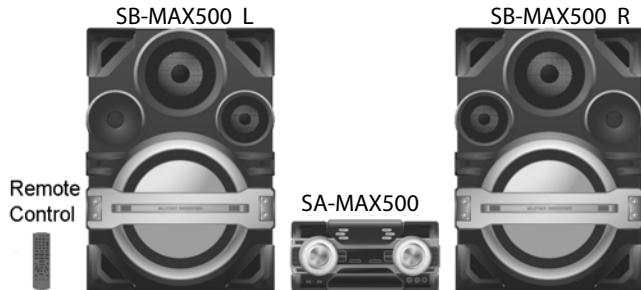


Service Manual

CD Stereo System

Model No. SA-MAX500LMK



Product Color: (K)...Black Type

Please refer to the original service manual for:

- CD Mechanism Unit, Order No. PSG1201019AE
- Speaker system SB-MAX500LMK, Order No. PMX1302002CE

Nota: El idioma original de este Manual de Servicio es en idioma inglés, sin embargo algunas notas aquí mencionadas serán escritas en español para mejor descripción para Centros de Servicio de México.

⚠ 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 \triangle 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.

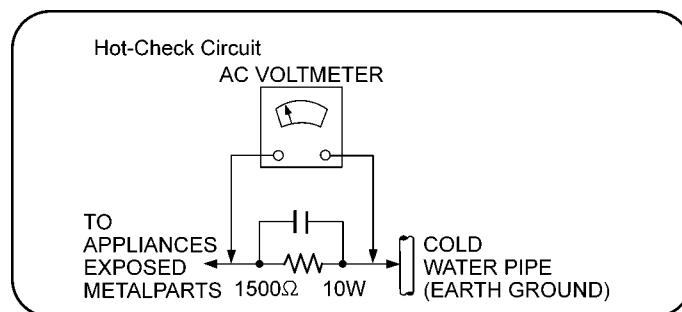


Figure 1-1

1.3. Before Repair and Adjustment

Disconnect AC power to discharge the AC Capacitors (C5700, C5701, C5702, C5703, C5704, C5705, C5706, C5707, C5708) through a $10\ \Omega$, 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~127 V/60 Hz in Power ON, FM Tuner, (No Signal at volume minimal) 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, T8AH, 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  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.

Panasonic de México S.A. de C.V.
Ingeniería de Audio

Modelo: SC-MAX500LMK

Safety	Nombre del componente	Número de Parte
	CABLE TOMACORRIENTE.	K2CB2CB00022
	CONECTOR TOMACORRIENTE	K2AB2B000007
	TRANSFORMADOR DE PODER	G4DYZ0000062
	TRANSFORMADOR DE RESPALDO	ETS19AB2E6AG
	FUSIBLE PRIMARIO	K5D802BNA005
	ZNR	ERZV05Z471CS
	CAPACITOR DE AC	F1BAF1020020
	CAPACITOR DE AC	F0CAF224A105
	CAPACITOR DE AC	F1BAF471A013
	OPTOACOPLADOR	B3PBA0000579
	PCB SMPS	RJB3573A Tarjeta sin componentes
	BOBINA PRIMARIO	G0B932H00002
	GAB. MET. SIN DOBLAR	RKM0702Z-K
	CD UNIT	RD-DDL100-PX
	REAR PANEL	RGR0439A-A RGR0439A-A1
	INSTRUCTIVO	RQTM0193

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

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.

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.

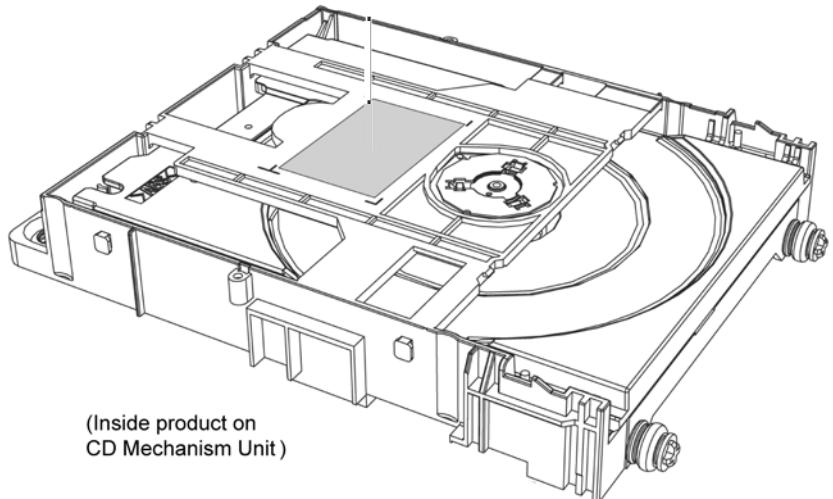


Figure 2-1

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.
(See right figure)

PbF

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

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

Recommended Lead Free Solder (Service Parts Route.)

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

Note

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

2.4. Handling Precautions for Traverse Unit

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

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

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

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

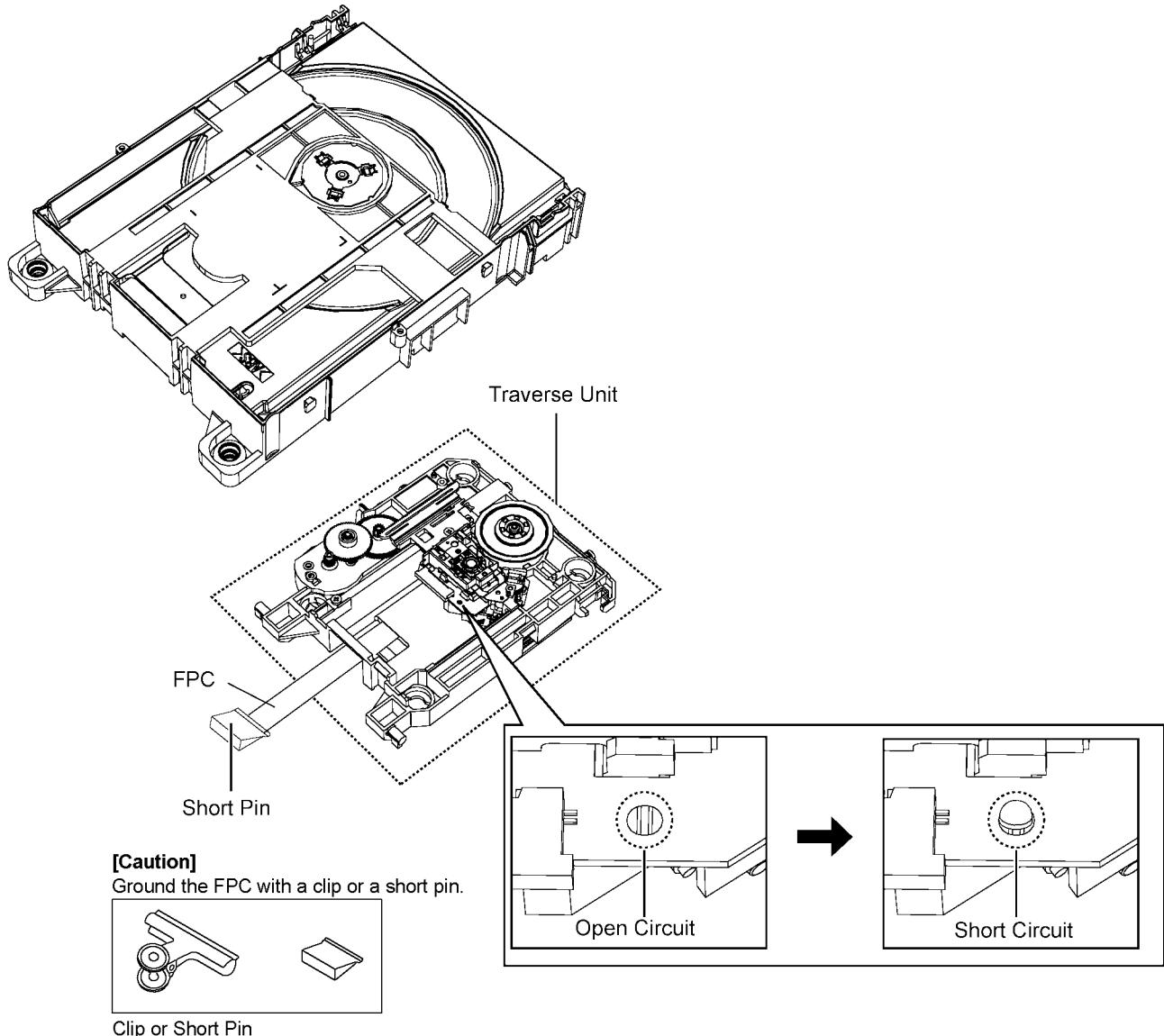


Figure 2-2

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.

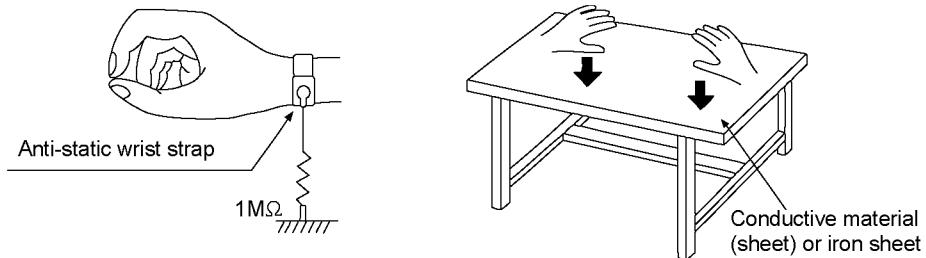


Figure 2-3

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.

- **CD Mechanism Unit:**

1) This model uses CD Mechanism Unit.

- **Micro-processor:**

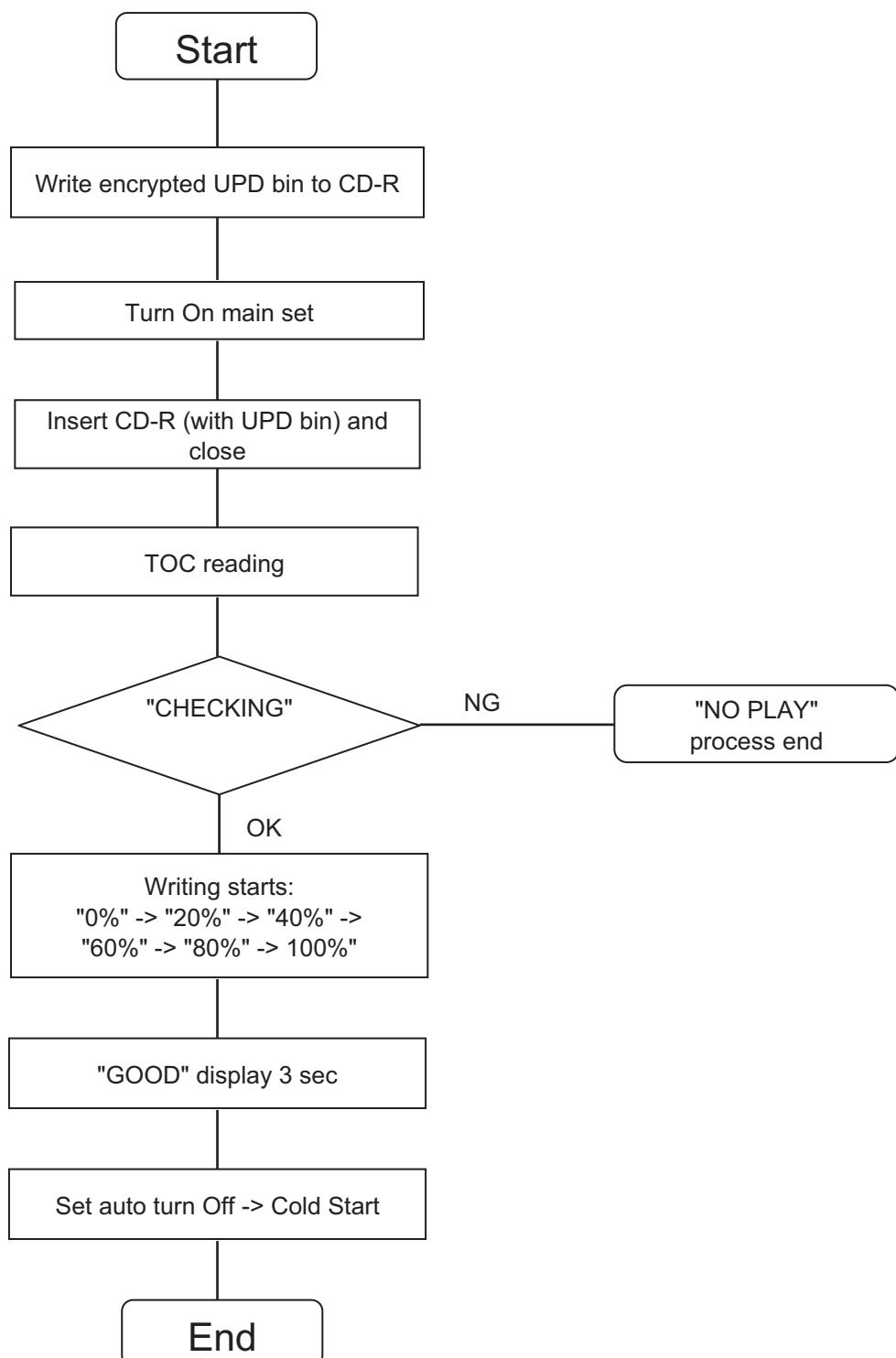
1) The following components are supplied as an assembled part.

- Micro-processor IC, IC2003 (MN101EF16KXW genérico) Este material se encuentra sin programar, debe ser programado.
- Micro-processor IC, IC2003 (RFKWMAKX500M0 para uso de Centros de Servicio).

- **Speaker System:**

1) This model uses Speaker System, SB-MAX500LMK.

3.2. Firmware Update Procedure



4 Specifications

Especificaciones

Sección del amplificador

Potencia de salida RMS en modo estéreo

Alto (ambos controlados por los canales)	250 W por canal (5 Ω), 1 kHz, 30% THD
Medio bajo (ambos controlados por los canales)	280 W por canal (4 Ω), 100 Hz, 30% THD
Bajo	550 W por canal (8 Ω), 100 Hz, 30% THD
Potencia total del modo estéreo RMS	2160 W (30% THD)

Potencia de salida PMPO	23800 W
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Sección del sintonizador, terminales

Emisoras preconfiguradas	30 emisoras de FM 15 emisoras de AM
--------------------------	--

Frecuencia modulada (FM)

Gama de frecuencias	87,5 MHz a 108,0 MHz (en pasos de 100 kHz)
	87,9 MHz a 107,9 MHz (en pasos de 200 kHz)
Terminales de la antena	75 Ω (desbalanceado)

Amplitud modulada (AM)

Gama de frecuencias	520 kHz a 1710 kHz (en pasos de 10 kHz)
---------------------	---

Conector del micrófono

Sensibilidad	0,7 mV, 1,1 kΩ
Terminal	Mono, toma de 3,5 mm (1 sistema)

Puerto de música (frontal)

Sensibilidad	100 mV, 4,7 kΩ
Terminal	Estéreo, toma de 3,5 mm

Entrada AUX	Clavija jack RCA
-------------	------------------

Sección de discos compactos

Discos reproducidos (8 cm o 12 cm)	CD, CD-R/RW (CD-DA, MP3*)
------------------------------------	---------------------------

Lector	Longitud de onda
--------	------------------

Generalidades

Fuente de alimentación	~ 127 V, 60 Hz
------------------------	----------------

Consumo de energía	198 W
--------------------	-------

Dimensiones (An x Al x Prf)	485 mm x 231 mm x 378 mm
-----------------------------	--------------------------

Peso	5 kg
------	------

Gama de temperaturas de funcionamiento	0°C a +40°C
--	-------------

Gama de humedades de funcionamiento	35% a 80% humedad relativa (sin condensación)
-------------------------------------	---

Consumo de energía en modo de espera	6,9Wh/día (considerando 23 horas en modo de espera al día).
--------------------------------------	---

Nota:

- Las especificaciones están sujetas a cambios sin previo aviso.
- El peso y las dimensiones son aproximados.
- La distorsión armónica total se mide con el analizador de espectro digital.

Salida de audio (disco)

Número de canales	2,2 ch (FL, FR, SW)
FL = Canal frontal izquierdo	
FR = Canal frontal derecho	
SW = Canal de subwoofer	

* MPEG-1 Layer 3

Sección de memoria interna

Memoria	Tamaño de la memoria	4 GB
	Compatibilidad con formato de archivos de medios	MP3 (*.mp3)

Cómo grabar en la memoria

Velocidad de bits	128 kbps
Velocidad de grabación en la memoria	1x, 3x máx. (CD solamente)
Formato de archivo de grabación	MP3 (*.mp3)
Capacidad de total de canciones grabadas	(Usa 128 kbps, aproximadamente 1 canción
	= 4 minutos)
	1000 canciones

Sección de USB

Puerto USB	USB 2,0 velocidad total
	Compatibilidad con formato de archivos de medios
	MP3 (*.mp3)
Sistema de archivo de dispositivo USB	FAT12, FAT16, FAT32
Energía puerto USB	500 mA (máx.)
Velocidad de bits	16 kbps a 320 kbps (reproducción)

Cómo grabar en el USB

Velocidad de bits	128 kbps
Velocidad de grabación USB	1x, 3x máx. (CD solamente)
Formato de archivo de grabación	MP3 (*.mp3)

5 General/Introduction

5.1. Media Information

NOTE on MP3

- Files are treated as tracks and folders are treated as albums.
- This unit can access up to 999 tracks, 255 albums and 20 sessions.
- Disc must conform to ISO9660 level 1 or 2 (except for extended formats).
- To play in a certain order, prefix the folder and file names with 3-digits numbers in the order you want to play them.

Limitations on MP3 play

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

NOTE on CDs

- This unit can access up to 99 tracks.
- This unit can play MP3 files and CD-DA format audio CD-R/RW that have been finalized.
- It may not be able to play some CD-R/RW due to the condition of the recording.
- Do not use irregularly shaped disc.
- Do not use disc with labels and stickers that are coming off or with adhesive exuding from under labels and stickers.
- Do not attach extra labels or stickers on the disc.
- Do not write anything on the disc.

NOTE on USB

Compatible devices

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

Supported format

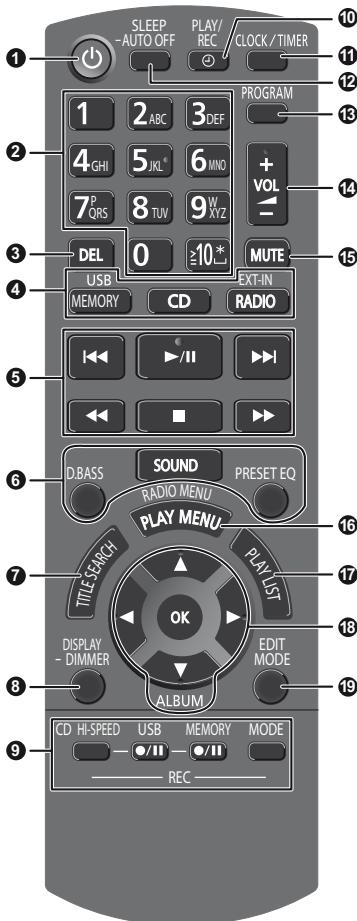
- Folders are defined as album.
- Files are defined as track.
- Track must have the extension ".mp3" or ".MP3".
- CBI (Control/Bulk/Interrupt) is not supported.
- NTFS file system is not supported. (only FAT 12/16/32 file system is supported).
- Some files can fail to work because of the sector size.

Note:

- Maximum album: 255 albums (include albums without MP3 tracks).
- Maximum track: 2500 tracks
- Maximum track in one album: 999 tracks

6 Location of Controls and Components

6.1. Remote Control Key Button Operation



① Interruptor de alimentación en espera/conectada [待机/电源]

Pulse este interruptor para cambiar del modo de alimentación conectada al modo de alimentación en espera o viceversa. En el modo de alimentación en espera, la unidad consume una pequeña cantidad de corriente.

② Botones alfanuméricos

Para seleccionar un número de dos dígitos
Ejemplo: 16= [≥10]▶ [1]▶ [6]
Para establecer un carácter
Ejemplo: B= [2]▶ [2]

③ Borre una pista programada

Borre una pista seleccionada en una lista de reproducción

④ Seleccionar la fuente de audio

⑤ Control de reproducción básica

⑥ Seleccionar los efectos de sonido

⑦ Iniciar la búsqueda del título para memoria interna

⑧ Vea la información del contenido

Disminuir el brillo del panel de visualización
Pulse y mantenga pulsado el botón para usar esta función.
Para cancelar, pulse y mantenga pulsado el botón nuevamente.

⑨ Control de operación de grabación

⑩ Configurar el temporizador de reproducción y de grabación

⑪ Configurar el reloj y el temporizador

⑫ Configurar el temporizador de apagado automático

Apagar automáticamente el sistema

Mientras la fuente sea el disco, el dispositivo USB o de memoria interna, la función de apagado automático apagará el sistema si no lo usa durante 30 minutos. Pulse y mantenga pulsado el botón para usar esta función.
Para cancelar, pulse y mantenga pulsado el botón nuevamente.

⑬ Configure la función programa

⑭ Ajustar el volumen del sistema

⑮ Desactivar el sonido del sistema

Pulse el botón nuevamente para cancelar.
“MUTE” también se cancela cuando usted ajusta el volumen o cuando apaga el sistema.

⑯ Configurar el ítem del menú de reproducción

Configurar el ítem del menú de radio

⑰ Funcionamiento de la lista de reproducción de la memoria interna

⑱ Seleccionar la opción

⑲ Configurar el modo de edición para USB y memoria interna

⑳ Explorar la lista de reproducción de la memoria interna

Buscar pistas o álbumes

[CD]

Gire la perilla para buscar las pistas.
Pulse [▶/II] para iniciar la reproducción de la selección.

[MP3]

Pulse [ALBUM/TRACK] para seleccionar el álbum o pista y luego gire la perilla para buscar.
Pulse [▶/II] para iniciar la reproducción de la selección.

㉑ Puerto USB (USB)

Indicador de grabación USB

㉒ Sensor del control remoto

Sensor del control remoto

Distancia: a aproximadamente 7 m
Ángulo: aproximadamente 20° hacia arriba y hacia abajo, 30° a la izquierda y derecha

㉓ Bandeja de disco

㉔ Toma puerto de música

㉕ Conector del micrófono

㉖ Ajuste el volumen del micrófono

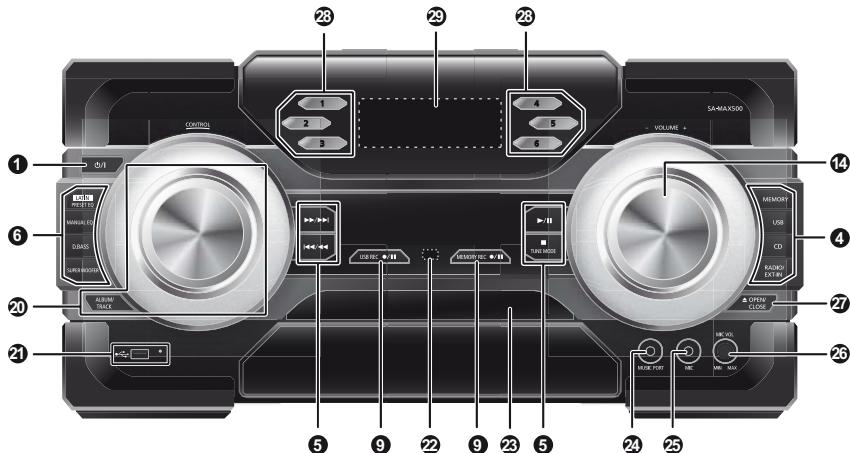
㉗ Abrir o cerrar la bandeja del disco

㉘ Botones directos de la lista de reproducción de la memoria interna

Pulse para agregar una pista a la lista de reproducción correspondiente.
Pulse para seleccionar la lista de reproducción.

㉙ Panel de visualización

6.2. Main Unit Key Button Operation



1 Interruptor de alimentación en espera/conectada [待] / [待/I]

Pulse este interruptor para cambiar del modo de alimentación conectada al modo de alimentación en espera o viceversa. En el modo de alimentación en espera, la unidad consume una pequeña cantidad de corriente.

2 Botones alfanuméricos

Para seleccionar un número de dos dígitos
Ejemplo: 16= [2] [1] [0] [1] [1] [6]

Para establecer un carácter
Ejemplo: B= [2] [2] [2]

3 Borre una pista programada

Borre una pista seleccionada en una lista de reproducción

4 Seleccionar la fuente de audio

5 Control de reproducción básica

6 Seleccionar los efectos de sonido

7 Iniciar la búsqueda del título para memoria interna

8 Vea la información del contenido

Disminuir el brillo del panel de visualización
Pulse y mantenga pulsado el botón para usar esta función.

Para cancelar, pulse y mantenga pulsado el botón nuevamente.

9 Control de operación de grabación

10 Configurar el temporizador de reproducción y de grabación

11 Configurar el reloj y el temporizador

12 Configurar el temporizador de apagado automático
Apagar automáticamente el sistema

Mientras la fuente sea el disco, el dispositivo USB o de memoria interna, la función de apagado automático apagará el sistema si no lo usa durante 30 minutos. Pulse y mantenga pulsado el botón para usar esta función.

Para cancelar, pulse y mantenga pulsado el botón nuevamente.

13 Configure la función programa

14 Ajustar el volumen del sistema

15 Desactivar el sonido del sistema

Pulse el botón nuevamente para cancelar.
"MUTE" también se cancela cuando usted ajusta el volumen o cuando apaga el sistema.

16 Configurar el ítem del menú de reproducción
Configurar el ítem del menú de radio

17 Funcionamiento de la lista de reproducción de la memoria interna

18 Seleccionar la opción

19 Configurar el modo de edición para USB y memoria interna

20 Explorar la lista de reproducción de la memoria interna
Buscar pistas o álbumes

CD
Gire la perilla para buscar las pistas.
Pulse [▶/II] para iniciar la reproducción de la selección.

MP3
Pulse [ALBUM/TRACK] para seleccionar el álbum o pista y luego gire la perilla para buscar.
Pulse [▶/II] para iniciar la reproducción de la selección.

21 Puerto USB (USB)

Indicador de grabación USB

22 Sensor del control remoto

Sensor del control remoto

Distancia: a aproximadamente 7 m
Ángulo: aproximadamente 20° hacia arriba y hacia abajo, 30° a la izquierda y derecha

23 Bandeja de disco

24 Toma puerto de música

25 Conector del micrófono

26 Ajuste el volumen del micrófono

27 Abrir o cerrar la bandeja del disco

28 Botones directos de la lista de reproducción de la memoria interna

Pulse para agregar una pista a la lista de reproducción correspondiente.

Pulse para seleccionar la lista de reproducción.

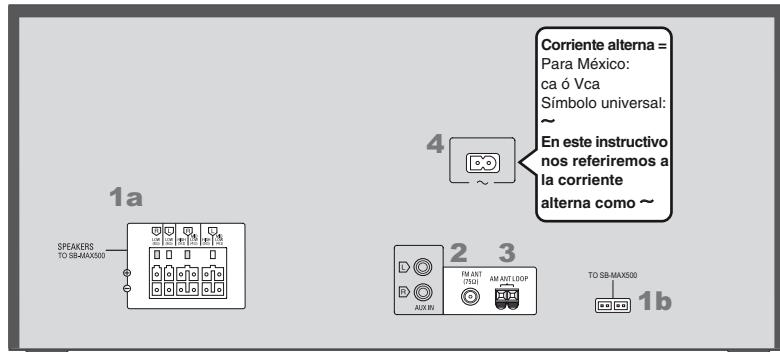
29 Panel de visualización

7 Installation Instructions

7.1. Speaker and A/C Connection

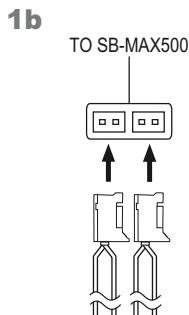
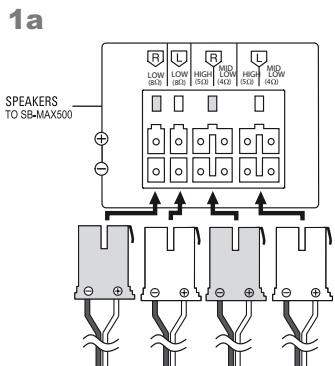
Cómo realizar las conexiones

Conecte el cable de alimentación de ~ sólo después de haber hecho todas las demás conexiones.



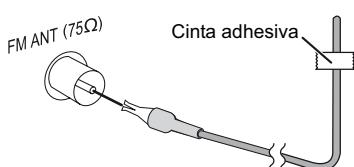
1 Conecte los bafles.

Conecte los cables del bafle a las terminales del mismo color.



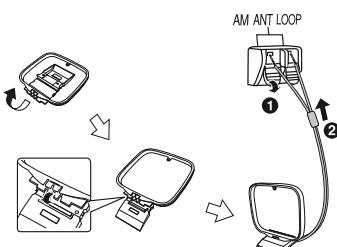
2 Conecte la antena interior FM.

Coloque la antena donde la recepción sea la mejor.

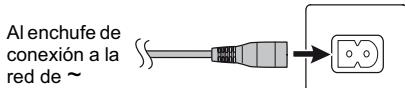


3 Conecte la antena de cuadro AM.

Ponga la antena en posición vertical sobre su base
hasta que haga clic.



4 Conecte el cable de alimentación de ~



No use un cable de alimentación de ~ de otro equipo.

Cómo ahorrar energía

El sistema consume aproximadamente 0.3 W cuando
está en modo de espera. Desconecte la fuente de
alimentación cuando no use el sistema.

Se perderán algunas configuraciones cuando
desconecte el sistema. Tendrá que configurarlas
nuevamente.

8 Service Mode

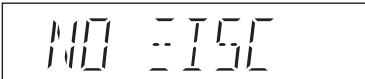
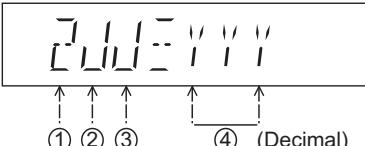
8.1. Cold-Start

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

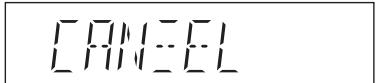
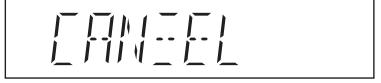
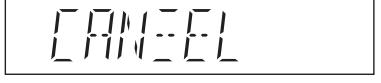
1. Unplug AC power cord
2. Press & hold [POWER] button
3. Plug AC power cord while [POWER] button being pressed
FL Display will show “-----”
4. Release [POWER] button

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		<p>In CD Mode:</p> <ol style="list-style-type: none"> Press [■] button on main unit follow by [4] and [7] on remote control. To exit, press [DELETE] button on remote control or, press [POWER, φ/] button on Main Unit
EEPROM checksum check	Displaying of 1. Year Develop. 2. Model Type. 3. ROM Type. 4. Firmware Version.	<p>(Display 1)</p>  <p>① ② ③ ④ (Decimal)</p> <p>Version No. (001 ~ 999) ⇒ specific for each firmware</p>	<p>In CD mode:</p> <ol style="list-style-type: none"> Enter into Doctor Mode

8.2.2. Doctor Mode Table 2

Item		FL Display	Key Operation
Mode Name	Description		
Volume Setting Check	To check the volume setting of a main unit.	 Press [7]: VOL50 Press [8]: VOL35 Press [9]: VOL0	In Doctor Mode : 1. Press [7], [8], [9] button on remote control.
FL Display Check	To check the FL segment display All segment will light up while all LED blink at 0.5s,intervals.(if any)		In Doctor mode : 1. Press [1] button on remote control. 2. To cancel, press [0] on remote control.
BRS11C Reliability Test (Traverse)	To determine CD Mechanism BRS11C Access Inner & Outer disc operation. In this mode, ensure the CD is in the main unit. Note: Refer to Section 8.3 Fig 2. for process flow .	 The counter will increment by one . When reach 9999 will change to 0000 Cancellation Display 	In Doctor Mode : 1. Press [10]>[1]>[2] button on remote control. 2. To cancel, press [0] on remote control.
BRS11C Reliability Test (Combination)	To determine CD Mechanism Unit (BRS11C) Open/Close & Access Inner & Outer Disc Operation. In this mode, ensure the CD is in the main unit. Note: Refer to Section 8.3 Fig 3. for process flow .	 The counter will increment by one . When reach 9999 will change to 0000 Cancellation Display 	In Doctor Mode : 1. Press [10]>[1]>[5] button on remote control. 2. To cancel, press [0] on remote control.
BRS11C Reliability Test (Loading)	To determine CD Mechanism Unit (BRS11C) Open/Close operation. In this mode, the tray will open & close. Note: Refer to Section 8.3 Fig 1 for process flow .	 The counter will increment by one . When reach 9999 will change to 0000 Cancellation Display 	In Doctor Mode : 1. Press [10]>[2]>[1] button on remote control. 2. To cancel, press [0] on remote control.

8.2.3. Doctor Mode Table 3

Item		FL Display	Key Operation																																																																		
Mode Name	Description																																																																				
CD Self- Adjustment (AJST) Result Display	i. Function: To display result of self-adjustment for CD . • This is used for servicing and analysis.	<p style="text-align: center;">↑ Display of auto adjustment result</p> <p>Reference table:</p> <table border="1"> <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>2nd AOC1</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/T AGC</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/T AGC	O	-	O	O	O	X	X	X	X	-	AGC2	O	-	O	O	O	O	O	O	O	△	In Doctor Mode: 1. Press [10]→[1]→[4] button on remote control . 2. To cancel, press [0] on remote control .
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/T AGC	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>Version (Decimal) Checksum (Hex)</p> <p>(Display 1)</p> <p>ROM Version</p> <p>(Display 2)</p> <p>Year ROM Develop Type Version (Decimal)</p> <p>after 2 sec</p>	In Doctor Mode : 1. Press [4] button on remote control . 2. To cancel, press [0] on remote control .																																																																		

8.3. Reliability Test Mode (CD Mechanism Unit (BRS11C))

Below is the process flow chart of the aging test for the CD Mechanism Unit (BRS11C).

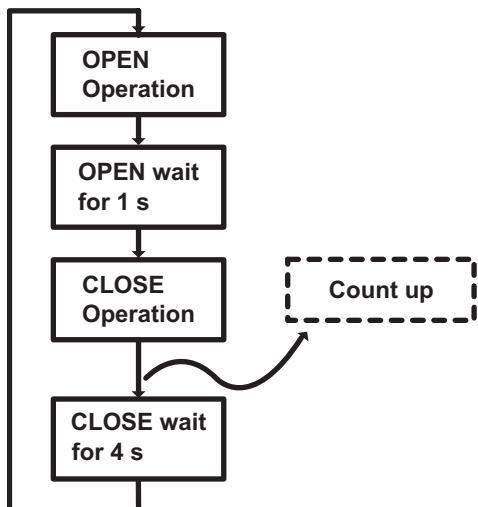


Fig. 1. Reliability Test (Loading)

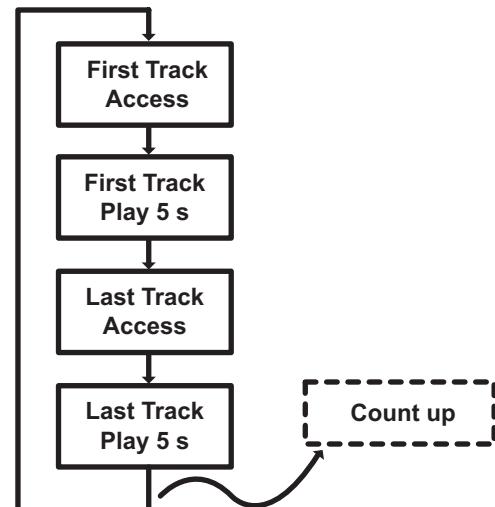


Fig. 2. Reliability Test (Traverse)

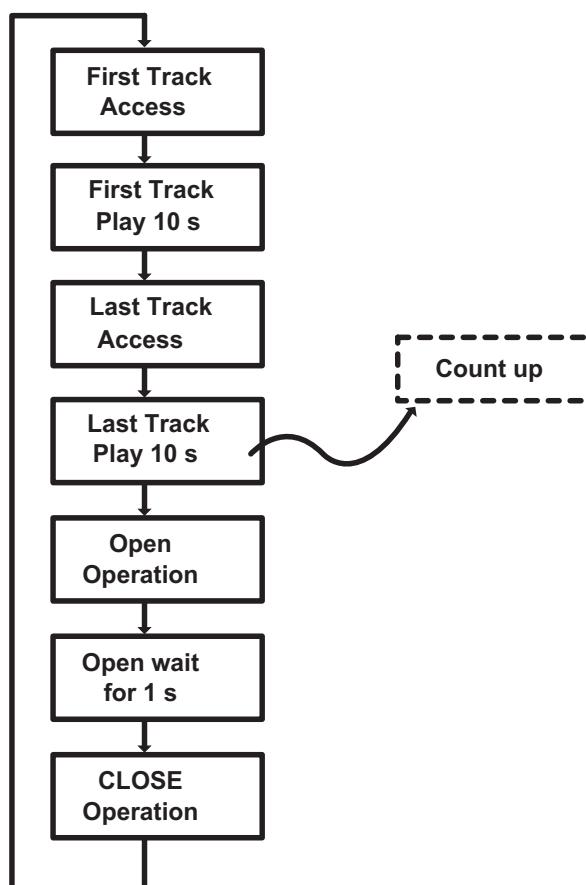


Fig. 3. Reliability Test (Combination)

8.4. Self-Diagnostic Mode

Item		FL Display	Key Operation
Mode Name	Description		
Self Diagnostic Mode	To enter into self diagnostic checking	— -- —	Step 1: Select CD mode (Ensure no disc is inserted). Step 2: Press & hold [■] button follow by [▶▶/▶▶] on main unit for 2 seconds.
Error code information	System will perform a check on any unusual/error code from the memory	Example: — -- — F76	Step 1: In self diagnostic mode, Press [■] on main unit. To exit, press [^/I] on main unit or remote control.
Delete error code	To clear the stored in memory (EEPROM IC)	CLEAR	Step 1: In self diagnostic mode, Press [0] on remote control. To exit, press [^/I] on main unit or remote control.
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.	F61	Press [■] on main unit for next error.
F76		DC_DET_PWR	F76	
F61-76		Both DCDET (NG)	F61-F76	
F26		Communication between CD servo LSI and micro-P abnormal (Radio, USB)	F26	

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 [Δ OPEN/CLOSE] and [CD] keys for 5 sec or more.

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



Note: [Δ 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 [Δ 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

9.1. Part Location

9.1.1. SMPS P.C.B.

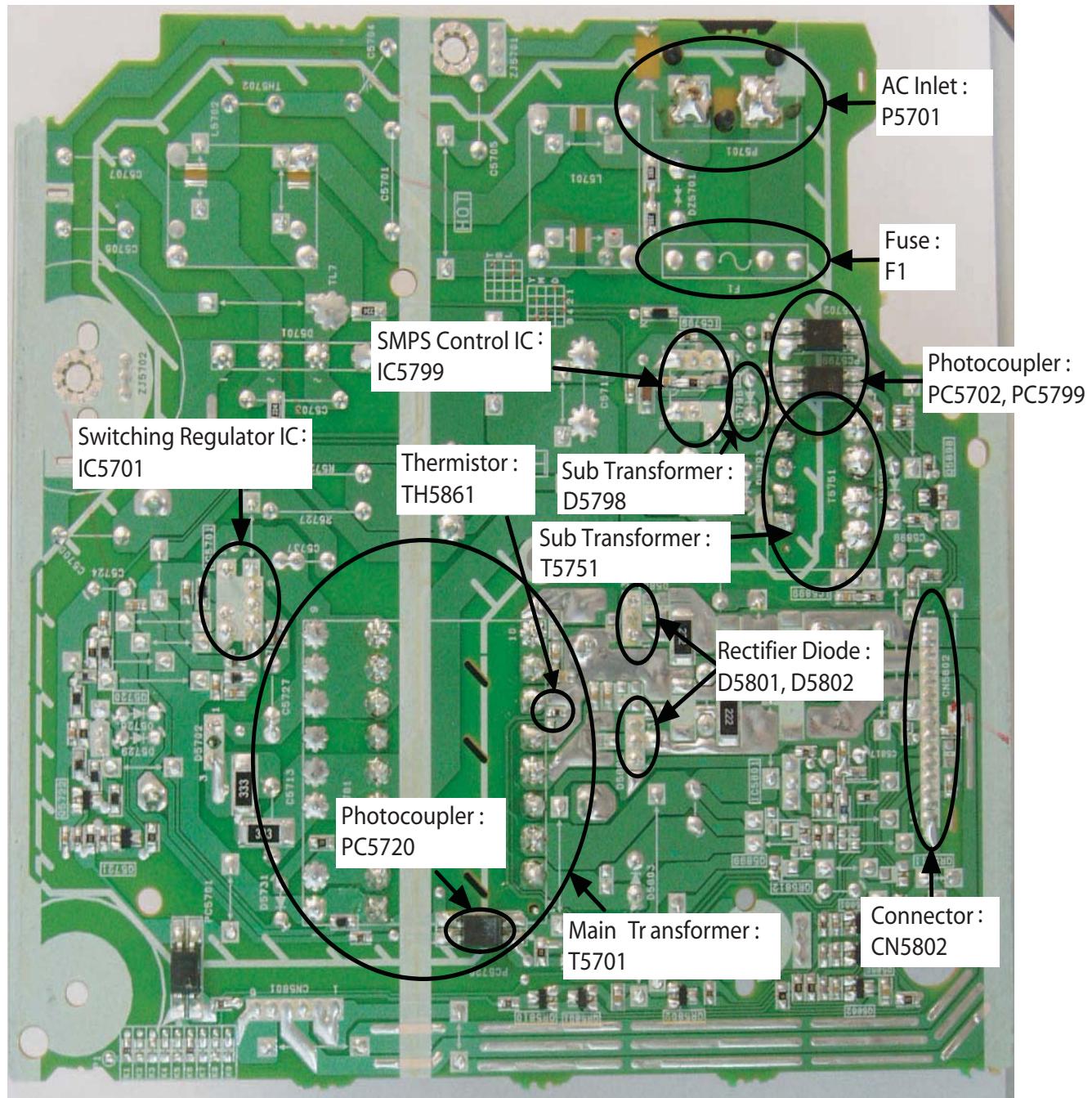


Fig. 1 SMPS P.C.B.

9.1.2. Main P.C.B. (Front Side)



Fig. 2 Main P.C.B. (Front Side)

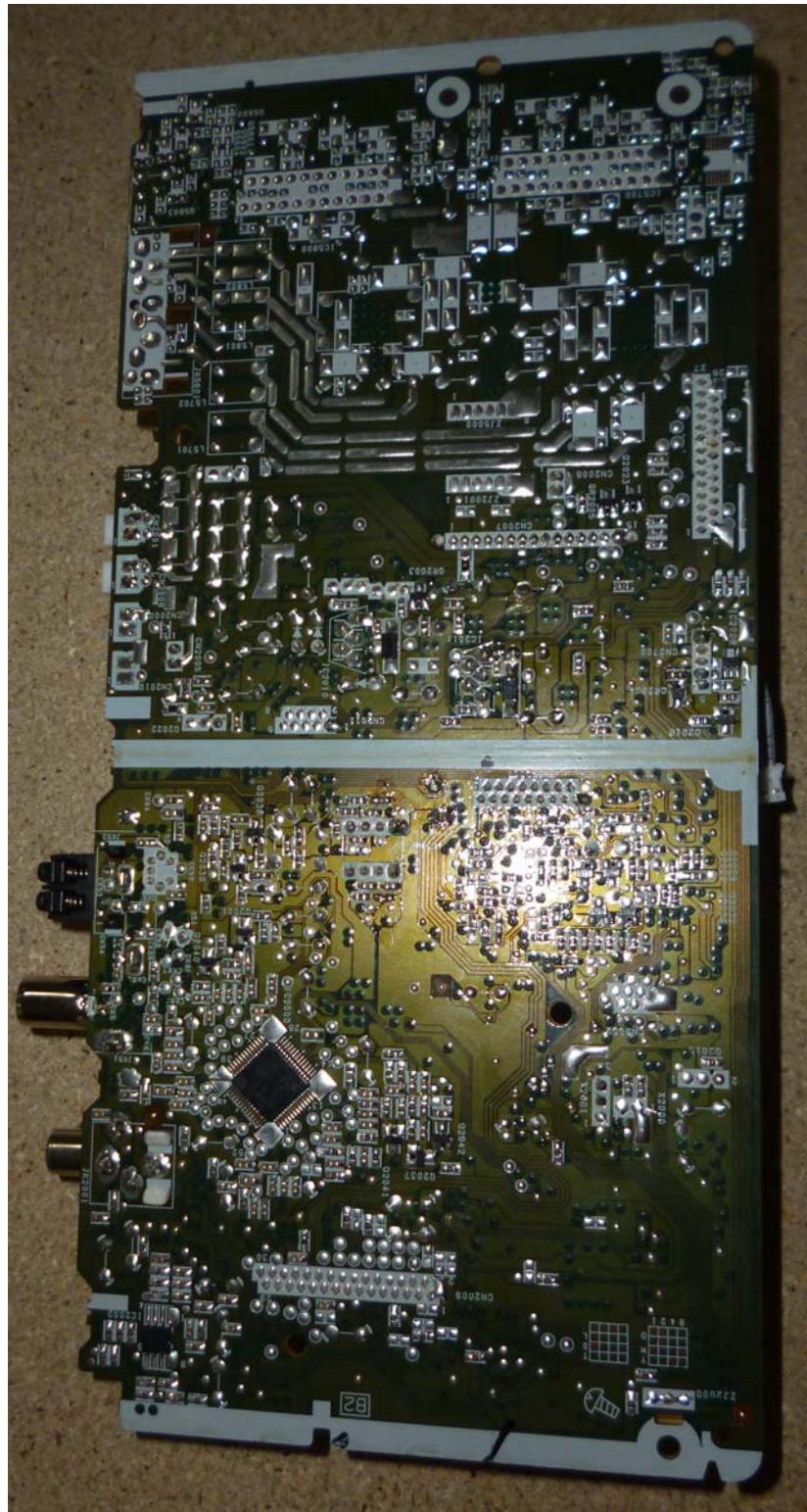


Fig. 3 Main P.C.B. (Back Side)

9.1.3. D-AMP P.C.B.

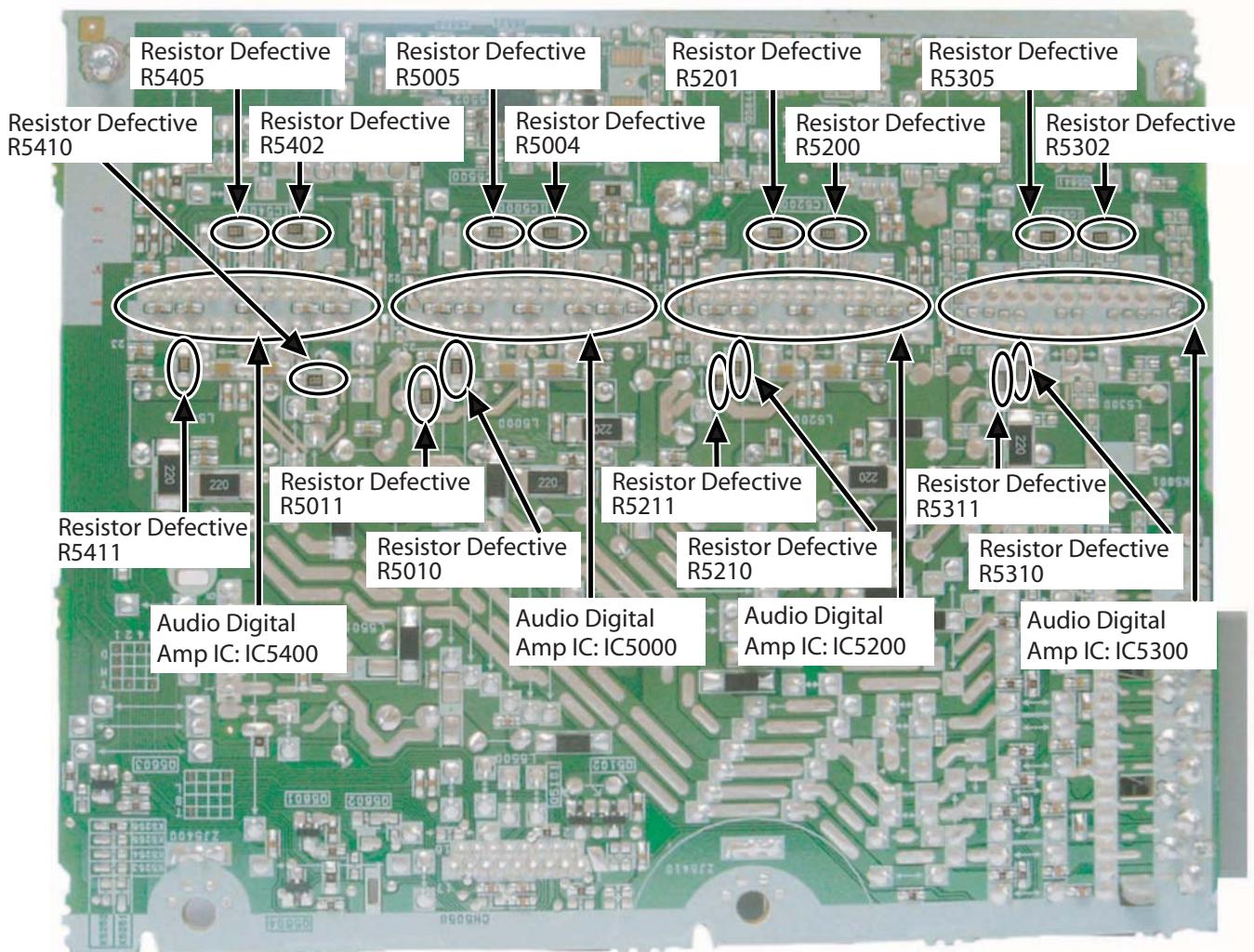


Fig. 4 D-Amp P.C.B.

