ORDER NO. MD0808002CE
A6

Service Manual

CD Stereo System

COMPACT disc DIGITAL AUDIO

SA-AK960P

Colour

(K)... Black Type

Notes: This model's CD mechanism changer unit is CRS1. Please refer to the original Service Manual (Order No. MD0509368C0) for this mechanism.

Specifications

■ AMPLIFIER SECTION

RMS output power	
Front Ch	200 W per channel (7 Ω), 1 kHz, 10% THD
Subwoofer Ch	240 W per channel (7 Ω), 100 Hz, 10% THD
Total RMS Dolby Digital mode power	880 W
FTC Output Power Stereo mode	
Front Ch (both ch driven)	190 W per channel (7 Ω), 100 to 12 kHz, 10% THD
Subwoofer Ch	220 W per channel (7 Ω), 40 to 100 Hz, 10% THD
Total FTC Stereo mode power	820 W

■ FM/AM TUNER, TERMINALS SECTION

Preset station	FM 20 stations AM 15 stations
Frequency Modulation (FM)	
Frequency range	87.9 to 107.9 MHz (200 kHz step) 87.5 to 108.0 MHz (100 kHz step)
Sensitivity	4.0 µV (IHF)
S/N 26 dB	2.2 µV
Antenna terminal(s)	75 Ω (unbalanced)
Amplitude Modulation (AM)	
Frequency range	520 to 1710 kHz (10 kHz step)
Phone jack	
Terminal	Stereo, 3.5 mm (1/8") jack
MIC jack	
Sensitivity	0.7 mV, 1.2 kΩ
Terminal	Mono, 3.5 mm (1/8") jack (1 system)
Music Port (Front)	
Sensitivity	100 mV, 4.7 kΩ
Terminal	Stereo, 3.5 mm (1/8") jack
USB Port	
USB standard	USB 2.0 full speed

Panasonic®

Media file format support	MP3 (*.mp3)
USB device file system	FAT12, FAT16, FAT32
USB port power	500 mA (Max)

■ CASSETTE DECK SECTION

Track system	4 track, 2 channel
Heads	
Record/playback	Solid permalloy head
Erasure	Double gap ferrite head
Motor	DC servo motor
Recording system	AC bias 100 kHz
Erase system	AC erase 100 kHz
Tape speed	4.8 cm/s (1-7/8 ips)
Overall frequency response (+3 dB, -6 dB) at DECK OUT	
Normal	35 Hz to 14 kHz
S/N Ratio	50 dB (A-WTD)
Wow and flutter	0.18% (WRMS)
Fast forward and rewind time	Approx. 120 seconds with C-60 cassette tape

■ DISC SECTION

Disc played [8 cm (3") or 12 cm (5")]

(1)CD-Audio (CD-DA)

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

(3)MP3*

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

Pick up	
Wavelength	785 nm
Laser power	CLASS 1
Audio output (Disc)	
Number of channels	(FL, FR, SL, SR, SW) 4.2 ch
Audio performance (measurement at: CD out terminal)	
Frequency response (CD-Audio)	4 Hz to 20 kHz
S/N ratio (CD-Audio)	95 dB
Dynamic range (CD-Audio)	93 dB
Total harmonic dist. (CD-Audio)	0.005%

■ GENERAL

Power supply	AC 120 V, 60 Hz
Power consumption	240 W
Dimensions (W x H x D)	250 x 331.5 x 358 mm (9-7/8" x 13-1/16" x 14-1/8")
Mass	8.3 kg (18.3 lb)
Operating temperature range	0°C to +40°C (+32°F to +104°F)
Operating humidity range	35% to 80% RH (no condensation)
Power consumption in standby mode	0.2 W (Approx.)

■ SYSTEM

SC-AK960 (P)	Music center: SA-AK960 (P)
	Front speakers: SB-PF960 (GCP)
	Surround speakers: SB-PS960 (GCP)
	Subwoofer 1: SB-WAK860 (GCP)
	Subwoofer 2: SB-WAK960 (GCP)

For Information on speaker system, plesae refer to the original Service Manual (Order No. MD0707024CE) for SB-PF960GCP-K, (Order No. MD0707025CE) for SB-PS960GCP-K, (Order No. MD0707026CE) for SB-WAK960GCP-K & (Order No. MD0707022CE) for SB-WAK860GCP-K.

This model uses CRS1 mechanism (CD changer mechanism)

Note:

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

⚠ 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.

CONTENTS

1 Safety Precautions

1.1. General Guidelines

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

(This “Safety Precaution” is applied only in U.S.A.)

1. Before servicing, unplug the power cord to prevent an electric shock.
2. When replacing parts, use only manufacturer’s recommended components for safety.
3. Check the condition of the power cord. Replace if wear or damage is evident.
4. After servicing, be sure to restore the lead dress, insulation barriers, insulation papers, shields, etc.
5. Before returning the serviced equipment to the customer, be sure to make the following insulation resistance test to prevent the customer from being exposed to a shock hazard.

1.1.1. Leakage Current Cold Check

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

1.1.2. Leakage Current Hot Check

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

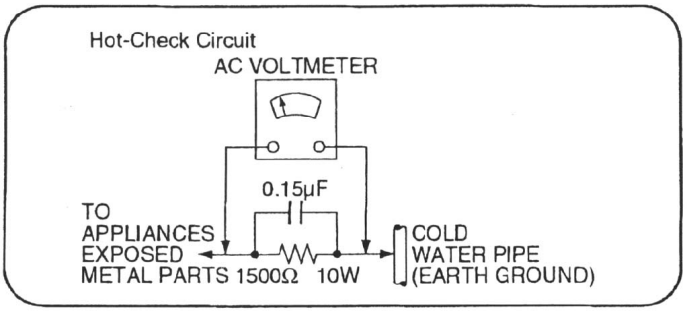


Fig. 1

1.2. Before Repair and Adjustment

Disconnect AC power, discharge Power Supply Capacitors C5171, C5172, C5920, C5940, C5950, C5101 and C5104 through a 10Ω, 1W resistor to ground.

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

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

- Current consumption at AC 120 V, 60 Hz in NO SIGNAL mode (at volume min in FM Tuner mode) should be ~1000 mA.

1.3. Protection Circuitry

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

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

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

If this occurs, follow the procedure outlines below:

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

Note:

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

1.4. Safety Part Information

Safety Parts List:

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

Table 1

Reference No.	Part No.	Part Name & Description	Remarks
11	RGRX0068E-A	REAR PANEL	[M] ⚠
A2	K2CB2CB00021	AC CORD	[M] ⚠
JK5950	K2AA2B000007	AC INLET	[M] ⚠
T5950	G4CYAYY00186	MAIN TRANSFORMER	[M] ⚠
T5951	G4C2AAJ00005	BACK UP TRANSFORMER	[M] ⚠
F1	K5D802APA008	FUSE	[M] ⚠
L5950	ELF15N035AN	LINE FILTER	[M] ⚠
RL5950	K6B1AEA00003	POWER RELAY	[M] ⚠
Z5950	ERZV10V511CS	ZENER	[M] ⚠
FP5950	K5G402AA0002	FUSE PROTECTOR	[M] ⚠
31	RKMV0071A-KJ	TOP CABINET	[M] ⚠
360	RAE0165A-V	TRAVERSE	[M] ⚠
PCB7	REPX0610B	TRANSFORMER P.C.B.	[M] ⚠ (RTL)
R5950	ERC12UGK335D	3.3M 1/2W	[M] ⚠

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

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

1. Immediately before handling any semiconductor component or semiconductor-equiped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equiped with ES devices, place the assembly on a conductive surface such as aluminium foil, to prevent electrostatic charge build up or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder remover device. Some solder removal devices not classified as “anti-static (ESD protected)” can generate electrical charge to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminium foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

   Caution

   Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize body 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).

3 Precaution of Laser Diode

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

CAUTION :

This product utilizes a laser diode with the unit turned "on", invisible laser radiation is emitted from the pickup lens.
Wavelength: 785 nm (CD)
Maximum output radiation power from pickup: 100 μW/VDE

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

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

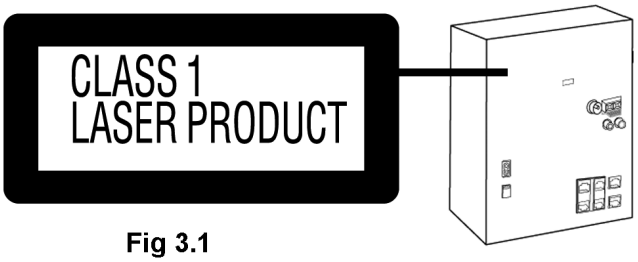


Fig 3.1

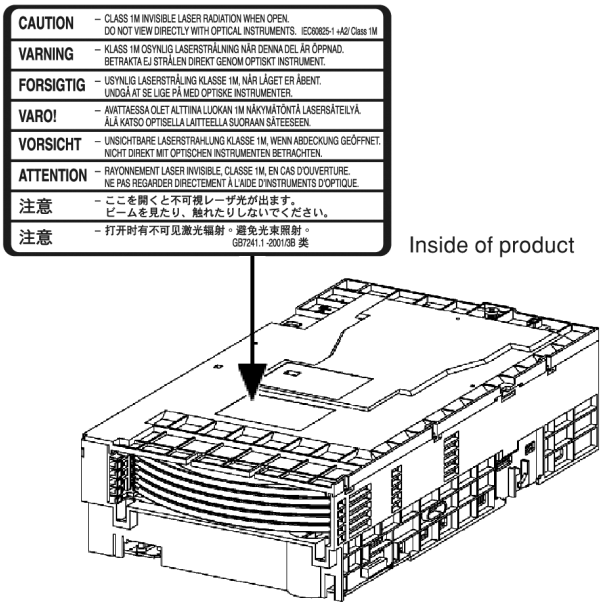


Fig 3.2

4 Handling Precautions For Traverse Unit

The laser diode in the traverse uint may break down due to potential difference caused by the static electricity of clothes or our human body.

So, be careful of electrostatic breakdown during repair of the traverse unit.

- **Way of handling the traverse unit**

1. Do not subject the traverse unit to static electricity as it is extremely sensitive to electrical shock.
2. To prevent the breakdown of the laser diode, an antistatic shorting pin is inserted into the flexible board (FFC board).
3. Do not to apply excessive stress to the flexible board (FFC board). When removing or connecting the short pin, finish the job in as short time as possible.
4. Do not turn the variable resistor for laser power adjustment. (It is pre-adjusted during production time)

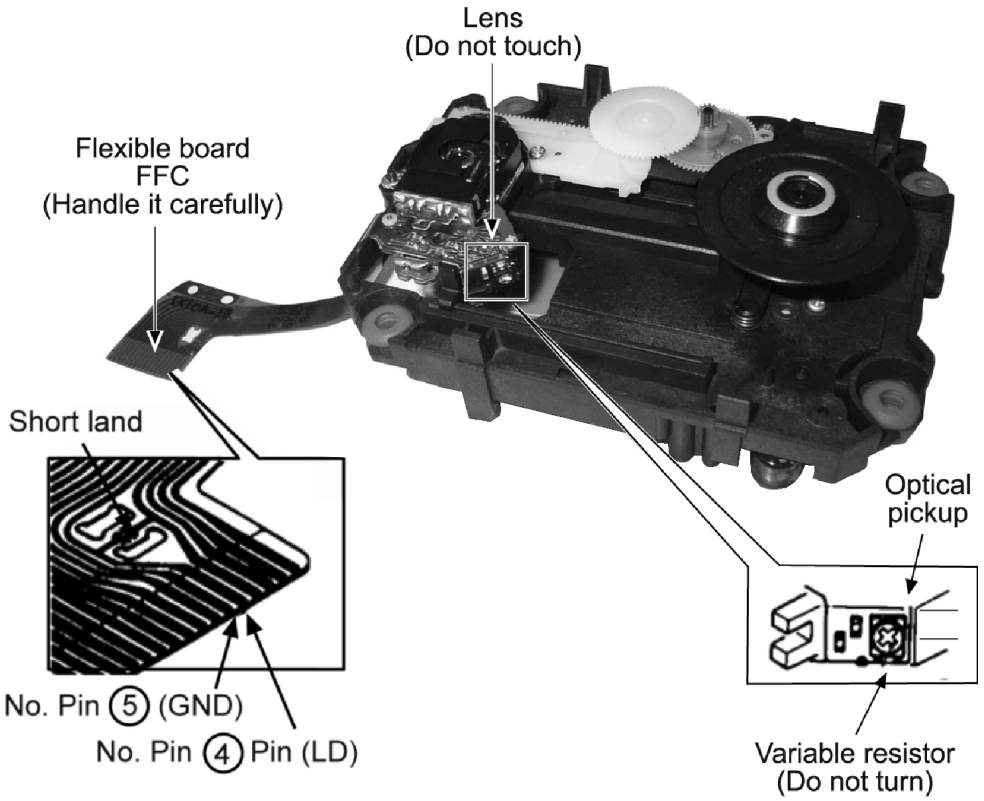


Fig 4.1

Grounding for electrostatic breakdown prevention

1. Human body grounding

   Use the anti-static wrist strap to discharge the static electricity from your body.
2. Work table grounding

   Put a conductive material (sheet) or steel sheet on the area where the traverse unit is place, and ground the sheet.

Caution :

The static electricity of your clothes will not be grounded through the wrist strap. So, take care not to let your clothes touch the traverse unit.

Caution when replacing the Traverse Unit

The traverse unit has a short point shorted with solder to protect the laser diode against electrostatics breakdown. Be sure to remove the solder from the short point before making connections.

