

Service Manual

Portable Stereo CD System

Model No. **RX-D50PH**

Product Color : (S)...Silver Type



Remote
Control



RX-D50

Notes: Please refer to the original service manual for:
 ● CD Mechanism Unit (DLS6F), Order No. PSG1002024AE

⚠ WARNING

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

IMPORTANT SAFETY NOTICE

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

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1 Safety Precautions

1.1. General Guidelines

1. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
2. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing, carry out the following leakage current checks to prevent the customer from being exposed to shock hazards.

1.1.1. Leakage Current Cold Check

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

1.1.2. Leakage Current Hot Check

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a $1.5k\Omega$, 10 watts resistor, in parallel with a $0.15\mu F$ capacitors, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure 1.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 or equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 milliamp. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be being repaired and rechecked before it is returned to the customer.

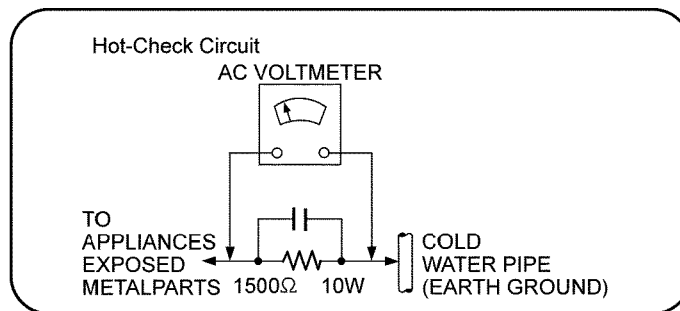


Figure. 1

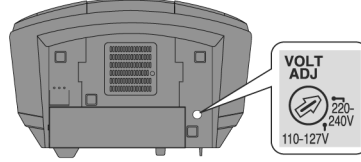
1.2. Before Use

Be sure to disconnect the mains cord before adjusting the voltage selector.

Use a minus(-) screwdriver to set the voltage selector (on the bottom panel) to the voltage setting for the area in which the unit will be used. (If the power supply in your area is 110V ~ 127V or 220V ~ 240V, set to the "110V ~ 127V or 220V ~ 240V" position.)

Note that this unit will be seriously damaged if this setting is not made correctly. (There is no voltage selector for some countries, the correct voltage is already set.)

Use a flat-head screwdriver to turn "VOLT ADJ" to the voltage setting for the area in which this unit is used.



1.3. 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 110V~127V / 220V ~ 240V, 50/60Hz in TUNER mode at volume (min) should be (~300 mA).

1.4. Caution For Fuse Replacement

CAUTION:

Replace with the same type fuse:

(Manufacturer: Littelfuse Inc., Type: 218, F5901, T2AL, 250V)

(Manufacturer: Littelfuse Inc., Type: 218, F5902, T1.6AL, 250V)

1.5. 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.

1.6. 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
⚠	14	RKHN0005A-H	HANDLE	
⚠	401	RD-DAPX001-V	TRAVERSE UNIT	
⚠	A2	K2CQ2CA00007	AC CORD	
⚠	A3	RQTX1153-M	O/I BOOK (Sp)	
⚠	A4	K2DAYYY00002	AC ADAPTOR	
⚠	PCB3	REPNT0063F	POWER P.C.B.	
⚠	S5901	RSR2A006S-B	SW VOLTAGE SELECTOR	
⚠	L5901	ELF15N035AN	LINE FILTER	
⚠	T5903	G4CYBYY00030	TRANSFORMER	
⚠	Z5902	ERZVA5Z471	ZNR SURGE	
⚠	F5901	K5D202BLA013	FUSE	
⚠	F5902	K5D162BLA013	FUSE	
⚠	FP4100	K5G502A00039	FUSE PROTECTOR	
⚠	FP5903	K5G502A00039	FUSE PROTECTOR	
⚠	JK5901	K2AA2B000014	JK AC INLET	
⚠	ZA5901	K3GE1ZZ00001	FUSE HOLDER	
⚠	ZA5902	K3GE1ZZ00001	FUSE HOLDER	
⚠	ZA5903	K3GE1ZZ00001	FUSE HOLDER	
⚠	ZA5904	K3GE1ZZ00001	FUSE HOLDER	

2 Warning

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

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor “chip” components. The following techniques should be used to help reduce the incidence of component damage caused by electrostatic discharge (ESD).

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum 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:

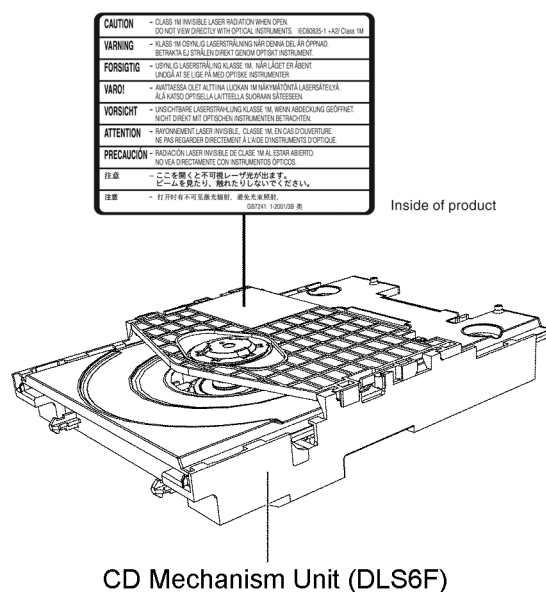
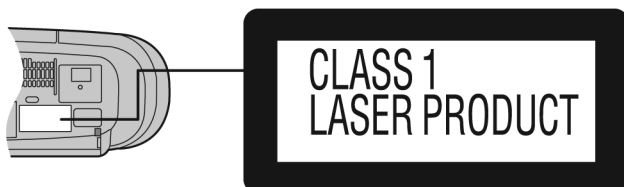
This product utilizes a laser diode with the unit turned "on", invisible laser radiation is emitted from the pickup lens.

Wavelength: 795 nm (CD)

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

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

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



2.3. Service caution based on Legal restrictions

2.3.1. General description about Lead Free Solder (PbF)

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

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

Definition of PCB Lead Free Solder being used

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

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

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

Recommended Lead Free Solder (Service Parts Route.)

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

Note

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

2.4. Handling Precaution for Traverse Unit

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

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

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

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

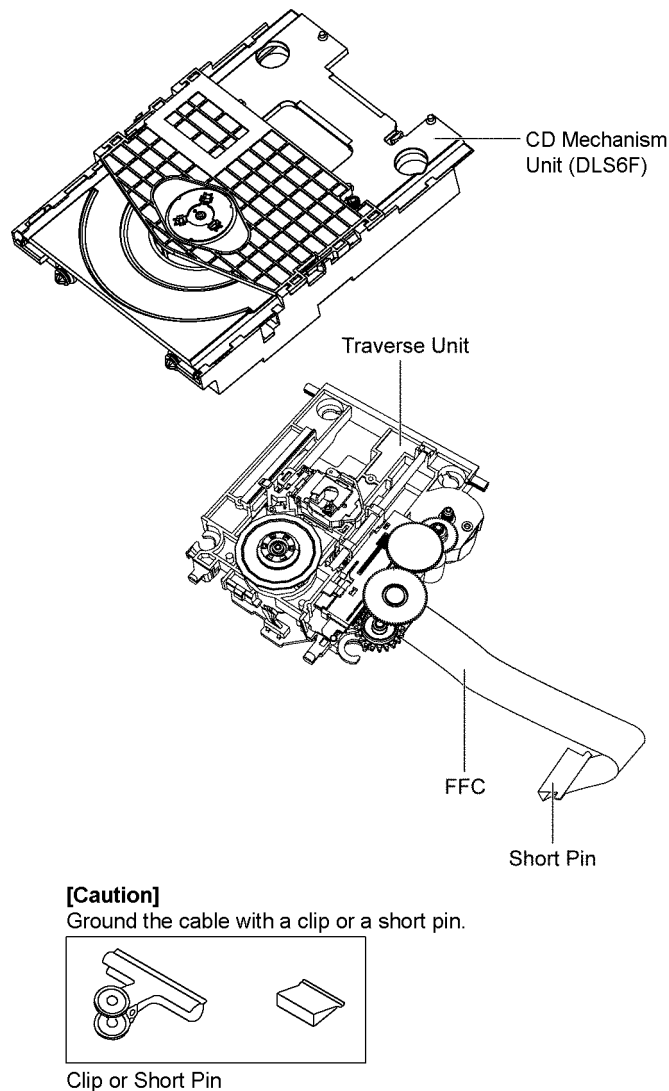


Figure 1

2.4.2. Grounding for electrostatic breakdown prevention

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

2.4.2.1. Worktable grounding

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

2.4.2.2. Human body grounding

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

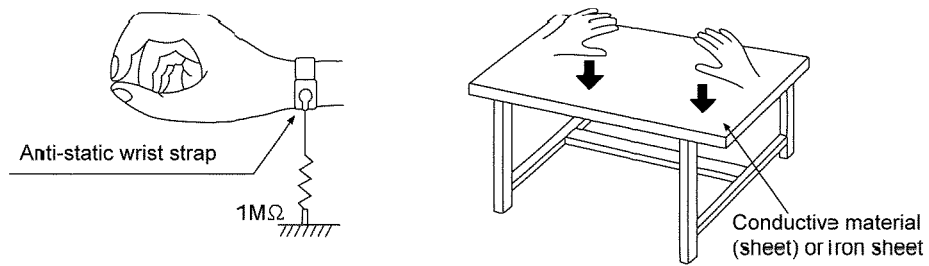


Figure 2

3 Service Navigation

3.1. Service Information

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

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

- **CD Mechanism Unit (DLS6F):**

1) This model uses CD Mechanism Unit (DLS6F).

- **Micro-processor:**

1) The following components are supplied as an assembled part.

- Micro-processor IC, (IC2100) is supplied as assembled part (RFKWMD45EG-W).

4 Specifications

■ Amplifier Section

RMS output power stereo mode

Front Ch (both channels driven) 3 W per channel (4 Ω), 1 kHz, 10% THD

Total RMS stereo mode power 6 W

■ FM/AM Tuner, Terminal Section

Frequency Modulation (FM)

Frequency range 87.5 MHz to 108.0 MHz (50 kHz step)

Amplitude Modulation (AM)

Frequency range 522 kHz to 1629 kHz (9 kHz step)
520 kHz to 1630 kHz (10 kHz step)

Headphone jack

Terminal Stereo, 3.5 mm jack (32 Ω)

Music port (front) jack

Sensitivity 100 mV, 4.7 k Ω

Terminal Stereo, 3.5 mm jack

■ Disc Section

Disc played (8 cm or 12 cm)

(1) CD-Audio (CD-DA)

(2) CD-R/RW (CD-DA, MP3* formatted disc)

(3) MP3*

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

Bit rate

MP3 32 kbps to 320 kbps

Sampling frequency

CD 44.1 kHz

MP3 32 kHz, 44.1 kHz, 48 kHz

Decoding 16 bit linear

Beam source Semiconductor laser (wavelength 795 nm (CD))

Frequency response 40 Hz to 20kHz

Number of channels 2 channel, stereo

Wow and flutter Less than possible measurement data

■ Cassette Deck Section

Track system 4 track, 2 channel, stereo

Monitor system Variable sound monitor

Recording system AC bias 84 kHz

Erase system Multi pole magnet

Overall frequency response

NORMAL 50 Hz to 12 kHz

■ Speaker Section

Speakers Impedance 4 Ω

Full range 2 x 8 cm

Ceramic tweeter 2 x 1.5 cm

■ General

Power supply

AC 110 V to 127 V / 220 V to 240 V, 50/60 Hz

Battery 12 V (8 x LR14, C)

Memory back-up 6 V (4 x R6/LR6, AA)

Power consumption 14 W

Battery life (use only alkaline batteries)

Radio broadcast 9 hours

Radio recording 9 hours

CD playback 6 hours

CD recording 7 hours

Tape playback 8 hours

Dimensions (W x H x D)

Mass 408 mm x 148 mm x 271 mm
3.3 kg without batteries (3.9 kg with batteries)

Operating temperature range

0°C to +40°C

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

Power consumption in standby mode: 0.8 W (approximate)

Notes :

1. Specifications are subject to change without notices.

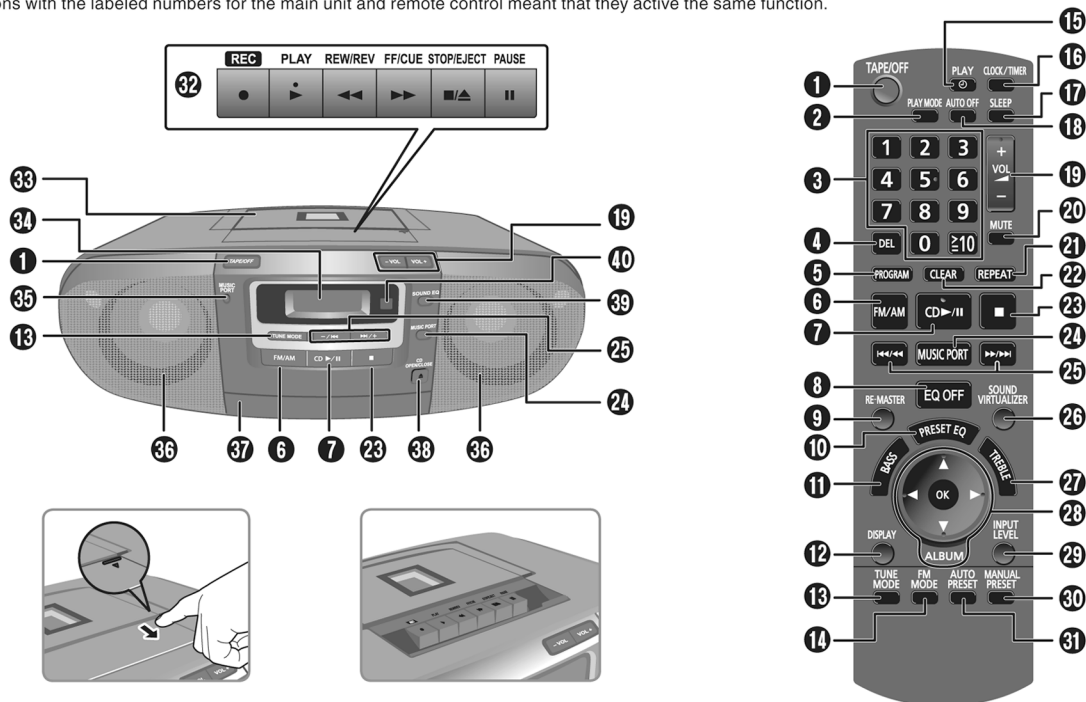
Mass and dimensions are approximate.

2. Total harmonic distortion is measured by the digital spectrum analyzer.

5 Location of Controls and Components

5.1. Main Unit and Remote Control Key Button Operations

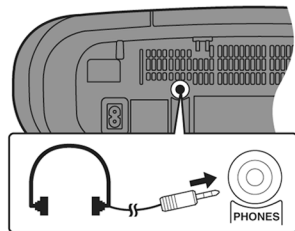
Buttons with the labeled numbers for the main unit and remote control meant that they active the same function.



Headphone jack (PHONES)

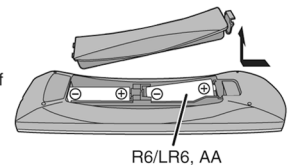
Plug type: Ø 3.5 mm stereo (not included)

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



Battery installation for remote control

Insert the batteries (not included) observing the correct polarities (+, -). Aim at the remote control signal sensor, avoiding obstacles, at a maximum range of 7 m directly in front of the unit.



To save power, the unit cannot be turned on from the remote control when batteries are used.

1 Tape mode/standby switch

Unit will be in standby mode.

2 Play mode function

3 Numeric selection

4 Program delete function

5 Program function

6 Tuner (FM/AM) selection

7 Disc play or pause

8 EQ OFF selection

9 RE-MASTER selection

10 Preset EQ selection

11 BASS selection

12 Track information display function

13 Tuning mode selection

14 MONO selection for FM mode

15 Play timer setting

16 Clock or timer setting

17 Sleep timer setting

18 Auto off function

Select either "ON" or "OFF".

This auto off function allows you to turn off the unit in disc or USB mode only after left unused for 10 minutes.

- Press the button to activate the function.
- Press the button again to cancel.
- The setting is maintained even if the unit is turned off.

19 Volume control

20 Muting function

- Press the button to activate the function.
- Press the button again or adjust the volume to cancel.

21 Repeat function

22 Program clear

23 Stop disc playback

24 Music port selection

25 Track skip or search, check program content, preset channel selection, tuning function, time adjustment, bass or treble adjustment

26 Sound virtualizer function

27 TREBLE selection

28 Disc and USB play [OK], Confirm selection [OK], Album selection

[▲/▼], [◀/▶] have the exact same functions as those of [◀◀/▶▶] or [▶▶/▶▶]

29 Input level selection

30 Manual preset selection

31 Auto preset selection

32 Cassette play operations

33 Cassette deck

34 Display panel

35 Music port jack

36 Speakers

These speakers do not have magnetic shielding. Do not place them near televisions, personal computers or other devices easily influenced by magnetism.

37 Disc tray

38 Disc tray open or close

39 Sound equalizer (EQ) selection

40 Remote control signal sensor

5.2. Disc Information

◆ NOTE about using a DualDisc

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

◆ NOTE on 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.
- 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 3-digits numbers in the order you want to play them.

Limitations on MP3 play

- If you have recorded MP3 on the same disc as CD-DA, only the format recorded in the first session can be played.
- Some MP3s may not be played due to the condition of the disc or recording.
- Recordings will not necessarily be played in the order you recorded them.

◆ NOTE on CDs

Choose discs with this mark:



- This unit can access up to 99 tracks.
- This unit can play MP3 files and CD-DA format audio CD-R/RW that have been finalised.
- It may not be able to play some CD-R/RW due to the condition of the recording.
- Do not use irregularly shaped disc.
- Do not use disc 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.

6 Self Diagnostic and Doctor Mode Setting

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

6.1. Self Diagnostic Mode

6.1.1. Self Diagnostic Table

Item		FL display	Key operation
Mode name	Description		
Self Diagnostic Mode	To enter into self diagnostic checking	 * * * : Error code	1. Select CD mode (Ensure no CD inserted). 2. Press and hold [■] for 2 seconds follow by [▶▶/+] on main unit. To exit, press [TAPE/OFF] on main unit.
Error code information	System will perform a check on any unusual/error code from the memory	Error code will display Example: 	1. In self diagnosis mode. 2. Press [STOP] for on main unit. To exit, press [TAPE/OFF] on main unit.

6.1.2. Self Diagnostic Error Code 1 (For CD)

Error Code	Diagnostic Contents	Description of error	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 (DLS6F) (For Traverse). Press [■] on main unit for next error
F15	CD REST SW Abnormal	CD traverse position initial 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 (DLS6F) (For Traverse). Press [■] 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 (DLS6F) (For Traverse). Press [■] on main unit for next error

6.1.3. Self Diagnostic Error Code 2 (For Power Supply)

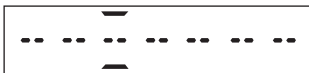
Error Code	Diagnostic Contents	Description of error	FL display	Remarks
U01	Battery Low	Detect the Battery when Battery is Low.		For Power. Press [■] on main unit for next error
F76	Abnormality in the output voltage of stabilized power supply	In normal operation when DCDT1 is detected "L" (Low) for two consecutive times, F76 is displayed on FL for 1 second and after that PCONT will be turned to "L" (Low). This is due to any of the DC voltages (+9V, +7V, -7V, +5V, +5.3V etc.) not available.		For Power. Press [■] on main unit for next error

6.2. Doctor Mode

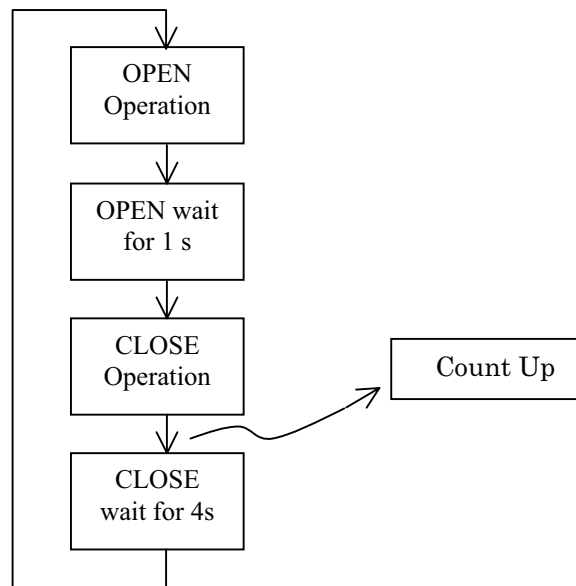
6.2.1. Doctor Mode Table 1

Item		FL display	Key operation
Mode name	Description		
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) Checksum (HEX) Checksum : (Condition 1) Version Display (DEC) Check sum (HEX) (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 any mode: 1. Press and hold [■] on main unit follow by [4] and [7] on remote control. To exit, press [TAPE/OFF] on main unt.

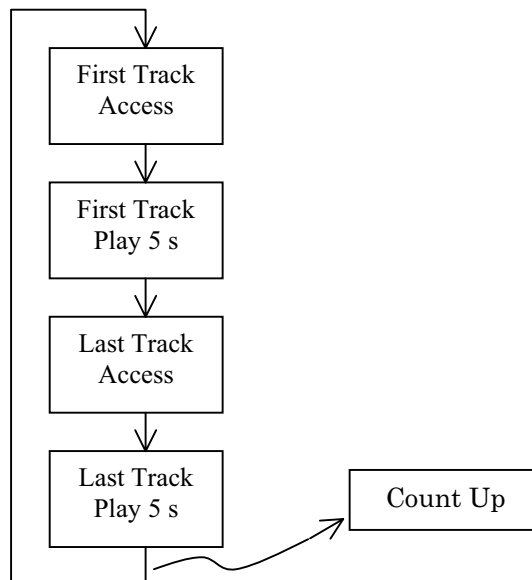
6.2.2. Doctor Mode Table 2

Item		FL display	Key operation
Mode name	Description		
FL Display Test	To check the FL segments display (All segments will light up)		In Doctor Mode: 1. Press [AUTO OFF] on remote control. To cancel, press [0] on remote control. To exit, press [TAPE/OFF] on main unit.
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] on remote control. To exit, press [TAPE/OFF] on main unit.
			In Doctor Mode: 1. Press [8] on remote control. To exit, press [TAPE/OFF] on main unit.
			In Doctor Mode: 1. Press [9] on remote control. To exit, press [TAPE/OFF] on main unit.
CD Loading Test Mode (DLS6F)	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 one. When reach 9999999 will change to 0000000	In Doctor Mode: 1. Press [≥10], [1], [1] on remote control. To exit, press [TAPE/OFF] on main unit. (Refer to section 6.2.3. for more information).
CD Traverse Unit Test Mode (DLS6F)	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 one. When reach 9999999 will change to 0000000	In Doctor Mode: 1. Press [≥10], [1], [2] on remote control. To exit, press [TAPE/OFF] on main unit. (Refer to section 6.2.4. for more information).
CD Combination Test Mode (DLS6F)	A combination of CD loading & traverse unit test.	 ↓ The counter will increment by one. When reach 9999999 will change to 0000000	In Doctor Mode: 1. Press [≥10], [1], [3] on remote control. To exit, press [TAPE/OFF] on main unit. (Refer to section 6.2.5. for more information).
CD Self-Adjustment (AJST) Result Display	The following shall be displayed for 2.5 secs. The result shall correspond to the condition met as shown.	 Display of auto adjustment result	In Doctor Mode: 1. Press [≥10], [1], [4] on remote control. To exit, press [TAPE/OFF] on main unit.
Cold Start	To activate cold start upon next AC power up.		In Doctor Mode: 1. Press [SLEEP] on remote control. To exit, press [TAPE/OFF] on main unit.

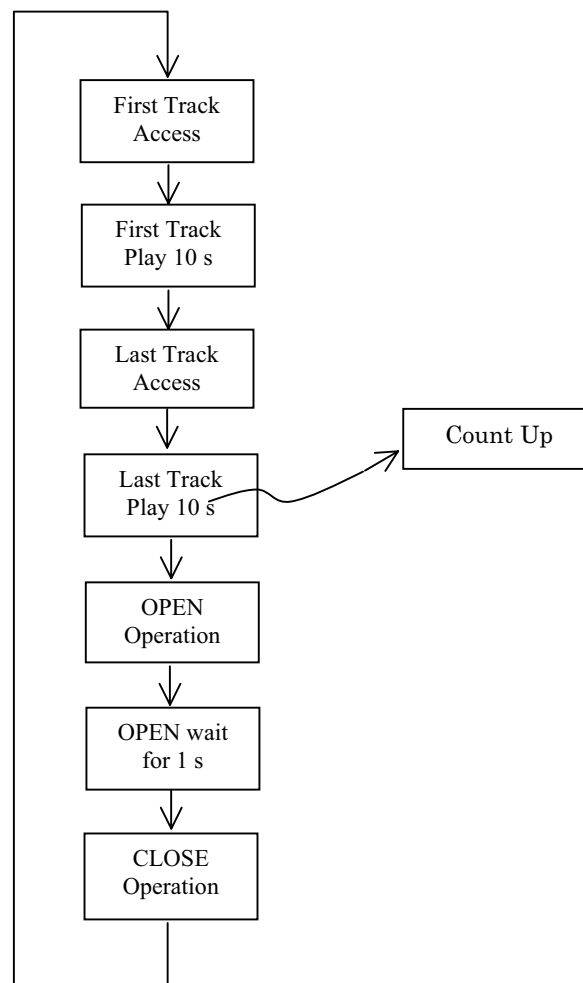
6.2.3. CD Loading Test Mode



6.2.4. CD Traverse Unit Test



6.2.5. CD Combination Test Mode



7 Service Fixture & Tools

Prepare service tools before process service position.

Service Tools		Remarks
Deck P.C.B. (JW830) - Main P.C.B. (CN2104)	REXN0084 (10P cable)	
Panel P.C.B. (ZJ903) - Main P.C.B. (CN4104)	REXN0082 (4P cable)	
Panel P.C.B. (CN900) - Main P.C.B. (CN2105)	REXN0080 (10P cable)	

8 Disassembly and Assembly Instructions

Caution Note:

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

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

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

- Disassembly of Top Cabinet Assembly
- Disassembly of Music Port P.C.B.
- Disassembly of Front Panel Assembly
- Disassembly of Panel P.C.B., Standby P.C.B. and Volume P.C.B.
- Disassembly of Woofer Speaker (SP1)
- Disassembly of Woofer Speaker (SP2)
- Disassembly of CD Lid
- Disassembly of Deck Mechanism Unit
- Disassembly of Deck P.C.B.
- Disassembly of Cassette Lid
- Disassembly of Mecha Bottom Cover
- Disassembly of Power P.C.B.
- Disassembly of Main P.C.B.
- Replacement of Transistor (Q4107)
- Replacement of Power IC (IC4101)
- Disassembly of CD Mechanism Unit
- Disassembly of CD Servo P.C.B.
- Disassembly of Battery (1) P.C.B.
- Disassembly of Battery (2) P.C.B.

CAUTION NOTE:

Please use original screws and at correct locations.

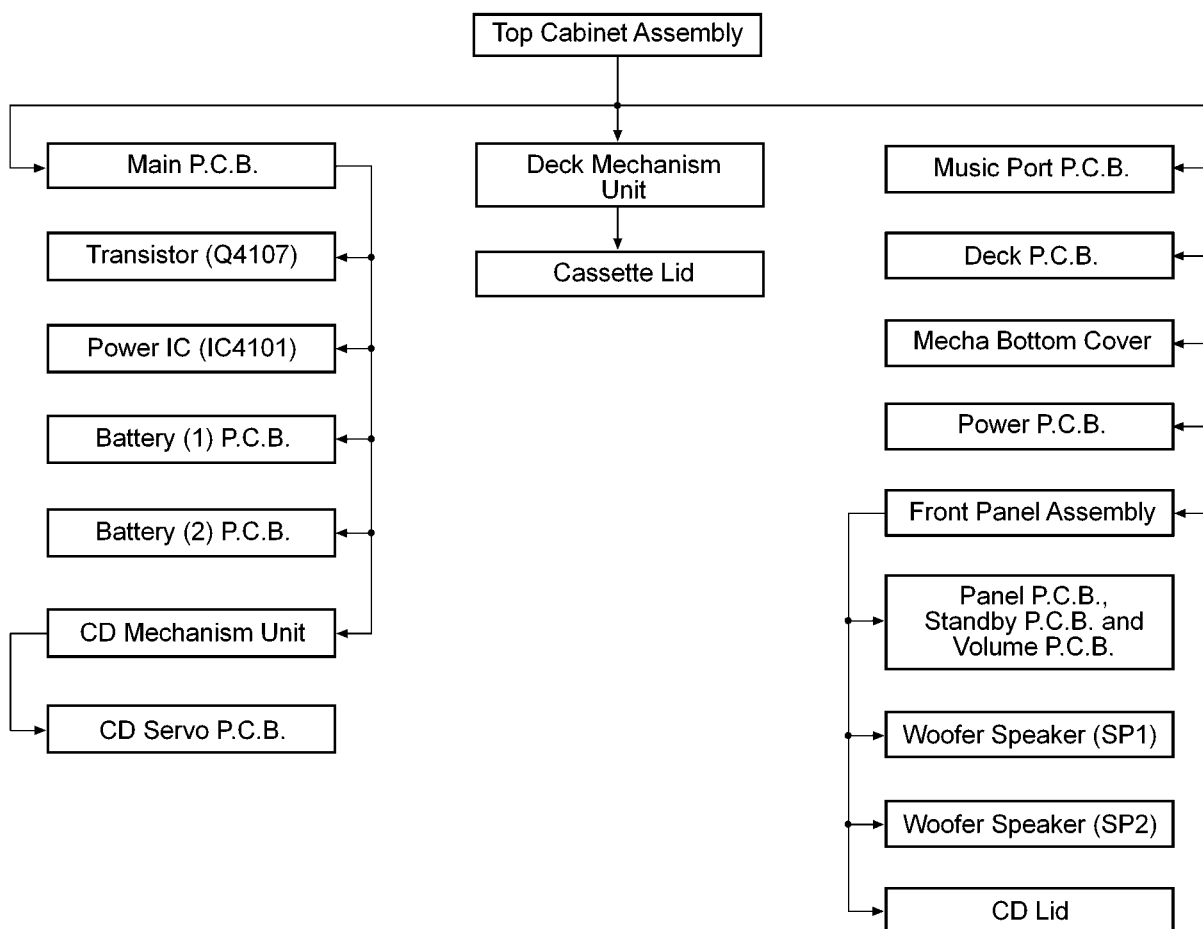
Below shown is the part no. of different screw types used:

- | | |
|------------------------|-----------------------|
| a : XTV3+10GFJ | f : XTV3+8FFJ |
| b : XTB26+10GFJ | g : XTW3+10FFJ |
| c : XTV3+16GFJ | h : RHD03001 |
| d : XTW26+10SFJ | i : XTN2+6GFJ |
| e : XTN2+14GFJ | |

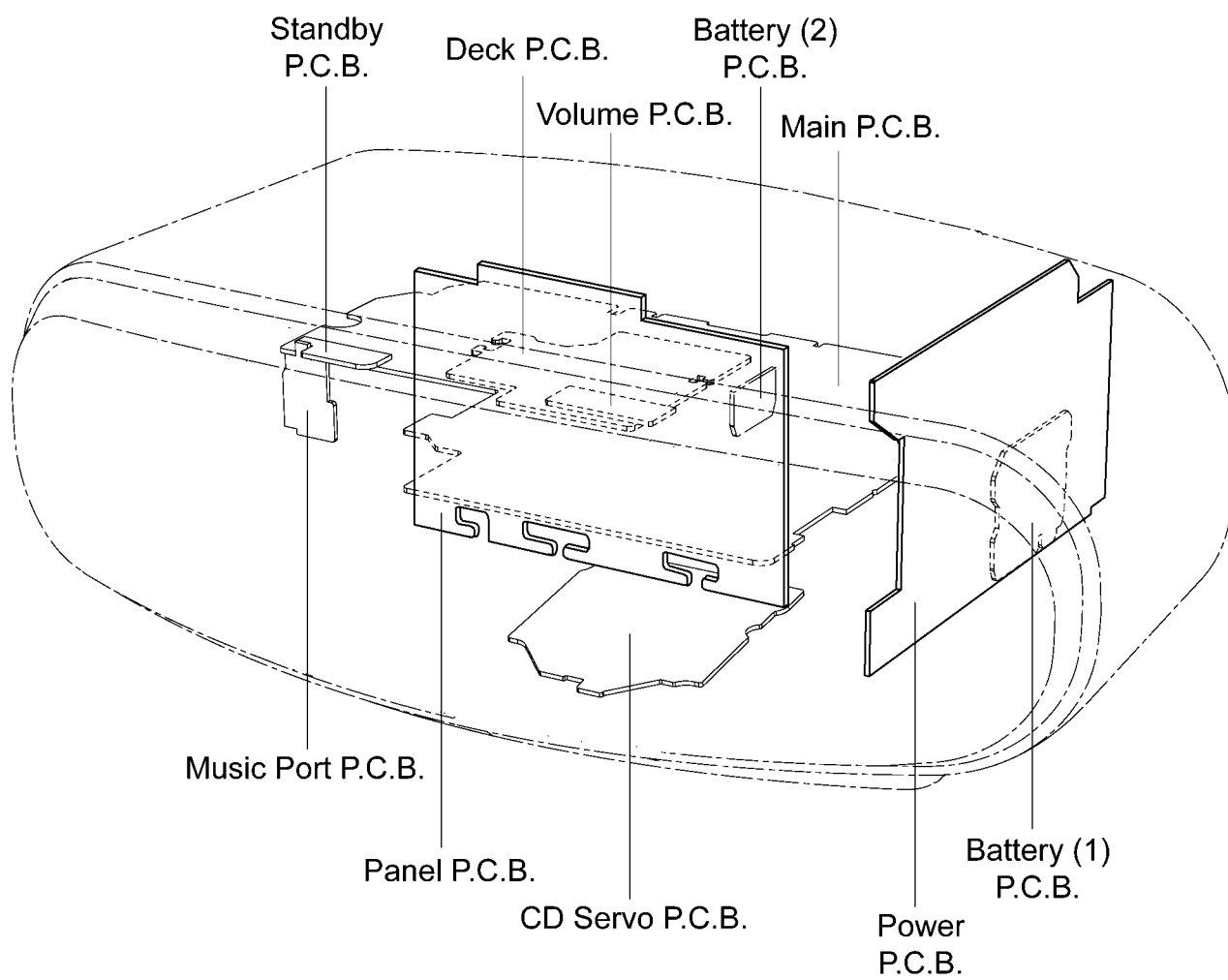
8.1. Disassembly flow chart

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.



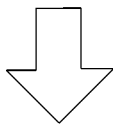
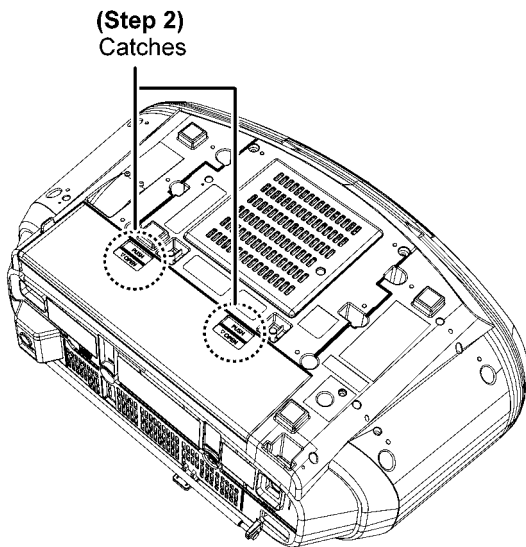
8.2. Main Parts Location Diagram



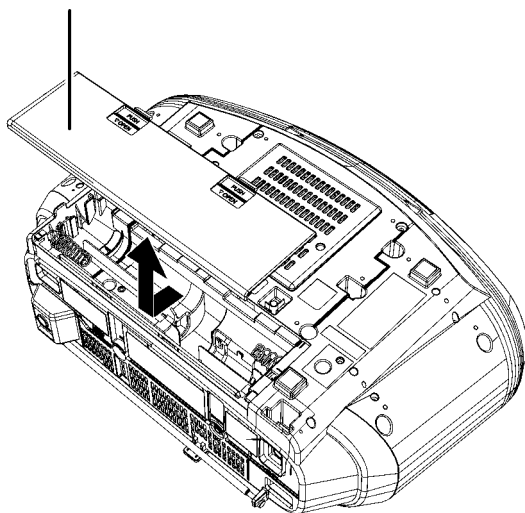
8.3. Disassembly of Top Cabinet Assembly

Step 1 : Upset the unit.

Step 2 : Release 2 catches to remove Battery Cover.



