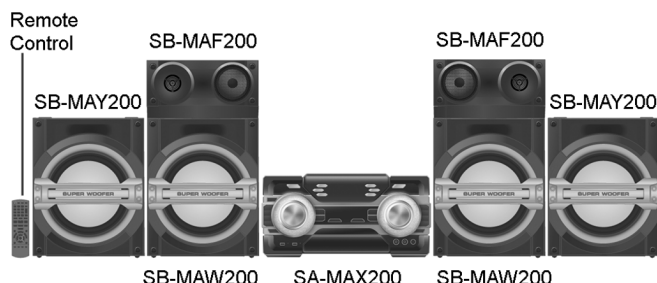


Service Manual

CD Stereo System

Model No. **SA-MAX200PH**

Product Color: (K)...Black Type



Please refer to the original service manual for:

- CD Mechanism Unit, Order No. PSG1201019AE
- Speaker system SB-MAX200PHK, Order No. PSG1302024CE

⚠ 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. IMPORTANT SAFETY NOTICE

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

2. An Isolation Transformer should always be used during the servicing of AC Adaptor whose chassis is not isolated from the AC power line. Use a transformer of adequate power rating as this protects the technician from accidents resulting in personal injury from electrical shocks. It will also protect AC Adaptor from being damaged by accidental shorting that may occur during servicing.
3. 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.
4. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
5. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

1.1.1. Leakage Current Cold Check

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between $1M\Omega$ and $5.2M\Omega$.

When the exposed metal does not have a return path to the chassis, the reading must be ∞

1.1.2. Leakage Current Hot Check

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

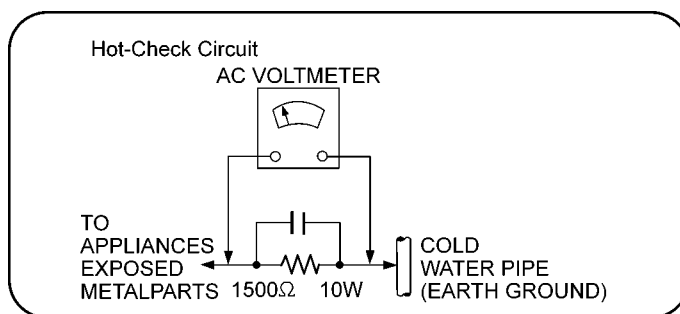


Figure 1-1

1.2. Before Use

Be sure to disconnect the mains cord before adjusting the voltage selector as shown in Figure 1-2.

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.

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.)

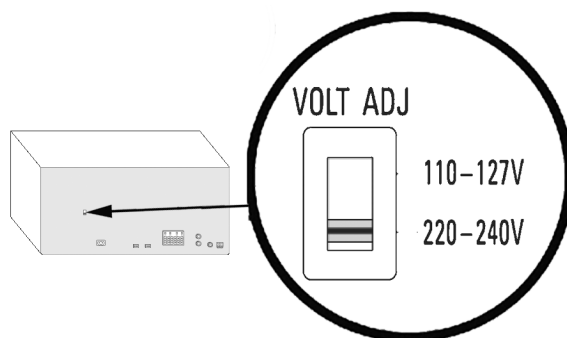


Figure 1-2

1.3. Before Repair and Adjustment

Disconnect AC power to discharge the AC Capacitors (C5700, C5701, C5702, C5703, C5704, C5705, 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 110~127 V/220~240 V, 50/60 Hz in FM Tuner at volume minimum should be ~ 850mA.

1.4. Protection Circuitry

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

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

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

If this occurs, follow the procedure outlines below:

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

Note:

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

1.5. Caution For Fuse Replacement

CAUTION:

Replace with the same type fuse:

(Manufacturer: LITTELFUSE, Type: 215, F1, T10AH, 250V)

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

Safety	Ref No.	Part No.	Part Name & Description	Remarks
\triangle	14	REXX1122-K	1P BLK WIRE (VOLTAGE SELECTOR - SMPS)	
\triangle	15	REXX1123-K	1P RED WIRE (VOLTAGE SELECTOR - SMPS)	
\triangle	22	RGR0439C-C1	REAR PANEL	
\triangle	41	RKM0702-K	TOP CABINET	
\triangle	301	RAE1037Z-V	TRAVERSE ASS'Y	
\triangle	A2	K2CQ2YY00119	AC CORD	
\triangle	A3	RQT9800-M	O/I BOOK (Sp/En)	
\triangle	PCB10	REP4908G	SMPS P.C.B.	(RTL)
\triangle	PCB11	REP4908G	VOLTAGE SELECTOR P.C.B.	(RTL)
\triangle	DZ5701	D4EAY511A127	VARISTOR	(E.S.D)
\triangle	S5701	K0ABCA000007	VOLT ADJ	
\triangle	L5701	G0B183J00002	LINE FILTER	
\triangle	L5702	G0B183J00002	LINE FILTER	
\triangle	T5701	G4DYZ0000070	TRANSFORMER	
\triangle	T5751	G4DYZ0000064	TRANSFORMER	
\triangle	T6000	G4DYA0000214	TRANSFORMER	
\triangle	TH5861	D4CCY1040001	THERMISTOR	
\triangle	PC5701	B3PBA0000579	PHOTO COUPLER	
\triangle	PC5702	B3PBA0000579	PHOTO COUPLER	
\triangle	PC5720	B3PBA0000579	PHOTO COUPLER	
\triangle	PC5799	B3PBA0000579	PHOTO COUPLER	
\triangle	F1	K5D103BNA005	FUSE	
\triangle	P5701	K2AA2B000011	AC INLET	
\triangle	R5708	D0GF155JA048	1.5M 1/4W	
\triangle	R5709	D0GF155JA048	1.5M 1/4W	
\triangle	R5901	ERG2SJ471E	470 2W	
\triangle	R5902	ERG2SJ471E	470 2W	
\triangle	R5903	ERG2SJ471E	470 2W	
\triangle	R5904	ERG2SJ471E	470 2W	
\triangle	R5905	ERG2SJ471E	470 2W	
\triangle	R5906	ERG2SJ471E	470 2W	
\triangle	R5907	ERG2SJ471E	470 2W	
\triangle	R5908	ERG2SJ471E	470 2W	
\triangle	C5700	F1BAF471A013	470pF	
\triangle	C5701	F0CAF104A105	0.1uF	
\triangle	C5702	F0CAF104A105	0.1uF	
\triangle	C5703	F0CAF104A105	0.1uF	
\triangle	C5704	F1BAF471A013	470pF	
\triangle	C5705	F1BAF471A013	470pF	
\triangle	C5707	F1BAF471A013	470pF	
\triangle	C5708	F1BAF471A013	470pF	

2 Warning

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

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices.

Examples of typical ES devices are IC (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).

IMPORTANT SAFETY NOTICE

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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: 790 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.

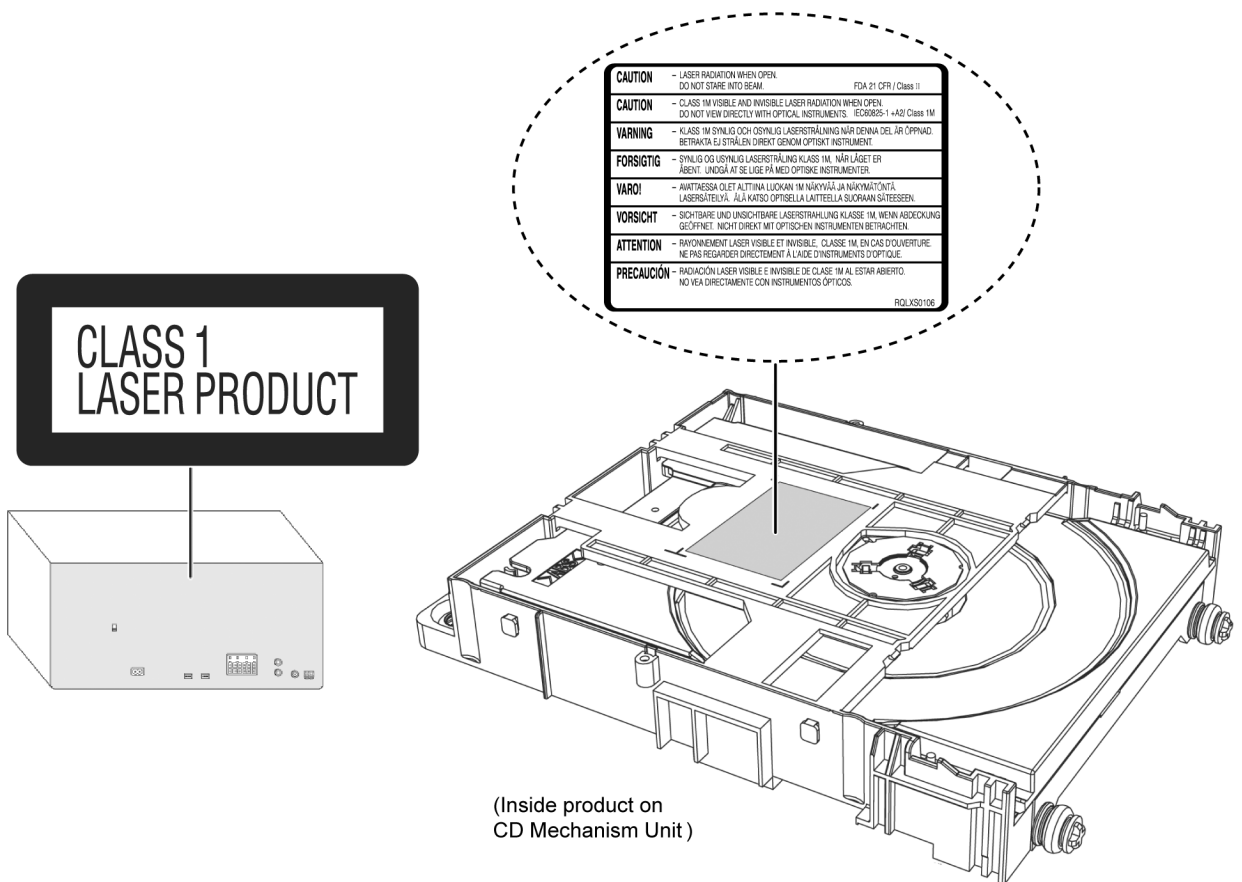


Figure 2-1

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.	PbF
(See right figure)	

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.

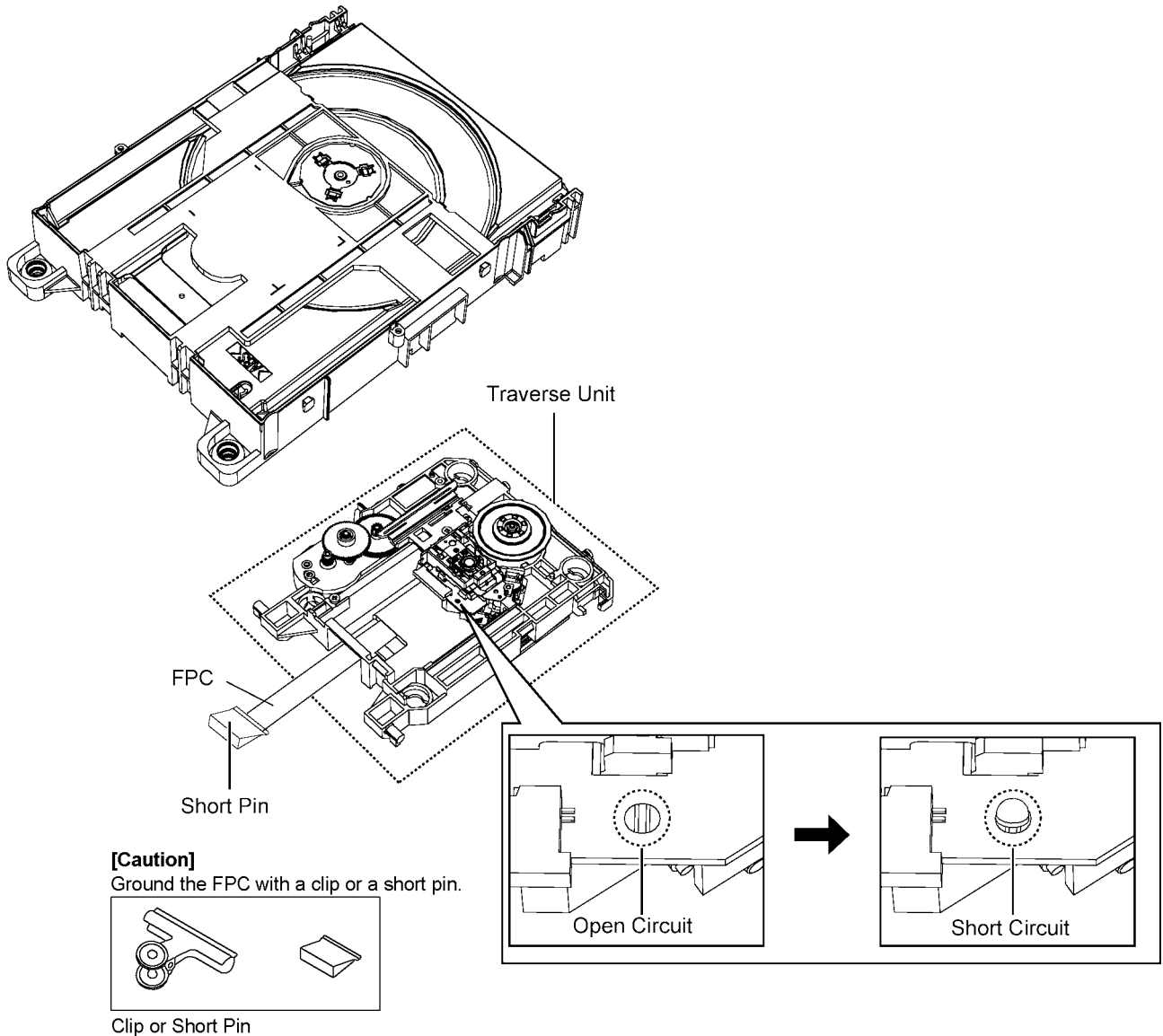


Figure 2-2

2.5. Grounding for electrostatic breakdown prevention

- As for parts that use optical pick-up (laser diode), the optical pick-up is destroyed by the static electricity of the working environment.

Repair in the working environment that is grounded.

2.5.1. Worktable grounding

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

2.5.2. Human body grounding

- Use the anti-static wrist strap to discharge the static electricity from your body Figure 2-3.

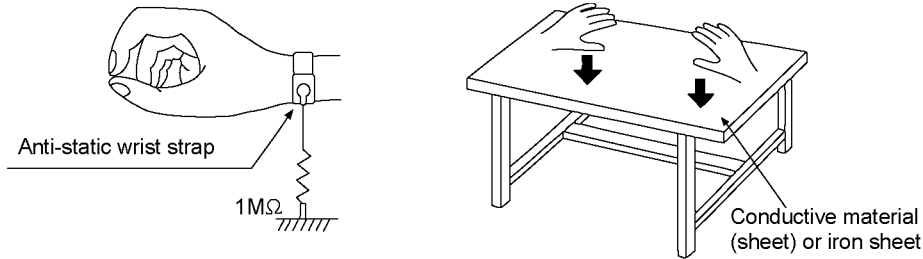


Figure 2-3

3 Service Navigation

3.1. Service Information

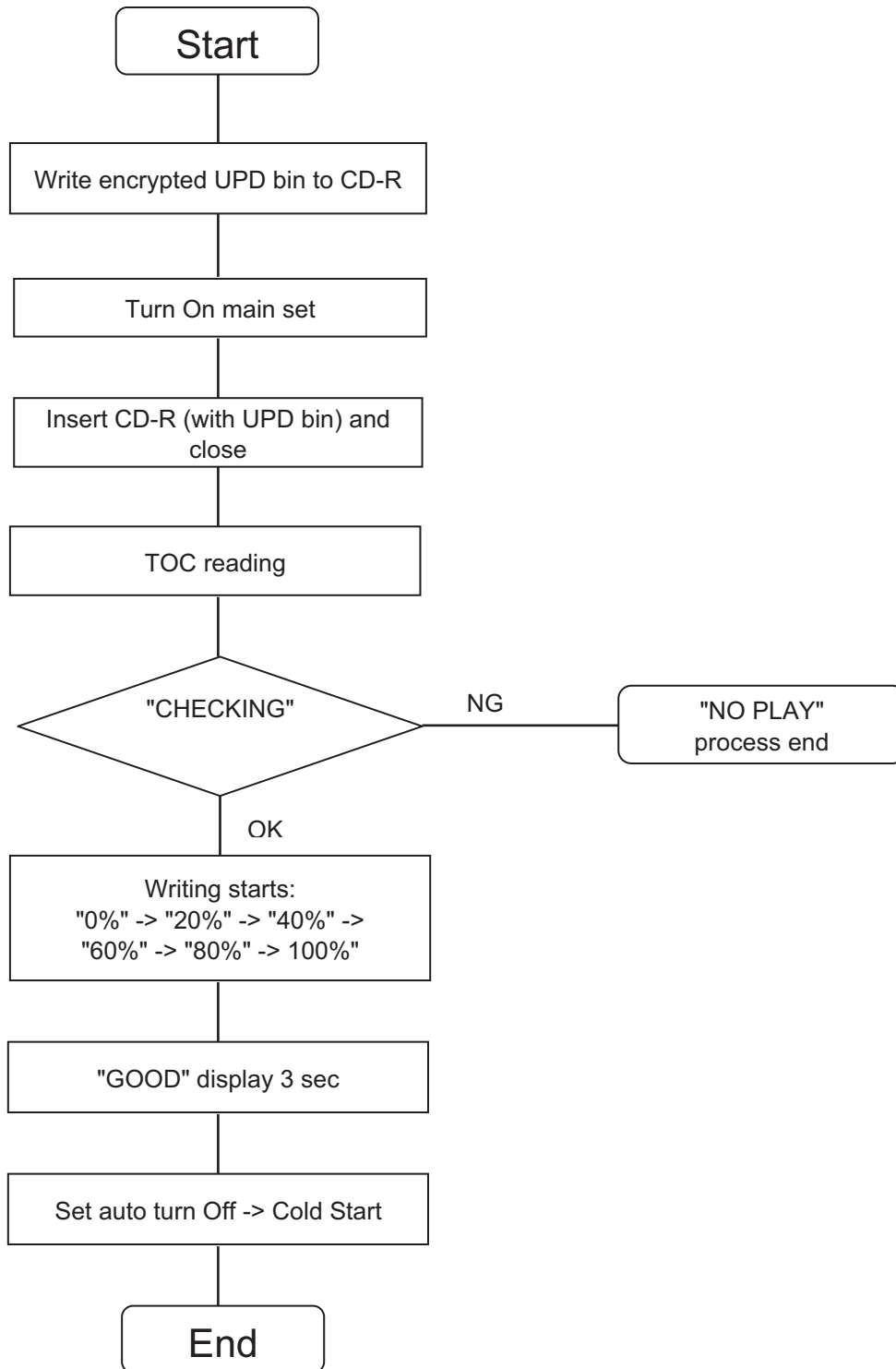
This service manual contains technical information which will allow service personnel's to understand and service this model. Please place orders using the parts list and not the drawing reference numbers.

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

- **Micro-processor:**

- 1) The following components are supplied as an assembled part.
 - Micro-processor IC, IC2006 (RFKWMMAX200M)

3.2. Firmware Update Procedure



4 Specifications

■ Amplifier section

RMS output power stereo mode

Front Speaker SB-MAF200	300 W per channel (3Ω), 1 kHz, 30% THD
Subwoofer Speaker SB-MAY200	300 W per channel (3Ω), 100 Hz, 30% THD
Subwoofer Speaker B-MAW200	440 W per channel (2Ω), 100 Hz, 30% THD
Total RMS stereo mode power	2080 W (30% THD)

■ Tuner, terminals section

Preset station	FM 30 stations AM 15 stations
-----------------------	----------------------------------

Frequency modulation (FM)

Frequency range	87.50 to 108.00 MHz (50 kHz step)
Antenna terminals	75 Ω (unbalanced)

Amplitude modulation (AM)

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

Microphone jack

Sensitivity	0.7 mV, 1.1 kΩ
Terminal	Mono, 3.5 mm jack (1 system)

Music port (front)

Sensitivity	100 mV, 4.7 kΩ
Terminal	Stereo, 3.5 mm jack

Aux input	RCA pin jack
------------------	--------------

■ Disc section

Disc played (8 cm or 12 cm)	CD, CD-R/RW(CD-DA, MP3*)
------------------------------------	--------------------------

Pick up

Wavelength	790 nm(CD)
------------	------------

Audio output (disc)

Number of channels	2.4 ch (FL, FR, SW)
FL = Front left channel	
FR = Front right channel	
SW = Subwoofer channel	
*MPEG-1 Layer 3	

■ Internal memory section

Memory

Memory size	4 GB
Media file format support	MP3 (*.mp3)

Memory recording

Bit rate	128 kbps
Memory recording speed	1x, 3x max (CD only)
Recording file format	MP3 (*.mp3)
Capacity of total songs recorded	1000 songs
(use 128 kbps, approximately 1 song = 4 mins)	

■ 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)
Bit rate	16 kbps to 320 kbps (playback)

USB recording

Bit rate	128 kbps
USB recording speed	1x, 3x max (CD only)

Recording file format

MP3 (*.mp3)

■ General

Power supply	AC 110 to 127/220 to 240 V, 50/60 Hz
Power consumption	195 W
Power consumption in standby mode	0.3 W (approximate)
Dimensions (W x H x D)	485 mm x 231 mm x 378 mm
Mass	4.8 kg
Operating temperature range	0 °C to +40 °C
Operating humidity range	35% to 80% RH (no condensation)

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

■ System: SC-MAX200PHK

Main Unit: SA-MAX200PHK
Front Speaker: SB-MAF200PHK
Subwoofer: SB-MAY200PHK
Subwoofer: SB-MAW200PHK

5 General/Introduction

5.1. Media Information

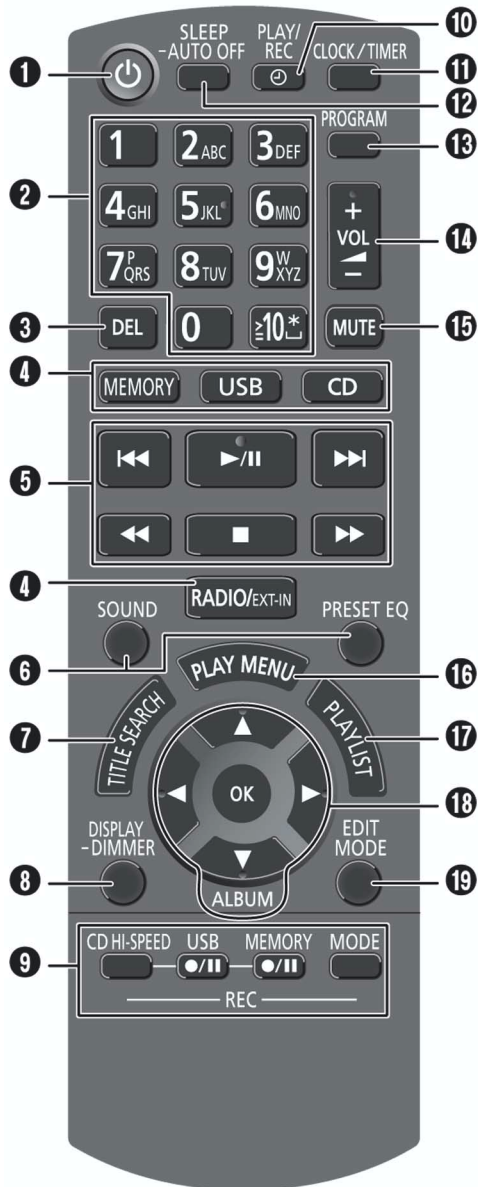
Note on disc

- This system can play CD-R/RW with CD-DA or MP3 format content.
- Some CD-R/RW cannot be played because of the condition of the recording.
- MP3 files are defined as tracks and folders are defined as albums.
- This system can access up to:
 - CD-DA: 99 tracks
 - MP3: 999 tracks, 255 albums and 20 sessions
- Disc must conform to ISO9660 level 1 or 2 (except for extended formats).
- Recordings will not necessarily be played in the order you recorded them.

MPEG Layer-3 audio coding technology licensed from Fraunhofer IIS and Thomson.
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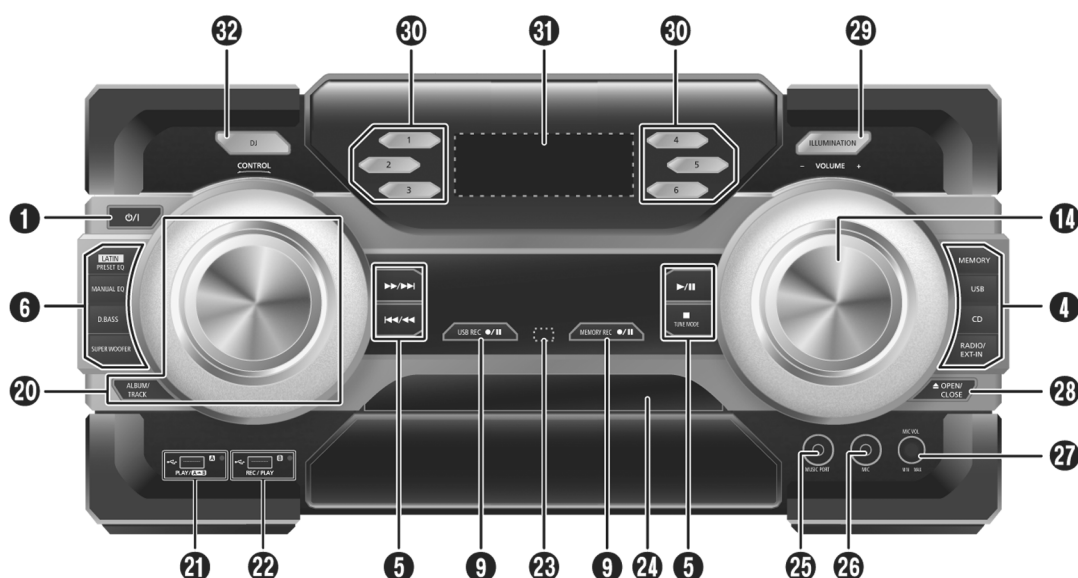
6 Location of Controls and Components

6.1. Remote Control Key Button Operation



- 1 Standby/on switch** [⏻], [⏻/⏹]
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.
- 2** Alphanumeric buttons
To select a 2-digit number
Example: 16: [≧10] → [1] → [6]
To set a character
Example: B: [2] → [2]
- 3** Delete a programmed track
Delete a selected track in a playlist
- 4** Select audio source
- 5** Basic playback control
- 6** Select the sound effects
- 7** Start the title search for internal memory
- 8** View content information
Decrease the brightness of the display panel
Press and hold the button to use this function.
To cancel, press and hold the button again.
- 9** Recording operation control
- 10** Set the play timer and record timer
- 11** Set the clock and timer
- 12** Set the sleep timer
Automatically switch off the system
When you are in disc, USB or internal memory source, the auto off function switches off the system if you do not use the system for 30 minutes.
Press and hold the button to use this function.
To cancel, press and hold the button again.
- 13** Set the program function
- 14** Adjust the volume of the system
- 15** **Mute the sound of the system**
To cancel, press the button again.
“MUTE” is also canceled when you adjust the volume or when you switch off the system.
- 16** Set the play menu item
- 17** Internal memory playlist operation
- 18** Select the option
- 19** Set the edit mode for **USB B** and internal memory

6.2. Main Unit Key Button Operation



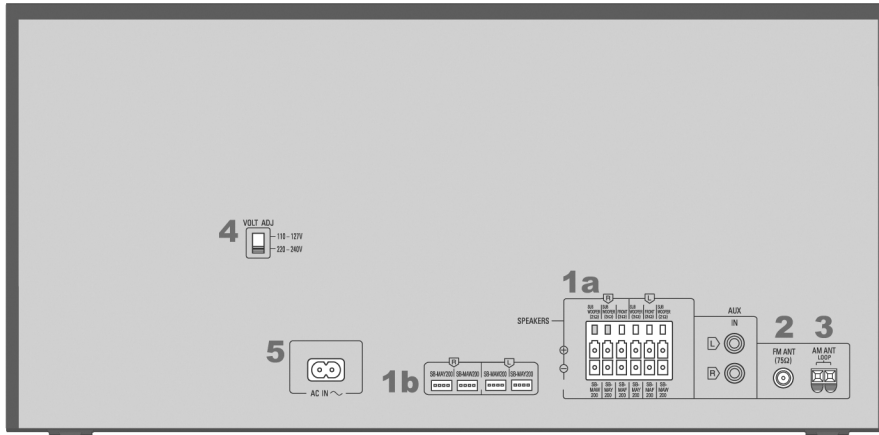
- 1 Standby/on switch** [⏻], [⏻/⏺]
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.
- 4 Select audio source**
- 5 Basic playback control**
- 6 Select the sound effects**
- 9 Recording operation control**
- 14 Adjust the volume of the system**
- 20 Browse playlist of the internal memory**
Browse tracks or albums
(CD)
Turn [CONTROL] to browse the track.
Press [▶/||] to start playback from the selection.
(MP3)
Press [ALBUM/TRACK] to select album or track and then turn [CONTROL] to browse.
Press [▶/||] to start playback from the selection.
- 21 USB A**
USB port (🔌)
USB status indicator
Play MP3 tracks.
Record MP3 tracks to **USB B**.
- 22 USB B**
USB port (🔌)
USB status indicator
Record sound or music tracks.
Play MP3 tracks.
- 23 Remote control sensor**
Distance: Within approximately 7 m
Angle: Approximately 20° up and down, 30° left and right
- 24 Disc tray**
- 25 Music port jack**
- 26 Microphone jack**
- 27 Adjust the volume of the microphone**
- 28 Open or close the disc tray**
- 29 Select the illumination effect**
- 30 Internal memory playlist direct buttons**
Press and hold to add a track to the corresponding playlist.
Press to select the playlist.
DJ effect direct buttons
Press [DJ] to switch on the DJ effect.
Press [1] to [6] to select the DJ effect.
To cancel, press the selected [1] to [6] again.
- 31 Display panel**
- 32 Switch on the DJ effect**
To cancel, press the button again.

7 Installation Instructions

7.1. Speaker and A/C Connection

Making the connections

Connect the AC power supply cord only after all the other connections have been made.

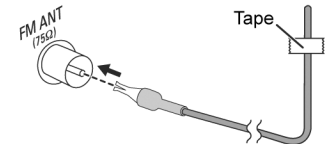
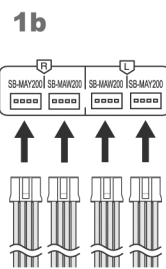
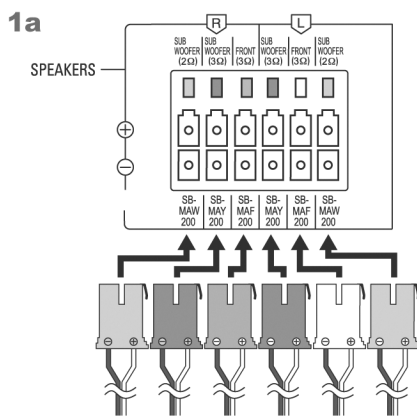


1 Connect the speakers.

Connect the speaker cables to the terminals of the same color.

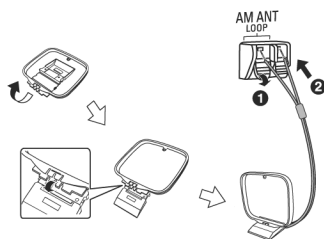
2 Connect the FM indoor antenna.

Put the antenna where reception is best.

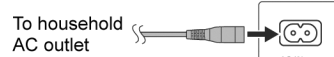


3 Connect the AM loop antenna.

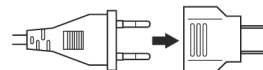
Stand the antenna up on its base until it clicks.



5 Connect the AC power supply cord.



If the power plug does not fit your socket, use the power plug adapter (supplied).



Do not use an AC power supply cord from other equipment.

Conserving power

The system consumes approximately 0.3 W when it is in standby mode. Disconnect the power supply if you do not use the system.

Some settings will be lost after you disconnect the system. You have to set them again.

4 Set the voltage.



Use a flat-head screwdriver to set the voltage selector to the AC voltage in your area.

8 Service Mode

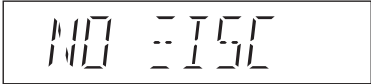
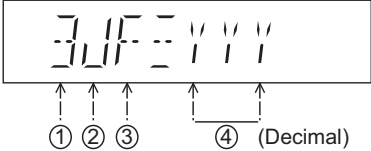
8.1. Cold-Start

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

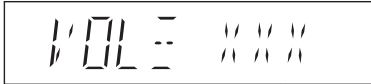







1. Unplug AC power cord
2. Press & hold [POWER] button
3. Plug AC power cord while [POWER] button being pressed
FL Display will show “_ _ _ _ _ _ _ _”
4. Release [POWER] button

8.2. Doctor Mode Table

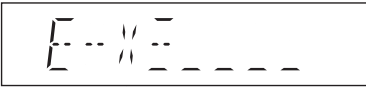
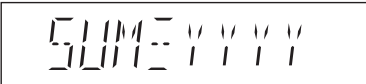
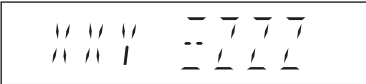
8.2.1. Doctor Mode Table 1

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 [DELETE] button on remote control or, press [POWER, ⓪/Ⓛ] button on Main Unit
EEPROM checksum check	Displaying of 1. Year Develop. 2. Model Type. 3. ROM Type. 4. Firmware Version.	(Display 1)  Version No. (001 ~ 999) → specific for each firmware	In CD mode: 1. Enter into Doctor Mode

8.2.2. Doctor Mode Table 2

Item		FL Display	Key Operation
Mode Name	Description		Front Key
Volume Setting Check	To check the volume setting of the main unit.	 <p>Press [7]: VOL50 Press [8]: VOL35 Press [9]: VOL0</p>	In Doctor Mode: 1. Press [7], [8], [9] button on the remote control.
FL Display Check	To check the FL segment display. All segments will light up while all LED blink at 0.5s intervals.		In Doctor mode: 1. Press [1] button on the remote control. 2. To cancel this mode, press [0] button on the remote control.
Traverse Test	To determine the traverse unit operation for inner & outer access track. In this mode, ensure the CD is in the main unit. Note: Refer to Section 8.3 Figure 8-2 for process flow	 <p>The counter will increment by one. When reach 99999999 will change to 00000000</p> <p>Cancellation Display</p> 	In Doctor Mode: 1. Press [10] → [1] → [2] button on the remote control. 2. To cancel this mode, press [0] button on the remote control.
Reliability Test (Combination)	To determine the traverse unit operation & open/close operation of the mechanism. In this mode, ensure the CD is in the main unit. Note: Refer to Section 8.3 Figure 8-3 for process flow	 <p>The counter will increment by one. When reach 99999999 will change to 00000000</p> <p>Cancellation Display</p> 	In Doctor Mode: 1. Press [10] → [1] → [5] button on the remote control. 2. To cancel this mode, press [0] button on the remote control.
Loading Test	To determine the open & close operation of the CD Mechanism Unit. In this mode, the tray will open & close automatically. Note: Refer to Section 8.3 Figure 8-1 for process flow	 <p>The counter will increment by one. When reach 99999999 will change to 00000000</p> <p>Cancellation Display</p> 	In Doctor Mode: 1. Press [10] → [2] → [1] button on the remote control. 2. To cancel this mode, press [0] button on the remote control.

8.2.3. Doctor Mode Table 3

Item		FL Display	Key Operation																																																																		
Mode Name	Description		Front Key																																																																		
CD Self-Adjustment Test	To display result of self-adjustment for CD.	 <p>↑ Display of auto adjustment result</p> <p>Reference table:</p> <table border="1" data-bbox="699 566 1157 806"> <thead> <tr> <th>ERROR Code Status Condition</th> <th>0</th> <th>1</th> <th>2</th> <th>4</th> <th>6</th> <th>8</th> <th>A</th> <th>C</th> <th>E</th> <th>F</th> </tr> </thead> <tbody> <tr> <td>AOC1/AOC2</td> <td>O</td> <td>※</td> <td>O</td> <td>O</td> <td>O</td> <td>O</td> <td>O</td> <td>O</td> <td>O</td> <td>-</td> </tr> <tr> <td>ABC2/ABC1</td> <td>O</td> <td>-</td> <td>X</td> <td>O</td> <td>X</td> <td>O</td> <td>X</td> <td>O</td> <td>X</td> <td>-</td> </tr> <tr> <td>2ndAOC1</td> <td>O</td> <td>-</td> <td>O</td> <td>X</td> <td>X</td> <td>O</td> <td>O</td> <td>X</td> <td>X</td> <td>-</td> </tr> <tr> <td>FAGC/TAGC</td> <td>O</td> <td>-</td> <td>O</td> <td>O</td> <td>O</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>-</td> </tr> <tr> <td>AGC2</td> <td>O</td> <td>-</td> <td>O</td> <td>O</td> <td>O</td> <td>O</td> <td>O</td> <td>O</td> <td>O</td> <td>△</td> </tr> </tbody> </table> <p>O : OK; X : NG (In case that time out happens.) ※: Either one of FO AOC, TR AOC and FO coarse AGC is NG. △: If the AGC is NG (ignore others).</p>	ERROR Code Status Condition	0	1	2	4	6	8	A	C	E	F	AOC1/AOC2	O	※	O	O	O	O	O	O	O	-	ABC2/ABC1	O	-	X	O	X	O	X	O	X	-	2 nd AOC1	O	-	O	X	X	O	O	X	X	-	FAGC/TAGC	O	-	O	O	O	X	X	X	X	-	AGC2	O	-	O	O	O	O	O	O	O	△	<p>In Doctor Mode: 1. Press [10]→[1]→[4] button on the remote control.</p> <p>To cancel this mode, press [0] button on the remote control.</p>
ERROR Code Status Condition	0	1	2	4	6	8	A	C	E	F																																																											
AOC1/AOC2	O	※	O	O	O	O	O	O	O	-																																																											
ABC2/ABC1	O	-	X	O	X	O	X	O	X	-																																																											
2 nd AOC1	O	-	O	X	X	O	O	X	X	-																																																											
FAGC/TAGC	O	-	O	O	O	X	X	X	X	-																																																											
AGC2	O	-	O	O	O	O	O	O	O	△																																																											
CD LSI Version Check	For checking CD LSI Version and checksum information.	<p>(Display 1)</p>  <p>↑ Checksum (Hex)</p> <p>(Display 2)</p>  <p>↑ Year Develop</p> <p>↑ ROM Type</p> <p>↑ Version (Decimal)</p> <p>after 2 sec</p>	<p>In Doctor Mode: 1. Press [4] button on the remote control.</p> <p>To cancel this mode, press [0] button on the remote control.</p>																																																																		

8.3. Reliability Test Mode (CD Mechanism Unit)

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

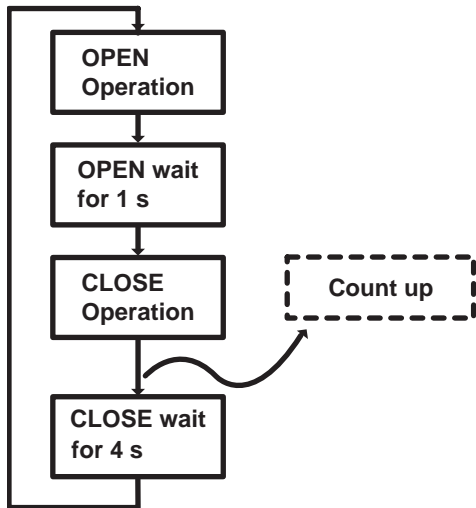


Fig. 1. Reliability Test (Loading)

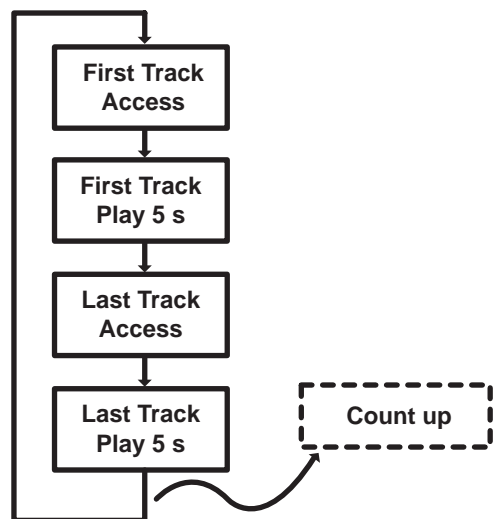


Fig. 2. Reliability Test (Traverse)

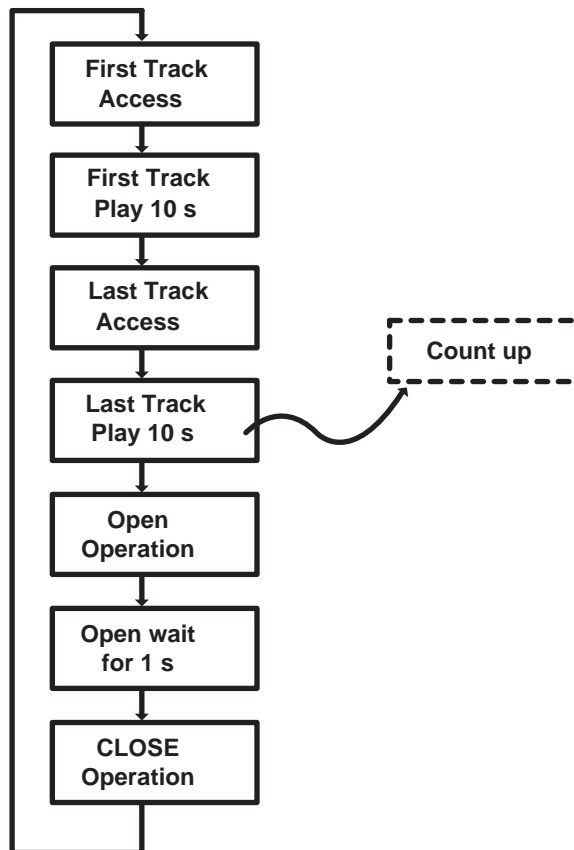


Fig. 3. Reliability Test (Combination)

8.4. Self-Diagnostic Mode

Item		FL Display	Key Operation
Mode Name	Description		Front Key
Self Diagnostic Mode	To enter into self diagnostic checking		<p>Step 1: Select CD mode (Ensure no disc is inserted).</p> <p>Step 2: Press & hold [■] button follow by [▶▶/▶▶] on main unit for 2 seconds.</p>
Error code information	System will perform a check on any unusual/error code from the memory	<p>Example:</p>	<p>Step 1: In self diagnostic mode, Press [■] on main unit.</p> <p>To exit, press [^/] on main unit or remote control.</p>
Delete error code	To clear the stored in memory (EEPROM IC)		<p>Step 1: In self diagnostic mode, Press [0] on remote control.</p> <p>To exit, press [^/] on main unit or remote control.</p>
Cold Start	To active cold start upon next AC power up when reset start is execute the next time.		In self diagnostic mode: 1. Press [3] button on the remote control.

8.5. Self-Diagnostic Error Code Table




Self-Diagnostic Function (Refer Section 8.4. 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.

8.5.1. 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, PCONT=HIGH, DC_DET_AMP after checking LSI.		Press [■] on main unit for next error.
F76		DC_DET_PWR		
F61-76		Both DCDET (NG)		
F26		Communication between CD servo LSI and micro-P abnormal (Radio, USB)		

8.5.2. CD Mechanism Error Code Table (CD Mechanism Unit)

Error Code	Diagnostic Contents	Description of error	Automatic FL Display	Remarks
CD H15	CD Open Abnormal	During operation POS_SW_R On fail to be detected with 4 sec. Error No. shall be clear by force or during cold start.		Press [■] on main unit for next error.
CD H16	CD Closing Abnormal	During operation POS_SW_CEN On fail to be detected with 4 sec. Error No. shall be clear by force or during cold start.		Press [■] on main unit for next error.
F26	Communication between CD servo LSI and micro-p abnormal.	During switch to CD function, if SENSE = "L" within failsafe time of 20ms.		Press [■] on main unit for next error.

8.6. Sales Demonstration Lock Function

8.6.1. Entering into Sales demonstration lock mode

Here is the procedures to enter into the Sales demonstration lock mode.

Step 1: Turn on the unit.

Step 2: Select to any mode function.

Step 3: Press and hold [▲OPEN/CLOSE] and [CD] keys for 5 sec or more.

The display will show upon entering into this mode for 2 sec..



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

8.6.2. Cancellation of Sales demonstration lock mode

Step 1: Turn on the unit.

Step 2: Select to any mode function.

Step 3: Set volume to Vol 19.

Step 4: Press and hold [▲OPEN/CLOSE] and [CD] keys for 5 sec or more.

The display will show upon entering into this mode for 2 sec..



9 Troubleshooting Guide

"Contents for this section is not available at time of issue"

10 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 Front Panel Unit
- Disassembly of FL Display P.C.B.
- Disassembly of Illumination Button P.C.B.
- Disassembly of Control P.C.B.
- Disassembly of Control Jog LED P.C.B.
- Disassembly of Volume P.C.B.
- Disassembly of Volume Jog LED P.C.B.
- Disassembly of Remote Sensor P.C.B.
- Disassembly of USB P.C.B.
- Disassembly of Mic P.C.B.
- Disassembly of LED P.C.B.
- Disassembly of CD Lid P.C.B.
- Disassembly of CD Mechanism Unit
- Disassembly of Rear Panel
- Disassembly of Main P.C.B.
- Replacement of Digital Amplifier IC (IC2501,IC2502,IC2503,IC2504)
- Disassembly of SMPS P.C.B. and Voltage Selector P.C.B.
- Replacement of Switching Regulator (Q5700)
- Replacement of Diode (D5801)
- Replacement of Diode (D5802)
- Disassembly of CD Interface P.C.B.

