PSG1002034CE

Service Manual

CD Stereo System

Model No. SA-AKX10PH
SA-AKX10PN

Product Color: (K)...Black Type

Notes: This model's CD Mechanism Unit is DLS6C. Please refer to the original service manual (Order No. MD0803034CE) for this mechanism

⚠ WARNING

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

IMPORTANT SAFETY NOTICE

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

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1 Safety Precautions

1.1. General Guidelines

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

1.1.1. LEAKAGE CURRENT COLD CHECK

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

1.1.2. LEAKAGE CURRENT HOT CHECK

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

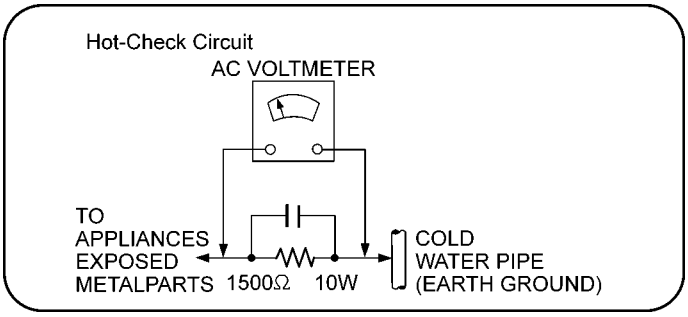


Figure 1

1.2. Before Use (For PH only)

Be sure to disconnect the mains cord before adjusting the voltage selector.
Use a minus(-) screwdriver to set the voltage selector (on the rear 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.)

1.3. Caution For Fuse Replacement

CAUTION:

Replace with the same type fuse:
(Manufacturer: LITTELFUSE, INC, Type: 233, F1, 8A, 125V) (For PN only)

CAUTION:

Replace with the same type fuse:
(Manufacturer: HOLLYLAND, INC, Type: 50T, F1, 630mA, 250V) (For PH only)

1.4. Before Repair and Adjustment

Disconnect AC power to discharge unit AC Capacitors as such (C5701, C5703, C5704, C5705, C5706, C5707, C5708) through a 10 Ω, 10 W resistor to ground.

Caution:

DO NOT SHORT-CIRCUIT DIRECTLY (with a screwdriver blade, for instance), as this may destroy solid state devices.

After repairs are completed, restore power gradually using a variac, to avoid overcurrent.

Current consumption at AC 120 V, 60 Hz in NO SIGNAL mode volume minimal should be ~ 500 mA. (PN)

Current consumption at AC 110~127 V / 220~240 V, 50/60 Hz in NO SIGNAL mode volume minimal should be ~ 500 mA. (PH)

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 Parts 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 & Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer’s specified parts to prevent shock, fire or other hazards. Do not modify the original design without permission of manufacturer.

Safety	Ref. No.	Part No.	Part Name & Description	Remarks
⚠	6	REXX1030	1P RED WIRE (VOLTAGE-SMPS)	PH
⚠	7	REXX1031	1P BLACK WIRE (VOLTAGE-SMPS)	PH
⚠	13	RGRX1002A-A2	REAR PANEL	PN
⚠	13	RGRX1002B-A2	REAR PANEL	PH
⚠	37	RKMX1003-K	TOP CABINET	
⚠	401	RAEX0190Z-V	TRAVERSE UNIT	
⚠	A2	K2CB2CB00021	AC CORD	PN
⚠	A2	K2CQ2CA00007	AC CORD	PH
⚠	A3	RQTX1084-M	O/I BOOK (En,SP)	
⚠	A3	RQTX1085-M	O/I BOOK (Sp)	PH
⚠	A6	K2DAYYY00002	AC PLUG ADAPTER	PH
⚠	PCB3	REPX0809A	SMPS P.C.B.	(RTL) PN
⚠	PCB3	REPX0809C	SMPS P.C.B.	(RTL) PH
⚠	PCB10	REPX0809C	VOLTAGE SELECTOR P.C.B.	(RTL) PH
⚠	DZ5701	ERZV10V511CS	ZNR	
⚠	S5701	K0ABCA000007	SW VOLTAGE SELECTOR	PH
⚠	L5703	G0B612H00002	LINE FILTER	
⚠	T5701	ETS39AG4M6AD	MAIN TRANSFORMER	PH
⚠	T5701	ETS39AG4NGAD	MAIN TRANSFORMER	PN
⚠	T5751	ETS19AB2E6AG	SUB TRANSFORMER	
⚠	T6101	G4DYA0000214	SWITCHING TRANSFORMER	
⚠	PC5701	B3PBA0000402	PHOTO COUPLER	
⚠	PC5702	B3PBA0000402	PHOTO COUPLER	
⚠	PC5720	B3PBA0000402	PHOTO COUPLER	
⚠	PC5799	B3PBA0000402	PHOTO COUPLER	
⚠	F1	K5D632BK0007	FUSE	PH
⚠	F1	K5D802APA008	FUSE	PN
⚠	TH5702	D4CAA2R20001	THERMISTOR	
⚠	TH5860	D4CC11040013	THERMISTOR	
⚠	TH5900	D4CC11040013	THERMISTOR	
⚠	P5701	K2AA2B000011	AC INLET	PH
⚠	P5701	K2AB2B000007	AC INLET	PN
⚠	C5701	F0CAF334A105	0.33uF	
⚠	C5703	F0CAF104A105	0.1uF	PH

Safety	Ref. No.	Part No.	Part Name & Description	Remarks
⚠	C5703	F0CAF224A105	0.22uF	PN
⚠	C5704	F1BAF1020020	1000pF	
⚠	C5705	F1BAF1020020	1000pF	
⚠	C5706	F1BAF1020020	1000pF	PH
⚠	C5707	F1BAF1020020	1000pF	PH
⚠	C5708	F1BAF1020020	1000pF	

2 Warning

2.1. Prevention of Electrostatic Discharge (ESD) to Electrostatic 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 buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device. Some solder removal devices not classified as “anti-static (ESD protected)” can generate electrical charge sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
   Caution:
   Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient to damage an ES device).

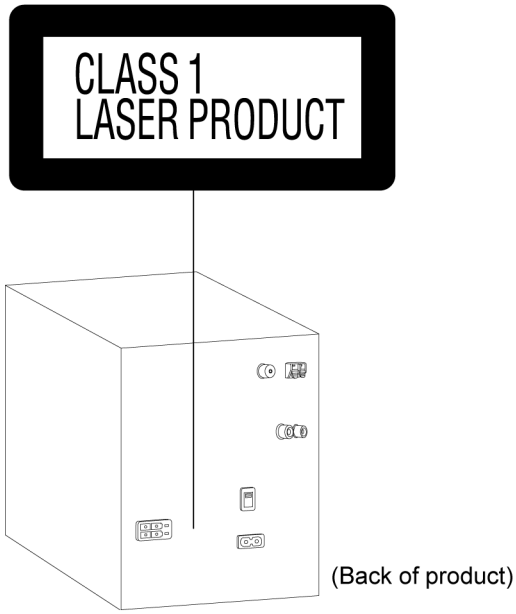
2.2. Precaution of Laser Diode

CAUTION:
THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

Caution:

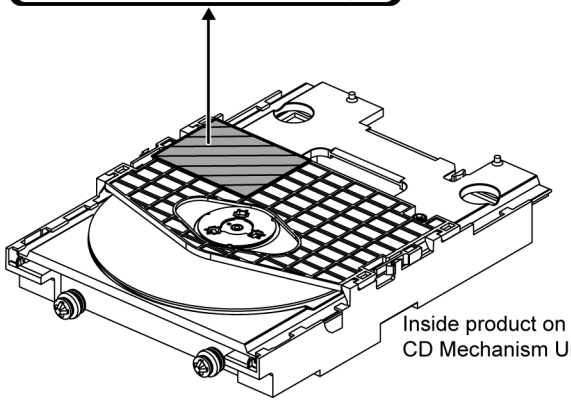
This product utilizes a laser diode with the unit turned “on”, invisible laser radiation is emitted from the pickup lens.
Wavelength: 785 nm (CD)
Maximum output radiation power from pickup: 100 μW/VDE
Laser radiation from the pickup unit is safety level, but be sure the followings:

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



(Back of product)

LASER CAUTION LABEL



Inside product on
CD Mechanism Unit (DLS6C)

2.3. Service caution based on Legal restrictions

2.3.1. General description about Lead Free Solder (PbF)

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

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

Definition of PCB Lead Free Solder being used

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

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

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

Recommended Lead Free Solder (Service Parts Route.)

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

Note

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

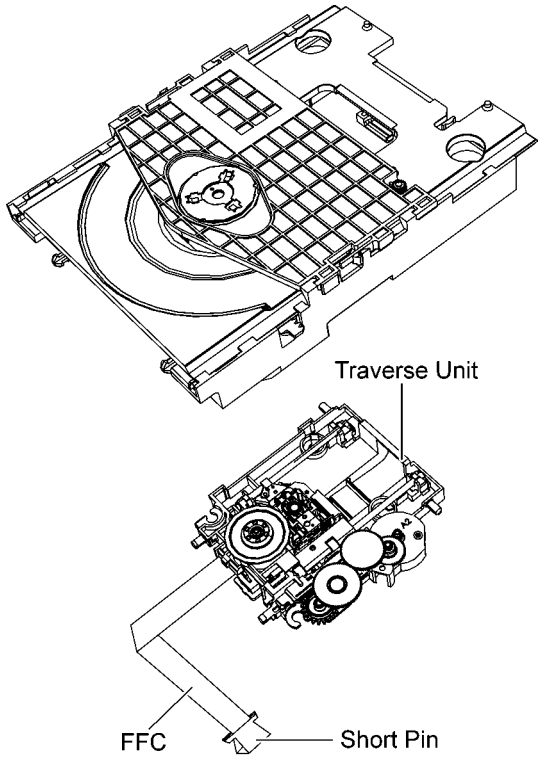
2.4. Handling Precautions for Traverse Unit

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

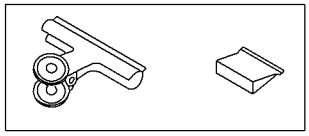
2.4.1. Cautions to Be Taken in Handling the Optical Pickup Unit

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

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



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



Clip or Short Pin

2.4.2. Grounding for electrostatic breakdown prevention

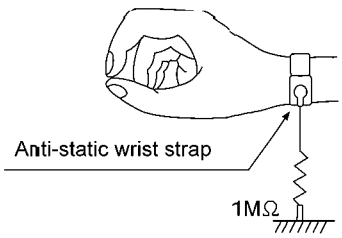
Some devices such as the DVD player use the optical pickup (laser diode) and the optical pickup will be damaged by static electricity in the working environment. Proceed servicing works under the working environment where grounding works is completed.

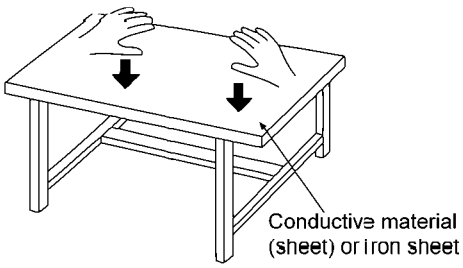
2.4.2.1. Worktable grounding

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.





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 (DLS6C):**

1) This model uses CD Mechanism Unit (DLS6C).

2) This service manual does not contain the following information on CD Mechanism Unit (DLS6C)
   - Schematic Diagram, Block Diagram and P.C.B. layout of CD Mechanism Unit (DLS6C) P.C.B.
   - Parts List for individual parts of CD Mechanism Unit (DLS6C).
   - Exploded View and Part List for individual parts of CD Mechanism Unit (DLS6C).
   Please refer to original service manual (Order No. MD0803034CE)

- **Micro-processor:**

1) The following components are supplied as an assembled part.
   - Micro-processor IC, IC2801 (RFKWMAKX10PN)

- **Speaker system:**

1) This model uses speaker, SB-AKX10PN-K (PSG1001001CE)

4 Specifications

■ **AMPLIFIER SECTION**

RMS output power stereo mode

Front Ch (both channels driven)

125 W per channel (4 Ω), 1 kHz, 10% THD

Total RMS stereo mode power

250 W

PMPO output power (PN only)

2800 W

■ **FM/AM TUNER, TERMINALS SECTION**

Preset station FM 30 stations
AM 15 stations

Frequency Modulation (FM)

Frequency range

For PH only

87.50 to 108.00 MHz (50 kHz step)

For PN only

87.9 to 107.9 MHz (200 kHz step)
87.5 to 108.0 MHz (100 kHz step)

Antenna terminal (s)

75 Ω (unbalanced)

Amplitude Modulation (AM)

Frequency range

For PH only

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

For PN only

520 to 1710 kHz (10 kHz step)

AUX Input

RCA pin jack

■ **DISC SECTION**

Discs 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

Pick up

Wavelength 785 nm(CD)
Laser Power CLASS 1 (CD)

Audio output (Disc)

Number of channels 2 (FL, FR)
FL = Front left channel
FR = Front right channel

■ **USB SECTION**

USB Port

USB standard USB 2.0 full speed
Media file format support MP3 (*.mp3)
USB device file system FAT12, FAT16, FAT32
USB Port power 500 mA (max)

■ **GENERAL**

Power supply

For PH only

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

For PN only

AC 120 V, 60 Hz

Power Consumption

For PH only

64 W

For PN only

61 W

Dimensions (W x H x D) 250 mm x 336 mm x 245 mm
Mass 3 kg
Operating temperature range 0 °C to +40 °C
Operating humidity range 35% to 80% RH (no condensation)

Power Consumption in standby mode

For PH only 0.3 W (Approximate)
For PN only 0.2 W (Approximate)

Notes

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

■ System: SC-AKX10PN-K

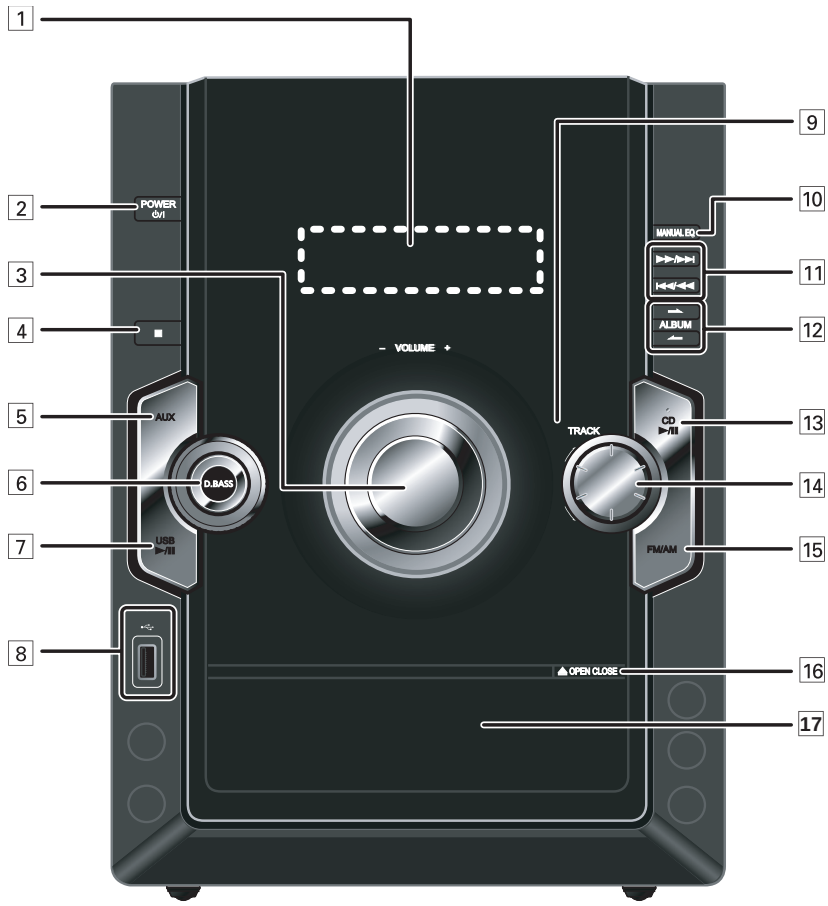
Main Unit: SA-AKX10PN-K
Front Speakers: SB-AKX10PN-K

■ System: SC-AKX10PH-K

Main Unit: SA-AKX10PH-K
Front Speakers: SB-AKX10PN-K

5 Location of Controls and Components

5.1. Main Unit Key Button Operation



1 **Display Panel**

2 **Standby/on switch (⏻/I, POWER)**
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.

3 **Volume Control**

4 [■]
Stop function

5 **[AUX]**

6 D.BASS Selection

7 **[USB,►/II]**
USB play or pause

8 **USB port**

9 **Remote control signal sensor**

10 **[MANUAL EQ] selection**

11 [I◄◄ / ◄◄][►► / ►►I]
Track skip or search,
fast-forward or rewind,
tune or preset channel selection,
sound quality adjustment,
manual EQ setting (BASS & TREBLE)

12 **Album selection**

13 **[CD, ►/II]**
Disc play and pause

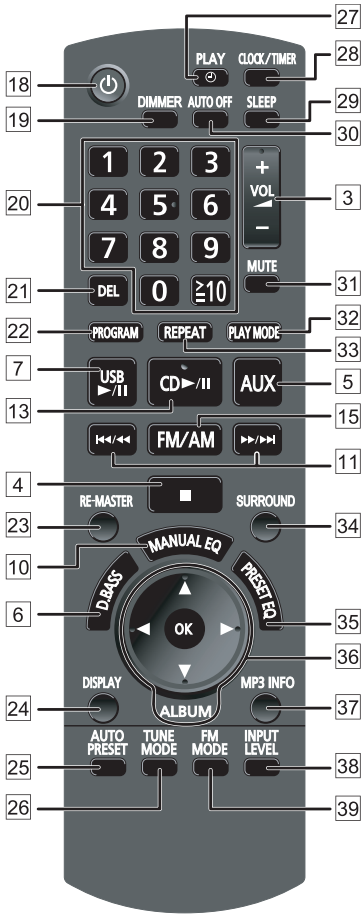
14 **[Track]**
Skip and play your desired track

15 **Tuner (FM/AM) Selection**

16 **[⏏, OPEN/CLOSE]**
Disc tray open or close

17 Disc tray

5.2. Remote Control Key Button Operation



3 Volume control

4 Stop playback

5 **[AUX]**

6 D.BASS selection

7 USB play or pause

10 Manual EQ selection

11 [⏮ / ◀◀][▶▶ / ⏭]
Track skip or search,
fast-forward or rewind,
tune or preset channel selection,
sound quality adjustment,
manual EQ setting (BASS & TREBLE)

13 Disc play and pause

15 Tuner (FM/AM) Selection

18 **Standby/on switch (⏻/I, POWER)**
Press to switch the unit from on to standby mode or vice versa.
In standby mode, the unit is still consuming a small amount of power.

19 **[DIMMER]**
To dim the display panel

20 Numberic selection

21 Delete function

22 Program function

23 RE-MASTER selection

24 Display function

25 **[AUTO PRESET]**
To restart presetting

26 **[TUNE MODE]**
To select "MANUAL"

27 Play timer

28 Clock or timer setting

29 Sleep timer

30 Auto off

31 Muting function

32 **[PLAY MODE]**
To select the desired mode

33 Repeat function

34 Surround selection

35 **Preset EQ**
Changing the sound quality

36 Album selection

37 **MP3 INFO**
To check the track information

38 **INPUT LEVEL**
Level adjustment

39 Tuner (FM) Selection

5.3. Media 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

- 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 finalized.
- 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.

NOTE on USB

Compatible devices

Devices which are defined as USB mass storage class:

- USB devices that support bulk only transfer.
- USB devices that support USB 2.0 full speed.

Supported format

- Folders are defined as album.
- Files are defined as track.
- Track must have the extension “.mp3” or “.MP3”.
- CBI (Control/Bulk/Interrupt) is not supported.
- A device using NTFS file system is not supported. [Only FAT 12/16/32 (File Allocation Table 12/16/32) file system is supported.]
- Depending on the sector size, some files may not work.
- Maximum album: 255 albums
- Maximum track: 2500 tracks
- Maximum track in one album: 999 tracks

6 Self-Diagnostic and Special Mode Setting

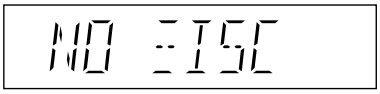
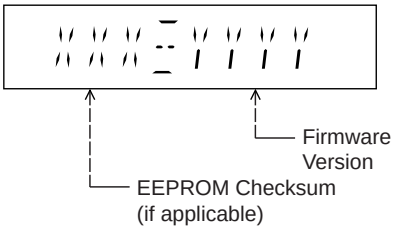
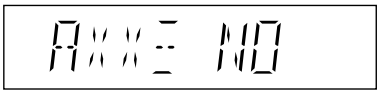
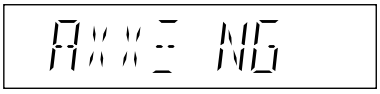
6.1. Cold-Start

Here is the procedure to carry out cold-start or initialize to shipping mode.

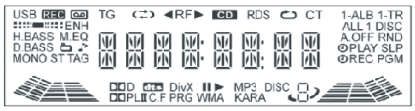
1. Unplug AC power cord
2. Press & hold [POWER] button
3. Plug AC power cord while [POWER] button being pressed
   FL Display will show “_ _ _ _ _ _ _ _”
4. Release [POWER] button

6.2. Doctor Mode Table

6.2.1. Doctor Mode Table 1

Item		FL Display	Key Operation
Mode Name	Description		Front Key
Doctor Mode	To enter into Doctor Mode		In CD Mode: 1.Press [■] button on main unit follow by [4] and [7] on remote control. 2. To exit, press [OK] button on remote control or press [POWER, ⏻ /I] button on main unit or remote control.
EEPROM checksum check	For checking of various items and displaying EEPROM and Firmware version.	 **Condition 1** When EEPROM is detected and has ROM correction. (The correction point existing data is other than 0)  **Condition 2** When EEPROM is detected and there is no ROM correction. (The correction point is 0)  **Condition 3** When the EEPROM is detected and has ROM correction but NG. (The file name is different even though a EPROM is set,or no correction file is existing) 	In CD Mode: 1. Enter Doctor Mode

6.2.2. Doctor Mode Table 2

Item		FL Display	Key Operation
Mode Name	Description		Front Key
Cold Start	To active cold start upon next AC power up when reset start is execute the next time.	-- -- -- -- -- -- -- --	In Doctor Mode: 1. Press [4] button on remote control.
Volume Setting Check	To check the volume setting of a main unit.	VOLUME XX Press [7]: VOLUME50 Press [8]: VOLUME35 Press [9]: VOLUME27 Press [>10]: VOLUME0 └ Volume	In Doctor Mode: 1. Press [7],[8],[9],[>10] button on remote control.
FL Display Check	To check the FL segment display All segment will light up while all LED blink at 0.5s,intervals.(if any)		In Doctor mode: 1. Press [2] button on remote control.
DLS6 Reliability Test (Loading)	To determine CD Mechanism Unit (DLS6C) Open/Close operation. In this mode, the tray will open & close. Note: Refer to Section 6.3 Fig 1 for process flow.	0000-0000 The counter will increment by one. When reach 9999 will change to 0000 Cancellation Display CANCEL	In Doctor Mode: 1.Press [5] button on remote control. 2.To cancel, press [0] on remote control.
DLS6 Reliability Test (Traverse)	To determine CD Mechanism DLS6C Access Inner & Outer disc operation. In this mode,ensure the CD is in the main unit. Note: Refer to Section 6.3 Fig 2. for process flow.	0000-0000 The counter will increment by one. When reach 9999 will change to 0000 Cancellation Display CANCEL	In Doctor Mode: 1.Press [6] button on remote control. 2.To cancel, press [0] on remote control.
DLS6 Reliability Test (Combination)	To determine CD Mechanism Unit (DLS6C) Open/Close & Access Inner & Outer Disc Operation. In this mode,ensure the CD is in the main unit. Note: Refer to Fig. 6.3. for process flow.	0000-0000 The counter will increment by one. When reach 9999 will change to 0000 Cancellation Display CANCEL	In Doctor Mode: 1.Press [DIMMER] button on remote control. 2.To cancel, press [0] on remote control.

6.3. Reliability Test Mode (CD Mechanism Unit (DLS6C))

Below is the process flow chart of the aging test for the CD Mechanism Unit (DLS6C).

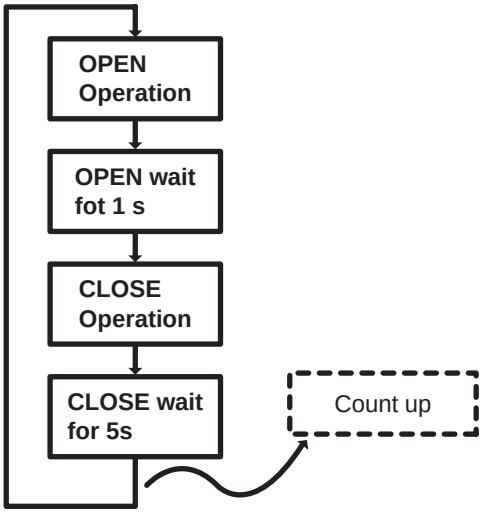


Fig. 1. Reliability Test (Loading)

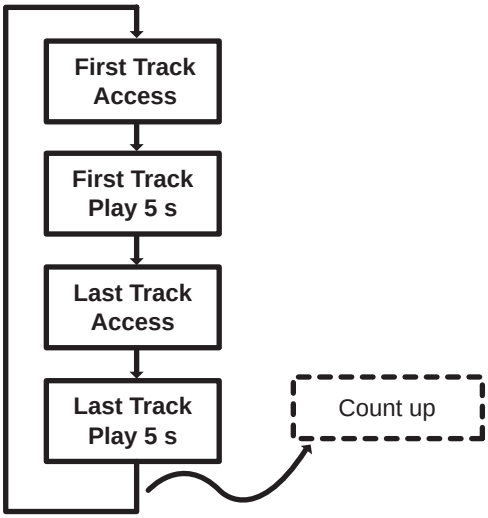


Fig. 2. Reliability Test (Traverse)

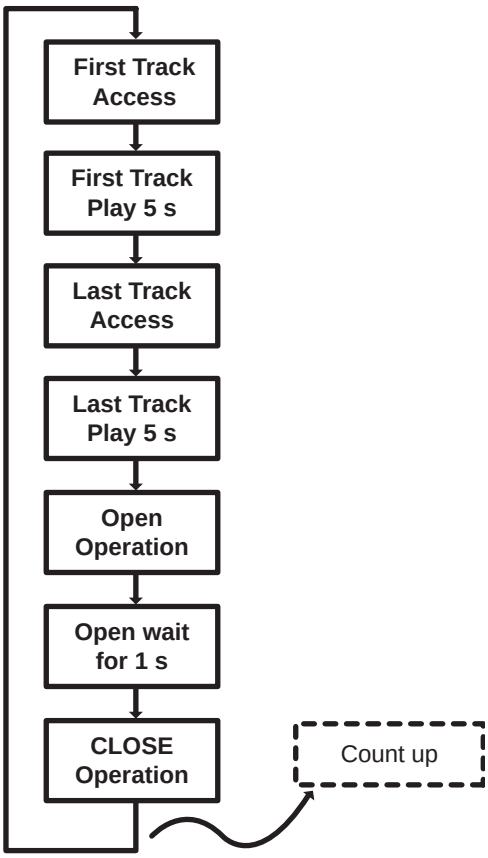
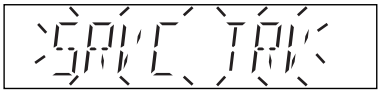
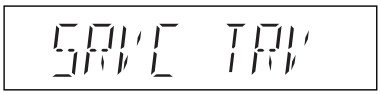


Fig. 3. Reliability Test (Combination)

6.4. Self-Diagnostic Mode

Item		FL Display	Key Operation
Mode Name	Description		Front Key
Self-Diagnostic Mode	To enter into self-diagnostic.		In AUX Mode: 1. Press and hold [STOP] button on the main unit for 2 secs. 2. Do not release [STOP] button, press & hold [▶▶/ ▶▶I] on the main unit for 2 secs. 3. To exit, press [POWER,/I⏻] button on main unit.
Service Mode	To unlock the mechanism unit for service. During the process,''SRCV TRV'' will blink. When ready "SRVC TRV" will stop blinking. In this mode, the disassembly of DLS6C can be carry out. (Refer to original service manual for CD Mechanism Unit (DLS6C))	(Display 1)  (Blinking) (Display 2) 	In Self-Diagnostic Mode: 1. Press [⏏ Open / Close] button on main unit. 2.To exit,press [POWER⏻/I] button on main unit.

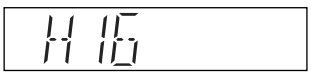
6.5. Self-Diagnostic Error Code Table

Self-Diagnostic Function (Refer Section 6.4. Self-Diagnostic Mode) provides information on any problems occurring for the unit and its respective components by displaying the error codes. These error code such as U**, H** and F** are stored in memory and held unless it is cleared.
The error code is automatically display after entering into self-diagnostic mode.

6.5.1. Power Supply Error Code Table

Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
F61	Power Amp IC output abnormal	Upon power on, PCNT=HIGH, DCDET2=L after checking LSI.		Press [■-DEMO] on main unit for next error.
F76		DCDET1 = L (NG)		
F61-76		Both DCDET1 and DCDET2 L (NG)		

6.5.2. Mechanism Error Code Table (CD Mechanism Unit (DLS6C))

Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
F15	CD REST SW Abnormal	CD traverse position initial setting operation fail safe time is over (10 sec) waiting for REST SW to turn on.		Press [■/-DEMO] on main unit for next error.
F26	Communication between CD servo LSI and micro-p abnormal.	At the time of switching to CD function,SENSE = H shall be detected using DTMS system setting command. If the error is memorized when SENSE = L is not detected within fail safe timer time (20ms), [F26] shall be displayed simultaneously.This display shall be retained if the power is ON and at CD function. If this error occurs, CD operation afterwards shall not be executed as in the case of [NO DISC].	 	Press [■/-DEMO] on main unit for next error.
H15	CD Open SW Abnormal	During normal operation CD OPEN SW On fail to be detected with 3 sec.		Press [■/-DEMO] on main unit for next error.
H16	CD closing SW abnormal	During Closing operation,if "POS_SW_CEN" is not detected within 3 secs.		Press [■ /-DEMO]on main unit for next error.

7 Troubleshooting Guide

7.1. Troubleshooting Guide for F61 and/or F76

This section illustrates the checking procedures when upon detecting the error of “F61” and/or “F76” after power up of the unit. It is for purpose of troubleshooting and checking in SMPS, D-Amp & Main P.C.B.

Symptom	Checking Items		Possible Fault(s)		Remarks
Set cannot ON	1	AC Cord	1	AC Cord Faulty, Loose connection.	Refer to Section 7.2.1 Fig. 1. SMPS P.C.B.
	2	AC Inlet, P5701	2	P5701 solder crack, dry joint.	
	3	Fuse, F1	3	Fuse, F1 Open.	
	4	Photocoupler	4	PC5702/PC5799 solder crack.	
		PC5702, PC5799		Dry joint, short circuit, open circuit.	
	5	Switching IC, IC5701	5	IC5701 Faulty.	
	6	Switching IC, IC5799	6	IC5799 Faulty.	
Set can ON then F61	1	Speaker Output	1	Faulty speaker unit, Loose connection, Short.	Refer to Section 7.2.3 Fig. 3. D-Amp P.C.B.
	2	D-AMP circuit	2a	D-AMP IC, IC5900 defective.	
				(DC voltage of +/-30V detected at speaker output)	
Set can ON then F76	1	Transformer T5701	1a	Short circuit between Pin 14 and Pin 15.	Refer to Section 7.2.1 Fig. 1. SMPS P.C.B.
			1b	Short circuit between Pin 15 and Pin 16.	
			1c	Short circuit between Pin 16 and Pin 17.	
	2	DC-DC Circuit	2a	Check cable wire connection between cable wire ZJ2701	Refer to Section 7.2.2 Fig. 2. Main P.C.B.
				(At Main P.C.B) & connector CN5802 (At SMPS P.C.B)	
			2b	Voltage Regulator IC (IC2701) &	
				Switching Regulator IC (IC2702) faulty.	
	3	Photocoupler	3	PC5720 solder crack,	Refer to Section 7.2.1 Fig. 1. SMPS P.C.B.
		PC5720		Dry joint, short circuit, open circuit.	
Set can ON working normally for some time then F76	1	Rectifier D5801	1a	Improper contact between D5801 to Heatsink.	Refer to Section 7.2.1 Fig. 1. SMPS P.C.B.
		Rectifier D5802		Improper contact between D5802 to Heatsink.	
	2	Thermistor TH5860	1b	Set trigger temperature protection.	

7.2. Part Location

7.2.1. SMPS P.C.B.

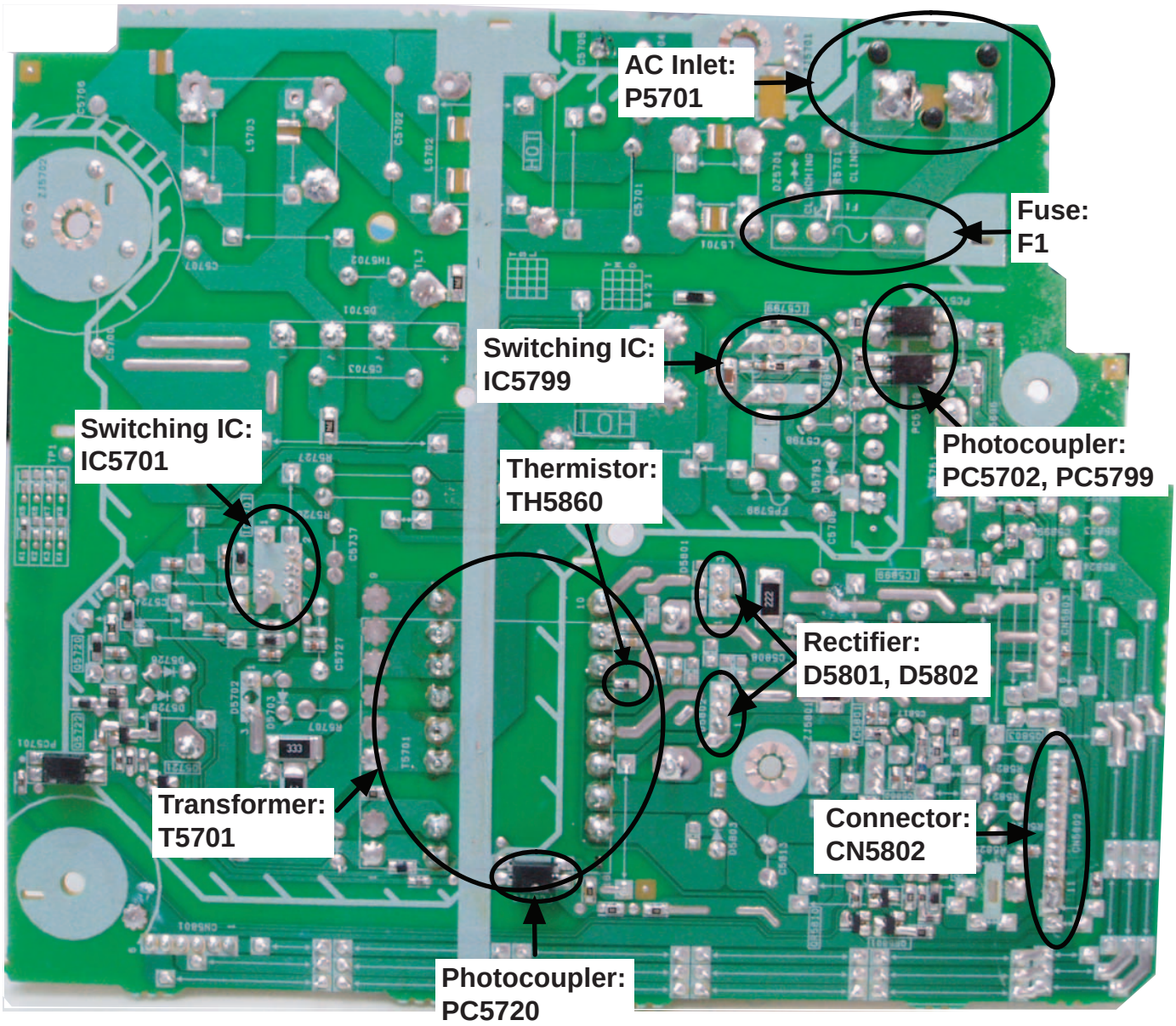


Fig. 1 SMPS P.C.B.

7.2.2. Main P.C.B.

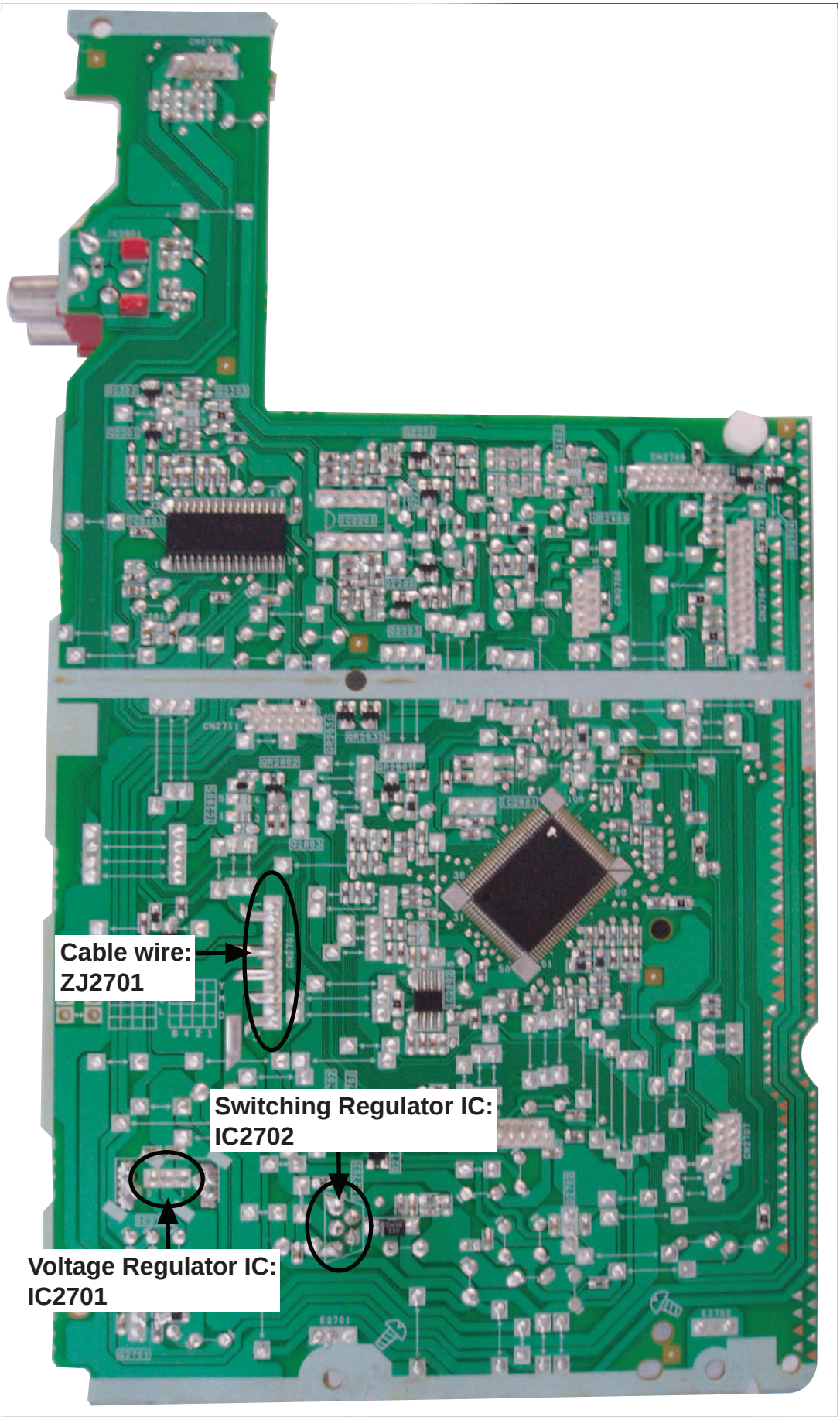


Fig. 2 Main P.C.B.

7.2.3. D-Amp P.C.B.

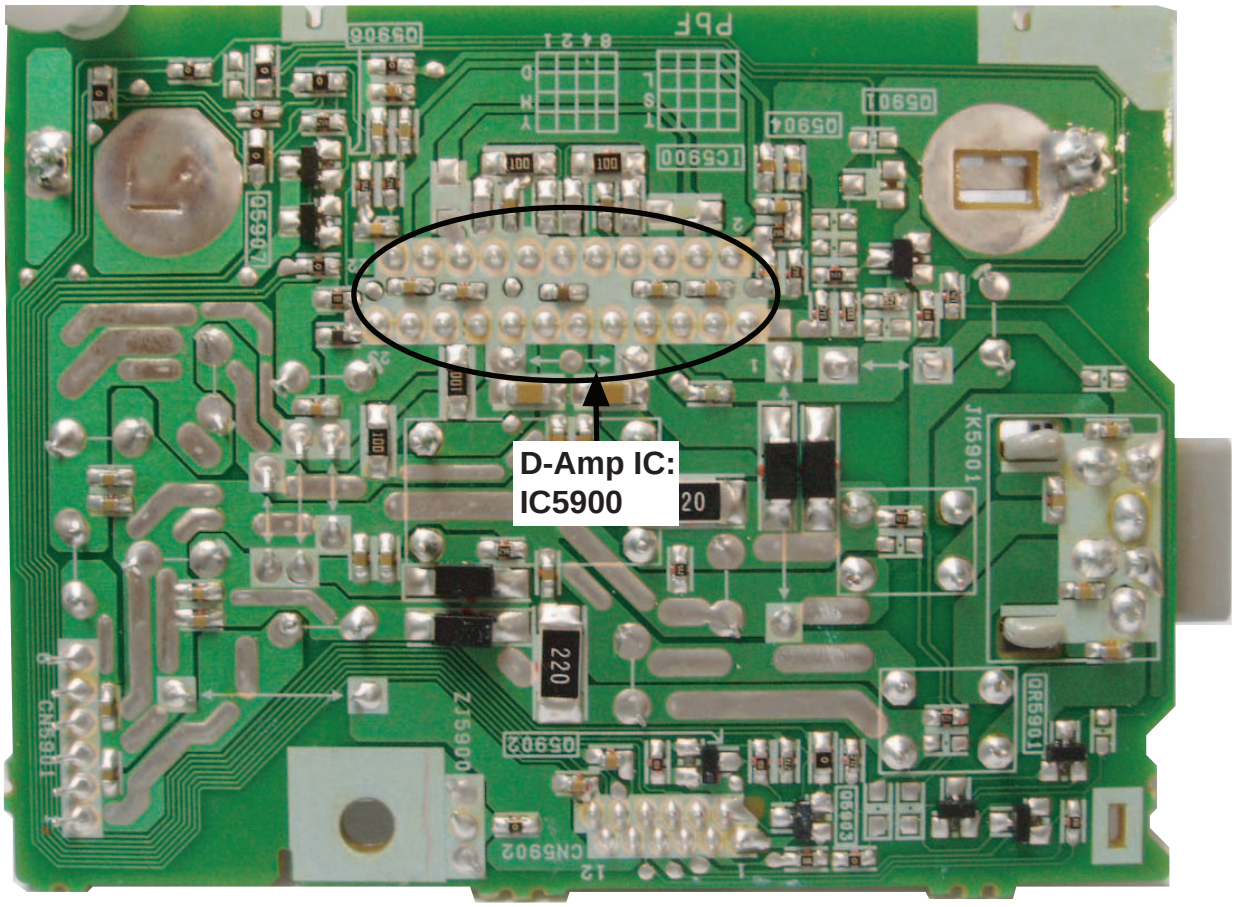


Fig. 3 D-Amp P.C.B.

7.3. D-Amp IC Operation & Control

D-AMP IC Operation & Control

1) D-AMP IC (C1AB0000497) was used for this model (AKX10).
2) Three control pins (signal send from micro-processor IC) were used to control the D-AMP IC operation such as muting, standby and normal operation. They are described as below: -

No	Pin no	Signal name	Function
1	4	F_HOP	Frequency Hop control.
2	6	MODE_DA	Digital Amp On/Off control.
3	3	MUTE_F	Digital Amp Muting control

Table 1: Digital AMP Pin Control.

Here is detailed description of the three control pins for the D-AMP IC

A) **MODE_DA** & **MUTE_F** were used to switch the D-AMP IC in the following muting status:

- L(Low/OFF): Standby / OFF
- H (High/ON): Operating or Mute

Below is the logic for the two pins used for the control of the D-AMP IC.

No	MODE_DA	MUTE_F	Digital AMP IC mode status
1	L	X	OFF (0V)
2	H	H	Mute (2.5V)
3	H	L	Operating(5V)

Table 2: Digital AMP IC Mode Status.

Note: Standby/OFF condition of D.AMP IC is available / activated only during the following event: Switching of Frequency Hoping, power off and start up (when the unit is undergoing the transition from standby to normal operation mode)

B) **F_HOP** is used to control the D-AMP operation to avoid interference with AM source by controlling the frequency source used. It will switch from one frequency to the other, depending on the tuned AM frequency.

For 9 KHz Step

AM Band Frequency	F_HOP	Switching Frequency
522 ~ 558	L	301
567 ~ 639	H	350
648 ~ 855	L	301
864 ~ 945	H	350
954 ~ 1152	L	301
1161 ~ 1242	H	350
1251 ~ 1449	L	301
1458 ~ 1539	H	350
1548 ~ 1629	L	301

Table 3: F_HOP Control during 9 kHz Step

For 10 KHz Step

AM Band Frequency	F_HOP	Switching Frequency
520 ~ 560	L	301
570 ~640	H	350
650 ~ 860	L	301
870 ~ 950	H	350
960 ~ 1160	L	301

1170 ~ 1250	H	350
1260 ~ 1450	L	301
1460 ~ 1540	H	350
1550 ~ 1710	L	301

Table 4: F_HOP Control during 10 kHz Step

Note: During activating, the 3 control pins namely MUTE_F, MUTE_A and MODE_DA must be used to cover the “Pop” sound cause by F-HOP switching.

8 Service Fixture & Tools

8.1. Service Tools and Equipment

Prepare service tools before process service position.