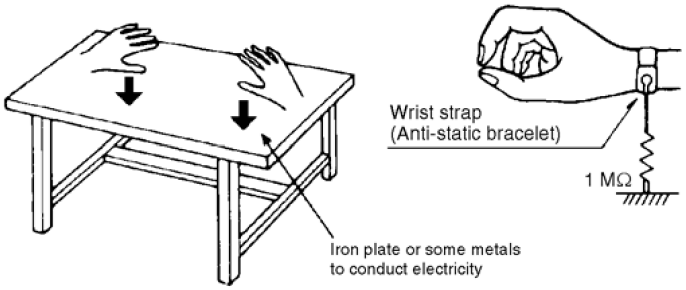

Wrist strap
(Anti-static bracelet)
1 MΩ
Iron plate or some metals
to conduct electricity

Fig 4.2

5 Handling the Lead Free Solder

5.1. 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)

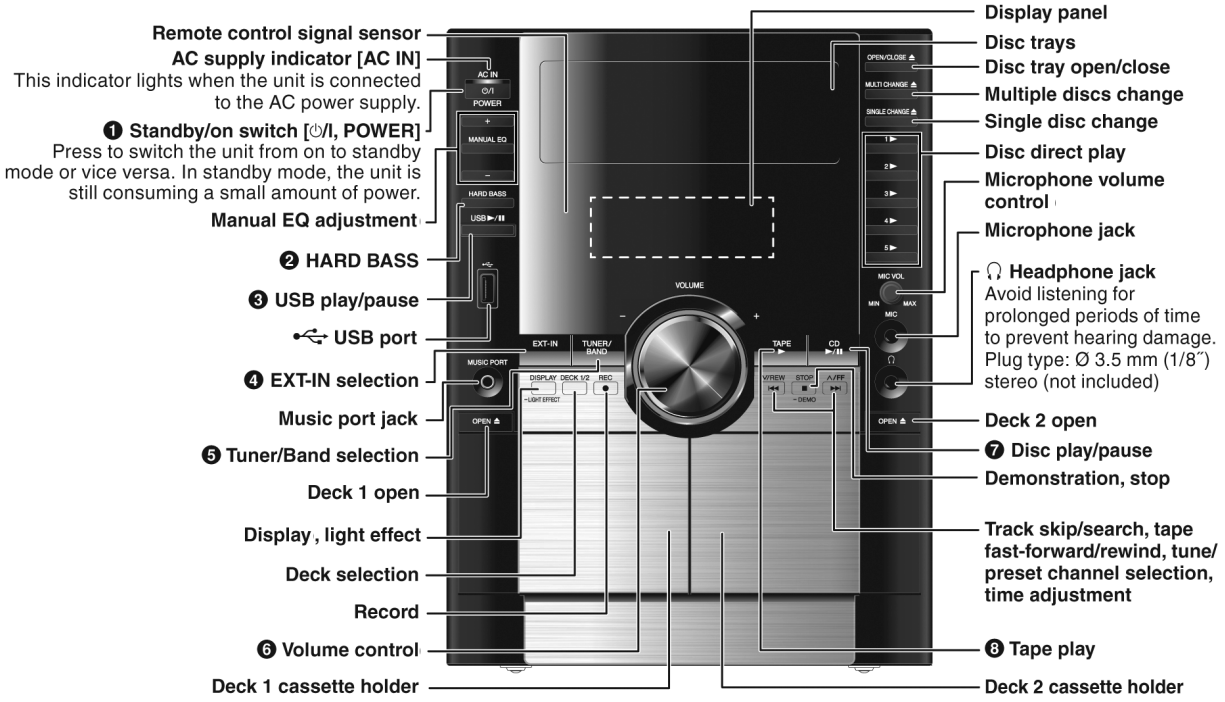
Note

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

6 Operation Procedures

6.1. Main Unit Key Buttons Operation

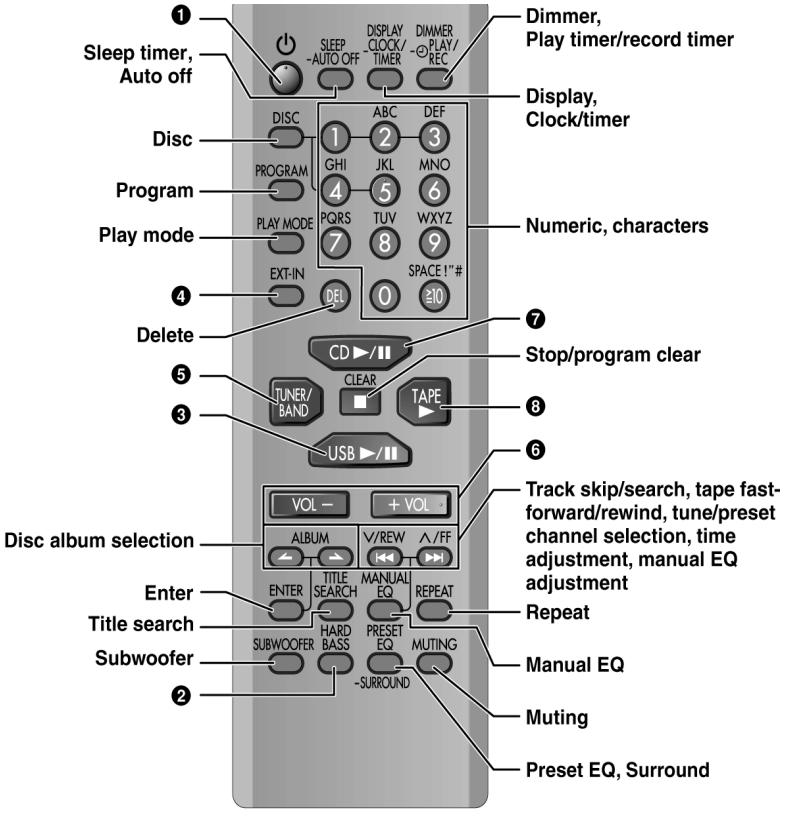
Refer to the numbers in parentheses for page reference.



DISPLAY
–LIGHT EFFECT

This function allows you to have light animation during **disc**, **tape or USB** play mode or when using **MIC**.
- Press and hold [–LIGHT EFFECT] to activate the function.
- Press and hold [–LIGHT EFFECT] again to cancel.

6.2. Remote Control Key Buttons Operation



SLEEP
–AUTO OFF
This auto off function allows you to turn off the unit in **disc, tape or USB** mode only after left unused for 10 minutes.
- Press and hold [–AUTO OFF] to activate the function.
- Press and hold [–AUTO OFF] again to cancel.
- The setting is maintained even if the unit is turned off.

DIMMER
–PLAY/REC
To dim the display panel.

MUTING
To mute the sound.
- Press the button to activate.
- Press again to cancel.

6.3. Disc Information

NOTE on CDs

- This unit can access up to 99 tracks.
- Choose disc with this mark.

- 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.

Using DualDiscs

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

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.

When “NOT MP3/ERROR1” appears on the display, an unsupported MP3 format is being played. The unit will skip that track and play the next one.

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.

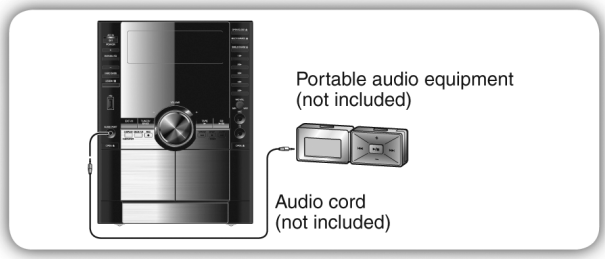
6.4. Using the Connecting to a portable audio equipment, other external unit and Playing a USB Mass Storage Class Device

External unit

Preparation
- All peripheral components and cables are sold separately.
- Turn off all equipment and read the appropriate operating instructions.

Connecting to a portable audio equipment

This feature enables you to enjoy music from a portable audio equipment.



EXT-IN Playing or recording from a portable audio equipment

Switch off the equalizer function (if there is any) of the portable audio equipment before you plug into the MUSIC PORT jack. Otherwise, sound from the speaker may be distorted.

1 **Plug the audio cord into the MUSIC PORT jack.**

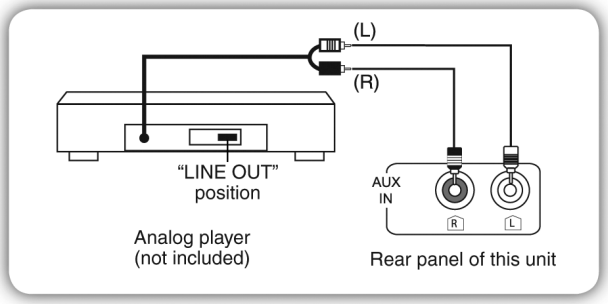
2 **Press [EXT-IN] repeatedly until "MUSIC PORT" is displayed.**

3 **For listening** : Proceed to step 4.
For recording : Press [●, REC] on the main unit to start recording.

4 **Play the portable audio equipment.**

Connecting to other external unit

You can connect to an analog player with a built-in phone equalizer.



EXT-IN Playing or recording from an external unit

1 **Press [EXT-IN] repeatedly until "AUX" is displayed.**

2 **For listening** : Proceed to step 3.
For recording : Press [●, REC] on the main unit to start recording.

3 **Start playback from the external source.**

Note:
- When units other than those described above are to be connected, please consult your audio dealer.
- Sound distortion may occur when you use an adaptor other than the one supplied.

Connecting and playing a USB mass storage class device

MP3

The USB connectivity enables you to connect and play MP3 tracks from USB mass storage class. Typically, USB memory devices. (Bulk only transfer)

Preparation

Before connecting any USB mass storage device to the unit, ensure that the data stored therein has been backed up.

USB enabled device (not included)
It is not recommended to use a USB extension cable. The device connected via the cable will not be recognised by this unit.

1 Reduce the volume and connect the USB mass storage device.

2 Press [▶/II, USB] to start play.

To	Action
pause play USB ▶/II	Press [▶/II, USB]. Press again to resume play.
stop play CLEAR ■	Press [■, CLEAR]. "RESUME" is displayed. The position is memorized. Press [▶/II, USB] to resume. Press [■, CLEAR] again to clear the position.
skip tracks ∨/REW ∧/FF ⏮ ⏭	Press [⏮, ∨/REW] or [⏭, ∧/FF].
skip album ALBUM	Press [ALBUM (◿ or ◺)] in the play mode. Press [ALBUM (◿ or ◺)] once and then the numeric buttons in the stop mode.

For other operating functions, they are similar as those described in "Discs" .

Recording from a USB mass storage class device

REC

1 Press [⏮, ∨/REW] or [⏭, ∧/FF] to select the desired track for recording.

2 Press [●, REC] on the main unit to start recording.

Compatible devices

Devices which are defined as USB mass storage class:

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

Supported format

Files must have the extension ".mp3" or ".MP3".

Note:

- CBI (Control/Bulk/Interrupt) is not supported.
- A device using NTFS file system is not supported [Only FAT 12/16/32 (File Allocation Table 12/16/32) file system is supported].
- Depending on the sector size, some files may not work.
- This unit can access up to 255 albums (including blank folders) and 2500 tracks.
- The maximum number of tracks in a folder are 999 tracks.
- Only one memory card will be selected when connecting a multiport USB card reader. Typically the first memory card inserted.
- Disconnect the USB card reader from the unit when you remove the memory card. Failure to do so may cause malfunction to the device.
- Compatible audio device will be charged when in USB mode.

Avoid interfering with other Panasonic equipment

EXT-IN

Other Panasonic audio or video equipment may start functioning when you operate the unit using the supplied remote control.

You can operate this unit in another mode by setting the remote control operating mode to "REMOTE 2".

The main unit and remote control must be set to the same mode.

1 Press and hold [EXT-IN] on the main unit. Then press [2] on the remote control until "REMOTE 2" is displayed.

2 Press and hold [ENTER] on the remote control followed by numeric button [2].

To change the mode back to "REMOTE 1", repeat the steps above by replacing [2] with [1].

7 Self diagnosis and special mode setting

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

7.1. Service Mode Summary Table

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

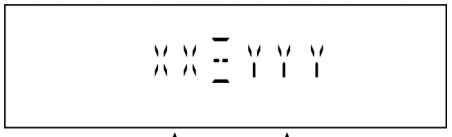
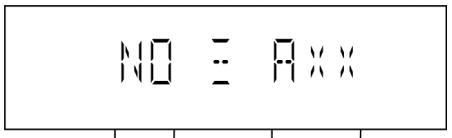
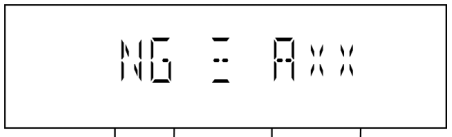
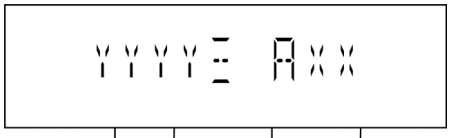
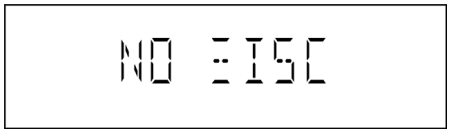
Player button	Remote control button unit	Application	Note
[STOP, ■] + [FF/ ►►I]	--	Entering into Self-Diagnostic Mode	Refer to the section, "7.2.1 Service Mode Table 1 for more information.
[STOP, ■]	[4], [7]	Entering into Doctor Mode	Refer to the section, "7.2.1 Service Mode Table 1 for more information.

Mode	Remote control button unit	Application	Note
In Doctor Mode	[4]	Set for cold start when reset start is executed the next time	Refer to the section, "7.2.2 for more information.
	[Muting]	Clock Setting	Refer to the section, "7.2.2 for more information.
	[0]	Tape Eject Test	Refer to the section, "7.2.2 for more information.
	[DIMMER]	All segment display for the FL	Refer to the section, "7.2.2 for more information.
	[DISC]	CRS1 Inspection	Refer to the section, "7.2.2 for more information.
	[7]	Volume 50 Setting check	Refer to the section, "7.2.2 for more information.
	[8]	Volume 41 Setting check	
	[9]	Volume 35 Setting check	

7.2. Service Mode

7.2.1. Service Mode Table 1

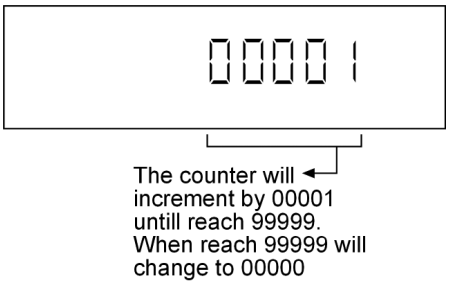
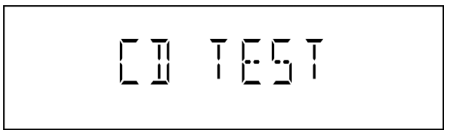
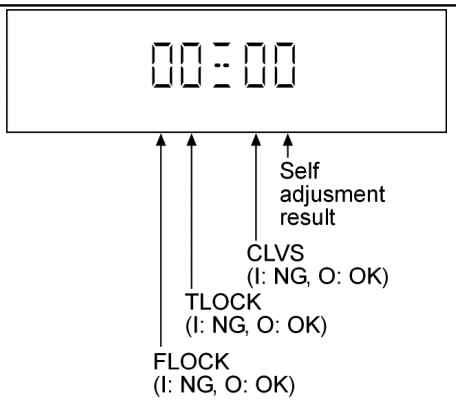
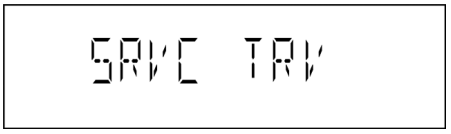
Item		FL Display	Key Operation
Mode Name	**Description**		**Front Key**
Self -Diagnostic Mode	To enter into self diagnostic checking for main unit.		1. Select [TAPE, ▶] for TAPE mode (Ensure no TAPE inserted). 2. Press and hold [STOP, ■] button follow by [FF/ ►►I]. To exit, press [⏻/I , POWER] button on main unit or remote control.