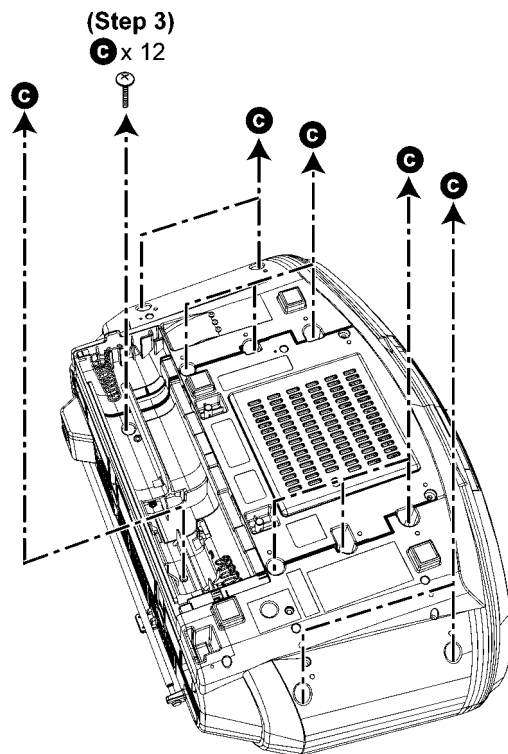
Battery Cover



Bottom View

Step 3 : Remove 12 screws.

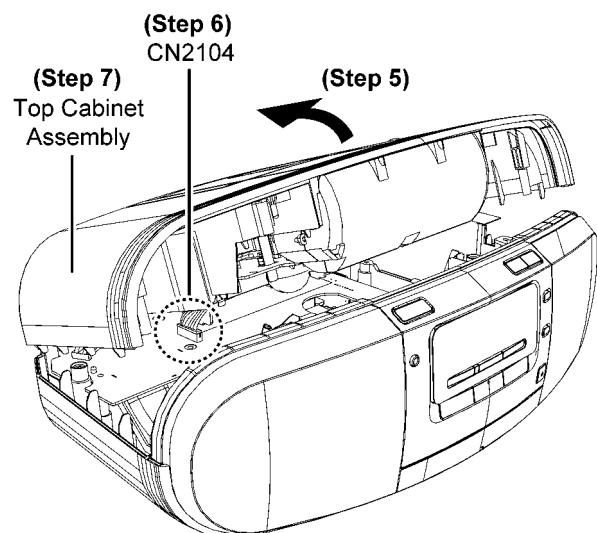
Step 4 : Upset the unit.



Step 5 : Slightly lift up the Top Cabinet Assembly as arrow shown.

Step 6 : Detach 10P cable at the connector (CN2104) on Main P.C.B..

Step 7 : Remove the Top Cabinet Assembly.

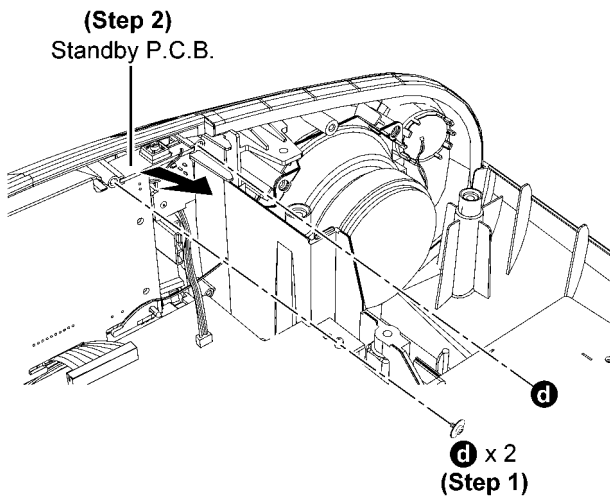


8.4. Disassembly of Music Port

- Refer to "Disassembly of Top Cabinet Assembly".

Step 1 : Remove 2 screws.

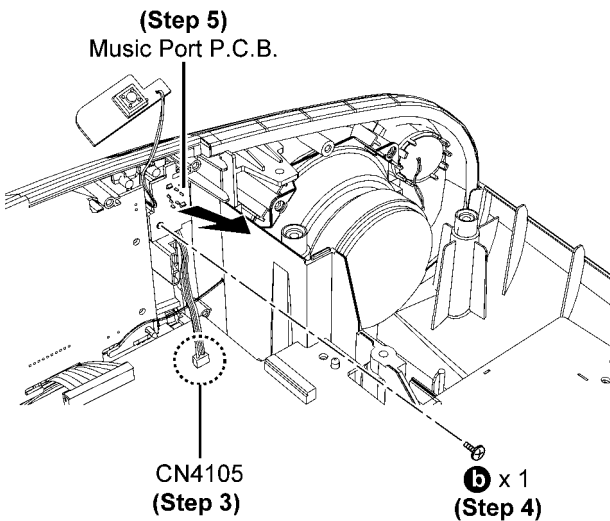
Step 2 : Lift up the Standby P.C.B..



Step 3 : Detach 3P cable at the connector (CN4105) on Main P.C.B..

Step 4 : Remove 1 screw.

Step 5 : Remove the Music Port P.C.B..

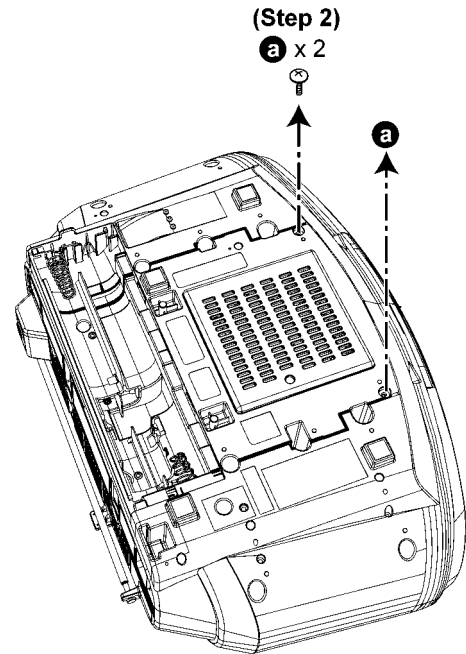


8.5. Disassembly of Front Panel Assembly

- Refer to "Disassembly of Top Cabinet Assembly".

Step 1 : Upset the unit.

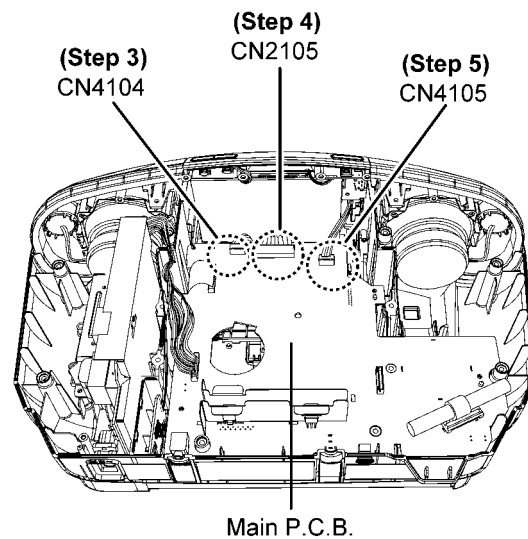
Step 2 : Remove 2 screws.



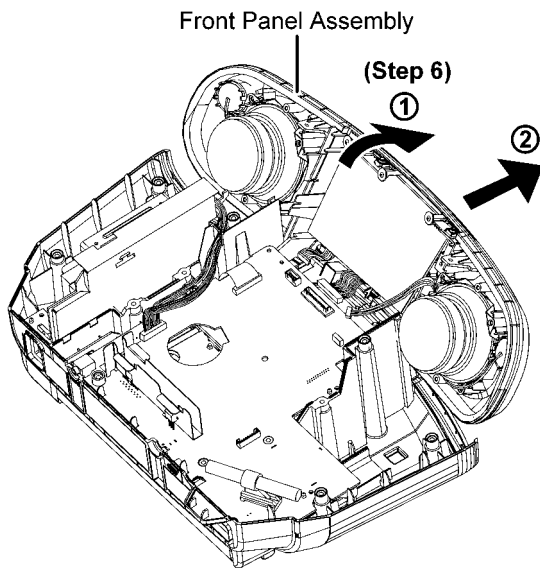
Step 3 : Detach 4P cable at the connector (CN4104) on Main P.C.B..

Step 4 : Detach 10P cable at the connector (CN2105) on Main P.C.B..

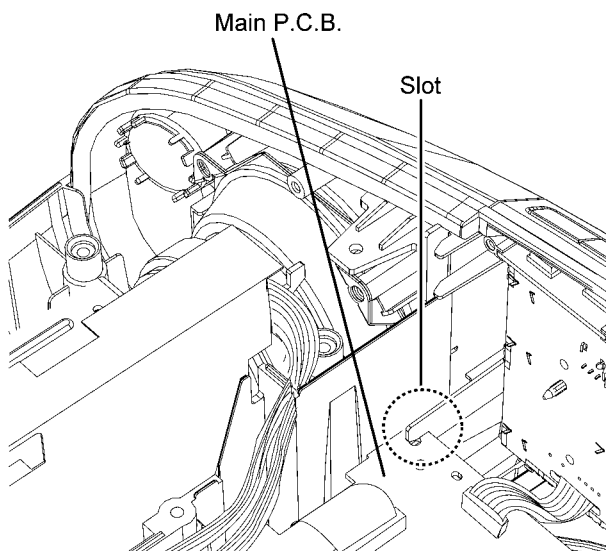
Step 5 : Detach 3P cable at the connector (CN4105) on Main P.C.B..



Step 6 : Remove Front Panel Assembly as arrow shown.



Caution : During assembling, ensure the Front Panel Assembly properly fixed to the Main P.C.B..

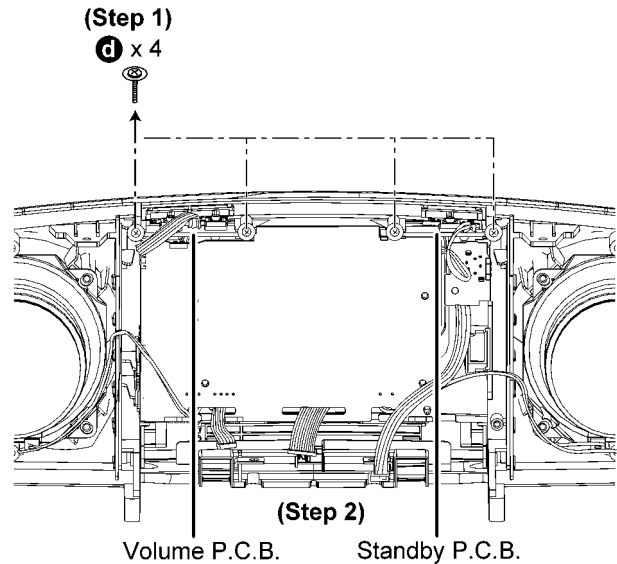


8.6. Disassembly of Panel P.C.B., Standby P.C.B. and Volume P.C.B.

- Refer to "Disassembly of Top Cabinet Assembly".
- Refer to "Disassembly of Front Panel Assembly".

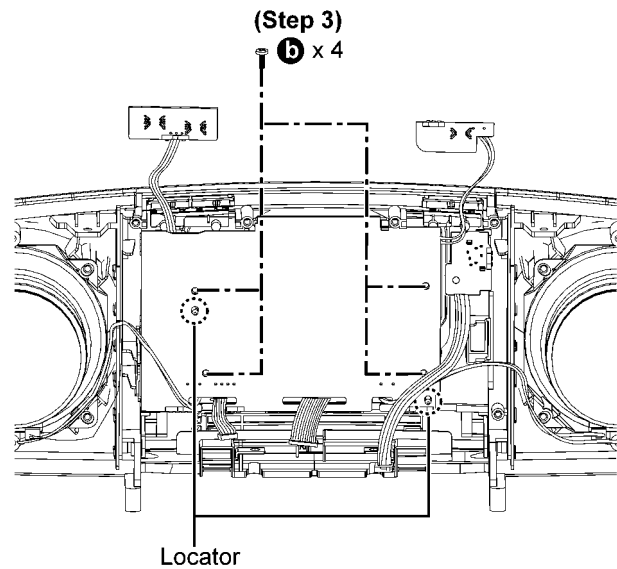
Step 1 : Remove 4 screws.

Step 2 : Lift up the Volume P.C.B. and Standby P.C.B..



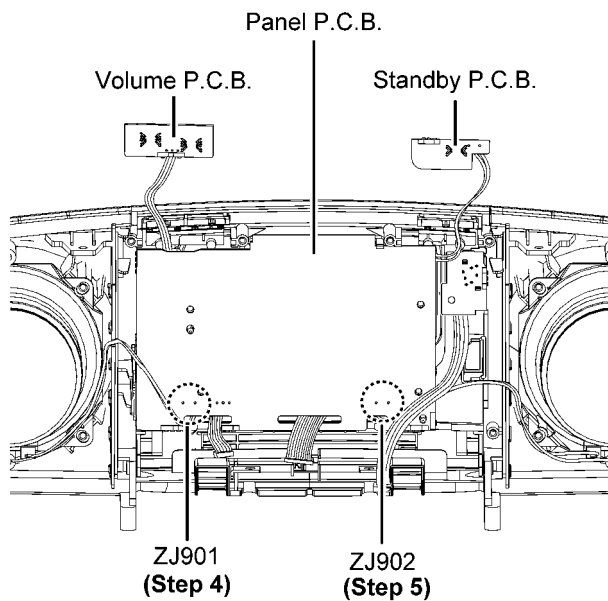
Step 3 : Remove 4 screws.

Caution : During assembling, ensure the Panel P.C.B. is properly into the Locator.



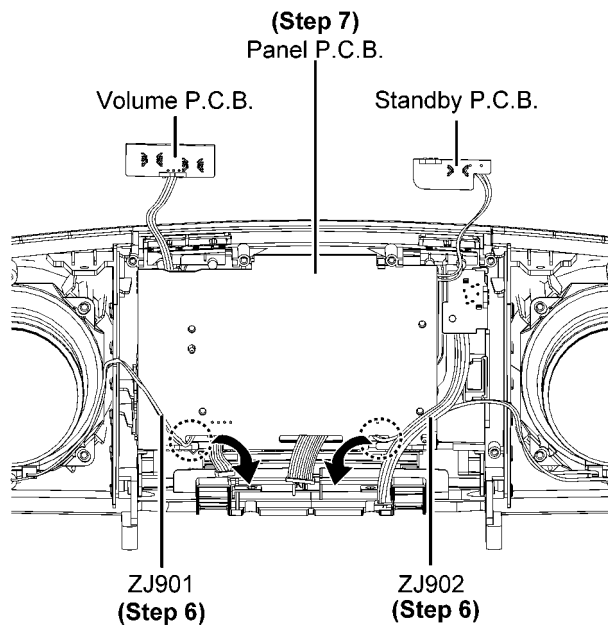
Step 4 : Desolder 2P wire at (ZJ901) on the Panel P.C.B..

Step 5 : Desolder 2P wire at (ZJ902) on the Panel P.C.B..



Step 6 : Release both 2P wires (ZJ901 and ZJ902) from the slot of the Panel P.C.B..

Step 7 : Remove the Panel P.C.B., Volume P.C.B. and Standby P.C.B. altogether.



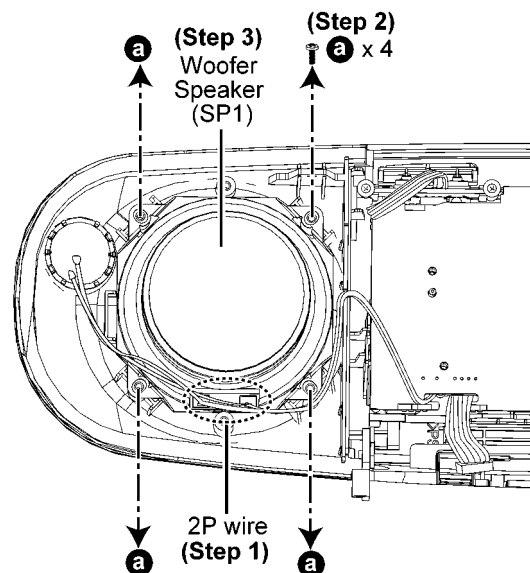
8.7. Disassembly of Woofer Speaker (SP1)

- Refer to "Disassembly of Top Cabinet Assembly".
- Refer to "Disassembly of Front Panel Assembly".

Step 1 : Desolder 2P wire on Woofer Speaker (SP1).

Step 2 : Remove 4 screws.

Step 3 : Remove Woofer Speaker (SP1).



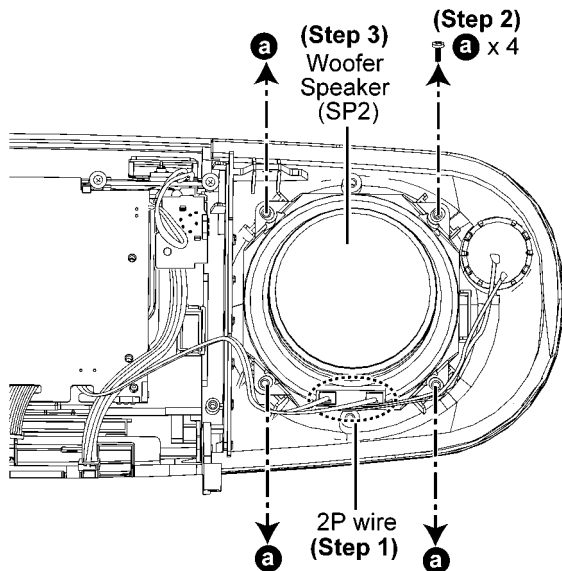
8.8. Disassembly of Woofer Speaker (SP2)

- Refer to "Disassembly of Top Cabinet Assembly".
- Refer to "Disassembly of Front Panel Assembly".

Step 1 : Desolder 2P wire on Woofer Speaker (SP2).

Step 2 : Remove 4 screws.

Step 3 : Remove Woofer Speaker (SP2).

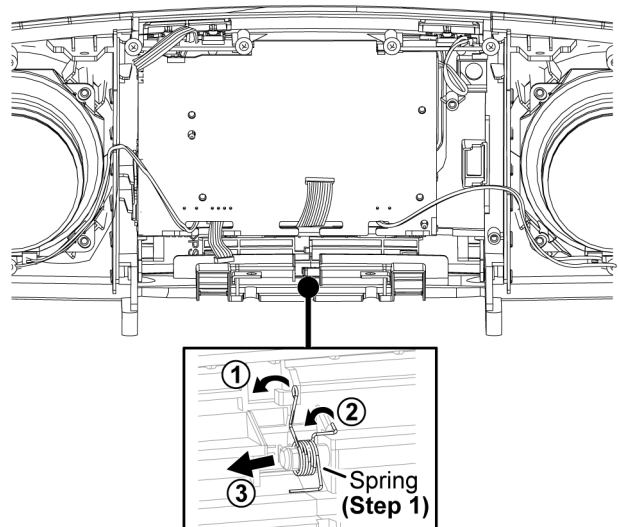


8.9. Disassembly of CD Lid

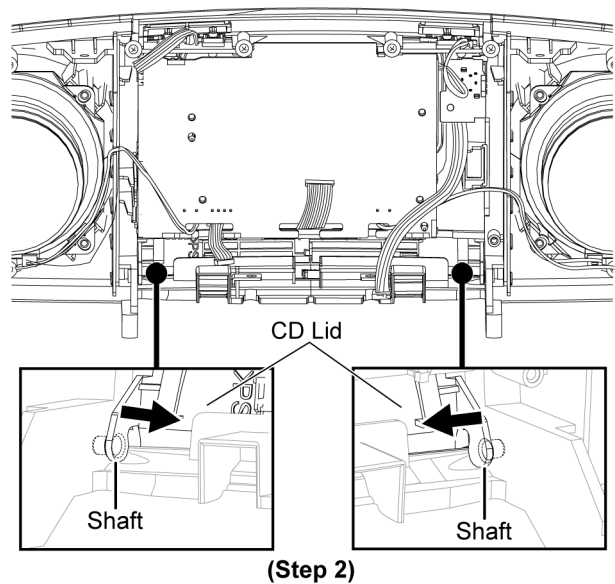
- Refer to "Disassembly of Top Cabinet Assembly".
- Refer to "Disassembly of Front Panel Assembly".

Step 1 : Remove the Spring as arrow shown in order of sequences (1) to (3).

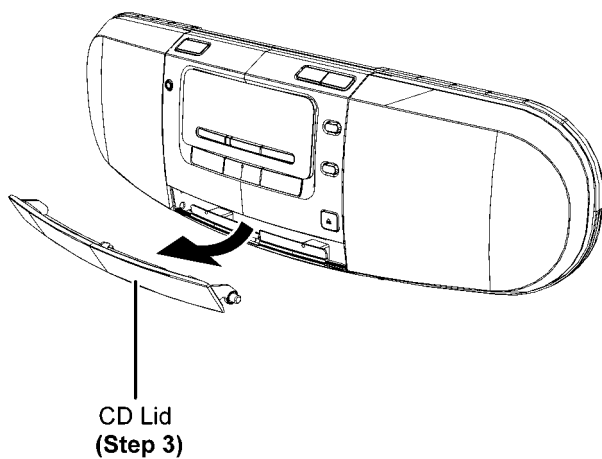
Caution : Keep the spring in the safe place and place them back during assembling.



Step 2 : Push shafts of CD Lid inward as arrows shown.



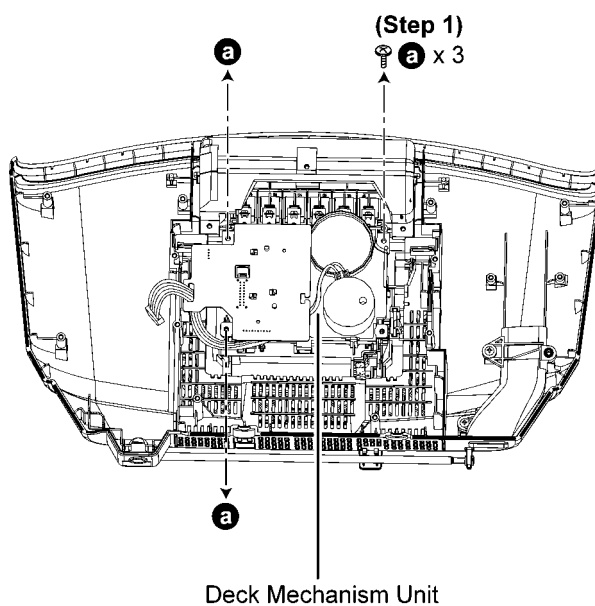
Step 3 : Remove the CD Lid.



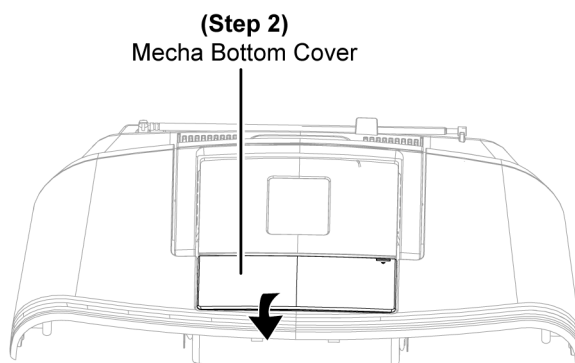
8.10. Disassembly of Deck Mechanism Unit

• Refer to "Disassembly of Top Cabinet Assembly".

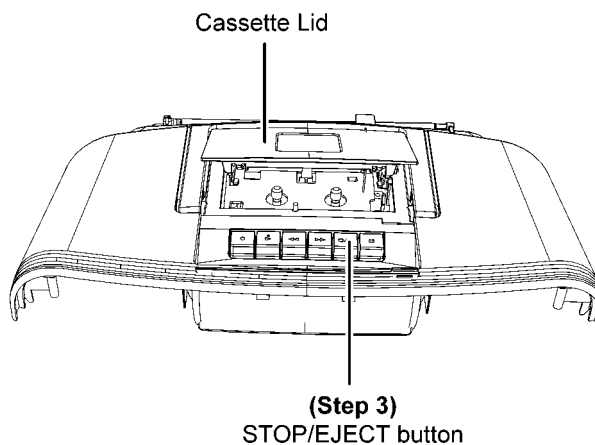
Step 1 : Remove 3 screws.



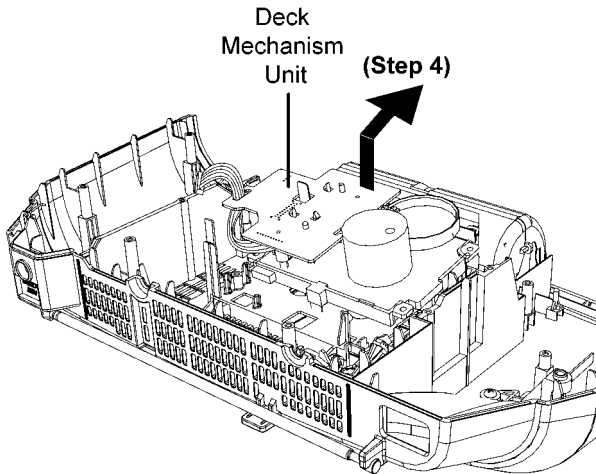
Step 2 : Open Mecha Bottom Cover as arrow shown.



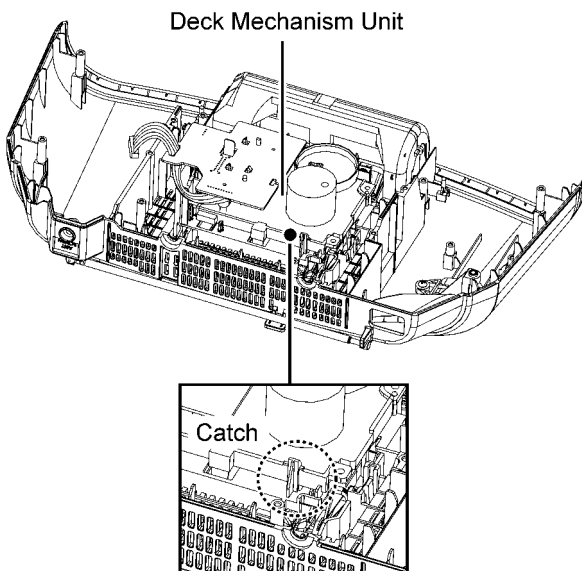
Step 3 : Press the STOP/EJECT button to open Cassette Lid.



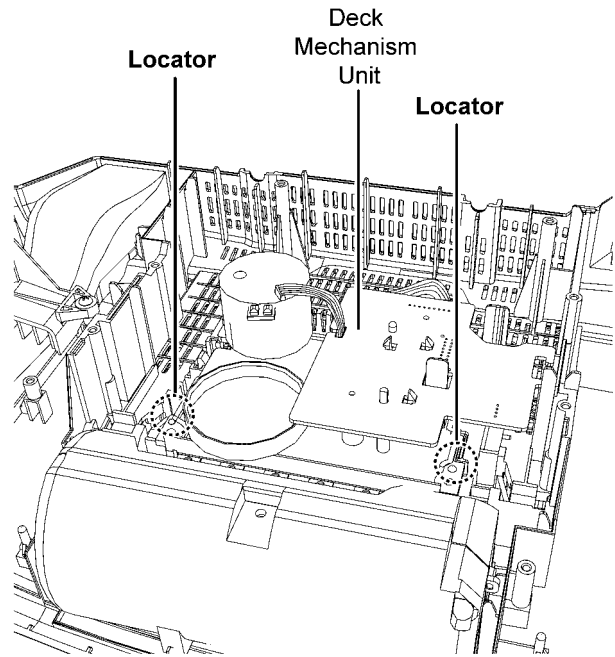
Step 4 : Remove the Deck Mechanism Unit as arrow shown.



Caution : During assembling, ensure the Deck Mechanism Unit is properly sitted under the Catch.



Caution : During assembling, ensure the Deck Mechanism Unit is properly fitted into the Locator.

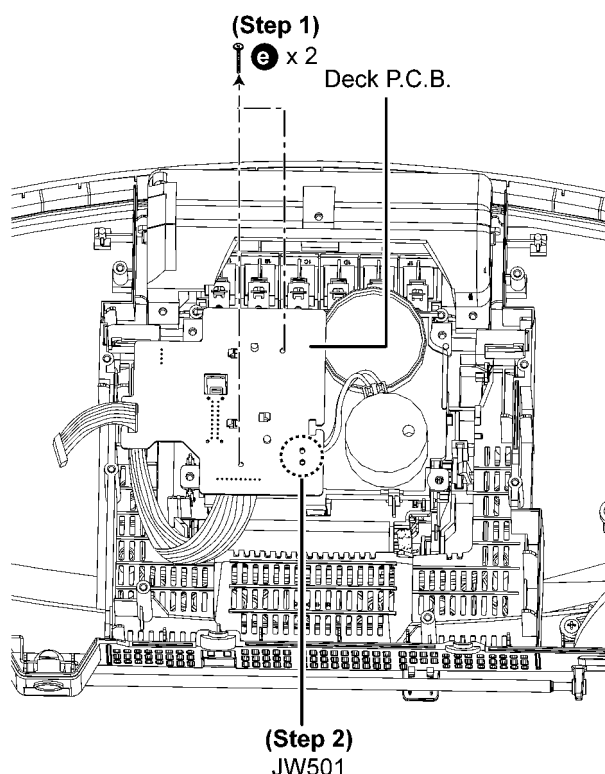


8.11. Disassembly of Deck P.C.B.

- Refer to "Disassembly of Top Cabinet Assembly".

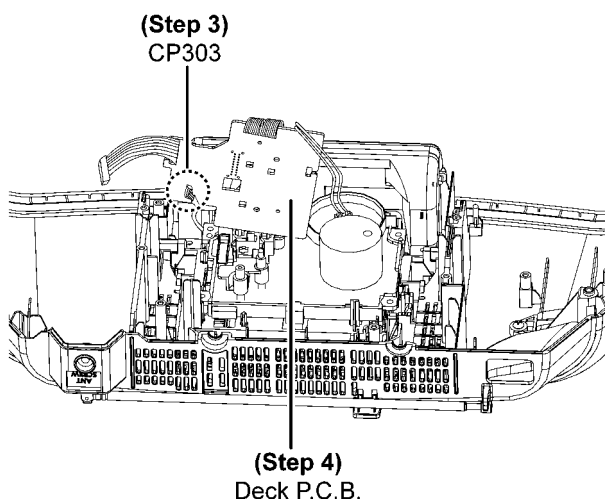
Step 1 : Remove 2 screws.

Step 2 : Desolder 2P wire at (JW501) on the Deck P.C.B..



Step 3 : Detach 4P wire at the connector (CP303) on Deck P.C.B..

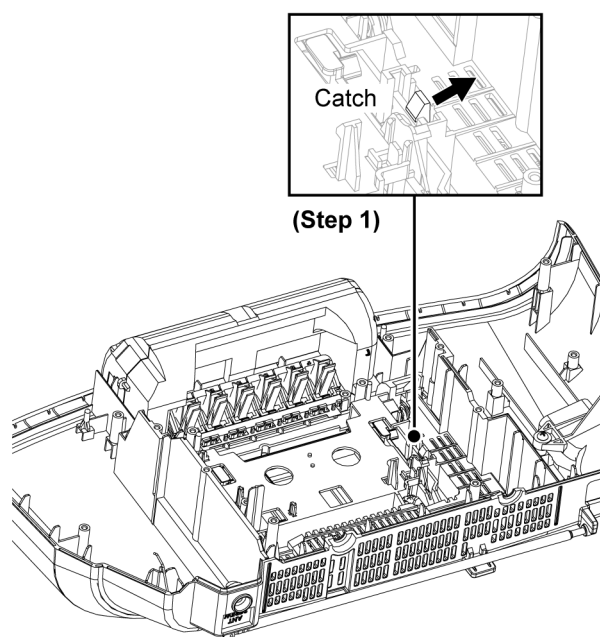
Step 4 : Remove the Deck P.C.B..



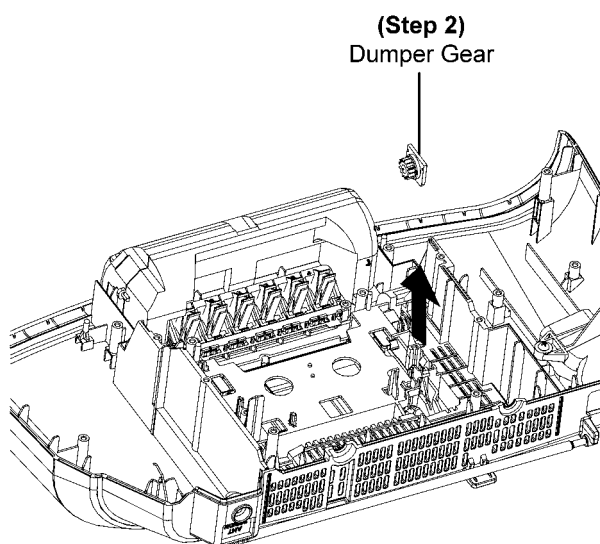
8.12. Disassembly of Cassette Lid

- Refer to "Disassembly of Top Cabinet Assembly".
- Refer to "Disassembly of Deck Mechanism Unit".

Step 1 : Release 1 catch.

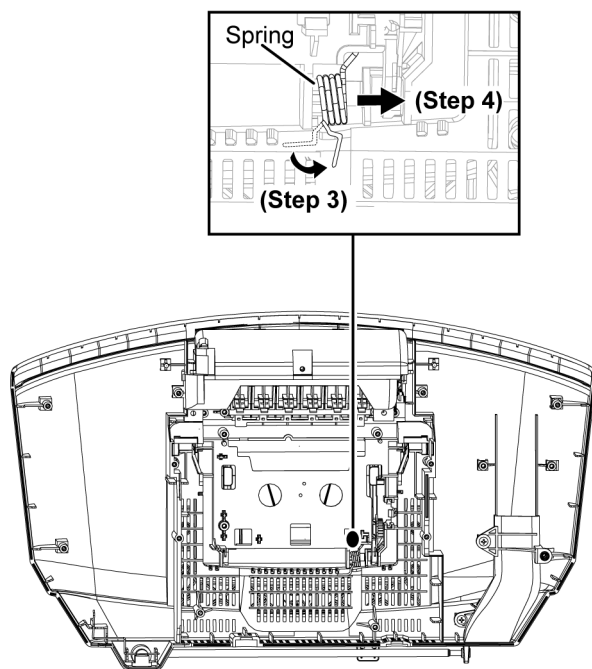


Step 2 : Remove the Dumper Gear as arrow shown.

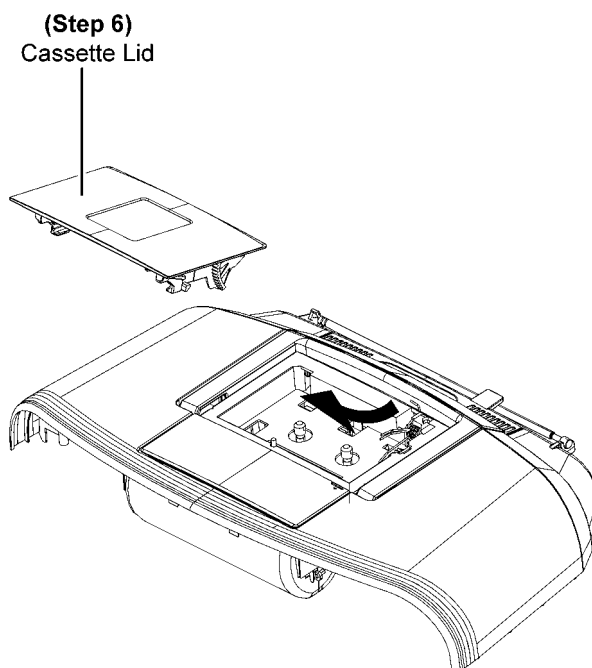


Step 3 : Lift up the Spring as arrow shown.

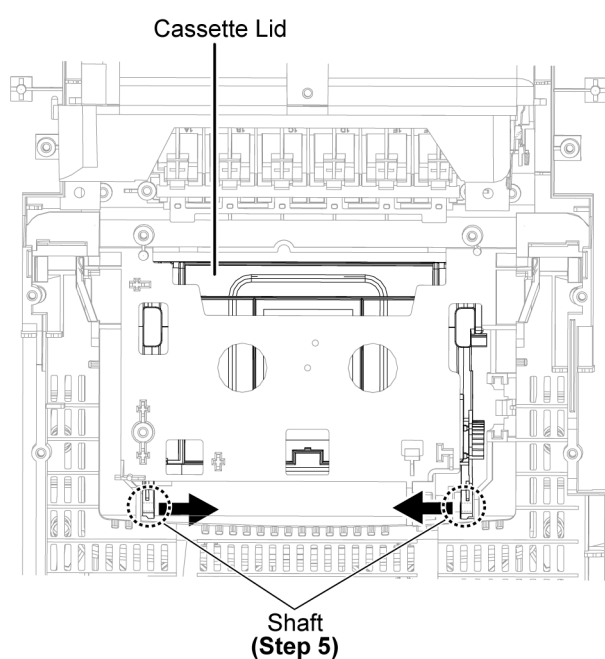
Step 4 : Remove the Spring.



Step 6 : Remove Cassette Lid as arrow shown.



Step 5 : Push the shafts of Cassette Lid inward as arrow shown.