Service Tools		Remarks
Main P.C.B. (CN2701) - SMPS P.C.B. (CN5802)	REXX0189 (11P Cable Wire)	

9 Disassembly and Assembly Instructions

Caution Note:

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

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

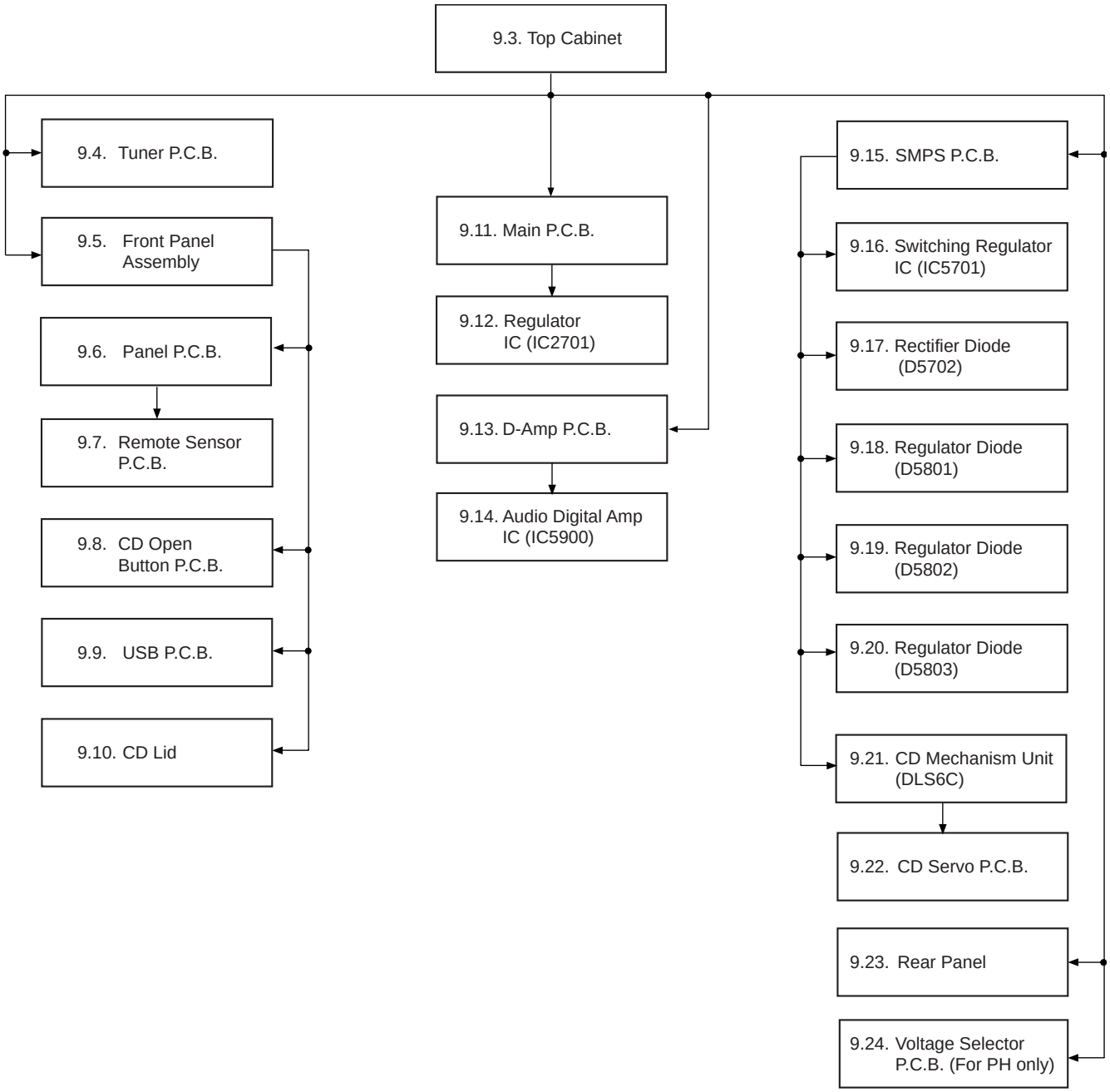
- **During disassembly and assembly, please ensure proper service tools, equipments or jigs is being used.**
- **During replacement of component parts, please refer to the section of "Replacement Parts List" as described in the service manual.**
- **Select items from the following indexes when disassembly or replacement are required.**
- Disassembly of Top Cabinet
- Disassembly of Tuner P.C.B.
- Disassembly of Front Panel Assembly
- Disassembly of Panel P.C.B.
- Disassembly of Remote Sensor P.C.B.
- Disassembly of CD Open Button P.C.B.
- Disassembly of USB P.C.B.
- Disassembly of CD Lid
- Disassembly of Main P.C.B.
- Disassembly of Regulator IC (IC2701)
- Disassembly of D-Amp P.C.B.
- Disassembly of Audio Digital Amp IC (IC5900)
- Disassembly of SMPS P.C.B.
- Disassembly of Switching Regulator IC (IC5701)
- Disassembly of Regulator Diode (D5702)
- Disassembly of Regulator Diode (D5801)
- Disassembly of Regulator Diode (D5802)
- Disassembly of Regulator Diode (D5803)
- Disassembly of CD Mechanism Unit (DLS6C)
- Disassembly of CD Servo P.C.B.
- Disassembly of Rear Panel
- Disassembly of Voltage Selector P.C.B. (For PH only)

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

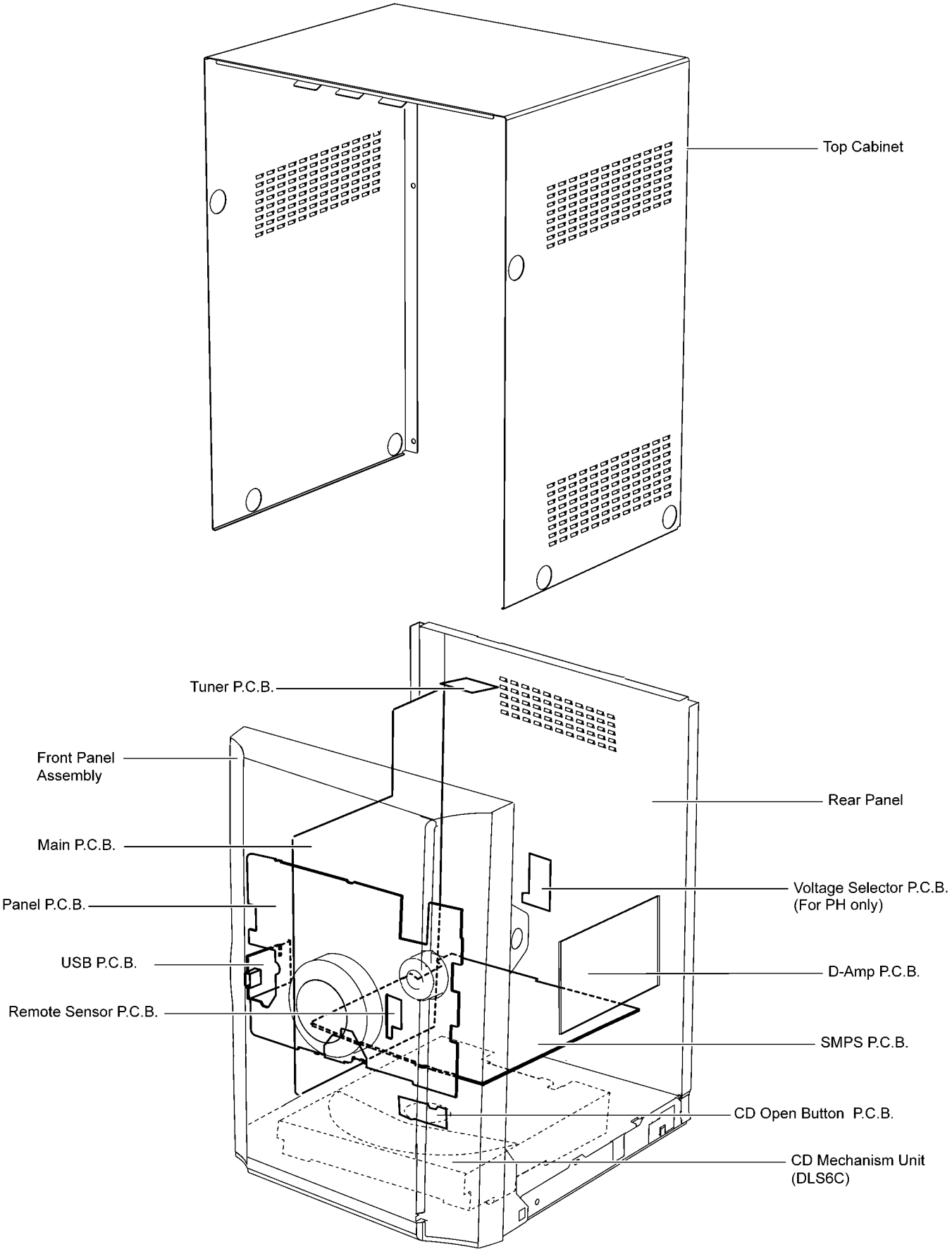
Below shown is part no. of different screw types used:

- ⓐ :RHD30007-K2J
- ⓑ :RHD30119-S
- ⓒ :RHDX30005-1
- ⓓ :XTB3+10JFJ
- ⓔ :RHD26046-L
- ⓕ :RHDX031008
- ⓖ :XTN2+6GFJ

9.1. Disassembly Flow Chart

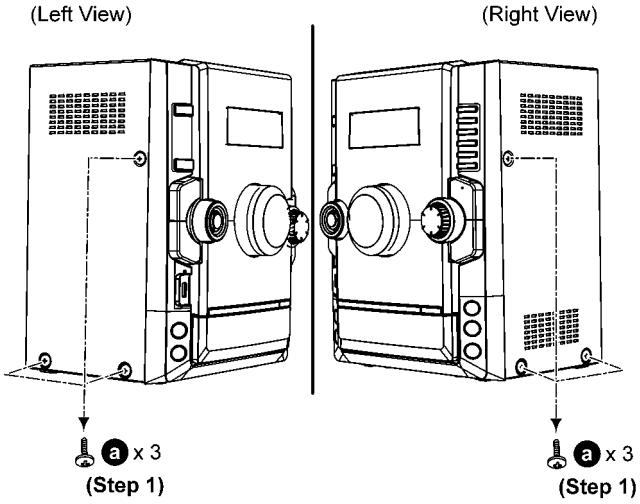


9.2. Main Components and P.C.B. Locations

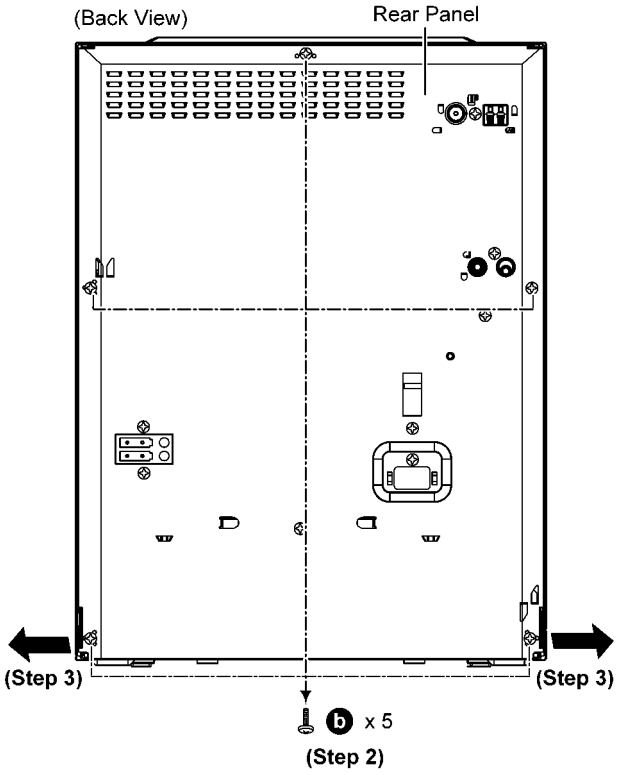


9.3. Disassembly of Top Cabinet

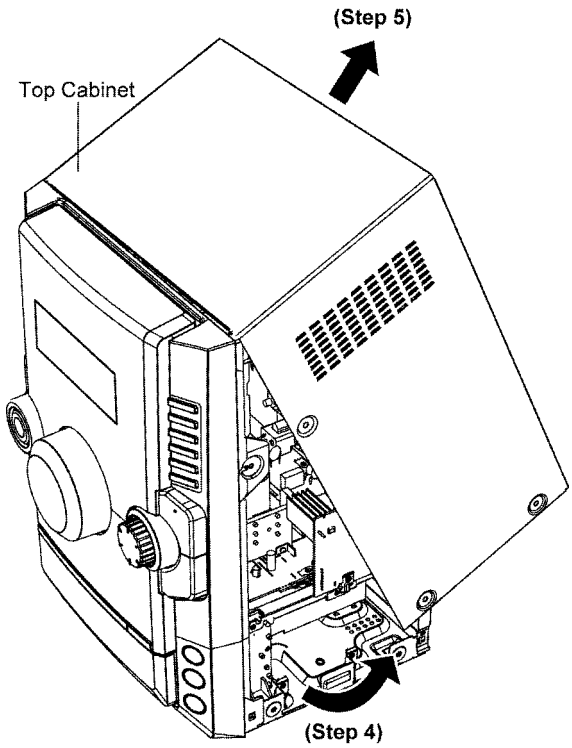
Step 1 Remove 3 screws on each side.



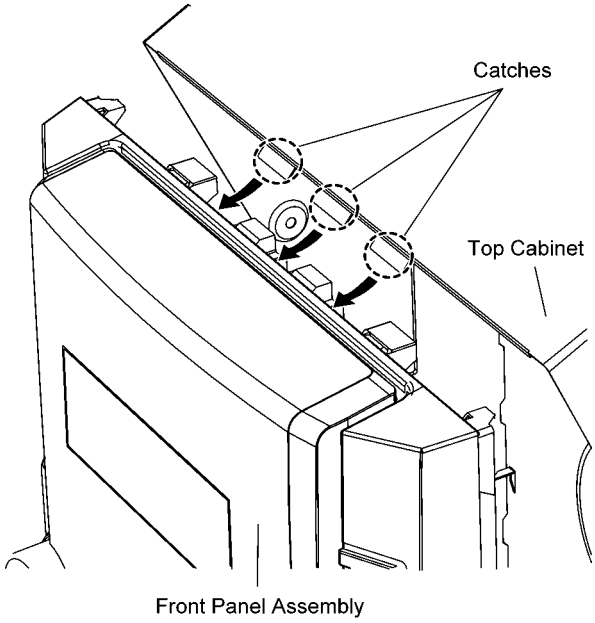
Step 2 Remove 5 screws.
Step 3 Slightly pull both side of Top Cabinet outwards as arrow shown.



Step 4 Slightly lift up both side of Top Cabinet in an outward direction as shown.
Step 5 Remove Top Cabinet.



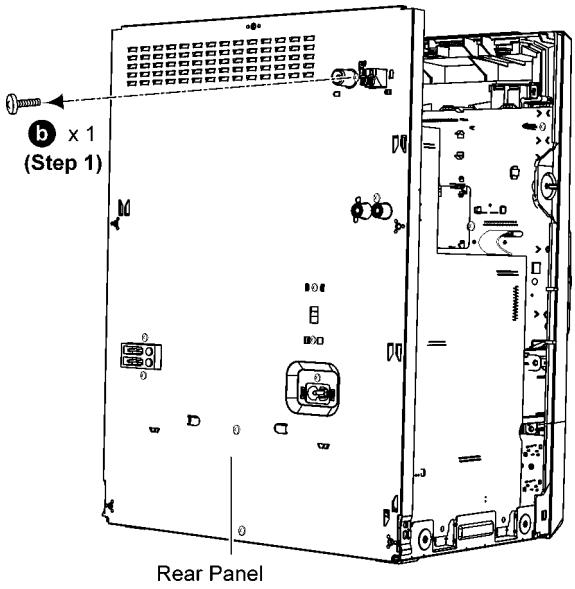
Caution: During assembling, ensure that the Top Cabinet catches are properly located into Front Panel Assembly as shown.



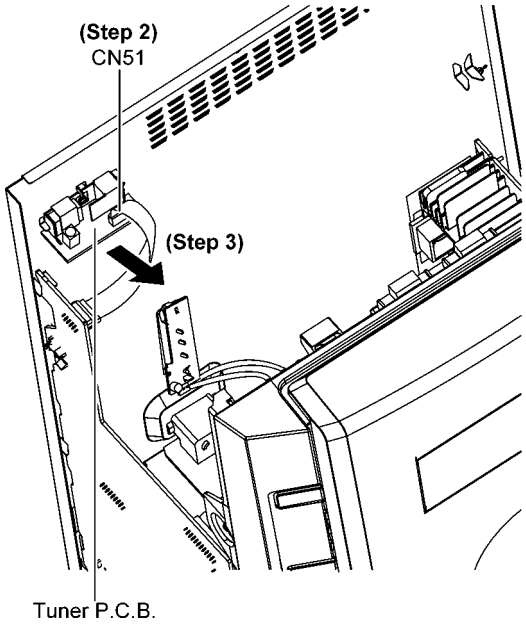
9.4. Disassembly of Tuner P.C.B.

- **Refer to "Disassembly of Top Cabinet".**

Step 1 Remove 1 screw.



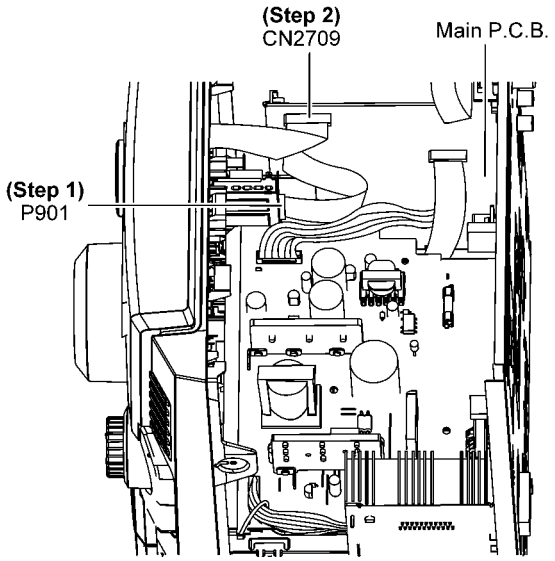
Step 2 Detach 9P FFC at the connector (CN51) on Tuner P.C.B..
Step 3 Remove Tuner P.C.B..



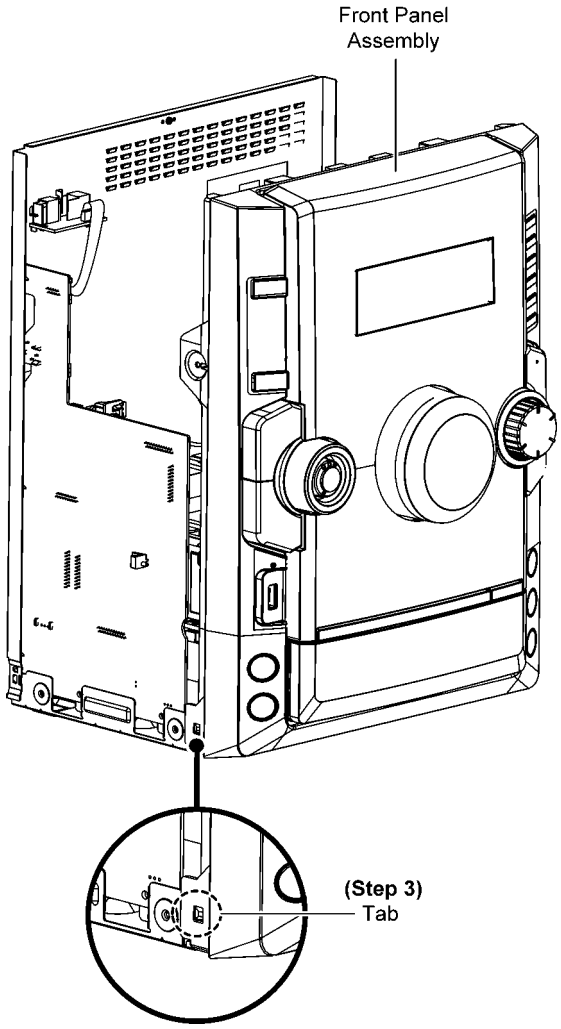
9.5. Disassembly of Front Panel Assembly

- **Refer to "Disassembly of Top Cabinet".**

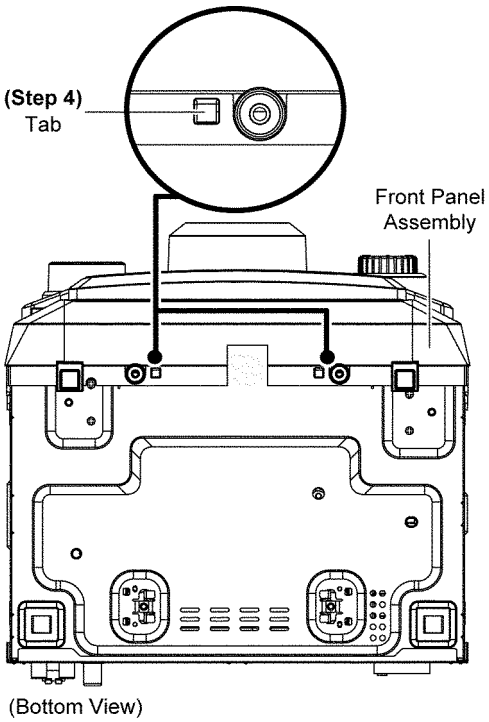
Step 1 Detach 22P FFC at the connector (P901) on USB P.C.B.
Step 2 Detach 17P FFC at the connector (CN2709) on Main P.C.B.



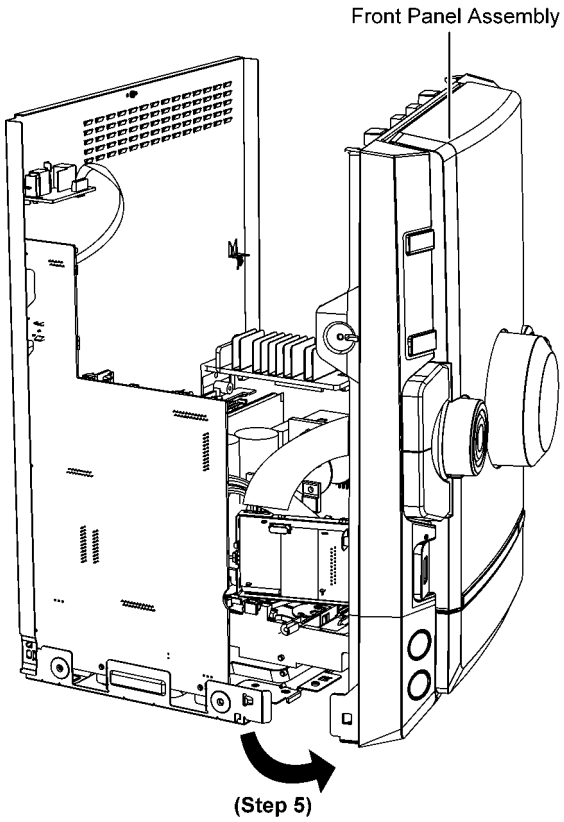
Step 3 Release tab at left side of Front Panel Assembly.



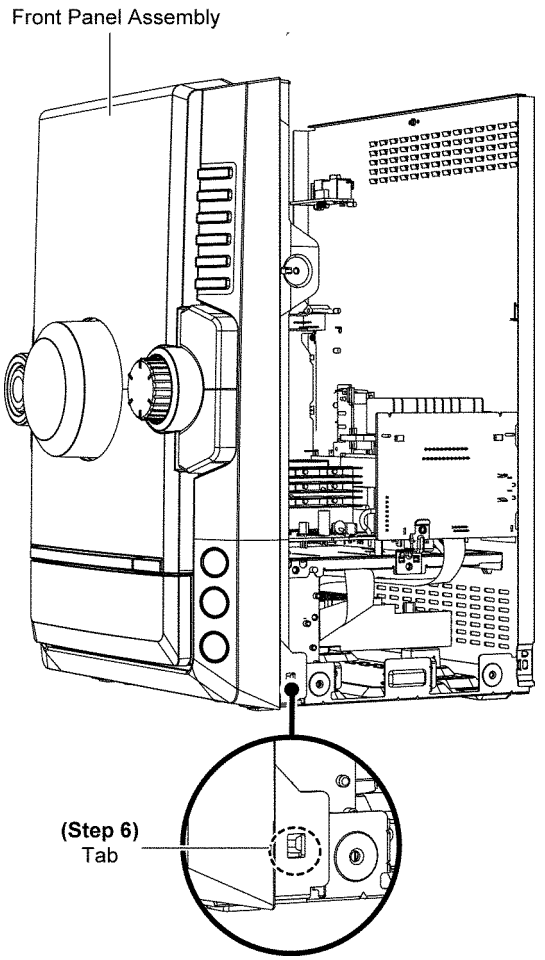
Step 4 Release tab at bottom.



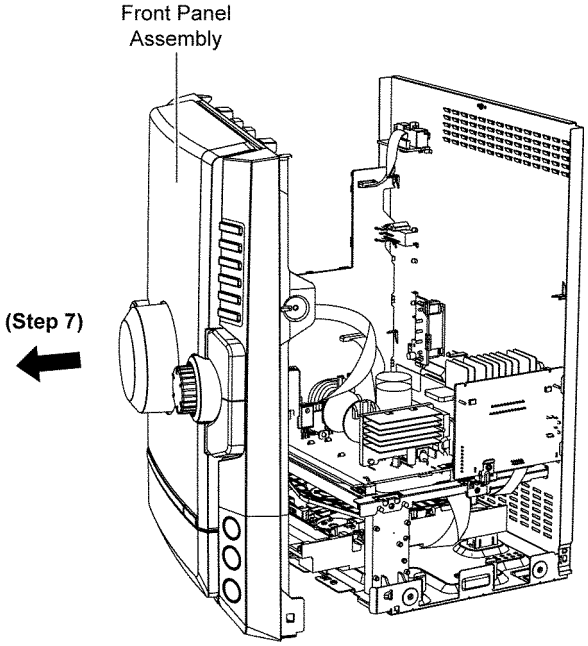
Step 5 Adjust slightly the left side of Front Panel Assembly as arrow shown.



Step 6 Release tab at right side.



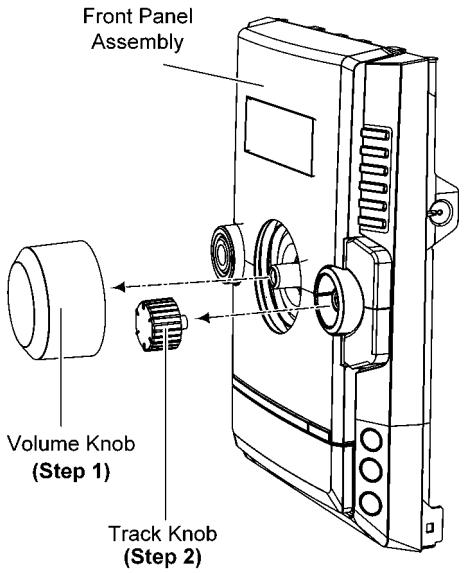
Step 7 Remove Front Panel Assembly.



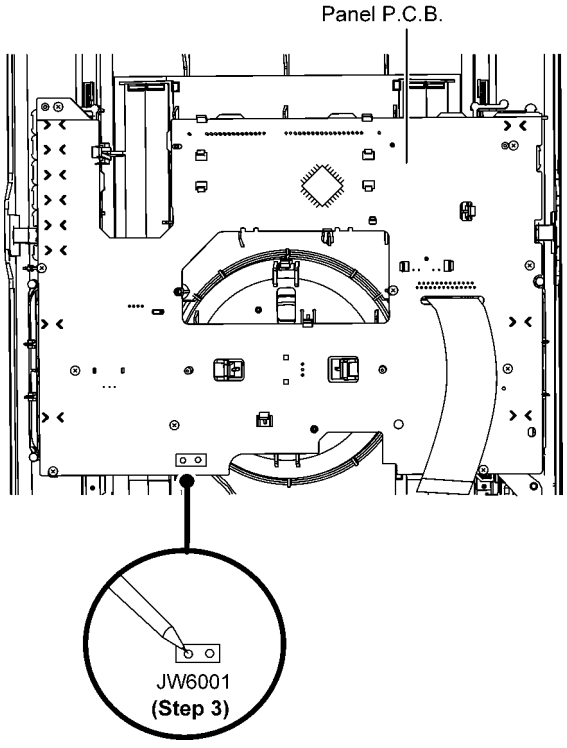
9.6. Disassembly of Panel P.C.B.

- **Refer to “Disassembly of Top Cabinet”.**
- **Refer to “Disassembly of Front Panel Assembly”.**

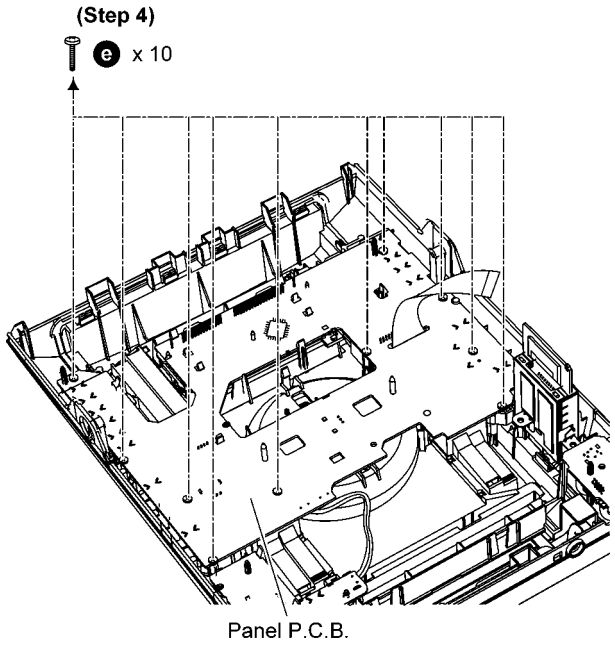
Step 1 Remove the Volume Knob.
Step 2 Remove the Track Knob.



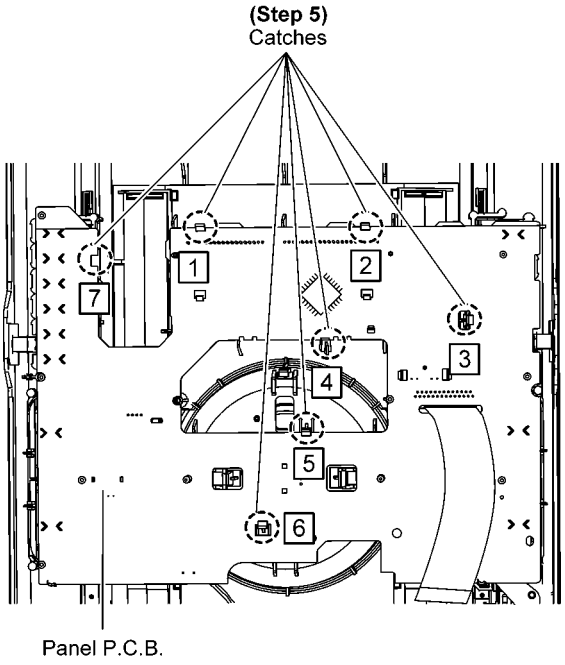
Step 3 Desolder 2 pins at the cable holder (JW6001) on Panel P.C.B..



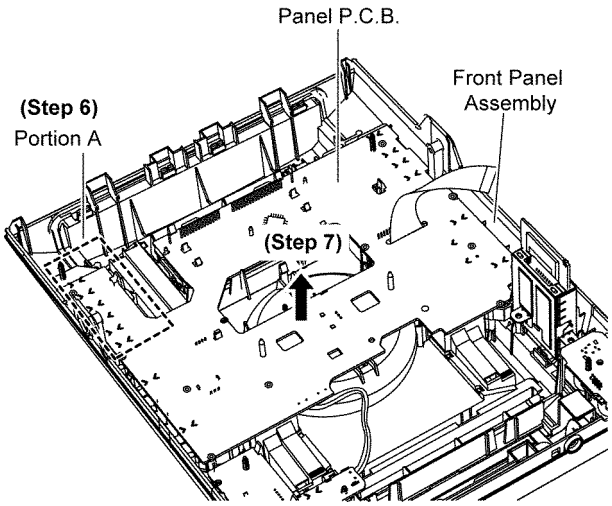
Step 4 Remove 10 screws.



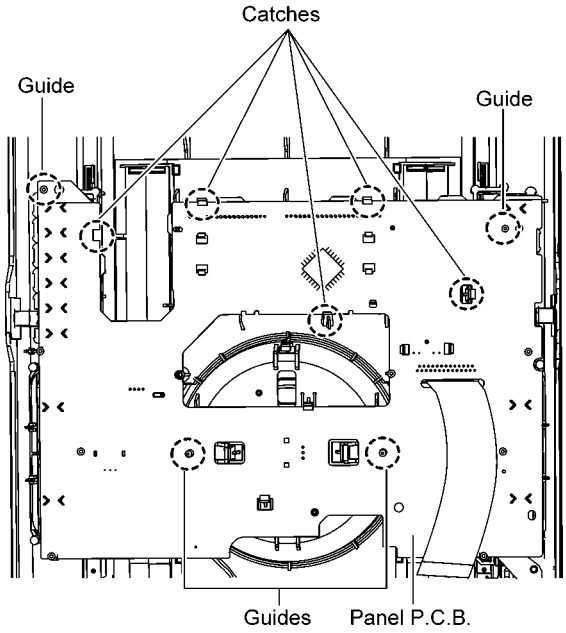
Step 5 Release catches by following the sequences (1-7).



Step 6 Slightly release Portion A of Panel P.C.B. from Front Panel Assembly.
Step 7 Remove Panel P.C.B..



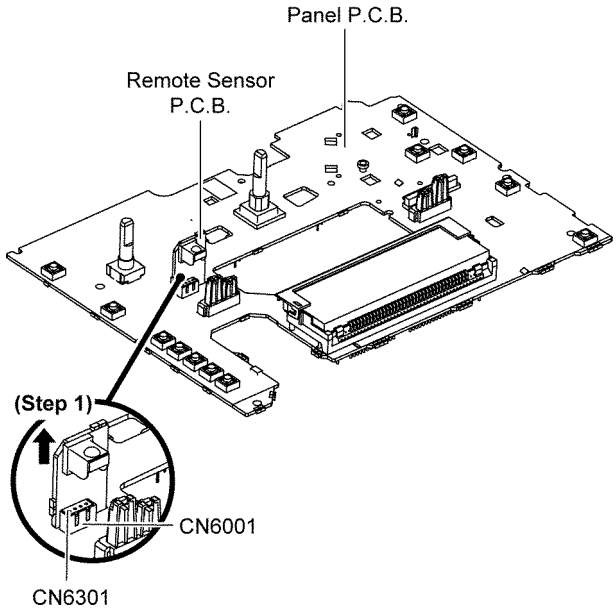
Caution: During assembling, ensure that Panel P.C.B. is seated properly through the Guides & fully catched.



9.7. Disassembly of Remote Sensor P.C.B.

- **Refer to “Disassembly of Top Cabinet”.**
- **Refer to “Disassembly of Front Panel Assembly”.**
- **Refer to “Disassembly of Panel P.C.B.”.**

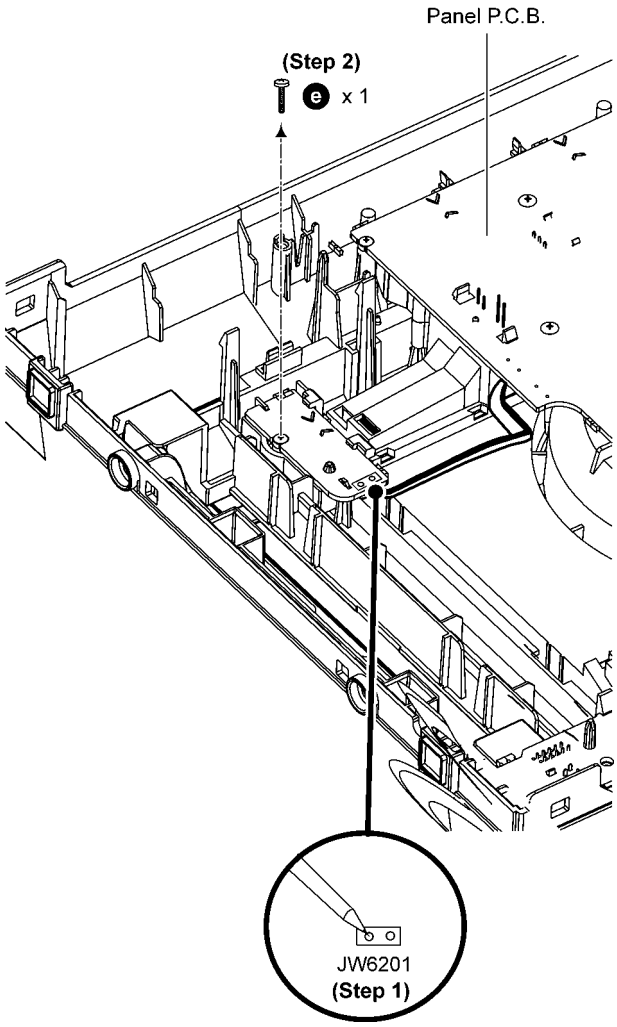
Step 1 Remove Remote Sensor P.C.B..
Caution: During assembling, ensure that Sensor P.C.B. is properly inserted & fully connected to Panel P.C.B..



9.8. Disassembly of CD Open Button P.C.B.

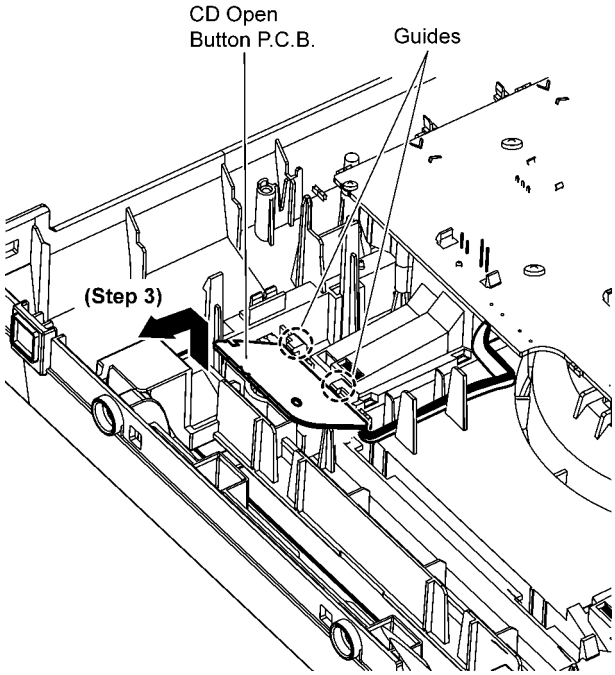
- **Refer to “Disassembly of Top Cabinet”.**
- **Refer to “Disassembly of Front Panel Assembly”.**

Step 1 Desolder 2 pins (JW6201) on CD Open Button P.C.B..
Step 2 Remove 1 screw.



Step 3 Lift up slightly and remove CD Open Button P.C.B. as arrow shown.

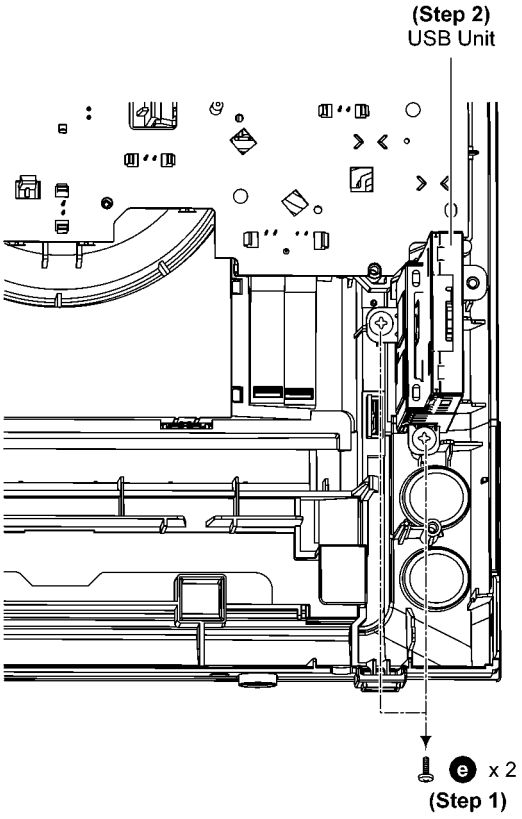
Caution: During assembling, ensure that the CD Open Button P.C.B. is properly located and seated under the guides.



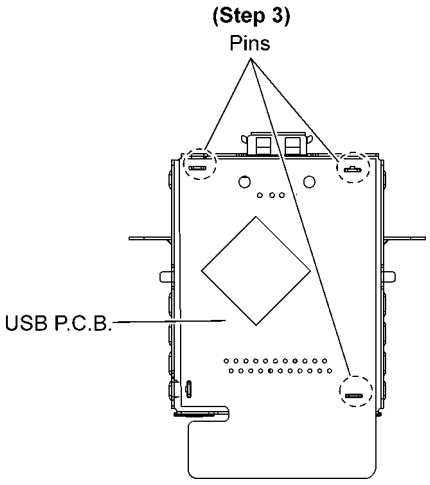
9.9. Disassembly of USB P.C.B.

- **Refer to “Disassembly of Top Cabinet”.**
- **Refer to “Disassembly of Front Panel Assembly”.**

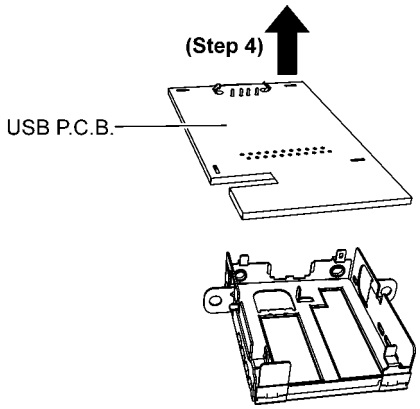
Step 1 Remove 2 screws.
Step 2 Remove USB Unit.



Step 3 Desolder 3 pins.



Step 4 Remove USB P.C.B..

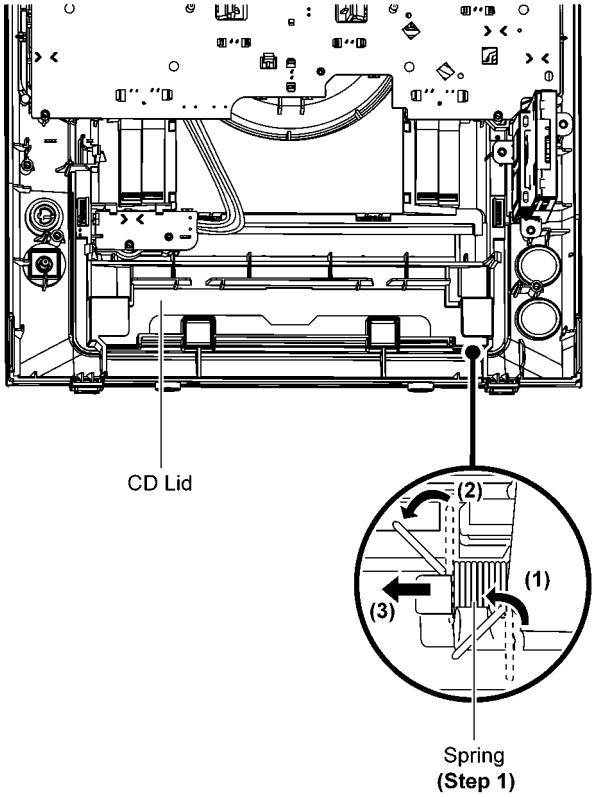


9.10. Disassembly of CD Lid

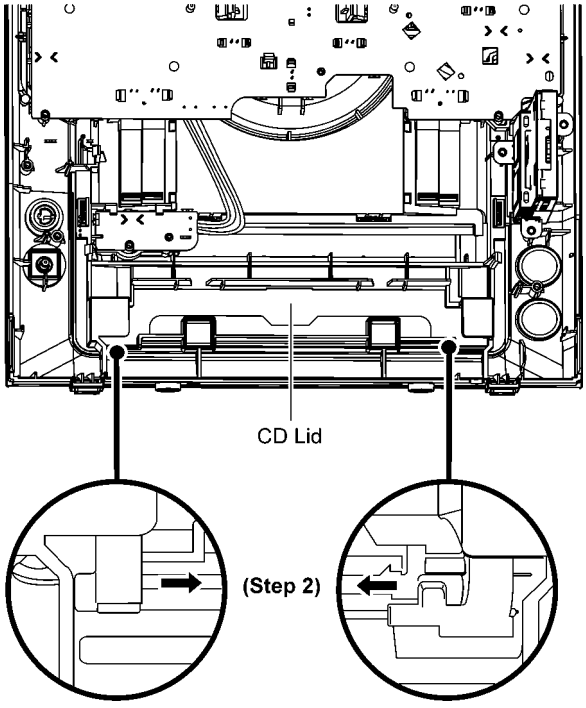
- **Refer to "Disassembly of Top Cabinet".**
- **Refer to "Disassembly of Front Panel Assembly".**

Step 1 Remove the spring as arrow shown in order of sequence (1) to (3).

Caution: During assembling, ensure that the spring is assembly at right position.



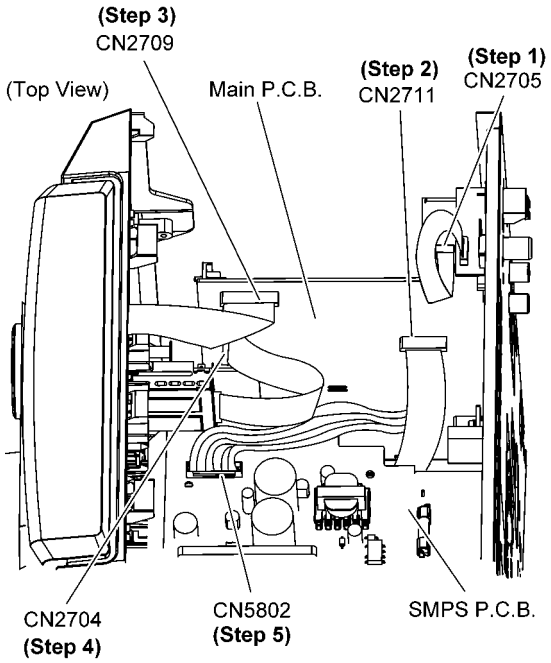
Step 2 Remove CD Lid as arrow shown.



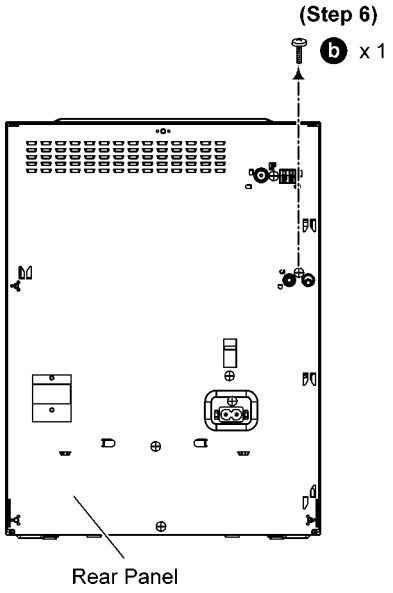
9.11. Disassembly of Main P.C.B.

- **Refer to "Disassembly of Top Cabinet".**

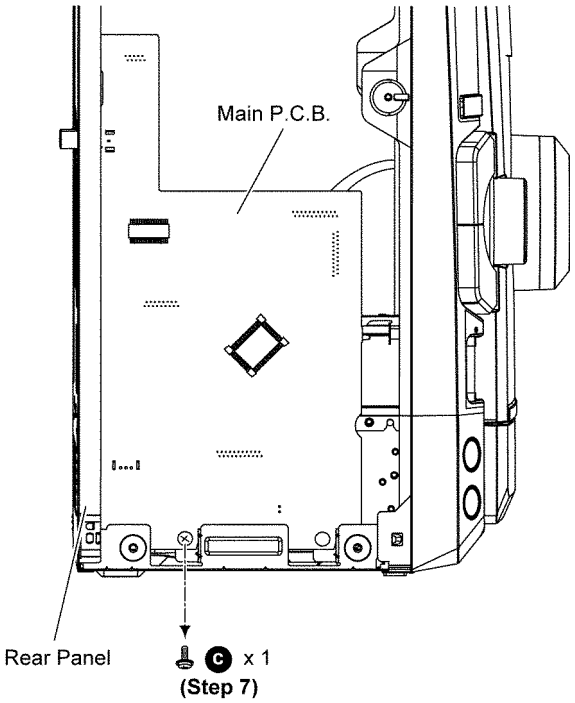
Step 1 Detach 9P FFC at the connector (CN2705) on Main P.C.B..
Step 2 Detach 12P FFC at the connector (CN2711) on Main P.C.B..
Step 3 Detach 17P FFC at the connecter (CN2709) on Main P.C.B..
Step 4 Detach 22P FFC at the connecter (CN2704) on Main P.C.B..
Step 5 Detach 11P Cable at the connector (CN5802) on SMPS P.C.B..



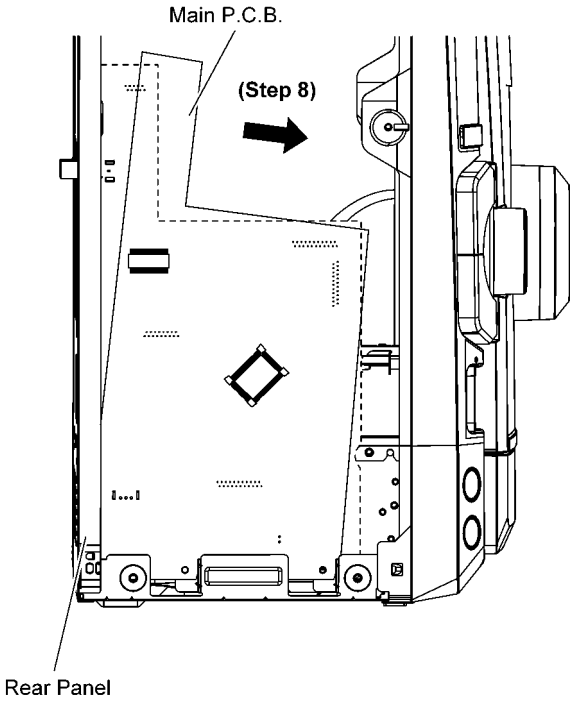
Step 6 Remove 1 screw.



Step 7 Remove 1 screw.

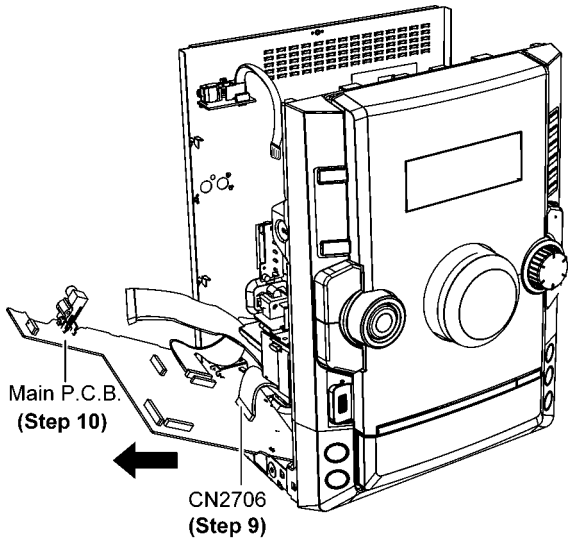


Step 8 Detach Main P.C.B. from Rear Panel according to arrow shown.