10.1. Screw Types

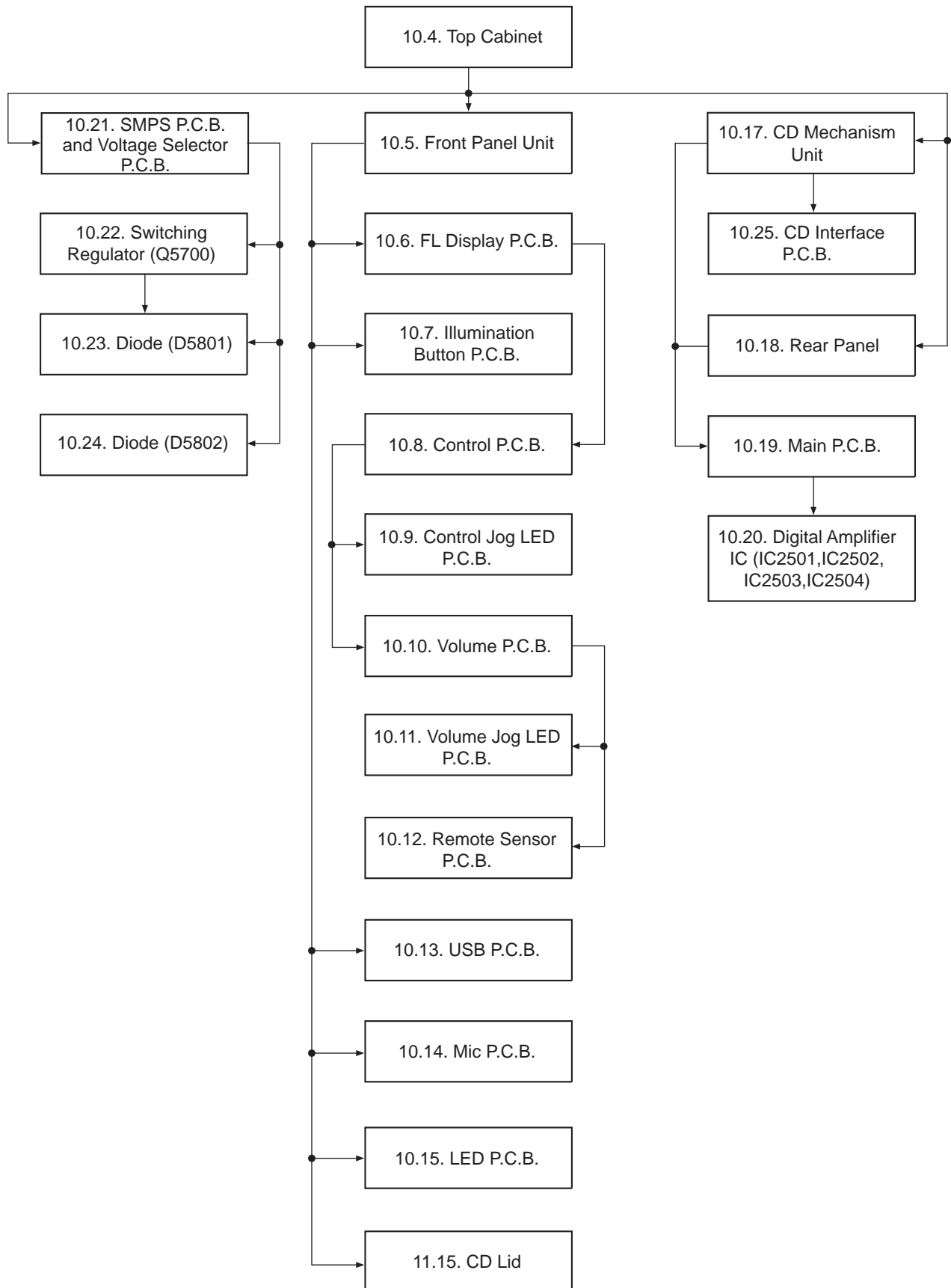
CAUTION NOTE:

Please use original screw and at correct locations.

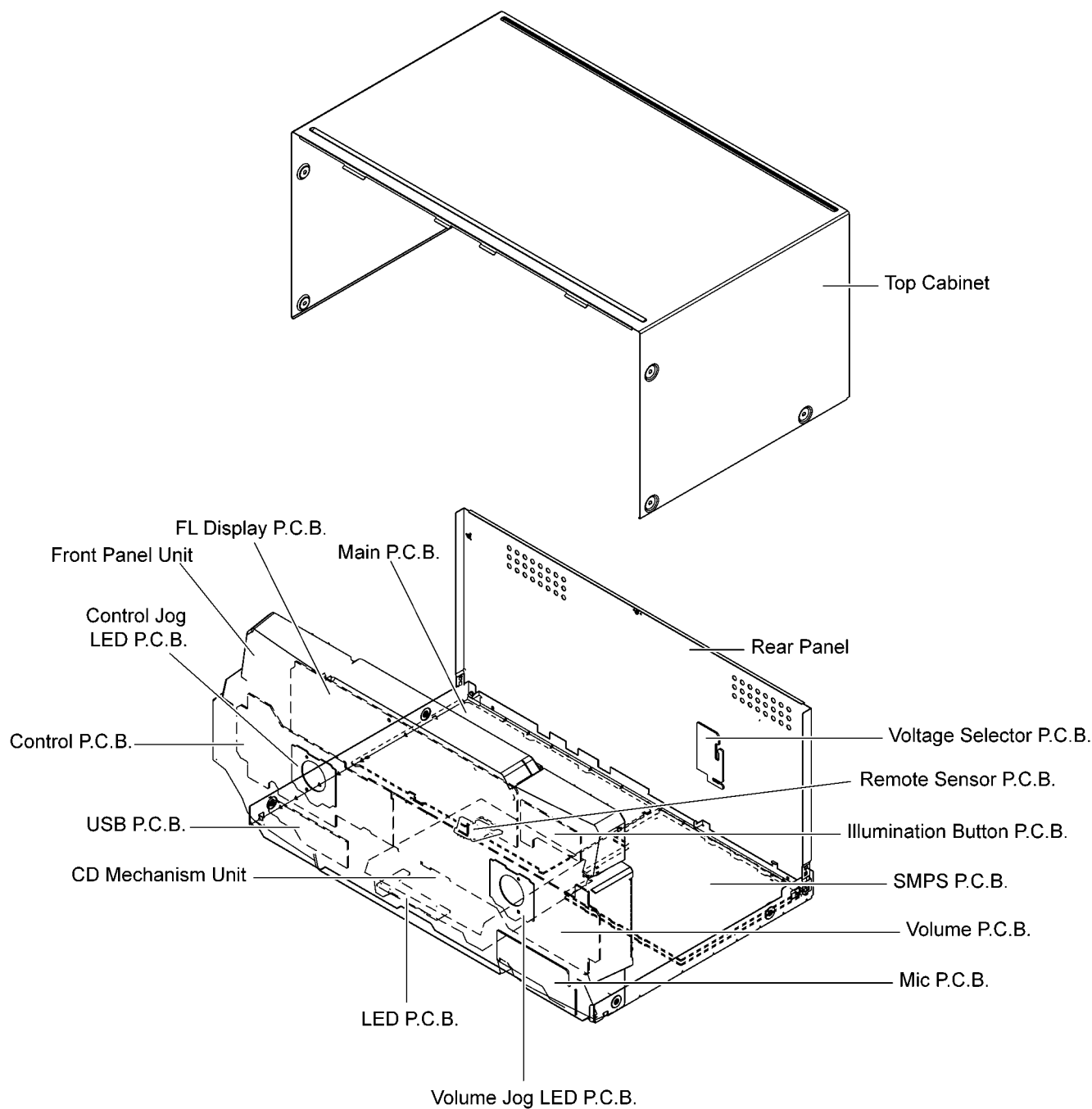
Below shown is part no. of different screw types used:

- a** :RHD30007-K2J **e** :RHDX031008
- b** :RHD30119-S **f** :RHD26043-1
- c** :RHDX30005-J
- d** :RHD26046-L

10.2. Disassembly Flow Chart

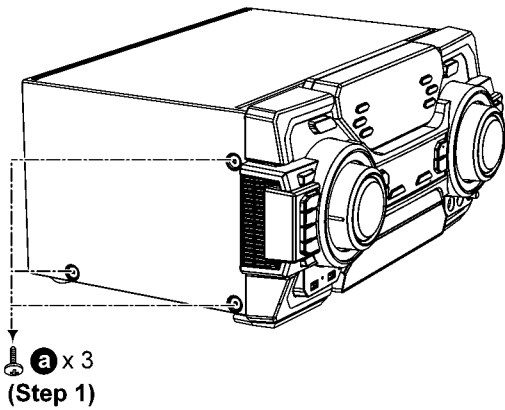


10.3. Main Components and P.C.B. Locations

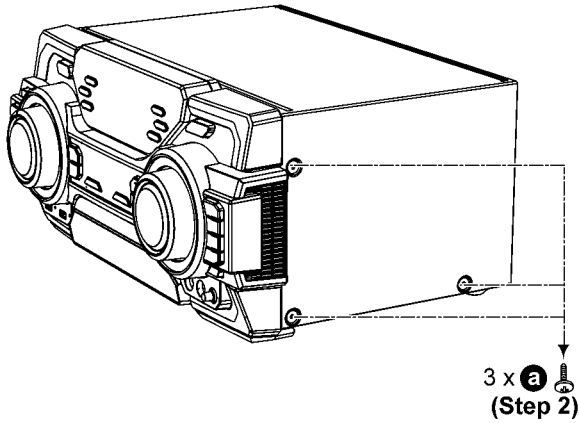


10.4. Disassembly of Top Cabinet

Step 1 Remove 3 screws.

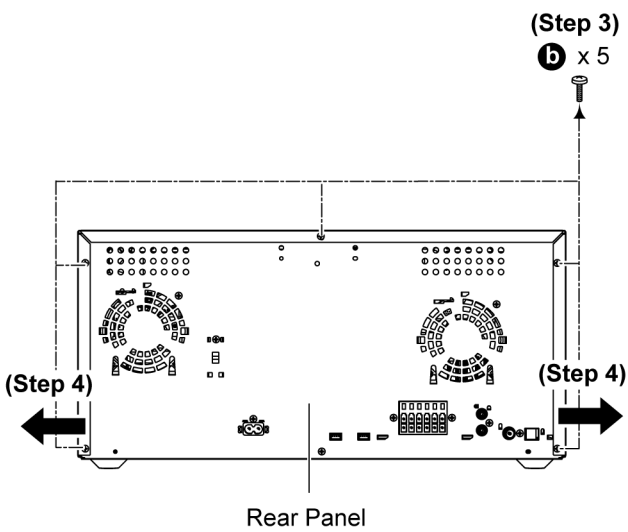


Step 2 Remove 3 screws.



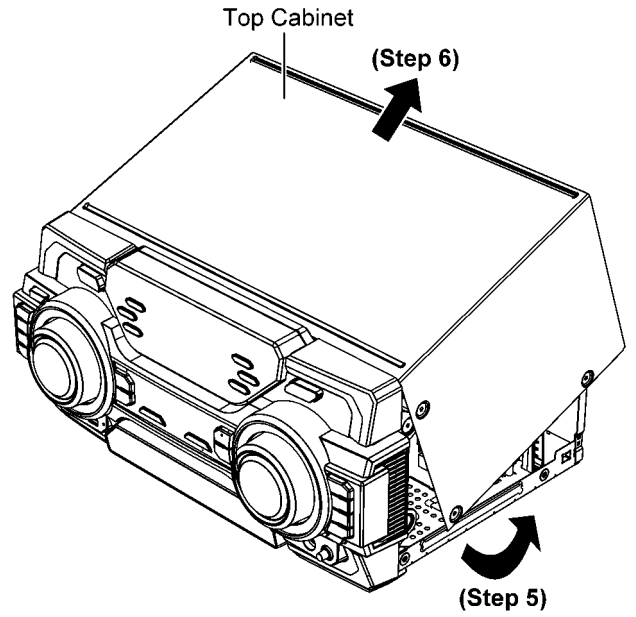
Step 3 Remove 5 screws.

Step 4 Slightly release both sides of the Top Cabinet as arrow shown.

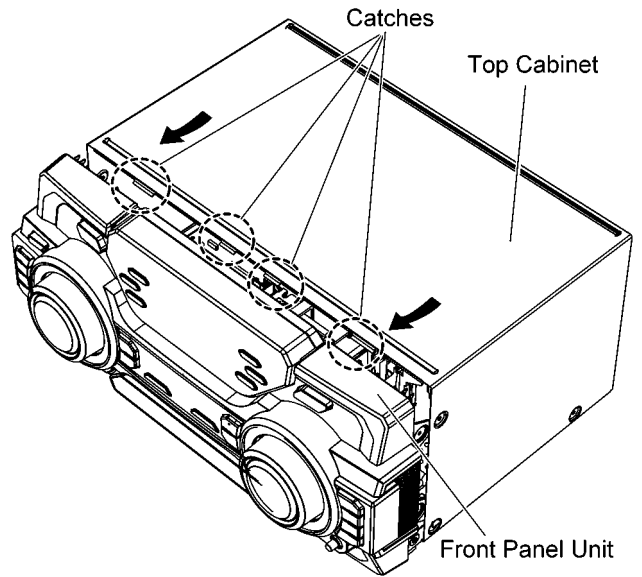


Step 5 Slightly lift up the Top Cabinet.

Step 6 Remove the Top Cabinet.



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



10.5. Disassembly of Front Panel Unit

• Refer to “Disassembly of Top Cabinet”.

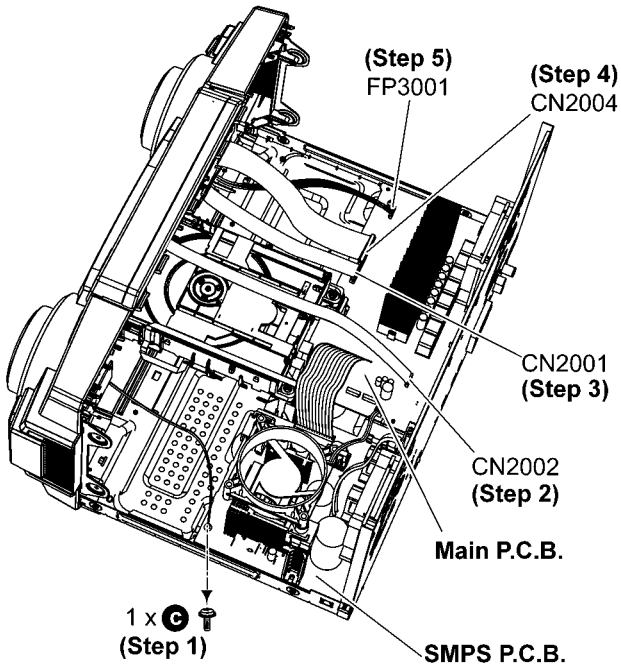
Step 1 Remove 1 screw.

Step 2 Detach 10P FFC at the connector (CN2002) on Main P.C.B..

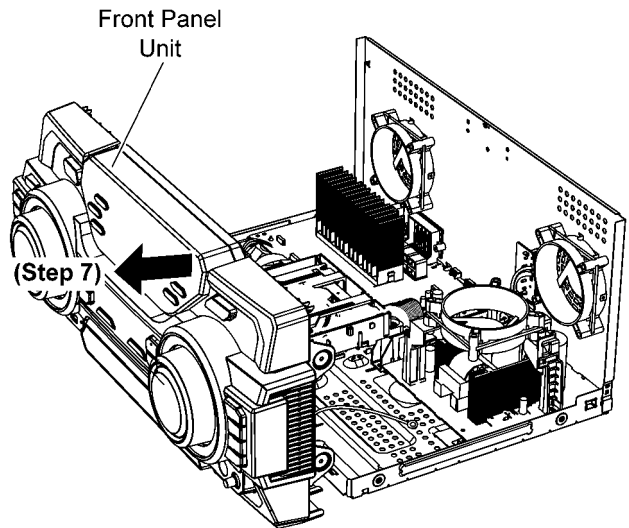
Step 3 Detach 11P Cable at the connector (CN2001) on Main P.C.B..

Step 4 Detach 30P FFC at the connector (CN2004) on Main P.C.B..

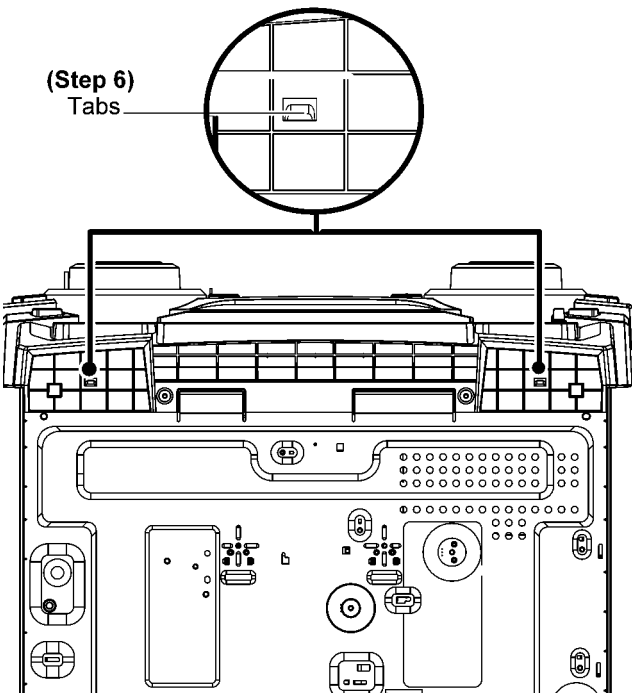
Step 5 Detach 5P Wire at the connector (FP3001) on Main P.C.B..



Step 7 Remove the Front Panel Unit



Step 6 Release tabs at the bottom of the unit.



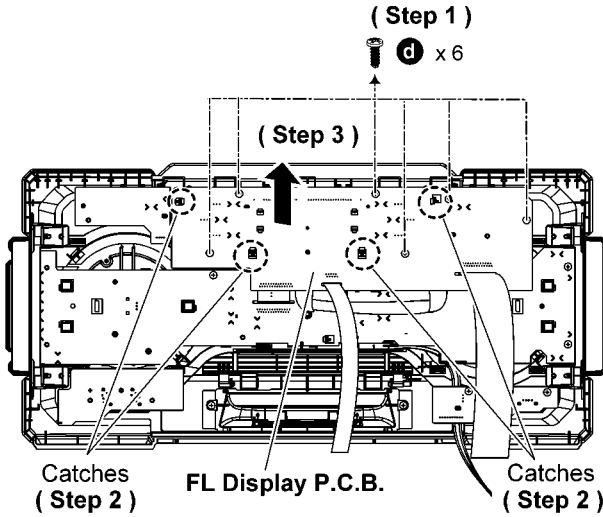
10.6. Disassembly of FL Display P.C.B.

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

Step 1 Remove 6 screws.

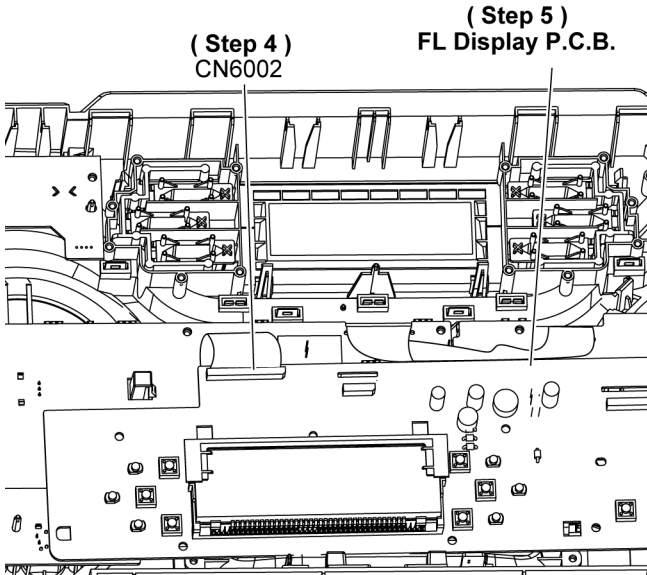
Step 2 Release 4 catches.

Step 3 Lift up the FL Display P.C.B..

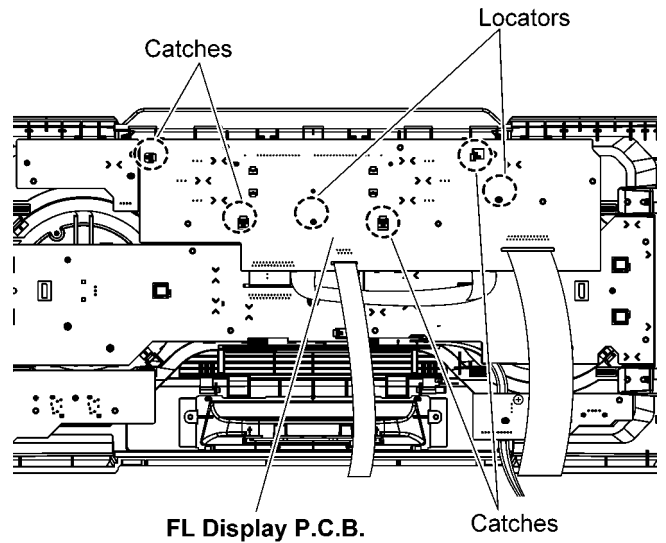


Step 4 Detach 30P FFC at a connector (CN6002) on the FL Display P.C.B..

Step 5 Remove the FL Display P.C.B..



Caution: During assembling, ensure that the FL Display P.C.B. is properly located and fully caught onto the Front Panel Unit.



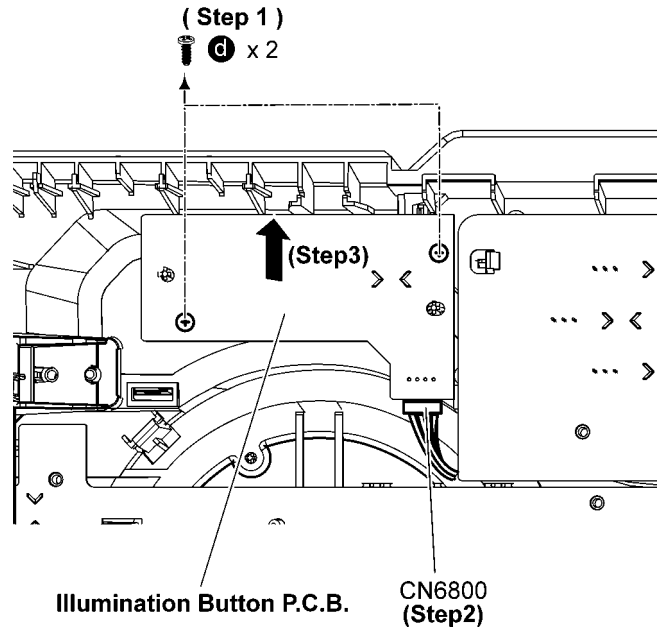
10.7. Disassembly of Illumination Button P.C.B.

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

Step 1 Remove 2 screws.

Step 2 Detach 2P Cable at a connector (CN6800) on the Illumination Button P.C.B..

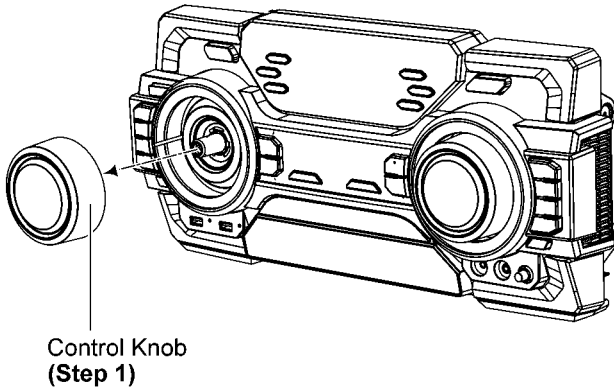
Step 3 Lift up to remove the Illumination Button P.C.B..



10.8. Disassembly of Control P.C.B.

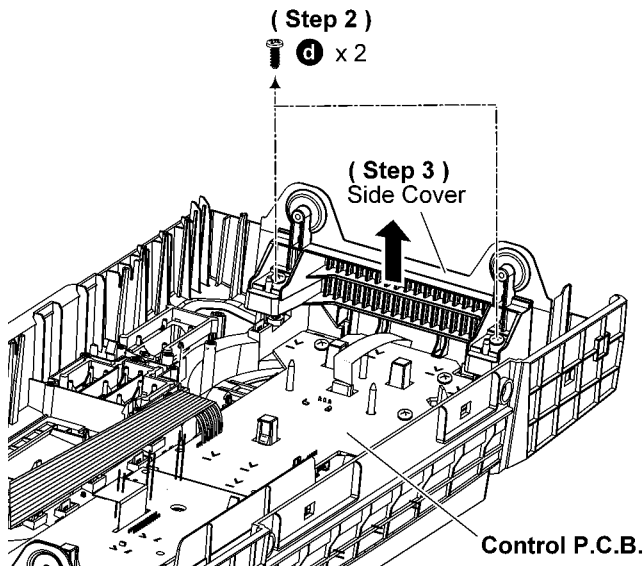
- Refer to “Disassembly of Top Cabinet”.
- Refer to “Disassembly of Front Panel Unit”.
- Refer to “Disassembly of FL Display P.C.B.”.

Step 1 Remove the Control Knob.



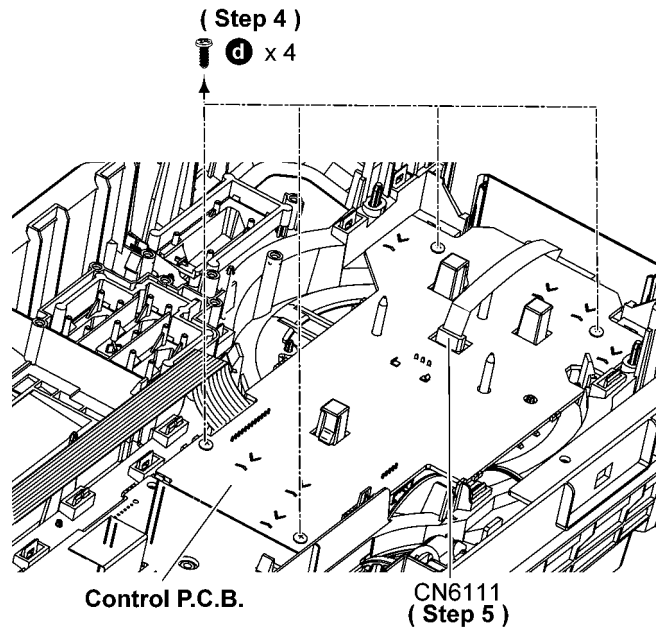
Step 2 Remove 2 screws.

Step 3 Remove the Side Cover.

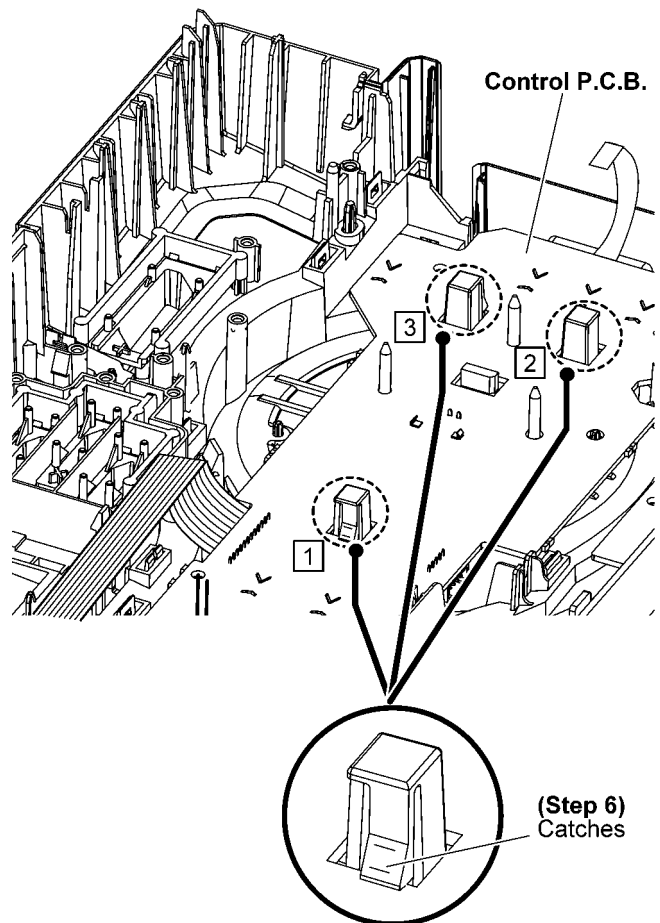


Step 4 Remove 4 screws.

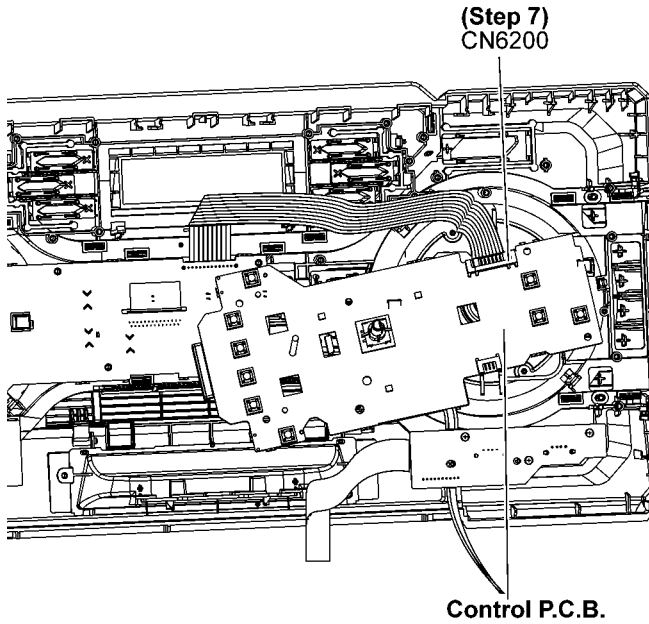
Step 5 Detach 6P FFC at a connector (CN6111) on the Control Jog LED P.C.B..



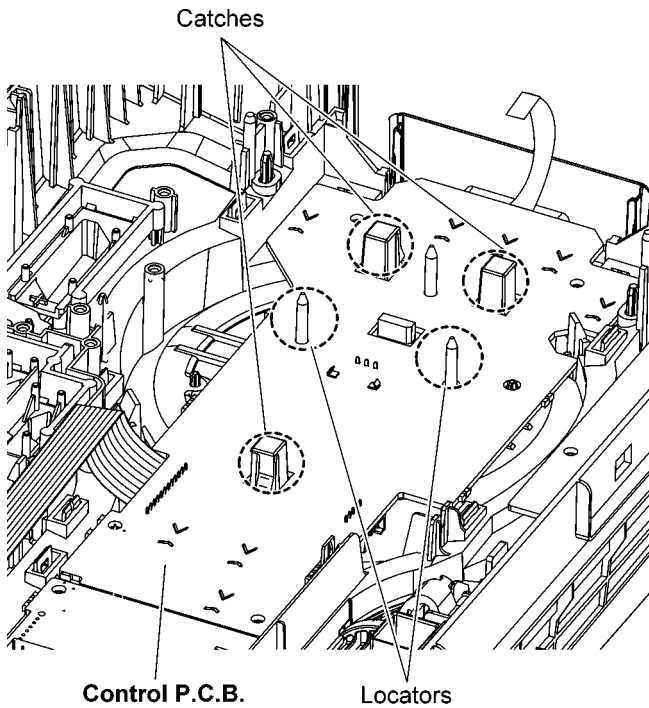
Step 6 Release catches in the sequences of 1 to 3.



Step 7 Detach 12P Cable at a connector (CN6200) on the Control P.C.B..



Caution: During assembling, ensure that the Control P.C.B. is properly located and fully caught onto the Front Panel Unit.

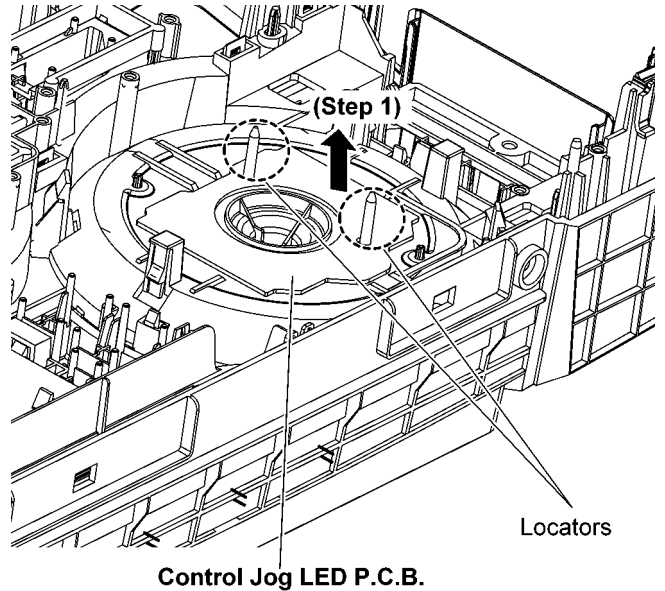


10.9. Disassembly of Control Jog LED P.C.B.

- Refer to “Disassembly of Top Cabinet”.
- Refer to “Disassembly of Front Panel Unit”.
- Refer to “Disassembly of FL Display P.C.B.”.
- Refer to “Disassembly of Control P.C.B.”.

Step 1 Lift up to remove the Control Jog LED P.C.B..

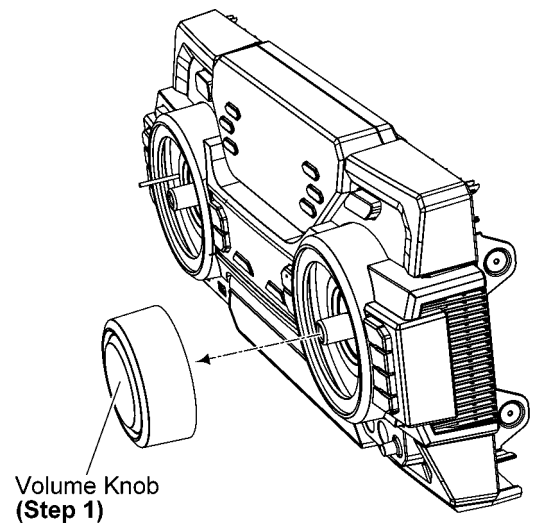
Caution: During assembling, ensure that the Control Jog LED P.C.B. is properly located & fully seated onto the Front Panel Unit.



10.10. Disassembly of Volume P.C.B.

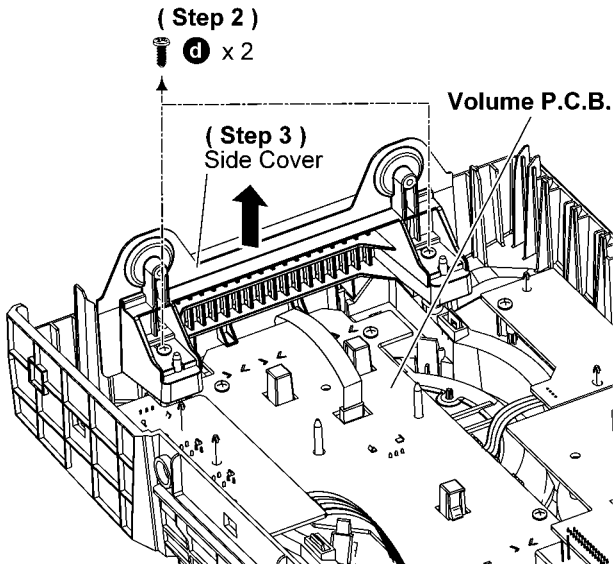
- Refer to “Disassembly of Top Cabinet”.
- Refer to “Disassembly of Front Panel Unit”.
- Refer to “Disassembly of FL Display P.C.B.”.
- Refer to “Disassembly of Control P.C.B.”.

Step 1 Remove the Volume Knob.



Step 2 Remove 2 screws.

Step 3 Remove the Side Cover.



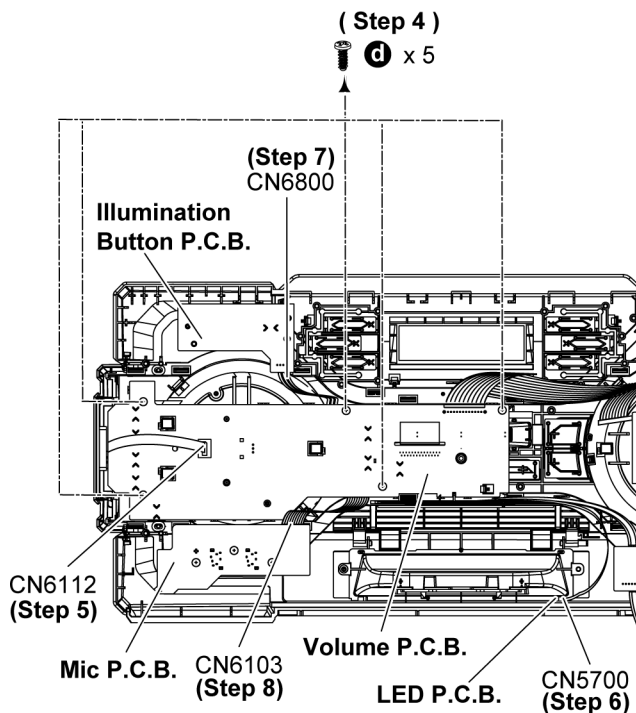
Step 4 Remove 5 screws.

Step 5 Detach 6P FFC at a connector (CN6112) on the Volume Jog LED P.C.B..

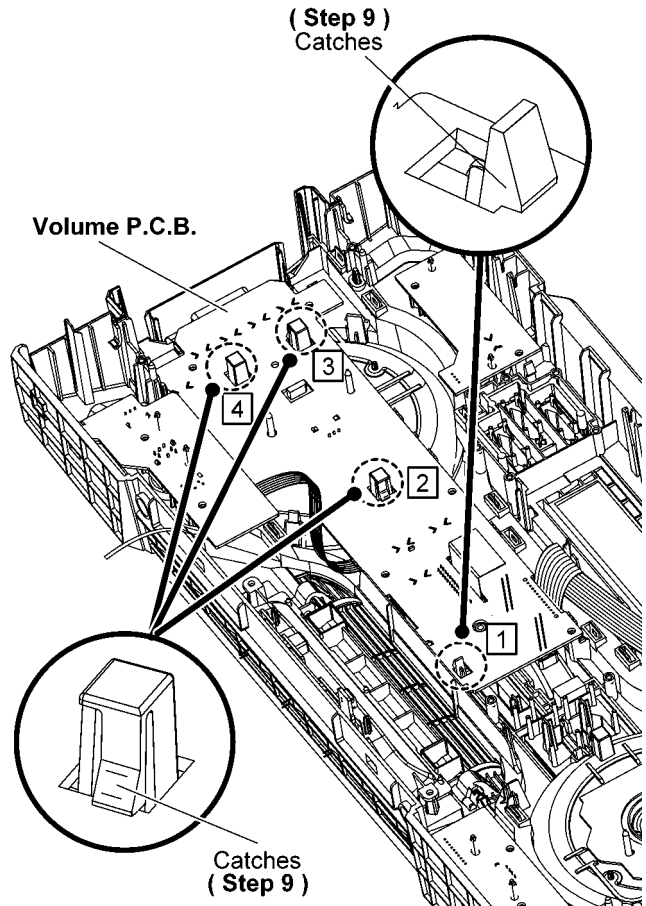
Step 6 Detach 4P Cable at a connector (CN5700) on the LED P.C.B..

Step 7 Detach 2P Cable at a connector (CN6800) on the Illumination Button P.C.B..

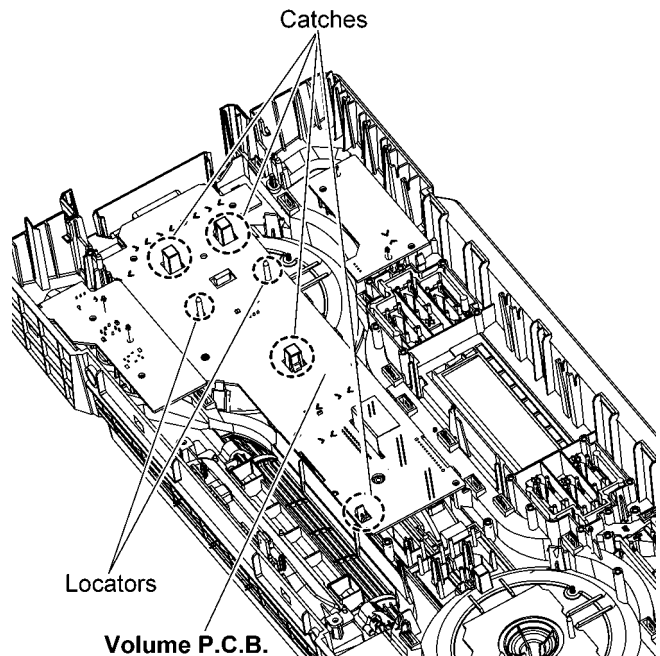
Step 8 Detach 8P Cable at a connector (CN6103) on the Mic P.C.B..



Step 9 Release catches in the sequences of 1 to 4.



Caution: During assembling, ensure that the Volume P.C.B. is properly located and fully caught onto the Front Panel Unit.

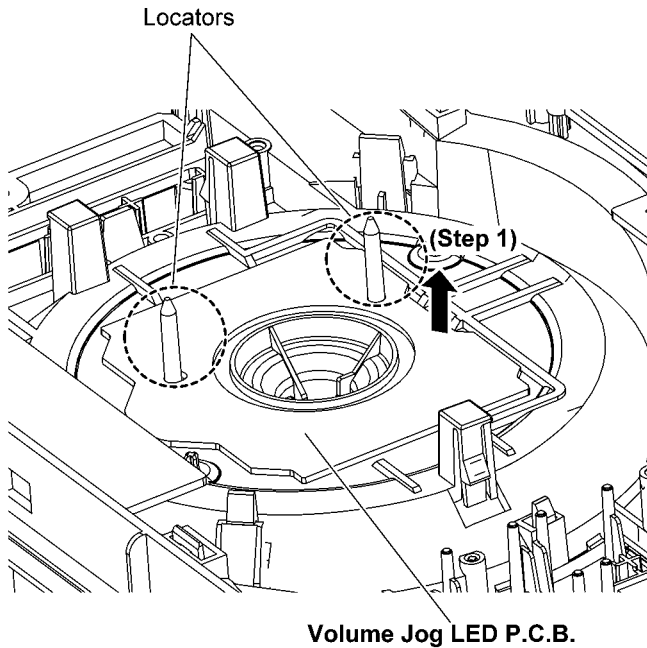


10.11. Disassembly of Volume Jog LED P.C.B.

- Refer to “Disassembly of Top Cabinet”.
- Refer to “Disassembly of Front Panel Unit”.
- Refer to “Disassembly of FL Display P.C.B.”.
- Refer to “Disassembly of Control P.C.B.”.
- Refer to “Disassembly of Volume P.C.B.”.

Step 1 Lift up to remove the Volume Jog LED P.C.B..

Caution: During assembling, ensure that the Volume Jog LED P.C.B. is properly located & fully seated onto the Front Panel Unit.

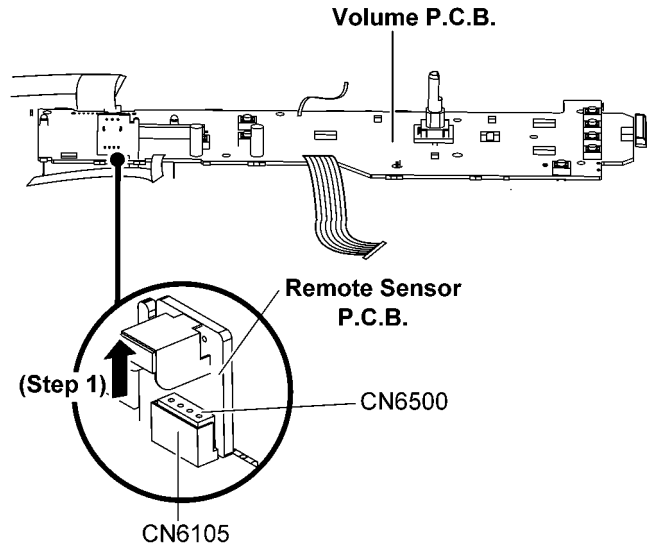


10.12. Disassembly of Remote Sensor P.C.B.

- Refer to “Disassembly of Top Cabinet”.
- Refer to “Disassembly of Front Panel Unit”.
- Refer to “Disassembly of FL Display P.C.B.”.
- Refer to “Disassembly of Control P.C.B.”.
- Refer to “Disassembly of Volume P.C.B.”.

Step 1 Remove the the Remote Sensor P.C.B..

Caution: During assembling, ensure that the Remote Sensor P.C.B. is properly inserted & fully connected to the Volume P.C.B..



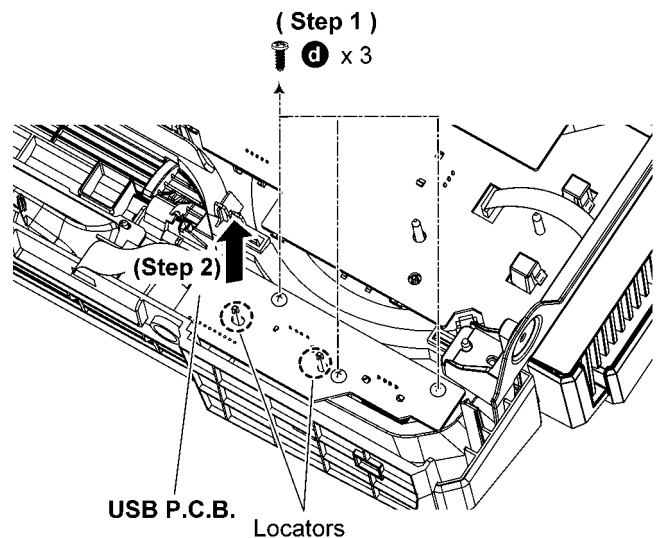
10.13. Disassembly of USB P.C.B.

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

Step 1 Remove 3 screws.

Step 2 Lift up to remove the USB P.C.B..

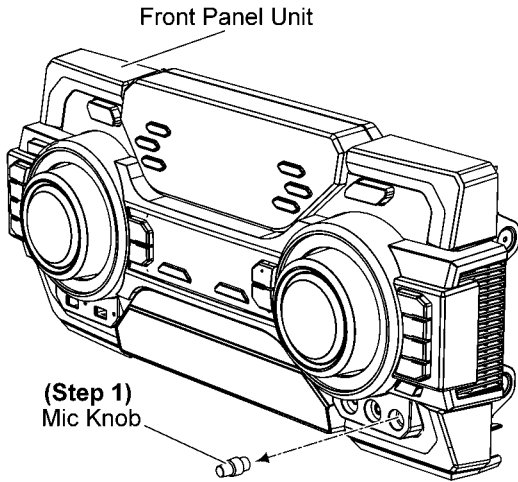
Caution: During assembling, ensure that the USB P.C.B. is properly located & fully seated onto the Front Panel Unit.



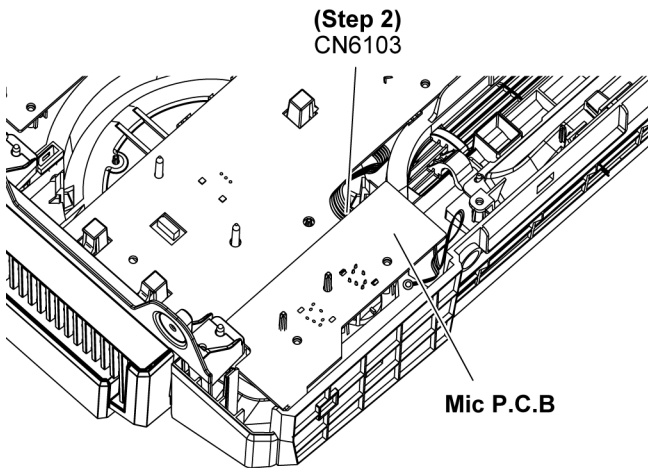
10.14. Disassembly of Mic P.C.B.

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

Step 1 Remove the Mic Knob.



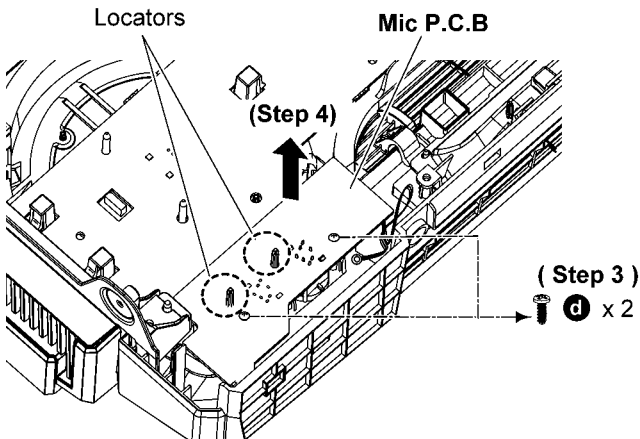
Step 2 Detach 8P Cable at a connector (CN6103) on the Mic P.C.B..