9.2. Troubleshooting Guide for F61 and/or F76

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

Symptom		Checking Items	Possible Fault(s)	Remarks
Set cannot ON	1	AC Cord	1 AC Cord Faulty, Loose connection.	Refer to Section 9.1.1 Fig. 1. SMPS P.C.B.
	2	AC Inlet, P5701	2 P5701 solder crack, dry joint.	
	3	Fuse, F1	3 Fuse, F1 Open .	
	4	Photocoupler	4 PC5702/PC5799 solder crack.	
		PC5702, PC5799	Dry joint, short circuit, open circuit.	
	5	Switching Regulator	5 IC5701 Faulty.	
		IC, IC5701		
	6	Main Transformer T575	16a T5751 Faulty.	
			6b Switching Mode Power Supply Control IC (IC5799) faulty.	
			6c D5798 faulty.	
Set can ON then F61	1	Speaker Output	1 Faulty speaker unit, Loose connection, Short.	Refer to Section 9.1.2 defective. Fig. 3. Main P.C.B. and Section 9.1.3 Pin 14 . Fig. 4. D-Amp P.C.B.
	2	D-AMP circuit	2a D-AMP IC, IC5700, IC5800, IC5000, IC5200, IC5300, IC5400 (Check DC voltage at speaker terminals, 3V and above defective)	
			2b DC Voltage ok but no sound, check DC Voltage at Pin 1. 5V ok condition, 2.5V or 0V defective.	
			2c 2a, 2b ok but no sound, check PWM waveform at Pin 10 and Pin 14 . If no PWM, 24 resistors defective. For IC5000 (R5004, R5005, R5010, R5011). For IC5400 (R5402, R5405, R5410, R5411). For IC5200 (R5200, R5201, R5210, R5211). For IC5300 (R5302, R5305, R5310, R5311).	
Set can ON then F76	1	Main Transformer T570	11a Short circuit between Pin 11 and Pin 12 1b Short circuit between Pin 13 and Pin 14 . 1c Short circuit between Pin 16 and Pin 17 .	Refer to Section 9.1.1 Fig. 1. SMPS P.C.B. Refer to Section 9.1.2 Fig. 2. and Fig.3. Main P.C.B. Refer to Section 9.1.1 Fig. 1. SMPS P.C.B.
	2	Regulator Circuits	2a IC2010 faulty (No +9V output). 2b L2000 Open. 2c Q2022 faulty (No +5V output). 2d IC2014 faulty (No +3.3V output). 2e IC2011 faulty (No +5V output). 2f L2001 Open.	
	3	Photocoupler	3 PC5720 solder crack, PC5720 Dry joint, short circuit, open circuit.	
Set can ON working normally for some time then F76	1	Rectifier Diode D5801	1a Improper contact between D5801 to Heatsink.	Refer to Section 9.1.1 Fig. 1. SMPS P.C.B.
		Rectifier Diode D5802	1b Improper contact between D5802 to Heatsink.	
	2	Thermistor TH5860,	1b Set trigger temperature protection.	
		TH5861		

9.3. D-Amp IC Operation & Control

D-AMP IC Operation & Control

- 1) D-AMP IC (C1BA00000497) was used for this model (MAX500)
- 2) Three control pins (signal send from micro-processor IC) were used to control the D-AMP IC operation such as muting, standby and normal operation. They are described as below: -

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

Table 1: Digital AMP Pin Control.

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

- A) MODE_DA & MUTE_F were used to switch the D-AMP IC in the following muting status:
- L(Low/OFF): Standby / OFF
 - H (High/ON): Operating or Mute

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

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

Table 2: Digital AMP IC Mode Status.

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

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

For 9 KHz Step

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

Table 3: F_HOP Control during 9 kHz Step

For 10 KHz Step

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

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

Table 4: F_HOP Control during 10 kHz Step

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

Service Fixture & Tools

Prepare service tools before process service position.

Ref. No	Service Tools	Remarks
SFT1	Main P.C.B. (CN2007) - SMPS P.C.B. (CN5802)	REX1552(15P Cable Wire)

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 Mic P.C.B.
 - Disassembly of Panel P.C.B.
 - Disassembly of Memory LED P.C.B.
 - Disassembly of Remote Sensor P.C.B.
 - Disassembly of USB P.C.B.
 - Disassembly of Music Port P.C.B.
 - Disassembly of Top Bar LED P.C.B.
 - Disassembly of Bottom Bar LED P.C.B.
 - Disassembly of Main P.C.B.
 - Replacement of Voltage Regulator (IC2010)
 - Replacement of Voltage Regulator (IC2011)
 - Disassembly of D-Amp P.C.B.
 - Replacement of Audio Digital Amp (IC5400)
 - Replacement of Audio Digital Amp (IC5000)
 - Replacement of Audio Digital Amp (IC5200)
 - Replacement of Audio Digital Amp (IC5300)
 - Disassembly of SMPS P.C.B.
 - Replacement of Switching Regulator IC (IC5701)
 - Replacement of Rectifier Diode (D5702)
 - Replacement of Rectifier Diode (D5801)
 - Replacement of Rectifier Diode (D5802)
 - Replacement of Rectifier Diode (D5803)
 - Disassembly of CD Mechanism Unit (BRS11C)
 - Disassembly of CD Interface P.C.B.
 - Disassembly of CD Servo P.C.B.
 - Disassembly of Rear Panel

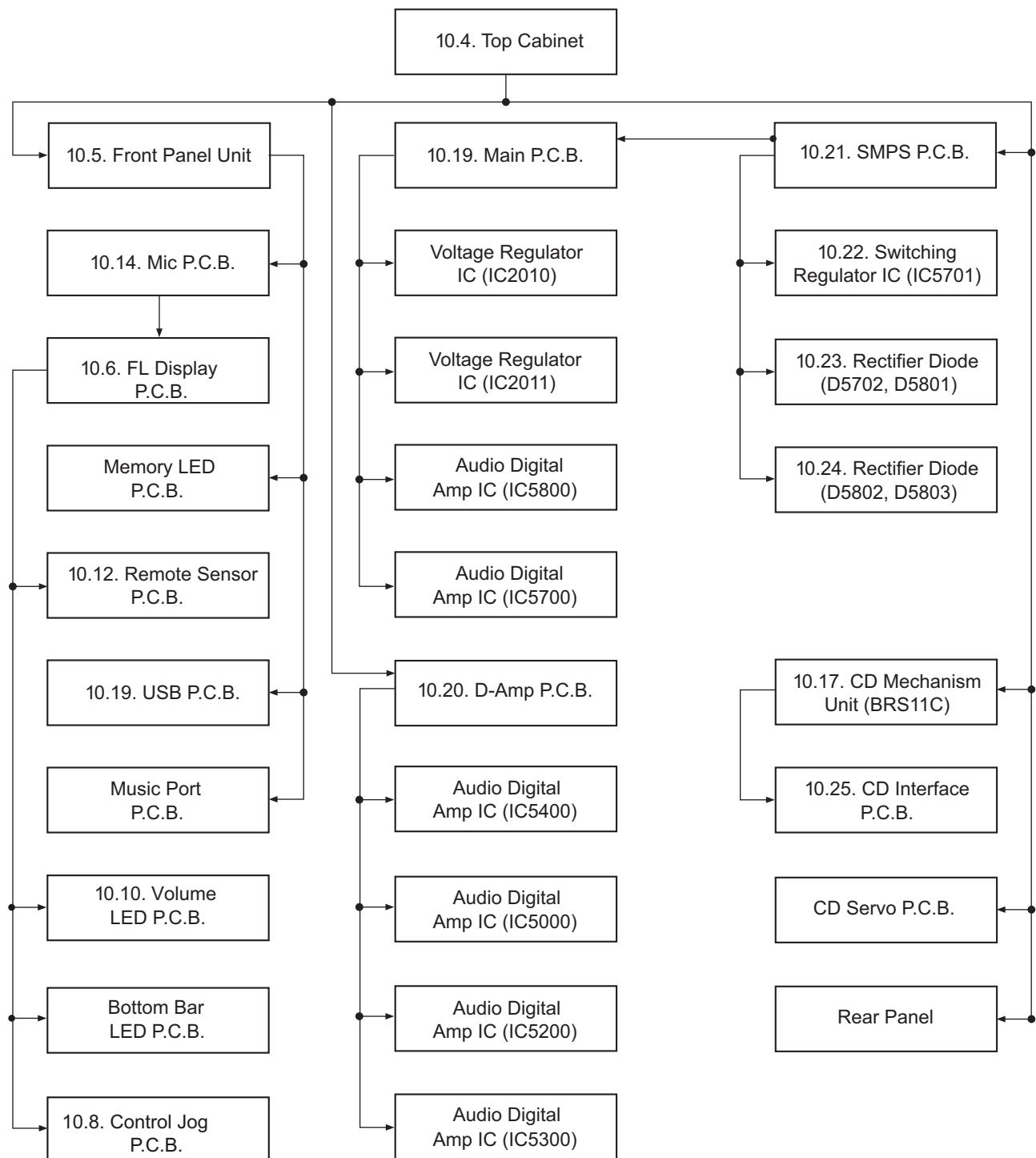
CAUTION NOTE:

Please use original screw and at correct locations.

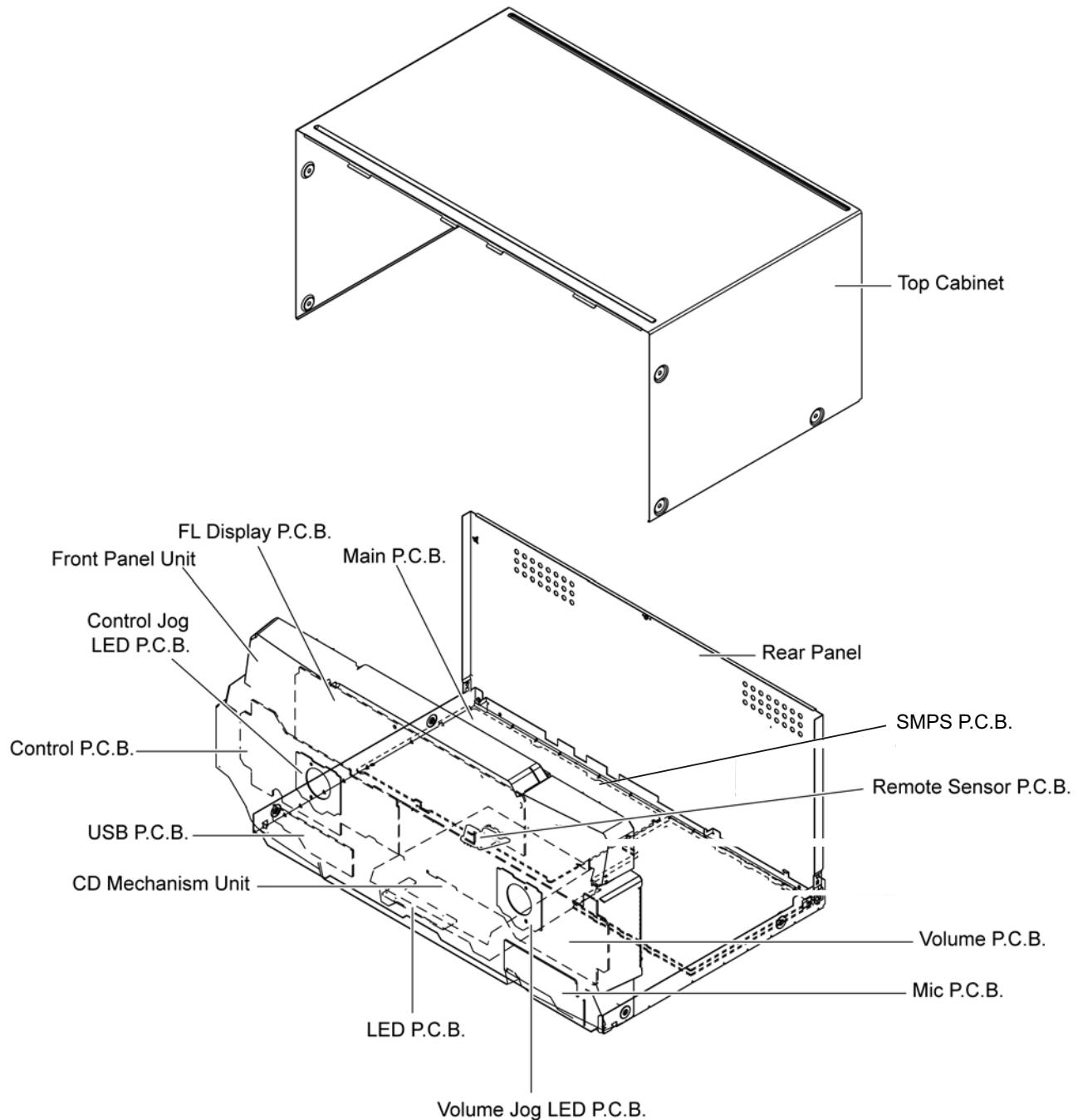
Below shown is part no. of different screw types used:

- | | |
|------------------------|-----------------------|
| a :RHD30007-K2J | e :XTB3+10JFJ |
| b :RHD30119-S | f :RHDX30005-J |
| c :RHD26046-L | g :RHDX031008 |
| d :RHD30111-31 | h :XTN2+6GFJ |
| | i :XTW3+8TFJ |

10.2. Disassembly Flow Chart

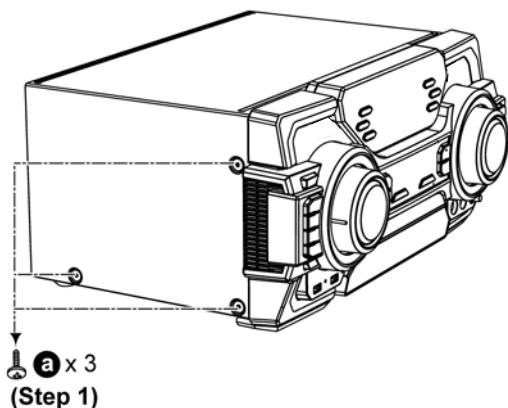


10.3. Main Components and P.C.B. Locations

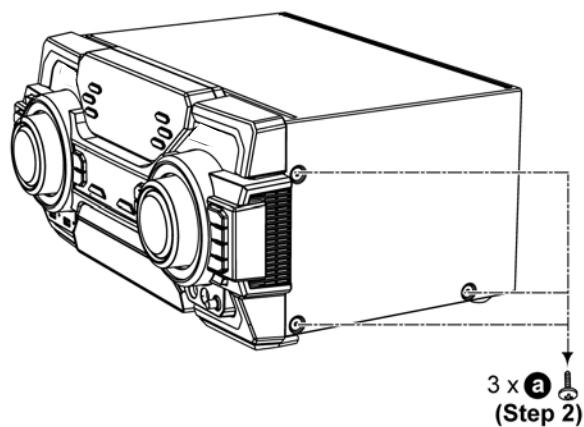


10.4. Disassembly of Top Cabinet

Step 1 Remove 3 screws.



Step 2 Remove 3 screws.

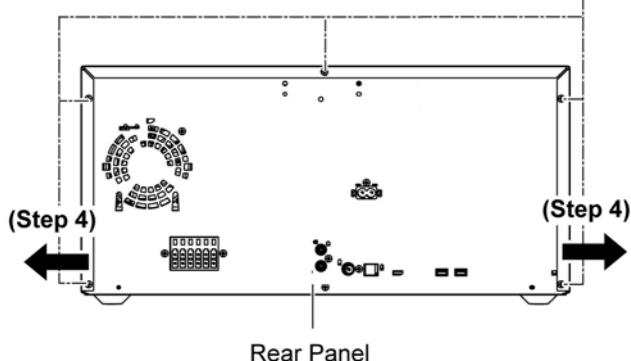


Step 3 Remove 5 screws.

Step 4 Slightly pull both side of Top Cabinet outwards as arrow shown.

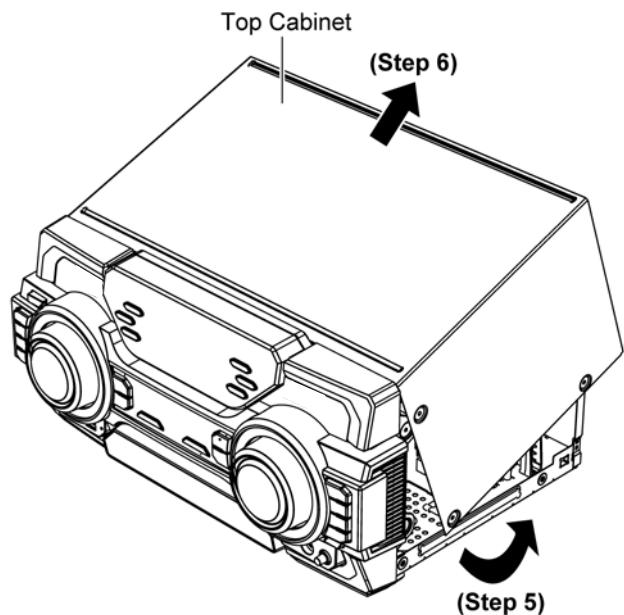
(Step 3)
b x 5

(Back View)

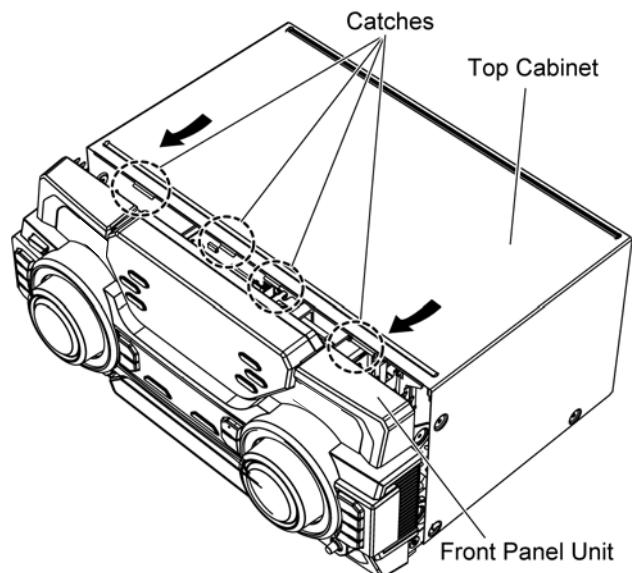


Step 5 Slightly lift up both side of Top Cabinet in an outward direction as shown.

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

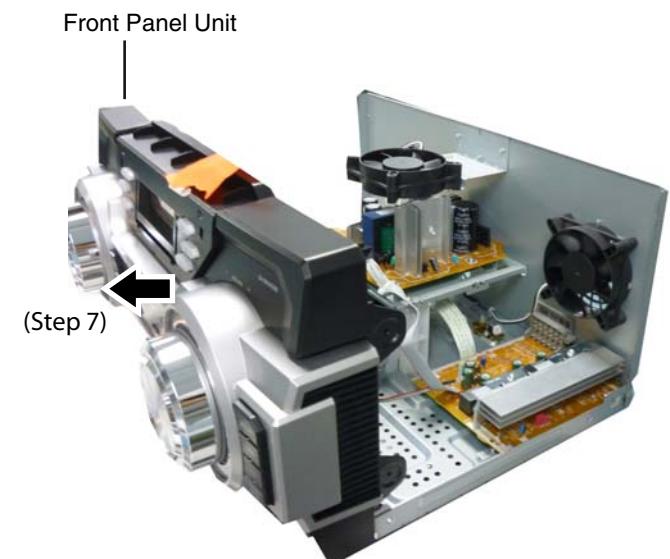
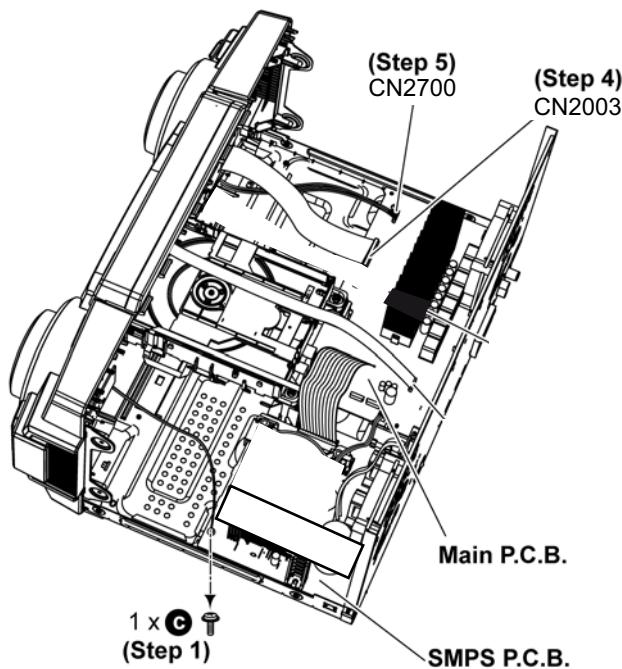
Step 7 Remove the Front Panel Unit

- Refer to "Disassembly of Top Cabinet".

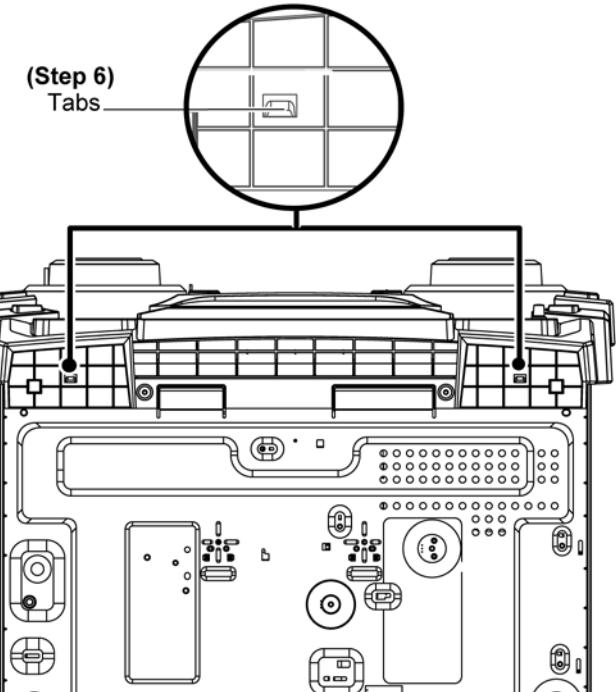
Step 1 Remove 1 screw at the SMPS P.C.B.

Step 4 Detach 30P FFC at the connector (CN2003) on Main P.C.B..

Step 5 Detach 5P Wire at the connector (CN2700) on Main P.C.B..



Step 6 Release tabs at the bottom of the unit.



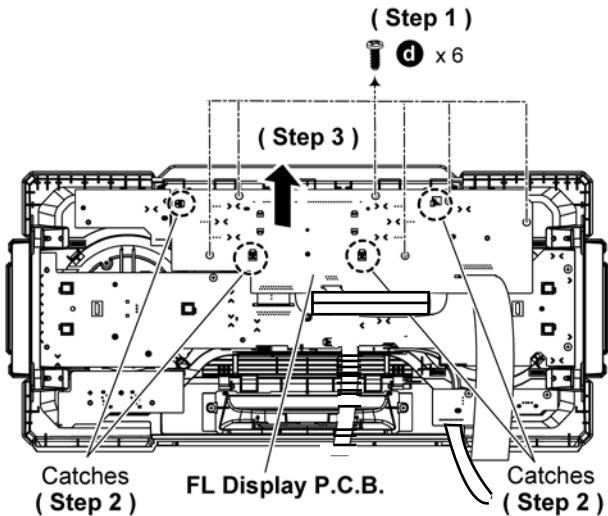
10.6. Disassembly of FL Display P.C.B.

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

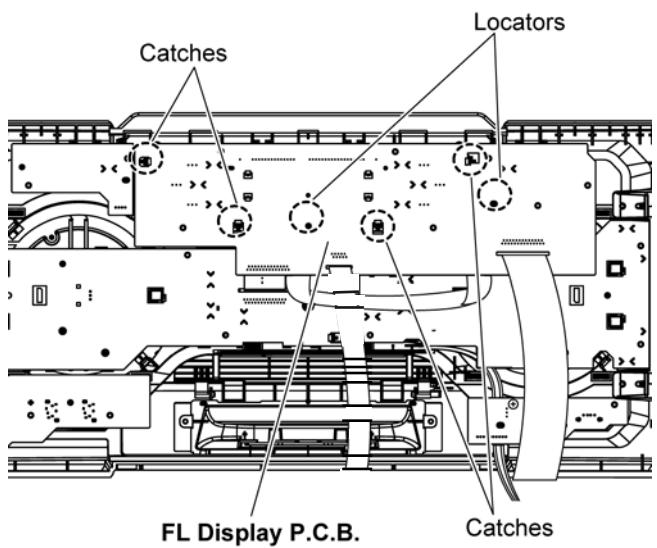
Step 1 Remove 6 screws.

Step 2 Release 4 catches.

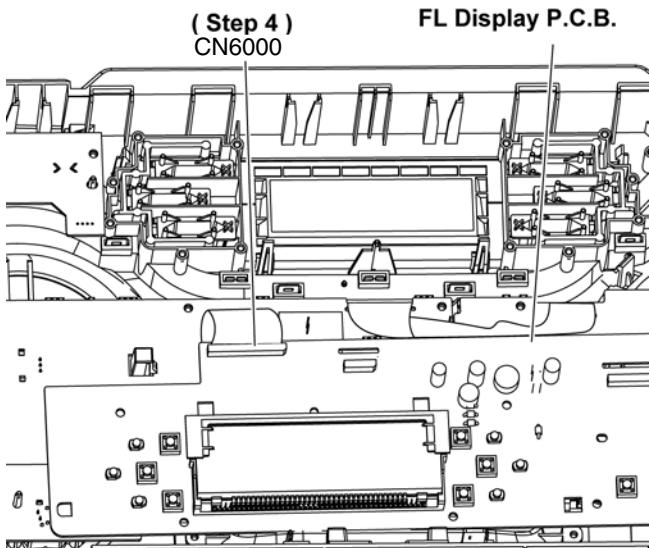
Step 3 Lift up the FL Display P.C.B..



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



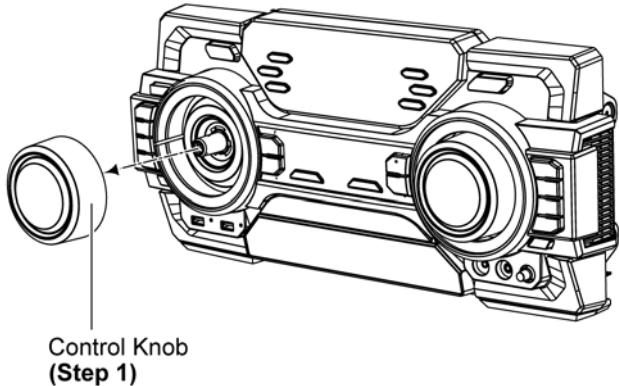
Step 4 Detach 30P FFC at a connector (CN6000) on the FL Display P.C.B..



10.8. Disassembly of Control P.C.B.

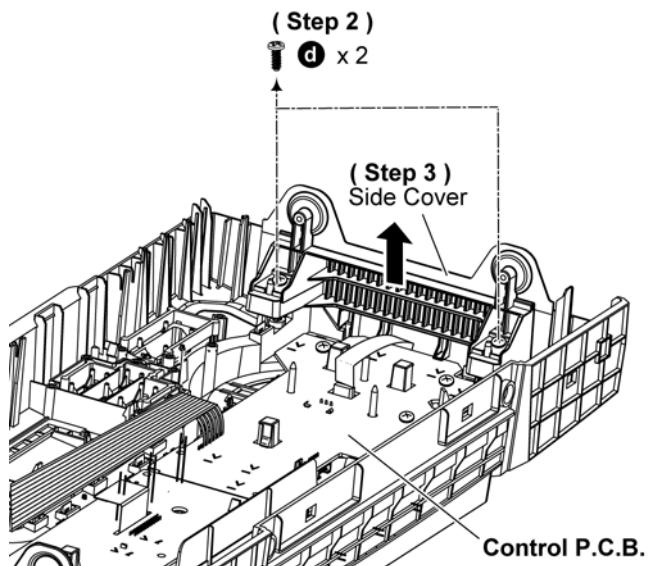
- Refer to "Disassembly of Top Cabinet".
- Refer to "Disassembly of Front Panel Unit".
- Refer to "Disassembly of FL Display P.C.B.".

Step 1 Remove the Control Knob.



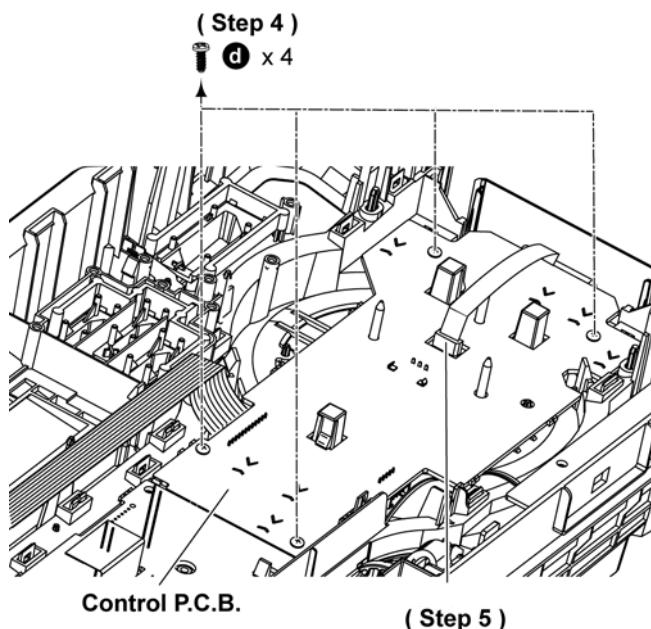
Step 2 Remove 2 screws.

Step 3 Remove the Side Cover.

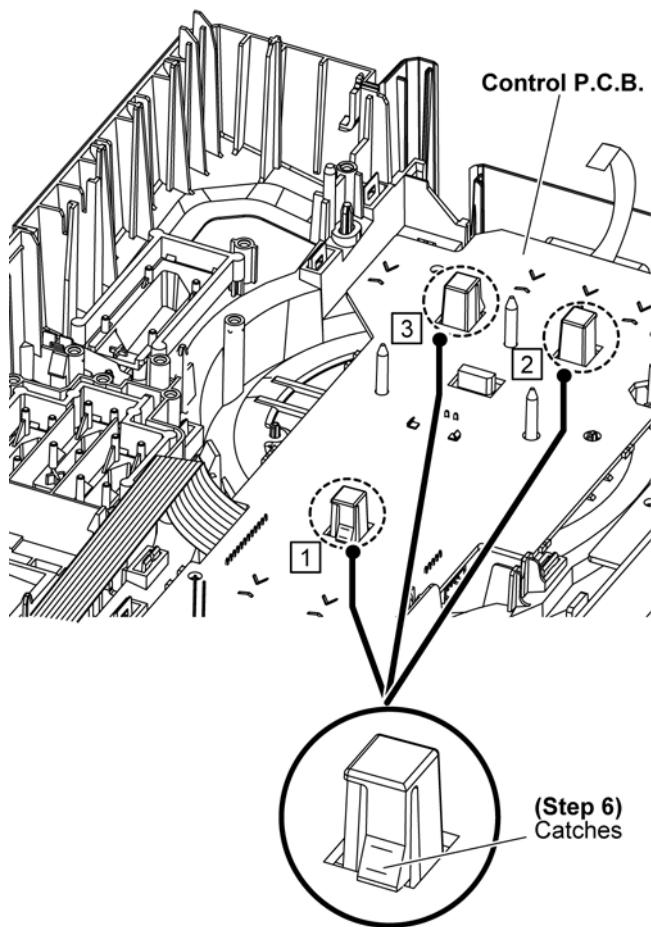


Step 4 Remove 4 screws.

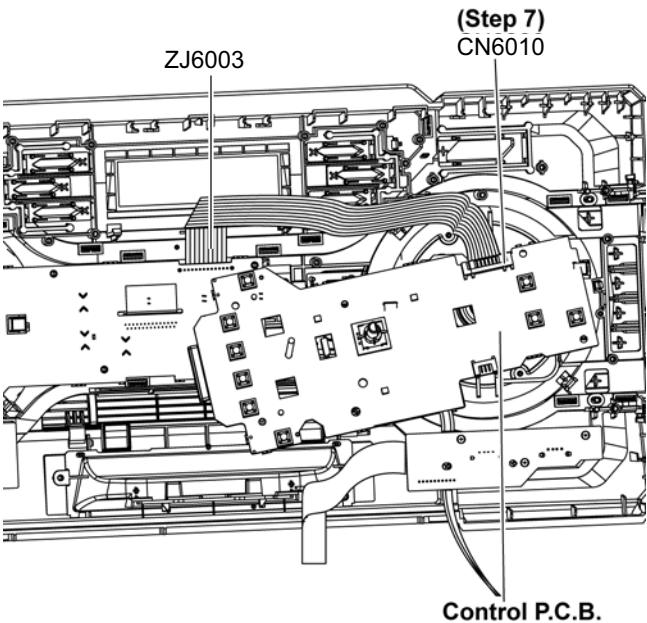
Step 5 From R part of P.C.B.



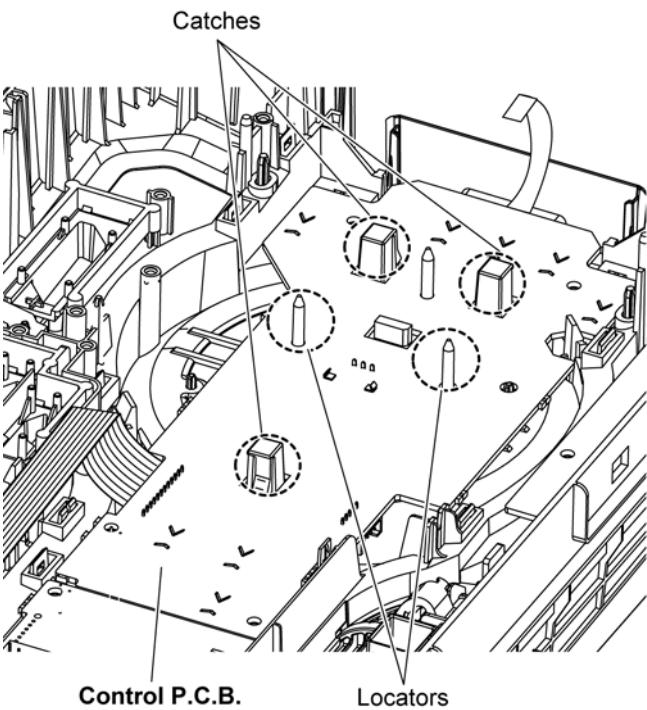
Step 6 Release catches by following the sequences (1-3).



Step 7 Detach 12P Cable at a connector (CN6010) on the Control P.C.B..



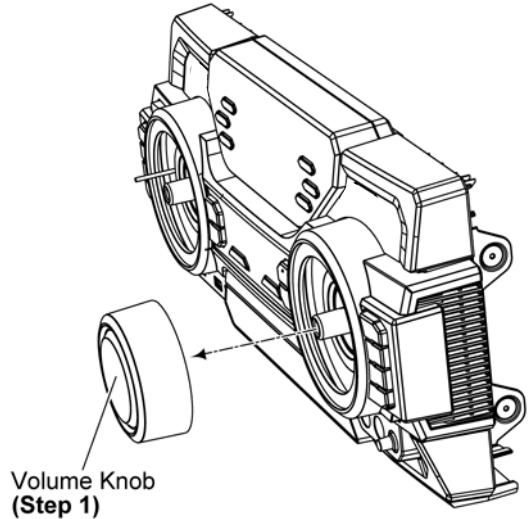
Caution: During assembling, ensure that the Control P.C.B. is properly located and fully caught onto the Front Panel Unit.



10.10. Disassembly of Volume P.C.B.

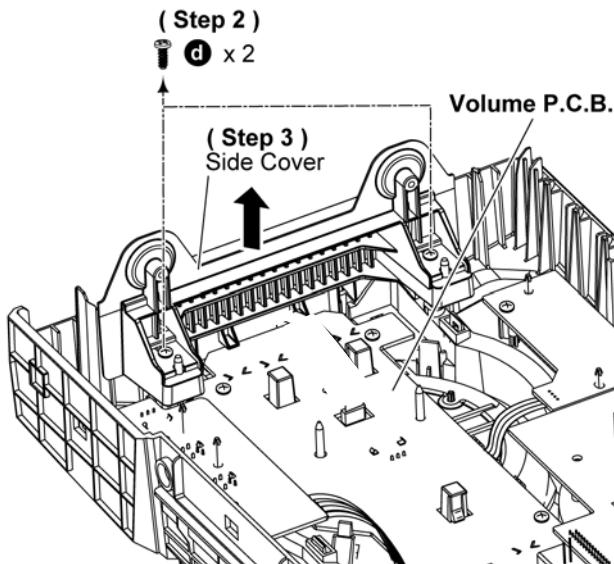
- Refer to "Disassembly of Top Cabinet".
- Refer to "Disassembly of Front Panel Unit".
- Refer to "Disassembly of FL Display P.C.B.".
- Refer to "Disassembly of Control P.C.B.".

Step 1 Remove the Volume Knob.

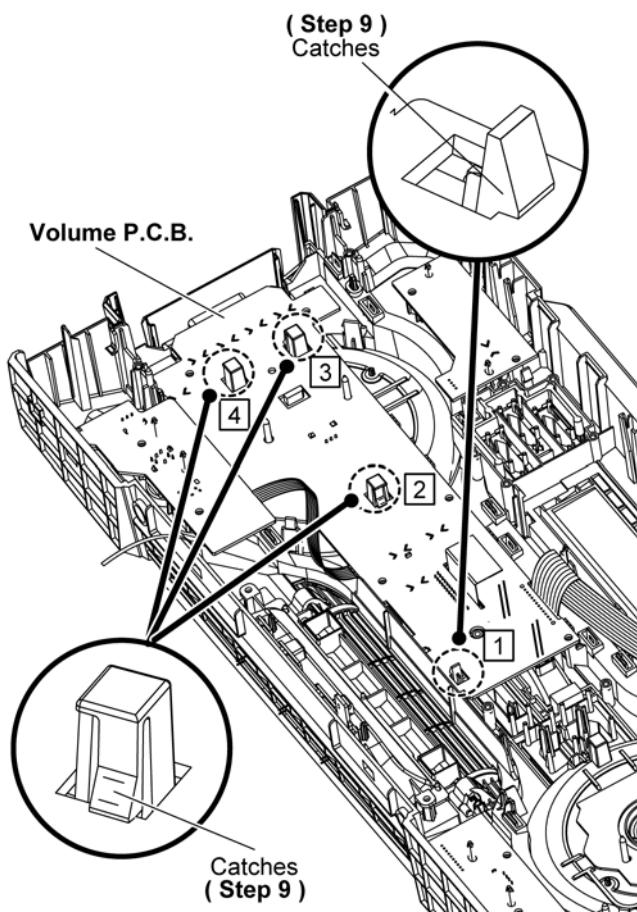


Step 2 Remove 2 screws.

Step 3 Remove the Side Cover.



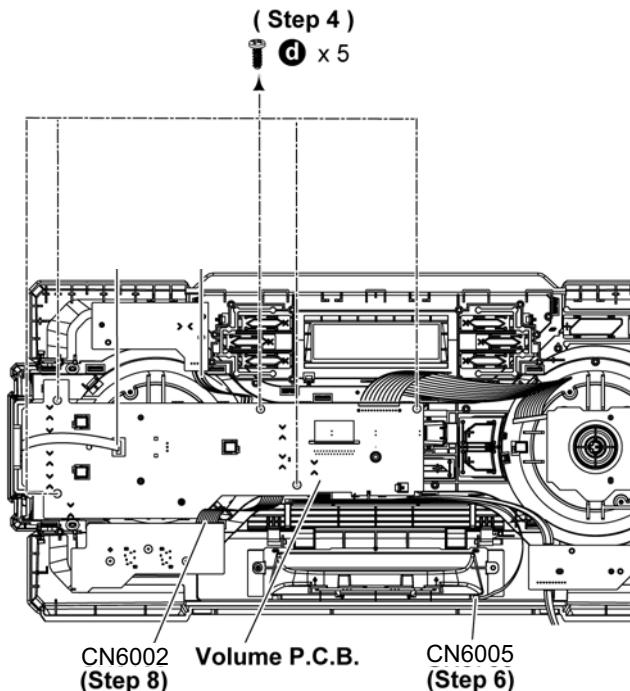
Step 9 Release catches by following the sequences (1-4).



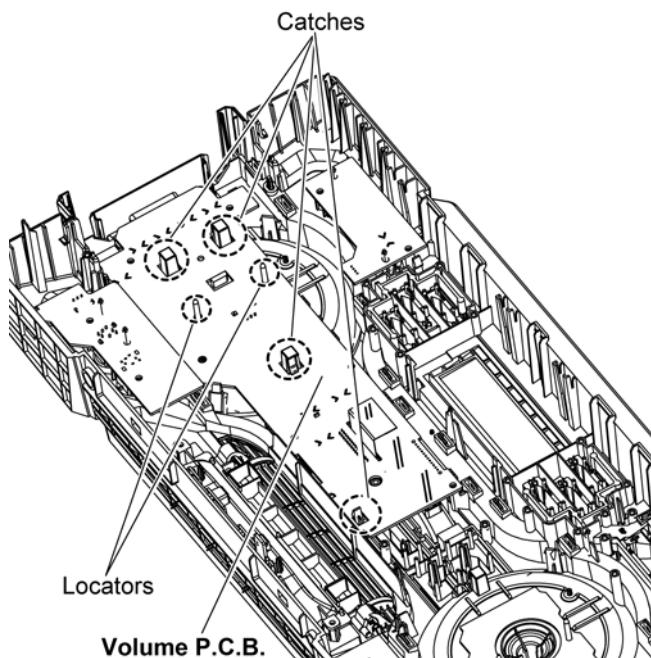
Step 4 Remove 5 screws.

Step 6 Detach 4P Cable at a connector (CN6005) on the LED P.C.B..

Step 8 Detach 8P Cable at a connector (CN6002) on the Mic P.C.B..



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

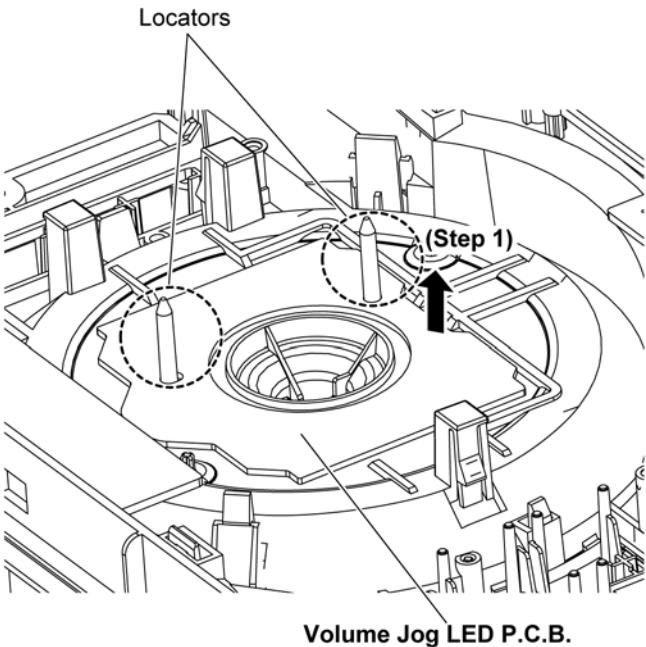


10.11. Disassembly of Volume Jog LED P.C.B.

- 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.