Item		FL Display	Key Operation
Mode Name	**Description**		**Front Key**
Doctor Mode	To enter into Doctor Mode for checking of various items and displaying EEPROM and firmware version. Note: The micro-processor version as shown is an example. It will be revise when there is an updates. FL display sequence Display 1 → 2	(Display 1)  1. The Check Sum of EEPROM and firmware version will be display * ROM correction. ** Firmware version No: checksum : (Condition 1)  (a) If there is NO EEPROM header string OR (b) If there is no EEPROM (no data is received by micro-processor) [NO] is displayed. checksum : (Condition 2)  If the version of the EEPROM does not match or not working properly [NG] is display. checksum : (Condition 3)  If the EEPROM version matches, checksum [YYYY] is displayed. (Display 2) 	In CD Mode: 1. Press [STOP, ■] button on main unit follow by [4] and [7] on remote control. To exit, press [ENTER] button on remote control or press [⏻/I , POWER] button on main unit or remote control.

7.2.2. Service Mode Table 2

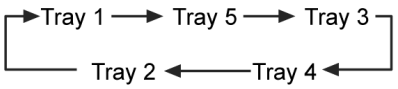
Item		FL Display	Key Operation
Mode Name	Description		Front Key
Cold Start	To activate cold start upon next AC power up.	-- -- -- -- -- -- -- -- -- --	In doctor mode: 1. Press [4] button on remote control. To exit, press [ENTER] button on remote control or press [⏻/I , POWER] button on main unit or remote control.
Clock Setting Check	To indicate that a clock time was set properly.	P: M:Y Y	In doctor mode: 1. Press [MUTING] button on remote control. To exit, press [ENTER] button on remote control or press [⏻/I , POWER] button on main unit or remote control.
Tape Eject Test	To check on the tape eject function (For deck 1/2)	NO TAPE	In doctor mode: 1. Select [TAPE, ▶] for TAPE mode (Ensure no TAPE inserted). 2. Press [0] button on remote control. To exit, press [ENTER] button on remote control or press [⏻/I , POWER] button on main unit or remote control.
FL Display Test	To check the FL segments display (All segments will light up and LED will blink at 0.5 second interval)	EQ H.BASS USB XM PGM MP3 WMA 1-ALB 1-TR TAG PS ALL 1 DISC RDS PTY A.OFF RND MONO ST PLAY SLP 12 REC REC 8888888888 1 2 3 4 5	In doctor mode: 1. Press [DIMMER] button on remote control. To exit, press [ENTER] button on remote control or press [⏻/I , POWER] button on main unit or remote control.
CRS1 inspection	CRS1 inspection operation: 1. Load TRAY 1 (Move to PLAY position) 2. After that, TRAY 2 is open (TRAY 1 still in LOAD condition) and close. 3. Tray 1 is unloaded. (Move to the STOCK position) 4. Load TRAY 5 (Move to PLAY position) 5. Tray 5 is unloaded. (Move to the STOCK position) 6. Tray 1 is loaded. (Move to the PLAY position) When step 1 to 6 operates normally without any error, FL will display [CHG: OK]	If operation without any error CHG: OK If operation with error CHG: NG If NG, please refer to the original service manual of changer unit CRS1.	In doctor Mode: 1. Press [DISC] button on remote control. To exit, press [ENTER] button on remote control or press [⏻/I , POWER] button on main unit or remote control.
Volume Setting	To check for volume setting during this mode.	Display 1 VOLUME 50	In doctor mode: 1. Press [7] button on remote control. To exit, press [ENTER] button on remote control or press [⏻/I , POWER] button on main unit or remote control.
		Display 1 VOLUME 41	In doctor mode: 2. Press [8] button on remote control. To exit, press [ENTER] button on remote control or press [⏻/I , POWER] button on main unit or remote control.
		Display 1 VOLUME 35	In doctor mode: 3. Press [9] button on remote control. To exit, press [ENTER] button on remote control or press [⏻/I , POWER] button on main unit or remote control.

7.2.3. Service Mode Table 3

Item		FL Display	Key Operation
Mode Name	Description		Front Key
CD Changer Reliability Test (CRS 1)	To determine the reliability of CD Loading Unit. (For more information, refer to section 7.2.4)		In Self-Diagnostic mode: 1. Select [CD, ▶/❚❚] for CD mode. 2. Press [REW/I◀◀] button. To exit, press [⏻/I , POWER] button on main unit or remote control. (The tray will return to PLAY position and then power off)
CD Test Mode	Checking of CD Operation.		In CD mode: 1. Select [CD, ▶/❚❚] for CD mode. 2. Press and hold [STOP, ■] button for 3 seconds follow by [FF/ ▶▶I]. To exit, press [⏻/I , POWER] button on main unit or remote control.
CD Auto Adjustment	To check the CD auto adjustment result for FLOCK, TLOCK and CLVS. FLOCK: Focus Lock. TLOCK: Traverse Lock. CLVS: Constant Linear Velocity Speed.		In CD Test mode: 1. Press [0] button on remote control. To exit, press [⏻/I , POWER] button on main unit or remote control.
Service Mode (For traverse unit)	To unlock the traverse unit for service. FL display sequence Display 1 → 2	(Display 1)  (Display 2) 	In TAPE mode: 1. With no cassette tape inserted. 2. Press [STOP, ■], [FF/ ▶▶I] button on main unit. 3. Press [SINGLE CHANGE] on main unit. To exit, press [⏻/I , POWER] button on main unit or remote control.

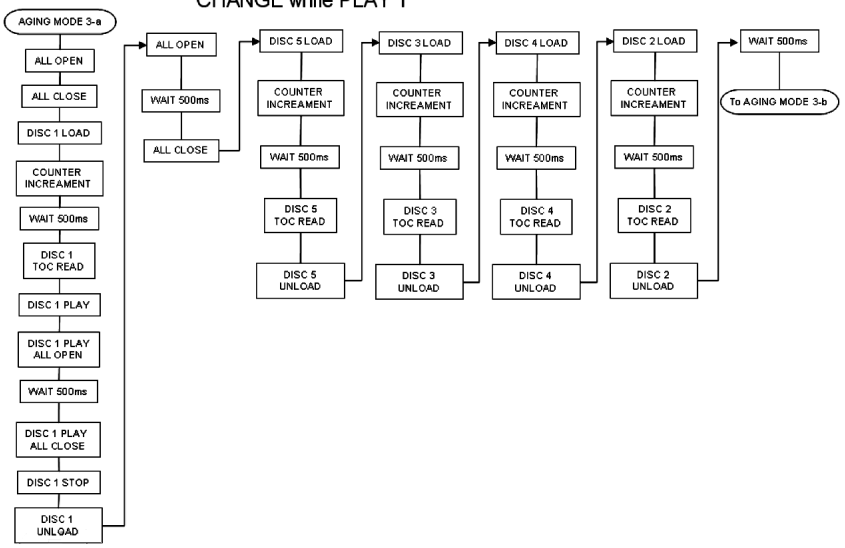
7.2.4. Reliability Test Mode (CRS1 Mechanism)

Below is the process flow chart of ageing for the CD changer unit. (CRS1)



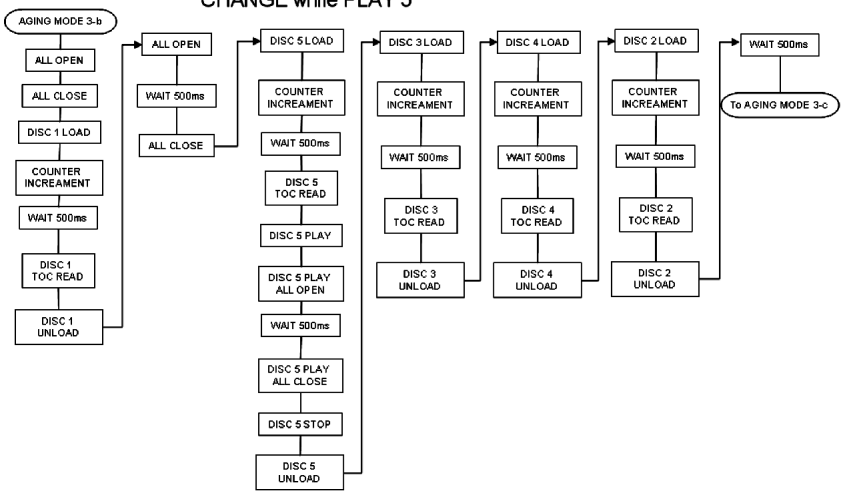
Mode 3 PLAY-CHANGE-OPEN mode aging (1 cycle)

CHANGE while PLAY 1



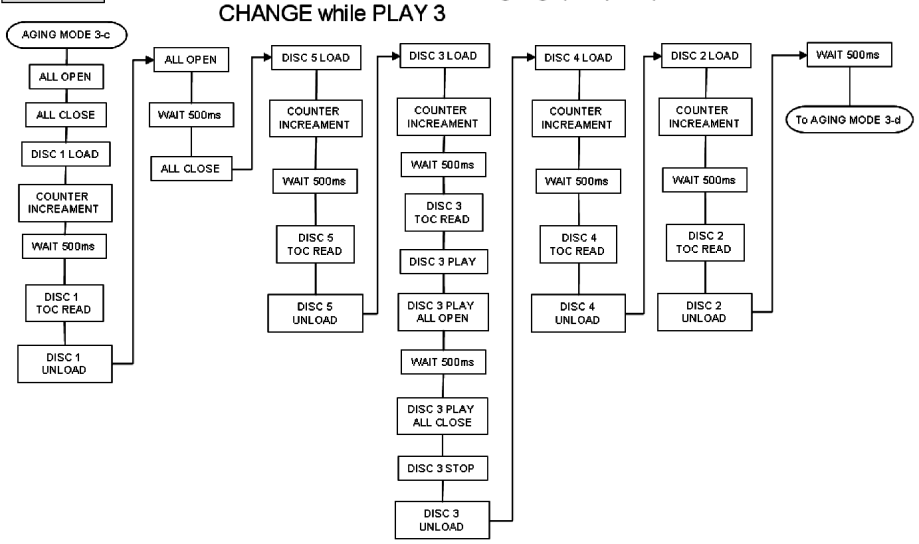
Mode 3 PLAY-CHANGE-OPEN mode aging (1 cycle)

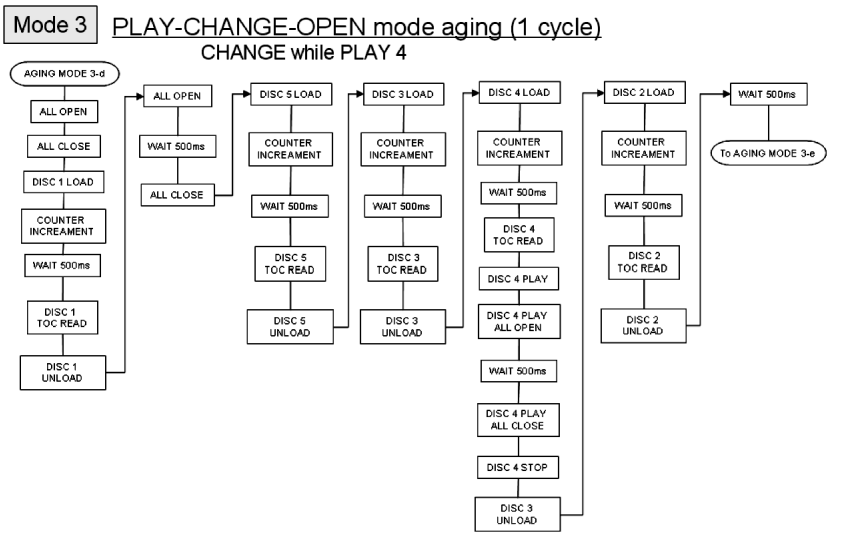
CHANGE while PLAY 5

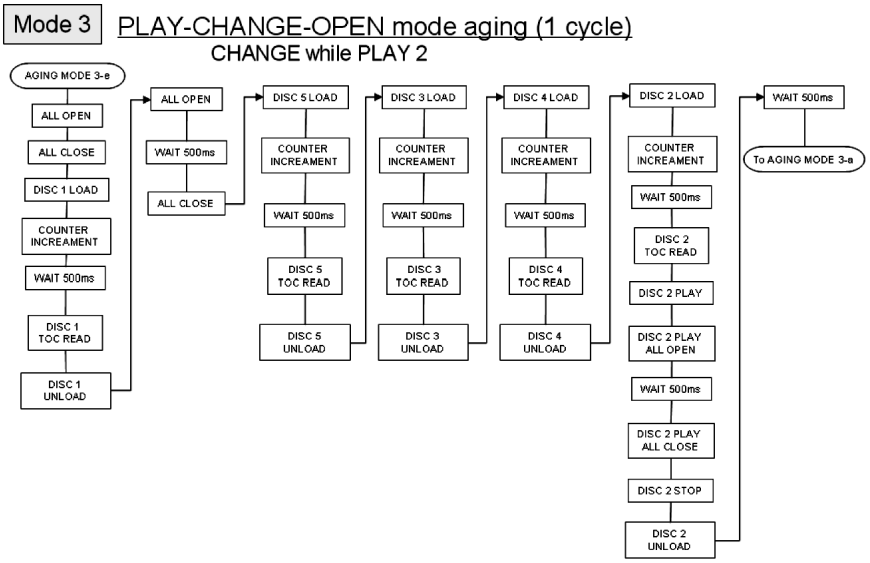


Mode 3 PLAY-CHANGE-OPEN mode aging (1 cycle)

CHANGE while PLAY 3







7.3. Error code Table Display

Self-Diagnosis Function (refer Section 7.2) provides information on any problems occuring 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.

