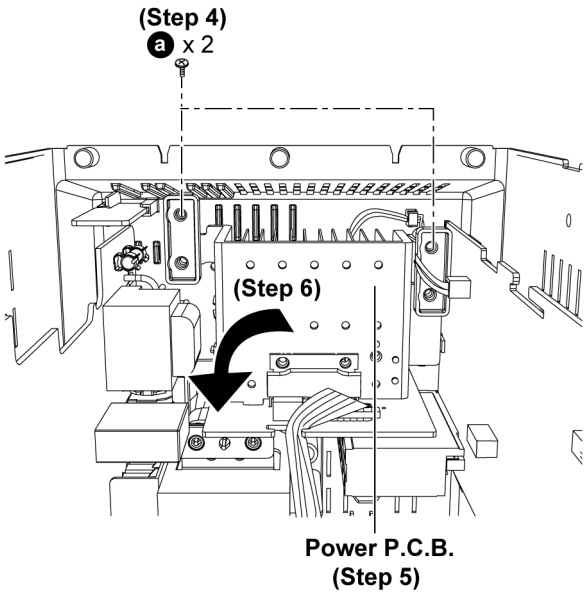
Step 10 : Upset CD Mechanism Unit (DLS6C).
Step 11 : Check & repair CD Servo P.C.B. according to the diagram shown.

12.4. Checking & Repairing Power P.C.B.

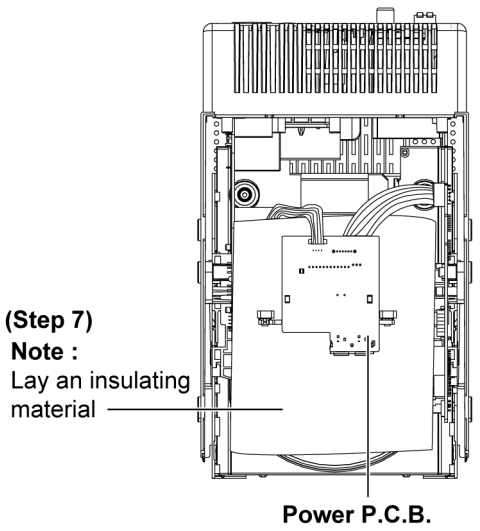
Step 1 : Remove Top Cabinet Assembly.
Step 2 : Remove Front Panel Assembly.



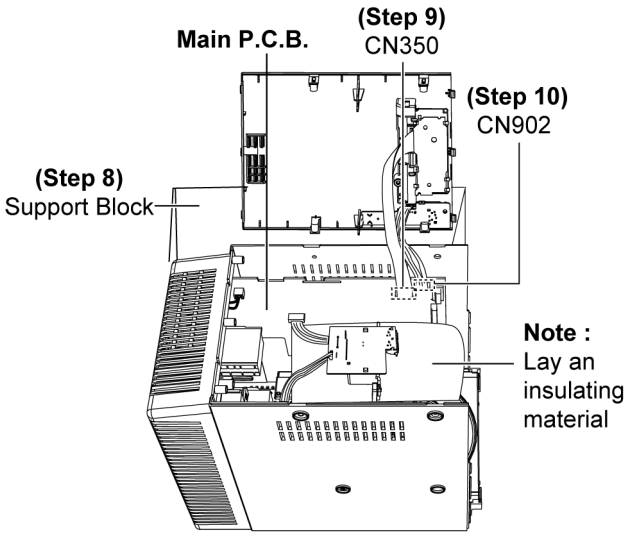
Step 3 : Remove 1 screw.



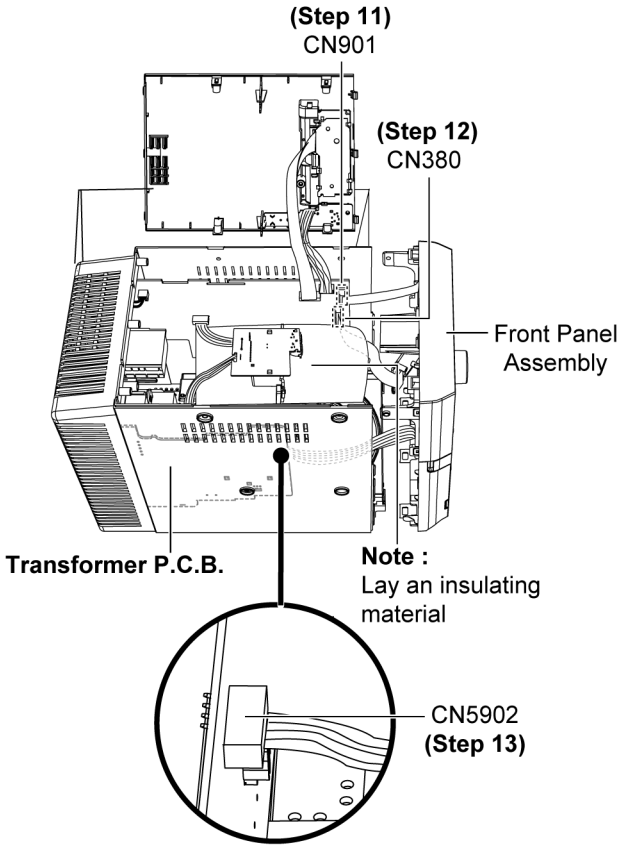
Step 4 : Remove 2 screws.
Step 5 : Detach Power P.C.B..
Step 6 : Flip over Power P.C.B. as arrow shown.



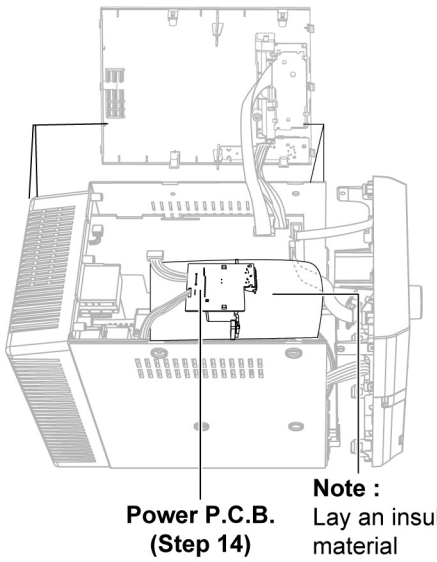
Step 7 : Put insulating material under Power P.C.B..



Step 8 : Place a support block underneath the Top Cabinet Assembly.
Step 9 : Connect 14P FFC at connector (CN350) on Main P.C.B..
Step 10 : Connect 5P cable at connector (CN902) on Main P.C.B..



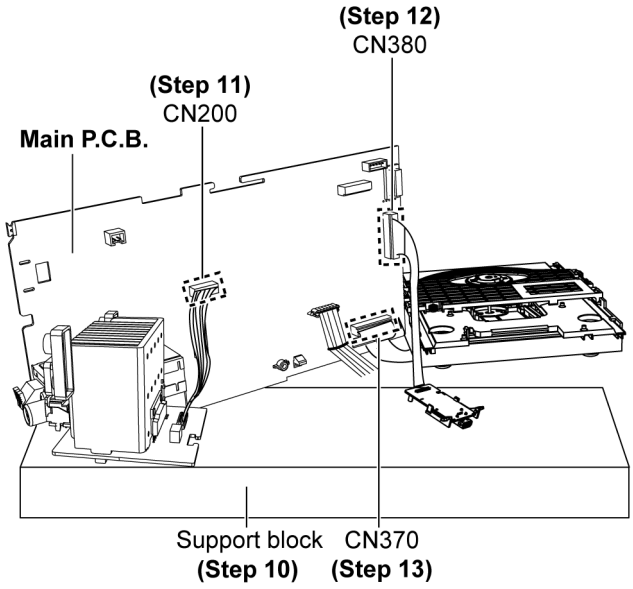
Step 11 : Connect 11P FFC at connector (CN901) on Main P.C.B..
Step 12 : Connect 22P FFC at connector (CN380) on USB P.C.B..
Step 13 : Connect 4P cable at connector (CN5902) on Transformer P.C.B..



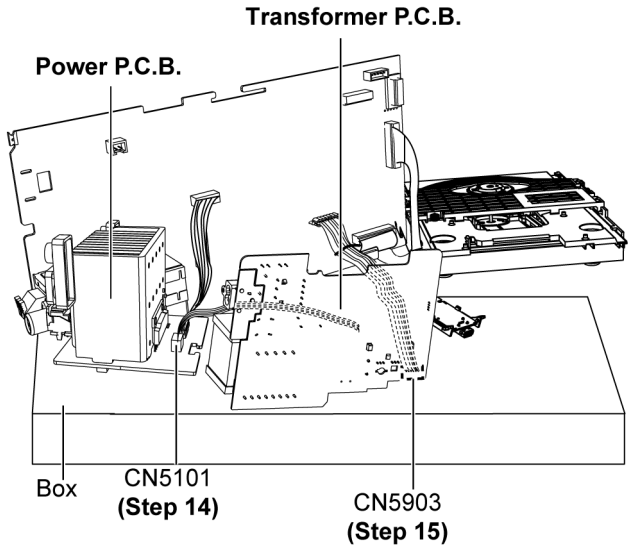
Step 14 : Check & repair Power P.C.B. according to the diagram shown.

12.5. Checking & Repairing Transformer P.C.B.

Step 1 : Remove Top Cabinet Assembly.
Step 2 : Remove Front Panel Assembly.
Step 3 : Remove USB P.C.B..
Step 4 : Remove Panel P.C.B..
Step 5 : Remove Power P.C.B..
Step 6 : Remove Main P.C.B..
Step 7 : Remove Transformer P.C.B..
Step 8 : Remove CD Mechanism Unit (DLS6C).
Step 9 : Remove Fan Unit.

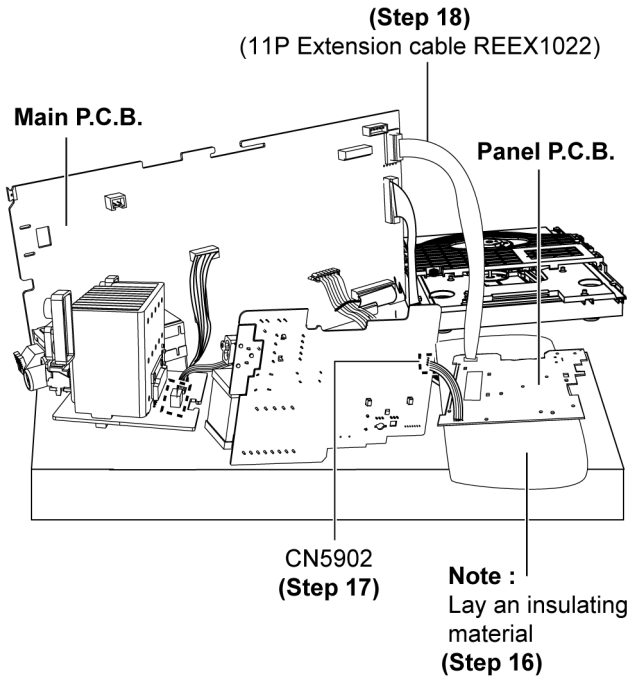


Step 10 : Place a support block as diagram shown.
Step 11 : Connect 6P cable at connector (CN200) on Main P.C.B..
Step 12 : Connect 22P cable at connector (CN380) on Main P.C.B..
Step 13 : Connect 22P cable at connector (CN370) on Main P.C.B..

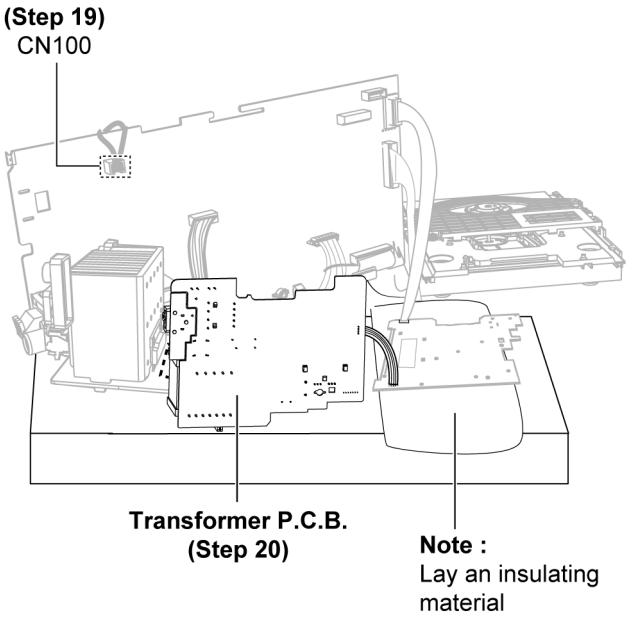


Step 14 : Connect 4P cable at connector (CN5101) on Power P.C.B..

Step 15 : Connect 7P cable at connector (CN5903) on Transformer P.C.B..



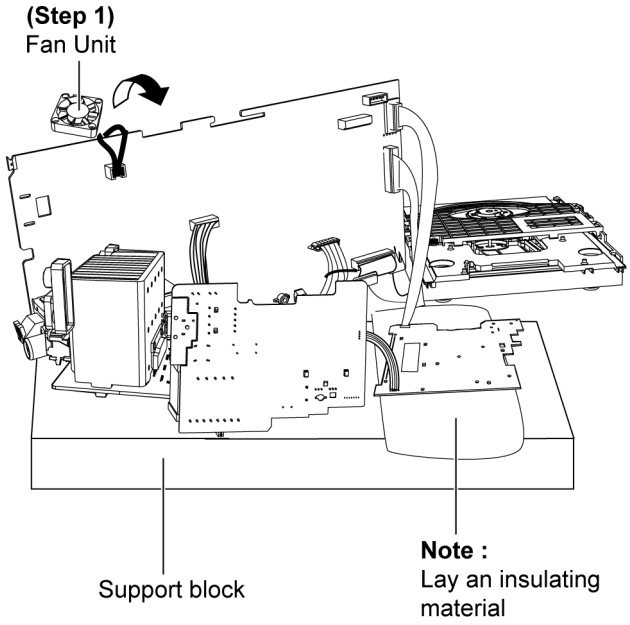
Step 16 : Place on insulating material under Panel P.C.B..
Step 17 : Connect 4P cable at connector (CN5902) on Transformer P.C.B..
Step 18 : Attach extension cable REEX1022 (11P FFC from CN901 on Main P.C.B. to CN900 on Panel P.C.B.).



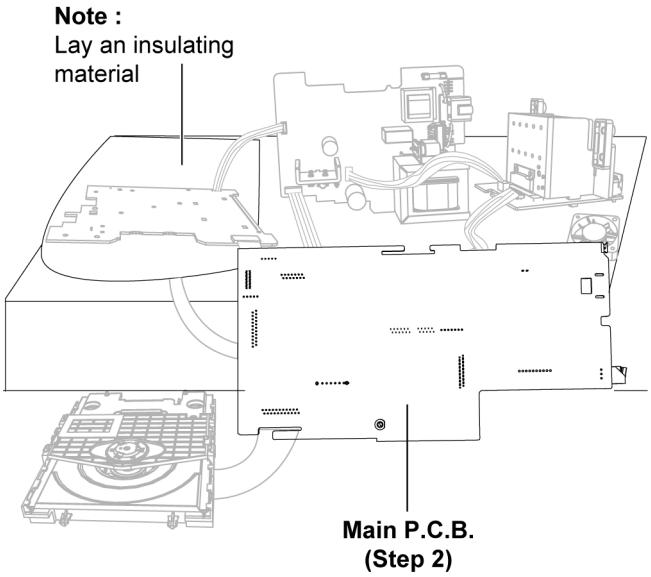
Step 19 : Connect 2P cable (Fan Unit) at connector (CN100) on Main P.C.B..
Step 20 : Check & repair Transformer P.C.B. according to the diagram shown.

12.6. Checking & Repairing Main P.C.B.

• Follow (Step 1 - Step 19) of item 12.5



Step 1 : Flip over Fan Unit.



Step 2 : Check & repair Main P.C.B. according to the diagram shown.

13 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.

13.1. USB 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	0.7	0.7	0.7	0	0	0	3.3	3.3	3.3	1.8	1.6	1.6	0	0	0	0	3.3	3.3	3.3	0.7
STANDBY	0.7	0.7	0.7	0	0	0	3.4	3.3	3.4	1.8	1.6	1.6	0	0	0	0	3.4	3.4	3.4	0.7

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	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	3.3	0.7	0
STANDBY	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	3.4	0.7	0

REF NO.	IC900																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	0.7	1.8	0.7	0	0.7	3.3	0.3	3.3	3.3	0	3.3	0.7	0	0	0.7	3.0	1.0	1.0	0	0.7
STANDBY	0.7	1.8	0.7	0	0.7	3.3	0.3	3.3	3.4	0	3.4	0.7	0	0	0.7	3.3	0	0	0	0.7

REF NO.	IC900																			
MODE	61	62	63	64																
CD PLAY	0	1.8	0.7	3.3																
STANDBY	0	1.8	0.7	3.3																

SA-PM38PP USB P.C.B.

13.2. 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	0	0	3.2
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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	1.6	1.8	0	3.2	1.5	0	0	0	1.6	1.6	2	0	1.9	1.9	0	1.7	1.7
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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	1.7	1.9	0	0	3.2	1.2	0	1.2	1.6	1.6	0.9	1.4	1.5	1.5	0	3.2	0	0
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	3	3	3	2.9	0	3.2	0	0	0	1.6	3.2	0	3.2	1.6
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	1.6	1.6	0	0	0	0	0	0	0	0	0	0	3.2	0	0	0	0	0	0	0
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	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	1.5	0	0	0	0	0	0	7.5	1.7	3.2	3.2	3.2	2.8	3.8	3.2	3.2	7.5	0
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ref No.	IC7002																			
MODE	21	22	23	24	25	26	27	28	29	30										
CD PLAY	0	0	0	0	7.1	1.6	1.6	1.6	0	0										
STANDBY	0	0	0	0	0	0	0	0	0	0										

Ref No.	Q7601																			
MODE	E	C	B																	
CD PLAY	3.1	2	2.4																	
STANDBY	0	0.1	0																	

SA-PM38PP CD SERVO P.C.B.

13.3. MAIN P.C.B. (1/2)

REF NO.	IC200																			
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	4.5	0	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	0	3.3	3.3
STANDBY	0	0	0.5	0	0.5	0.5	0.5	0.5	0	0	0	0.5	0	0.5	0.5	0.5	0.5	0	0	0

REF NO.	IC200																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	9	4.5	4.5	4.5	0.9	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	0	4.5	0	0	4.5
STANDBY	0	0	0.5	0.5	0	0.5	0	0	0	0	0	0	0	0	0.5	0	0.5	0	0	0.5

REF NO.	IC200																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52								
CD PLAY	0	4.5	0	4.5	0	4.5	4.5	0	0	4.5	0	4.5								
STANDBY	0	0.5	0	0.5	0	0	0	0	0	0.5	0	0								

REF NO.	IC600																			
MODE	1	2	3	4	5															
CD PLAY	7.5	7.5	0	5	1.25															
STANDBY	0.5	0.5	0	0.7	1.25															

REF NO.	IC601																			
MODE	1	2	3	4	5															
CD PLAY	5	0	1.2	3.3	5															
STANDBY	0.7	0	0	0	0.7															

REF NO.	IC700																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	4.8	0	4.8	0	4.8	0	4.8	9												
STANDBY	0	0	0	0	0	0	0	0												

SA-PM38PP MAIN P.C.B.