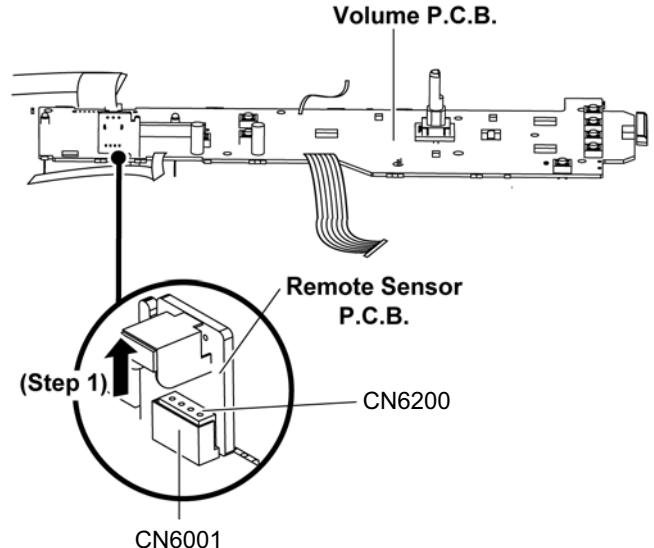


10.12. Disassembly of Remote Sensor P.C.B.

- 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 FL Display P.C.B..



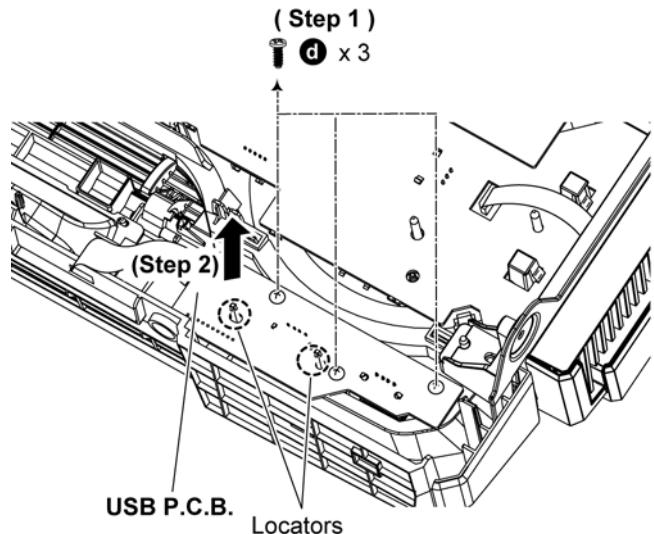
10.13. Disassembly of USB P.C.B.

- 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..

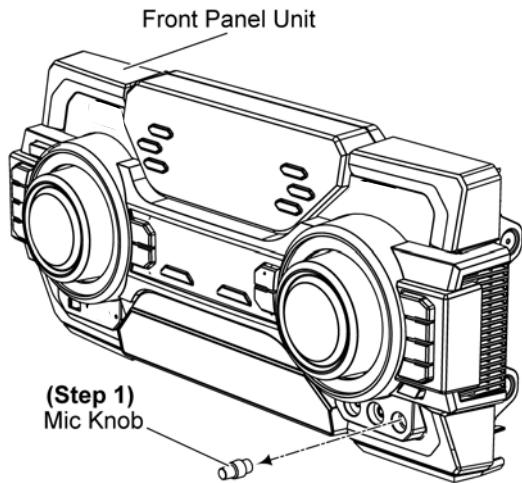
Caution: During assembling, ensure that the USB P.C.B. is properly located & fully seated onto the Front Panel Unit.



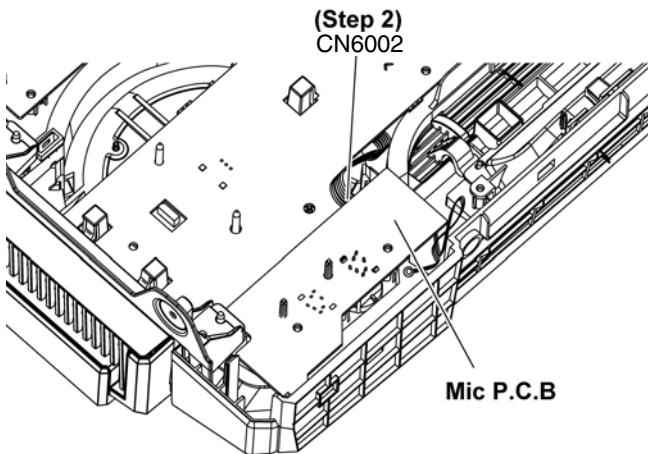
10.14. Disassembly of Mic P.C.B.

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

Step 1 Remove the Mic Knob.



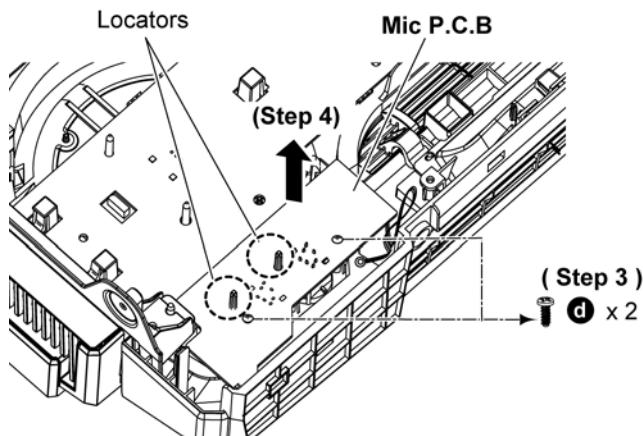
Step 2 Detach 8P Cable at a connector (CN6002) on the Mic P.C.B..



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.

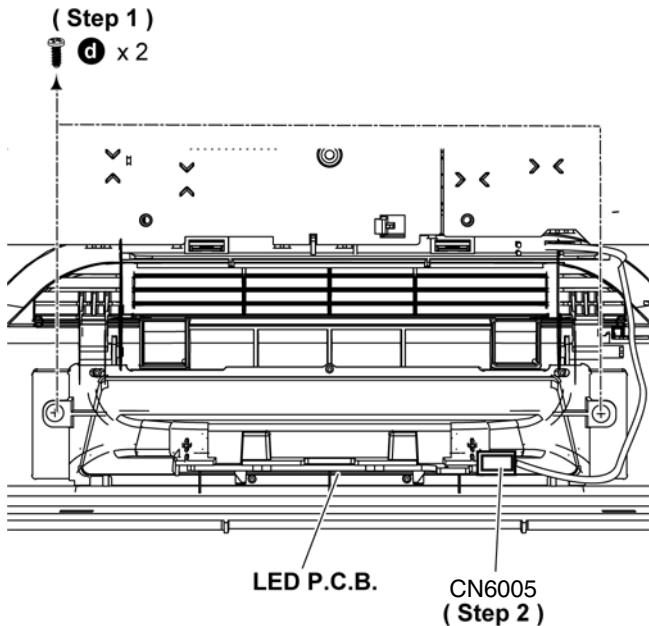


10.15. Disassembly of LED P.C.B.

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

Step 1 Remove 2 screws.

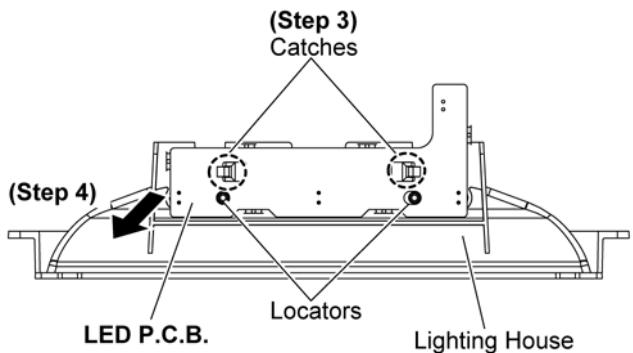
Step 2 Detach 2P Cable at a connector (CN6005) on LED P.C.B..



Step 3 Release 2 catches.

Step 4 Remove LED P.C.B..

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

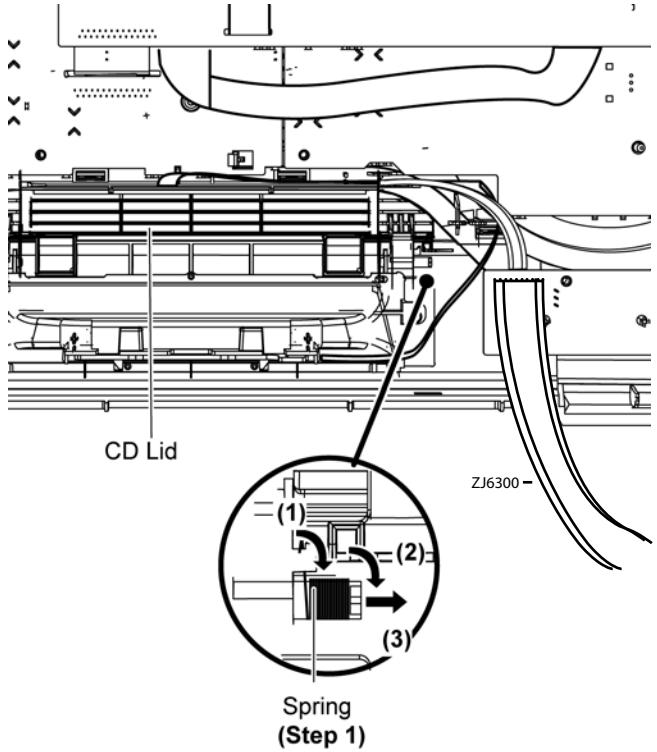


10.16. Disassembly of CD Lid

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

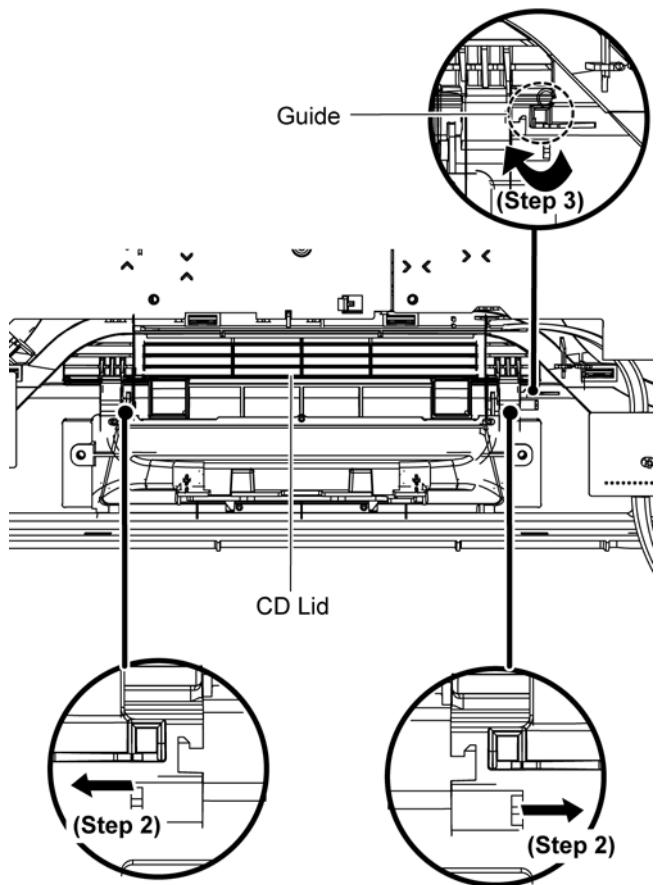
Step 1 Remove the spring as arrow shown in order of sequence (1) to (3).

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



Step 2 Remove CD Lid as arrow shown.

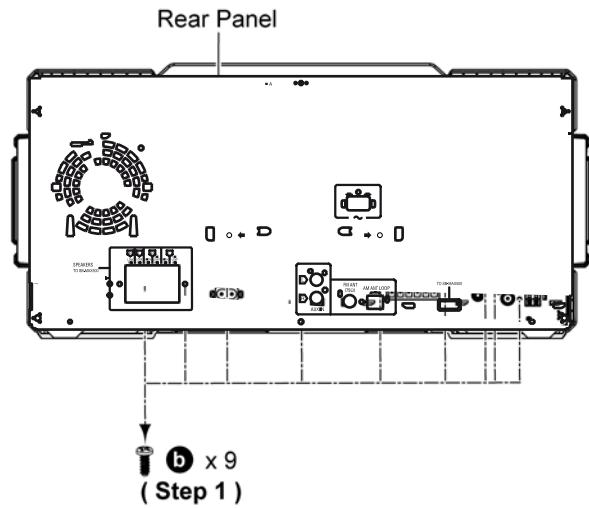
Step 3 Remove CD Lid from the guide.



10.17. Disassembly of Rear Panel

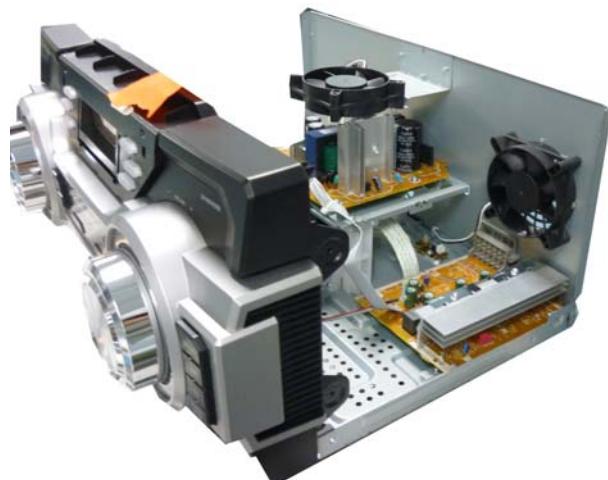
- Refer to “Disassembly of Top Cabinet”.

Step 1 Remove 9 screws.



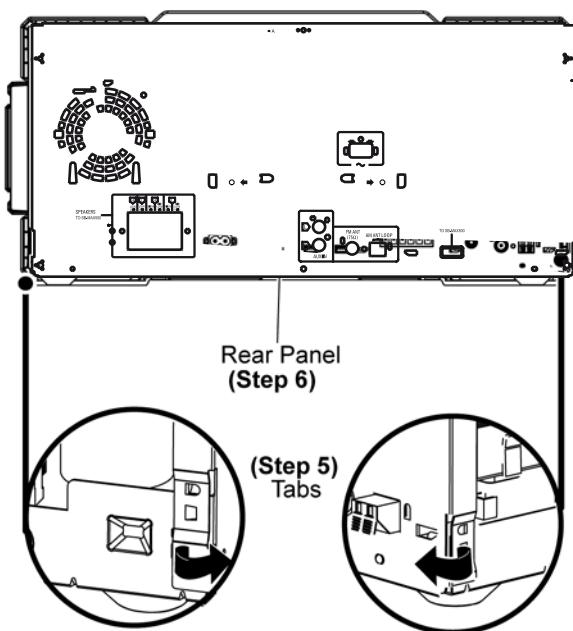
Step 3 Release catches on fans.

Step 4 Remove 2 fans.



Step 5 Release 2 tabs.

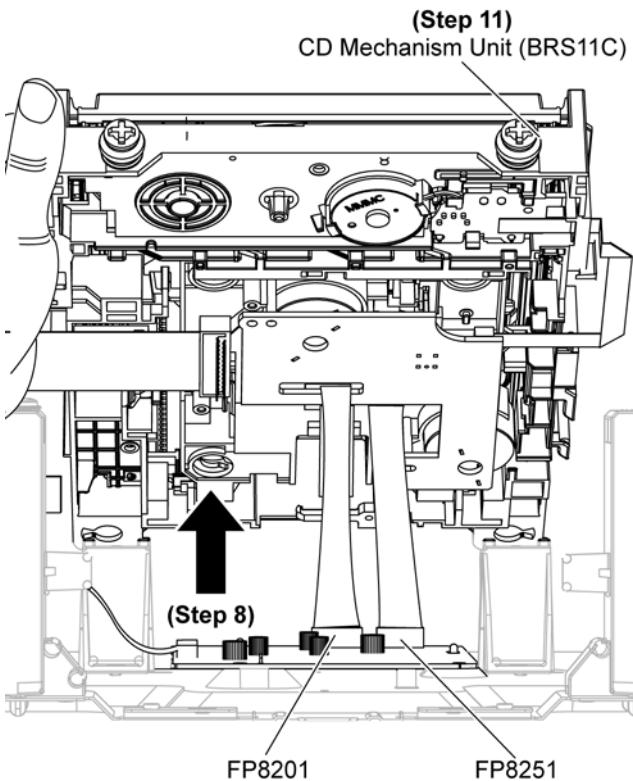
Step 6 Remove the Rear Panel.



10.18. Disassembly of CD Mechanism Unit

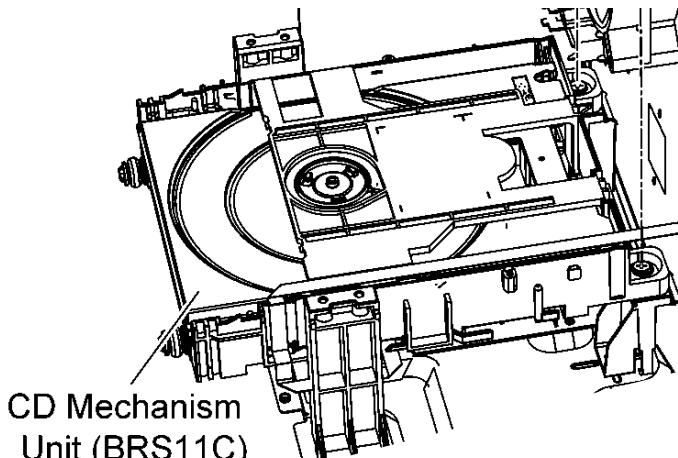
- Refer to “Disassembly of Top Cabinet”.
- Refer to “Disassembly of Front Panel Unit”.

Step 1 Remove 2 screws.



Step 2 Detach 10P FFC at the connector (FP8251) on the Main P.C.B..

Step 3 Detach 24P FFC at the connector (FP8201) 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 (CN2005) on the Main P.C.B..

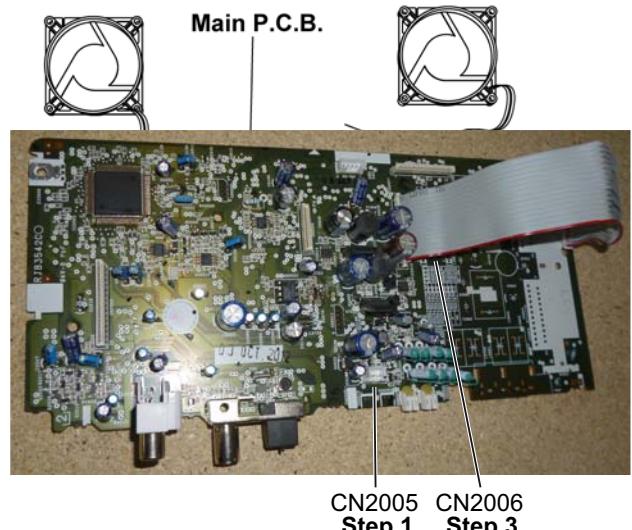
Step 3 Detach 2P Wire at the connector (CN2006) on the Main P.C.B..

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.



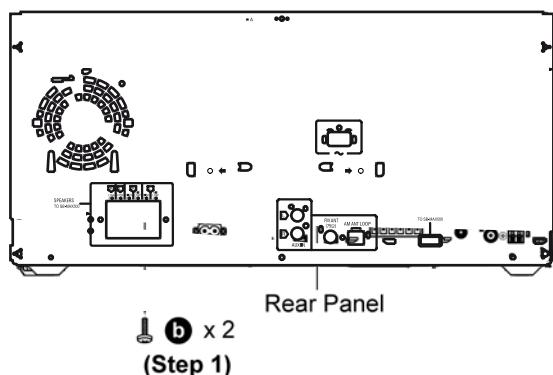
SMPS P.C.B.



10.21. Disassembly of SMPS P.C.B.

- Refer to “Disassembly of Top Cabinet”.

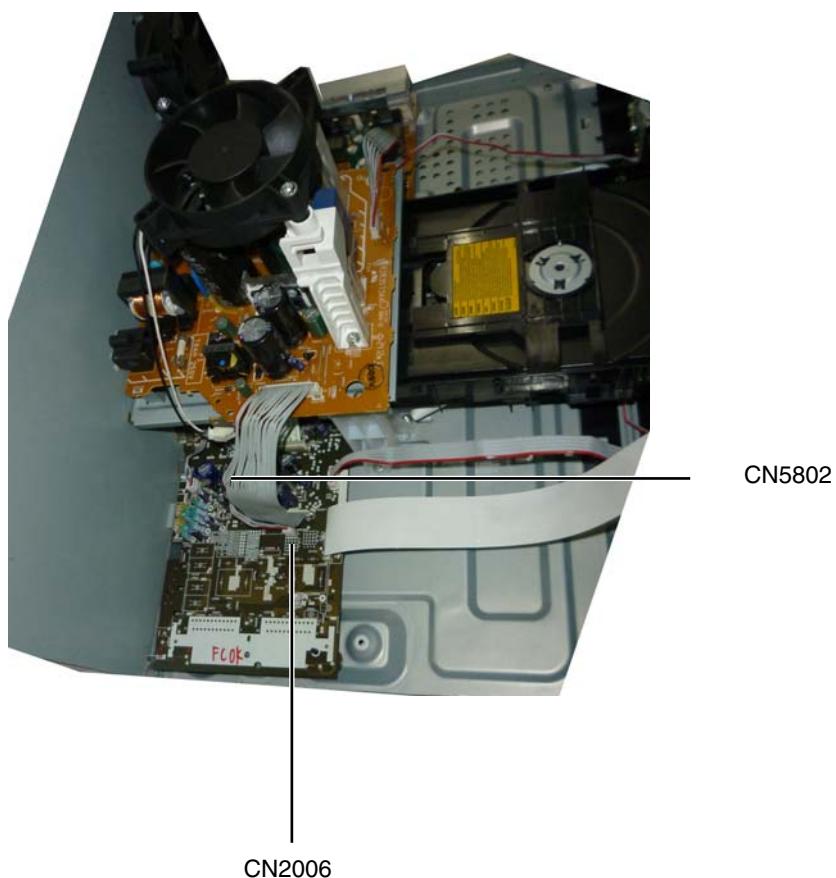
Step 1 Remove 2 screws.



Step 2 Detach 15P 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..

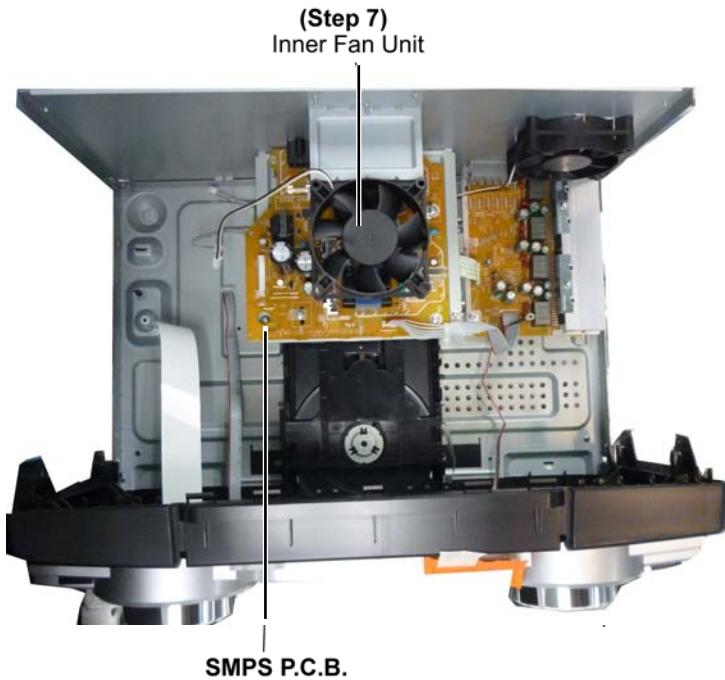
Step 4 Remove 1 screw.



Step 6 Remove 2 screws

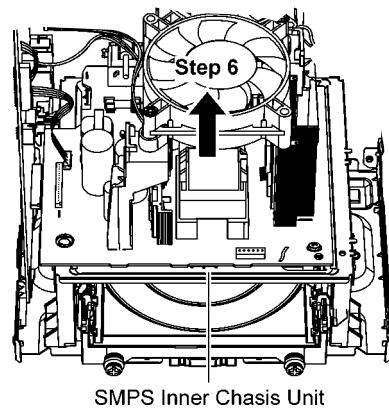
Step 7 Remove the Inner Fan Unit.

Caution: Keep the Fan Fixtures 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 (IC5701)

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

10.22.1. Disassembly of Switching Regulator (IC5701)

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

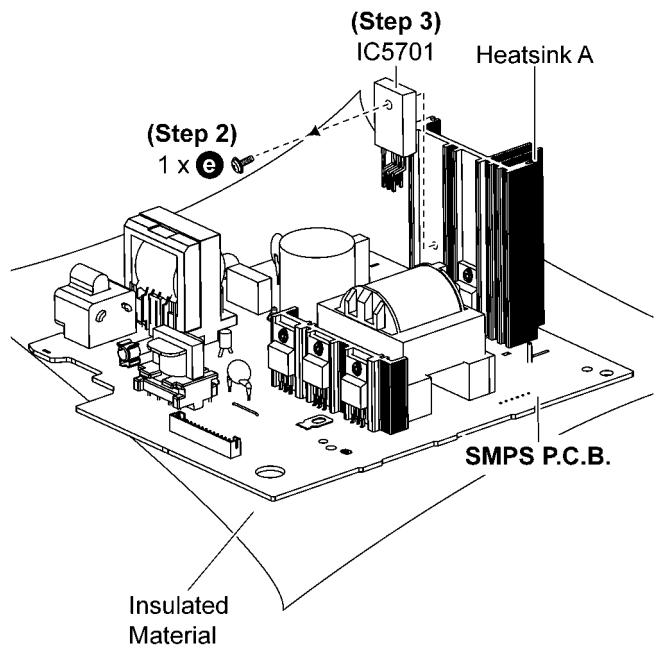
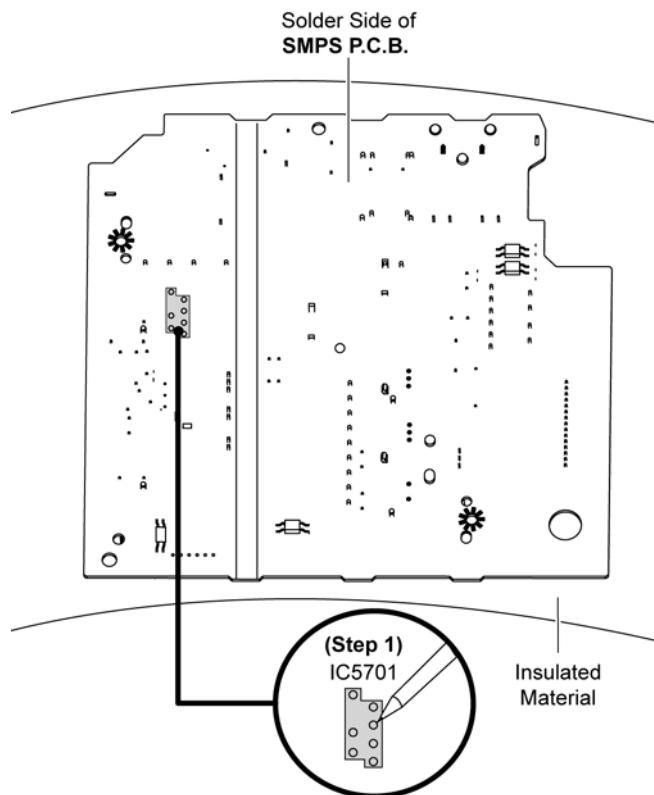
Step 2 Desolder pins of the Heatsink A.

Step 3 Remove the Heatsink A with the Switching Regulator (IC5701).AA

Step 4 Remove 1 screw.

Step 5 Remove the Switching Regulator (IC5701) 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 (IC5701)

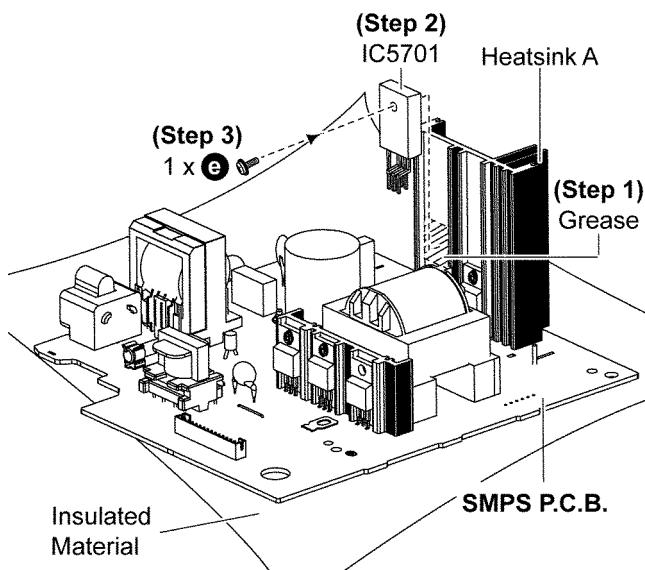
Step 1 Apply grease to the Heatsink A.

Step 2 Screw the Switching Regulator (IC5701) to the Heatsink A.

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

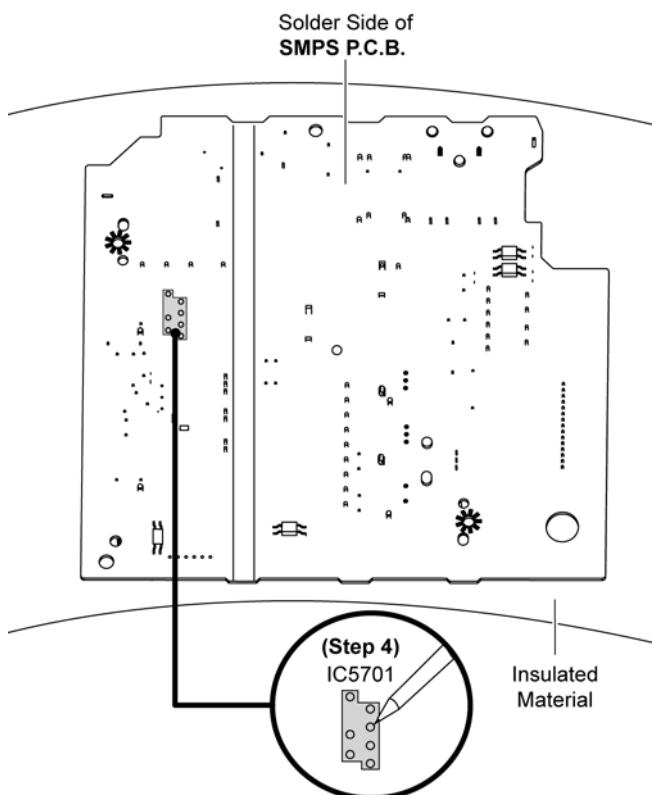
Step 3 Fix the Heatsink A with the Switching Regulator (IC5701) on the SMPS P.C.B. as shown.

Caution 1: Ensure the Heatsink A with the Switching Regulator (IC5701) are properly inserted into the SMPS P.C.B..



Step 4 Solder pins of the Switching Regulator (IC5701) 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..



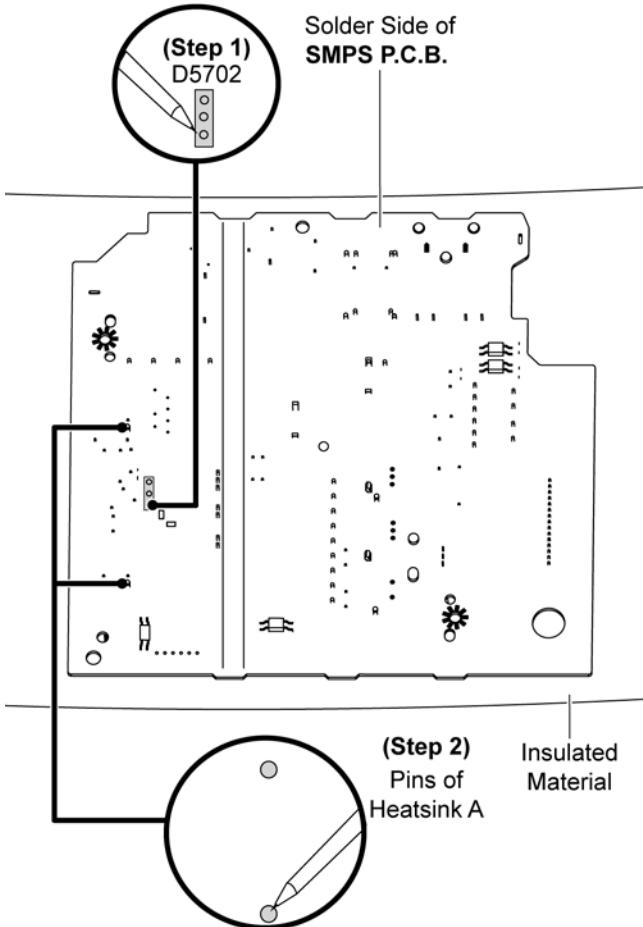
10.23. Replacement of Rectifier Diode (D5702)

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

10.23.1. Disassembly of Rectifier Diode (D5702)

Step 1 Desolder pins of the Rectifier Diode (D5702) and (D5802) on the solder side of the SMPS P.C.B..

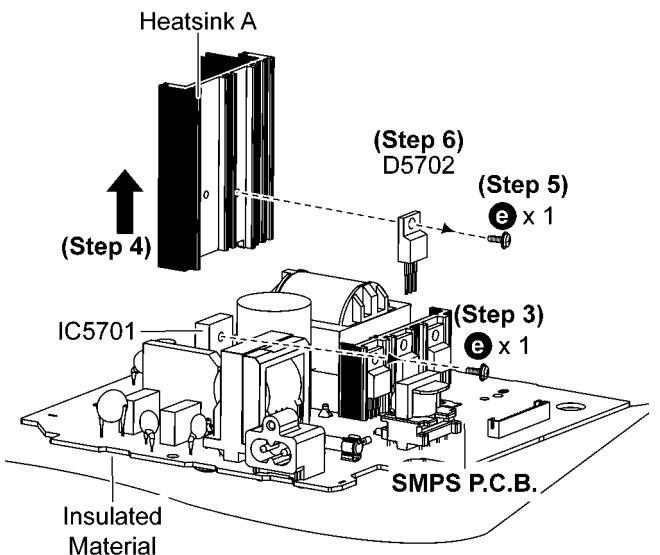
Step 2 Desolder pins of the Heatsink B.



Step 3 Remove 1 screw at Rectifier Diode (D5702).

Step 4 Remove the Rectifier Diode (D5702) 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 Rectifier Diode (D5801)

Step 1 Apply grease to the Heatsink B.

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

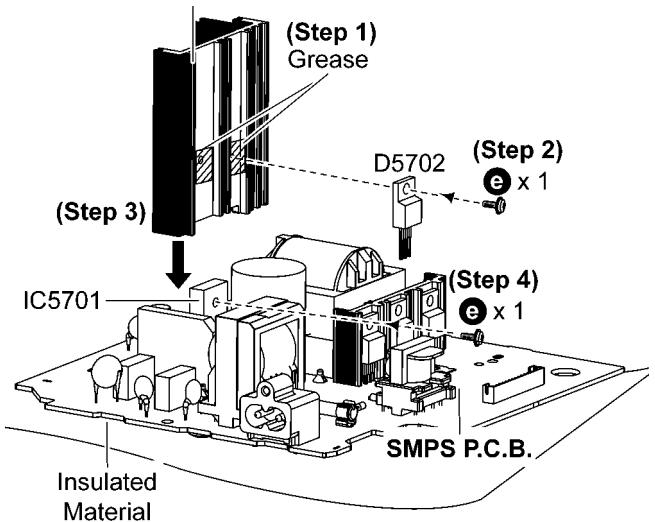
Caution: Ensure the Rectifier Diode (D5702) is tightly screwed to the Heatsink B.

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

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

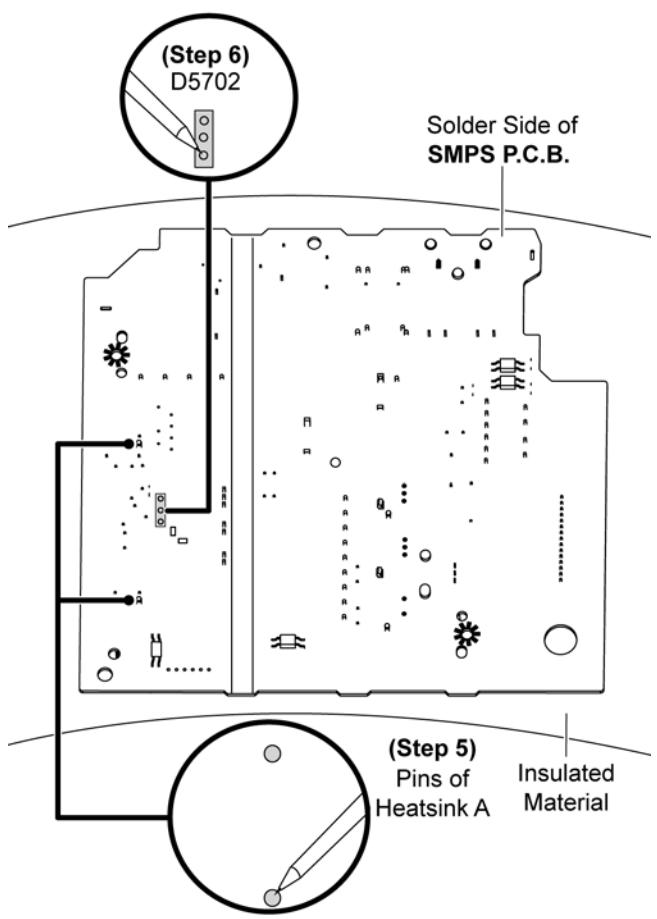
Step 4 Screw the Switching Regulator IC (IC5701) to the Heatsink A.

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



Step 4 Solder pins of the Rectifier Diode (D5702) 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..



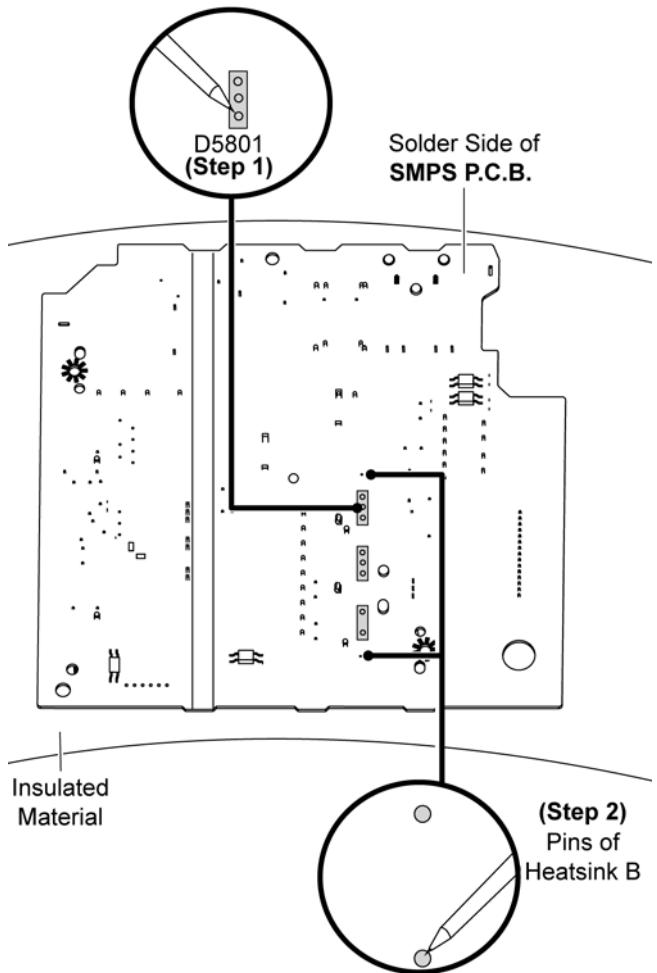
10.24. Replacement of Rectifier Diode (D5801)

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

10.24.1. Disassembly of Rectifier Diode (D5801)

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

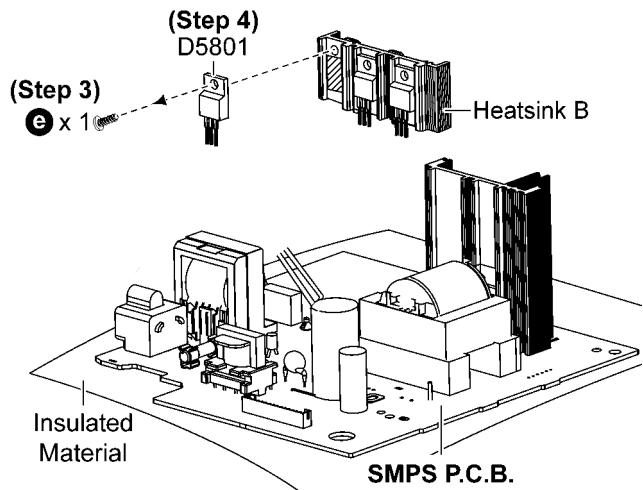
Step 2 Desolder pins of the Heatsink B.



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

Step 4 Remove the Rectifier 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.



10.24.2. Assembly of Rectifier Diode (D5801)

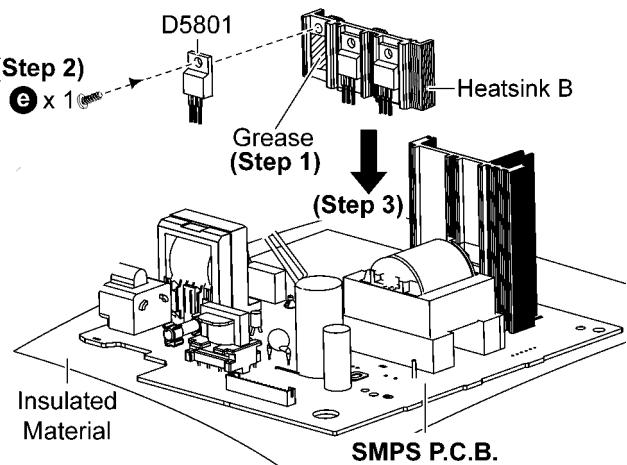
Step 1 Apply grease to the Heatsink B.

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

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

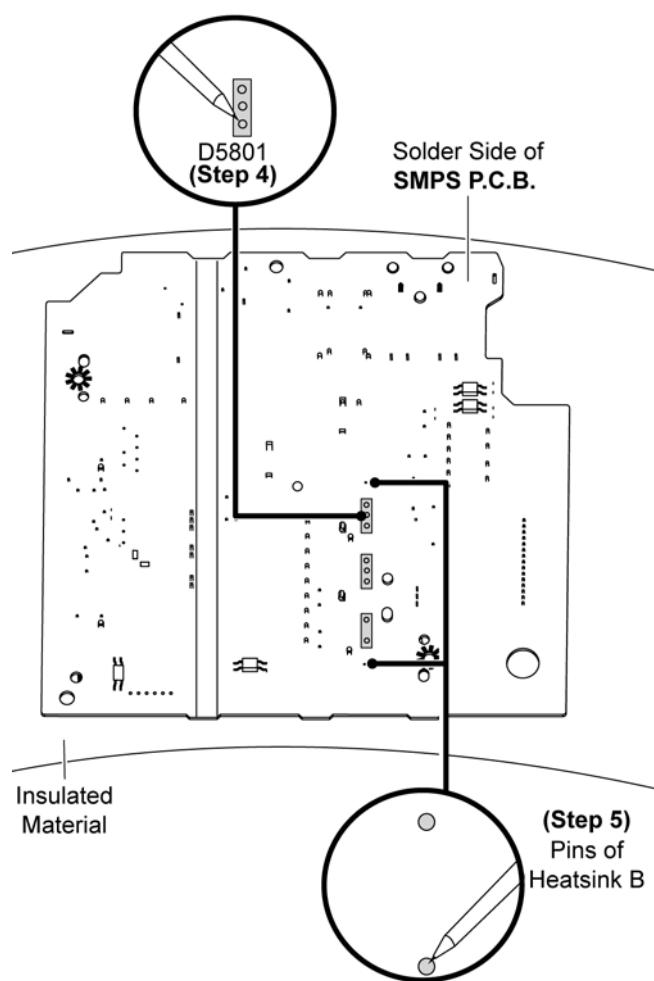
Step 3 Fix the Heatsink B with Rectifier Diode (D5801) on the SMPS P.C.B..

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



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

Step 5 Solder pins of the Heatsink B.



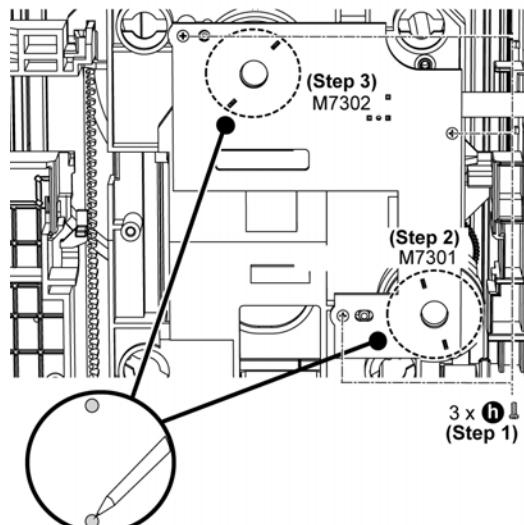
10.25. Disassembly of CD Interface P.C.B.

- Refer to "Disassembly of Top Cabinet".
- Refer to "Disassembly of Front Panel Unit".
- Refer to "Disassembly of CD Mechanism Unit (BRS11C)".

Step 1 Remove 3 screws.

Step 2 Desolder pins of the motor (M7301).

Step 3 Desolder pins of the motor (M7302).