7.3.1. Error Code Table for Deck Mechanism

Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
H01	Mode switch abnormal (Plunger and capstan motor)	Detection of switch for “On” when the deck mechanism is in the driving mode. Detection time at 1.6ms in 6 times interval	H01	For Deck Mechanism Unit (Deck 1/2) Press [STOP, ■] on main unit for next error. To exit, press [POWER] button on main unit. Normal operation shall executed upon next powering on of the main unit.
H02	REC_INHFswitch abnormal	Detection of switch for presence of the FORWARD recording tab when a cassette is loaded into the deck. Detection time is 20ms at 2 times interval.	H02	For Deck Mechanism Unit (Deck 1/2) Press [STOP, ■] on main unit for next error. To exit, press [POWER] button on main unit. Normal operation shall executed upon next powering on of the main unit.
H03	HALF switch abnormal	Detection of switch for "ON" state when a casstte is loaded into the deck. Detection time is 20ms at 2 times interval. When no cassette is loaded, it shall be in "OFF" state	H03	For Deck Mechanism Unit (Deck 1/2) Press [STOP, ■] on main unit for next error. To exit, press [POWER] button on main unit. Normal operation shall executed upon next powering on of the main unit.

Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
F01	Reel pulse abnormal	Detection of switch for the reel pulse signal toggling between high and low.		For Deck Mechanism Unit (Deck 1/2) Press [STOP, ■] on main unit for next error. To exit, press [POWER] button on main unit. Normal operation shall executed upon next powering on of the main unit.
F02	TPS abnormal	Tape position detection signal. It is abnormal condition when the tape ends before the checking is completed		For Deck Mechanism Unit (Deck 1/2) Press [STOP, ■] on main unit for next error. To exit, press [POWER] button on main unit. Normal operation shall executed upon next powering on of the main unit.

7.3.2. Error Code Table For CD Changer Block

Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
F15	RESET SW abnormal	REST SW: ON is not detected within the specified time.		For CD unit (For Traverse). Press [STOP, ■] on main unit for next error.
F26	Transmission error between CD Servo LSI IC and microprocessor IC	When set to CD mode, the sense signal does not turn “Low”, a fail safe time after system command transmission is sent.		For CD unit (For Traverse). Press [STOP, ■] on main unit for next error.
IHMS	Cam gear abnormality	Cam gear does not rotate to “HOME” position.		For CD changer unit (CRS1). Press [SINGLE CHANGE] on main unit for next error.
ICSL	Cam gear/gear units abnormal	Cam gear does not rotate to “PLAY” driving position and hence does not drive playing tray to “STOCK” position.		For CD changer unit (CRS1). Press [SINGLE CHANGE] on main unit for next error.

Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
ISTK	Drive rack/gear assembly abnormal	The tray drive rack does not move to “STOCK” position. (Tray does not move to “STOCK” position)		For CD changer unit (CRS1). Press [SINGLE CHANGE] on main unit for next error.
IPLY	Drive rack/gear assembly abnormal	The tray drive rack does not move to “PLAY” position. (Tray does not move to “PLAY” position)		For CD changer unit (CRS1). Press [SINGLE CHANGE] on main unit for next error.
ITOP	UD assembly	UD Rack does not move to front direction. This lead to UD base not raise to top position.		For CD changer unit (CRS1). Press [SINGLE CHANGE] on main unit for next error.
IUDS	UD assembly	After TOP SW is detected, UD rack does not move into tray 1 position.		For CD changer unit (CRS1). Press [SINGLE CHANGE] on main unit for next error.
HOME	Cam gear/gear assembly abnormal	Cam gear does not move to “HOME” position under following conditions 1. After tray is load to “PLAY” position. 2. After tray is unload to “STOCK” position.		For CD changer unit (CRS1). Press [SINGLE CHANGE] on main unit for next error.
LOAD	Tray drive assembly abnormal	Tray unit does not move from “STOCK” to “PLAY” position		For CD changer unit (CRS1). Press [SINGLE CHANGE] on main unit for next error.
UNLD	Tray drive assembly abnormal	Tray unit does not move from “PLAY” to “STOCK” position		For CD changer unit (CRS1). Press [SINGLE CHANGE] on main unit for next error.

Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
PDRV	Cam gear/gear assembly abnormal	Cam gear does not move from “HOME” to “PLAY” drive position.		For CD changer unit (CRS1). Press [SINGLE CHANGE] on main unit for next error.
UDU	UD base asssembly abnormal	UD Base assembly does not move upwards from tray 5 to tray 2		For CD changer unit (CRS1). Press [SINGLE CHANGE] on main unit for next error.
UDD	UD base asssembly abnormal	UD Base assembly does not move downwards from tray 1 to tray 5.		For CD changer unit (CRS1). Press [SINGLE CHANGE] on main unit for next error.
F1NG	Fail - safe mode. (For open/close tray unit(s))	When the tray open operation is performed, it fails to open. It will automatically close all trays after the time-out by the microprocessor. During this time when it fails, the error code will appear.		For CD changer unit (CRS1). Press [SINGLE CHANGE] on main unit for next error.
F2NG	Fail - safe mode. (For open/close tray unit(s))	When the tray close operation is performed, it fails to close. It will automatically open all trays after the time-out by the microprocessor. During this time when it fails, the error code will appear.		For CD changer unit (CRS1). Press [SINGLE CHANGE] on main unit for next error.
SRVC_TRV	To unlock the traverse unit for service	1. All trays set to “STOCK” position 2. Mechanism set to tray 5 3. Cam gear set to “HOME” position		For CD changer unit (CRS1). Press [SINGLE CHANGE] on main unit for next error.
RSET	Cam gear jam/close sensor faulty	During tray re-open, the cam gear will rotate in the opposite direction to reset the cam gearposition. When it fails, the error code will appear.		For CD changer unit (CRS1). Press [SINGLE CHANGE] on main unit for next error.

7.3.3. Error Code Table For Power Supply

Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
F61	Power Amp IC output abnormal	Upon power on, PCONT=HIGH, DCDET=L after checking LSI.		For power. Press [STOP, ■] on main unit for next error.

7.3.4. CRS1 Error Code display

CRS1 Error Code display

1. The errors that occured in CRS1 Mechanism can be recalled and displayed, in the order of the occurence under self-diagnostic for procedures to enter this mode.
   - Only the first 5 errors will be memorized (in backup memory). The subsequence error shall be ignored and not memorize. For system with EEPROM as memory backup,memory space in EEPROM is neccesary.
2. To display all error code memorized

   In CRS1 Self-Diagnostic mode, press [SINGLE CHANGE] to display subsequence error code.

   It shall repeat after reaching error no. 5.

   e.g.:

   [1 _ _ _ _ I H M S] → [SINGLE CHANGE]

   [2 _ _ _ _ I T O P] → [SINGLE CHANGE]

   [3 _ _ _ _ H O M E] → [SINGLE CHANGE]

   [4 _ _ _ _ L O A D] → [SINGLE CHANGE]

   [5 _ _ _ _ _ U D D] → [SINGLE CHANGE]
3. To clear the error code memory

   In CRS1 Self-Diagnostic mode, long press [SINGLE CHANGE] key (2s or more)

8 Assembling and Disassembling

"ATTENTION SERVICER"

Be careful when disassembling and servicing.

Some chassis components may have sharp edges.

Special Note:

1. **This model uses a CD changer mechanism unit (CRS1). In this following section does not contain the necessary assembly and disassembly information except the assembly and disassembly of the traverse unit. Kindly refer to the original service manual for the CD changer mechanism unit. (Order No. MD0509368C0).**
2. **This section describes the disassembly procedures for all the major printed circuit boards and main components.**
3. **Before the disassembly process was carried out, do take special note that all safety precautions are to be carried out. (Ensure that no AC power supply is connected during disassembling.)**
4. **For assembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.**
5. **Do take note of the locators on each printed circuit board during reassembling procedures.**
6. **The Switch Regulator IC may have high temperature after prolonged use.**
7. **Use caution when removing the top cabinet and avoid touching heat sinks located in the unit.**

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

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

- **Disassembly of Top Cabinet**
- **Disassembly of CD Changer Unit (CRS1)**
- **Disassembly of Subwoofer Interface P.C.B.**
- **Disassembly of Rear Panel**
- **Disassembly of Transformer P.C.B.**
- **Disassembly of Main P.C.B.**
- **Disassembly of Sub Power P.C.B.**
- **Replacement of Regulator IC (IC5101)**
- **Replacement of Regulator Transistor (Q5111)**
- **Replacement of Regulator Transistor (Q5112)**
- **Replacement of Regulator Transistor (Q5105)**
- **Replacement of Regulator Transistor (Q5106)**
- **Disassembly of Power P.C.B.**
- **Replacement of Digital-Amp IC (IC5300)**
- **Replacement of Digital-Amp IC (IC5200)**
- **Replacement of Digital-Amp IC (IC5000)**
- **Replacement of Digital-Amp IC (IC5400)**
- **Disassembly of Front Panel**
- **Disassembly of USB P.C.B.**
- **Disassembly of Panel P.C.B., Remote Sensor P.C.B. & Sub Panel P.C.B.**
- **Disassembly of Deck Mechanism Unit**
- **Disassembly for Deck P.C.B.**
- **Disassembly of Deck Mechanism**
- **Disassembly of Deck Mechanism P.C.B.**
- **Disassembly of Traverse Unit**
- **Disassembly CD Lid**

- **Disassembly Cassette Lid**
- **Rectification for Tape Jam Problem**

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

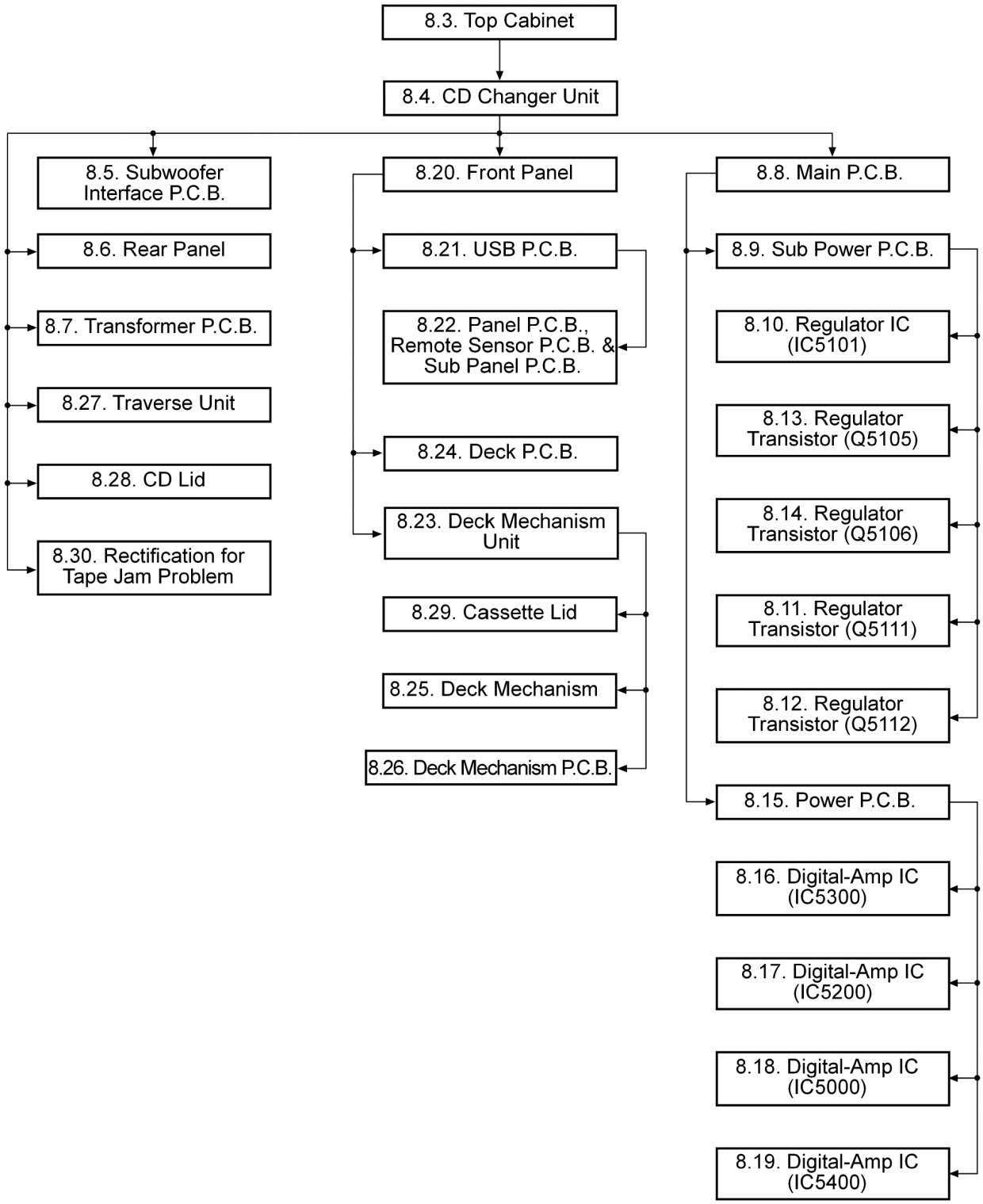
Below shown is the part no. of different screw types used:

ⓐ :RHD30007-K2J
ⓑ :RHD30119-S
ⓒ :XTW3+10TFJ
ⓓ :RHD30111-31
ⓔ :XTWS3+6TFJ
ⓕ :XTV3+10GFJ-M
ⓖ :XTW3+12TFJ
ⓗ :RHD26046-L
ⓘ :XTW26+10SFJ
ⓙ :XYC2+JF17FJ