Step 3 Remove 2 screws.

Step 4 Remove the Mic P.C.B..

Caution: During assembling, ensure that the Mic P.C.B. is properly located & fully seated onto the Front Panel Unit.

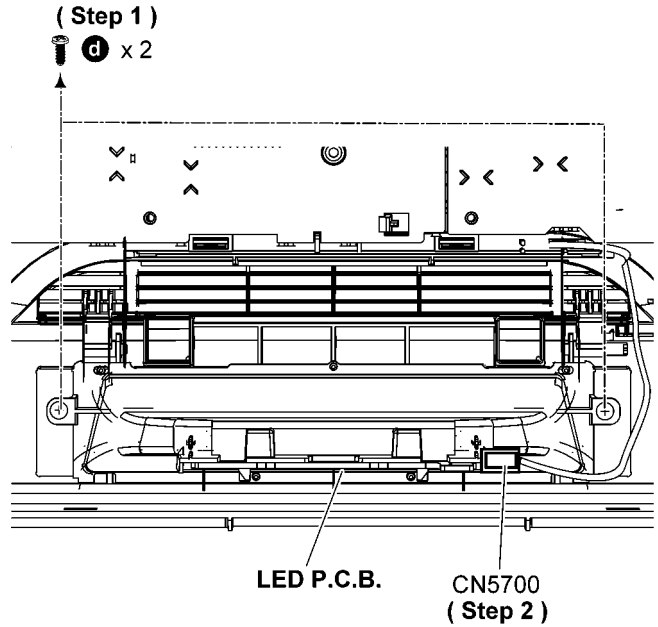


10.15. Disassembly of LED P.C.B.

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

Step 1 Remove 2 screws.

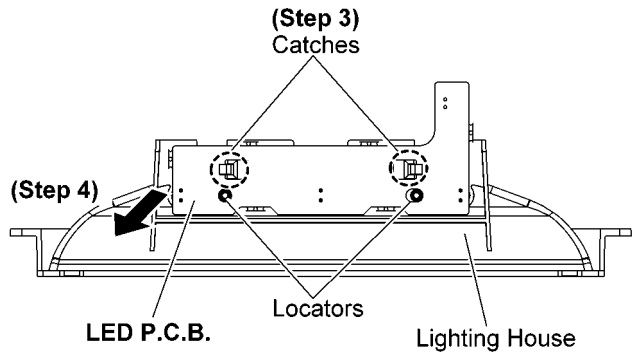
Step 2 Detach 4P Cable at a connector (CN5700) on LED P.C.B..



Step 3 Release 2 catches.

Step 4 Remove the LED P.C.B..

Caution: During assembling, ensure that the LED P.C.B. is properly located and fully caught onto Lighting House.

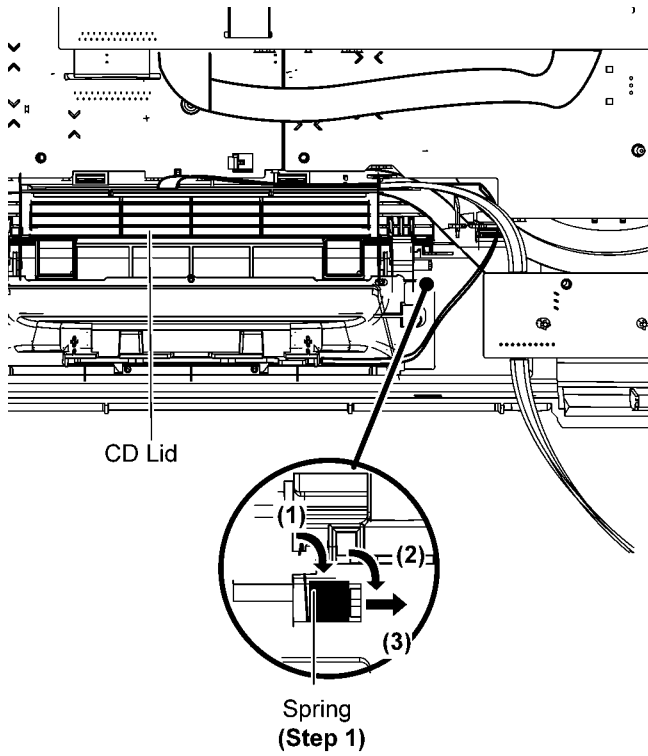


10.16. Disassembly of CD Lid

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

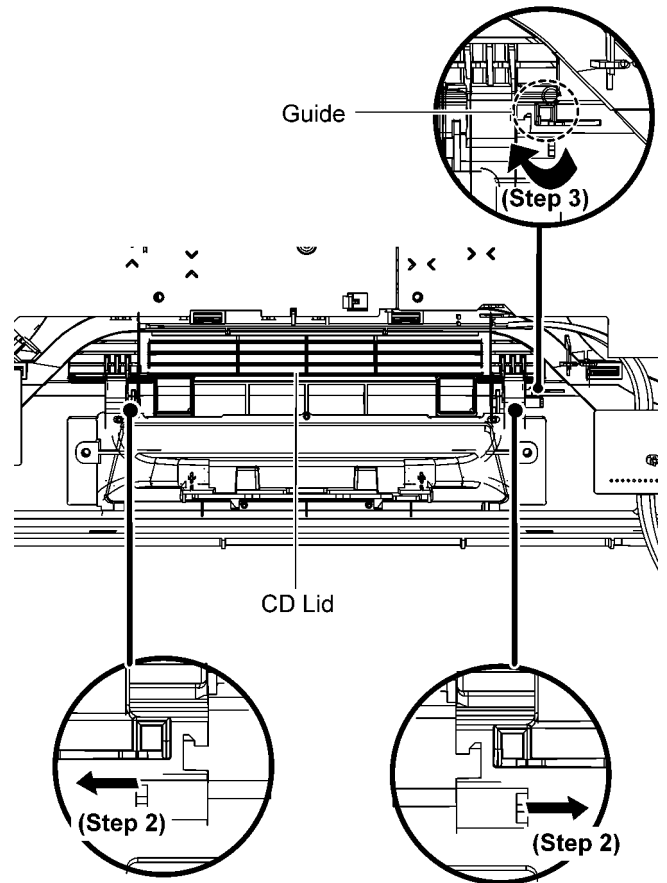
Step 1 Remove the spring as arrow shown in order of sequence (1) to (3).

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



Step 2 Remove the CD Lid as arrow shown.

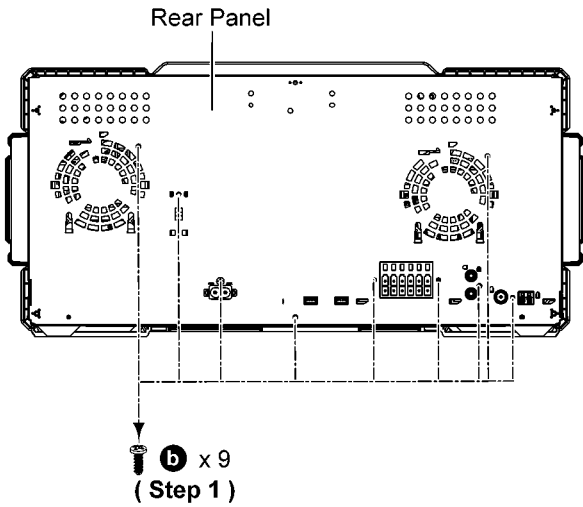
Step 3 Release the CD Lid from the guide.



10.17. Disassembly of Rear Panel

• Refer to "Disassembly of Top Cabinet".

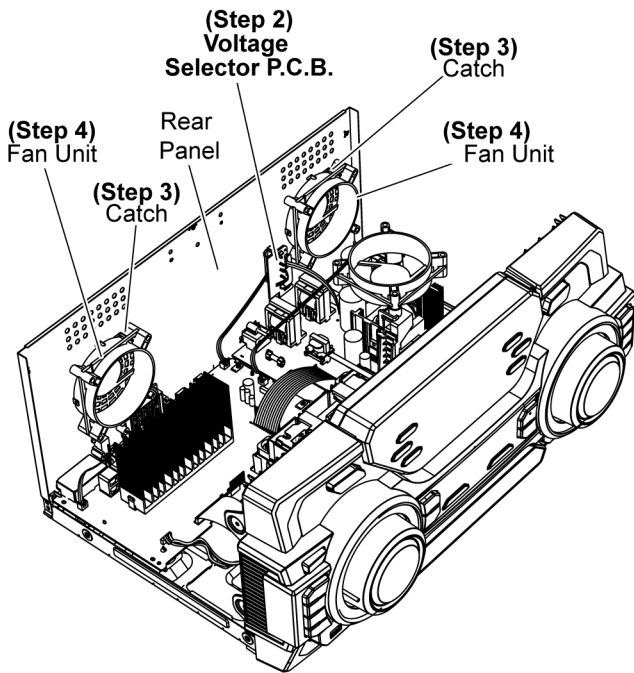
Step 1 Remove 9 screws.



Step 2 Detach the Voltage Selector P.C.B. from Rear Panel.

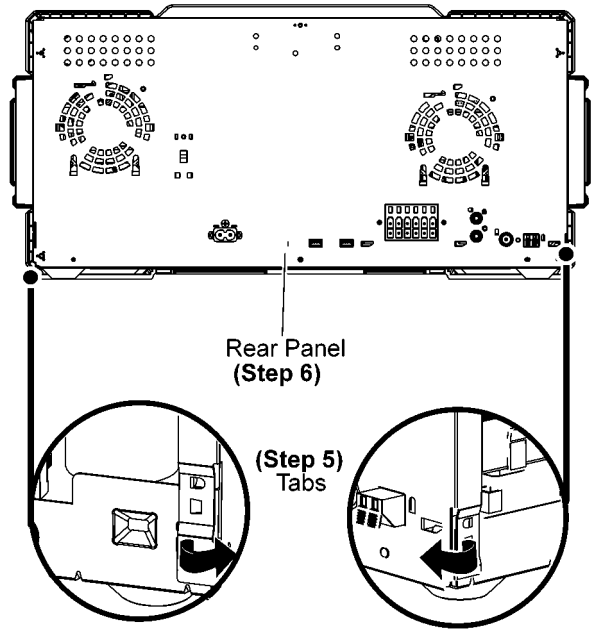
Step 3 Release catches on the Fan Units.

Step 4 Remove the Fan Units.



Step 5 Release 2 tabs.

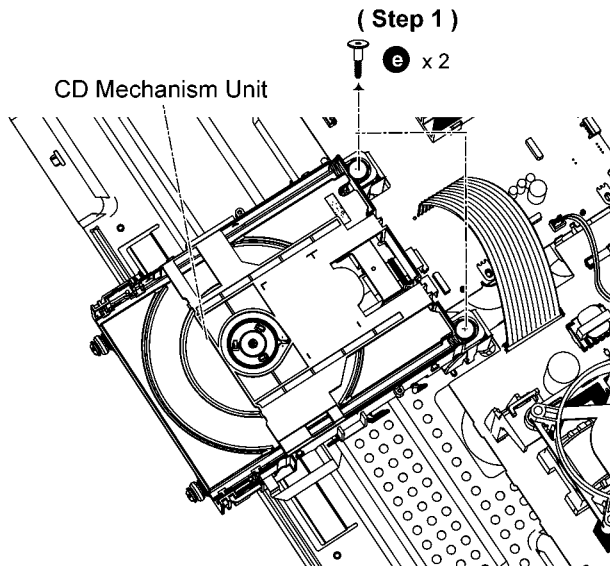
Step 6 Remove the Rear Panel.



10.18. Disassembly of CD Mechanism Unit

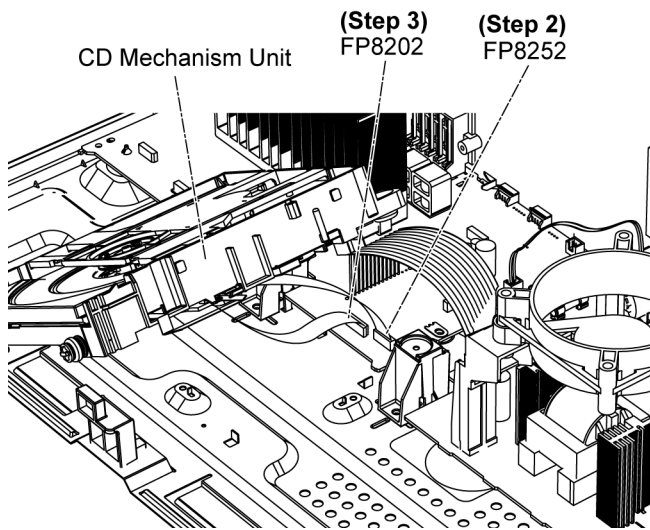
- Refer to “Disassembly of Top Cabinet”.
- Refer to “Disassembly of Front Panel Unit”.

Step 1 Remove 2 screws.



Step 2 Detach 10P FFC at the connector (FP8252) on the Main P.C.B..

Step 3 Detach 24P FFC at the connector (FP8202) on the Main P.C.B..



10.19. Disassembly of Main P.C.B.

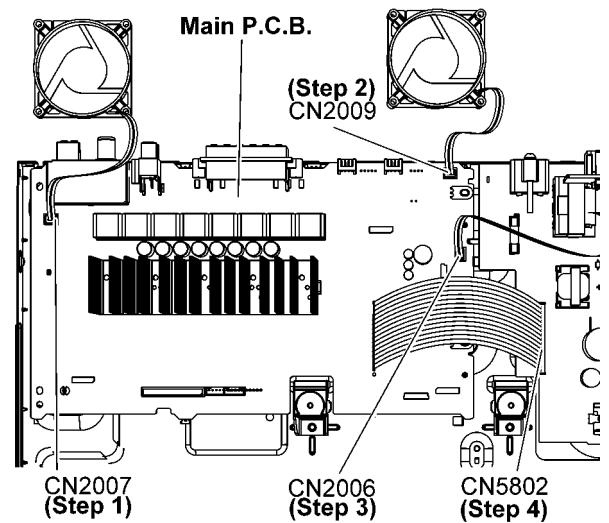
- Refer to “Disassembly of Top Cabinet”.
- Refer to “Disassembly of Front Panel Unit”.
- Refer to “Disassembly of Rear Panel”.
- Refer to “Disassembly of CD Mechanism Unit”.

Step 1 Detach 2P Wire at the connector (CN2007) on the Main P.C.B..

Step 2 Detach 2P Wire at the connector (CN2009) on the Main P.C.B..

Step 3 Detach 2P Wire at the connector (CN2006) on the Main P.C.B..

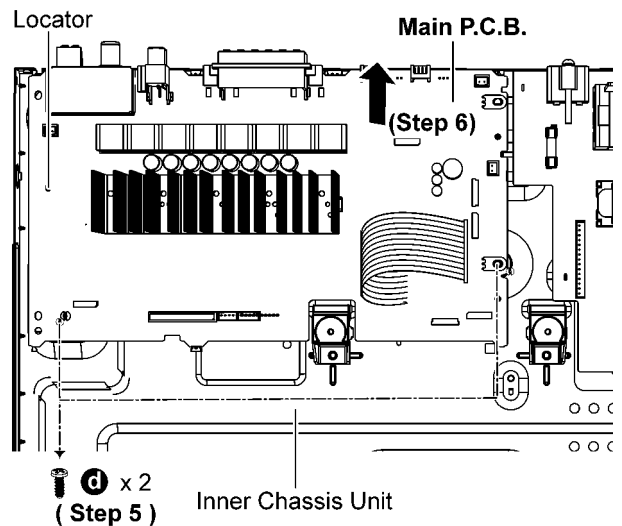
Step 4 Detach 13P Cable at the connector (CN5802) on the SMPS P.C.B..



Step 5 Remove 2 screws.

Step 6 Lift up to remove the Main P.C.B..

Caution: During assembling, ensure that the Main P.C.B. is properly located & fully seated onto the Inner Chassis Unit.



10.20. Disassembly of Digital Amplifier IC (IC2501/IC2502/IC2503/IC2504)

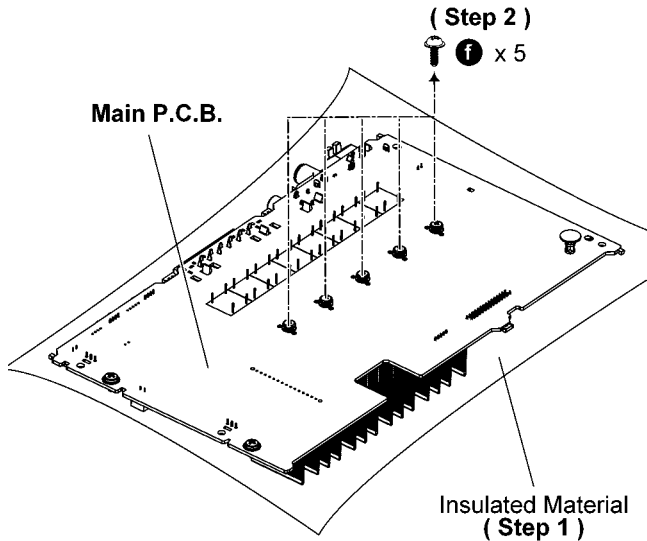
• Refer to “Disassembly of Main P.C.B.”.

10.20.1. Disassembly of Digital Amplifier IC (IC2501/IC2502/IC2503/IC2504)

Caution: Handle the Main P.C.B. with caution due to it's high temperature after prolonged use. Touching it may lead to injuries.

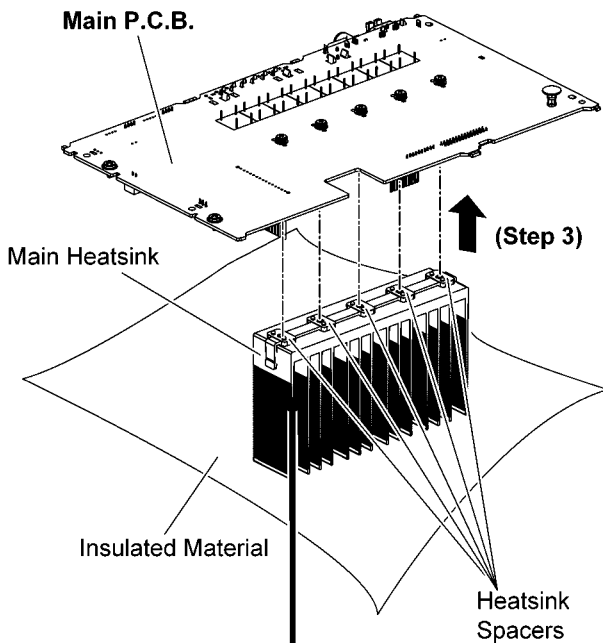
Step 1 Place the Main P.C.B. on an insulated material.

Step 2 Remove 5 screws.



Step 3 Lift up the Main P.C.B. as arrow shown.

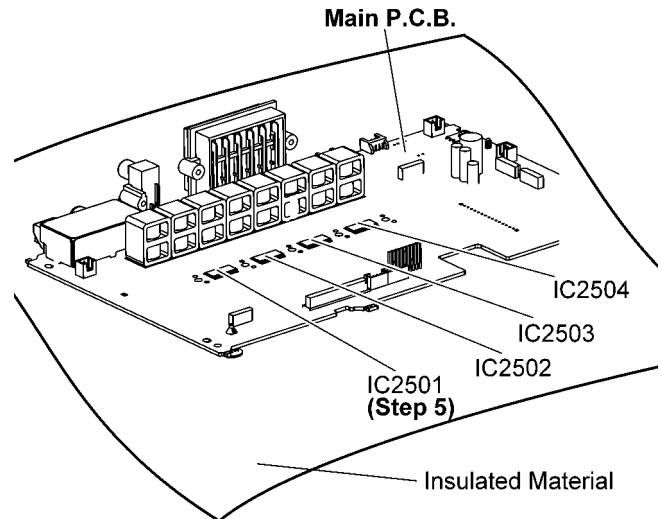
Caution: Keep the Heatsink Spacers in safe place. Avoid denting it, place it back during assembling.



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

Step 4 Desolder the pins of the Digital Amplifier IC.

Step 5 Remove the Digital Amplifier IC.

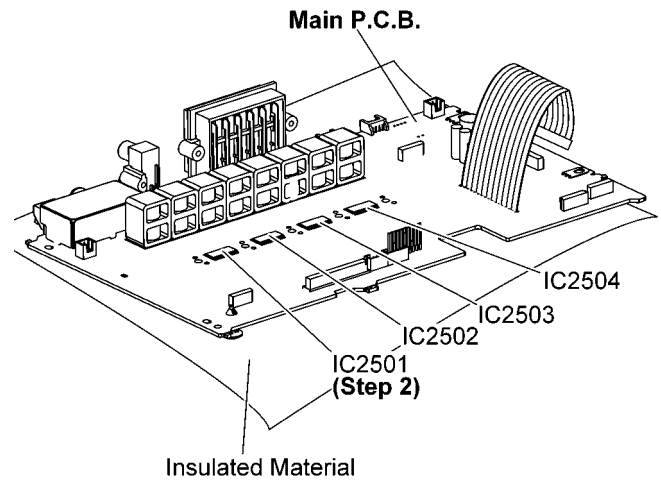


10.20.2. Assembly of Digital Amplifier IC (IC2501/IC2502/IC2503/IC2504)

Step 1 Fix the Digital Amplifier IC onto the Main P.C.B..

Step 2 Solder the pins of the Digital Amplifier IC.

Caution: Ensure that the pins of the Digital Amplifier IC is positioned correctly on the Main P.C.B. before soldering.

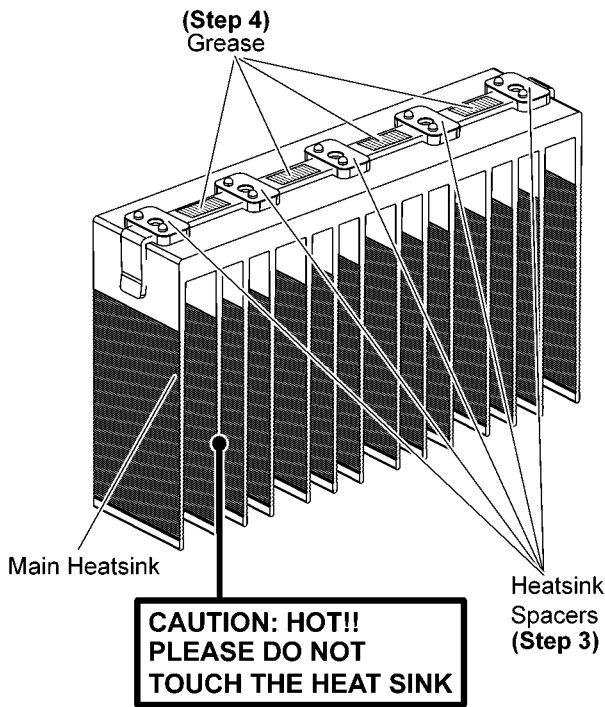


Step 3 Fix Heatsink spacers onto Main Heatsink..

Caution: Ensure that the Heatsink Spacers are properly located and seated flatly onto Main Heatsink.

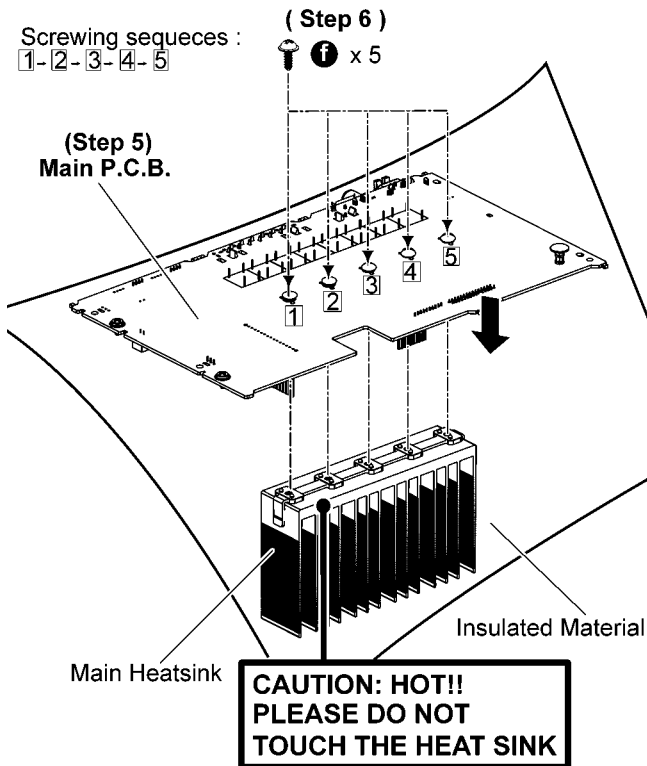
Step 4 Apply grease to the Main Heatsink as indicate in the diagram..

Caution: Ensure Grease thickness is about 0.2mm.



Step 5 Upset the Main P.C.B..

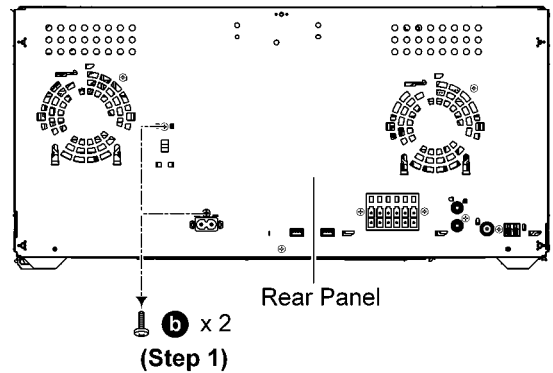
Step 6 Fix 5 screws.



10.21. Disassembly of SMPS P.C.B. and Voltage Selector P.C.B.

• Refer to “Disassembly of Top Cabinet”.

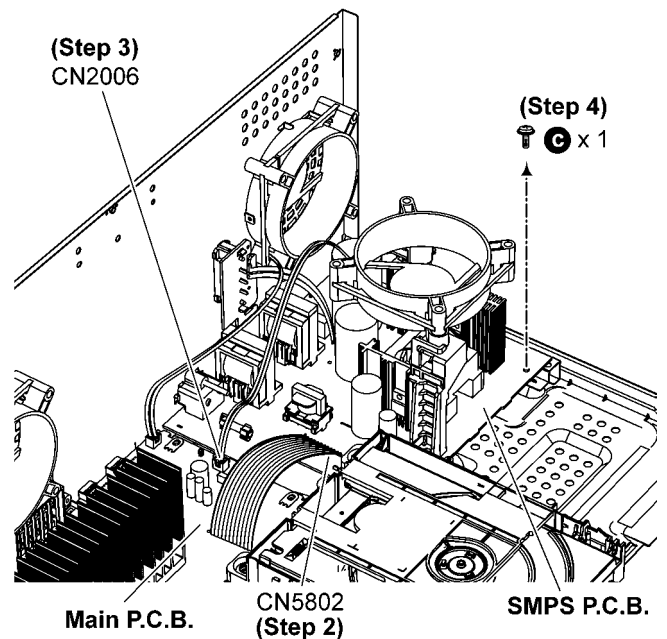
Step 1 Remove 2 screws.



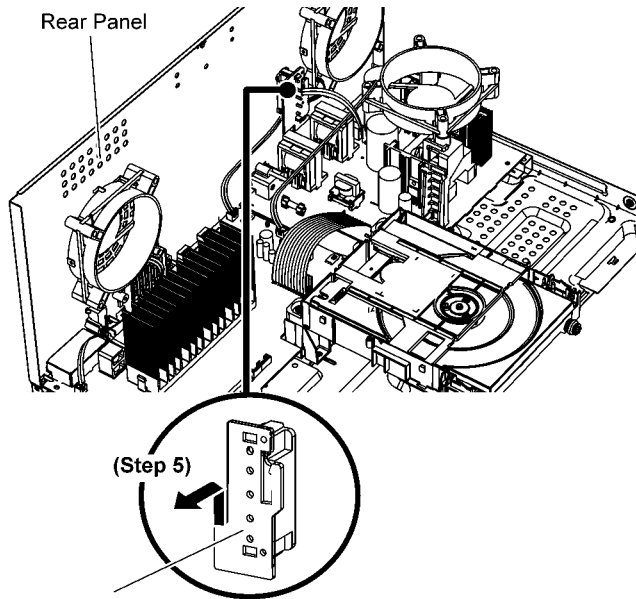
Step 2 Detach 13P Cable at a connector (CN5802) on the SMPS P.C.B..

Step 3 Detach 2P Wire at a connector (CN2006) on the Main P.C.B..

Step 4 Remove 1 screw.



Step 5 Detach the Voltage Selector P.C.B. from the rear panel as arrow shown.

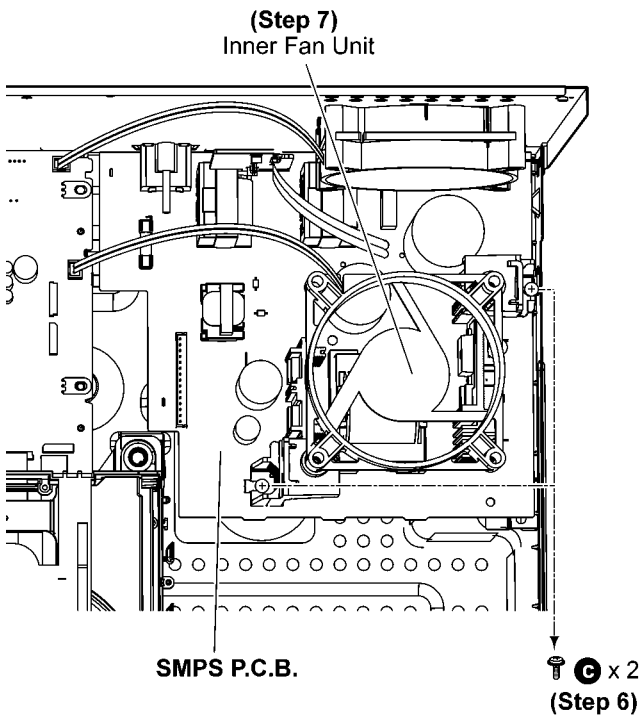


Voltage Selector P.C.B.

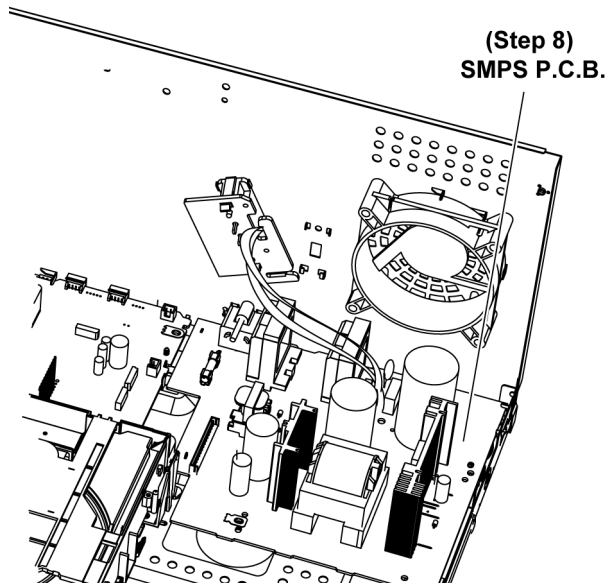
Step 6 Remove 2 screws

Step 7 Remove the Inner Fan Unit.

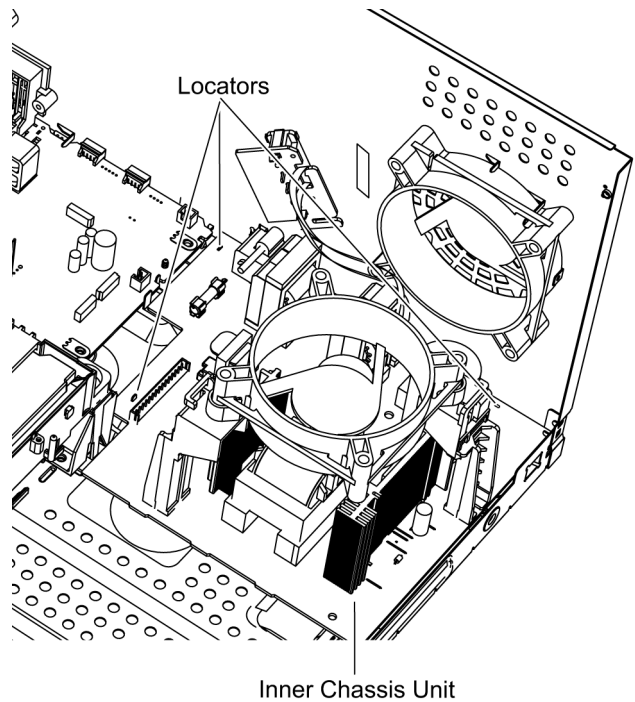
Caution: Keep the Inner Fan Unit in safe place, place it back during assembling.



Step 8 Remove the SMPS P.C.B..



Caution: During assembling, ensure that the SMPS P.C.B. is properly located & fully seated onto the Inner Chassis Unit.



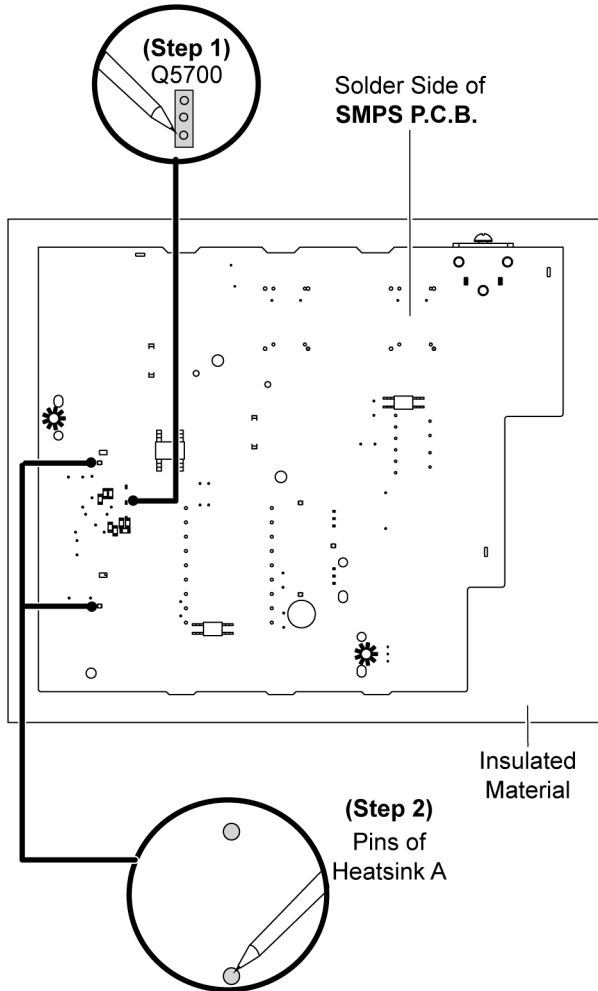
10.22. Replacement of Switching Regulator (Q5700)

• Refer to “Disassembly of SMPS P.C.B.”.

10.22.1. Disassembly of Switching Regulator (Q5700)

Step 1 Desolder pins of the Switching Regulator (Q5700) on the solder side of the SMPS P.C.B.

Step 2 Desolder pins of the Heatsink A.

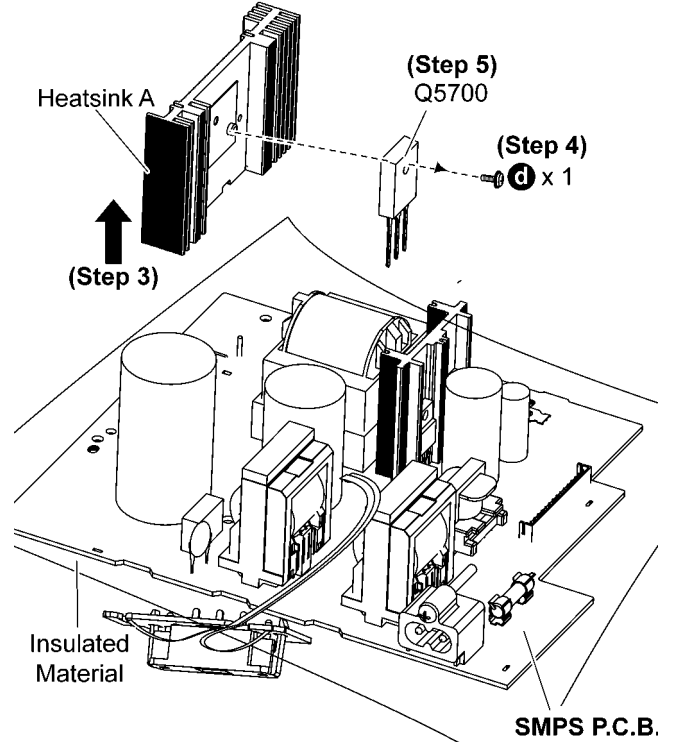


Step 3 Remove the Heatsink A with the Switching Regulator (Q5700).

Step 4 Remove 1 screw.

Step 5 Remove the Switching Regulator (Q5700) from the Heatsink A.

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



10.22.2. Assembly of Switching Regulator (Q5700)

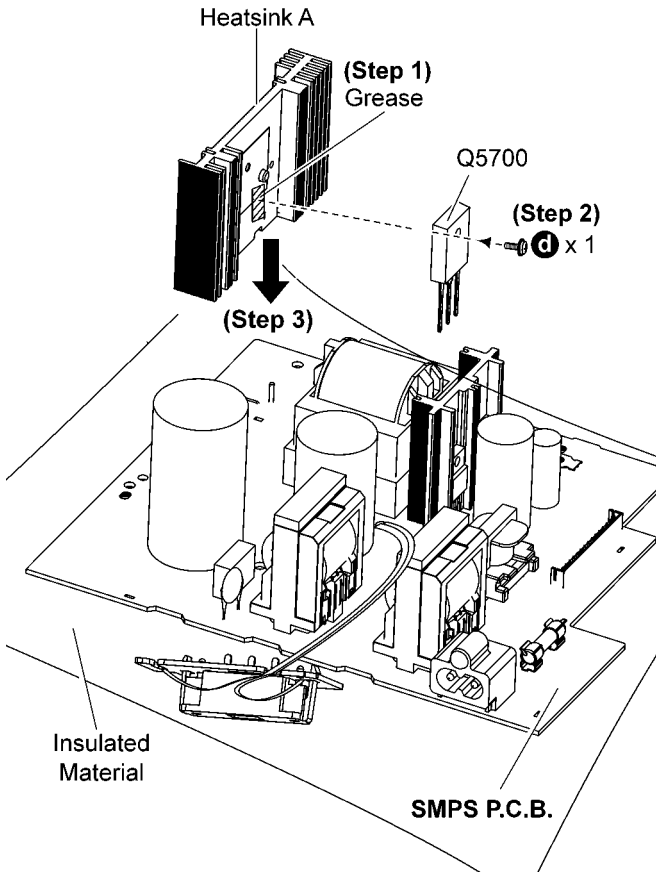
Step 1 Apply grease to the Heatsink A.

Step 2 Screw the Switching Regulator (Q5700) to the Heatsink A.

Caution: Ensure the Switching Regulator (Q5700) is tightly screwed to the Heatsink A.

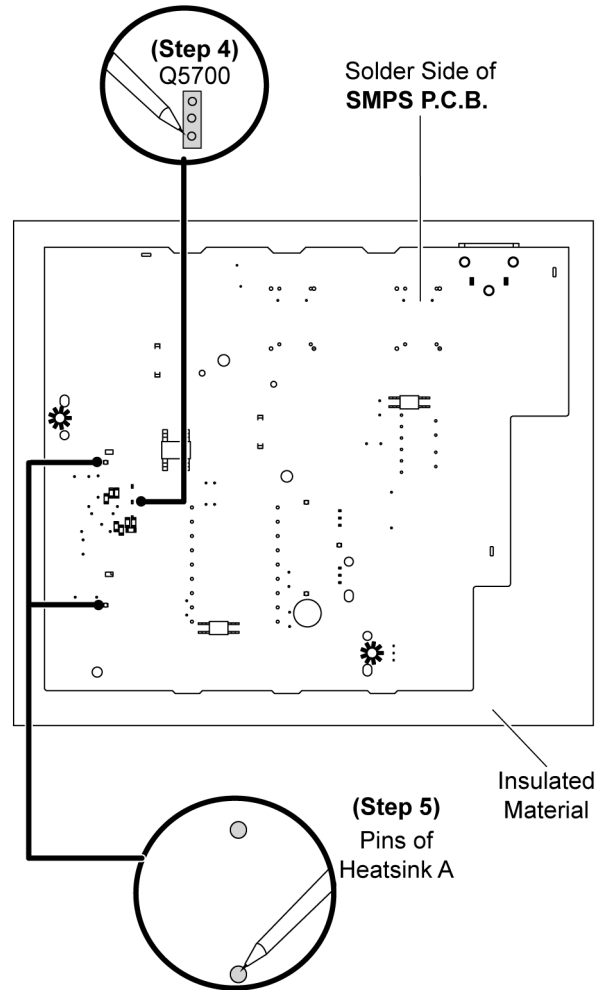
Step 3 Fix the Heatsink A with the Switching Regulator (Q5700) on the SMPS P.C.B. as shown.

Caution 1: Ensure the Heatsink A with the Switching Regulator (Q5700) are properly inserted into the SMPS P.C.B..



Step 4 Solder pins of the Switching Regulator (Q5700) on the solder side of the SMPS P.C.B..

Step 5 Solder pins of the Heatsink A on the solder side of the SMPS P.C.B..



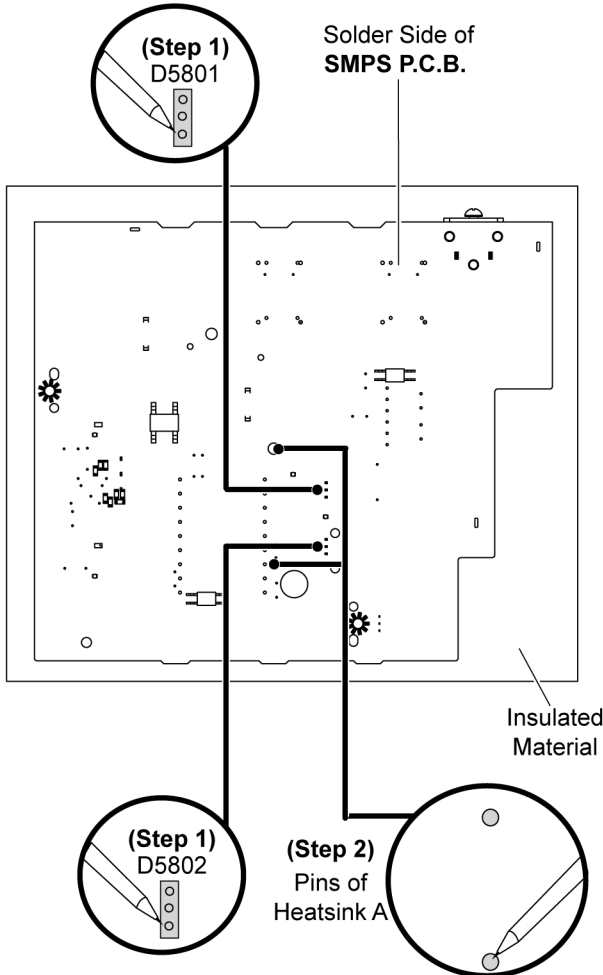
10.23. Replacement of Diode (D5801)

• Refer to “Disassembly of SMPS P.C.B.”.

10.23.1. Disassembly of Diode (D5801)

Step 1 Desolder pins of the Diode (D5801) and (D5802) on the solder side of the SMPS P.C.B..

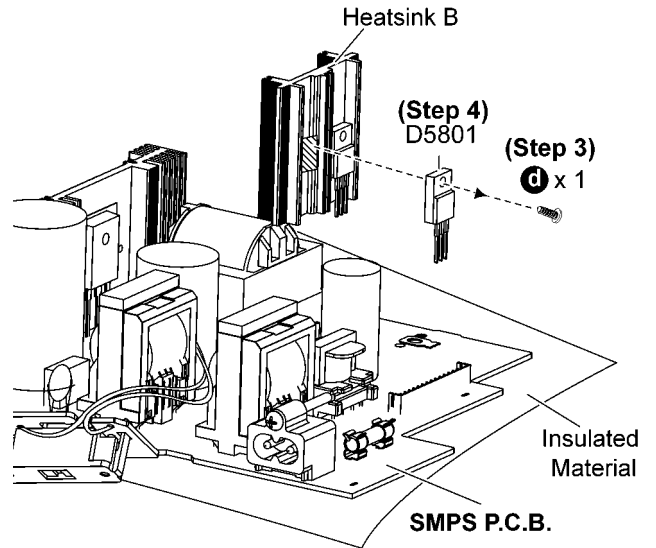
Step 2 Desolder pins of the Heatsink B.



Step 3 Remove 1 screw at the Diode (D5801).

Step 4 Remove the 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.



10.23.2. Assembly of Diode (D5801)

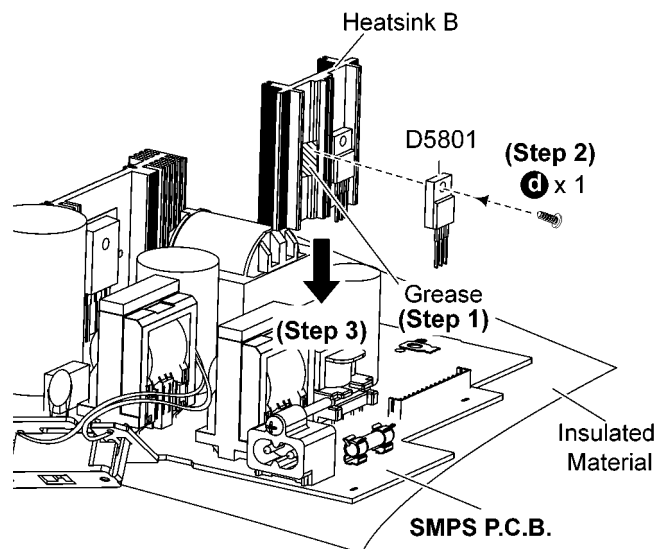
Step 1 Apply grease to the Heatsink B.

Step 2 Screw the Diode (D5801) to the Heatsink B.

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

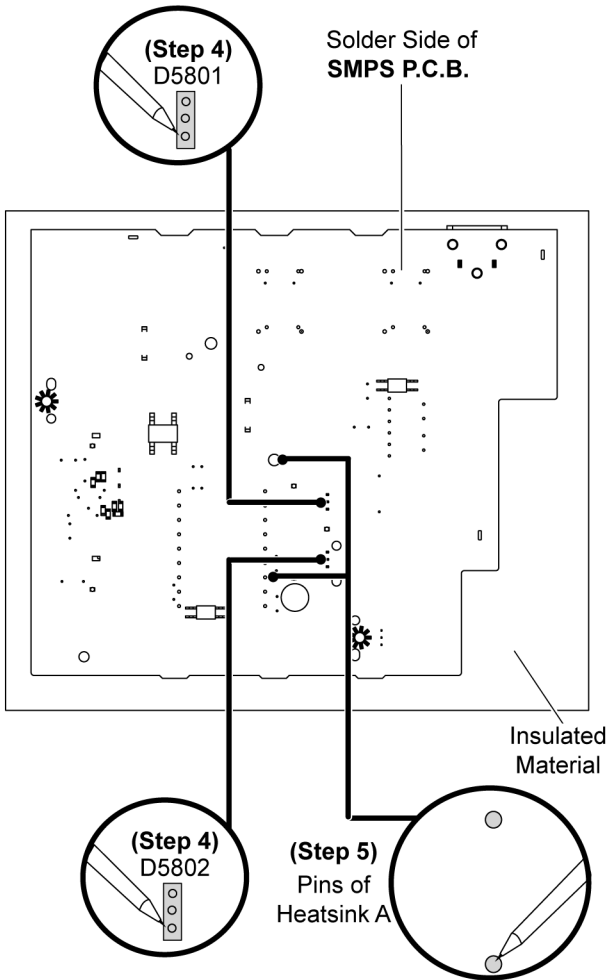
Step 3 Fix the Heatsink B with the Diode (D5801) on the SMPS P.C.B..