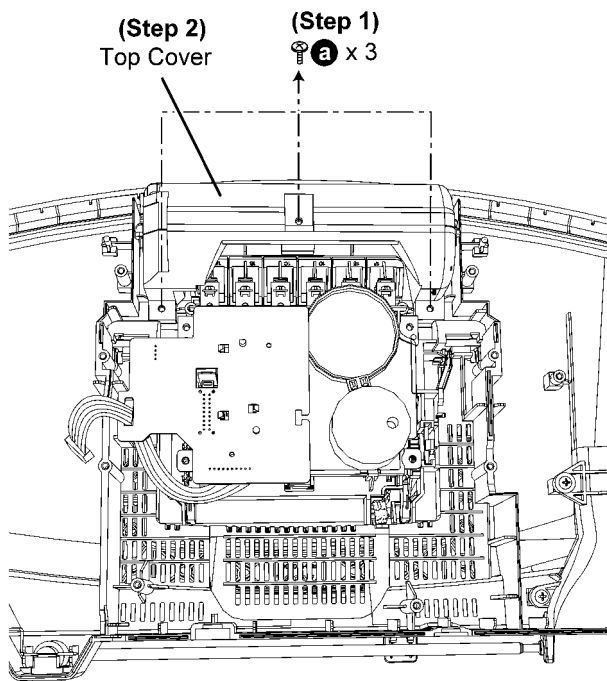


8.13. Disassembly of Mecha Bottom Cover

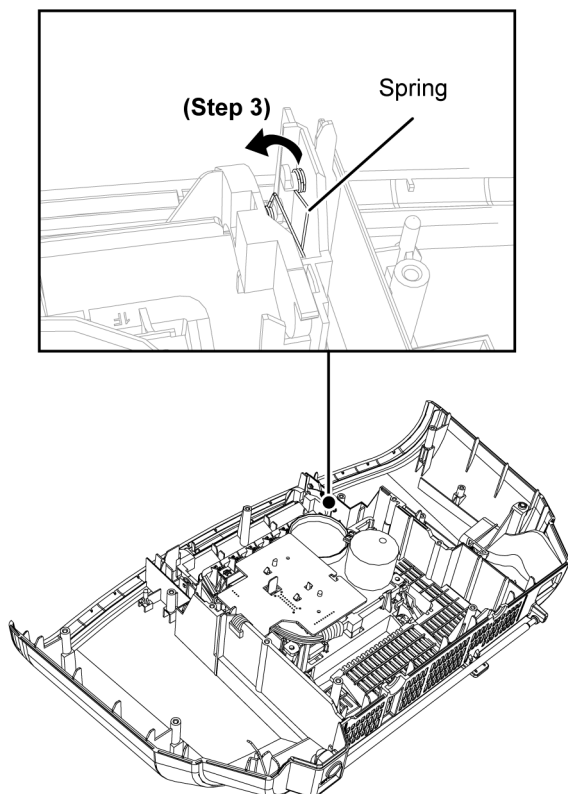
• Refer to "Disassembly of Top Cabinet Assembly".

Step 1 : Remove 3 screws.

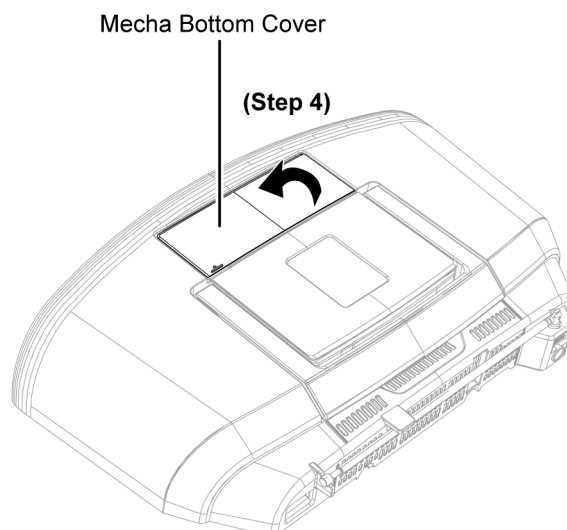
Step 2 : Remove the Top Cover.



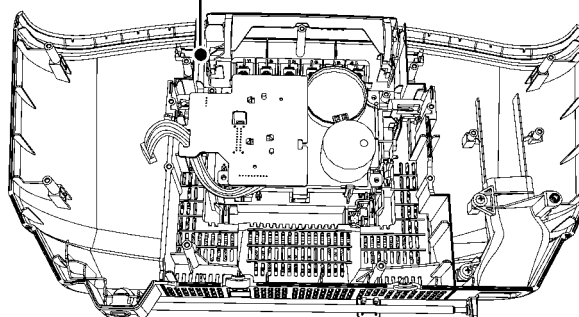
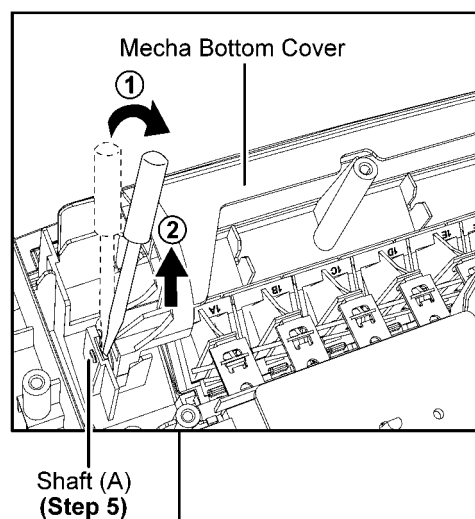
Step 3 : Release the Spring as arrow shown.



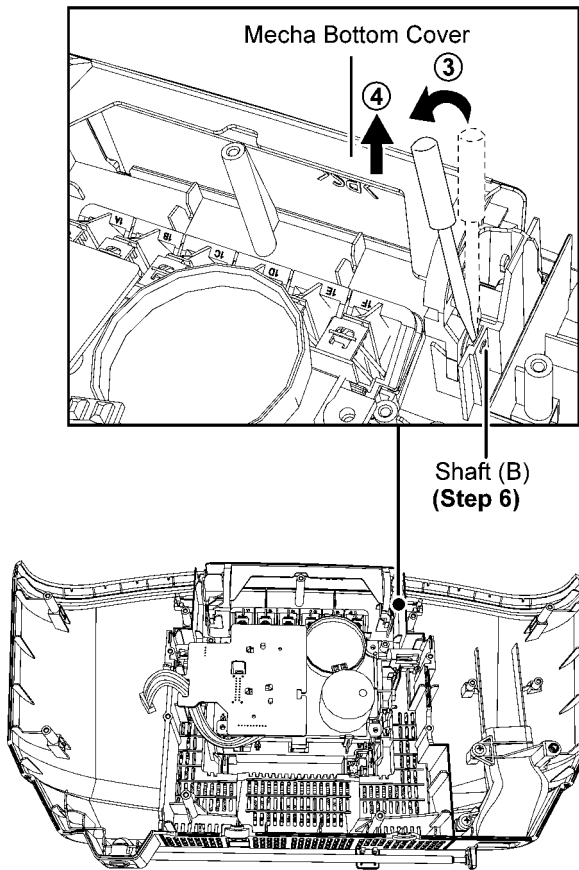
Step 4 : Open the Mecha Bottom Cover as arrow shown.



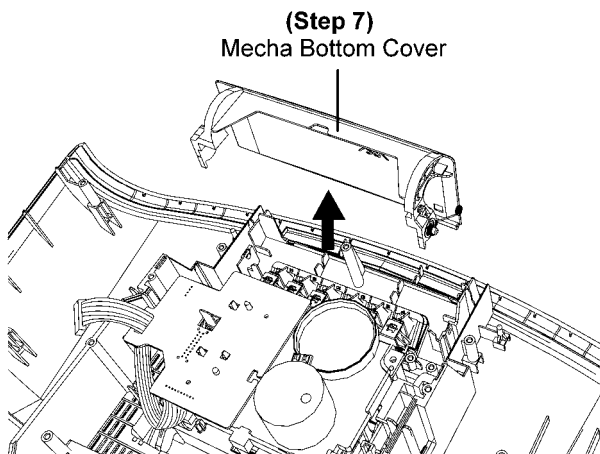
Step 5 : Using flat screwdriver slightly push the shaft (A) of Mecha Bottom Cover in order of sequence (1) to (2) as arrow shown.



Step 6 : Using flat screwdriver slightly push the shaft (B) of Mecha Bottom Cover in order of sequence (3) to (4) as arrow shown.



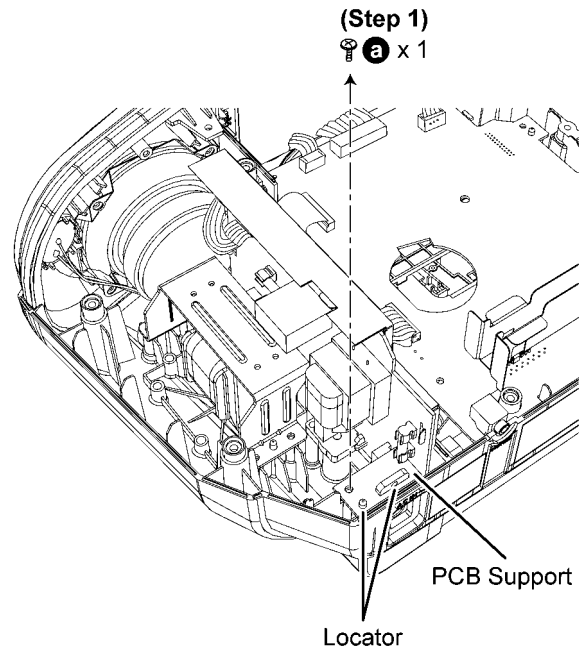
Step 7 : Remove the Mecha Bottom Cover as arrow shown.



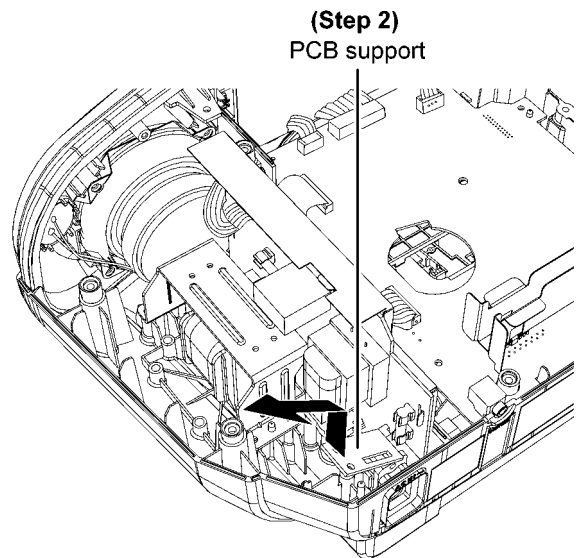
8.14. Disassembly of Power P.C.B.

• Refer to "Disassembly of Top Cabinet Assembly".

Step 1 : Remove 1 screw.

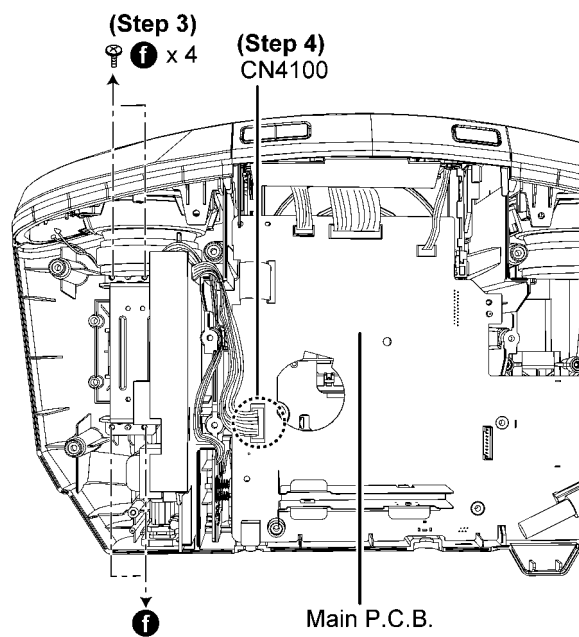


Step 2 : Lift and remove the PCB Support as arrow shown.
Caution : During assembling, ensure the PCB Support is seated properly on the Locator.



Step 3 : Remove 4 screws.

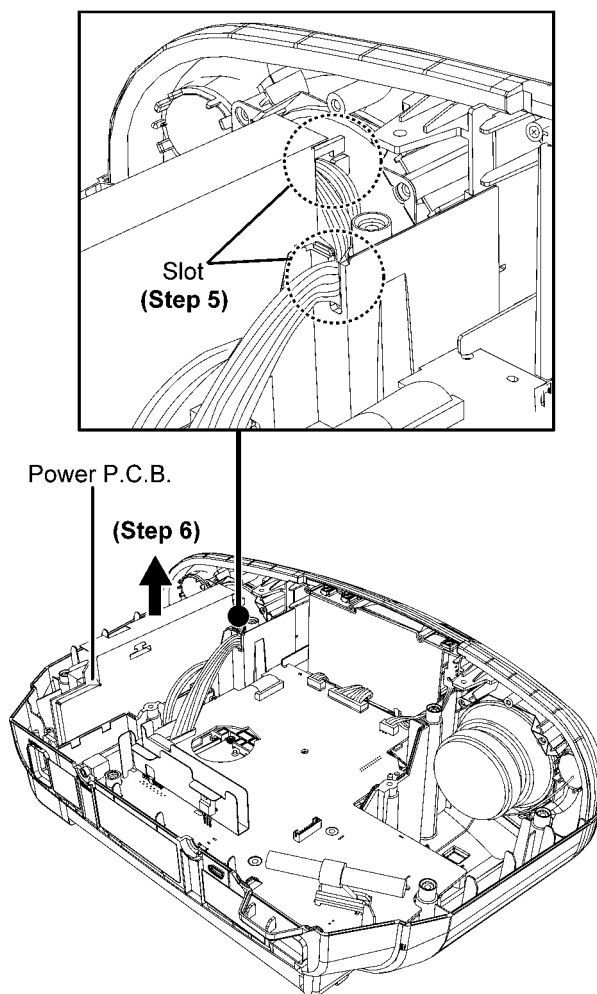
Step 4 : Detach 8P cable at the connector (CN4100) on Main P.C.B..



Step 5 : Remove the cables from the slot.

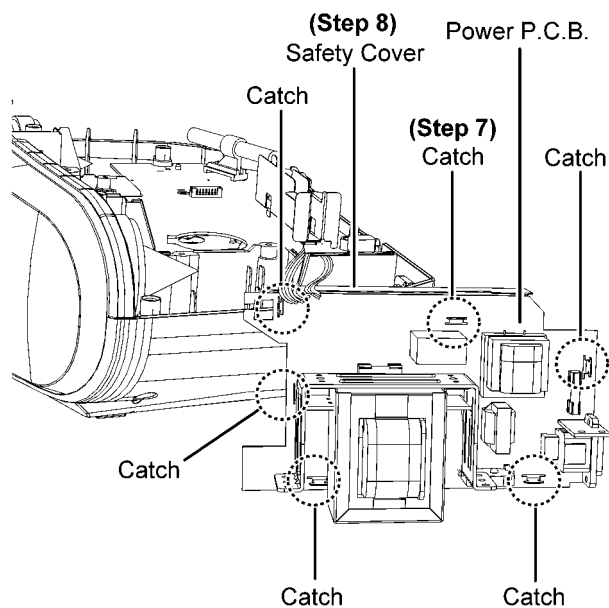
Caution : During assembling, ensure the cables as properly inserted into the Slot.

Step 6 : Lift up the Power P.C.B. as arrow shown.



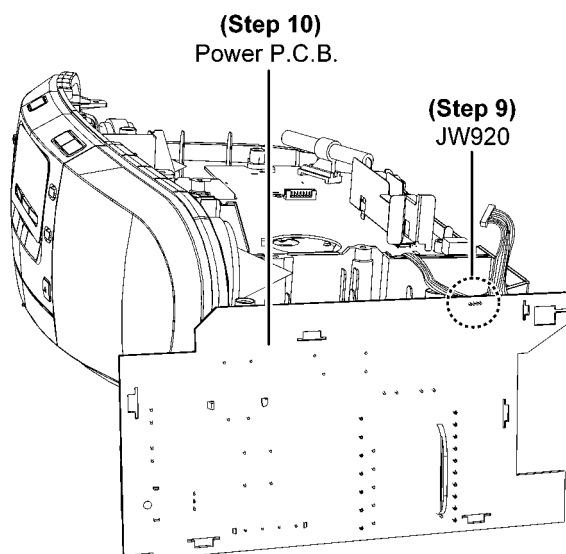
Step 7 : Release 6 catches.

Step 8 : Remove the Safety cover.



Step 9 : Desolder 4P cable at (JW920) on the Power P.C.B..

Step 10 : Remove Power P.C.B..



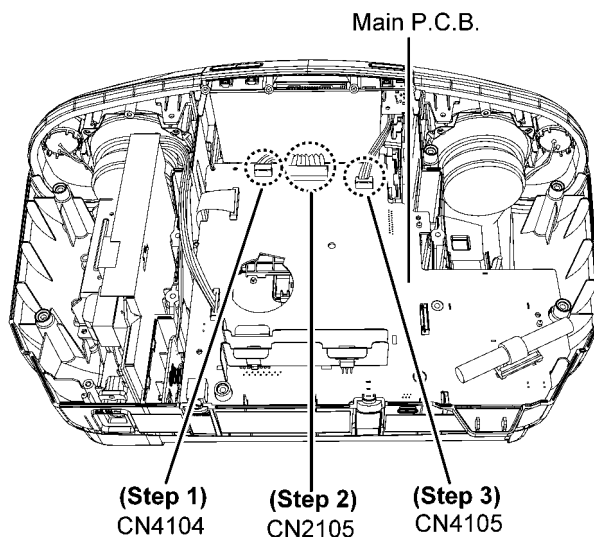
8.15. Disassembly of Main P.C.B.

• Refer to "Disassembly of Top Cabinet Assembly".

Step 1 : Detach 4P cable at the connector (CN4104) on Main P.C.B..

Step 2 : Detach 10P cable at the connector (CN2105) on Main P.C.B..

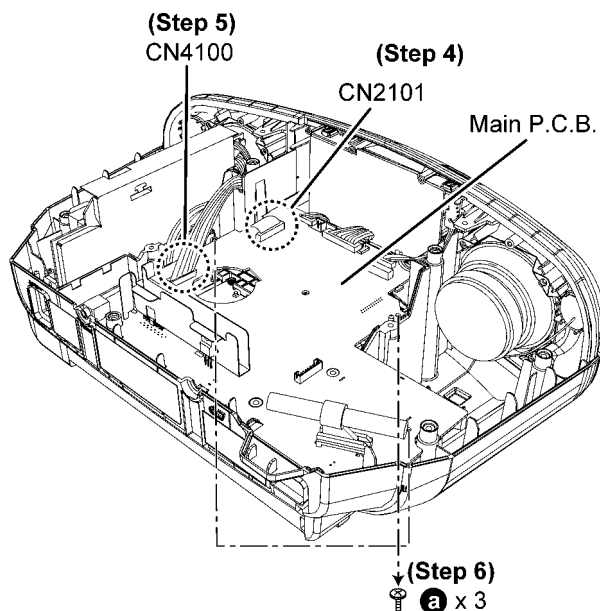
Step 3 : Detach 3P cable at the connector (CN4105) on Main P.C.B..



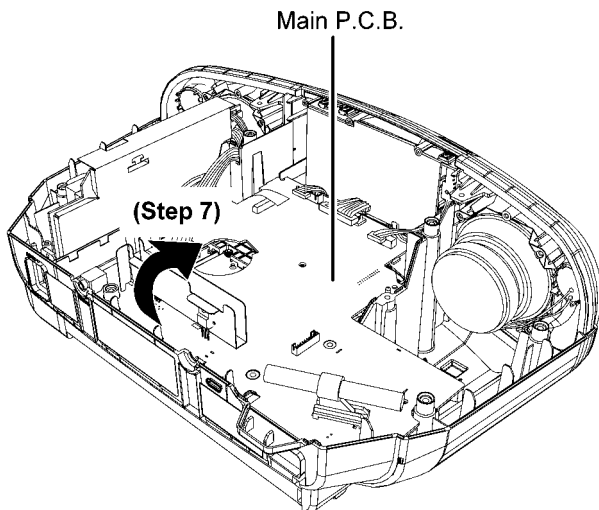
Step 4 : Detach 22P FFC at the connector (CN2101) on Main P.C.B..

Step 5 : Detach 8P cable at the connector (CN4100) on Main P.C.B..

Step 6 : Remove 3 screws.

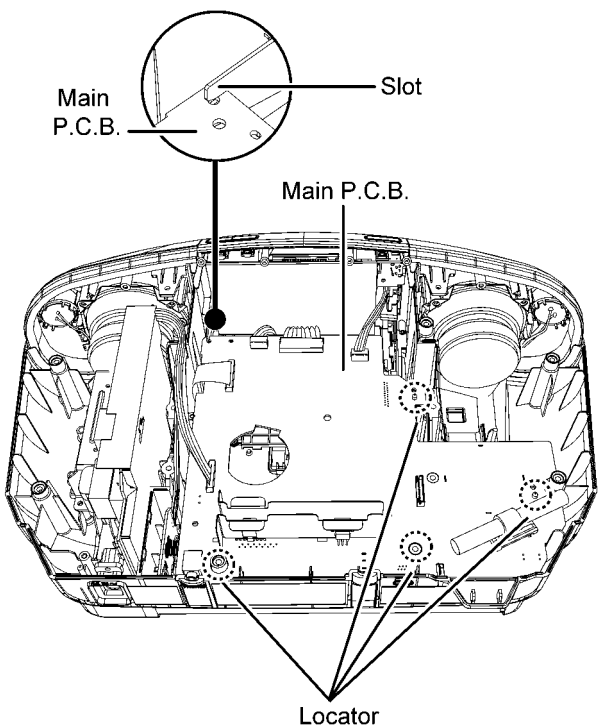


Step 7 : Lift up to remove Main P.C.B..



Caution 1 : During assembling, ensure the Main P.C.B. is seated properly on the Locator.

Caution 2 : During assembling, ensure the Main P.C.B. is slot into the Front Panel Assembly.

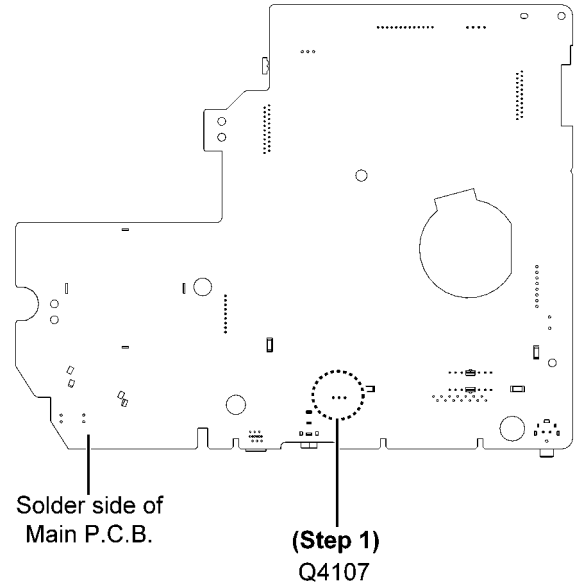


8.16. Replacement of Transistor (Q4107)

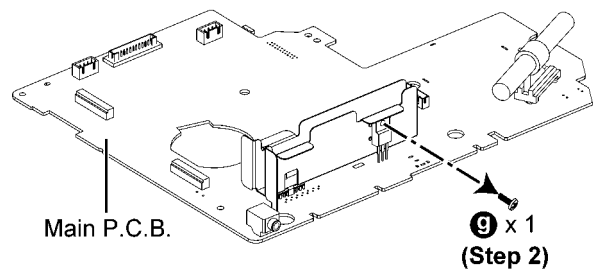
• Refer to "Disassembly of Main P.C.B."

8.16.1. Disassembly of Transistor (Q4107)

Step 1 : Desolder pins of the Transistor (Q4107) on the solder side of Main P.C.B..

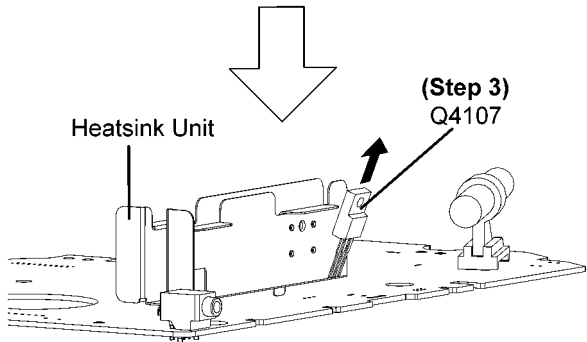
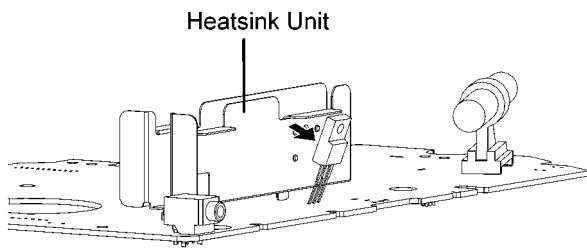


Step 2 : Remove 1 screw.



Step 3 : Remove the Transistor (Q4107).

Caution : Avoid touching the Heatsink Unit due to its high temperature after prolonged use. Touching it may lead to injuries.

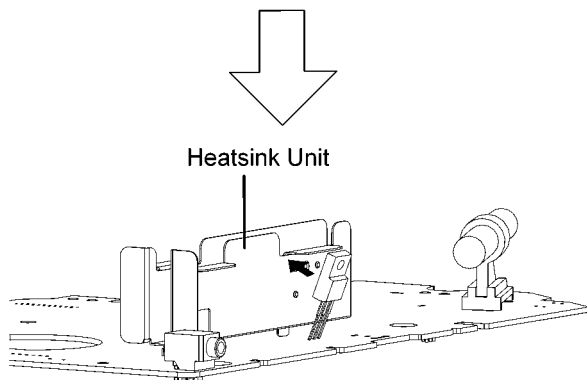
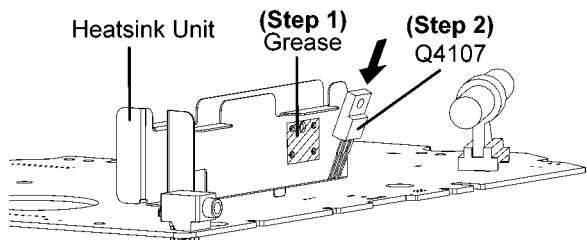


8.16.2. Assembly of Transistor (Q4107)

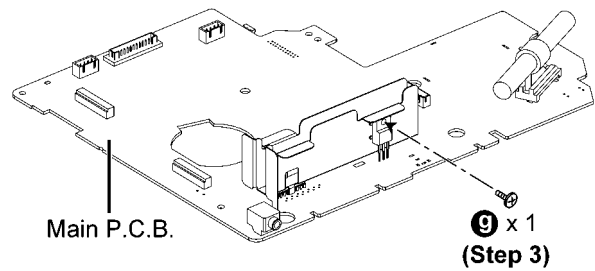
Step 1 : Apply Grease to the Heatsink Unit.

Step 2 : Install the Transistor (Q4107) on Main P.C.B. as arrow shown.

Caution : Ensure the pins are inserted and seated properly on Main P.C.B..

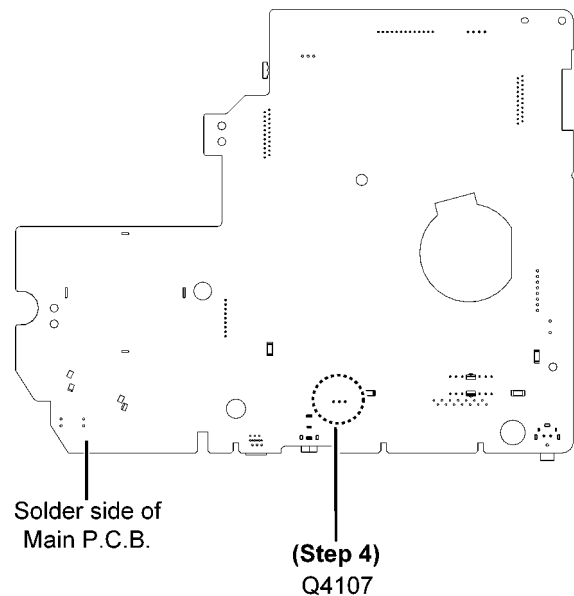


Step 3 : Fix 1 screw on the Transistor (Q4107) onto the Heat-sink Unit.



Step 4 : Solder pins of the Transistor (Q4107) on the solder side of Main P.C.B..

Caution : Check for the solderability of the Transistor (Q4107).

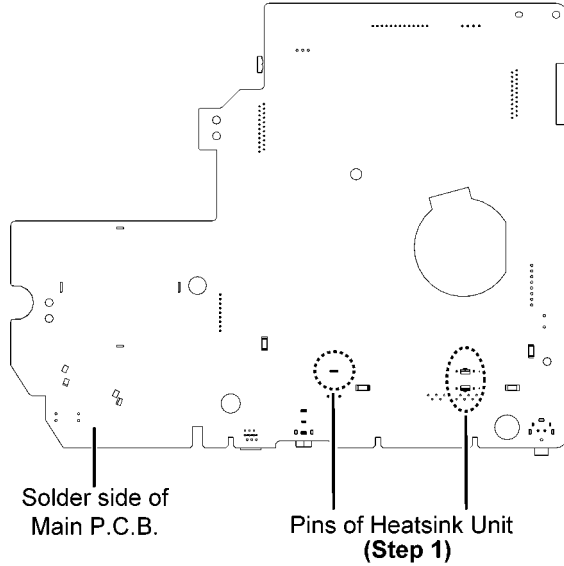


8.17. Replacement of Power IC (IC4101)

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

8.17.1. Disassembly of Power IC (IC4101)

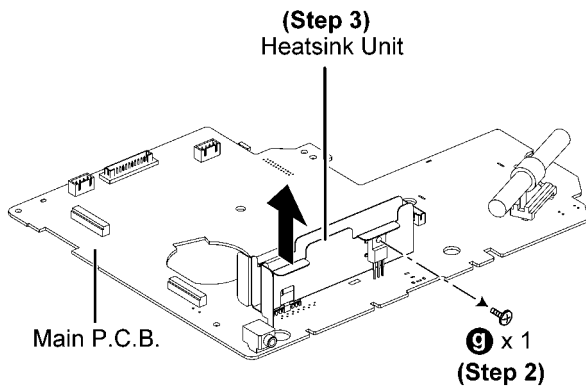
Step 1 : Desolder pins of the Heatsink Unit.



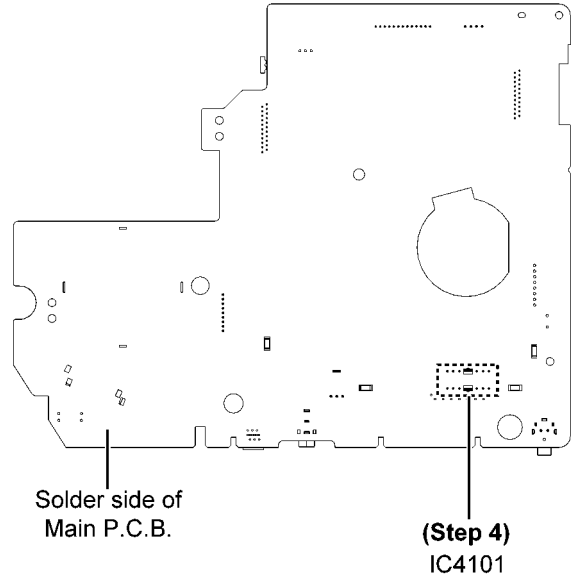
Step 2 : Remove 1 screw.

Step 3 : Remove Heatsink Unit.

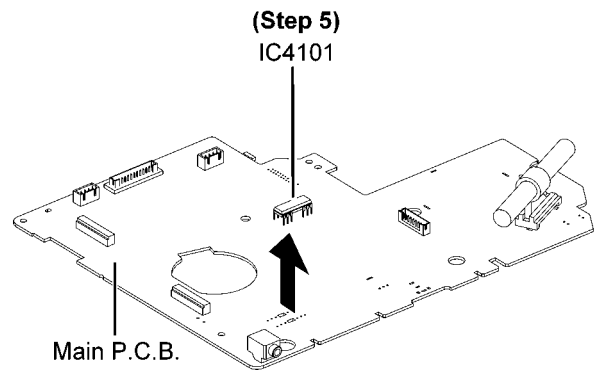
Caution : Avoid touching the Heatsink Unit due to its high temperature after prolonged use. Touching it may lead to injuries.



Step 4 : Desolder pins of the Power IC (IC4101) on the solder side of the Main P.C.B..



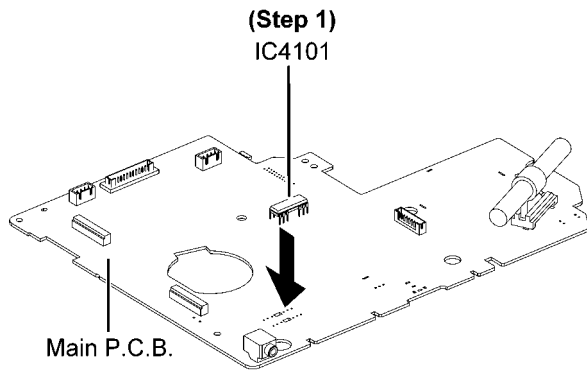
Step 5 : Remove the Power IC (IC4101).



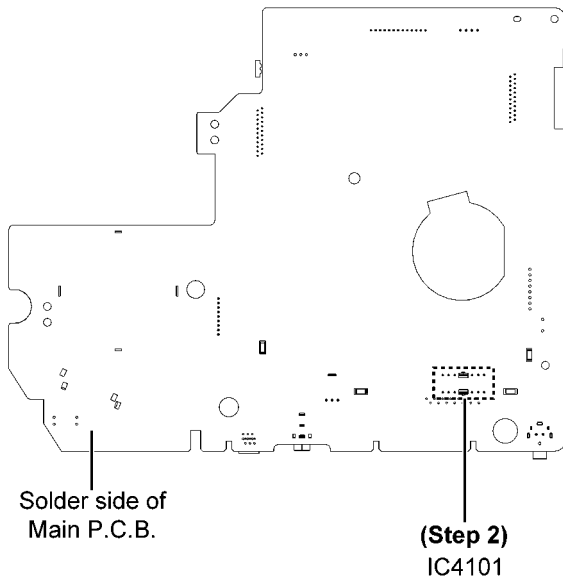
8.17.2. Assembly of Power IC (IC4101)

Step 1 : Install the Power (IC4101) on Main P.C.B..

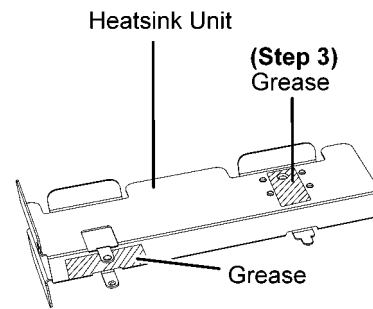
Caution : Ensure the pins are inserted and seated properly on Main P.C.B..



Step 2 : Solder pins of the Power IC (IC4101) on the solder side of Main P.C.B..



Step 3 : Apply Grease to the Heatsink Unit.

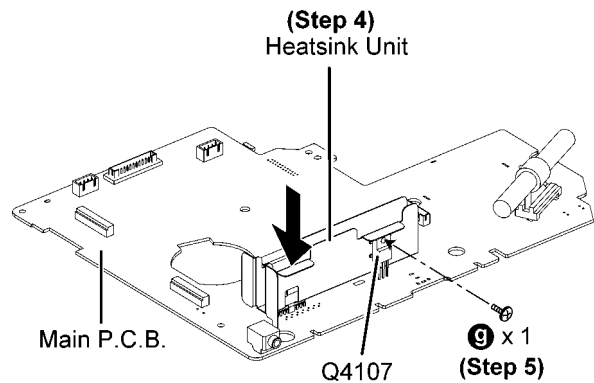


Step 4 : Install the Heatsink Unit on Main P.C.B.

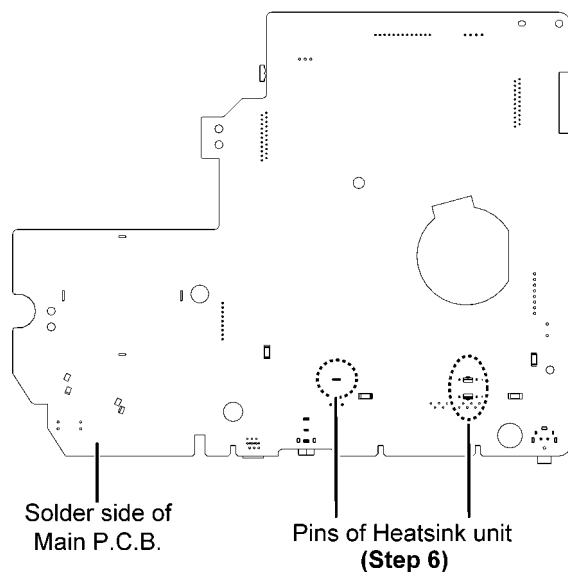
Caution : Ensure the pins are inserted and seated properly on Main P.C.B..

Step 5 : Fix 1 screw on the Transistor (Q4107) onto the Heatsink Unit.

Caution : Check the solderability of the Transistor (Q4107) and Power IC (IC4101).



Step 6 : Solder pins of the Heatsink Unit on the solder side of Main P.C.B..

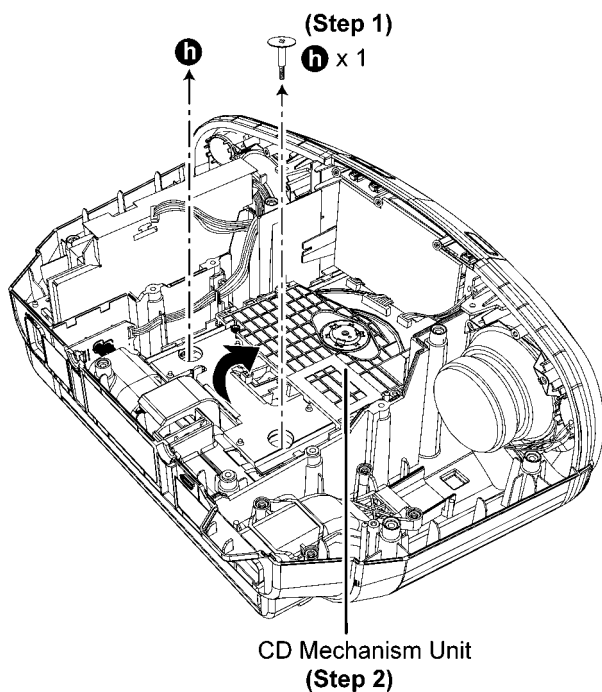


8.18. Disassembly of CD Mechanism Unit

- Refer to "Disassembly of Top Cabinet Assembly".
- Refer to "Disassembly of Main P.C.B."