13.4. MAIN P.C.B. (2/2)

REF NO.	IC800																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	3.3	3.3	1.2	0	3.3	0	3.3	0	3.3	0	0	1.5	1.5	0	1	1.6	3.3	1.8	3.3	3.3
STANDBY	0	0	0	0	0	0	3.3	0	0	0	0	1.5	1.5	0	1.5	1.5	3.3	0	1.8	3.3

REF NO.	IC800																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	0	3.2	0	0	3.3	1	0	0	0	1.1	3.3	2.8	3.3	0	3.3	3.3	1.8	0	0	3.3
STANDBY	0	1.2	2	0	3.3	2	1.5	0	0	0	0	0	0	0	0	1.2	1.8	0	0	3.3

REF NO.	IC800																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	0	3.3	3.3	0	3.3	0	3.3	3.3	0	0	0	0	0	0	0	0	0	0	0	0
STANDBY	0	3.3	3.3	0	0	0	0	3.3	0	0	0	0	0	0	0	0	0	0	0	0

REF NO.	IC800																			
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	1.6	0	0	0	1	0	0	0
STANDBY	0	3.3	0	0	0	0	0	0	0	0	0	0	1.2	0	0	0	1.2	0	0	0

REF NO.	IC800																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
REC	0	0	0	0	0	0	0	0	3.3	3.3	0	3.3	3.3	0	0	2.2	2	0	0	3.3
STANDBY	0	0	0	0	0	0	0	0	3.3	3.3	0	3.3	3.3	0	0	1.2	2	3.3	0	3.3

REF NO.	Q760																			
MODE	1	2	3	4	5	6														
REC	0	-1.4	0	0	-1.4	0														
STANDBY	0	0.7	0	0	0.7	0														

REF NO.	Q761																			
MODE	1	2	3	4	5	6														
REC	0	-1.1	0	0	-1.1	0														
STANDBY	0	0	0	0	0	0														

REF NO.	Q100				Q101				Q350				Q375				Q382			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	2.3	0		0	0	0.5		0	3.3	0		5.4	5.4	4.6		0	1.3	0	
STANDBY	0	0	0		0	0	0		0	3.3	0		0	1.3	1.3		0.5	0	0.5	

REF NO.	Q600				Q603				Q604				Q761				Q762			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	13.6	9	13		8.8	13	9		5.3	5	0		3.3	-1	3.3		3.3	-1	3.3	
STANDBY	0	0	0		0	0	0.5		0	0	0		3.3	3.3	0		3.3	3.3	0	

REF NO.	Q802				QR375				QR376				QR384				QR600			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	3.3	0		0	0	3.2		3.3	3.3	0		0	1.3	0		0	0	5	
STANDBY	0	3.3	0		0	1.3	0		0	1.7	1.3		0	0.5	0		0	0	0	

SA-PM38PP MAIN P.C.B.

13.5. 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	0	0	0	0	1.8	0	1.2	0.8	1.2	0	0	0	3.3	-29	-29	-27	-27	-27	-24.5	-24.5
STANDBY	0	0	0	0	0.9	0	0	0	0	0	0	0	1.2	0.7	0.7	0.7	0.7	0.7	0.7	0.7

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	-29	-24.5	-27	-29.5	-29.5	-29.5	-29.5	-24.5	-20	-24.5	-24.5	-27.5	-24.5	-27	-27	-27	-27	-27	-27	-27
STANDBY	0.7	0.7	0	0.7	0.7	0.7	0.7	0.7	0	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7

REF NO.	IC900																			
MODE	41	42	43	44																
CD PLAY	-27	-27	3.3	0																
STANDBY	0.7	1.1	1.2	0																

SA-PM38PP PANEL P.C.B.

13.6. POWER P.C.B.

REF NO.	IC5101																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12								
CD PLAY	15.2	7.1	0	7	3.3	0	0	0	2.6	7.1	0	7.1								
STANDBY	0.9	0	0	0	0	0	0	0	1.2	0	0	0								

SA-PM38PP POWER P.C.B.

13.7. TRANSFORMER P.C.B.

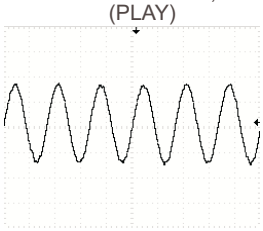
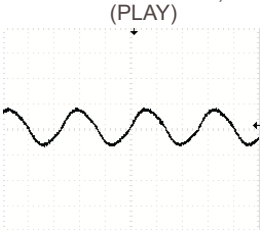
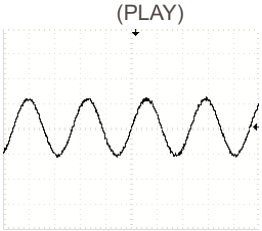
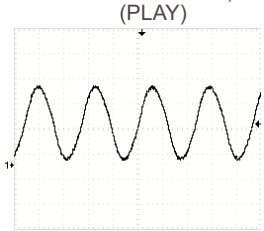
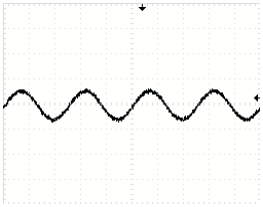
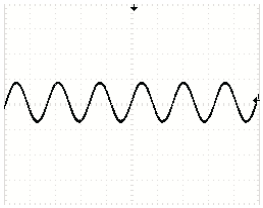
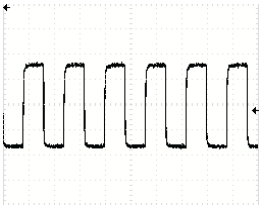
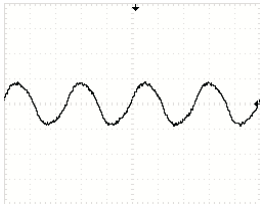
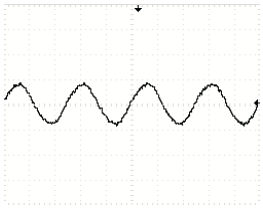
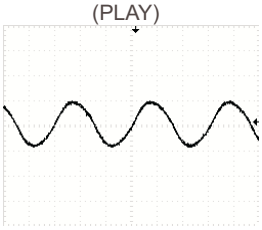
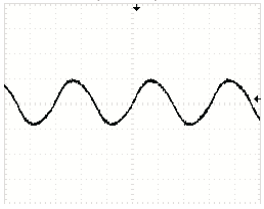
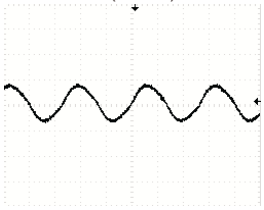
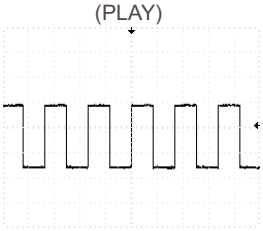
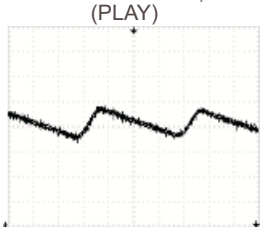
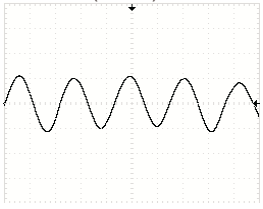
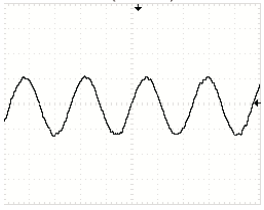
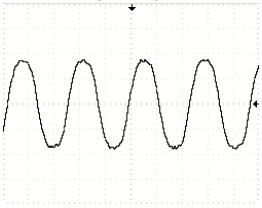
REF NO.	IC5901																			
MODE	1	2	3	4	5															
CD PLAY	6	0	1.5	3.3	6															
STANDBY	6.5	0	1.2	0	6.5															

REF NO.	Q5901				Q5902				Q5903				Q5904				Q5905			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	14.5	7	12		6.8	6.8	7.2		0	0	0		0	1.8	1.8		0	0	0	
STANDBY	0.5	0.2	0.2		0	0.2	0.5		0.6	0	0		0	1.8	2		0	6	0	

REF NO.	Q5907																			
MODE	E	C	B																	
CD PLAY	6	9.2	8																	
STANDBY	6	11	6.6																	

SA-PM38PP TRANSFORMER P.C.B.

13.8. Waveform Chart

WF No. IC200 - 5,35 (PLAY)  2.28Vp-p (100usec.div)	WF No. IC200 - 17,22 (PLAY)  668mVp-p (50nsec.div)	WF No. IC200 - 20 (PLAY)  2Vp-p (100nsec.div)	WF No. IC200 - 40,52 (PLAY)  2.24Vp-p (10msec.div)
WF No. IC200 - 42,50 (PLAY)  588mVp-p (50nsec.div)	WF No. IC700 - 1,7 (PLAY)  1.48Vp-p (250usec.div)	WF No. IC800 - 6 (PLAY)  3.44Vp-p (5usec.div)	WF No. IC800 - 12 (PLAY)  700mVp-p (50usec.div)
WF No. IC800 - 13 (PLAY)  2.48Vp-p (100nsec.div)	WF No. IC800 - 15 (PLAY)  3.52Vp-p (50nsec.div)	WF No. IC800 - 16 (PLAY)  1.72Vp-p (50nsec.div)	WF No. IC800 - 51 (PLAY)  2.2Vp-p (50nsec.div)
WF No. IC900 - 8 (PLAY)  1.2Vp-p (500usec.div)	WF No. IC5101 - 2,12 (PLAY)  172mVp-p (5nsec.div)	WF No. IC5101 - 6,8 (PLAY)  112mVp-p (5nsec.div)	WF No. IC7001 - 80 (PLAY)  3.56Vp-p (25nsec.div)
WF No. IC7001 - 81 (PLAY)  1.2Vp-p (25nsec.div)			

14 Illustration of IC's, Transistors and Diodes

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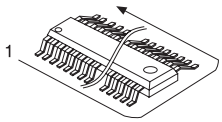
<tr>
<td>BA5948FPE2 (28P)
  </td>
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 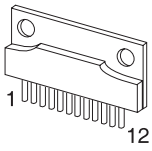 </td>
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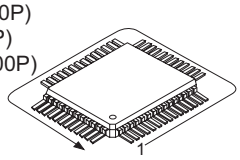
C1AB00003013 (52P)
MN6627954AMA (100P)
MNZSFB5KJM2 (64P)
RFKWMPM38EG (100P)
  </td>
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 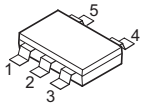 </td>
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 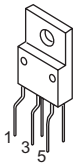 </td>
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 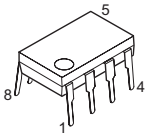 </td>
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 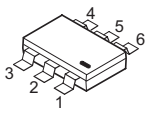 </td>
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 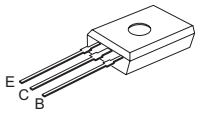 </td>
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 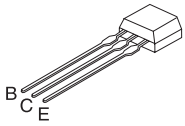 </td>
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 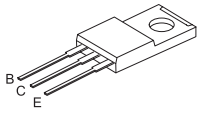 </td>
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 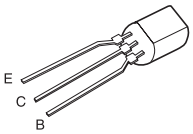 </td>
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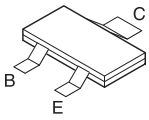
UNR221100L
UNR521400L
  </td>
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 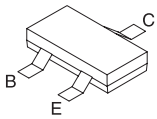 </td>
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 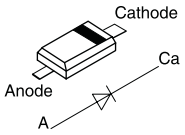 </td>
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 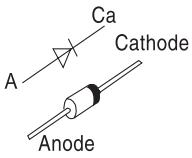 </td>
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 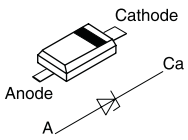 </td>
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 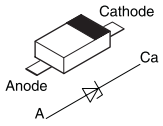 </td>
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 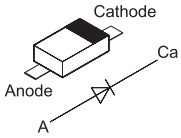 </td>
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 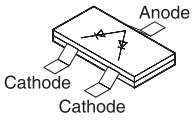 </td>
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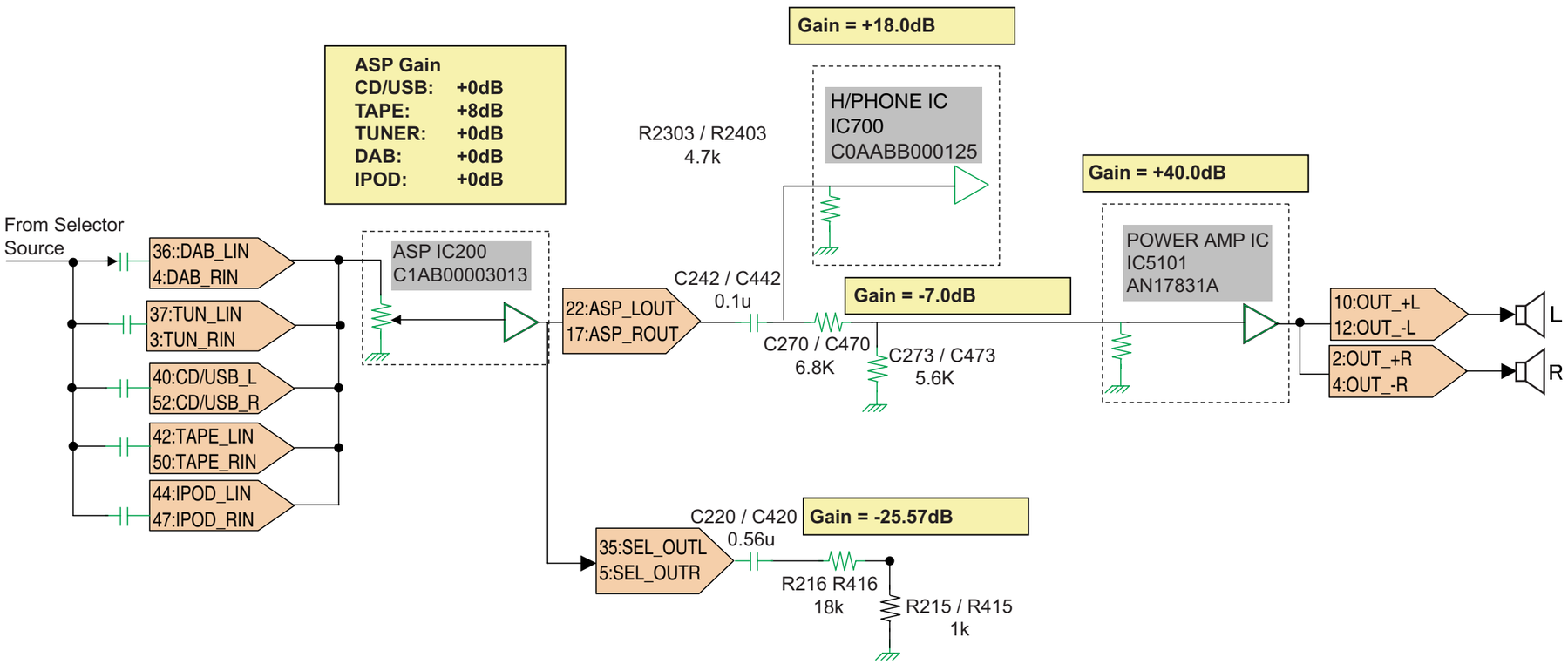
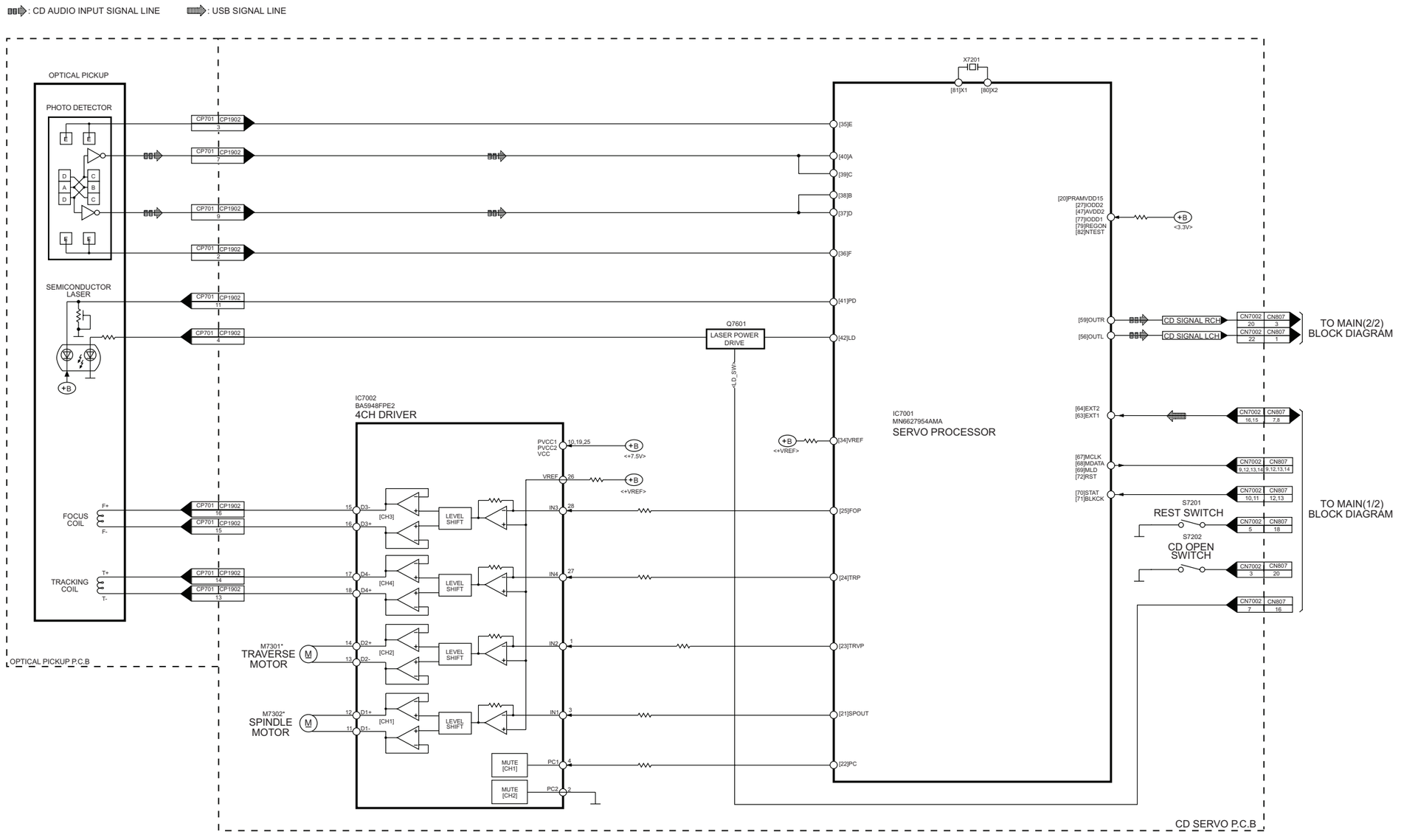
15 Overall Simplified Block for PM38