Caution: Ensure pins of the Diode (D5801) are properly inserted into the SMPS P.C.B..



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

Step 5 Solder pins of the Heatsink B.

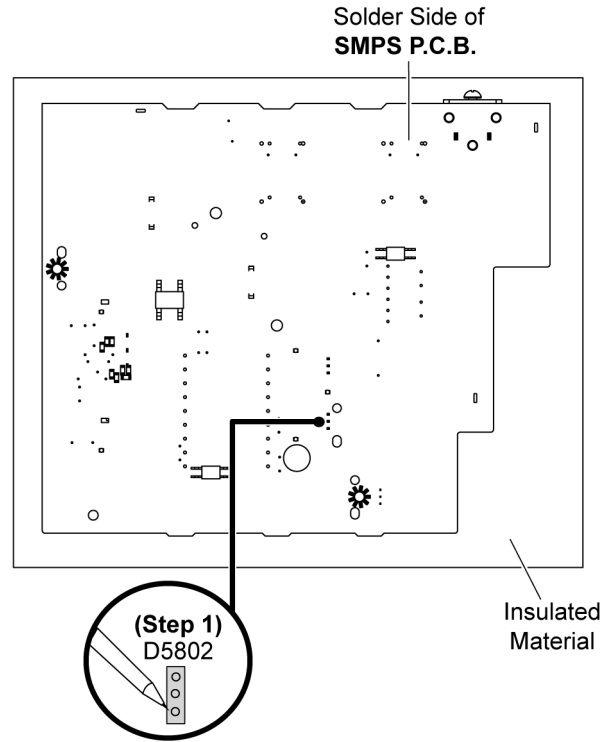


10.24. Replacement of Diode (D5802)

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

10.24.1. Disassembly of Diode (D5802)

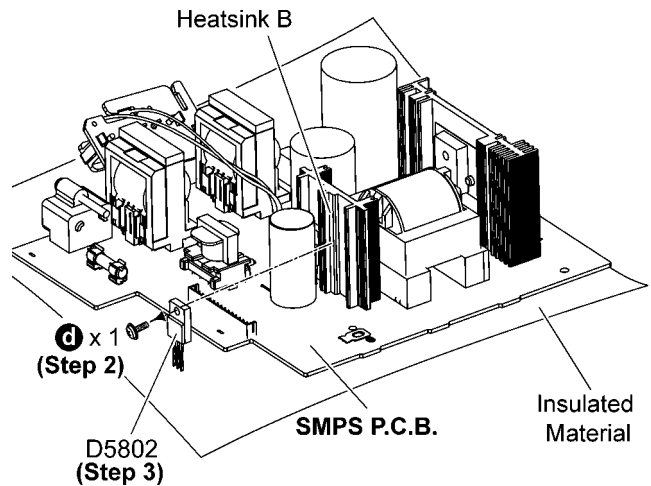
Step 1 Desolder pins of the Diode (D5802) on the solder side of the SMPS P.C.B.



Step 2 Remove 1 screw at the Diode (D5802).

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

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

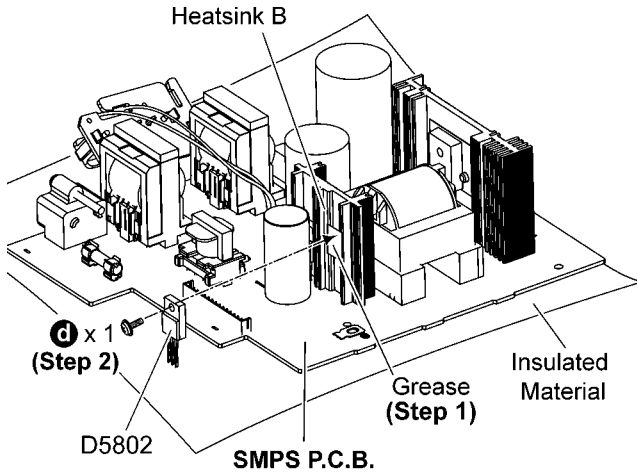


10.24.2. Assembly of Diode (D5802)

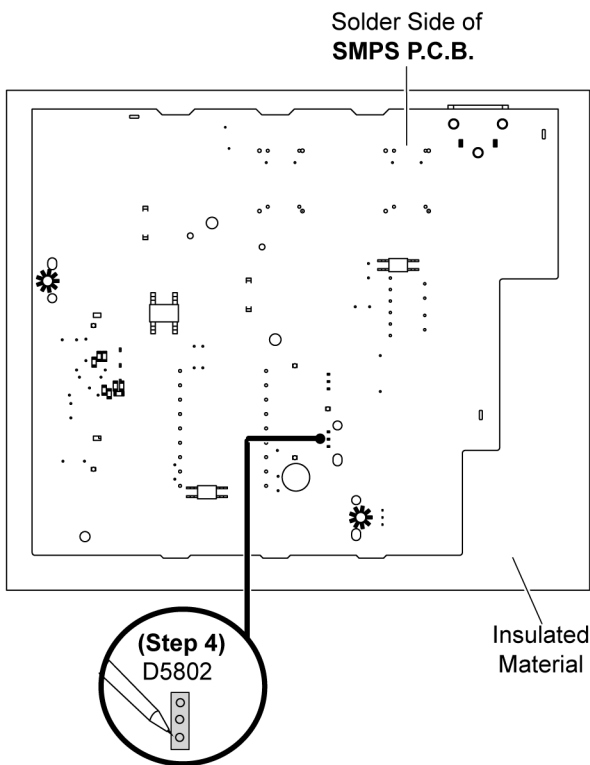
Step 1 Apply grease to the Heatsink B.

Step 2 Screw the Diode (D5802) to the Heatsink B.

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



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



10.25. Disassembly of CD Interface P.C.B.

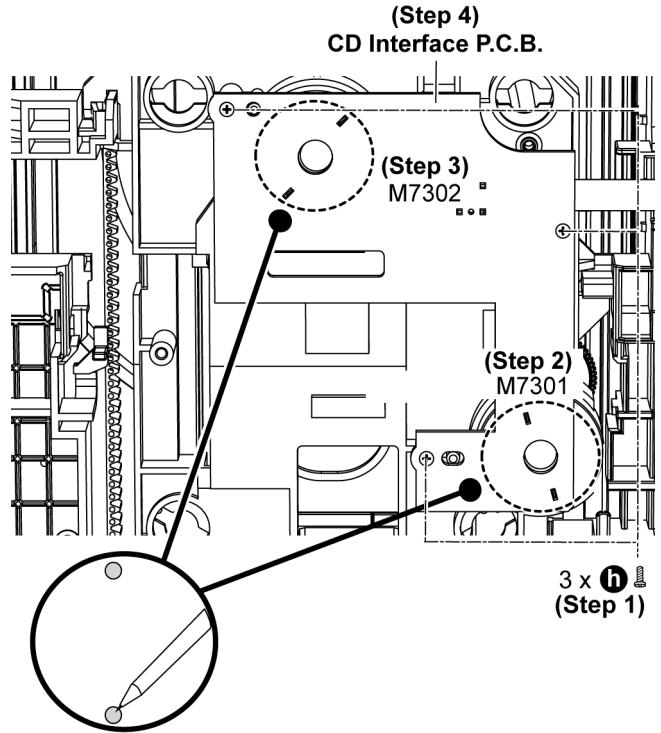
- Refer to “Disassembly of Top Cabinet”.
- Refer to “Disassembly of Front Panel Unit”.
- Refer to “Disassembly of CD Mechanism Unit”.

Step 1 Remove 3 screws.

Step 2 Desolder pins of the motor (M7301).

Step 3 Desolder pins of the motor (M7302).

Step 4 Remove the CD Interface P.C.B..



11 Service Position

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

11.1. Checking of FL Display P.C.B., Control P.C.B., Volume P.C.B., Mic P.C.B. and USB P.C.B.

- Step 1** Remove Top Cabinet.
- Step 2** Remove Front Panel Unit.
- Step 3** Remove FL Display P.C.B..
- Step 4** Remove Illumination Button P.C.B..
- Step 5** Remove Control P.C.B..
- Step 6** Remove Volume P.C.B..
- Step 7** Remove USB P.C.B..
- Step 8** Remove Mic P.C.B..
- Step 9** Attach 10P FFC at a connector (CN2002) on the Main P.C.B..
- Step 10** Attach 11P Cable at a connector (CN2001) on the Main P.C.B..
- Step 11** Attach 30P FFC at a connector (CN2004) on the Main P.C.B..

Step 12 Attach 2P Cable at a connector (CN6800) on the Illumination Button P.C.B..

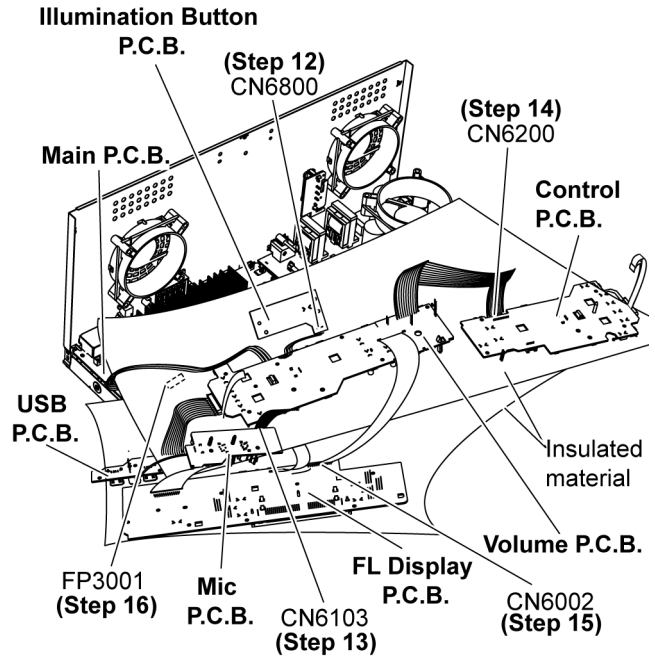
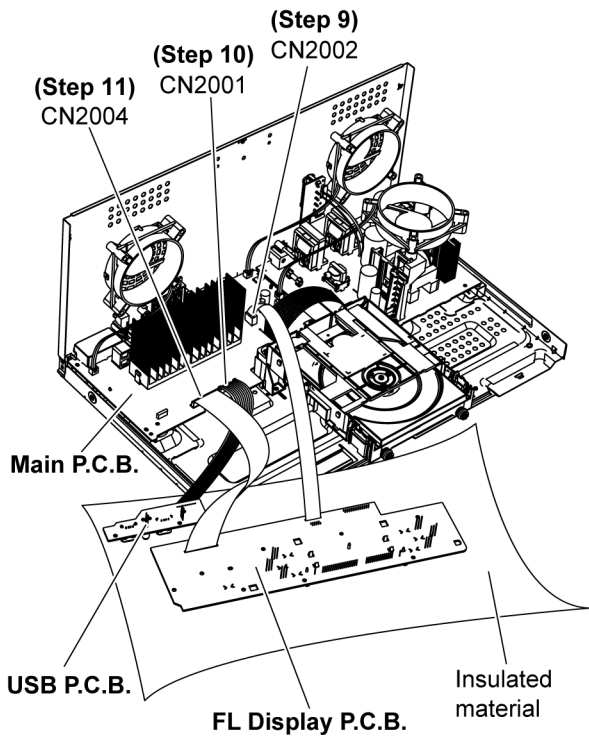
Step 13 Attach 8P Cable at a connector (CN6103) on the Mic P.C.B..

Step 14 Attach 12P Cable at a connector (CN6200) on the Control P.C.B..

Step 15 Attach 30P FFC at a connector (CN6002) on the FL Display P.C.B..

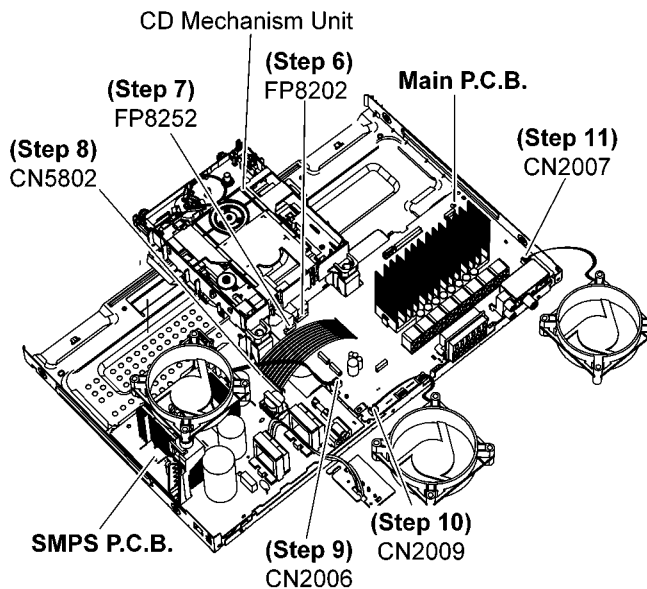
Step 16 Attach 5P Wire at the connector (FP3001) on Main P.C.B..

Step 17 FL Display P.C.B., Control P.C.B., Volume P.C.B., Mic P.C.B. and USB P.C.B. can be checked as diagram shown.

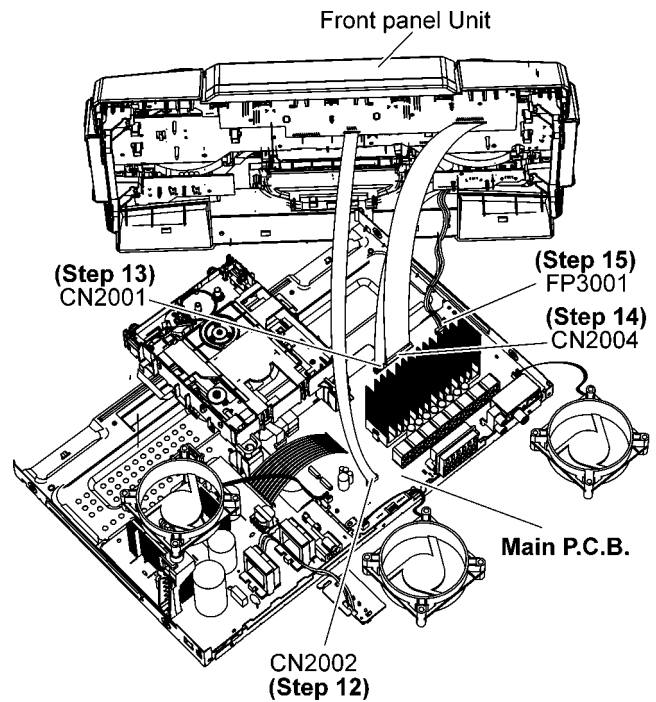


11.2. Checking of Main P.C.B. (Side B)

- Step 1** Remove Top Cabinet.
- Step 2** Remove Front Panel Unit.
- Step 3** Remove Rear Panel.
- Step 4** Remove CD Mechanism Unit.
- Step 5** Remove Main P.C.B..
- Step 6** Attach 24P FFC at the connector (FP8202) on the Main P.C.B..
- Step 7** Attach 10P FFC at the connector (FP8252) on the Main P.C.B..
- Step 8** Attach 13P Cable at the connector (CN5802) on the SMPS P.C.B..
- Step 9** Attach 2P Wire at the connector (CN2006) on the Main P.C.B..
- Step 10** Attach 2P Wire at the connector (CN2009) on the Main P.C.B..
- Step 11** Attach 2P Wire at the connector (CN2007) on the Main P.C.B..



- Step 12** Attach 10P FFC at a connector (CN2002) on the Main P.C.B..
- Step 13** Attach 11P Cable at a connector (CN2001) on the Main P.C.B..
- Step 14** Attach 30P FFC at a connector (CN2004) on the Main P.C.B..
- Step 15** Attach 5P Wire at the connector (FP3001) on Main P.C.B..
- Step 16** Side B Main P.C.B. can be checked as diagram shown.



11.3. Checking of Main P.C.B. (Side A)

Step 1 Remove Top Cabinet.

Step 2 Remove Front Panel Unit.

Step 3 Remove Rear Panel.

Step 4 Remove CD Mechanism Unit.

Step 5 Remove Main P.C.B..

Step 6 Attach 24P FFC at the connector (FP8202) on the Main P.C.B..

Step 7 Attach 10P FFC at the connector (FP8252) on the Main P.C.B..

Step 8 Attach 13P Cable at the connector (CN5802) on the SMPS P.C.B..

Step 9 Attach 2P Wire at the connector (CN2006) on the Main P.C.B..

Step 10 Attach 2P Wire at the connector (CN2009) on the Main P.C.B..

Step 11 Attach 2P Wire at the connector (CN2007) on the Main P.C.B..

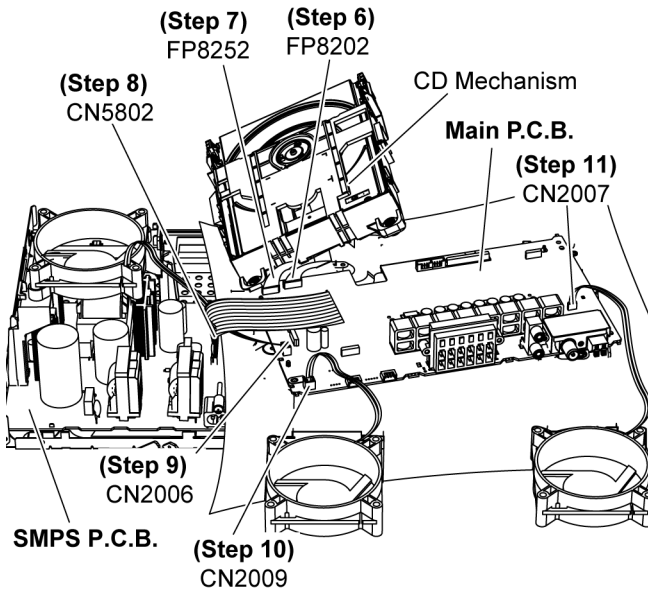
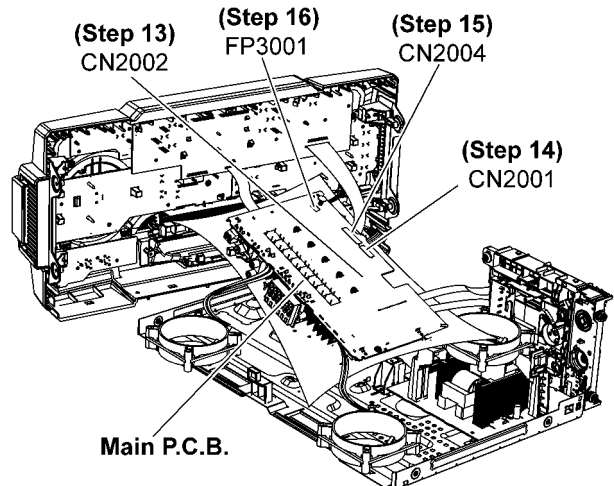
Step 13 Attach 10P FFC at a connector (CN2002) on the Main P.C.B..

Step 14 Attach 11P Cable at a connector (CN2001) on the Main P.C.B..

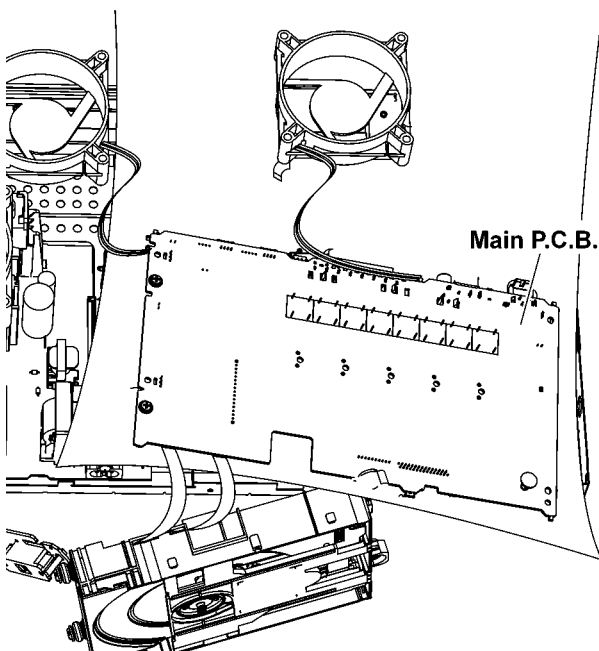
Step 15 Attach 30P FFC at a connector (CN2004) on the Main P.C.B..

Step 16 Attach 5P Wire at the connector (FP3001) on Main P.C.B..

Step 17 Side A Main P.C.B. can be checked as diagram shown.



Step 12 Upset the Main P.C.B..

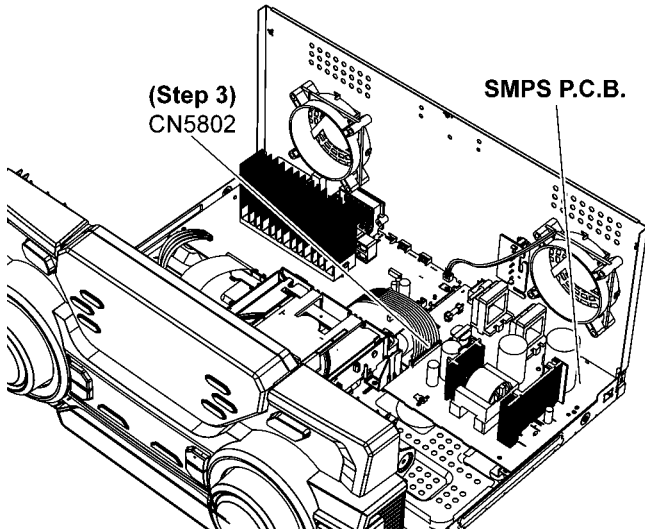


11.4. Checking of SMPS P.C.B.

Step 1 Remove Top Cabinet.

Step 2 Remove SMPS P.C.B..

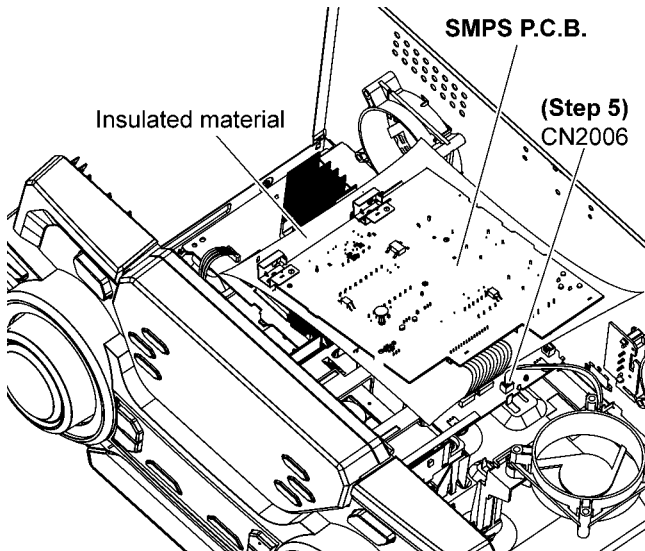
Step 3 Attach 13P Cable at the connector (CN5802) on the SMPS P.C.B..



Step 4 Upset the SMPS P.C.B..

Step 5 Attach 2P Wire at the connector (CN2006) on the Main P.C.B..

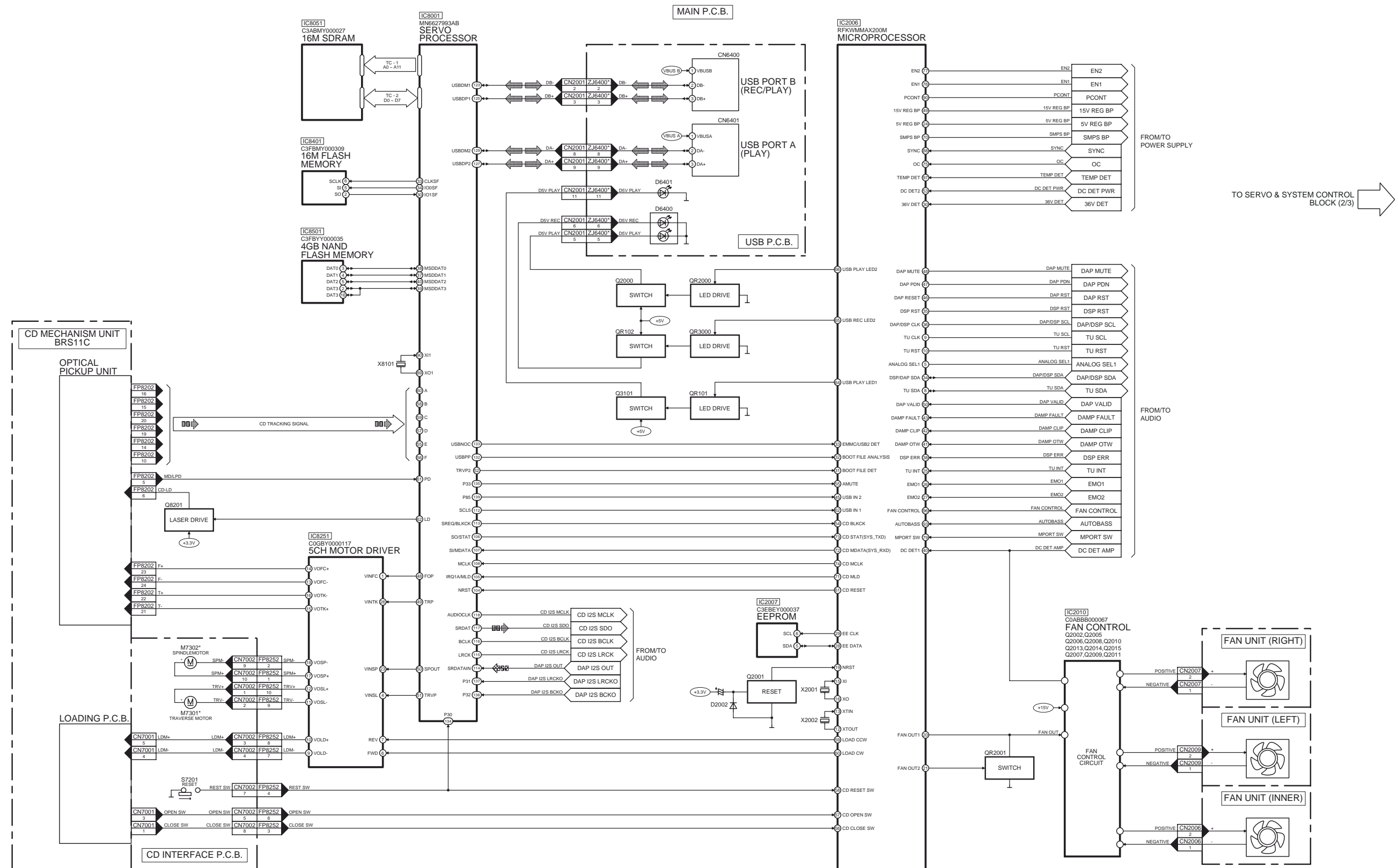
Step 6 SMPS P.C.B. can be checked as diagram shown.



12 Block Diagram

12.1. Servo & System Control

 : CD AUDIO INPUT SIGNAL LINE
  : AUDIO OUTPUT SIGNAL LINE
  : USB SIGNAL LINE

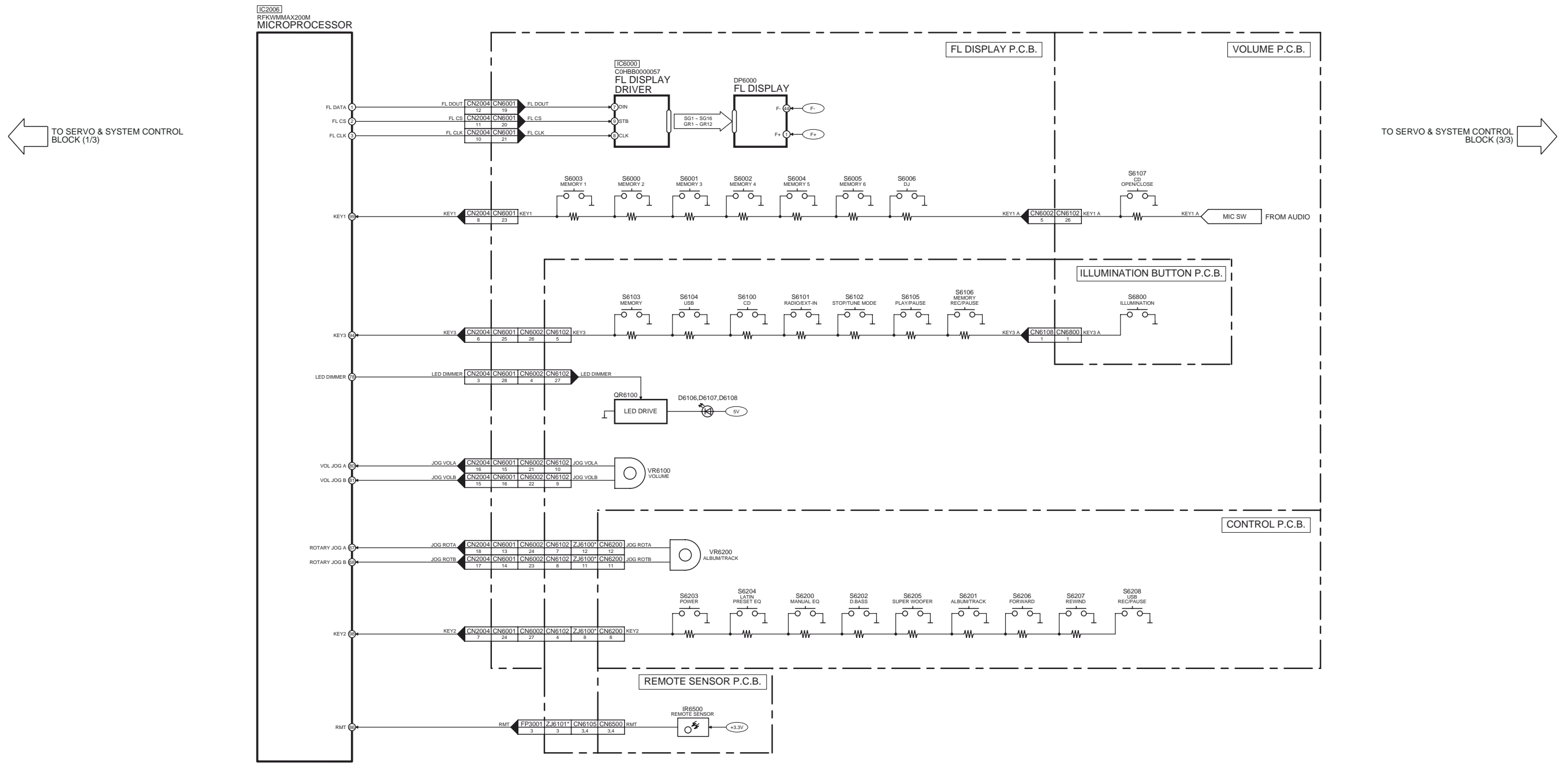


NOTE: "*" REF IS FOR INDICATION ONLY

SA-MAX200PH SERVO & SYSTEM CONTROL (1/3) BLOCK DIAGRAM

: CD AUDIO INPUT SIGNAL LINE
 : AUDIO OUTPUT SIGNAL LINE
 : USB SIGNAL LINE

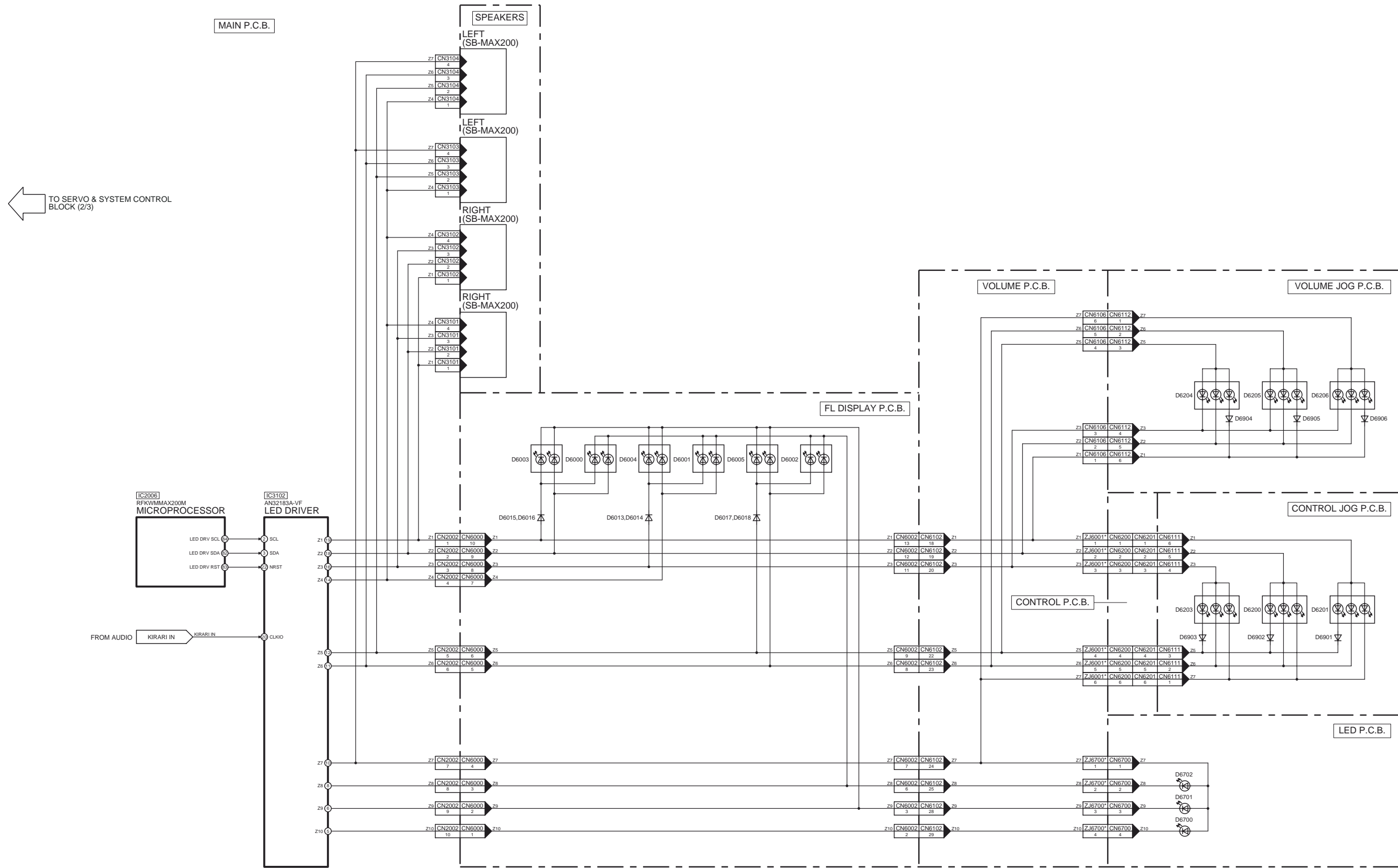
MAIN P.C.B.



NOTE: " * " REF IS FOR INDICATION ONLY

SA-MAX200PH SERVO & SYSTEM CONTROL (2/3) BLOCK DIAGRAM

 : CD AUDIO INPUT SIGNAL LINE
  : AUDIO OUTPUT SIGNAL LINE
  : USB SIGNAL LINE



NOTE: " * " REF IS FOR INDICATION ONLY

SA-MAX200PH SERVO & SYSTEM CONTROL (3/3) BLOCK DIAGRAM

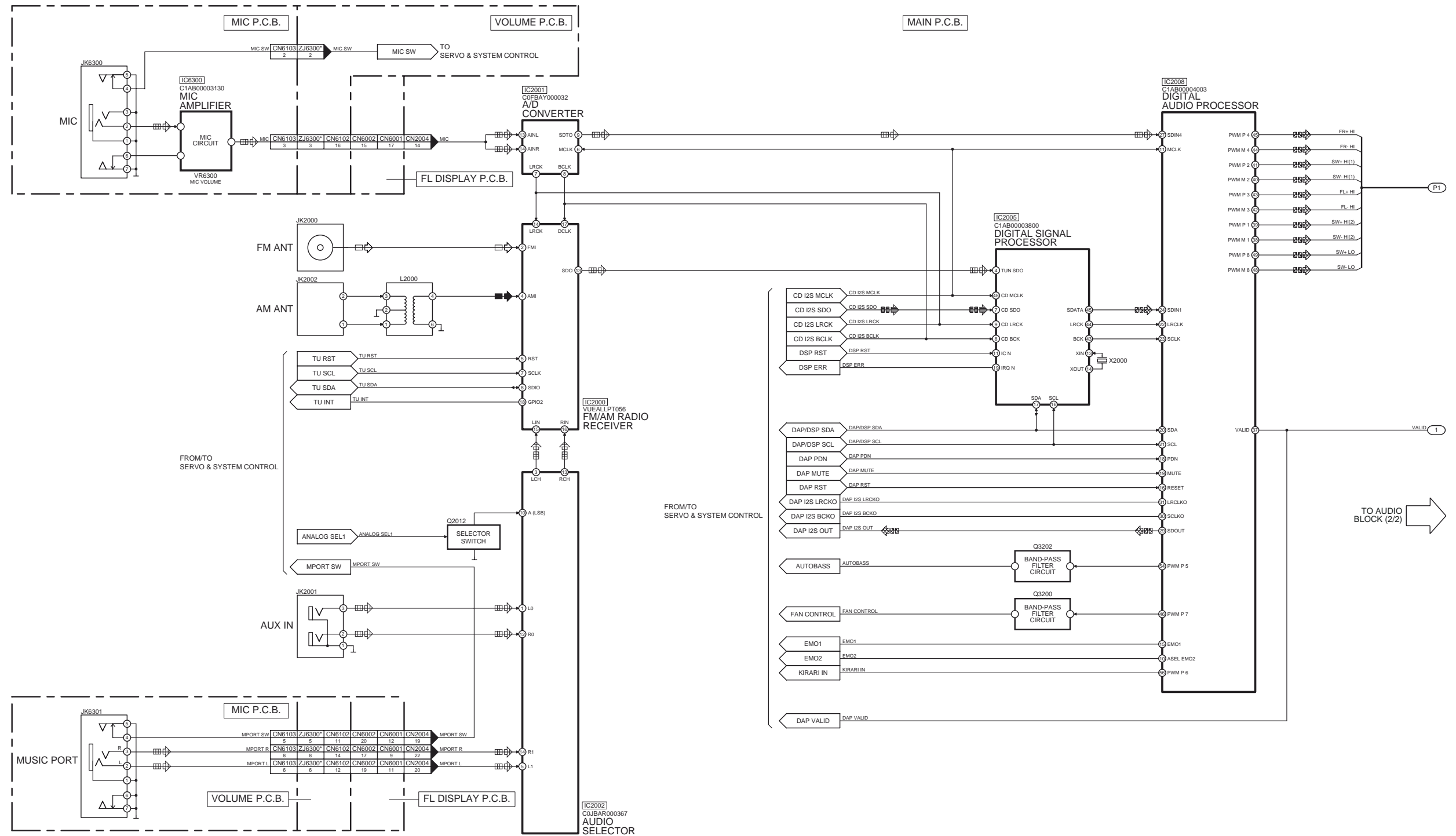
12.2. IC Terminal Chart

TC	IC8051 16M SDRAM		SIGNAL NAME	IC8001 SERVO PROCESSOR	
	PORT NAME	PIN NO		PIN NO	PORT NAME
1	A0	21	A0	14	A0
	A1	22	A1	15	A1
	A2	23	A2	16	A2
	A3	24	A3	17	A3
	A4	27	A4	20	A4
	A5	28	A5	21	A5
	A6	29	A6	22	A6
	A7	30	A7	23	A7
	A8	31	A8	24	A8
	A9	32	A9	25	A9
	A10	20	A10	13	A10
BA0	19	A11	26	A11	

TC	IC8051 16M SDRAM		SIGNAL NAME	IC8001 SERVO PROCESSOR	
	PORT NAME	PIN NO		PIN NO	PORT NAME
2	DQ0 / DQ15	2 / 49	D0	142	D0
	DQ1 / DQ14	3 / 48	D1	143	D1
	DQ2 / DQ13	5 / 46	D2	144	D2
	DQ3 / DQ12	6 / 45	D3	2	D3
	DQ4 / DQ11	8 / 43	D4	3	D4
	DQ5 / DQ10	9 / 42	D5	4	D5
	DQ6 / DQ9	11 / 40	D6	5	D6
	DQ7 / DQ8	12 / 39	D7	6	D7

12.3. Audio

: CD AUDIO INPUT SIGNAL LINE
 : TUNER/MUSIC PORT/AUX/MIC AUDIO INPUT SIGNAL LINE
 : AUDIO OUTPUT SIGNAL LINE
 : AM SIGNAL LINE
 : FM SIGNAL LINE

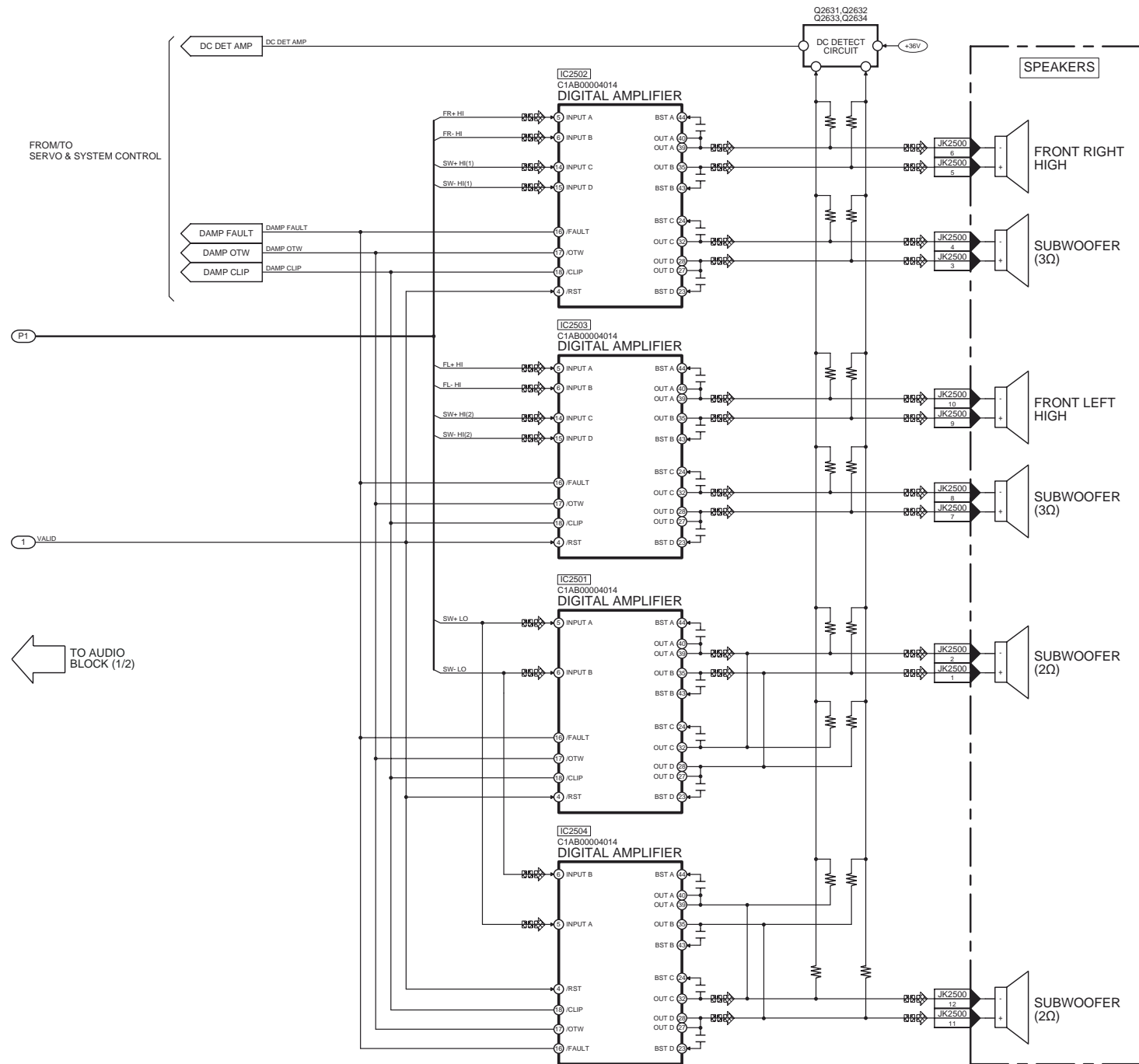


NOTE: " * " REF IS FOR INDICATION ONLY

SA-MAX200PH AUDIO (1/2) BLOCK DIAGRAM

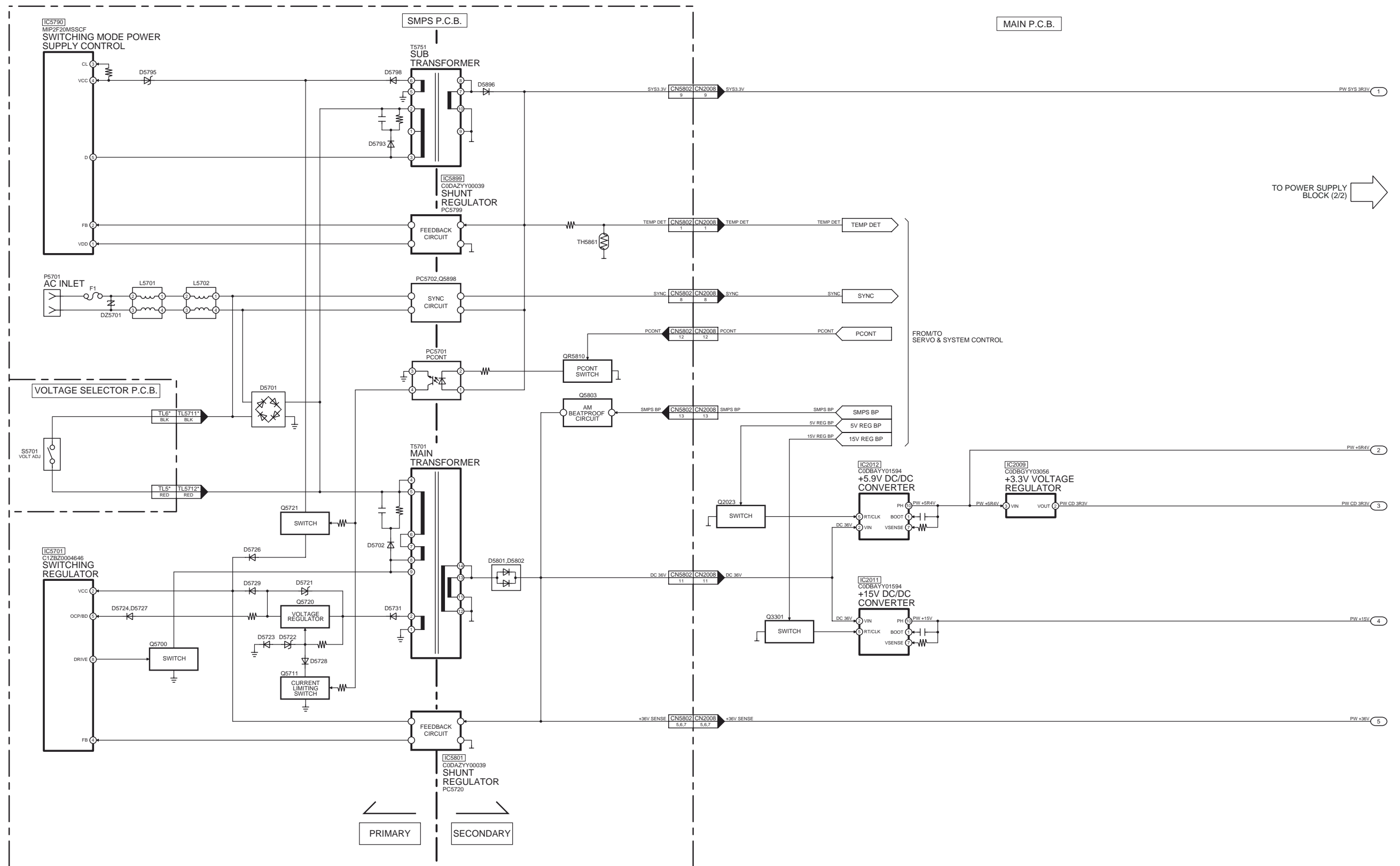
CD AUDIO INPUT SIGNAL LINE
 TUNER/MUSIC PORT/AUX/MIC AUDIO INPUT SIGNAL LINE
 AUDIO OUTPUT SIGNAL LINE
 AM SIGNAL LINE
 FM SIGNAL LINE

MAIN P.C.B.