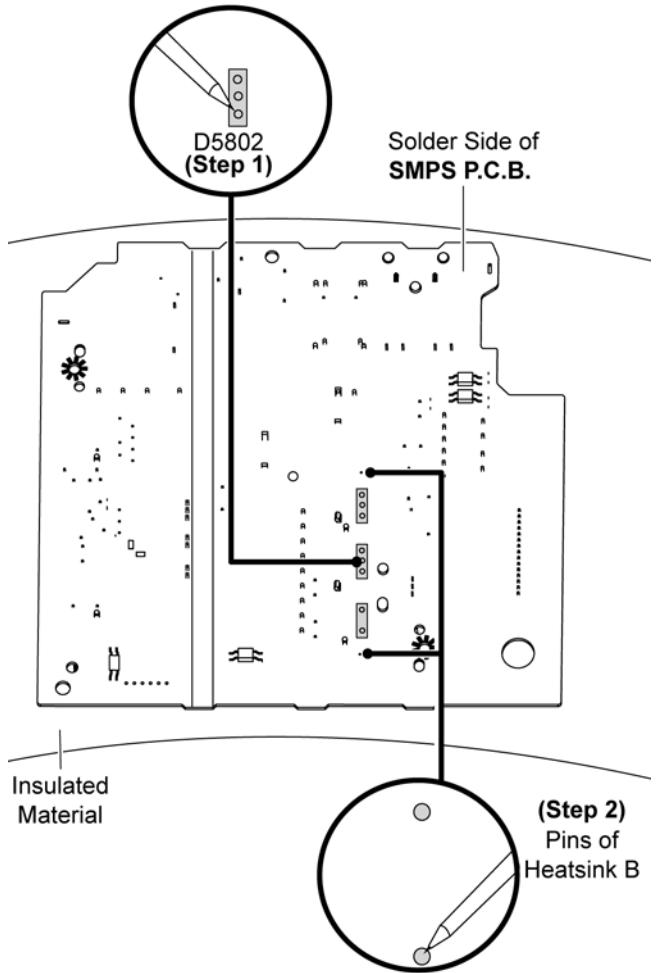
Replacement of Rectifier Diode (D5802)

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

Disassembly of Rectifier Diode (D5802)

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

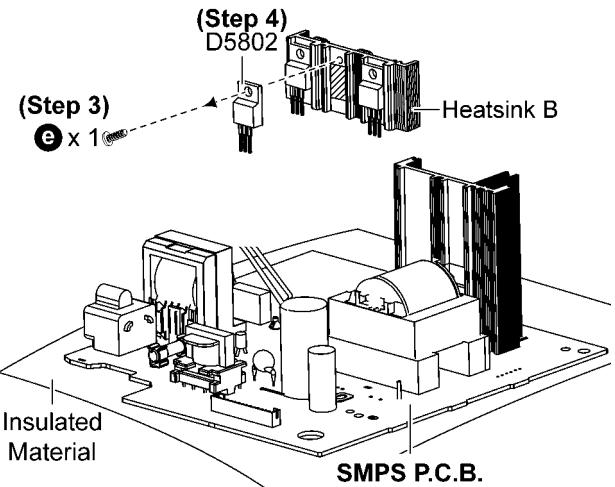
Step 2 Desolder pins of the Heatsink B.



Step 3 Remove 1 screw at Rectifier Diode (D5802).

Step 4 Remove the Rectifier 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.



Assembly of Rectifier Diode (D5802)

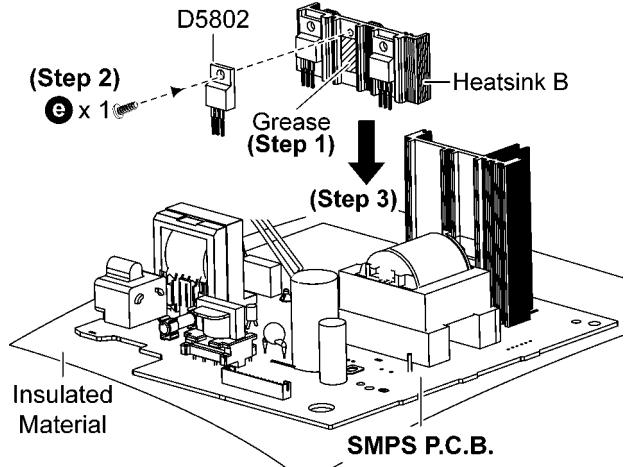
Step 1 Apply grease to the Heatsink B.

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

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

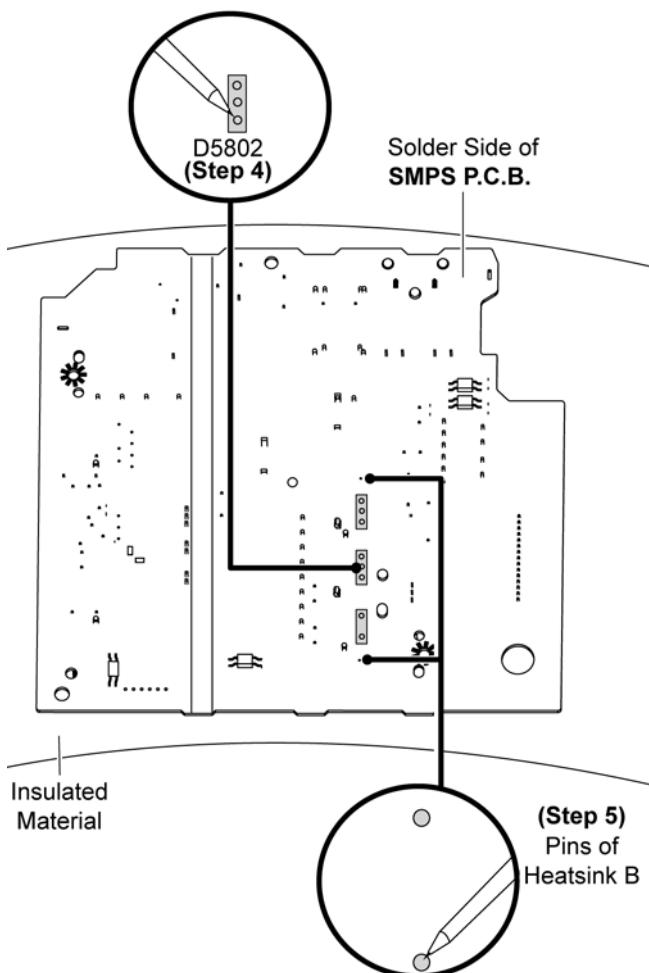
Step 3 Fix the Heatsink B with Rectifier Diode (D5802) on the SMPS P.C.B..

Caution: Ensure pins of the Rectifier Diode (D5802) are properly inserted into the SMPS P.C.B..



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

Step 5 Solder pins of the Heatsink B..



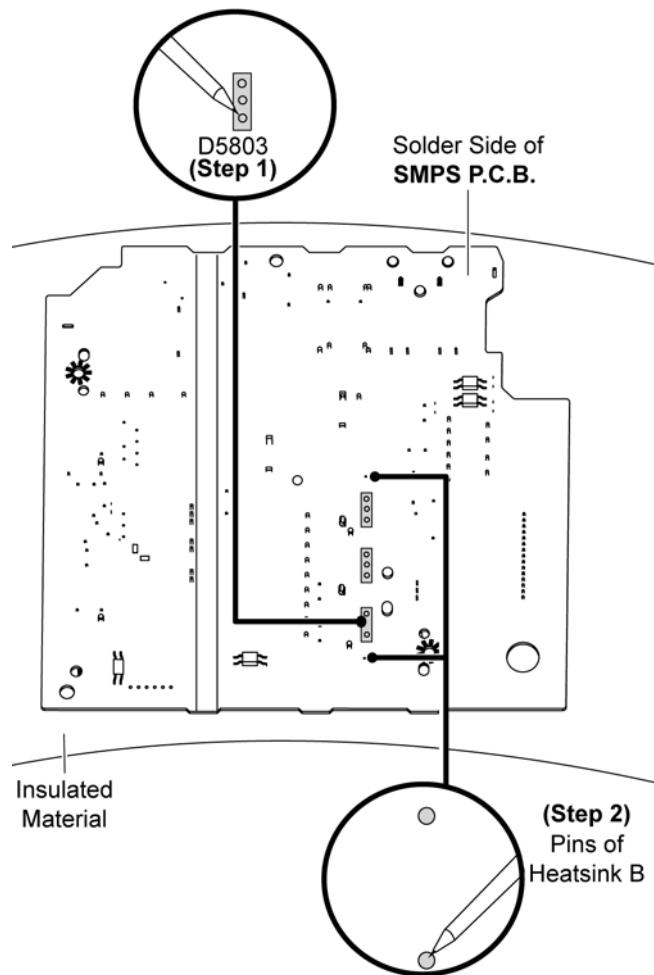
Replacement of Regulator Diode (D5803)

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

Disassembly of Rectifier Diode (D5803)

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

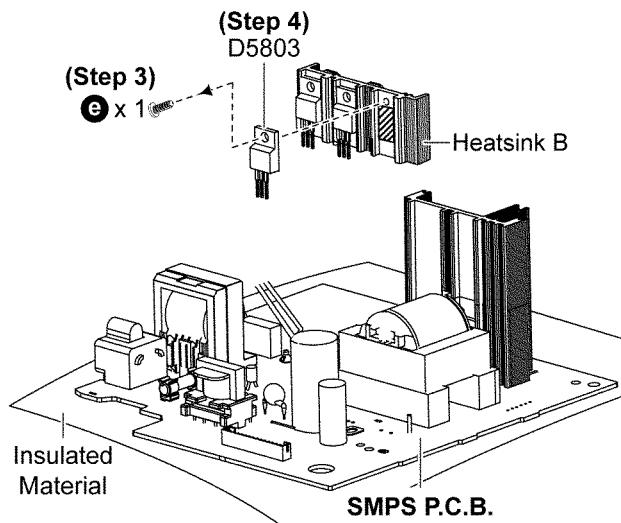
Step 2 Desolder pins of the Heatsink B.



Step 3 Remove 1 screw at Rectifier Diode (D5803).

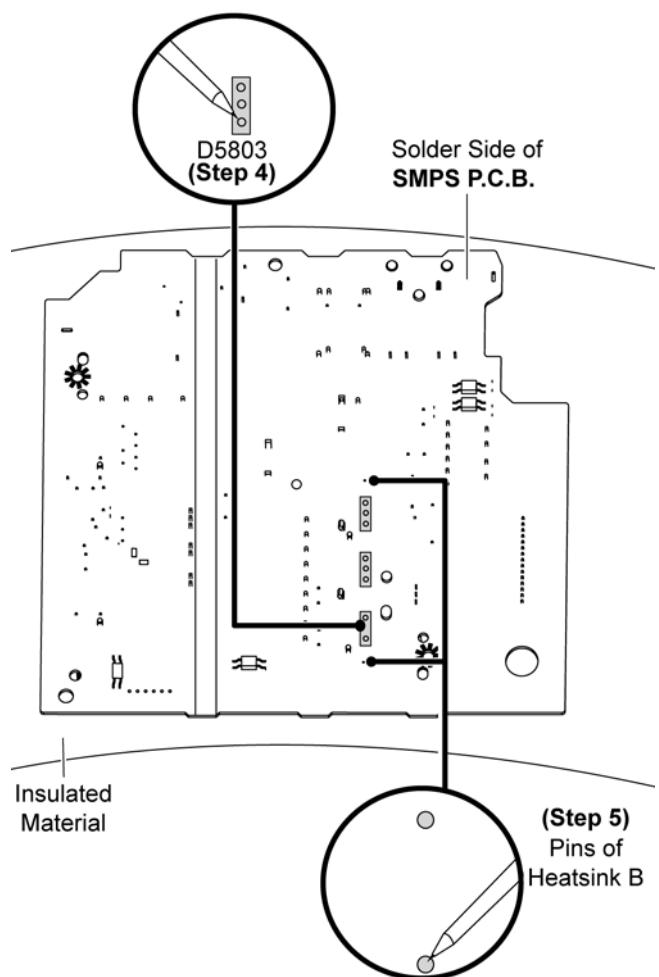
Step 4 Remove the Rectifier Diode (D5803) from SMPS P.C.B..

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



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

Step 5 Solder pins of the Heatsink B..



Assembly of Rectifier Diode (D5803)

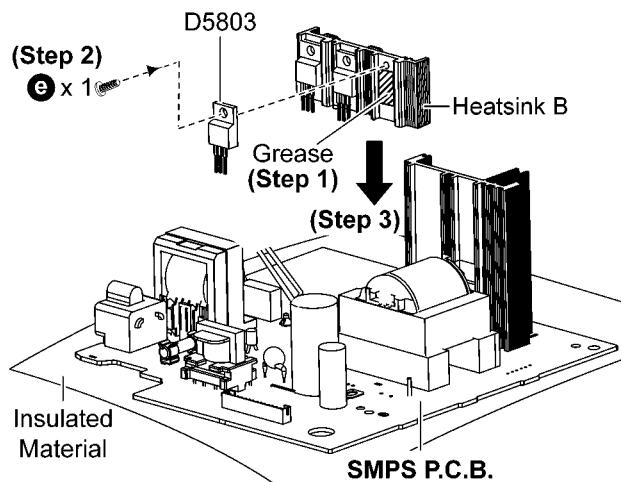
Step 1 Apply grease to the Heatsink B.

Step 2 Screw the Rectifier diode (D5803) to the Heatsink B.

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

Step 3 Fix the Heatsink B with Rectifier Diode (D5803) on SMPS P.C.B.

Caution: Ensure pins of the Rectifier Diode (D5803) are properly inserted into the SMPS P.C.B..



11 Service Position

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

11.1. Checking and Repairing 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..

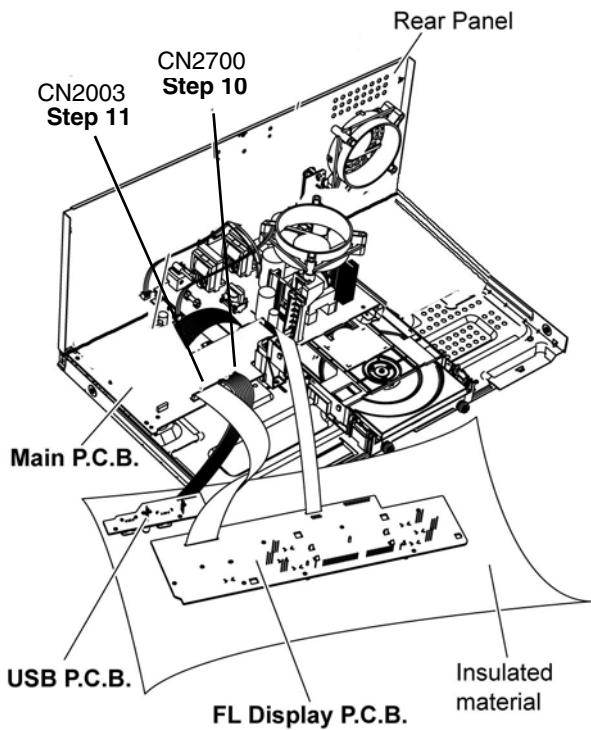
Step 6 Remove Volume P.C.B..

Step 7 Remove USB P.C.B..

Step 8 Remove Mic P.C.B..

Step 10 Attach 11P Cable at a connector (CN2700) on the Main P.C.B..

Step 11 Attach 30P FFC at a connector (CN2003) on the Main P.C.B..

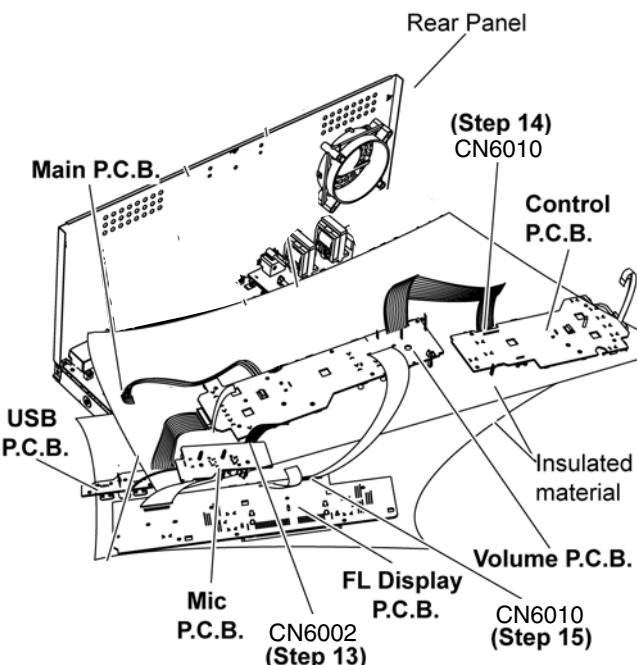


Step 13 Attach 8P Cable at a connector (CN6002) on the Mic P.C.B..

Step 14 Attach 12P Cable at a connector (CN6010) on the Control P.C.B..

Step 15 Attach 30P FFC at a connector (CN6000) on the FL Display 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 and repaired as diagram shown.



11.2. Checking and Repairing 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.

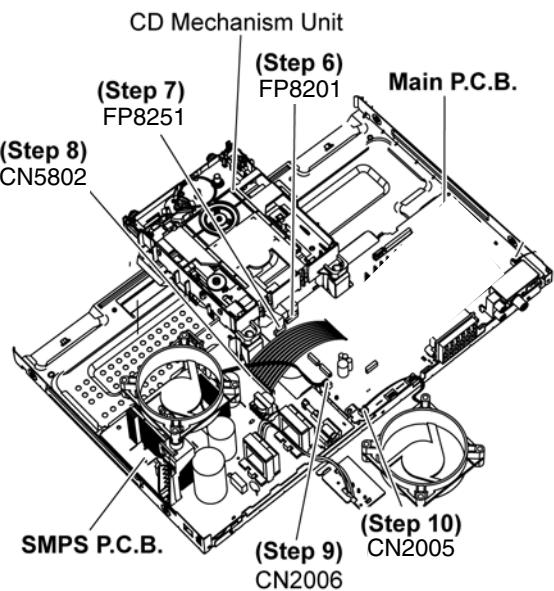
Step 5 Remove Main P.C.B..

Step 6 Attach 24P FFC at the connector (FP8201) on the Main P.C.B..

Step 7 Attach 10P FFC at the connector (FP8251) on the Main P.C.B..

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

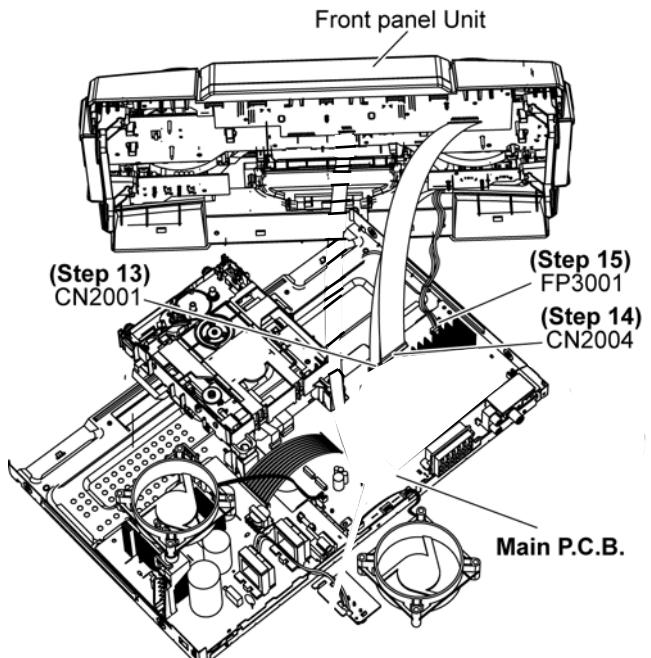
Step 9 Attach 2P Wire at the connector (CN2006) on the Main P.C.B...
Step 10 Attach 2P Wire at the connector (CN2005) on the Main P.C.B..



Step 13 Attach 11P Cable at a connector (CN2700) on the Main P.C.B..

Step 14 Attach 30P FFC at a connector (CN2003) on the Main P.C.B..

Step 16 Side B Main P.C.B. can be checked and repaired as diagram shown.



11.3. Checking and Repairing 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.

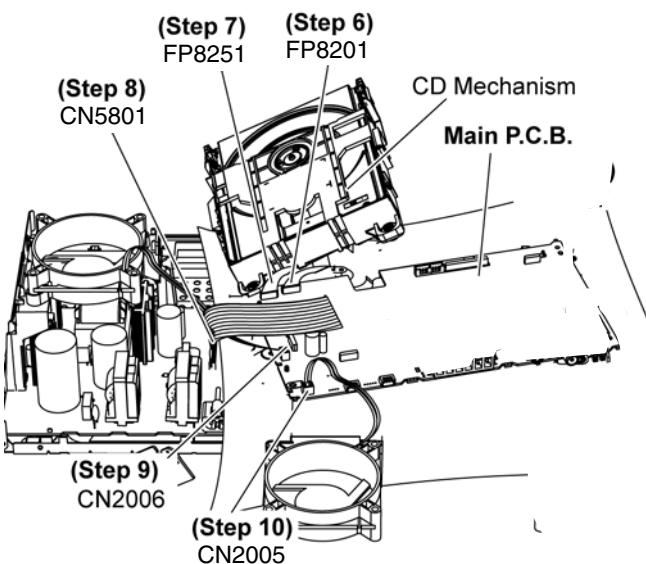
Step 5 Remove Main P.C.B..

Step 6 Attach 24P FFC at the connector (FP8201) on the Main P.C.B..

Step 7 Attach 10P FFC at the connector (FP8251) on the Main P.C.B..

Step 8 Attach 13P Cable at the connector (CN5801) on the SMPS P.C.B..

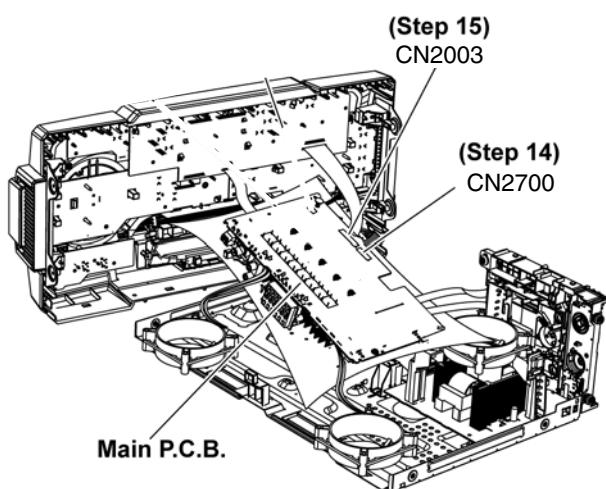
Step 9 Attach 2P Wire at the connector (CN2006) on the Main P.C.B...
Step 10 Attach 2P Wire at the connector (CN2005) on the Main P.C.B..



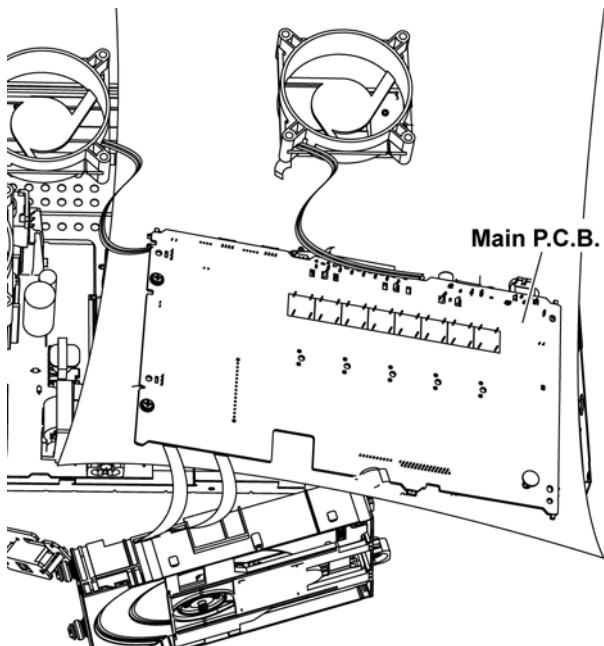
Step 14 Attach Cable at a connector (CN2700) on the Main P.C.B..

Step 15 Attach 30P FFC at a connector (CN2003) on the Main P.C.B..

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



Flip the Main P.C.B..

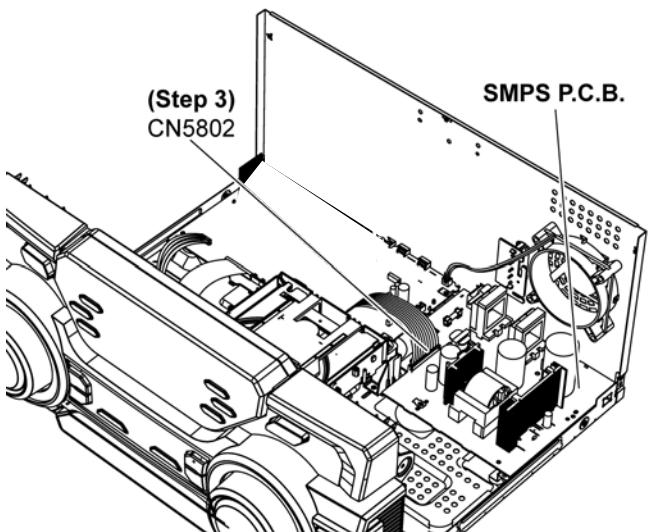


11.4. Checking and Repairing of SMPS P.C.B.

Step 1 Remove Top Cabinet.

Step 2 Remove SMPS P.C.B..

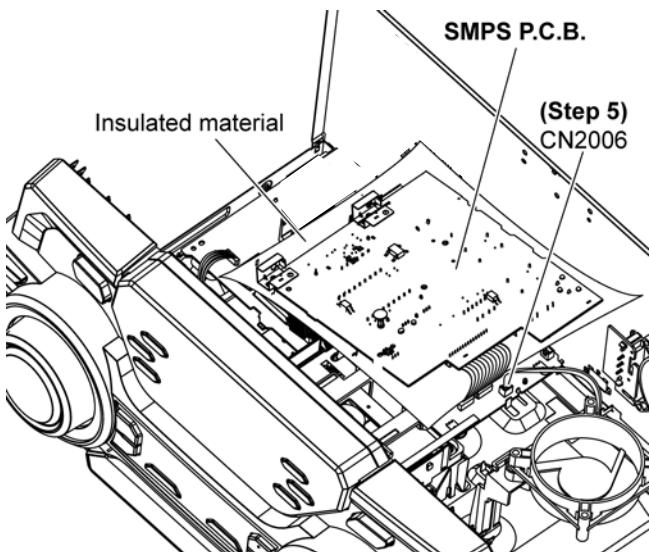
Step 3 Attach 13P Cable at the connector (CN5802) on the SMPS P.C.B..



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

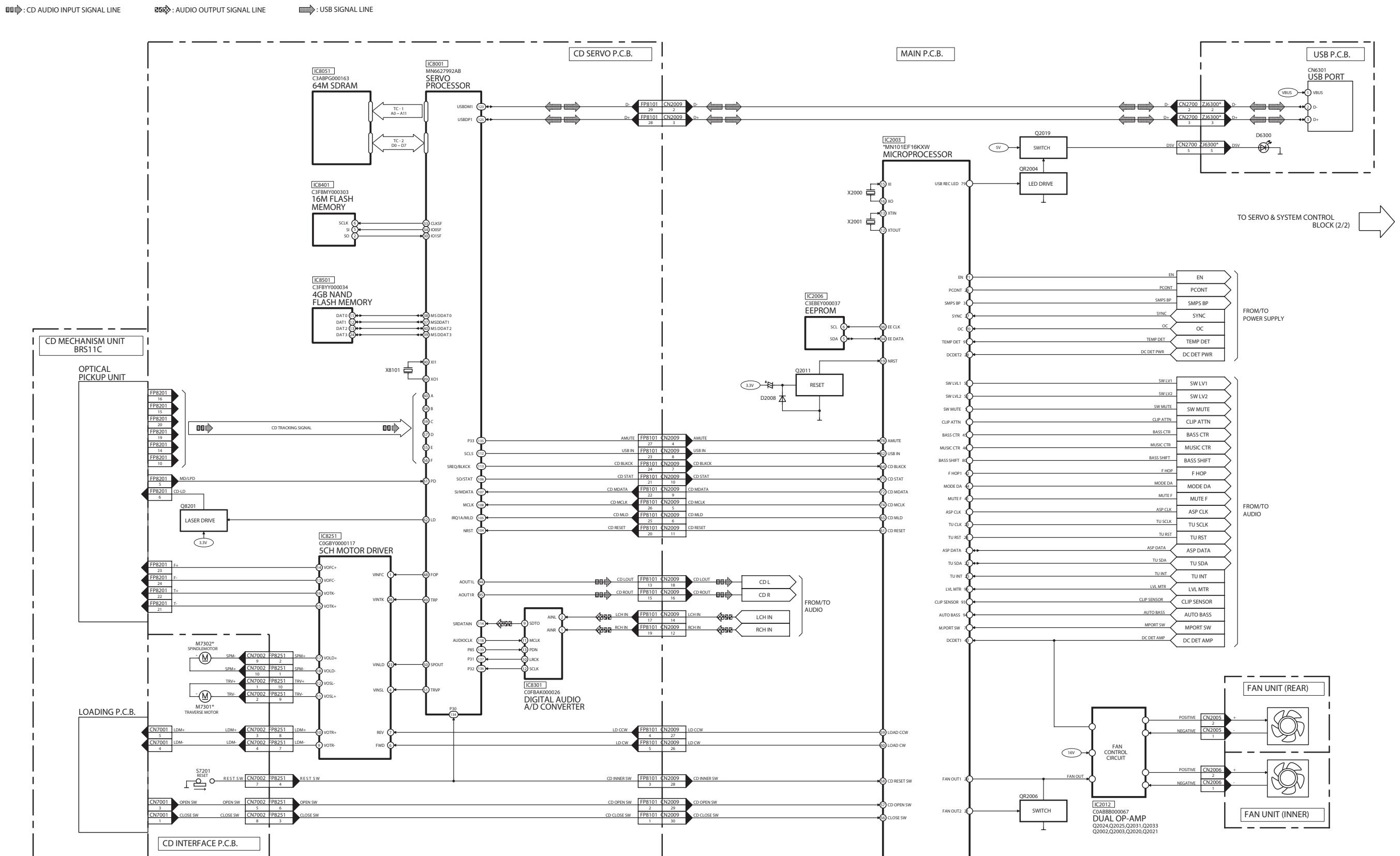
Step 5 Attach 2P Wire at the connector (CN2006) on the Main P.C.B..

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



12 Block Diagram

12.1. Servo & System Control



NOTE: " * " REF IS FOR INDICATION ONLY

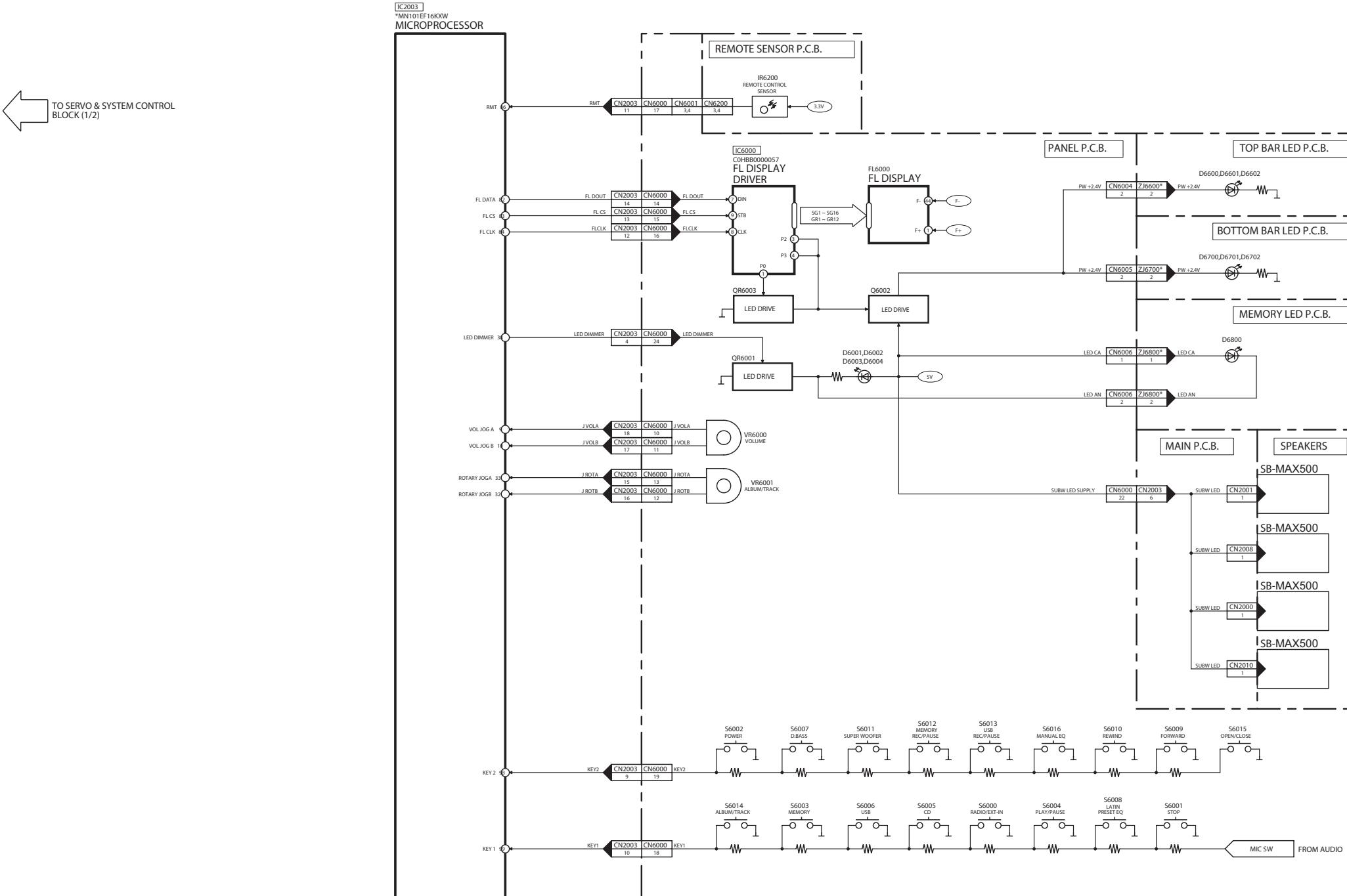
SA-MAX500 SERVO & SYSTEM CONTROL (1/2) BLOCK DIAGRAM

 CD AUDIO INPUT SIGNAL LINE

 : AUDIO OUTPUT SIGNAL LINE

 : USB SIGNAL LINE

MAIN P.C.B.



NOTE: "*" REF IS FOR INDICATION ONLY

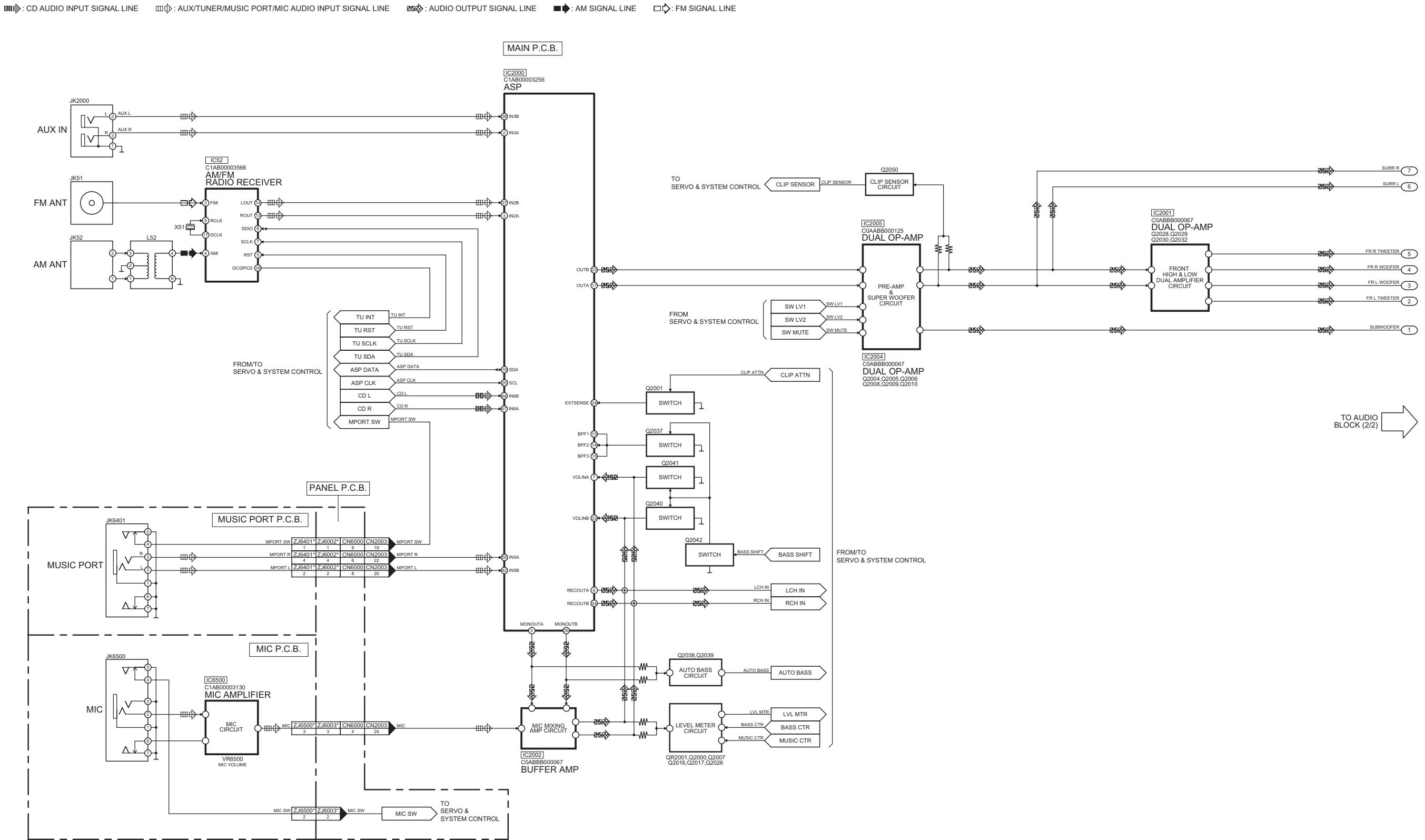
SA-MAX500 SERVO & SYSTEM CONTROL (2/2) BLOCK DIAGRAM

12.2. IC Terminal Chart

TC	IC8051 64M SDRAM		SIGNAL NAME	IC8001 SERVO PROCESSOR		
	PORT NAME	PIN NO		PIN NO	PORT NAME	
				A0	A0	
1	A0	23	A0	14	A0	
	A1	24	A1	15	A1	
	A2	25	A2	16	A2	
	A3	26	A3	17	A3	
	A4	29	A4	20	A4	
	A5	30	A5	21	A5	
	A6	31	A6	22	A6	
	A7	32	A7	23	A7	
	A8	33	A8	24	A8	
	A9	34	A9	25	A9	
	A10	22	A10	13	A10	
	A11	35	A11	26	A11	

TC	IC8051 64M SDRAM		SIGNAL NAME	IC8001 SERVO PROCESSOR		
	PORT NAME	PIN NO		PIN NO	PORT NAME	
				D0	142	
2	DQ0 / DQ15	2 / 53	D0	142	D0	
	DQ1 / DQ14	4 / 51	D1	143	D1	
	DQ2 / DQ13	5 / 50	D2	144	D2	
	DQ3 / DQ12	7 / 48	D3	2	D3	
	DQ4 / DQ11	8 / 47	D4	3	D4	
	DQ5 / DQ10	10 / 45	D5	4	D5	
	DQ6 / DQ9	11 / 44	D6	5	D6	
	DQ7 / DQ8	13 / 42	D7	6	D7	

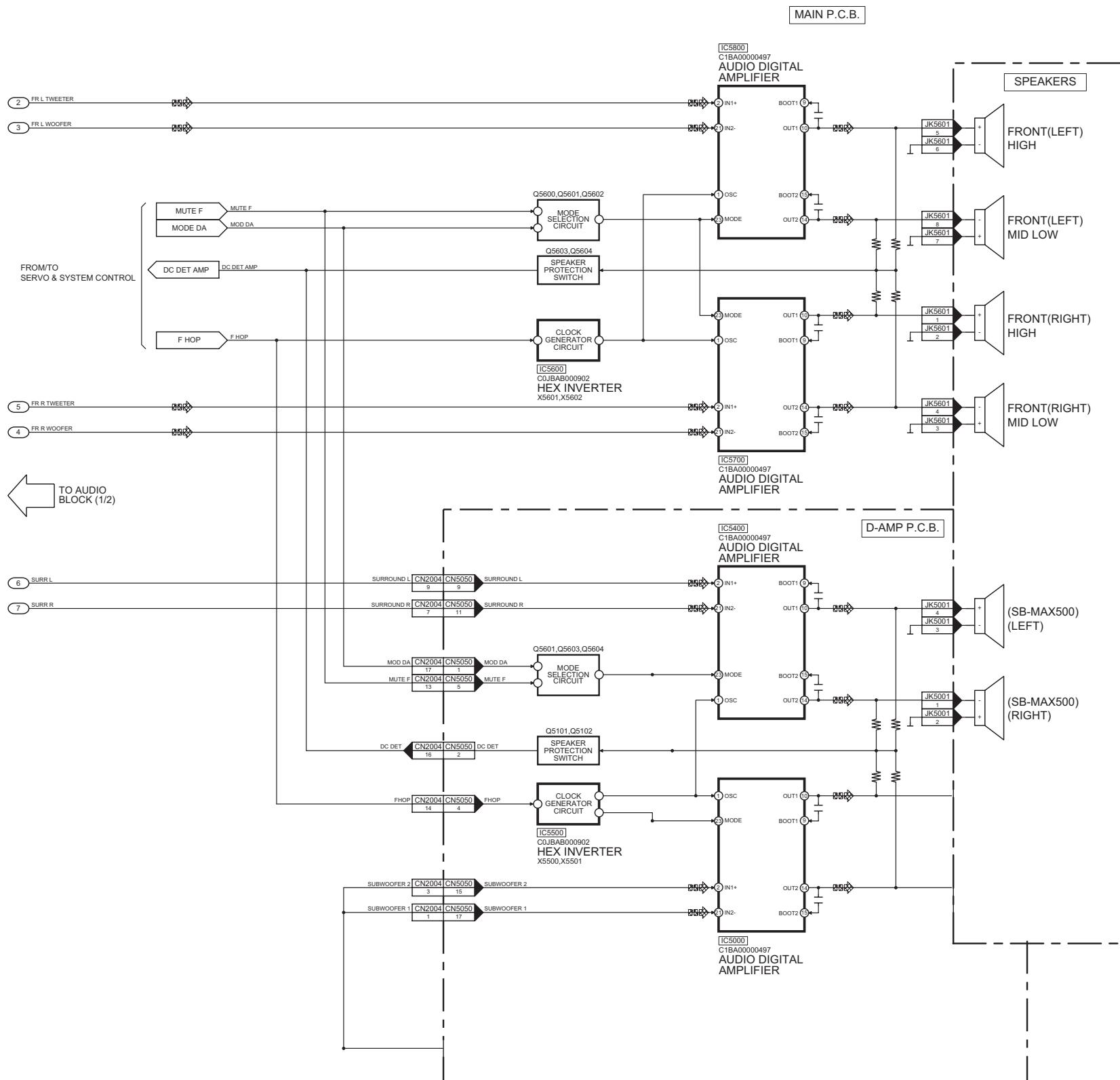
12.3. Audio



NOTE: "*" REF IS FOR INDICATION ONLY

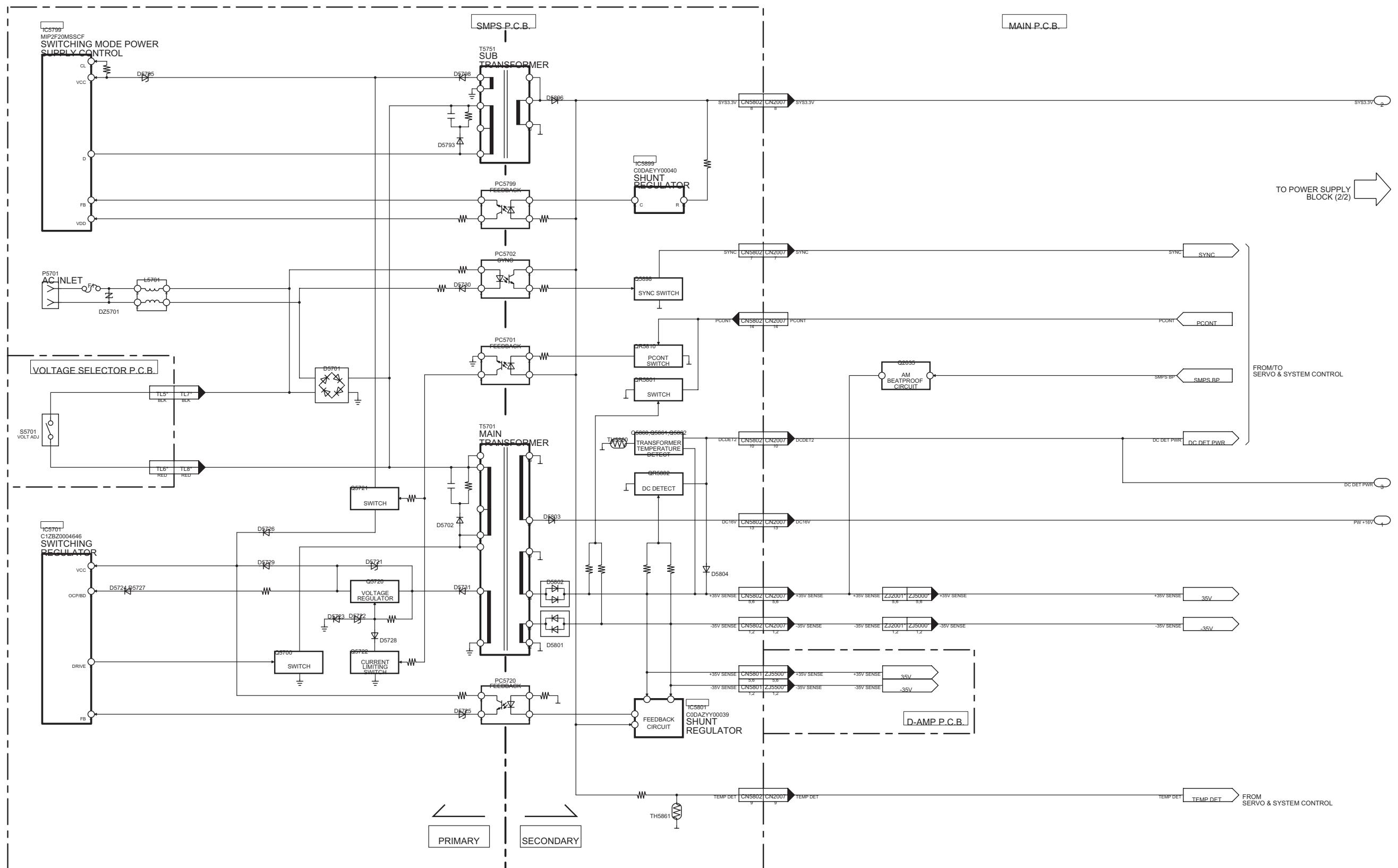
SA-MAX500 AUDIO (1/2) BLOCK DIAGRAM

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



SA-MAX500 AUDIO (2/2) BLOCK DIAGRAM

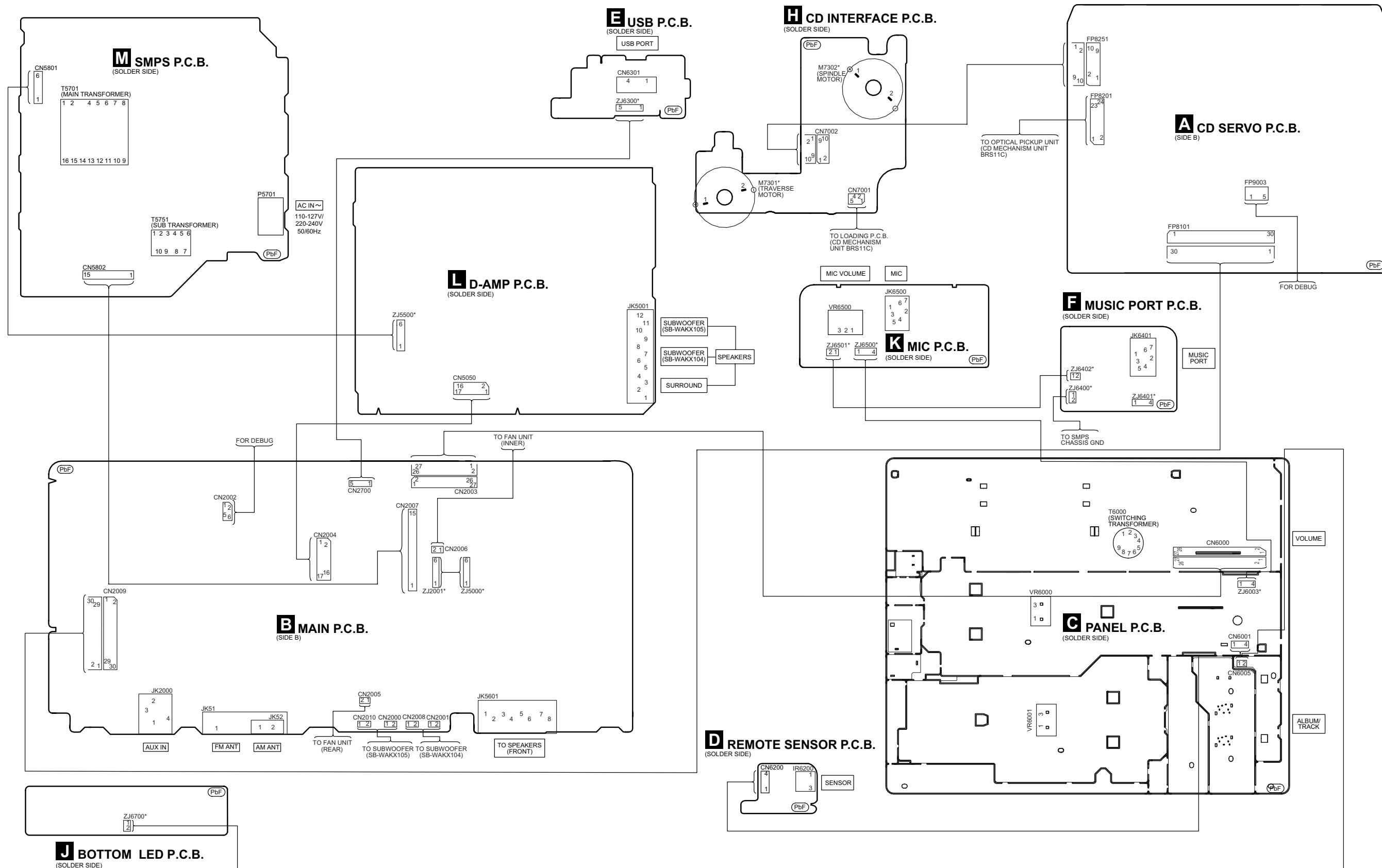
12.4. Power Supply



NOTE: "*" REF IS FOR INDICATION ONLY

SA-MAX500 POWER SUPPLY (1/2) BLOCK DIAGRAM

13 Wiring Connection Diagram



SA-MAX500 WIRING CONNECTION DIAGRAM

14 Schematic Diagram

16.1. Schematic Diagram Notes

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

Notes:

Playlist 2 switch.