Step 1 : Remove 2 screws.

Step 2 : Remove CD Mechanism Unit as arrow shown.



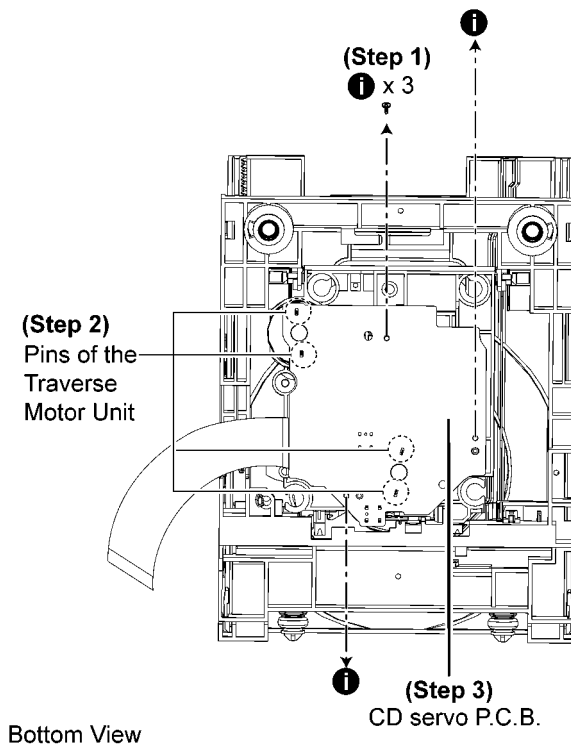
8.19. Disassembly of CD Servo P.C.B.

- Refer to "Disassembly of CD Mechanism Unit"

Step 1 : Remove 3 screws.

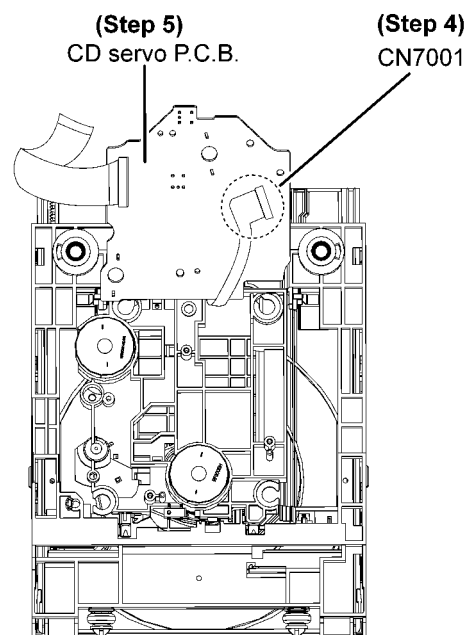
Step 2 : Desolder pins of the Traverse Motor Unit.

Step 3 : Lift up the CD Servo P.C.B. and turn it over.



Step 4 : Detach 16P FPC at the connector (CN7001) on the CD Servo P.C.B..

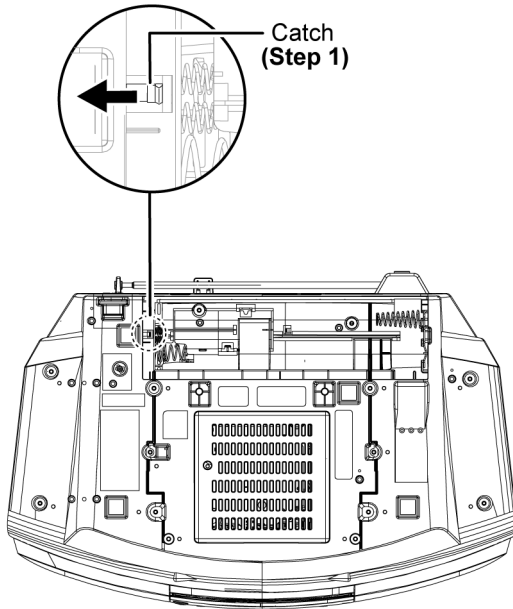
Step 5 : Remove the CD Servo P.C.B..



8.20. Disassembly of Battery (1) P.C.B.

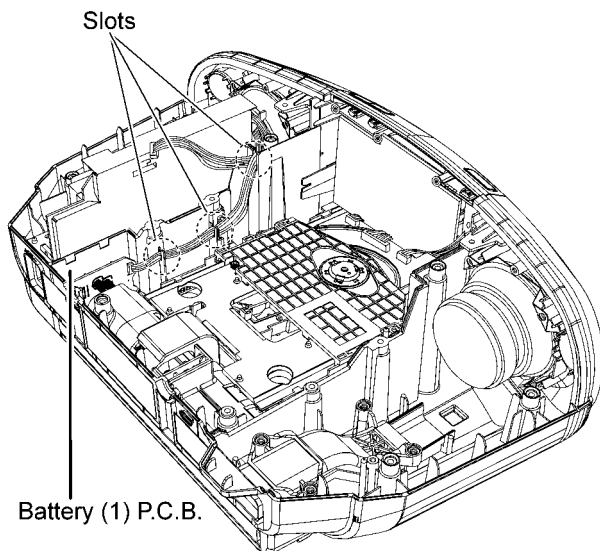
- Refer to “Disassembly of Top Cabinet Assembly”.
- Refer to “Disassembly of Main P.C.B.”

Step 1 : Release the catch.



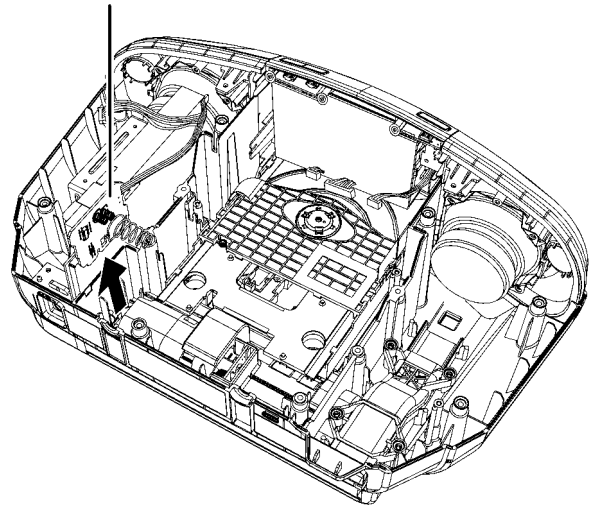
Bottom View

Caution : During assembling, ensure the cable is properly inserted into the slot.



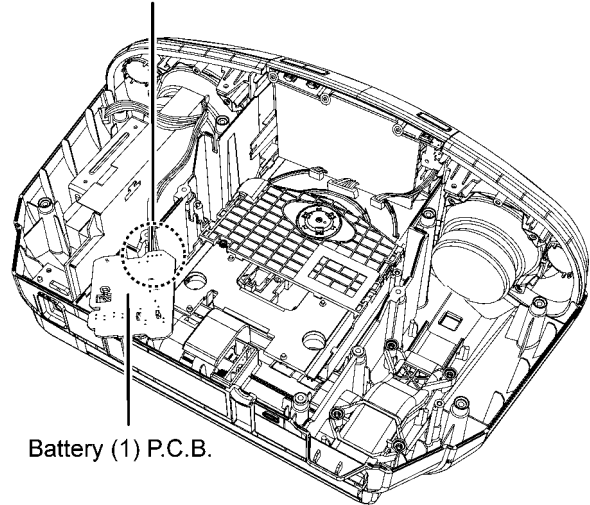
Step 2 : Remove the Battery (1) P.C.B. as arrow shown.

(Step 2)
Battery (1) P.C.B.



Step 3 : Desolder 4P cable at (CN921) on the Battery (1) P.C.B.

(Step 3)
CN921

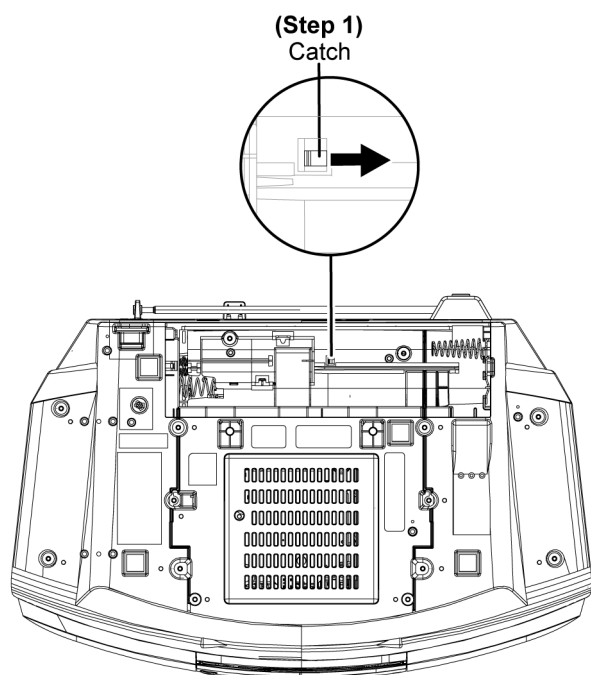


Battery (1) P.C.B.

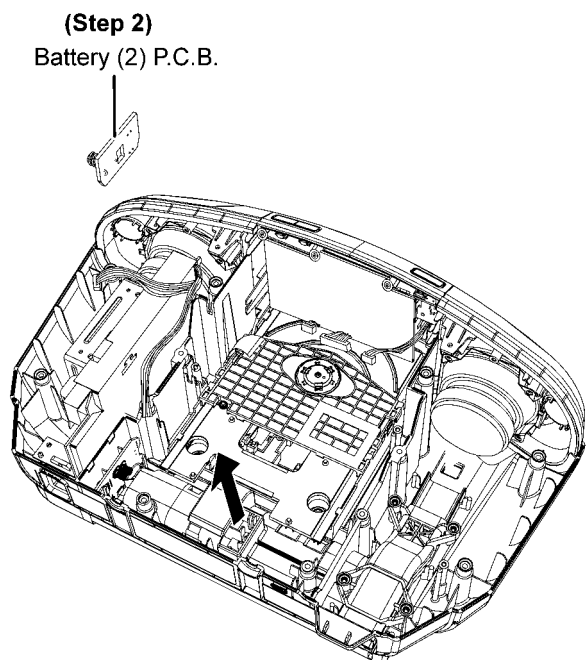
8.21. Disassembly of Battery (2) P.C.B.

- Refer to “Disassembly of Top Cabinet Assembly”.
- Refer to “Disassembly of Main P.C.B.”

Step 1 : Release the catch.



Step 2 : Remove the Battery (2) P.C.B. as arrow shown.

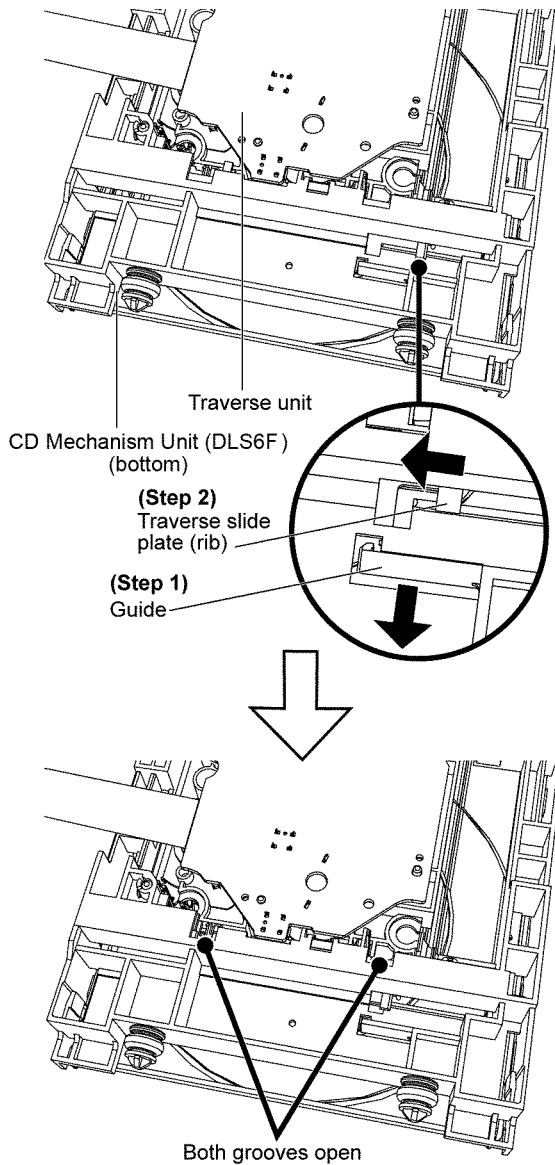


9 Disassembly and Assembly of Traverse Unit

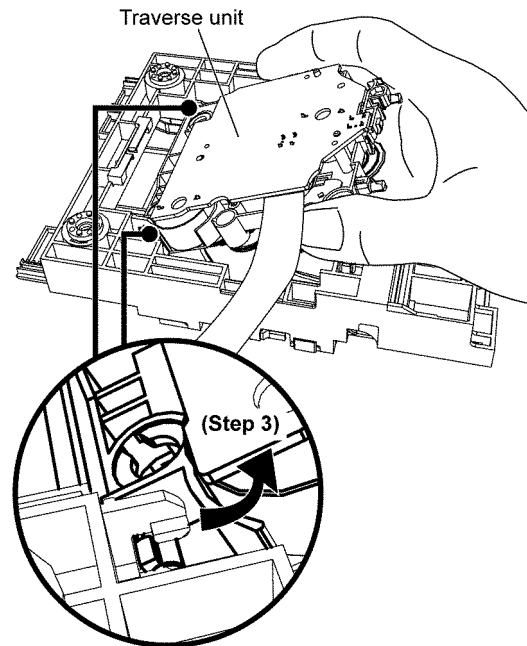
9.1. Disassembling Procedures

Step 1 : Release the guide.

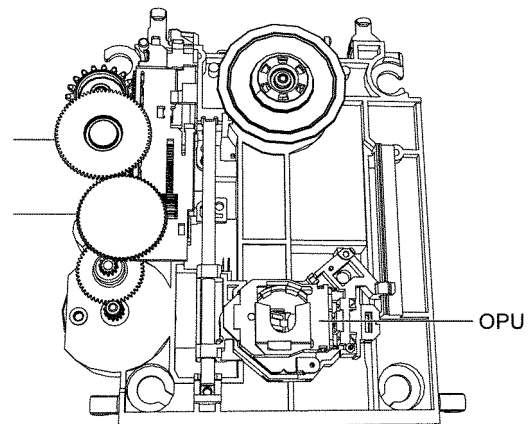
Step 2 : Push the traverse slide plate (rib), ensure both grooves are opened.



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

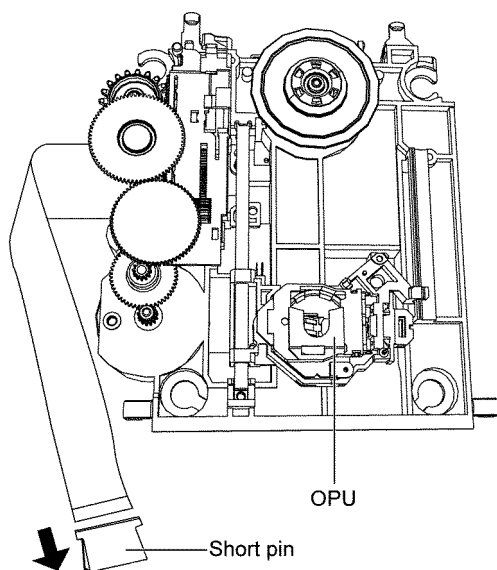


Caution : Ensure the OPU is face upwards, avoid touching the surface of the traverse unit.



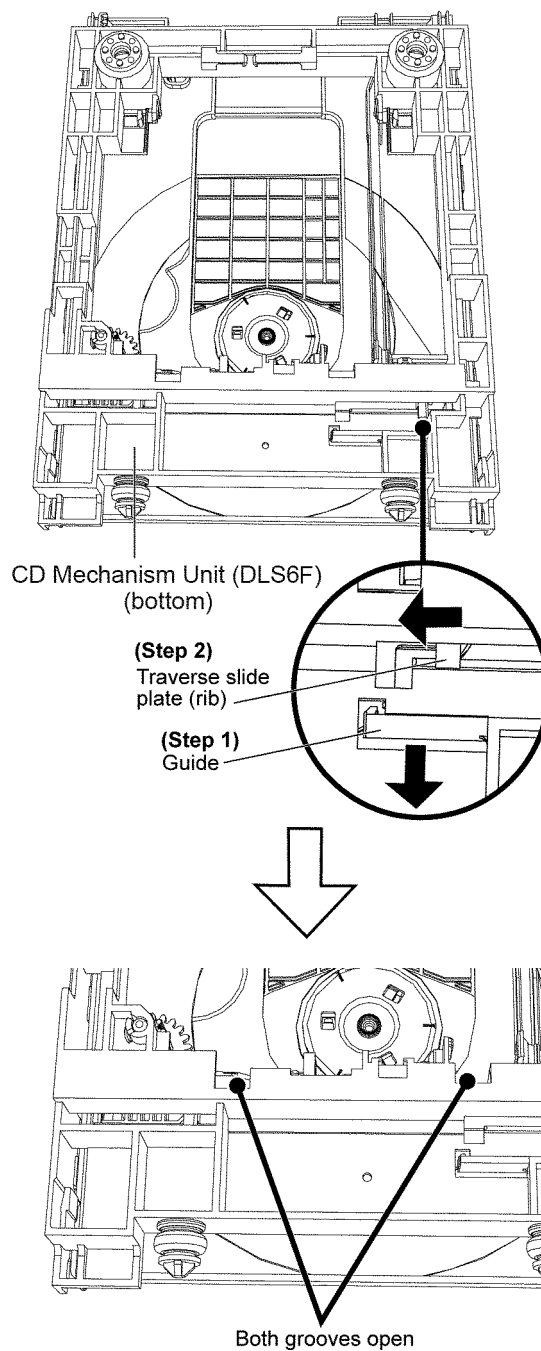
9.2. Assembling Procedure

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



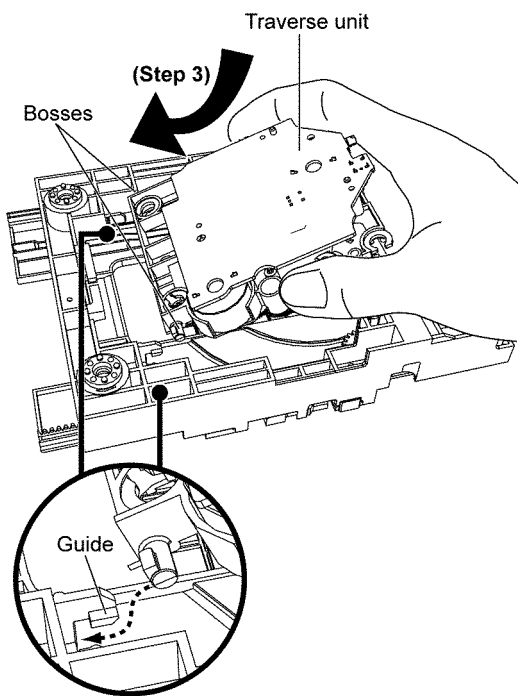
Step 1 : Release the guide.

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



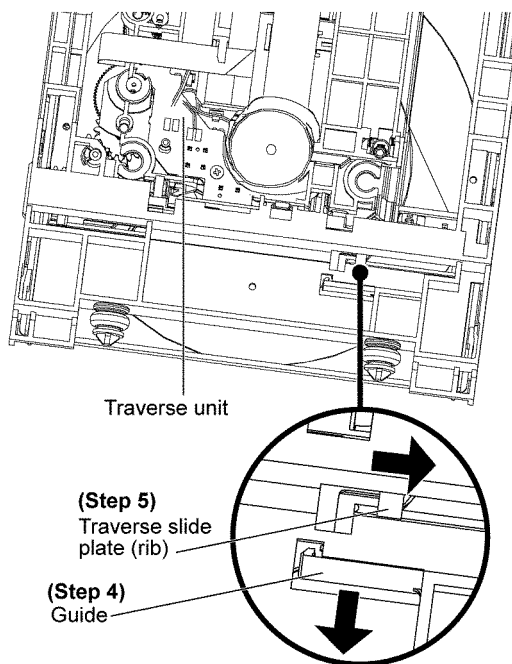
Step 3 : Slot the traverse unit at approximately 45° into the mecha chassis as arrow shown.

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.



10 Service Position

Note: For description of the disassembly procedures, see the Section 8

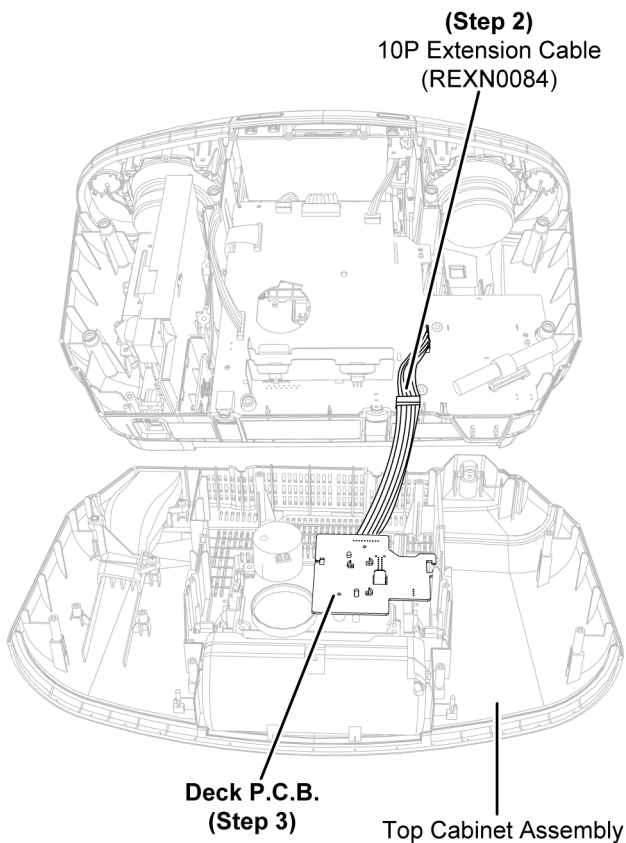
Note: Insert CD before checking

10.1. Checking & Repairing Deck P.C.B.

Step 1 : Remove the Top Cabinet Assembly.

Step 2 : Attach original cable with extension cable REXN0084 (10P cable from JW830 on Deck P.C.B. to CN2104 on Main P.C.B.).

Step 3 : Check and repair the Deck P.C.B..

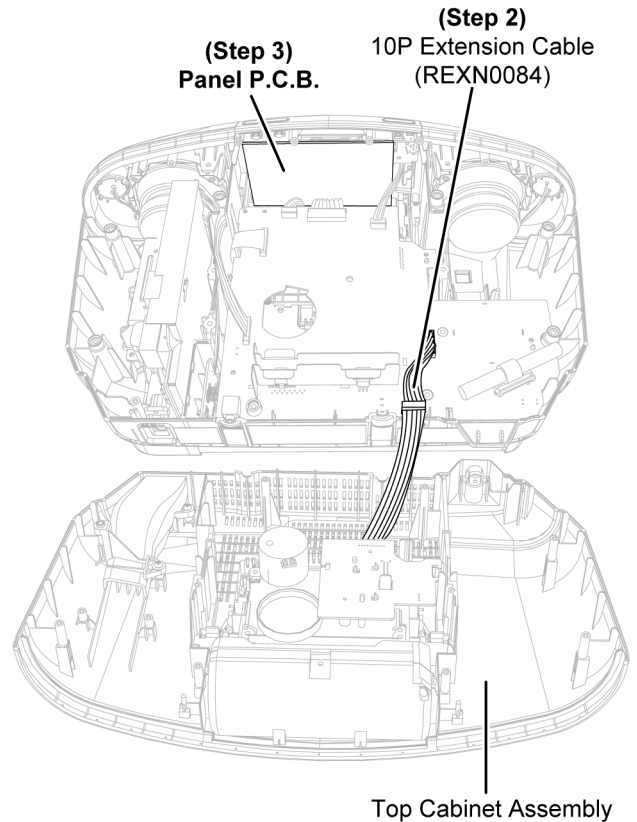


10.2. Checking & Repairing Panel P.C.B.

Step 1 : Remove the Top Cabinet Assembly.

Step 2 : Attach original cable with extension cable REXN0084 (10P cable from JW830 on Deck P.C.B. to CN2104 on Main P.C.B.).

Step 3 : Check and repair the Panel P.C.B..



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

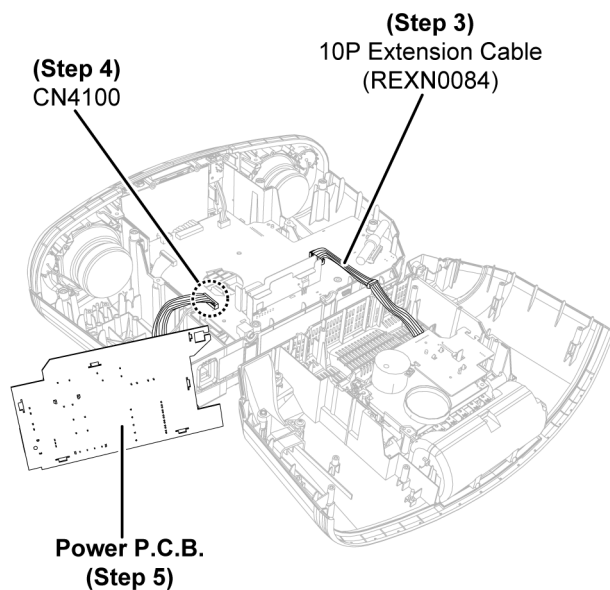
Step 1 : Remove the Top Cabinet Assembly.

Step 2 : Remove the Power P.C.B..

Step 3 : Attach original cable with extension cable REXN0084 (10P cable from JW830 on Deck P.C.B. to CN2104 on Main P.C.B.).

Step 4 : Connect 8P cable at the connector (CN4100) on the Main P.C.B..

Step 5 : Check and repair the Power P.C.B. according to the diagram shown.



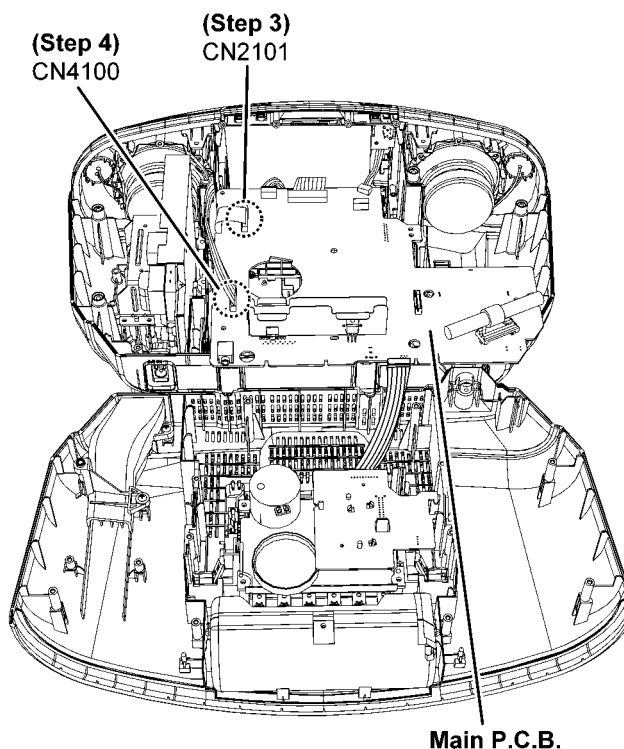
10.4. Checking & Repairing Main P.C.B.

Step 1 : Remove the Top Cabinet Assembly.

Step 2 : Remove the Main P.C.B..

Step 3 : Connect 22P FFC at the connector (CN2101) on the Main P.C.B..

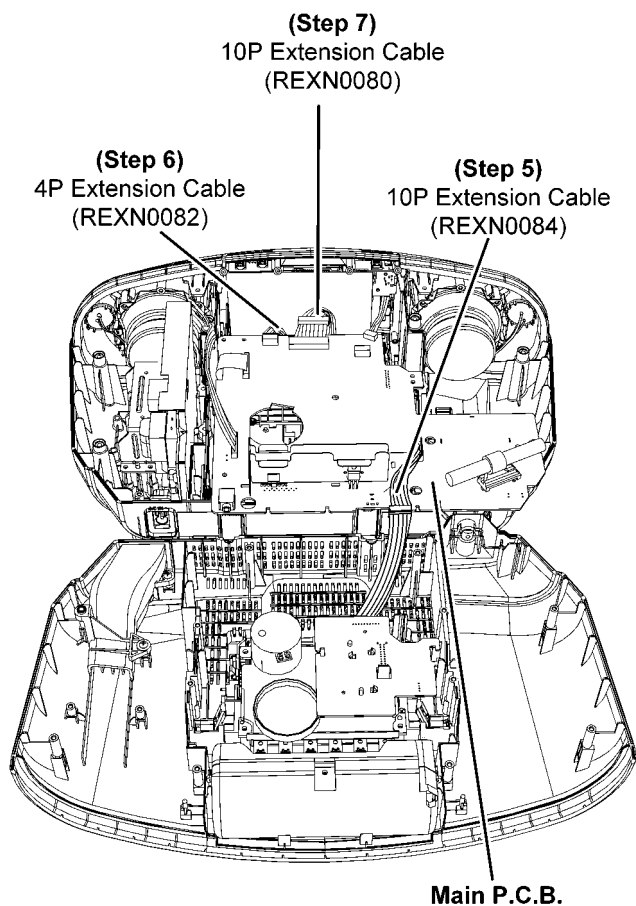
Step 4 : Connect 8P cable at the connector (CN4100) on the Main P.C.B..



Step 5 : Attach original cable with extension cable REXN0084 (10P cable from JW830 on Deck P.C.B. to CN2104 on Main P.C.B.).

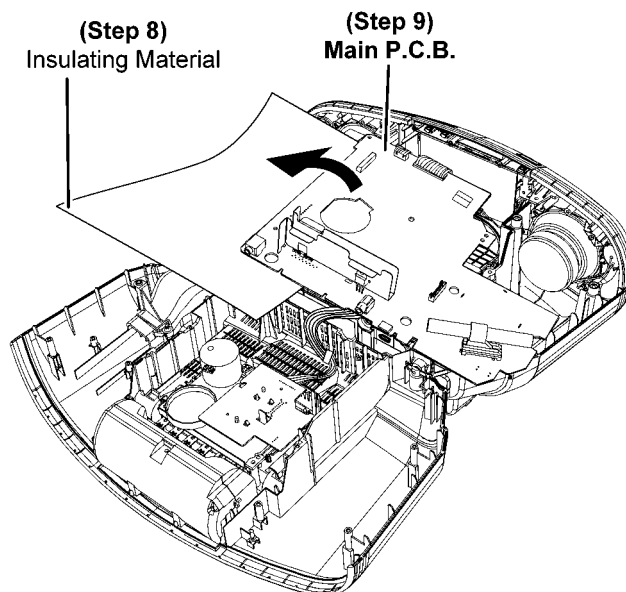
Step 6 : Attach original cable with extension cable REXN0082 (4P cable from ZJ903 on Panel P.C.B. to CN4104 on Main P.C.B.).

Step 7 : Attach original cable with extension cable REXN0080 (10P cable from CN900 on Panel P.C.B. to CN2105 on Main P.C.B.).

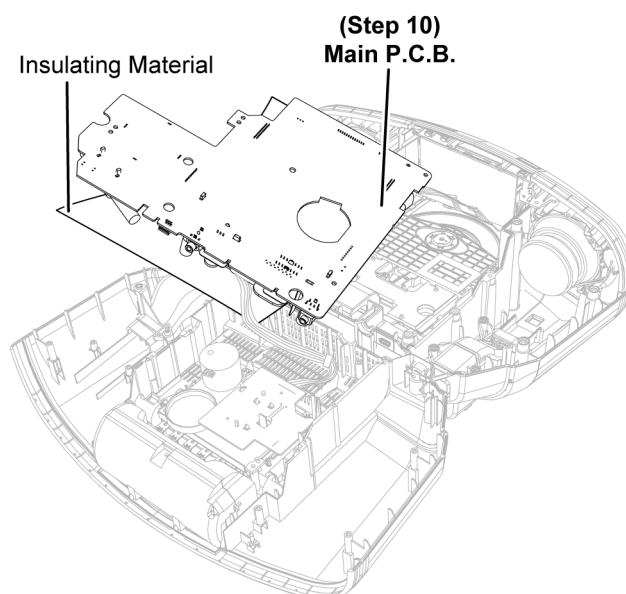


Step 8 : Place the insulating material as shown in the diagram.

Step 9 : Upset the Main P.C.B. onto the insulating material.



Step 10 : Check and repair the Main P.C.B. according to the diagram shown.



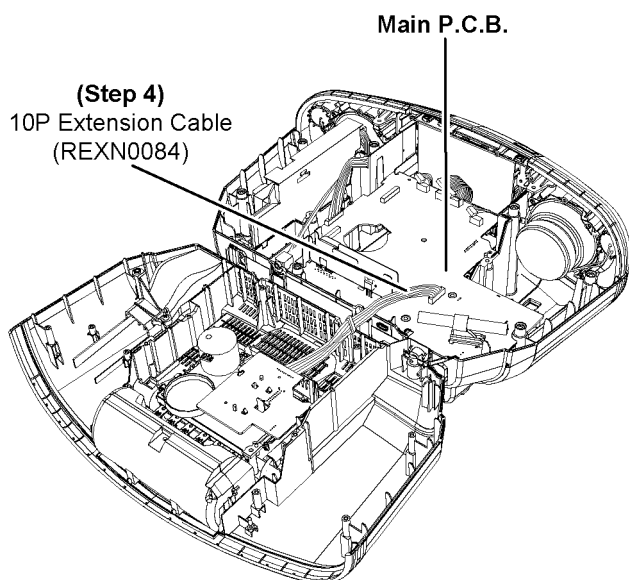
10.5. Checking & Repairing CD Servo P.C.B.

Step 1 : Remove the Top Cabinet Assembly.

Step 2 : Remove the Main P.C.B..

Step 3 : Remove the CD Mechanism Unit.

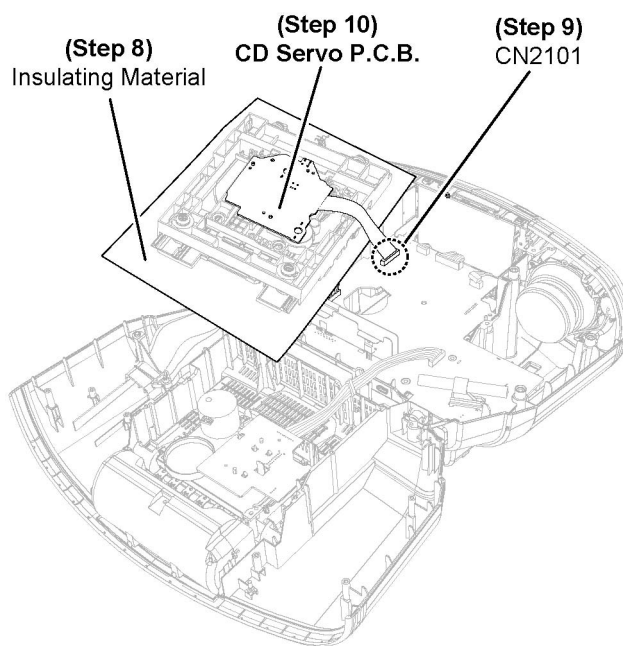
Step 4 : Attach original cable with extension cable REXN0084 (10P cable from JW830 on Deck P.C.B. to CN2104 on Main P.C.B.).



Step 8 : Place the insulating material as shown in the diagram.

Step 9 : Connect 22P FFC at the connector (CN2101) on the Main P.C.B..

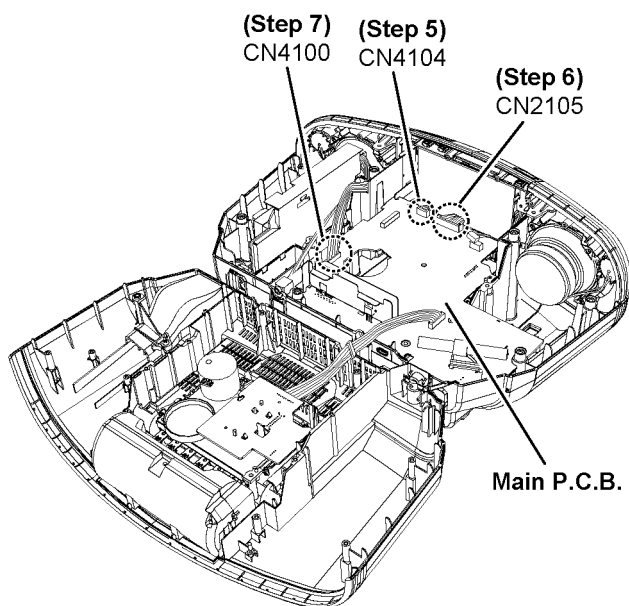
Step 10 : Check and repair the CD Servo P.C.B. according to the diagram shown.