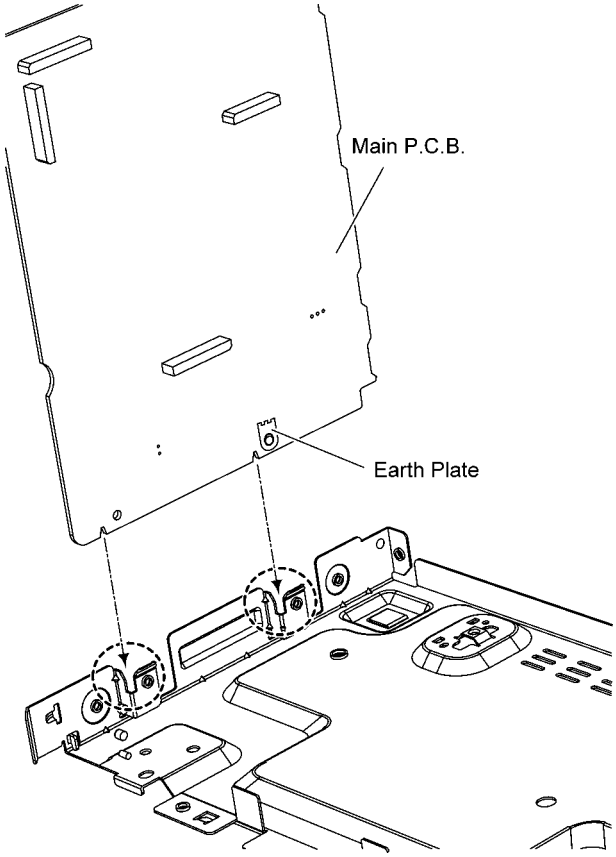


Step 9 Detach 22P FFC at the connector (CN2706) on Main P.C.B..

Step 10 Remove Main P.C.B..



Caution: During assembling, ensure that earth plate is bended flat against the Main P.C.B. properly when inserted to locators.

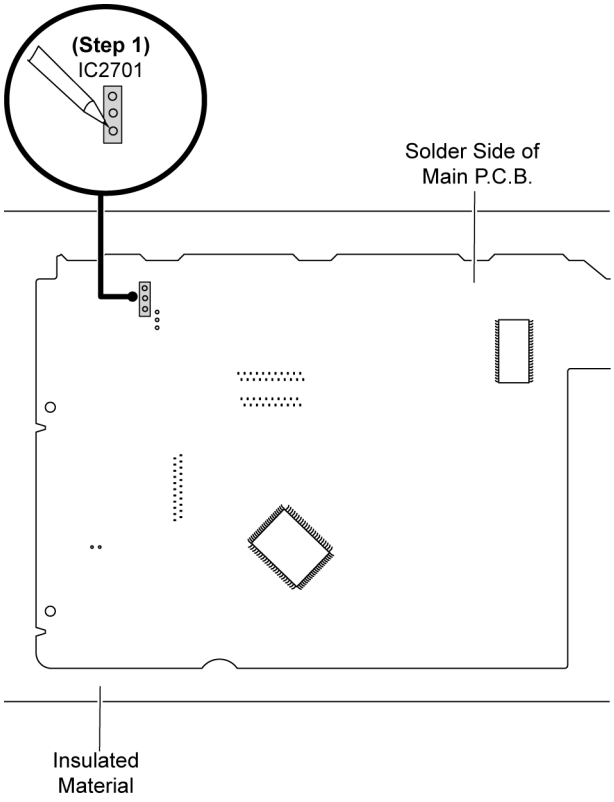


9.12. Replacement of Regulator IC (IC2701)

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

9.12.1. Disassembly of Regulator IC (IC2701)

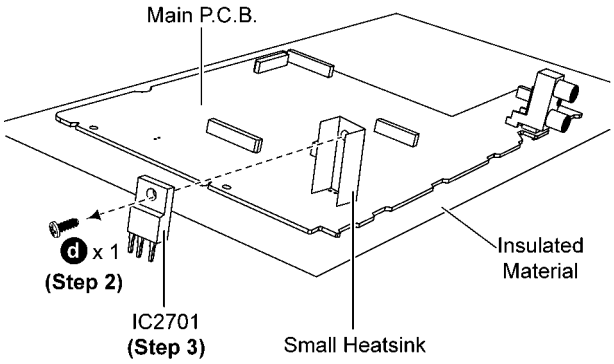
Step 1 Desolder pins of the Regulator IC (IC2701) on the solder side of Main P.C.B..



Step 2 Remove 1 screw.

Step 3 Remove the Regulator IC (IC2701) from the Main P.C.B..

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



9.12.2. Assembly of Regulator IC (IC2701)

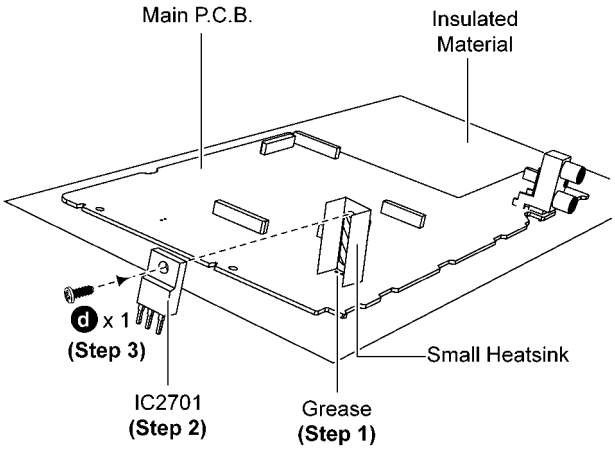
Step 1 Apply grease to the Small Heatsink.

Step 2 Mount the Regulator IC (IC2701) on Main P.C.B..

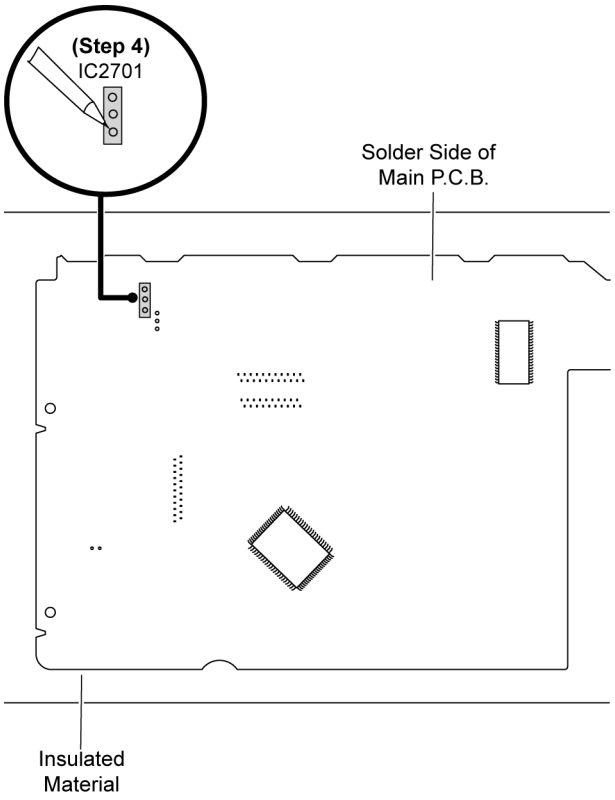
Caution: Ensure pins of the Regulator IC (IC2701) are properly seated on Main P.C.B..

Step 3 Screw the Regulator IC (IC2701) to the Small Heatsink.

Caution: Ensure the Regulator IC (IC2701) is tightly screwed to the Small Heatsink.



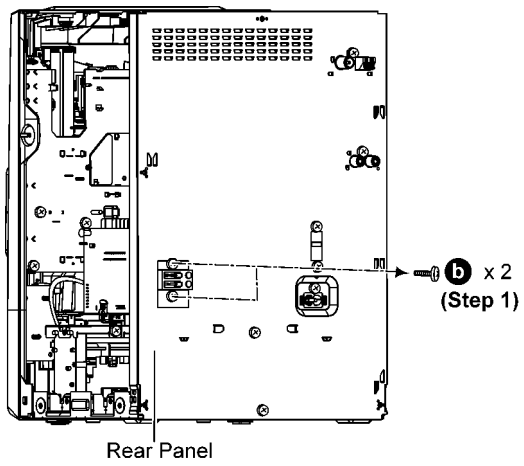
Step 4 Solder pins of the Regulator IC (IC2701) on the solder side of Main P.C.B..



9.13. Disassembly of D-Amp P.C.B.

- **Refer to "Disassembly of Top Cabinet".**

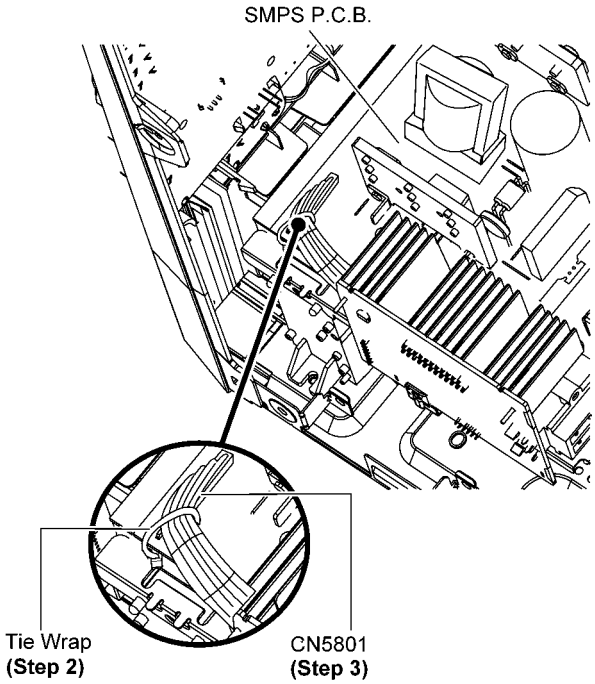
Step 1 Remove 2 screws.



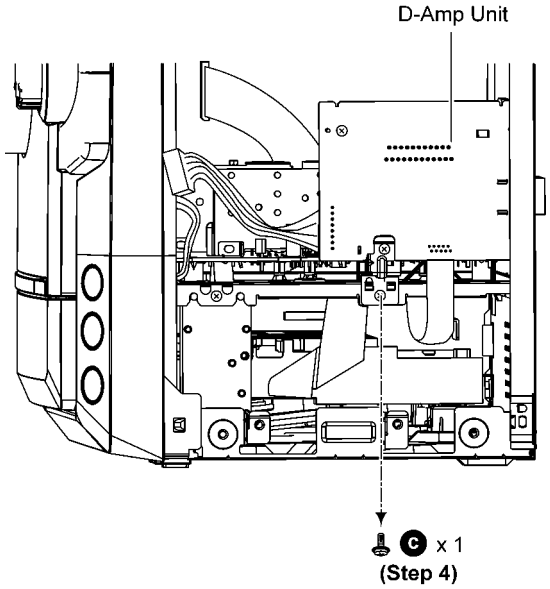
Step 2 Cut the Tie Wrap.

Caution: During assembling, tie the 6P Cable Wire with the Tie Wrap to SMPS P.C.B. as diagram shown.

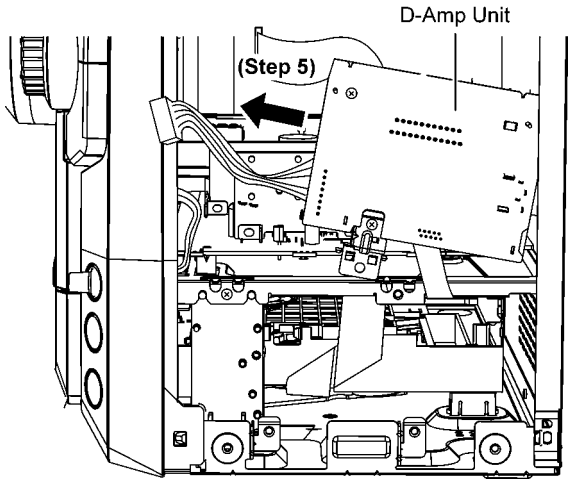
Step 3 Detach 6P Cable Wire at the connector (CN5801) on SMPS P.C.B..



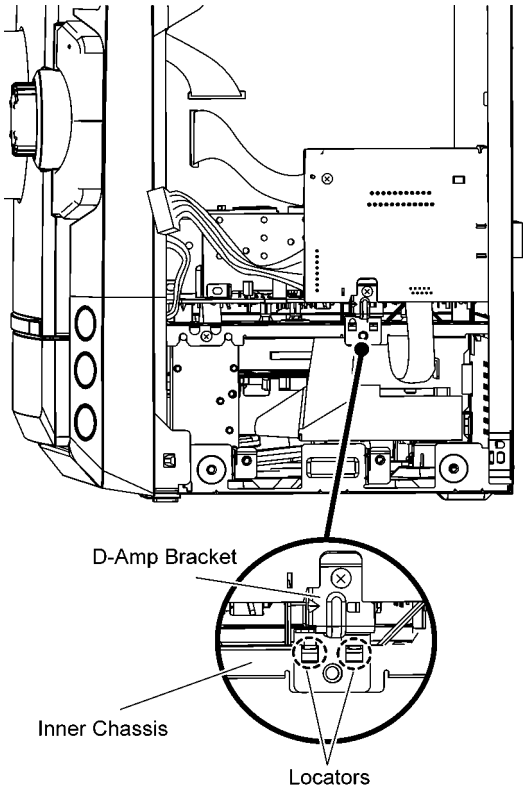
Step 4 Remove 1 screw.



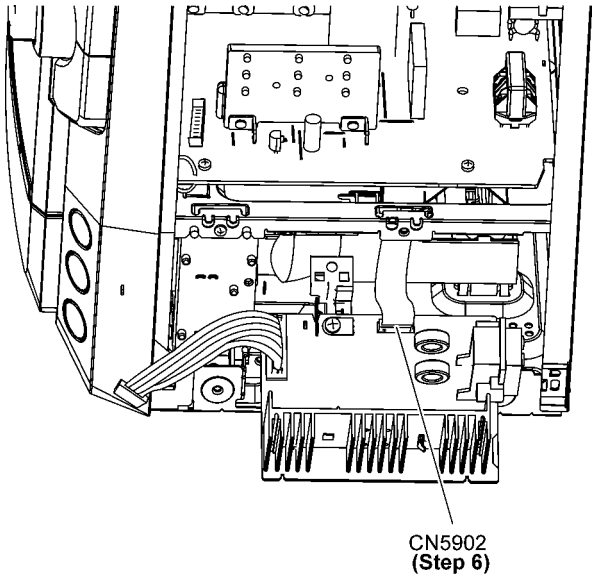
Step 5 Slightly lift up & remove D-Amp Unit as arrow shown.



Caution: During assembling, ensure that D-Amp Bracket is seated on the locator of Inner Chassis properly.



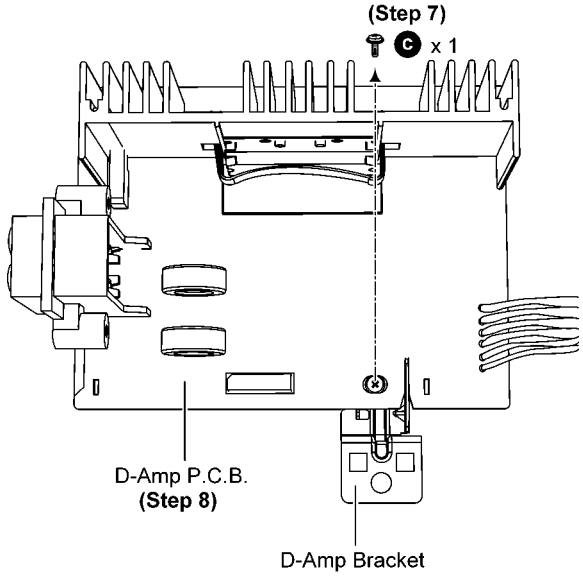
Step 6 Detach 12P FFC at the connector (CN5902) on D-Amp P.C.B..



Step 7 Remove 1 screw.

Step 8 Remove D-Amp P.C.B.

Caution: Keep the D-Amp Bracket in safe place, place it back during assembling.

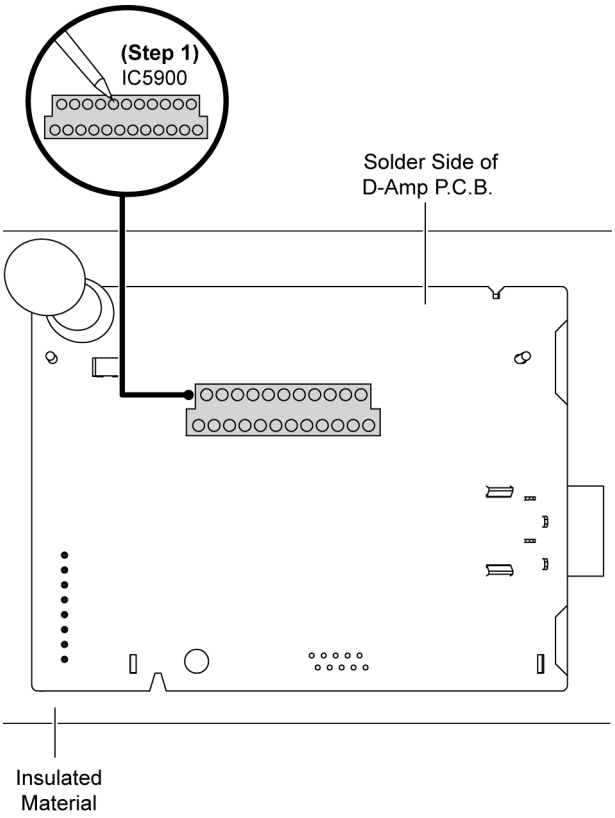


9.14. Replacement of Audio Digital Amp IC (IC5900)

- **Refer to "Disassembly of D-Amp P.C.B.".**

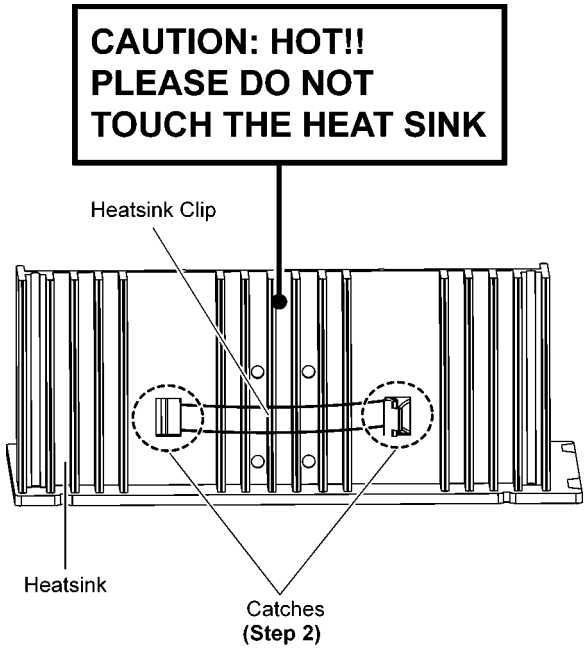
9.14.1. Disassembly of Audio Digital Amp IC (IC5900)

Step 1 Desolder pins of the Regulator IC (IC5900) on the solder side of D-Amp P.C.B..



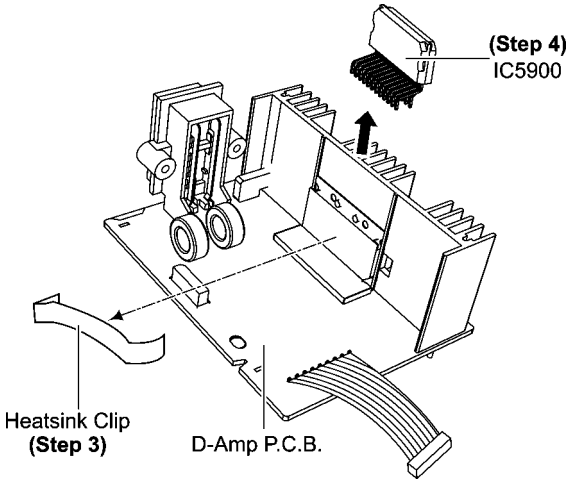
Step 2 Release 2 catches of Heatsink Clip.

Caution: During releasing of 2 catches, avoid touching the Heatsink, due to high temperature.



Step 3 Remove Heatsink Clip.

Step 4 Remove Audio Digital Amp IC (IC5900).



9.14.2. Assembly of Audio Digital Amp IC (IC5900)

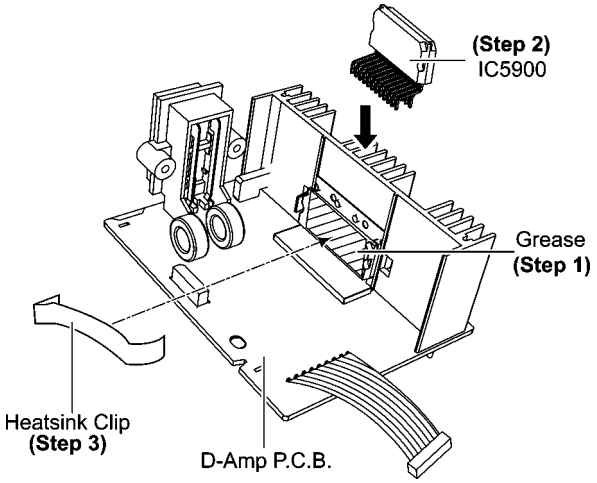
Step 1 Apply grease to the Heatsink.

Step 2 Install the Audio Digital Amp IC (IC5900) on D-Amp P.C.B.

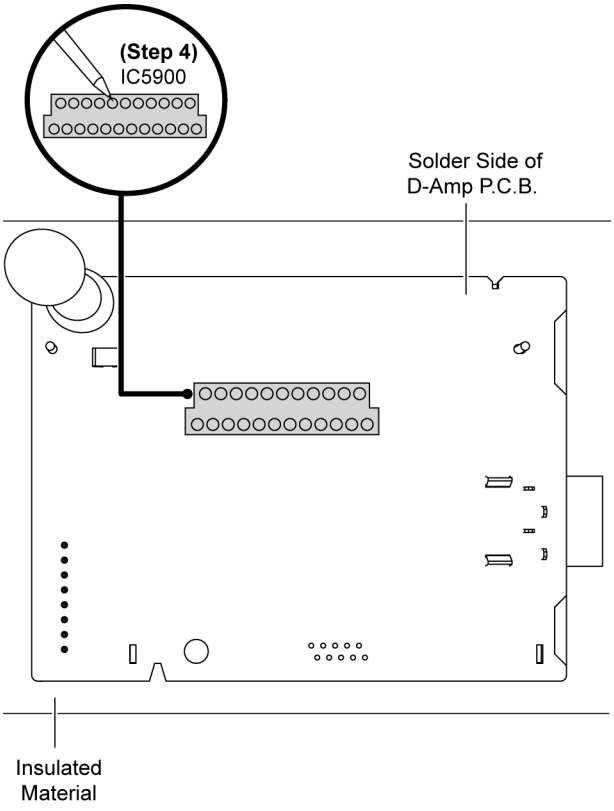
Caution: Ensure pins of the Audio Digital Amp IC (IC5900) are properly seated on D-Amp P.C.B.

Step 3 Install Heatsink Clip to the Heatsink.

Caution: During assembling, ensure that Heatsink Clip is catched onto Heatsink properly.



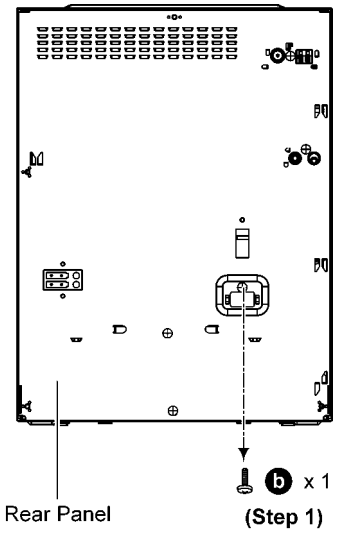
Step 4 Solder pins of the Audio Digital Amp IC (IC5900) on the solder side of D-Amp P.C.B..



9.15. Disassembly of SMPS P.C.B.

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

Step 1 Remove 1 screw.

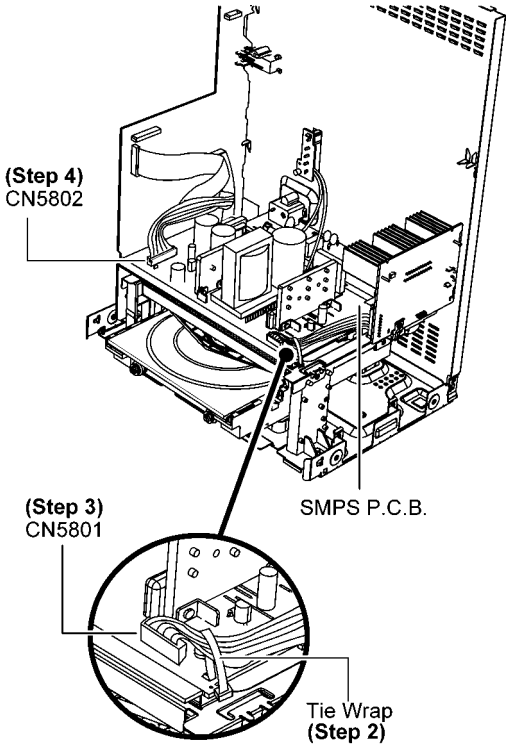


Step 2 Cut the Tie Wrap.

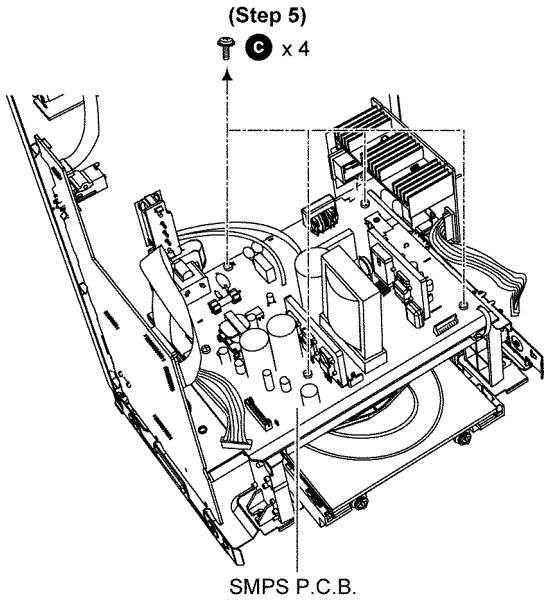
Caution: During assembling, tie the 6P Cable Wire with the Tie Wrap to SMPS P.C.B. as diagram shown.

Step 3 Detach 6P Cable Wire at the connector (CN5801) on SMPS P.C.B..

Step 4 Detach 11P Cable Wire at the connector (CN5802) on SMPS P.C.B..



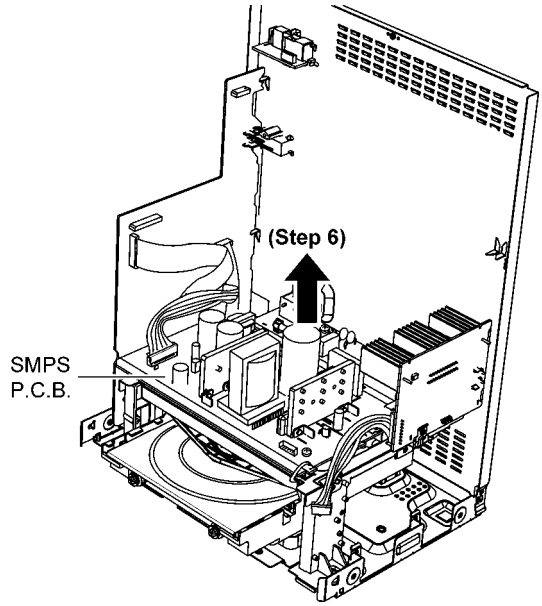
Step 5 Remove 4 screws.



• **For PN only**

Step 6 Lift up to remove SMPS P.C.B..

Caution: Lift up SMPS P.C.B. slowly in order not to damage both Main P.C.B. and D-Amp P.C.B..



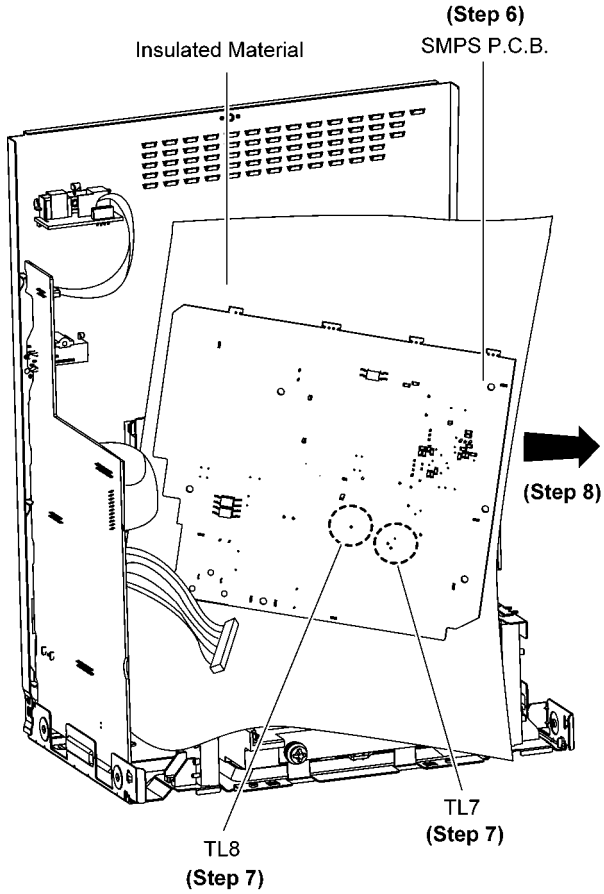
• **For PH only**

Step 6 Flip the SMPS P.C.B. and position it according to diagram shown.

Caution: Insulated Material is required in order to insulated SMPS P.C.B. from other parts.

Step 7 Desolder 2 Wire pin, TL7(Black) , TL8(Red) wires pin.

Step 8 Remove SMPS P.C.B..

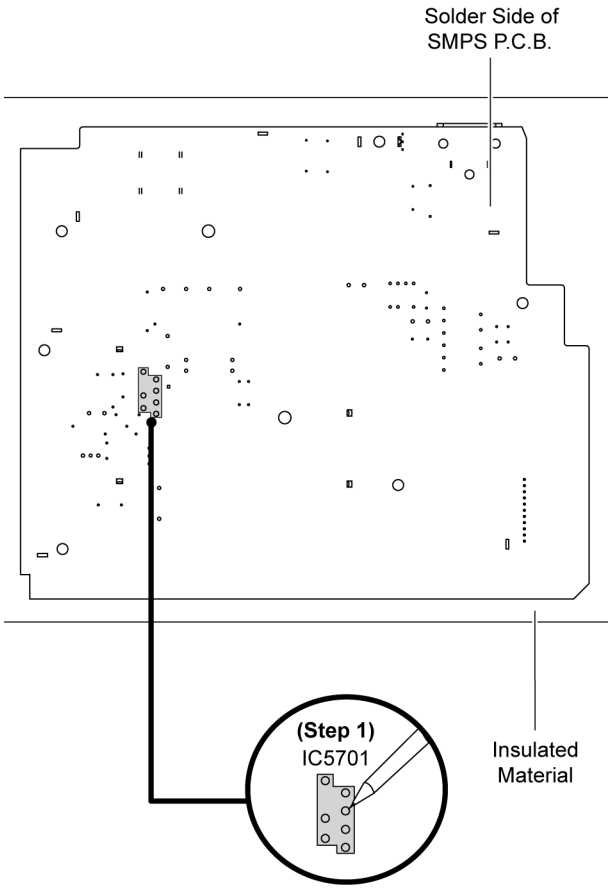


9.16. Replacement of Switching Regulator IC (IC5701)

- **Refer to “Disassembly of SMPS P.C.B.”.**

9.16.1. Disassembly of Switching Regulator IC (IC5701)

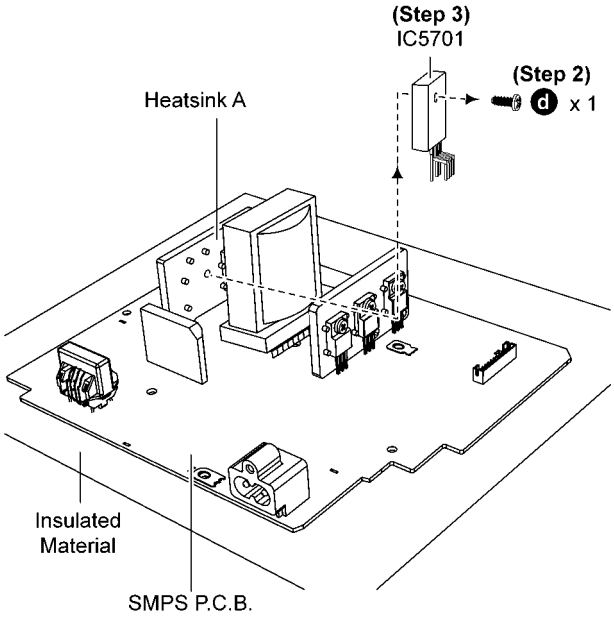
Step 1 Desolder pins of the Switching Regulator IC (IC5701) on the solder side of SMPS P.C.B..



Step 2 Remove 1 screw from the Switching Regulator IC (IC5701).

Step 3 Remove the Switching Regulator IC (IC5701) from the Heatsink A.

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



9.16.2. Assembly of Switching Regulator IC (IC5701)

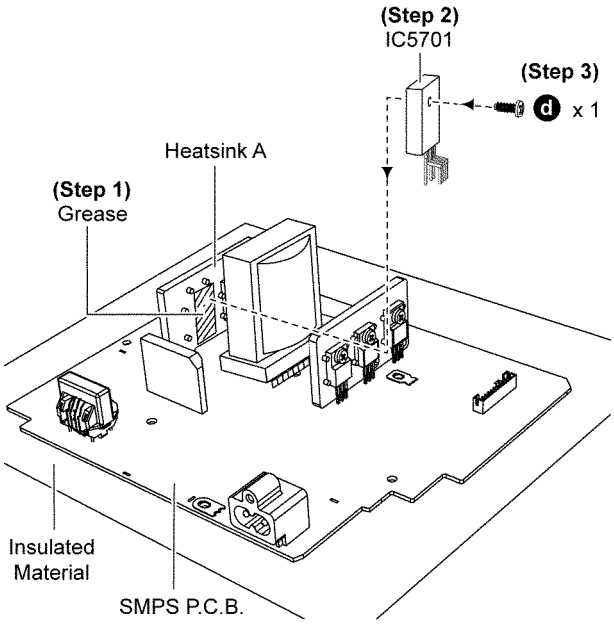
Step 1 Apply grease to the Heatsink A.

Step 2 Install the Switching Regulator IC (IC5701) to the SMPS P.C.B..

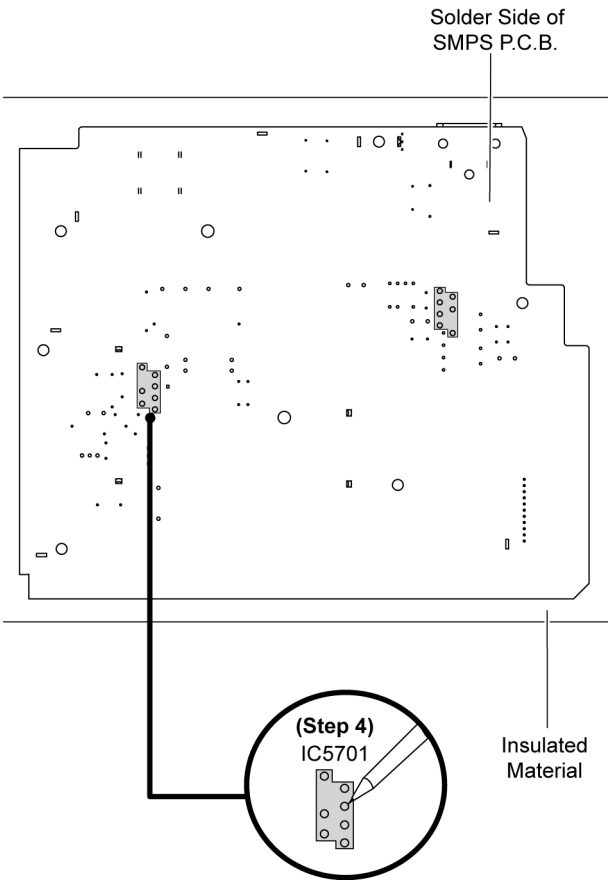
Caution: Ensure pins of the Switching Regulator IC (IC5701) are properly seated and soldered on SMPS P.C.B..

Step 3 Screw the Switching Regulator IC (IC5701) to the Heatsink A.

Caution: Ensure the Switching Regulator IC (IC5701) is tightly screwed to the Heatsink A.



Step 4 Solder pins of the Switching Regulator IC (IC5701) on the solder side of SMPS P.C.B..

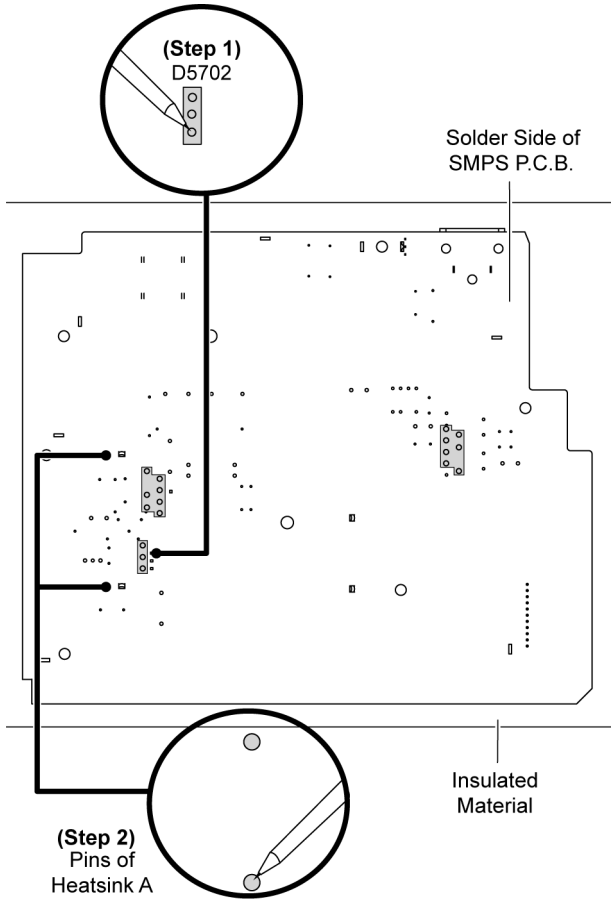


9.17. Replacement of Rectifier Diode (D5702)

- **Refer to “Disassembly of SMPS P.C.B.”.**

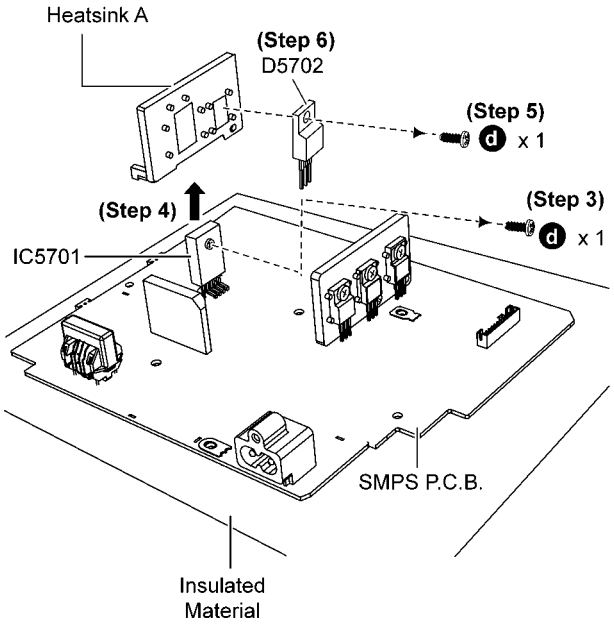
9.17.1. Disassembly of Rectifier Diode (D5702)

Step 1 Desolder pins of the Rectifier Diode (D5702) on the solder side of SMPS P.C.B.
Step 2 Desolder pins of the Heatsink A.



Step 3 Remove 1 screw from the Switching Regulator IC (IC5701).
Step 4 Remove the Heatsink A with Rectifier Diode (D5702).
Step 5 Remove 1 screw from the Rectifier Diode (D5702).
Step 6 Remove the Rectifier Diode (D5702) from the Heatsink A.

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



9.17.2. Assembly of Rectifier Diode (D5702)

Step 1 Apply grease to the Heatsink A.

Step 2 Screw the Rectifier Diode (D5702) to the Heatsink A.

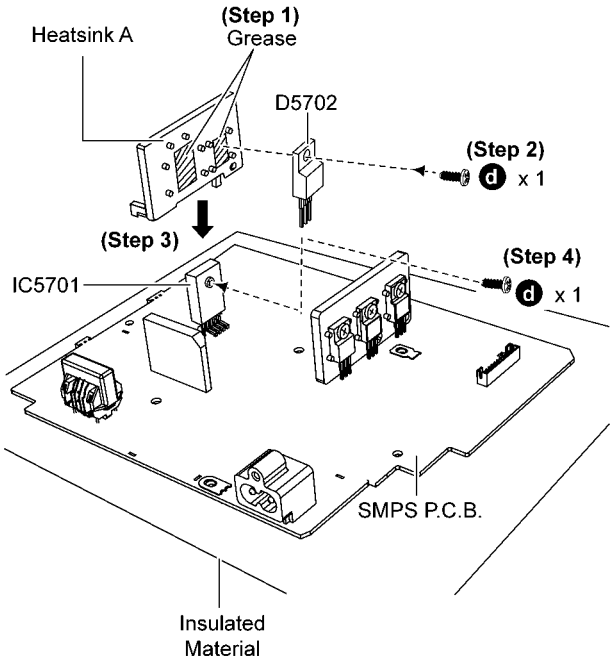
Caution: Ensure the Rectifier Diode (D5702) is tightly screwed to the Heatsink A.

Step 3 Install the Heatsink A with Rectifier Diode (D5702) on SMPS P.C.B. in the direction of arrow.

Caution: Ensure the Heatsink A with Rectifier Diode (D5702) are properly seated on SMPS P.C.B.

Step 4 Screw the Switching Regulator IC (IC5701) to the Heatsink A.

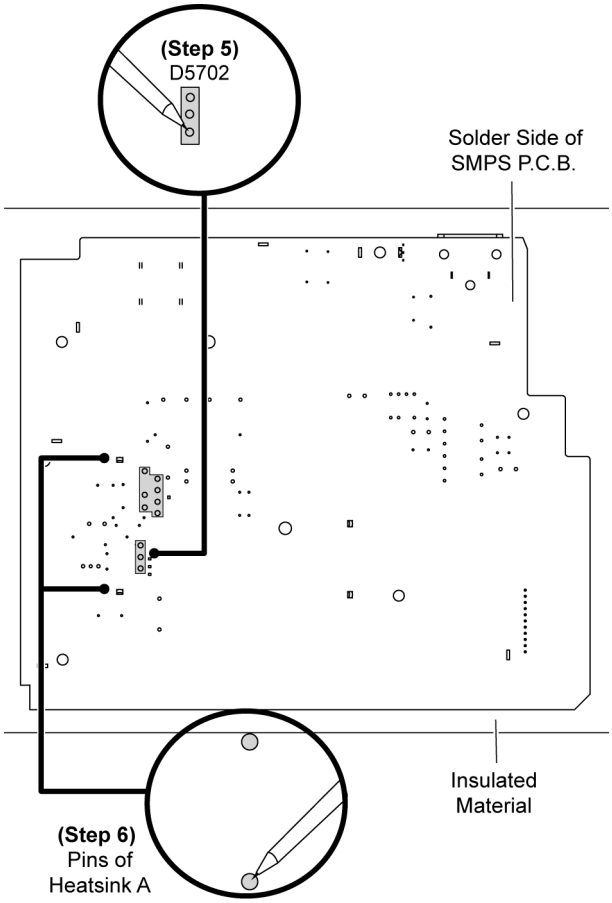
Caution: Ensure that Switching Regulator IC (IC5701) is tightly screwed to the Heatsink A.



Step 5 Solder pins of the Rectifier Diode (D5702) on the solder side of SMPS P.C.B..

Step 6 Solder pins of the Heatsink A on the solder side of SMPS P.C.B..

Caution: Ensure pins of the Rectifier Diode (D5702) are properly seated and soldered on SMPS P.C.B..

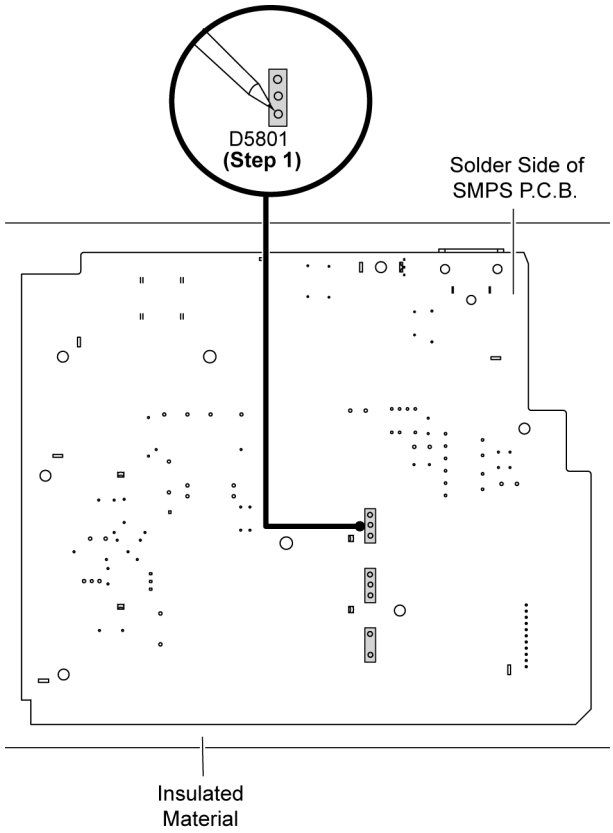


9.18. Replacement of Regulator Diode (D5801)

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

9.18.1. Disassembly of Regulator Diode (D5801)

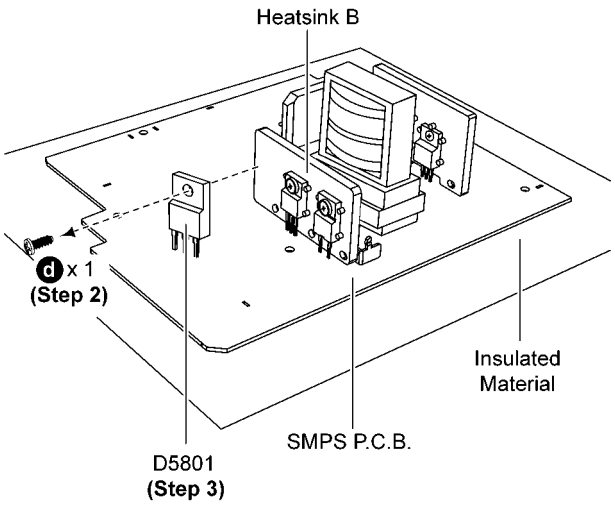
Step 1 Desolder pins of the Regulator Diode (D5801) on the solder side of SMPS P.C.B.



Step 2 Remove 1 screw from the Regulator Diode (D5801).

Step 3 Remove the Regulator Diode (D5801) from the SMPS P.C.B..

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



9.18.2. Assembly of Regulator Diode (D5801)

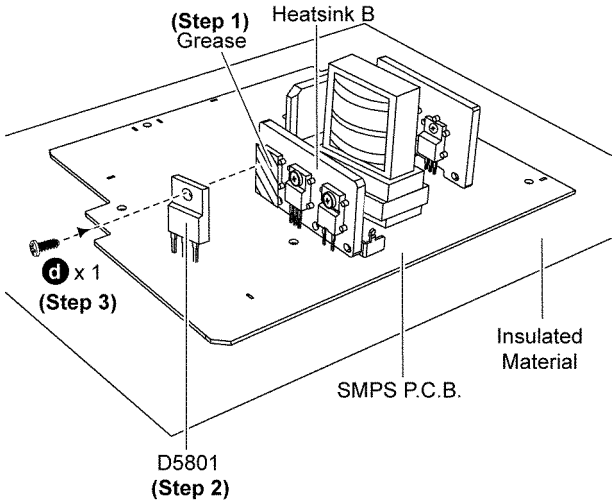
Step 1 Apply grease to the Heatsink B.