Playlist 3 switch.

Playlist 4 switch.

Playlist 1 switch.

Playlist 5 switch.

Playlist 6 switch.

S6000: Radio/EXT-IN switch.

S6001: Stop (■) switch.

S6002: Power (○/I) switch.

S6003: Memory switch.

S6004: Play/Pause (▶ / ■) switch.

S6005: CD switch.

S6006: USB switch.

S6007: D.BASS switch.

S6008: Latin Preset EQ switch.

S6009: Forward (▶▶ / ▶◀) switch.

S6010: Rewind (◀▶ / ◀◀) switch.

S6011: Super Woofer switch.

S6012: Memory Rec/Pause switch.

S6013: USB Rec/Pause switch.

S6014: Album/Track switch.

S6015: Open/Close switch (▲).

S6016: Manual EQ switch.

S7201: Reset switch.

VR6000: Volume Jog.

VR6001: Album/Track Jog.

VR6500: Mic Jog.

- Voltage and signal line

— : +B signal line

— : -B signal line

— : CD Audio input signal line

— : AUX/Tuner/Music Port/Mic Audio input signal line

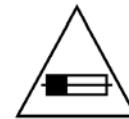
— : Audio output signal line

— : USB signal line

— : AM signal line

— : FM signal line

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE F1 T8AH 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.

- 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, C5704, C5705, C5708

- Resistor**

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

- Capacitor**

Unit of capacitance is μF , unless otherwise noted. F=Farads, $\text{pF}=\text{pico-Farad}$.

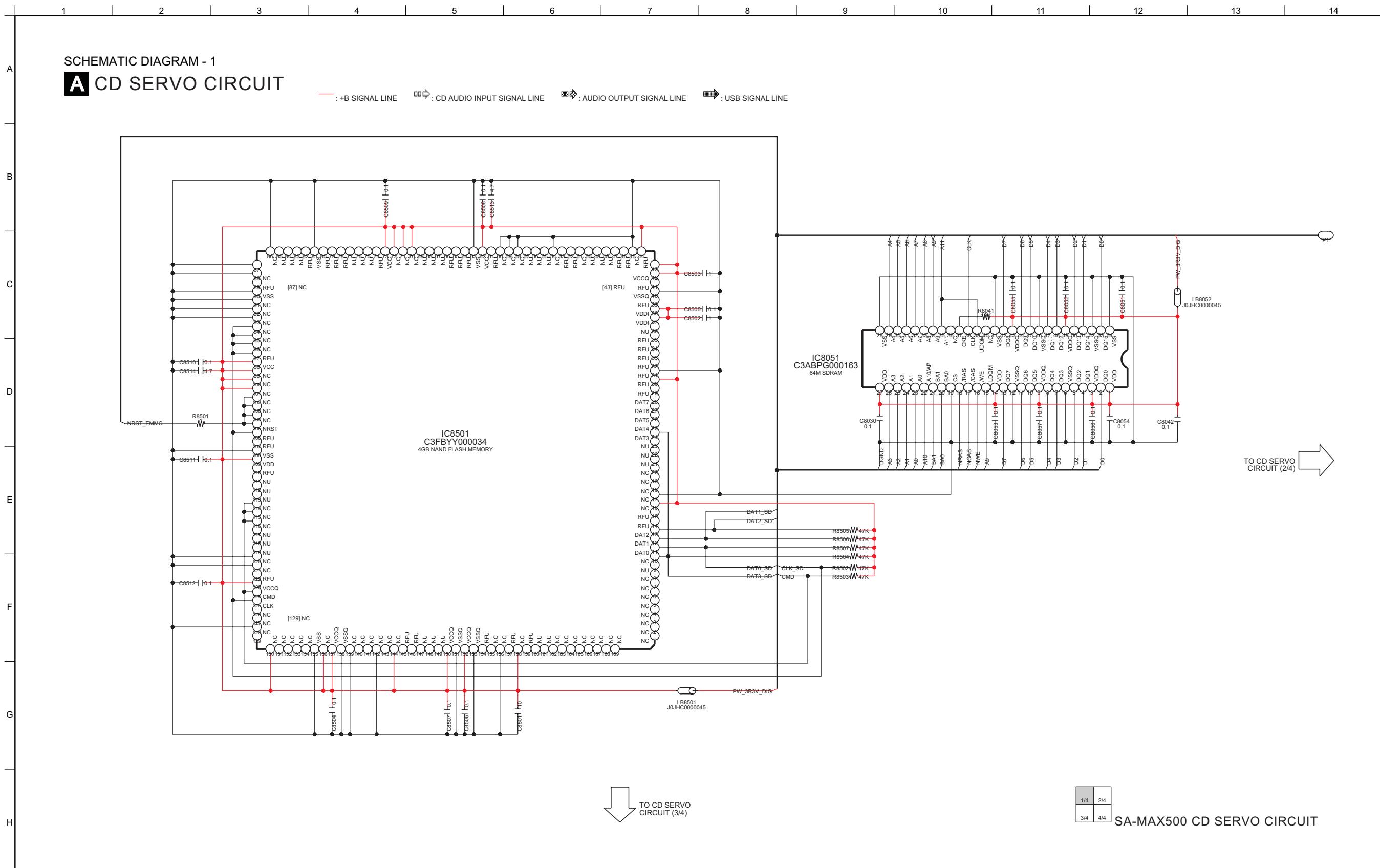
- Coil**

Unit of inductance is H, unless otherwise noted.

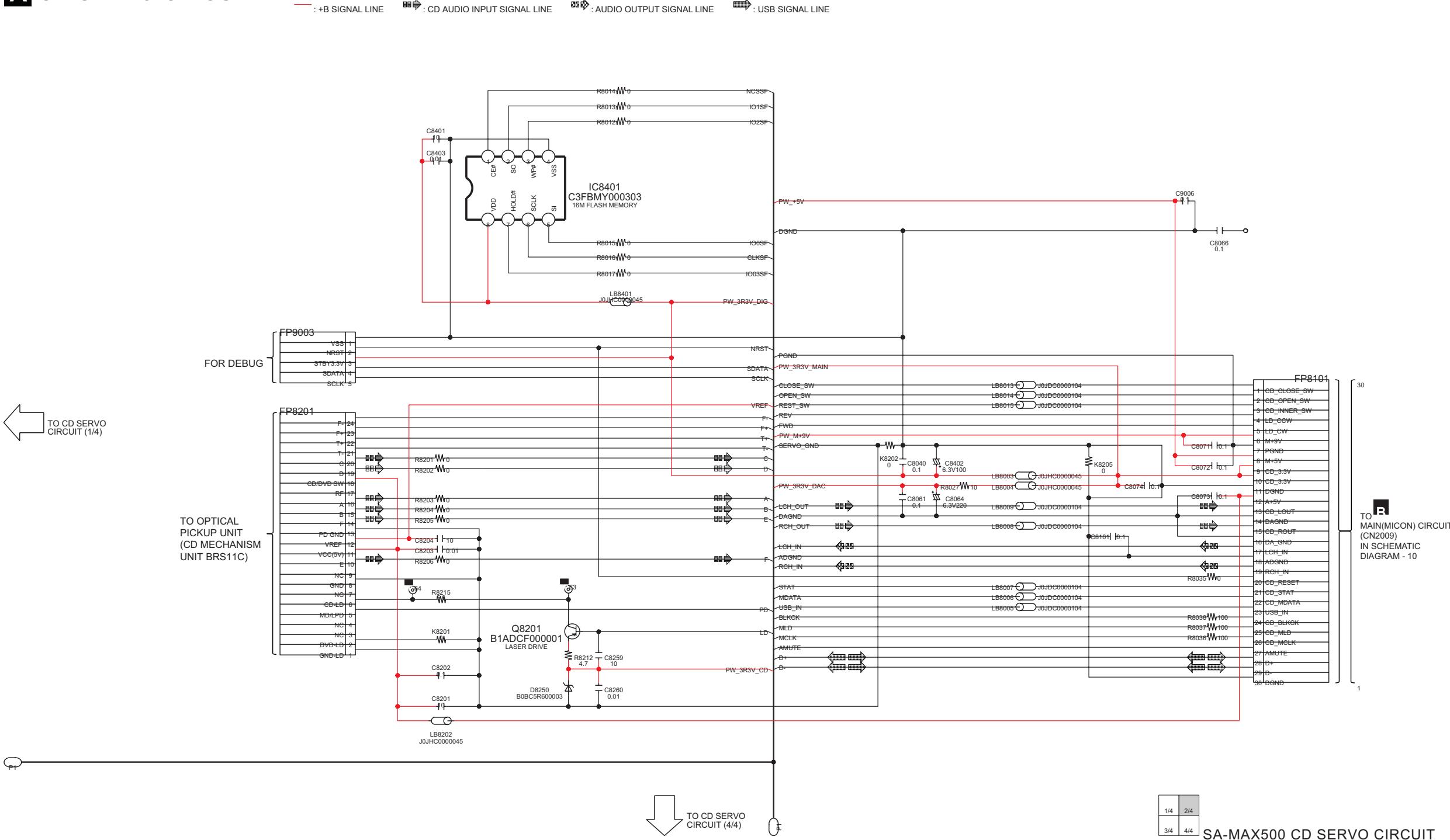
- *

REF IS FOR INDICATION ONLY.

14.2. CD Servo Circuit



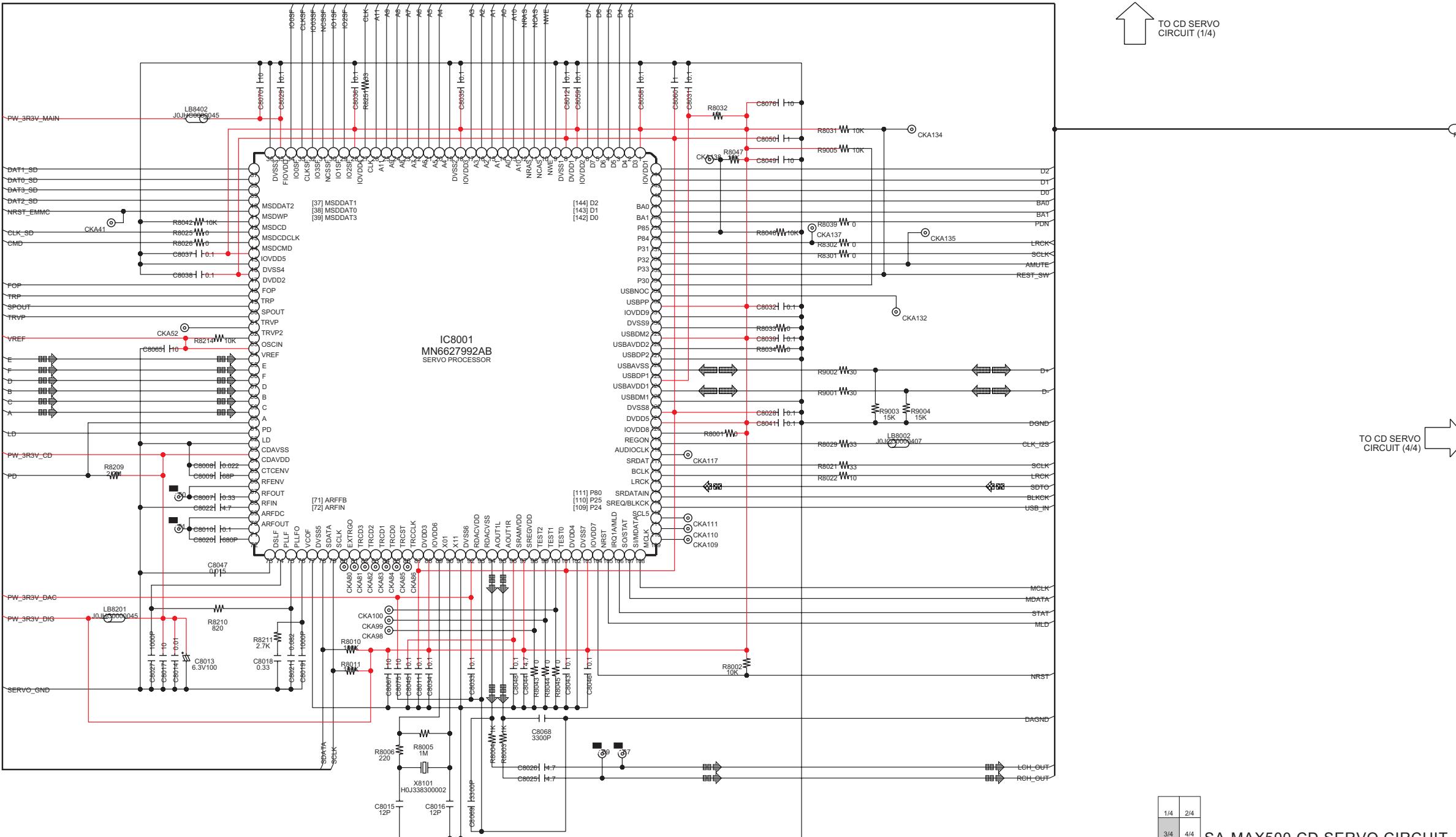
SCHEMATIC DIAGRAM - 2

A CD SERVO CIRCUIT

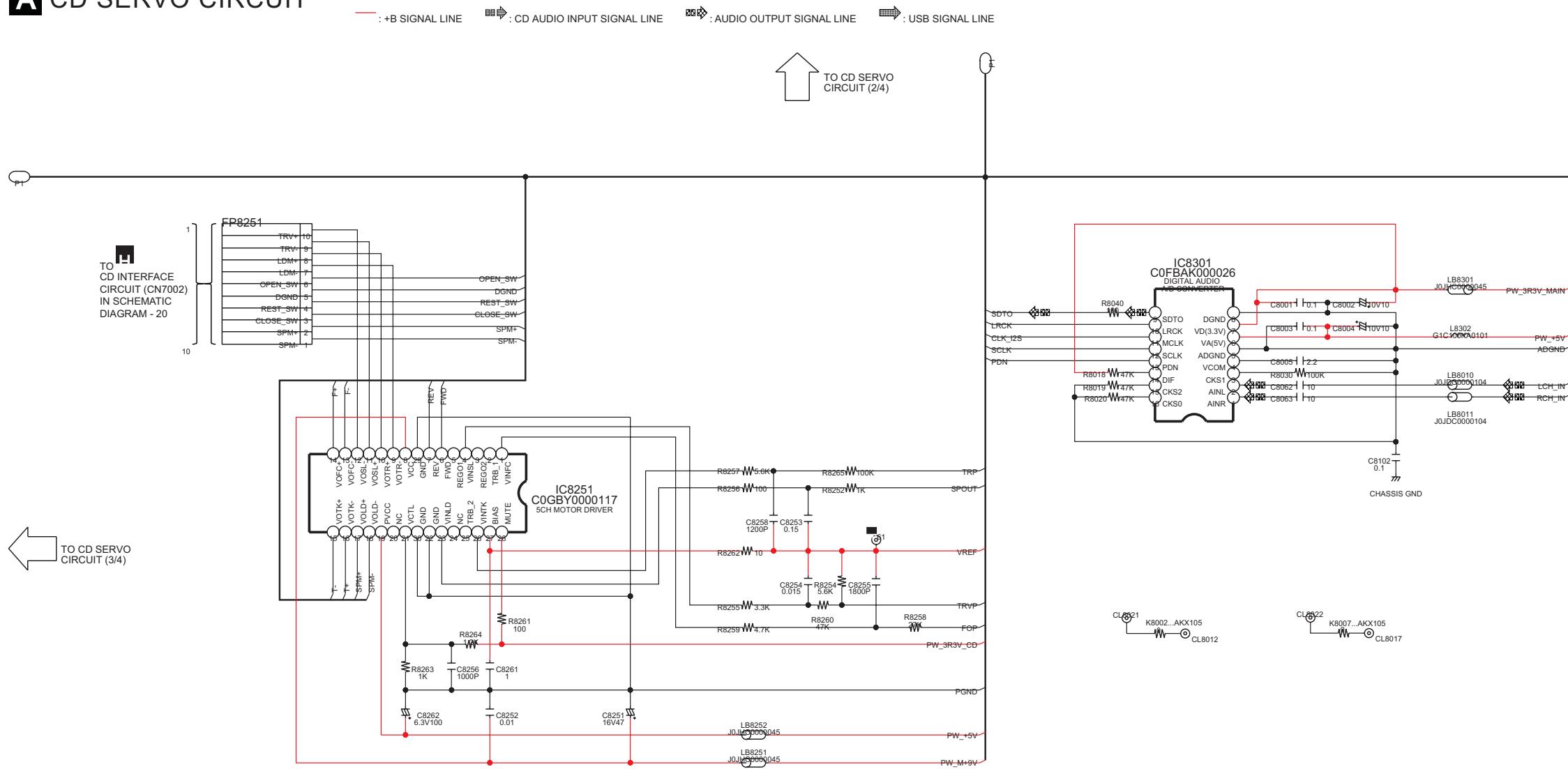
SCHEMATIC DIAGRAM - 3

A CD SERVO CIRCUIT

— : +B SIGNAL LINE □→ : CD AUDIO INPUT SIGNAL LINE □○ : AUDIO OUTPUT SIGNAL LINE ▶ : USB SIGNAL LINE



SCHEMATIC DIAGRAM - 4

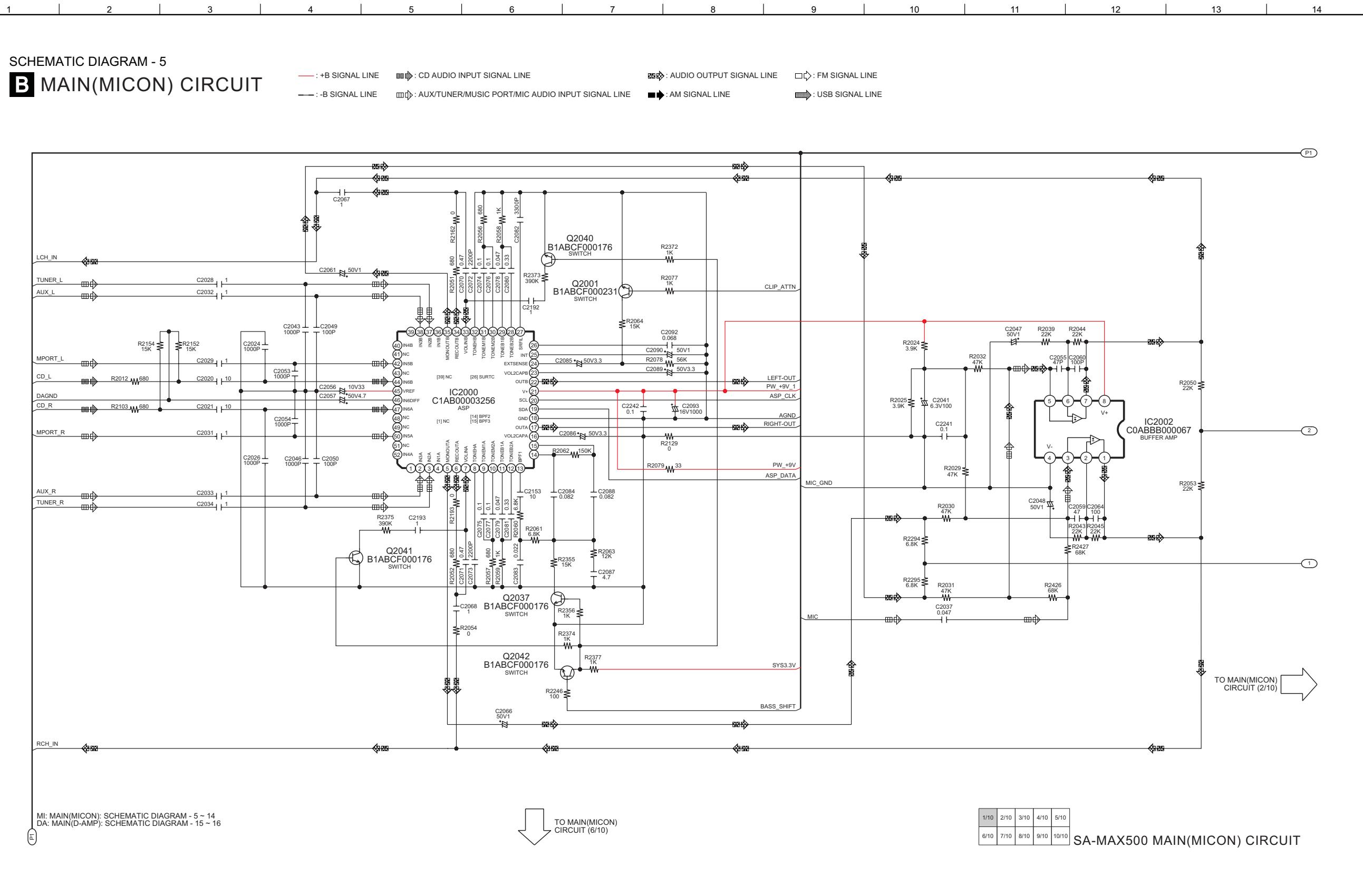
A CD SERVO CIRCUIT

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

SA-MAX500 CD SERVO CIRCUIT

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

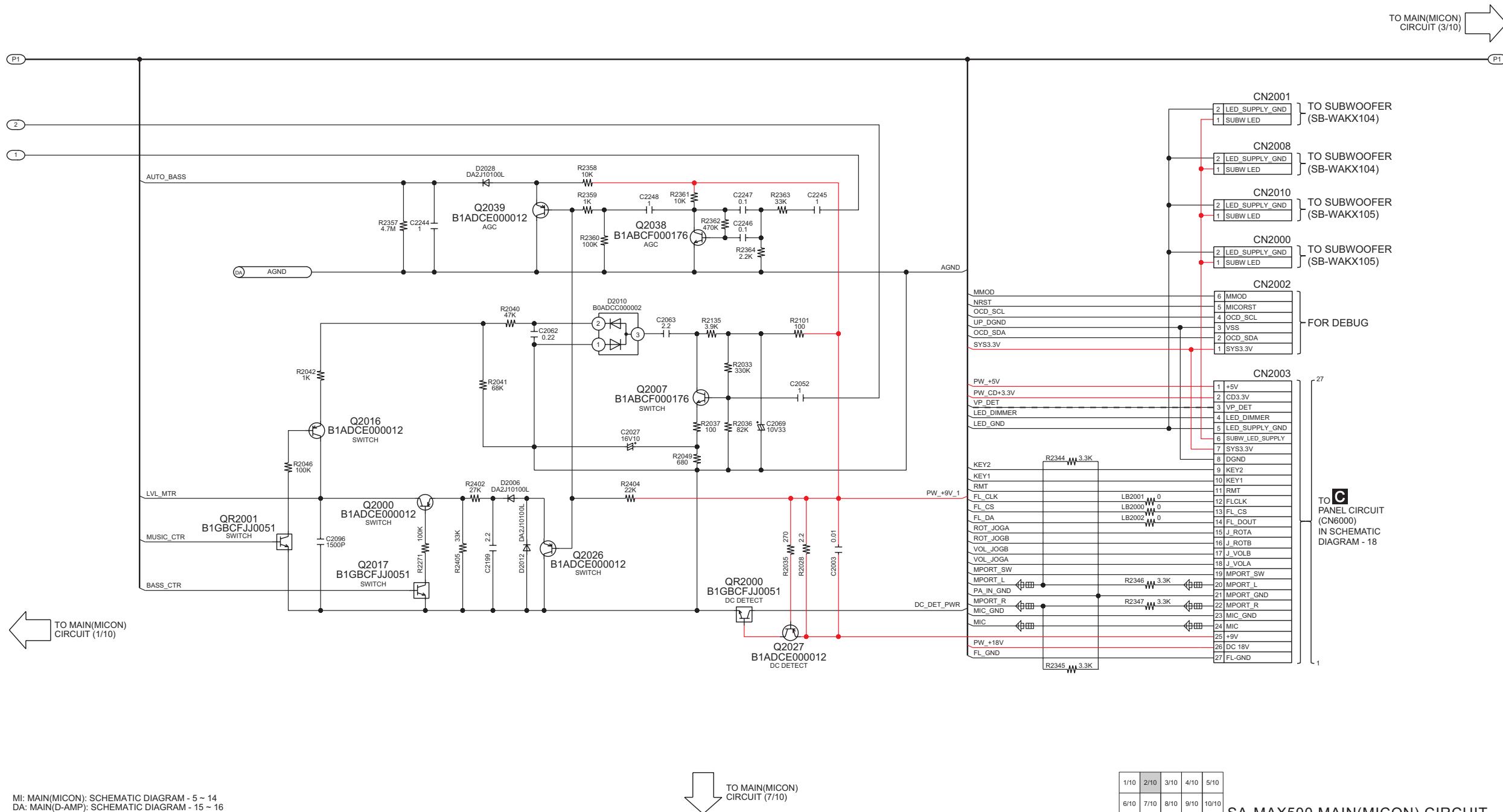
Main(MICON) Circuit



SCHEMATIC DIAGRAM - 6

B MAIN(MICON) CIRCUIT

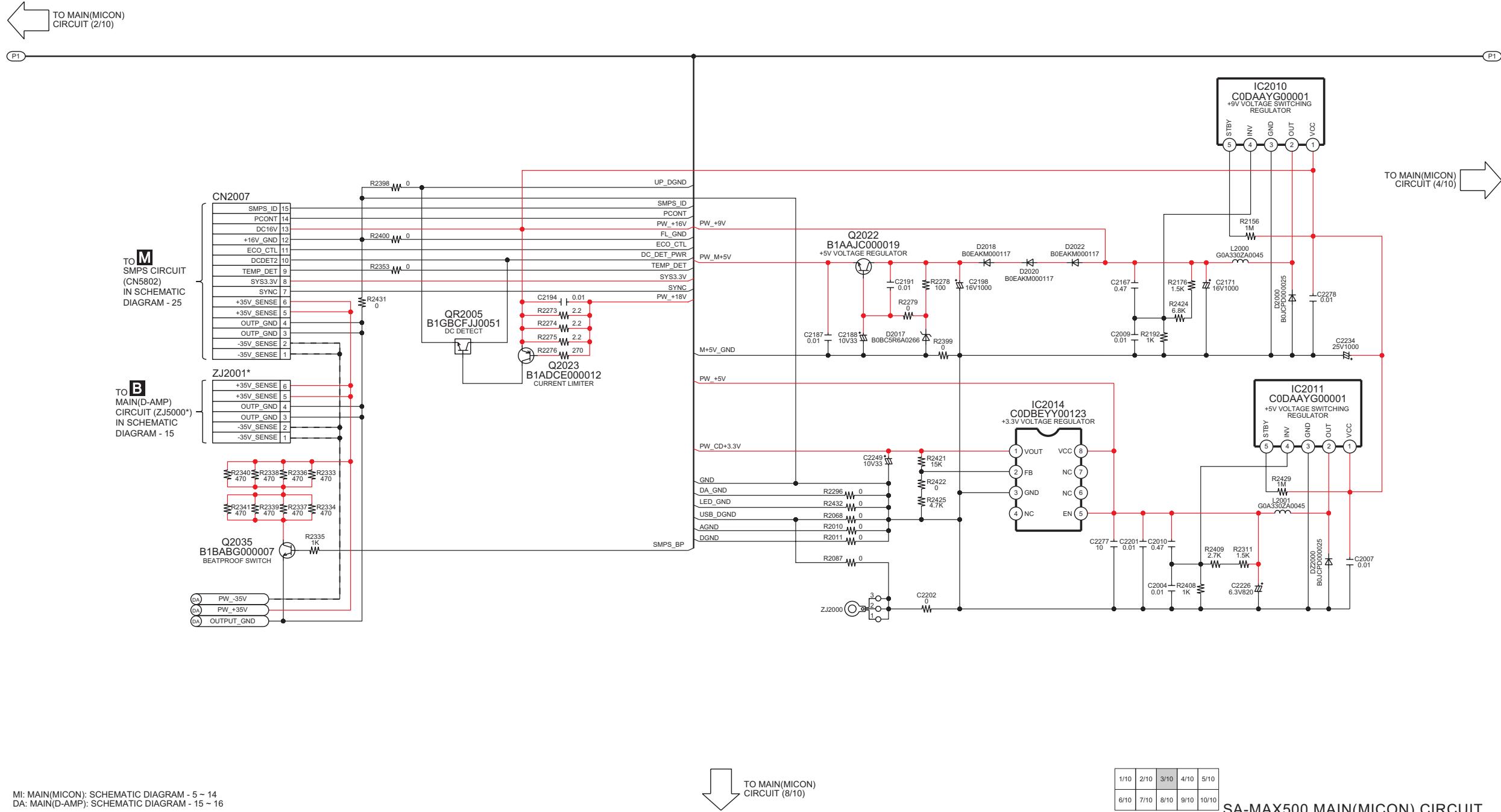
- : +B SIGNAL LINE : CD AUDIO INPUT SIGNAL LINE
 - : -B SIGNAL LINE : AUX/TUNER/MUSIC PORT/MIC AUDIO INPUT SIGNAL LINE
 : AUDIO OUTPUT SIGNAL LINE : FM SIGNAL LINE
 : AM SIGNAL LINE : USB SIGNAL LINE



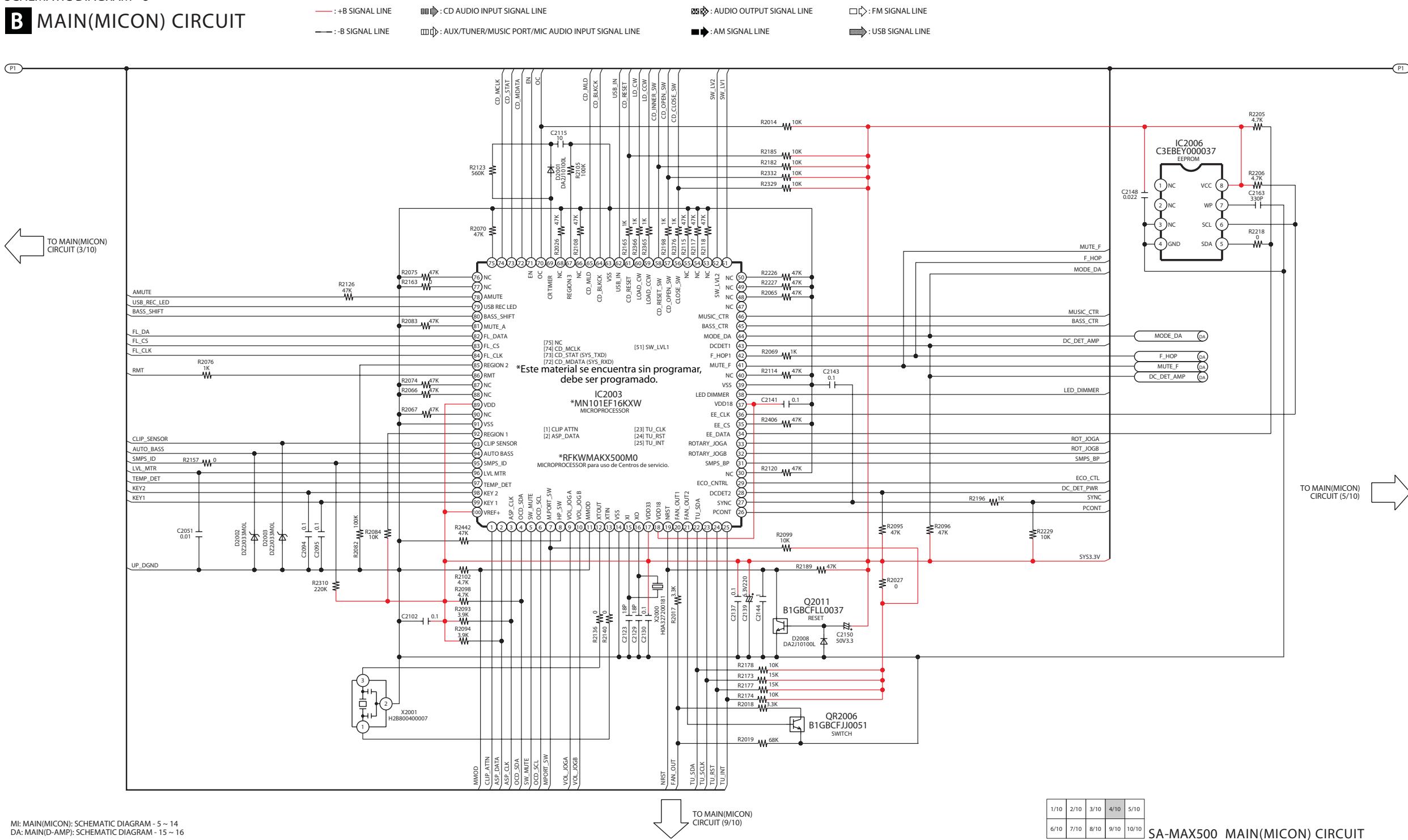
SCHEMATIC DIAGRAM - 7

B MAIN(MICON) CIRCUIT

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



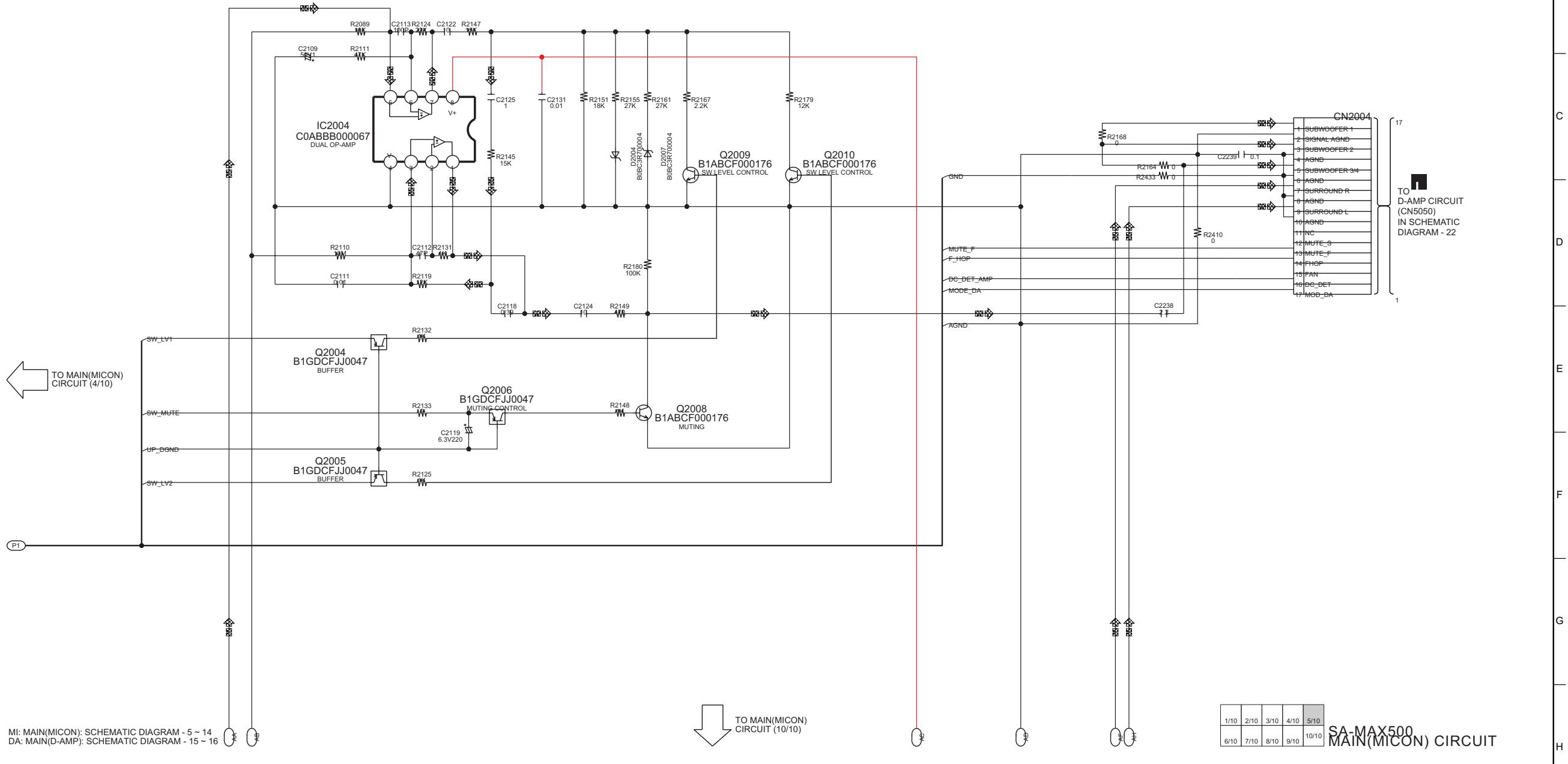
SCHEMATIC DIAGRAM - 8

B MAIN(MICON) CIRCUIT

SCHEMATIC DIAGRAM - 9

B MAIN(MICON) CIRCUIT

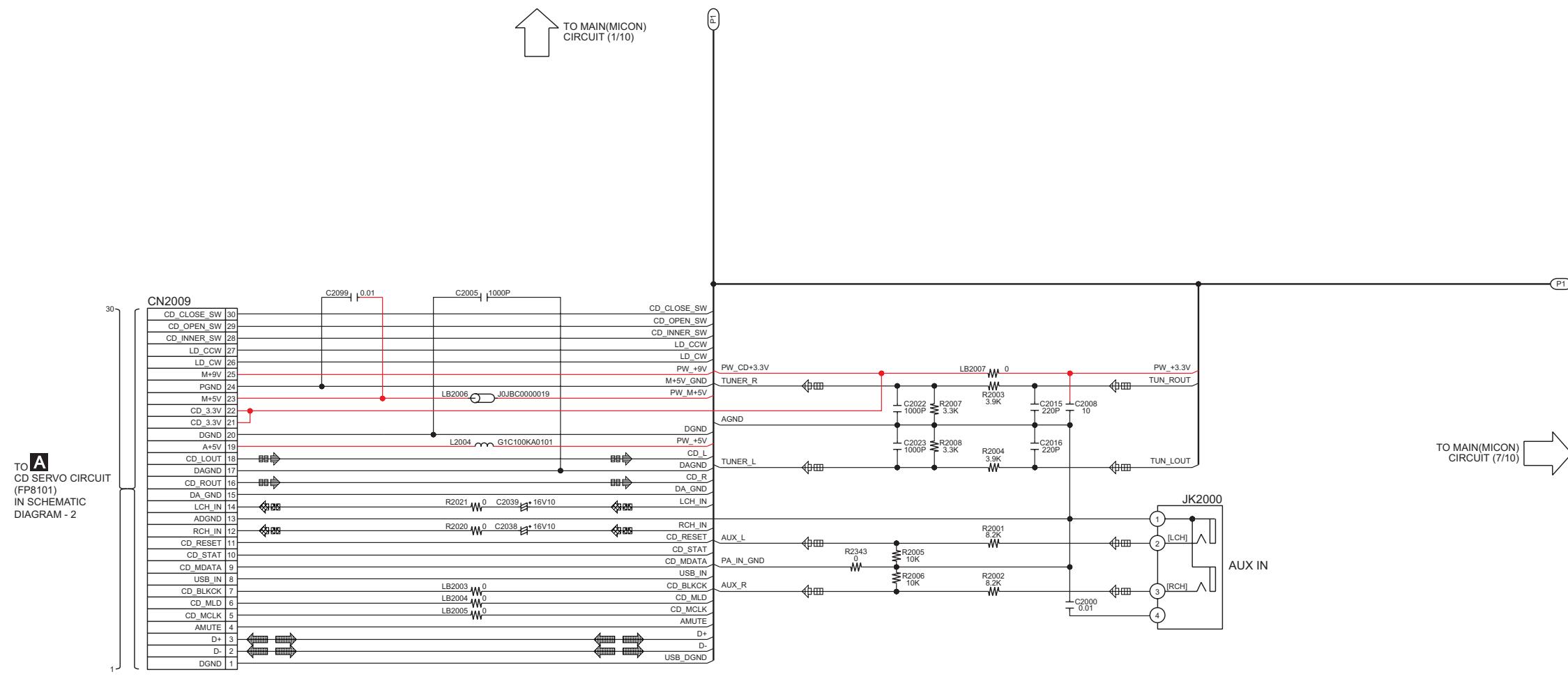
— : +B SIGNAL LINE ──┐ : CD AUDIO INPUT SIGNAL LINE
 — : -B SIGNAL LINE ──┘ : AUX/TUNER/MUSIC PORT/MIC AUDIO INPUT SIGNAL LINE
 ──┐ : AUDIO OUTPUT SIGNAL LINE ──┐ : FM SIGNAL LINE
 ──┘ : AM SIGNAL LINE ──┘ : USB SIGNAL LINE



SCHEMATIC DIAGRAM - 10

B MAIN(MICON) CIRCUIT

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



MI: MAIN(MICON); SCHEMATIC DIAGRAM - 5 ~ 14
DA: MAIN(D-AMP); SCHEMATIC DIAGRAM - 15 ~ 16

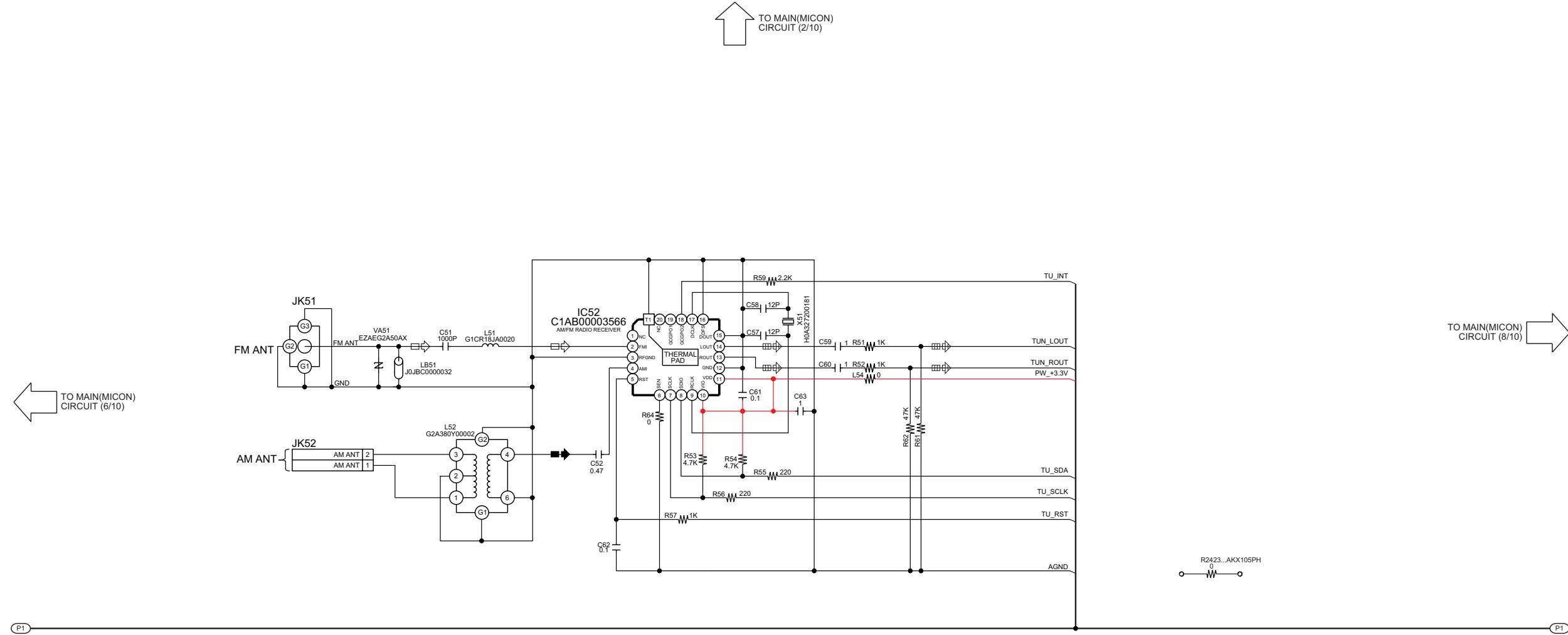
1/10	2/10	3/10	4/10	5/10
6/10	7/10	8/10	9/10	10/10