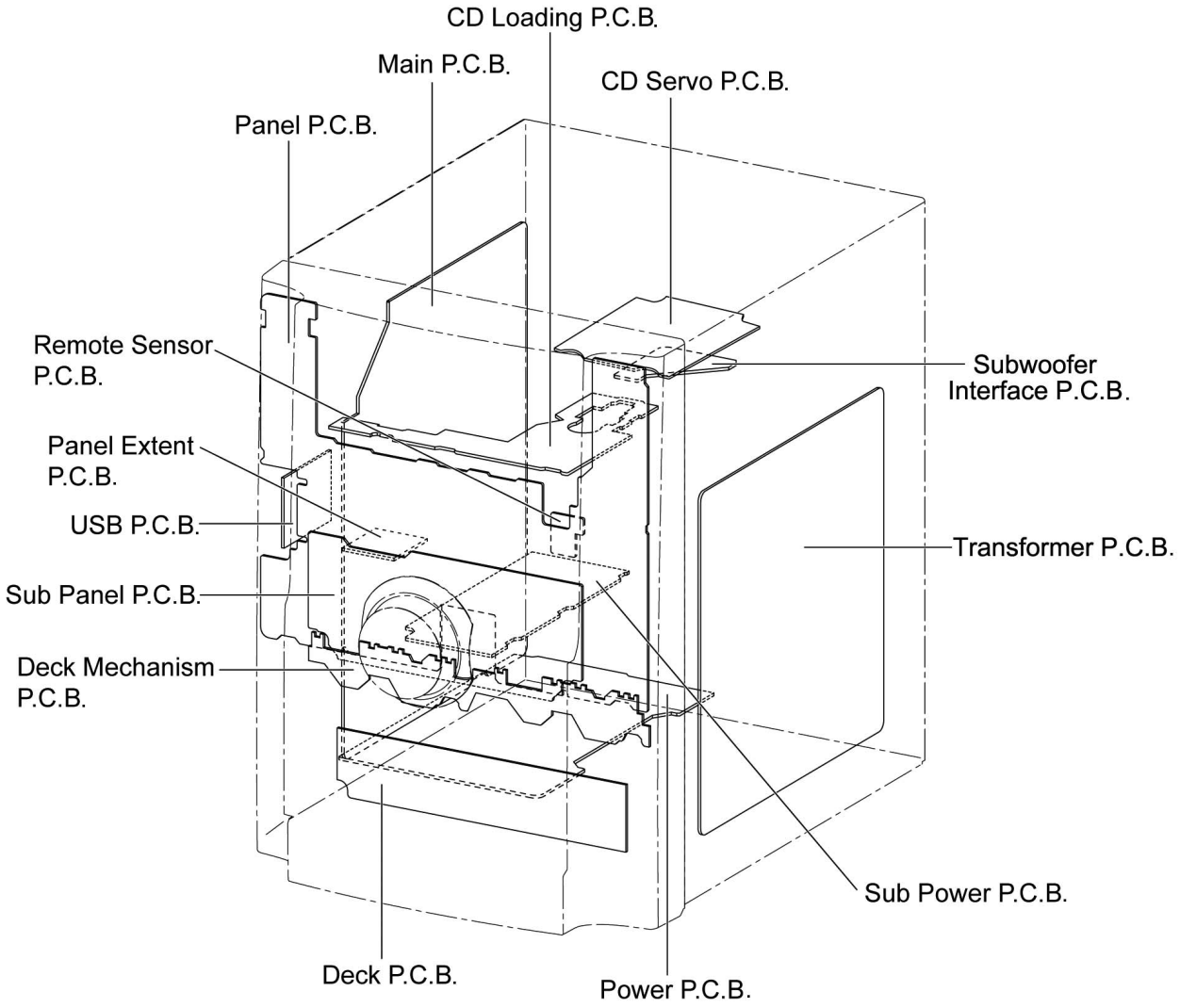
8.1. Disassembly flow chart

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

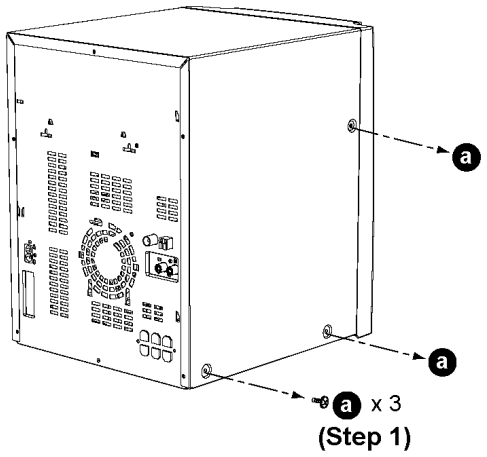
To assemble the unit, reverse the steps shown in the chart below.



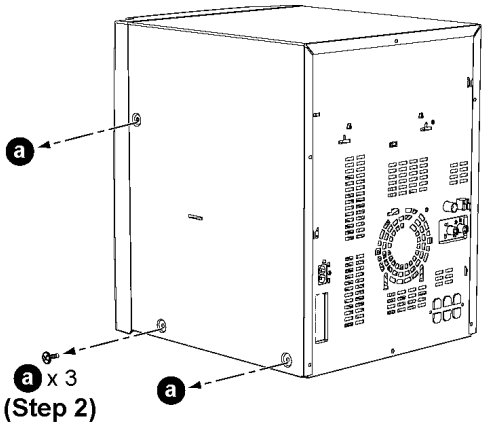
8.2. Main Parts Location Diagram



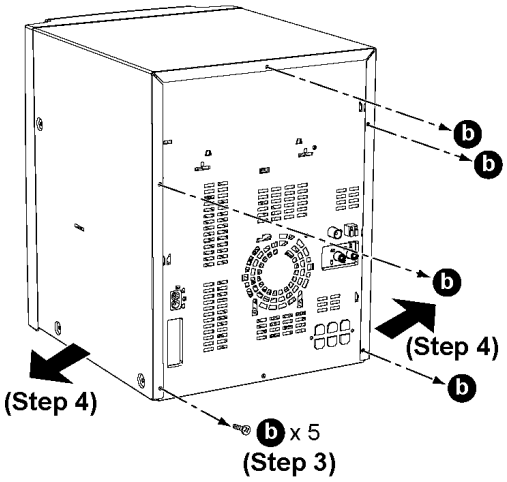
8.3. Disassembly of Top Cabinet



Step 1 : Remove 3 screws on Top Cabinet (L) side.

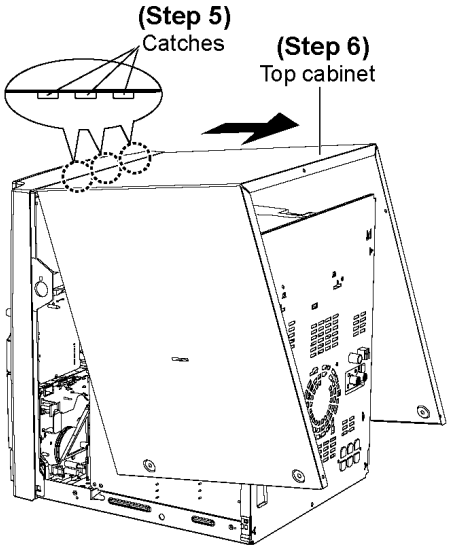


Step 2 : Remove 3 screws on Top Cabinet (R) side.



Step 3 : Remove 5 screws.

Step 4 : Lift the both sides of Top Cabinet outwards.

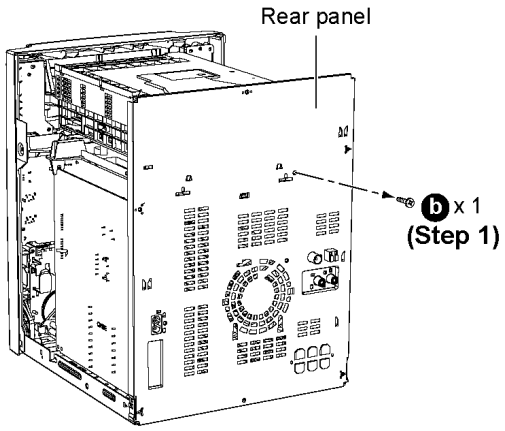


Step 5 : Push the Top Cabinet backwards to release the catches.

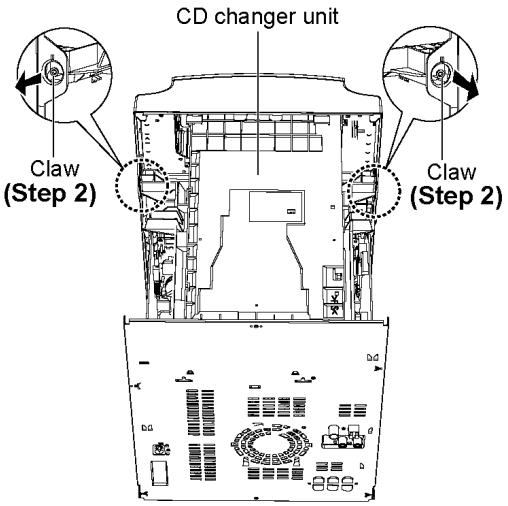
Step 6 : Remove Top Cabinet.

8.4. Disassembly of CD Changer Unit (CRS1)

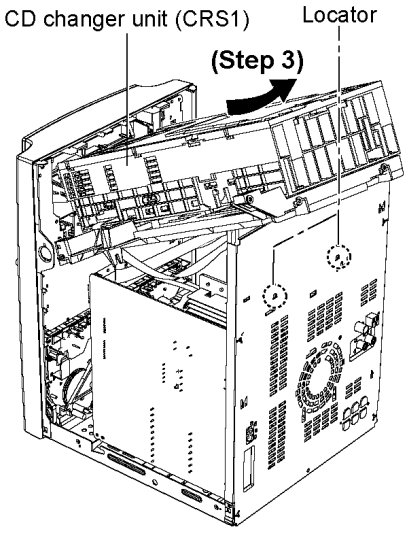
- Follow the (Step 1) - (Step 6) of Item 8.3



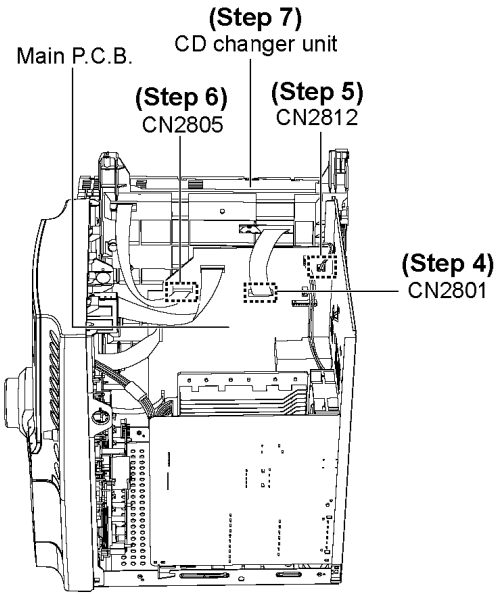
Step 1 : Remove 1 screw at Rear Panel.



Step 2 : Release the claws outwards on both ends.



Step 3 : Lift up the CD Changer Unit (CRS1) upwards.



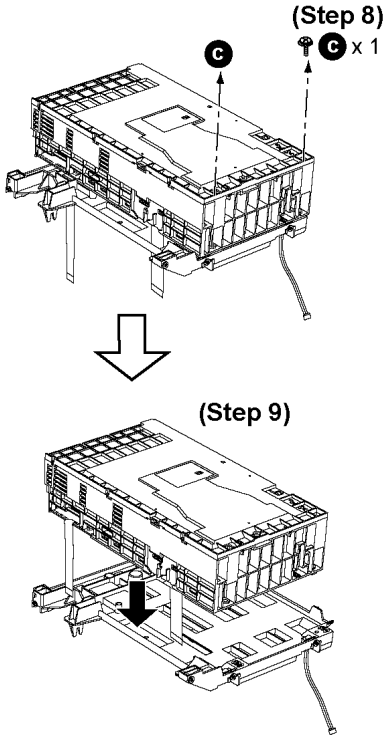
Step 4 : Detach 22P FFC cable at connectors (CN2801) on Main P.C.B..

Step 5 : Detach 3P cable at connector (CN2812) on Main P.C.B..

Step 6 : Detach 14P FFC cable at connectors (CN2805) on Main P.C.B..

Step 7 : Remove CD changer unit (with chassis).

- **Disassembly of Mecha Chassis**



Step 8 : Remove 2 screws.

Step 9 : Remove the Mecha chassis as arrow shown.

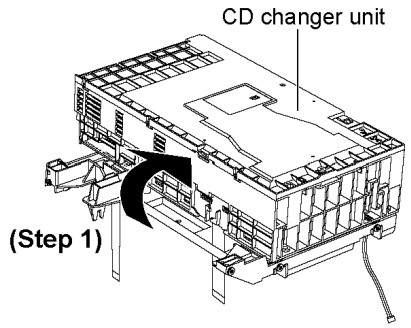
Note:

For disassembly & assembly of traverse unit, please refer to original Service Manual of the Disassembly and Assembly of

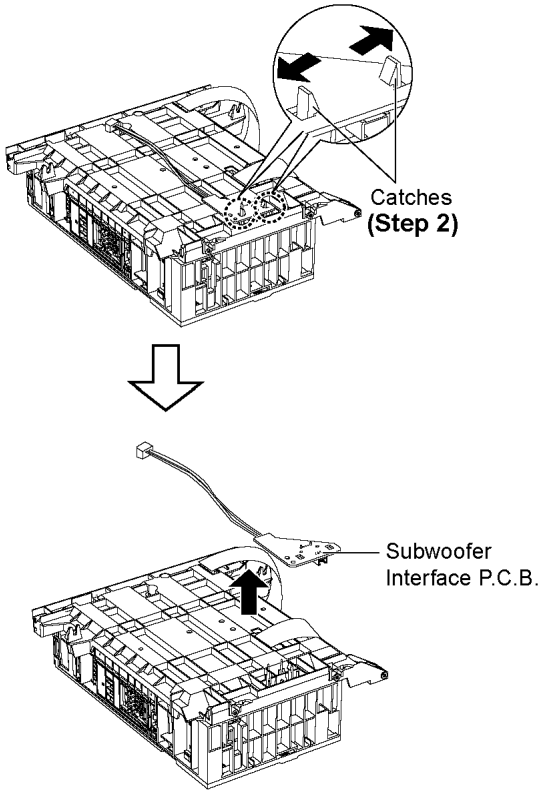
the CD Changer Unit (CRS1).