Step 2 Install the Regulator Diode (D5801) on SMPS P.C.B.

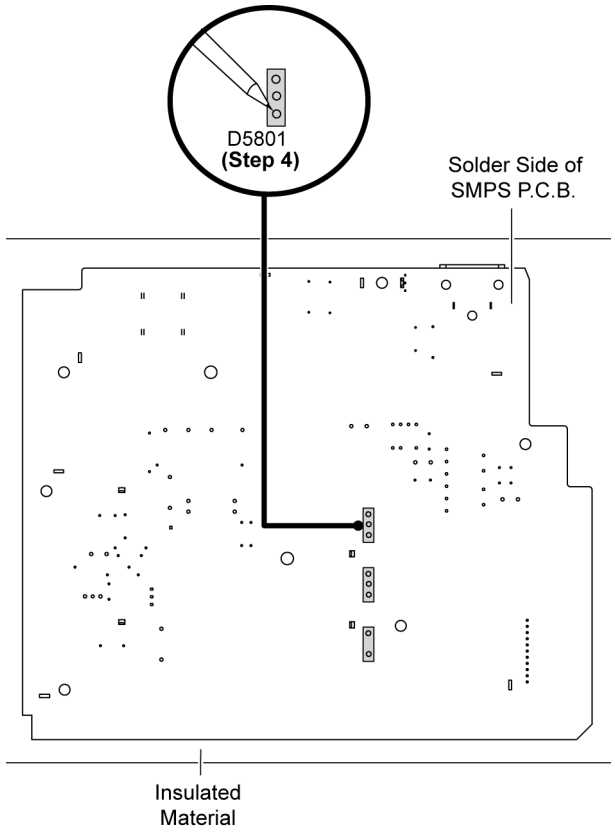
Caution: Ensure pins of the Regulator Diode (D5801) is properly seated on SMPS P.C.B.

Step 3 Screw the Regulator Diode (D5801) to the Heatsink B.

Caution: Ensure the Regulator Diode (D5801) is tightly screwed to the Heatsink B.



Step 4 Solder pins of the Regulator Diode (D5801) on the solder side of SMPS P.C.B..

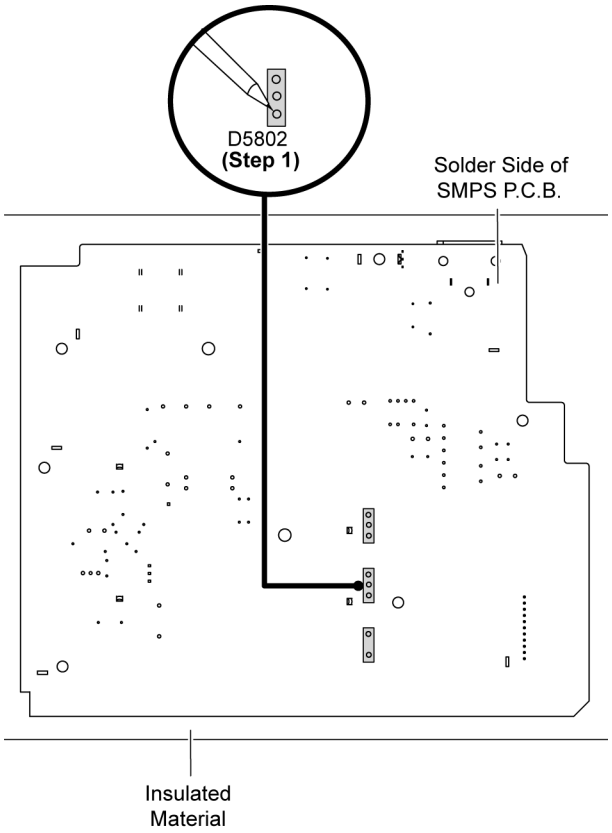


9.19. Replacement of Regulator Diode (D5802)

- **Refer to “Disassembly of SMPS P.C.B.”.**

9.19.1. Disassembly of Regulator Diode (D5802)

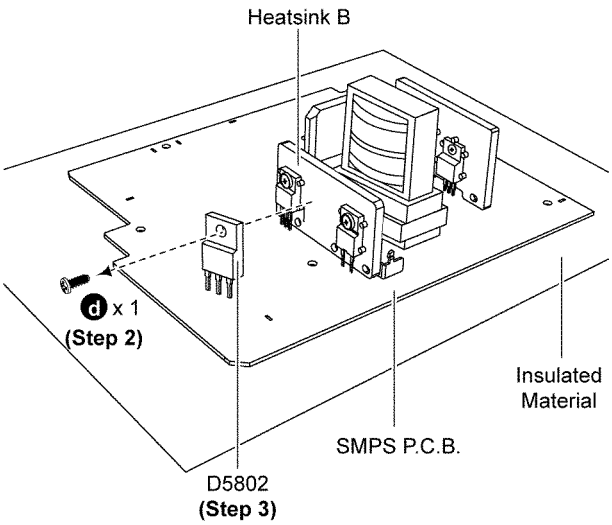
Step 1 Desolder pins of the Regulator Diode (D5802) on the solder side of SMPS P.C.B.



Step 2 Remove 1 screw from the Regulator Diode (D5802).

Step 3 Remove the Regulator Diode (D5802) from SMPS P.C.B..

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



9.19.2. Assembly of Regulator Diode (D5802)

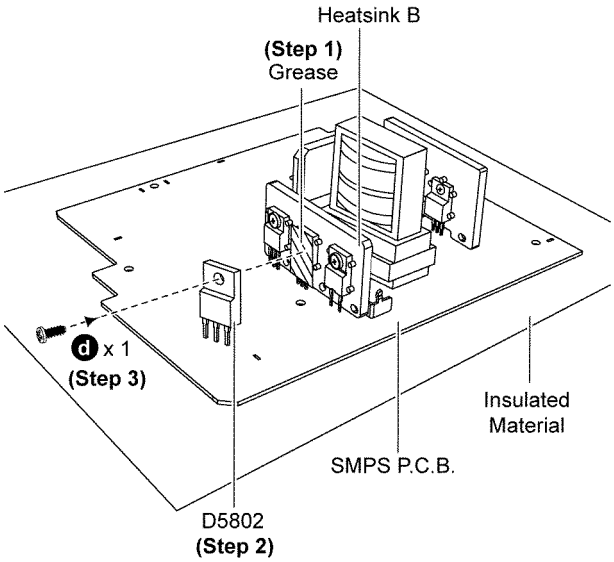
Step 1 Apply grease to the Heatsink B.

Step 2 Install the Regulator Diode (D5802) on SMPS P.C.B..

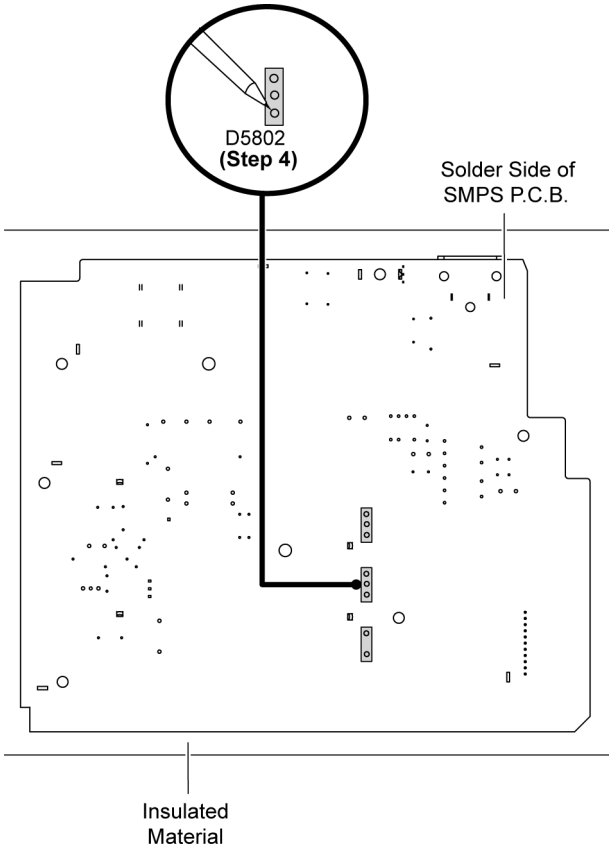
Caution: Ensure pins of the Regulator Diode (D5802) is properly seated on SMPS P.C.B.

Step 3 Screw the Regulator Diode (D5802) to the Heatsink B.

Caution: Ensure the Regulator Diode (D5802) is tightly screwed to the Heatsink B.



Step 4 Solder pins of the Regulator Diode (D5802) on the solder side of SMPS P.C.B..

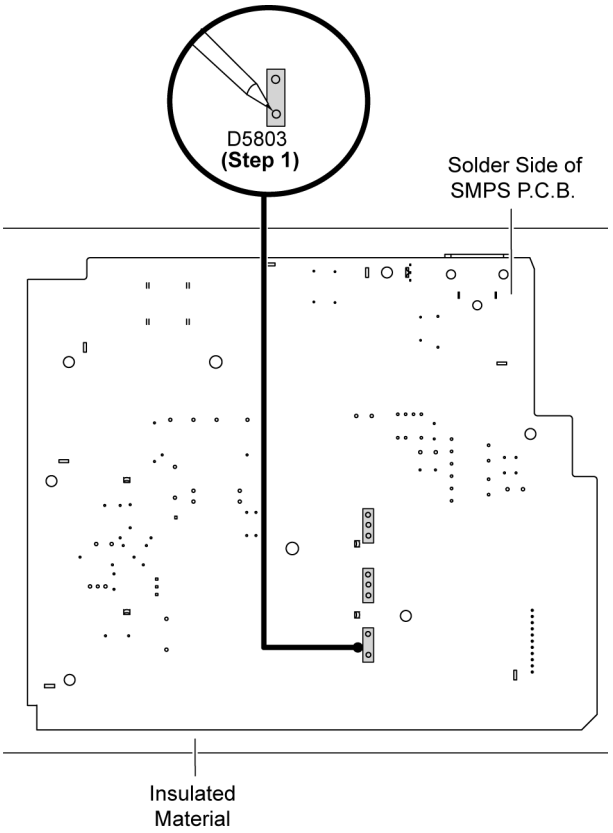


9.20. Replacement of Regulator Diode (D5803)

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

9.20.1. Disassembly of Regulator Diode (D5803)

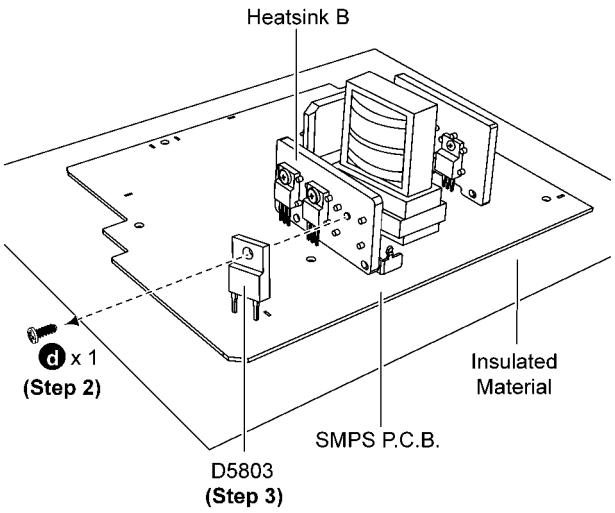
Step 1 Desolder pins of the Regulator Diode (D5803) on the solder side of SMPS P.C.B.



Step 2 Remove 1 screw from the Regulator Diode (D5803).

Step 3 Remove the Regulator Diode (D5803) from the SMPS P.C.B..

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



9.20.2. Assembly of Regulator Diode (D5803)

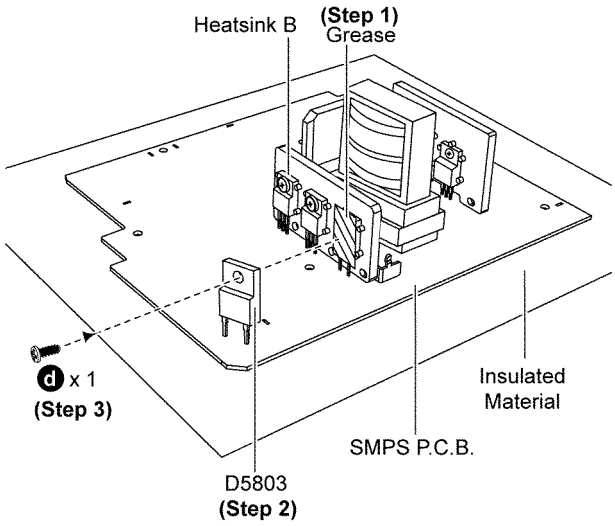
Step 1 Apply grease to the Heatsink B.

Step 2 Install Regulator Diode (D5803) on SMPS P.C.B.

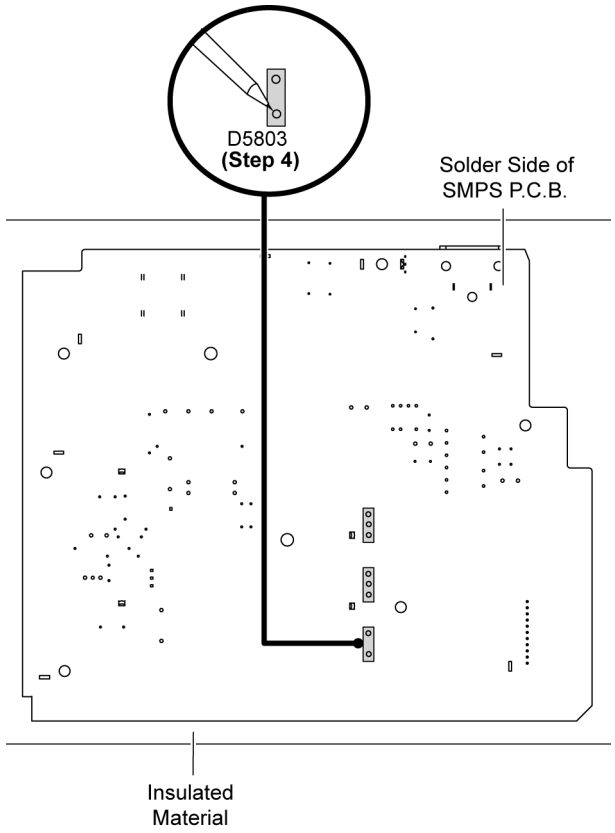
Caution: Ensure pins of the Regulator Diode (D5803) are properly seated on SMPS P.C.B.

Step 3 Screw the regulator diode (D5803) to the Heatsink B.

Caution: Ensure the Regulator Diode (D5803) is tightly screwed to the Heatsink B.



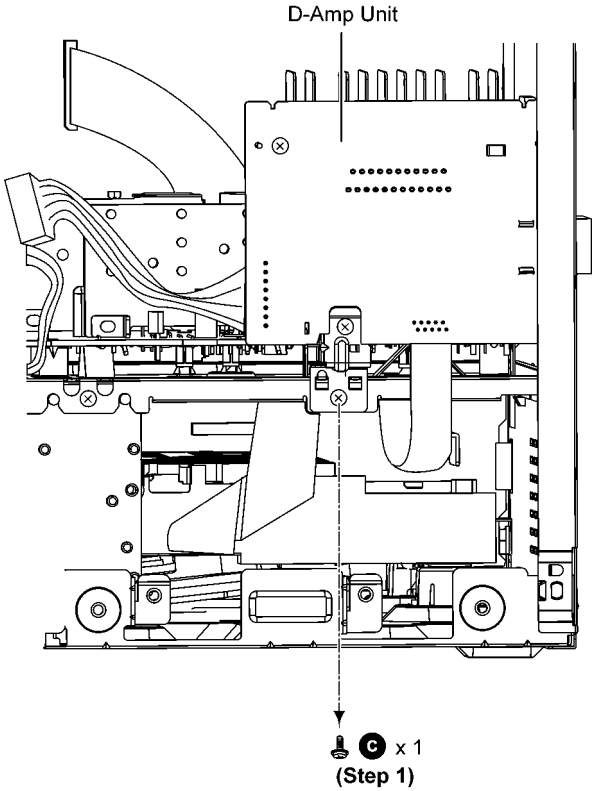
Step 4 Solder pins of the Regulator Diode (D5803) on the solder side of SMPS P.C.B.



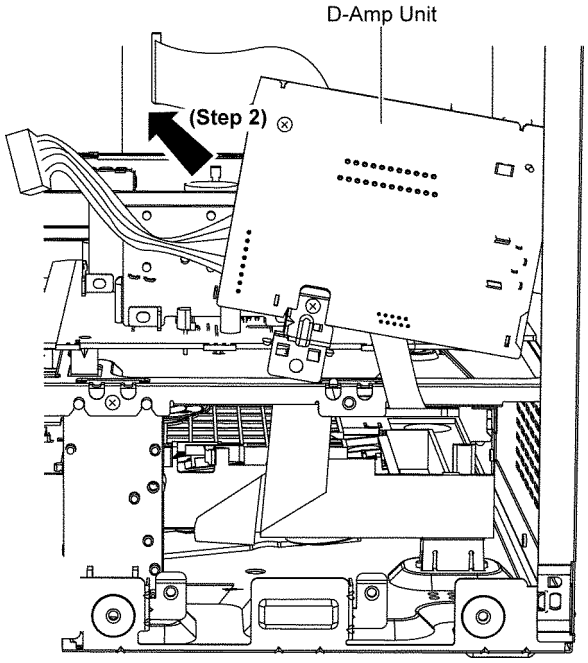
9.21. Disassembly of CD Mechanism Unit (DLS6C)

- **Refer to “Disassembly of Top Cabinet”.**
- **Refer to “Disassembly of Front Panel Assembly”.**

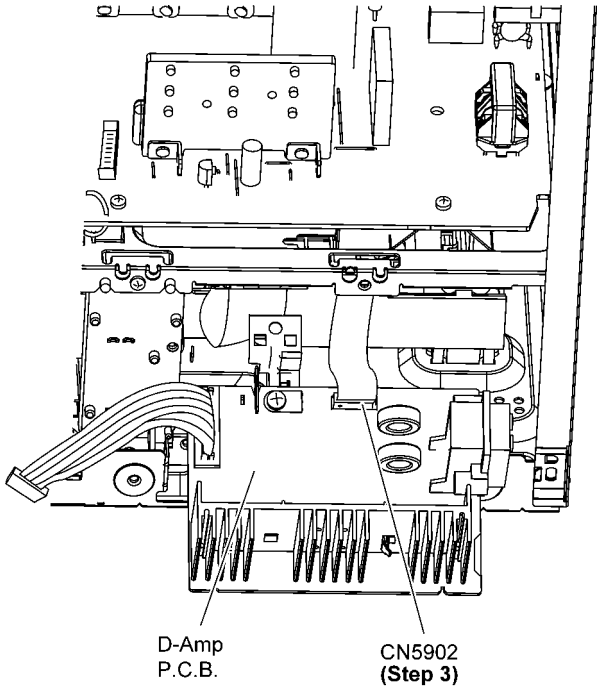
Step 1 Remove 1 screw.



Step 2 Release the D-Amp Unit from Inner Chassis catch.

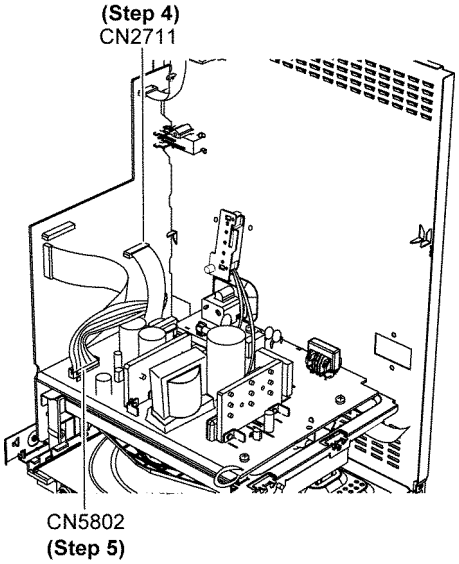


Step 3 Detach 12P FFC (CN5902) on D-Amp P.C.B..

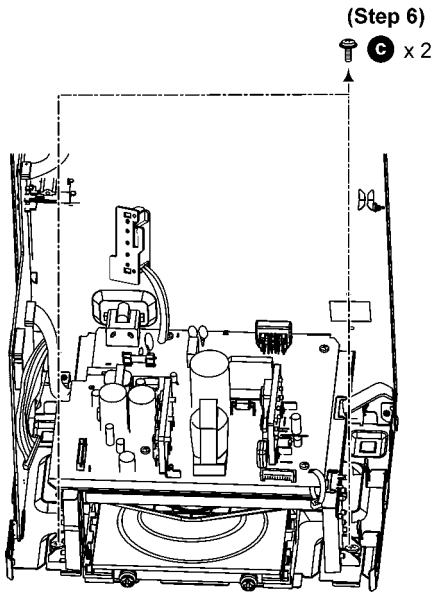


Step 4 Detach 12P FFC at the connector (CN2711) on Main P.C.B..

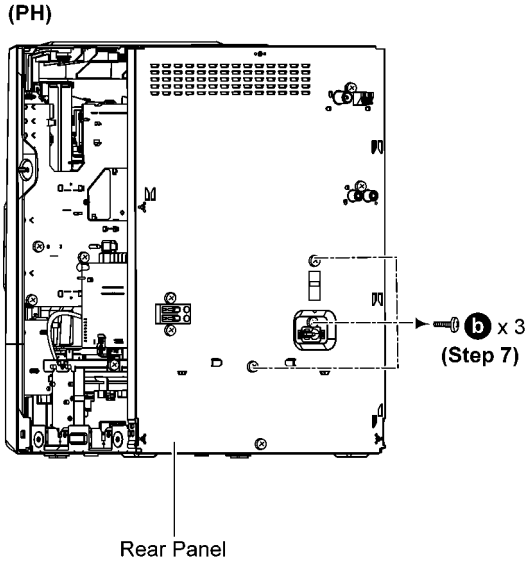
Step 5 Detach 11P Cable Wire at the connector (CN5802) on SMPS P.C.B..



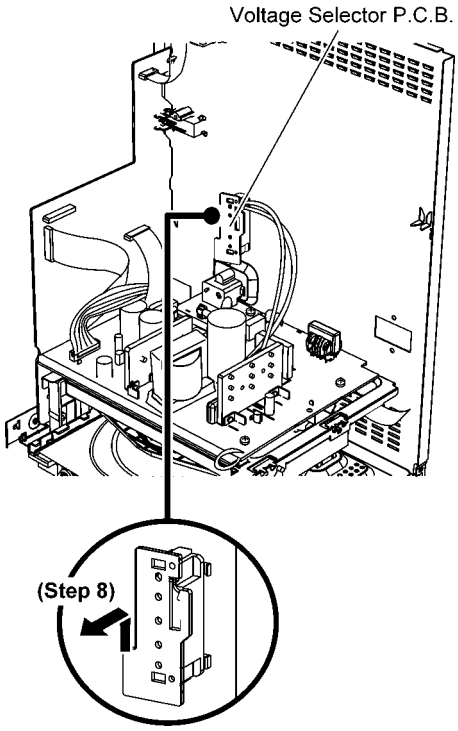
Step 6 Remove 2 screws.



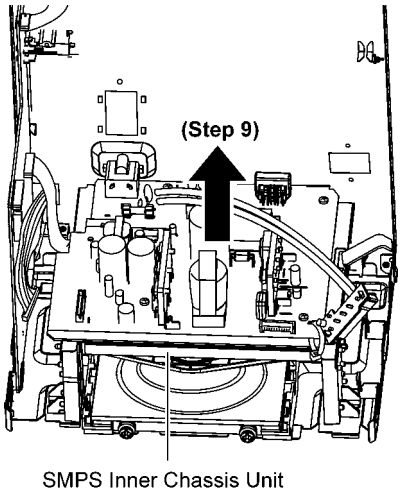
Step 7 Remove 3 screws (For PH only).
Step 7 Remove 2 screws (For PN only).



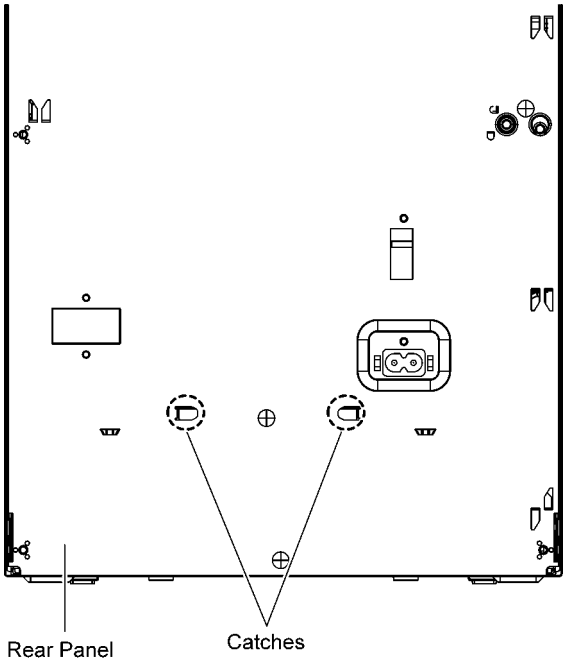
Step 8 Detach Voltage Selector P.C.B. from Rear Panel as arrow shown (For PH only).



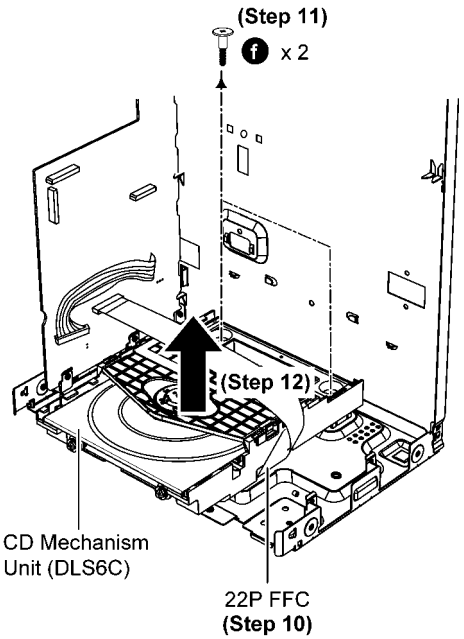
Step 9 Lift up SMPS Inner Chassis Unit.



Caution: During assembling, ensure that SMPS Inner Chassis Unit is catched onto Rear Panel properly.



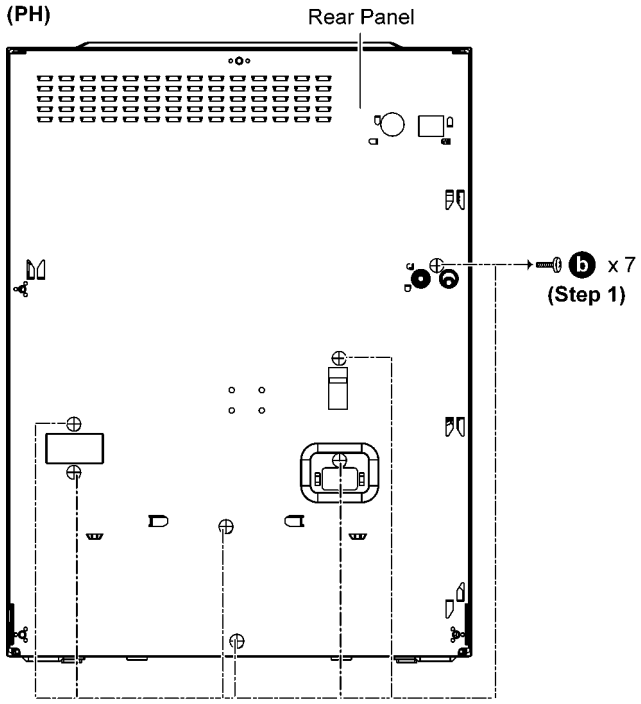
Step 10 Detach 22P FFC from CD Mechanism Unit (DLS6C).
Step 11 Remove 2 screws.
Step 12 Remove CD Mechanism Unit (DLS6C).



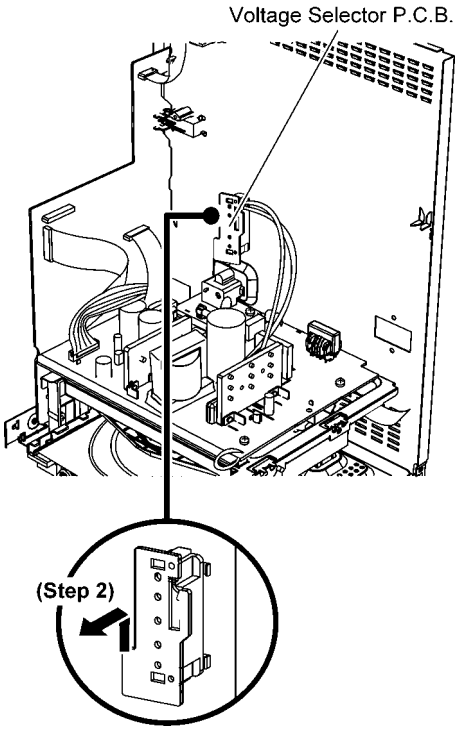
9.22. Disassembly of Rear Panel

- **Refer to "Disassembly of Top Cabinet".**
- **Refer to "Disassembly of Tuner P.C.B.".**

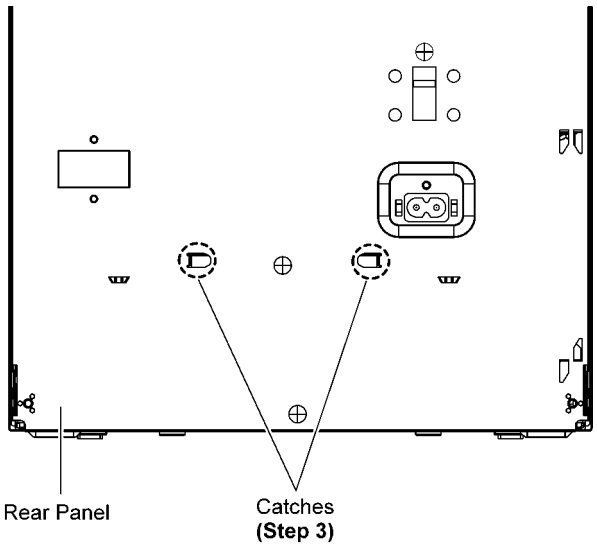
Step 1 Remove 7 screws (For PH only).
Step 1 Remove 6 screws (For PN only).



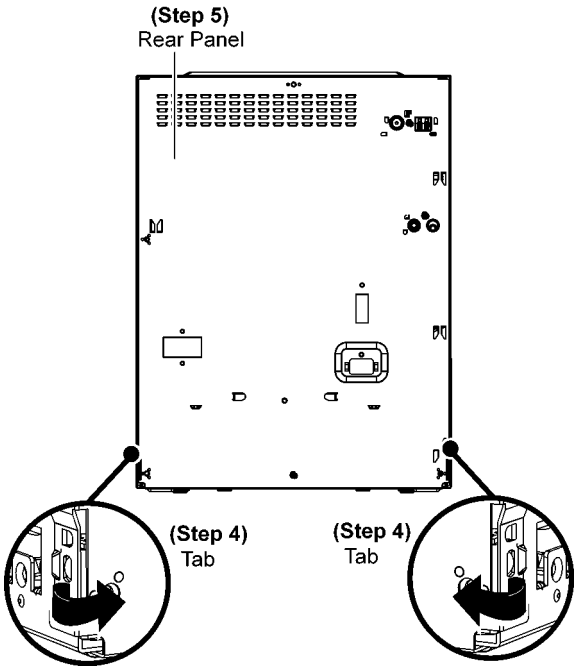
Step 2 Detach Voltage Selector P.C.B. from Rear Panel as arrow shown (For PH only).



Step 3 Lift up the SMPS Inner Chassis Unit to release the catch between the SMPS Inner Chassis Unit & the Rear Panel.



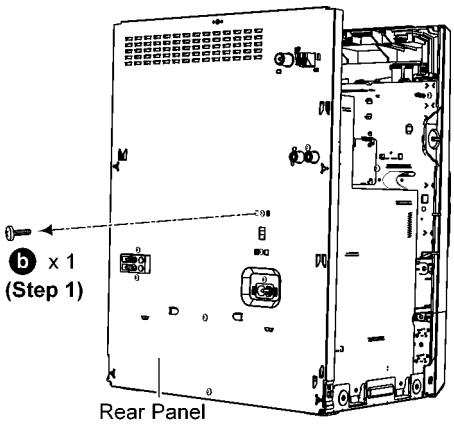
Step 4 Release 2 tabs.
Step 5 Remove Rear Panel.



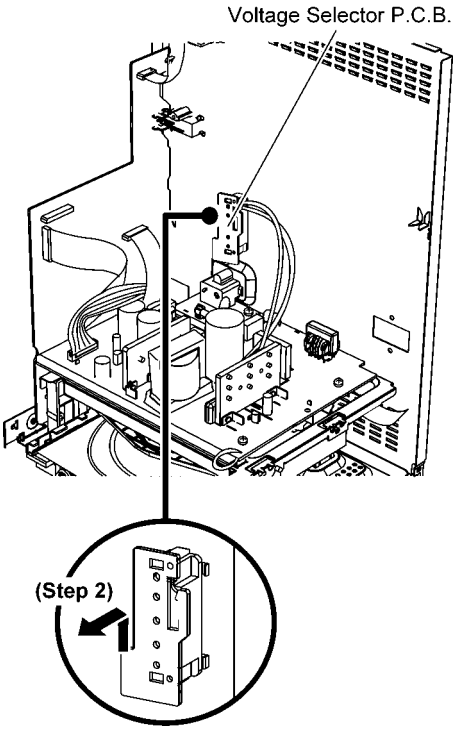
9.23. Disassembly of Voltage Selector P.C.B. (For PH only)

- **Refer to "Disassembly of Top Cabinet".**

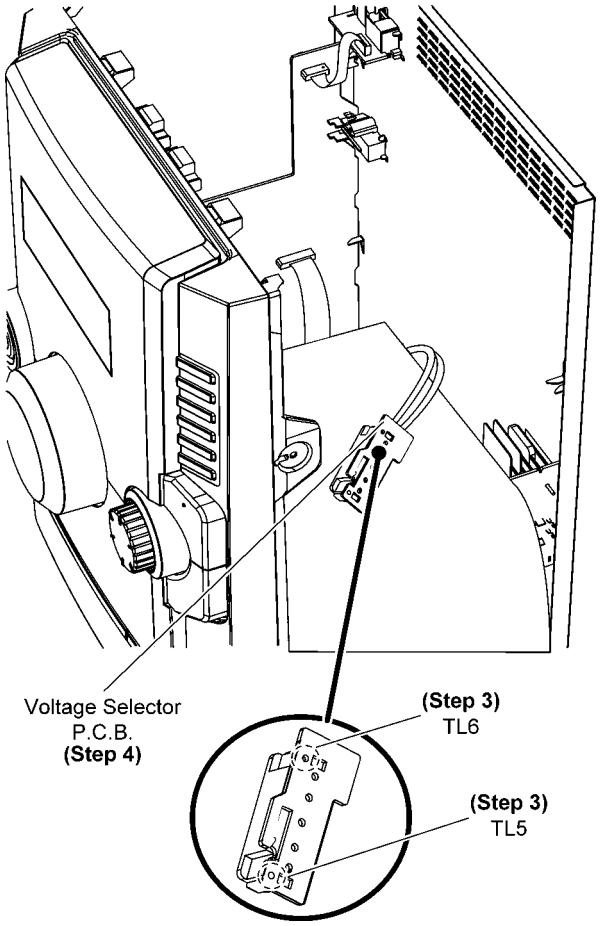
Step 1 Remove 1 screw.



Step 2 Detach Voltage Selector P.C.B. from Rear Panel as arrow shown.



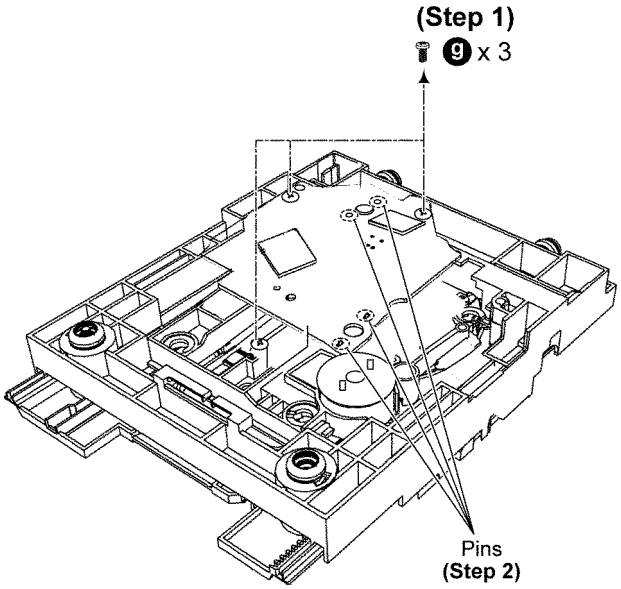
Step 3 Desolder 2 Wire pins, TL5(Black), TL6(Red) on the Voltage Selector P.C.B..
Step 4 Remove Voltage Selector P.C.B..



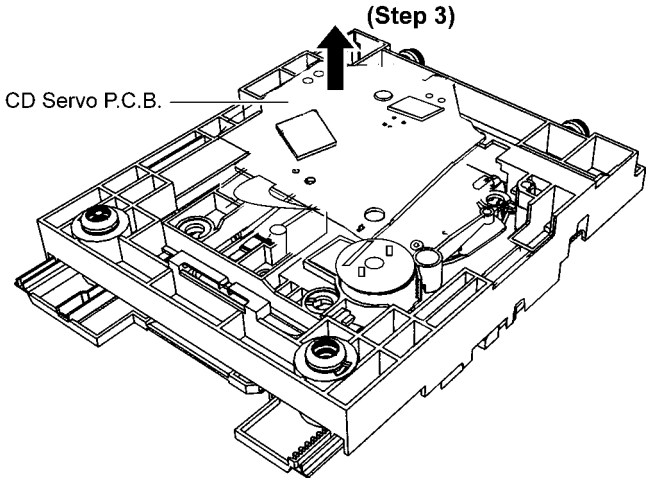
9.24. Disassembly of CD Servo P.C.B.

- **Refer to "Disassembly of CD Mechanism Unit (DLS6C)".**

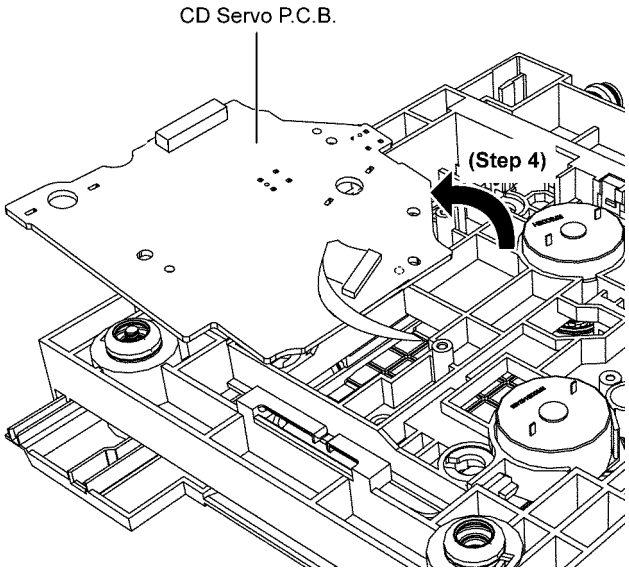
Step 1 Remove 3 screws.
Step 2 Desolder 4 pins.



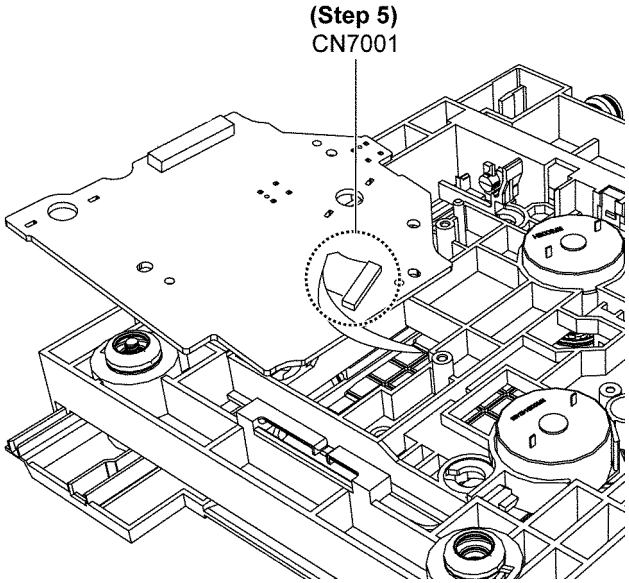
Step 3 Slightly lift up the CD Servo P.C.B..



Step 4 Flip the CD Servo P.C.B. as arrow shown.



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

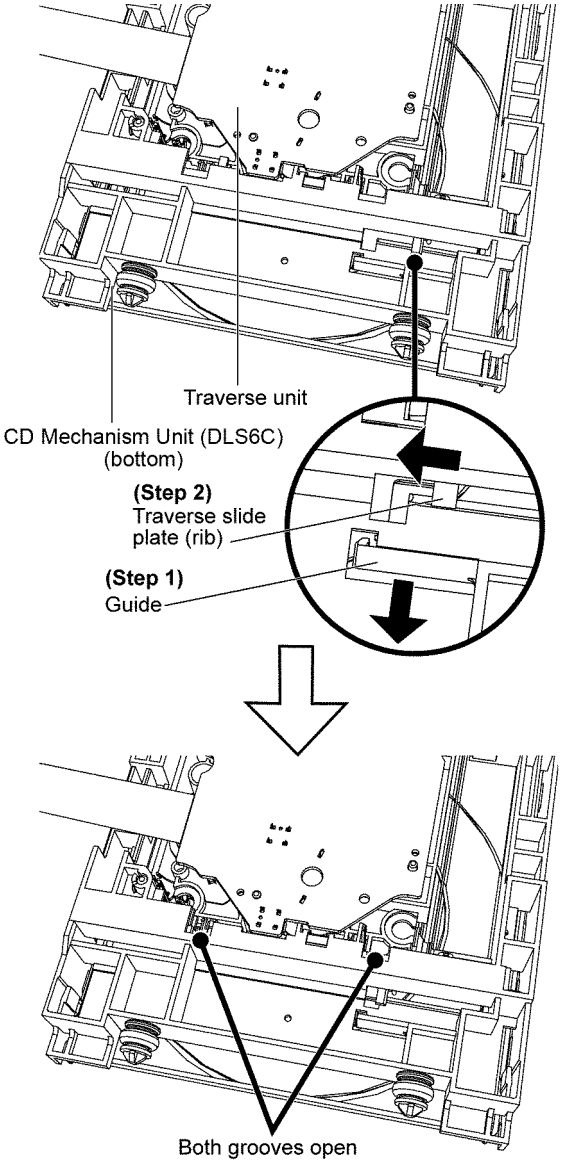


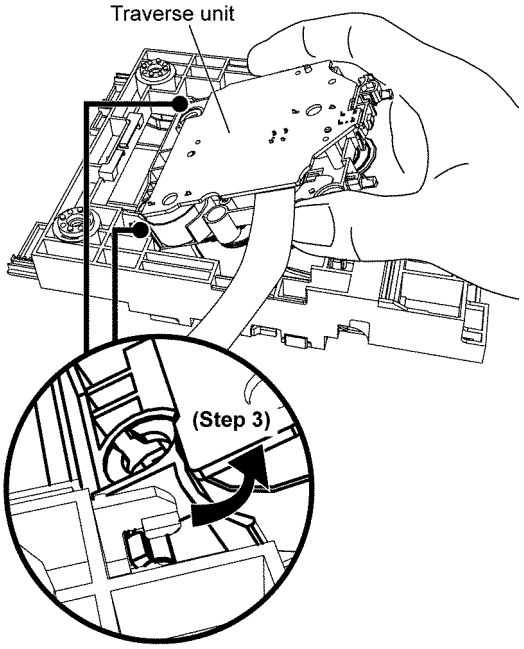
10 Replacement of Traverse Unit

10.1. Disassembling Procedures

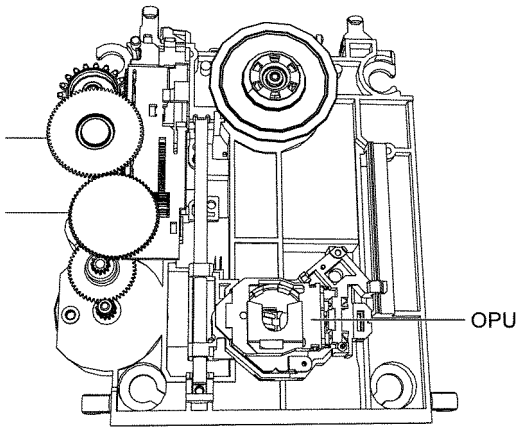
Step 1 Release the guide.

Step 2 Push the Traverse Slide Plate (rib), ensure both grooves are opened.





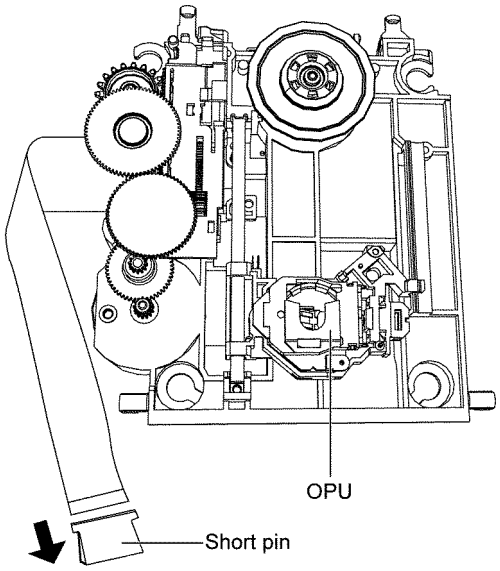
Caution: Ensure the OPU is face upwards, avoid touching the surface of the traverse unit.

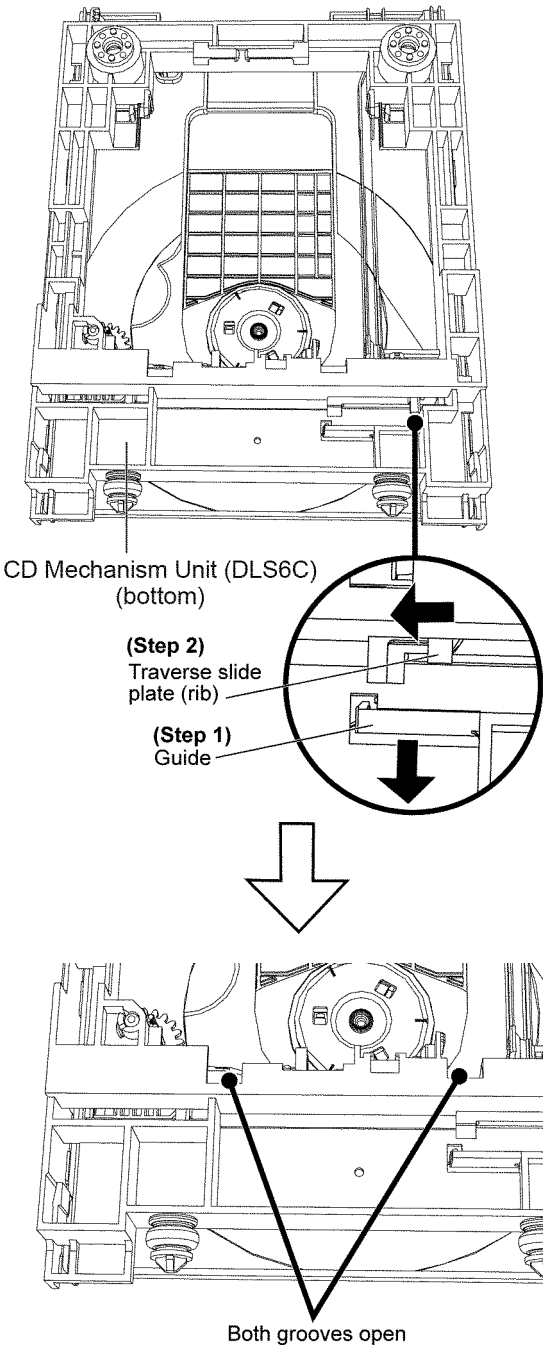


Step 3 Slide out the Traverse Unit as arrow shown.