SA-MAX500 MAIN(MICON) CIRCUIT

SCHEMATIC DIAGRAM - 11

B MAIN(MICON) CIRCUIT

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



MI: MAIN(MICON); SCHEMATIC DIAGRAM - 5 ~ 14
DA: MAIN(D-AMP); SCHEMATIC DIAGRAM - 15 ~ 16

1/10	2/10	3/10	4/10	5/10
6/10	7/10	8/10	9/10	10/10

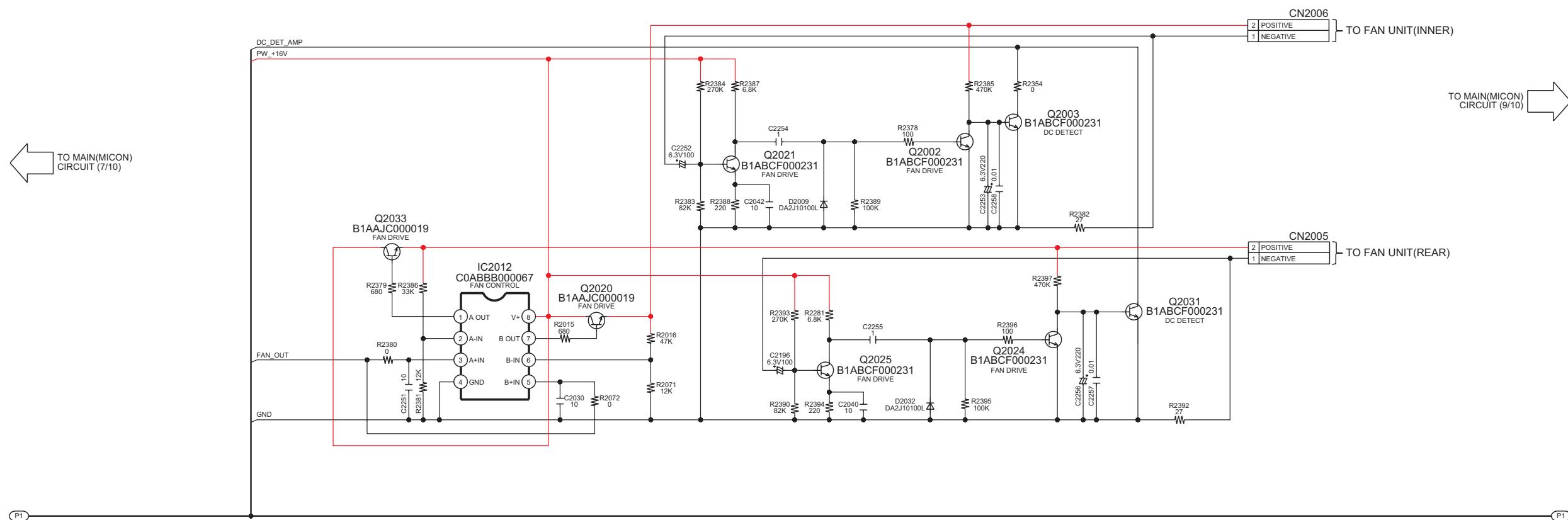
SA-MAX500 MAIN(MICON) CIRCUIT

SCHEMATIC DIAGRAM - 12

B MAIN(MICON) CIRCUIT

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

TO MAIN(MICON)
CIRCUIT (3/10)



MI: MAIN(MICON); SCHEMATIC DIAGRAM - 5 ~ 14
 DA: MAIN(D-AMP); SCHEMATIC DIAGRAM - 15 ~ 16

1/10	2/10	3/10	4/10	5/10
6/10	7/10	8/10	9/10	10/10

SA-MAX500 MAIN(MICON) CIRCUIT

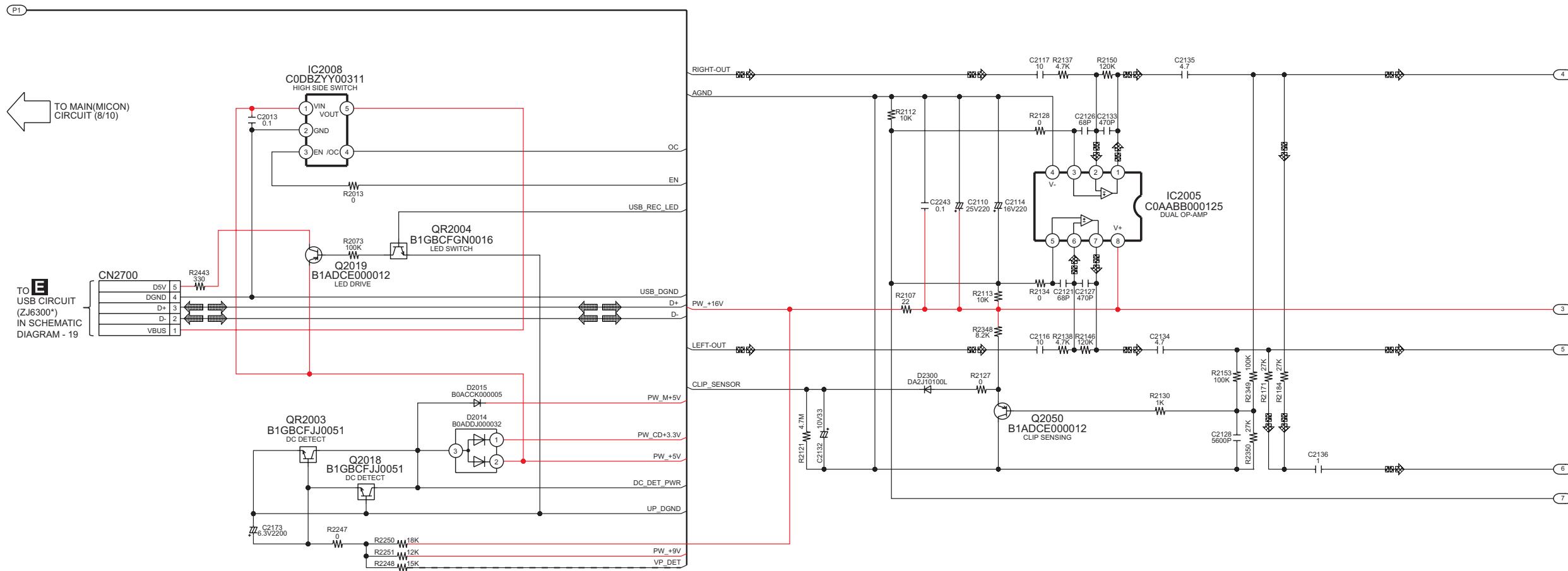
SCHEMATIC DIAGRAM - 13

B MAIN(MICON) CIRCUIT

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

TO MAIN(MICON)
CIRCUIT (4/10)

TO MAIN(MICON)
CIRCUIT (10/10)

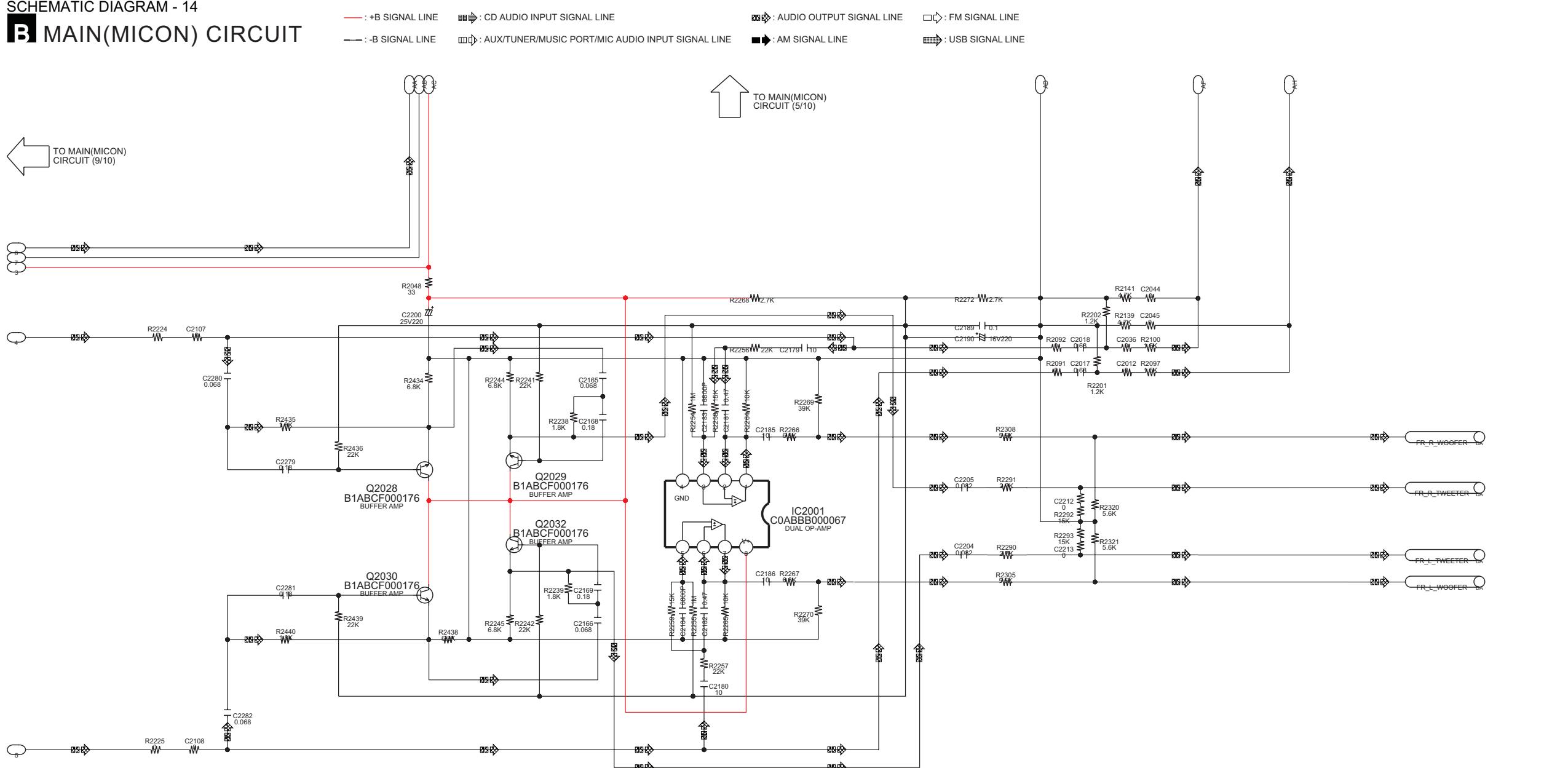


MI: MAIN(MICON) SCHEMATIC DIAGRAM - 5 ~ 14
DA: MAIN(D-AMP) SCHEMATIC DIAGRAM - 15 ~ 16

1/10	2/10	3/10	4/10	5/10
6/10	7/10	8/10	9/10	10/10

SA-MAX500 MAIN(MICON) CIRCUIT

SCHEMATIC DIAGRAM - 14
B MAIN(MICON) CIRCUIT

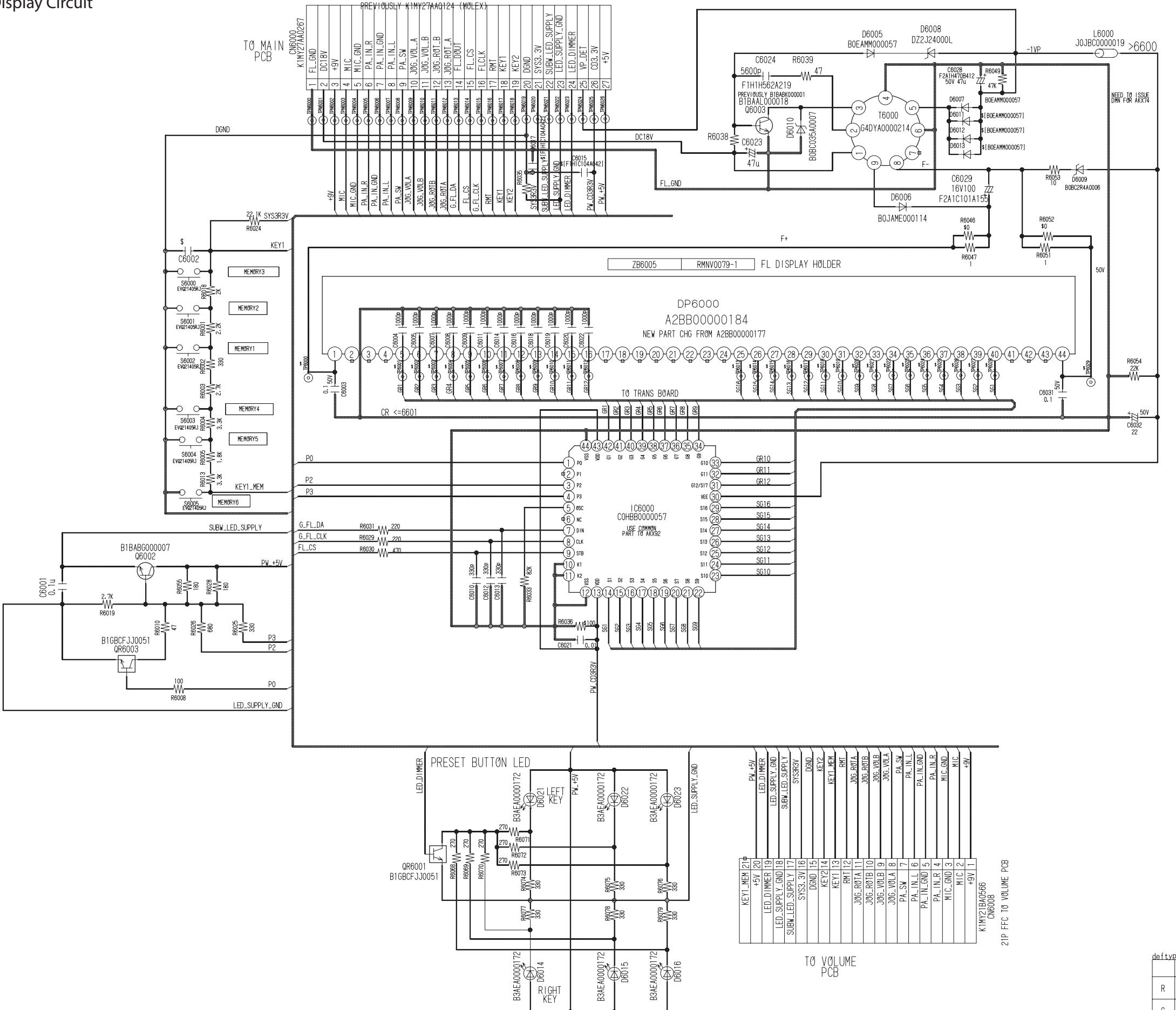


MI: MAIN(MICON): SCHEMATIC DIAGRAM - 5 ~ 14
DA: MAIN(D-AMP): SCHEMATIC DIAGRAM - 15 ~ 16

1/10	2/10	3/10	4/10	5/10
6/10	7/10	8/10	9/10	10/10

SA-MAX500 MAIN(MICON) CIRCUIT

14.3.FL Display Circuit

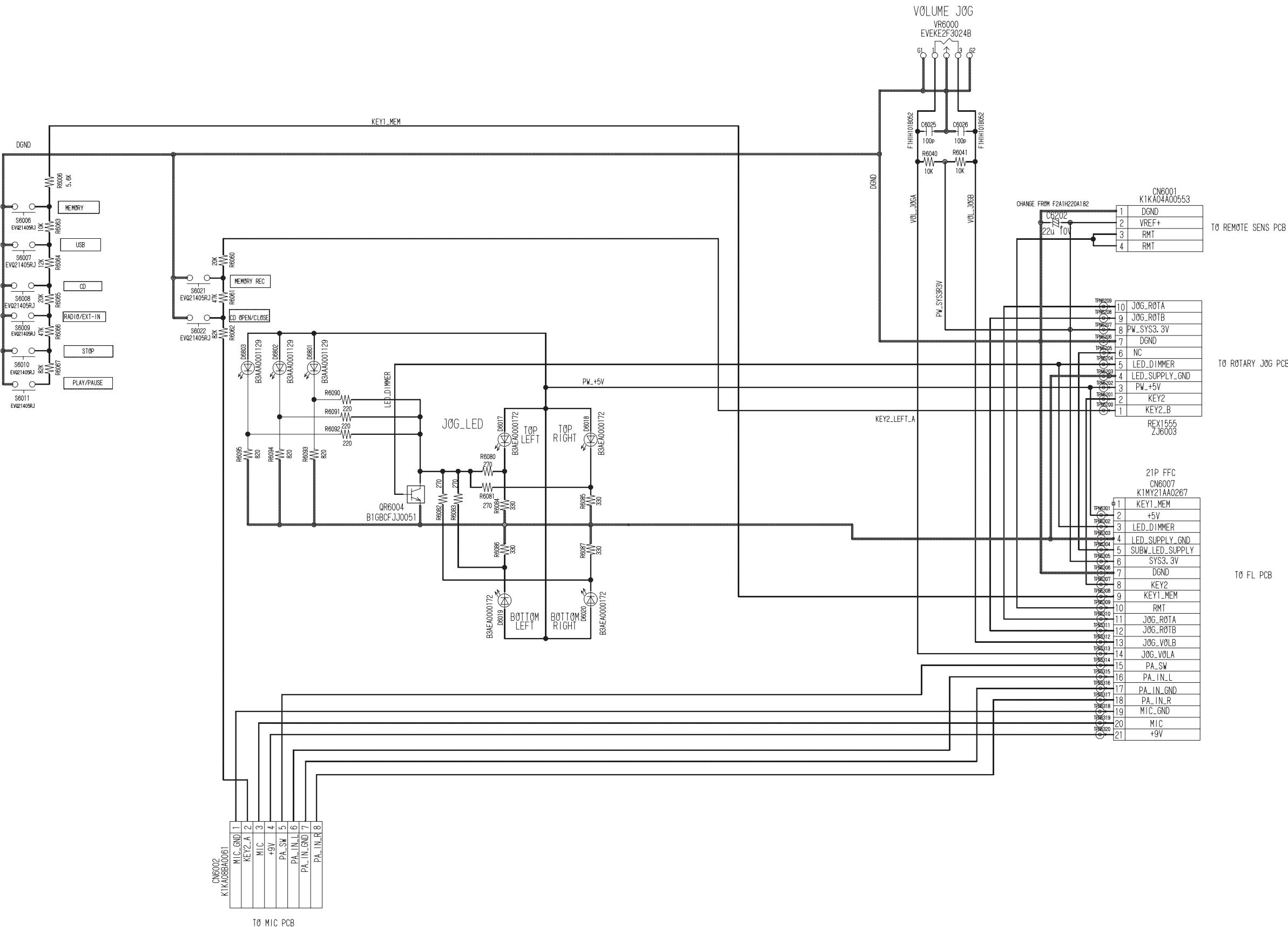


PCB	CIRCUIT
RJB3624AA	PANEL LCD
RJB3624AB	REMOTE
RJB3624AC	USB
RJB3624AD	MP3RT_MIC
RJB3624AE	VOLUME
RJB3624AF	DIAL_JOG
RJB3624AG	LIGHTING LED
RJB3624AH	INT_MEMORY LED
RJB3624AJ	INTERNAL FAN
RJB3624AK	REAR FAN

FL PANEL BOARD

NAME	BOARD NO	MODEL NO
RJB3624AA		
DRAWING NO		
KR		
ITEM	DATE	NAME CHECK
1		
2		
3		
4		
5		
DATE	SECTION	APPROVED CHECKED DESIGNED DRAWN
16JUL12	ELECTRICAL DESIGN	
REVISED DATE : 2012.04.20	Rule ID : AUDIO Factory : M	

14.4. Volume Circuit



NAME		VOLUME JOG		
deftype	value	CIRCUIT	BOARD NO	
R	[18]	RJB3624AE	MAX500 PR	
C	[18]	DRAWING NO		
KR		SECTION		
ITEM		DATE	APPROVED	
1		NAME	CHECKED	
2		DATE	DESIGNED	
3		SECTION	DRAWN	
4		28MAY12	ELECTRICAL DESIGN	
5		REVISED DATE : 2012.04.20		
6		Rule ID : AUDIO Factory : M		

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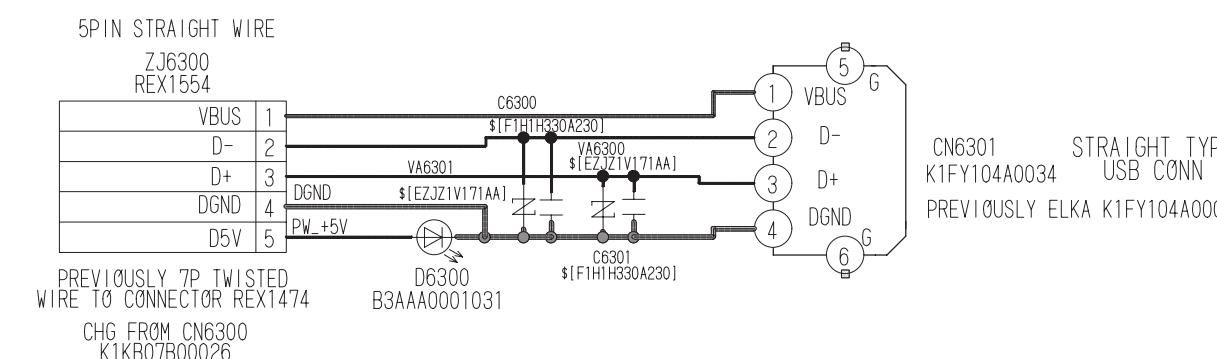
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14.5.Control & USB Circuit

TO
MAIN

PCB	CIRCUIT
RJB3624AA	PANEL_LCD
RJB3624AB	REMOTE
RJB3624AC	USB
RJB3624AD	MP0RT_MIC
RJB3624AE	VOLUME
RJB3624AF	DIAL_JOG
RJB3624AG	LIGHTING_LED
RJB3624AH	INT_MEMORY_LED
RJB3624AJ	INTERNAL FAN
RJB3624AK	REAR FAN

NAME		USB CKT			
CIRCUIT	BOARD NO	MODEL NO			
RJB3624AC		MAX500 PR			
DRAWING NO					
KR					
def type		DATE	SECTION	APPROVED	CHECKED
R		12JUL2012	ELEC DESIGN	TAWA SAN	CS TEE
C		REVISED DATE : 03.29.2012		TMCHER	JONDILL
Rule ID : AUDIO Factory : M					

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14.7. Remote Sensor

1

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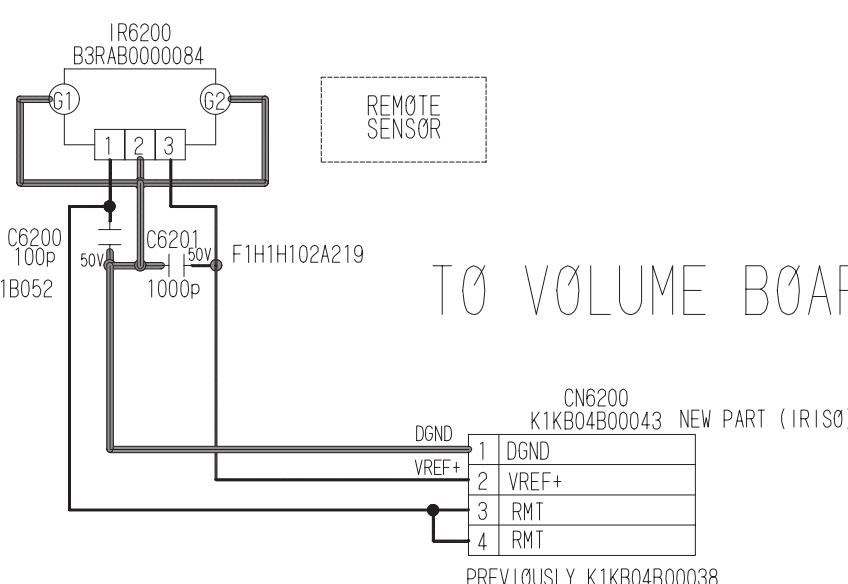
2

2

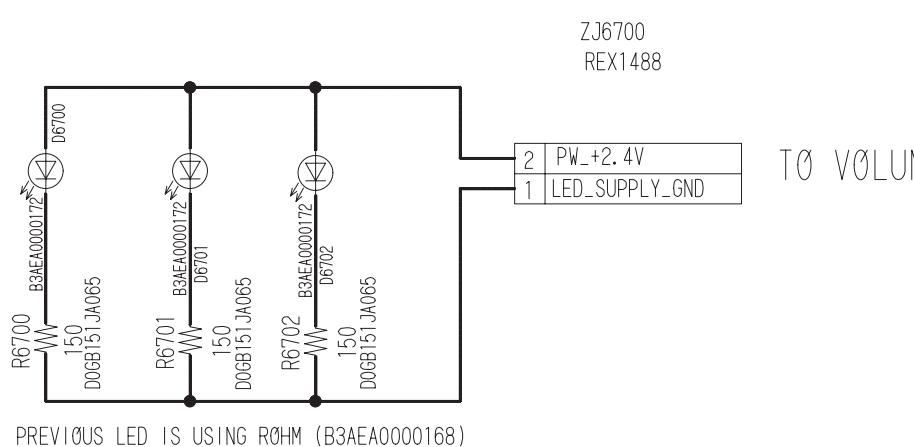
3

3

PCB	CIRCUIT
RJB3624AA	PANEL LCD
RJB3624AB	REMOTE
RJB3624AC	USB
RJB3624AD	MP0RT_MIC
RJB3624AE	VOLUME
RJB3624AF	DIAL JOG
RJB3624AG	LIGHTING_LED
RJB3624AH	INT_MEMORY_LED
RJB3624AJ	INTERNAL FAN
RJB3624AK	REAR FAN



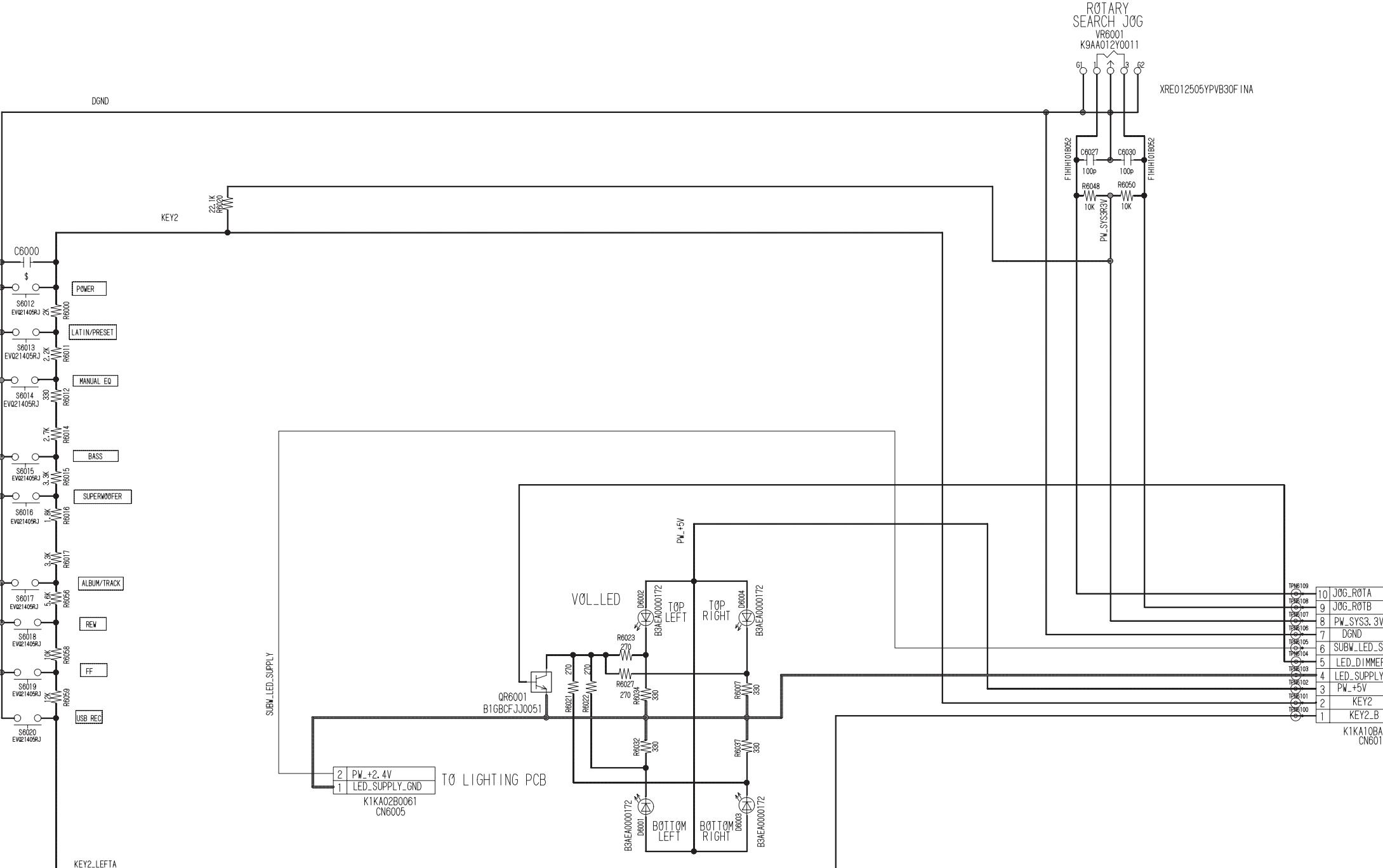
NAME		REMOTE SENSØR CKT			
CIRCUIT	BOARD NØ	MODEL NØ			
RJB3624AB		MAX500		PR	
		KR			
def type		DATE	SECTION	APPROVED	CHECKED
R		12JUL2012	ELEC DESIGN	TAWA SAN	CS TEE
C		[18]		TMCHER	JØNDILL
REVISED DATE : 04.12.2012				Rule ID : AUDIO	Factory : M



PCB	CIRCUIT
RJB3624AA	PANEL LCD
RJB3624AB	REMOTE
RJB3624AC	USB
RJB3624AD	MP3 PORT MIC
RJB3624AE	VOLUME
RJB3624AF	DIAL JOG
RJB3624AG	LIGHTING LED
RJB3624AH	INT_MEMORY LED
RJB3624AJ	INTERNAL FAN
RJB3624AK	REAR FAN

NAME		LIGHTING LED			
CIRCUIT	BOARD NO	MODEL NO			
RJB3624AG		MAX500			
DRAWING NO				PR	
KR					
def type	VALUE	DATE	SECTION	APPROVED	CHECKED
R	[18]	25MAY2012	ELEC DESIGN	TAWA SAN	CS TEE
C	[18]	REVISED DATE : 04.20.2012		Rule ID : AUDIO Factory : M	

Jog Board



TO VOLUME PANEL PCB

T1K101	10 JOG_ROTA
T1K102	9 JOG_ROTB
T1K103	8 PW_SYS3, 3V
T1K104	7 DGND
T1K105	6 SUBW_LED_SUPPLY
T1K106	5 LED_TIMER
T1K107	4 LED_SUPPLY_GND
T1K108	3 PW_+5V
T1K109	2 KEY2
T1K100	1 KEY2_B

K1KA10BA0062
CN6010

PCB	CIRCUIT
RJB3624AA	PANEL_LCD
RJB3624AB	REMOTE
RJB3624AC	USB
RJB3624AD	MPORT_MIC
RJB3624AE	VOLUME
RJB3624AF	DIAL_JOG
RJB3624AG	LIGHTING_LED
RJB3624AH	INT_MEMORY_LED
RJB3624AJ	INTERNAL_FAN
RJB3624AK	REAR_FAN

CONT' WITH MEM REC_CD OPEN_ MIC JACK

NAME		DIAL JOG BOARD			
deftype	value	CIRCUIT	BOARD NO	MODEL	NO
R	[18]	RJB3624AF			
C	[18]				
		DRAWING NO			
		KR			
NO	ITEM	DATE	NAME	CHECK	
1					DATE SECTION APPROVED CHECKED DESIGNED DRAWN
2					
3					
4					
5					
6					
		12JUL12	ELECTRICAL DESIGN		
				REVISED DATE :	2012.04.20 Rule ID :AUDIO Factory :M

A

B

C

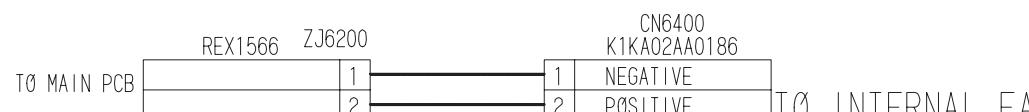
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Internal Fan

PCB	CIRCUIT
RJB3624AA	PANEL LCD
RJB3624AB	REMOTE
RJB3624AC	USB
RJB3624AD	MPØRT_MIC
RJB3624AE	VOLUME
RJB3624AF	DIAL JOG
RJB3624AG	LIGHTING_LED
RJB3624AH	INT_MEMORY LED
RJB3624AJ	INTERNAL FAN
RJB3624AK	REAR FAN

NAME		INTERNAL FAN					
CIRCUIT	BOARD NØ	MODEL NØ					
RJB3624AJ							
DRAWING NØ		MAX500 PR					
KR							
def type		DATE	SECTION	APPROVED	CHECKED		
R	VALUE	19JULY2012	ELEC DESIGN	TAWA SAN	CS TEE		
C	[18]	REVISED DATE : 03.30.2012		WIDNA	WIDNA		
		Rule ID : AUDIO		Factory : M			

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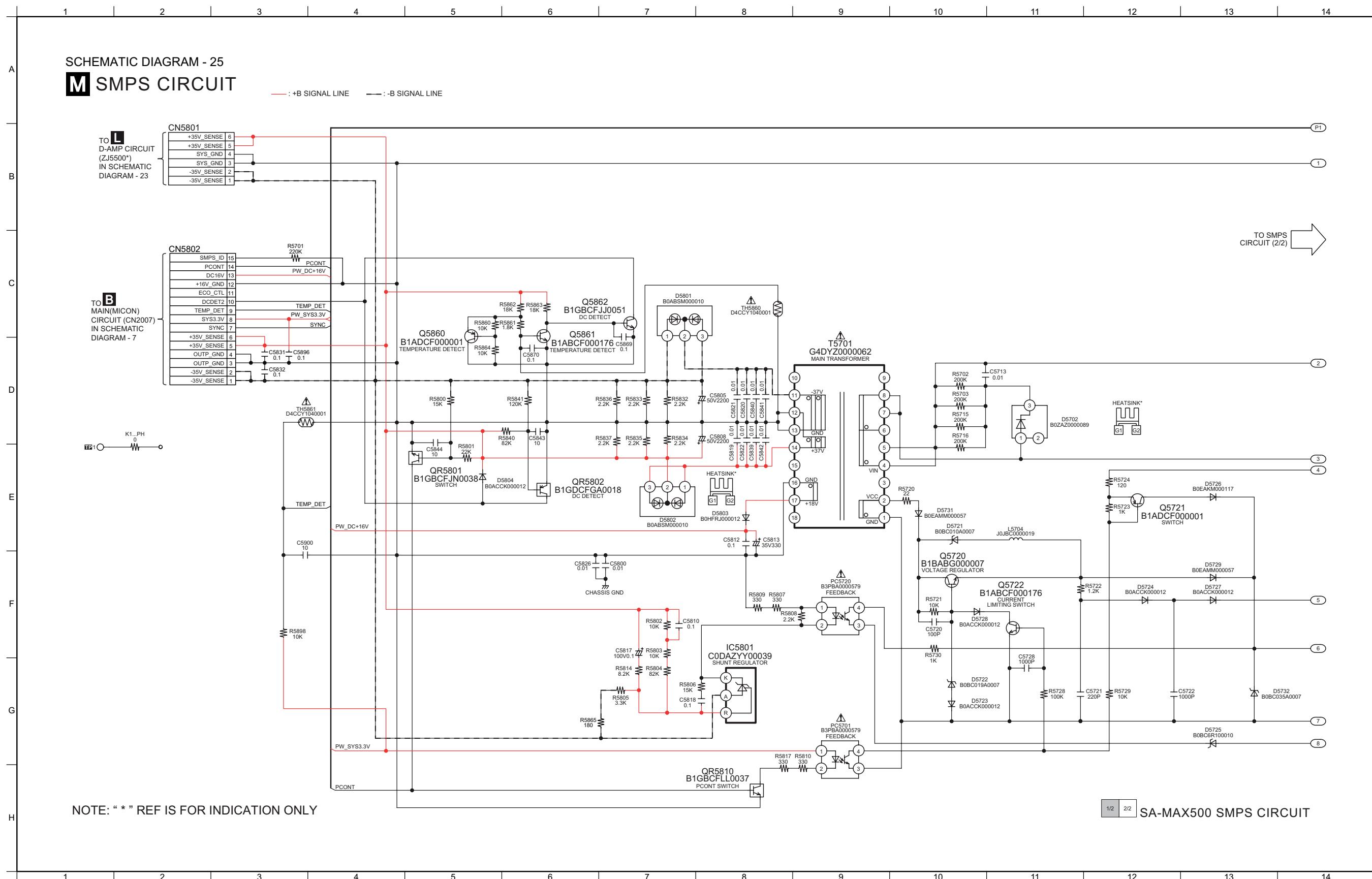
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14.8. SMPS Circuit

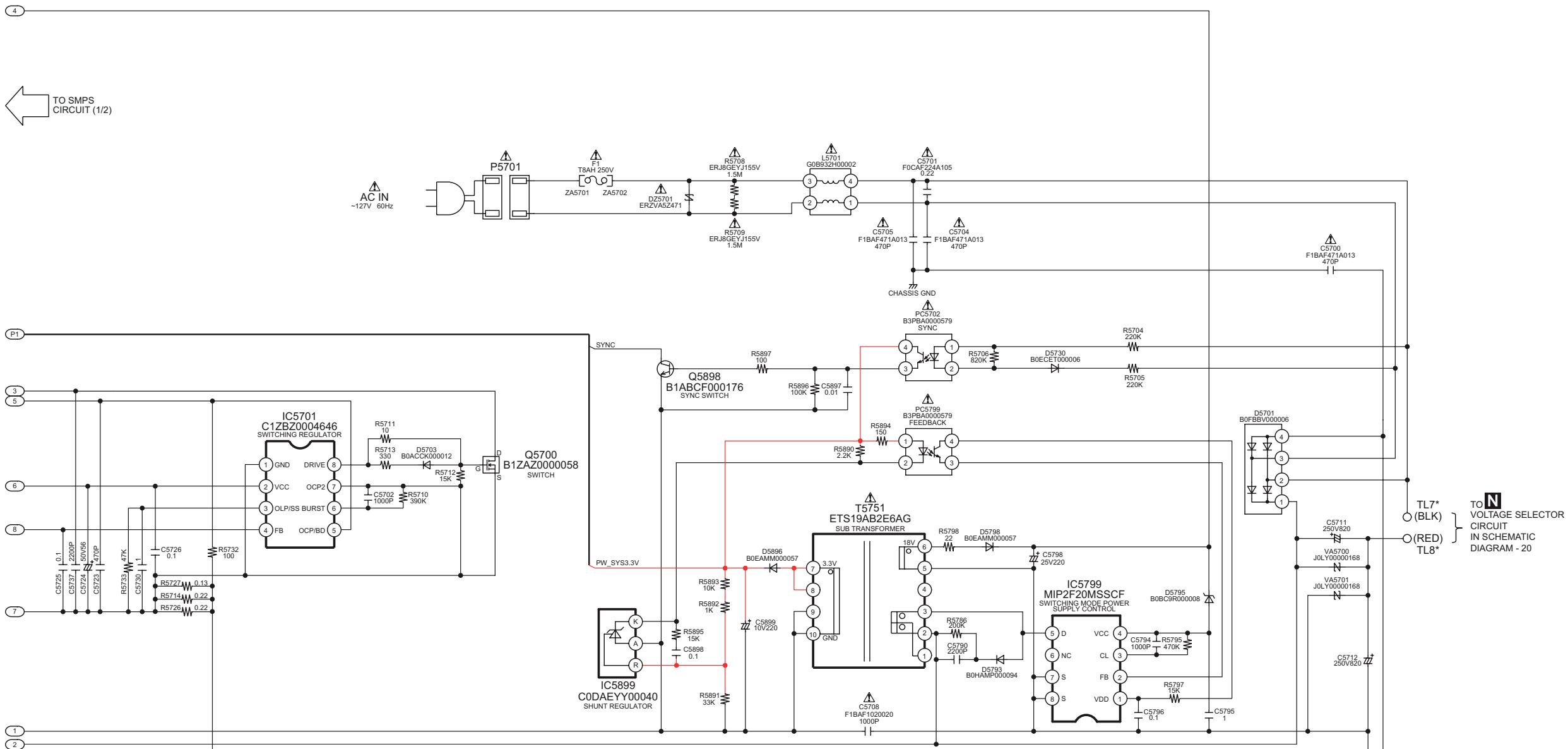


15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28

SCHEMATIC DIAGRAM - 26

M SMPS CIRCUIT

— : +B SIGNAL LINE — : -B SIGNAL LINE



NOTE: “*” REF IS FOR INDICATION ONLY

1/2 2/2 SA-MAX500 SMPS CIRCUIT

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

A
B
C
D
E
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15 Printed Circuit Board

15.1. Main P.C.B.

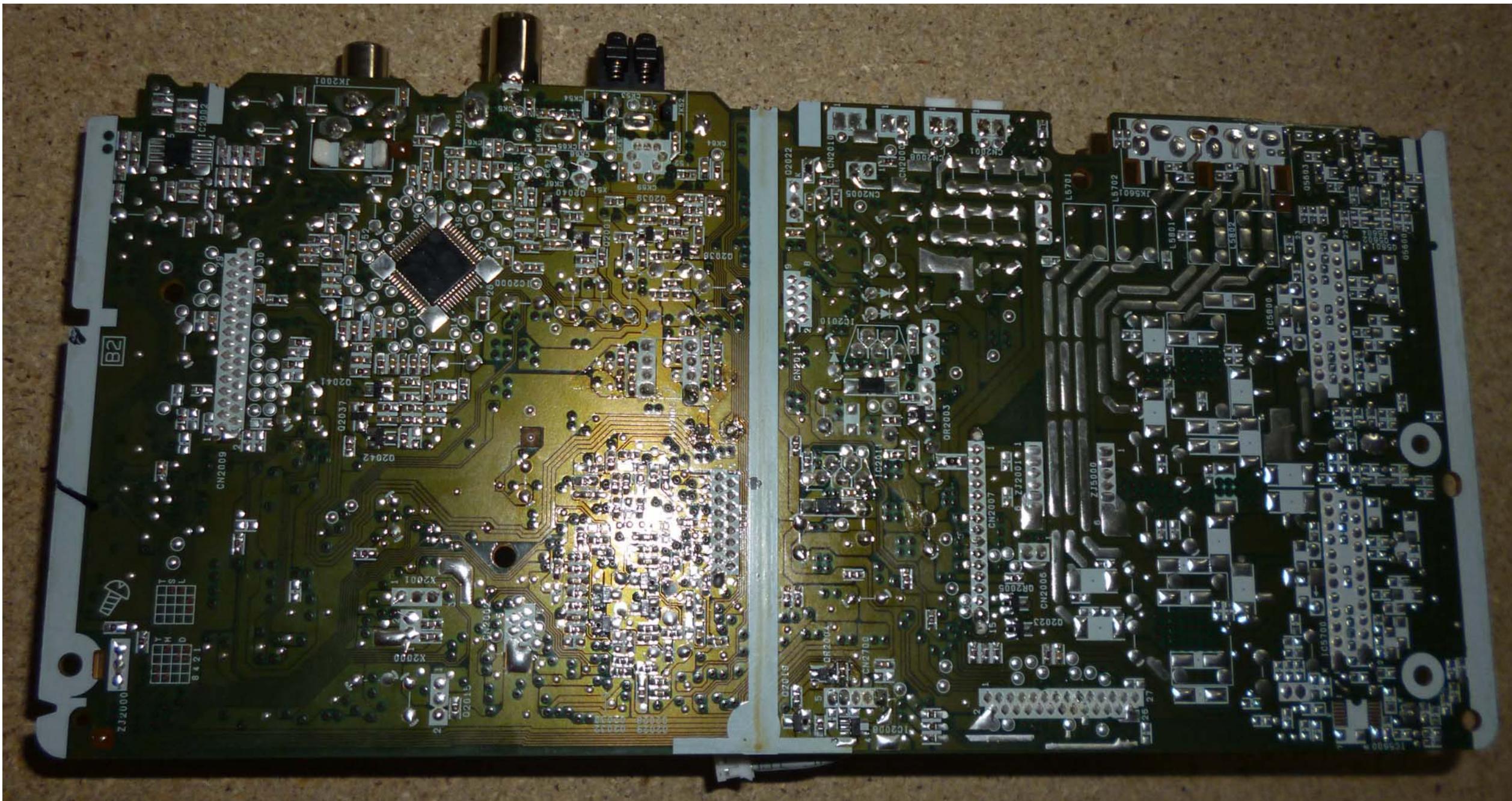
A MAIN P.C.B. (RD-DAK110-PX)



(SIDE A)

SA-MAX500
MAIN P.C.B.

A MAIN P.C.B. (RD-DAK110-PX)



H

G

F

E

D

C

B

A

(SIDE B)

SA-MAX500
MAIN P.C.B.