8.5. Disassembly of Subwoofer Interface P.C.B.

- Follow the (Step 1) - (Step 6) of Item 8.3
- Follow the (Step 1) - (Step 7) of Item 8.4



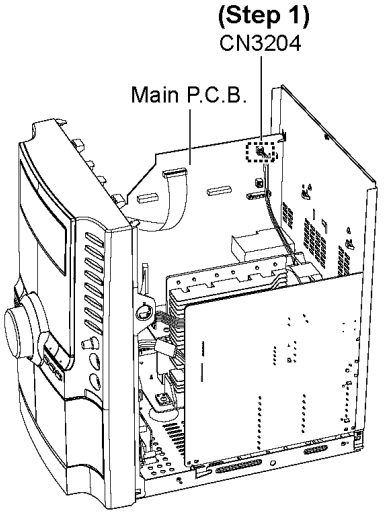
Step 1 : Upset the CD changer mechanism.



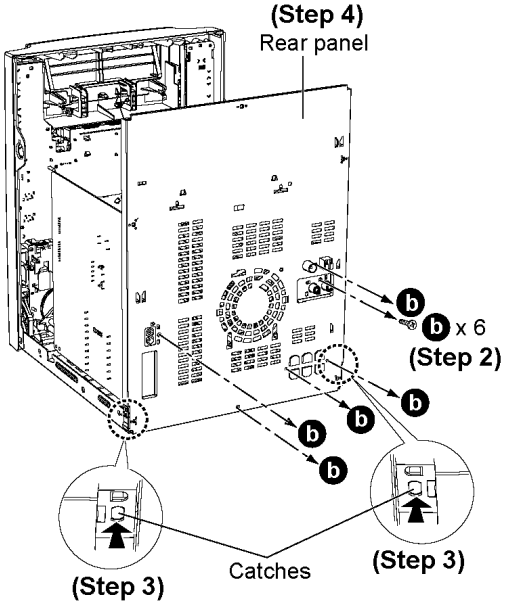
Step 2 : Release 2 catches and remove Subwoofer Interface P.C.B. as arrow shown.

8.6. Disassembly of Rear Panel

- Follow the (Step 1) - (Step 6) of Item 8.3
- Follow the (Step 1) - (Step 7) of Item 8.4



Step 1 : Detach 2P cable at connector (CN3204) on Main P.C.B..



Step 2 : Remove 6 screws.

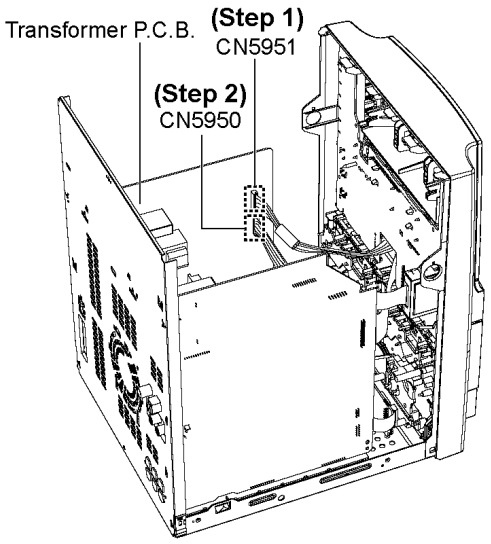
Step 3 : Release 2 catches.

Step 4 : Remove Rear Panel.

8.7. Disassembly of Transformer P.C.B.

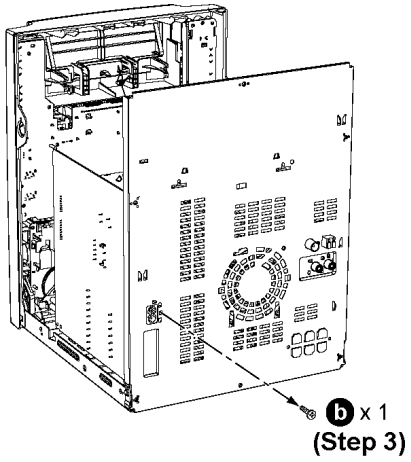
- Follow the (Step 1) - (Step 6) of Item 8.3
- Follow the (Step 1) - (Step 7) of Item 8.4

CAUTION: HOT!!
DO NOT TOUCH THE HEAT SINK

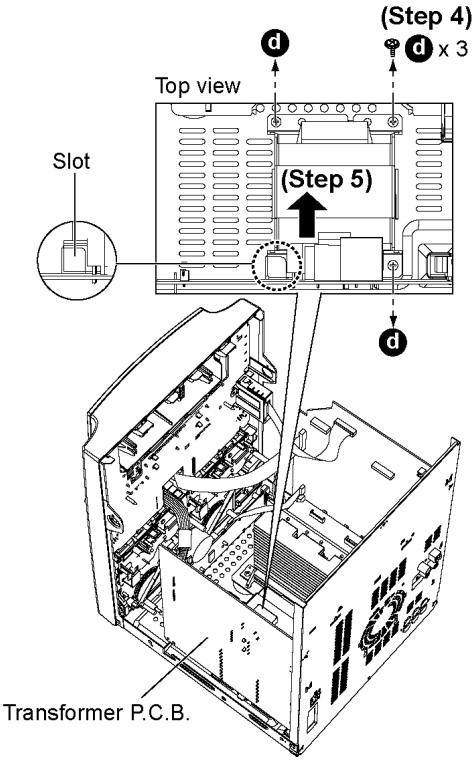


Step 1 : Detach 9P cable at connector (CN5951) on Transformer P.C.B..

Step 2 : Detach 9P cable at connectors (CN5950) on Transformer P.C.B..



Step 3 : Remove 1 screw.

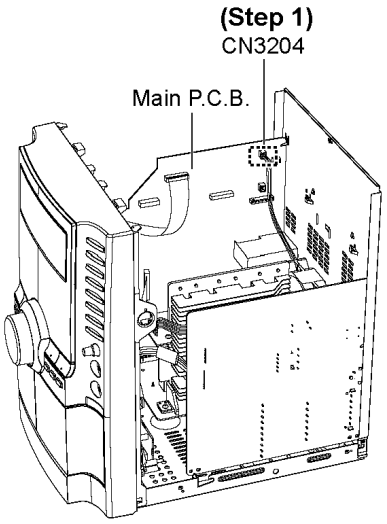


Step 4 : Remove 3 screws (Mounting screws for transformer to bottom chassis).

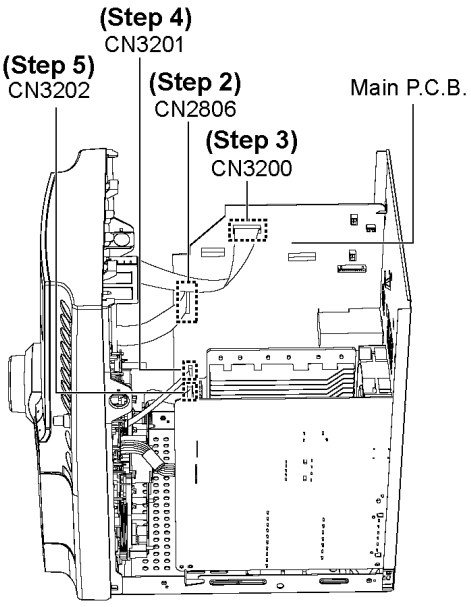
Step 5 : Push the Transformer P.C.B. backwards to remove it.

8.8. Disassembly of Main P.C.B.

- Follow the (Step 1) - (Step 6) of Item 8.3
- Follow the (Step 1) - (Step 7) of Item 8.4



Step 1 : Detach 2P cable at connector (CN3204) on Main P.C.B..

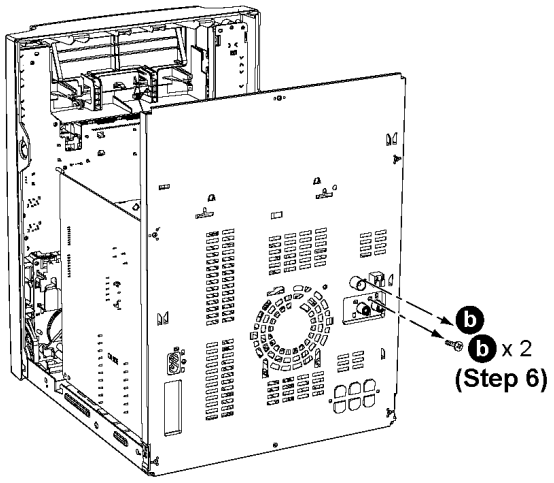


Step 2 : Detach 30P FFC cable at connector (CN2806) on Main P.C.B..

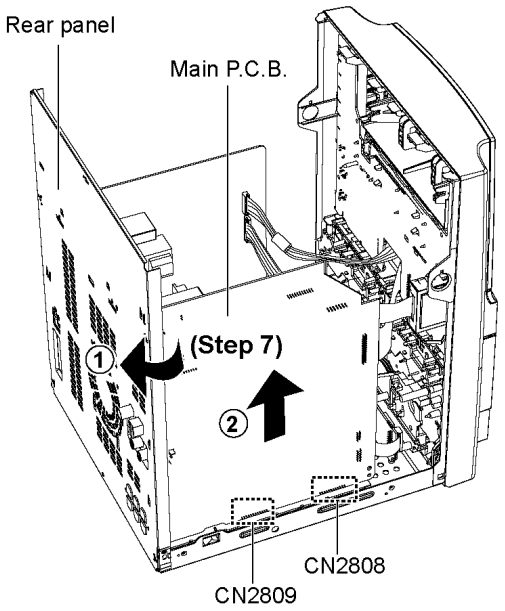
Step 3 : Detach 22P FFC cable at connector (CN3200) on Main P.C.B..

Step 4 : Detach 10P FFC cable at connector (CN3201) on Main P.C.B..

Step 5 : Detach 11P FFC cable at connector (CN3202) on Main P.C.B..



Step 6 : Remove 2 screws.



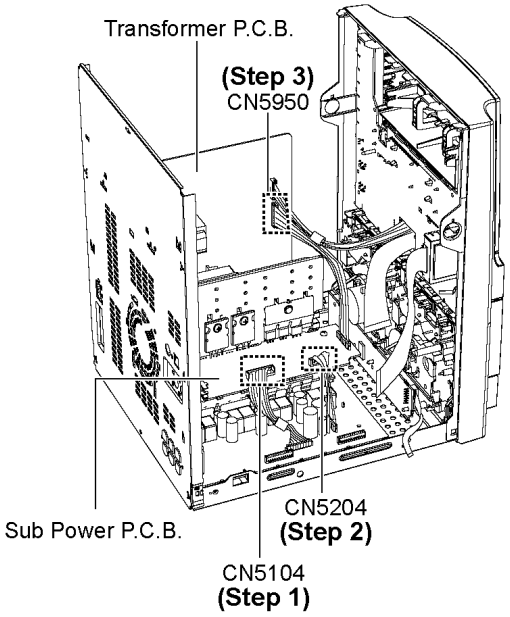
Step 7 : Slightly pull out the rear panel as arrow (1) shown and lift up the Main P.C.B. as arrow (2) shown to remove It.

Caution: Do not exert strong force when disassembly Main P.C.B. as it may damage Power P.C.B.

8.9. Disassembly of Sub Power P.C.B.

- Follow the (Step 1) - (Step 6) of Item 8.3
- Follow the (Step 1) - (Step 7) of Item 8.4
- Follow the (Step 1) - (Step 7) of Item 8.8

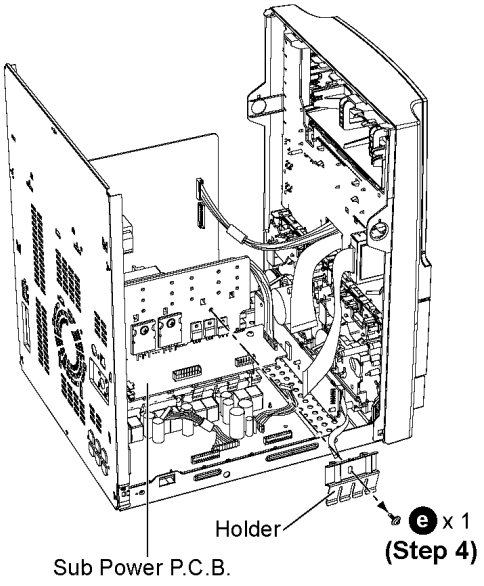
CAUTION: HOT!!
DO NOT TOUCH THE HEAT SINK



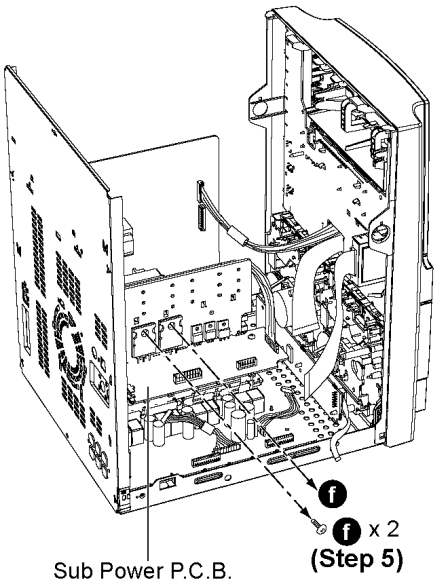
Step 1 : Detach 9P cable at connector (CN5104) on Sub Power P.C.B..

Step 2 : Detach 6P cable at connector (CN5204) on Sub Power P.C.B..

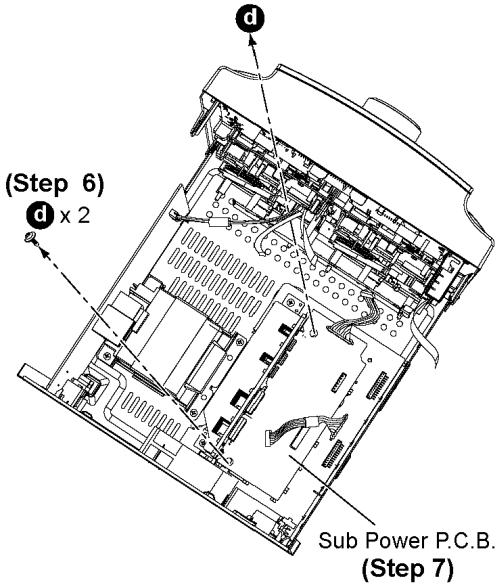
Step 3 : Detach 9P cable at connector (CN5950) on Transformer P.C.B..



Step 4 : Remove 1 screw to remove holder.



Step 5 : Remove 2 screws (Regulator Transistor).



Step 6 : Remove 2 screws.