Step 5 : Connect 4P cable at the connector (CN4104) on the Main P.C.B..

Step 6 : Connect 10P cable at the connector (CN2105) on the Main P.C.B..

Step 7 : Connect 8P cable at the connector (CN4100) on the Main P.C.B..



11 Measurements and Adjustments

11.1. Tuner Section

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

1. Set selector switch to AM, FM and TAPE.
2. Set volume level to maximum.
3. Output of signal.

● AM-RF ALIGNMENT

Signal Generator or Sweep Generator		Radio Dial Setting	Indicator (Electronic Voltmeter or Oscilloscope)	Adjustment (Shown in Fig.1)	Remarks
Connections	Frequency				
Fashion a loop of several turns of wire and radiate a signal into loop ant. of receiver.	540 kHz	Point of noninterference. (on/about 600kHz).	Headphone Jack (32Ω) Fabricate the plug as shown in Fig.2 and then connect the lead wires of the plug to the measuring instrument.	[*1] L51 (AM ANT Coil)	Adjust for maximum output.
Fashion a loop of several turns of wire and radiate a signal into loop ant. of receiver.	522 kHz	Point of noninterference. (on/about 600kHz).	Headphone Jack (32Ω) Fabricate the plug as shown in Fig.2 and then connect the lead wires of the plug to the measuring instrument.	L7 (AM OSC)	Adjust for maximum output.
Fashion a loop of several turns of wire and radiate a signal into loop ant. of receiver.	1404 kHz	Point of noninterference.	Headphone Jack (32Ω) Fabricate the plug as shown in Fig.2 and then connect the lead wires of the plug to the measuring instrument.	CT51 (AM OSC)	Adjust for maximum output.
[*1] Fix antenna coil with after completing alignment.					

● FM-RF ALIGNMENT

Signal Generator or Sweep Generator		Radio Dial Setting	Indicator (Electronic Voltmeter or Oscilloscope)	Adjustment (Shown in Fig.1)	Remarks
Connections	Frequency				
Fashion a loop of several turns of wire and radiate a signal into loop ant. of receiver.	90 MHz	Point of noninterference.	Headphone Jack (32Ω) Fabricate the plug as shown in Fig.2 and then connect the lead wires of the plug to the measuring instrument.	[*1] L5 (FM ANT Coil)	Adjust for maximum output.
[*1] Fix antenna coil with after completing alignment.					

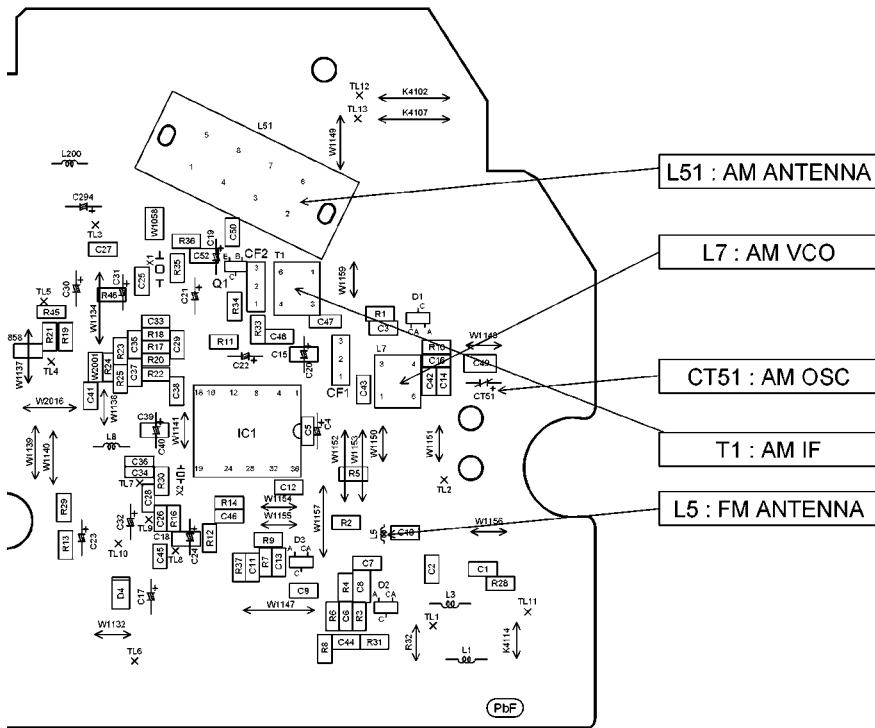


Fig. 1

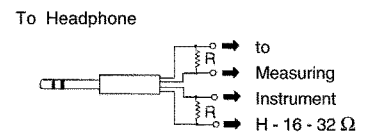


Fig. 2

11.2. Deck Mechanism Section

● HEAD AZIMUTH ALIGNMENT

TEST TAPE	INDICATOR (ELECTRONIC VOLT-METER or OSCILLOSCOPE)	ADJUSTMENT	REMARKS
QZZCAB (~ 3 dB)	Headphone Jack (32Ω) Fabricate the plug as shown in Fig.3 and then connect the lead wires of the plug to the measuring instrument.	Azimuth Screw (Shown in Fig.4)	1. Insert the test tape (QZZCAB) and start playback at maximum volume & equalize at "FLAT". 2. Adjust the azimuth screw for maximum waveform on the oscilloscope and the similar output on L and R channels. 3. When adjusting the azimuth in the reverse direction, repeat the adjustment several times because of a little slip on the forward direction side.

CAUTION :

- Please remove the screw-locking bond left on the head base when replacing the azimuth screw.
- After the adjustment, apply screwlock to the azimuth adjusting screw. (Screw-locking bond: RZZ0L01).
- Minimum screw-lock apply on screws must be 180° around the screw.

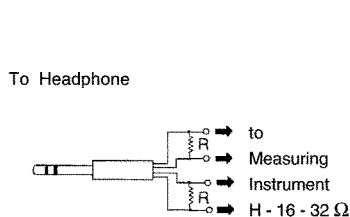


Fig. 3

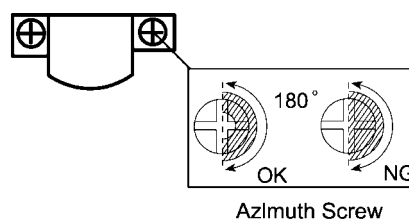


Fig. 4

● TAPE SPEED CHECKING

TEST TAPE	EQUIPMENT CONNECTION ELECTRONIC COUNTER	ADJUSTMENT	SPECIFICATION	REMARKS
QZZCWAT (3 kHz, -10 dB)	Headphone Jack (32Ω) Fabricate the plug as shown in Fig.5 and then connect the lead wires of the plug to the measuring instrument.	Motor VR. (Shown in Fig.6)	3000±90Hz	1. Insert the test tape (QZZCWAT) and start playback. 2. Check the output at headphone or speaker.

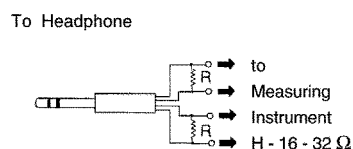


Fig. 5

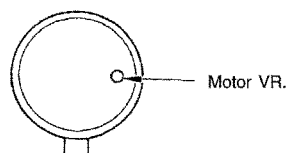


Fig. 6

12 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.

12.1. CD SERVO P.C.B.

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

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

REF NO.	IC7001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	0.2	2.4	1.9	1.7	1.2	1.8	3.2	1.2	1.3	1.3	1.7	1.7	0.9	1.5	1.5	1.5	0	3.0	1.5	0
STANDBY	0	3.4	1.6	1.7	1.7	1.8	3.4	1.2	1.2	1.2	1.7	1.7	0.9	1.1	1.1	1.6	0	3.1	1.6	0

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

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

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

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

RX-D50PH CD SERVO P.C.B.

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

REF NO.	IC1																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	2.2	2.2	2.5	0	5.0	5.0	2.2	2.2	4.0	3.7	3.8	2.1	2.1	0	0	3.6	0.4	3.4	1.3	1.8
STANDBY	2.2	2.2	2.5	0	5.0	5.0	2.2	2.2	4.0	3.7	3.5	2.1	2.1	0	0	3.6	0.4	3.4	1.4	1.9
REF NO.	IC1																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36				
CD PLAY	3.9	2.2	0.9	2.0	0	2.0	2.0	0.3	0	0.6	5.0	5.0	5.0	5.0	0	1.1				
STANDBY	3.9	2.1	0.9	1.9	0.9	2.0	2.0	0.2	0.1	1.0	5.0	5.0	5.0	5.0	0	1.1				
REF NO.	IC2100																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	3.1	2.9	0	3.1	3.1	3.1	0	0	0	0	0	1.5	1.5	0	1.2	1.6	3.2	1.8	3.2	0
STANDBY	3.1	2.9	0	3.1	3.1	3.1	0	0	0	0	0	1.5	1.5	0	1.2	1.6	3.2	1.8	3.2	0
REF NO.	IC2100																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	0	0	0	0	0	1.3	3.3	3.2	0	1.7	3.1	3.3	3.1	0	3.2	0	1.8	0	0	3.2
STANDBY	0	0	0	0	0	1.3	3.3	3.2	0	1.7	3.1	3.3	3.1	0	3.2	0	1.8	0	0	3.2
REF NO.	IC2100																			
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	3.2	0	0	3.1	3.3	3.4	0.4	0	2.6	0	0	0	0	0	0	0
STANDBY	0	3.3	3.3	0	3.2	0	0	3.1	3.3	3.4	0.4	0	2.6	0	0	0	0	0	0	0
REF NO.	IC2100																			
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	2.8	2.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.3
STANDBY	0	0	0	2.8	2.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.3
REF NO.	IC2100																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
CD PLAY	0	3.3	3.3	0	0	0	0	0	3.2	0	0	3.3	3.3	0	0	3.3	1.0	0	0	3.3
STANDBY	0	3.3	3.3	0	0	0	0	0	3.2	0	0	3.3	3.3	0	0	3.3	1.0	0	0	3.3
REF NO.	IC2101																			
MODE	1	2	3	4																
CD PLAY	3.2	3.3	0	0																
STANDBY	3.2	3.3	0	0																
REF NO.	IC2500																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	4.3	0	4.3	0	4.2	4.2	4.0	4.2	4.2	4.2	4.3	4.3	0	0	4.3	0	2.8	2.8	8.6	0
STANDBY	4.3	0	4.3	0	4.2	4.2	4.0	4.2	4.2	4.2	4.3	4.3	0	0	4.3	0	2.8	2.8	8.6	0
REF NO.	IC2500																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32								
CD PLAY	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	0	4.3	0	0								
STANDBY	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	0	4.3	0	0								

RX-D50PH MAIN P.C.B.

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

REF NO.	IC4100																	
MODE	1	2	3															
CD PLAY	3.3	0	6.0															
STANDBY	3.3	0	6.0															
REF NO.	IC4101																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14				
CD PLAY	1.9	7.8	0	0	0	3.1	3.1	0	10.7	0	8.0	15.8	0	0				
STANDBY	1.9	7.8	0	0	0	3.1	3.1	0	10.7	0	8.0	15.8	0	0				
REF NO.	IC4102																	
MODE	1	2	3	4	5													
CD PLAY	5.1	0	0	0	3.3													
STANDBY	5.1	0	0	0	3.3													
REF NO.	IC4103																	
MODE	1	2	3	4	5													
CD PLAY	9.4	9.4	0	5.1	1.3													
STANDBY	9.4	9.4	0	5.1	1.3													
REF NO.	IC4104																	
MODE	1	2	3															
CD PLAY	15.7	0	15.7															
STANDBY	15.7	0	15.7															
REF NO.	Q2103				Q2101				Q2102				Q4102					
MODE	E	C	B		E	C	B		E	C	B		1	2	3	4	5	6
CD PLAY	3.3	3.3	2.6		0	1.5	3.2		0	1.5	3.2		4.3	0	4.3	4.3	0	0
STANDBY	3.3	3.3	2.6		0	1.5	3.2		0	1.5	3.2		4.3	0	4.3	4.3	0	0
REF NO.	Q4105				Q4106				Q4107				Q4108					
MODE	E	C	B		E	C	B		E	C	B		E	C	B			
DECK PLAY	3.3	3.3	0		8.6	14.9	9.2		15.3	9.1	14.6		15.8	14.8	15.6			
STANDBY	3.3	3.3	0		8.6	14.9	9.2		15.3	9.1	14.6		15.8	14.8	15.6			
REF NO.	Q4109							Q4116				Q4117				Q4118		
MODE	1	2	3	4	5	6		E	C	B		E	C	B		E	C	B
DECK PLAY	8.0	0	0	7.8	0	10.7		9.0	9.0	0		0	0	5.0		15.7	15.7	0
STANDBY	8.0	0	0	7.8	0	10.7		9.0	9.0	0		0	0	5.0		15.7	15.7	0
REF NO.	Q4119				QR4104				QR4105									
MODE	E	C	B		E	C	B		E	C	B							
DECK PLAY	0	0	2.7		0	0	2.7		0	3.3	2.6							
STANDBY	0	0	2.7		0	0	2.7		0	3.3	2.6							

RX-D50PH MAIN P.C.B.

12.4. DECK P.C.B.

REF NO.	IC2																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12						
CD PLAY	4.0	0.2	0.6	0	0	0	0	9.0	0	9.0	0.6	4.1						
STANDBY	4.0	0.2	0.6	0	0	0	0	9.0	0	9.0	0.6	4.1						
REF NO.	Q133				Q233				Q321									
MODE	E	C	B		E	C	B		E	C	B							
CD PLAY	0	0	0		0	0	0		0	2.8	0.8							
STANDBY	0	0	0.7		0	0	0.7		0	2.8	0.8							

RX-D50PH DECK P.C.B.

12.5. PANEL P.C.B.

REF NO.	IC900																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	3.1	3.3	3.2	3.1	0	2.9	3.3	0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
STANDBY	3.1	3.3	3.2	3.1	0	2.9	3.3	0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5

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

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

REF NO.	Q900																			
MODE	E	C	B																	
CD PLAY	3.3	3.3	2.6																	
STANDBY	3.3	3.3	2.6																	

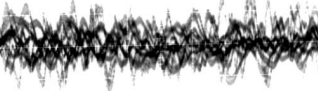
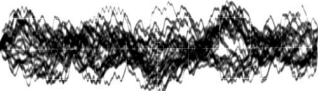
RX-D50PH PANEL P.C.B.

12.6. POWER P.C.B.

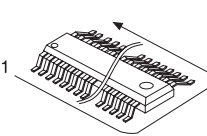
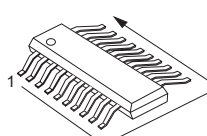
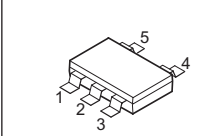
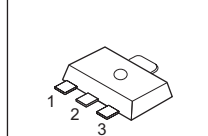
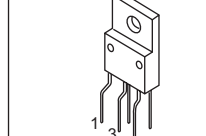
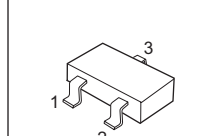
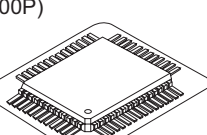
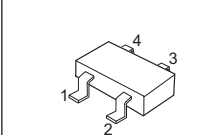
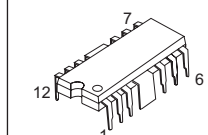
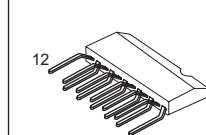
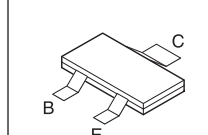
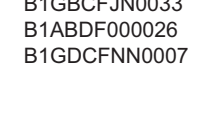
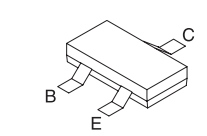
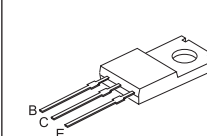
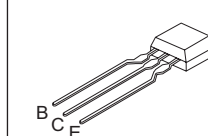
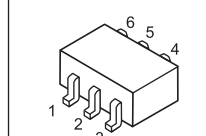
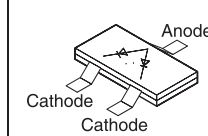
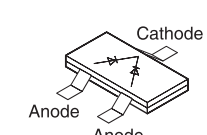
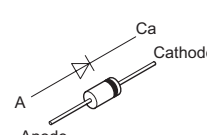
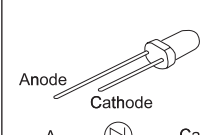
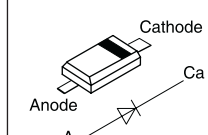
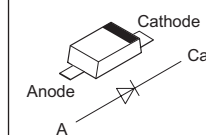
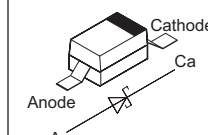
REF NO.	Q5906																			
MODE	E	C	B																	
CD PLAY	0	1.4	0.4																	
STANDBY	0	1.4	0.4																	

RX-D50PH POWER P.C.B.

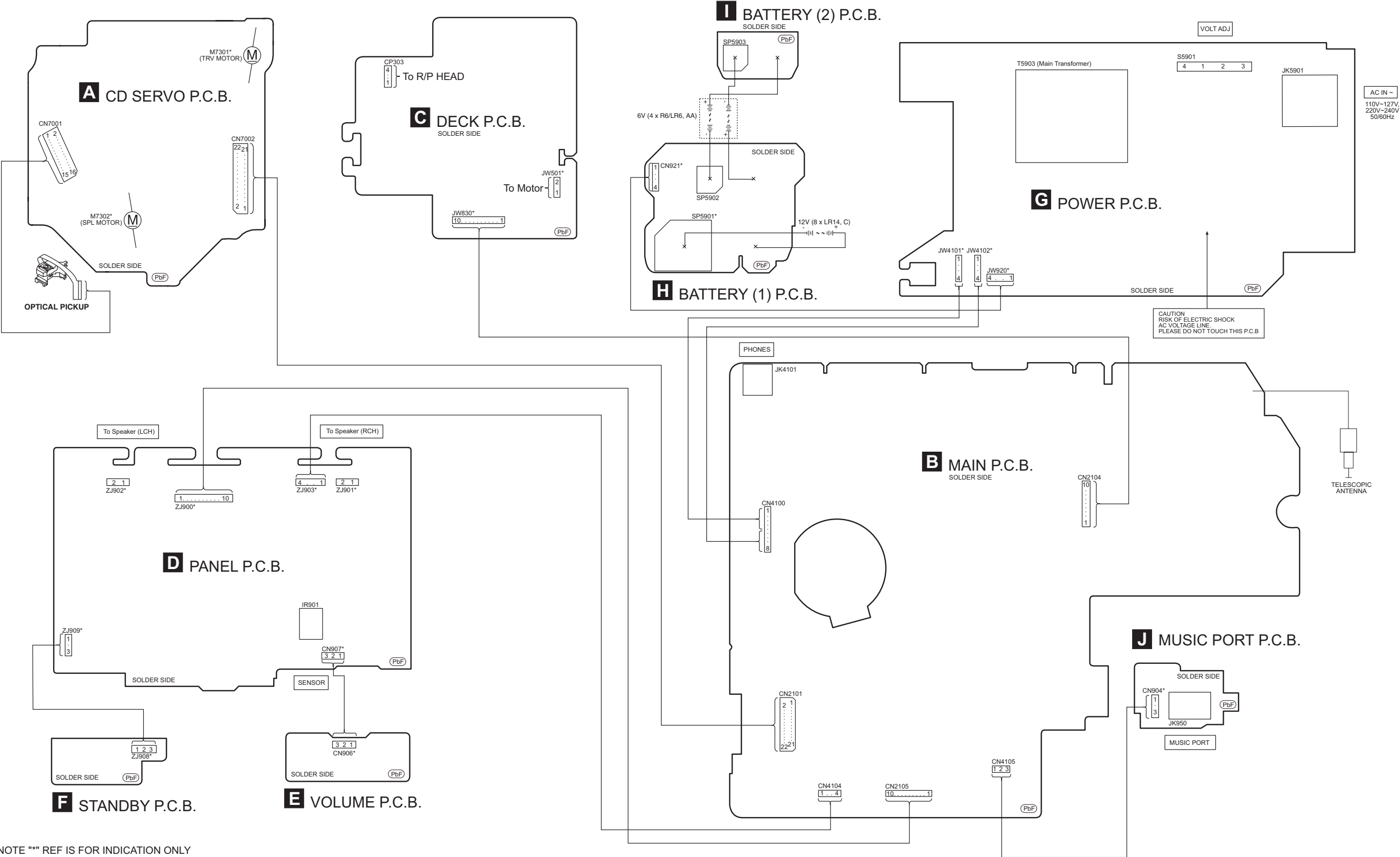
12.7. Waveform Chart

WF No. IC1-9,11 (PLAY)  0.11Vp-p(50nsec/div)	WF No. IC1-12,13 (PLAY)  0.6Vp-p(50usec/div)	WF No. IC1-19 (PLAY)  0.56Vp-p(5usec/div)	WF No. IC1-20 (PLAY)  0.68Vp-p(5usec/div)
WF No. IC2-1,12 (PLAY)  0.1Vp-p(50usec/div)	WF No. IC2100-12 (PLAY)  4Vp-p(50nsec/div)	WF No. IC2100-13 (PLAY)  2Vp-p(20nsec/div)	WF No. IC2100-15 (PLAY)  1.4Vp-p(5usec/div)
WF No. IC2100-16 (PLAY)  2.2Vp-p(5usec/div)	WF No. IC2500-1,2,3,4 (PLAY)  3.2Vp-p(200usec/div)	WF No. IC2500-7,8,9,10 (PLAY)  0.04Vp-p(100usec/div)	WF No. IC2500-11,12 (PLAY)  0.36Vp-p(200usec/div)
WF No. IC2500-21,22 (PLAY)  0.1Vp-p(200usec/div)	WF No. IC2500-31,32 (PLAY)  2.8Vp-p(50usec/div)	WF No. IC4101-2,11 (PLAY)  0.1Vp-p(200usec/div)	WF No. IC7001-21 (PLAY)  1.8Vp-p(5usec/div)
WF No. IC7001-23,24 (PLAY)  0.52Vp-p(1usec/div)	WF No. IC7001-56,59 (PLAY)  2.4Vp-p(100nsec/div)	WF No. IC7001-80 (PLAY)  4.8Vp-p(20nsec/div)	WF No. IC7001-81 (PLAY)  1.9Vp-p(20nsec/div)

13 Illustration of IC's, Transistors and Diodes

BA5948FPE2 (28P) C1BB00000732 (32P) 	C1BB00001120 (36P) 	C0CBABE00023 	C0CBABE00040 	C0DAEJG00001 	C0EBM0000024 
MN6627954AMA (100P) C0HBA0000268 (44P) RFKWMD45EG-W (100P) 	C0EBE0000124 	C1BA00000421 	BA3313L 	B1ADCF000001 	B1ABCF000176 B1ADCE000012 B1GBCFJN0033 B1ABDF000026 B1GDCFNN0007 
B1ABCF000176 B1ADCE000012 B1GBCFJN0033 B1ABDF000026 B1GDCFNN0007 	B1BCCG000002 	B1ACCF000094 	B1HBECA00004 	B0ADFJ000004 	B0CDAB000019 B0CDAD000010 
B0CDAB000019 B0CDAD000010 	B0EAKM000117 	B3ACA0000264 	MAZ8056GML 	B0ACCK000005 B0BC9R1A0218 	B0JACE000003 

14 Wiring Connection Diagram



15 Schematic Diagram Notes

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

Notes:

S501:	LEAF switch
S502:	CUE/REV switch
S900:	STDBY switch
S901:	CD PLAY/PAUSE switch
S902:	FM/AM switch
S903:	TUNE MODE switch
S904:	REV switch
S905:	FF switch
S907:	VOL- switch.
S908:	VOL+ switch.
S909:	SOUND switch.
S910:	MUSIC PORT switch.
S911:	OPEN/CLOSE switch.
S912:	STOP switch.
S5901:	VOLTAGE SELECTOR switch.
S7201:	REST switch.
S7202:	CD OPEN switch.
SW4:	RECORDING switch.

• Important safety notice:

Components identified by  mark have special characteristics important for safety.

Furthermore, special parts which have purposes of fire-retardant (resistors), high quality sound (capacitors), low-noise (resistors), etc are used.

When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

• Resistor

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

• Capacitor

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

• Coil

Unit of inductance is H, unless otherwise noted.

• *

REF IS FOR INDICATION ONLY.

• Voltage and signal line

	: +B Signal Line
	: CD/TAPE Audio input Signal Line
	: FM Signal Line
	: AM Signal Line
	: FM/AM Signal Line
	: Audio Output Signal Line
	: MUSIC PORT Audio Input Signal Line

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE F5901 T2AL 250V FUSE
TYPE F5902 T1.6AL 250V FUSE



RISK OF FIRE-REPLACE FUSE AS MARKED.

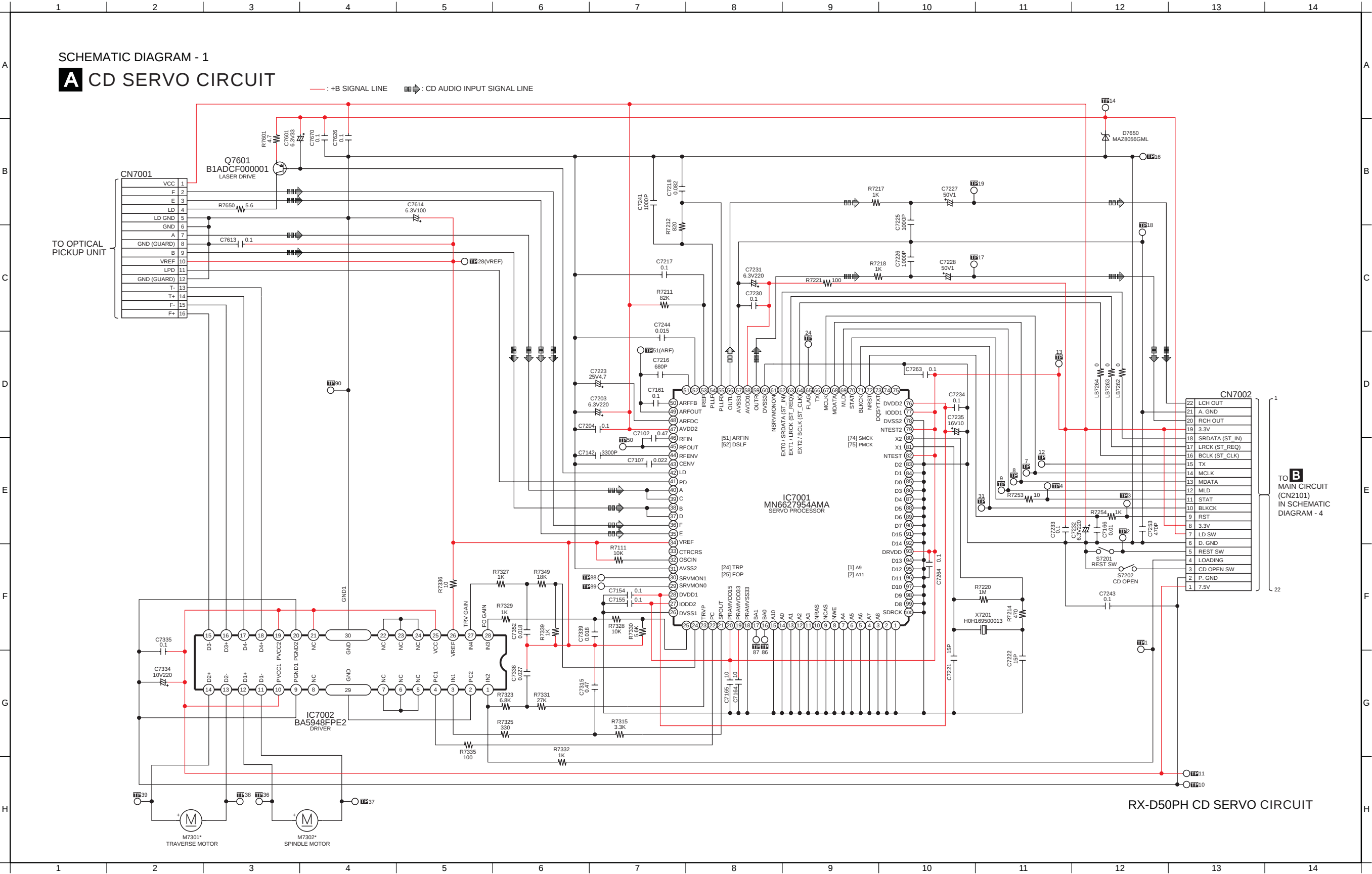
FUSE CAUTION



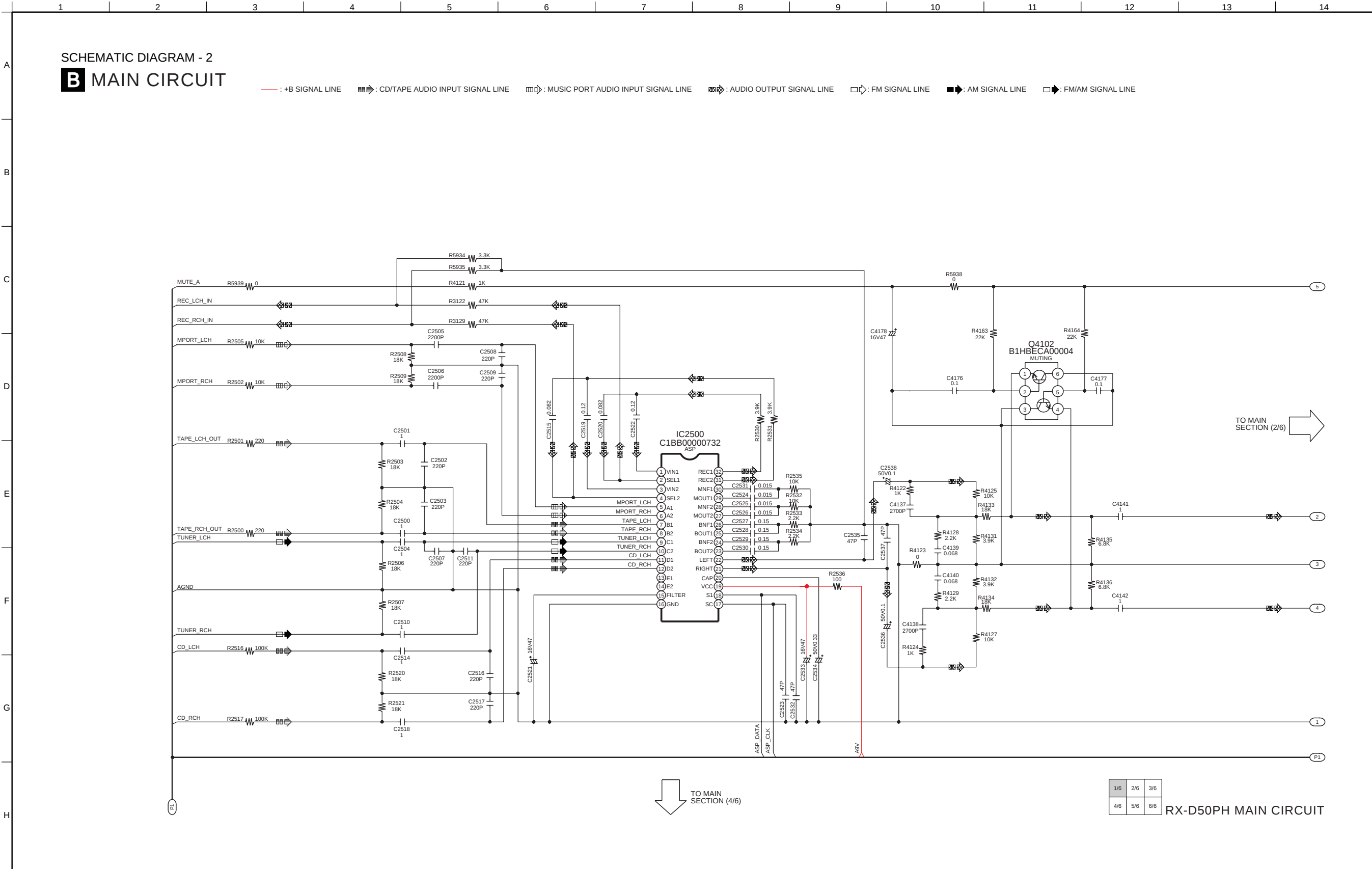
These symbols located near the fuse indicates that the fuse used is a fast operating type. For continued protection against fire hazard, replace with the same type fuse. For fuse rating, refer to the marking adjacent to the symbol.