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

COMPONENTES DE PISTA MAIN PSG

Ref. No.	Parts No.	Name & Description
	RD-DAK110-PX	MAIN PCB (completa con componentes)
	REP4768R	CONJUNTO MANUAL MAIN
	RJB3542C	TARJETA MAIN SIN COMPONENTES
C51	F1H1H102A219	GRM188B11H102KA01D
C52	F1H1A474A107	CL10B474KP8NNPC
C57	F1H1H120A230	GRM1882C1H120JD01D
C58	F1H1H120A230	GRM1882C1H120JD01D
C59	F1H1A105A025	LMK107BJ105KA-T
C60	F1H1A105A025	LMK107BJ105KA-T
C61	F1G1C104A077	GRM155B31C104KA87D
C62	F1G1C104A077	GRM155B31C104KA87D
C63	F1H0J105A051	CL10X105KQ8NNPC
C2000	F1H1H103A219	GRM188B11H103KA01D
C2003	F1H1H103A219	GRM188B11H103KA01D
C2004	F1H1H103A219	GRM188B11H103KA01D
C2005	F1H1H102A219	GRM188B11H102KA01D
C2007	F1H1H103A219	GRM188B11H103KA01D
C2008	F1J1A106A043	GRM21BB31A106KE18L
C2009	F1H1H103A219	GRM188B11H103KA01D
C2010	F1H1A474A107	CL10B474KP8NNPC
C2013	F1H1H104B047	CL10B104KB8NNPC
C2015	F1H1H2210001	CM105W5R221K50AT
C2016	F1H1H2210001	CM105W5R221K50AT
C2020	F1J1A106A043	GRM21BB31A106KE18L
C2021	F1J1A106A043	GRM21BB31A106KE18L
C2022	F1H1H102A219	GRM188B11H102KA01D
C2023	F1H1H102A219	GRM188B11H102KA01D
C2024	F1H1H102A219	GRM188B11H102KA01D
C2026	F1H1H102A219	GRM188B11H102KA01D
C2027	F2A1C100A207	SM100M016B070T050P
C2028	F1H0J105A051	CL10X105KQ8NNPC
C2029	F1H0J105A051	CL10X105KQ8NNPC
C2030	F1J1A106A043	GRM21BB31A106KE18L
C2031	F1H0J105A051	CL10X105KQ8NNPC
C2032	F1H0J105A051	CL10X105KQ8NNPC
C2033	F1H0J105A051	CL10X105KQ8NNPC
C2034	F1H0J105A051	CL10X105KQ8NNPC
C2037	F1H1H473A783	C1608JB1H473KT
C2038	F2A1C100A207	SM100M016B070T050P
C2039	F2A1C100A207	SM100M016B070T050P
C2040	F1J1A106A043	GRM21BB31A106KE18L
C2041	F2A0J101B034	GS101M6R3C110T050P
C2042	F1J1A106A043	GRM21BB31A106KE18L
C2043	F1H1H102A219	GRM188B11H102KA01D
C2046	F1H1H102A219	GRM188B11H102KA01D
C2047	F2A1H1R0A213	SM010M050B070T050P
C2048	F2A1H1R0A213	SM010M050B070T050P
C2049	F1H1H101B052	CL10C101JB8NNPC
C2050	F1H1H101B052	CL10C101JB8NNPC
C2051	F1H1H103A219	GRM188B11H103KA01D
C2052	F1H0J105A051	CL10X105KQ8NNPC
C2053	F1H1H102A219	GRM188B11H102KA01D
C2054	F1H1H102A219	GRM188B11H102KA01D
C2055	F1H1H470A004	CM105CH470J50AT
C2056	F2A1A330B138	GS330M010C110T050P
C2057	F2A1H4R7A213	SM4R7M050B070T050P
C2059	F1H1H470A004	CM105CH470J50AT
C2060	F1H1H101B052	CL10C101JB8NNPC
C2061	F2A1H1R0A213	SM010M050B070T050P
C2062	F1H1A224A061	CL10B224KP8NNNP
C2063	F1H1A225A051	GRM188B31A225KE33D
C2064	F1H1H101B052	CL10C101JB8NNPC
C2066	F2A1H1R0A213	SM010M050B070T050P
C2067	F1H0J105A051	CL10X105KQ8NNPC
C2068	F1H0J105A051	CL10X105KQ8NNPC
C2069	F2A1A330B138	GS330M010C110T050P
C2070	F1H1A474A107	CL10B474KP8NNPC
C2071	F1H1A474A107	CL10B474KP8NNPC
C2072	F1H1H222A219	GRM188B11H222KA01D
C2073	F1H1H222A219	GRM188B11H222KA01D
C2074	F1H1H104B047	CL10B104KB8NNPC
C2075	F1H1H104B047	CL10B104KB8NNPC

C2076	F1H1H104B047	CL10B104KB8NNPC
C2077	F1H1H104B047	CL10B104KB8NNPC
C2078	F1H1H473A783	C1608JB1H473KT
C2079	F1H1H473A783	C1608JB1H473KT
C2080	F1H1A334A028	C1608JB1A334KT000N
C2081	F1H1A334A028	C1608JB1A334KT000N
C2082	F1H1H332A013	CM105W5R332K50AT
C2083	F1H1H223A219	GRM188B11H223KA01D
C2084	F1H1C823A001	CM105W5R823K16AT
C2085	F2A1H3R3A213	SM3R3M050B070T050P
C2086	F2A1H3R3A213	SM3R3M050B070T050P
C2087	F1H0J4750004	GRM188B30J475KE18D
C2088	F1H1C823A001	CM105W5R823K16AT
C2089	F2A1H3R3A213	SM3R3M050B070T050P
C2090	F2A1H1R0A213	SM010M050B070T050P
C2092	F1H1C683A087	GRM188B11C683KA01D.....
C2093	F2A1C102A019	RE3-16V102MG-T2
C2094	F1H1C104A042	GRM188B11C104KA01D...
C2095	F1H1C104A042	GRM188B11C104KA01D...
C2096	F1H1H152A219	GRM188B11H152KA01D
C2099	F1H1H103A219	GRM188B11H103KA01D
C2102	F1H1C104A042	GRM188B11C104KA01D...
C2107	D0GBR00J0004	RM06JTN0
C2108	D0GBR00J0004	RM06JTN0
C2109	F2A1H1R0A213	SM010M050B070T050P
C2110	F2A1E2210093	SK221M025F070T050P
C2111	F1H1H103A219	GRM188B11H103KA01D
C2112	F1H1H470A004	CM105CH470J50AT
C2113	F1H1H101B052	CL10C101JB8NNPC
C2114	F2A1C221B456	GS221M016E110T050P
C2115	F1J1A106A043	GRM21BB31A106KE18L
C2116	F1J1A106A043	GRM21BB31A106KE18L
C2117	F1J1A106A043	GRM21BB31A106KE18L
C2118	F1H1A105A025	LMK107BJ105KA-T
C2119	F2A0J221B034	GS221M6R3C110T050P
C2121	F1H1H680A230	GRM1882C1H680JD01D
C2122	F1J1A106A043	GRM21BB31A106KE18L
C2123	F1H1H180A230	GRM1882C1H180JD01D
C2124	F1J1A106A043	GRM21BB31A106KE18L
C2125	F1H0J105A051	CL10X105KQ8NNPC
C2126	F1H1H680A230	GRM1882C1H680JD01D
C2127	F1H1H101B052	CL10C101JB8NNPC
C2128	F1H1H562A219	GRM188B11H562KA01D
C2129	F1H1H180A230	GRM1882C1H180JD01D
C2130	F1J1H104A459	UMK212BJ104KG-T
C2131	F1H1H103A219	GRM188B11H103KA01D
C2132	F2A1A330B138	GS330M010C110T050P
C2133	F1H1H101B052	CL10C101JB8NNPC
C2134	F1H0J4750004	GRM188B30J475KE18D
C2135	F1H0J4750004	GRM188B30J475KE18D
C2136	F1H0J105A051	CL10X105KQ8NNPC
C2137	F1H1C104A042	GRM188B11C104KA01D...
C2139	F2A0J221B034	GS221M6R3C110T050P
C2141	F1H1C104A042	GRM188B11C104KA01D...
C2143	F1H1C104A042	GRM188B11C104KA01D...
C2144	F1H0J105A051	CL10X105KQ8NNPC
C2148	F1H1H223A219	GRM188B11H223KA01D
C2150	F2A1H3R3A213	SM3R3M050B070T050P
C2153	F1J1A106A043	GRM21BB31A106KE18L
C2163	F1H1H331A013	CM105W5R331K50AT
C2165	F1H1C683A087	GRM188B11C683KA01D.....
C2166	F1H1C683A087	GRM188B11C683KA01D.....
C2167	F1H1A474A107	CL10B474KP8NNPC
C2168	F1H1A184A107	CL10B184KP8NNPC
C2169	F1H1A184A107	CL10B184KP8NNPC
C2171	F2A1C102A019	RE3-16V102MG-T2
C2173	F2A0J2220055	RW222M6R3G200T050P
C2179	F1J1A106A043	GRM21BB31A106KE18L
C2180	F1J1A106A043	GRM21BB31A106KE18L
C2181	F1H1A474A025	LMK107BJ474KA-T
C2182	F1H1A474A025	LMK107BJ474KA-T
C2183	F1H1H682A219	GRM188B11H682KA01D
C2184	F1H1H682A219	GRM188B11H682KA01D
C2185	F1J1A106A043	GRM21BB31A106KE18L
C2186	F1J1A106A043	GRM21BB31A106KE18L

C2187	F1H1H103A219	GRM188B11H103KA01D
C2188	F2A1A330B138	GS330M010C110T050P
C2189	F1H1C104A042	GRM188B11C104KA01D...
C2190	F2A1C221B456	GS221M016E110T050P
C2191	F1H1H103A219	GRM188B11H103KA01D
C2192	F1H0J105A051	CL10X105KQ8NNPC
C2193	F1H0J105A051	CL10X105KQ8NNPC
C2194	F1H1H103A219	GRM188B11H103KA01D
C2196	F2A0J101A181	UVR0J101MDA1TA
C2198	F2A1C102A019	RE3-16V102MG-T2
C2199	F1H1A225A051	GRM188B31A225KE33D
C2200	F2A1E2210093	SK221M025F070T050P
C2201	F1H1H103A219	GRM188B11H103KA01D
C2202	D0GBR00J0004	RM06JTN0
C2204	F1H1C823A001	CM105W5R823K16AT
C2205	F1H1C823A001	CM105W5R823K16AT
C2212	D0GBR00J0004	RM06JTN0
C2213	D0GBR00J0004	RM06JTN0
C2226	F2AOJ821B044	KF821M6R3G125T050P
C2234	F2A1E102B396	GS102M025G200T050P
C2238	F1H0J2250008	GRM188B30J225KE18D
C2239	F1H1C104A042	GRM188B11C104KA01D...
C2241	F1H1C104A042	GRM188B11C104KA01D...
C2242	F1J1E1040003	GRM219F11E104ZA01D
C2243	F1H1C104A042	GRM188B11C104KA01D...
C2244	F1H0J105A051	CL10X105KQ8NNPC
C2245	F1H0J105A051	CL10X105KQ8NNPC
C2246	F1H1C104A042	GRM188B11C104KA01D...
C2247	F1H1C104A042	GRM188B11C104KA01D...
C2248	F1H0J105A051	CL10X105KQ8NNPC
C2249	F2A1A330B138	GS330M010C110T050P
C2251	F1J1A106A043	GRM21BB31A106KE18L
C2252	F2A0J101A181	UVR0J101MDA1TA
C2253	F2A0J221B034	GS221M6R3C110T050P
C2254	F1H0J105A051	CL10X105KQ8NNPC
C2255	F1H0J105A051	CL10X105KQ8NNPC
C2256	F2A0J221B034	GS221M6R3C110T050P
C2257	F1H1H103A219	GRM188B11H103KA01D
C2258	F1H1H103A219	GRM188B11H103KA01D
C2277	F1J1A106A043	GRM21BB31A106KE18L
C2278	F1H1H103A219	GRM188B11H103KA01D
C2279	F1H1A184A107	CL10B184KP8NNPC
C2280	F1H1C683A087	GRM188B11C683KA01D.....
C2281	F1H1A184A107	CL10B184KP8NNPC
C2282	F1H1C683A087	GRM188B11C683KA01D.....
CN2001	K1KA02BA0061	S2B-PH-K-S(LF)(SN)
CN2003	K1MY27AA0124	52806-2760
CN2004	K1MY17AA0124	52806-1760
CN2005	K1KA02AA0186	B2B-XH-A(LF)(SN)
CN2006	K1KA02AA0186	B2B-XH-A(LF)(SN)
CN2007	K1YZ15000001	51048-1510
CN2008	K1KA02BA0061	S2B-PH-K-S(LF)(SN)
CN2009	K1MY30AA0124	52806-3060
CN2700	K1KA05AA0193	B5B-PH-K-S(LF)(SN)
D2000	B0JCPD000025	SM330A-T
D2001	DA2J10100L	DA2J10100L
D2002	DZ2J033M0L	DZ2J033M0L
D2003	DZ2J033M0L	DZ2J033M0L
D2004	B0BC3R700004	UDZSTE-173.6B
D2006	DA2J10100L	DA2J10100L
D2007	B0BC3R700004	UDZSTE-173.6B
D2008	DA2J10100L	DA2J10100L
D2009	DA2J10100L	DA2J10100L
D2010	B0ADCC000002	DA204KT146
D2012	DA2J10100L	DA2J10100L
D2014	B0ADDJ000032	L1SS181LT1G
D2015	B0ACCK000005	1SS355TE-17
D2017	B0BC5R6A0266	PZU5.6B2,115
D2018	B0EAKM000117	1N4003S-N02
D2020	B0EAKM000117	1N4003S-N02
D2022	B0EAKM000117	1N4003S-N02
D2028	DA2J10100L	DA2J10100L
D2032	DA2J10100L	DA2J10100L
D2300	DA2J10100L	DA2J10100L
DZ2000	B0JCPD000025	SM330A-T

IC52	C1AB00003566	SI4730-D60-GMR
IC2000	C1AB00003256	NJW1201AFH2
IC2001	COABBB000067	BA4558F-E2
IC2002	COABBB000067	BA4558F-E2
IC2003	MN101EF16KXW	MICROPROCESADOR sin programar (genérico)
IC2003	RFKWMAX500M0	MICROPROCESADOR para uso de centros de servicio
IC2004	COABBB000067	BA4558F-E2
IC2005	COAABB000125	NJM4565D
IC2006	C3EBEY000037	CAT24C04WI-GT3JN
IC2008	CODBZY000311	BD2224G-TR
IC2010	CODAAYG00001	BD9873CP-V5E2
IC2011	CODAAYG00001	BD9873CP-V5E2
IC2012	COABBB000067	BA4558F-E2
IC2014	CODBEYY00123	BD00HC0WEFJ-HVE2
JK51	K4ZZ02000103	MSP-301V1-NI-RF(P8)
JK52	K4AC02B00042	MPT-604V-02-PBT-RF(P8)
JK2001	K2HA2YYA0009	MSP-482V1-01-NI-FE-RF-ABS
L51	G1CR18JA0020	MLF1608DR18JT000
L52	G2A380Y00002	OFK5903287
L54	D0GBR00J0004	RM06JTN0
L2000	G0A330ZA0045	AB7503CY-330M
L2001	G0A330ZA0045	AB7503CY-330M
L2004	G1C100KA0101	CBC2518T100K
LB51	J0JBC0000032	BK1608HS102-T
LB2000	D0GBR00J0004	RM06JTN0
LB2001	D0GBR00J0004	RM06JTN0
LB2002	D0GBR00J0004	RM06JTN0
LB2003	D0GBR00J0004	RM06JTN0
LB2004	D0GBR00J0004	RM06JTN0
LB2005	D0GBR00J0004	RM06JTN0
LB2006	J0JBC0000019	BK1608LM252-T
LB2007	D0GBR00J0004	RM06JTN0
Q2000	B1ADCE000012	KTA1504SGR-RTK/P
Q2001	B1ABCF000231	2PD601ART,215
Q2002	B1ABCF000231	2PD601ART,215
Q2003	B1ABCF000231	2PD601ART,215
Q2004	B1GDCFJJ0047	KRA102S-RTK/P
Q2005	B1GDCFJJ0047	KRA102S-RTK/P
Q2006	B1GDCFJJ0047	KRA102S-RTK/P
Q2007	B1ABCF000176	KTC3875SGR-RTK/P
Q2008	B1ABCF000176	KTC3875SGR-RTK/P
Q2009	B1ABCF000176	KTC3875SGR-RTK/P
Q2010	B1ABCF000176	KTC3875SGR-RTK/P
Q2011	B1GBCFL0037	KRC103SR TK/P
Q2016	B1ADCE000012	KTA1504SGR-RTK/P
Q2017	B1GBCFJJ0051	KRC102SR TK/P
Q2018	B1GBCFJJ0051	KRC102SR TK/P
Q2019	B1ADCE000012	KTA1504SGR-RTK/P
Q2020	B1AAJC000019	KTC3203-Y-AT/P
Q2021	B1ABCF000231	2PD601ART,215
Q2022	B1AAJC000019	KTC3203-Y-AT/P
Q2023	B1ADCE000012	KTA1504SGR-RTK/P
Q2024	B1ABCF000231	2PD601ART,215
Q2025	B1ABCF000231	2PD601ART,215
Q2026	B1ADCE000012	KTA1504SGR-RTK/P
Q2027	B1ADCE000012	KTA1504SGR-RTK/P
Q2028	B1ABCF000176	KTC3875SGR-RTK/P
Q2029	B1ABCF000176	KTC3875SGR-RTK/P
Q2030	B1ABCF000176	KTC3875SGR-RTK/P
Q2031	B1ABCF000231	2PD601ART,215
Q2032	B1ABCF000176	KTC3875SGR-RTK/P
Q2033	B1AAJC000019	KTC3203-Y-AT/P
Q2035	B1BABG000007	KTD863-Y-AT/P
Q2037	B1ABCF000176	KTC3875SGR-RTK/P
Q2038	B1ABCF000176	KTC3875SGR-RTK/P
Q2039	B1ADCE000012	KTA1504SGR-RTK/P
Q2040	B1ABCF000176	KTC3875SGR-RTK/P
Q2041	B1ABCF000176	KTC3875SGR-RTK/P
Q2042	B1ABCF000176	KTC3875SGR-RTK/P
Q2050	B1ADCE000012	KTA1504SGR-RTK/P
QR2000	B1GBCFJJ0051	KRC102SR TK/P
QR2001	B1GBCFJJ0051	KRC102SR TK/P
QR2003	B1GBCFJJ0051	KRC102SR TK/P
QR2004	B1GBCFGN0016	KRC406-RTK/P
QR2005	B1GBCFJJ0051	KRC102SR TK/P
QR2006	B1GBCFJJ0051	KRC102SR TK/P

R51	ERJ3GEYJ102V	ERJ3GEYJ102V
R52	ERJ3GEYJ102V	ERJ3GEYJ102V
R53	ERJ2GEJ472X	ERJ2GEJ472X
R54	ERJ2GEJ472X	ERJ2GEJ472X
R55	ERJ2GEJ221X	ERJ2GEJ221X
R56	ERJ3GEYJ221V	ERJ3GEYJ221V
R57	ERJ2GEJ102X	ERJ2GEJ102X
R59	ERJ3GEYJ222V	ERJ3GEYJ222V
R61	ERJ3GEYJ473V	ERJ3GEYJ473V
R62	ERJ3GEYJ473V	ERJ3GEYJ473V
R64	D0GBR00J0004	RM06JTN0
R2001	D0GB123JA065	RM06JTN123
R2002	D0GB123JA065	RM06JTN123
R2003	ERJ3GEYJ392V	ERJ3GEYJ392V
R2004	ERJ3GEYJ392V	ERJ3GEYJ392V
R2005	ERJ3GEYJ103V	ERJ3GEYJ103V
R2006	ERJ3GEYJ103V	ERJ3GEYJ103V
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R2011	ERJ3GEY0R00V	ERJ3GEY0R00V
R2012	ERJ3GEYJ681V	ERJ3GEYJ681V
R2013	ERJ3GEY0R00V	ERJ3GEY0R00V
R2014	ERJ3GEYJ103V	ERJ3GEYJ103V
R2015	ERJ3GEYJ681V	ERJ3GEYJ681V
R2016	ERJ3GEYJ473V	ERJ3GEYJ473V
R2017	D0GB332JA065	RM06JTN332
R2018	ERJ3GEYJ332V	ERJ3GEYJ332V
R2019	ERJ3GEYJ683V	ERJ3GEYJ683V
R2020	ERJ3GEY0R00V	ERJ3GEY0R00V
R2021	ERJ3GEY0R00V	ERJ3GEY0R00V
R2024	D0GB392JA065	RM06JTN392
R2025	D0GB392JA065	RM06JTN392
R2026	ERJ3GEYJ473V	ERJ3GEYJ473V
R2027	ERJ3GEY0R00V	ERJ3GEY0R00V
R2028	ERJ3GEYJ2R2V	ERJ3GEYJ2R2V
R2029	D0GB473JA065	RM06JTN473
R2030	D0GB473JA065	RM06JTN473
R2031	D0GB473JA065	RM06JTN473
R2032	D0GB473JA065	RM06JTN473
R2033	D0GB334JA065	RM06JTN334
R2035	ERJ3GEYJ271V	ERJ3GEYJ271V
R2036	D0GB823JA065	RM06JTN823
R2037	D0GB101JA065	RM06JTN101
R2039	D0GB223JA065	RM06JTN223
R2040	D0GB473JA065	RM06JTN473
R2041	D0GB683JA065	RM06JTN683
R2042	D0GB102JA065	RM06JTN102
R2043	D0GB223JA065	RM06JTN223
R2044	D0GB223JA065	RM06JTN223
R2045	D0GB223JA065	RM06JTN223
R2046	ERJ3GEYJ104V	ERJ3GEYJ104V
R2048	D0AF330JA039	RDF50SJR330
R2049	D0GB681JA065	RM06JTN681
R2050	D0GB223JA065	RM06JTN223
R2051	ERJ3GEYJ102V	ERJ3GEYJ102V
R2052	ERJ3GEYJ102V	ERJ3GEYJ102V
R2053	D0GB223JA065	RM06JTN223
R2054	ERJ3GEY0R00V	ERJ3GEY0R00V
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R2057	D0GB681JA065	RM06JTN681
R2058	D0GB102JA065	RM06JTN102
R2059	D0GB102JA065	RM06JTN102
R2060	D0GB682JA065	RM06JTN682
R2061	D0GB682JA065	RM06JTN682
R2062	D0GB154JA065	RM06JTN154
R2063	D0GB153JA065	RM06JTN153
R2064	D0GB153JA065	RM06JTN153
R2065	ERJ3GEYJ473V	ERJ3GEYJ473V
R2066	ERJ3GEYJ473V	ERJ3GEYJ473V
R2067	ERJ3GEYJ473V	ERJ3GEYJ473V
R2068	ERJ3GEY0R00V	ERJ3GEY0R00V
R2069	ERJ3GEYJ102V	ERJ3GEYJ102V
R2070	ERJ3GEYJ473V	ERJ3GEYJ473V
R2071	D0GB123JA065	RM06JTN123

R2072	ERJ3GEY0R00V	ERJ3GEY0R00V
R2073	ERJ3GEYJ104V	ERJ3GEYJ104V
R2074	ERJ3GEYJ473V	ERJ3GEYJ473V
R2075	ERJ3GEYJ473V	ERJ3GEYJ473V
R2076	ERJ3GEYJ102V	ERJ3GEYJ102V
R2077	ERJ3GEYJ102V	ERJ3GEYJ102V
R2078	ERJ3GEYJ563V	ERJ3GEYJ563V
R2079	D0AF330JA039	RDF50SJR330
R2082	ERJ3GEYJ104V	ERJ3GEYJ104V
R2083	ERJ3GEYJ473V	ERJ3GEYJ473V
R2084	D0GB103JA065	RM06JTN103
R2085	D0GB332JA065	RM06JTN332
R2087	ERJ3GEY0R00V	ERJ3GEY0R00V
R2089	D0GB103JA065	RM06JTN103
R2093	ERJ3GEYJ392V	ERJ3GEYJ392V
R2094	ERJ3GEYJ392V	ERJ3GEYJ392V
R2095	ERJ3GEYJ473V	ERJ3GEYJ473V
R2096	ERJ3GEYJ473V	ERJ3GEYJ473V
R2098	ERJ3GEYJ472V	ERJ3GEYJ472V
R2099	ERJ3GEYJ103V	ERJ3GEYJ103V
R2101	D0GB101JA065	RM06JTN101
R2102	ERJ3GEYJ472V	ERJ3GEYJ472V
R2103	ERJ3GEYJ681V	ERJ3GEYJ681V
R2105	ERJ3GEYJ104V	ERJ3GEYJ104V
R2107	D0AF220JA039	RDF50SJR220
R2108	ERJ3GEYJ473V	ERJ3GEYJ473V
R2110	D0GB106JA065	RM06JTN106
R2111	D0GB473JA065	RM06JTN473
R2112	ERJ3GEYJ103V	ERJ3GEYJ103V
R2113	ERJ3GEYJ103V	ERJ3GEYJ103V
R2114	ERJ3GEYJ473V	ERJ3GEYJ473V
R2115	ERJ3GEYJ473V	ERJ3GEYJ473V
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R2118	ERJ3GEYJ473V	ERJ3GEYJ473V
R2119	D0GB123JA065	RM06JTN123
R2120	ERJ3GEYJ473V	ERJ3GEYJ473V
R2121	ERJ3GEYJ475V	ERJ3GEYJ475V
R2123	ERJ3GEYJ564V	ERJ3GEYJ564V
R2124	D0GB823JA065	RM06JTN823
R2125	D0GB102JA065	RM06JTN102
R2126	ERJ3GEYJ473V	ERJ3GEYJ473V
R2127	ERJ3GEY0R00V	ERJ3GEY0R00V
R2128	D0GBR00J0004	RM06JTN0
R2129	D0GBR00J0004	RM06JTN0
R2130	ERJ3GEYJ102V	ERJ3GEYJ102V
R2131	D0GB102JA065	RM06JTN102
R2132	D0GB102JA065	RM06JTN102
R2133	D0GBR00J0004	RM06JTN0
R2134	D0GBR00J0004	RM06JTN0
R2135	D0GB392JA065	RM06JTN392
R2136	ERJ3GEY0R00V	ERJ3GEY0R00V
R2137	D0GB472JA065	RM06JTN472
R2138	D0GB472JA065	RM06JTN472
R2140	ERJ3GEY0R00V	ERJ3GEY0R00V
R2142	D0GBR00J0004	RM06JTN0
R2145	D0GB153JA065	RM06JTN153
R2146	D0GB104JA065	RM06JTN104
R2147	D0GB153JA065	RM06JTN153
R2148	D0GB102JA065	RM06JTN102
R2149	D0GB471JA065	RM06JTN471
R2150	D0GB104JA065	RM06JTN104
R2151	D0GB183JA065	RM06JTN183
R2152	ERJ3GEYJ153V	ERJ3GEYJ153V
R2153	ERJ3GEYJ104V	ERJ3GEYJ104V
R2154	ERJ3GEYJ153V	ERJ3GEYJ153V
R2155	D0GB273JA065	RM06JTN273
R2156	ERJ3GEYJ105V	ERJ3GEYJ105V
R2157	D0GBR00J0004	RM06JTN0
R2159	D0GBR00J0004	RM06JTN0
R2160	D0GBR00J0004	RM06JTN0
R2161	D0GB273JA065	RM06JTN273
R2162	ERJ3GEY0R00V	ERJ3GEY0R00V
R2163	ERJ3GEY0R00V	ERJ3GEY0R00V
R2165	ERJ3GEYJ102V	ERJ3GEYJ102V
R2166	D0GBR00J0004	RM06JTN0

R2167	D0GB222JA065	RM06JTN222
R2171	D0GB473JA065	RM06JTN473
R2173	ERJ3GEYJ153V	ERJ3GEYJ153V
R2174	ERJ3GEYJ103V	ERJ3GEYJ103V
R2176	ERJ3RBD152V	ERJ3RBD152V
R2177	ERJ3GEYJ153V	ERJ3GEYJ153V
R2178	ERJ3GEYJ103V	ERJ3GEYJ103V
R2179	D0GB123JA065	RM06JTN123
R2180	D0GB104JA065	RM06JTN104
R2182	ERJ3GEYJ103V	ERJ3GEYJ103V
R2184	D0GB473JA065	RM06JTN473
R2185	ERJ3GEYJ103V	ERJ3GEYJ103V
R2189	ERJ3GEYJ473V	ERJ3GEYJ473V
R2192	ERJ3RBD102V	ERJ3RBD102V
R2193	ERJ3GEY0R00V	ERJ3GEY0R00V
R2196	ERJ3GEYJ102V	ERJ3GEYJ102V
R2198	ERJ3GEYJ102V	ERJ3GEYJ102V
R2205	ERJ3GEYJ472V	ERJ3GEYJ472V
R2206	ERJ3GEYJ472V	ERJ3GEYJ472V
R2218	ERJ3GEY0R00V	ERJ3GEY0R00V
R2224	D0GBR00J0004	RM06JTN0
R2225	D0GBR00J0004	RM06JTN0
R2226	ERJ3GEYJ473V	ERJ3GEYJ473V
R2227	ERJ3GEYJ473V	ERJ3GEYJ473V
R2229	ERJ3GEYJ103V	ERJ3GEYJ103V
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R2244	D0GB682JA065	RM06JTN682
R2245	D0GB682JA065	RM06JTN682
R2246	ERJ3GEYJ101V	ERJ3GEYJ101V
R2247	ERJ3GEY0R00V	ERJ3GEY0R00V
R2248	ERJ3GEYJ153V	ERJ3GEYJ153V
R2250	ERJ3GEYJ183V	ERJ3GEYJ183V
R2251	ERJ3GEYJ123V	ERJ3GEYJ123V
R2254	D0GB105JA065	RM06JTN105
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R2256	D0GB223JA065	RM06JTN223
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R2259	D0GB153JA065	RM06JTN153
R2264	D0GB103JA065	RM06JTN103
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R2273	ERJ3GEYJ2R2V	ERJ3GEYJ2R2V
R2274	ERJ3GEYJ2R2V	ERJ3GEYJ2R2V
R2275	ERJ3GEYJ2R2V	ERJ3GEYJ2R2V
R2276	ERJ3GEYJ271V	ERJ3GEYJ271V
R2278	ERJ3GEYJ101V	ERJ3GEYJ101V
R2279	ERJ3GEY0R00V	ERJ3GEY0R00V
R2281	D0GB682JA065	RM06JTN682
R2290	D0GB272JA065	RM06JTN272
R2291	D0GB272JA065	RM06JTN272
R2292	D0GB562JA065	RM06JTN562
R2293	D0GB562JA065	RM06JTN562
R2294	ERJ3GEYJ682V	ERJ3GEYJ682V
R2295	ERJ3GEYJ682V	ERJ3GEYJ682V
R2296	ERJ3GEY0R00V	ERJ3GEY0R00V
R2305	D0GB103JA065	RM06JTN103
R2308	D0GB103JA065	RM06JTN103
R2310	D0GB224JA065	RM06JTN224
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R2320	D0GB153JA065	RM06JTN153
R2321	D0GB153JA065	RM06JTN153
R2329	ERJ3GEYJ103V	ERJ3GEYJ103V
R2332	ERJ3GEYJ103V	ERJ3GEYJ103V
R2333	ERG2SJ471E	ERG2SJ471E
R2334	ERG2SJ471E	ERG2SJ471E

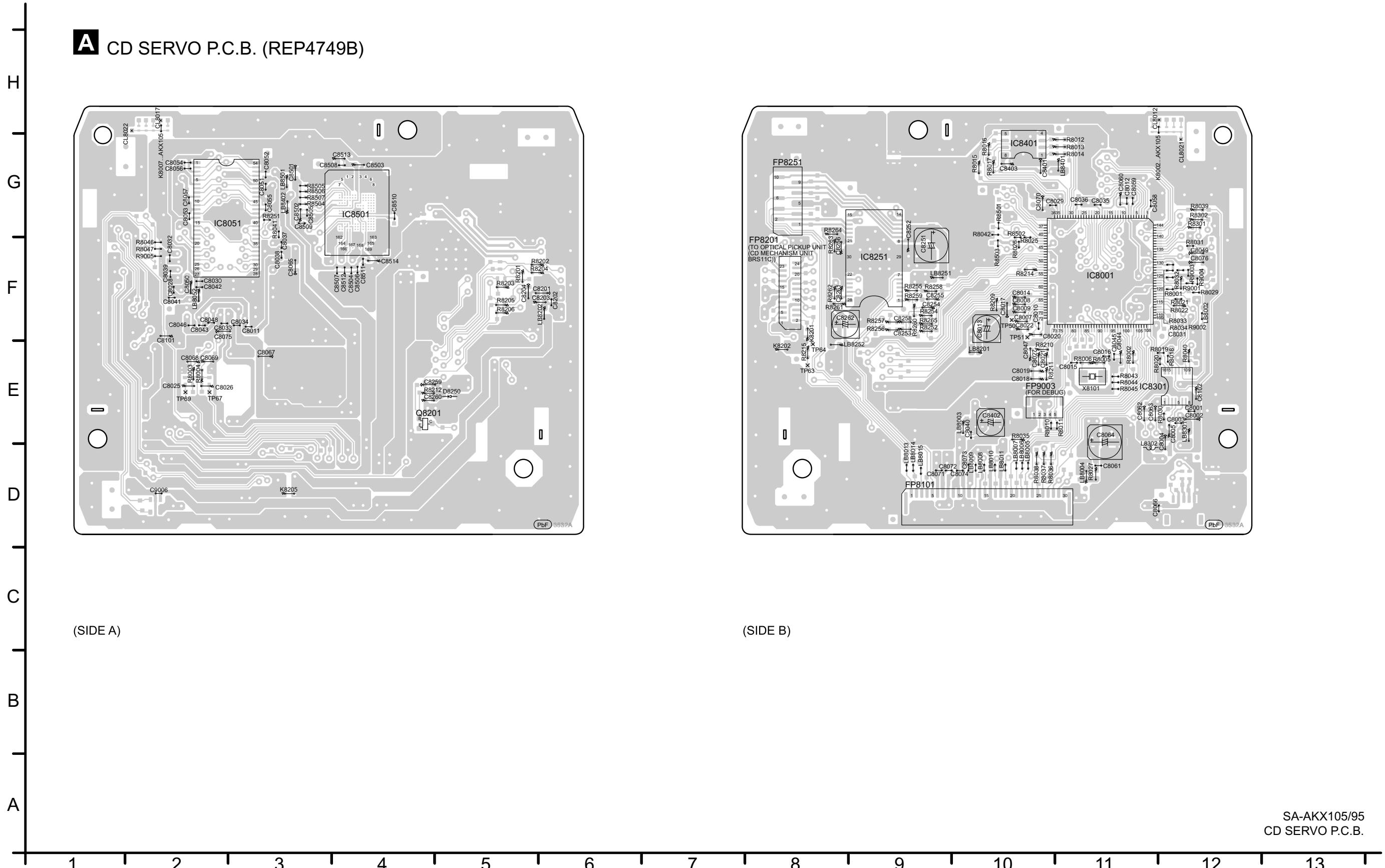
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R2339	ERG2SJ471E	ERG2SJ471E
R2340	ERG2SJ471E	ERG2SJ471E
R2341	ERG2SJ471E	ERG2SJ471E
R2343	ERJ3GEY0R00V	ERJ3GEY0R00V
R2344	ERJ3GEYJ332V	ERJ3GEYJ332V
R2345	ERJ3GEYJ332V	ERJ3GEYJ332V
R2346	D0GB472JA065	RM06JTN472
R2347	D0GB472JA065	RM06JTN472
R2348	D0GB822JA065	RM06JTN822
R2349	ERJ3GEYJ104V	ERJ3GEYJ104V
R2350	D0GB273JA065	RM06JTN273
R2353	D0GBR00J0004	RM06JTN0
R2354	ERJ3GEY0R00V	ERJ3GEY0R00V
R2355	ERJ3GEYJ123V	ERJ3GEYJ123V
R2356	ERJ3GEYJ102V	ERJ3GEYJ102V
R2357	ERJ3GEYJ475V	ERJ3GEYJ475V
R2358	ERJ3GEYJ103V	ERJ3GEYJ103V
R2359	ERJ3GEYJ102V	ERJ3GEYJ102V
R2360	ERJ3GEYJ104V	ERJ3GEYJ104V
R2361	ERJ3GEYJ103V	ERJ3GEYJ103V
R2362	ERJ3GEYJ474V	ERJ3GEYJ474V
R2363	ERJ3GEYJ333V	ERJ3GEYJ333V
R2364	ERJ3GEYJ222V	ERJ3GEYJ222V
R2365	ERJ3GEYJ102V	ERJ3GEYJ102V
R2366	ERJ3GEYJ102V	ERJ3GEYJ102V
R2372	ERJ3GEYJ102V	ERJ3GEYJ102V
R2373	D0GB394JA065	RM06JTN394
R2374	ERJ3GEYJ102V	ERJ3GEYJ102V
R2375	D0GB394JA065	RM06JTN394
R2376	ERJ3GEYJ102V	ERJ3GEYJ102V
R2377	D0GB102JA065	RM06JTN102
R2378	ERJ3GEYJ101V	ERJ3GEYJ101V
R2379	ERJ3GEYJ681V	ERJ3GEYJ681V
R2380	ERJ3GEY0R00V	ERJ3GEY0R00V
R2381	D0GB123JA065	RM06JTN123
R2382	D0AF270JA039	RDF50SJR270
R2383	ERJ3GEYJ823V	ERJ3GEYJ823V
R2384	ERJ3GEYJ274V	ERJ3GEYJ274V
R2385	ERJ3GEYJ474V	ERJ3GEYJ474V
R2386	ERJ3GEYJ473V	ERJ3GEYJ473V
R2387	ERJ3GEYJ682V	ERJ3GEYJ682V
R2388	ERJ3GEYJ221V	ERJ3GEYJ221V
R2389	ERJ3GEYJ104V	ERJ3GEYJ104V
R2390	D0GB823JA065	RM06JTN823
R2392	D0AF270JA039	RDF50SJR270
R2393	D0GB274JA065	RM06JTN274
R2394	D0GB221JA065	RM06JTN221
R2395	D0GB104JA065	RM06JTN104
R2396	D0GB101JA065	RM06JTN101
R2397	D0GB474JA065	RM06JTN474
R2398	ERJ3GEY0R00V	ERJ3GEY0R00V
R2399	ERJ3GEY0R00V	ERJ3GEY0R00V
R2400	ERJ3GEY0R00V	ERJ3GEY0R00V
R2402	ERJ3GEYJ273V	ERJ3GEYJ273V
R2404	ERJ3GEYJ223V	ERJ3GEYJ223V
R2405	ERJ3GEYJ333V	ERJ3GEYJ333V
R2406	ERJ3GEYJ473V	ERJ3GEYJ473V
R2408	ERJ3RBD102V	ERJ3RBD102V
R2409	ERJ3RBD272V	ERJ3RBD272V
R2410	ERJ3GEY0R00V	ERJ3GEY0R00V
R2416	D0GBR00J0004	RM06JTN0
R2421	ERJ3GEYJ153V	ERJ3GEYJ153V
R2422	ERJ3GEY0R00V	ERJ3GEY0R00V
R2424	ERJ3RBD682V	ERJ3RBD682V
R2425	ERJ3GEYJ472V	ERJ3GEYJ472V
R2426	ERJ3GEYJ683V	ERJ3GEYJ683V
R2427	ERJ3GEYJ683V	ERJ3GEYJ683V
R2428	D0GBR00J0004	RM06JTN0
R2429	ERJ3GEYJ105V	ERJ3GEYJ105V
R2431	D0GFR00JA017	RM12JT000
R2432	ERJ3GEY0R00V	ERJ3GEY0R00V

R2433	D0GBR00J0004	RM06JTN0
R2434	D0GB682JA065	RM06JTN682
R2435	D0GB152JA065	RM06JTN152
R2436	D0GB153JA065	RM06JTN153
R2438	D0GB682JA065	RM06JTN682
R2439	D0GB153JA065	RM06JTN153
R2440	D0GB152JA065	RM06JTN152
R2442	ERJ3GEYJ473V	ERJ3GEYJ473V
R2443	ERJ3GEYJ392V	ERJ3GEYJ392V
VA51	EZAEG2A50AX	EZAEG2A50AX
X51	H0A327200181	CFS-20632768EZFB
X2000	H0A327200181	CFS-20632768EZFB
X2001	H2B800400007	CSTLS8M00G56-A0
ZJ2000	K9ZZ00001279	MET37-0005
ZJ2007	REX1552	REX1552
	RPF0595	RPF0595
	RPG0C16	
	RPQ2996	RPQ2996
	RP0142-1	RP0142-1
	RPQ2997	RPQ2997
	RPQ2998	RPQ2998
	Z-TP-G72A1	
	Z-TP-N12	Z-TP-N12

Printed Circuit Board

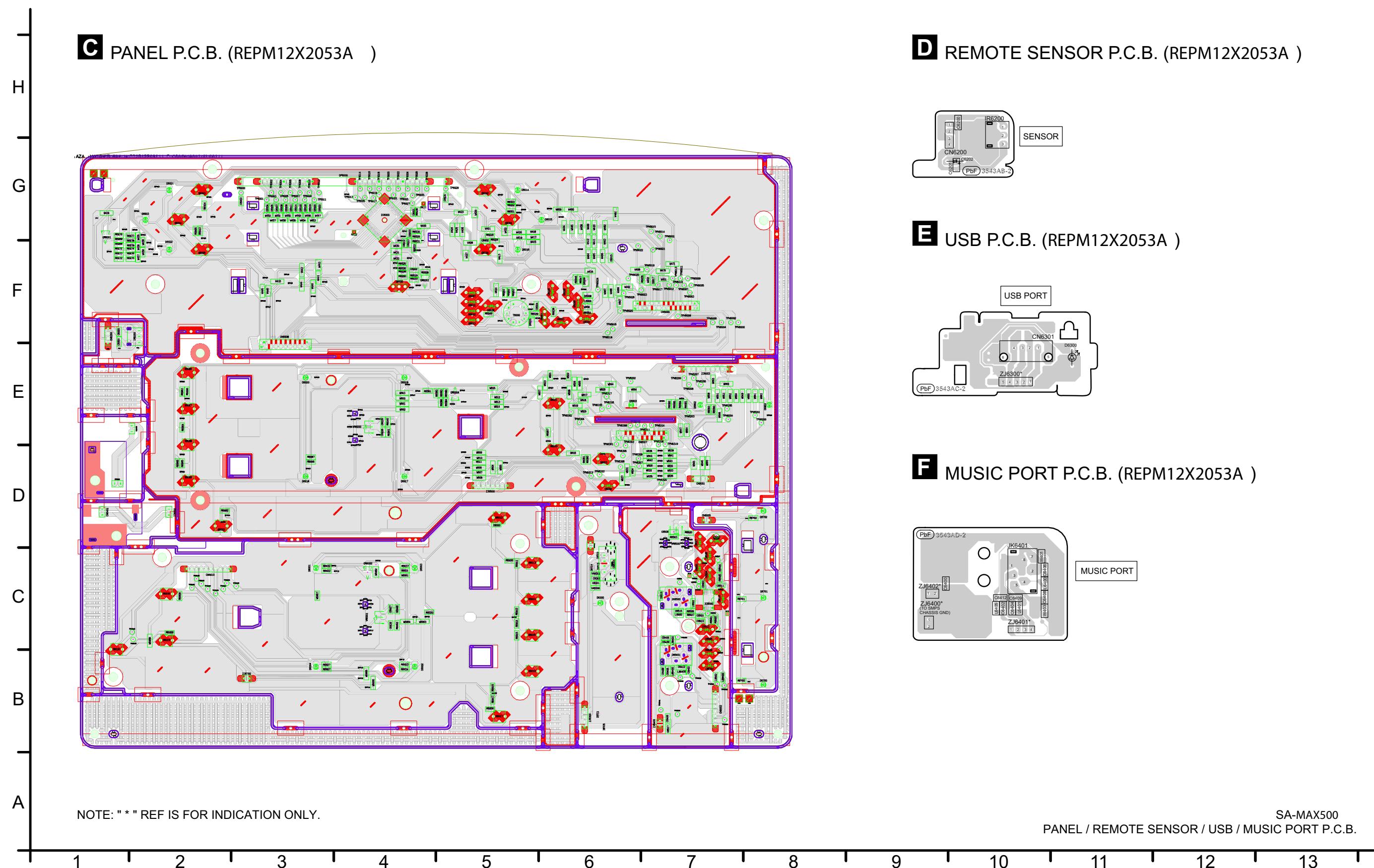
15.1.1 CD Servo P.C.B.

A CD SERVO P.C.B. (REP4749B)



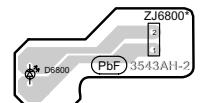
SA-AKX105/95
CD SERVO P.C.B.

Panel, Remote Sensor, USB and Music Port P.C.B.