10.2. Assembling Procedure

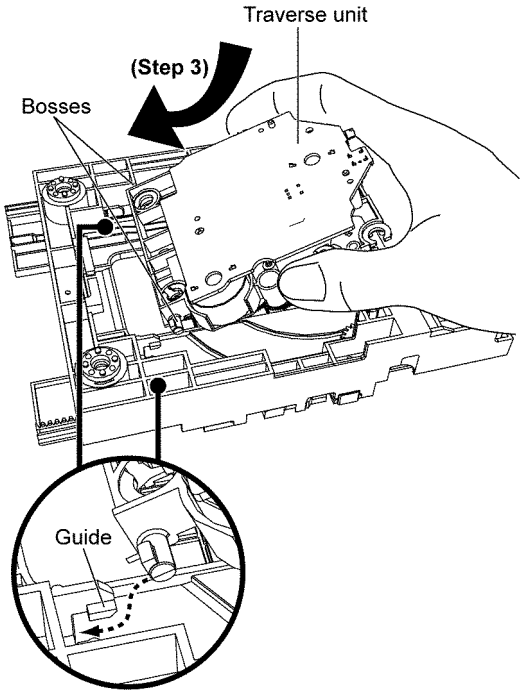
Caution: Removal of the short pin is necessary for replacement of new traverse unit.



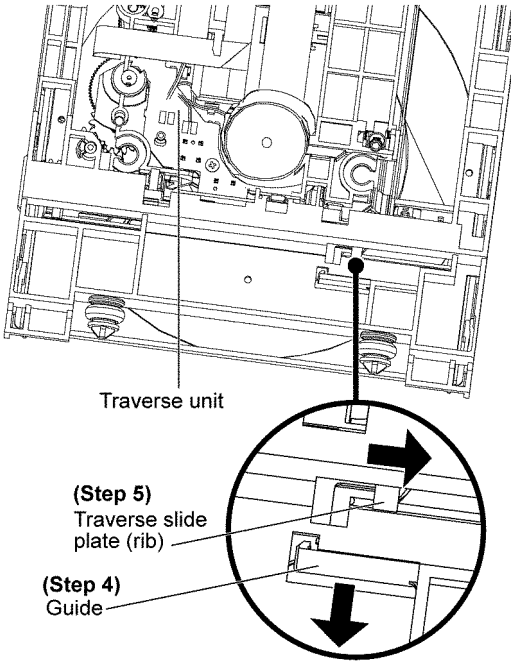


Step 1 Release the guide.
Step 2 Push the Traverse Slide Plate (rib), ensure both grooves are opened.

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.

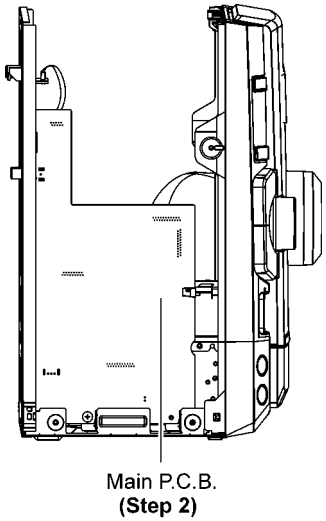


11 Service Position

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

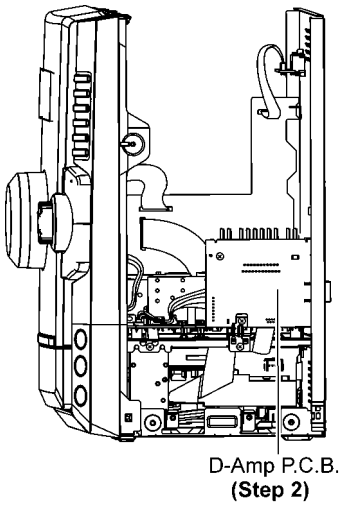
11.1. Checking and Repairing of Main P.C.B.

Step 1 Remove Top Cabinet.
Step 2 Main P.C.B. can be checked & repaired at its original position.



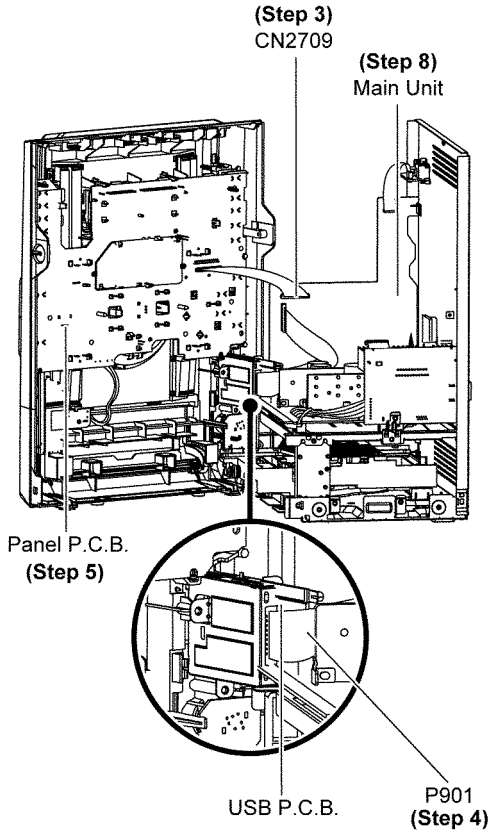
11.2. Checking and Repairing of D-Amp P.C.B.

Step 1 Remove Top Cabinet.
Step 2 D-Amp P.C.B. can be checked & repaired at its original position.



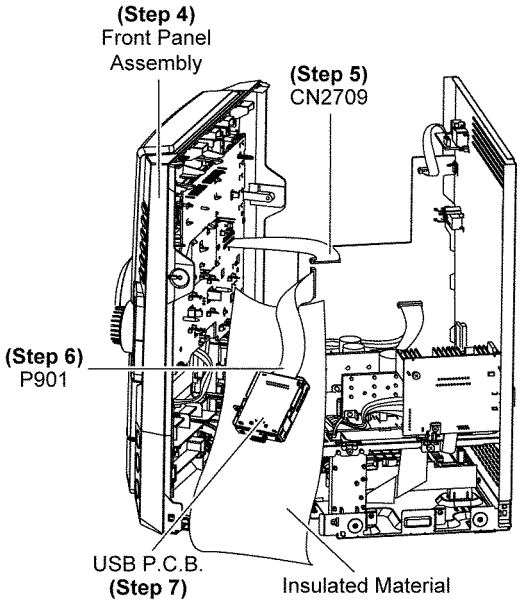
11.3. Checking and Repairing of Panel P.C.B.

Step 1 Remove Top Cabinet.
Step 2 Remove Front Panel Assembly.
Step 3 Attach 17P FFC to the connector (CN2709) on Main P.C.B..
Step 4 Attach 22P FFC to the connector (P901) on USB .P.C.B..
Step 5 Panel P.C.B can be chacked & repaired as diagram shown.



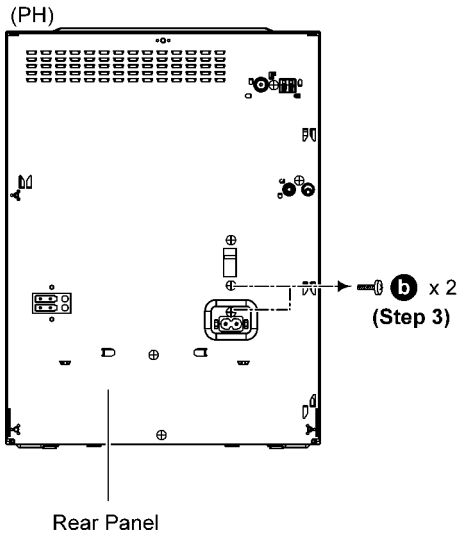
11.4. Checking and Repairing of USB P.C.B.

Step 1 Remove Top Cabinet.
Step 2 Remove Front Panel Assembly.
Step 3 Remove USB P.C.B..
Step 4 Position Front Panel Assembly as diagram shown.
Step 5 Attach 17P FFC to the connector (CN2709) on Main P.C.B..
Step 6 Attach 22P FFC to the connector (P901) on USB P.C.B..
Caution: Insulated Material is required to insulate USB Unit from other parts.
Step 7 USB P.C.B. can be chacked & repaired as diagram shown.



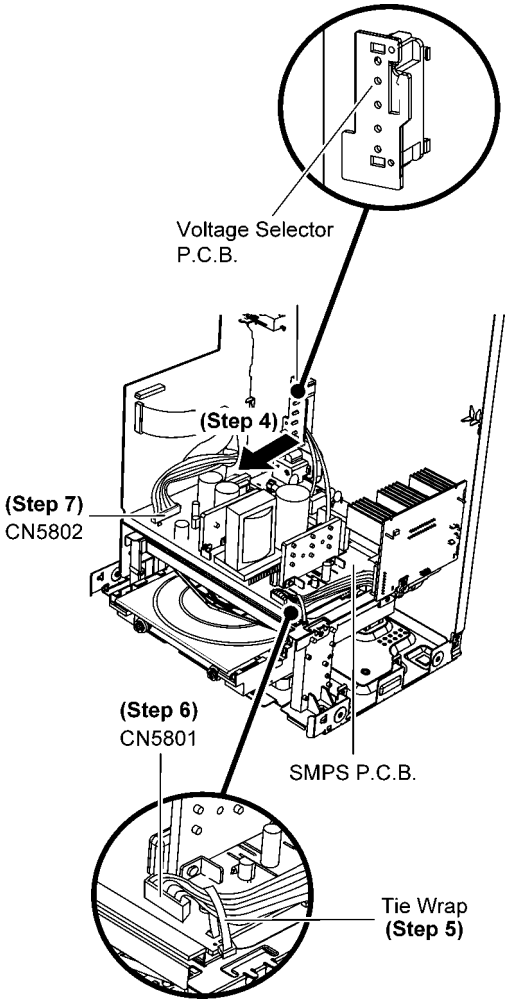
11.5. Checking and Repairing of SMPS P.C.B.

Step 1 Remove Top Cabinet.
Step 2 Remove Front Panel Assembly.
Step 3 Remove 2 screws.(For PH only)
Step 3 Remove 1 screw.(For PN only)

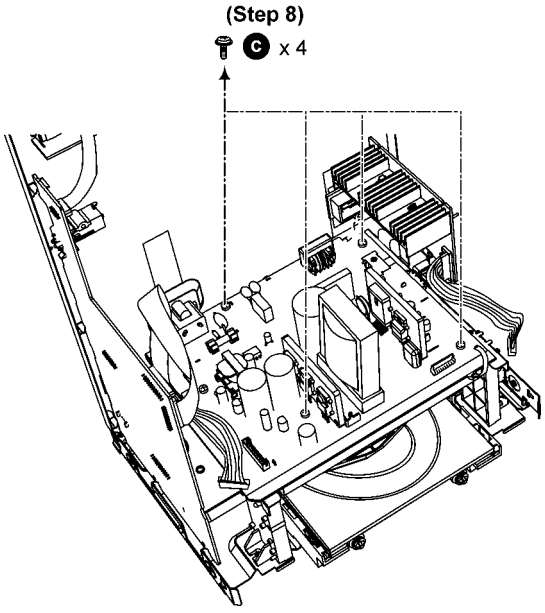


Step 4 Detach Voltage Selector P.C.B. from Rear Panel as arrow shown (For PH only).

Step 5 Cut the Tie Wrap.
Step 6 Detach 6P Cable Wire at the connector (CN5801) on SMPS P.C.B..
Step 7 Detach 11P Cable Wire at the connector (CN5802) on SMPS P.C.B..

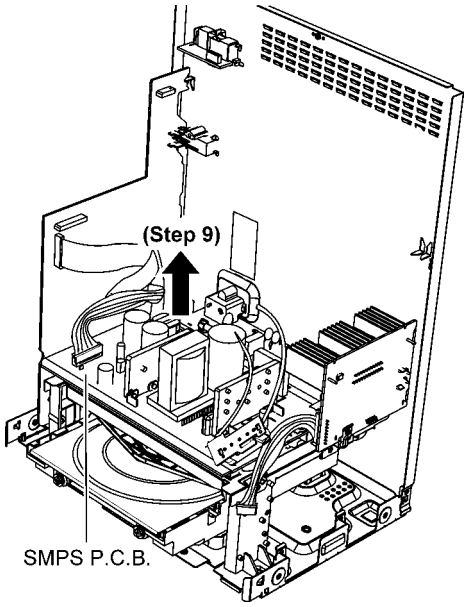


Step 8 Remove 4 screws.



Step 9 Remove SMPS P.C.B..

Caution:Lift up SMPS P.C.B. slowly in order not to damage both the Main P.C.B. & D-Amp P.C.B..

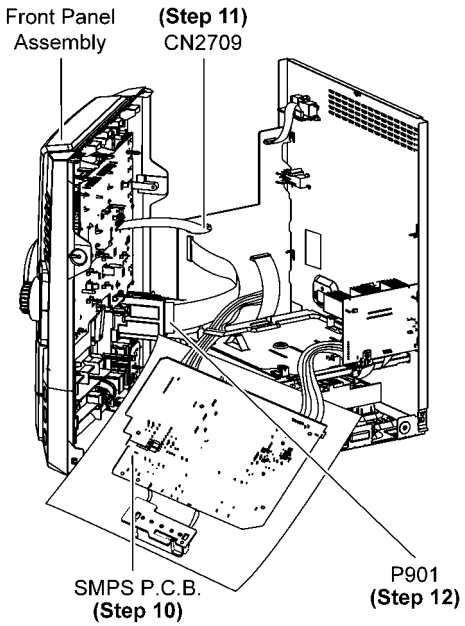


Step 10 Position Front Panel Assembly & SMPS P.C.B. as diagram shown.

Caution: Insulated Material is required to insulate SMPS P.C.B. from other parts.

Step 11 Attach 17P FFC to the connector (CN2709) on Main P.C.B..

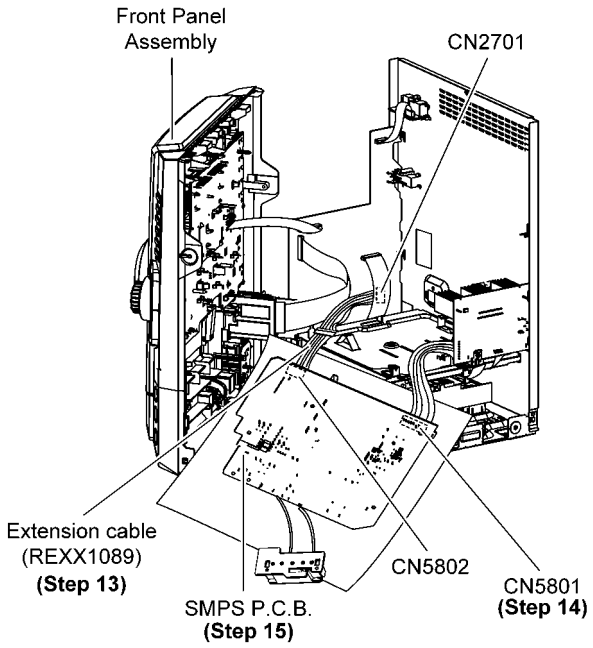
Step 12 Attach 22P FFC to the connector (P901) on USB P.C.B..



Step 13 Extend the wire with extension Cable Wire (REXX1089) (11P Cable Wire from CN2701 to CN5802).

Step 14 Connect 6P Cable Wire to the connector (CN5801) on SMPS P.C.B..

Step 15 SMPS P.C.B. can be checked & repaired as diagram shown.



12 Voltage & Waveform Chart

Note:

- Indication Voltage Values are in 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 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																	

SA-AKX10PH/PN CD SERVO P.C.B.

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

REF NO.	IC2101																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	0	4.7	9.4	0	3.3	3.3	0
STANDBY	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	0	4.7	9.5	0	3.3	3.3	0

REF NO.	IC2101																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32								
CD PLAY	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7								
STANDBY	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.6	4.6	4.6								

REF NO.	IC2201																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	6.1	6.1	6.1	0	6.1	6.1	6.1	12.2												
STANDBY	6.1	6.1	6.1	0	6.1	6.1	6.1	12.2												

REF NO.	IC2701																			
MODE	1	2	3																	
CD PLAY	16.7	0	12.2																	
STANDBY	16.7	0	12.2																	

REF NO.	IC2702																			
MODE	1	2	3	4	5															
CD PLAY	16.7	5.2	0	1.0	2.9															
STANDBY	17.0	5.2	0	1.0	2.9															

REF NO.	IC2801																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	3.3	0	0	0	3.3	3.3	0	0	0	0.6	0.6	0	1.7	0	1.7	3.4	3.1	0	3.1	1.9
STANDBY	3.3	0	0	0	3.3	3.3	3.3	0	0	0.7	0.7	3.3	1.7	0	1.7	3.4	3.4	3.3	0	2.1

REF NO.	IC2801																			
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	0	0	0	3.3	3.3	0	0	0	0	3.3	0	0	0	0	0
STANDBY	0	0	0	0	0.1	0	0	0	3.3	3.3	0	0	0	0	3.3	3.3	0	0	0	0

REF NO.	IC2801																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	0	0	0	0	0	0	0	0	0	0	3.3	3.2	0	0	0	3.0	2.3	3.3	2.2	3.3
STANDBY	0	0	0	0	0	0	0	0	0	0	3.3	3.2	0	0	0	3.3	0	3.3	0	3.3

REF NO.	IC2801																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
CD PLAY	3.3	3.3	3.3	0	0	3.3	0	0	0	0	0	0	0	0	0	0	0	0	0	3.3
STANDBY	3.3	3.3	3.3	0	0	3.3	0	0	0	0	0	0	0	0	0	0	0	0	0	3.4

REF NO.	IC2801																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
CD PLAY	0	2.7	0.4	1.8	0	0	0	3.3	0	3.3	0	0	3.3	3.3	1.1	0	1.0	3.3	3.3	1.0
STANDBY	0	2.8	0.4	1.9	0	0	0	3.3	0	2.3	0	0	3.3	3.3	1.2	0	1.1	3.3	3.3	1.1

SA-AKX10PH/PN MAIN P.C.B.

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

REF NO.	IC2802																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	0	0	0	0	0	1.2	0	3.3												
STANDBY	0	0	0	0	0	1.2	0	3.3												

REF NO.	Q2220				Q2221				Q2222				Q2223				Q2301			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	7.3	12.0	7.8		0	7.1	0		7.2	12.1	7.8		0	7.2	0		0	0	0	
STANDBY	7.2	12.1	7.8		0	7.1	0		7.2	12.1	7.9		0	7.1	0		0	0	0	

REF NO.	Q2302				Q2701				Q2702				Q2705				Q2790			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	0	0		7.6	10.6	8.2		3.3	5.2	4.0		16.5	0	16.4		0	0	0.7	
STANDBY	0	0	0		7.6	10.6	8.2		3.3	5.2	4.1		16.7	0	16.8		0	0	0.6	

REF NO.	Q2803				QR2701				QR2702				QR2704				QR2801			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	3.2	3.3	2.6		0	3.3	0.1		0.1	3.3	0		0	3.3	0		0	3.1	0	
STANDBY	3.3	3.3	2.6		0	3.3	0		0	3.3	0		0	3.3	0		0	3.3	0	

REF NO.	QR2802				QR2831				QR2832											
MODE	E	C	B		E	C	B		E	C	B									
CD PLAY	0	3.3	0		3.3	3.2	0.1		3.2	3.2	0.1									
STANDBY	0	0	3.0		3.3	3.3	0.1		3.4	3.4	0.1									

SA-AKX10PH/PN MAIN P.C.B.

12.4. Panel P.C.B.

REF NO.	IC6001																			
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	2.3	1.4	0.4	2.8	1.9	0	0	0	3.4	-20.1	-20.1	-20.1	-24.0	-24.0	-24.0	-24.0
STANDBY	0	0	0	0	2.3	1.4	0.4	2.8	1.9	0	0	0	3.4	-20.1	-20.1	-20.1	-24.0	-24.0	-24.0	-24.0

REF NO.	IC6001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	-22.0	-23.9	-23.9	-23.9	-20.1	-22.0	-22.0	-23.9	-23.9	-24.3	-22.3	-22.2	-22.3	-22.3	-22.2	-22.2	-22.2	-22.2	-22.2	-22.2
STANDBY	-22.0	-23.9	-23.9	-23.9	-20.1	-22.0	-22.0	-23.9	-23.9	-24.3	-22.3	-22.2	-22.3	-22.3	-22.2	-22.2	-22.2	-22.2	-22.2	-22.2

REF NO.	IC6001																			
MODE	41	42	43	44																
CD PLAY	-22.2	-22.2	3.4	0																
STANDBY	-22.2	-22.2	3.4	0																

REF NO.	Q6101																			
MODE	E	C	B																	
CD PLAY	0	16.5	-0.1																	
STANDBY	0	16.7	-0.1																	

SA-AKX10PH/PN PANEL P.C.B.

12.5. USB P.C.B.

REF NO.	IC900																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	1.2	1.2	1.3	0	0	0	3.3	3.2	3.3	1.8	1.6	1.6	0	0	0	0	3.3	3.3	3.3	1.3
STANDBY	1.1	1.1	1.1	0	0	0	3.2	3.2	3.3	1.5	1.4	1.5	0	0	0	0	3.3	3.4	3.4	1.2

REF NO.	IC900																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	0.9	1.3	1.3	1.2	1.2	1.2	1.3	1.3	1.2	1.3	1.3	1.3	1.3	1.3	1.2	1.2	1.1	3.3	1.0	0
STANDBY	1.3	1.3	1.3	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.3	3.4	1.3	0

REF NO.	IC900																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	0.9	1.8	0.9	0	0.9	3.3	0.3	3.3	3.3	0	3.3	0.9	0	0	0.9	3.0	0	0	0	0.9
STANDBY	1.3	1.8	1.3	0	1.3	3.3	0.3	3.3	3.4	0	3.4	1.3	0	0	1.3	3.3	0	0	0	1.3

REF NO.	IC900																			
MODE	61	62	63	64																
CD PLAY	0	1.8	0.9	3.3																
STANDBY	0	1.8	1.3	3.3																

SA-AKX10PH/PN USB P.C.B.

12.6. D-Amp P.C.B.

REF NO.	IC5900																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	-30.0	-3.1	-3.1	34.9	0	-34.9	-26.4	35.2	6.1	-3.1	-35.1	-25.0	-35.1	-3.1	6.1	35.2	-34.9	-34.9	0	34.9
STANDBY	-30.0	-3.0	-3.0	34.9	0	-34.9	-26.4	35.2	6.2	-3.0	-35.1	-25.0	-35.1	-3.0	6.2	35.2	-34.9	-34.9	0	34.9

REF NO.	IC5900																			
MODE	21	22	23																	
CD PLAY	-3.1	-3.1	4.6																	
STANDBY	-3.0	-3.0	2.5																	

REF NO.	Q5901				Q5902				Q5903				Q5905				Q5906			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	-34.9	-34.9	-34.3		5.2	5.2	4.5		0	0	0.7		0	4.6	0		0	3.3	0	
STANDBY	-34.9	-34.9	-34.3		5.2	5.2	4.5		0	0	0.7		0	0.1	0.7		0	3.3	0	

REF NO.	Q5907				QR5900				QR5901											
MODE	E	C	B		E	C	B		E	C	B									
CD PLAY	0	3.3	0		0	0	3.3		5.2	5.2	0									
STANDBY	0	3.3	0		0	0	3.4		5.2	5.2	0									

SA-AKX10PH/PN D-AMP P.C.B.

12.7. SMPS P.C.B.

REF NO.	IC5701																			
MODE	1	2	3	4	5	6	7													
CD PLAY	164.8	0	0	19.1	0.1	1.4	0.5													
STANDBY	164.8	0	0	19.1	0.1	1.4	0.5													

REF NO.	IC5799																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	5.9	1.0	2.3	11.0	164.2	0	0	0												
STANDBY	5.9	1.0	2.3	11.0	164.2	0	0	0												

REF NO.	IC5801																			
MODE	1	2	3																	
CD PLAY	-2.0	-32.5	-35.2																	
STANDBY	-2.0	-32.6	-35.2																	

REF NO.	IC5899																			
MODE	1	2	3																	
CD PLAY	2.3	2.5	0																	
STANDBY	2.3	2.5	0																	

REF NO.	Q5720				Q5721				Q5722				Q5803				Q5860			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	7.3	8.5	7.6		19.7	19.7	19.0		0	19.6	0.2		0	35.2	0		1.3	0	0.7	
STANDBY	7.4	8.6	7.7		19.7	19.7	19.0		0	19.6	0.2		0	35.2	0		1.3	0	0.7	

REF NO.	Q5861				Q5862				Q5898				QR5801				QR5802			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	0	0.7		0	3.3	0		0	2.1	0.4		0	3.1	-3.0		0	3.3	6.6	
STANDBY	0	3.3	0		0	3.3	0		0	2.1	0.4		0	3.1	-2.9		0	3.3	6.6	

REF NO.	QR5810																			
MODE	E	C	B																	
CD PLAY	0	0.1	3.1																	
STANDBY	0	0.1	3.1																	

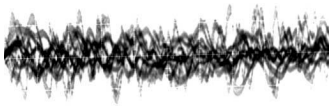
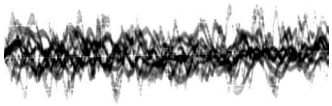
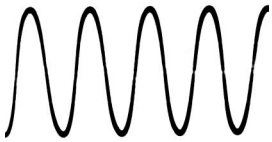
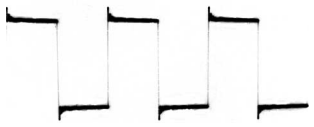
SA-AKX10PH/PN SMPS P.C.B.

12.8. Tuner P.C.B.

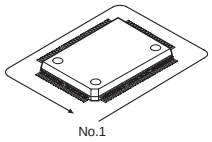
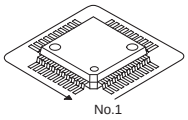
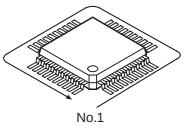
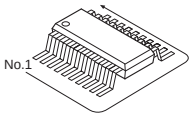
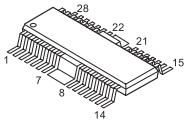
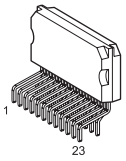
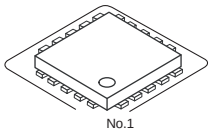
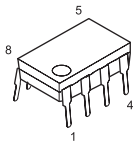
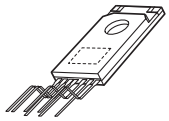
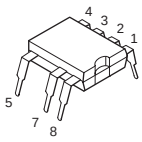
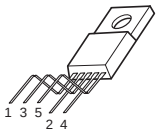
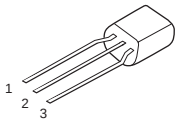
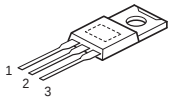
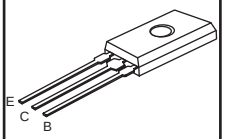
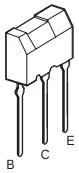
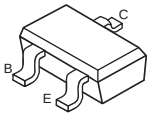
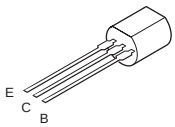
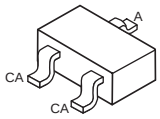
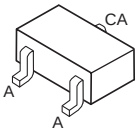
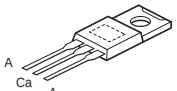
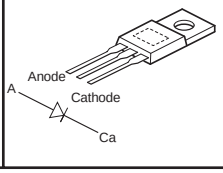
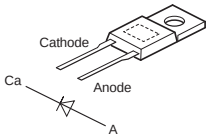
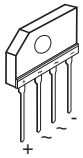
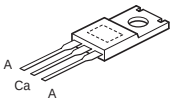
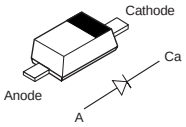
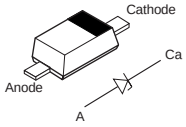
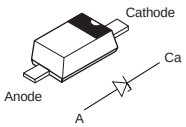
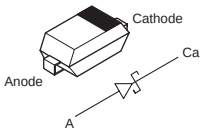
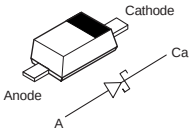
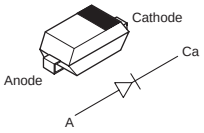
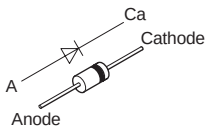
REF NO.	IC52																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	0	3.0	3.0	0	0	0	0	0	0	3.3	3.3	1.4	0.3	0.3	0.3	0	0	0	0
STANDBY	0	0	3.0	3.0	0	0	0	0	0	0	3.3	3.3	1.4	0.3	0.3	0.3	0	0	0	0

SA-AKX10PH/PN TUNER P.C.B.

12.9. Waveform Table

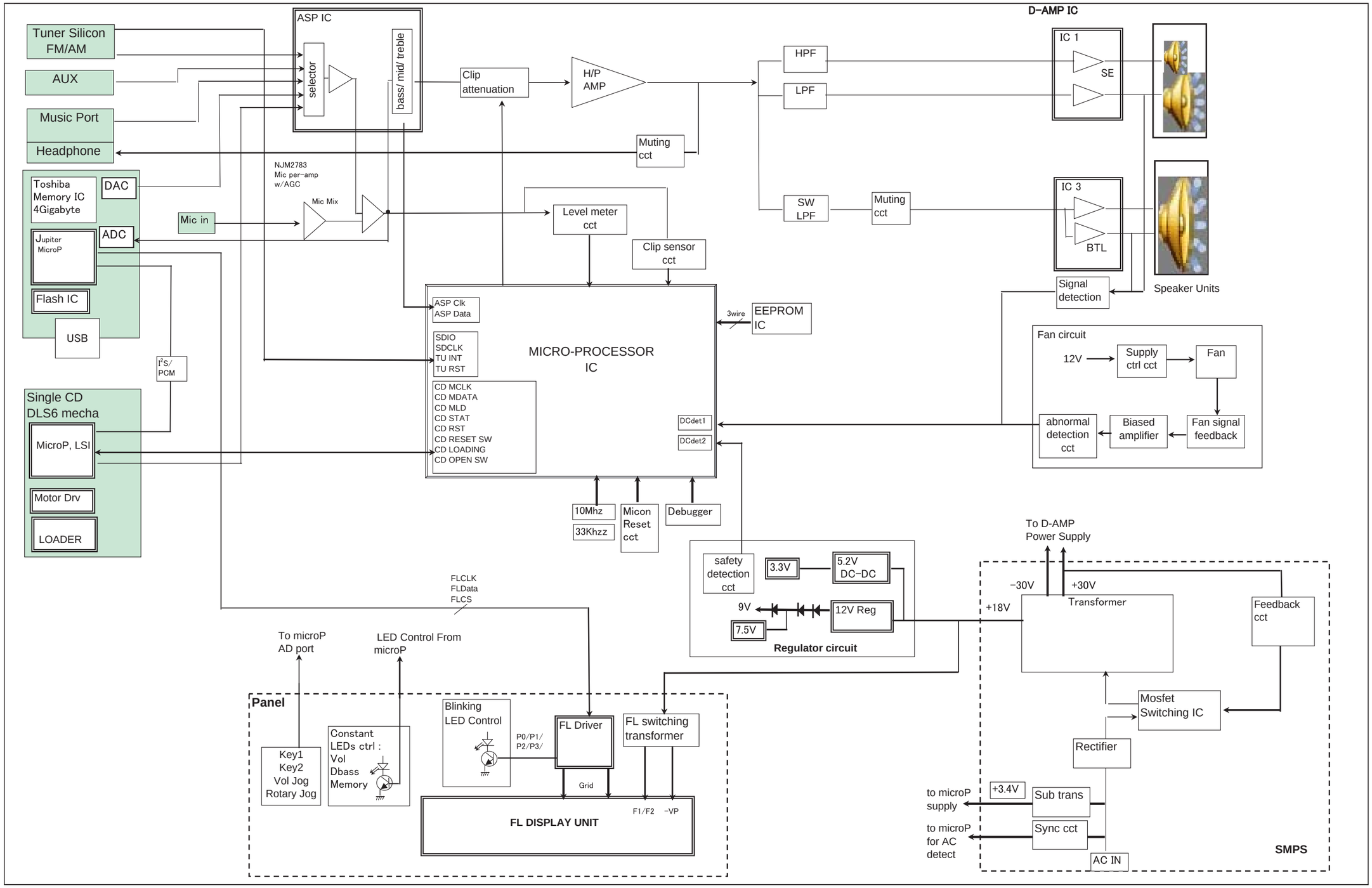
WF No. IC52-9,17 (PLAY)  0.2Vp-p(100usec/div)	WF No. IC52-13,14 (PLAY)  0.1Vp-p(200usec/div)	WF No. IC900-11 (PLAY)  2.2Vp-p(20nsec/div)	WF No. IC900-12 (PLAY)  3Vp-p(20nsec/div)
WF No. IC2101-2,12 (PLAY)  0.1Vp-p(200usec/div)	WF No. IC2101-6,8 (PLAY)  1.3Vp-p(200usec/div)	WF No. IC2101-31,32 (PLAY)  3.6Vp-p(200usec/div)	WF No. IC2801-10,11 (PLAY)  1.8Vp-p(10usec/div)
WF No. IC2801-13 (PLAY)  3.2Vp-p(20nsec/div)	WF No. IC2801-15 (PLAY)  2Vp-p(50nsec/div)	WF No. IC5900-2,3 (PLAY)  1.4Vp-p(1msec/div)	WF No. IC5900-10,14 (PLAY)  100Vp-p(1usec/div)
WF No. IC5900-21,22 (PLAY)  1.5Vp-p(500usec/div)	WF No. IC6001-5 (PLAY)  1.5Vp-p(1usec/div)	WF No. IC6001-8 (PLAY)  3.2Vp-p(2usec/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(100usec/div)	WF No. IC7001-80 (PLAY)  4.8Vp-p(20nsec/div)	WF No. IC7001-81 (PLAY)  1.9Vp-p(20nsec/div)

13 Illustration of ICs, Transistor and Diode

RFKWMAKX10PN (100P) 	MN6627954AMA (100P) 	C0HBB0000061 (64P) MNZSFB5KJM2 (64P) 	C1BB00001151 (32P) C3EBFY000006 (8P) 	BA5948FPE2 (28P) 	C1BA00000497 (23P) 
VUEALLPT031 (20P) 	C0AABB000125 (8P) 	C5HACYY00004 (7P) C5HACYY00005 (7P) 	MIP2F20MSSCF (8P) 	C0DAAYG00001 (5P) 	C0DABFC00002 C0DAEMZ00001 
C0CAAKG00046 	B1BABG000007 	B1BABK000001 		B1ADCE000012 B1ADCF000001 B1ABGC000005 B1ABCF000176 B1GBCFJJ0051 B1GBCFLL0037 B1GDCFGA0018 B1GDCFGG0026 B1GDCFJJ0047	B1AAJC000019 B1ACKD000006 
B0ADCJ000020 	B1GBCFJN0038 	B0ABSM000008 	B0ZAZ0000052 	B0HFRJ000012 	B0FBAR000043 
B1BACG000023 	B0ACCK000012 MA2YF8000L 		B0BC018A0267 B0BC2R4A0263 B0BC5R1A0266 B0BC8R2A0266 B0BC024A0269 B0BC036A0264		B0BC010A0007 B0BC019A0007 B0BC035A0007 B0BC6R100010 B0BC9R000008
B0JCPD000025 	MAZ8056GML 	B0HCSP000001 		B0EAKM000117 B0EAMM000057 B0HAMP000094 B0JAME000114	

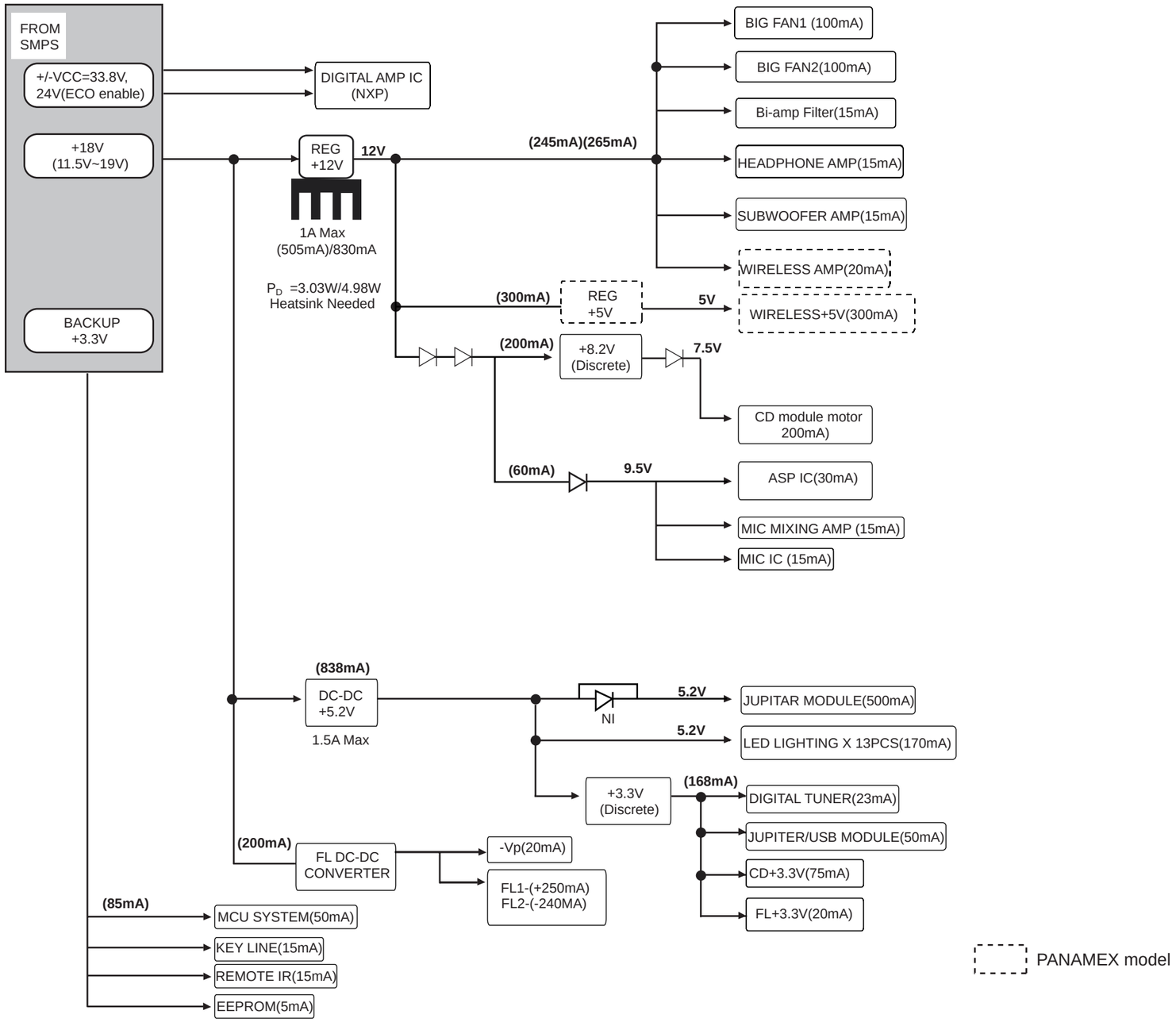
14 Simplified Block Diagram

14.1. Overall Simplified Block Diagram



14.2. D-Amp Block Diagram

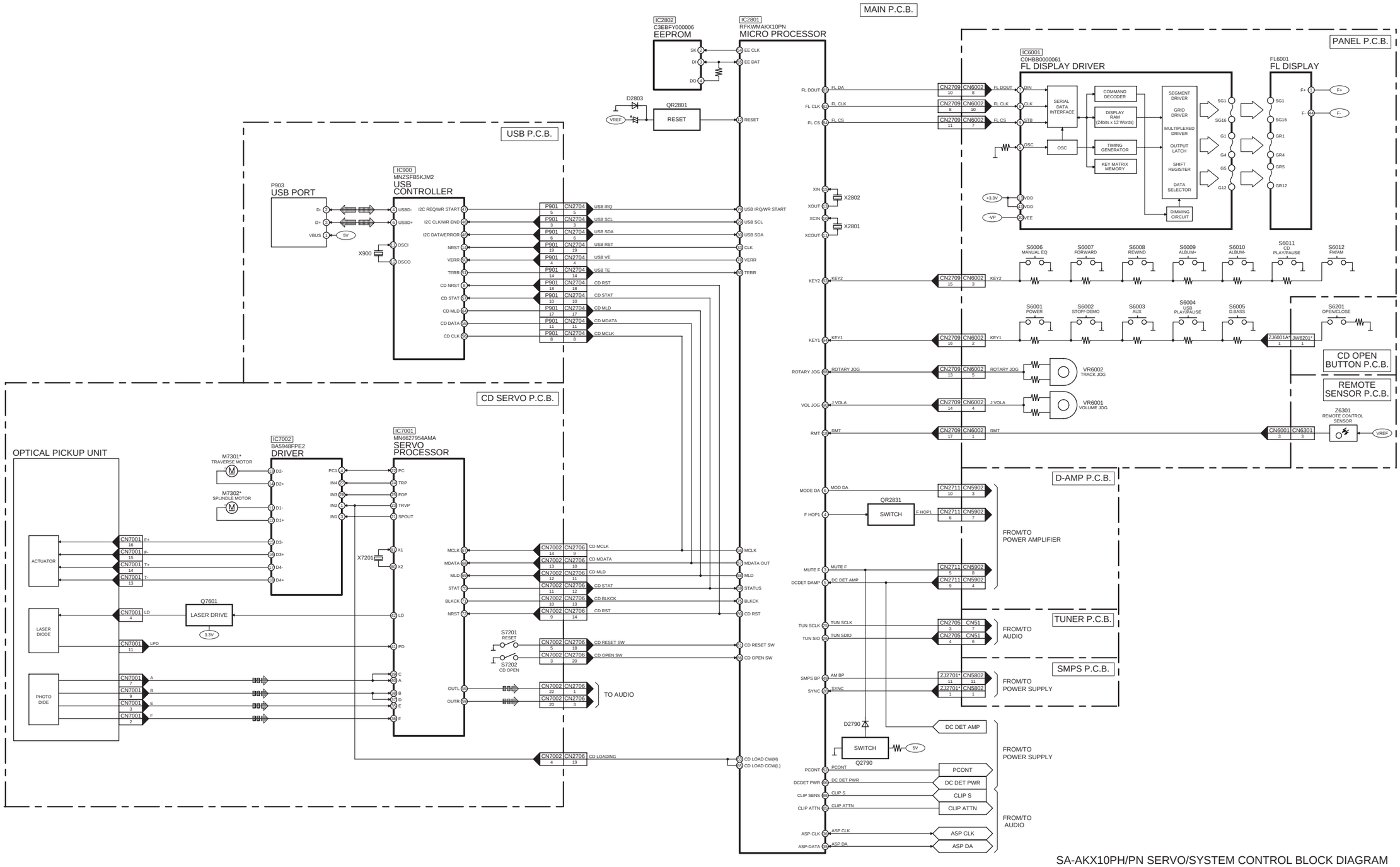
Block Connection Diagram



15 Block Diagram

15.1. Servo/System Control

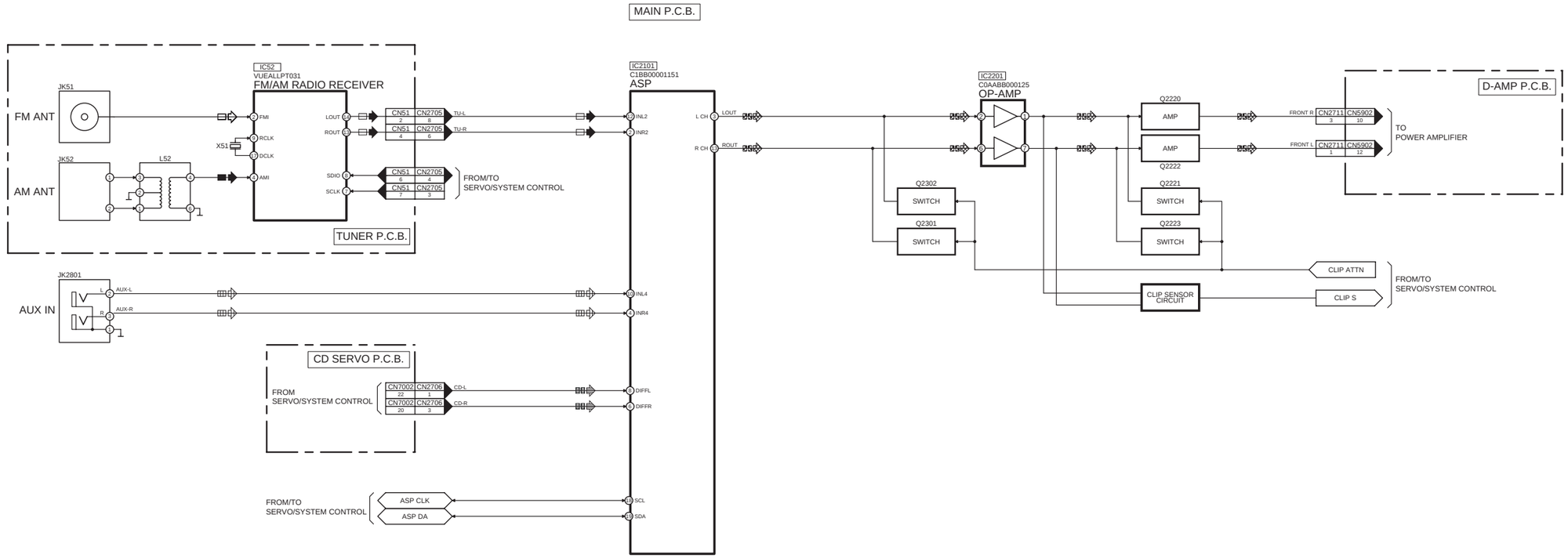
: CD AUDIO INPUT SIGNAL LINE : USB SIGNAL LINE



SA-AKX10PH/PN SERVO/SYSTEM CONTROL BLOCK DIAGRAM

15.2. Audio

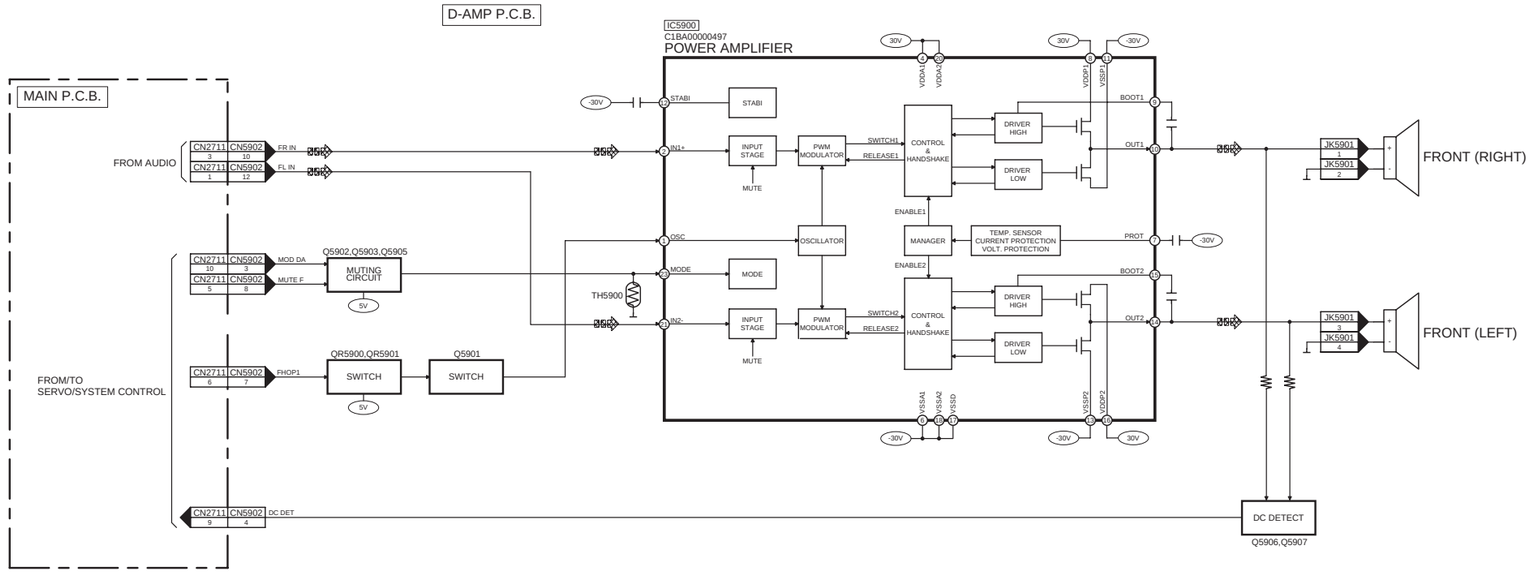
: CD AUDIO INPUT SIGNAL LINE : AUX AUDIO INPUT SIGNAL LINE : AUDIO OUTPUT SIGNAL LINE : AM SIGNAL LINE : FM SIGNAL LINE : AM/FM SIGNAL LINE