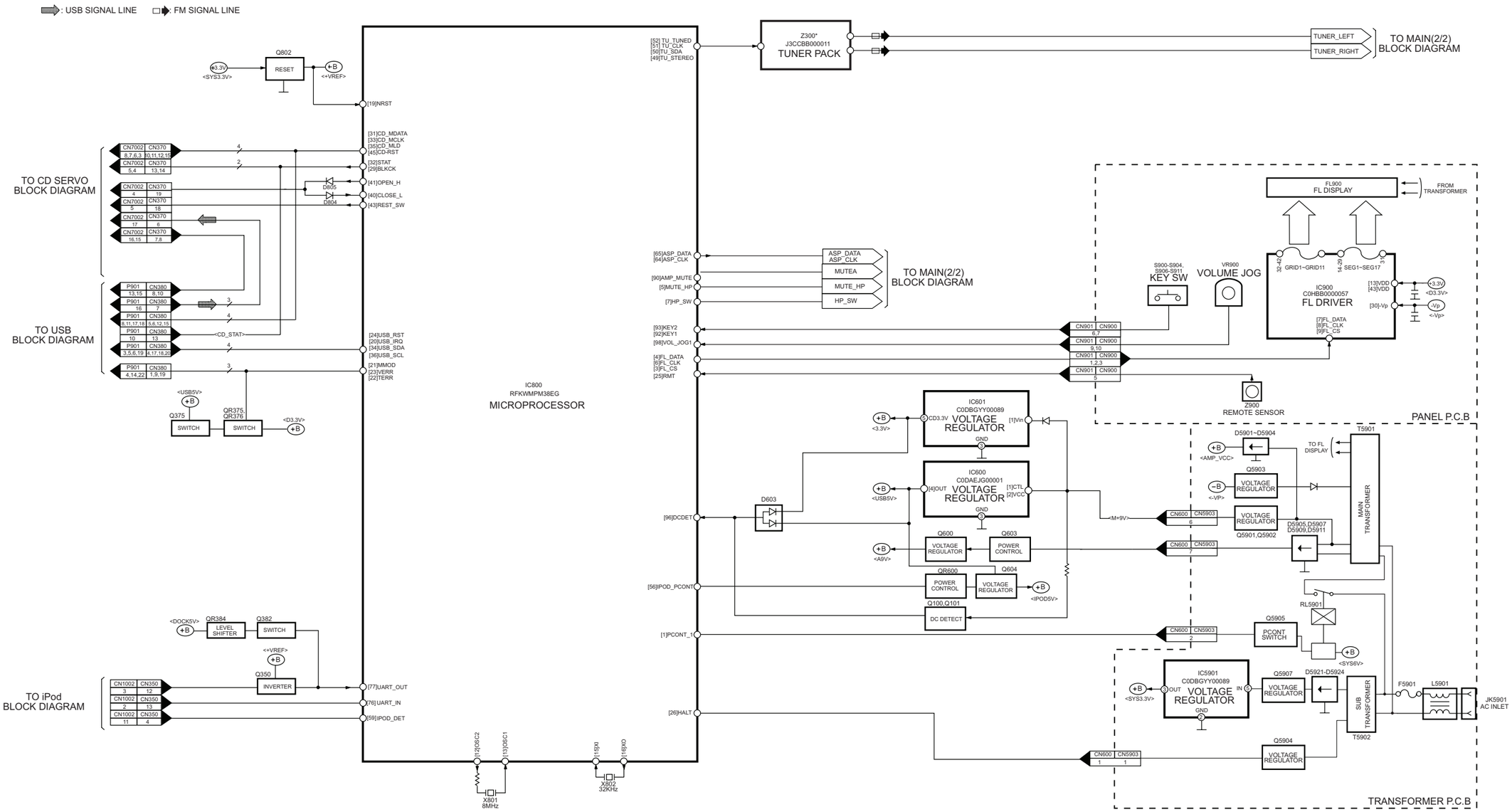
16 Block Diagram

16.1. CD SERVO BLOCK DIAGRAM



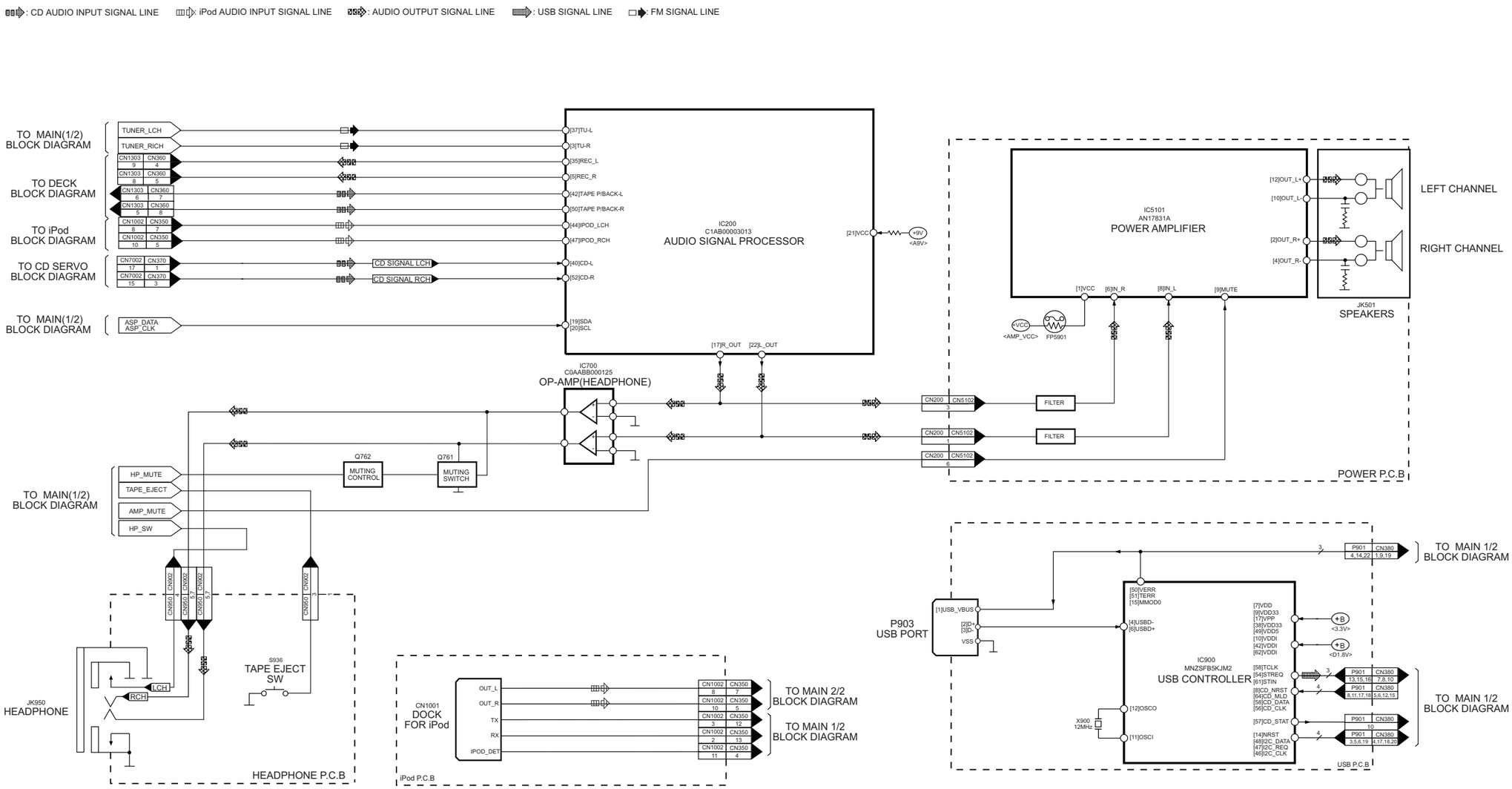
SA-PM38PP CD SERVO BLOCK DIAGRAM

16.2. MAIN(1/2)/ PANEL/TRANSFORMER BLOCK DIAGRAM



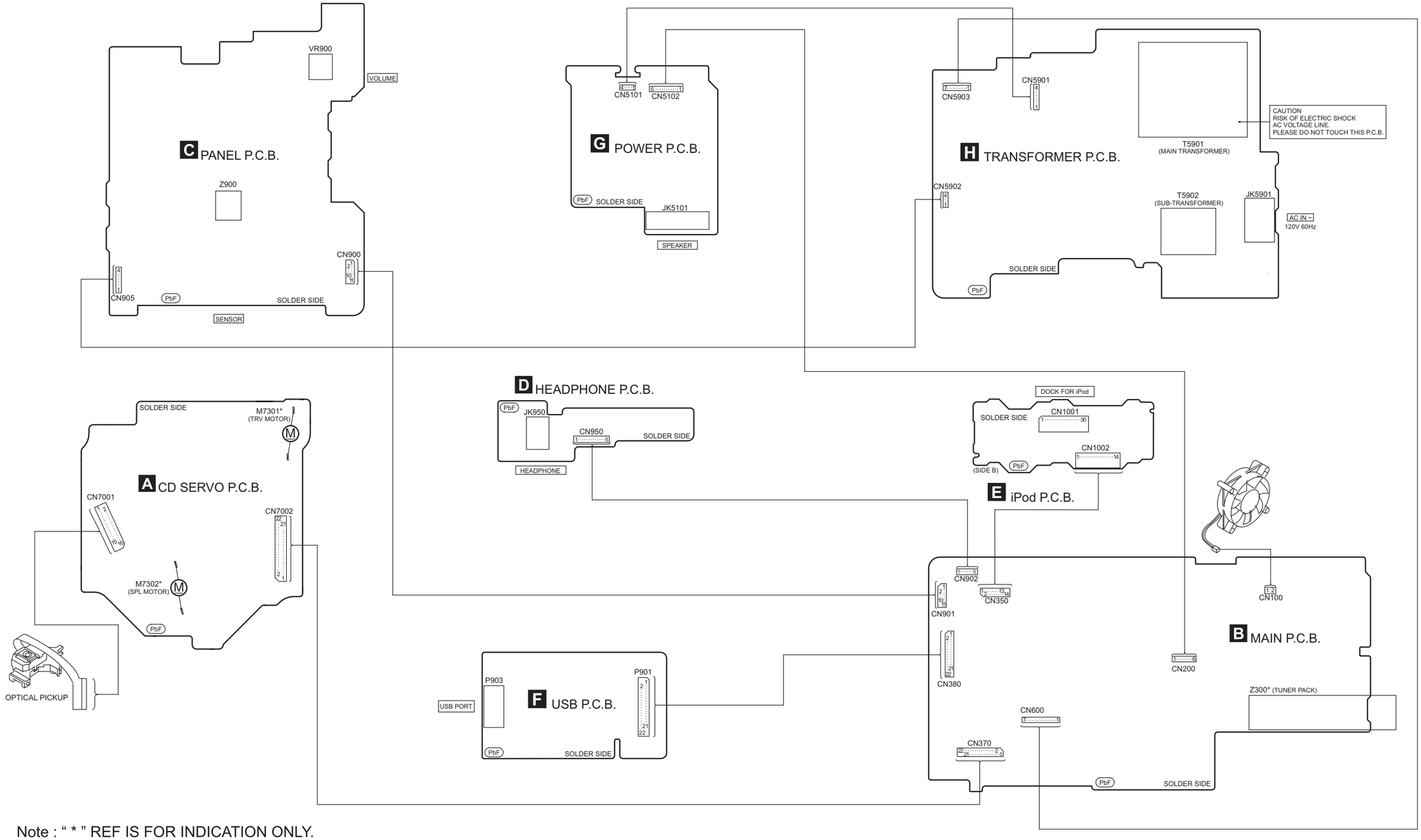
SA-PM38PP MAIN(1/2)/ PANEL/TRANSFORMER BLOCK DIAGRAM

16.3. MAIN(2/2)/ HEADPHONE/ iPod/ USB BLOCK DIAGRAM



MAIN P.C.B

17 Wiring Connection Diagram



Note : “ * ” REF IS FOR INDICATION ONLY.

18 Schematic Diagram Notes

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

Notes:

S900:	-DEMO switch (■ / -DEMO).
S901:	CD PLAY/PAUSE switch (CD ►/❚❚).
S902:	USB switch (USB ►/❚❚).
S903:	FM/AM switch.
S904:	iPod switch (iPod ►/❚❚).
S906:	CD EJECT switch (OPEN/CLOSE ⏏).
S907:	POWER switch (⏻/I).
S908:	REW switch (I◄◄/◄◄).
S909:	FWD switch (►►/►►I).
S910:	BASS/TREBLE switch.
S911:	D.BASS switch.
S7201:	REST switch.
S7202:	CD OPEN switch.
VR900:	Volume jog.

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

- Capacitor values are in microfarad(μF) unless specified otherwise, F=Farad, pF=Pico-Farad
  Resistance values are in ohm(Ω), unless specified otherwise, 1K=1,000Ω, 1M=1,000KΩ

- **Voltage and Signal lines:**


: +B Signal Line


: -B Signal Line


: CD Audio Input Signal Line

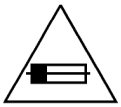

: iPod Audio Input Signal Line


: Audio Output Signal Line


: FM Signal Line


: USB Signal Line

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE F5901 1.6A, 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 harzard, 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 qù le présent symbole est apposé.

19 Schematic Diagram

19.1. CD SERVO CIRCUIT

SCHEMATIC DIAGRAM - 1

A CD SERVO CIRCUIT

—— : +B SIGNAL LINE ▮▮▶ : CD AUDIO INPUT SIGNAL LINE

CN7001

TO OPTICAL PICKUP UNIT

Q7601
B1ADCF000001
LASER POWER DRIVE

IC7001
MN6627954AMA
SERVO PROCESSOR

IC7002
BA5948FPE2
4CH DRIVER

CN7002

TO **B** MAIN CIRCUIT (CN370) IN SCHEMATIC DIAGRAM - 4

X7201
H0H169500013

S7201 REST

S7202 CD OPEN

M7301*
TRAVERSE MOTOR

M7302*
SPINDLE MOTOR

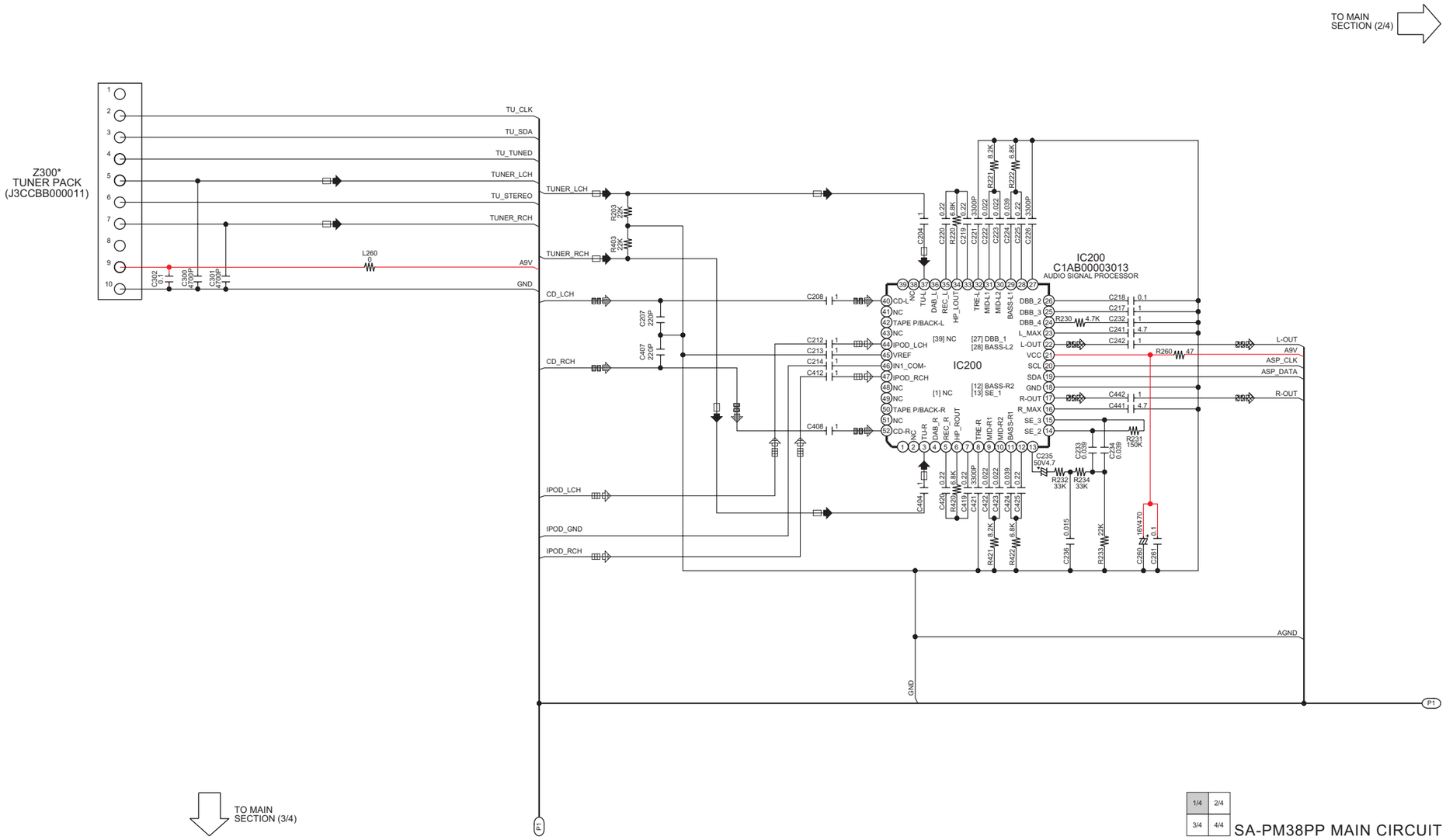
SA-PM38PP CD SERVO CIRCUIT

19.2. MAIN CIRCUIT (1/4)

SCHEMATIC DIAGRAM - 2

B MAIN CIRCUIT

: +B SIGNAL LINE : CD AUDIO INPUT SIGNAL LINE : iPod AUDIO INPUT SIGNAL LINE : AUDIO OUTPUT SIGNAL LINE : USB SIGNAL LINE : FM SIGNAL LINE