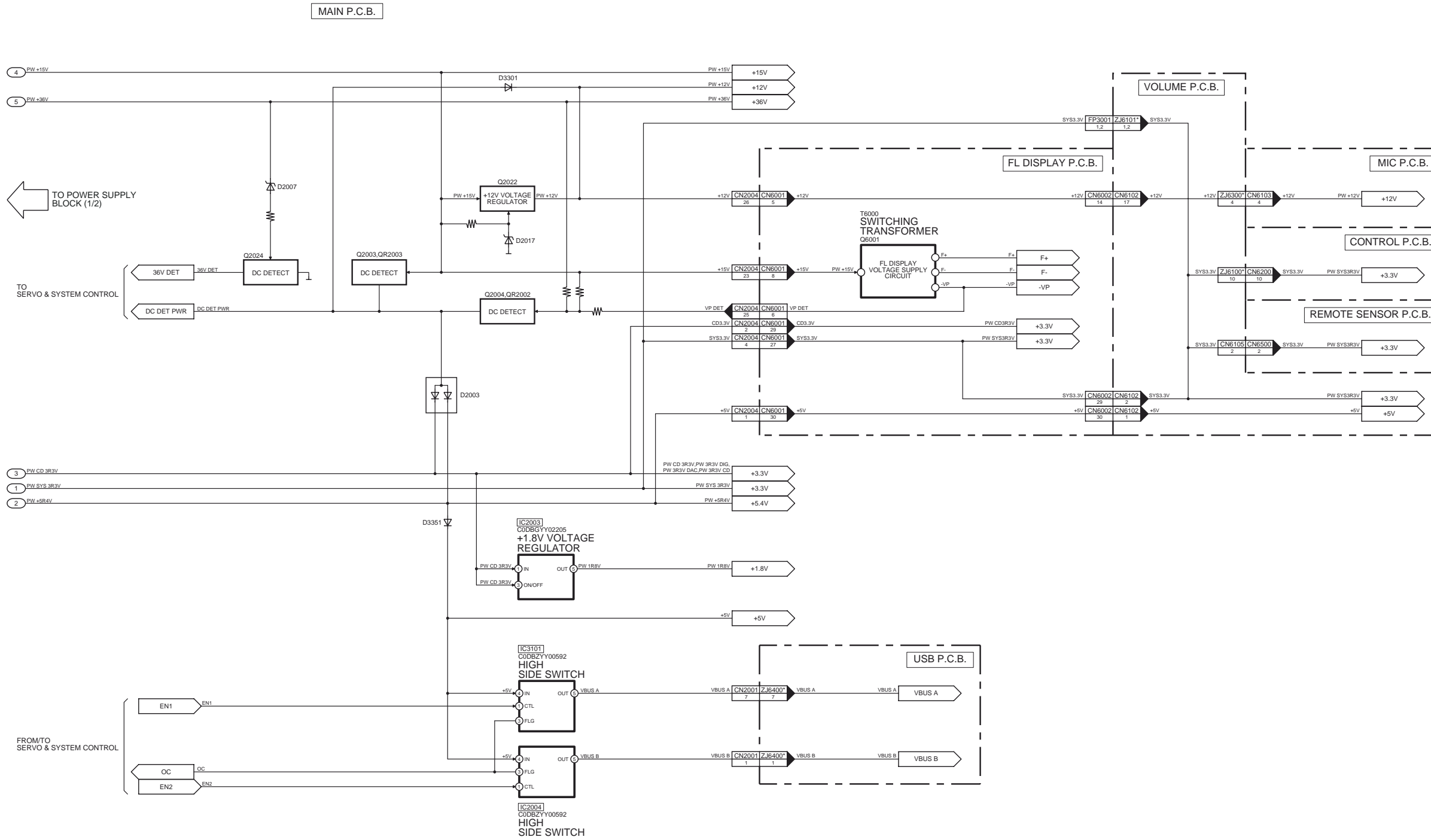
SA-MAX200PH AUDIO (2/2) BLOCK DIAGRAM

12.4. Power Supply



NOTE: " * " REF IS FOR INDICATION ONLY

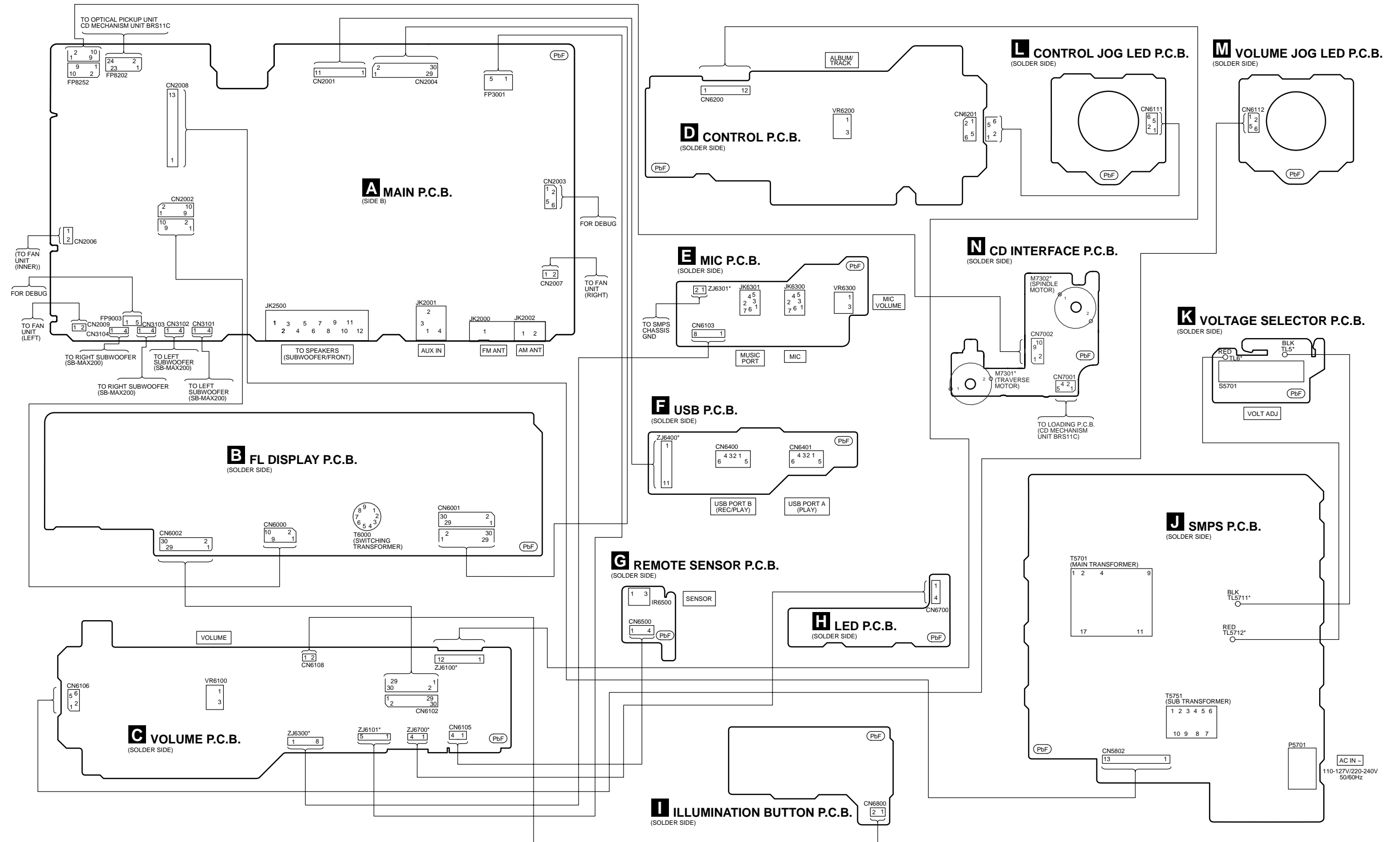
SA-MAX200PH POWER SUPPLY (1/2) BLOCK DIAGRAM



NOTE: "*" REF IS FOR INDICATION ONLY

SA-MAX200PH POWER SUPPLY (2/2) BLOCK DIAGRAM

13 Wiring Connection Diagram



NOTE: " * " REF IS FOR INDICATION ONLY.

SA-MAX200PH WIRING CONNECTION DIAGRAM

14 Schematic Diagram


14.1. Schematic Diagram Notes

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

Notes:

S5701:	Voltage Selector switch.
S6000:	Memory 2 switch.
S6001:	Memory 3 switch.
S6002:	Memory 4 switch.
S6003:	Memory 1 switch.
S6004:	Memory 5 switch.
S6005:	Memory 6 switch.
S6006:	DJ switch.
S6100:	CD switch.
S6101:	Radio/EXT-IN switch.
S6102:	Stop (■) switch.
S6103:	Memory switch.
S6104:	USB switch.
S6105:	Play/Pause (▶/) switch.
S6106:	Memory Rec switch.
S6107:	CD Open/Close switch.
S6200:	Manual EQ switch.
S6201:	Album/Track switch.
S6202:	BASS switch.
S6203:	Power (⏻/⏻) switch.
S6204:	Latin/Preset EQ switch.
S6205:	Superwoofer switch.
S6206:	Forward (▶▶ / ▶▶▶) switch.
S6207:	Rewind (◀◀ / ◀◀◀) switch.
S6208:	USB Rec switch.
S6800:	Illumination switch.
VR6100:	Volume Jog.
VR6200:	Control Jog.
VR6300:	Mic 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:

C5700, C5701, C5702, C5703, C5704, C5705, C5707, C5708

- **Resistor**

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

- **Capacitor**

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









- **Coil**

Unit of inductance is H, unless otherwise noted.

- *

REF IS FOR INDICATION ONLY.

- Voltage and signal line


	: +B signal line
	: -B signal line
	: CD Audio input signal line
	: Mic/Tuner/Music Port/AUX input signal line
	: Audio output signal line
	: USB signal line
	: AM signal line
	: FM signal line

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE F1 T10AH 250V FUSE



RISK OF FIRE-REPLACE FUSE AS MARKED.

FUSE CAUTION



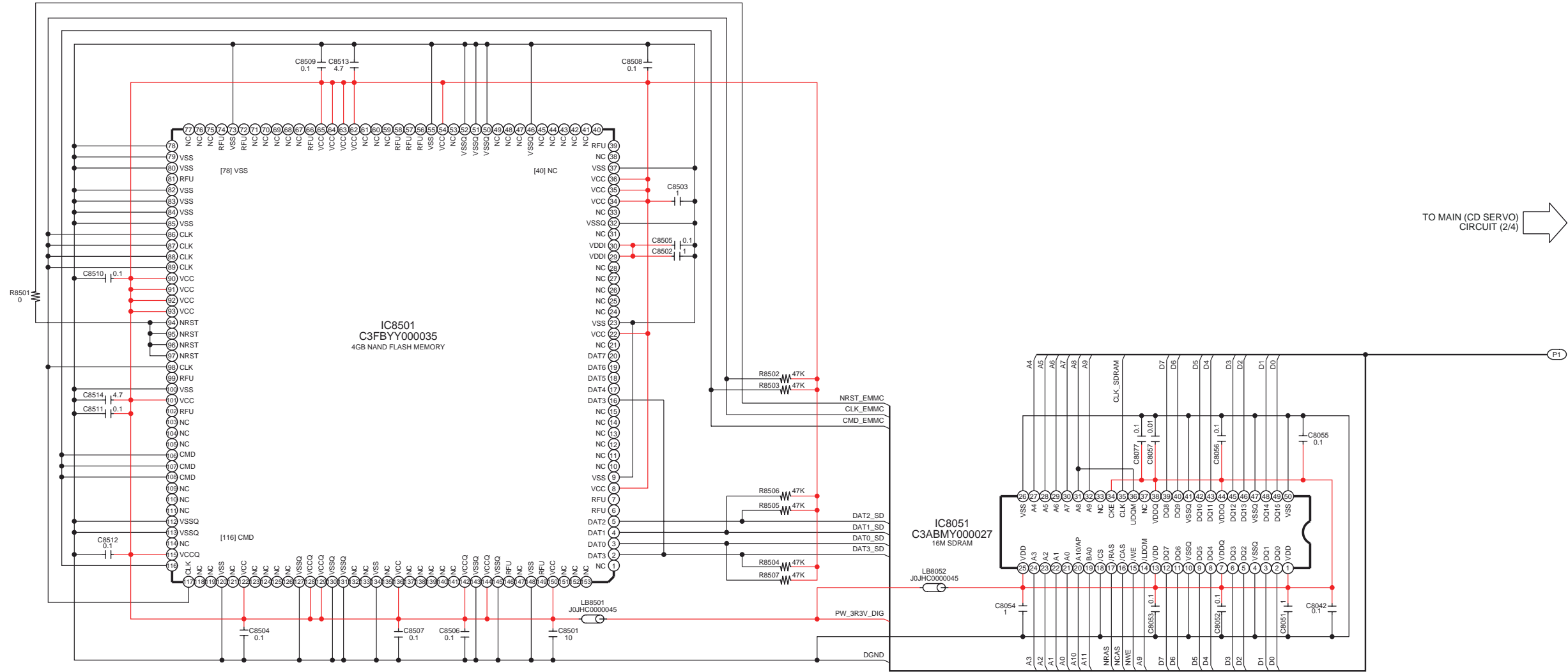
These symbols located near the fuse indicates that the fuse used is a fast operating type. For continued protection against fire hazard, replace with the same type fuse. For rating, refer to the marking adjacent to the symbol.


14.2. MAIN (CD Servo/Micon/Damp) Circuit


SCHEMATIC DIAGRAM - 1

A MAIN (CD SERVO) CIRCUIT

— : +B SIGNAL LINE  : CD AUDIO INPUT SIGNAL LINE  : AUDIO OUTPUT SIGNAL LINE  : USB SIGNAL LINE



TO MAIN (CD SERVO) CIRCUIT (2/4) 

 TO MAIN (CD SERVO) CIRCUIT (3/4)

MI: MAIN (MICON): SCHEMATIC DIAGRAM - 5 ~ 10
DA: MAIN (DAMP): SCHEMATIC DIAGRAM - 11 ~ 14

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

SA-MAX200PH MAIN (CD SERVO) CIRCUIT

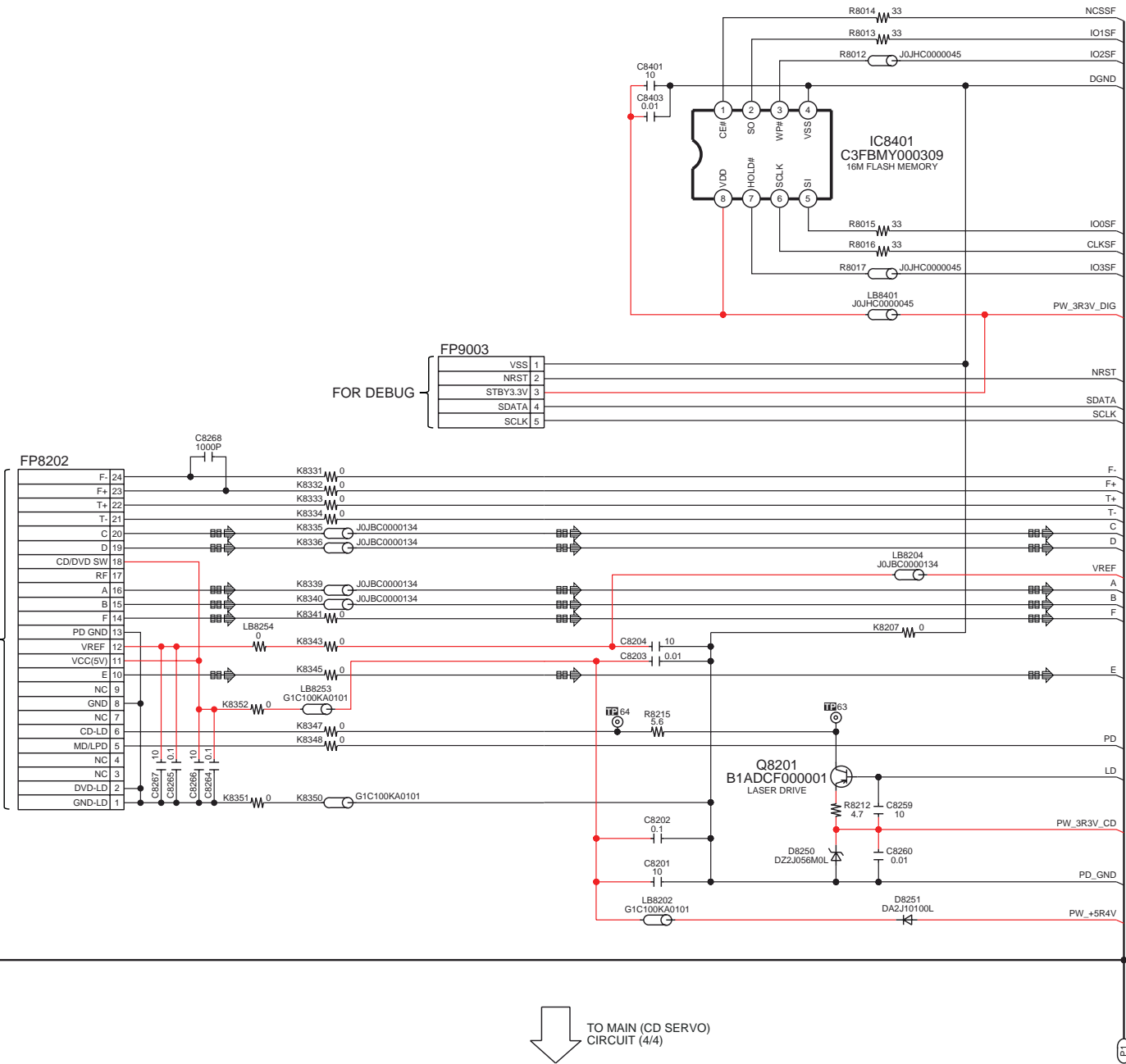
SCHEMATIC DIAGRAM - 2

A MAIN (CD SERVO) CIRCUIT

—: +B SIGNAL LINE : CD AUDIO INPUT SIGNAL LINE : AUDIO OUTPUT SIGNAL LINE : USB SIGNAL LINE

← TO MAIN (CD SERVO) CIRCUIT (1/4)

TO OPTICAL PICKUP UNIT
(CD MECHANISM UNIT BRS11C)



↓ TO MAIN (CD SERVO) CIRCUIT (4/4)

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

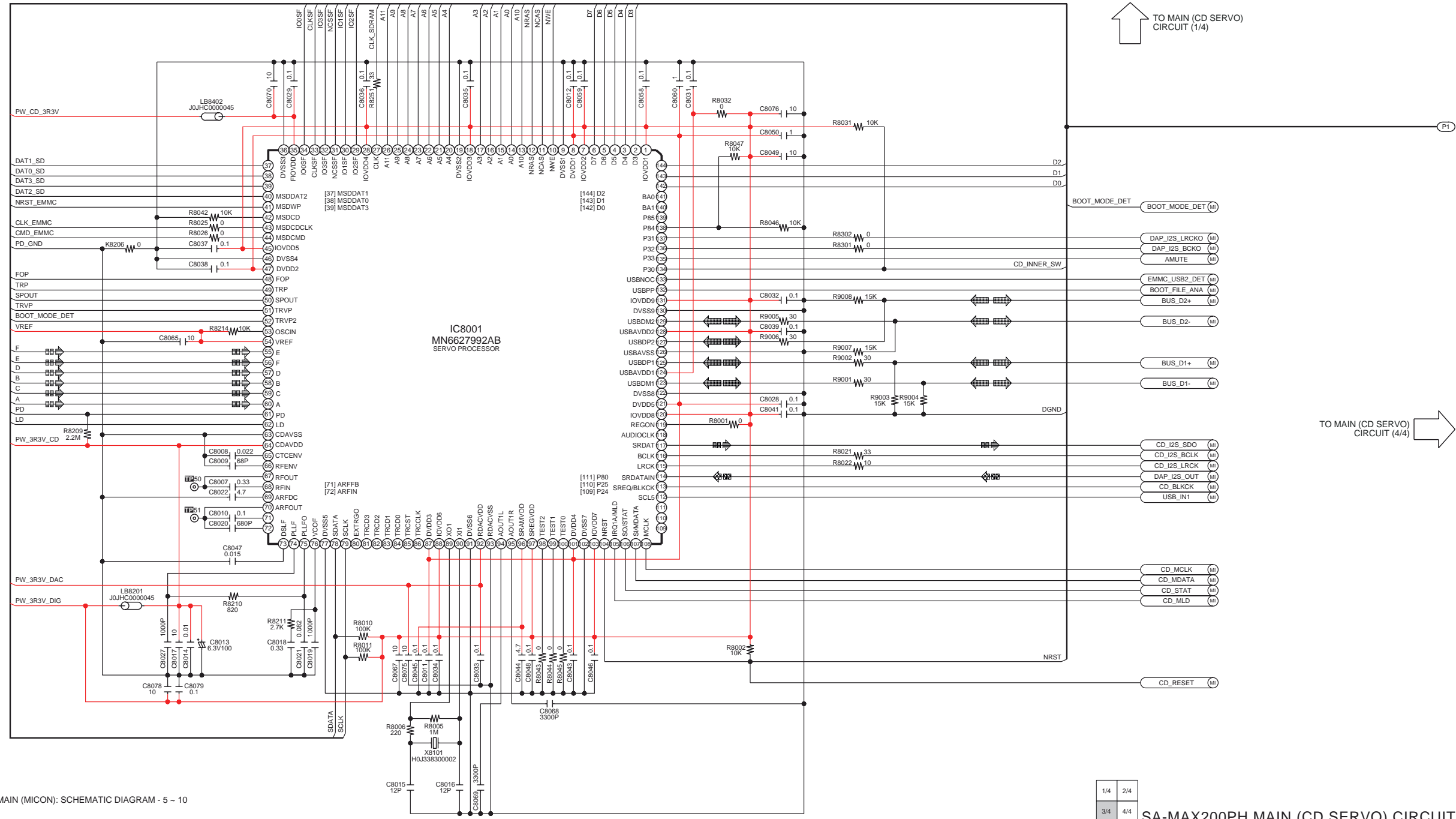
SA-MAX200PH MAIN (CD SERVO) CIRCUIT

A
B
C
D
E
F
G
H

SCHEMATIC DIAGRAM - 3

A MAIN (CD SERVO) CIRCUIT

—: +B SIGNAL LINE : CD AUDIO INPUT SIGNAL LINE : AUDIO OUTPUT SIGNAL LINE : USB SIGNAL LINE



↑ TO MAIN (CD SERVO) CIRCUIT (1/4)

→ TO MAIN (CD SERVO) CIRCUIT (4/4)

MI: MAIN (MICON): SCHEMATIC DIAGRAM - 5 ~ 10

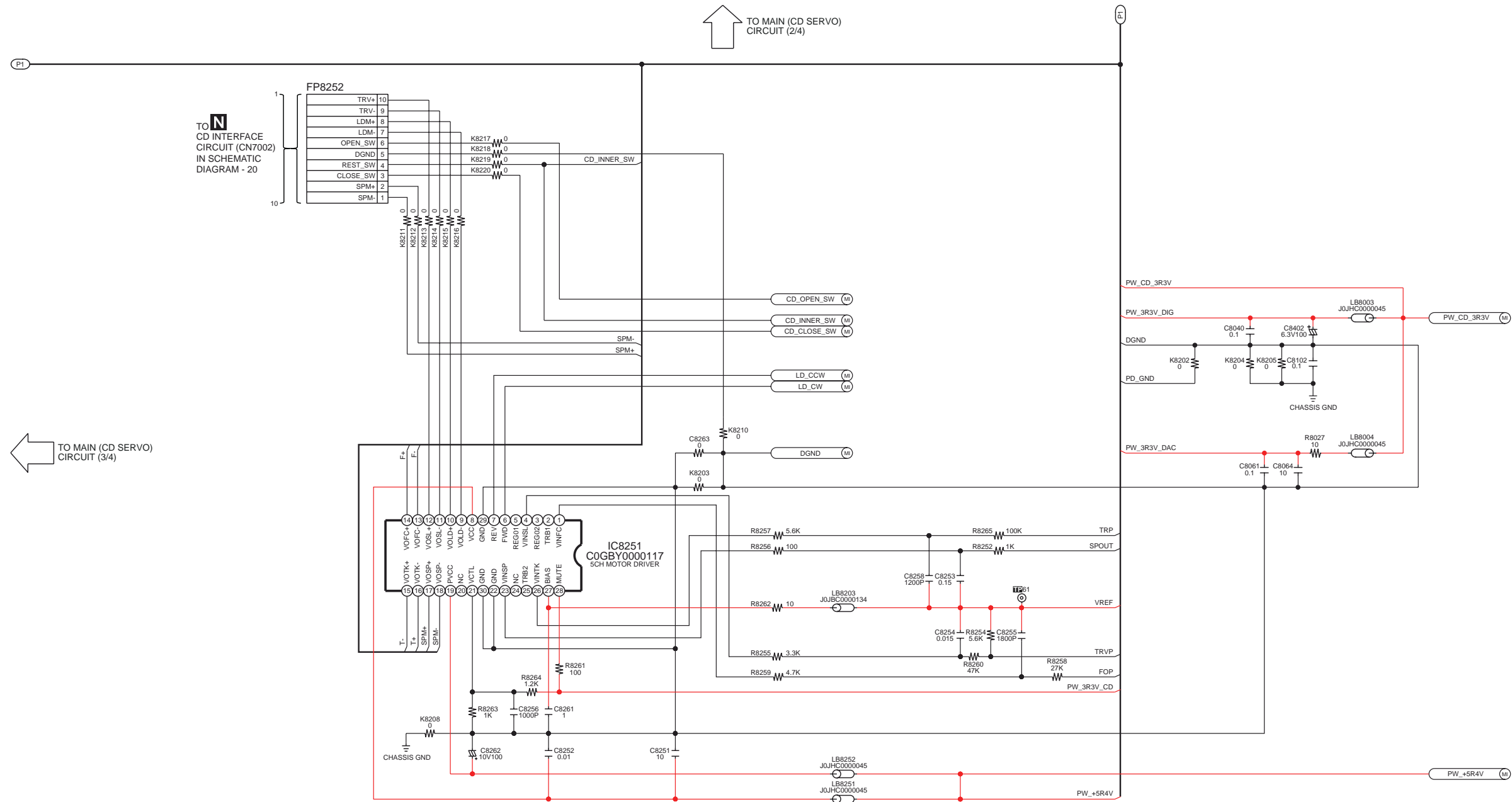
1/4	2/4
3/4	4/4

SA-MAX200PH MAIN (CD SERVO) CIRCUIT

SCHEMATIC DIAGRAM - 4

A MAIN (CD SERVO) CIRCUIT

— : +B SIGNAL LINE  : CD AUDIO INPUT SIGNAL LINE  : AUDIO OUTPUT SIGNAL LINE  : USB SIGNAL LINE



← TO MAIN (CD SERVO) CIRCUIT (3/4)

↑ TO MAIN (CD SERVO) CIRCUIT (2/4)

MI: MAIN (MICON): SCHEMATIC DIAGRAM - 5 - 10

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

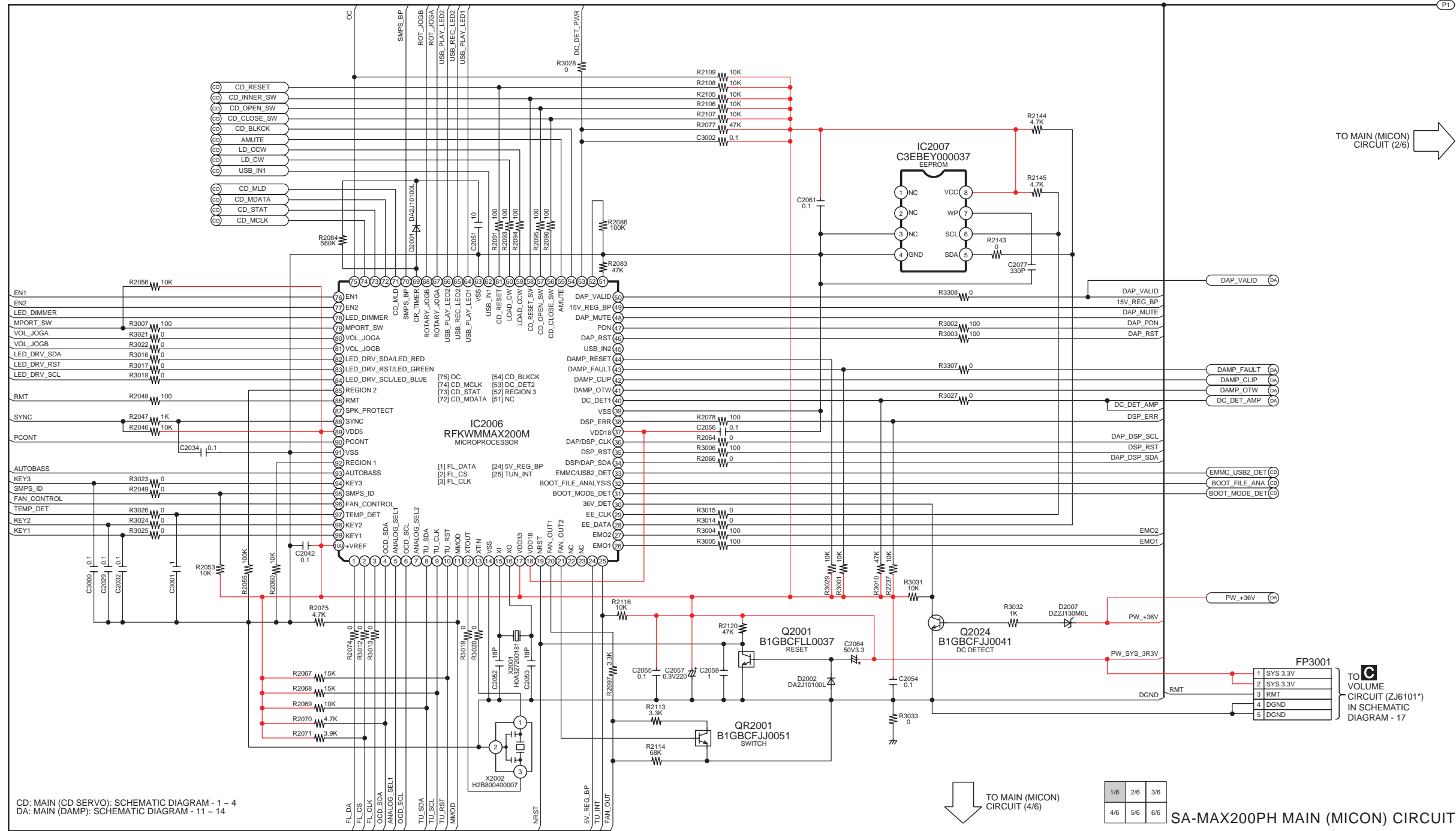
SA-MAX200PH MAIN (CD SERVO) CIRCUIT

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

SCHEMATIC DIAGRAM - 5

A MAIN (MICON) CIRCUIT

- : +B SIGNAL LINE
- : -B SIGNAL LINE
- ▬▬▬ : CD AUDIO INPUT SIGNAL LINE
- ▬▬▬ : MIC/TUNER/MUSIC PORT/AUX AUDIO INPUT SIGNAL LINE
- ⚡ : AUDIO OUTPUT SIGNAL LINE
- ⚡ : AM SIGNAL LINE
- ◻◻◻ : FM SIGNAL LINE
- ◻◻◻ : USB SIGNAL LINE



CD: MAIN (CD SERVO): SCHEMATIC DIAGRAM - 1 ~ 4
 DA: MAIN (DAMP): SCHEMATIC DIAGRAM - 11 ~ 14

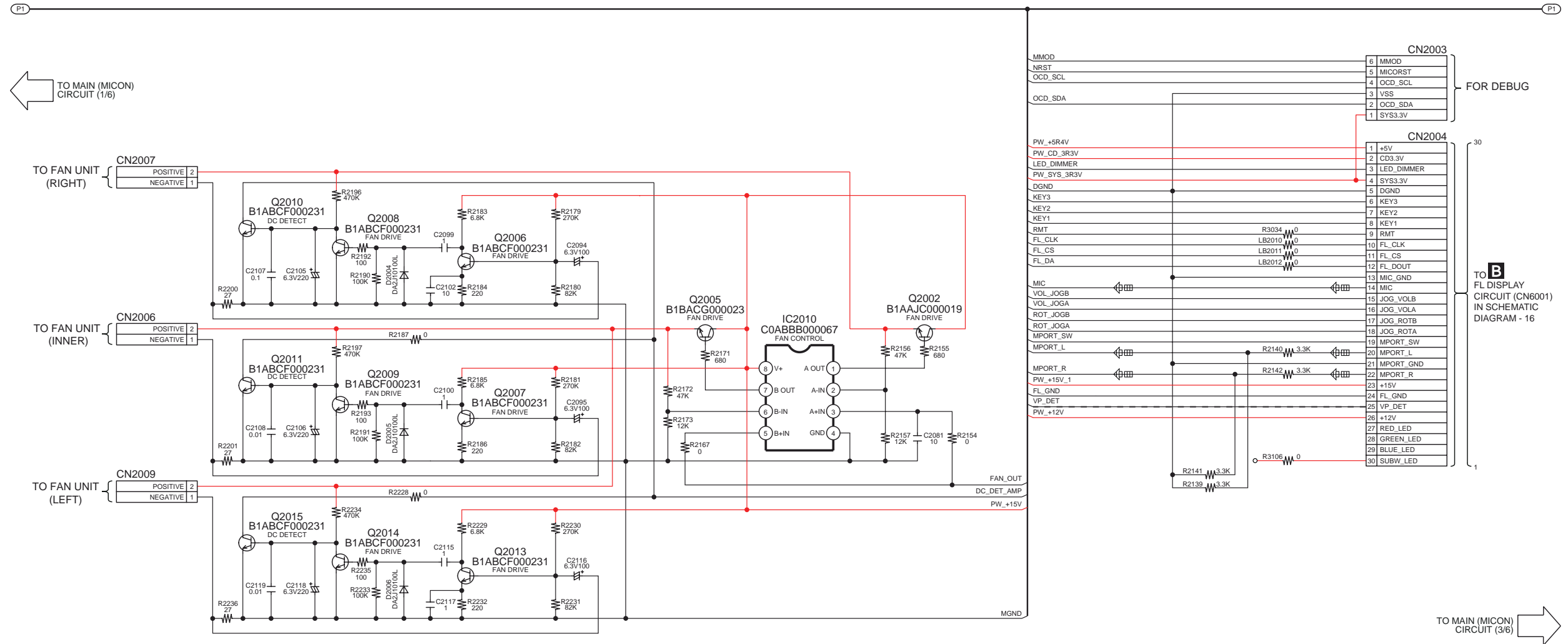
1/6	2/6	3/6
4/6	5/6	6/6

SA-MAX200PH MAIN (MICON) CIRCUIT

SCHEMATIC DIAGRAM - 6

A MAIN (MICON) CIRCUIT

- : +B SIGNAL LINE
- : -B SIGNAL LINE
- ⏏ : CD AUDIO INPUT SIGNAL LINE
- ⏏ : MIC/TUNER/MUSIC PORT/AUX AUDIO INPUT SIGNAL LINE
- ⏏ : AUDIO OUTPUT SIGNAL LINE
- ⏏ : AM SIGNAL LINE
- ⏏ : FM SIGNAL LINE
- ⏏ : USB SIGNAL LINE



CD: MAIN (CD SERVO): SCHEMATIC DIAGRAM - 1 ~ 4
 DA: MAIN (DAMP): SCHEMATIC DIAGRAM - 11 ~ 14

TO MAIN (MICON)
 CIRCUIT (5/6)

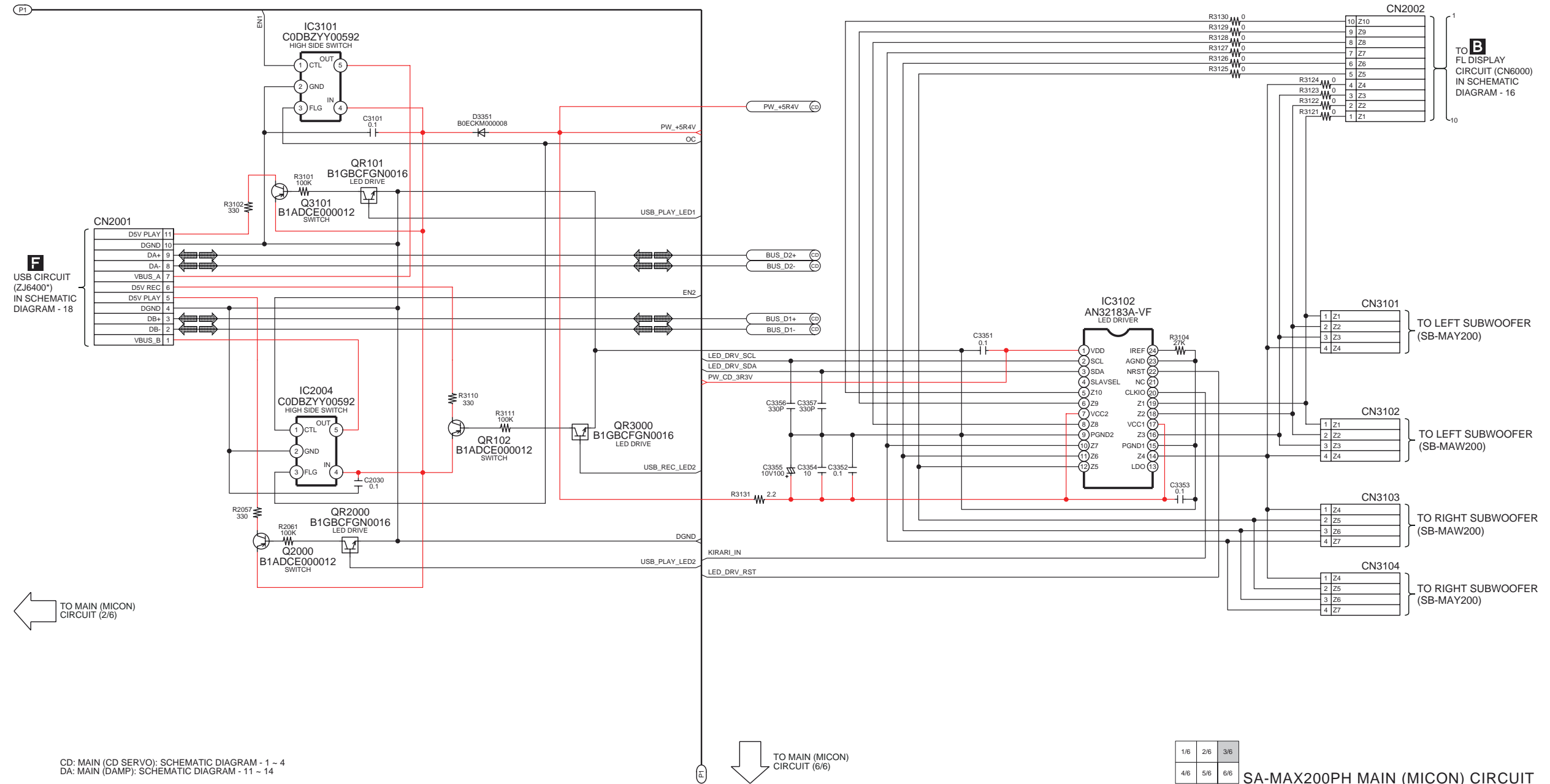
1/6	2/6	3/6
4/6	5/6	6/6

SA-MAX200PH MAIN (MICON) CIRCUIT

SCHEMATIC DIAGRAM - 7

A MAIN (MICON) CIRCUIT

— : +B SIGNAL LINE : CD AUDIO INPUT SIGNAL LINE : AUDIO OUTPUT SIGNAL LINE : FM SIGNAL LINE
— : -B SIGNAL LINE : MIC/TUNER/MUSIC PORT/AUX AUDIO INPUT SIGNAL LINE : AM SIGNAL LINE : USB SIGNAL LINE



F
USB CIRCUIT (ZJ6400*)
IN SCHEMATIC DIAGRAM - 18

B
TO FL DISPLAY CIRCUIT (CN6000)
IN SCHEMATIC DIAGRAM - 16

CN3101
TO LEFT SUBWOOFER (SB-MAY200)

CN3102
TO LEFT SUBWOOFER (SB-MAW200)

CN3103
TO RIGHT SUBWOOFER (SB-MAW200)

CN3104
TO RIGHT SUBWOOFER (SB-MAY200)

TO MAIN (MICON) CIRCUIT (2/6)

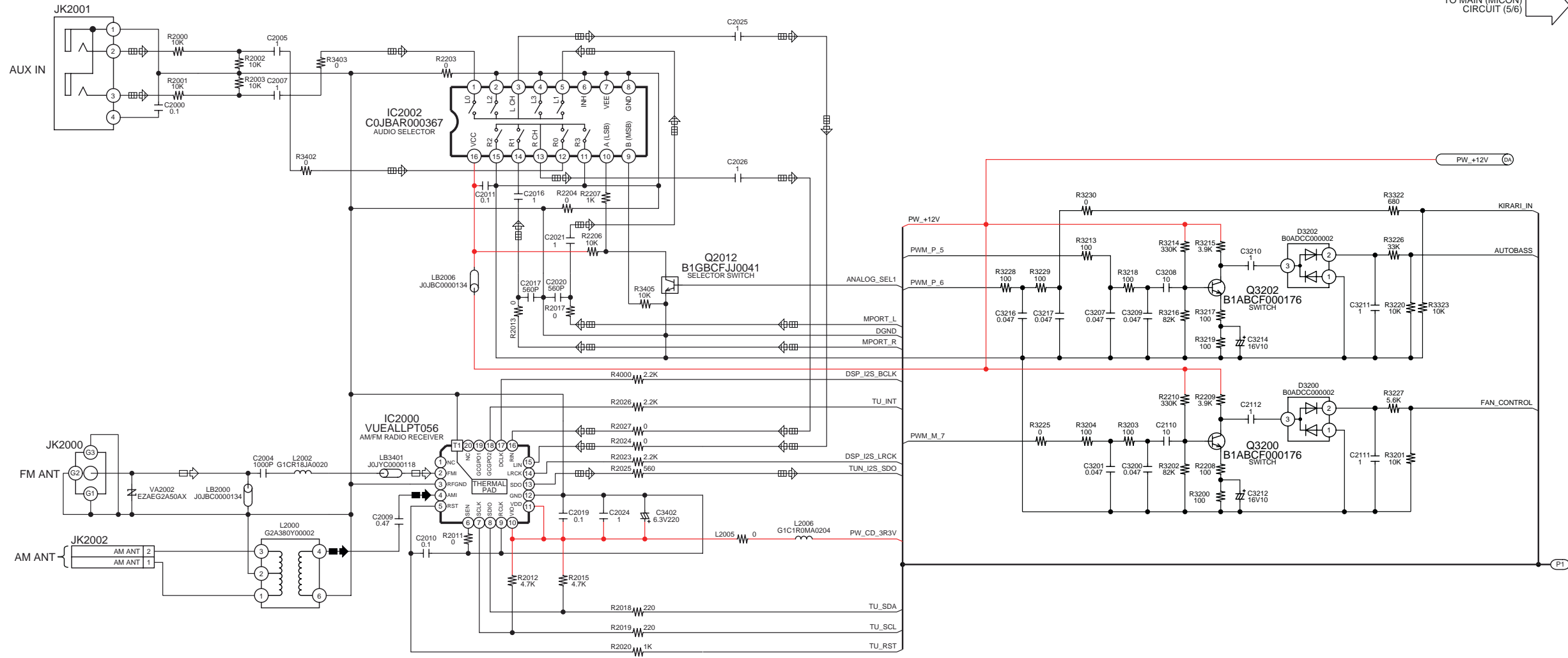
TO MAIN (MICON) CIRCUIT (6/6)

CD: MAIN (CD SERVO): SCHEMATIC DIAGRAM - 1 ~ 4
DA: MAIN (DAMP): SCHEMATIC DIAGRAM - 11 ~ 14

SCHEMATIC DIAGRAM - 8

A MAIN (MICON) CIRCUIT

- : +B SIGNAL LINE
- : -B SIGNAL LINE
- : CD AUDIO INPUT SIGNAL LINE
- : MIC/TUNER/MUSIC PORT/AUX AUDIO INPUT SIGNAL LINE
- : AUDIO OUTPUT SIGNAL LINE
- : AM SIGNAL LINE
- : FM SIGNAL LINE
- : USB SIGNAL LINE