SA-AKX10PH/PN AUDIO BLOCK DIAGRAM

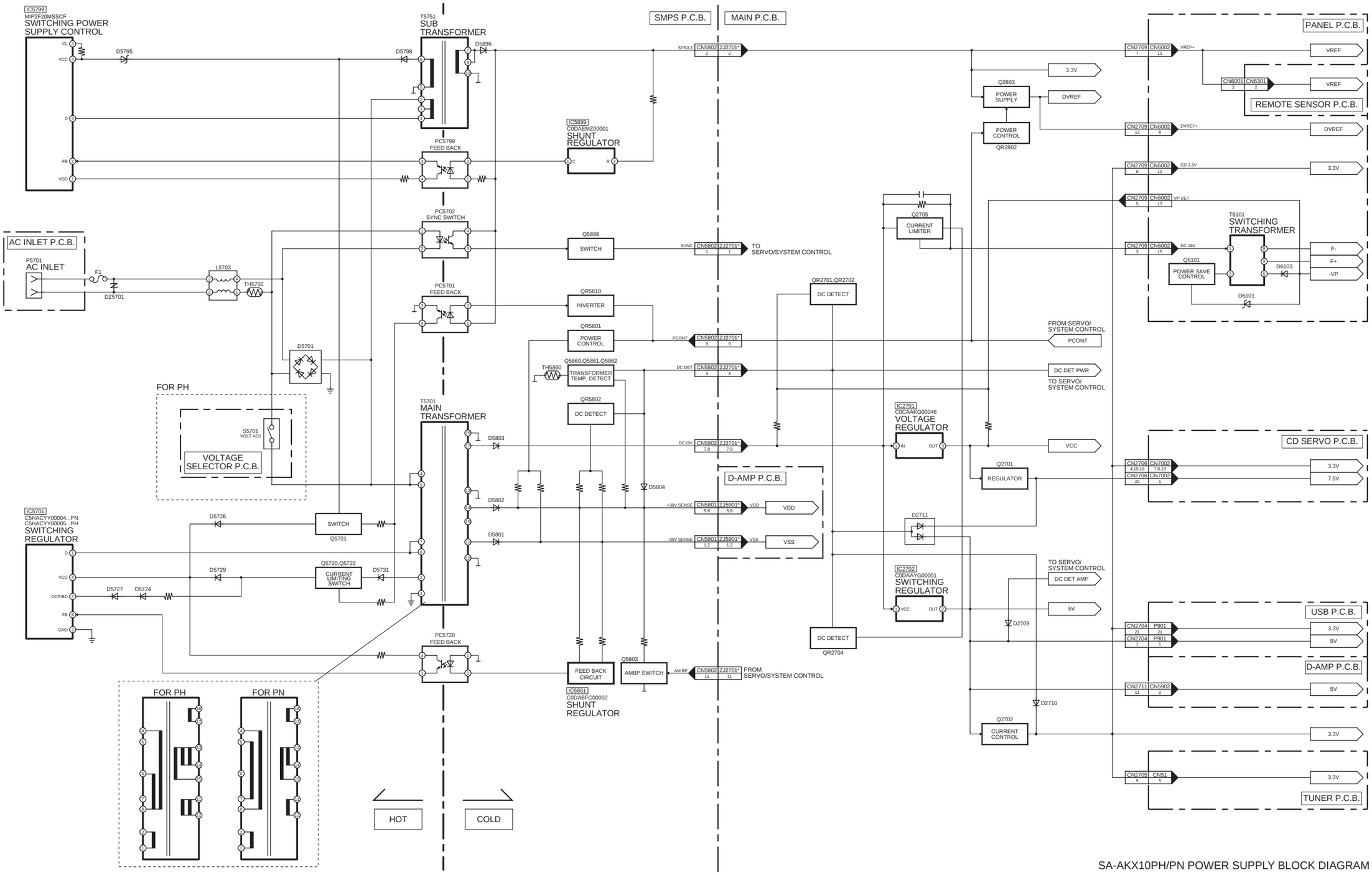
15.3. Power Amplifier

: AUDIO OUTPUT SIGNAL LINE



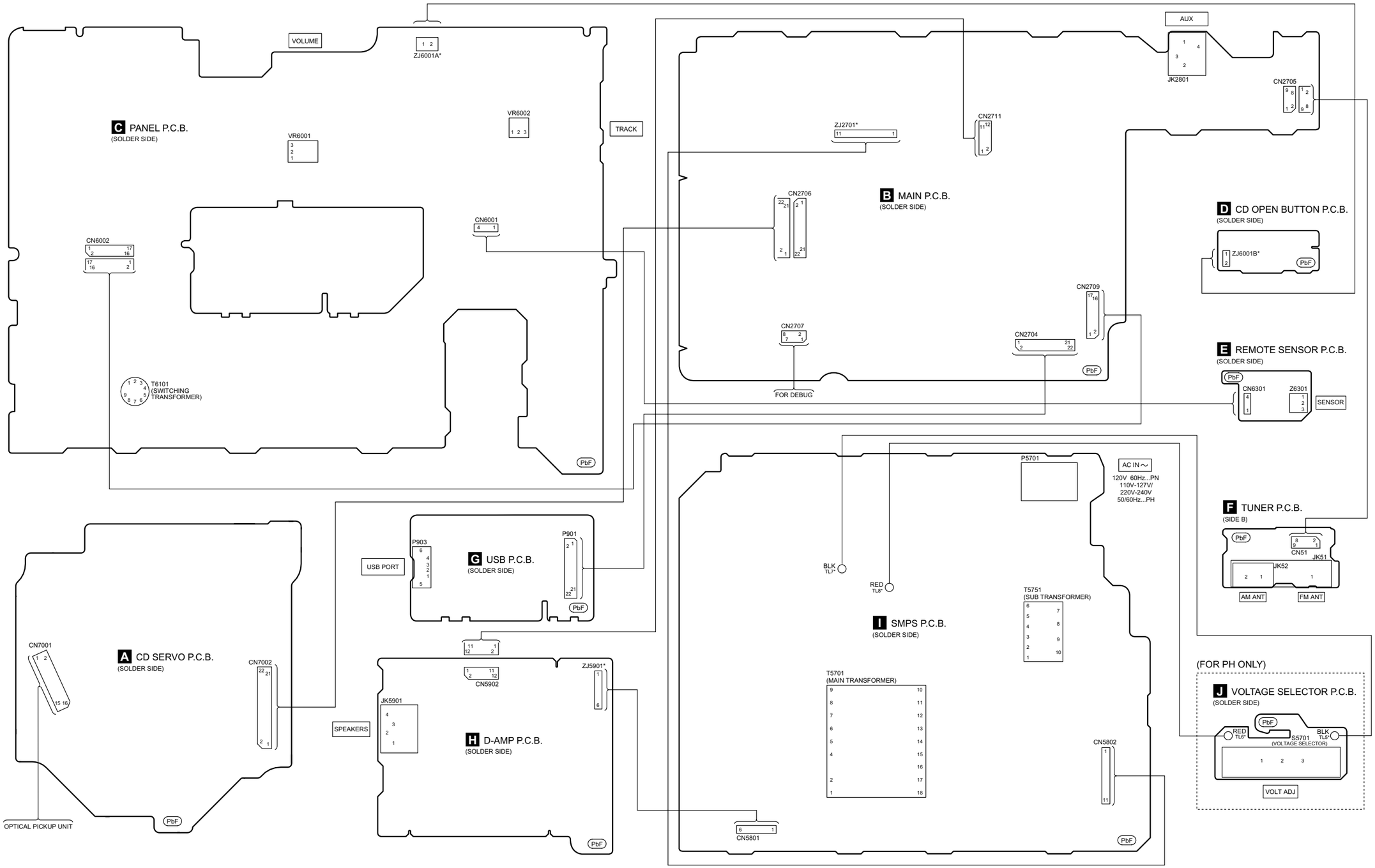
SA-AKX10PH/PN POWER AMPLIFIER BLOCK DIAGRAM

15.4. Power Supply



SA-AKX10PH/PN POWER SUPPLY BLOCK DIAGRAM

16 Wiring Diagram



NOTE: " * " REF IS FOR INDICATION ONLY.

SA-AKX10PH/PN WIRING CONNECTION

17 Schematic Diagram Notes

- **This schematic diagram may be modified at any time with the development of new technology.**

Notes:

S5701:	Voltage ADJ switch (For PH only).
S6001:	Power switch (⏻/|).
S6002:	Stop (■ -DEMO) switch.
S6003:	AUX Switch
S6004:	USB Play/Pause (USB ▶/❚❚) switch.
S6005:	D.BASS switch.
S6006:	Manual EQ (MANUAL EQ) switch.
S6007:	Forward (▶▶/▶▶|) switch.
S6008:	Rewind (|◀◀/◀◀) switch.
S6009:	Album + switch.
S6010:	Album - switch.
S6011:	CD switch (⏏).
S6012:	FM/AM switch.
VR6001:	Volume Jog.
VR6002:	Track Jog.

- 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.

- In case of AC rated voltage Capacitors, the part no. and values will be indicated in the Schematic Diagram.
  AC rated voltage capacitors:
  For PN only:
  C5701, C5703, C5704, C5705, C5708
  For PH only:
  C5701, C5703, C5704, C5705, C5706, C5707. C5708

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

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

- **Coil**
  Unit of inductance is H, unless otherwise noted.

- *****

  REF IS FOR INDICATION ONLY.

- Voltage and signal line

  : +B signal line

  : -B signal line

  
  : CD Audio input signal line

  
  : AUX input Audio signal line

  
  : Audio output signal line

  
  : USB signal line

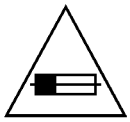
  
  : FM/AM signal line

  
  : AM signal line

  
  : FM signal line

- For PH only

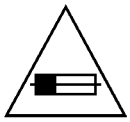
CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE F1 T6.3AL 250V FUSE



RISK OF FIRE-REPLACE FUSE AS MARKED.

- For PN only

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE F1 8A 125V FUSE



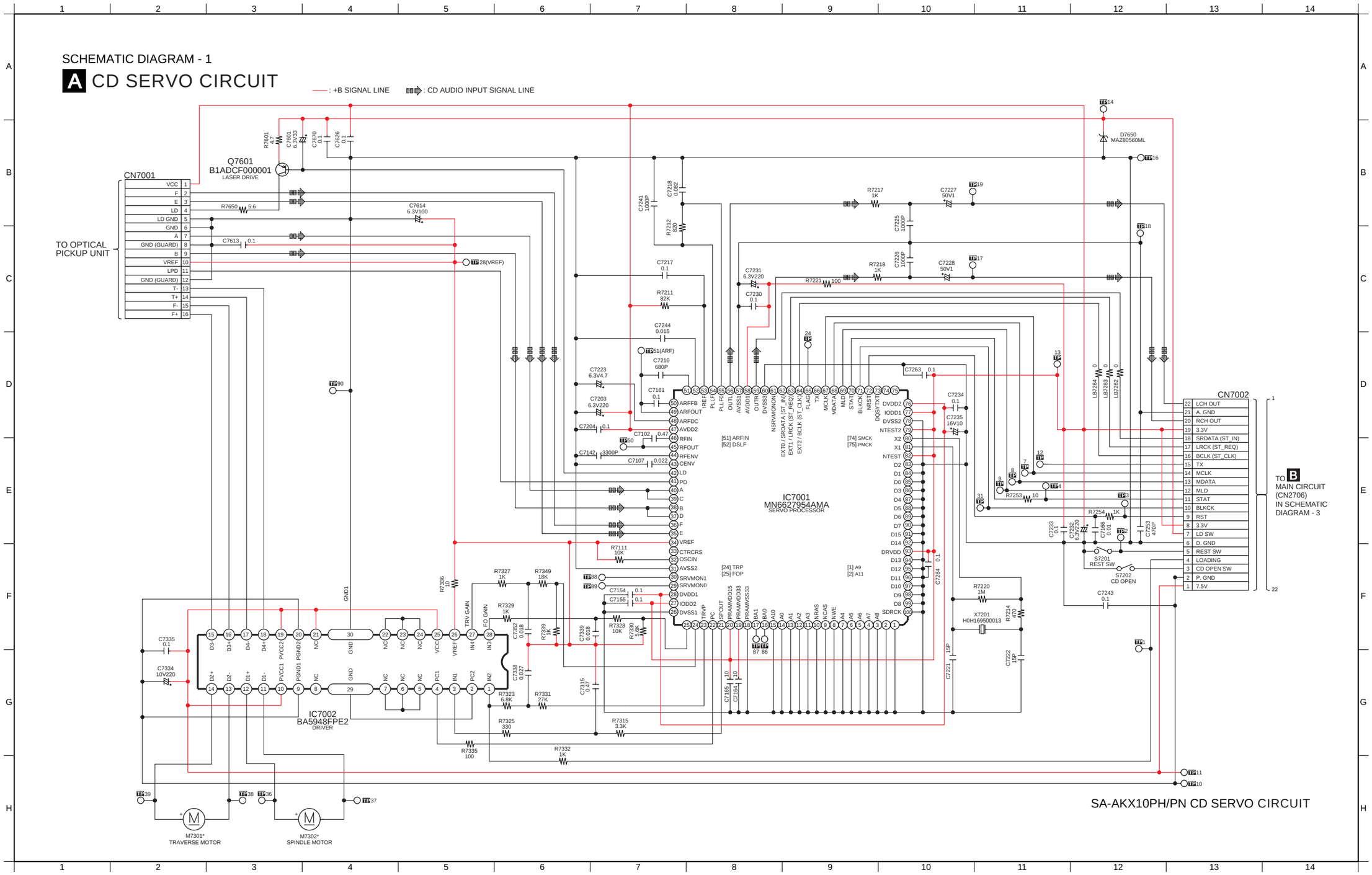
RISK OF FIRE-REPLACE FUSE AS MARKED.

FUSE CAUTION

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

18 Schematic Diagram

18.1. CD Servo Circuit



18.2. Main Circuit

SCHEMATIC DIAGRAM - 2

B MAIN CIRCUIT

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

IC2801
RFKWMAKX10PN
MICRO PROCESSOR

IC2802
C3EBFY000006
EEPROM

CN2707
FOR DEBUG

QR2832
B1GDCFGG0026
SWITCH

QR2831
B1GDCFGG0026
SWITCH

Q2803
B1ACKD000006
POWER SUPPLY

QR2801
B1GBCFLL0037
RESET

QR2802
B1GBCFLL0037
POWER CONTROL

D2804
B0BC5R1A0266

TO MAIN SECTION (3/4)

TO MAIN SECTION (2/4)

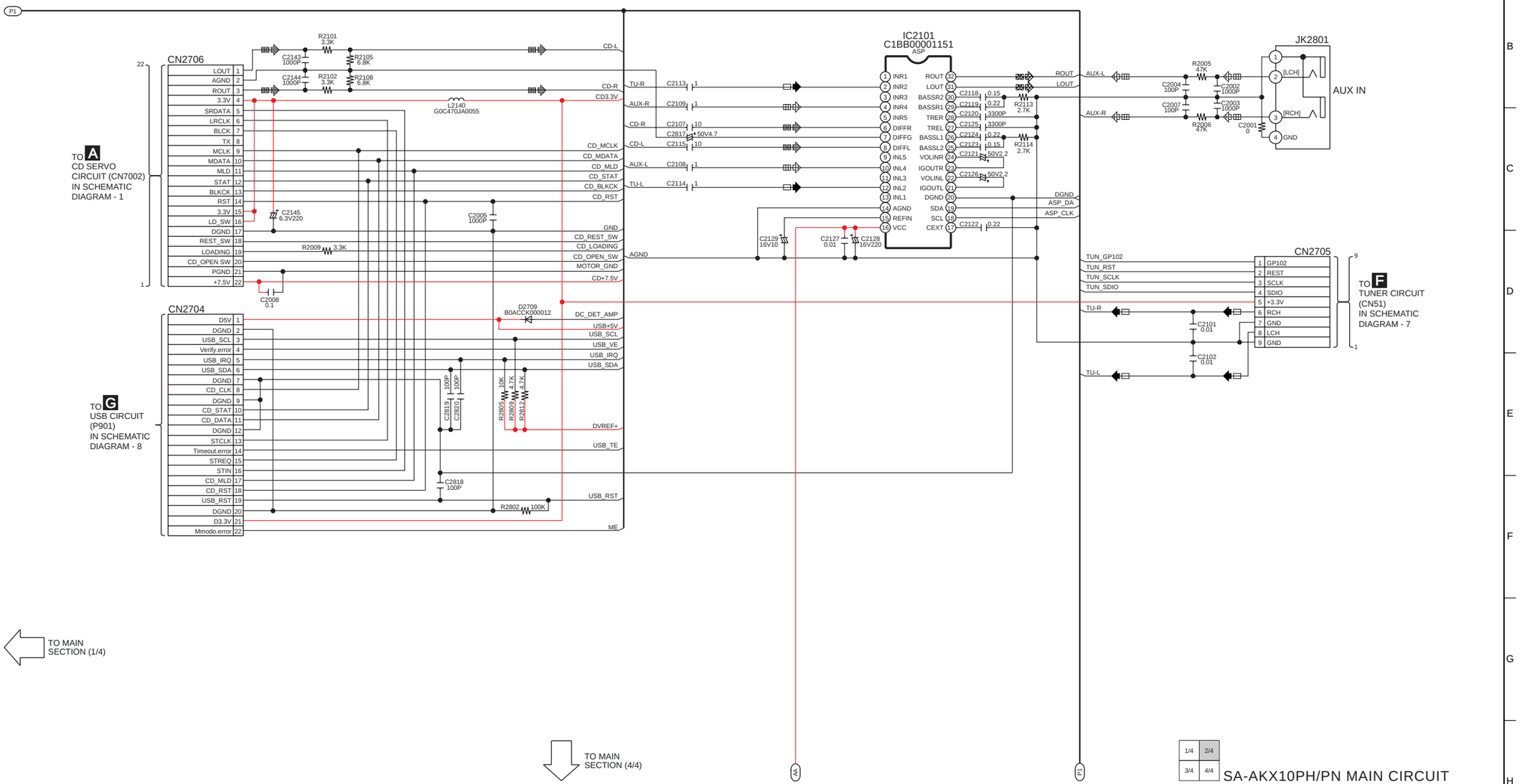
1/4	2/4
3/4	4/4

SA-AKX10PH/PN MAIN CIRCUIT

SCHEMATIC DIAGRAM - 3

B MAIN CIRCUIT

: +B SIGNAL LINE : -B SIGNAL LINE : CD AUDIO INPUT SIGNAL LINE : AUX AUDIO INPUT SIGNAL LINE : AUDIO OUTPUT SIGNAL LINE : AM/FM SIGNAL LINE



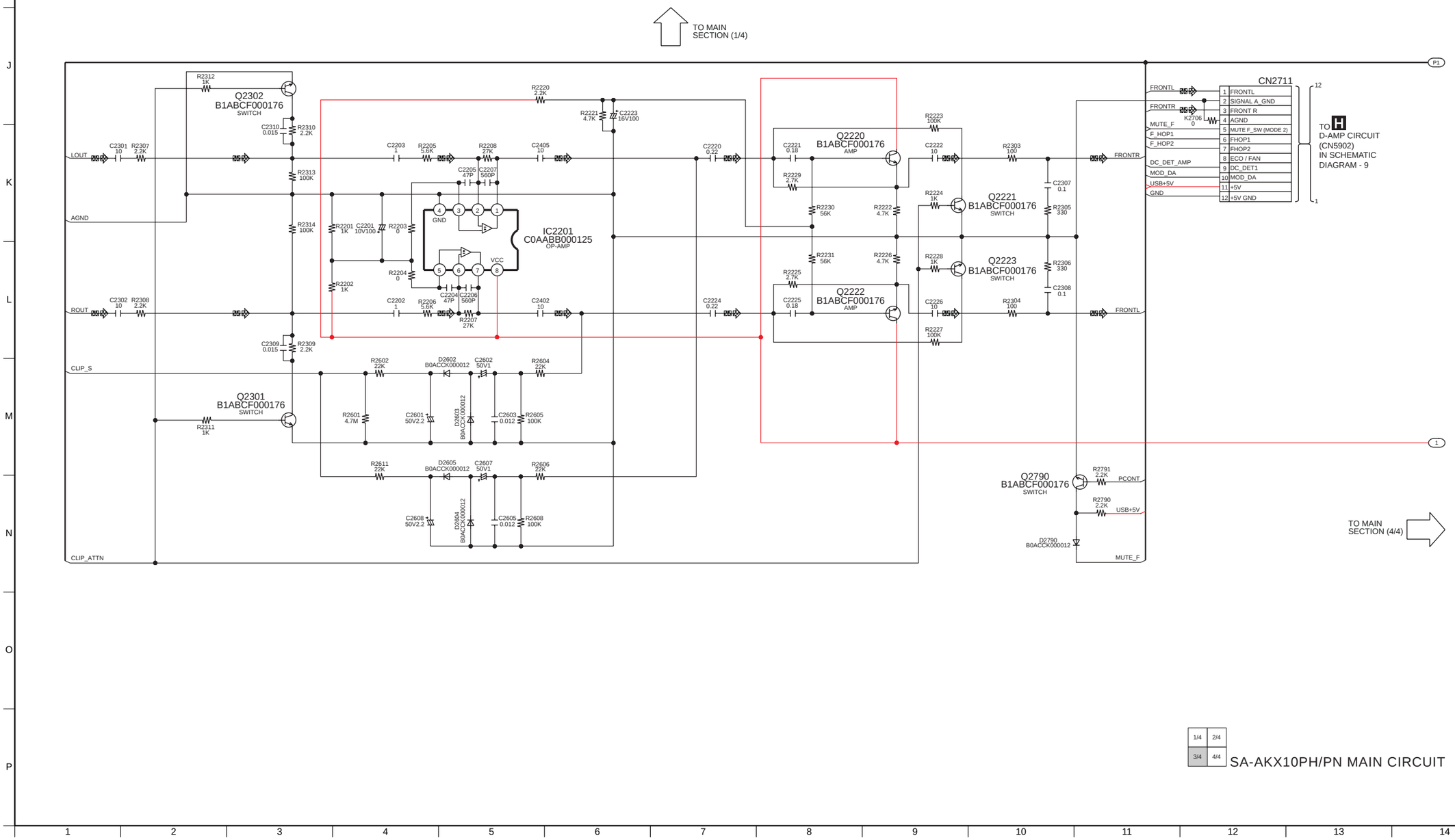
1/4 | 2/4
3/4 | 4/4

SA-AKX10PH/PN MAIN CIRCUIT

SCHEMATIC DIAGRAM - 4

B MAIN CIRCUIT

: +B SIGNAL LINE : -B SIGNAL LINE : CD AUDIO INPUT SIGNAL LINE : AUX AUDIO INPUT SIGNAL LINE : AUDIO OUTPUT SIGNAL LINE : AM/FM SIGNAL LINE



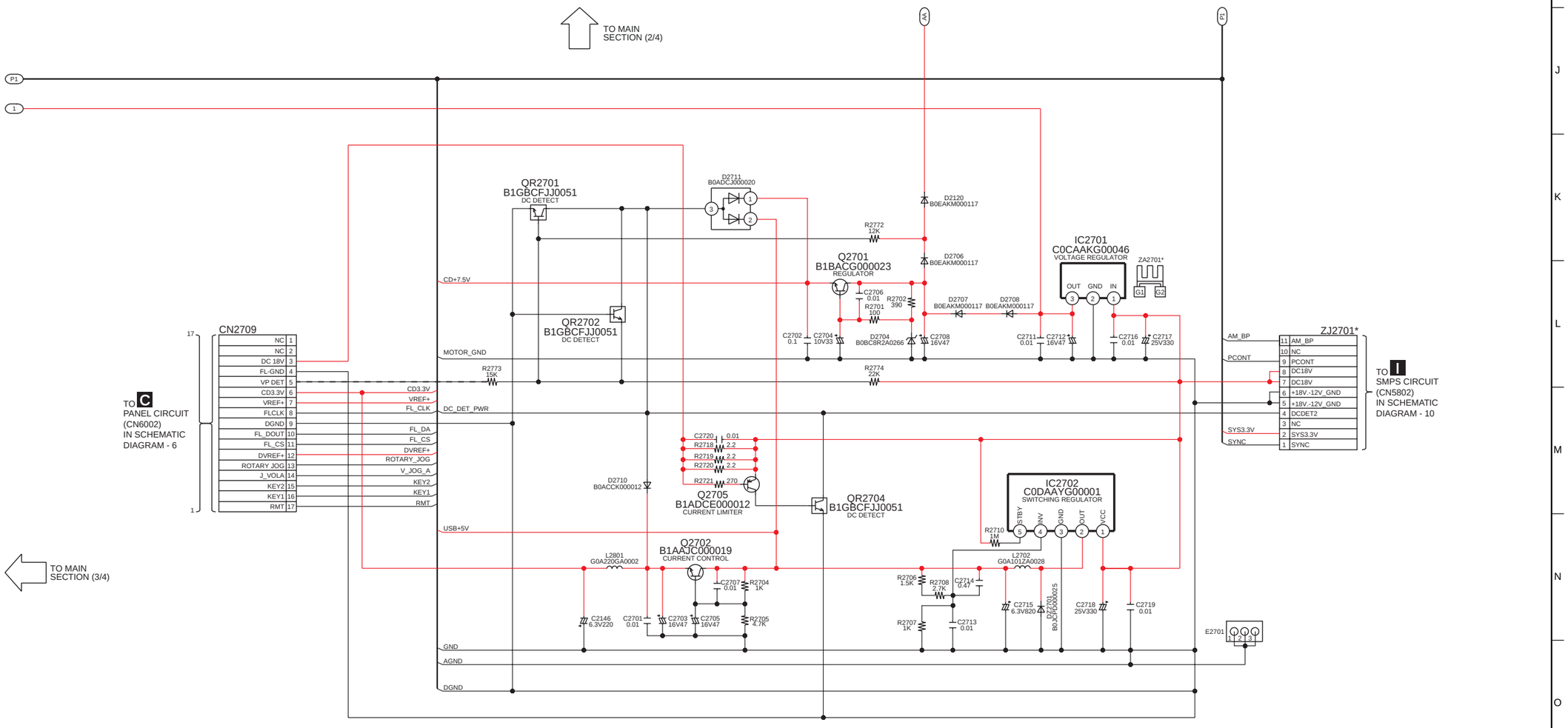
1/4	2/4
3/4	4/4

SA-AKX10PH/PN MAIN CIRCUIT

SCHEMATIC DIAGRAM - 5

B MAIN CIRCUIT

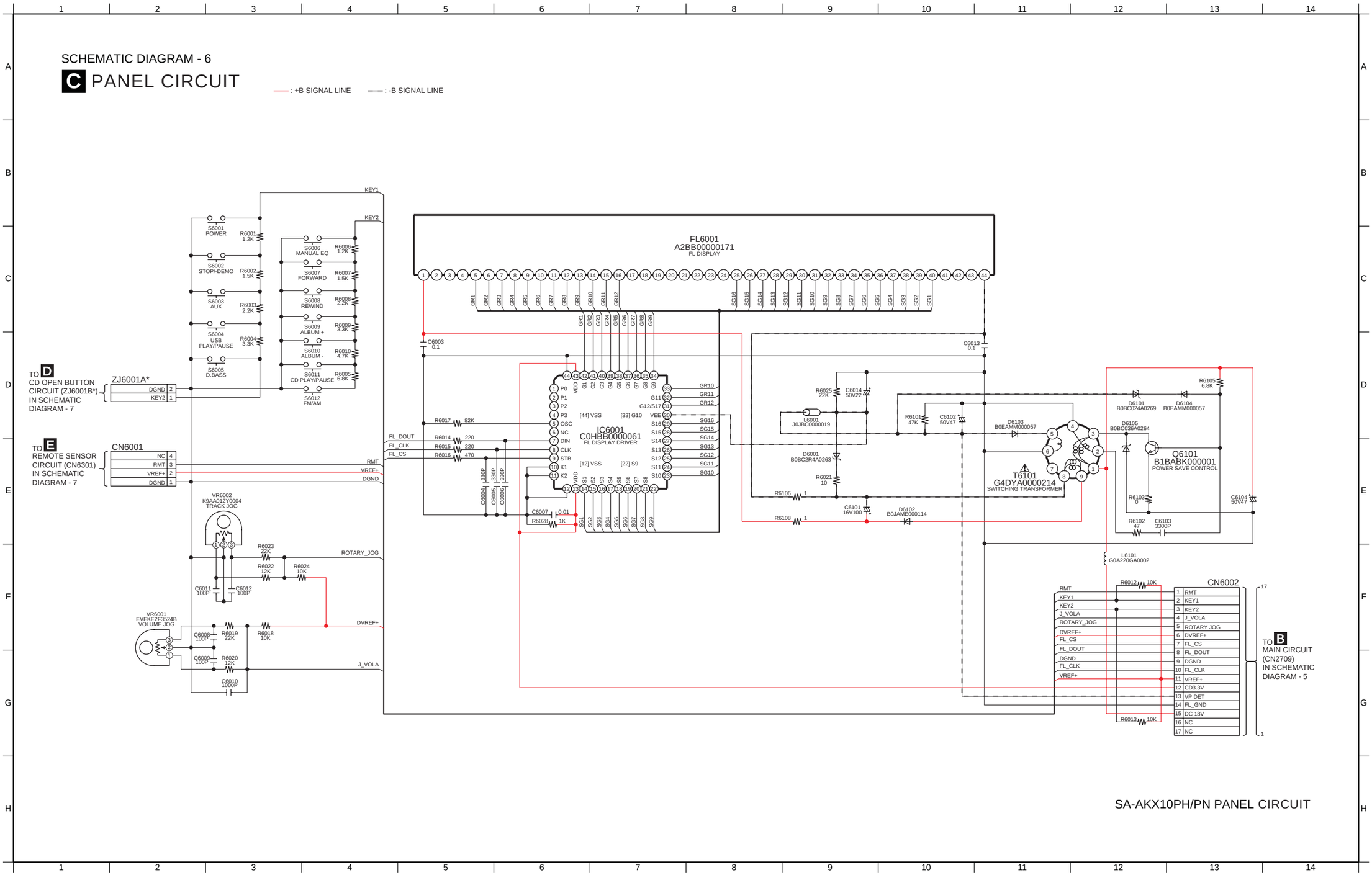
: +B SIGNAL LINE : -B SIGNAL LINE : CD AUDIO INPUT SIGNAL LINE : AUX AUDIO INPUT SIGNAL LINE : AUDIO OUTPUT SIGNAL LINE : AM/FM SIGNAL LINE



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

SA-AKX10PH/PN MAIN CIRCUIT

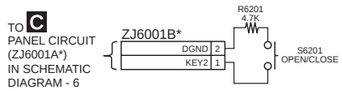
18.3. Panel Circuit



18.4. CD Open Button, Remote Sensor & Tuner Circuit

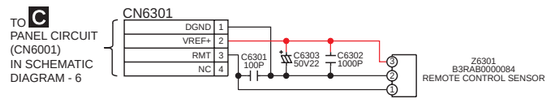
SCHEMATIC DIAGRAM - 7

D CD OPEN BUTTON CIRCUIT



E REMOTE SENSOR CIRCUIT

: +B SIGNAL LINE

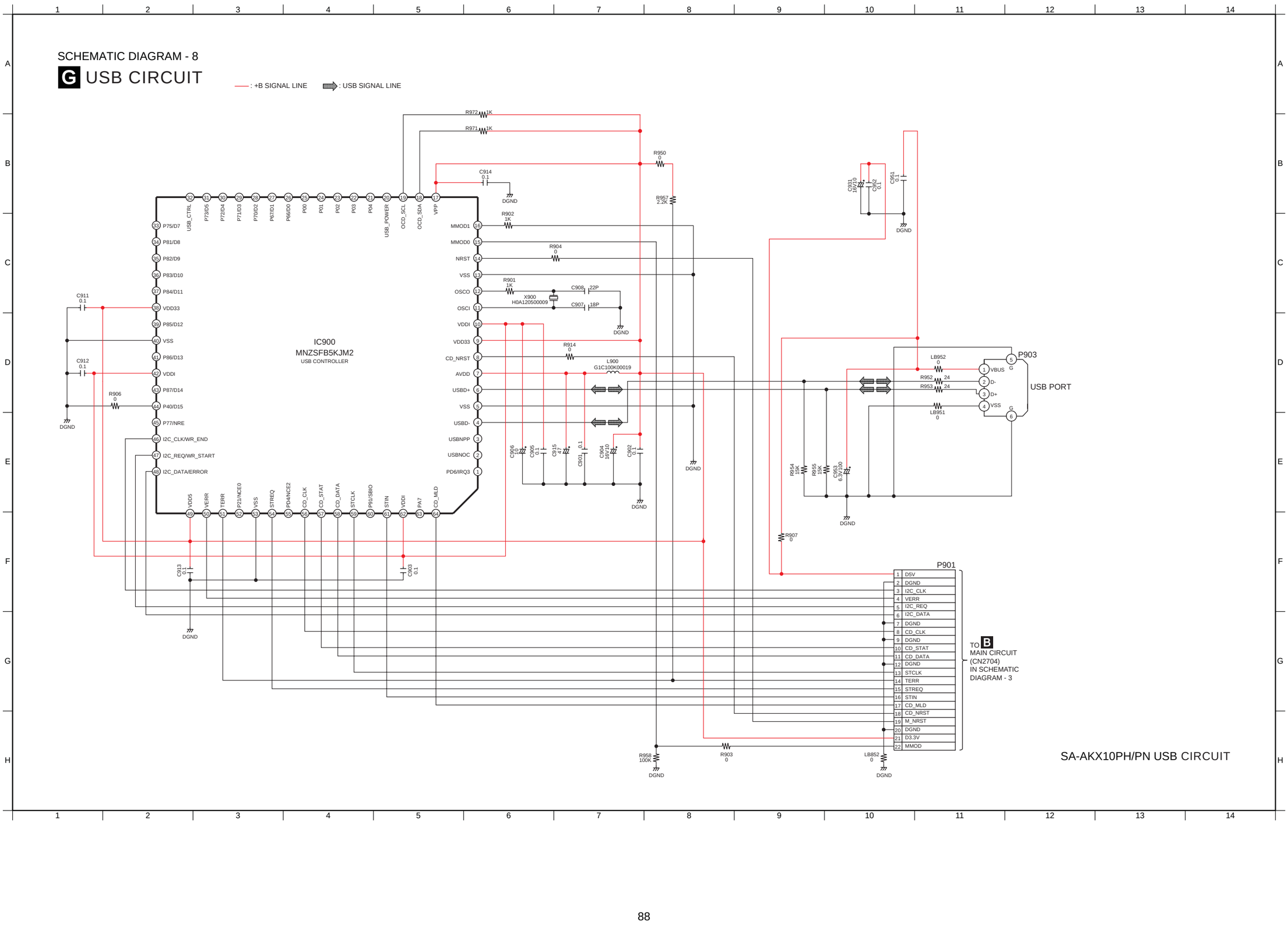


F TUNER CIRCUIT

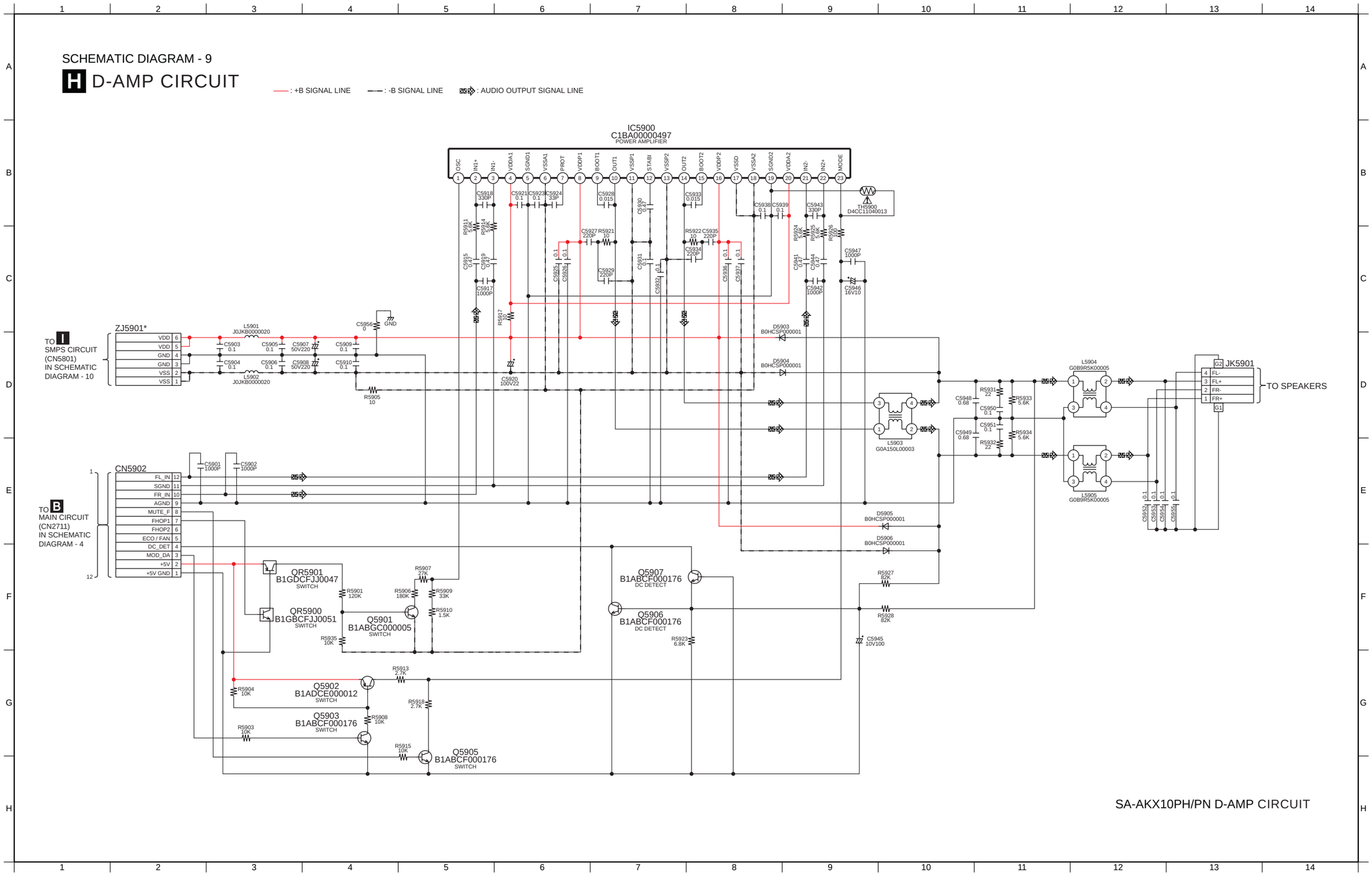
: +B SIGNAL LINE : AM SIGNAL LINE : FM SIGNAL LINE : AM/FM SIGNAL LINE

SA-AKX10PH/PN CD OPEN BUTTON / REMOTE SENSOR / TUNER CIRCUIT

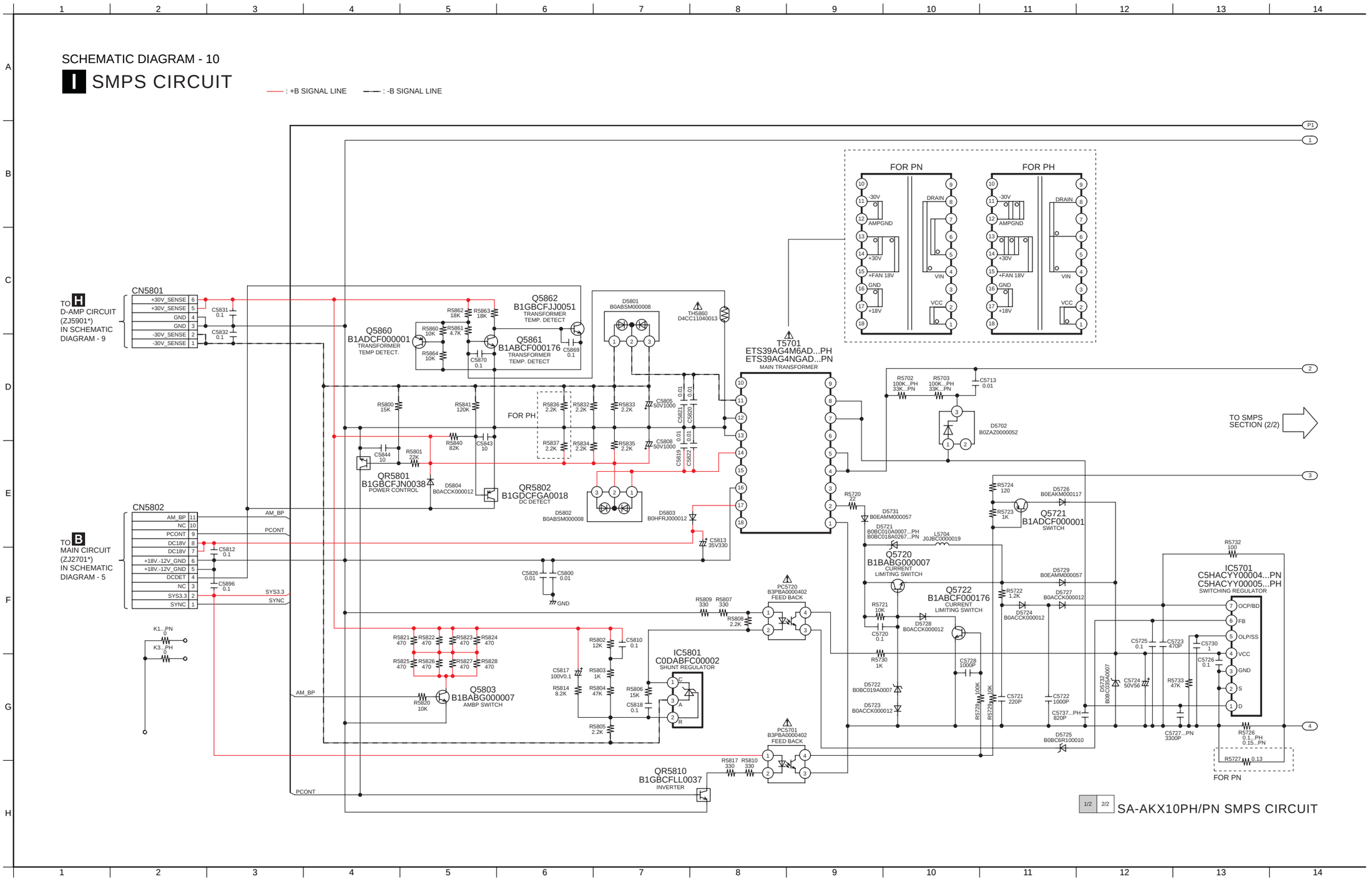
18.5. USB Circuit



18.6. D-Amp Circuit



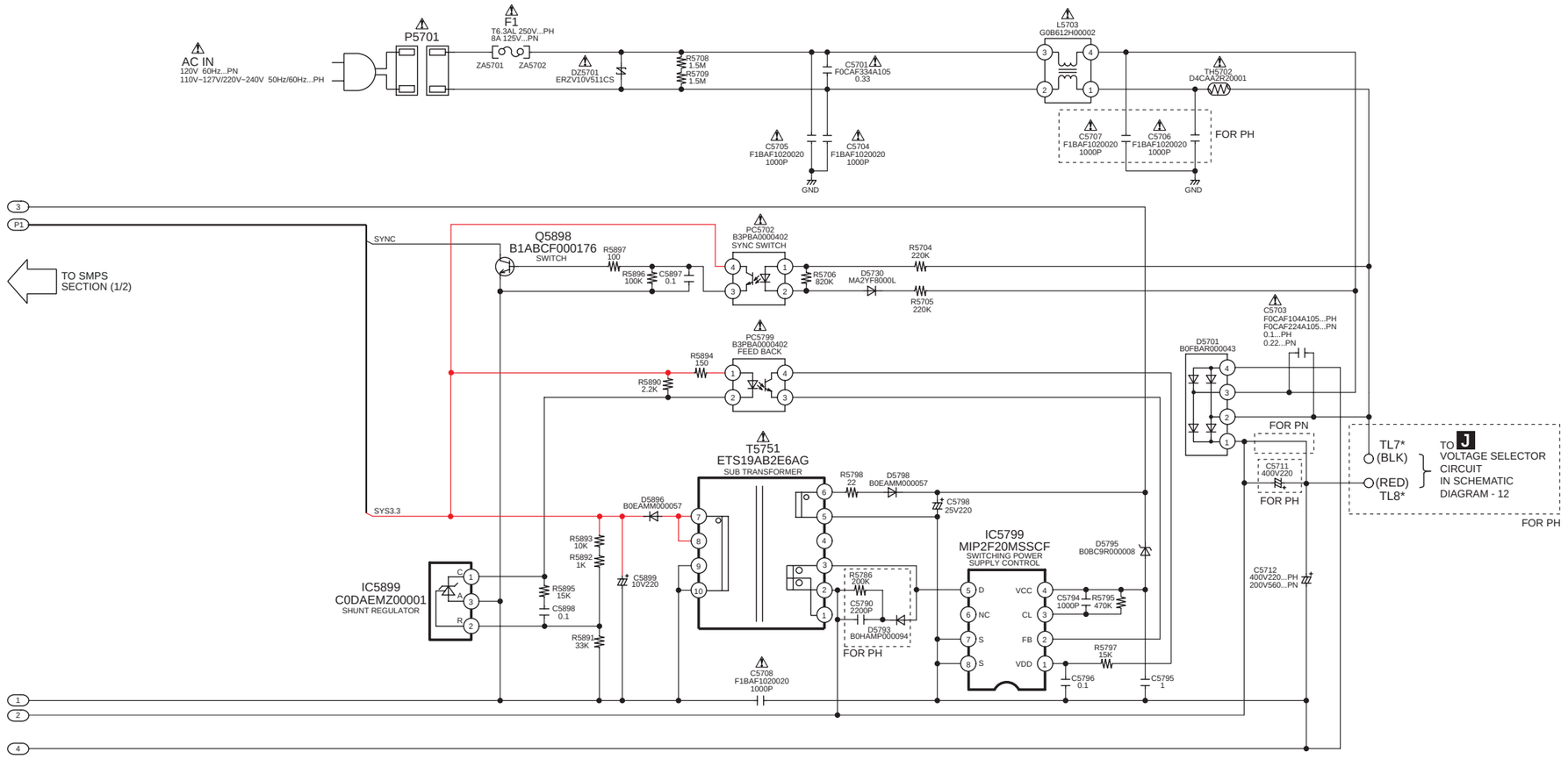
18.7. SMPS Circuit



SCHEMATIC DIAGRAM - 11

I SMPS CIRCUIT

—— : +B SIGNAL LINE —— : -B SIGNAL LINE

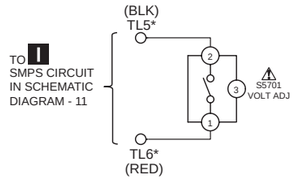


1/2 2/2 SA-AKX10PH/PN SMPS CIRCUIT

18.8. Voltage Selector Circuit (For PH Only)

SCHEMATIC DIAGRAM - 12

J VOLTAGE SELECTOR CIRCUIT (FOR PH ONLY)

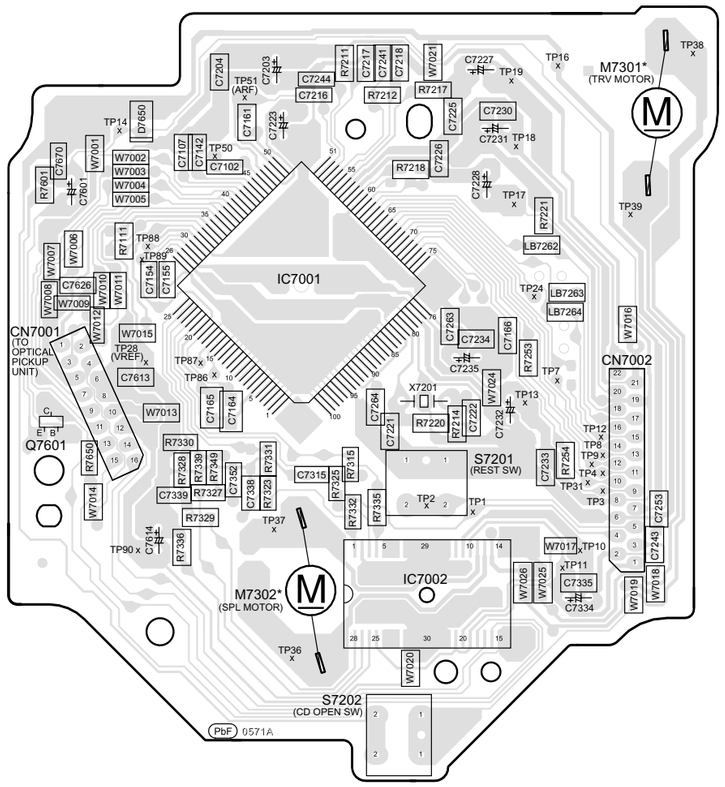


SA-AKX10PH/PN VOLTAGE SELECTOR CIRCUIT

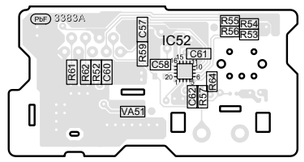
19 Printed Circuit Board

19.1. CD Servo, Tuner & Voltage Selector P.C.B.

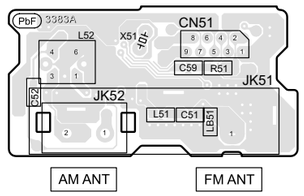
A CD SERVO P.C.B. (REPX0636A)



F TUNER P.C.B. (REP4557A)

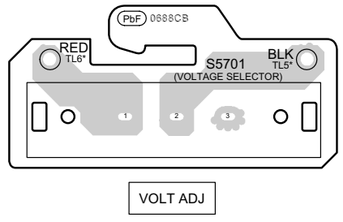


(SIDE A)



(SIDE B)

J VOLTAGE SELECTOR P.C.B. (REPX0809C...PH)

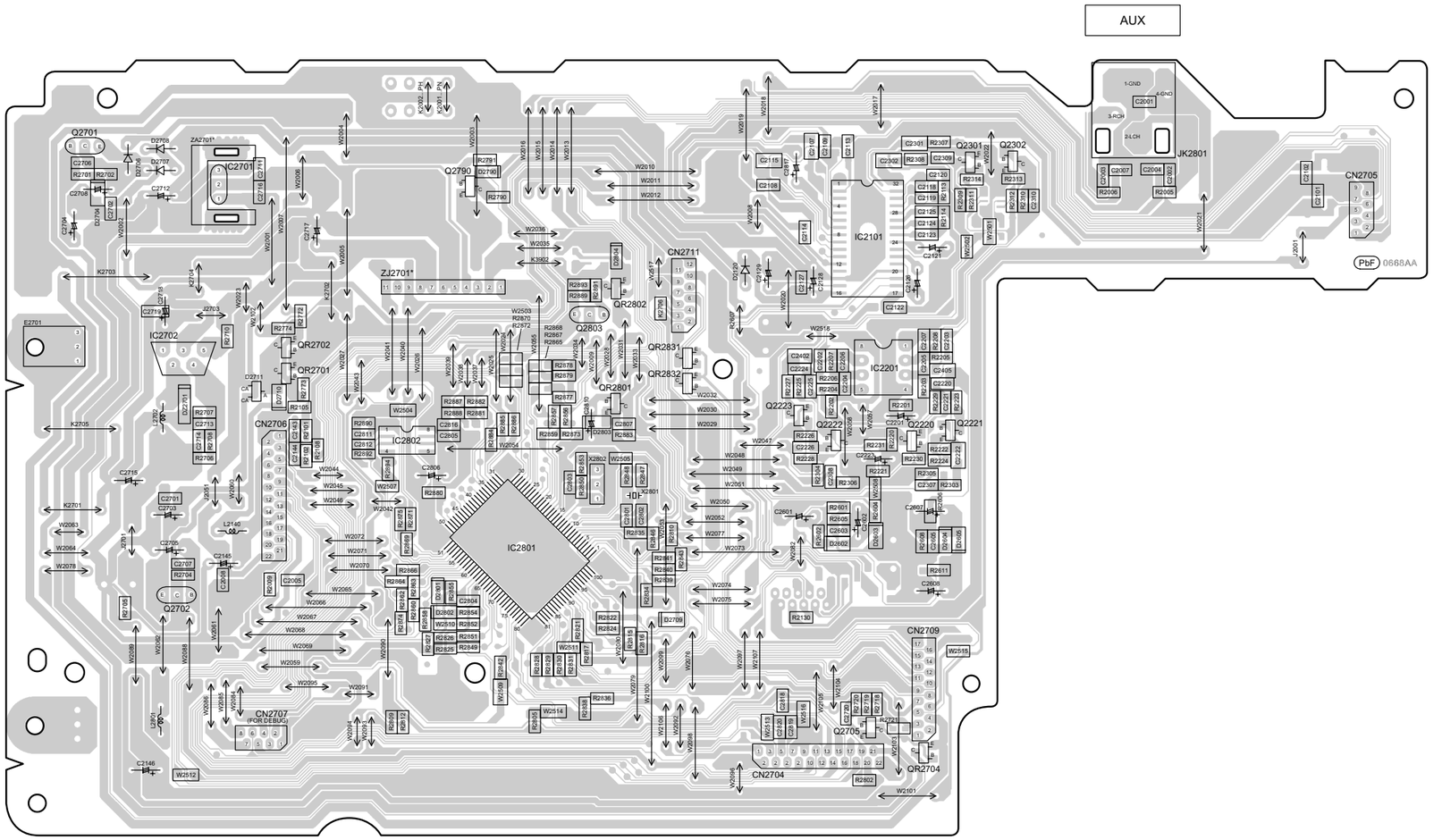


NOTE: " * " REF IS FOR INDICATION ONLY.