16 Schematic Diagram

16.1. CD SERVO CIRCUIT



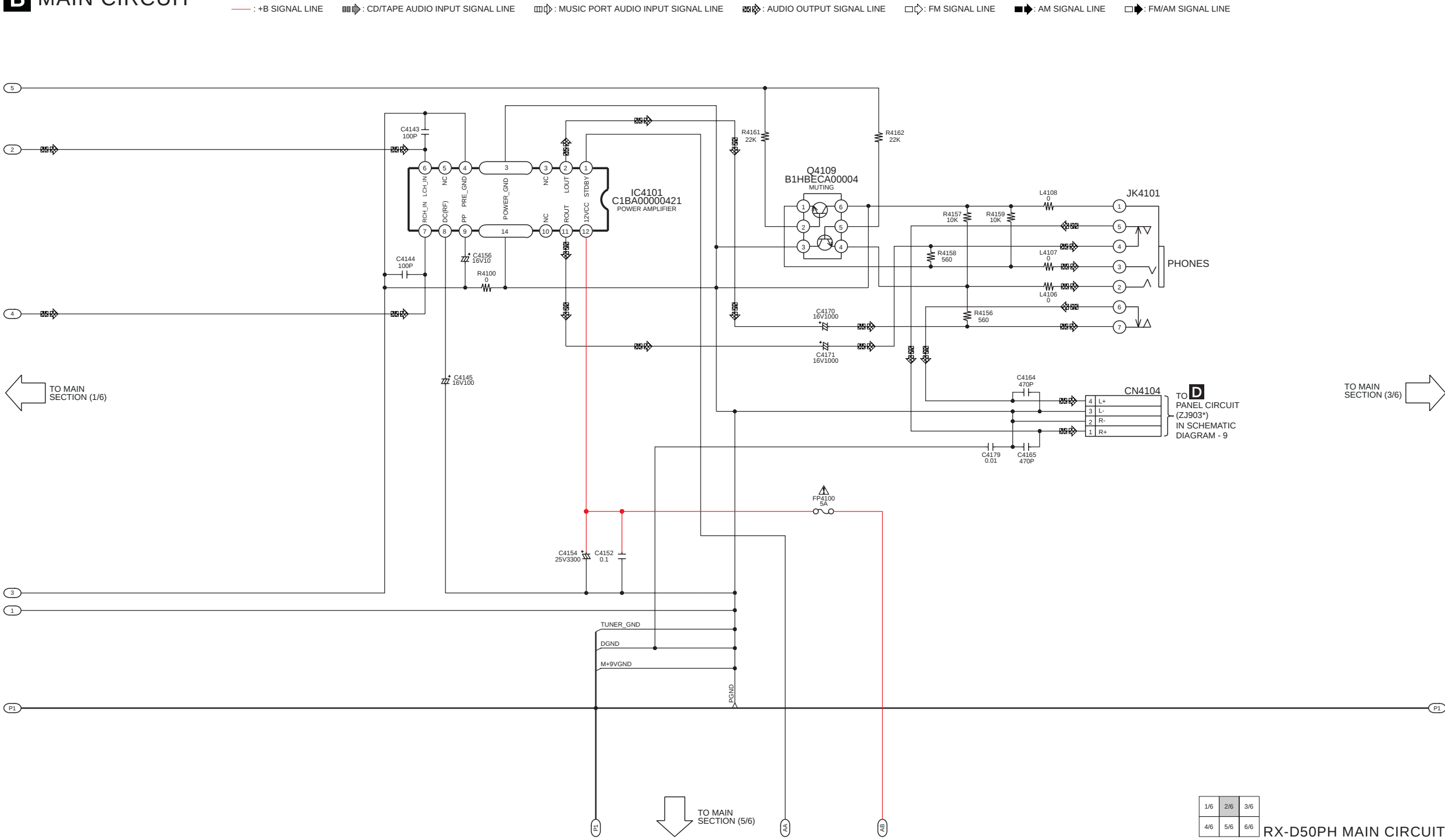
16.2. MAIN CIRCUIT (1/6)



16.3. MAIN CIRCUIT (2/6)

SCHEMATIC DIAGRAM - 3

B MAIN CIRCUIT

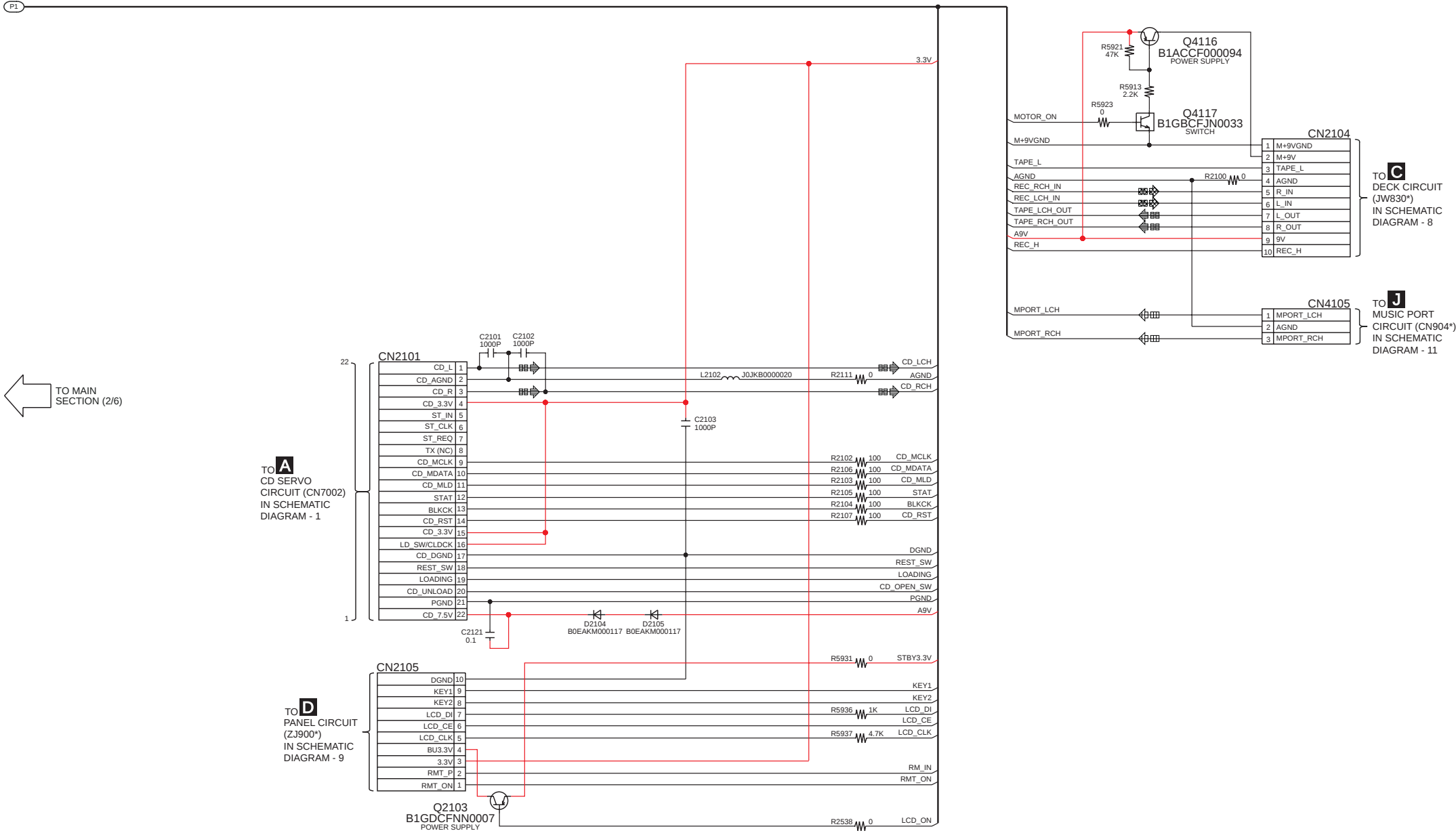


16.4. MAIN CIRCUIT (3/6)

SCHEMATIC DIAGRAM - 4

B MAIN CIRCUIT

— : +B SIGNAL LINE : CD/TAPE AUDIO INPUT SIGNAL LINE : MUSIC PORT AUDIO INPUT SIGNAL LINE : AUDIO OUTPUT SIGNAL LINE : FM SIGNAL LINE : AM SIGNAL LINE : FM/AM SIGNAL LINE



TO MAIN SECTION (2/6)

TO A CD SERVO CIRCUIT (CN7002) IN SCHEMATIC DIAGRAM - 1

TO D PANEL CIRCUIT (ZJ900*) IN SCHEMATIC DIAGRAM - 9

TO MAIN SECTION (6/6)

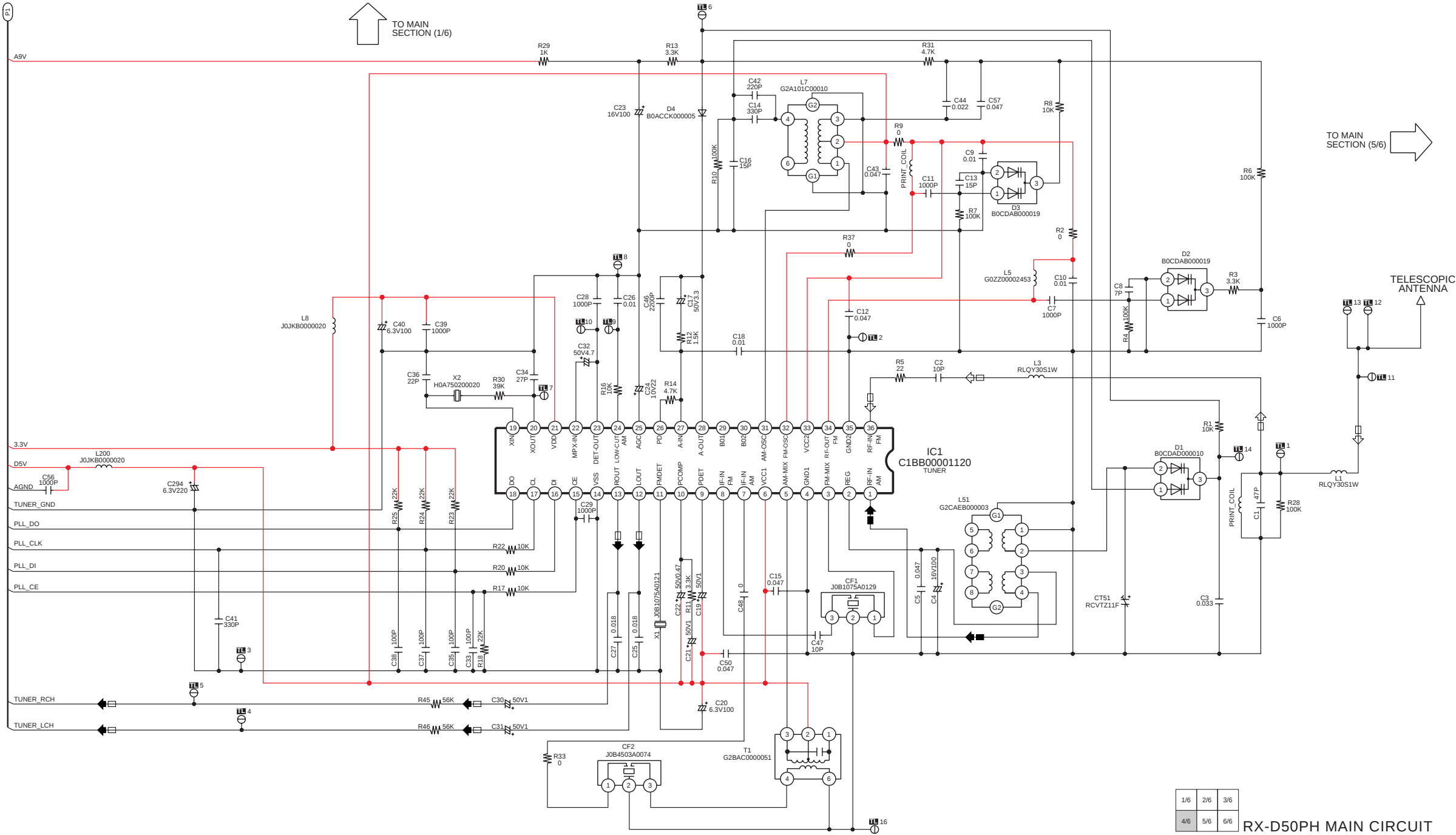
1/6 2/6 3/6
4/6 5/6 6/6 RX-D50PH MAIN CIRCUIT

16.5. MAIN CIRCUIT (4/6)

SCHEMATIC DIAGRAM - 5

B MAIN CIRCUIT

—: +B SIGNAL LINE : CD/TAPE AUDIO INPUT SIGNAL LINE : MUSIC PORT AUDIO INPUT SIGNAL LINE : AUDIO OUTPUT SIGNAL LINE : FM SIGNAL LINE : AM SIGNAL LINE : FM/AM SIGNAL LINE

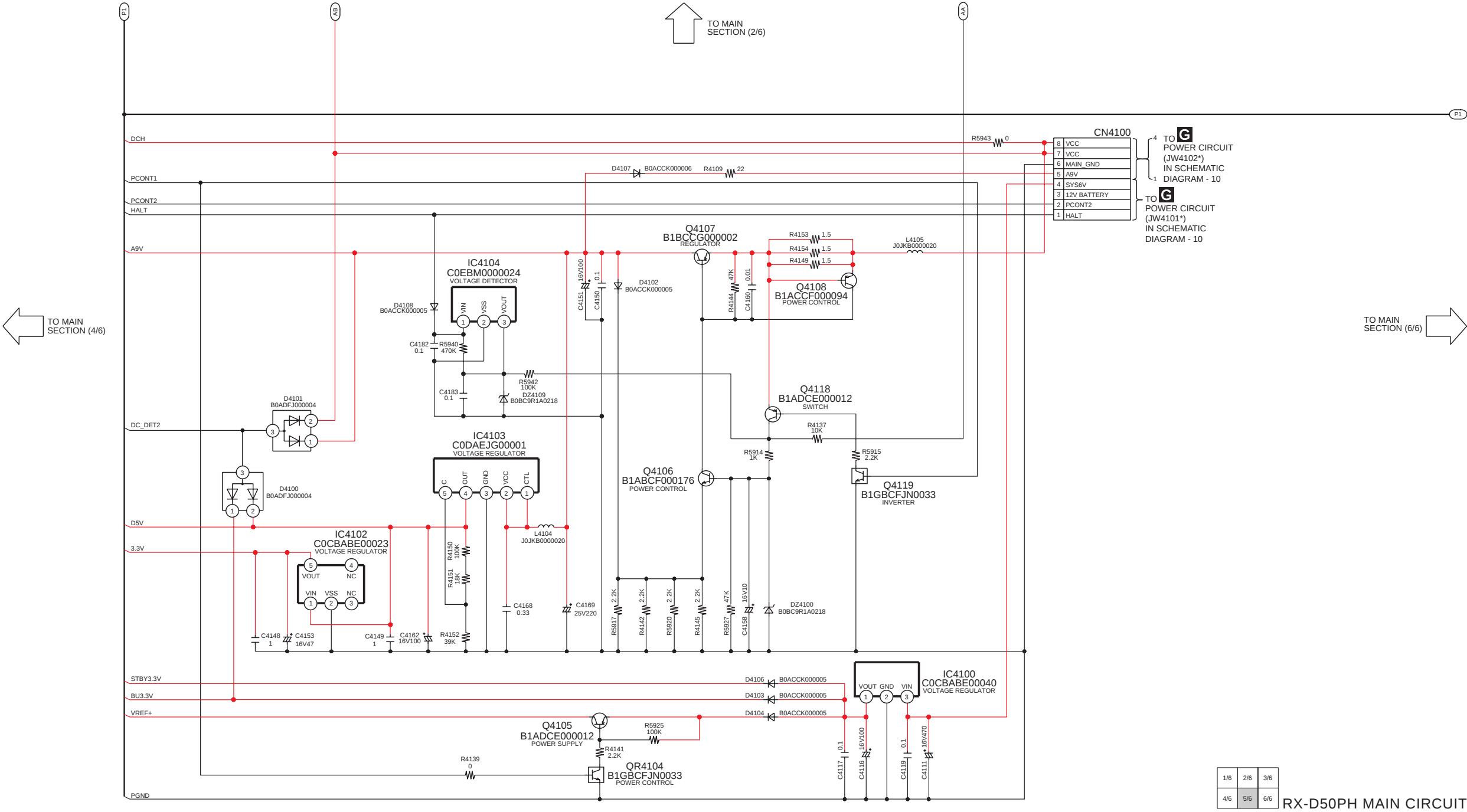


16.6. MAIN CIRCUIT (5/6)

SCHEMATIC DIAGRAM - 6

B MAIN CIRCUIT

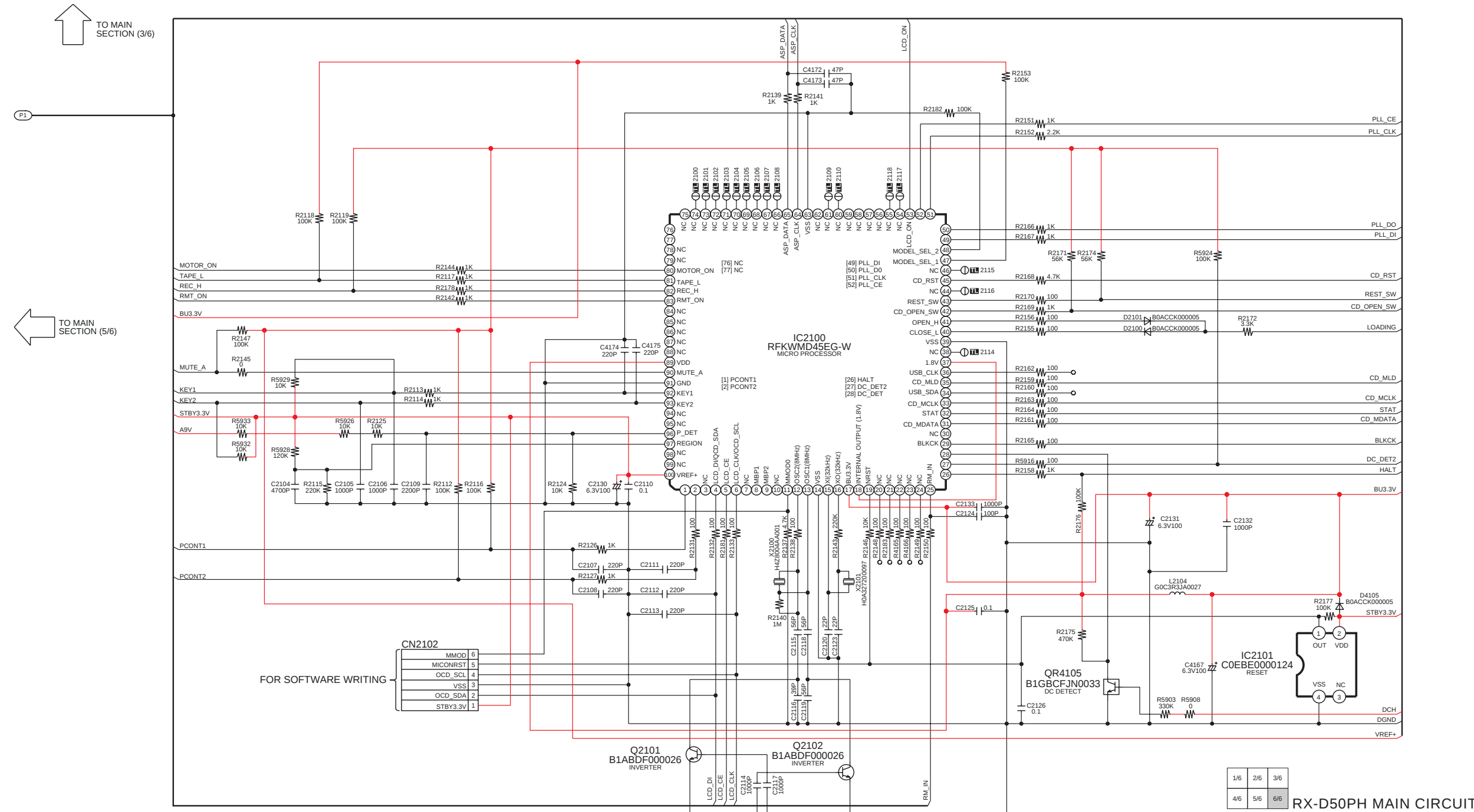
— : +B SIGNAL LINE : CD/TAPE AUDIO INPUT SIGNAL LINE : MUSIC PORT AUDIO INPUT SIGNAL LINE : AUDIO OUTPUT SIGNAL LINE : FM SIGNAL LINE : AM SIGNAL LINE : FM/AM SIGNAL LINE



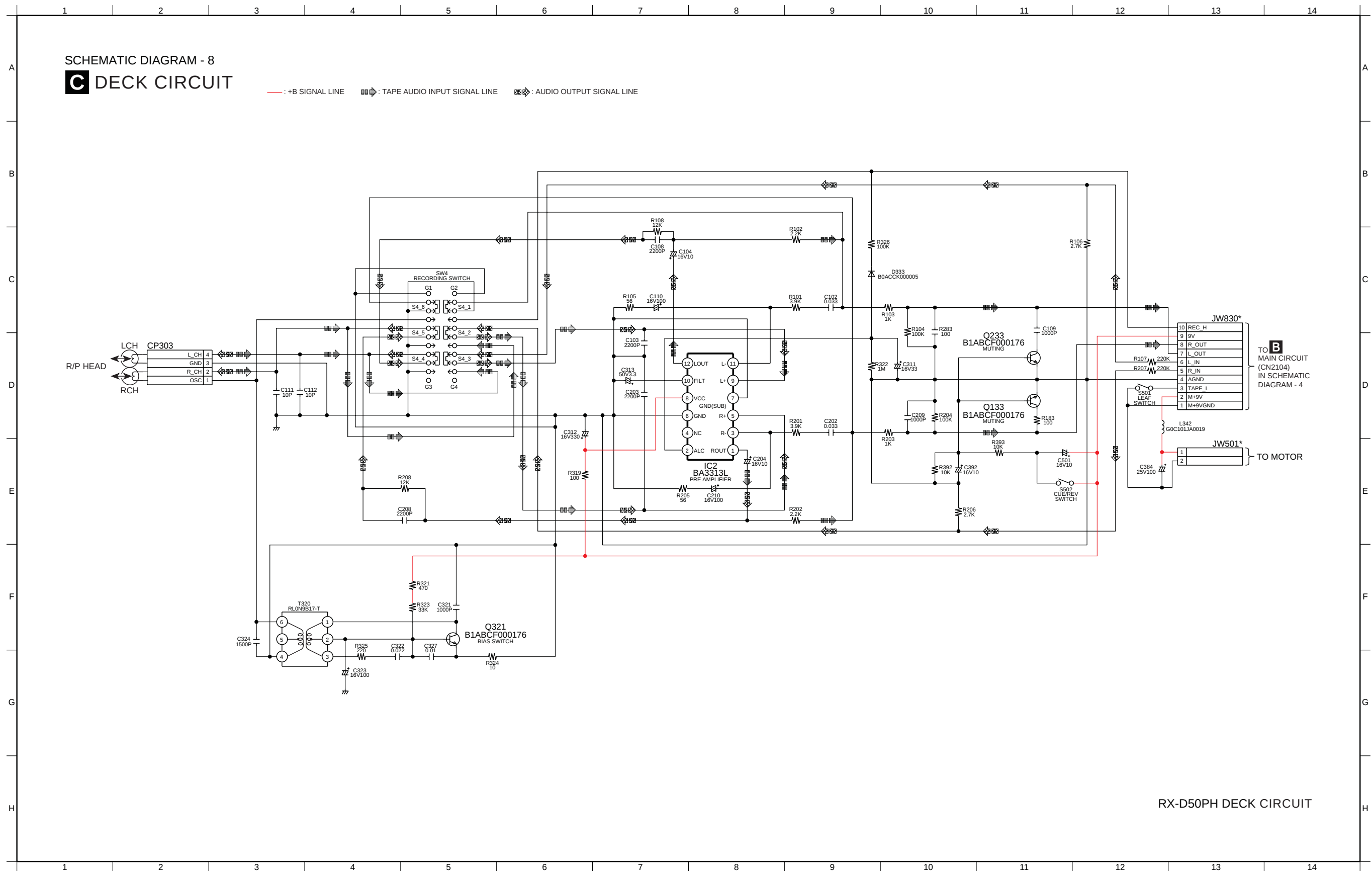
16.7. MAIN CIRCUIT (6/6)

SCHEMATIC DIAGRAM - 7

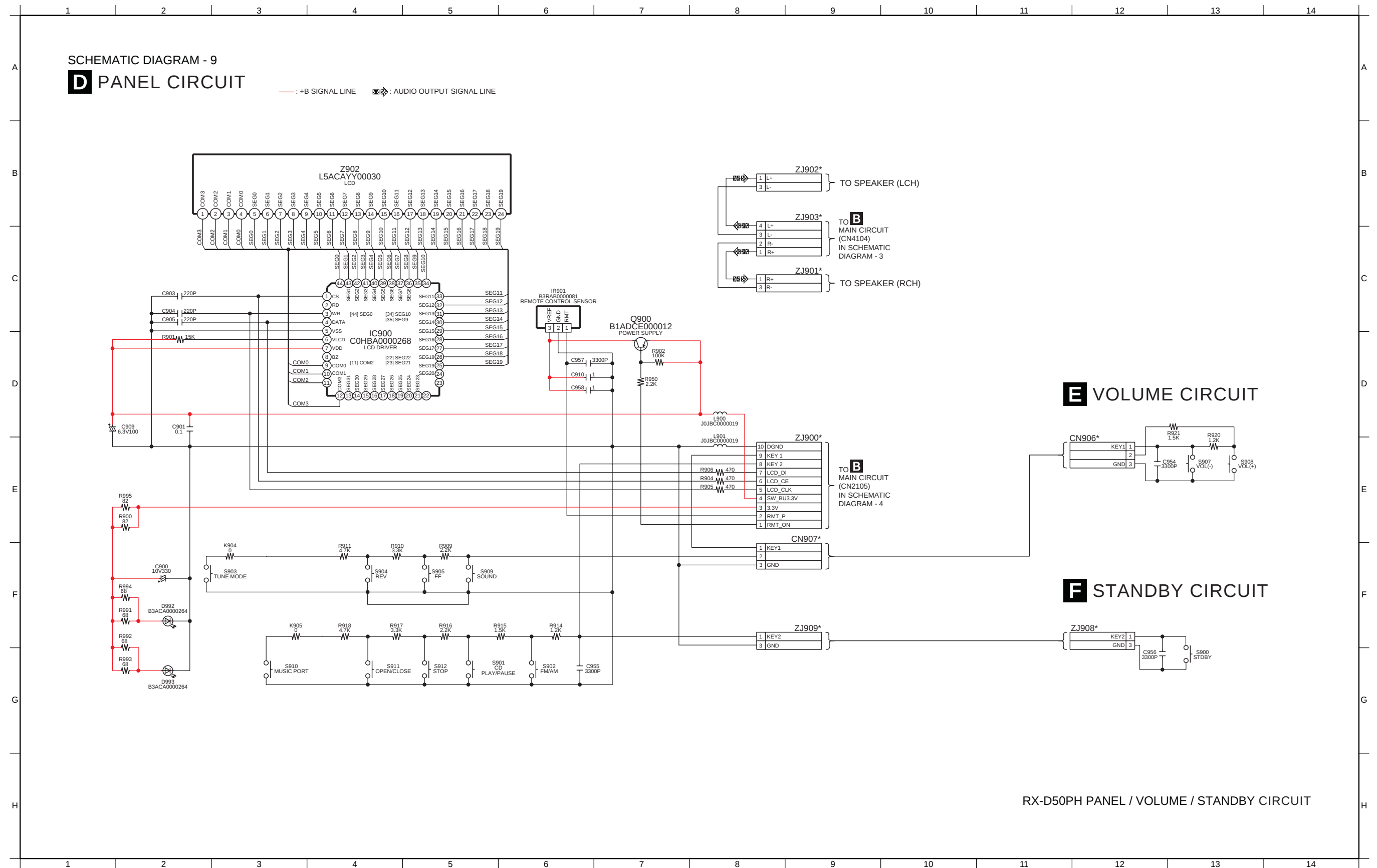
B MAIN CIRCUIT



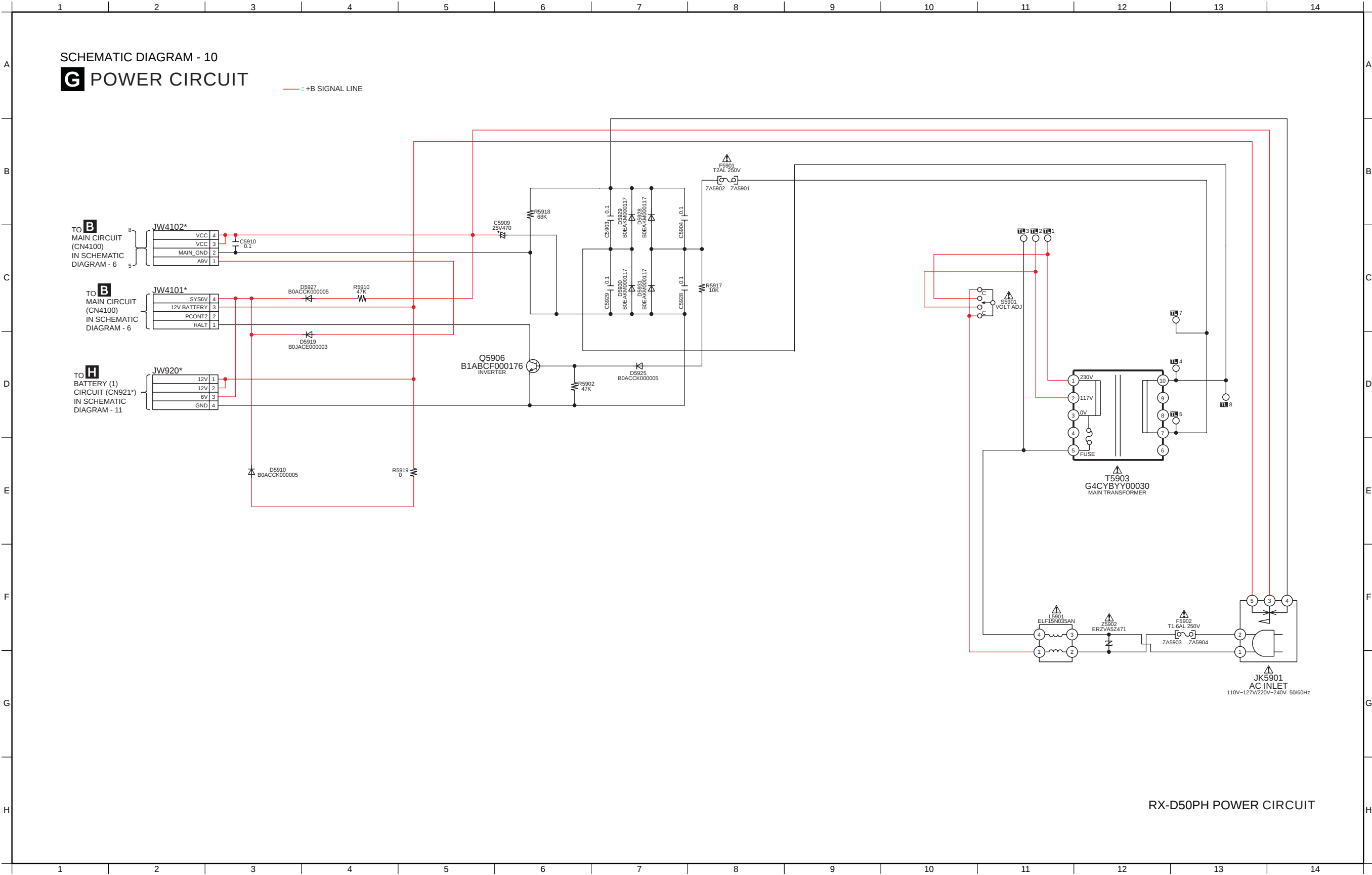
16.8. DECK CIRCUIT



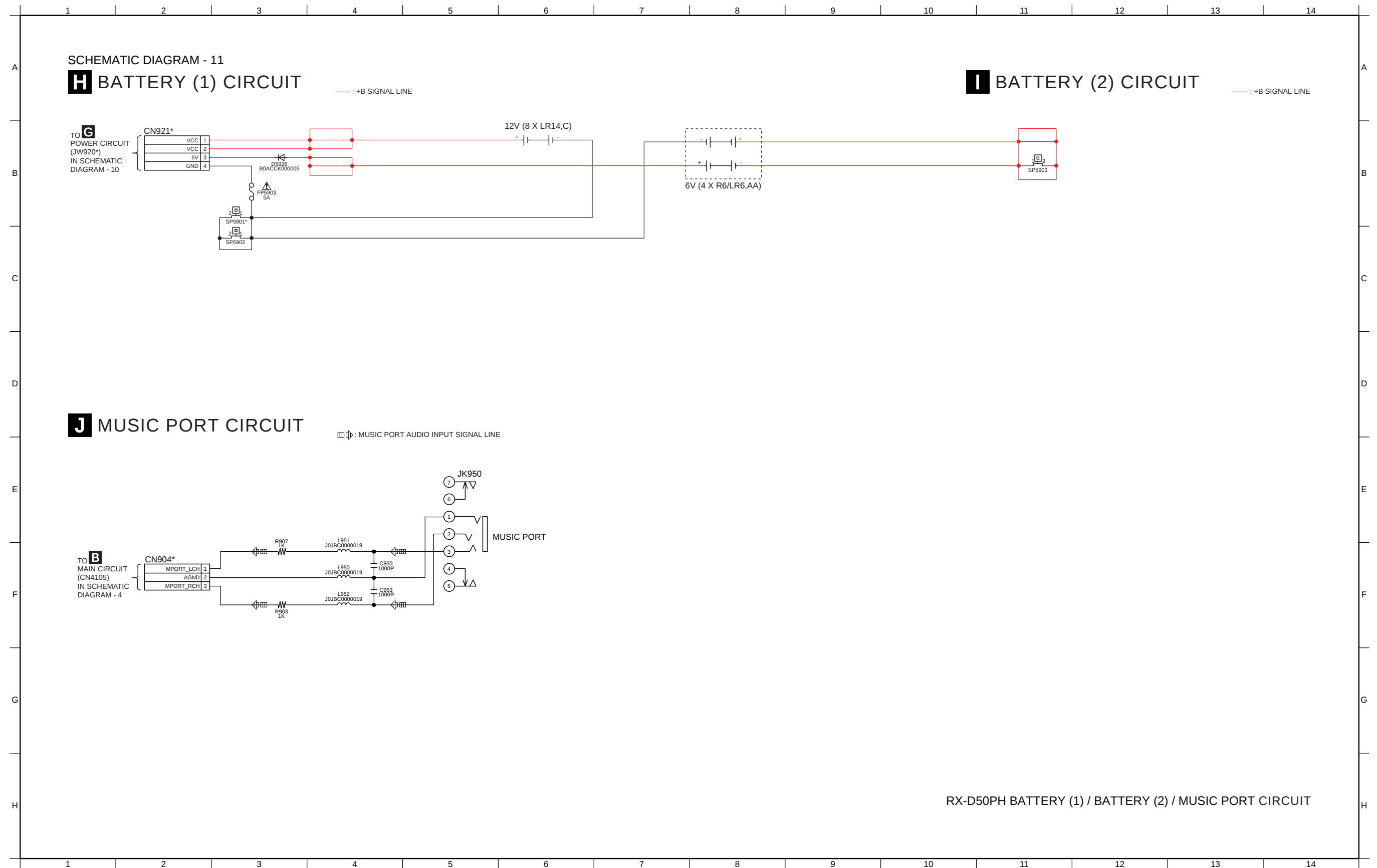
16.9. PANEL, VOLUME & STANDBY CIRCUIT



16.10. POWER CIRCUIT



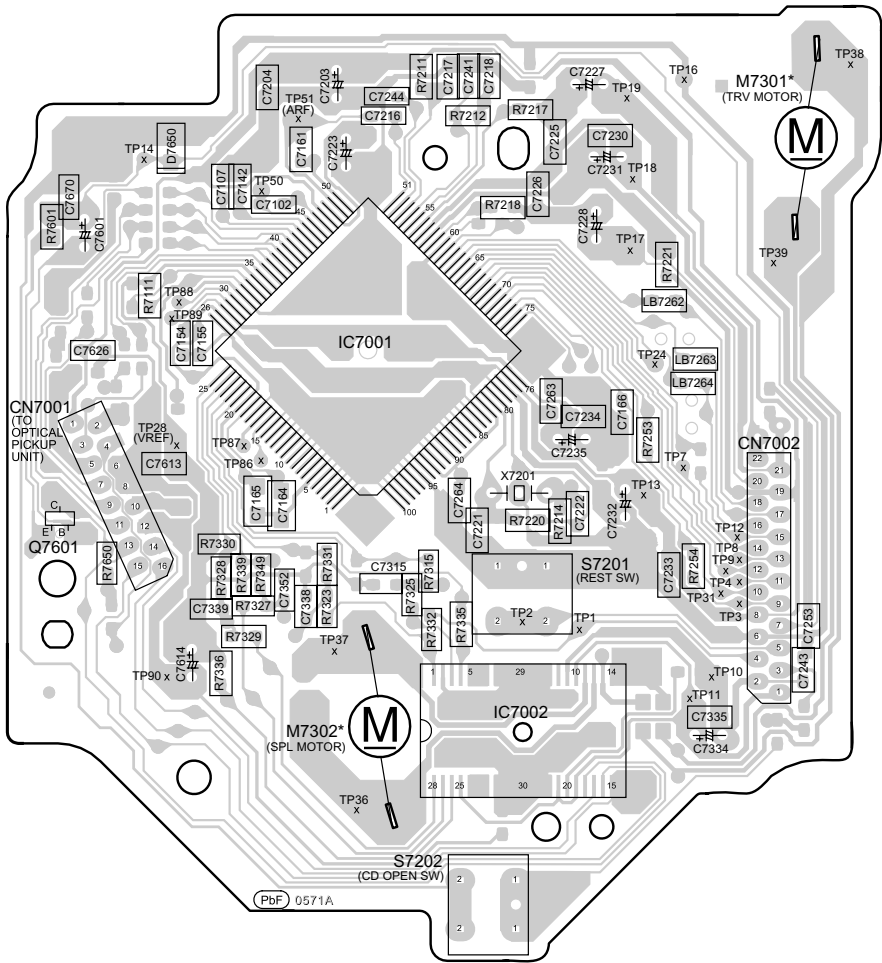
16.11. BATTERY (1), BATTERY (2) & MUSIC PORT CIRCUIT



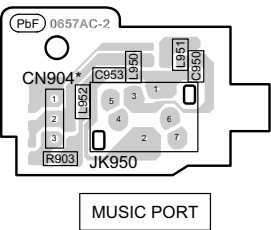
17 Printed Circuit Board

17.1. CD SERVO & MUSIC PORT P.C.B.

A CD SERVO P.C.B. (REPN0636A)



J MUSIC PORT P.C.B. (REPNT0061FC)



NOTE: " * " REF IS FOR INDICATION ONLY.

RX-D50PH
CD SERVO / MUSIC PORT P.C.B.

A vertical number line with tick marks labeled A, B, C, D, E, F, G, and H from bottom to top.

B

TELESCOPIC
ANTENNA

A
B
C
D
E
F
G
H

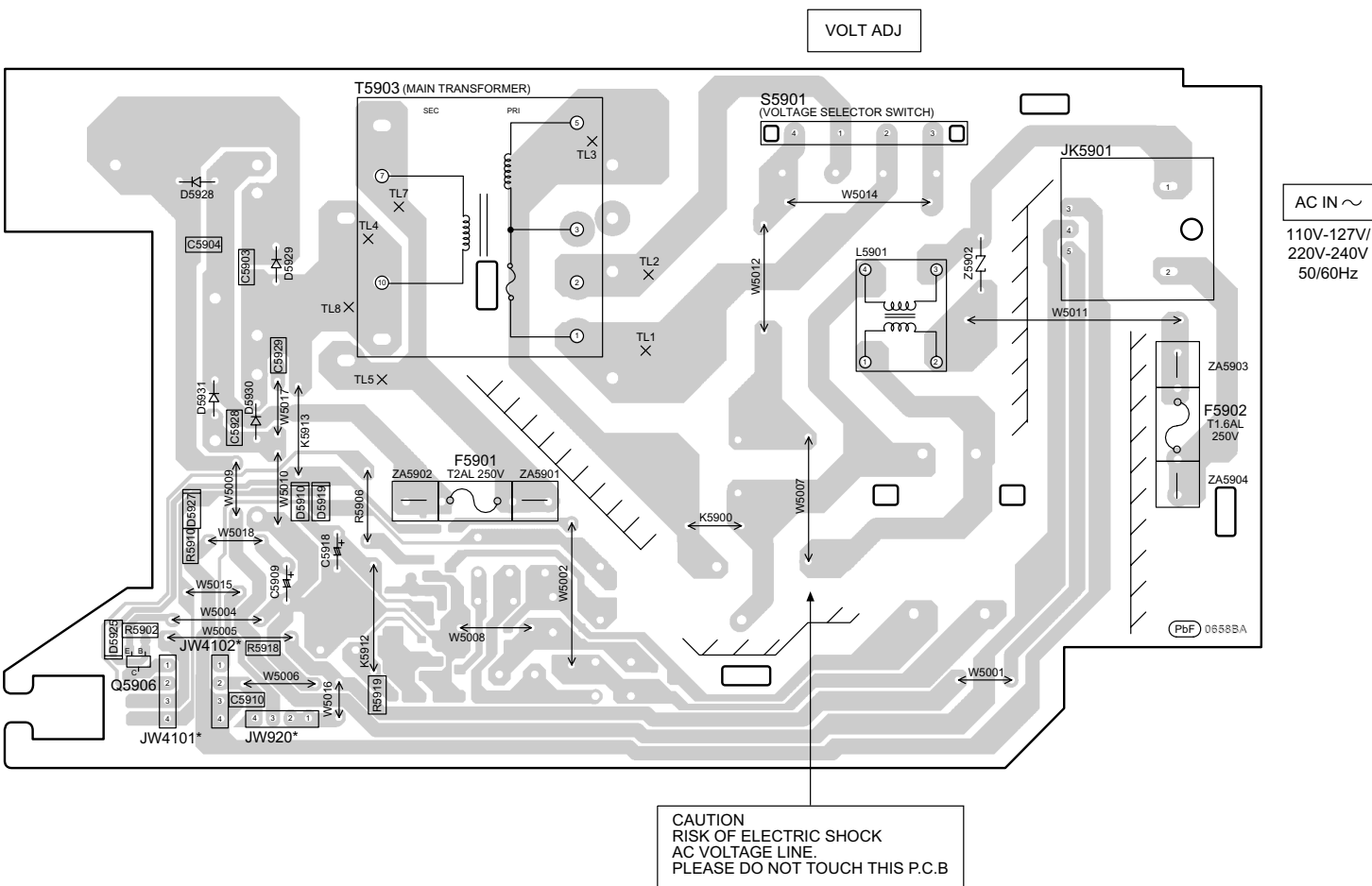
Diagram of the CN906 connector. Pin 1 is connected to S908 (VOL+). Pin 2 is connected to R920. Pin 3 is connected to R921. The connector is labeled CN906*.