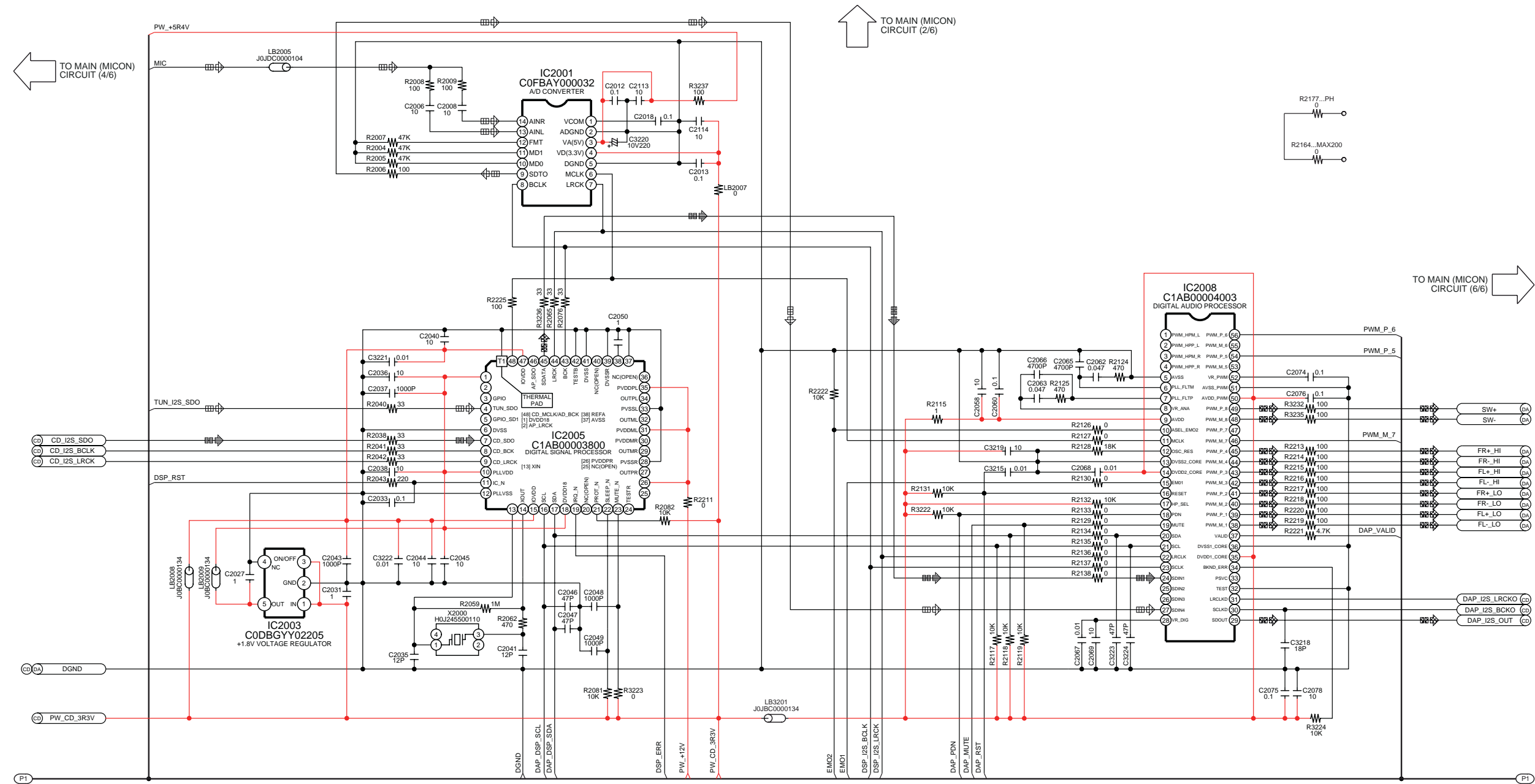
CD: MAIN (CD SERVO): SCHEMATIC DIAGRAM - 1 ~ 4
 DA: MAIN (DAMP): SCHEMATIC DIAGRAM - 11 ~ 14

1/6	2/6	3/6
4/6	5/6	6/6

SA-MAX200PH MAIN (MICON) CIRCUIT

SCHEMATIC DIAGRAM - 9

A MAIN (MICON) CIRCUIT



CD: MAIN (CD SERVO): SCHEMATIC DIAGRAM - 1 - 4
 DA: MAIN (DAMP): SCHEMATIC DIAGRAM - 11 - 14

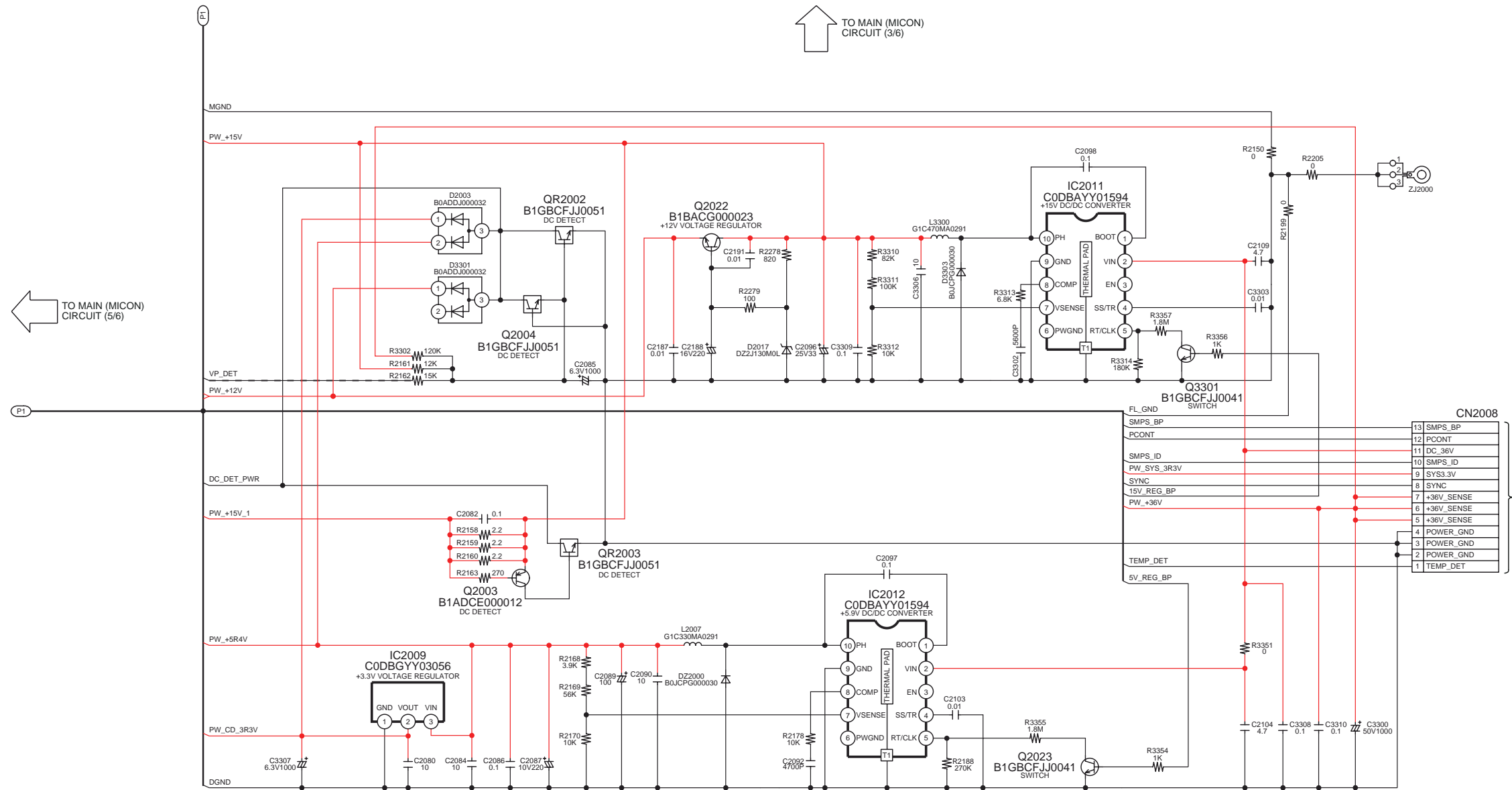
1/6	2/6	3/6
4/6	5/6	6/6

SA-MAX200PH MAIN (MICON) CIRCUIT

SCHEMATIC DIAGRAM - 10

A MAIN (MICON) CIRCUIT

- : +B SIGNAL LINE
- : -B SIGNAL LINE
- ⬆ : CD AUDIO INPUT SIGNAL LINE
- ⬆ : MIC/TUNER/MUSIC PORT/AUX AUDIO INPUT SIGNAL LINE
- ⬆ : AUDIO OUTPUT SIGNAL LINE
- ⬆ : AM SIGNAL LINE
- ⬆ : FM SIGNAL LINE
- ⬆ : USB SIGNAL LINE



TO MAIN (MICON) CIRCUIT (5/6)

TO MAIN (MICON) CIRCUIT (3/6)

TO **J** SMPS CIRCUIT (CN5802) IN SCHEMATIC DIAGRAM - 21

CD: MAIN (CD SERVO): SCHEMATIC DIAGRAM - 1 ~ 4
DA: MAIN (DAMP): SCHEMATIC DIAGRAM - 11 ~ 14

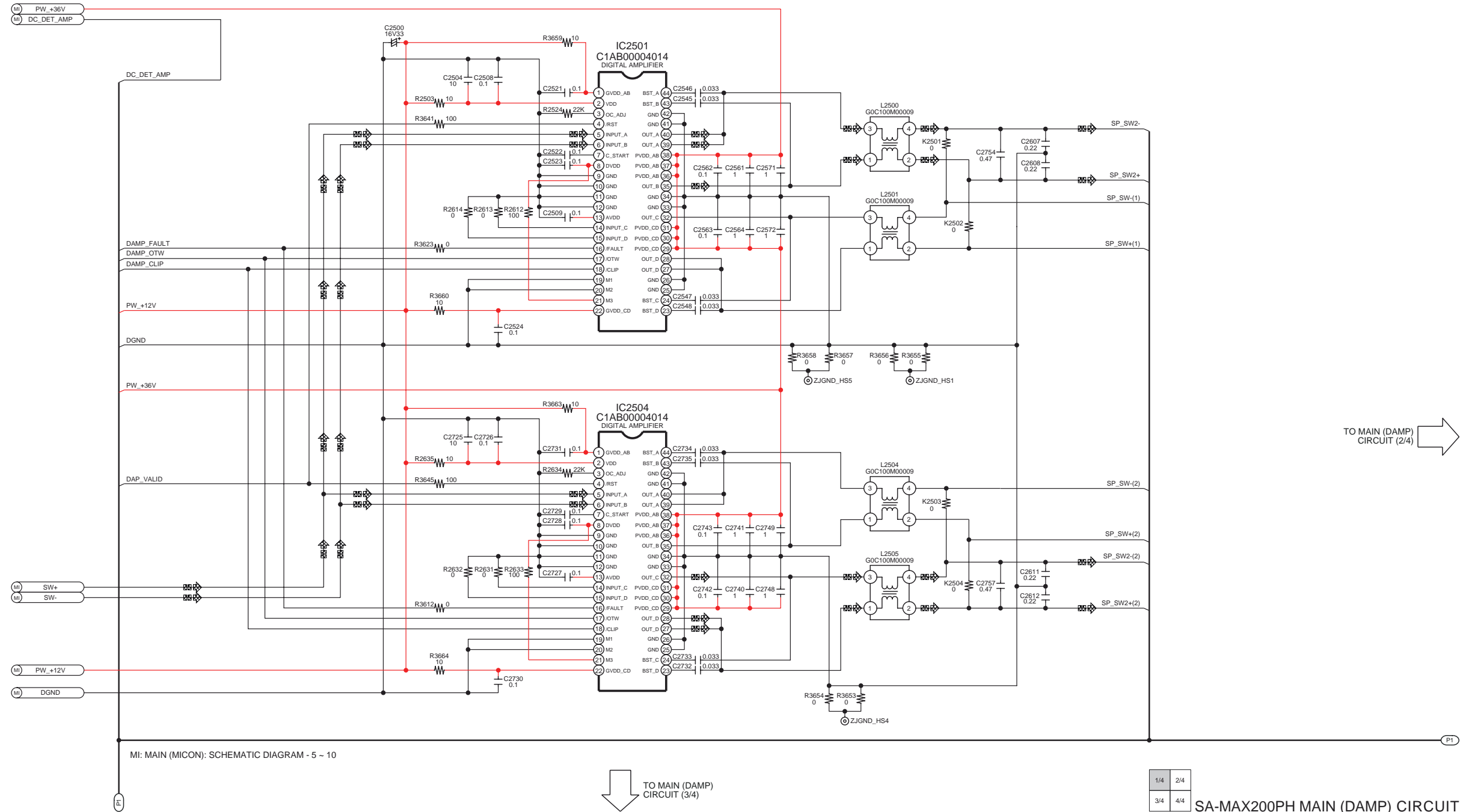
1/6	2/6	3/6
4/6	5/6	6/6

SA-MAX200PH MAIN (MICON) CIRCUIT

SCHEMATIC DIAGRAM - 11

A MAIN (DAMP) CIRCUIT

—: +B SIGNAL LINE : AUDIO OUTPUT SIGNAL LINE




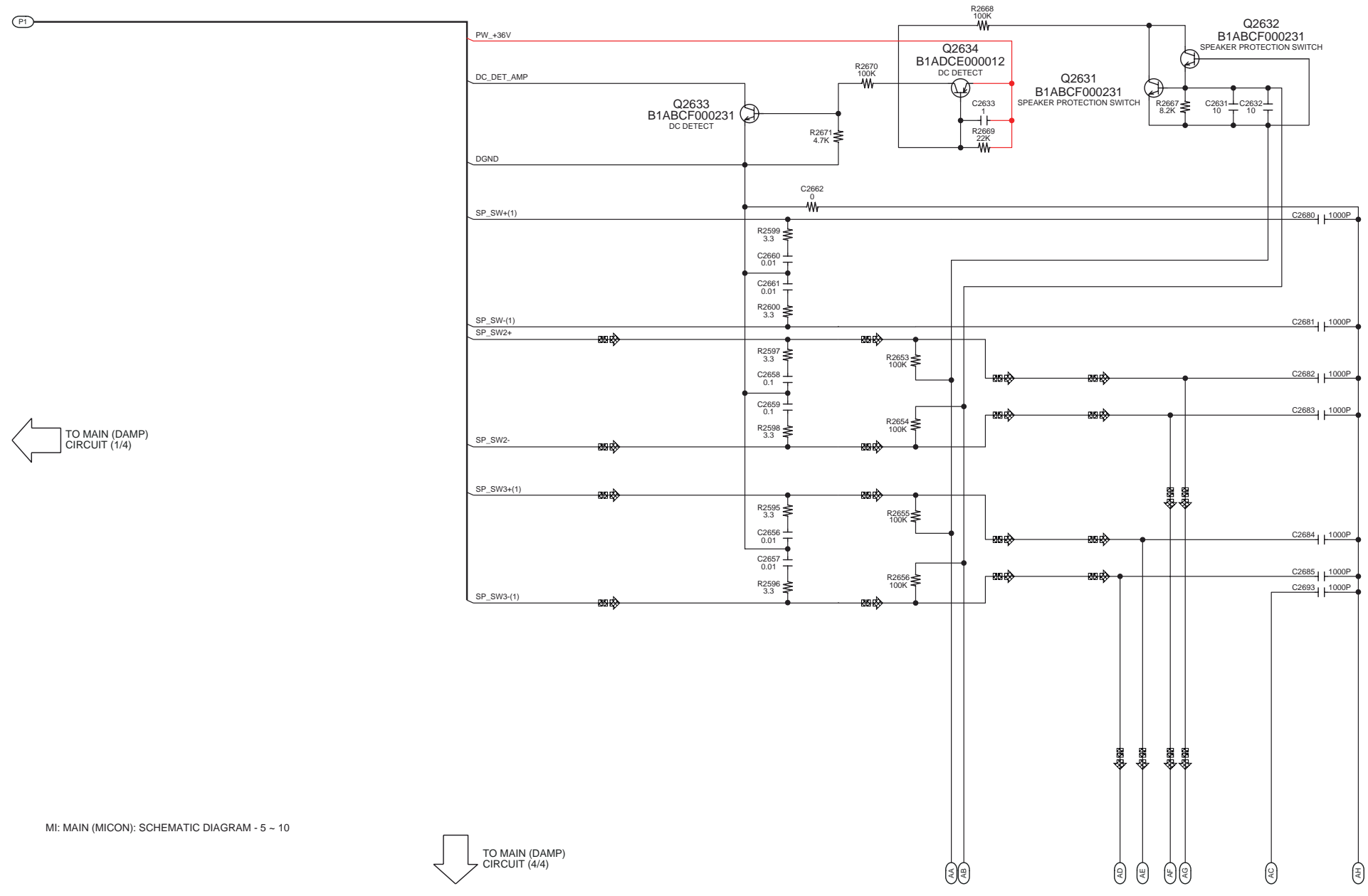
1/4	2/4
3/4	4/4

SA-MAX200PH MAIN (DAMP) CIRCUIT

SCHEMATIC DIAGRAM - 12

A MAIN (DAMP) CIRCUIT

— : +B SIGNAL LINE  : AUDIO OUTPUT SIGNAL LINE



← TO MAIN (DAMP) CIRCUIT (1/4)

MI: MAIN (MICON); SCHEMATIC DIAGRAM - 5 - 10

↓ TO MAIN (DAMP) CIRCUIT (4/4)


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

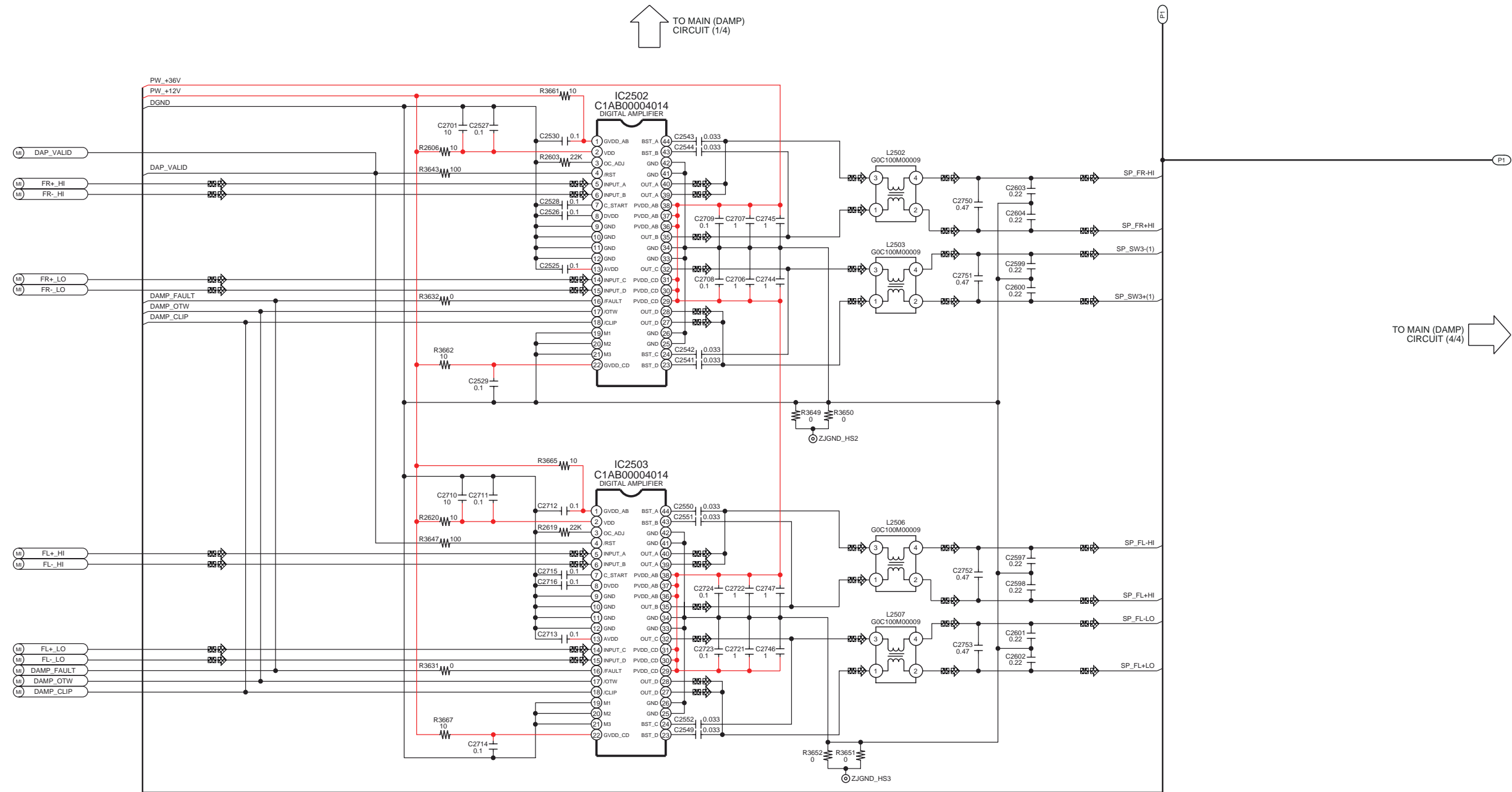
SA-MAX200PH MAIN (DAMP) CIRCUIT

A
B
C
D
E
F
G
H

SCHEMATIC DIAGRAM - 13

A MAIN (DAMP) CIRCUIT

— : +B SIGNAL LINE  : AUDIO OUTPUT SIGNAL LINE



↑ TO MAIN (DAMP) CIRCUIT (1/4)

→ TO MAIN (DAMP) CIRCUIT (4/4)

MI: MAIN (MICON); SCHEMATIC DIAGRAM - 5 - 10


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

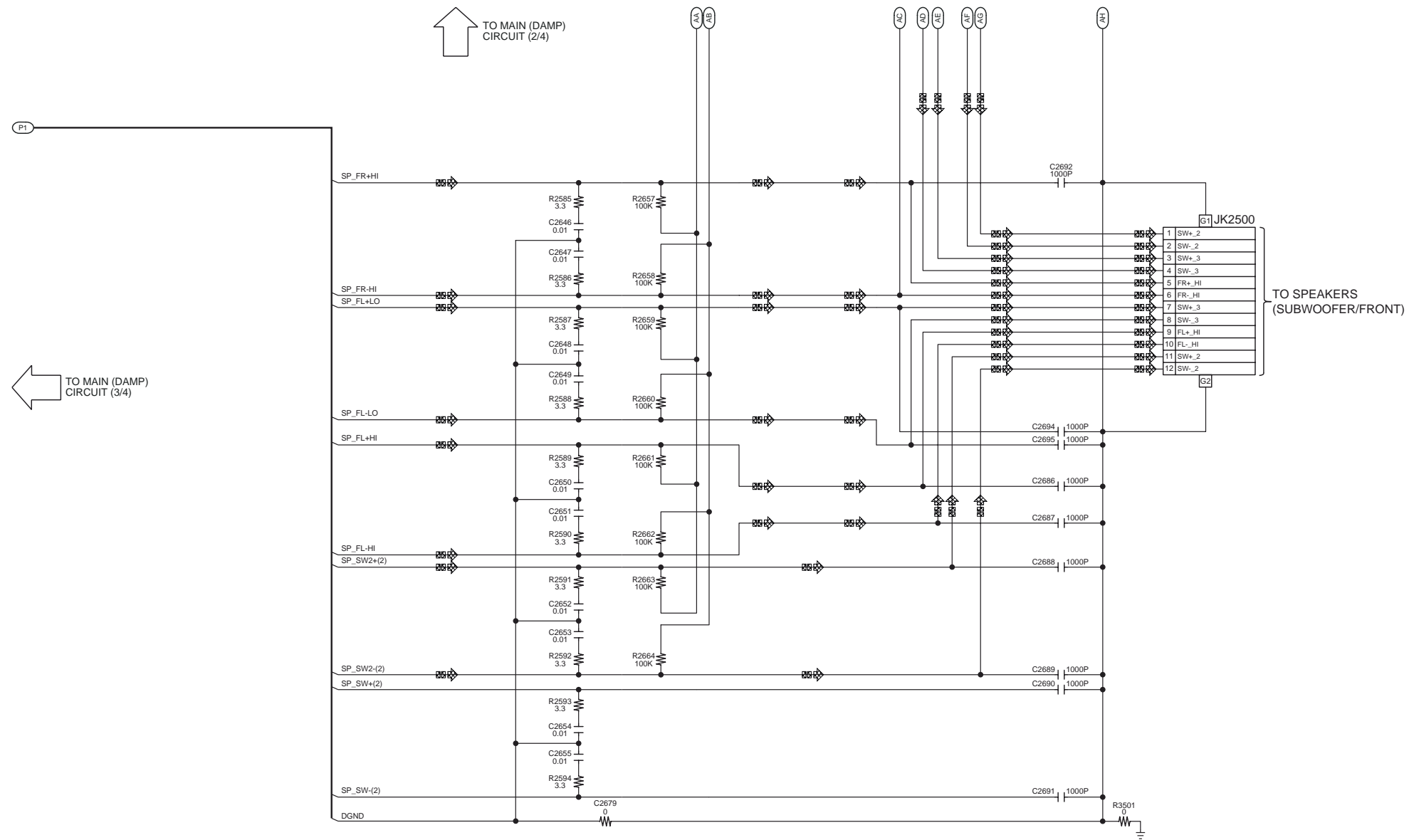
SA-MAX200PH MAIN (DAMP) CIRCUIT

1 2 3 4 5 6 7 8 9 10 11 12 13 14

SCHEMATIC DIAGRAM - 14

A MAIN (DAMP) CIRCUIT

— : +B SIGNAL LINE  : AUDIO OUTPUT SIGNAL LINE



← TO MAIN (DAMP) CIRCUIT (3/4)

↑ TO MAIN (DAMP) CIRCUIT (2/4)

TO SPEAKERS (SUBWOOFER/FRONT)

MI: MAIN (MICON): SCHEMATIC DIAGRAM - 5 - 10

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

SA-MAX200PH MAIN (DAMP) CIRCUIT

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

14.3. FL Display Circuit

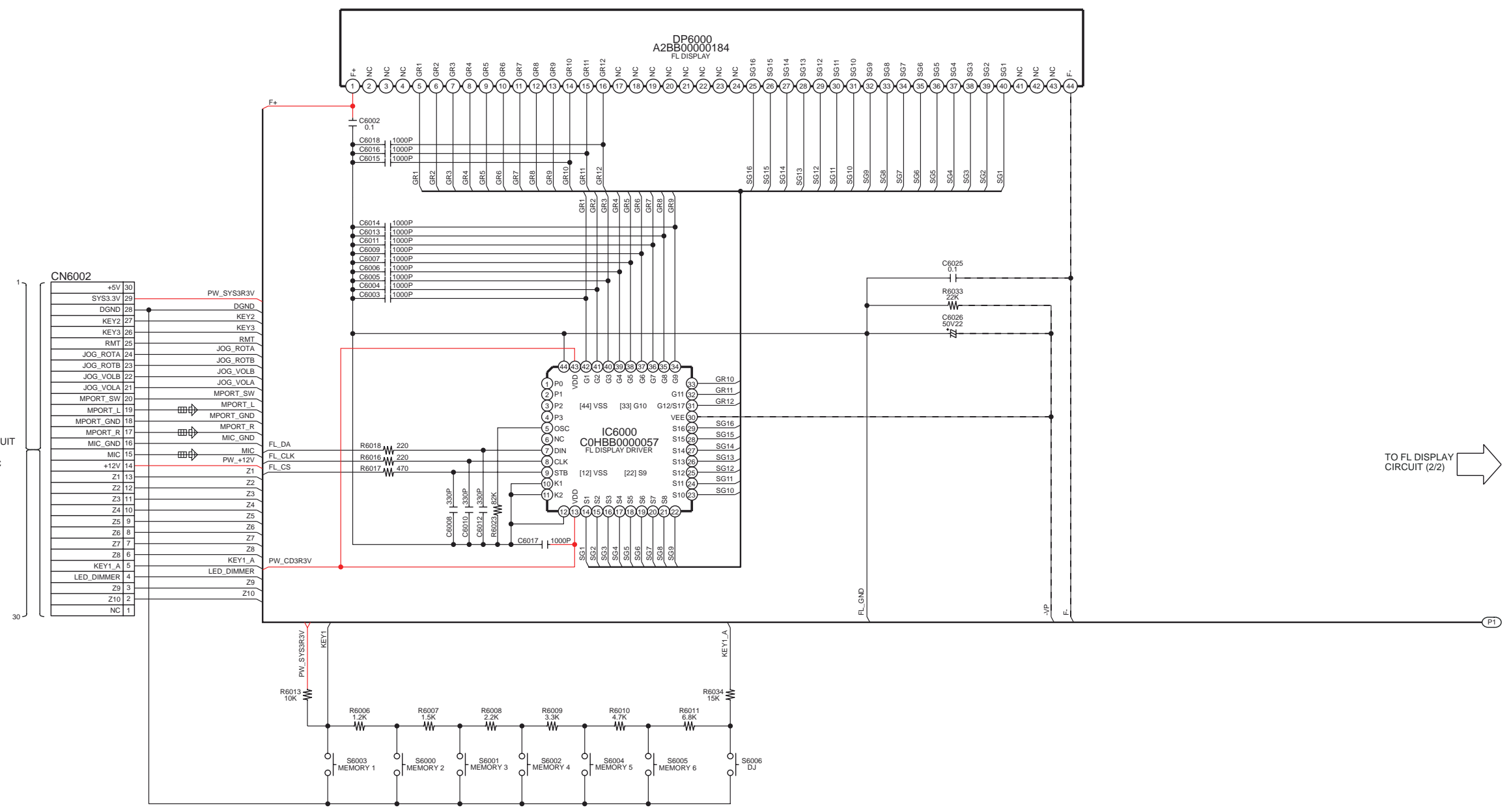
SCHEMATIC DIAGRAM - 15

B FL DISPLAY CIRCUIT

— : +B SIGNAL LINE - - - : -B SIGNAL LINE : MIC/MUSIC PORT AUDIO INPUT SIGNAL LINE

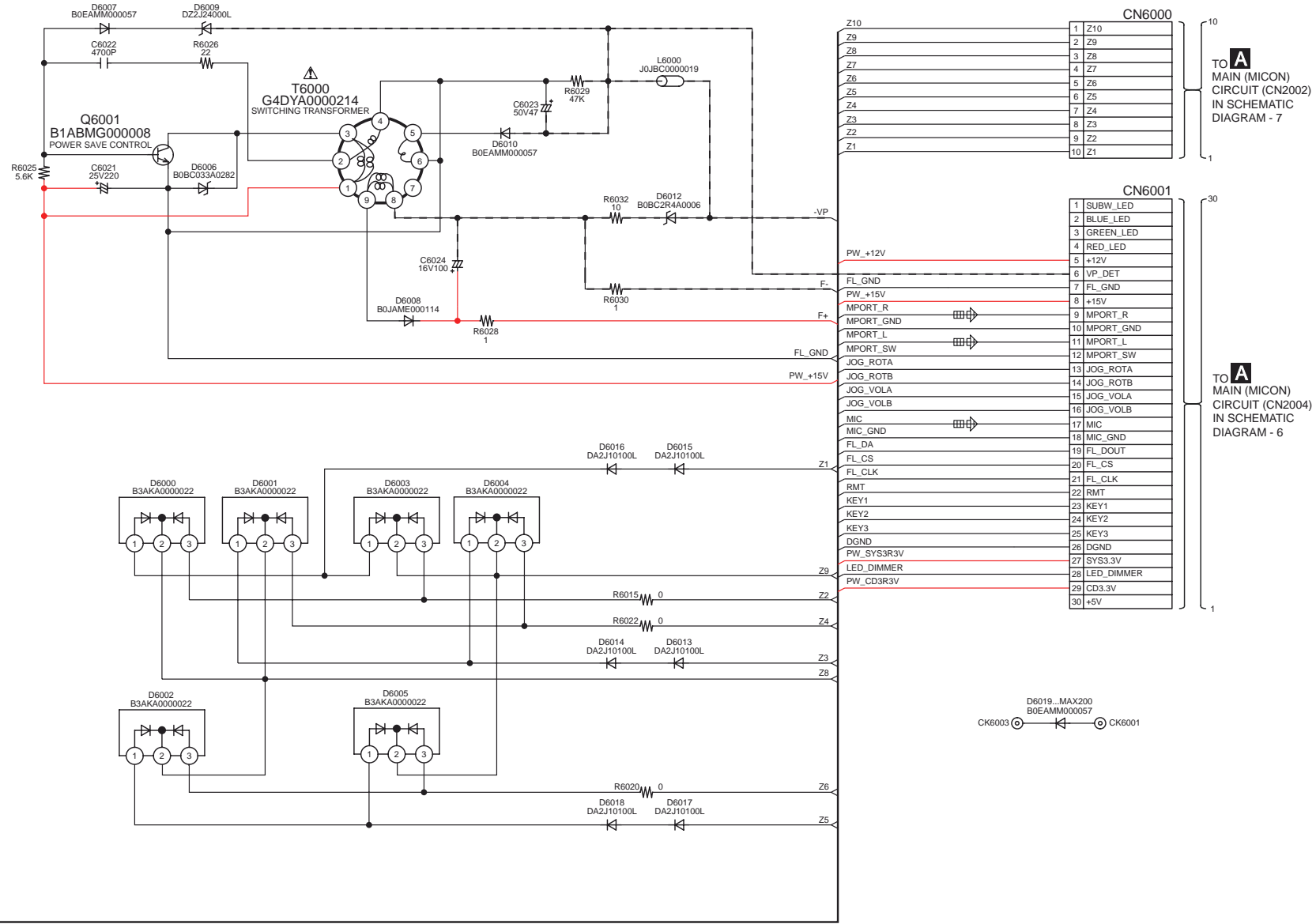
TO VOLUME CIRCUIT (CN6102) IN SCHEMATIC DIAGRAM - 17

TO FL DISPLAY CIRCUIT (2/2)



SCHEMATIC DIAGRAM - 16
B FL DISPLAY CIRCUIT

—+ : +B SIGNAL LINE —- : -B SIGNAL LINE  : MIC/MUSIC PORT AUDIO INPUT SIGNAL LINE

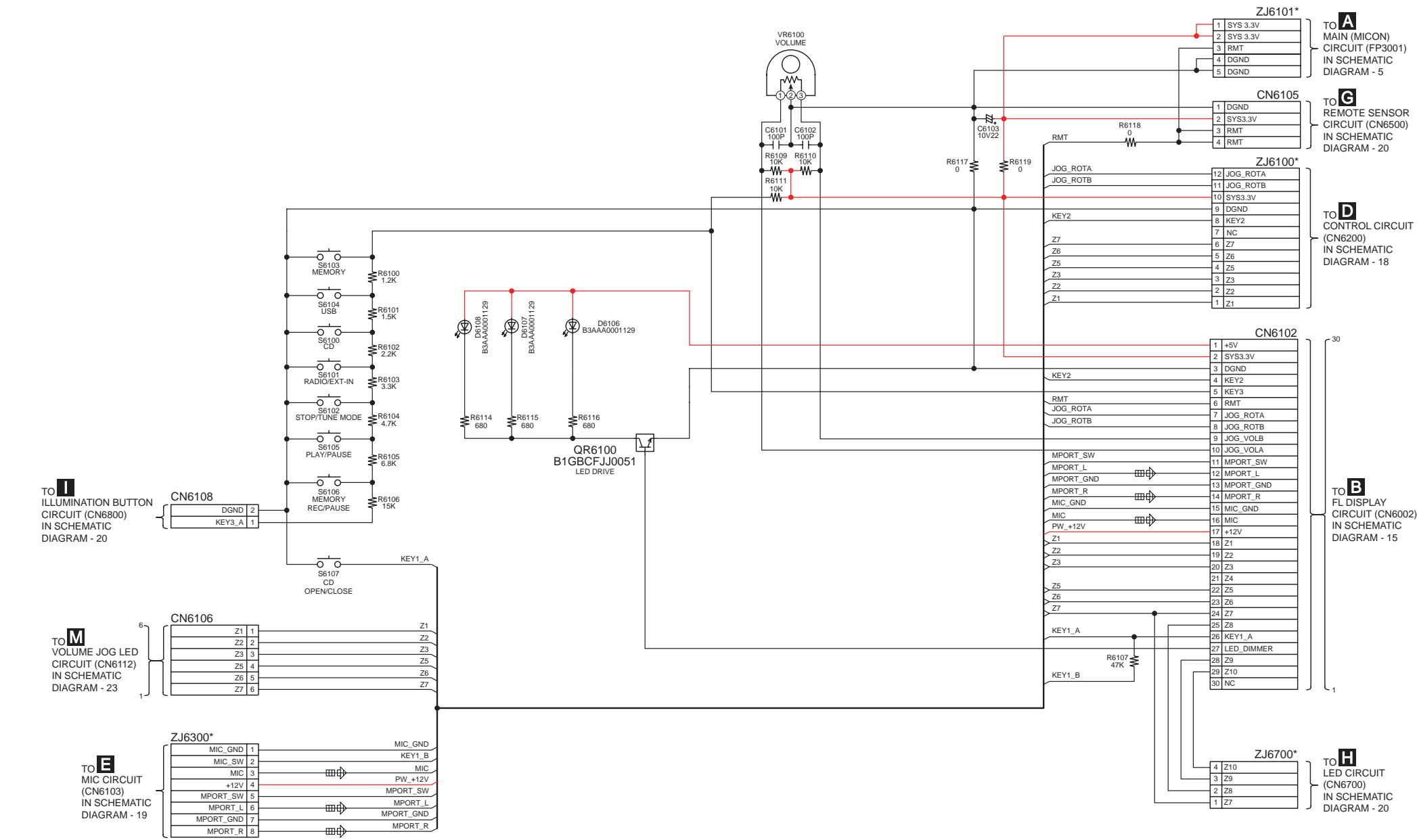


← TO FL DISPLAY CIRCUIT (1/2)

14.4. Volume Circuit

SCHMATIC DIAGRAM - 17
C VOLUME CIRCUIT

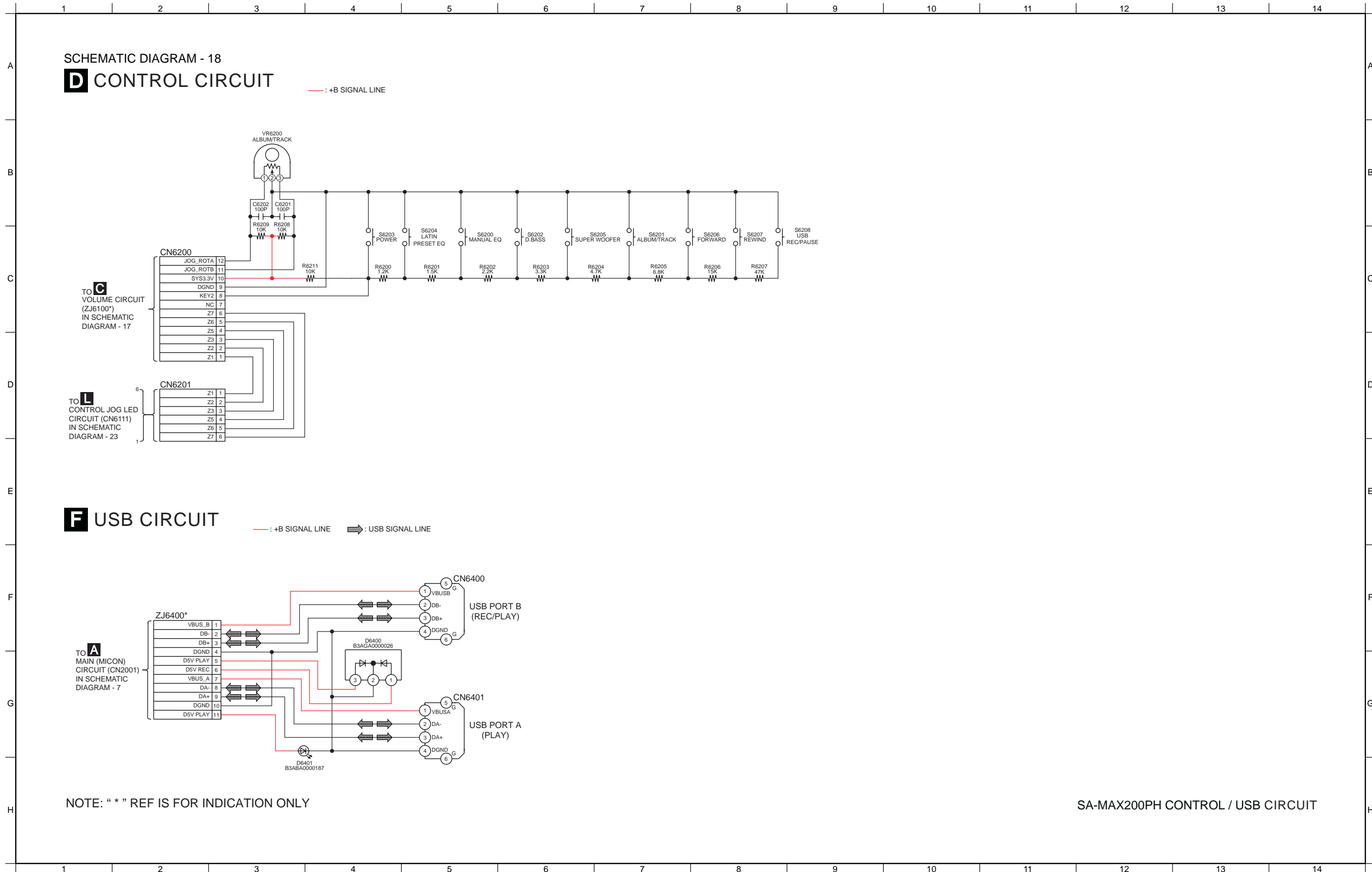
—: +B SIGNAL LINE : MIC/MUSIC PORT AUDIO INPUT SIGNAL LINE



NOTE: " * " REF IS FOR INDICATION ONLY

SA-MAX200PH VOLUME CIRCUIT

14.5. Control & USB Circuit

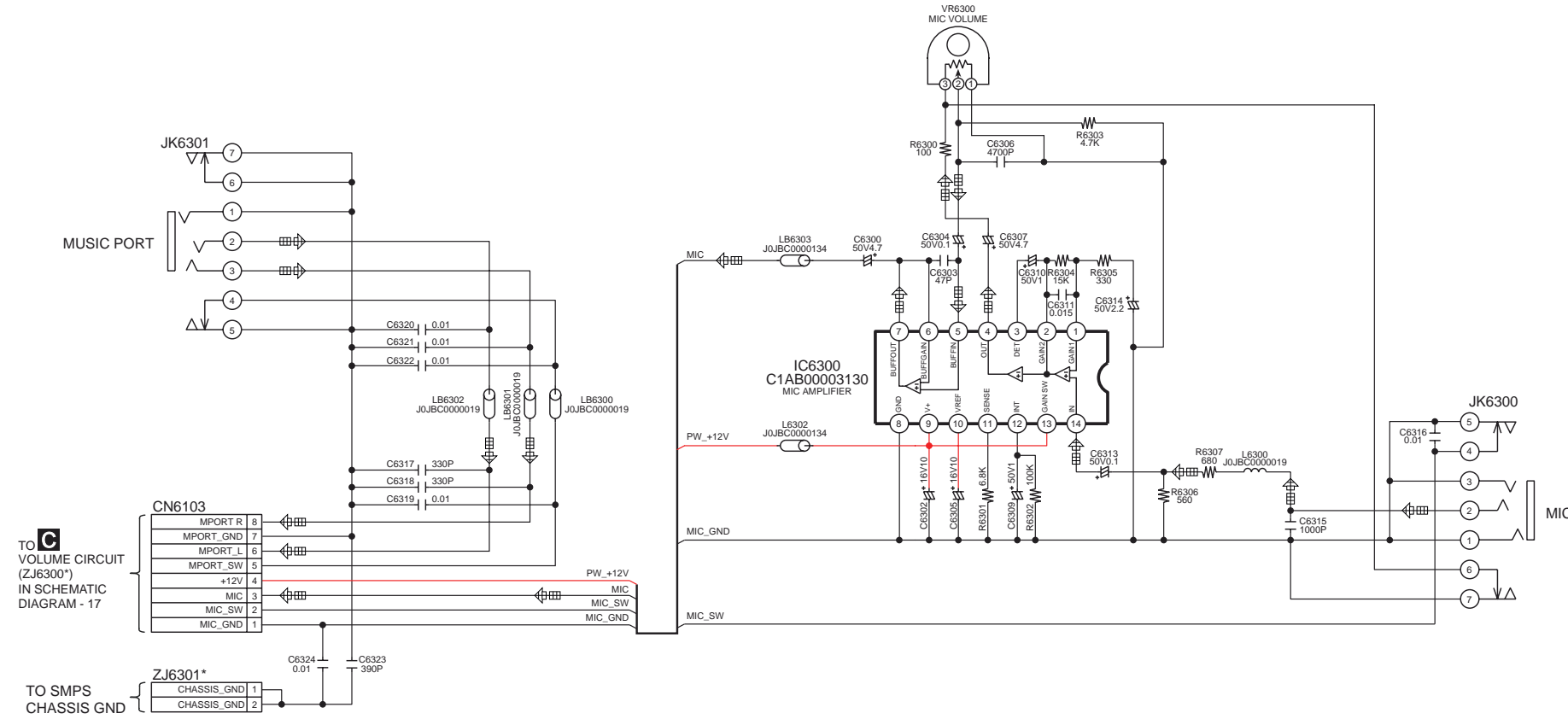


14.6. Mic Circuit

SCHEMATIC DIAGRAM - 19

E MIC CIRCUIT

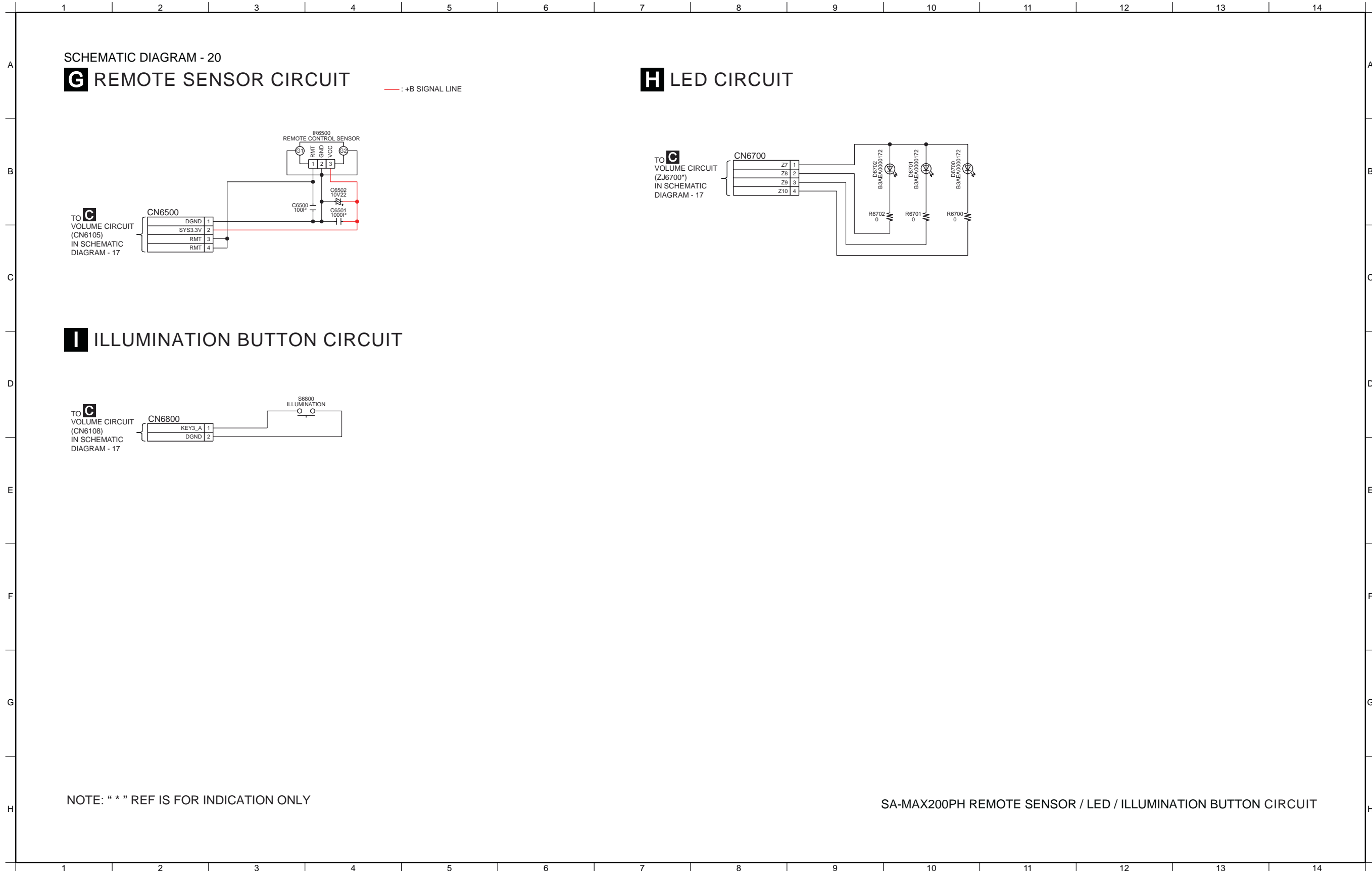
— : +B SIGNAL LINE : MIC/MUSIC PORT AUDIO INPUT SIGNAL LINE



NOTE: " * " REF IS FOR INDICATION ONLY

SA-MAX200PH MIC CIRCUIT

14.7. Remote Sensor, LED & Illumination Button Circuit



14.8. SMPS Circuit

SCHMATIC DIAGRAM - 21
J SMPS CIRCUIT

--- : +B SIGNAL LINE

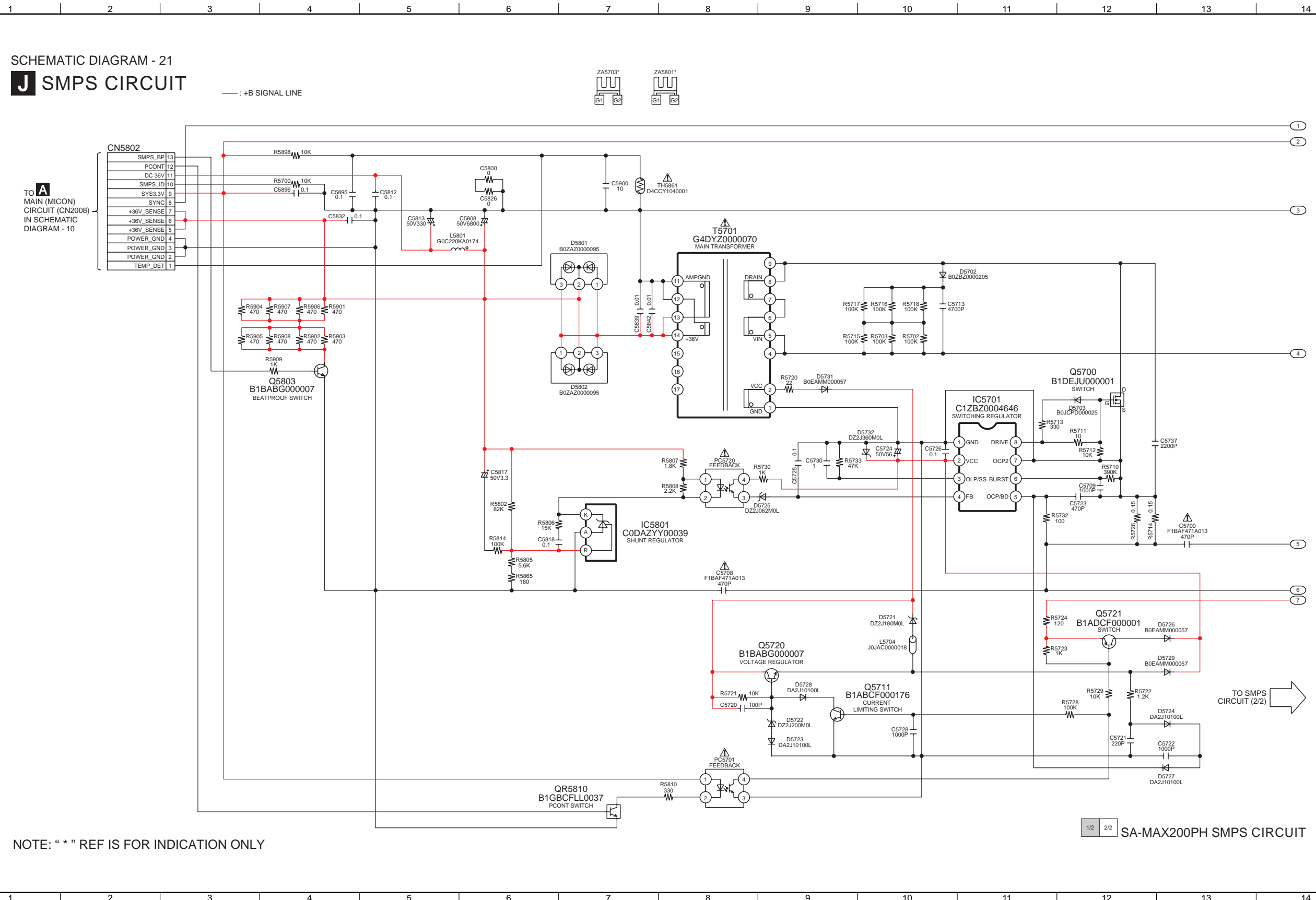
CN5802

SMPS_BP	13
PCONT	12
DC 36V	11
SMPS_ID	10
SYS3.3V	9
SYNC	8
+36V_SENSE	7
+36V_SENSE	6
+36V_SENSE	5
POWER_GND	4
POWER_GND	3
POWER_GND	2
TEMP_DET	1