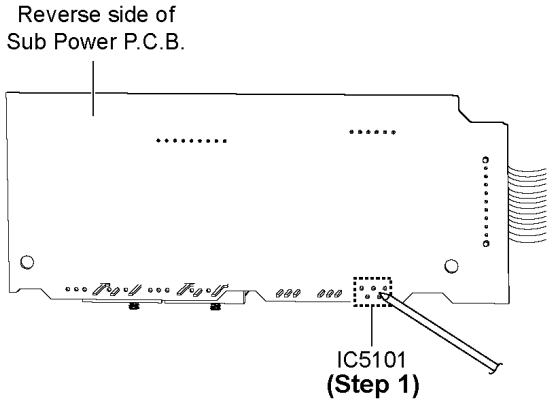
Step 7 : Remove Sub Power P.C.B..

Note:

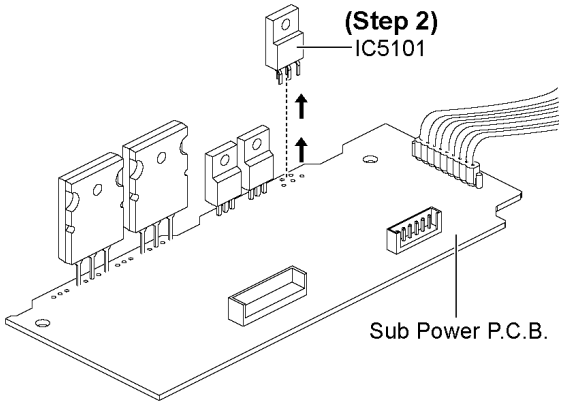
Insulate the Sub Power P.C.B. with insulation material to avoid short circuit.

8.10. Replacement of Regulator IC (IC5101)

- Follow the (Step 1) - (Step 6) of Item 8.3
- Follow the (Step 1) - (Step 7) of Item 8.4
- Follow the (Step 1) - (Step 7) of Item 8.8
- Follow the (Step 1) - (Step 7) of Item 8.9

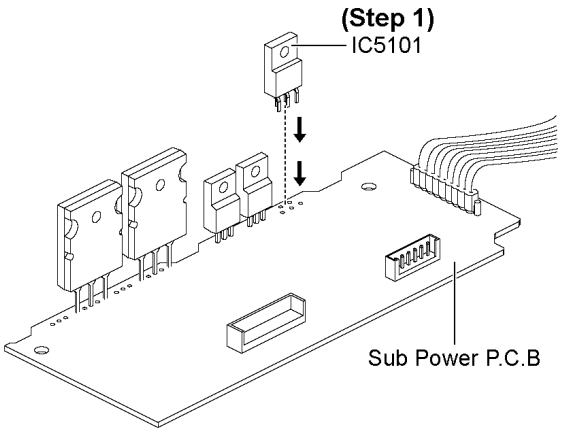


Step 1 : Desolder pins of Regulator IC (IC5101) on reverse of Sub Power P.C.B..



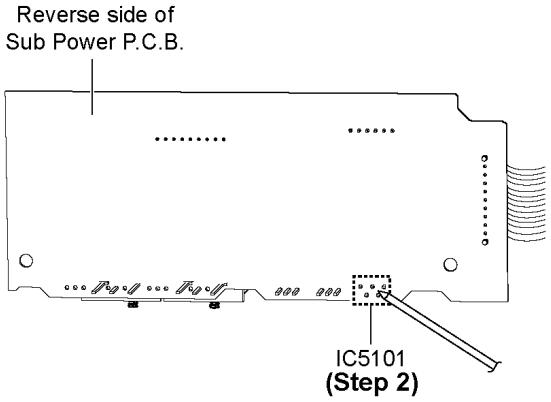
Step 2 : Remove Regulator IC (IC5101) from Sub Power P.C.B..

8.10.1. Assembly of Regulator IC (IC5101)



Step 1 : Mount the Regulator IC (IC5101) onto the Sub Power P.C.B..

Caution : Ensure all pins are seated properly.

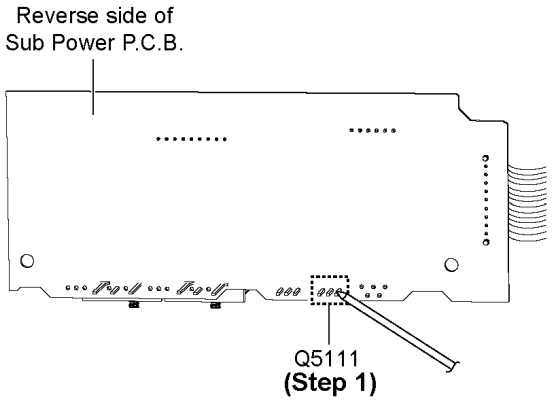


Step 2 : Solder the pins of the Regulator IC (IC5101) on the reverse side of Sub Power P.C.B..

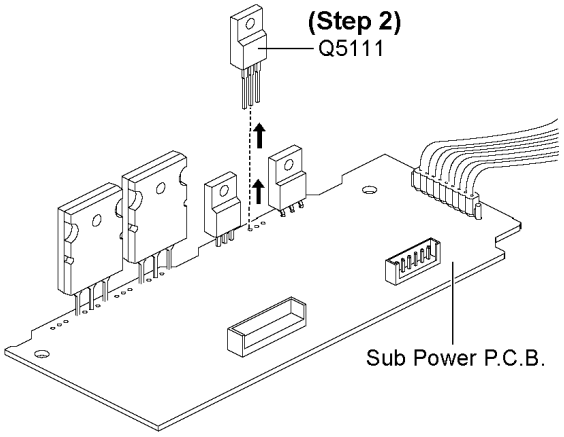
Caution : Before soldering, ensure all pins are properly seated and no 'floating' of pins.

8.11. Replacement of Regulator Transistor (Q5111)

- Follow the (Step 1) - (Step 6) of Item 8.3
- Follow the (Step 1) - (Step 7) of Item 8.4
- Follow the (Step 1) - (Step 7) of Item 8.8
- Follow the (Step 1) - (Step 7) of Item 8.9

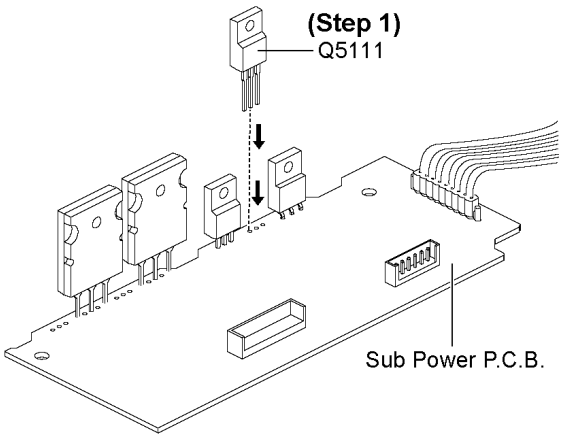


Step 1 : Desolder pins of Regulator Transistor (Q5111) on reverse of Sub Power P.C.B..



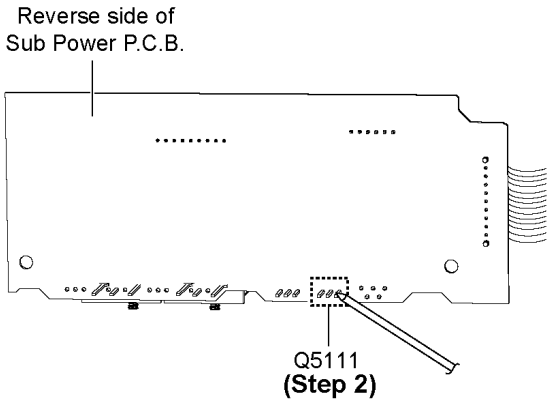
Step 2 : Remove Regulator Transistor (Q5111) from Sub Power P.C.B..

8.11.1. Assembly of Regulator Transistor (Q5111)



Step 1 : Mount the Regulator Transistor (Q5111) onto the Sub Power P.C.B..

Caution : Ensure all pins are seated properly.

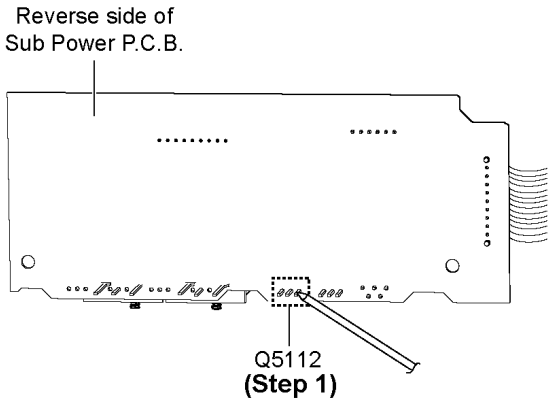


Step 2 : Solder the pins of the Regulator Transistor (Q5111) on the reverse side of Sub Power P.C.B..

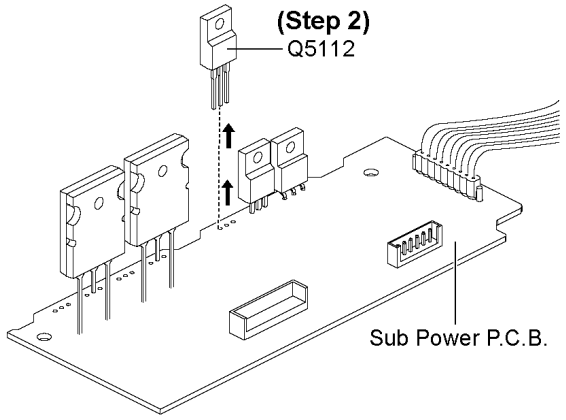
Caution : Before soldering, ensure all pins are properly seated and no 'floating' of pins.

8.12. Replacement of Regulator Transistor (Q5112)

- Follow the (Step 1) - (Step 6) of Item 8.3
- Follow the (Step 1) - (Step 7) of Item 8.4
- Follow the (Step 1) - (Step 7) of Item 8.8
- Follow the (Step 1) - (Step 7) of Item 8.9

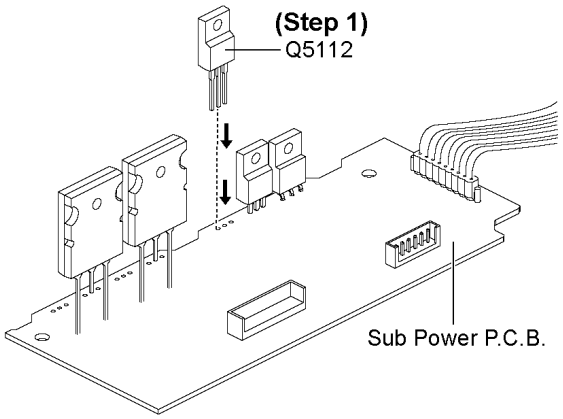


Step 1 : Desolder pins of Regulator Transistor (Q5112) on reverse of Sub Power P.C.B..



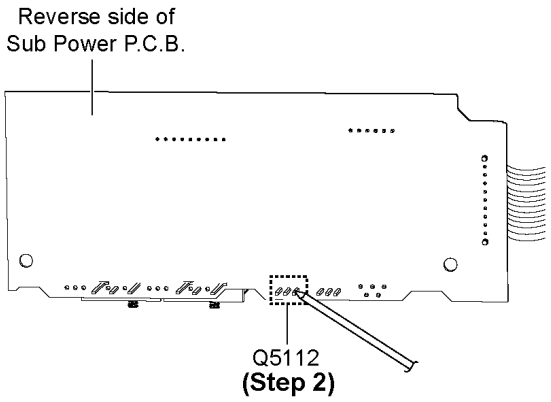
Step 2 : Remove Regulator Transistor (Q5112) from Sub Power P.C.B..

8.12.1. Assembly of Regulator Transistor (Q5112)



Step 1 : Mount the Regulator Transistor (Q5112) onto the Sub Power P.C.B..

Caution : Ensure all pins are seated properly.

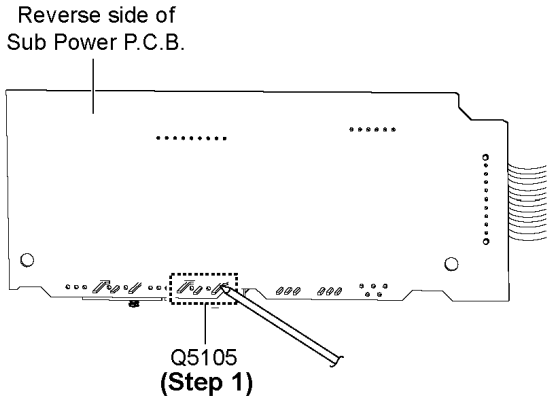


Step 2 : Solder the pins of the Regulator Transistor (Q5112) on the reverse side of Sub Power P.C.B..

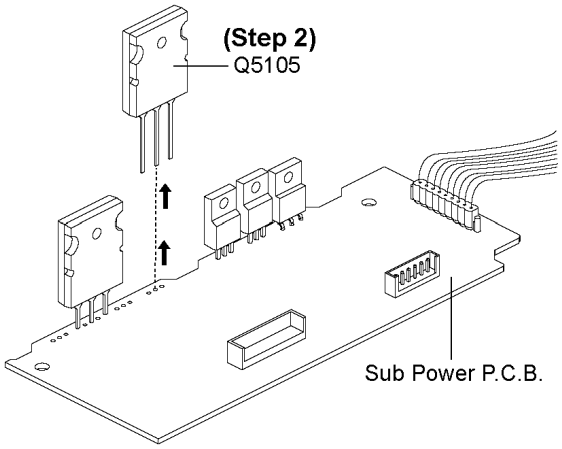
Caution : Before soldering, ensure all pins are properly seated and no 'floating' of pins.

8.13. Replacement of Regulator Transistor (Q5105)

- Follow the (Step 1) - (Step 6) of Item 8.3
- Follow the (Step 1) - (Step 7) of Item 8.4
- Follow the (Step 1) - (Step 7) of Item 8.8
- Follow the (Step 1) - (Step 7) of Item 8.9

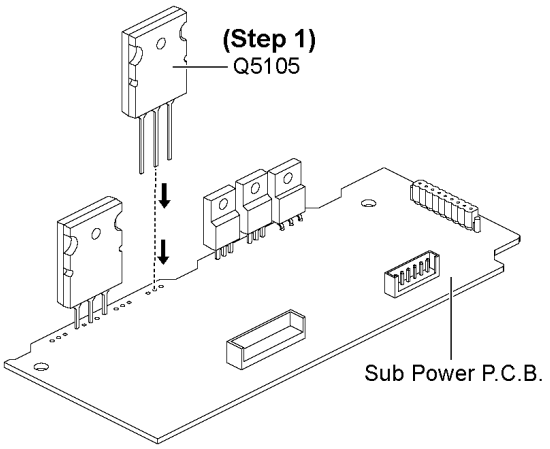


Step 1 : Desolder pins of Regulator Transistor (Q5105) on reverse of Sub Power P.C.B..