S900
(STANDBY)
C956
ZJ908*
PbF 0659AB

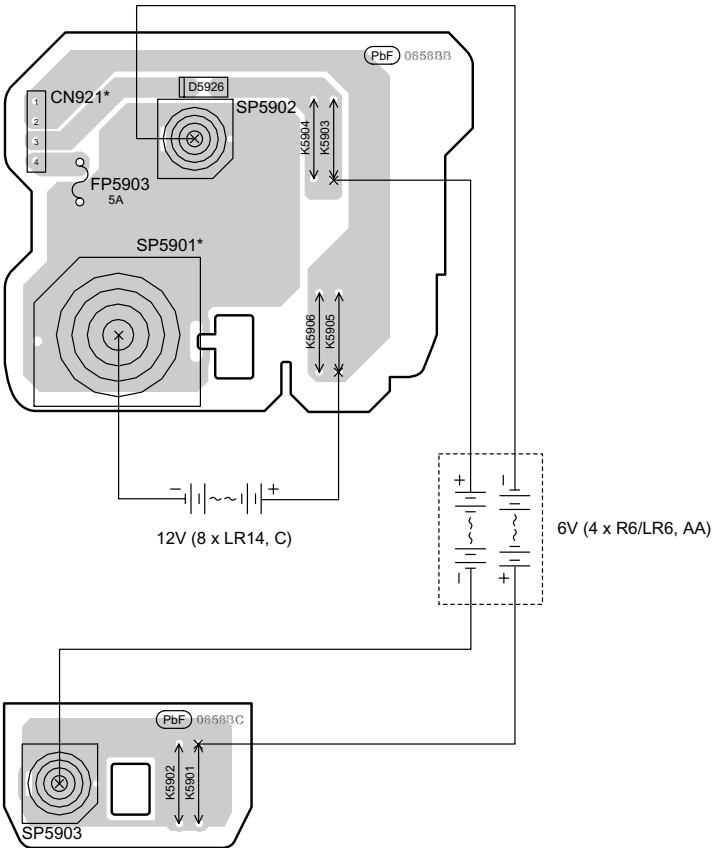
RX-D50PH
DECK / PANEL / VOLUME / STANDBY P.C.B.

17.4. POWER, BATTERY (1) & BATTERY (2) P.C.B.

G POWER P.C.B. (REPNT0063F)



H BATTERY (1) P.C.B. (REPNT0063F)



I BATTERY (2) P.C.B. (REPNT0063F)

NOTE: " * " REF IS FOR INDICATION ONLY.

RX-D50PH
POWER / BATTERY (1) / BATTERY (2) P.C.B.

18 Terminal Function of IC's

18.1. 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	DSLIF	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)

Pin No.	Mark	I/O	Function
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 Signal O/P 2
84	D1	O	Data Signal O/P 1
85	D0	O	Data Signal O/P 0
86	D3	O	Data Signal O/P 3
87	D4	O	Data Signal O/P 4
88	D5	O	Data Signal O/P 5
89	D6	O	Data Signal O/P 6
90	D7	O	Data Signal O/P 7
91	D15	O	Data Signal O/P 15
92	D14	O	Data Signal O/P 14
93	DRVDD	-	I/O Power Supply Voltage (DRAM)
94	D13	O	Data Signal O/P 13
95	D12	O	Data Signal O/P 12
96	D11	O	Data Signal O/P 11
97	D10	O	Data Signal O/P 10
98	D9	O	Data Signal O/P 9
99	D8	O	Data Signal O/P 8
100	SDRCK	O	Clock Signal O/P

18.2. 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

18.3. IC2100 (RFKWMD45EG-W) MICRO PROCESSOR

Pin No.	Mark	I/O	Function
1	PCONT1	O	Power AMP Control
2	PCONT2	O	AC Relay Control
3	N.C.	-	No Connection
4	LCD_DI / OCD_SDA	O	LCD Data Output
5	LCD_CE	O	LCD Chip Select
6	LCD_CLK / OCD_SCL	O	LCD Clock Output
7	N.C.	-	No Connection
8	MBP1	-	No Connection
9	MBP2	-	No Connection
10	N.C.	-	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	-	GND
15	XI (32KHz)	I	Sub Oscillator Input (32KHz)
16	XO (32KHz)	O	Sub Oscillator Output (32KHz)
17	BU3.3V	-	3.3V
18	Internal Output (1.8V)	-	Connect To Pin 37
19	NRST	I	MICOM RESET PIN (L: reset)
20	N.C.	-	Not in use
21	N.C.	-	Not in use
22	N.C.	-	Not in use
23	N.C.	-	Not in use

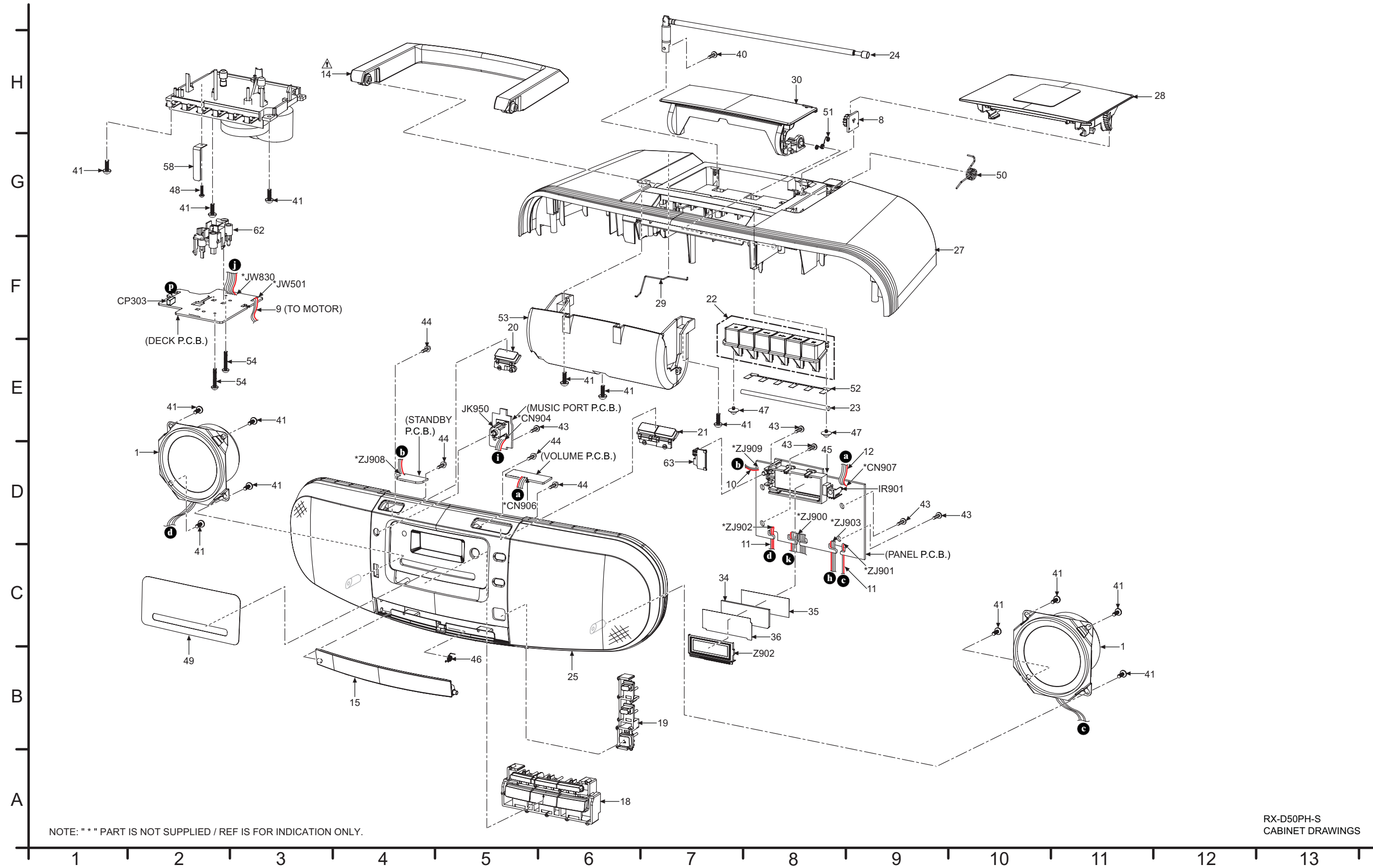
Pin No.	Mark	I/O	Function
24	N.C.	-	Not in use
25	RMT_IN	I	Remote Control Input
26	HALT	I	AC Detection
27	DCDET2	I	Power Failure Detection (F76)
28	DC_DET	I	DC Supply Detection
29	BLKCK	I	CD Sub-code Block Clock Input
30	N.C.	-	No Connection
31	CD_MDATA	O	CD LSI Command Data
32	STAT	I	CD LSI Status Input
33	CD_MCLK	O	CD LSI Command Clock
34	USB_SDA	-	Not in use
35	CD_MLD	O	CD LSI Command Load
36	USB_CLK	-	Not in use
37	1.8V	-	Power Supply (1.8V)
38	N.C.	-	No Connection
39	VSS	-	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 Output (L: reset)
46	N.C.	-	No Connection
47	MODEL_SEL1	I	Model Selection Port 1
48	MODEL_SEL2	I	Model Selection Port 2
49	PLL_DI	I	PLL Data Input
50	PLL_DO	O	PLL Data Output
51	PLL_CLK	I/O	PLL Clock
52	PLL_CE	O	PLL Chip Select
53	LCD_ON	O	LCD ON/OFF control (Active "L") (L=LCD turning on, H=LCD turning Off)
54	N.C.	-	No Connection
55	N.C.	-	No Connection
56	N.C.	-	No Connection
57	N.C.	-	No Connection
58	N.C.	-	No Connection
59	N.C.	-	No Connection
60	N.C.	-	No Connection
61	N.C.	-	No Connection
62	N.C.	-	No Connection
63	VSS	-	Micom GND
64	ASP_CLK	O	ASP Sound Processor Serial Clock Output
65	ASP_DATA	O	ASP Sound Processor Serial Data Output
66	N.C.	-	No Connection
67	N.C.	-	No Connection
68	N.C.	-	No Connection
69	N.C.	-	No Connection
70	N.C.	-	No Connection
71	N.C.	-	No Connection
72	N.C.	-	No Connection
73	N.C.	-	No Connection
74	N.C.	-	No Connection
75	N.C.	-	No Connection
76	N.C.	-	No Connection
77	N.C.	-	No Connection
78	N.C.	-	No Connection
79	N.C.	-	No Connection
80	MOTOR_ON	O	Deck Motor Power Control (Active "H")
81	TAPE_L	I	Deck Play Condition (L: Running, H: Stop)
82	REC_H	I	Deck Rec Condition (Active: H)

Pin No.	Mark	I/O	Function
83	RMT_ON	O	Remote Control Supply (Active "L") => Output "L" when HALT is present or => Output "L" when DC_DET=L and PCONT1=H
84	N.C.	-	No Connection
85	N.C.	-	No Connection
86	N.C.	-	No Connection
87	N.C.	-	No Connection
88	N.C.	-	No Connection
89	VDD	-	Micom VDD 3.3V
90	MUTE_A	O	Amplifier MUTE Output (H:MUTE ON)
91	GND	-	GROUND
92	KEY1	I	Key 1 Input
93	KEY2	I	Key 2 Input
94	N.C.	-	No Connection
95	N.C.	-	No Connection
96	PDET	I	Battery Level Detection
97	REGION	I	Region Setting Input
98	N.C.	-	No Connection
99	N.C.	-	No Connection
100	VREF+	-	A/D Converter Reference Voltage +3.3V

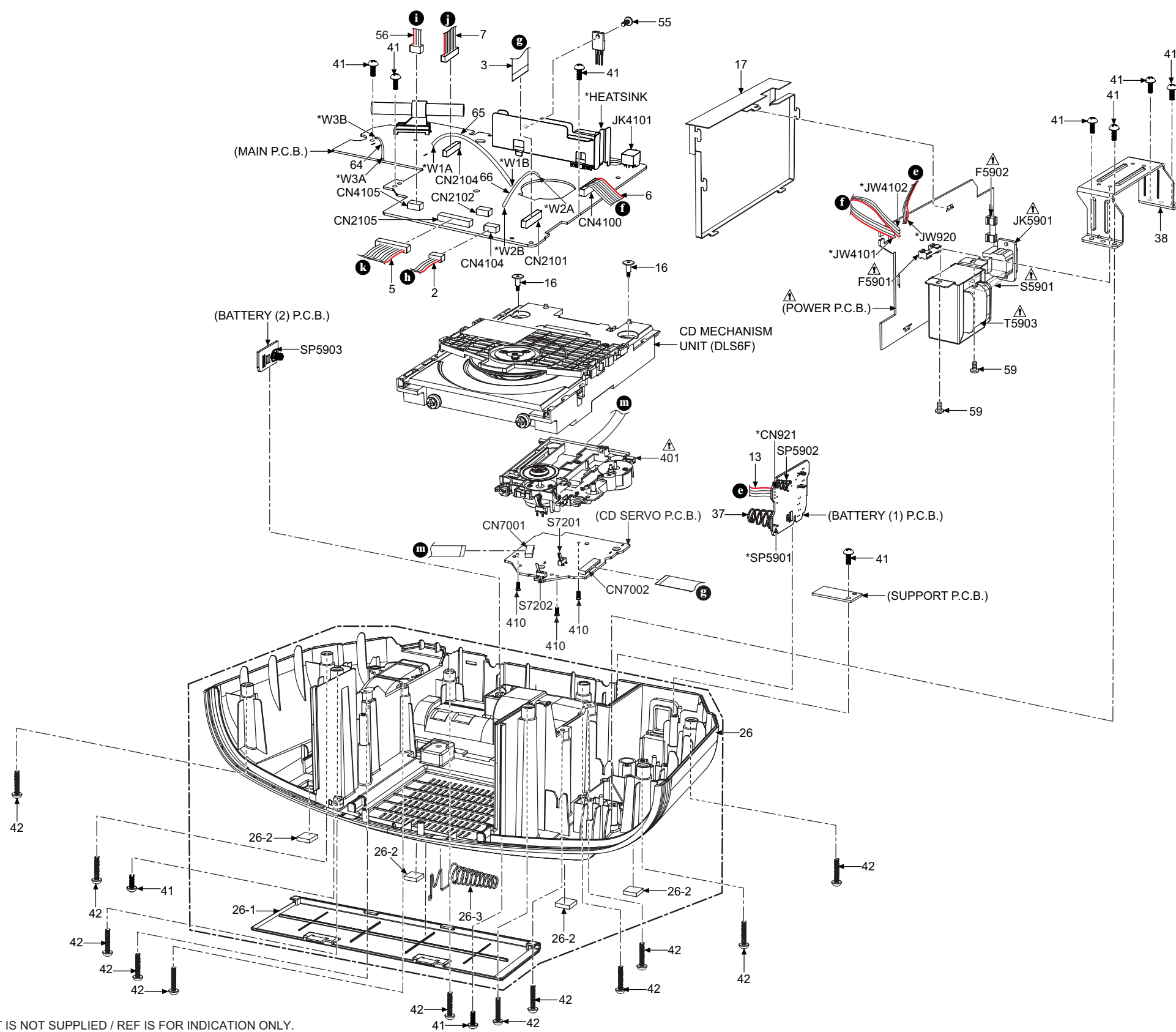
19 Exploded View and Replacement Parts List

19.1. Exploded View and Mechanical replacement Parts List

19.1.1. Cabinet Parts Location



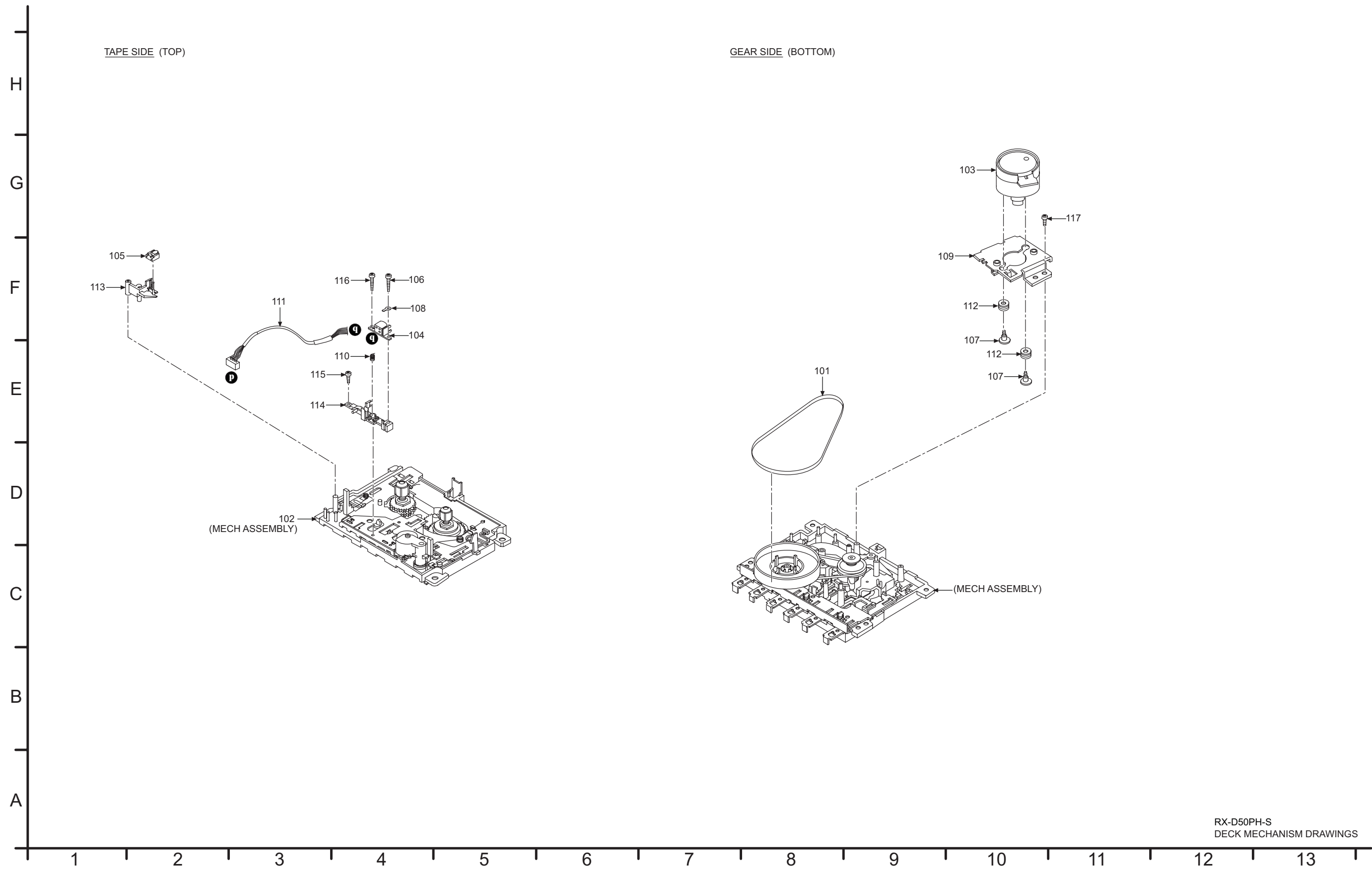
H
G
F
E
D
C
B
A



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

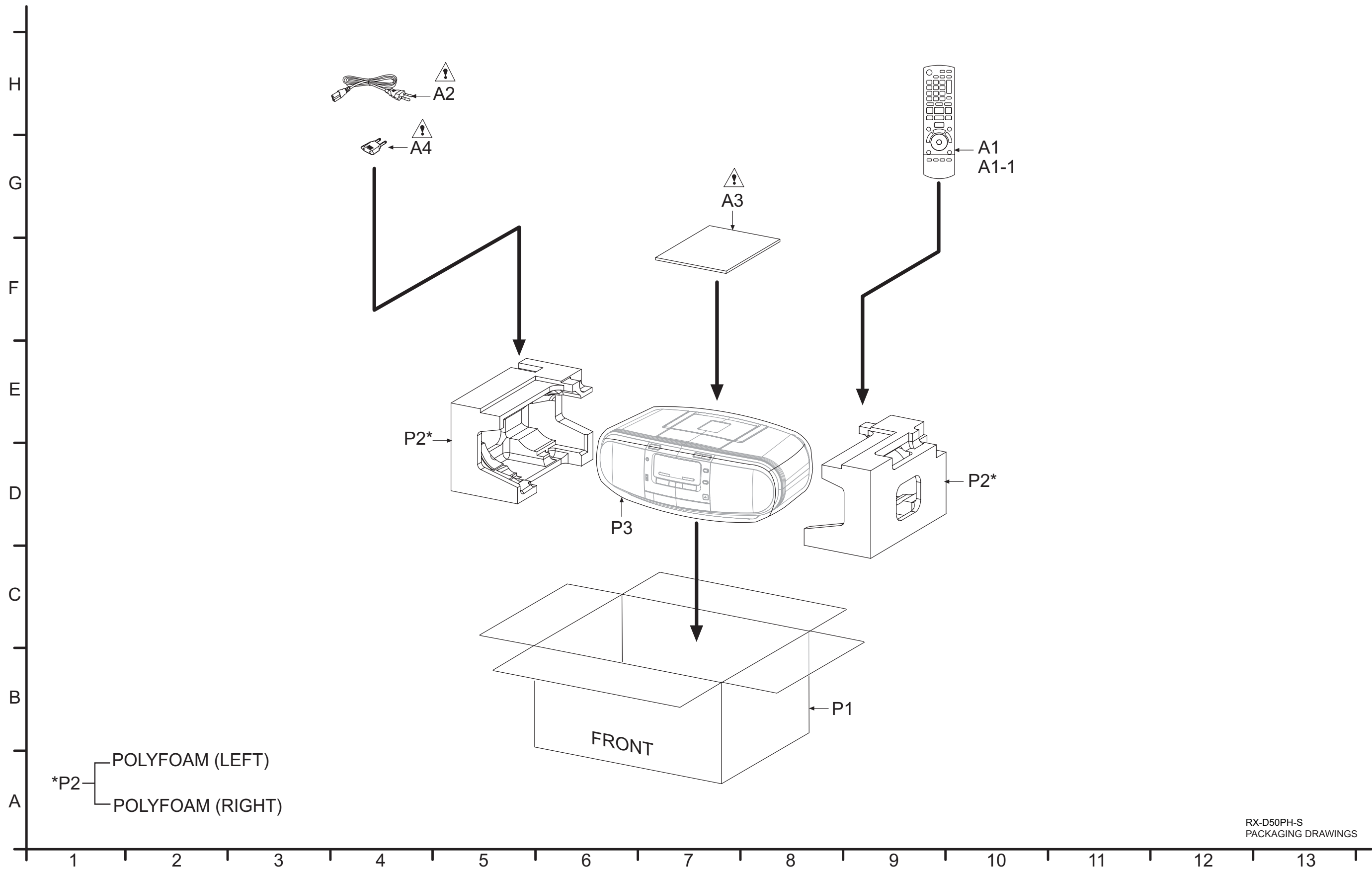
RX-D50PH-S
CABINET DRAWINGS

19.1.2. Deck Mechanism Parts Location (RAA0948-N)



RX-D50PH-S
DECK MECHANISM DRAWINGS

19.1.3. Packaging



RX-D50PH-S
PACKAGING DRAWINGS

19.1.4. Mechanical Repacement Parts List

Important Safety Notice

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

RTL (Retention Time Limited)

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

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

Note:

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

Ar:	Arabic	Du:	Dutch	It:	Italian	Sp:	Spanish
Cf:	Canadian French	En:	English	Ko:	Korean	Sw:	Swedish
Cz:	Czech	Fr:	French	Po:	Polish	Co:	Traditional Chinese
Da:	Danish	Ge:	German	Ru:	Russian	Cn:	Simplified Chinese
Pe:	Persian	Ur:	Ukraine	Pr:	Portuguese		

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
			CABINET AND CHASSIS		
	1	RASN8P050-G	SPEAKER	2	
	2	REXN0082	4P CABLE WIRE (MAIN-PANEL)	1	
	3	REEN0027	22P FFC (MAIN-CD)	1	
	5	REXN0080	10P CABLE WIRE (MAIN-PANEL)	1	
	6	REXN0081	8P CABLE WIRE (MAIN-POWER)	1	
	7	REXN0084	10P CABLE WIRE (MAIN-DECK)	1	
	8	RXGX0002	DAMPER GEAR	1	
	9	RWJ0302060KD	2P WIRE (DECK-MOTOR)	1	
	10	RWJ0202095KK	2P CABLE WIRE (PANEL-STANDBY)	1	
	11	RWJ0202155KK	2P CABEL WIRE (PANEL-SPEAKER UNIT)	2	
	12	RWJ0203096KK	3P CABEL WIRE (PANEL-VOLUME)	1	
	13	RWJ0204220KK	4P CABLE WIRE (BATT (1) -POWER)	1	
	14	RKHN0005A-H	HANDLE	1	
	15	RKFN0020-S	CD LID	1	
	16	RHDX03001	SCREW	2	
	17	RMVN0066	SAFETY COVER	1	
	18	RGUN0055-S	MAIN BUTTON	1	
	19	RGUN0056-S	SOUND EQ BUTTON	1	
	20	RGUN0058-S	POWER BUTTON	1	
	21	RGUN0059-S	VOLUME BUTTON	1	
	22	RGZN0008A-H	MECHA BUTTON	1	

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
	23	SUX102A	MECHA BUTTON HOLD-ING	1	
	24	XEARR210CA-C	ROD ANTENNA	1	
	25	RFKGD50EG-S	FRONT CABINET ASS'Y	1	
	26	RYQN0009D-S	BOTTOM CABINET ASS'Y	1	
	26-1	RKKN0007A-S	BATTERY COVER	1	
	26-2	RMGX0022	RUBBER LEG	4	
	26-3	RJCN0010	BATT TERMINAL	1	
	27	RYQN0008A-S	TOP CABINET	1	
	28	RFKLD50EG-S	CASSETTE LID ASS'Y	1	
	29	RJRN0017	ANTENNA TERMINAL	1	
	30	RKFN0019A-S	MECHA BOTTOM COVER	1	
	34	RGLN0006	LIGHTING PIECE	1	
	35	RGLN0007	DIFFUSER SHEET	1	
	36	RGLN0008	REFLECTOR SHEET	1	
	37	RJCN0011-1	BATTERY SPRING	1	
	38	RMAN0052	TRANSFORMER BRACKET	1	
	40	XYN3+F12FJ	SCREW	1	
	41	XTV3+10GFJ	SCREW	24	
	42	XTV3+16GFJ	SCREW	12	
	43	XTB26+10GFJ	SCREW	5	
	44	XTW26+10SFJ	SCREW	4	
	45	RMKN0011-W	LCD HOLDER	1	
	46	RMEN0009	CD LID SPRING	1	
	47	XTW3+W8TFJ	SCREW	2	
	48	XTN2+4FFJ	SCREW	1	
	49	RKWN0024A	LCD PANEL	1	
	50	RMEN0008	CASSETTE OPEN SPRING	1	
	51	RMEN0010	MECHA COVER SPRING	1	
	52	RMQ0649	MECHA BUTTON SUP-PORT	1	
	53	RMQN0015A-H	COIN COVER	1	

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
	54	XTN2+14GFJ	SCREW	2	
	55	XTW3+10FFJ	SCREW	1	
	56	REXN0083	3P CABLE WIRE (MUSIC PORT-MAIN)	1	
	58	RMCN0005-1	R/P SPRING	1	
	59	XTV3+8FFJ	SCREW	2	
	62	RMR0368-1	MECHA CHASSIS	1	
	63	RMVN0063-W	LED COVER	1	
	64	REU01R094A	1P WIRE (W3A-W3B)	1	
	65	RWJ0201100KK	1P WIRE (W1A-W1B)	1	
	66	RWJ0201100KK	1P WIRE (W2A-W2B)	1	
			CASSETTE DECK		
	101	RDV0021-1	CAPSTAN BELT	1	
	102	RXK0215-J1	MECHA CHASSIS	1	
	103	RFKPXD45EG-W	MOTOR ASS'Y	1	
	104	RBR4CM006-T	R/P HEAD	1	
	105	RD-JHP001-N1	ERASE HEAD	1	
	106	RHD20049-1	SCREW	1	
	107	RHD26002-1	SCREW	2	
	108	RJR0033	EARTH LUG	1	
	109	RMA0108-1	MOTOR BRACKET A	1	
	110	RMB0059	AZIMUTH SPRING	1	
	111	REXN0021	4P WIRE	1	
	112	RMG0102-1	MOTOR CUSHION	2	
	113	RML0080-2	ERASE HEAD ARM	1	
	114	RMR0149-1	HEAD BASE	1	
	115	XTN2+4FFJ	SCREW	1	
	116	XTN2+8FFJ	SCREW	1	
	117	XTN26+8JFJ	SCREW	1	
			TRAVERSE DECK		
⚠	401	RD-DAPX001-V	TRAVERSE UNIT	1	
	410	XTN2+6GFJ	SCREW	3	
			PACKING MATERIALS		
	P1	RPGX3056B	PACKING CASE	1	
	P2	RPNX1014-1	POLYFOAM	1	
	P3	RPFN0004	MIRAMAT SHEET	1	
			ACCESSORIES		
	A1	N2QAYA000009	REMOTE CONTROL	1	
	A1-1	RKK-PT470EBK	R/C BATTERY COVER	1	
⚠	A2	K2CQ2CA00007	AC CORD	1	
⚠	A3	RQTX1153-M	O/I BOOK (Sp)	1	
⚠	A4	K2DAYYY00002	AC ADAPTOR	1	

19.2. Electrical Replacement Parts List

Important Safety Notice

Components identified by Δ 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	REPNT0061FA	MAIN P.C.B.	1	(RTL)
	PCB2	REPNT0062B	PANEL P.C.B.	1	(RTL)
Δ	PCB3	REPNT0063F	POWER P.C.B.	1	(RTL)
	PCB4	REPNT00636A	CD SERVO P.C.B.	1	(RTL)
	PCB5	REPNT0061FC	MUSIC PORT P.C.B.	1	(RTL)
	PCB6	REPNT0061FB	DECK P.C.B.	1	(RTL)
	PCB7	REPNT0062B	VOLUME P.C.B.	1	(RTL)
	PCB8	REPNT0062B	STANDBY P.C.B.	1	(RTL)
	PCB9	REPNT0063F	BATTERY (1) P.C.B.	1	(RTL)
	PCB10	REPNT0063F	BATTERY (2) P.C.B.	1	(RTL)
			INTERGRATED CIRCUITS		
	IC1	C1BB00001120	IC	1	
	IC2	BA3313L	IC	1	
	IC900	C0HBA0000268	IC	1	
	IC2100	RFKWMD45EG-W	IC	1	
	IC2101	C0EBE0000124	IC	1	
	IC2500	C1BB00000732	IC	1	
	IC4100	C0CBABE000040	IC	1	
	IC4101	C1BA00000421	IC	1	
	IC4102	C0CBABE000023	IC	1	
	IC4103	C0DAEJG00001	IC	1	
	IC4104	C0EBM0000024	IC	1	
	IC7001	MN6627954AMA	IC	1	
	IC7002	BA5948FPE2	IC	1	
			TRANSISTORS		
	Q133	B1ABCF000176	TRANSISTOR	1	
	Q233	B1ABCF000176	TRANSISTOR	1	
	Q321	B1ABCF000176	TRANSISTOR	1	

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
	Q900	B1ADCE000012	TRANSISTOR	1	
	Q2101	B1ABDF000026	TRANSISTOR	1	
	Q2102	B1ABDF000026	TRANSISTOR	1	
	Q2103	B1GDCFNN0007	TRANSISTOR	1	
	Q4102	B1HBECA00004	TRANSISTOR	1	
	Q4105	B1ADCE000012	TRANSISTOR	1	
	Q4106	B1ABCF000176	TRANSISTOR	1	
	Q4107	B1BCCG000002	TRANSISTOR	1	
	Q4108	B1ACCF000094	TRANSISTOR	1	
	Q4109	B1HBECA00004	TRANSISTOR	1	
	Q4116	B1ACCF000094	TRANSISTOR	1	
	Q4117	B1GBCFJN0033	TRANSISTOR	1	
	Q4118	B1ADCE000012	TRANSISTOR	1	
	Q4119	B1GBCFJN0033	TRANSISTOR	1	
	Q5906	B1ABCF000176	TRANSISTOR	1	
	Q7601	B1ADCF000001	TRANSISTOR	1	
	QR4104	B1GBCFJN0033	TRANSISTOR	1	
	QR4105	B1GBCFJN0033	TRANSISTOR	1	
			DIODES		
	D1	B0CDAD000010	DIODE	1	
	D2	B0CDAB000019	DIODE	1	
	D3	B0CDAB000019	DIODE	1	
	D4	B0ACCK000005	DIODE	1	
	D333	B0ACCK000005	DIODE	1	
	D992	B3ACA0000264	DIODE	1	
	D993	B3ACA0000264	DIODE	1	
	D2100	B0ACCK000005	DIODE	1	
	D2101	B0ACCK000005	DIODE	1	
	D2104	B0EAKM000117	DIODE	1	
	D2105	B0EAKM000117	DIODE	1	
	D4100	B0ADFJ000004	DIODE	1	
	D4101	B0ADFJ000004	DIODE	1	
	D4102	B0ACCK000005	DIODE	1	
	D4103	B0ACCK000005	DIODE	1	
	D4104	B0ACCK000005	DIODE	1	
	D4105	B0ACCK000005	DIODE	1	

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
	D4106	BOACCK000005	DIODE	1	
	D4107	BOACCK000005	DIODE	1	
	D4108	BOACCK000005	DIODE	1	
	D5910	BOACCK000005	DIODE	1	
	D5919	BOJACE000003	DIODE	1	
	D5925	BOACCK000005	DIODE	1	
	D5926	BOACCK000005	DIODE	1	
	D5927	BOACCK000005	DIODE	1	
	D5928	BOEAKM000117	DIODE	1	
	D5929	BOEAKM000117	DIODE	1	
	D5930	BOEAKM000117	DIODE	1	
	D5931	BOEAKM000117	DIODE	1	
	D7650	MAZ8056GML	DIODE	1	
	DZ4109	B0BC9R1A0218	DIODE	1	
	DZ4100	B0BC9R1A0218	DIODE	1	
			SWITCHES		
	S501	RSHN1A001-1M	SW LEAF	1	
	S502	RSHN1A002-1M	SW CUE/REV	1	
	S900	EVQ11G05R	SW STDBY	1	
	S901	EVQ11G05R	SW CD PLAY/PAUSE	1	
	S902	EVQ11G05R	SW FM/AM	1	
	S903	EVQ11G05R	SW TUNE MODE	1	
	S904	EVQ11G05R	SW REV	1	
	S905	EVQ11G05R	SW FF	1	
	S907	EVQ11G05R	SW VOL-	1	
	S908	EVQ11G05R	SW VOL+	1	
	S909	EVQ11G05R	SW SOUND	1	
	S910	EVQ11G05R	SW MUSIC PORT	1	
	S911	EVQ11G05R	SW OPEN/CLOSE	1	
	S912	EVQ11G05R	SW STOP	1	
⚠	S5901	RSR2A006S-B	SW VOLTAGE SELECTOR	1	
	S7201	K0L1BA000133	SW REST	1	
	S7202	K0L1BA000133	SW CD OPEN	1	
	SW4	RSPN6D003-C	SW RECORDING	1	
			CONNECTORS		
	CN2101	K1MN22AA0004	22P CONNECTOR	1	
	CN2102	K1KA06A00452	6P CONNECTOR	1	
	CN2104	K1KA10AA0194	10P CONNECTOR	1	
	CN2105	K1KA10BA0062	10P CONNECTOR	1	
	CN4100	K1KA08AA0180	8P CONNECTOR	1	
	CN4104	K1KA04BA0055	4P CONNECTOR	1	
	CN4105	K1KA03AA0180	3P CONNECTOR	1	
	CN7001	K1MN16B00154	16P CONNECTOR	1	
	CN7002	K1MN22BA0005	22P CONNECTOR	1	
	CP303	K1KA04AA0193	4P CONNECTOR	1	
			TRIMMERS		
	CT51	RCVTZ11F	TRIMMER CAPACITOR	1	
			COILS AND INDUCTORS		
	L1	RLQY30S1W	RF CHOKE COIL	1	
	L3	RLQY30S1W	RF CHOKE COIL	1	
	L5	G0ZZ00002453	FM OSC COIL	1	
	L7	G2A101C00010	AM OSC COIL	1	
	L8	J0JKB0000020	INDUCTOR	1	
	L51	G2CAEB000003	COIL	1	
	L200	J0JKB0000020	INDUCTOR	1	
	L342	G0C101JA0019	INDUCTOR	1	
	L900	J0JBC0000019	INDUCTOR	1	
	L901	J0JBC0000019	INDUCTOR	1	
	L950	J0JBC0000019	INDUCTOR	1	
	L951	J0JBC0000019	INDUCTOR	1	
	L952	J0JBC0000019	INDUCTOR	1	
	L2102	J0JKB0000020	INDUCTOR	1	
	L2104	G0C3R3JA0027	INDUCTOR	1	
	L4104	J0JKB0000020	INDUCTOR	1	