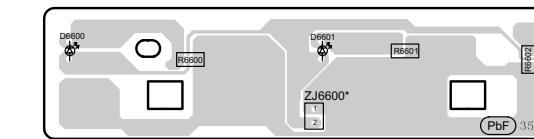


15.2. Memory LED, CD Interface, Top Bar LED, Bottom Bar LED and Mic P.C.B.

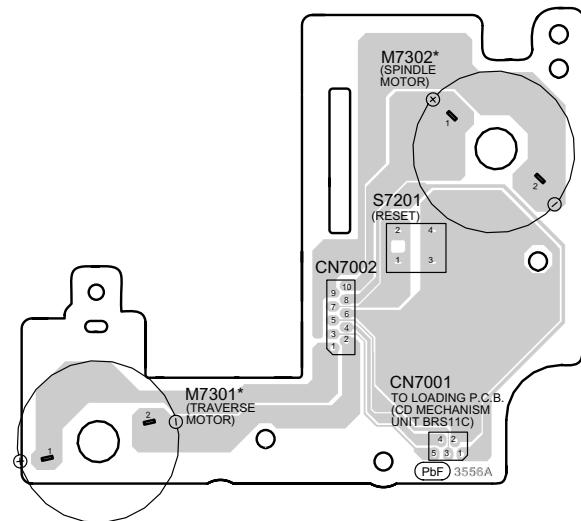
G MEMORY LED P.C.B. (REPM12X2053A)



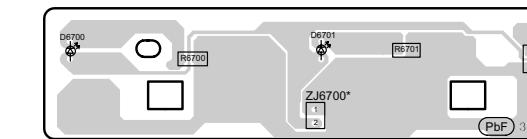
I TOP BAR LED P.C.B. (REPM12X953A)



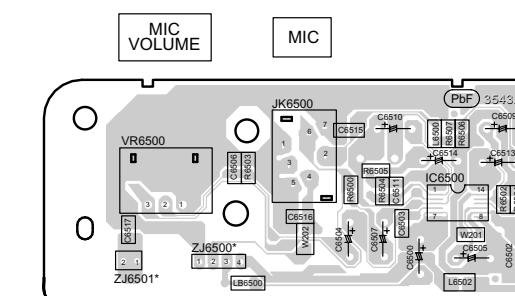
H CD INTERFACE P.C.B. (REPM12X2053A)



J BOTTOM BAR LED P.C.B. (REPM12X2053A)



K MIC P.C.B. (REPM12X2053A)



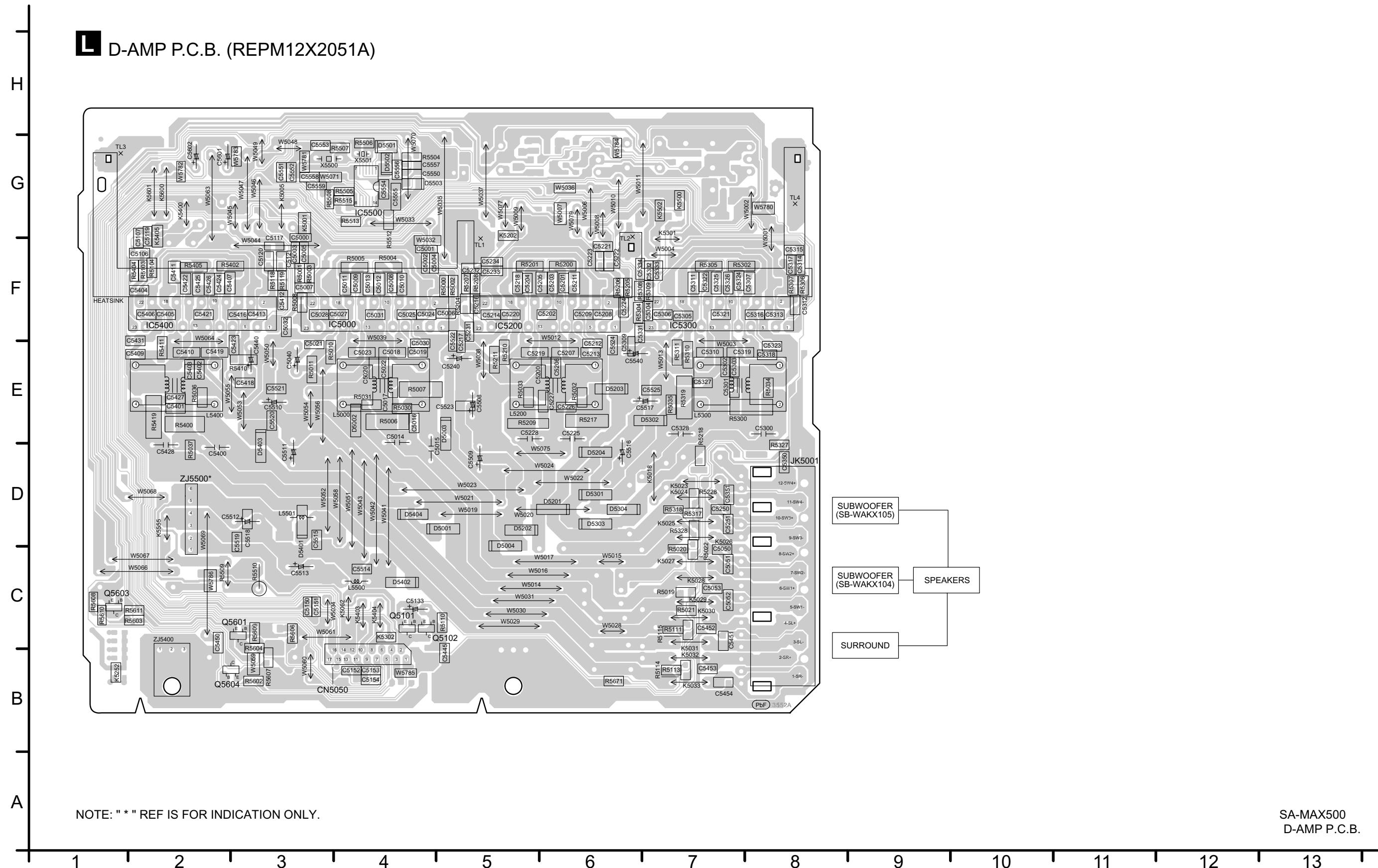
NOTE: "*" REF IS FOR INDICATION ONLY.

SA-MAX500
MEMORY LED / CD INTERFACE / TOP BAR LED / BOTTOM BAR LED / MIC P.C.B.

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

15.3 D-Amp P.C.B.

L D-AMP P.C.B. (REPM12X2051A)

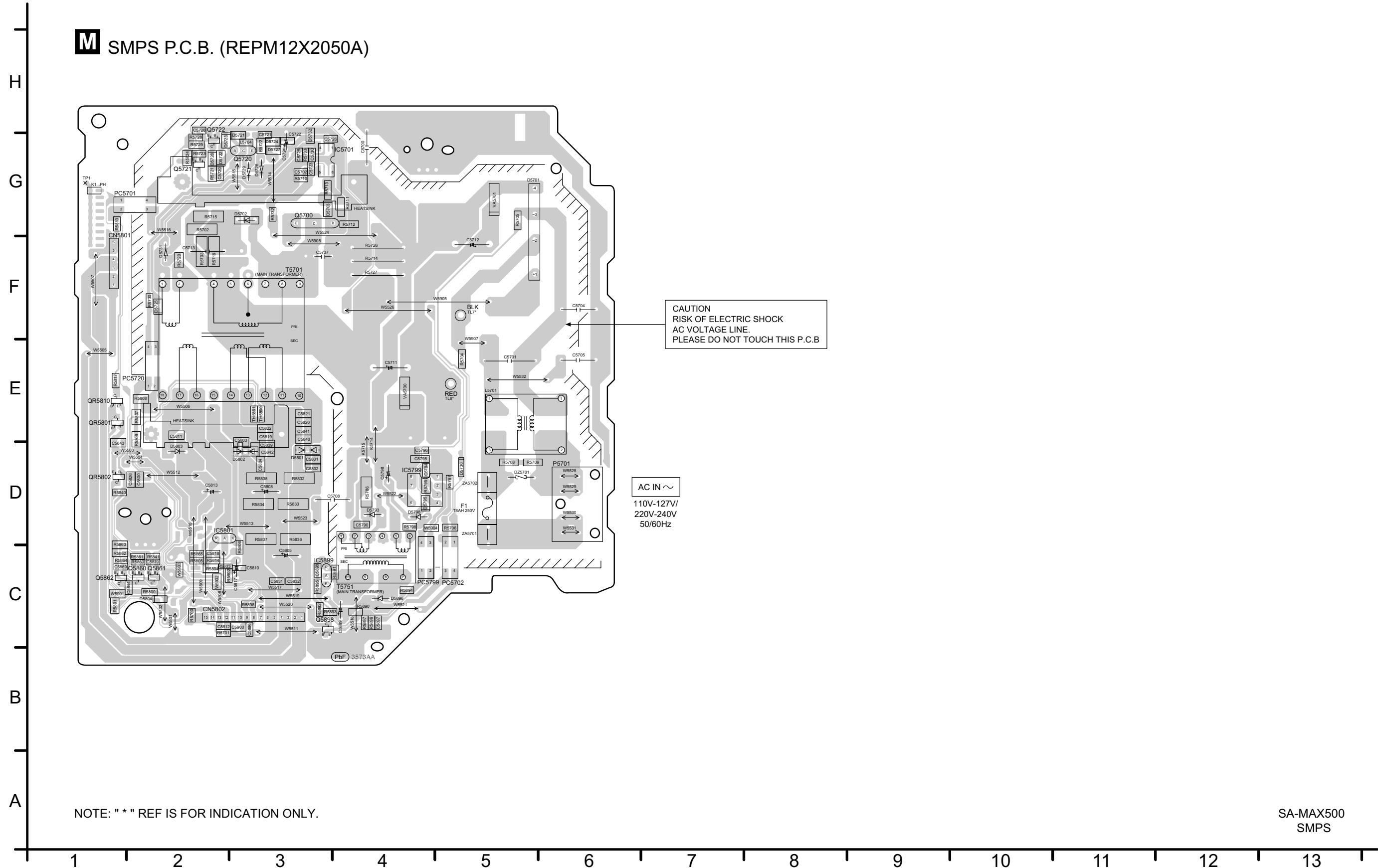


NOTE: * REF IS FOR INDICATION ONLY.

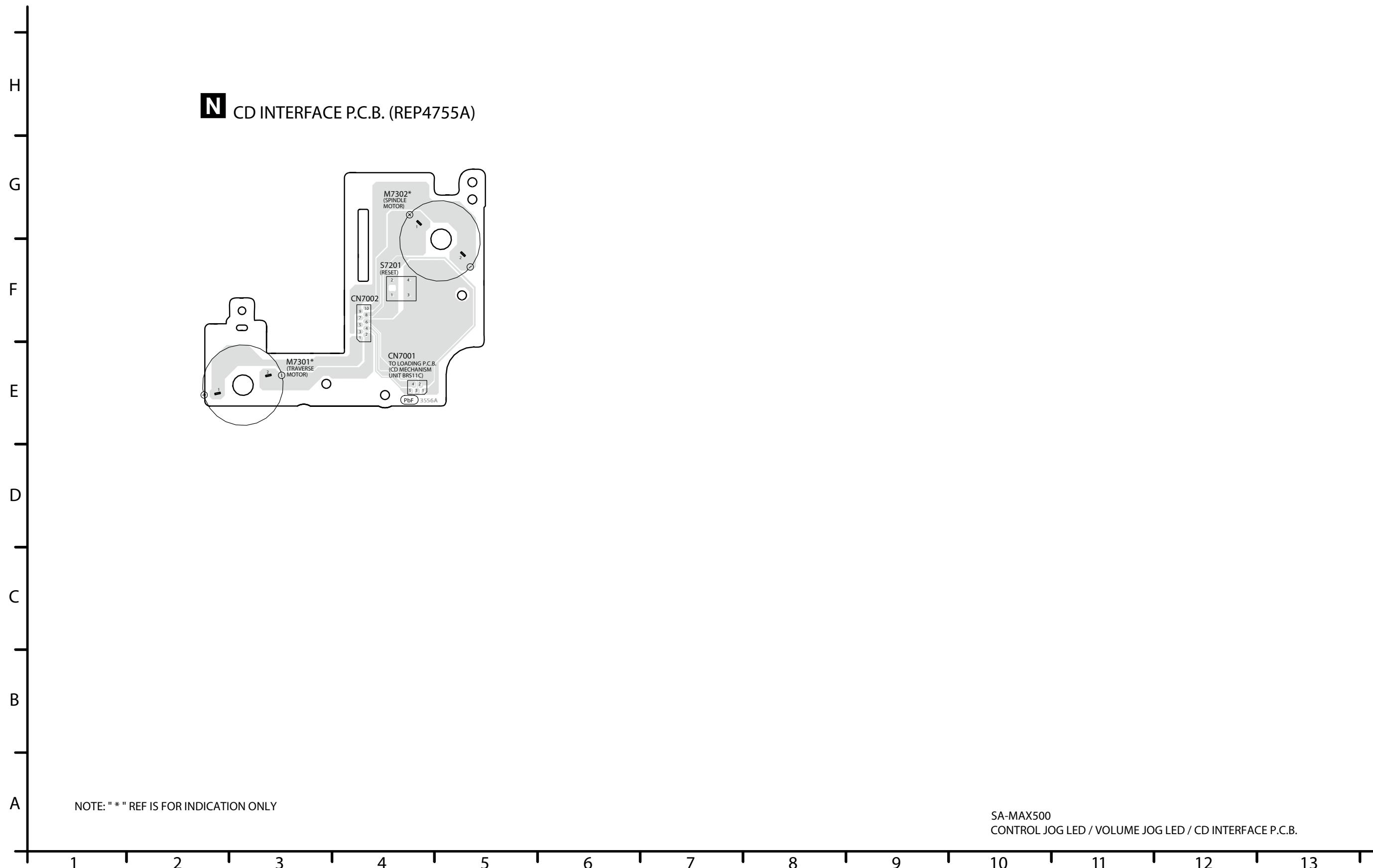
SA-MAX500
D-AMP P.C.B.

15.4. SMPS

M SMPS P.C.B. (REPM12X2050A)



15.5. CD Interface P.C.B.



18.1.6. Main P.C.B. (3/4)

REF NO. MODE	Q2000			Q2001			Q2002			Q2003			Q2004			
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	
CD PLAY	0	1.7	2.3		0	0	0.5		0	0	15.0		0	3.3	0	
STANDBY	0	1.7	2.3		0	0	0.5		0	0	15.0		0	3.3	0	
REF NO. MODE	Q2005			Q2006			Q2007			Q2008			Q2009			
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	
CD PLAY	3.3	2.0	0		0	0	3.3		0	9.0	4.3		0	8.8	0	
STANDBY	3.3	2.0	0		0	0	3.3		0	9.0	4.3		0	8.8	0	
REF NO. MODE	Q2010			Q2011			Q2016			Q2017			Q2020			
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	
CD PLAY	0	8.8	2.0		0	3.3	0		2.3	1.6	1.1		0	3.2	0	
STANDBY	0	8.8	2.0		0	3.3	0		2.3	1.6	1.1		0	3.2	0	
REF NO. MODE	Q2021			Q2023			Q2026			Q2028			Q2029			
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	
CD PLAY	0	15.0	15.0		18.2	0	18.1		0	0	1.9		8.1	17.2	8.5	
STANDBY	0	15.0	15.0		18.2	0	18.1		0	0	1.9		8.1	17.2	8.5	
REF NO. MODE	Q2030			Q2032			Q2035			Q2037			Q2038			
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	
CD PLAY	8.1	7.2	8.5		8.1	17.2	8.5		0	34.1	2.0		0	4.4	3.0	
STANDBY	8.1	7.2	8.5		8.1	17.2	8.5		0	34.1	2.0		0	4.4	3.0	
REF NO. MODE	Q2039			Q2040			Q2041			Q2042			Q2050			
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	
CD PLAY	0.9	0	1.9		0	4.3	4.4		0	4.4	4.3		0	3.3	0	
STANDBY	0.9	0	1.9		0	4.3	4.4		0	4.4	4.3		0	3.3	0	

SA- MAX500 MAIN P.C.B.

18.1.10. SMPS P.C.B.

REF NO.		IC5701														
MODE		1	2	3	4	5	6	7	8							
POWER ON		164.8	0	0	19.1	0	1.4	0.5	0							
STANDBY		164.8	0	0	19.1	0	1.4	0.5	0							
REF NO.		IC5799														
MODE		1	2	3	4	5	6	7	8							
POWER ON		5.9	1.0	2.3	11.0	164.2	0	0	0							
STANDBY		5.9	1.0	2.3	11.0	164.2	0	0	0							
REF NO.		IC5801														
MODE		K	A	R												
POWER ON		2.4	2.0	-30.0												
STANDBY		2.4	2.0	-30.0												
REF NO.		IC5899														
MODE		K	A	R												
POWER ON		1.2	0	0												
STANDBY		1.2	0	0												
REF NO.		Q5700			Q5720			Q5721			Q5722			Q5860		
MODE		E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
POWER ON		0	0.5	0	7.3	8.5	7.6	19.7	19.7	19.0	0	19.6	0	0	35.2	0
STANDBY		0	0.5	0	7.4	8.6	7.7	19.7	19.7	19.0	0	19.6	0	0	35.2	0
REF NO.		Q5861			Q5862			Q5898			QR5801			QR5802		
MODE		E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
POWER ON		1.3	0	0.7	0	0	0.7	0	3.3	0	0	3.1	0	0	3.3	6.6
STANDBY		1.3	0	0.7	0	3.3	0	0	3.3	0	0	3.1	0	0	3.3	6.6
REF NO.		QR5810														
MODE		E	C	B												
POWER ON		0	0	3.1												
STANDBY		0	0	3.1												

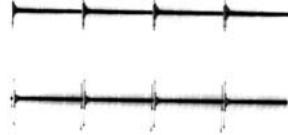
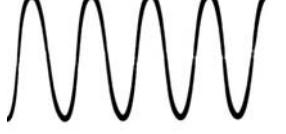
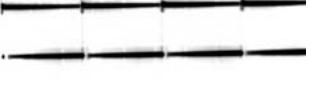
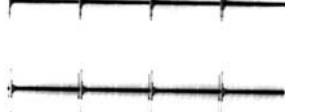
SA-AKX500 SMPS P.C.B.

18.1.11. Mic P.C.B.

REF NO.		IC6500														
MODE		1	2	3	4	5	6	7	8	9	10	11	12	13	14	
POWER ON		4.3	4.3	4.3	4.3	4.3	4.3	4.3	0	0	4.3	0	0	8.6	4.3	
STANDBY		4.3	4.3	4.3	4.3	4.3	4.3	4.3	0	0	4.3	0	0	8.6	4.3	

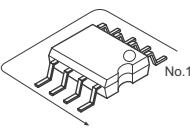
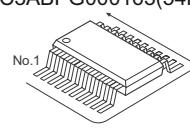
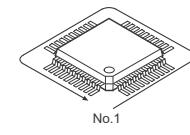
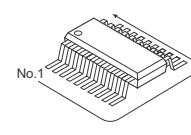
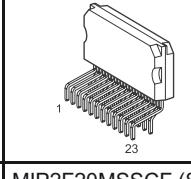
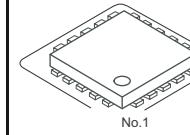
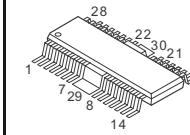
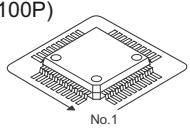
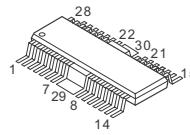
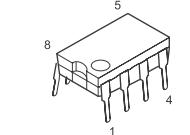
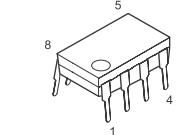
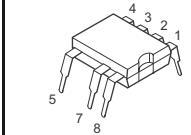
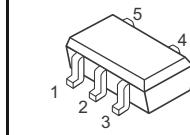
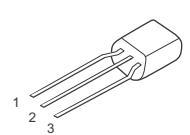
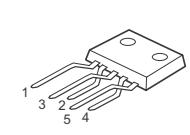
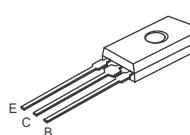
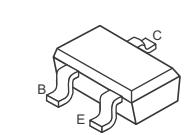
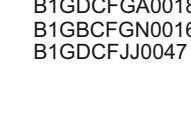
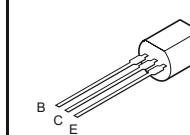
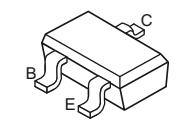
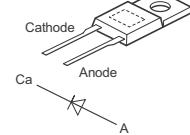
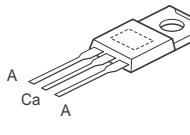
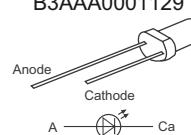
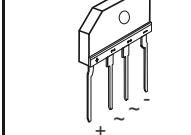
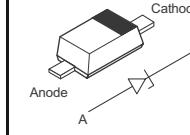
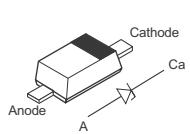
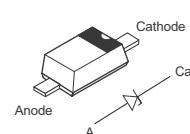
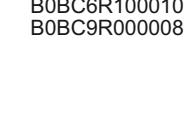
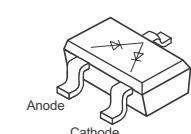
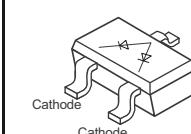
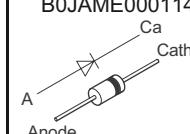
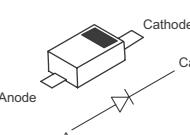
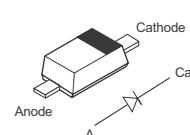
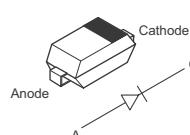
SA-MAX500 MIC P.C.B.

18.1.12. Waveform Table

WF No. IC52-2,13,14 (PLAY)  0.1Vp-p(200usec/div)	WF No. IC2000-2,3,42,50 (PLAY)  0.48Vp-p(1usec/div)	WF No. IC2000-5,6,7 (PLAY)  2Vp-p(200usec/div)	WF No. IC2000-17,22 (PLAY)  0.48Vp-p(1usec/div)
WF No. IC2000-44,47 (PLAY)  1.1Vp-p(50usec/div)	WF No. IC2003-12,13 (PLAY)  4Vp-p(50nsec/div)	WF No. IC2003-15,16 (PLAY)  3Vp-p(10usec/div)	WF No. IC2005-1,2,6,7 (PLAY)  0.52Vp-p(1usec/div)
WF No. IC5700-10,14 (PLAY)  44Vp-p(1usec/div)	WF No. IC5700-2,21 (PLAY)  2Vp-p(1usec/div)	WF No. IC5800-10,14 (PLAY)  44Vp-p(1usec/div)	WF No. IC5800-2,21 (PLAY)  2Vp-p(1usec/div)
WF No. IC8001-55,56,57,58,59,60 (PLAY)  0.5Vp-p(2usec/div)	WF No. IC8001-94,95 (PLAY)  2.5Vp-p(200usec/div)	WF No. IC8001-123,125 (PLAY)  0.4Vp-p(5usec/div)	WF No. IC8301-1,2 (PLAY)  2Vp-p(200usec/div)
WF No. IC8301-9 (PLAY)  0.4Vp-p(1usec/div)			

18.2. Illustration of ICs, Transistor and Diode

*Este material se encuentra sin programar, debe ser programado.

C0ABBB000067 (8P) C0JBAB000902 (14P)	C0FBAK000026(16P) C1AB00003130 (14P) C1ZBZ0004646 (8P) C3ABPG000163(54P)	C0HBB0000057 (44P)	C0DBEYY00123 (8P) C3FBMY000303 (8P)	C1BA00000497 (23P)	C1AB00003566 (20P) C3FBYY000034 (169P)
					
C1AB00003256 (52P) MN6627992AB (144P) *MN101EF16KXW (100P)		C0GBY0000117	C3EBEY000037 (8P)	C0AABB000125 (8P)	MIP2F20MSSCF (8P)
					
C0DAZYY00039 C0DAEYY00040	C0DAAYG00001	B1BAAL000018 B1BABG000007 B1ZAZ0000058	B1ABCF000176 B1ADCE000012	B1ADCF000001 B1GBCFJJ0051 B1GBCFL0037 B1GDCFGA0018 B1GBCFGN0016 B1GDCFJJ0047	B1AAJC000019
					
B1ABCF000231 B1GBCFJN0038	B0HFRJ000012 B0ZAZ0000089	B0ABSM000010	B3AAA0000487 B3AEA0000127 B3AEA0000172 B3AAA0001129	B0FBBV000006	DZ2J033M0L DZ2J24000L DZ2J051M0L
					
B0BC5R1A0266 B0BC5R60003 B0BC5R6A0266	B0BC010A0007 B0BC019A0007	B0BC035A0007 B0BC2R4A0006 B0BC3R70004 B0BC6R100010 B0BC9R00008	B0ADCC000002	B0ADDJ000032	B0EAKM000117 B0EAMM000057 B0HAMP000094 B0JAME000114
					
B0ECET000006	B0ACCK000005 B0ACCK000012 DA2J10100L	B0HCSP000001 B0JCPD000025			
					

18.3. Terminal Function of ICs

18.3.1. IC2003 (*MN101EF16KXW): IC MICRO-PROCESSOR

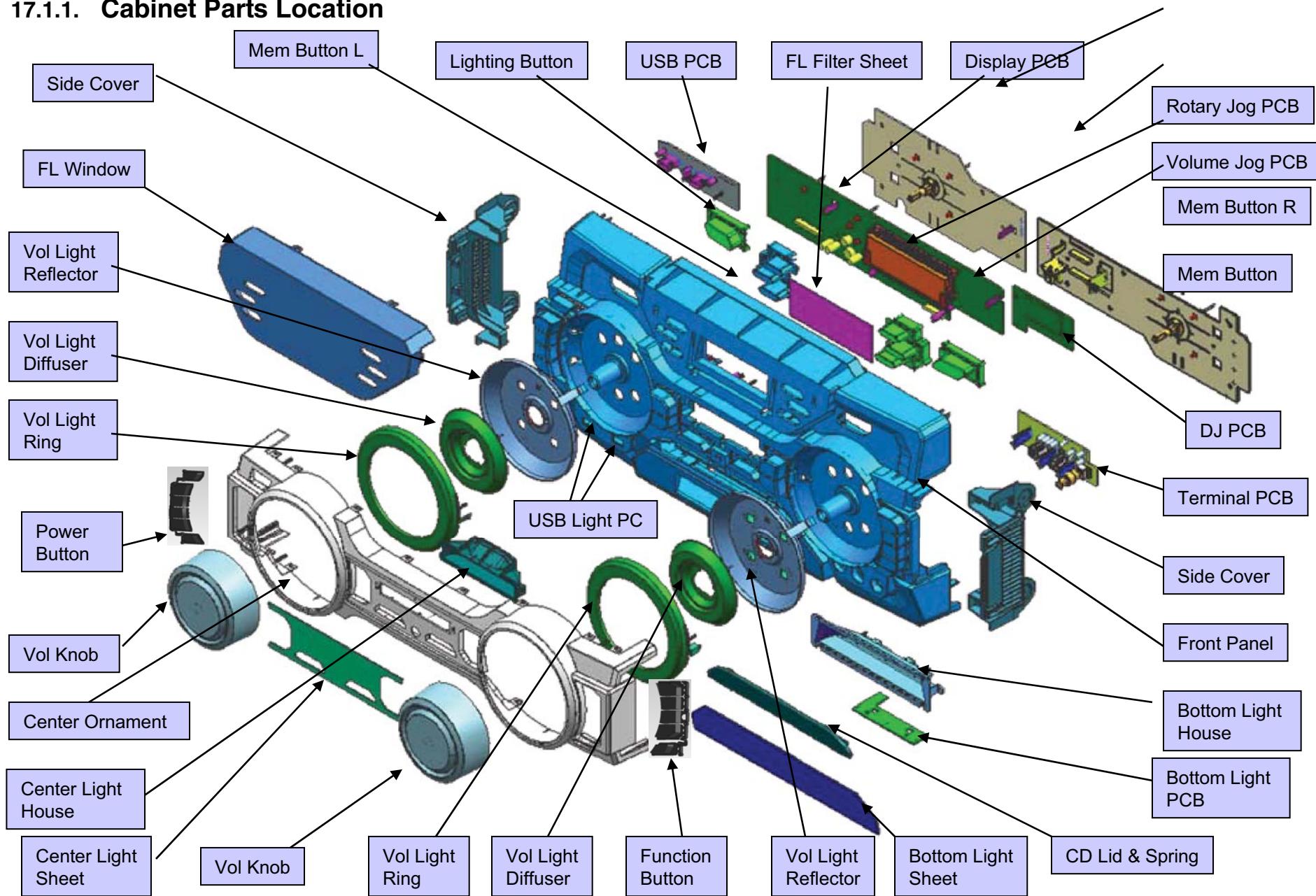
Pin No.	Terminal Name	I/O	Function
1	CLIP ATTN	O	Clipping attenuation
2	ASP_DATA	O	ASP data
3	ASP_CLK	O	ASP Clock
4	OCD_SDA	O	OCD Serial data
5	SW_MUTE	O	Subwoofer Muting
6	OCD_SCL	O	OC Serial Clock
7	M.PORT_SW	I	Music Port Detect
8	HP_SW	I	Headphone Detect
9	VOL_JOGA	I	Volume Jog A Signal
10	VOL_JOGB	I	Volume Jog B Signal
11	MM0D0 (GND)	-	Ground
12	XTOUT	O	Oscillator Output
13	XTIN	I	Oscillator Input
14	VSS	-	Ground
15	XI	I	Oscillator Input
16	XO	O	Oscillator Output
17	VDD3.3	-	+3.3 Voltage Supply
18	VDD1.8	-	+1.8 Voltage Supply
19	NRST	I	Reset Input (Active L)
20	FAN_OUT1	O	Fan Speed Control 1
21	FAN_OUT2	O	Fan Speed Control 2
22	TU_SDA	O	Tuner Serial Data
23	TU_CLK	O	Tuner Clock
24	TU_RST	O	Tuner Reset
25	TU_INT	I	Tuner Interrupt
26	PCONT	O	Power Control
27	SYNC	I	AC Failure Detection Input
28	DCDET2	I	DC Detect (D-AMP IC Failure Detection)
29	ECO_CNTRL	O	Eco Mode Control
30	NC	-	No Connection
31	SMPS_BP	O	SMPS Breatproof
32	ROTARY JOGB	O	Rotary jog for browse operation (Album & Track)
33	ROTARY JOGA	O	Rotary jog for browse operation (Album & Track)
34	EE_DATA	O	EEPROM IC Serial data
35	EE_CS	O	EEPROM IC Chip select
36	EE_CLK	O	EEPROM IC Serial clock
37	VDD18	-	+1.8V Voltage Supply
38	LED DIMMER	O	LCD Display Brightness Control
39	VSS	-	Ground
40	NC	-	No Connection
41	MUTE_F	O	Digital Amp Muting control
42	F_HOP1	O	Frequency Hopping
43	DCDET1	I	DC Detect (Power Supply Failure Detection)
44	MODE_DA	O	Digital Amp On/Off control
45	BASS_CTR	O	Bass Control
46	MUSIC_CTR	O	Music Control
47	NC	-	No Connection
48	NC	-	No Connection
49	NC	-	No Connection
50	NC	-	No Connection
51	SW_LVL_1	O	Subwoofer Level Setting 1
52	SW_LVL_2	O	Subwoofer Level Setting 2
53	NC	-	No Connection
54	NC	-	No Connection
55	NC	-	No Connection

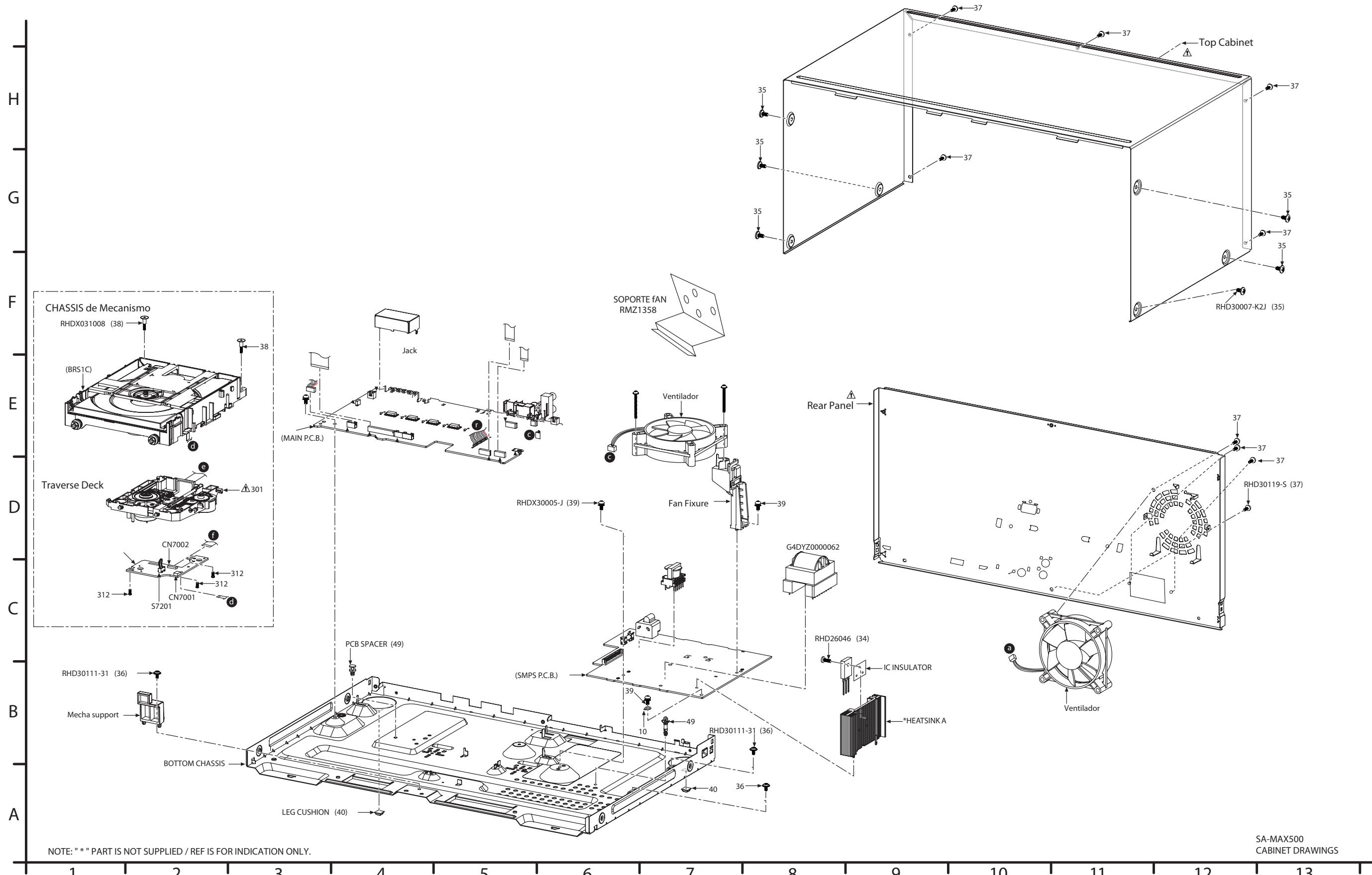
Pin No.	Terminal Name	I/O	Function
56	CLOSE_SW	I	CD Close Switch Detection
57	CD_OPEN_SW	I	CD Open Switch Detection
58	CD_RESET_SW	I	CD Reset Detection
59	LOAD_CCW	O	Loading Motor Turning Counter-Clockwise (Tray Close)
60	LOAD_CW	O	Loading Motor Turning Counter-Clockwise (Tray Open)
61	CD_RESET	O	CD Reset
62	USB_IN	I	USB Input Detection
63	VSS	-	Ground
64	CD_BLKCK	I	CD Block Clock
65	CD_MLD	O	CD Loading
66	NC	-	No Connection
67	REGION 3	I	Region Setting 3
68	NC	-	No Connection
69	CR_TIMER	I	CR Timer
70	OC	I	USB Over Current
71	EN	O	USB Enable
72	CD_MDATA (SYS_RXD)	O	CD data
73	CD_STAT (SYS_TXD)	I	CD Status
74	CD_MCLK	O	CD Clock
75	NC	-	No Connection
76	NC	-	No Connection
77	NC	-	No Connection
78	AMUTE	I	Amp Muting control
79	USB REC LED	O	USB Rec LED Drive
80	BASS_SHIFT	O	Bass Level Meter Adjustment
81	MUTE_A	O	Audio Output Muting
82	FL_DATA	O	FL Display data input
83	FL_CS	O	FL Display Data Input
84	FL_CLK	O	FL Display Clock
85	REGION 2	I	Region Setting 2
86	RMT	I	Remote Control Signal
87	NC	-	No Connection
88	NC	-	No Connection
89	VDD	-	Voltage supply
90	NC	-	No Connection
91	VSS	-	Ground
92	REGION 1	AN0	Region Setting 1
93	CLIP SENSOR	AN1	Clipping sensor (Volume & ASP Bass control)
94	AUTO BASS	AN2	Auto Bass setting adjustment
95	SMPS_ID	AN3	SMPS Type Detection
96	LVL_MTR	AN4	Bass Lever Meter Control
97	TEMP_DET	AN5	Temperature Detect
98	KEY 2	AN6	Key 2 Input
99	KEY 1	AN7	Key 1 Input
100	VREF+	-	Voltage Supply

17 Exploded View and Replacement Parts List

17.1. Exploded View and Mechanical replacement Part List

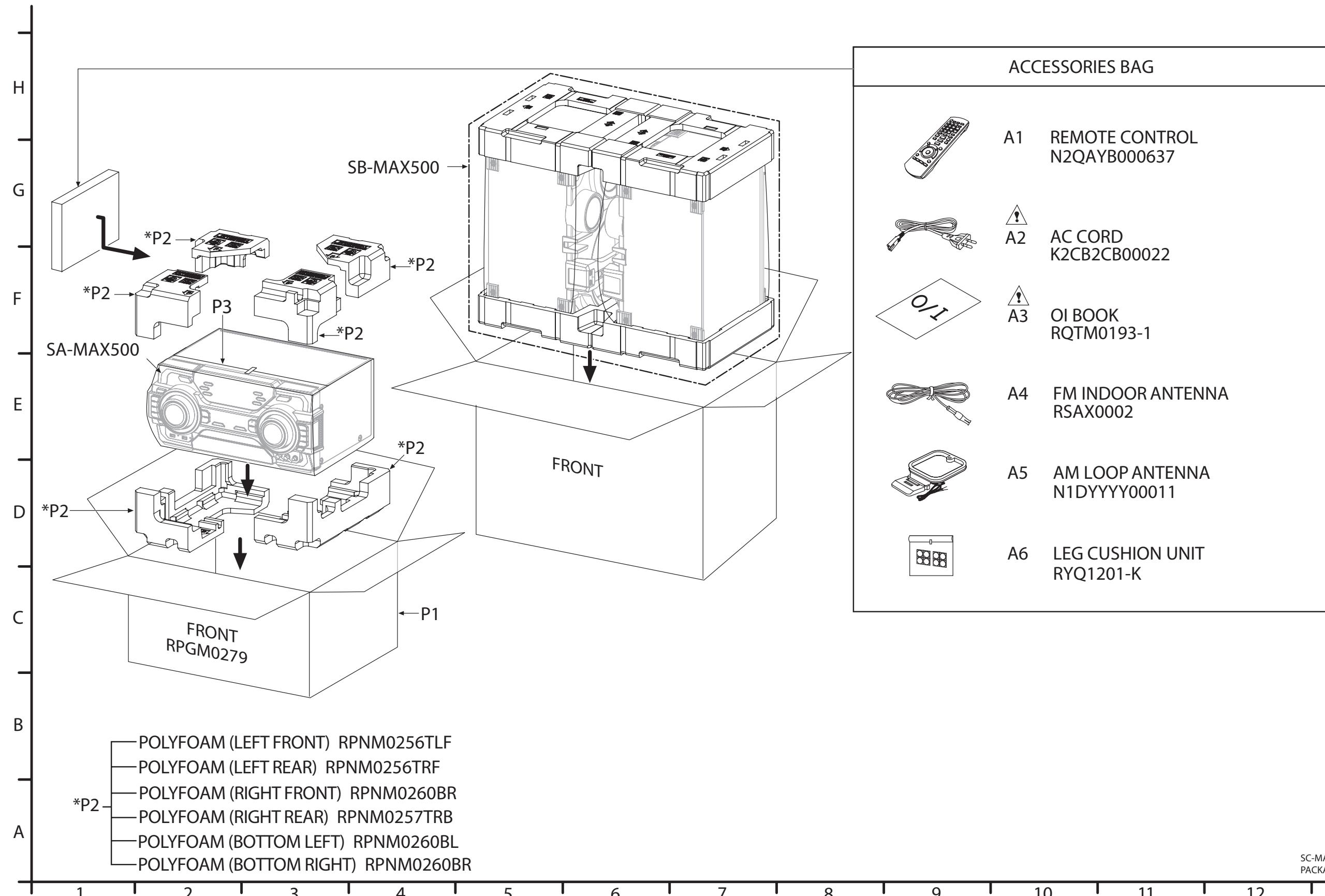
17.1.1. Cabinet Parts Location





SA-MAX500
CABINET DRAWINGS

17.1.2. Packaging



17.1.3. Mechanical Replacement Part List

Important Safety Notice

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

RTL (Retention Time Limited)

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

After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependant on the type of assembly, and in accordance with the laws governing part and product retention.

After the end of this period, the assembly will no longer be available.

Note:

- When replacing any of these components, be sure to use only manufacturer's specified parts shown in the replacement part list.
- The parenthesized indications on the Remarks column specify the destination & product color (Refer to the cover page for the information).
- Parts without these indications shall be used for all areas.
- This product uses a laser diode. Refer to "Precaution of Laser Diode".
- All parts mentioned are supplied by 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

PARTES MECANICAS			
Safety	Ref. No	Part Number	Part name & Description
		RYPM0316	Front Panel Ensemble PMX MAX500
		RGC0043-WL	VOL LIGHT REFLECTOR Arms
		RGQ0666-W	Light Diffuser
		RMB0930	CD LID OPEN SPRING
		RKAX0042-K	RUBBER LEG
		RMGX0033A-K	CD LID Cushion
		RGQ0706-K	CENTER LIGHT FILTER SHEET
		RGQ0707-K	LOWER LIGHT FILTER SHEET
		RGP1612-KL	FRONT PANEL MAX500
		RGK2425-KL	CD LID MAX500
		RKW1019-QL	FL WINDOW MAX500
		RGK2427-SL	CENTER ORNAMENT MAX500
		RGU2845-WL	MEMORY BTN L
		RYRM014_3	MEMORY BTN L INY
		RGU2846-WL	MEMORY BTN R
		RYRM0144	MEMORY BTN R INY
		RGL0779-WL	VOL LIGHT RING
		RYPM0152	VOL LIGHT RING INY MAX500
		RGC0049-WL	CENTER LIGHT HOUSE
		RGL0780-WL	USB REC LIGHT PIECE MAX500
		RGK2426-KL	SIDE COVER
		RGU2854-KL	POWER BTN MAX500
		RGU2855-KL	FUNCTION BTN MAX500
	ZA5703	RMY0419	HEATSINK FOR MOSFET
	ZA5801	RMY0417A	HEATSINK FOR 3 DIODE
	ZA5900	XTB3+10JFJ	TORNILLO
	ZA5901	XTB3+10JFJ	TORNILLO
	ZA5902	XTB3+10JFJ	TORNILLO
	ZA5903	XTB3+10JFJ	TORNILLO
	ZA5904	XTB3+10JFJ	TORNILLO
	ZB5900	RMZ1276	IC INSULATOR
		REVM0162B	WIRE JUMPER SMPS
	ZA4	XTW3+8TFJ	TORNILLO
	ZA5	XTW3+8TFJ	TORNILLO
		REE1720	30P FFC WIRE (MAIN TO CD)
		RXSM0002-2	INNER CHASSIS
		RZMM0043	M.P INNER CHASSIS 2011
		RMQX1088	MECHA SUPPORT
		L6FALEFH0030	VENTILADOR
		RMX0444	MAIN PCB SPACER
		RKAX0042-K	RUBBER LEG
		RHD30007-K2J	SCREW
		RHD30119-S	SCREW
		RHD30111-31	SCREW
		RHDHX30005-J	Screw (SPRING WASHER)
		REE1671	10P FFC (RELAY TO SERVO PCB)
		RHD26046	SCREW
		RGW0428-S1	VOLUME KNOB
		SHR301-J	LEAD CLAMPER
		RGWX0056-1K1	MIC KNOB REV 1
⚠		RGR0439A-A	REAR PANEL_MAX500
		RMK0827	BOTTOM CHASSIS
		RMAX1007A	CHASSIS SUPPORT
		RMX049_9	PCB SPACER
		REE1721-1	17P FFC WIRE (MAIN to D.AMP)
		REE1719-1	27P FFC WIRE (MAIN to FL DISPLAY)
		REE1722-1	21P FFC WIRE (VOL to FL)
		RGC0046-W1	LIGHTING HOUSE
		RD-DUKX014PX	CD LSI MOD 4G MEMORY
		RMQ2120-L	FRONT MECHA SUPPORT
		SJA 5525S-AL	HIPS PRECOLOR NEGRO
		RMA2439	DAMP PCB SUPPORT
⚠		RKM0702Z-K	TOP CABINET (UNBEND)
		MZA3738Q-A	JET MELT
		RMA2460-L	FAN CHASSIS
		RZMM0044	M.P FAN CHASSIS
		SHR301-J	LEAD CLAMPER
		RMZ1358	SOPORTE FAN
		RMQM0188	HIMELON ORNAMENT (25X10)
		ACCESORIOS MAX500	

	N2QAYB000637	REMOTE CONTROL AKX32
	N1DYYYY00011	AM Loop Antenna
	RSAAX0002	FM ANTENA
△	K2CB2CB00022	AC CORD POLARIZED
△	P5701	AC INLET
	UM-3UHS/864	PILA CARBON TAMAÑO AA
△	RQTM0193-1	INSTRUCTIVO SC-MAX500
	RYQ1201-K	LEG Rubber set
		CONJUNTO EMPAQUE MAIN SET MAX500
	RPH0310	MIRAMAT SHEET
	RPGM0279	Packing Case SA-MAX500
	RPNM0256TLF	UNICEL TAPA LF
	RPNM0256TRF	UNICEL TAPA RF
	RPNM0257TLB	UNICEL TAPA LB
	RPNM0257TRB	UNICEL TAPA RB
	RPNM0260BR	UNICEL BASE R
	RPNM0260BL	UNICEL BASE L
		TRAVERSE DECK
△	RD-DDL100-PX	BRS1C CD UNIT
	RHDX031008	Screw (DLS6 - Bottom Chassis)

17.2. Electrical Replacement Part List

Important Safety Notice

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

RTL (Retention Time Limited)

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

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

Note:

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

ZJ6003	REX1555	10P WIRE ROT JOG TO VOL JOG P
ZJ6200	REX1566	FAN RELAY TO MAIN PCB
ZJ6201	REX1603	2P wire fan relay to main pcb
ZJ6300	REX1554	5P WIRE USB TO MAIN
ZJ6400	REX1556	2P GROUND WIRE MIC PCB TO CHASSIS
ZJ6500	REX1557	8P WIRE MIC TO VOL JOG PCB
ZJ6700	REX1602	2P wire button light to panel
	RAIM12X2050A	CONJUNTO SMPS MAX500 pista completa CS
	REPM12X2050A	CONJUNTO MANUAL SMPS MAX500
	REVM0162B	WIRE JUMPER SMPS
	REAM12X2050A	CONJUNTO SMT SMPS MAX500
	RENM12X2050AJ	CONJUNTO JUMPER SMPS MAX500
△	RJB3573A	PRINTED CIRCUIT BOARD (SMPS)
	RAIM12X2051A	CONJUNTO D-AMP MAX500 pista completa CS
	REPM12X2051A	CONJUNTO MANUAL D-AMP MAX500
	REAM12X2051A	CONJUNTO SMT D-AMP MAX500
	RENM12X2051AJ	CONJUNTO JUMPER D-AMP MAX500
	RJB3552B	PRINTED CIRCUIT BOARD (BIG DAMP)
	RAIM12X2053A	CONJUNTO PANEL MAX500 Pista completa CS
	REPM12X2053A	CONJUNTO MANUAL PANEL MAX500
	REAM12X2053A	CONJUNTO SMT PANEL MAX500
	RENM12X2053AJ	CONJUNTO JUMPER PANEL MAX500
	RJB3624A	AKX205 PANEL PCB
△ F1	K5D802BNA005	FUSIBLE
	RD-DAK110-PX	MAX500 MAIN PCB (COMPLETA, con componentes)
	REP4749B	SERVO PCB