1/4	2/4
3/4	4/4

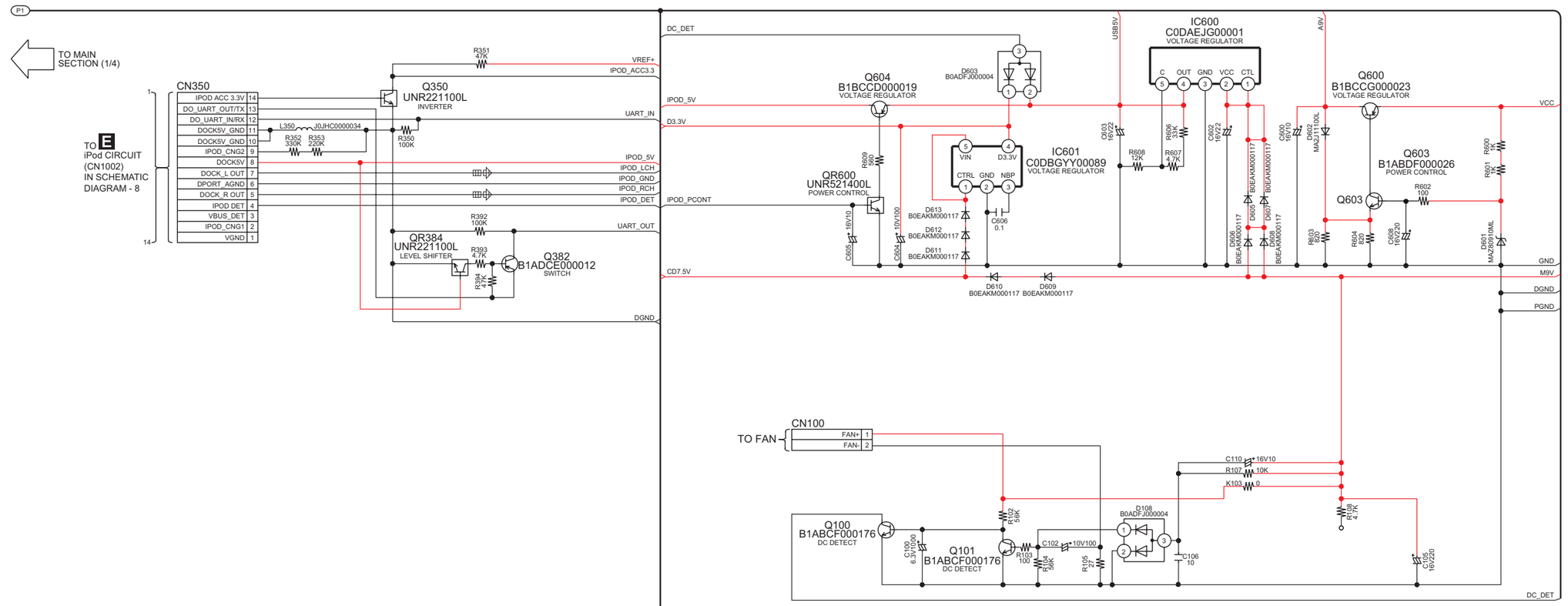
SA-PM38PP MAIN CIRCUIT

19.3. MAIN CIRCUIT (2/4)

SCHEMATIC DIAGRAM - 3

B MAIN CIRCUIT

: +B SIGNAL LINE : CD AUDIO INPUT SIGNAL LINE : iPod AUDIO INPUT SIGNAL LINE : AUDIO OUTPUT SIGNAL LINE : USB SIGNAL LINE : FM SIGNAL LINE



TO MAIN SECTION (4/4)

E

1/4	2/4
3/4	4/4

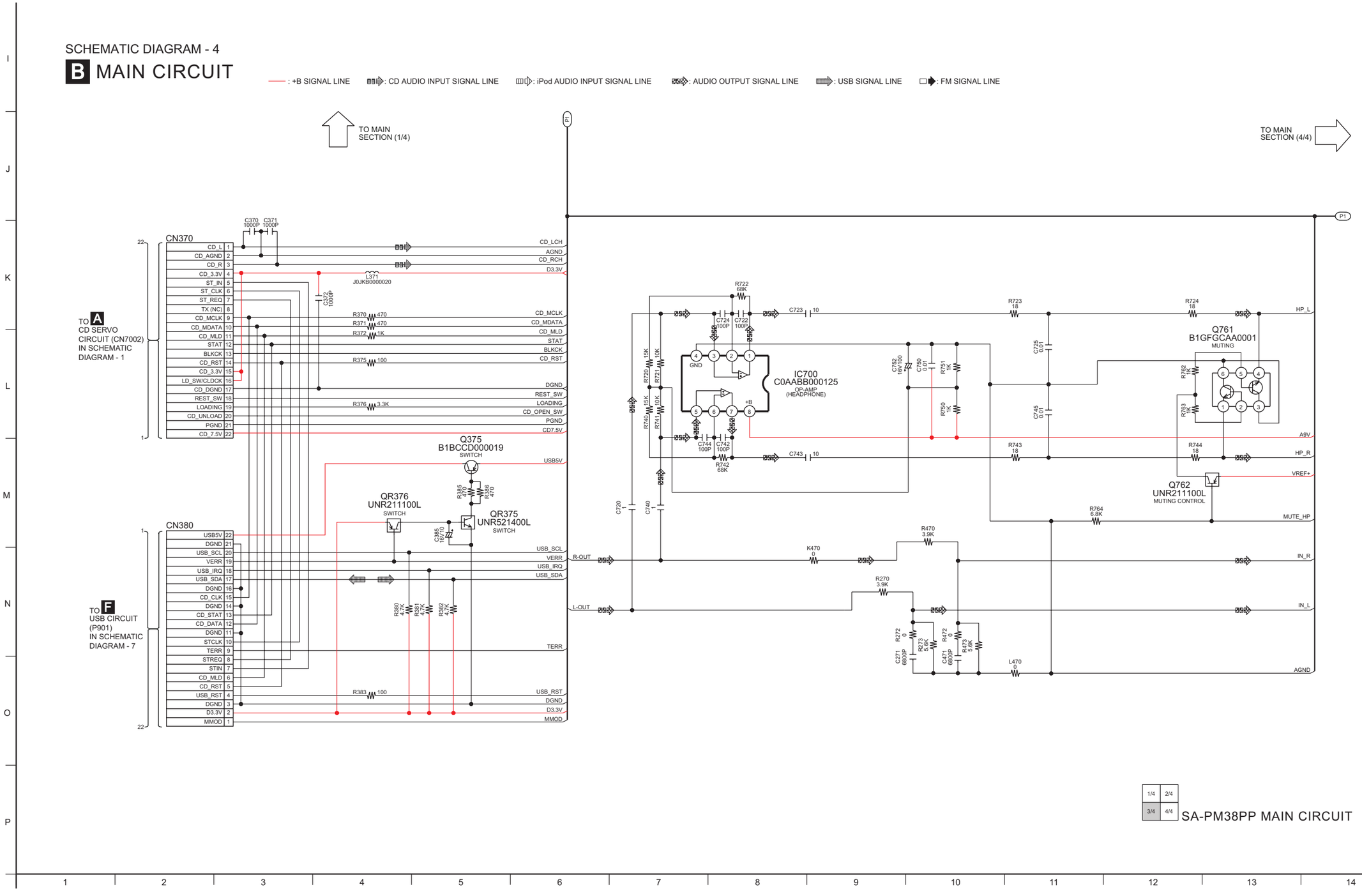
SA-PM38PP MAIN CIRCUIT

19.4. MAIN CIRCUIT (3/4)

SCHEMATIC DIAGRAM - 4

B MAIN CIRCUIT

: +B SIGNAL LINE : CD AUDIO INPUT SIGNAL LINE : iPod AUDIO INPUT SIGNAL LINE : AUDIO OUTPUT SIGNAL LINE : USB SIGNAL LINE : FM SIGNAL LINE



1/4 | 2/4 | 3/4 | 4/4

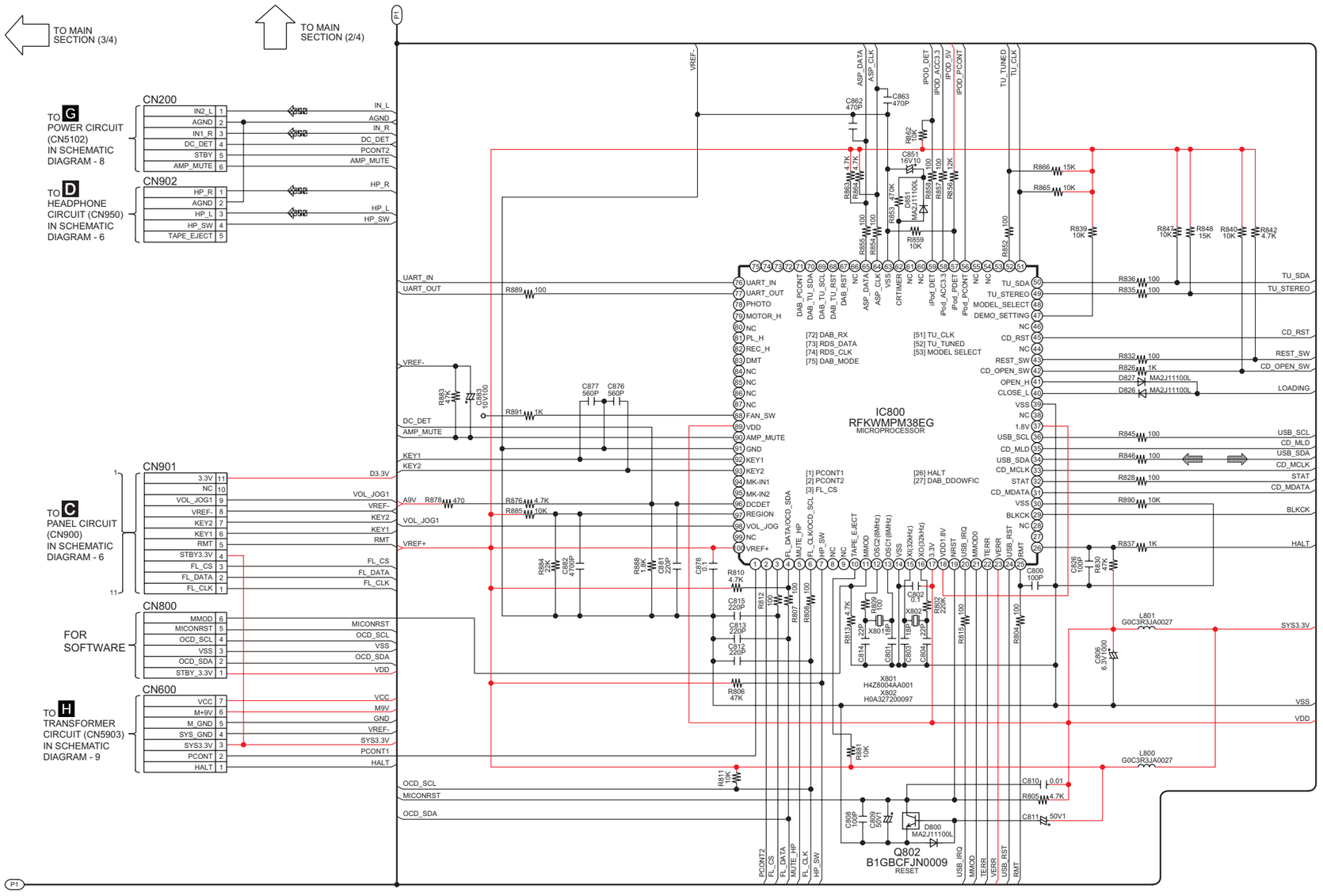
SA-PM38PP MAIN CIRCUIT

19.5. MAIN CIRCUIT (4/4)

SCHEMATIC DIAGRAM - 5

B MAIN CIRCUIT

: +B SIGNAL LINE : CD AUDIO INPUT SIGNAL LINE : iPod AUDIO INPUT SIGNAL LINE : AUDIO OUTPUT SIGNAL LINE : USB SIGNAL LINE : FM SIGNAL LINE

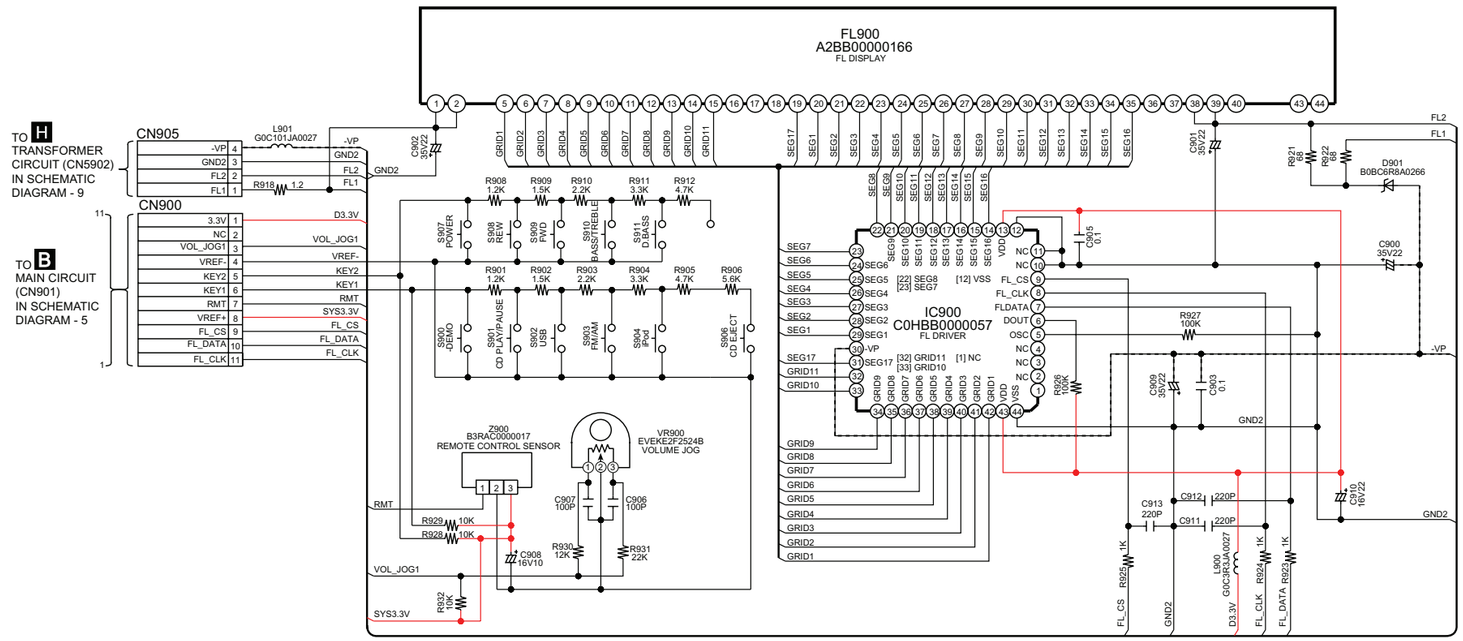


19.6. PANEL CIRCUIT and HEADPHONE CIRCUIT

SCHEMATIC DIAGRAM - 6

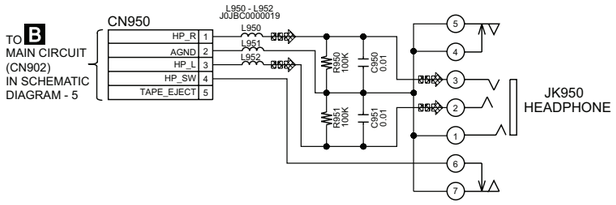
C PANEL CIRCUIT

: +B SIGNAL LINE : -B SIGNAL LINE



D HEADPHONE CIRCUIT

: AUDIO OUTPUT SIGNAL LINE



SA-PM38PP PANEL / HEADPHONE CIRCUIT

19.7. USB CIRCUIT

SCHEMATIC DIAGRAM - 7

F USB CIRCUIT

: +B SIGNAL LINE : USB SIGNAL LINE

IC900
MNZSFB5KJM2
USB CONTROLLER

P903
USB PORT

P901

TO **B**
MAIN CIRCUIT
(CN380)
IN SCHEMATIC
DIAGRAM - 4

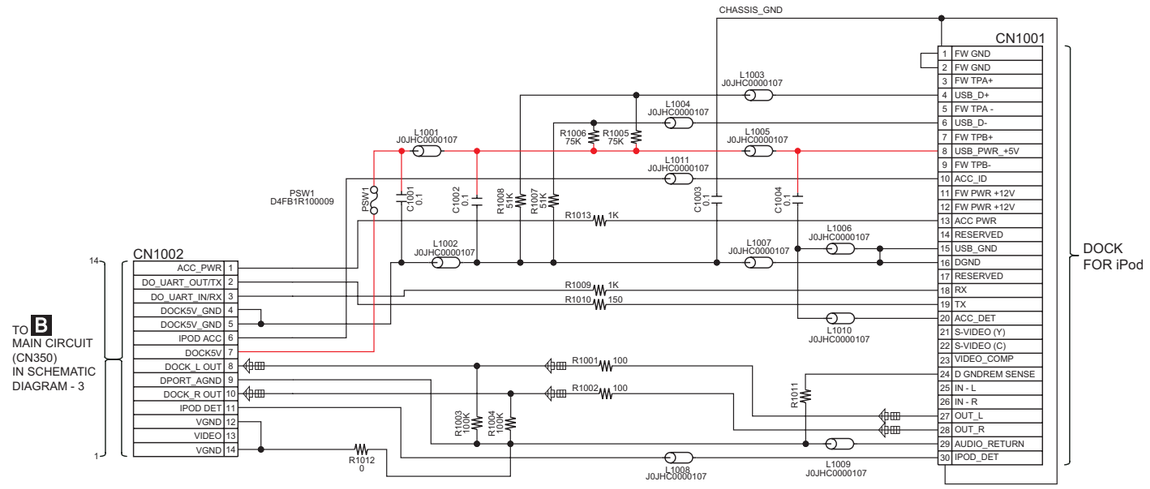
SA-PM38PP USB CIRCUIT

19.8. iPod CIRCUIT and POWER CIRCUIT

SCHEMATIC DIAGRAM - 8

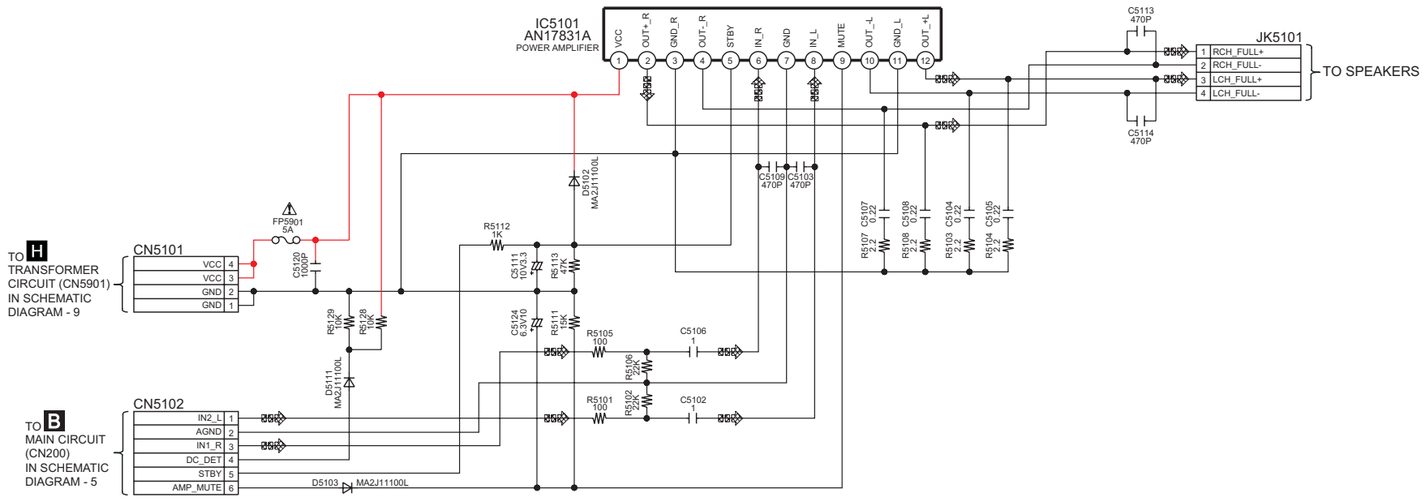
E iPod CIRCUIT

: +B SIGNAL LINE : iPod AUDIO INPUT SIGNAL LINE



G POWER CIRCUIT

: +B SIGNAL LINE : AUDIO OUTPUT SIGNAL LINE



SA-PM38PP iPod / POWER CIRCUIT

19.9. TRANSFORMER CIRCUIT

SCHEMATIC DIAGRAM - 9

H TRANSFORMER CIRCUIT

: +B SIGNAL LINE : -B SIGNAL LINE

TO G POWER CIRCUIT (CN5101) IN SCHEMATIC DIAGRAM - 8

CN5901: VCC 4, VCC 3, GND 2, GND 1

TO C PANEL CIRCUIT (CN905) IN SCHEMATIC DIAGRAM - 6

CN5902: -VP 4, -VP(GND) 3, FL2 2, FL1 1

TO B MAIN CIRCUIT (CN600) IN SCHEMATIC DIAGRAM - 5

CN5903: VCC 7, M+9V 6, M_GND 5, SYS_GND 4, SYS3.3V 3, PCONT 2, HALT 1

C5902 0.1
C5901 35V3300
D5901 B0EAMM000038
D5902 B0EAMM000038
C5928 0.1
D5903 B0EAMM000038
D5904 B0EAMM000038

Q5901 B1BCCG000023 VOLTAGE REGULATOR
C5912 0.01
R5902 100K
R5901 2.2K
D5917 MA2J11100L
C5914 0.1
C5913 16V220
Q5902 B1ABCF000176 VOLTAGE REGULATOR
R5904 820
R5903 820
C5911 16V10
D5918 MAZ8091ML
C5910 0.1
C5909 25V1000
C5908 25V1000
D5919 B0EAKM000117
R5915 22