TO **A**
 MAIN (MICON)
 CIRCUIT (CN2008)
 IN SCHEMATIC
 DIAGRAM - 10

NOTE: " * " REF IS FOR INDICATION ONLY

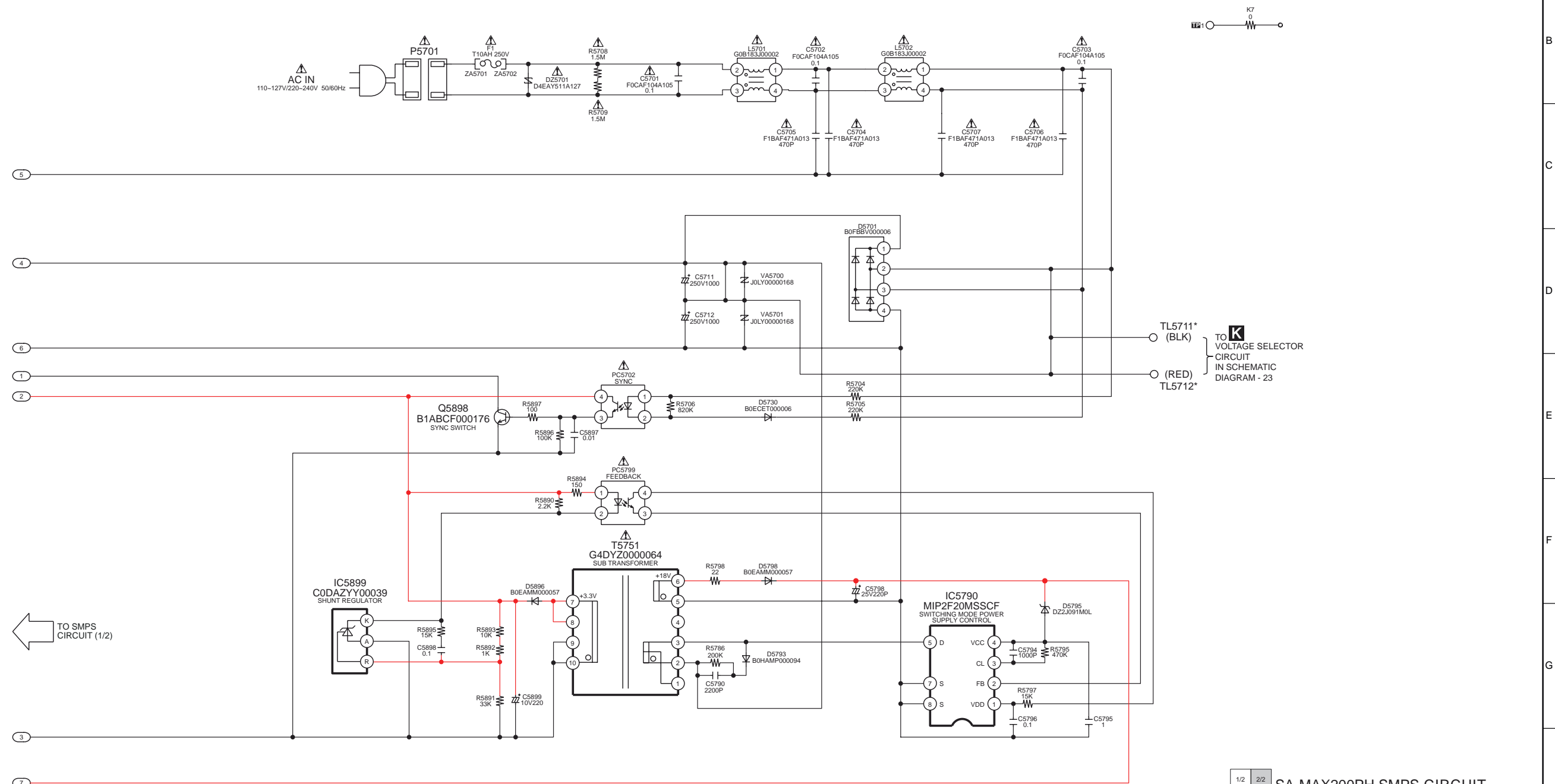
1/2 2/2 SA-MAX200PH SMPS CIRCUIT



TO SMPS
 CIRCUIT (2/2)

SCHMATIC DIAGRAM - 22
J SMPS CIRCUIT

— : +B SIGNAL LINE



← TO SMPS CIRCUIT (1/2)

TO VOLTAGE SELECTOR CIRCUIT IN SCHEMATIC DIAGRAM - 23

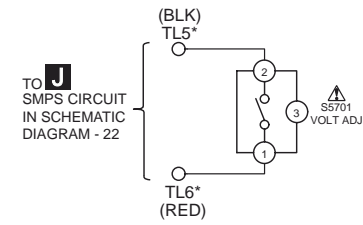
NOTE: "*" REF IS FOR INDICATION ONLY

1/2 2/2 SA-MAX200PH SMPS CIRCUIT

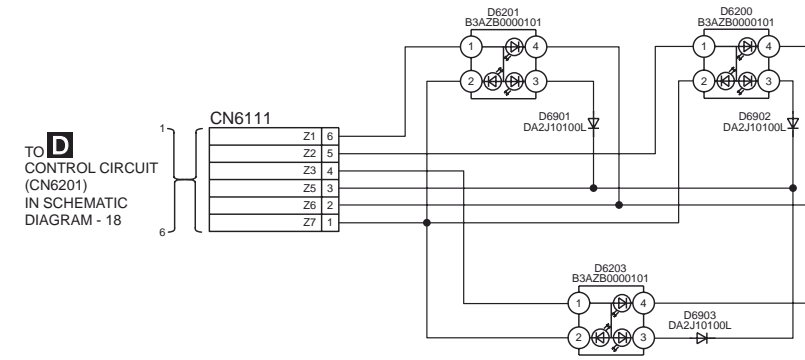
14.9. Voltage Selector, Control Jog LED, Volume Jog LED & CD Interface Circuit

SCHEMATIC DIAGRAM - 23

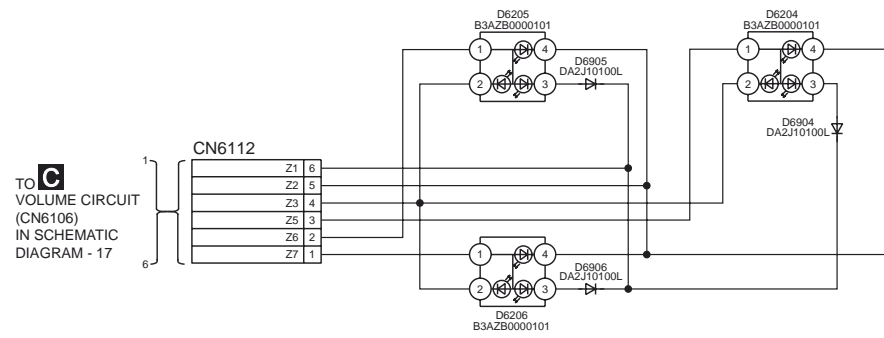
K VOLTAGE SELECTOR CIRCUIT



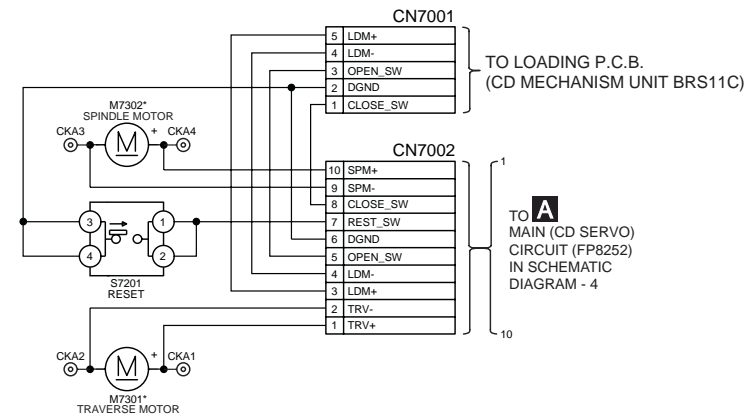
L CONTROL JOG LED CIRCUIT



M VOLUME JOG LED CIRCUIT



N CD INTERFACE CIRCUIT



SA-MAX200PH VOLTAGE SELECTOR / CONTROL JOG LED / VOLUME JOG LED / CD INTERFACE CIRCUIT

15 Printed Circuit Board

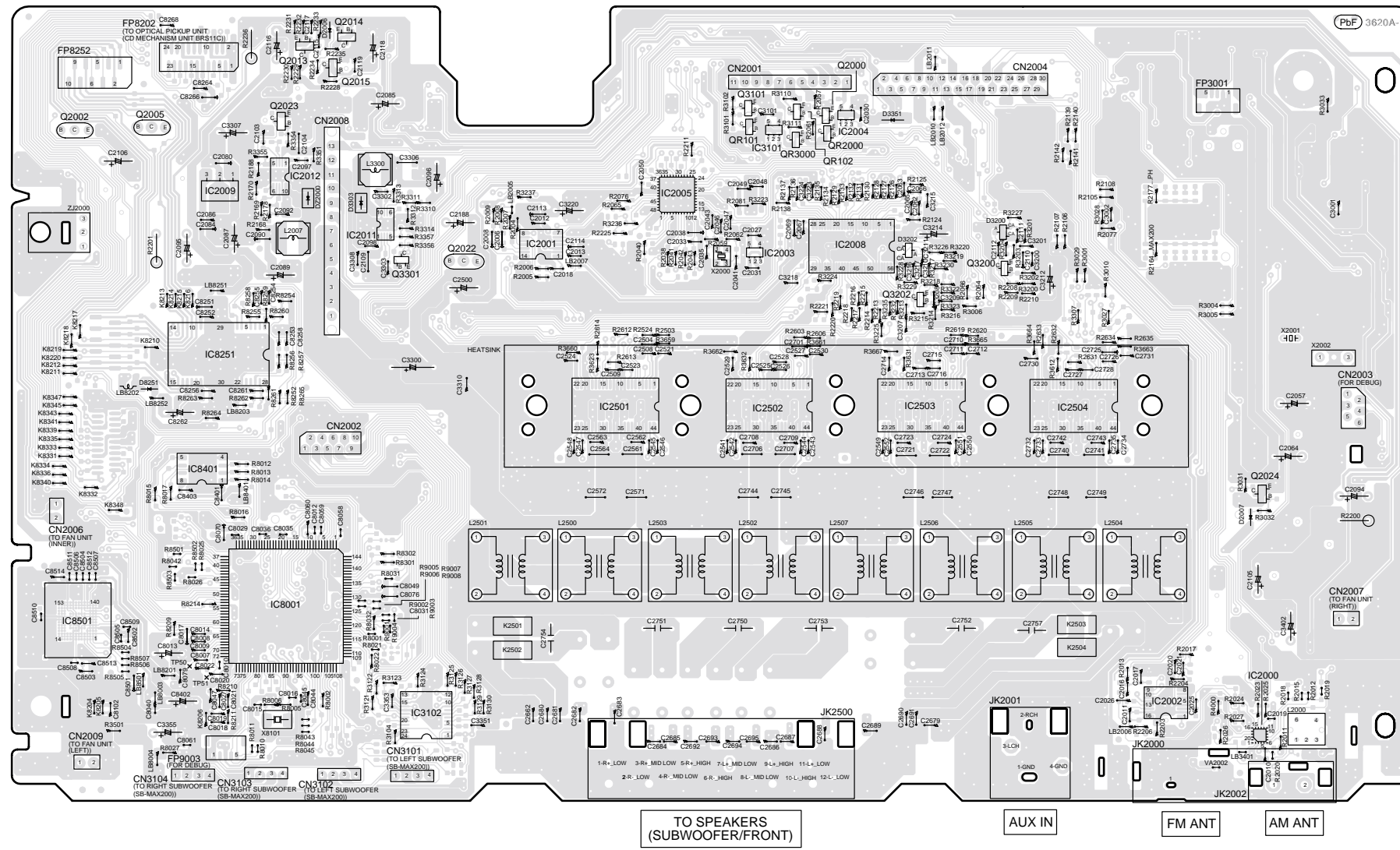
15.1. Main P.C.B.

A MAIN P.C.B. (REP4882B)



A MAIN P.C.B. (REP4882B)

H
G
F
E
D
C
B
A



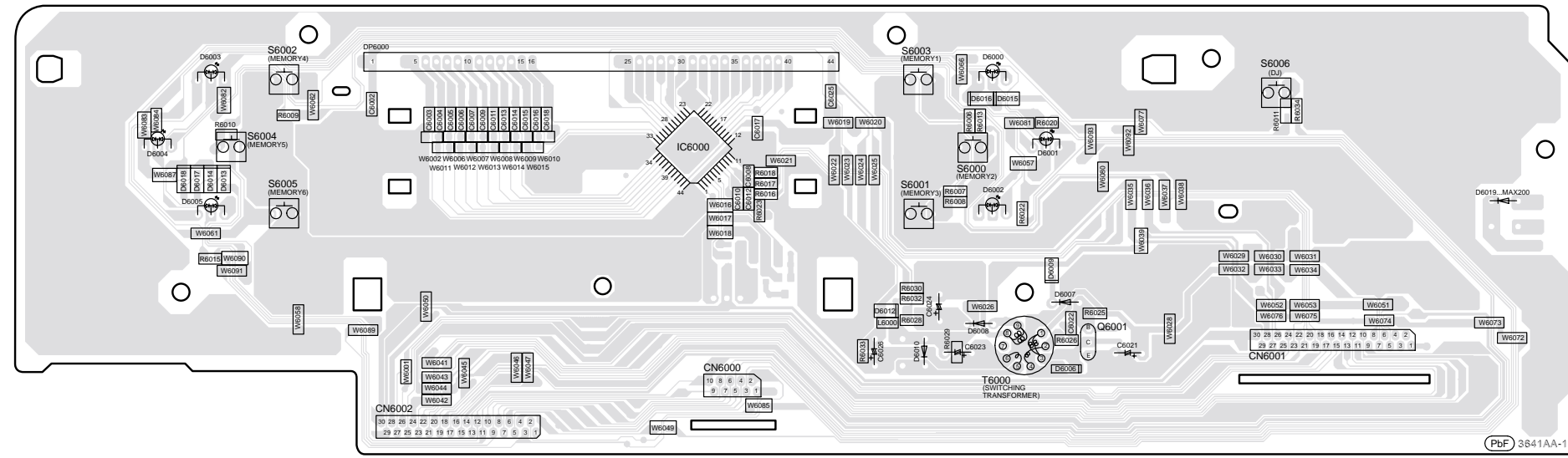
(SIDE B)

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

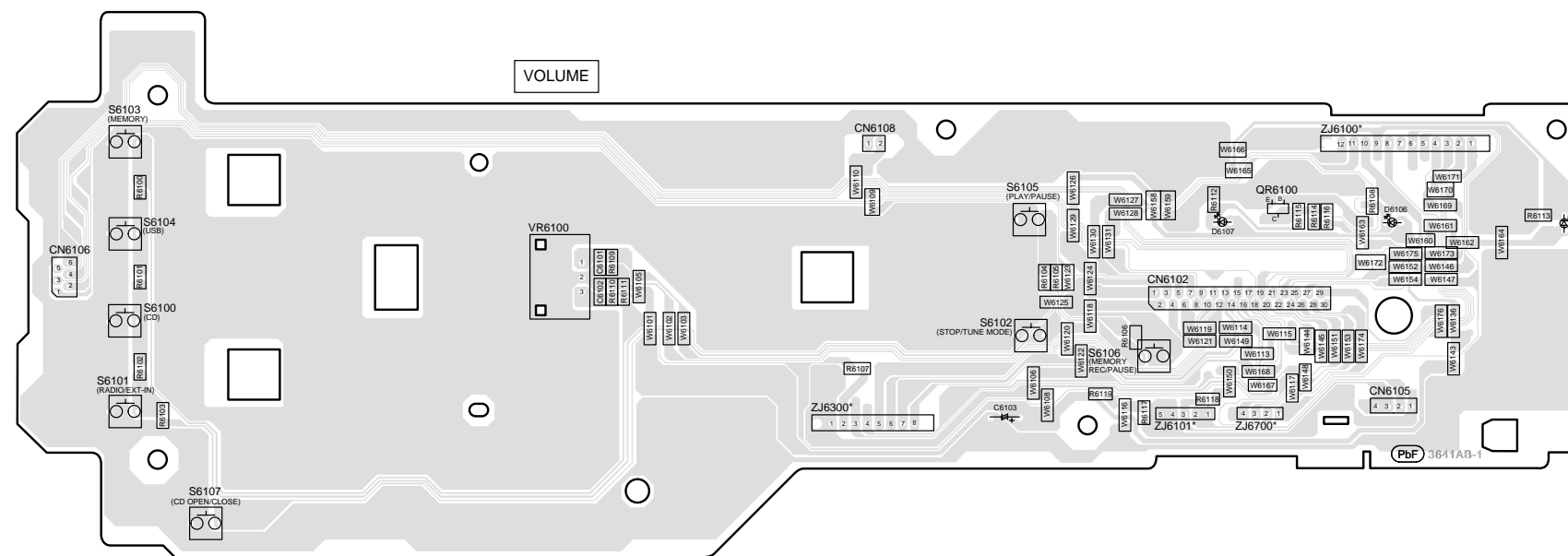
SA-MAX200PH
MAIN P.C.B.

15.2. FL Display & Volume P.C.B.

B FL DISPLAY P.C.B. (REP4883AA)



C VOLUME P.C.B. (REP4883AB)



NOTE: " * " REF IS FOR INDICATION ONLY.

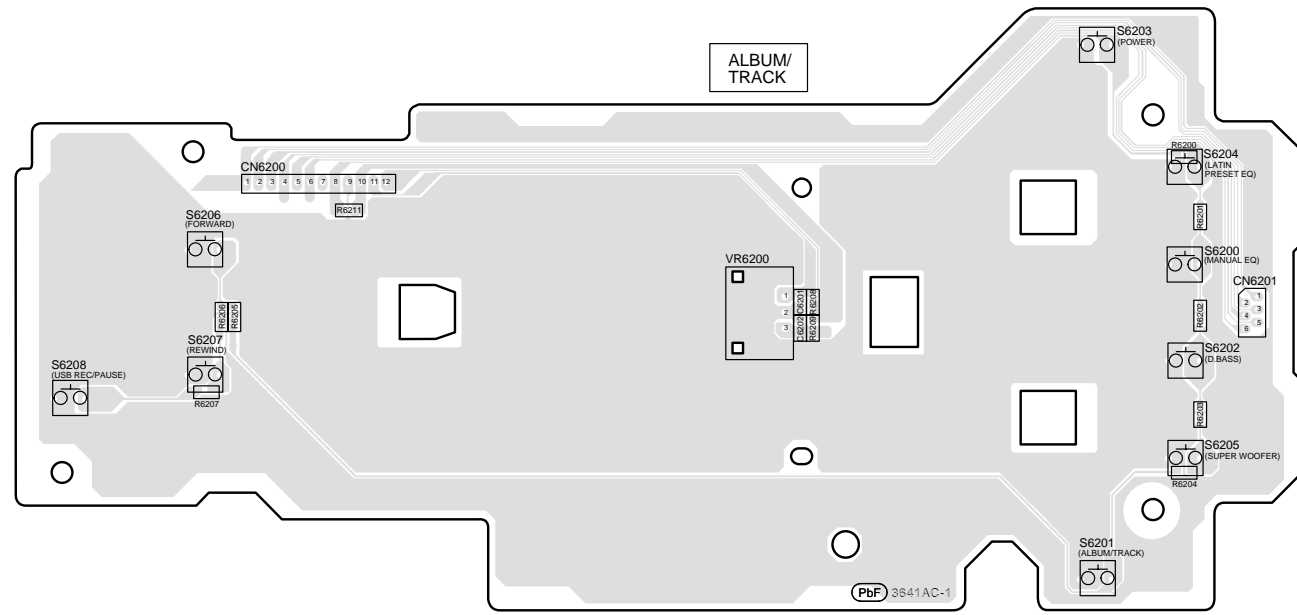
SA-MAX200PH
FL DISPLAY / VOLUME P.C.B.

15.3. Control, Mic, USB, Remote Sensor, LED & Illumination Button P.C.B.

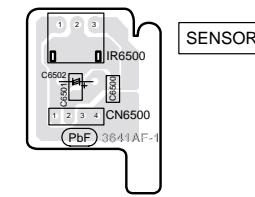
H
G
F
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D
C
B
A

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

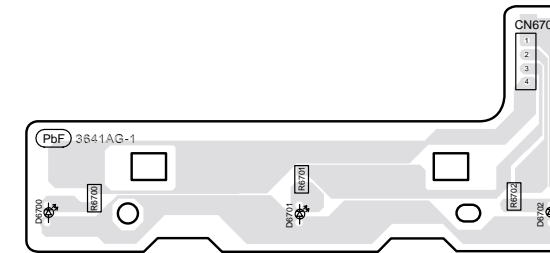
D CONTROL P.C.B. (REP4883AC)



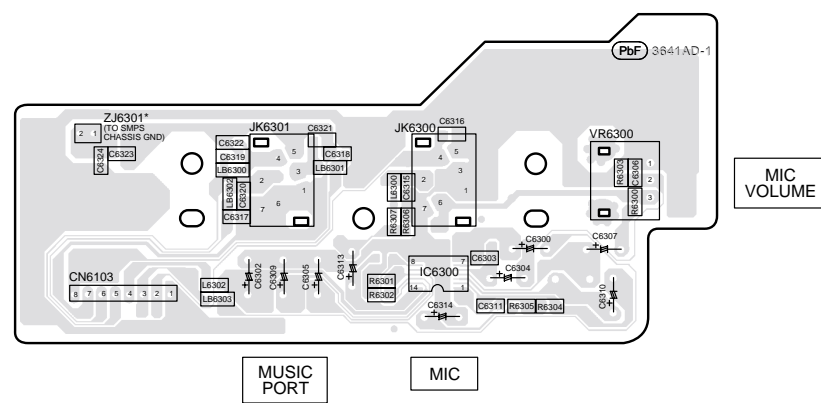
G REMOTE SENSOR P.C.B. (REP4883AF)



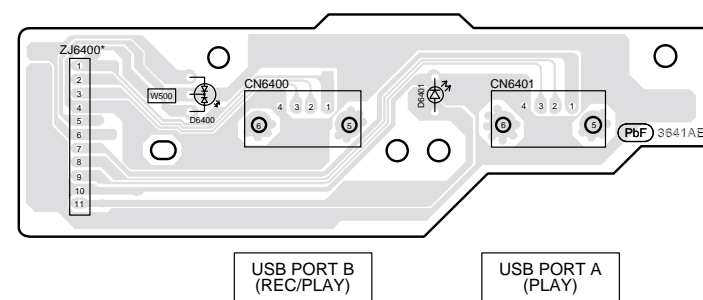
H LED P.C.B. (REP4883AG)



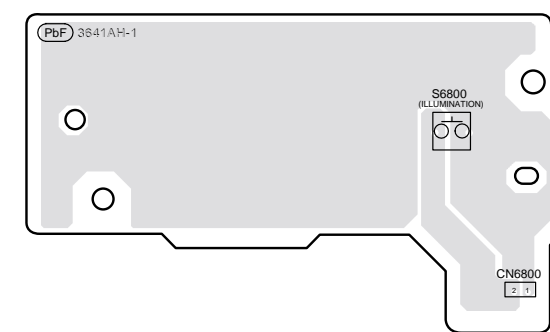
E MIC P.C.B. (REP4883AD)



F USB P.C.B. (REP4883AE)



I ILLUMINATION BUTTON P.C.B. (REP4883AH)



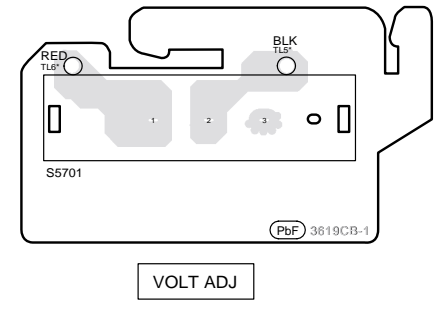
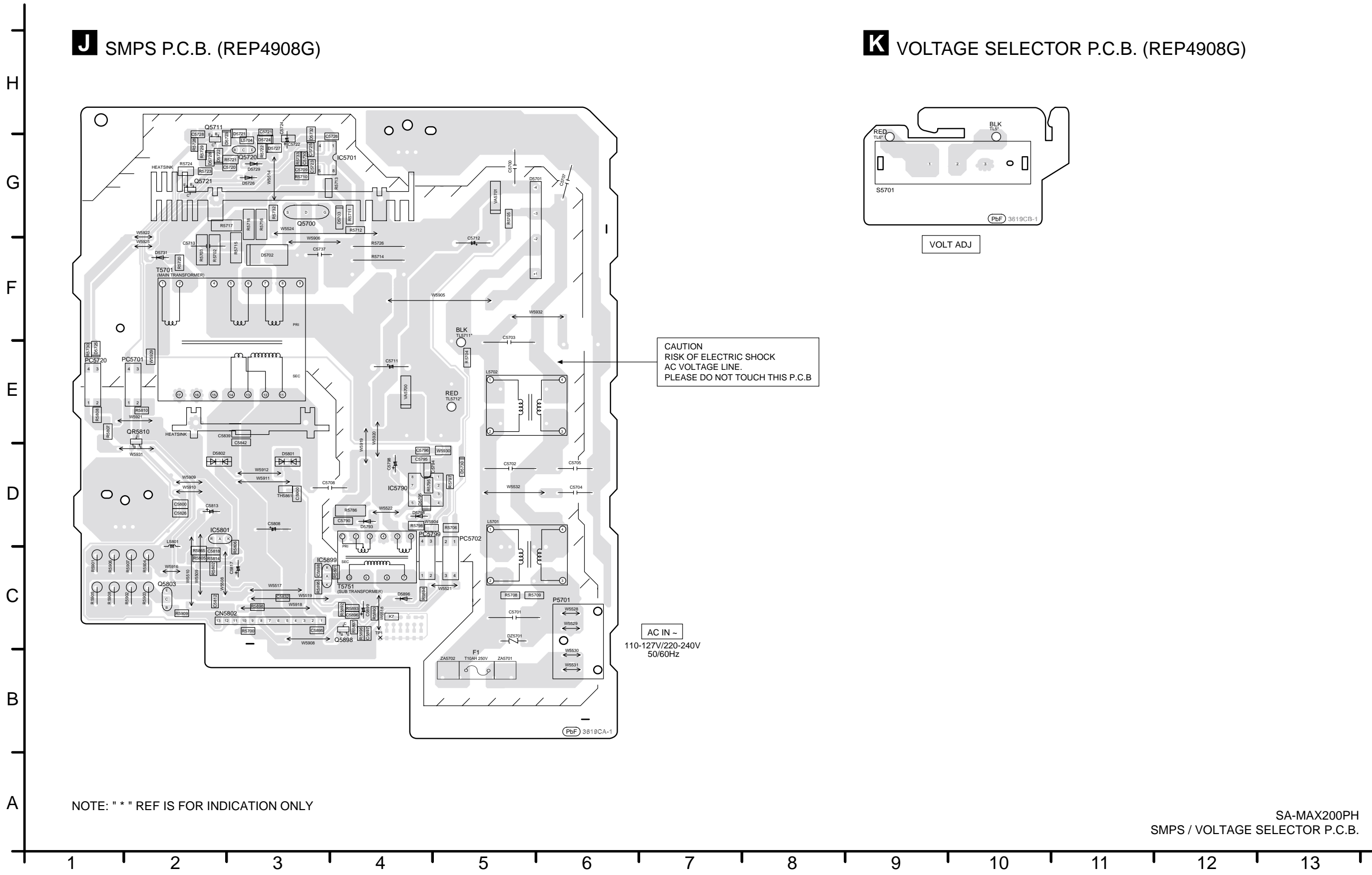
NOTE: " * " REF IS FOR INDICATION ONLY.

SA-MAX200PH
CONTROL / MIC / USB / REMOTE SENSOR / LED / ILLUMINATION BUTTON P.C.B.

15.4. SMPS & Voltage Selector P.C.B.

J SMPS P.C.B. (REP4908G)

K VOLTAGE SELECTOR P.C.B. (REP4908G)



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

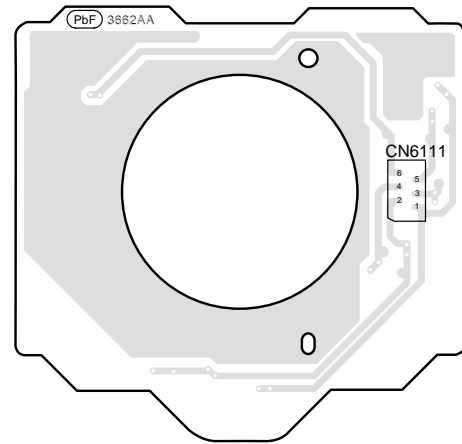
AC IN ~
110-127V/220-240V
50/60Hz

NOTE: "*" REF IS FOR INDICATION ONLY

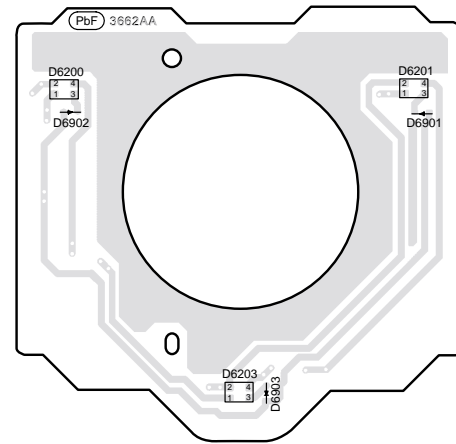
SA-MAX200PH
SMPS / VOLTAGE SELECTOR P.C.B.

15.5. Control Jog LED, Volume Jog LED & CD Interface P.C.B.

L CONTROL JOG LED P.C.B. (REP4915AA)

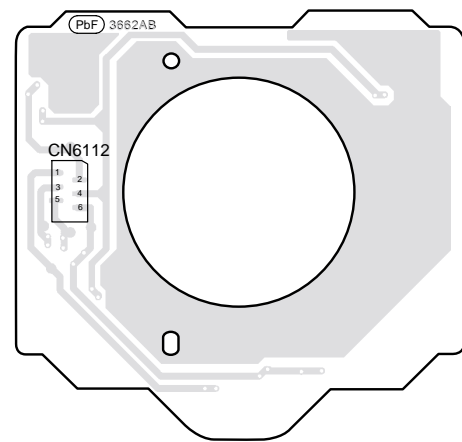


(SIDE A)

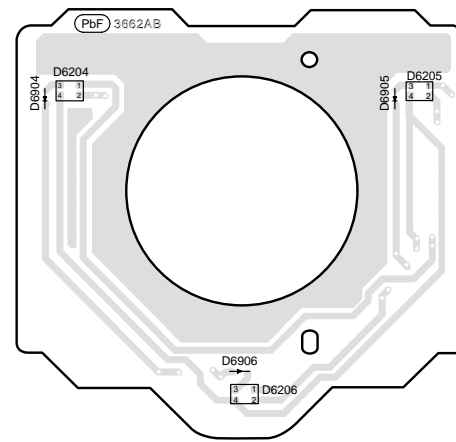


(SIDE B)

M VOLUME JOG LED P.C.B. (REP4915AB)



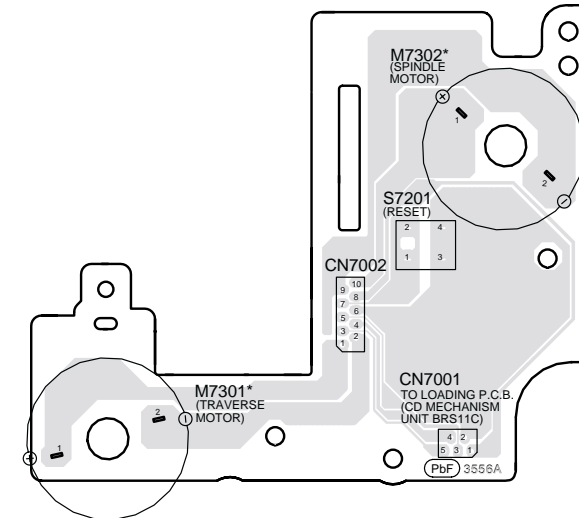
(SIDE A)



(SIDE B)

NOTE: " * " REF IS FOR INDICATION ONLY

N CD INTERFACE P.C.B. (REP4755A)



SA-MAX200PH
CONTROL JOG LED / VOLUME JOG LED / CD INTERFACE P.C.B.

H
G
F
E
D
C
B
A

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

16 Appendix Information of Schematic Diagram

16.1. 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.

16.1.1. Main P.C.B. (1/7)

REF NO.	IC2000																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
TUNER	0	1.5	0	3.0	3.3	0	3.0	3.3	0	3.3	3.3	0	1.4	0.3	2.8	2.8	3.3	0	0	0
REF NO.	IC2001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
CD PLAY	2.4	0	4.7	3.3	0	1.6	1.7	1.6	1.3	0	0	0	2.4	2.4						
STANDBY	2.4	0	4.8	3.3	0	1.6	1.7	1.6	1.5	0	0	0	2.4	2.4						
REF NO.	IC2002																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
AUX IN	2.8	0	3.0	0	2.0	0	0	0	0	3.0	0	2.8	3.0	2.0	0	12.0				
STANDBY	2.8	0	3.0	0	2.0	0	0	0	0	3.0	0	2.8	3.0	2.0	0	12.0				
REF NO.	IC2003																			
MODE	1	2	3	4	5															
POWER ON	3.3	0	3.3	0	1.8															
STANDBY	3.3	0	3.3	0	1.8															
REF NO.	IC2004																			
MODE	1	2	3	4	5															
POWER ON	3.3	0	3.3	5.1	5.1															
STANDBY	3.3	0	3.3	5.1	5.1															
REF NO.	IC2005																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	1.8	0	0	3.3	0	0	1.6	1.6	1.6	1.8	3.3	0	1.6	1.8	3.3	3.3	3.3	1.8	3.3	0
STANDBY	1.8	0	0	3.3	0	0	1.6	1.6	1.6	1.8	3.3	0	1.6	1.8	3.3	3.3	3.3	1.8	3.3	0
REF NO.	IC2005																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	3.3	3.3	3.3	0	0	12.0	0	0	0	0	12.0	0	0	0	12.0	0	0	3.3	0	0
STANDBY	3.3	3.3	3.3	0	0	12.0	0	0	0	0	12.0	0	0	0	12.0	0	0	3.3	0	0
REF NO.	IC2005																			
MODE	41	42	43	44	45	46	47	48												
CD PLAY	0	0	1.6	1.7	0.8	0	1.8	1.6												
STANDBY	0	0	1.6	1.7	0.8	0	1.8	1.6												
REF NO.	IC2006																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
POWER ON	1.3	0.7	1.0	0	0.8	0	0	3.3	3.3	0	0	1.6	1.5	0	1.3	1.7	3.3	1.8	3.3	3.3
STANDBY	1.3	0.7	1.0	0	0.8	0	0	3.3	3.3	0	0	1.6	1.5	0	1.3	1.7	3.3	1.8	3.3	3.3
REF NO.	IC2006																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
POWER ON	3.3	0	0	4.8	3.3	3.3	0	3.3	3.3	1.8	0	0	5.0	3.3	3.3	3.3	1.8	3.3	0	3.3
STANDBY	3.3	0	0	4.8	3.3	3.3	0	3.3	3.3	1.8	0	0	5.0	3.3	3.3	3.3	1.8	3.3	0	3.3

SA-MAX200PH MAIN P.C.B.

16.1.2. Main P.C.B. (2/7)

REF NO.	IC2006																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
POWER ON	3.3	3.3	3.3	0	0	3.3	3.3	3.3	0	3.3	0	0	3.3	3.2	0	0	3.3	3.3	3.3	3.3
STANDBY	3.3	3.3	3.3	0	0	3.3	3.3	3.3	0	3.3	0	0	3.3	3.2	0	0	3.3	3.3	3.3	3.3

REF NO.	IC2006																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
POWER ON	3.3	3.3	0	3.3	3.3	3.3	3.3	3.3	3.3	0	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	0	3.3
STANDBY	3.3	3.3	0	3.3	3.3	3.3	3.3	3.3	3.3	0	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	0	3.3

REF NO.	IC2006																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
POWER ON	3.3	3.3	3.3	3.3	0	3.3	0	1.6	3.3	3.3	0	0.4	0.6	3.3	1.7	0	2.6	3.3	3.0	3.3
STANDBY	3.3	3.3	3.3	3.3	0	3.3	0	1.6	3.3	3.3	0	0.4	0.6	3.3	1.7	0	2.6	3.3	3.0	3.3

REF NO.	IC2007																			
MODE	1	2	3	4	5	6	7	8												
POWER ON	0	0	0	0	3.3	3.3	0	3.3												
STANDBY	0	0	0	0	3.3	3.3	0	3.3												

REF NO.	IC2008																			
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	0.6	1.1	1.8	3.3	0	1.6	1.0	0	3.3	3.3	3.3	3.3	3.3	3.3	3.3
STANDBY	0	0	0	0	0	0.7	1.1	1.8	3.3	0	1.6	1.0	0	3.3	3.3	3.3	3.3	3.3	3.3	3.3

REF NO.	IC2008																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	3.3	1.7	1.6	0.8	0	0	1.2	1.8	1.2	1.6	1.6	0	0	3.3	3.3	0	3.3	1.6	1.6	1.6
STANDBY	3.3	1.7	1.6	0.8	0	0	1.2	1.8	1.2	1.6	1.6	0	0	3.3	3.3	0	3.3	1.6	1.6	1.6

REF NO.	IC2008																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56				
CD PLAY	1.6	1.6	1.6	1.6	1.6	1.6	0	1.6	1.6	3.3	0	1.8	0	1.6	0	1.4				
STANDBY	1.6	1.6	1.6	1.6	1.6	1.6	0	1.6	1.6	3.3	0	1.8	0	1.6	0	1.4				

REF NO.	IC2009																			
MODE	1	2	3																	
POWER ON	0	3.3	5.4																	
STANDBY	0	3.3	5.4																	

REF NO.	IC2010																			
MODE	1	2	3	4	5	6	7	8												
POWER ON	8.5	1.6	1.6	0	1.6	1.6	8.8	15.3												
STANDBY	8.5	1.6	1.6	0	1.6	1.6	8.8	15.3												

REF NO.	IC2011																			
MODE	1	2	3	4	5	6	7	8	9	10										
POWER ON	18.7	37.4	5.0	2.0	0.5	0	0.8	0.9	0	12.6										
STANDBY	18.7	37.4	4.5	2.2	0.5	0	0.8	0.8	0	12.6										

SA-MAX200PH MAIN P.C.B.