SA-AKX10PH/PN
CD SERVO / TUNER / VOLTAGE SELECTOR P.C.B.

19.2. Main P.C.B.

B MAIN P.C.B. (REPX0814BA...PH)
(REPX0814AA...PN)

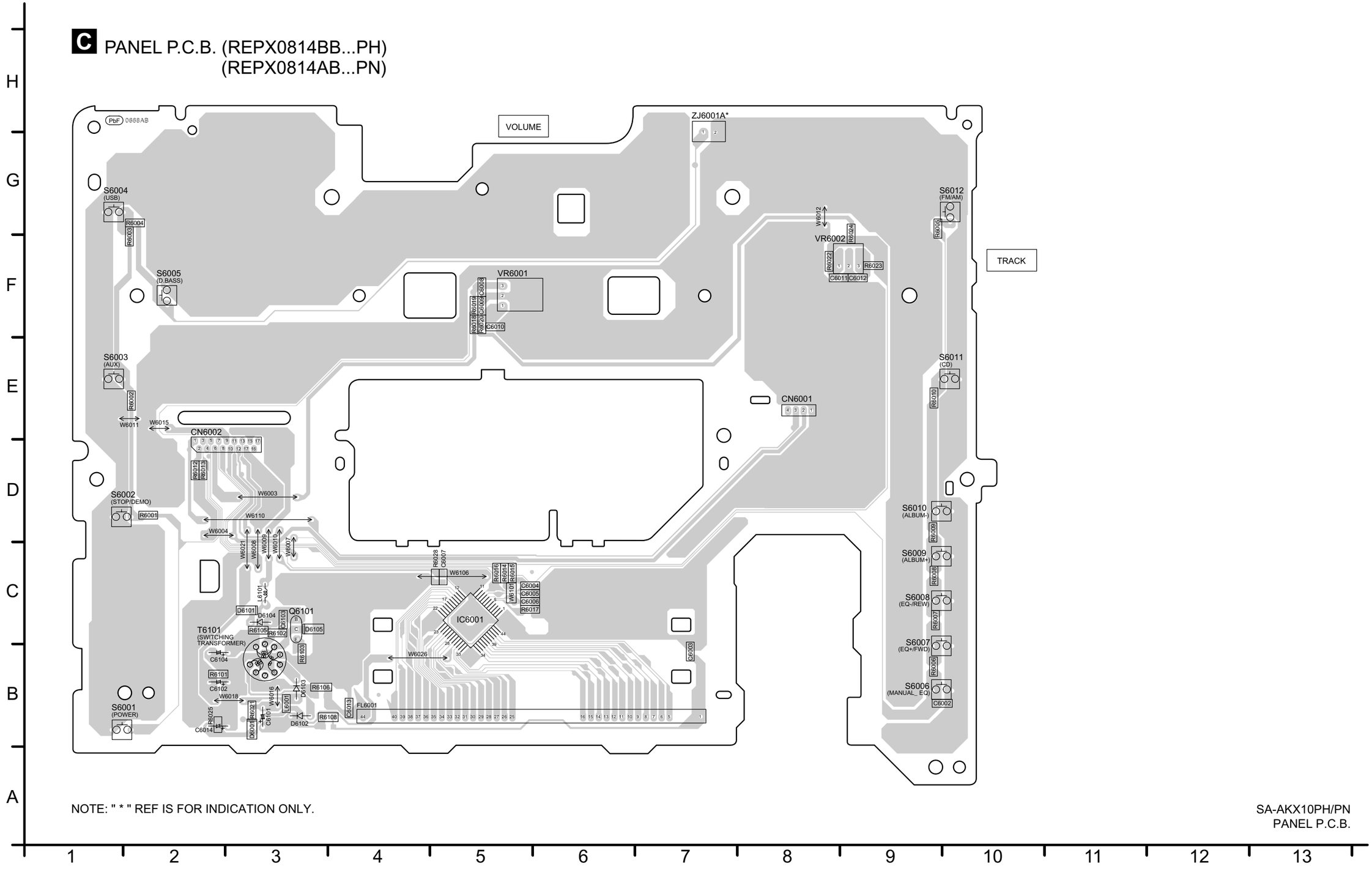


NOTE: " * " REF IS FOR INDICATION ONLY.

SA-AKX10PH/PN
MAIN P.C.B.

19.3. Panel P.C.B.

C PANEL P.C.B. (REPX0814BB...PH)
(REPX0814AB...PN)

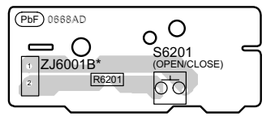


NOTE: " * " REF IS FOR INDICATION ONLY.

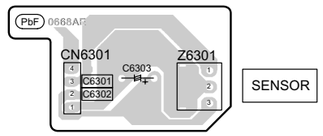
SA-AKX10PH/PN
PANEL P.C.B.

19.4. CD Open Button, Remote Sensor, USB & D-Amp P.C.B.

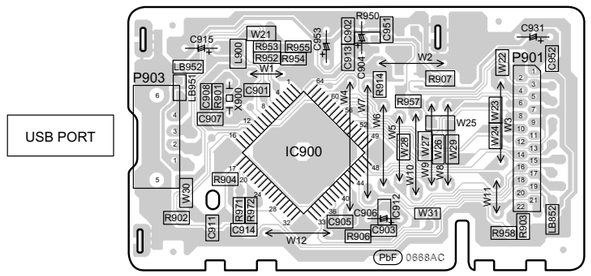
D CD OPEN BUTTON P.C.B. (REPX0814BB...PH)
(REPX0814AB...PN)



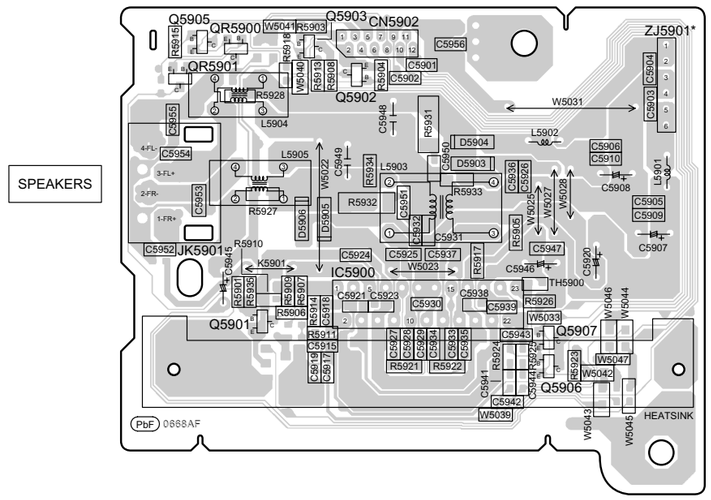
E REMOTE SENSOR P.C.B. (REPX0814BB...PH)
(REPX0814AB...PN)



G USB P.C.B. (REPX0814BC...PH)
(REPX0814AC...PN)



H D-AMP P.C.B. (REPX0814BF...PH)
(REPX0814AF...PN)

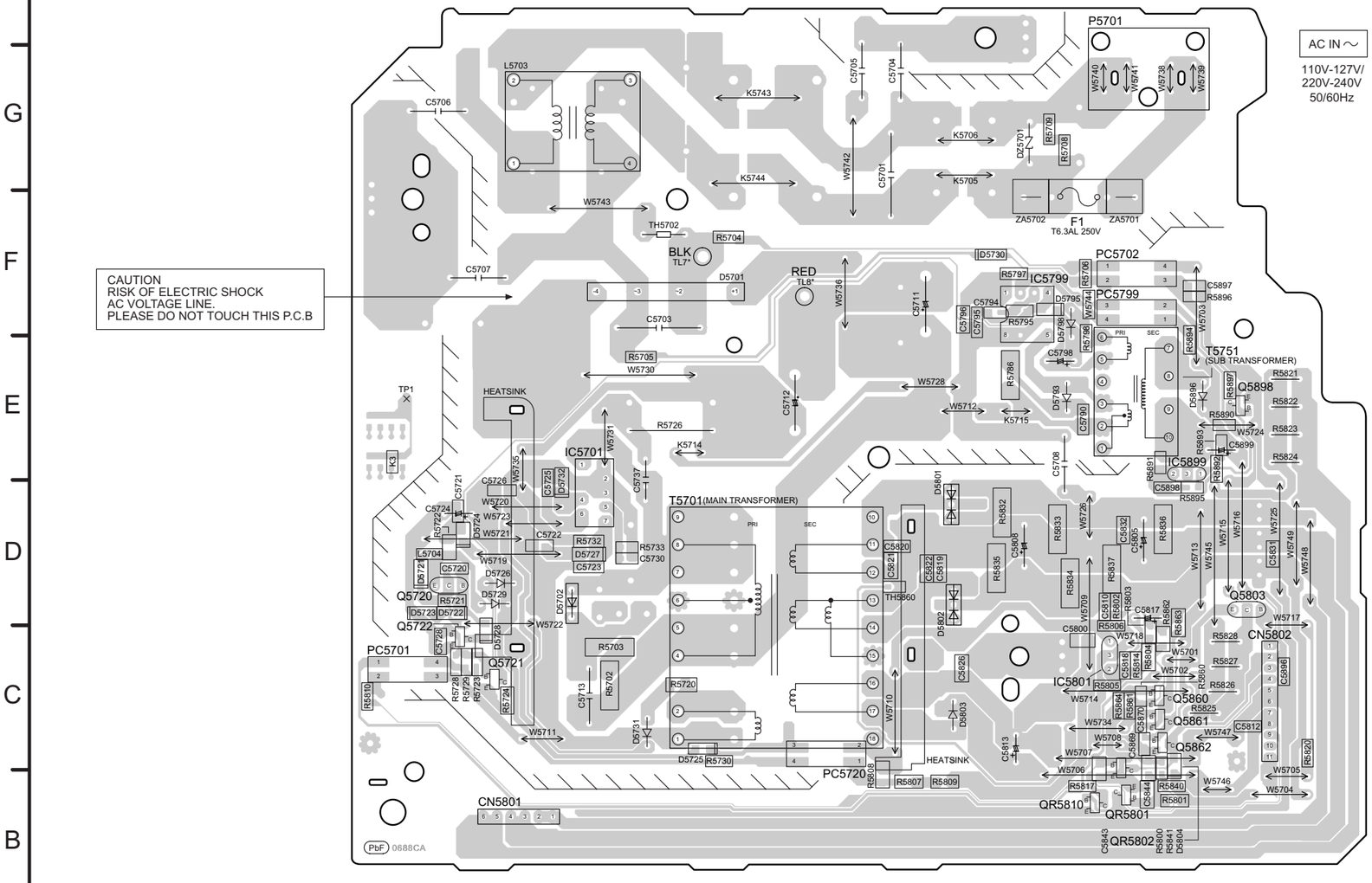


NOTE: " * " REF IS FOR INDICATION ONLY.

SA-AKX10PH/PN
CD OPEN BUTTON / REMOTE SENSOR / USB / D-AMP P.C.B.

19.5. SMPS P.C.B. (For PH only)

I SMPS P.C.B. (REPX0809C...PH)



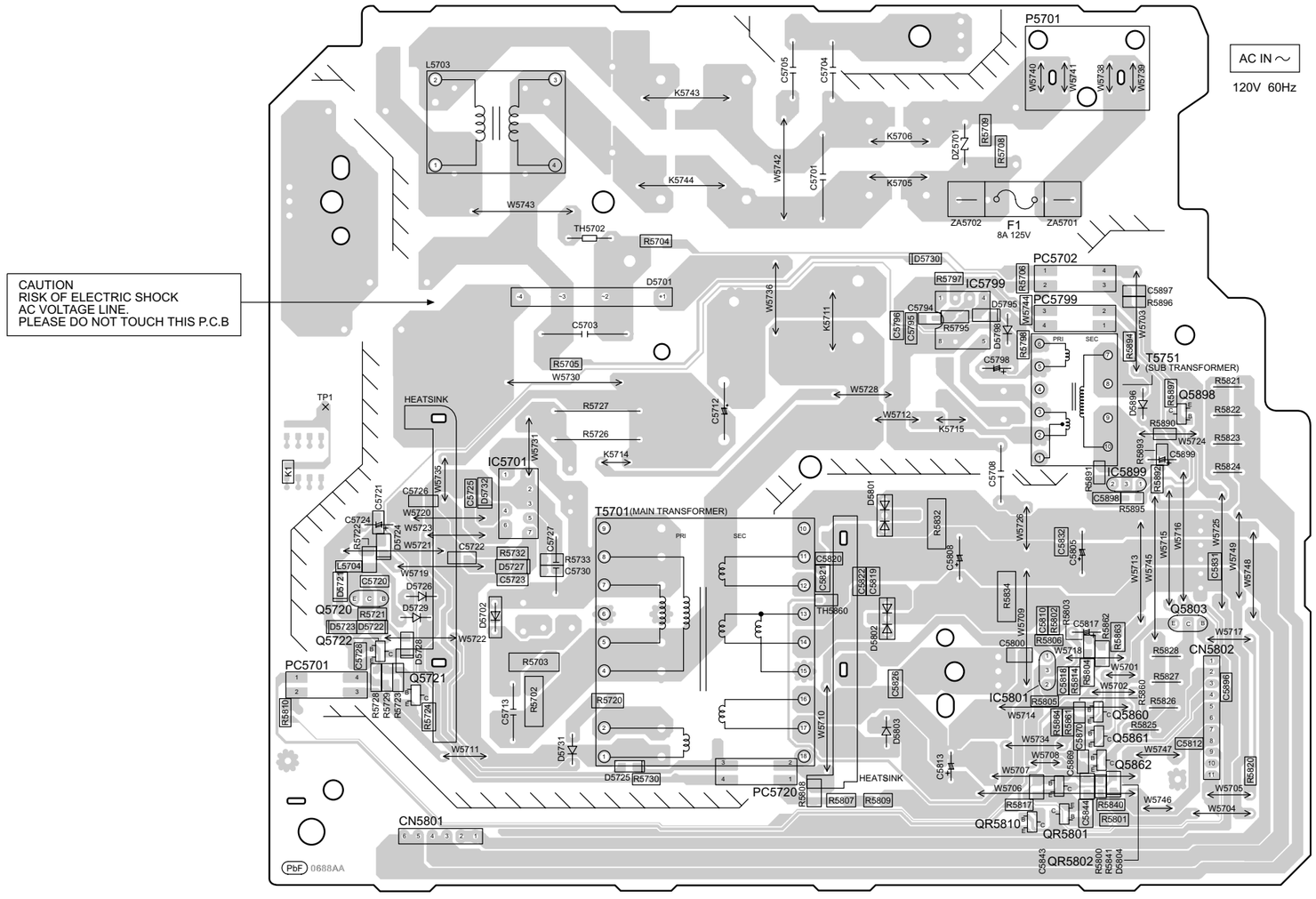
CAUTION
RISK OF ELECTRIC SHOCK
AC VOLTAGE LINE.
PLEASE DO NOT TOUCH THIS P.C.B

NOTE: " * " REF IS FOR INDICATION ONLY.

SA-AKX10PH/PN
SMPS P.C.B.

19.6. SMPS P.C.B. (For PN only)

I SMPS P.C.B. (REPX0809A...PN)



CAUTION
RISK OF ELECTRIC SHOCK
AC VOLTAGE LINE.
PLEASE DO NOT TOUCH THIS P.C.B

NOTE: " * " REF IS FOR INDICATION ONLY.

SA-AKX10PH/PN
SMPS P.C.B.

20 Terminal Function of ICs

20.1. IC2801 (RFKWMAKX10PN): IC MICRO-PROCESSOR

Pin No.	Terminal Name	I/O	Function
1	NC	-	No Connection
2	NC	-	No Connection
3	Mute_F	O	DAMP MUTE_F
4	F_HOP	O	FHOP for DAMP
5	DCDET_DAMP	I	DC detect input 1 (D.Amp failure)
6	MODE_DA	O	For digital amp mute
7	MUTE A	O	Audio Mute
8	BYTE	-	External Data Bus width select input. (GND)
9	CNVSS EFP_CNVSS	-	Flash Mode Terminal
10	XCIN	-	32.768kHz sub clock
11	XCOUT	-	32.768kHz sub clock
12	/RESET	-	/Reset input (Active L)
13	XOUT	-	10MHz main clock
14	VSS	-	GND (0V)
15	XIN	-	10MHz main clock
16	VCC	-	Power Supply (+3.3V)
17	/NMI	-	Connected to vcc (3.3V)
18	RMT	I	Remote control Input
19	TUN_INT	I	Tuner Interupt
20	SYNC	I	AC failure detect input
21	NC	-	No Connection
22	NC	-	No Connection
23	NC	-	No Connection
24	TUN_RST	O	Tuner Reset
25	TUN_CLK	O	Tuner CLK
26	TUN_DATA	I/O	Tuner Data
27	NC	-	No Connection
28	NC	-	No Connection
29	USB_SCL (RXD)/ WR_END	I/O	USB I2C clock line (Flash Rx for on board writer)
30	USB_SDA (TXD)/ERR	I/O	USB I2C data line (Flash Tx for on board writer)
31	RXD	O	RX for Debug
32	TXD	O	TX for Debug
33	USB_RST(CLK)	O	USB reset pin. (Flash Clock for on board writer)
34	BUSY	I	(Flash Busy for On board writer)
35	ASP_DAT	I/O	ASP DATA
36	ASP_CLK	I/O	ASP_CLK
37	NC	-	No Connection
38	NC	-	No Connection
39	NC	-	No Connection
40	NC	-	No Connection
41	NC	-	No Connection
42	NC	-	No Connection
43	NC	-	No Connection
44	NC	-	No Connection
45	NC	-	No Connection
46	NC	-	No Connection
47	NC	-	No Connection
48	NC	-	No Connection
49	SMPS_BP	O	SMPS_Beat Proof
50	NC	-	No Connection
51	DCDET_PWR	I	DC detect input (Power supply failure)
52	PCONT/EFP/CE	O	Main transformer control output
53	EE_CS/EFP/EPM	O	EEPROM chip select (Flash EPM for on board writer)
54	EE_CLK	O	EEPROM clock
55	EE_DAT	I/O	EEPROM data
56	MCLK	I/O	CD command CLK output
57	MDATA_OUT	I/O	CD command data output
58	MLD	I/O	CD command load output
59	STATUS	I	CD servo LSI status input
60	CD RST	O	CD reset Output
61	/RESET_SW(INNER_SW)	I	CD limit SW Input for the most inner point(activeLow) (s_ImecINNER)
62	VCC	-	Power supply (+3.3V)
63	CD_LOAD_(H)(TRV_SW)	O	CD LOAD (H) (s_OmecTRAY_CW_H)
64	VSS	-	Ground (0V)
65	CD_LOAD_(L)(TRV_CCW)	O	CD LOAD (L)(s_OmecTRAY_CCW_H)
66	CD OPEN SW	I	CD OPEN SW (s_ImecUNLOAD)
67	NC	-	No Connection
68	HEADPHONE_SW	I	Headphone SW
69	NC	-	No Connection
70	NC	-	No Connection
71	NC	-	No Connection
72	NC	-	No Connection
73	NC	-	No Connection
74	NC	-	No Connection
75	BLKCK	I	CD block control Input
76	NC	-	No Connection
77	NC	-	No Connection
78	VERR	O	verify error for USB version up using CD
79	USB_REQ WR_START	I	Write start flag for USB version up.
80	TERR	I	Time Out Error for USB
81	MMOD0	I	Micon mode switching for USB version up
82	FL_CLK	O	Serial Clock to FL driver
83	FL_DOUT	O	Serial Data to FL driver
84	FL_CS	O	FL driver CS
85	CLIP_ATT	O	Clip Attenuation
86	CLIP_SENSOR	I	CLIP SENSOR
87	NC	-	No Connection
88	ROTARY_JOG	I	Rotary Jog
89	REG	I	Region Setting
90	VOL_JOG	I	Volume Jog
91	CS	I	Chip Select pin
92	NC	-	No Connection
93	KEY 2	I	Key 2 Input
94	KEY 1	I	Key 1 input
95	BASS_JOG1	I	Bass Jog 1
96	AVSS	-	Analog power supply input (Connect to GND)
97	BASS_JOG2	I	Bass Jog 2
98	VREF	-	Reference for AD (3.3V)
99	AVCC	-	Analog power supply input
100	DEMO_SEL	I	(H= default demo ON, L=default demo OFF)

20.2. IC6901(C0HBB0000057): IC FL Driver

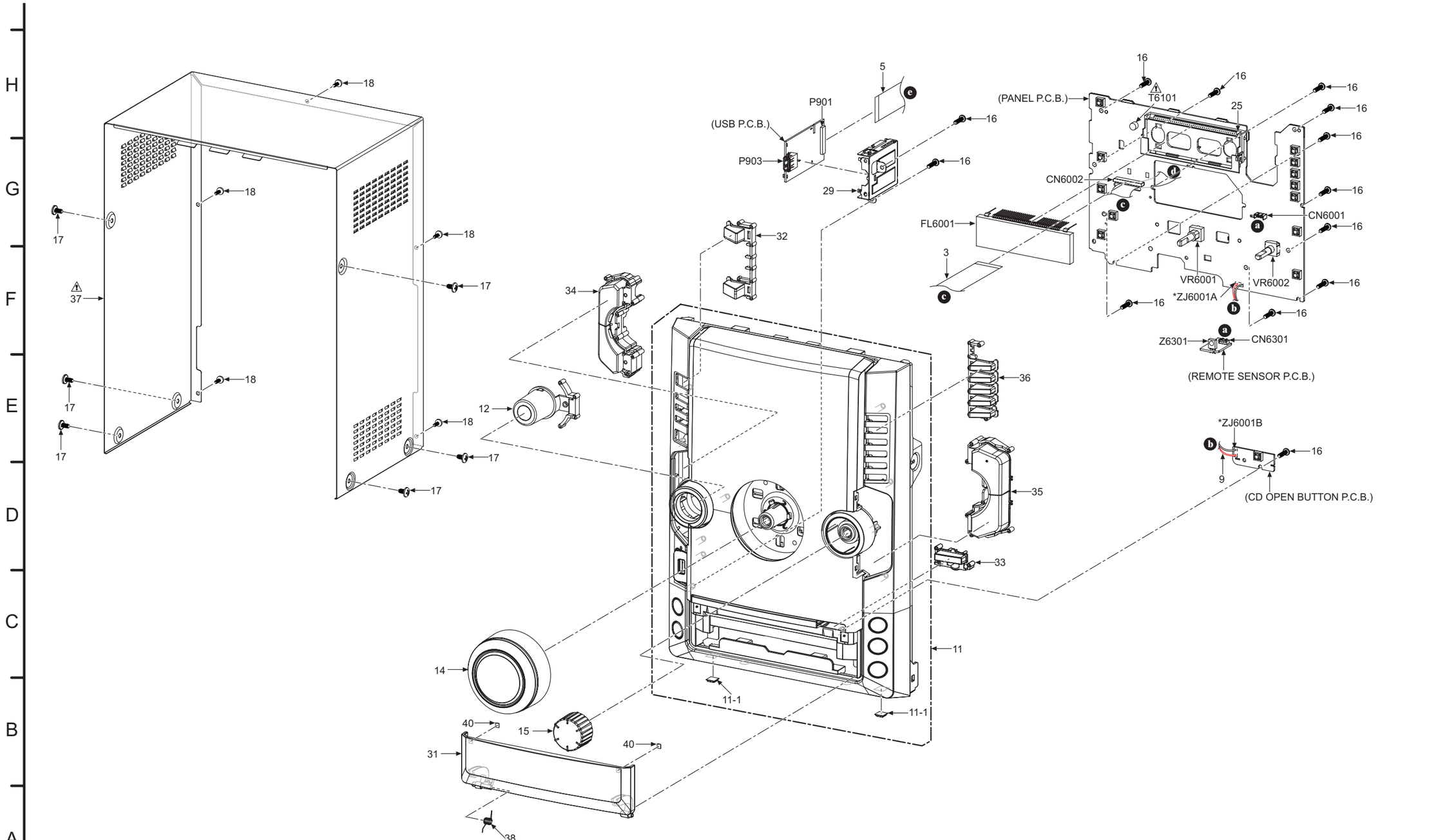
Pin No.	Terminal Name	I/O	Function
1	P0	-	No Connection

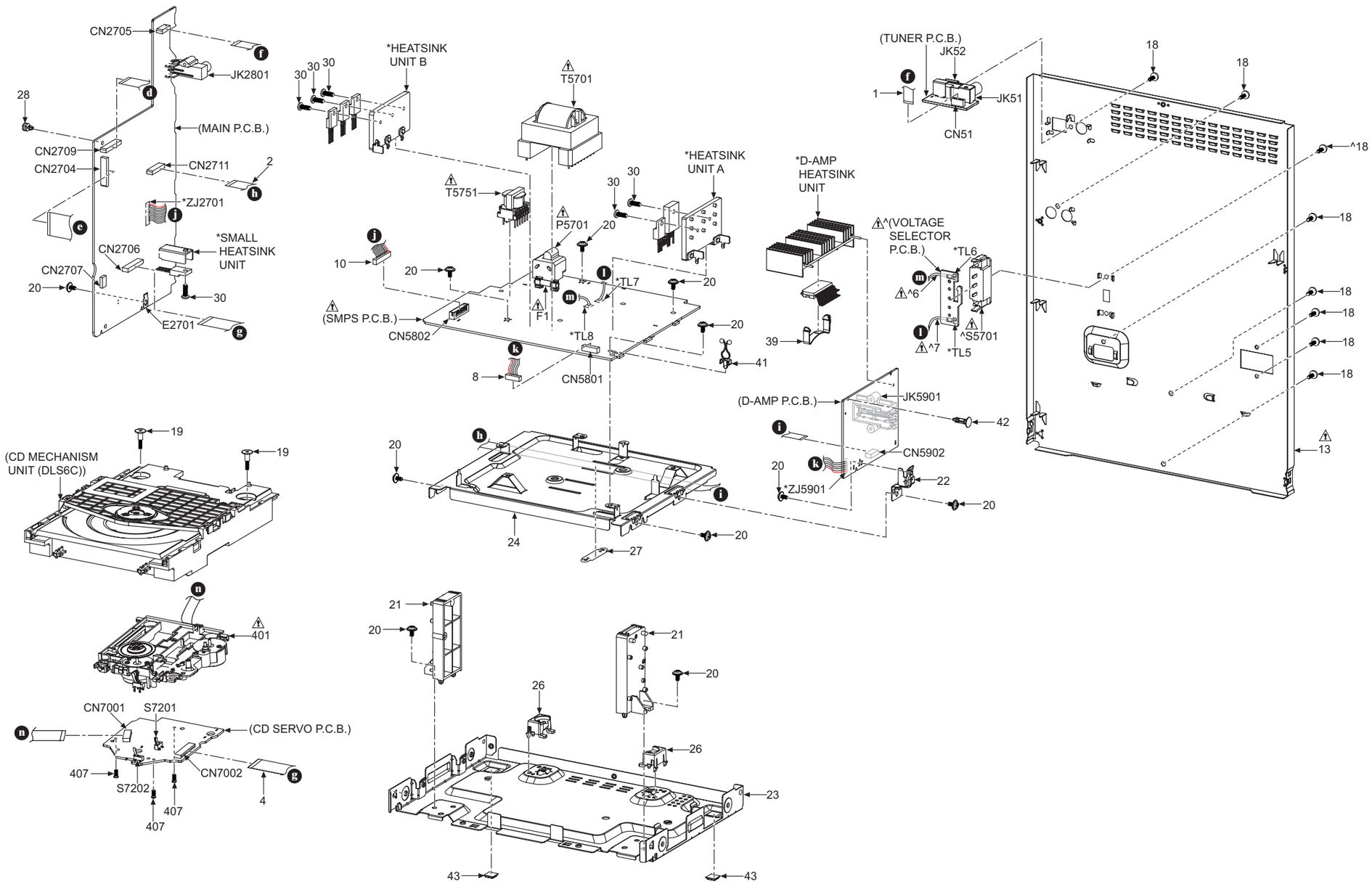
Pin No.	Terminal Name	I/O	Function
2	P1	-	No Connection
3	P2	-	No Connection
4	P3	-	No Connection
5	OSC	I	Oscillator Input
6	NC	-	No Connection
7	DIN	I	Data Input
8	CLK	I	Clock Input
9	STB	I	Serial Interface Strobe
10	K1	-	Key Data Input 1 (No Connection)
11	K2	-	Key Data Input 2 (No Connection)
12	VSS	-	GND
13	VDD	-	Power Supply (+5V)
14	S1	O	Segment Output 18
15	S2	O	Segment Output 17
16	S3	O	Segment Output 16
17	S4	O	Segment Output 15
18	S5	O	Segment Output 14
19	S6	O	Segment Output 13
20	S7	O	Segment Output 12
21	S8	O	Segment Output 11
22	S9	O	Segment Output 10
23	S10	O	Segment Output 9
24	S11	O	Segment Output 8
25	S12	O	Segment Output 7
26	S13	O	Segment Output 6
27	S14	O	Segment Output 5
28	S15	O	Segment Output 4
29	S16	O	Segment Output 3
30	VEE	-	Voltage Supply
31	G12	O	Segment Output 2
32	G11	O	Segment Output 1
33	G10	O	Grid Segment Output 1
34	G9	O	Grid Segment Output 2
35	G8	O	Grid Segment Output 3
36	G7	O	Grid Segment Output 4
37	G6	O	Grid Segment Output5
38	G5	O	Grid Segment Output 6
39	G4	O	Grid Segment Output7
40	G3	O	Grid Segment Output 8
41	G2	O	Grid Segment Output 9
42	G1	O	Grid Segment Output 10
43	VDD	-	Voltage Supply (+5V)
44	VSS	-	GND

21 Exploded View and Replacement Parts List

21.1. Exploded View and Mechanical replacement Part List

21.1.1. Cabinet Parts Location

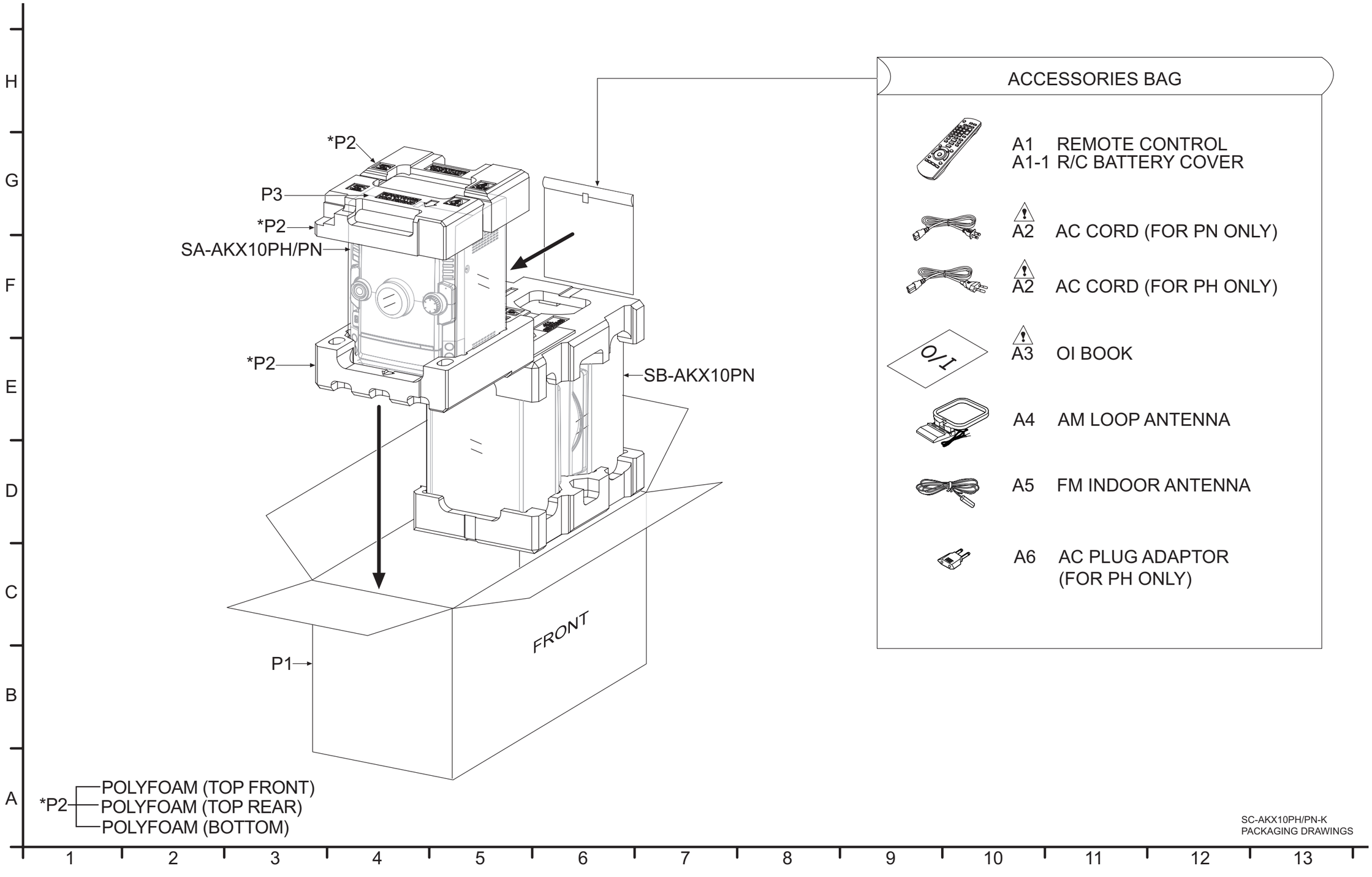




NOTE: " * " PART IS NOT SUPPLIED / REF IS FOR INDICATION ONLY.
" ^ " PART IS FOR PH ONLY.

SA-AKX10PH/PN-K
CABINET DRAWINGS

21.1.2. Packaging



21.1.3. Mechanical Replacement Part List

Important Safety Notice

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

RTL (Retention Time Limited)

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

Note:

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

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

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
			CABINET AND CHASSIS		
	1	REEX1001	9P FFC (MAIN-TUNER)	1	
	2	REEX1147	12P FFC (MAIN-DAMP)	1	
	3	REEX1157	17P FFC (MAIN-PANEL)	1	
	4	REEX1161	22P FFC (MAIN-CD MECHA)	1	
	5	REEX1170	22P FFC (USB-MAIN)	1	
⚠	6	REXX1030	1P RED WIRE (VOLTAGE-SMPS)	1	PH
⚠	7	REXX1031	1P BLACK WIRE (VOLTAGE-SMPS)	1	PH
	8	REXX1040	6P CABLE WIRE (DAMP-SMPS)	1	
	9	REXX1076	2P CABLE WIRE (PANEL-CD OPEN BUTTON)	1	
	10	REXX1089	11P CABLE WIRE (SMPS-MAIN)	1	
	11	RFKGAKX10PHK	FRONT PANEL ASS'Y	1	
	11-1	RKAX0042-K	LEG CUSHION	2	
	12	RYPX0321H-S	D.BASS BUTTON UNIT	1	
⚠	13	RGRX1002A-A2	REAR PANEL	1	PN
⚠	13	RGRX1002B-A2	REAR PANEL	1	PH
	14	RGWX0112-S1	VOLUME KNOB	1	
	15	RGWX0113-S	SKIP KNOB	1	
	16	RHD26046-L	SCREW	13	
	17	RHD30007-K2J	SCREW	6	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	18	RHD30119-S	SCREW	13	PH
	18	RHD30119-S	SCREW	12	PN
	19	RHDX031008	SCREW	2	
	20	RHDX30005-1	SCREW	11	
	21	RMAX0333-2	CHASSIS SUPPORT	2	
	22	RMAX1002	D-AMP BRACKET	1	
	23	RMKX1005	BOTTOM CHASSIS	1	
	24	RMKX1006	INNER CHASSIS	1	
	25	RMNV0079-1	FL HOLDER	1	
	26	RMQX0382-2	MECHA HOLDER	2	
	27	RMQX1041-Q	SUPPORT SHEET	1	
	28	RMR0502A-W	PCB SUPPORT	1	
	29	RSCV0087B-1	USB CASING TOP	1	
	30	XTB3+10JFJ	SCREW	6	
	31	RGKX1030-K	CD LID	1	
	32	RGUX1007-K	POWER BUTTON	1	
	33	RGUX1009-K	CD OPEN BUTTON	1	
	34	RGUX1010-S	MAIN CONTROL BUTTON L	1	
	35	RGUX1011-S	MAIN CONTROL BUTTON R	1	
	36	RGUX1016-K	MANUAL EQ BUTTON	1	
⚠	37	RKMX1003-K	TOP CABINET	1	
	38	RMBX1002	CD LID OPEN SPRING	1	
	39	RMCX0035	HEATSINK CLIP A	1	
	40	RMGX0033	CUSHION RUBBER	2	
	41	RMNX1025	WIRE HOLDER	1	
	42	RMQ1702	PCB SUPPORT	1	
	43	RKAX0042-K	LEG CUSHION	2	
			TRAVERSE DECK		
⚠	401	RAEX0190Z-V	TRAVERSE UNIT	1	
	407	XTN2+6GFJ	SCREW	3	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
			PACKING MATERI-ALS		
	P1	RPGX3065	PACKING CASE	1	PN
	P1	RPGX3066	PACKING CASE	1	PH
	P2	RPNX1019	POLYFOAM	1	
	P3	RPFX0198	MIRAMAT SHEET	1	
			ACCESSORIES		
	A1	N2QAYB000500	REMOTE CONTROL	1	
	A1-1	RKK-PT470EBK	R/C BATTERY COVER	1	
⚠	A2	K2CB2CB00021	AC CORD	1	PN
⚠	A2	K2CQ2CA00007	AC CORD	1	PH
⚠	A3	RQTX1084-M	O/I BOOK (En,Sp)	1	
⚠	A3	RQTX1085-M	O/I BOOK (Sp)	1	PH
	A4	N1DYYYY00010	AM LOOP ANTENNA	1	
	A5	RSAX0002	FM INDOOR ANTENNA	1	
⚠	A6	K2DAYYY00002	AC PLUG ADAPTER	1	PH

21.2. Electrical Replacement Part List

Important Safety Notice

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

RTL (Retention Time Limited)

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

Note:

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

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
			PRINTED CIRCUIT BOARDS		
	PCB1	REP4557A	TUNER P.C.B.	1	(RTL)
	PCB2	REPX0636A	CD SERVO P.C.B.	1	(RTL)
⚠	PCB3	REPX0809A	SMPS P.C.B.	1	(RTL) PN
⚠	PCB3	REPX0809C	SMPS P.C.B.	1	(RTL) PH
	PCB4	REPX0814AA	MAIN P.C.B.	1	(RTL) PN
	PCB4	REPX0814BA	MAIN P.C.B.	1	(RTL) PH
	PCB5	REPX0814AB	PANEL P.C.B.	1	(RTL) PN
	PCB5	REPX0814BB	PANEL P.C.B.	1	(RTL) PH
	PCB6	REPX0814AB	CD OPEN BUTTON P.C.B.	1	(RTL) PN
	PCB6	REPX0814BB	CD OPEN BUTTON P.C.B.	1	(RTL) PH
	PCB7	REPX0814AB	REMOTE SENSOR P.C.B.	1	(RTL) PN
	PCB7	REPX0814BB	REMOTE SENSOR P.C.B.	1	(RTL) PH
	PCB8	REPX0814AC	USB P.C.B.	1	(RTL) PN
	PCB8	REPX0814BC	USB P.C.B.	1	(RTL) PH
	PCB9	REPX0814AF	D-AMP P.C.B.	1	(RTL) PN
	PCB9	REPX0814BF	D-AMP P.C.B.	1	(RTL) PH
⚠	PCB10	REPX0809C	VOLTAGE SELECTOR P.C.B.	1	(RTL) PH
			INTEGRATED CIRCUITS		
	IC52	VUEALLPT031	IC	1	[SPG]