D5905 B0EAKM000117
D5906 B0EAKM000117
D5907 B0EAKM000117
D5908 B0EAKM000117
C5929 0.1
D5909 B0EAKM000117
D5910 B0EAKM000117
D5911 B0EAKM000117
D5912 B0EAKM000117

T5901 G4CYBYY00025 MAIN TRANSFORMER
TL13 13
TL12 12 S1
TL11 11
TL10 10 S2
TL9 9 -VP
TL8 8
TL7 7 FL
6
TL5
1 2 3 4 5

FL2
FL1
-VP

Q5903 2SB0621AHA VOLTAGE REGULATOR
R5905 12
D5913 B0EAKM000117
C5905 50V22
C5907 0.01
R5906 3.3K
R5907 47K
C5908 0.047
D5915 B0BC02900004
C5906 50V22
D5914 B0EAKM000117
TL1

RL5901 K6B1AEA00003
D5920 MA2J11100L
Q5905 B1GBCFGN0016 PCONT SWITCH

IC5901 C0DBGYY00089 VOLTAGE REGULATOR
4 OUT NBP 3
GND 2
5 IN CRTL 1
C5919 0.1
R5912 1K
Q5904 B1GBCFJJ0051 VOLTAGE REGULATOR
D5925 MA2J11100L
R5909 10K
C5923 0.01
R5908 10K
C5922 0.01
C5921 16V10
C5920 0.1
C5918 16V220
C5917 16V1000
D5921 B0EAKM000117
D5922 B0EAKM000117
D5923 B0EAKM000117
D5924 B0EAKM000117
C5916 0.1

Q5907 B1BABG000007 VOLTAGE REGULATOR
C5924 0.01
R5911 1.8K
R5910 82
C5925 25V47
D5927 MA2J06300ML

R5900 3300K
T5902 G4C2AAD00004 SUB TRANSFORMER
6 220/100V
7
230/240V
9
3
2

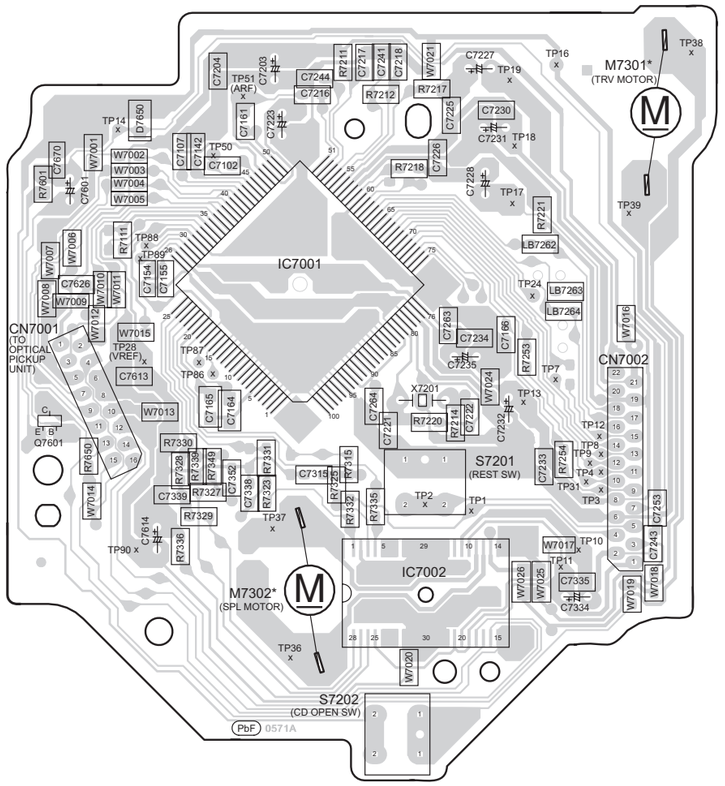
Z5901 ERZVA5Z471
L5901 ELF15N035AN
F5901 1.6A 125V
FC5902 FC5901
JK5901
AC IN 120V 60HZ

SA-PM38PP TRANSFORMER CIRCUIT

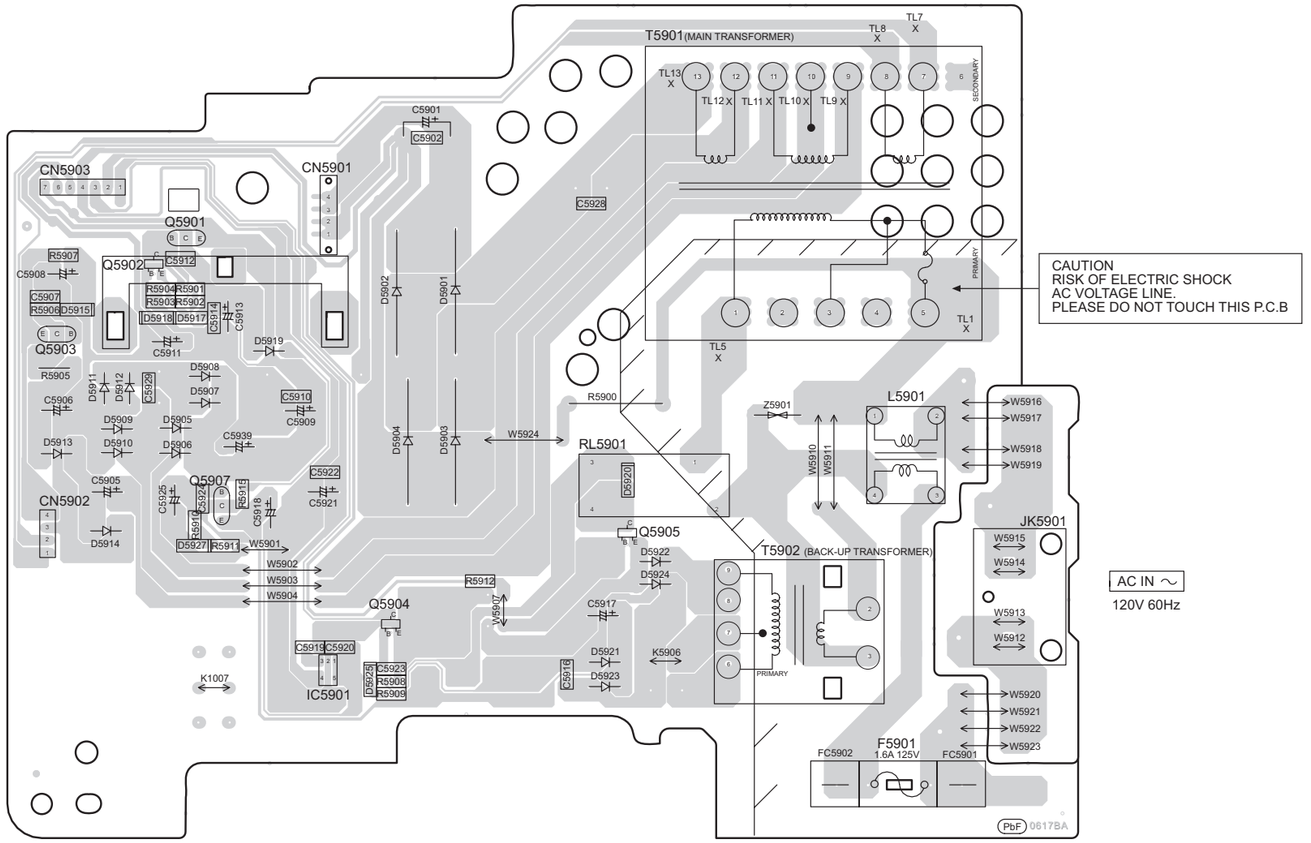
20 Printed Circuit Board

20.1. CD SERVO P.C.B. and TRANSFORMER P.C.B.

A CD SERVO P.C.B. (REPX0636A)



H TRANSFORMER P.C.B. (REPX0708F)

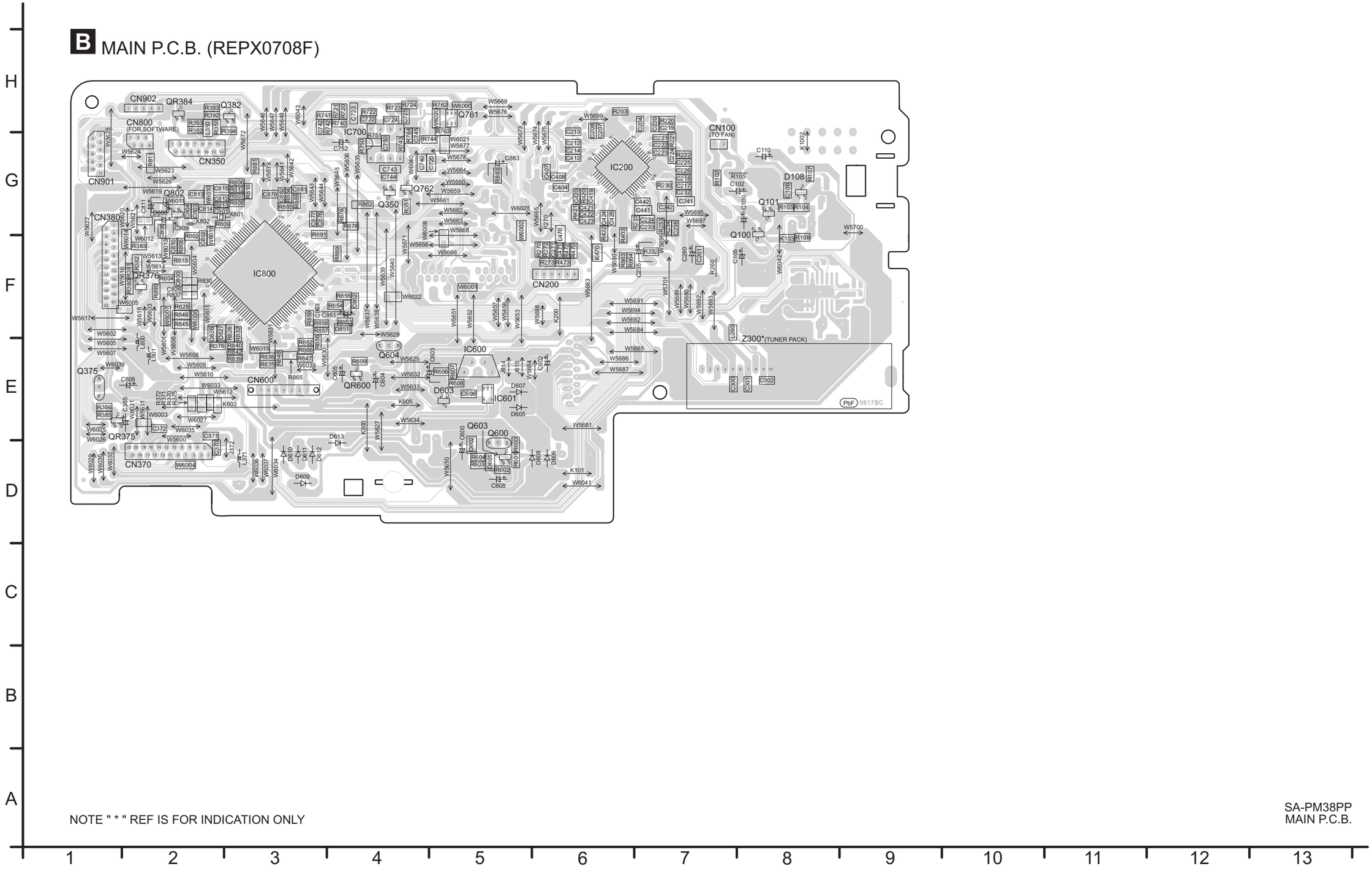


NOTE " * " REF IS FOR INDICATION ONLY

SA-PM38PP
CD SERVO/ TRANSFORMER P.C.B.

20.2. MAIN P.C.B.

B MAIN P.C.B. (REPX0708F)

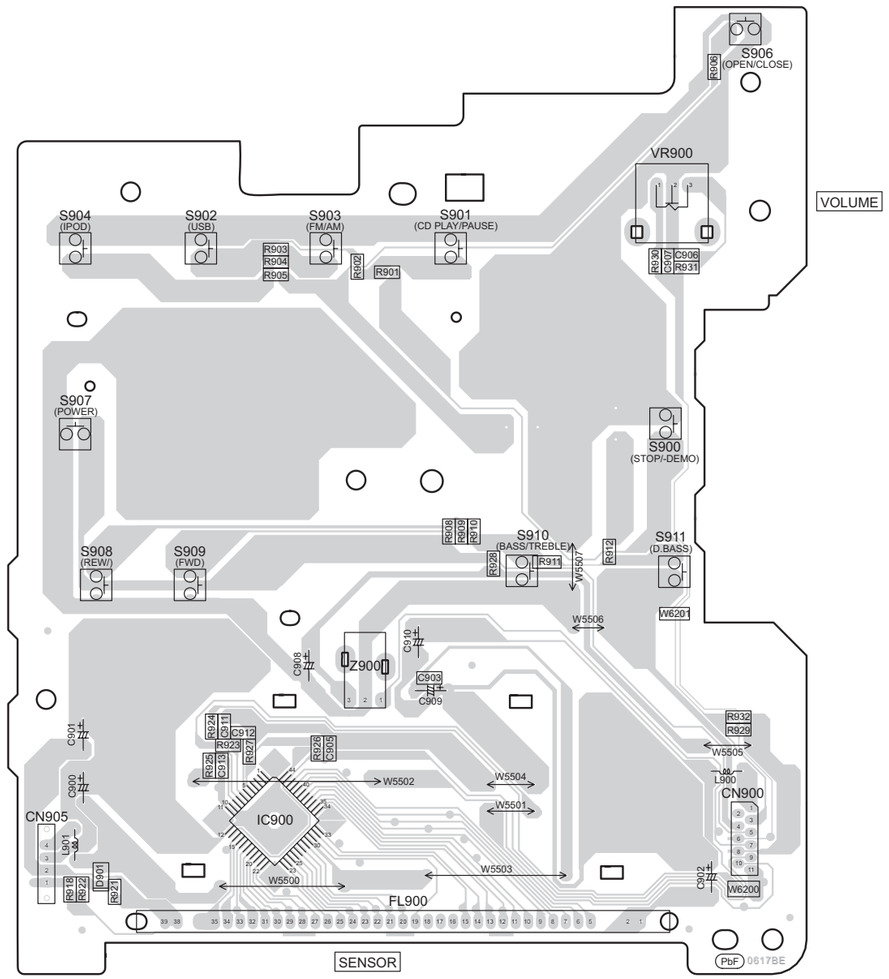


NOTE " * " REF IS FOR INDICATION ONLY

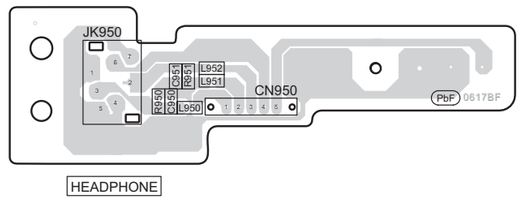
SA-PM38PP
MAIN P.C.B.

20.3. PANEL P.C.B., HEADPHONE P.C.B. and POWER P.C.B.

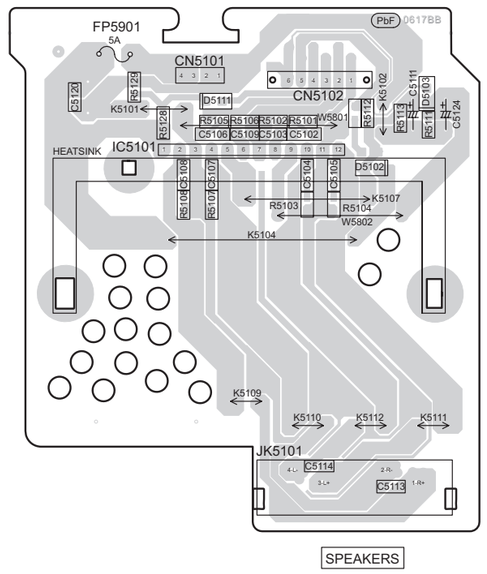
C PANEL P.C.B. (REPX0708F)



D HEADPHONE P.C.B. (REPX0708F)



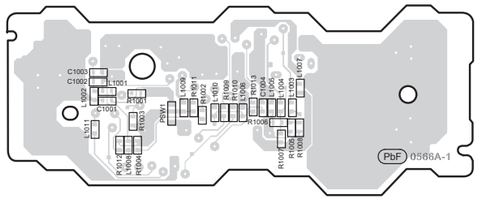
G POWER P.C.B. (REPX0708F)



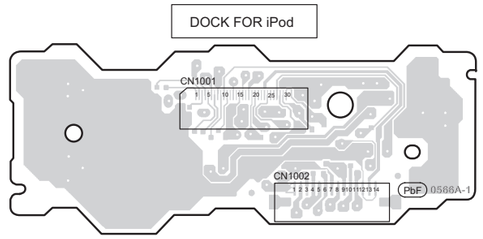
SA-PM38PP
PANEL/ HEADPHONE/ POWER P.C.B.