16.1.3. Main P.C.B. (3/7)

REF NO.	IC2012																			
MODE	1	2	3	4	5	6	7	8	9	10										
POWER ON	11.0	35.5	0	2.1	0.5	0	0	0	0	5.4										
STANDBY	11.0	35.5	0	2.1	0.5	0	0	0	0	5.4										

REF NO.	IC2501																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	11.7	11.7	1.2	3.3	1.6	1.6	3.1	3.3	0	0	0	0	7.8	1.6	1.6	1.6	3.3	3.3	0	0
STANDBY	11.7	11.7	1.2	3.3	1.6	1.6	3.1	3.3	0	0	0	0	7.8	1.6	1.6	1.6	3.3	3.3	0	0

REF NO.	IC2501																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	3.3	11.8	29.0	29.0	0	0	18.1	18.1	37.4	37.4	37.4	18.1	0	0	18.1	37.4	37.4	37.4	18.1	18.1
STANDBY	3.3	11.8	29.0	29.0	0	0	18.1	18.1	37.4	37.4	37.4	18.0	0	0	18.1	37.4	37.4	37.4	18.1	18.1

REF NO.	IC2501																			
MODE	41	42	43	44																
CD PLAY	0	0	29.0	29.0																
STANDBY	0	0	29.0	29.0																

REF NO.	IC2502																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	11.7	11.7	1.2	3.3	1.6	1.6	3.1	3.3	0	0	0	0	7.8	1.6	1.6	1.6	3.3	3.3	0	0
STANDBY	11.7	11.7	1.2	3.3	1.6	1.6	3.1	3.3	0	0	0	0	7.8	1.6	1.6	1.6	3.3	3.3	0	0

REF NO.	IC2502																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	3.3	11.8	29.0	29.0	0	0	18.1	18.1	37.4	37.4	37.4	18.1	0	0	18.1	37.4	37.4	37.4	18.1	18.1
STANDBY	3.3	11.8	29.0	29.0	0	0	18.1	18.1	37.4	37.4	37.4	18.0	0	0	18.1	37.4	37.4	37.4	18.1	18.1

REF NO.	IC2502																			
MODE	41	42	43	44																
CD PLAY	0	0	29.0	29.0																
STANDBY	0	0	29.0	29.0																

REF NO.	IC2503																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	11.7	11.7	1.2	3.3	1.6	1.6	3.1	3.3	0	0	0	0	7.8	1.6	1.6	1.6	3.3	3.3	0	0
STANDBY	11.7	11.7	1.2	3.3	1.6	1.6	3.1	3.3	0	0	0	0	7.8	1.6	1.6	1.6	3.3	3.3	0	0

REF NO.	IC2503																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	3.3	11.8	29.0	29.0	0	0	18.1	18.1	37.4	37.4	37.4	18.1	0	0	18.1	37.4	37.4	37.4	18.1	18.1
STANDBY	3.3	11.8	29.0	29.0	0	0	18.1	18.1	37.4	37.4	37.4	18.1	0	0	18.1	37.4	37.4	37.4	18.1	18.1

REF NO.	IC2503																			
MODE	41	42	43	44																
CD PLAY	0	0	29.0	29.0																
STANDBY	0	0	29.0	29.0																

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16.1.4. Main P.C.B. (4/7)

REF NO.	IC2504																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	11.7	11.7	1.2	3.3	1.6	1.6	3.1	3.3	0	0	0	0	7.8	1.6	1.6	1.6	3.3	3.3	0	0
STANDBY	11.7	11.7	1.2	3.3	1.6	1.6	3.1	3.3	0	0	0	0	7.8	1.6	1.6	1.6	3.3	3.3	0	0
REF NO.	IC2504																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	3.3	11.8	29.0	29.0	0	0	18.1	18.1	37.4	37.4	37.4	18.1	0	0	18.1	37.4	37.4	37.4	18.1	18.1
STANDBY	3.3	11.8	29.0	29.0	0	0	18.1	18.1	37.4	37.4	37.4	18.1	0	0	18.1	37.4	37.4	37.4	18.1	18.1
REF NO.	IC2504																			
MODE	41	42	43	44																
CD PLAY	0	0	29.0	29.0																
STANDBY	0	0	29.0	29.0																
REF NO.	IC3101																			
MODE	1	2	3	4	5															
POWER ON	3.3	0	3.3	5.1	5.1															
STANDBY	3.3	0	3.3	5.1	5.1															
REF NO.	IC3102																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
POWER ON	3.3	3.0	3.3	1.7	2.2	1.5	5.2	1.6	0	2.8	2.8	3.0	0	2.9	0	2.7	5.2	2.8	3.0	0.4
STANDBY	3.3	3.0	3.3	1.7	2.2	1.6	5.2	1.6	0	2.8	2.8	3.0	0	3.0	0	2.7	5.2	2.8	3.0	0.3
REF NO.	IC3102																			
MODE	21	22	23	24																
POWER ON	0	3.3	0	0.3																
STANDBY	0	3.3	0	0.3																
REF NO.	IC8001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	3.2	1.3	1.1	1.2	1.2	1.3	3.2	1.2	0	3.2	3.2	3.2	0	0	0	0	0	3.2	0	0
STANDBY	3.2	1.3	1.1	1.2	1.2	1.3	3.2	1.2	0	3.2	3.2	3.2	0	0	0	0	0	3.2	0	0
REF NO.	IC8001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	0	0	0	0	3.2	3.2	1.3	3.2	3.2	3.2	3.2	3.2	0.6	3.0	3.2	0	1.2	1.2	1.2	0.8
STANDBY	0	0	0	0	3.2	3.2	1.3	3.2	3.2	3.2	3.2	3.2	0.6	3.0	3.2	0	1.2	1.2	1.2	0.8
REF NO.	IC8001																			
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	0.8	0.8	3.2	0	1.2	1.7	1.7	1.5	0	1.5	1.6	3.3	1.6	1.6	1.9	0	1.7	1.7
STANDBY	0	0	0.8	0.8	3.2	0	1.2	1.7	1.7	1.5	0	1.5	1.6	3.3	1.6	1.6	1.9	0	1.7	1.7
REF NO.	IC8001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
CD PLAY	1.7	3.2	0	3.3	3.2	3.2	0.8	1.0	0	1.0	1.2	1.6	1.6	1.4	1.4	0.4	0	3.3	3.3	0
STANDBY	1.7	3.2	0	3.3	3.2	3.2	0.8	1.0	0	1.0	1.2	1.6	1.6	1.4	1.4	0.4	0	3.3	3.3	0

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16.1.5. Main P.C.B. (5/7)

REF NO.	IC8001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
CD PLAY	0	0	0	0	0	0	1.2	3.3	1.2	1.2	0	3.3	0	0	0	1.6	3.2	0	0	0
STANDBY	0	0	0	0	0	0	1.2	3.3	1.2	1.2	0	3.3	0	0	0	1.6	3.2	0	0	0
REF NO.	IC8001																			
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
CD PLAY	1.2	0	3.2	3.1	3.0	3.2	3.1	3.1	0	0	0	3.2	3.1	3.0	1.6	1.4	0.8	1.0	3.2	3.2
STANDBY	1.2	0	3.2	3.1	3.0	3.2	3.1	3.1	0	0	0	3.2	3.1	3.0	1.6	1.4	0.8	1.0	3.2	3.2
REF NO.	IC8001																			
MODE	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
CD PLAY	1.2	0	3.0	3.2	3.0	0	0	3.2	3.0	0	3.2	0	0	3.2	0	1.6	1.6	1.6	0	0
STANDBY	1.2	0	3.0	3.2	3.0	0	0	3.2	3.0	0	3.2	0	0	3.2	0	1.6	1.6	1.6	0	0
REF NO.	IC8001																			
MODE	141	142	143	144																
CD PLAY	0	1.0	1.1	1.1																
STANDBY	0	1.0	1.1	1.1																
REF NO.	IC8051																			
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	1.3	0	0.6	1.2	3.3	1.4	1.3	0	1.4	0.8	3.3	3.2	3.3	3.2	3.2	0	0	0
STANDBY	3.3	0	0	0	0	0	3.3	0	0	0	0	0	3.3	3.3	3.3	3.3	3.3	0	0	0
REF NO.	IC8051																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	0	1.8	1.8	1.6	3.3	0	1.7	1.7	1.7	1.7	3.3	3.3	0	3.3	1.4	3.3	0	3.3	0.5	0.6
STANDBY	0	0	3.3	0	3.3	0	3.3	3.3	0	3.3	3.3	3.3	0	3.3	1.4	3.3	0	3.3	0	0
REF NO.	IC8051																			
MODE	41	42	43	44	45	46	47	48	49	50										
CD PLAY	0	0	0.6	3.3	1.3	0.6	0	0.6	1.3	0										
STANDBY	0	0	0	3.3	0	0	0	0	0	0										
REF NO.	IC8251																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	1.7	0	0	0	0	3.3	3.3	5.6	0	0	2.9	2.9	2.7	3.0	2.8	2.9	2.3	3.3	5.6	0
STANDBY	1.7	0	0	0	0	3.3	3.3	5.6	0	0	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.8	5.6	0
REF NO.	IC8251																			
MODE	21	22	23	24	25	26	27	28												
CD PLAY	1.5	0	1.5	0	0	1.7	1.7	3.3												
STANDBY	1.5	0	1.7	0	0	1.7	1.7	3.3												
REF NO.	IC8401																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	1.6	2.4	3.3	0	3.2	0.9	3.3	3.3												
STANDBY	2.3	2.8	3.3	0	3.2	0.5	3.3	3.3												

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16.1.6. Main P.C.B. (6/7)

REF NO.	IC8501																				
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
CD PLAY	0	1.0	1.2	1.2	1.2	0	0	3.3	0	0	0	0	0	0	0	1.2	0	0	0	0	
STANDBY	0	1.0	1.2	1.2	1.2	0	0	3.3	0	0	0	0	0	0	0	1.2	0	0	0	0	
REF NO.	IC8501																				
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	
CD PLAY	0	3.3	0	0	0	0	0	0	0	0	0	0	0	3.3	3.3	3.3	0	0	0	0	
STANDBY	0	3.3	0	0	0	0	0	0	0	0	0	0	0	3.3	3.3	3.3	0	0	0	0	
REF NO.	IC8501																				
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	0	0	0	3.3	0	0	0	0	0	0	
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	3.3	0	0	0	0	0	0	
REF NO.	IC8501																				
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	
CD PLAY	0	3.3	3.3	3.3	3.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
STANDBY	0	3.3	3.3	3.3	3.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
REF NO.	IC8501																				
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	
CD PLAY	0	0	0	0	0	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	0	0	0	0	3.3	0	0	
STANDBY	0	0	0	0	0	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	0	0	0	0	3.3	0	0	
REF NO.	IC8501																				
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	
CD PLAY	3.3	0	0	0	0	3.3	3.3	3.3	0	0	0	0	0	0	3.3	3.3	3.3	0	0	0	
STANDBY	3.3	0	0	0	0	3.3	3.3	3.3	0	0	0	0	0	0	3.3	3.3	3.3	0	0	0	
REF NO.	IC8501																				
MODE	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	
CD PLAY	0	3.3	0	0	0	0	0	3.3	3.3	0	0	0	0	0	0	3.3	0	0	0	0	
STANDBY	0	3.3	0	0	0	0	0	3.3	3.3	0	0	0	0	0	0	3.3	0	0	0	0	
REF NO.	IC8501																				
MODE	141	142	143	144	145	146	147	148	149	150	151	152	153								
CD PLAY	0	3.3	0	3.3	0	0	0	0	0	3.3	0	0	0								
STANDBY	0	3.3	0	3.3	0	0	0	0	0	3.3	0	0	0								
REF NO.	Q2000			Q2001			Q2002			Q2003			Q2004								
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
POWER ON	5.1	0	5.4	0	3.3	0	7.8	15.3	8.4	15.3	0	15.3	0	3.3	0						
STANDBY	5.1	0	5.4	0	3.3	0	7.8	15.3	8.4	15.4	0	15.3	0	3.3	0						
REF NO.	Q2005			Q2006			Q2007			Q2008			Q2009								
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
POWER ON	7.8	15.3	8.3	0	11.6	1.0	0	15.3	1.0	0	0	11.6	0	0	15.3	0	0	15.3			
STANDBY	7.8	15.3	8.3	0	11.6	1.0	0	15.3	1.0	0	0	11.6	0	0	15.3	0	0	15.3			

SA-MAX200PH MAIN P.C.B.

16.1.7. Main P.C.B. (7/7)

REF NO.	Q2010			Q2011			Q2012			Q2013			Q2014			
	MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
POWER ON	0	3.3	0	0	3.3	0	0	12.2	0.8	0	4.4	1.0	0	0	4.2	
STANDBY	0	3.2	0	0	3.3	0	0	12.2	0.8	0	4.4	1.0	0	0	4.2	

REF NO.	Q2015			Q2022			Q2024			Q2631			Q2632			
	MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
POWER ON	0	3.3	0	12.3	15.4	12.9	0	1.8	30.0	18.1	37.4	18.1	18.1	37.4	18.1	
STANDBY	0	3.3	0	12.3	15.4	12.9	0	1.8	30.0	18.1	37.4	18.1	18.1	37.4	18.1	

REF NO.	Q2633			Q2634			Q3301			QR2001			QR2002			
	MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
POWER ON	0	3.3	0	37.4	0	37.3	0	0.5	0	0	0	3.3	0	3.3	0	
STANDBY	0	3.3	0	37.4	0	37.3	0	0.5	0	0	0	3.3	0	3.3	0	

REF NO.	QR2003															
	MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
POWER ON	0	3.3	0													
STANDBY	0	3.3	0													

REF NO.	Q2023			Q3101			Q3200			Q3202			Q8201			
	MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
CD PLAY	0	0.6	0	5.1	0	5.3	0	12.0	1.0	0	12.0	1.2	3.1	2.1	2.4	
STANDBY	0	0.6	0	5.1	0	5.3	0	12.0	1.0	0	12.0	1.2	3.3	0	3.3	

REF NO.	QR101			QR102			QR2000			QR3000						
	MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
CD PLAY	0	5.4	0	5.1	0	5.4	0	5.1	0	0	5.3	0				
STANDBY	0	5.4	0	5.1	0	5.4	0	5.1	0	0	5.3	0				

SA-MAX200PH MAIN P.C.B.

16.1.8. FL Display P.C.B.

REF NO.	IC6000																			
	MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
POWER ON	0	0	0	0	1.9	0	1.3	0	0.7	0	0	0	3.3	-16.1	-14.1	-21.5	-21.5	-19.7	-21.5	-17.8
STANDBY	0	0	0	0	1.9	0	1.3	0	0.7	0	0	0	3.3	-16.1	-14.1	-21.5	-21.5	-19.7	-21.5	-17.8

REF NO.	IC6000																			
	MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
POWER ON	-19.5	-21.5	-23.4	-21.5	-15.9	-19.6	-17.8	-21.5	-21.5	-21.5	-21.5	-21.5	-21.5	-21.5	-21.5	-21.5	-21.5	-21.5	-21.5	-21.5
STANDBY	-19.5	-21.5	-23.4	-21.5	-15.9	-19.6	-17.8	-21.5	-21.5	-21.5	-21.5	-21.5	-21.5	-21.5	-21.5	-21.5	-21.5	-21.5	-21.5	-21.5

REF NO.	IC6000																			
	MODE	41	42	43	44															
POWER ON	-21.6	-21.9	3.3	0																
STANDBY	-21.6	-21.9	3.3	0																

REF NO.	Q6001															
	MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
POWER ON	0	15.1	0													
STANDBY	0	15.1	0													

SA-MAX200PH FL DISPLAY P.C.B.

16.1.9. Volume P.C.B.

REF NO.	QR6100															
	MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
POWER ON	0	0	3.3													
STANDBY	0	0	3.3													

SA-MAX200PH VOLUME P.C.B.

16.1.10. Mic P.C.B.

REF NO.	IC6300																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14				
POWER ON	0	0	6.0	6.0	6.0	6.0	6.0	0	12.1	6.0	0	0.9	12.1	6.0				
STANDBY	0	0	6.0	6.0	6.0	6.0	6.0	0	12.1	6.0	0	0.9	12.1	6.0				

SA-MAX200PH MIC P.C.B.

16.1.11. SMPS P.C.B.

REF NO.	IC5701																	
MODE	1	2	3	4	5	6	7	8										
POWER ON	0	18.9	0	1.6	0.3	7.0	0	0										
STANDBY	0	18.9	0	1.6	0.3	7.0	0	0										

REF NO.	IC5790																	
MODE	1	2	3	4	5	6	7	8										
POWER ON	5.8	0.6	2.3	0.2	163.0	0	0	0										
STANDBY	5.8	0.6	2.3	0.2	163.0	0	0	0										

REF NO.	IC5801																	
MODE	K	A	R															
POWER ON	33.6	0	2.5															
STANDBY	33.6	0	2.5															

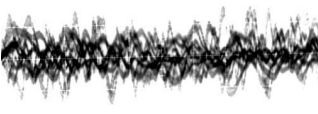


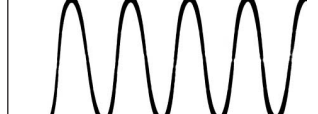





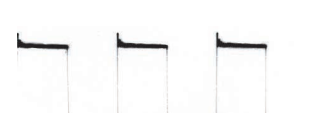


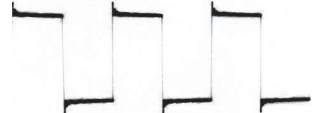
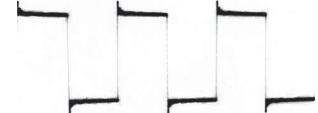

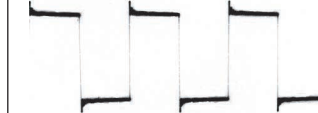
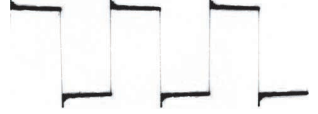


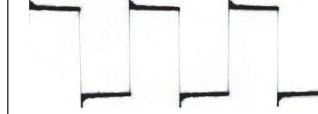
REF NO.	IC5899																	
MODE	K	A	R															
POWER ON	2.3	0	2.5															
STANDBY	2.4	0	2.5															

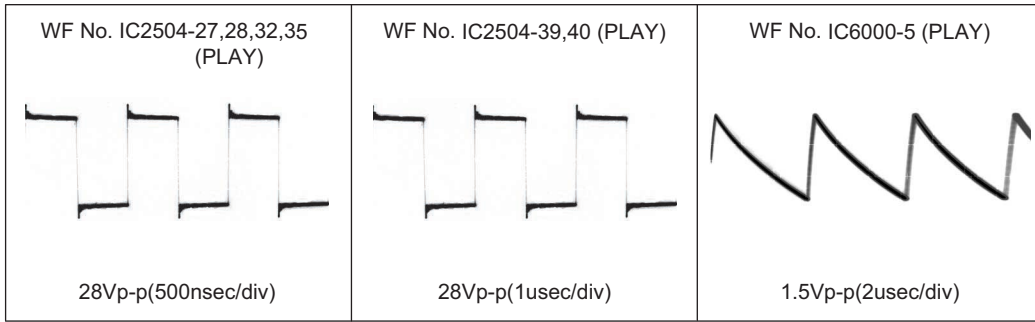
REF NO.	Q5700			Q5711			Q5720			Q5721			Q5803		
MODE	S	D	G	E	C	B	E	C	B	E	C	B	E	C	B
POWER ON	0	0	0	0	14.0	0	4.8	5.7	5.1	20.0	19.5	18.9	0	37.4	0
STANDBY	0	0	0	0	14.0	0	4.7	5.7	5.1	20.0	19.5	18.9	0	37.4	0

REF NO.	Q5898			QR5810														
MODE	E	C	B	E	C	B												
POWER ON	0	1.6	0.4	0	0	3.3												
STANDBY	0	1.6	0.4	0	0	3.3												

SA-MAX200PH SMPS P.C.B.

16.1.12. Waveform Table

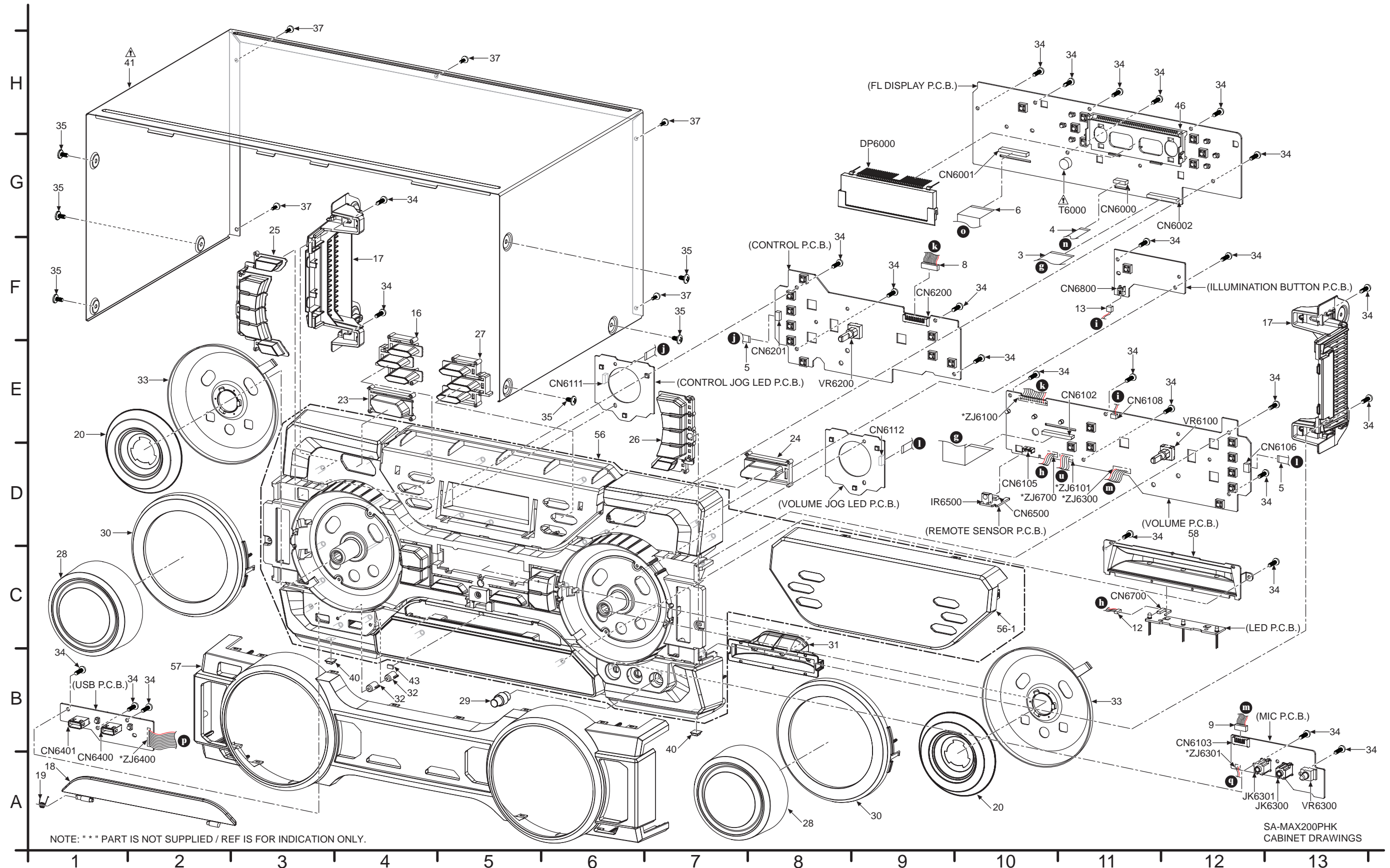
<p>WF No. IC2000-2,4,13 (TUNER)</p>  <p>0.1Vp-p(200usec/div)</p>	<p>WF No. IC2005-13 (PLAY)</p>  <p>1.6Vp-p(20nsec/div)</p>	<p>WF No. IC2005-14 (PLAY)</p>  <p>4.8Vp-p(20nsec/div)</p>	<p>WF No. IC2006-12 (PLAY)</p>  <p>3.8Vp-p(50nsec/div)</p>
<p>WF No. IC2006-13 (PLAY)</p>  <p>4Vp-p(50nsec/div)</p>	<p>WF No. IC2006-15 (PLAY)</p>  <p>2Vp-p(10usec/div)</p>	<p>WF No. IC2006-16 (PLAY)</p>  <p>3.8Vp-p(10usec/div)</p>	<p>WF No. IC2008-24 (PLAY)</p>  <p>1.8Vp-p(50usec/div)</p>
<p>WF No. IC2008-27 (PLAY)</p>  <p>3.2Vp-p(1usec/div)</p>	<p>WF No. IC2008-38,39,40,41,42,43,44,45,46,48,49 (PLAY)</p>  <p>5.2Vp-p(1usec/div)</p>	<p>WF No. IC2501-5,6,14,15 (PLAY)</p>  <p>1.6Vp-p(1usec/div)</p>	<p>WF No. IC2501-27,28,32,35 (PLAY)</p>  <p>28Vp-p(500nsec/div)</p>
<p>WF No. IC2501-39,40 (PLAY)</p>  <p>28Vp-p(1usec/div)</p>	<p>WF No. IC2502-5,6,14,15 (PLAY)</p>  <p>1.6Vp-p(1usec/div)</p>	<p>WF No. IC2502-27,28,32,35 (PLAY)</p>  <p>28Vp-p(500nsec/div)</p>	<p>WF No. IC2502-39,40 (PLAY)</p>  <p>28Vp-p(1usec/div)</p>
<p>WF No. IC2503-5,6,14,15 (PLAY)</p>  <p>1.6Vp-p(1usec/div)</p>	<p>WF No. IC2503-27,28,32,35 (PLAY)</p>  <p>28Vp-p(500nsec/div)</p>	<p>WF No. IC2503-39,40 (PLAY)</p>  <p>28Vp-p(1usec/div)</p>	<p>WF No. IC2504-5,6,14,15 (PLAY)</p>  <p>1.6Vp-p(1usec/div)</p>

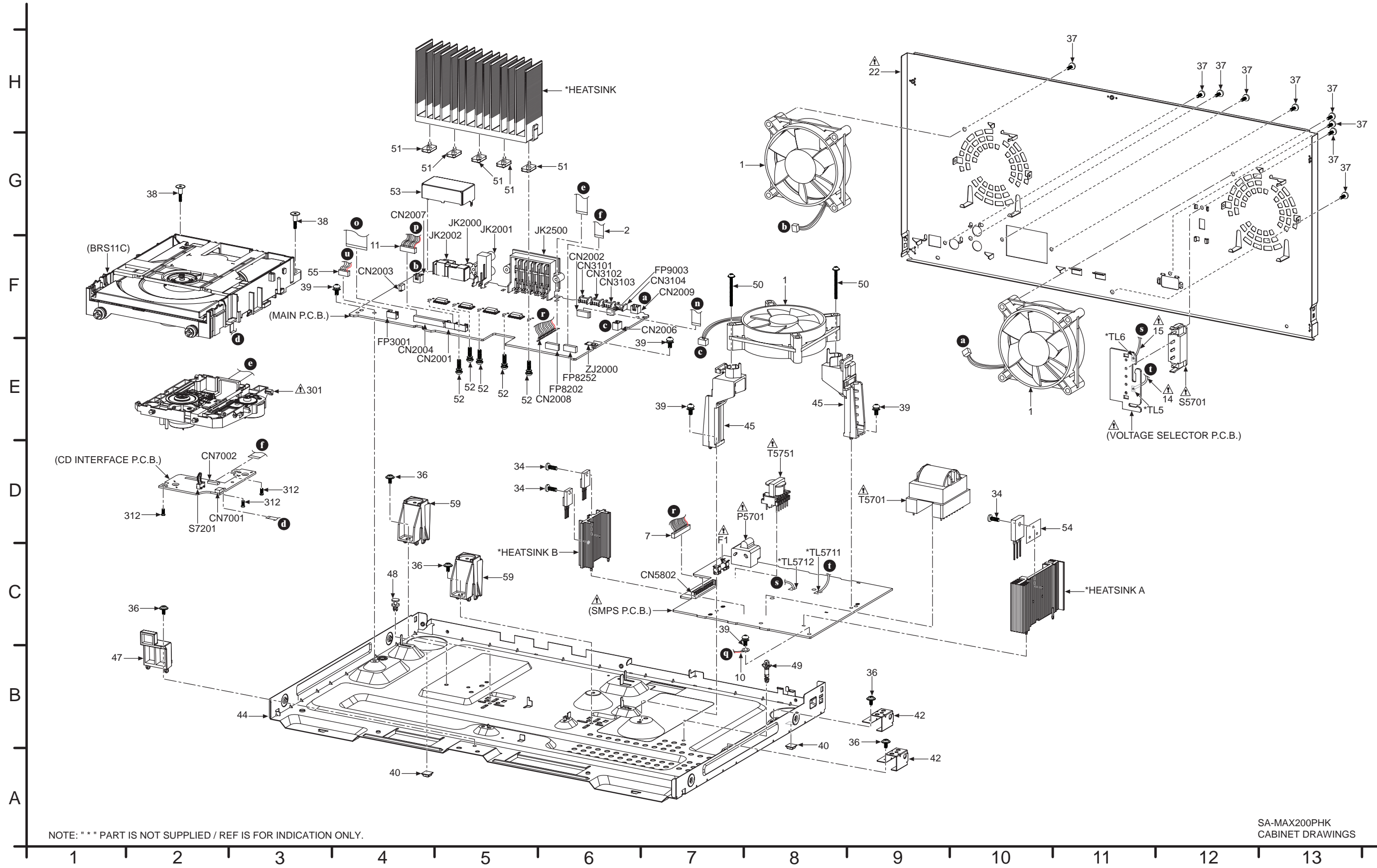


17 Exploded View and Replacement Parts List

17.1. Exploded View and Mechanical replacement Part List

17.1.1. Cabinet Parts Location

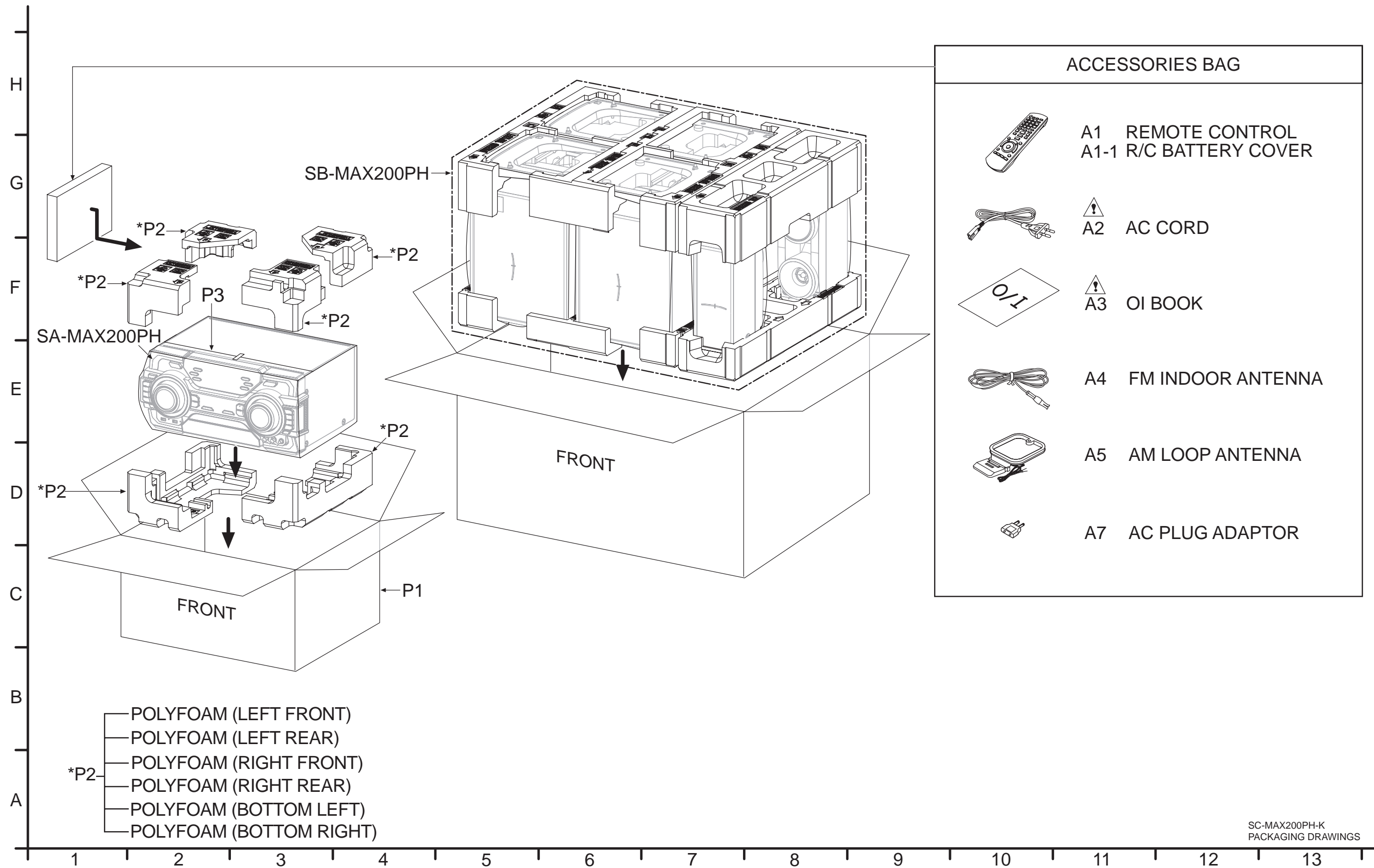




NOTE: "*" PART IS NOT SUPPLIED / REF IS FOR INDICATION ONLY.

SA-MAX200PHK
CABINET DRAWINGS

17.1.2. Packaging



SC-MAX200PH-K
PACKAGING DRAWINGS

17.1.3. Mechanical Replacement Part List

Important Safety Notice

Components identified by \triangle 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 PAVCJM unless indicated likewise.
- Reference for O/I book languages are as follows:

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

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
			CABINET AND CHASSIS		
	1	L6FALEFH0030	FAN UNIT	3	
	2	REE1671	10P FFC (MAIN-CD INTERFACE)	1	
	3	REE1725	30P FFC (FL DISPLAY-VOLUME)	1	
	4	REE1735	10P FFC (FL DISPLAY-MAIN)	1	
	5	REE1760	6P FFC (CONTROL JOG LED-CONTROL/VOLUME JOG LED-VOLUME)	2	
	6	REE1764	30P FFC (FL DISPLAY-MAIN)	1	
	7	REX1558	13P CABLE WIRE (MAIN-SMPS)	1	
	8	REX1576	12P CABLE WIRE (CONTROL-VOLUME)	1	
	9	REX1557	8P CABLE WIRE (VOLUME-MIC)	1	
	10	REX1556	2P CABLE WIRE (MIC-SMPS)	1	
	11	REX1559	11P CABLE WIRE (USB-MAIN)	1	
	12	REX1563	4P CABLE WIRE (VOLUME-LED)	1	
	13	REX1560-1	2P CABLE WIRE (ILLUMINATION BUTTON-VOLUME)	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
\triangle	14	REXX1122-K	1P BLK WIRE (VOLTAGE SELECTOR-SMPS)	1	
\triangle	15	REXX1123-K	1P RED WIRE (VOLTAGE SELECTOR-SMPS)	1	
	16	RGU2872-W	MEMORY BUTTON L	1	
	17	RGK2471-K	SIDE COVER	2	
	18	RGK2468-K	CD LID	1	
	19	RMB0930	CD LID SPRING	1	
	20	RGQ0666-W	VOLUME LIGHT DIFFUSER	2	
\triangle	22	RGR0439C-C1	REAR PANEL	1	
	23	RGU2843-W	DJ EFFECT BUTTON	1	
	24	RGU2844-W	LIGHTING BUTTON	1	
	25	RGU2870-K	POWER BUTTON	1	
	26	RGU2871-K	FUNCTION BUTTON	1	
	27	RGU2873-W	MEMORY BUTTON R	1	
	28	RGW0428-S1	VOLUME KNOB	2	
	29	RGWX0056-1K1	ROTARY KNOB	1	
	30	RGL0786-W	VOLUME LIGHT RING	2	
	31	RGC0051-W	CENTER LIGHT HOUSE	1	
	32	RGL0787-W	USB REC LIGHT PIECE	2	
	33	RGC0043-W1	VOLUME LIGHT REFLECTOR	2	
	34	RHD26046-L	SCREW	31	
	35	RHD30007-K2J	SCREW	6	
	36	RHD30111-31	SCREW	5	
	37	RHD30119-S	SCREW	14	
	38	RHDX031008	SCREW	2	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	39	RHDX30005-J	SCREW	5	
	40	RKAX0042-K	LEG CUSHION	4	
△	41	RKM0702-K	TOP CABINET	1	
	42	RMA2451	SMPS PCB SUPPORT	2	
	43	RMGX0033A-K	CD LID CUSHION	1	
	44	RMK0827A-1	BOTTOM CHASSIS	1	
	45	RMKX1016-4	FAN FIXTURE	2	
	46	RMNV0079-1	FL HOLDER	1	
	47	RMQ2154	FRONT MECHA SUP- PORT	1	
	48	RMX0444	SPACER	1	
	49	RMX0510	SMPS PCB SPACER	1	
	50	XTW3+30TFJ	SCREW	2	
	51	RMZX1022	HEATSINK SPACER	5	
	52	RHD26043-1	SCREW	5	
	53	RSC1230	TUNER SHIELD	1	
	54	RMZ1378	IC INSUALTOR	1	
	56	RYP1930A-K	FRONT PANEL ASS'Y	1	
	56-1	RKW1033-Q	FL WINDOW	1	
	57	RYP1300-S	CENTER ORNAMENT ASS'Y	1	
	58	RGC0046-W1	LIGHTING HOUSE	1	
	59	RMQX1088-J	MECHA HOLDER	2	
			TRAVERSE DECK		
△	301	RAE1037Z-V	TRAVERSE ASS'Y	1	
	312	XTN2+6GFJ	SCREW	3	
			PACKING MATERI- ALS		
	P1	RPG0C38	PACKING CASE	1	
	P2	RPN2485-1	POLYFOAM	1	
	P3	RPH0310-1	MIRAMAT SHEET	1	
			ACCESSORIES		
	A1	N2QAYB000850	REMOTE CONTROL	1	
	A1-1	RKK-PM500EBK	R/C BATTERY COVER	1	
△	A2	K2CQ2YY00119	AC CORD	1	
△	A3	RQT9800-M	O/I BOOK (Sp/En)	1	
	A4	RSAX0002	FM INDOOR ANTENNA	1	
	A5	NLDYYYY00011	AM LOOP ANTENNA	1	
	A7	K2DAYYY00002	AC PLUG ADAPTOR	1	

17.2. Electrical Replacement Part List

Important Safety Notice

Components identified by \triangle 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 PAVCJM unless indicated likewise.
- Parts mentioned [SPG] in the Remarks column are supplied by JAPAN.

E.S.D. standards for Electrostatically Sensitive Devices, refer to "PREVENTION OF ELECTROSTATIC DISCHARGE (ESD) TO ELECTROSTATIC SENSITIVE (ES) DEVICES" section.

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
			PRINTED CIRCUIT BOARDS		
	PCB1	REP4882B	MAIN P.C.B.	1	(RTL)
	PCB2	REP4883AA	FL DISPLAY P.C.B.	1	(RTL)
	PCB3	REP4883AB	VOLUME P.C.B.	1	(RTL)
	PCB4	REP4883AC	CONTROL P.C.B.	1	(RTL)
	PCB5	REP4883AD	MIC P.C.B.	1	(RTL)
	PCB6	REP4883AE	USB P.C.B.	1	(RTL)
	PCB7	REP4883AF	REMOTE SENSOR P.C.B.	1	(RTL)
	PCB8	REP4883AG	LED P.C.B.	1	(RTL)
	PCB9	REP4883AH	ILLUMINATION BUTTON P.C.B.	1	(RTL)
\triangle	PCB10	REP4908G	SMPS P.C.B.	1	(RTL)
\triangle	PCB11	REP4908G	VOLTAGE SELECTOR P.C.B.	1	(RTL)
	PCB12	REP4915AA	CONTROL JOG LED P.C.B.	1	(RTL)
	PCB13	REP4915AB	VOLUME JOG LED P.C.B.	1	(RTL)
	PCB14	REP4755A	CD INTERFACE P.C.B.	1	(RTL)
			INTEGRATED CIRCUITS		
	IC2000	VUEALLPT056	IC	1	(E.S.D) [SPG]
	IC2001	COFBAY000032	IC	1	(E.S.D)
	IC2002	COJBAR000367	IC	1	(E.S.D)
	IC2003	CODBGYY02205	IC	1	(E.S.D)

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	IC2004	C0DBZYY00592	IC	1	(E.S.D)
	IC2005	C1AB00003800	IC	1	(E.S.D)
	IC2006	RFKWMMAX200M	IC	1	(E.S.D), JIGS & ADJ
	IC2007	C3EBEY000037	IC	1	(E.S.D)
	IC2008	C1AB00004003	IC	1	(E.S.D)
	IC2009	C0DBGYY03056	IC	1	(E.S.D)
	IC2010	C0ABBB000067	IC	1	(E.S.D)
	IC2011	C0DBAYY01594	IC	1	(E.S.D)
	IC2012	C0DBAYY01594	IC	1	(E.S.D)
	IC2501	C1AB00004014	IC	1	(E.S.D)
	IC2502	C1AB00004014	IC	1	(E.S.D)
	IC2503	C1AB00004014	IC	1	(E.S.D)
	IC2504	C1AB00004014	IC	1	(E.S.D)
	IC3101	C0DBZYY00592	IC	1	(E.S.D)
	IC3102	AN32183A-VF	IC	1	(E.S.D)
	IC5701	C1ZBZ0004646	IC	1	(E.S.D)
	IC5790	MIP2F20MSSCF	IC	1	(E.S.D)
	IC5801	C0DAZYY00039	IC	1	(E.S.D)
	IC5899	C0DAZYY00039	IC	1	(E.S.D)
	IC6000	C0HBB0000057	IC	1	(E.S.D)
	IC6300	C1AB00003130	IC	1	(E.S.D)
	IC8001	MN6627993AB	IC	1	(E.S.D)
	IC8051	C3ABMY000027	IC	1	(E.S.D)
	IC8251	C0GBY0000117	IC	1	(E.S.D)
	IC8401	C3FBMY000309	IC	1	(E.S.D)
	IC8501	C3FBYY000035	IC	1	(E.S.D)
			TRANSISTORS		
	Q2000	B1ADCE000012	TRANSISTOR	1	(E.S.D)
	Q2001	B1GBCFL00037	TRANSISTOR	1	(E.S.D)
	Q2002	B1AAJC000019	TRANSISTOR	1	(E.S.D)
	Q2003	B1ADCE000012	TRANSISTOR	1	(E.S.D)

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	S6102	EVQ21405RJ	SW STOP	1	
	S6103	EVQ21405RJ	SW MEMORY	1	
	S6104	EVQ21405RJ	SW USB	1	
	S6105	EVQ21405RJ	SW PLAY/PAUSE	1	
	S6106	EVQ21405RJ	SW MEMORY REC	1	
	S6107	EVQ21405RJ	SW CD OPEN/CLOSE	1	
	S6200	EVQ21405RJ	SW MANUAL EQ	1	
	S6201	EVQ21405RJ	SW ALBUM/TRACK	1	
	S6202	EVQ21405RJ	SW BASS	1	
	S6203	EVQ21405RJ	SW POWER	1	
	S6204	EVQ21405RJ	SW LATIN/PRESET EQ	1	
	S6205	EVQ21405RJ	SW SUPERWOOFER	1	
	S6206	EVQ21405RJ	SW FORWARD	1	
	S6207	EVQ21405RJ	SW REWIND	1	
	S6208	EVQ21405RJ	SW USB REC	1	
	S6800	EVQ21405RJ	SW ILLUMINATION	1	
			CONNECTORS		
	CN2001	K1KA11AA0194	11P CONNECTOR	1	
	CN2002	K1MY10AA0124	10P CONNECTOR	1	
	CN2003	K1MY06AA0124	6P CONNECTOR	1	
	CN2004	K1MY30AA0124	30P CONNECTOR	1	
	CN2006	K1KA02AA0186	2P CONNECTOR	1	
	CN2007	K1KA02AA0186	2P CONNECTOR	1	
	CN2008	K1YZ13000002	CABLE CONNECTOR	1	
	CN2009	K1KA02AA0186	2P CONNECTOR	1	
	CN3101	K1KA04BA0061	4P CONNECTOR	1	
	CN3102	K1KA04BA0061	4P CONNECTOR	1	
	CN3103	K1KA04BA0061	4P CONNECTOR	1	
	CN3104	K1KA04BA0061	4P CONNECTOR	1	
	CN5802	K1KA13AA0181	13P CONNECTOR	1	
	CN6000	K1MY10AA0124	10P CONNECTOR	1	
	CN6001	K1MY30AA0124	30P CONNECTOR	1	
	CN6002	K1MN30B00046	30P CONNECTOR	1	
	CN6102	K1MY30AA0124	30P CONNECTOR	1	
	CN6103	K1KA08BA0061	8P CONNECTOR	1	
	CN6105	K1KA04A00553	4P CONNECTOR	1	
	CN6106	K1MN06B00015	6P CONNECTOR	1	
	CN6108	K1YZ202000015	2P CONNECTOR	1	
	CN6111	K1MN06AA0076	6P CONNECTOR	1	
	CN6112	K1MN06AA0076	6P CONNECTOR	1	
	CN6200	K1KA12BA0062	12P CONNECTOR	1	
	CN6201	K1MN06B00015	6P CONNECTOR	1	
	CN6400	K1FY104A0034	USB CONNECTOR	1	
	CN6401	K1FY104A0034	USB CONNECTOR	1	
	CN6500	K1KB04B00043	4P CONNECTOR	1	
	CN6700	K1KA04BA0061	4P CONNECTOR	1	
	CN6800	K1KA02BA0061	2P CONNECTOR	1	
	CN7001	K1MY05BA0539	5P CONNECTOR	1	
	CN7002	K1MN10B00016	10P CONNECTOR	1	
	FP3001	K1KA05AA0051	5P CONNECTOR	1	
	FP8202	K1MN24A00062	24P CONNECTOR	1	
	FP8252	K1MN10AA0076	10P CONNECTOR	1	
	FP9003	K1KA05AA0051	5P CONNECTOR	1	
			COILS AND INDUC-TORS		
	K8350	G1C100KA0101	INDUCTOR	1	
	L2000	G2A380Y00002	ANTENNA COIL	1	
	L2002	G1CR18JA0020	INDUCTOR	1	
	L2006	G1C1R0MA0204	INDUCTOR	1	
	L2007	G1C330MA0291	INDUCTOR	1	
	L2500	G0C100M00009	INDUCTOR	1	
	L2501	G0C100M00009	INDUCTOR	1	
	L2502	G0C100M00009	INDUCTOR	1	
	L2503	G0C100M00009	INDUCTOR	1	
	L2504	G0C100M00009	INDUCTOR	1	
	L2505	G0C100M00009	INDUCTOR	1	
	L2506	G0C100M00009	INDUCTOR	1	
	L2507	G0C100M00009	INDUCTOR	1	
	L3300	G1C470MA0291	INDUCTOR	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
△	L5701	G0B183J00002	LINE FILTER	1	
△	L5702	G0B183J00002	LINE FILTER	1	
	L5704	J0JAC0000018	INDUCTOR	1	
	L5801	G0C220KA0174	INDUCTOR	1	
	L6000	J0JBC0000019	INDUCTOR	1	
	L6300	J0JBC0000019	INDUCTOR	1	
	LB2000	J0JBC0000134	INDUCTOR	1	
	LB2005	J0JDC0000104	INDUCTOR	1	
	LB2006	J0JBC0000134	INDUCTOR	1	
	LB2008	J0JBC0000134	INDUCTOR	1	
	LB2009	J0JBC0000134	INDUCTOR	1	
	LB3201	J0JBC0000134	INDUCTOR	1	
	LB3401	J0JYC0000118	INDUCTOR	1	
	LB6300	J0JBC0000019	INDUCTOR	1	
	LB6301	J0JBC0000019	INDUCTOR	1	
	LB6302	J0JBC0000019	INDUCTOR	1	
	LB8003	J0JHC0000045	INDUCTOR	1	
	LB8004	J0JHC0000045	INDUCTOR	1	
	LB8052	J0JHC0000045	INDUCTOR	1	
	LB8201	J0JHC0000045	INDUCTOR	1	
	LB8202	G1C100KA0101	INDUCTOR	1	
	LB8203	J0JBC0000134	INDUCTOR	1	
	LB8204	J0JBC0000134	INDUCTOR	1	
	LB8251	J0JHC0000045	INDUCTOR	1	
	LB8252	J0JHC0000045	INDUCTOR	1	
	LB8253	G1C100KA0101	INDUCTOR	1	
	LB8401	J0JHC0000045	INDUCTOR	1	
	LB8402	J0JHC0000045	INDUCTOR	1	
	LB8501	J0JHC0000045	INDUCTOR	1	
	R8012	J0JHC0000045	INDUCTOR	1	
	R8017	J0JHC0000045	INDUCTOR	1	
			TRANSFORMERS		
△	T5701	G4DYZ0000070	TRANSFORMER	1	
△	T5751	G4DYZ0000064	TRANSFORMER	1	
△	T6000	G4DYA0000214	TRANSFORMER	1	
			PHOTO COUPLERS		
△	PC5701	B3PBA0000579	PHOTO COUPLER	1	
△	PC5702	B3PBA0000579	PHOTO COUPLER	1	
△	PC5720	B3PBA0000579	PHOTO COUPLER	1	
△	PC5799	B3PBA0000579	PHOTO COUPLER	1	
			EARTH PLATE		
	ZJ2000	K9ZZ00001279	EARTH PLATE	1	
			OSCILLATORS		
	X2000	H0J245500110	OSCILLATOR	1	
	X2001	H0A327200181	OSCILLATOR	1	
	X2002	H2B800400007	OSCILLATOR	1	
	X8101	H0J338300002	OSCILLATOR	1	
			FUSE		
△	F1	K5D103BNA005	FUSE	1	
			FUSE HOLDERS		
	ZA5701	K3GE1ZZ00001	FUSE HOLDER	1	
	ZA5702	K3GE1ZZ00001	FUSE HOLDER	1	
			LCD DISPLAY		
	DP6000	A2BB00000184	LCD DISPLAY	1	
			REMOTE SENSOR		
	IR6500	B3RAB0000110	REMOTE SENSOR	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	C8504	F1G1A1040006	0.1uF 10V	1	
	C8505	F1G1A1040006	0.1uF 10V	1	
	C8506	F1G1A1040006	0.1uF 10V	1	
	C8507	F1G1A1040006	0.1uF 10V	1	
	C8508	F1G1A1040006	0.1uF 10V	1	
	C8509	F1G1A1040006	0.1uF 10V	1	
	C8510	F1G1A1040006	0.1uF 10V	1	
	C8511	F1G1A1040006	0.1uF 10V	1	
	C8512	F1G1A1040006	0.1uF 10V	1	
	C8513	F1H0J4750005	4.7uF 6.3V	1	
	C8514	F1H0J4750005	4.7uF 6.3V	1	

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