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	IC900	MNZSFB5KJM2	IC	1	
	IC2101	C1BB00001151	IC	1	
	IC2201	C0AABB000125	IC	1	
	IC2701	C0CAAKG00046	IC	1	
	IC2702	C0DAAYG00001	IC	1	
	IC2801	RFKWMAKX10PN	IC	1	
	IC2802	C3EBFY000006	IC	1	
	IC5701	C5HACYY00004	IC	1	PN
	IC5701	C5HACYY00005	IC	1	PH
	IC5799	MIP2F20MSSCF	IC	1	
	IC5801	C0DABFC00002	IC	1	
	IC5899	C0DAEMZ00001	IC	1	
	IC5900	C1BA00000497	IC	1	
	IC6001	C0HBB0000061	IC	1	
	IC7001	MN6627954AMA	IC	1	
	IC7002	BA5948FPE2	IC	1	
			TRANSISTORS		
	Q2220	B1ABCF000176	TRANSISTOR	1	
	Q2221	B1ABCF000176	TRANSISTOR	1	
	Q2222	B1ABCF000176	TRANSISTOR	1	
	Q2223	B1ABCF000176	TRANSISTOR	1	
	Q2301	B1ABCF000176	TRANSISTOR	1	
	Q2302	B1ABCF000176	TRANSISTOR	1	
	Q2701	B1BACG000023	TRANSISTOR	1	
	Q2702	B1AAJC000019	TRANSISTOR	1	
	Q2705	B1ADCE000012	TRANSISTOR	1	
	Q2790	B1ABCF000176	TRANSISTOR	1	
	Q2803	B1ACKD000006	TRANSISTOR	1	
	Q5720	B1BABG000007	TRANSISTOR	1	
	Q5721	B1ADCF000001	TRANSISTOR	1	
	Q5722	B1ABCF000176	TRANSISTOR	1	
	Q5803	B1BABG000007	TRANSISTOR	1	
	Q5860	B1ADCF000001	TRANSISTOR	1	
	Q5861	B1ABCF000176	TRANSISTOR	1	
	Q5862	B1GBCFJJ0051	TRANSISTOR	1	
	Q5898	B1ABCF000176	TRANSISTOR	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	Q5901	B1ABGC000005	TRANSISTOR	1	
	Q5902	B1ADCE000012	TRANSISTOR	1	
	Q5903	B1ABCF000176	TRANSISTOR	1	
	Q5905	B1ABCF000176	TRANSISTOR	1	
	Q5906	B1ABCF000176	TRANSISTOR	1	
	Q5907	B1ABCF000176	TRANSISTOR	1	
	Q6101	B1BABK000001	TRANSISTOR	1	
	Q7601	B1ADCF000001	TRANSISTOR	1	
	QR2701	B1GBCFJJ0051	TRANSISTOR	1	
	QR2702	B1GBCFJJ0051	TRANSISTOR	1	
	QR2704	B1GBCFJJ0051	TRANSISTOR	1	
	QR2801	B1GBCFLL0037	TRANSISTOR	1	
	QR2802	B1GBCFLL0037	TRANSISTOR	1	
	QR2831	B1GDCFGG0026	TRANSISTOR	1	
	QR2832	B1GDCFGG0026	TRANSISTOR	1	
	QR5801	B1GBCFJN0038	TRANSISTOR	1	
	QR5802	B1GDCFGA0018	TRANSISTOR	1	
	QR5810	B1GBCFLL0037	TRANSISTOR	1	
	QR5900	B1GBCFJJ0051	TRANSISTOR	1	
	QR5901	B1GDCFJJ0047	TRANSISTOR	1	
			DIODES		
	D2120	B0EAKM000117	DIODE	1	
	D2602	B0ACCK000012	DIODE	1	
	D2603	B0ACCK000012	DIODE	1	
	D2604	B0ACCK000012	DIODE	1	
	D2605	B0ACCK000012	DIODE	1	
	D2704	B0BC8R2A0266	DIODE	1	
	D2706	B0EAKM000117	DIODE	1	
	D2707	B0EAKM000117	DIODE	1	
	D2708	B0EAKM000117	DIODE	1	
	D2709	B0ACCK000012	DIODE	1	
	D2710	B0ACCK000012	DIODE	1	
	D2711	B0ADCJ000020	DIODE	1	
	D2790	B0ACCK000012	DIODE	1	
	D2801	B0ACCK000012	DIODE	1	
	D2802	B0ACCK000012	DIODE	1	
	D2803	B0ACCK000012	DIODE	1	
	D2804	B0BC5R1A0266	DIODE	1	
	D5701	B0FBAR000043	DIODE	1	
	D5702	B0ZAZ0000052	DIODE	1	
	D5721	B0BC010A0007	DIODE	1	PH
	D5721	B0BC018A0267	DIODE	1	PN
	D5722	B0BC019A0007	DIODE	1	
	D5723	B0ACCK000012	DIODE	1	
	D5724	B0ACCK000012	DIODE	1	
	D5725	B0BC6R100010	DIODE	1	
	D5726	B0EAKM000117	DIODE	1	
	D5727	B0ACCK000012	DIODE	1	
	D5728	B0ACCK000012	DIODE	1	
	D5729	B0EAMM000057	DIODE	1	
	D5730	MA2YF8000L	DIODE	1	
	D5731	B0EAMM000057	DIODE	1	
	D5732	B0BC035A0007	DIODE	1	
	D5793	B0HAMP000094	DIODE	1	PH
	D5795	B0BC9R000008	DIODE	1	
	D5798	B0EAMM000057	DIODE	1	
	D5801	B0ABSM000008	DIODE	1	
	D5802	B0ABSM000008	DIODE	1	
	D5803	B0HFRJ000012	DIODE	1	
	D5804	B0ACCK000012	DIODE	1	
	D5896	B0EAMM000057	DIODE	1	
	D5903	B0HCSP000001	DIODE	1	
	D5904	B0HCSP000001	DIODE	1	
	D5905	B0HCSP000001	DIODE	1	
	D5906	B0HCSP000001	DIODE	1	
	D6001	B0BC2R4A0263	DIODE	1	
	D6101	B0BC024A0269	DIODE	1	
	D6102	B0JAME000114	DIODE	1	
	D6103	B0EAMM000057	DIODE	1	
	D6104	B0EAMM000057	DIODE	1	
	D6105	B0BC036A0264	DIODE	1	
	D7650	MAZ8056GML	DIODE	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	DZ2701	B0JCPD000025	DIODE	1	
⚠	DZ5701	ERZV10V511CS	ZNR	1	
			VARISTORS		
	VA51	EZAEG2A50AX	ESD SUPRESSOR	1	
			VARIABLE RESISTORS		
	VR6001	EVEKE2F3524B	VOLUME JOG	1	
	VR6002	K9AA012Y0004	VR ENCODER	1	
			SWITCHES		
⚠	S5701	K0ABCA000007	SW VOLTAGE SELECTOR	1	PH
	S6001	EVQ21405RJ	SW POWER	1	
	S6002	EVQ21405RJ	SW STOP/DEMO	1	
	S6003	EVQ21405RJ	SW AUX	1	
	S6004	EVQ21405RJ	SW USB	1	
	S6005	EVQ21405RJ	SW D. BASS	1	
	S6006	EVQ21405RJ	SW MANUAL_EQ	1	
	S6007	EVQ21405RJ	SW EQ+/FWD	1	
	S6008	EVQ21405RJ	SW EQ-/REW	1	
	S6009	EVQ21405RJ	SW ALBUM+	1	
	S6010	EVQ21405RJ	SW ALBUM-	1	
	S6011	EVQ21405RJ	SW CD	1	
	S6012	EVQ21405RJ	SW FM/AM	1	
	S6201	EVQ21405RJ	SW OPEN/CLOSE	1	
	S7201	RSH1A045-1A	SW RESET	1	
	S7202	RSH1A045-1A	SW CD OPEN	1	
			CONNECTORS		
	CN51	K1MN09AA0003	9P CONNECTOR	1	
	CN2704	K1MN22AA0004	22P CONNECTOR	1	
	CN2705	K1MN09AA0003	9P CONNECTOR	1	
	CN2706	K1MN22AA0004	22P CONNECTOR	1	
	CN2707	K1MN08B00013	8P CONNECTOR	1	
	CN2709	K1MY17AA0124	17P CONNECTOR	1	
	CN2711	K1MN12AA0003	12P CONNECTOR	1	
	CN5801	K1KA06AA0180	6P CONNECTOR	1	
	CN5802	K1KA11AA0194	11P CONNECTOR	1	
	CN5902	K1MN12AA0003	12P CONNECTOR	1	
	CN6001	K1KA04AA0031	4P CONNECTOR	1	
	CN6002	K1MY17AA0124	17P CONNECTOR	1	
	CN6301	K1KB04A00046	4P CONNECTOR	1	
	CN7001	K1MN16B00154	16P CONNECTOR	1	
	CN7002	K1MN22BA0005	22P CONNECTOR	1	
	P901	K1MN22BA0005	22P CONNECTOR	1	
	P903	K1FY104B0011	USB CONNECTOR	1	
			COILS AND INDUCTORS		
	L51	G1CR18JA0020	INDUCTOR	1	
	L52	G2A380Y00001	ANTENNA COIL	1	
	L900	G1C100K00019	INDUCTOR	1	
	L2140	G0C470JA0055	INDUCTOR	1	
	L2702	G0A101ZA0028	CHOKE COIL	1	
	L2801	G0A220GA0002	CHOKE COIL	1	
⚠	L5703	G0B612H00002	LINE FILTER	1	
	L5704	J0JBC0000019	INDUCTOR	1	
	L5901	J0JKB0000020	INDUCTOR	1	
	L5902	J0JKB0000020	INDUCTOR	1	
	L5903	G0A150L00003	CHOKE COIL	1	
	L5904	G0B9R5K00005	LINE FILTER	1	
	L5905	G0B9R5K00005	LINE FILTER	1	
	L6001	J0JBC0000019	INDUCTOR	1	
	L6101	G0A220GA0002	CHOKE COIL	1	
	LB51	J0JBC0000032	INDUCTOR	1	
			TRANSFORMERS		
⚠	T5701	ETS39AG4M6AD	MAIN TRANSFORMER	1	PH
⚠	T5701	ETS39AG4NGAD	MAIN TRANSFORMER	1	PN
⚠	T5751	ETS19AB2E6AG	SUB TRANSFORMER	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
⚠	T6101	G4DYA0000214	SWITCHING TRANS-FORMER	1	
			COMPONENT COMBI-NATION		
	Z6301	B3RAB0000084	REMOTE SENSOR	1	
			PHOTO COUPLERS		
⚠	PC5701	B3PBA0000402	PHOTO COUPLER	1	
⚠	PC5702	B3PBA0000402	PHOTO COUPLER	1	
⚠	PC5720	B3PBA0000402	PHOTO COUPLER	1	
⚠	PC5799	B3PBA0000402	PHOTO COUPLER	1	
			OSCILLATORS		
	X51	H0A327200097	CRYSTAL OSCILLA-TOR	1	
	X900	H0A120500009	CRYSTAL OSCILLA-TOR	1	
	X2801	H0A327200097	CRYSTAL OSCILLA-TOR	1	
	X2802	H2B100500004	CRYSTAL OSCILLA-TOR	1	
	X7201	H0H169500013	CRYSTAL OSCILLA-TOR	1	
			FL DISPLAY		
	FL6001	A2BB00000171	LCD DISPLAY	1	
			FUSES		
⚠	F1	K5D632BK0007	FUSE	1	PH
⚠	F1	K5D802APA008	FUSE	1	PN
			FUSE HOLDERS		
	ZA5701	K3GE1ZZ00001	FUSE HOLDER	1	
	ZA5702	K3GE1ZZ00001	FUSE HOLDER	1	
			THERMISTORS		
⚠	TH5702	D4CAA2R20001	THERMISTOR	1	
⚠	TH5860	D4CC11040013	THERMISTOR	1	
⚠	TH5900	D4CC11040013	THERMISTOR	1	
			JACKS		
	JK51	K4ZZ02000103	JK FM ANT	1	
	JK52	K4AC02B00042	JK AM ANT	1	
	JK2801	K2HA204B0153	JK AUX	1	
	JK5901	K4AL04B00001	JK SPEAKER	1	
⚠	P5701	K2AA2B000011	AC INLET	1	PH
⚠	P5701	K2AB2B000007	AC INLET	1	PN
			EARTH TERMINALS		
	E2701	K4CZ01000027	TERMINAL	1	
			CHIP JUMPERS		
	K1	D0GBR00JA008	0 1/16W	1	PN
	K3	D0GBR00JA008	0 1/16W	1	PH
	K2706	D0GBR00JA008	0 1/16W	1	
	LB852	D0GBR00JA008	0 1/16W	1	
	LB951	D0GBR00JA008	0 1/16W	1	
	LB952	D0GBR00JA008	0 1/16W	1	
	LB7262	D0GBR00JA008	0 1/16W	1	
	LB7263	D0GBR00JA008	0 1/16W	1	
	LB7264	D0GBR00JA008	0 1/16W	1	
	W21	D0GDR00JA017	0 1/10W	1	
	W22	D0GBR00JA008	0 1/16W	1	
	W23	D0GBR00JA008	0 1/16W	1	
	W24	D0GBR00JA008	0 1/16W	1	
	W25	D0GDR00JA017	0 1/10W	1	
	W26	D0GDR00JA017	0 1/10W	1	
	W27	D0GDR00JA017	0 1/10W	1	
	W28	D0GBR00JA008	0 1/16W	1	
	W29	D0GDR00JA017	0 1/10W	1	
	W30	D0GDR00JA017	0 1/10W	1	
	W31	D0GBR00JA008	0 1/16W	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	W2501	D0GDR00JA017	0 1/10W	1	
	W2502	D0GBR00JA008	0 1/16W	1	
	W2503	D0GBR00JA008	0 1/16W	1	
	W2504	D0GDR00JA017	0 1/10W	1	
	W2505	D0GBR00JA008	0 1/16W	1	
	W2507	D0GBR00JA008	0 1/16W	1	
	W2508	D0GBR00JA008	0 1/16W	1	
	W2509	D0GDR00JA017	0 1/10W	1	
	W2510	D0GBR00JA008	0 1/16W	1	
	W2511	D0GBR00JA008	0 1/16W	1	
	W2512	D0GDR00JA017	0 1/10W	1	
	W2513	D0GDR00JA017	0 1/10W	1	
	W2514	D0GDR00JA017	0 1/10W	1	
	W2515	D0GBR00JA008	0 1/16W	1	
	W2516	D0GDR00JA017	0 1/10W	1	
	W5033	D0GBR00JA008	0 1/16W	1	
	W5039	D0GBR00JA008	0 1/16W	1	
	W5040	D0GDR00JA017	0 1/10W	1	
	W5041	D0GBR00JA008	0 1/16W	1	
	W5042	D0GDR00JA017	0 1/10W	1	
	W5043	D0GDR00JA017	0 1/10W	1	
	W5044	D0GDR00JA017	0 1/10W	1	
	W5045	D0GBR00JA008	0 1/16W	1	
	W5046	D0GDR00JA017	0 1/10W	1	
	W5047	D0GBR00JA008	0 1/16W	1	
	W5744	D0GBR00JA008	0 1/16W	1	
	W6101	D0GDR00JA017	0 1/10W	1	
	W7001	D0GBR00JA008	0 1/16W	1	
	W7002	D0GBR00JA008	0 1/16W	1	
	W7003	D0GBR00JA008	0 1/16W	1	
	W7004	D0GBR00JA008	0 1/16W	1	
	W7005	D0GBR00JA008	0 1/16W	1	
	W7006	D0GBR00JA008	0 1/16W	1	
	W7007	D0GBR00JA008	0 1/16W	1	
	W7008	D0GBR00JA008	0 1/16W	1	
	W7009	D0GBR00JA008	0 1/16W	1	
	W7010	D0GBR00JA008	0 1/16W	1	
	W7011	D0GBR00JA008	0 1/16W	1	
	W7012	D0GBR00JA008	0 1/16W	1	
	W7013	D0GBR00JA008	0 1/16W	1	
	W7014	D0GBR00JA008	0 1/16W	1	
	W7015	D0GBR00JA008	0 1/16W	1	
	W7016	D0GBR00JA008	0 1/16W	1	
	W7017	D0GBR00JA008	0 1/16W	1	
	W7018	D0GBR00JA008	0 1/16W	1	
	W7019	D0GBR00JA008	0 1/16W	1	
	W7020	D0GBR00JA008	0 1/16W	1	
	W7021	D0GBR00JA008	0 1/16W	1	
	W7024	D0GBR00JA008	0 1/16W	1	
	W7025	D0GDR00JA017	0 1/10W	1	
	W7026	D0GDR00JA017	0 1/10W	1	
			RESISTORS		
	R51	D0GB102JA008	1K 1/16W	1	
	R52	D0GB102JA008	1K 1/16W	1	
	R53	D0GA472JA023	4.7K 1/16W	1	
	R54	D0GA472JA023	4.7K 1/16W	1	
	R55	D0GA221JA023	220 1/16W	1	
	R56	D0GB221JA007	220 1/10W	1	
	R57	D0GA102JA023	1K 1/16W	1	
	R59	D0GB222JA008	2.2K 1/16W	1	
	R61	D0GB473JA008	47K 1/16W	1	
	R62	D0GB473JA008	47K 1/16W	1	
	R64	D0GBR00JA008	0 1/16W	1	
	R901	D0GB102JA008	1K 1/16W	1	
	R902	D0GB102JA008	1K 1/16W	1	
	R903	D0GBR00JA008	0 1/16W	1	
	R904	D0GBR00JA008	0 1/16W	1	
	R906	D0GBR00JA008	0 1/16W	1	
	R907	D0GDR00JA017	0 1/10W	1	
	R914	D0GBR00JA008	0 1/16W	1	
	R950	D0GBR00JA008	0 1/16W	1	
	R952	D0GB240JA008	24 1/16W	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	R953	D0GB240JA008	24 1/16W	1	
	R954	D0GB153JA008	15K 1/16W	1	
	R955	D0GB153JA008	15K 1/16W	1	
	R957	D0GB222JA008	2.2K 1/16W	1	
	R958	D0GB104JA008	100K 1/16W	1	
	R971	D0GB102JA008	1K 1/16W	1	
	R972	D0GB102JA008	1K 1/16W	1	
	R2005	D0GB473JA008	47K 1/16W	1	
	R2006	D0GB473JA008	47K 1/16W	1	
	R2009	D0GB332JA008	3.3K 1/16W	1	
	R2101	D0GB332JA008	3.3K 1/16W	1	
	R2102	D0GB332JA008	3.3K 1/16W	1	
	R2105	D0GB682JA008	6.8K 1/16W	1	
	R2108	D0GB682JA008	6.8K 1/16W	1	
	R2113	D0GB272JA008	2.7K 1/16W	1	
	R2114	D0GB272JA008	2.7K 1/16W	1	
	R2130	D0GBR00JA008	0 1/16W	1	
	R2201	D0GB102JA008	1K 1/16W	1	
	R2202	D0GB102JA008	1K 1/16W	1	
	R2203	D0GBR00JA008	0 1/16W	1	
	R2204	D0GBR00JA008	0 1/16W	1	
	R2205	D0GB562JA008	5.6K 1/16W	1	
	R2206	D0GB562JA008	5.6K 1/16W	1	
	R2207	D0GB273JA008	27K 1/16W	1	
	R2208	D0GB273JA008	27K 1/16W	1	
	R2220	D0GB222JA008	2.2K 1/16W	1	
	R2221	D0GB472JA008	4.7K 1/16W	1	
	R2222	D0GB472JA008	4.7K 1/16W	1	
	R2223	D0GB104JA008	100K 1/16W	1	
	R2224	D0GB102JA008	1K 1/16W	1	
	R2225	D0GB272JA008	2.7K 1/16W	1	
	R2226	D0GB472JA008	4.7K 1/16W	1	
	R2227	D0GB104JA008	100K 1/16W	1	
	R2228	D0GB102JA008	1K 1/16W	1	
	R2229	D0GB272JA008	2.7K 1/16W	1	
	R2230	D0GB563JA008	56K 1/16W	1	
	R2231	D0GB563JA008	56K 1/16W	1	
	R2303	D0GB101JA008	100 1/16W	1	
	R2304	D0GB101JA008	100 1/16W	1	
	R2305	D0GB331JA008	330 1/16W	1	
	R2306	D0GB331JA008	330 1/16W	1	
	R2307	D0GB222JA008	2.2K 1/16W	1	
	R2308	D0GB222JA008	2.2K 1/16W	1	
	R2309	D0GB222JA008	2.2K 1/16W	1	
	R2310	D0GB222JA008	2.2K 1/16W	1	
	R2311	D0GB102JA008	1K 1/16W	1	
	R2312	D0GB102JA008	1K 1/16W	1	
	R2313	D0GB104JA008	100K 1/16W	1	
	R2314	D0GB104JA008	100K 1/16W	1	
	R2601	D0GB475JA008	4.7M 1/16W	1	
	R2602	D0GB223JA008	22K 1/16W	1	
	R2604	D0GB223JA008	22K 1/16W	1	
	R2605	D0GB104JA008	100K 1/16W	1	
	R2606	D0GB223JA008	22K 1/16W	1	
	R2608	D0GB104JA008	100K 1/16W	1	
	R2611	D0GB223JA008	22K 1/16W	1	
	R2701	D0GB101JA008	100 1/16W	1	
	R2702	D0GB391JA008	390 1/16W	1	
	R2704	D0GB102JA008	1K 1/16W	1	
	R2705	D0GB472JA008	4.7K 1/16W	1	
	R2706	D0HB152ZA002	1.5K 1/16W	1	
	R2707	D0HB102ZA002	1K 1/16W	1	
	R2708	ERJ3RBD272V	2.7K 1/16W	1	
	R2710	D0GB105JA008	1M 1/16W	1	
	R2718	D0GB2R2JA008	2.2 1/16W	1	
	R2719	D0GB2R2JA008	2.2 1/16W	1	
	R2720	D0GB2R2JA008	2.2 1/16W	1	
	R2721	D0GB271JA008	270 1/16W	1	
	R2772	D0GB123JA008	12K 1/16W	1	
	R2773	D0GB153JA008	15K 1/16W	1	
	R2774	D0GB223JA008	22K 1/16W	1	
	R2790	D0GB222JA008	2.2K 1/16W	1	
	R2791	D0GB222JA008	2.2K 1/16W	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	R2802	D0GB104JA008	100K 1/16W	1	
	R2805	D0GB103JA008	10K 1/16W	1	
	R2809	D0GB472JA008	4.7K 1/16W	1	
	R2810	D0GB223JA008	22K 1/16W	1	
	R2812	D0GB472JA008	4.7K 1/16W	1	
	R2815	D0GB332JA008	3.3K 1/16W	1	
	R2816	D0GB122JA008	1.2K 1/16W	1	PH
	R2816	D0GBR00JA008	0 1/16W	1	PN
	R2817	D0GB103JA008	10K 1/16W	1	
	R2821	D0GB102JA008	1K 1/16W	1	
	R2822	D0GB101JA008	100 1/16W	1	
	R2824	D0GB101JA008	100 1/16W	1	
	R2825	D0GB473JA008	47K 1/16W	1	
	R2826	D0GB473JA008	47K 1/16W	1	
	R2827	D0GB103JA008	10K 1/16W	1	
	R2828	D0GB101JA008	100 1/16W	1	
	R2829	D0GB101JA008	100 1/16W	1	
	R2830	D0GB101JA008	100 1/16W	1	
	R2831	D0GB101JA008	100 1/16W	1	
	R2834	D0GB473JA008	47K 1/16W	1	
	R2835	D0GB103JA008	10K 1/16W	1	
	R2836	D0GB102JA008	1K 1/16W	1	
	R2838	D0GB102JA008	1K 1/16W	1	
	R2839	D0GB101JA008	100 1/16W	1	
	R2840	D0GB223JA008	22K 1/16W	1	
	R2841	D0GB101JA008	100 1/16W	1	
	R2842	D0GB101JA008	100 1/16W	1	
	R2843	D0GB101JA008	100 1/16W	1	
	R2846	D0GB101JA008	100 1/16W	1	
	R2847	D0GB106JA008	10M 1/16W	1	
	R2848	D0GBR00JA008	0 1/16W	1	
	R2849	D0GB102JA008	1K 1/16W	1	
	R2850	D0GB105JA008	1M 1/16W	1	
	R2851	D0GB102JA008	1K 1/16W	1	
	R2852	D0GB101JA008	100 1/16W	1	
	R2853	D0GB221JA007	220 1/10W	1	
	R2854	D0GB152JA008	1.5K 1/16W	1	
	R2855	D0GB152JA008	1.5K 1/16W	1	
	R2856	D0GB102JA008	1K 1/16W	1	
	R2857	D0GB101JA008	100 1/16W	1	
	R2858	D0GB101JA008	100 1/16W	1	
	R2859	D0GB103JA008	10K 1/16W	1	
	R2860	D0GB102JA008	1K 1/16W	1	
	R2862	D0GB101JA008	100 1/16W	1	
	R2863	D0GB102JA008	1K 1/16W	1	
	R2864	D0GB101JA008	100 1/16W	1	
	R2865	D0GB101JA008	100 1/16W	1	
	R2866	D0GB102JA008	1K 1/16W	1	
	R2867	D0GB101JA008	100 1/16W	1	
	R2868	D0GB101JA008	100 1/16W	1	
	R2869	D0GB101JA008	100 1/16W	1	
	R2870	D0GB101JA008	100 1/16W	1	
	R2871	D0GB102JA008	1K 1/16W	1	
	R2872	D0GB101JA008	100 1/16W	1	
	R2873	D0GB223JA008	22K 1/16W	1	
	R2874	D0GB103JA008	10K 1/16W	1	
	R2875	D0GB473JA008	47K 1/16W	1	
	R2877	D0GB153JA008	15K 1/16W	1	
	R2878	D0GB153JA008	15K 1/16W	1	
	R2879	D0GB103JA008	10K 1/16W	1	
	R2880	D0GB101JA008	100 1/16W	1	
	R2881	D0GB101JA008	100 1/16W	1	
	R2882	D0GB101JA008	100 1/16W	1	
	R2883	D0GB473JA008	47K 1/16W	1	
	R2884	D0GB101JA008	100 1/16W	1	
	R2885	D0GB101JA008	100 1/16W	1	
	R2886	D0GB101JA008	100 1/16W	1	
	R2887	D0GB392JA008	3.9K 1/16W	1	
	R2888	D0GB392JA008	3.9K 1/16W	1	
	R2889	D0GB472JA008	4.7K 1/16W	1	
	R2890	D0GB223JA008	22K 1/16W	1	
	R2891	D0GB102JA008	1K 1/16W	1	
	R2892	D0GB223JA008	22K 1/16W	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	R2893	D0GB474JA008	470K 1/16W	1	
	R2894	D0GB103JA008	10K 1/16W	1	
	R5702	D0GZ104JA012	100K 1W	1	PH
	R5702	D0GZ333JA012	33K 1W	1	PN
	R5703	D0GZ104JA012	100K 1W	1	PH
	R5703	D0GZ333JA012	33K 1W	1	PN
	R5704	ERJ8GEYJ224V	220K 1/4W	1	
	R5705	ERJ8GEYJ224V	220K 1/4W	1	
	R5706	D0GD824JA017	820K 1/8W	1	
	R5708	ERJ8GEYJ155V	1.5M 1/4W	1	
	R5709	ERJ8GEYJ155V	1.5M 1/4W	1	
	R5720	D0GD220JA017	22 1/10W	1	
	R5721	D0GD103JA017	10K 1/10W	1	
	R5722	D0GD122JA017	1.2K 1/10W	1	
	R5723	D0GB102JA008	1K 1/16W	1	
	R5724	D0GD121JA017	120 1/10W	1	
	R5726	ERX2SZJR10P	0.1 2W	1	PH
	R5726	ERX2SZJR15P	0.15 2W	1	PN
	R5727	ERX2SZJR13P	0.13 2W	1	PN
	R5728	D0GB104JA008	100K 1/16W	1	
	R5729	D0GD103JA017	10K 1/10W	1	
	R5730	D0GB102JA008	1K 1/16W	1	
	R5732	D0GB101JA008	100 1/16W	1	
	R5733	D0GB473JA008	47K 1/16W	1	
	R5786	D0GZ204JA012	100K 1W	1	PH
	R5795	D0GD474JA017	470K 1/8W	1	
	R5797	D0GB153JA008	15K 1/16W	1	
	R5798	D0GB220JA008	22 1/16W	1	
	R5800	D0GD153JA017	15K 1/10W	1	
	R5801	D0GD223JA017	22K 1/10W	1	
	R5802	D0HB123ZA002	12K 1/16W	1	
	R5803	D0HB102ZA002	1K 1/16W	1	
	R5804	D1BD4702A077	47K 1/10W	1	
	R5805	ERJ3RBD222V	2.2K 1/16W	1	
	R5806	D0GB153JA008	15K 1/16W	1	
	R5807	D0GD331JA017	330 1/8W	1	
	R5808	D0GD222JA017	2.2K 1/10W	1	
	R5809	D0GD331JA017	330 1/8W	1	
	R5810	D0GB331JA008	330 1/16W	1	
	R5814	D0GB822JA008	8.2K 1/16W	1	
	R5817	D0GB331JA008	330 1/16W	1	
	R5820	D0GB103JA008	10K 1/16W	1	
	R5821	ERG2SJ471E	470 2W	1	
	R5822	ERG2SJ471E	470 2W	1	
	R5823	ERG2SJ471E	470 2W	1	
	R5824	ERG2SJ471E	470 2W	1	
	R5825	ERG2SJ471E	470 2W	1	
	R5826	ERG2SJ471E	470 2W	1	
	R5827	ERG2SJ471E	470 2W	1	
	R5828	ERG2SJ471E	470 2W	1	
	R5832	D0GZ222JA012	2.2K 1W	1	
	R5833	D0GZ222JA012	2.2K 1W	1	PH
	R5834	D0GZ222JA012	2.2K 1W	1	
	R5835	D0GZ222JA012	2.2K 1W	1	PH
	R5836	D0GZ222JA012	2.2K 1W	1	PH
	R5837	D0GZ222JA012	2.2K 1W	1	PH
	R5840	D0GB823JA008	82K 1/16W	1	
	R5841	D0GB124JA008	120K 1/16W	1	
	R5860	ERJ3GEYF103V	10K 1/10W	1	
	R5861	ERJ3GEYF472V	4.7K 1/10W	1	
	R5862	D0GD183JA017	18K 1/8W	1	
	R5863	D0GD183JA017	18K 1/8W	1	
	R5864	ERJ3GEYF103V	10K 1/10W	1	
	R5890	D0GB222JA008	2.2K 1/16W	1	
	R5891	ERJ3RBD333V	33K 1/16W	1	
	R5892	D0HB102ZA002	1K 1/16W	1	
	R5893	ERJ3RBD103V	10K 1/16W	1	
	R5894	D0GB151JA008	150 1/16W	1	
	R5895	D0GB153JA008	15K 1/16W	1	
	R5896	D0GB104JA008	100K 1/16W	1	
	R5897	D0GB101JA008	100 1/16W	1	
	R5901	D0GB124JA008	120K 1/16W	1	
	R5903	D0GB103JA008	10K 1/16W	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	R5904	D0GB103JA008	10K 1/16W	1	
	R5905	D0GF100JA014	10 1/8W	1	
	R5906	D0GB184JA008	180K 1/16W	1	
	R5907	ERJ3RBD273V	27K 1/16W	1	
	R5908	D0GB103JA008	10K 1/16W	1	
	R5909	ERJ3RBD333V	33K 1/16W	1	
	R5910	D0HB152ZA002	1.5K 1/16W	1	
	R5911	D0GB562JA008	5.6K 1/16W	1	
	R5913	ERJ3RBD272V	2.7K 1/16W	1	
	R5914	D0GB562JA008	5.6K 1/16W	1	
	R5915	D0GB103JA008	10K 1/16W	1	
	R5917	D0GF100JA014	10 1/8W	1	
	R5918	ERJ3RBD272V	2.7K 1/16W	1	
	R5921	D0GF100JA014	10 1/8W	1	
	R5922	D0GF100JA014	10 1/8W	1	
	R5923	D0GB682JA008	6.8K 1/16W	1	
	R5924	D0GB562JA008	5.6K 1/16W	1	
	R5925	D0GB562JA008	5.6K 1/16W	1	
	R5926	D0GB101JA008	100 1/16W	1	
	R5927	D0GB823JA008	82K 1/16W	1	
	R5928	D0GB823JA008	82K 1/16W	1	
	R5931	ERJ1TYJ220U	22 1W	1	
	R5932	ERJ1TYJ220U	22 1W	1	
	R5933	D0GB562JA008	5.6K 1/16W	1	
	R5934	D0GB562JA008	5.6K 1/16W	1	
	R5935	D0GB103JA008	10K 1/16W	1	
	R6001	D0GB122JA008	1.2K 1/16W	1	
	R6002	D0GB152JA008	1.5K 1/16W	1	
	R6003	D0GB222JA008	2.2K 1/16W	1	
	R6004	D0GB332JA008	3.3K 1/16W	1	
	R6005	D0GB682JA008	6.8K 1/16W	1	
	R6006	D0GB122JA008	1.2K 1/16W	1	
	R6007	D0GB152JA008	1.5K 1/16W	1	
	R6008	D0GB222JA008	2.2K 1/16W	1	
	R6009	D0GB332JA008	3.3K 1/16W	1	
	R6010	D0GB472JA008	4.7K 1/16W	1	
	R6012	D0GB103JA008	10K 1/16W	1	
	R6013	D0GB103JA008	10K 1/16W	1	
	R6014	D0GB221JA007	220 1/10W	1	
	R6015	D0GB221JA007	220 1/10W	1	
	R6016	D0GB471JA008	470 1/16W	1	
	R6017	D0GB823JA008	82K 1/16W	1	
	R6018	D0GB103JA008	10K 1/16W	1	
	R6019	D0GB223JA008	22K 1/16W	1	
	R6020	D0GB123JA008	12K 1/16W	1	
	R6021	D0GB100JA008	10 1/16W	1	
	R6022	D0GB123JA008	12K 1/16W	1	
	R6023	D0GB223JA008	22K 1/16W	1	
	R6024	D0GB103JA008	10K 1/16W	1	
	R6025	D0GB223JA008	22K 1/16W	1	
	R6028	D0GB102JA008	1K 1/16W	1	
	R6101	D0GB473JA008	47K 1/16W	1	
	R6102	D0GB470JA008	47 1/16W	1	
	R6103	D0GBR00JA008	0 1/16W	1	
	R6105	D0GB682JA008	6.8K 1/16W	1	
	R6106	D0GD1R0JA017	1.0 1/8W	1	
	R6108	D0GD1R0JA017	1.0 1/8W	1	
	R6201	D0GB472JA008	4.7K 1/16W	1	
	R7111	D0GB103JA008	10K 1/16W	1	
	R7211	D0GB823JA008	82K 1/16W	1	
	R7212	D0GB821JA008	820 1/16W	1	
	R7214	D0GB471JA008	470 1/16W	1	
	R7217	D0GB102JA008	1K 1/16W	1	
	R7218	D0GB102JA008	1K 1/16W	1	
	R7220	D0GB105JA008	1M 1/16W	1	
	R7221	D0GB101JA008	100 1/16W	1	
	R7253	D0GB100JA008	10 1/16W	1	
	R7254	D0GB102JA008	1K 1/16W	1	
	R7315	D0GB332JA008	3.3K 1/16W	1	
	R7323	D0GB682JA008	6.8K 1/16W	1	
	R7325	D0GB331JA008	330 1/16W	1	
	R7327	D0GB102JA008	1K 1/16W	1	
	R7328	D0GB103JA008	10K 1/16W	1	

Safety	Ref. No.	Part No.	Part Name & Description		Qty	Remarks
	R7329	D0GB102JA008	1K	1/16W	1	
	R7330	D0GB562JA008	5.6K	1/16W	1	
	R7331	D0GB273JA008	27K	1/16W	1	
	R7332	D0GB102JA008	1K	1/16W	1	
	R7335	D0GB101JA008	100	1/16W	1	
	R7336	D0GB100JA008	10	1/16W	1	
	R7339	D0GB102JA008	1K	1/16W	1	
	R7349	D0GB183JA008	18K	1/16W	1	
	R7601	D0GB4R7JA008	4.7	1/16W	1	
	R7650	D0GB5R6JA008	5.6	1/16W	1	
					1	
			CAPACITORS		1	
	C51	F1H1H102A219	1000pF	50V	1	
	C52	F1H1A474A025	0.47uF	10V	1	
	C57	F1H1H220A230	22pF	50V	1	
	C58	F1H1H220A230	22pF	50V	1	
	C59	F1H1A105A025	1uF	10V	1	
	C60	F1H1A105A025	1uF	10V	1	
	C61	F1G1C104A077	0.1uF	16V	1	
	C62	F1G1C104A077	0.1uF	16V	1	
	C901	F1H1H104A013	0.1uF	50V	1	
	C902	F1H1H104A013	0.1uF	50V	1	
	C903	F1H1H104A013	0.1uF	50V	1	
	C904	F2A1C100A234	10uF	16V	1	
	C905	F1H1H104A013	0.1uF	50V	1	
	C906	F2A1C100A234	10uF	16V	1	
	C907	F1H1H180A230	18pF	50V	1	
	C908	F1H1H220A004	22pF	50V	1	
	C911	F1H1H104A013	0.1uF	50V	1	
	C912	F1H1H104A013	0.1uF	50V	1	
	C913	F1H1H104A013	0.1uF	50V	1	
	C914	F1H1H104A013	0.1uF	50V	1	
	C915	F2A1C470A234	47uF	16V	1	
	C931	F2A1C100A234	10uF	16V	1	
	C951	F1H1H104A013	0.1uF	50V	1	
	C952	F1H1H104A013	0.1uF	50V	1	
	C953	F2A0J101A245	100uF	6.3V	1	
	C2001	D0GBR00JA008	0	1/16W	1	
	C2002	F1H1H102A219	1000pF	50V	1	
	C2003	F1H1H102A219	1000pF	50V	1	
	C2004	F1H1H101A720	100pF	50V	1	
	C2005	F1H1H102A219	1000pF	50V	1	
	C2007	F1H1H101A720	100pF	50V	1	
	C2008	F1H1H104A013	0.1uF	50V	1	
	C2101	F1H1H103A219	0.01uF	50V	1	
	C2102	F1H1H103A219	0.01uF	50V	1	
	C2107	F1J0J106A020	10uF	6.3V	1	
	C2108	F1H0J1050013	1uF	6.3V	1	
	C2109	F1H0J1050013	1uF	6.3V	1	
	C2113	F1H0J1050013	1uF	6.3V	1	
	C2114	F1H0J1050013	1uF	6.3V	1	
	C2115	F1J0J106A020	10uF	6.3V	1	
	C2118	F1H1A154A001	0.15uF	10V	1	
	C2119	F1H1A224A007	0.22uF	10V	1	
	C2120	F1H1H332A013	3300pF	50V	1	
	C2121	F2A1H2R2A145	2.2uF	50V	1	
	C2122	F1H1A224A007	0.22uF	10V	1	
	C2123	F1H1A154A001	0.15uF	10V	1	
	C2124	F1H1A224A007	0.22uF	10V	1	
	C2125	F1H1H332A013	3300pF	50V	1	
	C2126	F2A1H2R2A145	2.2uF	50V	1	
	C2127	F1H1H103A219	0.01uF	50V	1	
	C2128	F2A1C221A236	220uF	16V	1	
	C2129	F2A1C100A234	10uF	16V	1	
	C2143	F1H1H102A219	1000pF	50V	1	
	C2144	F1H1H102A219	1000pF	50V	1	
	C2145	F2A0J221A181	220uF	6.3V	1	
	C2146	F2A0J221A181	220uF	6.3V	1	
	C2201	F2A1A101A159	100uF	10V	1	
	C2202	F1H0J1050013	1uF	6.3V	1	
	C2203	F1H0J1050013	1uF	6.3V	1	
	C2204	F1H1H470A004	47pF	50V	1	
	C2205	F1H1H470A004	47pF	50V	1	

Safety	Ref. No.	Part No.	Part Name & Description		Qty	Remarks
	C2206	F1H1H561A013	560pF	50V	1	
	C2207	F1H1H561A013	560pF	50V	1	
	C2220	F1H1A224A007	0.22uF	10V	1	
	C2221	F1H1A184A012	0.18uF	10V	1	
	C2222	F1J0J106A020	10uF	6.3V	1	
	C2223	F2A1C101A208	100uF	16V	1	
	C2224	F1H1A224A007	0.22uF	10V	1	
	C2225	F1H1A184A012	0.18uF	10V	1	
	C2226	F1J0J106A020	10uF	6.3V	1	
	C2301	F1J0J106A020	10uF	6.3V	1	
	C2302	F1J0J106A020	10uF	6.3V	1	
	C2307	F1H1H104A013	0.1uF	50V	1	
	C2308	F1H1H104A013	0.1uF	50V	1	
	C2309	F1H1H153A219	0.015uF	50V	1	
	C2310	F1H1H153A219	0.015uF	50V	1	
	C2402	F1J0J106A020	10uF	6.3V	1	
	C2405	F1J0J106A020	10uF	6.3V	1	
	C2601	F2A1H2R2A145	2.2uF	50V	1	
	C2602	F2A1H1R0A213	1.0uF	50V	1	
	C2603	F1H1H123A219	0.012uF	50V	1	
	C2605	F1H1H123A219	0.012uF	50V	1	
	C2607	F2A1H1R0A213	1.0uF	50V	1	
	C2608	F2A1H2R2A145	2.2uF	50V	1	
	C2701	F1H1H103A219	0.01uF	50V	1	
	C2702	F1H1H104A013	0.1uF	50V	1	
	C2703	F2A1C470A180	47uF	16V	1	
	C2704	F2A1A330A159	33uF	10V	1	
	C2705	F2A1C470A180	47uF	16V	1	
	C2706	F1H1H103A219	0.01uF	50V	1	
	C2707	F1H1H103A219	0.01uF	50V	1	
	C2708	F2A1C470A180	47uF	16V	1	
	C2711	F1H1H103A219	0.01uF	50V	1	
	C2712	F2A1C470A180	47uF	16V	1	
	C2713	F1H1H103A219	0.01uF	50V	1	
	C2714	F1H1A474A001	0.47uF	10V	1	
	C2715	EEUFC0J821B	820uF	6.3V	1	
	C2716	F1H1H103A219	0.01uF	50V	1	
	C2717	F2A1E3310048	330uF	25V	1	
	C2718	F2A1E3310048	330uF	25V	1	
	C2719	F1H1H103A219	0.01uF	50V	1	
	C2720	F1H1H103A219	0.01uF	50V	1	
	C2801	F1H1H180A230	18pF	50V	1	
	C2802	F1H1H220A004	22pF	50V	1	
	C2803	F1H1H104A013	0.1uF	50V	1	
	C2804	F1H1H104A013	0.1uF	50V	1	
	C2805	F1H1H104A013	0.1uF	50V	1	
	C2806	F2A0J221A181	220uF	6.3V	1	
	C2807	F1H0J1050013	1uF	6.3V	1	
	C2810	F2A1H3R3A213	3.3uF	50V	1	
	C2811	F1H1H331A013	330pF	50V	1	
	C2812	F1H1H331A013	330pF	50V	1	
	C2816	F1H1H223A219	0.022uF	50V	1	
	C2817	F2A1H4R7A213	4.7uF	50V	1	
	C2818	F1H1H101A720	100pF	50V	1	
	C2819	F1H1H101A720	100pF	50V	1	
	C2820	F1H1H101A720	100pF	50V	1	
⚠	C5701	F0CAF334A105	0.33uF		1	
⚠	C5703	F0CAF104A105	0.1uF		1	PH
⚠	C5703	F0CAF224A105	0.22uF		1	PN
⚠	C5704	F1BAF1020020	1000pF		1	
⚠	C5705	F1BAF1020020	1000pF		1	
⚠	C5706	F1BAF1020020	1000pF		1	PH
⚠	C5707	F1BAF1020020	1000pF		1	PH
⚠	C5708	F1BAF1020020	1000pF		1	
	C5711	F2B2G2210012	220uF	400V	1	PH
	C5712	F2B2D5610008	560uF	200V	1	PN
	C5712	F2B2G2210012	220uF	400V	1	PH
	C5713	F0C2J1030007	0.01uF	630V	1	
	C5720	F1H1H104A013	0.1uF	50V	1	
	C5721	F1H1H2210001	220pF	50V	1	
	C5722	F1H1H102A219	1000pF	50V	1	
	C5723	F1H1H471A219	470pF	50V	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	C5724	F2A1H5600009	56uF 50V	1	
	C5725	F1H1H104A013	0.1uF 50V	1	
	C5726	F1H1H104A013	0.1uF 50V	1	
	C5727	F1B3A3320012	3300pF 1000V	1	PN
	C5728	F1H1H102A219	1000pF 50V	1	
	C5730	F1H1E105A116	1uF 25V	1	
	C5737	ECKE3D821KBP	820pF 2000V	1	PH
	C5790	F1K2J2220002	2200pF 630V	1	PH
	C5794	F1H1H102A219	1000pF 50V	1	
	C5795	F1K1H105A149	1uF 50V	1	
	C5796	F1H1H104A013	0.1uF 50V	1	
	C5798	F2A1E2210050	22uF 50V	1	
	C5800	F1J2E1030004	0.01uF 250V	1	
	C5805	F2A1H102B126	1000uF 50V	1	
	C5808	F2A1H102B126	1000uF 50V	1	
	C5810	F1H1H104A013	0.1uF 50V	1	
	C5812	F1H1H104A013	0.1uF 50V	1	
	C5813	F2A1V331B150	330uF 35V	1	
	C5817	F2A2AR100002	0.10uF 100V	1	
	C5818	F1H1H104A013	0.1uF 50V	1	
	C5819	F1J2E1030004	0.01uF 250V	1	
	C5820	F1J2E1030004	0.01uF 250V	1	
	C5821	F1J2E1030004	0.01uF 250V	1	
	C5822	F1J2E1030004	0.01uF 250V	1	
	C5826	F1J2E1030004	0.01uF 250V	1	
	C5831	F1H1H104A013	0.1uF 50V	1	
	C5832	F1H1H104A013	0.1uF 50V	1	
	C5843	F1J1A106A043	10uF 10V	1	
	C5844	F1J1A106A043	10uF 10V	1	
	C5869	F1H1H104A013	0.1uF 50V	1	
	C5870	F1H1H104A013	0.1uF 50V	1	
	C5896	F1H1H104A013	0.1uF 50V	1	
	C5897	F1H1H104A013	0.1uF 50V	1	
	C5898	F1H1H104A013	0.1uF 50V	1	
	C5899	F2A1A2210063	220uF 10V	1	
	C5901	F1H1H102A219	1000pF 50V	1	
	C5902	F1H1H102A219	1000pF 50V	1	
	C5903	F1H1H104A013	0.1uF 50V	1	
	C5904	F1H1H104A013	0.1uF 50V	1	
	C5905	F1H1H104A013	0.1uF 50V	1	
	C5906	F1H1H104A013	0.1uF 50V	1	
	C5907	F2A1H221B436	220uF 50V	1	
	C5908	F2A1H221B436	220uF 50V	1	
	C5909	F1H1H104A013	0.1uF 50V	1	
	C5910	F1H1H104A013	0.1uF 50V	1	
	C5915	F1H1A474A001	0.47uF 10V	1	
	C5917	F1H1H102A219	1000pF 50V	1	
	C5918	F1H1H331A013	330pF 50V	1	
	C5919	F1H1A474A001	0.47uF 10V	1	
	C5920	F2A2A220A388	22uF 100V	1	
	C5921	F1H1H104A013	0.1uF 50V	1	
	C5923	F1H1H104A013	0.1uF 50V	1	
	C5924	F1H1H330A230	33pF 50V	1	
	C5925	F1K2A1040007	0.1uF 100V	1	
	C5926	F1H1H104A013	0.1uF 50V	1	
	C5927	F1J2A221A030	220pF 100V	1	
	C5928	F1H1H153A219	0.015uF 50V	1	
	C5929	F1J2A221A030	220pF 100V	1	
	C5930	F1H1C474A140	0.47uF 16V	1	
	C5931	F1H1H104A013	0.1uF 50V	1	
	C5932	F1H1H104A013	0.1uF 50V	1	
	C5933	F1H1H153A219	0.015uF 50V	1	
	C5934	F1J2A221A030	220pF 100V	1	
	C5935	F1J2A221A030	220pF 100V	1	
	C5936	F1H1H104A013	0.1uF 50V	1	
	C5937	F1K2A1040007	0.1uF 100V	1	
	C5938	F1H1H104A013	0.1uF 50V	1	
	C5939	F1H1H104A013	0.1uF 50V	1	
	C5941	F1H1A474A001	0.47uF 10V	1	
	C5942	F1H1H102A219	1000pF 50V	1	
	C5943	F1H1H331A013	330pF 50V	1	
	C5944	F1H1A474A001	0.47uF 10V	1	
	C5945	F2A1A101A159	100uF 10V	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	C5946	F2A1C100A234	10uF 16V	1	
	C5947	F1H1H102A219	1000pF 50V	1	
	C5948	ECQV1H684JL3	0.68uF 50V	1	
	C5949	ECQV1H684JL3	0.68uF 50V	1	
	C5950	F1H1H104A013	0.1uF 50V	1	
	C5951	F1H1H104A013	0.1uF 50V	1	
	C5952	F1H1H104A013	0.1uF 50V	1	
	C5953	F1H1H104A013	0.1uF 50V	1	
	C5954	F1H1H104A013	0.1uF 50V	1	
	C5955	F1H1H104A013	0.1uF 50V	1	
	C5956	D0GBR00JA008	0 1/16W	1	
	C6003	F1H1H104A013	0.1uF 50V	1	
	C6004	F1H1H331A013	330pF 50V	1	
	C6005	F1H1H331A013	330pF 50V	1	
	C6006	F1H1H331A013	330pF 50V	1	
	C6007	F1H1H103A219	0.01uF 50V	1	
	C6008	F1H1H101A230	100pF 50V	1	
	C6009	F1H1H101A230	100pF 50V	1	
	C6010	F1H1H102A219	1000pF 50V	1	
	C6011	F1H1H101A230	100pF 50V	1	
	C6012	F1H1H101A230	100pF 50V	1	
	C6013	F1H1H104A013	0.1uF 50V	1	
	C6014	F2A1H220A182	22uF 50V	1	
	C6101	F2A1C101A208	100uF 16V	1	
	C6102	F2A1H470A147	47uF 50V	1	
	C6103	F1H1H332A013	3300pF 50V	1	
	C6104	F2A1H470A147	47uF 50V	1	
	C6301	F1H1H101A230	100pF 50V	1	
	C6302	F1H1H102A219	1000pF 50V	1	
	C6303	F2A1H220A182	22uF 50V	1	
	C7102	F1H1A474A025	0.47uF 10V	1	
	C7107	F1H1H223A219	0.022uF 50V	1	
	C7142	F1H1H332A013	3300pF 50V	1	
	C7154	F1H1C104A042	0.1uF 16V	1	
	C7155	F1H1C104A042	0.1uF 16V	1	
	C7161	F1H1C104A042	0.1uF 16V	1	
	C7164	F1J1A106A076	10uF 10V	1	
	C7165	F1J1A106A076	10uF 10V	1	
	C7166	F1H1H103A219	0.01uF 50V	1	
	C7203	F2A0J221A200	220uF 6.3V	1	
	C7204	F1H1C104A042	0.1uF 16V	1	
	C7216	F1H1H681A013	680pF 50V	1	
	C7217	F1H1C104A042	0.1uF 16V	1	
	C7218	F1H1C823A001	0.082uF 16V	1	
	C7221	F1H1H150A971	15pF 50V	1	
	C7222	F1H1H150A971	15pF 50V	1	
	C7223	F2A1H4R70037	4.7uF 50V	1	
	C7225	F1H1H102A219	1000pF 50V	1	
	C7226	F1H1H102A219	1000pF 50V	1	
	C7227	ECA1HAK010XI	1uF 50V	1	
	C7228	ECA1HAK010XI	1uF 50V	1	
	C7230	F1H1C104A042	0.1uF 16V	1	
	C7231	F2A0J221A200	220uF 6.3V	1	
	C7232	F2A0J221A200	220uF 6.3V	1	
	C7233	F1H1C104A008	0.1uF 16V	1	
	C7234	F1H1C104A042	0.1uF 16V	1	
	C7235	F2A1C100A133	10uF 16V	1	
	C7241	F1H1H102A219	1000pF 50V	1	
	C7243	F1H1C104A008	0.1uF 16V	1	
	C7244	F1H1C153A001	0.015uF 16V	1	
	C7253	F1H1H471A219	470pF 50V	1	
	C7263	F1H1C104A042	0.1uF 16V	1	
	C7264	F1H1C104A042	0.1uF 16V	1	
	C7315	F1H1A474A025	0.47uF 10V	1	
	C7334	ECEA1AKA221I	220uF 10V	1	
	C7335	F1H1C104A008	0.1uF 16V	1	
	C7338	F1H1E2730002	0.027uF 25V	1	
	C7339	F1H1C183A001	0.018uF 16V	1	
	C7352	F1H1C183A001	0.018uF 16V	1	
	C7601	ECEA0JKA330I	33uF 6.3V	1	
	C7613	F1H1C104A042	0.1uF 16V	1	
	C7614	F2A0J101A198	100uF 6.3V	1	
	C7626	F1H1C104A042	0.1uF 16V	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	C7670	F1H1C104A042	0.1uF 16V	1	

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