20.4. iPod P.C.B. and USB P.C.B.

E iPod P.C.B. (REPX0631A)

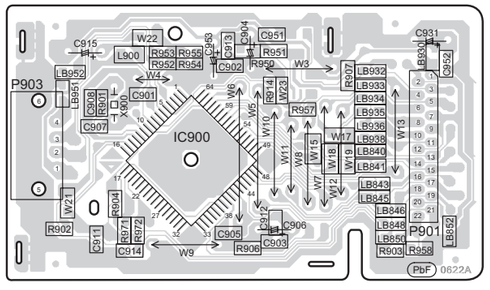


(SIDE A)



(SIDE B)

F USB P.C.B. (REPX0720A)



SA-PM38PP
IPOD/ USB P.C.B.

21 Terminal Function of IC's

21.1. 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	DSLF	I	Loop Filter Terminal (For DSL)
53	IREF	-	Reference I/P
54	PLLF	-	PLL Loop Filter Terminal (Phase Compare)
55	PLLF0	-	PLL Loop Filter Terminal (Speed Compare)
56	OUTL	O	Audio O/P (LCH)
57	AVSS1	-	GND
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 Sigmal 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

21.2. 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

21.3. IC800 (RFKWMPM38EG) IC MICRO-PROCESSOR

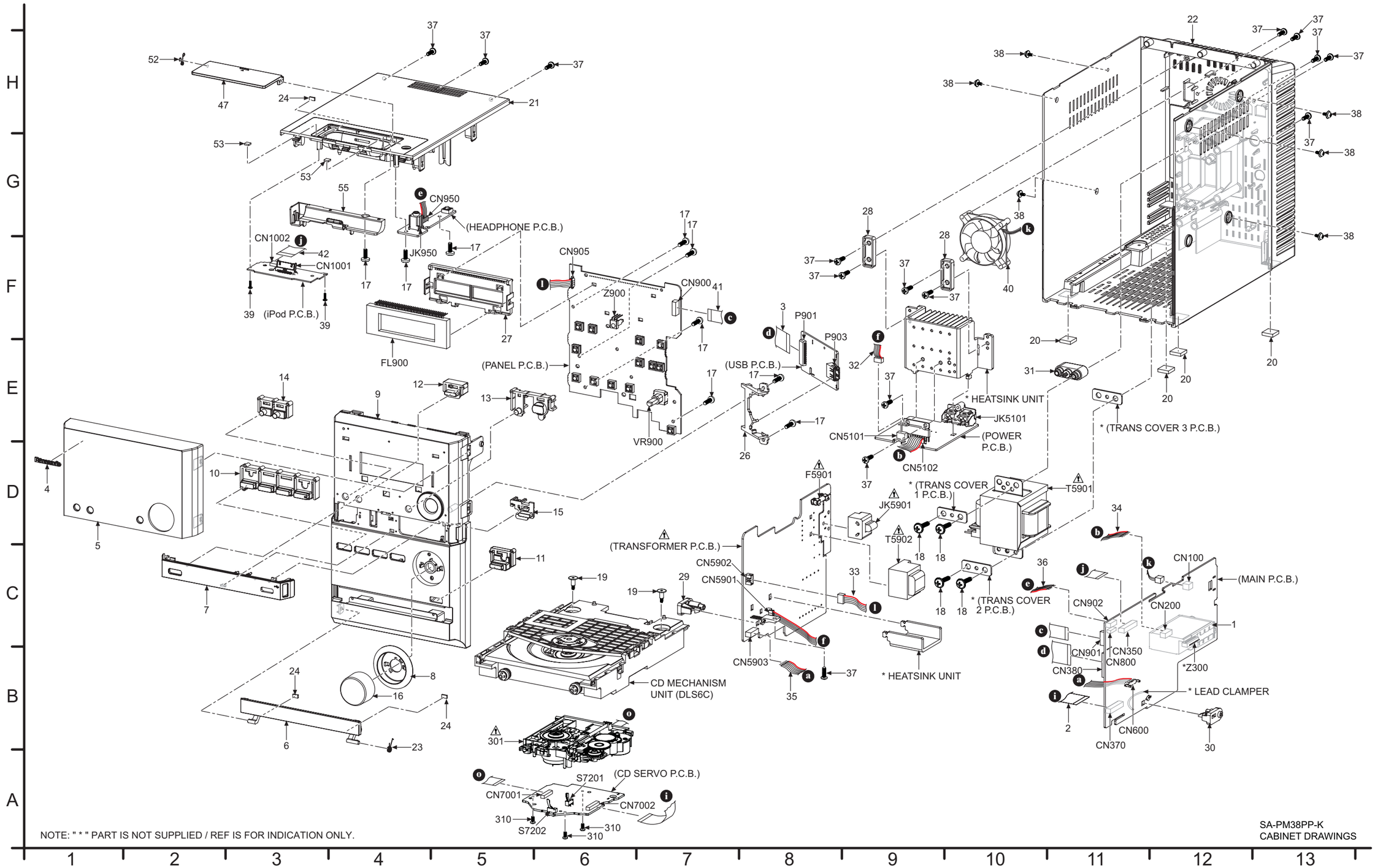
Pin No.	Mark	I/O	Function
1	PCONT1	O	“Power Control Output 1(Pwr Sply, Active HIGH)”
2	PCONT2	O	Power Control Output 2
3	FL_CS	O	Chip Select for FL Panel
4	FL_DATA / OCD_SDA	O	FL Data Output / On Chip Debugger Data
5	MUTE_HP	O	Analog MUTE Output (L : MUTE ON)
6	FL_CLK / OCD_SCL	O	FL CLK Output / On Chip Debugger Clock
7	HP_SW	I	Headphone detect switch input
8	N.C.	-	No Connection
9	N.C.	-	No Connection
10	TAPE_EJECT	-	No Connection
11	MMOD	I	Memory mode selection
12	OSC2 (8MHz)	O	Main Oscillator output (8MHz)
13	OSC1 (8MHz)	I	Main Oscillator input (8MHz)
14	VSS	-	Micom GND
15	XI (32kHz)	I	Slow Oscillator input (32KHz)
16	XO (32KHz)	O	Slow Oscillator output (32KHz)
17	3.3V	-	Voltage supply 3.3V
18	VDD1.8	-	Connect to pin 37
19	NRST	I	MICOM RESET PIN (L: reset)
20	USB_IRQ	I	USB Interrupt Request
21	MMOD0	O	Switching Mode
22	TERR	I	Time out error
23	VERR	O	Verify error
24	USB_RST	O	USB Reset Pin
25	RMT	I	Remote Control Input
26	HALT	I	AC Failure Detect Signal
27	DAB_ DDOWFIC	-	No Connection
28	N.C.	-	No Connection
29	BLKCK	I	CD Subcode Block Clock Input
30	VSS	-	Micom GND
31	CD_MDATA	O	CD LSI Command Data
32	STAT	I	CD LSI Status Input
33	CD_MCLK	O	CD LSI Command Clock
34	USB_SDA	I/O	USB I2C Data Line
35	CD_MLD	O	CD LSI Command Load
36	USB_SCL	I	USB I2C Clock Line
37	1.8V	-	Power Supply (1.8V)
38	N.C.	-	No Connection
39	VSS	-	Micom GND
40	CLOSE_L	O	CD Tray Close Control (Active L)
41	OPEN_H	O	CD Tray Open Control (Active H)
42	CD_OPEN_SW	I	CD Open SW (H : Open; L : Close)
43	REST_SW	I	REST SW (L : Inner)
44	N.C.	-	No Connection
45	CD_RST	O	CD LSI Reset Ouput (L: reset)
46	N.C.	-	No Connection
47	DEMO_ SETTING	I	Demo Mode Setting Input
48	MODEL_ SELECT	-	No Connection
49	TU_STEREO	I/O	Tuner Stereo Signal
50	TU_SDA	O	IIC Serial Data for Tuner (PLL Data I/O)
51	TU_CLK	O	IIC Serial Clock for Tuner (PLL Clock Output)
52	TU_TUNED	I/O	Tuner Tuned Signal
53	MODEL SELECT	-	No Connection
54	N.C.	-	No Connection
55	N.C.	-	No Connection
56	iPod_PCONT	O	iPod regulator control
57	iPod_PDET	I	iPod regulator detection
58	iPod_Acc3.3	I	iPod Signal ready detection
59	iPod_DET	I	iPod detection (Output L if no iPod)
60	N.C.	-	No Connection
61	N.C.	-	No Connection
62	CRTIMER	I/O	CR TIMER
63	VSS	-	Micom GND
64	ASP_CLK	I/O	ASP Sound Processor Serial Clock Output
65	ASP_DATA	I/O	ASP Sound Processor Serial Data Output
66	N.C.	-	No Connection
67	DAB_RST	-	No Connection
68	DAB_ TU_RST	-	No Connection
69	DAB_ TU_SCL	-	No Connection
70	DAB_ TU_SDA	-	No Connection
71	DAB_PCONT	-	No Connection
72	DAB_RX	-	No Connection
73	RDS_DATA	-	No Connection
74	RDS_CLK	-	No Connection
75	DAB_MODE	-	No Connection

Pin No.	Mark	I/O	Function
76	UART_IN	O	Serial UART Communication
77	UART_OUT	I	Serial UART Communication
78	PHOTO	-	No Connection
79	MOTOR_H	-	No Connection
80	N.C.	-	No Connection
81	PL_H	-	No Connection
82	REC_H	-	No Connection
83	DMT	-	No Connection
84	N.C.	-	No Connection
85	N.C.	-	No Connection
86	N.C.	-	No Connection
87	N.C.	-	No Connection
88	FAN_SW	-	No Connection
89	VDD	-	Micom VDD +5V
90	AMP_MUTE	-	Amplifier mute output (H : MUTE ON)
91	GND	-	Ground Connection
92	KEY1	I	Key 1 Input
93	KEY2	I	Key 2 Input
94	MK-IN1	-	No Connection
95	MK-IN2	-	No Connection
96	DCDET	I	DC Level Detection Input
97	REGION	I	Region Setting Input
98	VOL_JOG	I	Jog Input
99	N.C.	-	No Connection
100	VREF +	-	A/D Converter reference voltage +3.3V

22 Exploded View and Replacement Parts List

22.1. Exploded View and Mechanical replacement Parts List

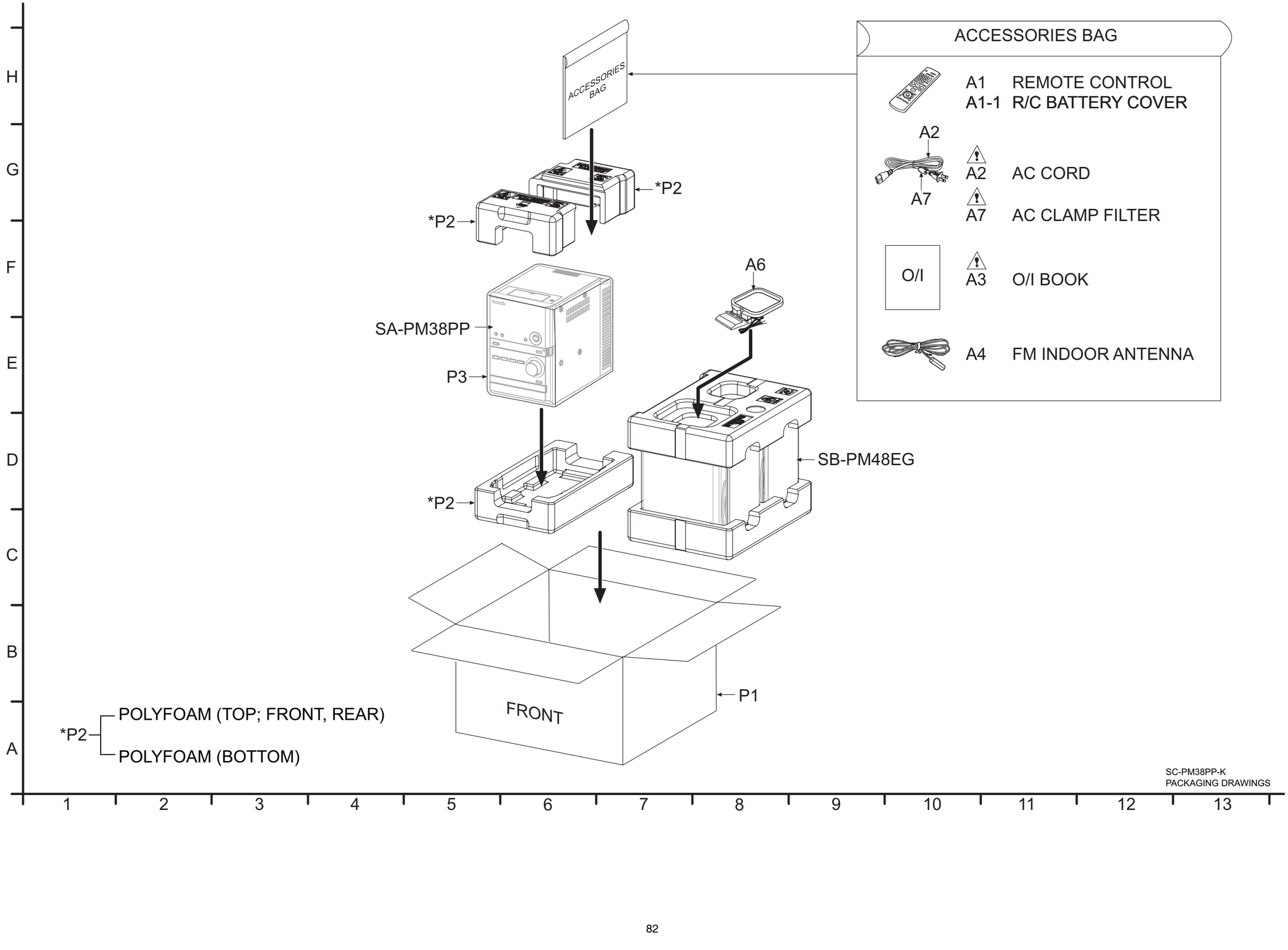
22.1.1. Cabinet Parts Location



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

SA-PM38PP-K
CABINET DRAWINGS

22.1.2. Packaging



22.1.3. 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	S:	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	J3CCBB000011	TUNER PACK	1	
	2	REEX0945	22P FFC (CD-MAIN)	1	
	3	REEX0947	22P FFC (USB-MAIN)	1	
	4	RGBV0016-S	PANASONIC BADGE	1	
	5	RGKX0513E-H	FL WINDOW	1	
	6	RGKX0514-K	CD LID	1	
	7	RGKX0515A-S	CENTER ORNAMENT	1	
	8	RGKX0523-S	VOLUME RING	1	
	9	RGPX0370L-K	FRONT PANEL	1	
	10	RGUX0800B-K	FUNCTION BUTTON	1	
	11	RGUX0801-K	CD EJECT BUTTON	1	
	12	RGUX0802A-S	POWER BUTTON	1	
	13	RGUX0808-K	DBASS/BASS TREBLE BUTTON	1	
	14	RGUX0804-K	FF/REW BUTTON	1	
	15	RGUX0805-S	STOP BUTTON	1	
	16	RGWV0047-1S	VOLUME KNOB	1	
	17	RHD26046-L	SCREW	9	
	18	RHDC0023	SCREW	4	
	19	RHDX03001	SCREW	2	
	20	RKAX0042-K	LEG CUSHION	4	
	21	RKMX0149B-K	TOP CABINET	1	
	22	RFKHAPM38PPK	REAR CABINET ASS'Y	1	
	23	RMBX0088	CD LID SPRING	1	
	24	RMG0547-K	CUSHION	3	
	26	RMNX0304	USB HOLDER	1	
	27	RMNV0062A	FL HOLDER	1	
	28	RMQX0353	HEATSINK SUPPORT	2	
	29	RMQX0354	TRANS PCB SUPPORT	1	
	30	RMQX0355	MAIN PCB SUPPORT	1	
	31	RMQX0359	TRANSFORMER SPACER	1	
	32	RWJ0204130XX	4P WIRE (TRANSFORMER-POWER)	1	
	33	RWJ1104135XX	4P WIRE (PANEL-TRANSFORMER)	1	
	34	RWJ1106090XX	6P WIRE (POWER-MAIN)	1	
	35	RWJ1107125XX	7P WIRE (MAIN-TRANSFORMER)	1	
	36	RWJ1105145XX	5P WIRE (HEADPHONE-MAIN)	1	
	37	XTB3+10JFJ	SCREW	15	
	38	XTW3+10SFJK	SCREW	6	
	39	VHD1224-1	SCREW	2	
	40	L6FAYYYH0088	FAN UNIT	1	
	41	REEX0948	11P FFC (PANEL-MAIN)	1	
	42	REEX0963	14P FFC (iPod-MAIN)	1	
	47	RGKX0516-K	IPOD LID	1	
	52	RMB0823	SD LID SPRING	1	
	53	RMGX0033	CUSHION RUBBER	2	
	55	RMVX0125	IPOD COVER LID	1	
			TRAVERSE DECK		
⚠	301	RAEX0190Z-V	TRV UNIT (W/O SERVO P.C.B.)	1	(RTL)
	310	XTN2+6GFJ	SCREW	3	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
			PACKING MATERI-ALS		
	P1	RPGX2104	PACKING CASE	1	
	P2	RPNX0605	POLYFOAM	1	
	P3	RPHV0001-1	MIRAMAT SHEET	1	
			ACCESSORIES		
	A1	N2QAYB000429	REMOTE CONTROL	1	
	A1-1	RKK-PT470EBK	R/C BATTERY COVER	1	
⚠	A2	K2CB2CB00021	AC CORD	1	
⚠	A3	RQTX0192-P	O/I BOOK (En/Cf/Sp)	1	
	A4	RSA0007-M	FM INDOOR ANTENNA	1	
	A6	N1DAAAA00001	AM LOOP ANTENNA	1	
⚠	A7	J0KG00000037	AC CLAMP FILTER	1	

22.2. Electrical Replacement Parts List

Important Safety Notice

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

RTL (Retention Time Limited)

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

Note:

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

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
			PRINTED CIRCUIT BOARDS		
	PCB1	REPX0631A	iPod P.C.B	1	(RTL)
	PCB2	REPX0636A	CD SERVO P.C.B	1	(RTL)
	PCB3	REPX0708F	MAIN P.C.B	1	(RTL)
	PCB4	REPX0708F	PANEL P.C.B	1	(RTL)
	PCB5	REPX0708F	POWER P.C.B	1	(RTL)
	PCB6	REPX0720A	USB P.C.B	1	(RTL)
⚠	PCB7	REPX0708F	TRANSFORMER P.C.B	1	(RTL)
	PCB8	REPX0708F	HEADPHONE P.C.B	1	(RTL)
			INTEGRATED CIRCUITS		
	IC200	C1AB00003013	IC	1	
	IC600	C0DAEJG00001	IC	1	
	IC601	C0DBGYY00089	IC	1	
	IC700	C0AABB000125	IC	1	
	IC800	RFKWMPM38EG	IC	1	
	IC900	C0HBB0000057	IC	1	
	IC900	MNZSFB5KJM2	IC	1	
	IC5101	AN17831A	IC	1	
	IC5901	C0DBGYY00089	IC	1	
	IC7001	MN6627954AMA	IC	1	
	IC7002	BA5948FPE2	IC	1	
			TRANSISTORS		
	Q100	B1ABCF000176	TRANSISTOR	1	
	Q101	B1ABCF000176	TRANSISTOR	1	
	Q350	UNR221100L	TRANSISTOR	1	
	Q375	B1BCCD000019	TRANSISTOR	1	
	Q382	B1ADCE000012	TRANSISTOR	1	
	Q600	B1BCCG000023	TRANSISTOR	1	
	Q603	B1ABDF000026	TRANSISTOR	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	Q604	B1BCCD000019	TRANSISTOR	1	
	Q761	B1GFGCAA0001	TRANSISTOR	1	
	Q762	UNR211100L	TRANSISTOR	1	
	Q802	B1GBCFJN0009	TRANSISTOR	1	
	Q5901	B1BCCG000023	TRANSISTOR	1	
	Q5902	B1ABCF000176	TRANSISTOR	1	
	Q5903	2SB0621AHA	TRANSISTOR	1	
	Q5904	B1GBCFJJ0051	TRANSISTOR	1	
	Q5905	B1GBCFGN0016	TRANSISTOR	1	
	Q5907	B1BABG000007	TRANSISTOR	1	
	Q7601	B1ADCF000001	TRANSISTOR	1	
	QR375	UNR521400L	TRANSISTOR	1	
	QR376	UNR211100L	TRANSISTOR	1	
	QR384	UNR221100L	TRANSISTOR	1	
	QR600	UNR521400L	TRANSISTOR	1	
			DIODES		
	D108	B0ADFJ000004	DIODE	1	
	D601	MAZ80910ML	DIODE	1	
	D602	MA2J11100L	DIODE	1	
	D603	B0ADFJ000004	DIODE	1	
	D605	B0EAKM000117	DIODE	1	
	D606	B0EAKM000117	DIODE	1	
	D607	B0EAKM000117	DIODE	1	
	D608	B0EAKM000117	DIODE	1	
	D609	B0EAKM000117	DIODE	1	
	D610	B0EAKM000117	DIODE	1	
	D611	B0EAKM000117	DIODE	1	
	D612	B0EAKM000117	DIODE	1	
	D613	B0EAKM000117	DIODE	1	
	D800	MA2J11100L	DIODE	1	
	D826	MA2J11100L	DIODE	1	
	D827	MA2J11100L	DIODE	1	
	D851	MA2J11100L	DIODE	1	
	D901	B0BC6R8A0266	DIODE	1	
	D5102	MA2J11100L	DIODE	1	
	D5103	MA2J11100L	DIODE	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	D5111	MA2J11100L	DIODE	1	
	D5901	B0EAMM000038	DIODE	1	
	D5902	B0EAMM000038	DIODE	1	
	D5903	B0EAMM000038	DIODE	1	
	D5904	B0EAMM000038	DIODE	1	
	D5905	B0EAKM000117	DIODE	1	
	D5906	B0EAKM000117	DIODE	1	
	D5907	B0EAKM000117	DIODE	1	
	D5908	B0EAKM000117	DIODE	1	
	D5909	B0EAKM000117	DIODE	1	
	D5910	B0EAKM000117	DIODE	1	
	D5911	B0EAKM000117	DIODE	1	
	D5912	B0EAKM000117	DIODE	1	
	D5913	B0EAKM000117	DIODE	1	
	D5914	B0EAKM000117	DIODE	1	
	D5915	B0BC02900004	DIODE	1	
	D5917	MA2J11100L	DIODE	1	
	D5918	MAZ80910ML	DIODE	1	
	D5919	B0EAKM000117	DIODE	1	
	D5920	MA2J11100L	DIODE	1	
	D5921	B0EAKM000117	DIODE	1	
	D5922	B0EAKM000117	DIODE	1	
	D5923	B0EAKM000117	DIODE	1	
	D5924	B0EAKM000117	DIODE	1	
	D5925	MA2J11100L	DIODE	1	
	D5927	MAZ80680ML	DIODE	1	
	D7650	MAZ80560ML	DIODE	1	
			VARIABLE RESISTOR		
	VR900	EVEKE2F2524B	VOLUME JOG	1	
			SWITCHES		
	S900	EVQ21405RJ	SW -DEMO	1	
	S901	EVQ21405RJ	SW CD PLAY/PAUSE	1	
	S902	EVQ21405RJ	SW USB	1	
	S903	EVQ21405RJ	SW FM/AM	1	
	S904	EVQ21405RJ	SW iPod	1	
	S906	EVQ21405RJ	SW CD EJECT	1	
	S907	EVQ21405RJ	SW POWER	1	
	S908	EVQ21405RJ	SW REW	1	
	S909	EVQ21405RJ	SW FWD	1	
	S910	EVQ21405RJ	SW BASS/TREBLE	1	
	S911	EVQ21405RJ	SW D.BASS	1	
	S7201	K0L1BA000133	SW REST	1	
	S7202	K0L1BA000133	SW CD OPEN	1	
	PSW1	D4FB1R100009	SW	1	
			CONNECTORS		
	CN100	K1KA02AA0186	2P CONNECTOR (FAN)	1	
	CN200	K1MP06A00003	6P CONNECTOR	1	
	CN350	K1MN14AA0003	14P CONNECTOR	1	
	CN370	K1MN22AA0004	22P CONNECTOR	1	
	CN380	K1MN22AA0004	22P CONNECTOR	1	
	CN600	K1YZ07000001	7P WIRE HOLDER	1	
	CN800	K1MN06A00013	6P CONNECTOR	1	
	CN900	K1MN11BA0004	11P CONNECTOR	1	
	CN901	K1MN11AA0003	11P CONNECTOR	1	
	CN902	K1MP05A00004	5P CONNECTOR	1	
	CN905	K1YZ04000002	4P WIRE HOLDER	1	
	CN950	K1YZ05000005	5P WIRE HOLDER	1	
	CN1001	MFI514S0117	Ipod CONNECTOR	1	
	CN1002	K1MN14BA0141	14P CONNECTOR	1	
	CN5101	K1MP04A00003	4P CONNECTOR	1	
	CN5102	K1YZ06000002	6P WIRE HOLDER	1	
	CN5901	K1YZ04000002	4P WIRE HOLDER	1	
	CN5902	K1MP04A00003	4P CONNECTOR	1	
	CN5903	K1MP07A00011	7P CONNECTOR	1	
	CN7001	K1MN16B00154	16P CONNECTOR	1	
	CN7002	K1MN22BA0005	22P CONNECTOR	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	P901	K1MN22BA0005	22P CONNECTOR	1	
	P903	K1FY104B0011	USB CONNECTOR	1	
			COILS AND INDUCTORS		
	L350	J0JHC0000034	INDUCTOR	1	
	L371	J0JKB0000020	INDUCTOR	1	
	L800	G0C3R3JA0027	INDUCTOR	1	
	L801	G0C3R3JA0027	INDUCTOR	1	
	L900	G0C3R3JA0027	INDUCTOR	1	
	L900	G1C100K00019	INDUCTOR	1	
	L901	G0C101JA0027	INDUCTOR	1	
	L950	J0JBC0000019	INDUCTOR	1	
	L951	J0JBC0000019	INDUCTOR	1	
	L952	J0JBC0000019	INDUCTOR	1	
	L1001	J0JHC0000107	INDUCTOR	1	
	L1002	J0JHC0000107	INDUCTOR	1	
	L1003	J0JHC0000107	INDUCTOR	1	
	L1004	J0JHC0000107	INDUCTOR	1	
	L1005	J0JHC0000107	INDUCTOR	1	
	L1006	J0JHC0000107	INDUCTOR	1	
	L1007	J0JHC0000107	INDUCTOR	1	
	L1008	J0JHC0000107	INDUCTOR	1	
	L1009	J0JHC0000107	INDUCTOR	1	
	L1010	J0JHC0000107	INDUCTOR	1	
	L1011	J0JHC0000107	INDUCTOR	1	
⚠	L5901	ELF15N035AN	LINE FILTER	1	
	LB840	J0JBC0000033	INDUCTOR	1	
	LB841	J0JBC0000033	INDUCTOR	1	
	LB843	J0JBC0000033	INDUCTOR	1	
	LB845	J0JBC0000033	INDUCTOR	1	
	LB846	J0JBC0000033	INDUCTOR	1	
	LB848	J0JBC0000033	INDUCTOR	1	
	LB932	J0JBC0000033	INDUCTOR	1	
	LB933	J0JBC0000033	INDUCTOR	1	
	LB934	J0JBC0000033	INDUCTOR	1	
	LB935	J0JBC0000033	INDUCTOR	1	
	LB936	J0JBC0000033	INDUCTOR	1	
	LB938	J0JBC0000033	INDUCTOR	1	
			TRANSFORMERS		
⚠	T5901	G4CYBYY00025	MAIN TRANSFORMER	1	
⚠	T5902	G4C2AAD00004	SUB TRANSFORMER	1	
			COMPOMENT COMBINATION		
	Z900	B3RAC0000017	REMOTE CONTROL SENSOR	1	
⚠	Z5901	ERZVA5Z471	ZENER	1	
			OSCILLATOR		
	X801	H4Z8004AA001	CRYSTAL OSCILLATOR	1	
	X802	H0A327200097	CRYSTAL OSCILLATOR	1	
	X900	H0A120500009	CRYSTAL OSCILLATOR	1	
	X7201	H0H169500013	CRYSTAL OSCILLATOR	1	
			FL DISPLAY		
	FL900	A2BB00000166	LCD DISPLAY	1	
			FUSE		
⚠	F5901	K5D162APA008	FUSE	1	
			RELAY		

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
⚠	RL5901	K6B1AEA00003	RELAY	1	
			FUSE HOLDERS		
	FC5901	K3GE1ZZ00001	FUSE HOLDER	1	
	FC5902	K3GE1ZZ00001	FUSE HOLDER	1	
			FUSE PROTECTOR		
⚠	FP5901	K5G502AA0002	FUSE PROTECTOR	1	
			JACKS		
	JK950	K2HC103A0031	JK HEADPHONE	1	
	JK5101	K2HA1YYB0021	JK SPEAKER	1	
⚠	JK5901	K2AB2B000007	AC INLET	1	
			CHIP JUMPERS		
	L260	D0GBR00JA008	0 1/16W	1	
	L470	D0GBR00JA008	0 1/16W	1	
	LB850	D0GBR00JA008	0 1/16W	1	
	LB852	D0GBR00JA008	0 1/16W	1	
	LB930	D0GBR00JA008	0 1/16W	1	
	LB951	D0GBR00JA008	0 1/16W	1	
	LB952	D0GBR00JA008	0 1/16W	1	
	LB7262	D0GBR00JA008	0 1/16W	1	
	LB7263	D0GBR00JA008	0 1/16W	1	
	LB7264	D0GBR00JA008	0 1/16W	1	
	W15	D0GDR00JA017	0 1/10W	1	
	W17	D0GDR00JA017	0 1/10W	1	
	W18	D0GDR00JA017	0 1/10W	1	
	W19	D0GDR00JA017	0 1/10W	1	
	W21	D0GDR00JA017	0 1/10W	1	
	W22	D0GDR00JA017	0 1/10W	1	
	W23	D0GBR00JA008	0 1/16W	1	
	W6000	D0GBR00JA008	0 1/16W	1	
	W6001	D0GDR00JA017	0 1/10W	1	
	W6002	D0GDR00JA017	0 1/10W	1	
	W6003	D0GBR00JA008	0 1/16W	1	
	W6004	D0GBR00JA008	0 1/16W	1	
	W6005	D0GBR00JA008	0 1/16W	1	
	W6006	D0GBR00JA008	0 1/16W	1	
	W6007	D0GDR00JA017	0 1/10W	1	
	W6008	D0GDR00JA017	0 1/10W	1	
	W6010	D0GDR00JA017	0 1/10W	1	
	W6011	D0GBR00JA008	0 1/16W	1	
	W6012	D0GBR00JA008	0 1/16W	1	
	W6013	D0GBR00JA008	0 1/16W	1	
	W6014	D0GDR00JA017	0 1/10W	1	
	W6015	D0GDR00JA017	0 1/10W	1	
	W6018	D0GBR00JA008	0 1/16W	1	
	W6020	D0GBR00JA008	0 1/16W	1	
	W6021	D0GDR00JA017	0 1/10W	1	
	W6022	D0GDR00JA017	0 1/10W	1	
	W6200	D0GDR00JA017	0 1/10W	1	
	W6201	D0GBR00JA008	0 1/16W	1	
	W7001	D0GBR00JA008	0 1/16W	1	
	W7002	D0GBR00JA008	0 1/16W	1	
	W7003	D0GBR00JA008	0 1/16W	1	
	W7004	D0GBR00JA008	0 1/16W	1	
	W7005	D0GBR00JA008	0 1/16W	1	
	W7006	D0GBR00JA008	0 1/16W	1	
	W7007	D0GBR00JA008	0 1/16W	1	
	W7008	D0GBR00JA008	0 1/16W	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	
	W7021	D0GBR00JA008	0 1/16W	1	
	W7024	D0GBR00JA008	0 1/16W	1	
	W7025	D0GDR00JA017	0 1/10W	1	
	W7026	D0GDR00JA017	0 1/10W	1	
			RESISTORS		
	R102	D0GB824JA008	820K 1/16W	1	
	R103	D0GB101JA008	100 1/16W	1	
	R104	D0GB563JA008	56K 1/16W	1	
	R105	D0AF270JA039	27 1/2W	1	
	R107	D0GB222JA008	2.2K 1/16W	1	
	R108	D0GB472JA008	4.7K 1/16W	1	
	R203	D0GB223JA008	22K 1/16W	1	
	R220	D0GB682JA008	6.8K 1/16W	1	
	R221	D0GB822JA008	8.2K 1/16W	1	
	R222	D0GB682JA008	6.8K 1/16W	1	
	R230	D0GB472JA008	4.7K 1/16W	1	
	R231	D0GB154JA008	150K 1/16W	1	
	R232	D0GB333JA008	33K 1/16W	1	
	R233	D0GB223JA008	22K 1/16W	1	
	R234	D0GB333JA008	33K 1/16W	1	
	R260	ERD2FCVG470T	47 1/4W	1	
	R270	D0GB392JA008	3.9K 1/16W	1	
	R272	D0GBR00JA008	0 1/16W	1	
	R273	D0GB562JA008	5.6K 1/16W	1	
	R350	D0GB104JA008	100K 1/16W	1	
	R351	D0GB473JA008	47K 1/16W	1	
	R352	D0GB334JA008	330K 1/16W	1	
	R353	D0GB224JA008	220K 1/16W	1	
	R370	D0GB471JA008	470 1/16W	1	
	R371	D0GD471JA017	470 1/10W	1	
	R372	D0GB102JA008	1K 1/16W	1	
	R375	D0GB101JA008	100 1/16W	1	
	R376	D0GB332JA008	3.3K 1/16W	1	
	R380	D0GB472JA008	4.7K 1/16W	1	
	R381	D0GB472JA008	4.7K 1/16W	1	
	R382	D0GD472JA017	4.7K 1/10W	1	
	R383	D0GB101JA008	100 1/16W	1	
	R385	D0GB471JA008	470 1/16W	1	
	R386	D0GB471JA008	470 1/16W	1	
	R392	D0GB104JA008	100K 1/16W	1	
	R393	D0GB472JA008	4.7K 1/16W	1	
	R394	D0GB473JA008	47K 1/16W	1	
	R403	D0GB223JA008	22K 1/16W	1	
	R420	D0GB682JA008	6.8K 1/16W	1	
	R421	D0GB822JA008	8.2K 1/16W	1	
	R422	D0GB682JA008	6.8K 1/16W	1	
	R470	D0GB392JA008	3.9K 1/16W	1	
	R472	D0GBR00JA008	0 1/16W	1	
	R473	D0GB562JA008	5.6K 1/16W	1	
	R600	D0GB102JA008	1K 1/16W	1	
	R601	D0GB102JA008	1K 1/16W	1	
	R602	D0GB101JA008	100 1/16W	1	
	R603	D0GB821JA008	820 1/16W	1	
	R604	D0GB821JA008	820 1/16W	1	
	R606	D0GB333JA008	33K 1/16W	1	
	R607	D0GB472JA008	4.7K 1/16W	1	
	R608	D0GB123JA008	12K 1/16W	1	
	R609	D0GB561JA008	560 1/16W	1	
	R720	D0GB153JA008	15K 1/16W	1	
	R721	D0GB103JA008	10K 1/16W	1	
	R722	D0GB683JA008	68K 1/16W	1	
	R723	D0GB180JA008	18 1/16W	1	
	R724	D0GB180JA008	18 1/16W	1	
	R740	D0GB153JA008	15K 1/16W	1	
	R741	D0GB103JA008	10K 1/16W	1	
	R742	D0GB683JA008	68K 1/16W	1	
	R743	D0GB180JA008	18 1/16W	1	