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
	L4105	J0JKB0000020	INDUCTOR	1	
⚠	L5901	ELF15N035AN	LINE FILTER	1	
	T1	G2BAC0000051	IFT	1	
	T320	RL0N9B17-T	BIAS OSC COIL	1	
			TRANSFORMER		
⚠	T5903	G4CYBY00030	TRANSFORMER	1	
			COMPONENT COMBINATION		
⚠	Z5902	ERZVA5Z471	ZNR SURGE	1	
	IR901	B3RAB0000081	REMOTE CONTROL SENSOR	1	
			CERAMIC FILTER		
	CF1	J0B1075A0129	CERAMIC FILTER	1	
	CF2	J0B4503A0074	CERAMIC FILTER	1	
			OSCILLATORS		
	X1	J0B1075A0121	CRYSTAL OSCILLATOR	1	
	X2	H0A750200020	CRYSTAL OSCILLATOR	1	
	X2100	H4Z8004AA001	CERAMIC RESONATOR	1	
	X2101	H0A327200097	CRYSTAL OSCILLATOR	1	
	X7201	H0H169500013	CRYSTAL OSCILLATOR	1	
			FL DISPLAY		
	Z902	L5ACAYY00030	LCD DISPLAY	1	
			FUSES		
⚠	F5901	K5D202BLA013	FUSE	1	
⚠	F5902	K5D162BLA013	FUSE	1	
			FUSE HOLDERS		
⚠	ZA5901	K3GE1ZZ00001	FUSE HOLDER	1	
⚠	ZA5902	K3GE1ZZ00001	FUSE HOLDER	1	
⚠	ZA5903	K3GE1ZZ00001	FUSE HOLDER	1	
⚠	ZA5904	K3GE1ZZ00001	FUSE HOLDER	1	
			FUSE PROTECTORS		
⚠	FP4100	K5G502A00039	FUSE PROTECTOR	1	
⚠	FP5903	K5G502A00039	FUSE PROTECTOR	1	
			JACKS		
	JK950	K2HC103A0031	JK MUSIC PORT	1	
	JK4101	RJJN37TK01-Y	JK PHONE	1	
⚠	JK5901	K2AA2B000014	JK AC INLET	1	
			BATTERY TERMINALS		
	SP5902	RJC751YB-1	BATTERY TERMINAL	1	
	SP5903	RJC751YB-1	BATTERY TERMINAL	1	
			CHIP JUMPERS		
	L4106	ERJ3GEY0R00V	0 1/10W	1	
	L4107	ERJ3GEY0R00V	0 1/10W	1	
	L4108	ERJ3GEY0R00V	0 1/10W	1	
	LB7262	ERJ3GEY0R00V	0 1/10W	1	
	LB7263	ERJ3GEY0R00V	0 1/10W	1	
	LB7264	ERJ3GEY0R00V	0 1/10W	1	
	W600	ERJ3GEY0R00V	0 1/10W	1	
	W602	ERJ3GEY0R00V	0 1/10W	1	
	W1058	ERJ3GEY0R00V	0 1/10W	1	

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
	W2000	ERJ3GEY0R00V	0 1/10W	1	
	W2001	ERJ3GEY0R00V	0 1/10W	1	
	W2002	ERJ3GEY0R00V	0 1/10W	1	
	W2027	ERJ3GEY0R00V	0 1/10W	1	
	W2030	ERJ3GEY0R00V	0 1/10W	1	
			RESISTORS		
	R1	ERJ3GEYJ103V	10K 1/10W	1	
	R2	ERJ3GEY0R00V	0 1/10W	1	
	R3	ERJ3GEYJ332V	3.3K 1/10W	1	
	R4	ERJ3GEYJ104V	100K 1/10W	1	
	R5	ERJ3GEYJ220V	22 1/10W	1	
	R6	ERJ3GEYJ104V	100K 1/10W	1	
	R7	ERJ3GEYJ104V	100K 1/10W	1	
	R8	ERJ3GEYJ103V	10K 1/10W	1	
	R9	ERJ3GEY0R00V	0 1/10W	1	
	R10	ERJ3GEYJ104V	100K 1/10W	1	
	R11	ERJ3GEYJ332V	3.3K 1/10W	1	
	R12	ERJ3GEYJ152V	1.5K 1/10W	1	
	R13	ERJ3GEYJ332V	3.3K 1/10W	1	
	R14	ERJ3GEYJ472V	4.7K 1/10W	1	
	R16	ERJ3GEYJ103V	10K 1/10W	1	
	R17	ERJ3GEYJ103V	10K 1/10W	1	
	R18	ERJ3GEYJ223V	22K 1/10W	1	
	R20	ERJ3GEYJ103V	10K 1/10W	1	
	R22	ERJ3GEYJ103V	10K 1/10W	1	
	R23	ERJ3GEYJ223V	22K 1/10W	1	
	R24	ERJ3GEYJ223V	22K 1/10W	1	
	R25	ERJ3GEYJ223V	22K 1/10W	1	
	R28	ERJ3GEYJ104V	100K 1/10W	1	
	R29	ERJ3GEYJ102V	1K 1/10W	1	
	R30	ERJ3GEYJ393V	39K 1/10W	1	
	R31	ERJ3GEYJ472V	4.7K 1/10W	1	
	R33	ERJ3GEY0R00V	0 1/10W	1	
	R37	ERJ3GEY0R00V	0 1/10W	1	
	R45	ERJ3GEYJ563V	56K 1/10W	1	
	R46	ERJ3GEYJ563V	56K 1/10W	1	
	R101	ERJ3GEYJ392V	3.9K 1/10W	1	
	R102	ERJ3GEYJ222V	2.2K 1/10W	1	
	R103	ERJ3GEYJ102V	1K 1/10W	1	
	R104	ERJ3GEYJ104V	100K 1/10W	1	
	R105	ERJ3GEYJ560V	56 1/10W	1	
	R106	ERJ3GEYJ272V	2.7K 1/10W	1	
	R107	ERJ3GEYJ224V	220K 1/10W	1	
	R108	ERJ3GEYJ123V	12K 1/10W	1	
	R183	ERJ3GEYJ101V	100 1/10W	1	
	R201	ERJ3GEYJ392V	3.9K 1/10W	1	
	R202	ERJ3GEYJ222V	2.2K 1/10W	1	
	R203	ERJ3GEYJ102V	1K 1/10W	1	
	R204	ERJ3GEYJ104V	100K 1/10W	1	
	R205	ERJ3GEYJ560V	56 1/10W	1	
	R206	ERJ3GEYJ272V	2.7K 1/10W	1	
	R207	ERJ3GEYJ224V	220K 1/10W	1	
	R208	ERJ3GEYJ123V	12K 1/10W	1	
	R283	ERJ3GEYJ101V	100 1/10W	1	
	R319	ERJ3GEYJ101V	100 1/10W	1	
	R321	ERJ3GEYJ471V	470 1/10W	1	
	R322	ERJ3GEYJ105V	1M 1/10W	1	
	R323	ERJ3GEYJ333V	33K 1/10W	1	
	R324	ERJ3GEYJ100V	10 1/10W	1	
	R325	ERJ3GEYJ221V	220 1/10W	1	
	R326	ERJ3GEYJ104V	100K 1/10W	1	
	R392	ERJ3GEYJ103V	10K 1/10W	1	
	R393	ERJ3GEYJ103V	10K 1/10W	1	
	R900	ERJ3GEYJ820V	82 1/10W	1	
	R901	ERJ3GEYJ153V	15K 1/10W	1	
	R902	ERJ3GEYJ104V	100K 1/10W	1	
	R903	ERJ3GEYJ102V	1K 1/10W	1	
	R904	ERJ3GEYJ471V	470 1/10W	1	
	R905	ERJ3GEYJ471V	470 1/10W	1	
	R906	ERJ3GEYJ471V	470 1/10W	1	
	R907	ERJ3GEYJ102V	1K 1/10W	1	

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
	R909	ERJ3GEYJ222V	2.2K 1/10W	1	
	R910	ERJ3GEYJ332V	3.3K 1/10W	1	
	R911	ERJ3GEYJ472V	4.7K 1/10W	1	
	R914	ERJ3GEYJ122V	1.2K 1/10W	1	
	R915	ERJ3GEYJ152V	1.5K 1/10W	1	
	R916	ERJ3GEYJ222V	2.2K 1/10W	1	
	R917	ERJ3GEYJ332V	3.3K 1/10W	1	
	R918	ERJ3GEYJ472V	4.7K 1/10W	1	
	R920	ERJ3GEYJ122V	1.2K 1/10W	1	
	R921	ERJ3GEYJ152V	1.5K 1/10W	1	
	R950	ERJ3GEYJ222V	2.2K 1/10W	1	
	R991	ERJ3GEYJ680V	68 1/10W	1	
	R992	ERJ3GEYJ680V	68 1/10W	1	
	R993	ERJ3GEYJ680V	68 1/10W	1	
	R994	ERJ3GEYJ680V	68 1/10W	1	
	R995	ERJ3GEYJ820V	82 1/10W	1	
	R2100	ERJ3GEY0R00V	0 1/10W	1	
	R2102	ERJ3GEYJ101V	100 1/10W	1	
	R2103	ERJ3GEYJ101V	100 1/10W	1	
	R2104	ERJ3GEYJ101V	100 1/10W	1	
	R2105	ERJ3GEYJ101V	100 1/10W	1	
	R2106	ERJ3GEYJ101V	100 1/10W	1	
	R2107	ERJ3GEYJ101V	100 1/10W	1	
	R2111	ERJ3GEY0R00V	0 1/10W	1	
	R2112	ERJ3GEYJ104V	100K 1/10W	1	
	R2113	D0GD102JA055	1K 1/10W	1	
	R2114	ERJ3GEYJ102V	1K 1/10W	1	
	R2115	ERJ3GEYJ224V	220K 1/10W	1	
	R2116	ERJ3GEYJ104V	100K 1/10W	1	
	R2117	ERJ3GEYJ102V	1K 1/10W	1	
	R2118	ERJ3GEYJ104V	100K 1/10W	1	
	R2119	ERJ3GEYJ104V	100K 1/10W	1	
	R2124	D1BB1002A074	10K 1/10W	1	
	R2125	D1BB1002A074	10K 1/10W	1	
	R2126	ERJ3GEYJ102V	1K 1/10W	1	
	R2127	ERJ3GEYJ102V	1K 1/10W	1	
	R2131	ERJ3GEYJ101V	100 1/10W	1	
	R2132	ERJ3GEYJ101V	100 1/10W	1	
	R2133	ERJ3GEYJ101V	100 1/10W	1	
	R2137	ERJ3GEYJ472V	4.7K 1/10W	1	
	R2138	ERJ3GEYJ101V	100 1/10W	1	
	R2139	ERJ3GEYJ102V	1K 1/10W	1	
	R2140	ERJ3GEYJ105V	1M 1/10W	1	
	R2141	ERJ3GEYJ102V	1K 1/10W	1	
	R2142	ERJ3GEYJ102V	1K 1/10W	1	
	R2143	ERJ3GEYJ224V	220K 1/10W	1	
	R2144	ERJ3GEYJ102V	1K 1/10W	1	
	R2145	ERJ3GEY0R00V	0 1/10W	1	
	R2146	ERJ3GEYJ103V	10K 1/10W	1	
	R2147	ERJ3GEYJ104V	100K 1/10W	1	
	R2148	ERJ3GEYJ101V	100 1/10W	1	
	R2149	ERJ3GEYJ101V	100 1/10W	1	
	R2150	ERJ3GEYJ101V	100 1/10W	1	
	R2151	ERJ3GEYJ102V	1K 1/10W	1	
	R2152	ERJ3GEYJ222V	2.2K 1/10W	1	
	R2153	ERJ3GEYJ104V	100K 1/10W	1	
	R2155	ERJ3GEYJ101V	100 1/10W	1	
	R2156	ERJ3GEYJ101V	100 1/10W	1	
	R2158	ERJ3GEYJ102V	1K 1/10W	1	
	R2159	ERJ3GEYJ101V	100 1/10W	1	
	R2160	ERJ3GEYJ101V	100 1/10W	1	
	R2161	ERJ3GEYJ101V	100 1/10W	1	
	R2162	ERJ3GEYJ101V	100 1/10W	1	
	R2163	D0GD101JA055	100 1/10W	1	
	R2164	ERJ3GEYJ101V	100 1/10W	1	
	R2165	ERJ3GEYJ101V	100 1/10W	1	
	R2166	ERJ3GEYJ102V	1K 1/10W	1	
	R2167	ERJ3GEYJ102V	1K 1/10W	1	
	R2168	ERJ3GEYJ472V	4.7K 1/10W	1	
	R2169	ERJ3GEYJ102V	1K 1/10W	1	
	R2170	ERJ3GEYJ101V	100 1/10W	1	
	R2171	ERJ3GEYJ563V	56K 1/10W	1	
	R2172	ERJ3GEYJ332V	3.3K 1/10W	1	

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
	R2174	ERJ3GEYJ563V	56K 1/10W	1	
	R2175	ERJ3GEYJ474V	470K 1/10W	1	
	R2176	ERJ3GEYJ104V	100K 1/10W	1	
	R2177	ERJ3GEYJ104V	100K 1/10W	1	
	R2178	ERJ3GEYJ102V	1K 1/10W	1	
	R2181	ERJ3GEYJ101V	100 1/10W	1	
	R2182	ERJ3GEYJ104V	100K 1/10W	1	
	R2183	ERJ3GEYJ101V	100 1/10W	1	
	R2500	ERJ3GEYJ221V	220 1/10W	1	
	R2501	ERJ3GEYJ221V	220 1/10W	1	
	R2502	ERJ3GEYJ103V	10K 1/10W	1	
	R2503	ERJ3GEYJ183V	18K 1/10W	1	
	R2504	ERJ3GEYJ183V	18K 1/10W	1	
	R2505	ERJ3GEYJ103V	10K 1/10W	1	
	R2506	ERJ3GEYJ183V	18K 1/10W	1	
	R2507	ERJ3GEYJ183V	18K 1/10W	1	
	R2508	ERJ3GEYJ183V	18K 1/10W	1	
	R2509	ERJ3GEYJ183V	18K 1/10W	1	
	R2516	ERJ3GEYJ104V	100K 1/10W	1	
	R2517	ERJ3GEYJ104V	100K 1/10W	1	
	R2520	ERJ3GEYJ183V	18K 1/10W	1	
	R2521	ERJ3GEYJ183V	18K 1/10W	1	
	R2530	ERJ3GEYJ392V	3.9K 1/10W	1	
	R2531	ERJ3GEYJ392V	3.9K 1/10W	1	
	R2532	ERJ3GEYJ103V	10K 1/10W	1	
	R2533	ERJ3GEYJ222V	2.2K 1/10W	1	
	R2534	ERJ3GEYJ222V	2.2K 1/10W	1	
	R2535	ERJ3GEYJ103V	10K 1/10W	1	
	R2536	ERJ3GEYJ101V	100 1/10W	1	
	R2538	ERJ3GEY0R00V	0 1/10W	1	
	R3122	ERJ3GEYJ473V	47K 1/10W	1	
	R3129	ERJ3GEYJ473V	47K 1/10W	1	
	R4100	ERJ3GEY0R00V	0 1/10W	1	
	R4109	ERJ3GEYJ220V	22 1/10W	1	
	R4121	ERJ3GEYJ102V	1K 1/10W	1	
	R4122	ERJ3GEYJ102V	1K 1/10W	1	
	R4123	ERJ3GEY0R00V	0 1/10W	1	
	R4124	ERJ3GEYJ102V	1K 1/10W	1	
	R4125	ERJ3GEYJ103V	10K 1/10W	1	
	R4127	ERJ3GEYJ103V	10K 1/10W	1	
	R4128	ERJ3GEYJ222V	2.2K 1/10W	1	
	R4129	ERJ3GEYJ222V	2.2K 1/10W	1	
	R4131	ERJ3GEYJ392V	3.9K 1/10W	1	
	R4132	ERJ3GEYJ392V	3.9K 1/10W	1	
	R4133	ERJ3GEYJ183V	18K 1/10W	1	
	R4134	ERJ3GEYJ183V	18K 1/10W	1	
	R4135	ERJ3GEYJ682V	6.8K 1/10W	1	
	R4136	ERJ3GEYJ682V	6.8K 1/10W	1	
	R4137	D0GD103JA055	10K 1/10W	1	
	R4139	D0GDR00JA055	0 1/10W	1	
	R4141	ERJ3GEYJ222V	2.2K 1/10W	1	
	R4142	ERJ3GEYJ222V	2.2K 1/10W	1	
	R4144	ERJ3GEYJ473V	47K 1/10W	1	
	R4145	ERJ3GEYJ222V	2.2K 1/10W	1	
	R4149	D0AF1R5JA113	1.5 1/2W	1	
	R4150	ERJ3GEYJ104V	100K 1/10W	1	
	R4151	ERJ3GEYJ183V	18K 1/10W	1	
	R4152	ERJ3GEYJ393V	39K 1/10W	1	
	R4153	D0AF1R5JA113	1.5 1/2W	1	
	R4154	D0AF1R5JA113	1.5 1/2W	1	
	R4156	ERJ3GEYJ561V	560 1/10W	1	
	R4157	ERJ3GEYJ103V	10K 1/10W	1	
	R4158	ERJ3GEYJ561V	560 1/10W	1	
	R4159	ERJ3GEYJ103V	10K 1/10W	1	
	R4161	ERJ3GEYJ223V	22K 1/10W	1	
	R4162	ERJ3GEYJ223V	22K 1/10W	1	
	R4163	ERJ3GEYJ223V	22K 1/10W	1	
	R4164	ERJ3GEYJ223V	22K 1/10W	1	
	R4165	ERJ3GEYJ101V	100 1/10W	1	
	R4166	ERJ3GEYJ101V	100 1/10W	1	
	R5902	ERJ3GEYJ473V	47K 1/10W	1	
	R5903	ERJ3GEYJ334V	330K 1/10W	1	
	R5908	ERJ3GEY0R00V	0 1/10W	1	

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
	R5910	ERJ3GEYJ473V	47K 1/10W	1	
	R5913	ERJ3GEYJ222V	2.2K 1/10W	1	
	R5914	ERJ3GEYJ102V	1K 1/10W	1	
	R5915	ERJ3GEYJ222V	2.2K 1/10W	1	
	R5916	ERJ3GEYJ101V	100 1/10W	1	
	R5917	ERJ3GEYJ103V	10K 1/10W	1	
	R5917	ERJ3GEYJ222V	2.2K 1/10W	1	
	R5918	ERJ3GEYJ683V	68K 1/10W	1	
	R5919	ERJ3GEY0R00V	0 1/10W	1	
	R5920	ERJ3GEYJ222V	2.2K 1/10W	1	
	R5921	ERJ3GEYJ473V	47K 1/10W	1	
	R5923	ERJ3GEY0R00V	0 1/10W	1	
	R5924	ERJ3GEYJ104V	100K 1/10W	1	
	R5925	ERJ3GEYJ104V	100K 1/10W	1	
	R5926	D1BB1002A074	10K 1/10W	1	
	R5927	ERJ3GEYJ473V	47K 1/10W	1	
	R5928	ERJ3GEYJ124V	120K 1/10W	1	
	R5929	ERJ3GEYJ103V	10K 1/10W	1	
	R5931	ERJ3GEY0R00V	0 1/10W	1	
	R5932	ERJ3GEYJ103V	10K 1/10W	1	
	R5933	D1BB1002A074	10K 1/10W	1	
	R5934	ERJ3GEYJ332V	3.3K 1/10W	1	
	R5935	ERJ3GEYJ332V	3.3K 1/10W	1	
	R5936	ERJ3GEYJ102V	1K 1/10W	1	
	R5937	ERJ3GEYJ472V	4.7K 1/10W	1	
	R5938	ERJ3GEY0R00V	0 1/10W	1	
	R5939	ERJ3GEY0R00V	0 1/10W	1	
	R5940	ERJ3GEYJ474V	470K 1/10W	1	
	R5942	ERJ3GEYJ104V	100K 1/10W	1	
	R5943	ERJ3GEY0R00V	0 1/10W	1	
	R7111	ERJ3GEYJ103V	10K 1/10W	1	
	R7211	ERJ3GEYJ823V	82K 1/10W	1	
	R7212	ERJ3GEYJ821V	820 1/10W	1	
	R7214	ERJ3GEYJ471V	470 1/10W	1	
	R7217	ERJ3GEYJ102V	1K 1/10W	1	
	R7218	ERJ3GEYJ102V	1K 1/10W	1	
	R7220	ERJ3GEYJ105V	1M 1/10W	1	
	R7221	ERJ3GEYJ101V	100 1/10W	1	
	R7253	ERJ3GEYJ100V	10 1/10W	1	
	R7254	ERJ3GEYJ102V	1K 1/10W	1	
	R7315	ERJ3GEYJ332V	3.3K 1/10W	1	
	R7323	ERJ3GEYJ682V	6.8K 1/10W	1	
	R7325	ERJ3GEYJ331V	330 1/10W	1	
	R7327	ERJ3GEYJ102V	1K 1/10W	1	
	R7328	ERJ3GEYJ103V	10K 1/10W	1	
	R7329	ERJ3GEYJ102V	1K 1/10W	1	
	R7330	ERJ3GEYJ562V	5.6K 1/10W	1	
	R7331	ERJ3GEYJ273V	27K 1/10W	1	
	R7332	ERJ3GEYJ102V	1K 1/10W	1	
	R7335	ERJ3GEYJ101V	100 1/10W	1	
	R7336	ERJ3GEYJ100V	10 1/10W	1	
	R7339	ERJ3GEYJ102V	1K 1/10W	1	
	R7349	ERJ3GEYJ183V	18K 1/10W	1	
	R7601	ERJ3GEYJ4R7V	4.7 1/10W	1	
	R7650	ERJ3GEYJ5R6V	5.6 1/10W	1	
	K904	ERJ3GEY0R00V	0 1/10W	1	
	K905	ERJ3GEY0R00V	0 1/10W	1	
			CAPACITORS		
	C1	F1H1H4700006	47pF 50V	1	
	C2	F1H1H100A831	10pF 50V	1	
	C3	F1H1C333A071	0.033uF 16V	1	
	C4	F2A1C101A030	100uF 16V	1	
	C5	F1H1C473A041	0.047uF 16V	1	
	C6	F1H1H102A219	1000pF 50V	1	
	C7	F1H1H102A219	1000pF 50V	1	
	C8	F1H1H7R0A503	7.0pF 50V	1	
	C9	F1H1E103A029	0.01uF 25V	1	
	C10	F1H1E103A029	0.01uF 25V	1	
	C11	F1H1H102A219	1000pF 50V	1	
	C12	F1H1C473A041	0.047uF 16V	1	
	C13	F1H1H150A004	15pF 50V	1	

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
	C14	F1H1H331A219	330pF 50V	1	
	C15	F1H1C473A041	0.047uF 16V	1	
	C16	F1H1H150A004	15pF 50V	1	
	C17	F2A1H3R3A213	3.3uF 50V	1	
	C18	F1H1E103A029	0.01uF 25V	1	
	C19	F2A1H1R0A213	1.0uF 50V	1	
	C20	F2A0J101A030	100uF 6.3V	1	
	C21	F2A1H1R0A213	1.0uF 50V	1	
	C22	F2A1HR47A147	0.47uF 50V	1	
	C23	F2A1C101A030	100uF 16V	1	
	C24	F2A1A220A580	22uF 10V	1	
	C25	F1H1C183A041	0.018uF 16V	1	
	C26	F1H1E103A029	0.01uF 25V	1	
	C27	F1H1C183A041	0.018uF 16V	1	
	C28	F1H1H102A219	1000pF 50V	1	
	C29	F1H1H102A219	1000pF 50V	1	
	C30	F2A1H1R0A213	1.0uF 50V	1	
	C31	F2A1H1R0A213	1.0uF 50V	1	
	C32	F2A1H4R7A147	4.7uF 50V	1	
	C33	F1H1H1010005	100pF 50V	1	
	C34	F1H1H270A004	27pF 50V	1	
	C35	F1H1H1010005	100pF 50V	1	
	C36	F1H1H220A736	22pF 50V	1	
	C37	F1H1H1010005	100pF 50V	1	
	C38	F1H1H1010005	100pF 50V	1	
	C39	F1H1H102A219	1000pF 50V	1	
	C40	F2A0J101A030	100uF 6.3V	1	
	C41	F1H1H331A219	330pF 50V	1	
	C42	F1H1H221A004	220pF 50V	1	
	C43	F1H1C473A041	0.047uF 16V	1	
	C44	F1H1H223A219	0.022uF 50V	1	
	C46	F1H1H222A219	2200pF 50V	1	
	C47	F1J1H100A664	10pF 50V	1	
	C48	ERJ3GEY0R00V	0 1/10W	1	
	C50	F1H1C473A041	0.047uF 16V	1	
	C56	F1H1H102A219	1000pF 50V	1	
	C57	F1H1C473A041	0.047uF 16V	1	
	C102	F1H1H333A220	0.033uF 50V	1	
	C103	F1H1H222A219	2200pF 50V	1	
	C104	RCA1CKA100BT	10uF 16V	1	
	C108	F1H1H222A219	2200pF 50V	1	
	C109	F1H1H102A219	1000pF 50V	1	
	C110	F2A1C101A030	100uF 16V	1	
	C111	F1H1H100A831	10pF 50V	1	
	C112	F1H1H100A831	10pF 50V	1	
	C202	F1H1H333A220	0.033uF 50V	1	
	C203	F1H1H222A219	2200pF 50V	1	
	C204	RCA1CKA100BT	10uF 16V	1	
	C208	F1H1H222A219	2200pF 50V	1	
	C209	F1H1H102A219	1000pF 50V	1	
	C210	F2A1C101A030	100uF 16V	1	
	C294	F2A0J221A030	220uF 6.3V	1	
	C311	F2A1C330A030	33uF 16V	1	
	C312	F2A1C331A019	330uF 16V	1	
	C313	F2A1H3R3A213	3.3uF 50V	1	
	C321	F1H1H102A219	1000pF 50V	1	
	C322	F1H1H223A219	0.022pF 50V	1	
	C323	F2A1C101A030	100uF 16V	1	
	C324	F0A2A152A010	1500pF 100V	1	
	C327	F1H1H103A219	0.01uF 50V	1	
	C384	F2A1E101A012	100uF 25V	1	
	C392	RCA1CKA100BT	10uF 16V	1	
	C501	RCA1CKA100BT	10uF 16V	1	
	C900	F2A1A331B295	330uF 10V	1	
	C901	F1H1H104A913	0.1uF 50V	1	
	C903	F1H1H221A004	220pF 50V	1	
	C904	F1H1H221A004	220pF 50V	1	
	C905	F1H1H221A004	220pF 50V	1	
	C909	RCA0JKA101BT	100uF 6.3V	1	
	C950	F1H1H102A219	1000pF 50V	1	
	C953	F1H1H102A219	1000pF 50V	1	
	C954	F1H1H332A219	3300pF 50V	1	
	C955	F1H1H332A219	3300pF 50V	1	

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
	C956	F1H1H332A219	3300pF 50V	1	
	C957	F1H1H332A219	3300pF 50V	1	
	C958	F1J1E105A008	1uF 25V	1	
	C910	F1J1E105A008	1uF 25V	1	
	C2101	F1H1H102A219	1000pF 50V	1	
	C2102	F1H1H102A219	1000pF 50V	1	
	C2103	F1H1H102A219	1000pF 50V	1	
	C2104	F1H1H472A013	4700pF 50V	1	
	C2105	F1H1H102A219	1000pF 50V	1	
	C2106	F1H1H102A219	1000pF 50V	1	
	C2107	F1H1H221A004	220pF 50V	1	
	C2108	F1H1H221A004	220pF 50V	1	
	C2109	F1H1H222A219	2200pF 50V	1	
	C2110	F1H1C104A002	0.1uF 16V	1	
	C2111	F1H1H221A004	220pF 50V	1	
	C2112	F1H1H221A004	220pF 50V	1	
	C2113	F1H1H221A004	220pF 50V	1	
	C2114	F1H1H102A219	1000pF 50V	1	
	C2115	F1H1H560A230	56pF 50V	1	
	C2116	F1H1H390A004	39pF 50V	1	
	C2117	F1H1H102A219	1000pF 50V	1	
	C2118	F1H1H560A230	56pF 50V	1	
	C2119	F1H1H560A230	56pF 50V	1	
	C2120	F1H1H220A736	22pF 50V	1	
	C2121	F1H1H104A913	0.1uF 50V	1	
	C2123	F1H1H220A736	22pF 50V	1	
	C2124	F1J1H101A631	100pF 50V	1	
	C2125	F1H1C104A002	0.1uF 16V	1	
	C2126	F1H1H104A913	0.1uF 50V	1	
	C2130	F2A0J101A030	100uF 6.3V	1	
	C2131	F2A0J101A030	100uF 6.3V	1	
	C2132	F1H1H102A219	1000pF 50V	1	
	C2133	F1H1H102A219	1000pF 50V	1	
	C2500	F1H1C105A097	1uF 16V	1	
	C2501	F1H1C105A097	1uF 16V	1	
	C2502	F1H1H221A004	220pF 50V	1	
	C2503	F1H1H221A004	220pF 50V	1	
	C2504	F1H1C105A097	1uF 16V	1	
	C2505	F1H1C105A097	1uF 16V	1	
	C2506	F1H1C105A097	1uF 16V	1	
	C2507	F1H1H221A004	220pF 50V	1	
	C2508	F1H1H221A004	220pF 50V	1	
	C2509	F1H1H221A004	220pF 50V	1	
	C2510	F1H1C105A097	1uF 16V	1	
	C2511	F1H1H221A004	220pF 50V	1	
	C2514	F1H1C105A097	1uF 16V	1	
	C2515	F1H1C8230002	0.082uF 16V	1	
	C2516	F1H1H221A004	220pF 50V	1	
	C2517	F1H1H221A004	220pF 50V	1	
	C2518	F1H1C105A097	1uF 16V	1	
	C2519	F1H1A124A012	0.12uF 10V	1	
	C2520	F1H1C8230002	0.082uF 16V	1	
	C2521	F2A1C470A030	47uF 16V	1	
	C2522	F1H1A124A012	0.12uF 10V	1	
	C2523	F1H1H4700006	47pF 50V	1	
	C2524	F1H1E1530002	0.015uF 25V	1	
	C2525	F1H1E1530002	0.015uF 25V	1	
	C2526	F1H1E1530002	0.015uF 25V	1	
	C2527	F1H1A154A025	0.15uF 10V	1	
	C2528	F1H1A154A025	0.15uF 10V	1	
	C2529	F1H1A154A025	0.15uF 10V	1	
	C2530	F1H1A154A025	0.15uF 10V	1	
	C2531	F1H1E1530002	0.015uF 25V	1	
	C2532	F1H1H4700006	47pF 50V	1	
	C2533	F2A1C470A030	47uF 16V	1	
	C2534	F2A1HR33A147	0.33uF 50V	1	
	C2535	F1H1H4700006	47pF 50V	1	
	C2536	RCA1HKA0R1BT	0.1 50V	1	
	C2537	F1H1H4700006	47pF 50V	1	
	C2538	RCA1HKA0R1BT	0.1 50V	1	
	C4111	F2A1C471A030	470uF 16V	1	
	C4116	F2A1C101A030	100uF 16V	1	
	C4117	F1H1H104A913	0.1uF 50V	1	

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
	C4119	F1H1H104A913	0.1uF 50V	1	
	C4137	F1H1H272A219	2700pF 50V	1	
	C4138	F1H1H272A219	2700pF 50V	1	
	C4139	F1H1C683A071	0.068uF 16V	1	
	C4140	F1H1C683A071	0.068uF 16V	1	
	C4141	F1H1A105A030	1uF 10V	1	
	C4142	F1H1A105A030	1uF 10V	1	
	C4143	F1H1H1010005	100pF 50V	1	
	C4144	F1H1H1010005	100pF 50V	1	
	C4145	F2A1C101A030	100uF 16V	1	
	C4148	F1H1C105A097	1uF 16V	1	
	C4149	F1H1C105A097	1uF 16V	1	
	C4150	F1H1C104A002	0.1uF 16V	1	
	C4151	F2A1C101A030	100uF 16V	1	
	C4152	F1H1H104A913	0.1uF 50V	1	
	C4153	F2A1C470A030	47uF 16V	1	
	C4154	RCA1EM332ET	3300 25V	1	
	C4156	RCA1CKA100BT	10uF 16V	1	
	C4158	RCA1CKA100BT	10uF 16V	1	
	C4160	F1H1H103A219	0.01uF 50V	1	
	C4162	F2A1C101A030	100uF 16V	1	
	C4164	F1H1H471A792	470pF 50V	1	
	C4165	F1H1H471A792	470pF 50V	1	
	C4167	F2A0J101A030	100uF 6.3V	1	
	C4168	F1H1C334A057	0.33uF 16V	1	
	C4169	F2A1E221A122	220uF 25V	1	
	C4170	F2A1C102A428	1000uF 16V	1	
	C4171	F2A1C102A428	1000uF 16V	1	
	C4172	F1H1H4700006	47pF 50V	1	
	C4173	F1H1H4700006	47pF 50V	1	
	C4174	F1H1H221A004	220pF 50V	1	
	C4175	F1H1H221A004	220pF 50V	1	
	C4176	F1H1H104A913	0.1uF 50V	1	
	C4177	F1H1H104A913	0.1uF 50V	1	
	C4178	F2A1C470A030	47uF 16V	1	
	C4179	F1H1H103A219	0.01uF 50V	1	
	C4182	F1H1H104A913	0.1uF 50V	1	
	C4183	F1H1H104A913	0.1uF 50V	1	
	C5903	F1H1H104A913	0.1uF 50V	1	
	C5904	F1H1H104A913	0.1uF 50V	1	
	C5909	F2A1E471B424	470uF 25V	1	
	C5910	F1H1H104A913	0.1uF 50V	1	
	C5928	F1H1H104A913	0.1uF 50V	1	
	C5929	F1H1H104A913	0.1uF 50V	1	
	C7102	F1H1A4740010	0.47uF 10V	1	
	C7107	F1H1H223A219	0.022uF 50V	1	
	C7142	F1H1H332A219	3300pF 50V	1	
	C7154	F1H1C104A041	0.1uF 16V	1	
	C7155	F1H1C104A041	0.1uF 16V	1	
	C7161	F1H1C104A041	0.1uF 16V	1	
	C7164	F1J1A106A024	10uF 10V	1	
	C7165	F1J1A106A024	10uF 10V	1	
	C7166	F1H1H103A219	0.01uF 50V	1	
	C7203	RCA0JKA221IT	220uF 6.3V	1	
	C7204	F1H1C104A041	0.1uF 16V	1	
	C7216	F1H1H6810005	680pF 50V	1	
	C7217	F1H1C104A041	0.1uF 16V	1	
	C7218	F1H1C8230002	0.082uF 16V	1	
	C7221	F1H1H150A004	15pF 50V	1	
	C7222	F1H1H150A004	15pF 50V	1	
	C7223	ECEA1EKA4R7I	4.7uF 25V	1	
	C7225	F1H1H102A219	1000pF 50V	1	
	C7226	F1H1H102A219	1000pF 50V	1	
	C7227	F2A1H1R0A880	1 50V	1	
	C7228	F2A1H1R0A880	1 50V	1	
	C7230	F1H1C104A041	0.1uF 16V	1	
	C7231	RCA0JKA221IT	220uF 6.3V	1	
	C7232	RCA0JKA221IT	220uF 6.3V	1	
	C7233	F1H1C104A041	0.1uF 16V	1	
	C7234	F1H1C104A041	0.1uF 16V	1	
	C7235	F2A1C100A029	10uF 16V	1	
	C7241	F1H1H102A219	1000pF 50V	1	
	C7243	F1H1C104A041	0.1uF 16V	1	

Safety	Ref. No.	Part No.	Part Name & Description	QTY	Remarks
	C7244	F1H1C153A041	0.015uF 16V	1	
	C7253	F1H1H471A792	470pF 50V	1	
	C7263	F1H1C104A041	0.1uF 16V	1	
	C7264	F1H1C104A041	0.1uF 16V	1	
	C7315	F1H1A4740010	0.47uF 10V	1	
	C7334	RCA1AKA221IT	220 10V	1	
	C7335	F1H1C104A041	0.1uF 16V	1	
	C7338	F1H1E273A002	0.027uF 25V	1	
	C7339	F1H1C183A041	0.018uF 16V	1	
	C7352	F1H1C183A041	0.018uF 16V	1	
	C7601	F2A0J330A603	33uF 6.3V	1	
	C7613	F1H1C104A041	0.1uF 16V	1	
	C7614	F2A0J101A030	100uF 6.3V	1	
	C7626	F1H1C104A041	0.1uF 16V	1	
	C7670	F1H1C104A041	0.1uF 16V	1	

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