Safety	Ref. No.	Part No.	Part Name & Description		Qty	Remarks
	R744	D0GB180JA008	18	1/16W	1	
	R750	D0GB102JA008	1K	1/16W	1	
	R751	D0GB102JA008	1K	1/16W	1	
	R762	D0GB102JA008	1K	1/16W	1	
	R763	D0GB102JA008	1K	1/16W	1	
	R764	D0GB682JA008	6.8K	1/16W	1	
	R802	D0GB224JA008	220K	1/16W	1	
	R804	D0GB101JA008	100	1/16W	1	
	R805	D0GB472JA008	4.7K	1/16W	1	
	R806	D0GB473JA008	47K	1/16W	1	
	R807	D0GB101JA008	100	1/16W	1	
	R808	D0GB101JA008	100	1/16W	1	
	R809	D0GB101JA008	100	1/16W	1	
	R810	D0GB472JA008	4.7K	1/16W	1	
	R811	D0GB103JA008	10K	1/16W	1	
	R812	D0GB101JA008	100	1/16W	1	
	R813	D0GB472JA008	4.7K	1/16W	1	
	R815	D0GD101JA017	100	1/10W	1	
	R826	D0GD102JA017	1K	1/10W	1	
	R828	D0GB101JA008	100	1/16W	1	
	R830	D0GB473JA008	47K	1/16W	1	
	R832	D0GB101JA008	100	1/16W	1	
	R835	D0GB101JA008	100	1/16W	1	
	R836	D0GB101JA008	100	1/16W	1	
	R837	D0GB102JA008	1K	1/16W	1	
	R839	D0GB103JA008	10K	1/16W	1	
	R840	D0GB103JA008	10K	1/16W	1	
	R842	D0GB472JA008	4.7K	1/16W	1	
	R845	D0GD101JA017	100	1/10W	1	
	R846	D0GD101JA017	100	1/10W	1	
	R847	D0GB103JA008	10K	1/16W	1	
	R848	D0GB153JA008	15K	1/16W	1	
	R852	D0GB101JA008	100	1/16W	1	
	R853	D0GB474JA008	470K	1/16W	1	
	R854	D0GB101JA008	100	1/16W	1	
	R855	D0GB101JA008	100	1/16W	1	
	R856	D0GB123JA008	12K	1/16W	1	
	R857	D0GB101JA008	100	1/16W	1	
	R858	D0GB101JA008	100	1/16W	1	
	R859	D0GB103JA008	10K	1/16W	1	
	R862	D0GB103JA008	10K	1/16W	1	
	R863	D0GB472JA008	4.7K	1/16W	1	
	R864	D0GB472JA008	4.7K	1/16W	1	
	R865	D0GB103JA008	10K	1/16W	1	
	R866	D0GB153JA008	15K	1/16W	1	
	R876	D0GB472JA008	4.7K	1/16W	1	
	R878	D0GB471JA008	470	1/16W	1	
	R881	D0GB103JA008	10K	1/16W	1	
	R883	D0GB473JA008	47K	1/16W	1	
	R884	D0GB223JA008	22K	1/16W	1	
	R885	D0GB103JA008	10K	1/16W	1	
	R888	D0GB182JA008	1.8K	1/16W	1	
	R889	D0GB101JA008	100	1/16W	1	
	R890	D0GB103JA008	10K	1/16W	1	
	R891	D0GB102JA008	1K	1/16W	1	
	R901	D0GB102JA008	1K	1/16W	1	
	R901	D0GB122JA008	1.2K	1/16W	1	
	R902	D0GB102JA008	1K	1/16W	1	
	R902	D0GB152JA008	1.5K	1/16W	1	
	R903	D0GB222JA008	2.2K	1/16W	1	
	R903	D0GBR00JA008	0	1/16W	1	
	R904	D0GB332JA008	3.3K	1/16W	1	
	R904	D0GBR00JA008	0	1/16W	1	
	R905	D0GB472JA008	4.7K	1/16W	1	
	R906	D0GB562JA008	5.6K	1/16W	1	
	R906	D0GBR00JA008	0	1/16W	1	
	R907	D0GDR00JA017	0	1/10W	1	
	R908	D0GB122JA008	1.2K	1/16W	1	
	R909	D0GB152JA008	1.5K	1/16W	1	
	R910	D0GB222JA008	2.2K	1/16W	1	
	R911	D0GB332JA008	3.3K	1/16W	1	
	R912	D0GB472JA008	4.7K	1/16W	1	
	R914	D0GBR00JA008	0	1/16W	1	

Safety	Ref. No.	Part No.	Part Name & Description		Qty	Remarks
	R918	D0GB1R2JA008	1.2	1/16W	1	
	R921	D0GB680JA008	68	1/16W	1	
	R922	D0GB680JA008	68	1/16W	1	
	R923	D0GB102JA008	1K	1/16W	1	
	R924	D0GB102JA008	1K	1/16W	1	
	R925	D0GB102JA008	1K	1/16W	1	
	R926	D0GB104JA008	100K	1/16W	1	
	R927	D0GB104JA008	100K	1/16W	1	
	R928	D0GB103JA008	10K	1/16W	1	
	R929	D0GB103JA008	10K	1/16W	1	
	R930	D0GB123JA008	12K	1/16W	1	
	R931	D0GB223JA008	22K	1/16W	1	
	R932	D0GB103JA008	10K	1/16W	1	
	R950	D0GB104JA008	100K	1/16W	1	
	R950	D0GB223JA008	22K	1/16W	1	
	R951	D0GB104JA008	100K	1/16W	1	
	R951	D0GBR00JA008	0	1/16W	1	
	R952	D0GB240JA008	24	1/16W	1	
	R953	D0GB240JA008	24	1/16W	1	
	R954	D0GB153JA008	15K	1/16W	1	
	R955	D0GB153JA008	15K	1/16W	1	
	R957	D0GB222JA008	2.2K	1/16W	1	
	R958	D0GB104JA008	100K	1/16W	1	
	R971	D0GB102JA008	1K	1/16W	1	
	R972	D0GB102JA008	1K	1/16W	1	
	R1001	D0GB101JA008	100	1/16W	1	
	R1002	D0GB101JA008	100	1/16W	1	
	R1003	D0GB104JA008	100K	1/16W	1	
	R1004	D0GB104JA008	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	D0GB151JA008	150	1/16W	1	
	R1010	D0GB151JA008	150	1/16W	1	
	R1011	D0GBR00JA008	0	1/16W	1	
	R1012	D0GBR00JA008	0	1/16W	1	
	R1013	D0GB102JA008	1K	1/16W	1	
	R5101	D0GB101JA008	100	1/16W	1	
	R5102	D0GB223JA008	22K	1/16W	1	
	R5103	D0GB2R2JA008	2.2	1/16W	1	
	R5104	D0GB2R2JA008	2.2	1/16W	1	
	R5105	D0GB101JA008	100	1/16W	1	
	R5106	D0GB223JA008	22K	1/16W	1	
	R5107	D0GB2R2JA008	2.2	1/16W	1	
	R5108	D0GB2R2JA008	2.2	1/16W	1	
	R5111	D0GB153JA008	15K	1/16W	1	
	R5112	D0GB102JA008	1K	1/16W	1	
	R5113	D0GB473JA008	47K	1/16W	1	
	R5128	D0GB103JA008	10K	1/16W	1	
	R5129	D0GB103JA008	10K	1/16W	1	
	R5900	ERC12UGK335D	3300K	1/2W	1	
	R5901	D0GB222JA008	2.2K	1/16W	1	
	R5902	D0GB104JA008	100K	1/16W	1	
	R5903	D0GB821JA008	820	1/16W	1	
	R5904	D0GB821JA008	820	1/16W	1	
	R5905	ERD2FCVG120T	12	1/4W	1	
	R5906	D0GB332JA008	3.3K	1/16W	1	
	R5907	D0GB473JA008	47K	1/16W	1	
	R5908	D0GB103JA008	10K	1/16W	1	
	R5909	D0GB103JA008	10K	1/16W	1	
	R5910	D0GB820JA008	82	1/16W	1	
	R5911	D0GB182JA008	1.8K	1/16W	1	
	R5912	D0GB102JA008	1K	1/16W	1	
	R5915	D0GB220JA008	22	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	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	R7253	D0GB100JA008	10 1/16W	1	
	R7254	D0GB102JA008	1K 1/16W	1	
	R7315	D0GB332JA008	3.3K 1/16W	1	
	R7323	D0GB682JA008	6.8K 1/16W	1	
	R7325	D0GB331JA008	330 1/16W	1	
	R7327	D0GB102JA008	1K 1/16W	1	
	R7328	D0GB103JA008	10K 1/16W	1	
	R7329	D0GB102JA008	1K 1/16W	1	
	R7330	D0GB562JA008	5.6K 1/16W	1	
	R7331	D0GB273JA008	27K 1/16W	1	
	R7332	D0GB102JA008	1K 1/16W	1	
	R7335	D0GB101JA008	100 1/16W	1	
	R7336	D0GB100JA008	10 1/16W	1	
	R7339	D0GB102JA008	1K 1/16W	1	
	R7349	D0GB183JA008	18K 1/16W	1	
	R7601	D0GB4R7JA008	4.7 1/16W	1	
	R7650	D0GB5R6JA008	5.6 1/16W	1	
	K103	D0GBR00JA008	0 1/16W	1	
	K470	D0GDR00JA017	0 1/10W	1	
			CAPACITORS		
	C100	F2A0J102A016	1000uF 6.3V	1	
	C102	F2A1A101A159	100uF 10V	1	
	C105	F2A1C221A019	220uF 16V	1	
	C106	F1K1C106A062	10uF 16V	1	
	C110	F2A1C100A147	10uF 16V	1	
	C204	F1H1C105A097	1uF 16V	1	
	C207	F1H1H221A219	220pF 50V	1	
	C208	F1H1C105A097	1uF 16V	1	
	C212	F1H1C105A097	1uF 16V	1	
	C213	F1H1A105A025	1uF 10V	1	
	C214	F1H1A105A025	1uF 10V	1	
	C217	F1H1A105A025	1uF 10V	1	
	C218	F1H1C104A041	0.1uF 16V	1	
	C219	F1H1C224A068	0.22uF 16V	1	
	C220	F1H1C224A068	0.22uF 16V	1	
	C221	F1H1H332A013	3300pF 50V	1	
	C222	F1H1E223A002	0.022uF 25V	1	
	C223	F1H1E223A002	0.022uF 25V	1	
	C224	F1H1C393A001	0.039uF 16V	1	
	C225	F1H1C224A068	0.22uF 16V	1	
	C226	F1H1H332A013	3300pF 50V	1	
	C232	F1H1A105A025	1uF 10V	1	
	C233	F1H1C393A001	0.039uF 16V	1	
	C234	F1H1C393A001	0.039uF 16V	1	
	C235	F2A1H4R7A234	4.7uF 50V	1	
	C236	F1H1E1530002	0.015uF 25V	1	
	C241	F1J0J475A008	4.7uF 6.3V	1	
	C242	F1H1A105A025	1uF 10V	1	
	C260	F2A1C4710045	470uF 16V	1	
	C261	F1H1C104A041	0.1uF 16V	1	
	C271	F1H1H682A219	6800pF 50V	1	
	C300	F1H1H472A970	4700pF 50V	1	
	C301	F1H1H472A970	4700pF 50V	1	
	C302	F1H1C104A041	0.1uF 16V	1	
	C370	F1H1H102A219	1000pF 50V	1	
	C371	F1H1H102A219	1000pF 50V	1	
	C372	F1H1H102A219	1000pF 50V	1	
	C385	F2A1C100A147	10uF 16V	1	
	C404	F1H1C105A097	1uF 16V	1	
	C407	F1H1H221A219	220pF 50V	1	
	C408	F1H1C105A097	1uF 16V	1	
	C412	F1H1C105A097	1uF 16V	1	
	C419	F1H1C224A068	0.22uF 16V	1	
	C420	F1H1C224A068	0.22uF 16V	1	
	C421	F1H1H332A013	3300pF 50V	1	
	C422	F1H1E223A002	0.022uF 25V	1	
	C423	F1H1E223A002	0.022uF 25V	1	
	C424	F1H1C393A001	0.039uF 16V	1	
	C425	F1H1C224A068	0.22uF 16V	1	
	C441	F1J0J475A008	4.7uF 6.3V	1	
	C442	F1H1A105A025	1uF 10V	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	C471	F1H1H682A219	6800pF 50V	1	
	C600	F2A1C100A147	10uF 16V	1	
	C602	F2A1C220A234	22uF 16V	1	
	C603	F2A1C220A234	22uF 16V	1	
	C604	F2A1A101A159	100uF 10V	1	
	C605	F2A1C100A147	10uF 16V	1	
	C606	F1H1C104A041	0.1uF 16V	1	
	C608	F2A1C221A019	220uF 16V	1	
	C720	F1H1C105A097	1uF 16V	1	
	C722	F1H1H101A230	100pF 50V	1	
	C723	F1K1C106A062	10uF 16V	1	
	C724	ECJ1VB1H271K	270pF 50V	1	
	C725	F1H1H103A219	0.01uF 50V	1	
	C740	F1H1C105A097	1uF 16V	1	
	C742	F1H1H101A230	100pF 50V	1	
	C743	F1K1C106A062	10uF 16V	1	
	C744	ECJ1VB1H271K	270pF 50V	1	
	C745	F1H1H103A219	0.01uF 50V	1	
	C750	F1H1H103A219	0.01uF 50V	1	
	C752	F2A1A101A159	100uF 10V	1	
	C800	F1H1H101A230	100pF 50V	1	
	C801	F1H1H180A230	18pF 50V	1	
	C802	F1H1C104A041	0.1uF 16V	1	
	C803	F1H1H180A230	18pF 50V	1	
	C804	F1H1H220A004	22pF 50V	1	
	C806	F2A0J102A016	1000uF 6.3V	1	
	C808	F1H1H101A230	100pF 50V	1	
	C809	F2A1H1R0A145	1.0uF 50V	1	
	C810	F1H1H103A219	0.01uF 50V	1	
	C811	F2A1H1R0A145	1.0uF 50V	1	
	C812	F1H1H221A219	220pF 50V	1	
	C813	F1H1H221A219	220pF 50V	1	
	C814	F1H1H220A004	22pF 50V	1	
	C815	F1H1H221A219	220pF 50V	1	
	C826	F1H1H101A230	100pF 50V	1	
	C851	F2A1C100A147	10uF 16V	1	
	C862	F1H1H471A219	470pF 50V	1	
	C863	F1H1H471A219	470pF 50V	1	
	C876	F1H1H561A013	560pF 50V	1	
	C877	F1H1H561A013	560pF 50V	1	
	C878	F1H1C104A041	0.1uF 16V	1	
	C881	F1H1H221A219	220pF 50V	1	
	C882	F1H1H472A970	4700pF 50V	1	
	C883	F2A1A101A159	100uF 10V	1	
	C900	F2A1V220A184	22uF 35V	1	
	C901	F1H1C104A042	0.1uF 16V	1	
	C901	F2A1V220A184	22uF 35V	1	
	C902	F1H1C104A042	0.1uF 16V	1	
	C902	F2A1V220A184	22uF 35V	1	
	C903	F1H1C104A042	0.1uF 16V	1	
	C903	F1H1H104A013	0.1uF 50V	1	
	C904	F2A1C100A234	10uF 16V	1	
	C905	F1H1C104A041	0.1uF 16V	1	
	C905	F1H1C104A042	0.1uF 16V	1	
	C906	F1H1H101A230	100pF 50V	1	
	C906	F2A1C100A234	10uF 16V	1	
	C907	ECJ1VC1H180J	18pF 50V	1	
	C907	F1H1H101A230	100pF 50V	1	
	C908	F1H1H220A004	22pF 50V	1	
	C908	F2A1C100A147	10uF 16V	1	
	C909	F2A1V220A184	22uF 35V	1	
	C910	F2A1C220A234	22uF 16V	1	
	C911	F1H1C104A042	0.1uF 16V	1	
	C911	F1H1H221A219	220pF 50V	1	
	C912	F1H1C104A042	0.1uF 16V	1	
	C912	F1H1H221A219	220pF 50V	1	
	C913	F1H1C104A042	0.1uF 16V	1	
	C913	F1H1H221A219	220pF 50V	1	
	C914	F1H1C104A042	0.1uF 16V	1	
	C915	F2A1C470A234	47uF 16V	1	
	C931	F2A1C100A234	10uF 16V	1	
	C950	F1H1H103A219	0.01uF 50V	1	
	C951	F1H1C104A042	0.1uF 16V	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	C951	F1H1H103A219	0.01uF 50V	1	
	C952	F1H1C104A042	0.1uF 16V	1	
	C953	F2A0J101A245	100uF 6.3V	1	
	C1001	F1H1H104A013	0.1uF 50V	1	
	C1002	F1H1H104A013	0.1uF 50V	1	
	C1003	F1H1H104A013	0.1uF 50V	1	
	C1004	F1H1H104A013	0.1uF 50V	1	
	C5102	F1K1H105A138	1uF 50V	1	
	C5103	F1H1H471A219	470pF 50V	1	
	C5104	F1H1C224A068	0.22uF 16V	1	
	C5105	F1H1C224A068	0.22uF 16V	1	
	C5106	F1K1H105A138	1uF 50V	1	
	C5107	F1H1C224A068	0.22uF 16V	1	
	C5108	F1H1C224A068	0.22uF 16V	1	
	C5109	F1H1H471A219	470pF 50V	1	
	C5111	F2A1H3R3A213	3.3uF 50V	1	
	C5113	F1H1H471A219	470pF 50V	1	
	C5114	F1H1H471A219	470pF 50V	1	
	C5120	F1H1H102A219	1000pF 50V	1	
	C5124	F2A1C100A147	10uF 16V	1	
	C5901	F2A1V3320020	3300uF 35V	1	
	C5902	F1H1H104A013	0.1uF 50V	1	
	C5905	F2A1H220A182	22uF 50V	1	
	C5906	F2A1H220A182	22uF 50V	1	
	C5907	F1H1H103A219	0.01uF 50V	1	
	C5908	F2A1H470A147	47uF 50V	1	
	C5909	F2A1E102A151	1000uF 25V	1	
	C5910	F1H1H104A013	0.1uF 50V	1	
	C5911	F2A1C100A147	10uF 16V	1	
	C5912	F1H1H103A219	0.01uF 50V	1	
	C5913	F2A1C221A019	220uF 16V	1	
	C5914	F1H1H104A013	0.1uF 50V	1	
	C5916	F1H1E104A029	0.1uF 25V	1	
	C5917	F2A1C102A236	1000uF 16V	1	
	C5918	F2A1C221A019	220uF 16V	1	
	C5919	F1H1C104A041	0.1uF 16V	1	
	C5920	F1H1C104A041	0.1uF 16V	1	
	C5921	F2A1C100A147	10uF 16V	1	
	C5922	F1H1H103A219	0.01uF 50V	1	
	C5923	F1H1H103A219	0.01uF 50V	1	
	C5924	F1H1H103A219	0.01uF 50V	1	
	C5925	F2A1C100A147	10uF 16V	1	
	C5928	F1H1H104A013	0.1uF 50V	1	
	C5929	F1H1H104A013	0.1uF 50V	1	
	C5939	F2A1E102A151	1000uF 25V	1	
	C7102	F1H1A474A025	0.47uF 10V	1	
	C7107	F1H1H223A219	0.022uF 50V	1	
	C7142	F1H1H332A013	3300pF 50V	1	
	C7154	F1H1C104A042	0.1uF 16V	1	
	C7155	F1H1C104A042	0.1uF 16V	1	
	C7161	F1H1C104A042	0.1uF 16V	1	
	C7164	ECJ2FF1A106Z	10uF 10V	1	
	C7165	ECJ2FF1A106Z	10uF 10V	1	
	C7166	F1H1H103A219	0.01uF 50V	1	
	C7203	F2A0J221A200	220uF 6.3V	1	
	C7204	F1H1C104A042	0.1uF 16V	1	
	C7216	ECJ1VB1H681K	680pF 50V	1	
	C7217	F1H1C104A042	0.1uF 16V	1	
	C7218	ECJ1VB1C823K	0.082uF 16V	1	
	C7221	ECJ1VC1H150J	15pF 50V	1	
	C7222	ECJ1VC1H150J	15pF 50V	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	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	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	F1H1E2730002	0.027uF 25V	1	
	C7339	F1H1C183A001	0.018uF 16V	1	
	C7352	F1H1C183A001	0.018uF 16V	1	
	C7601	ECEA0JKA330I	33uF 6.3V	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	