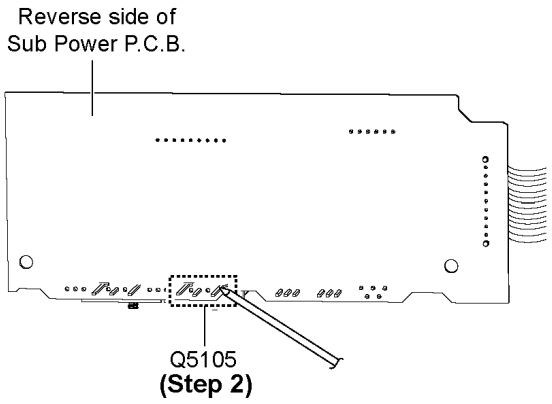
Step 2 : Remove Regulator Transistor (Q5105) from Sub Power P.C.B..

8.13.1. Assembly of Regulator Transistor (Q5105)



Step 1 : Mount the Regulator Transistor (Q5105) onto the Sub Power P.C.B..

Caution : Ensure all pins are seated properly.

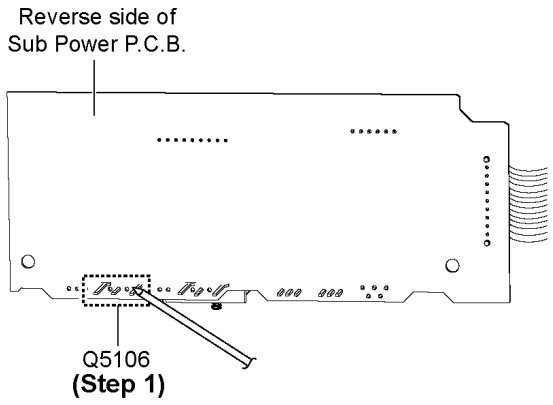


Step 2 : Solder the pins of the Regulator Transistor (Q5105) on the reverse side of Sub Power P.C.B..

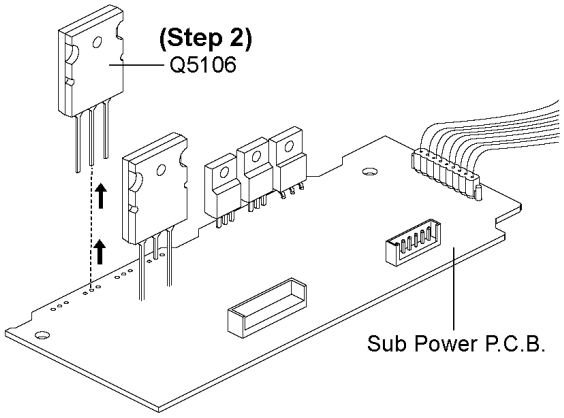
Caution : Before soldering, ensure all pins are properly seated and no 'floating' of pins.

8.14. Replacement of Regulator Transistor (Q5106)

- Follow the (Step 1) - (Step 6) of Item 8.3
- Follow the (Step 1) - (Step 7) of Item 8.4
- Follow the (Step 1) - (Step 7) of Item 8.8
- Follow the (Step 1) - (Step 7) of Item 8.9

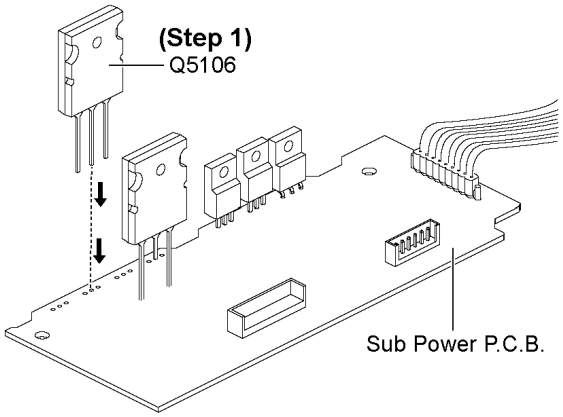


Step 1 : Desolder pins of Regulator Transistor (Q5106) on reverse of Sub Power P.C.B..



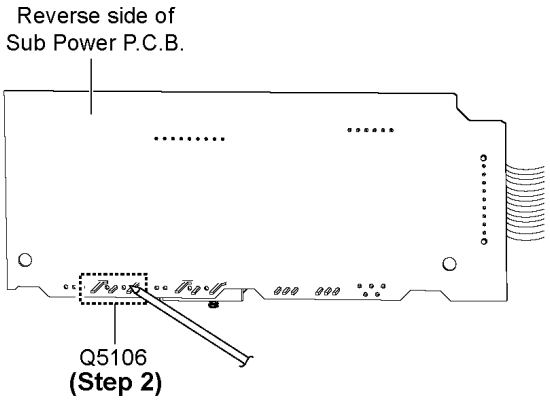
Step 2 : Remove Regulator Transistor (Q5106) from Sub Power P.C.B..

8.14.1. Assembly of Regulator Transistor (Q5106)



Step 1 : Mount the Regulator Transistor (Q5106) onto the Sub Power P.C.B..

Caution : Ensure all pins are seated properly.



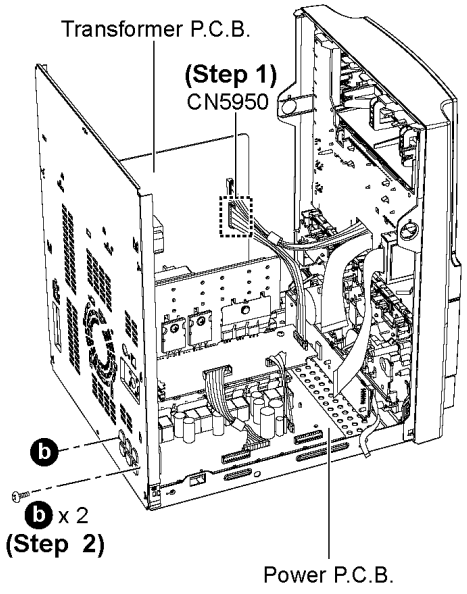
Step 2 : Solder the pins of the Regulator Transistor (Q5106) on the reverse side of Sub Power P.C.B..

Caution : Before soldering, ensure all pins are properly seated and no 'floating' of pins.

8.15. Disassembly of Power P.C.B.

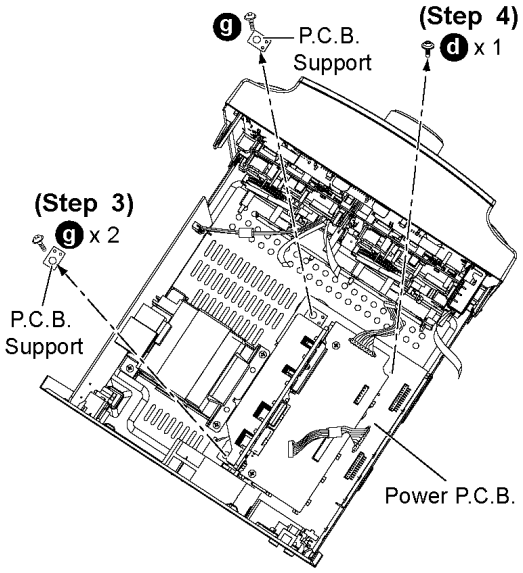
- Follow the (Step 1) - (Step 6) of Item 8.3
- Follow the (Step 1) - (Step 7) of Item 8.4
- Follow the (Step 1) - (Step 7) of Item 8.8

CAUTION: HOT!!
DO NOT TOUCH THE HEAT SINK



Step 1 : Detach 9P cable at connectors (CN5950) on Transformer P.C.B..

Step 2 : Remove 2 screws.



Step 3 : Remove 2 screws and P.C.B. support.

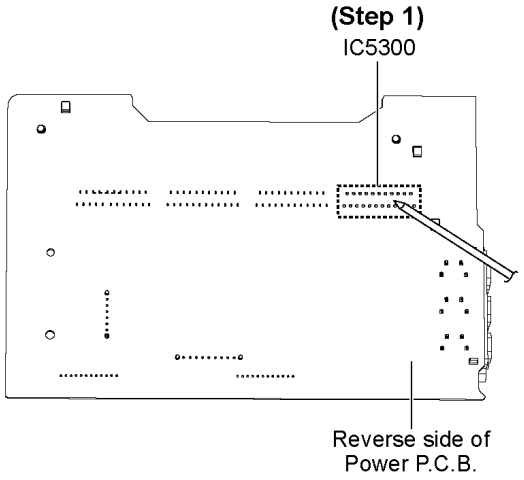
Step 4 : Remove 1 screw and remove Power P.C.B..

Note:

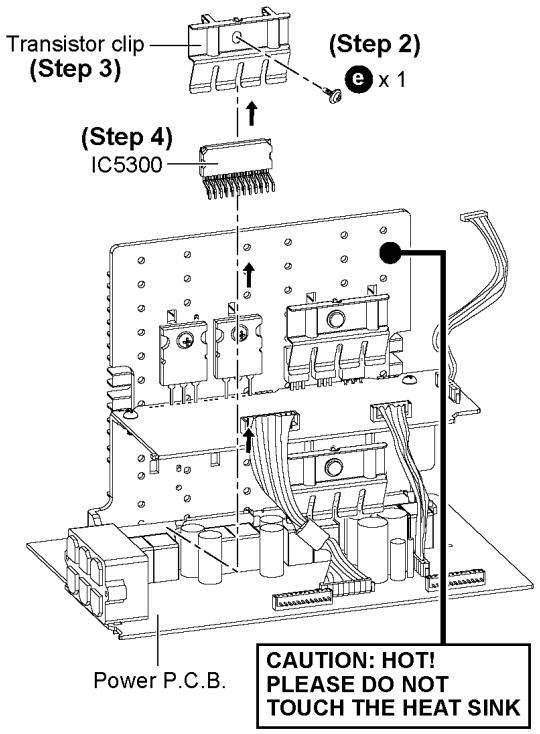
Insulate the Power P.C.B. with insulation material to avoid short circuit.

8.16. Replacement of Digital-Amp IC (IC5300)

- Follow the (Step 1) - (Step 6) of Item 8.3
- Follow the (Step 1) - (Step 7) of Item 8.4
- Follow the (Step 1) - (Step 7) of Item 8.8
- Follow the (Step 1) - (Step 4) of Item 8.15



Step 1 : Desolder pins of Digital-Amp IC (IC5300) on reverse side of Power P.C.B..



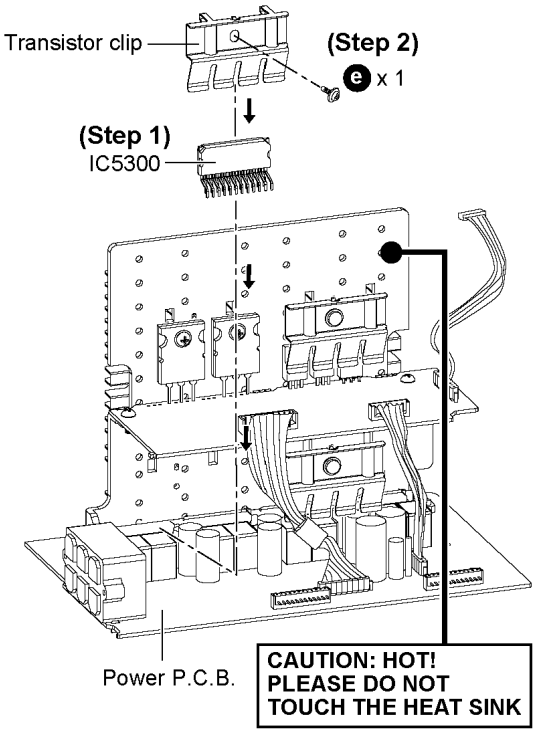
Step 2 : Remove 1 screw.

Step 3 : Remove Transistor clip in the direction of arrow shown.

Step 4 : Remove Digital-Amp IC (IC5300) from the heat sink unit.

Caution : Avoid touching the heat sink unit during replacement due to its hight temperature as it may lead to injuries/shock.

8.16.1. Assembly of Digital-Amp IC (IC5300)

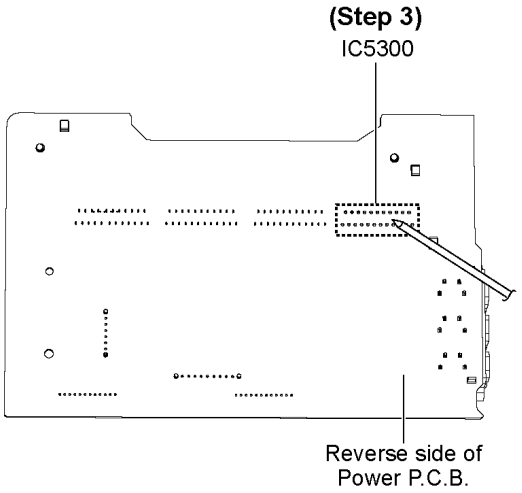


Step 1 : Mount the Digital-Amp IC (IC5300) onto the Power P.C.B..

Caution : Ensure all pins are seated properly.

Step 2 : Fix 1 screw to attach the Transistor clip to the heat sink unit.

Make sure it is well tighten to prevent overheat.

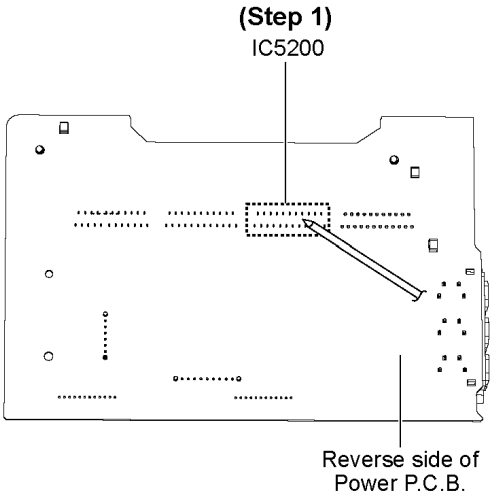


Step 3 : Solder the pins of the Digital-Amp IC (IC5300) on the reverse side of the Power P.C.B..

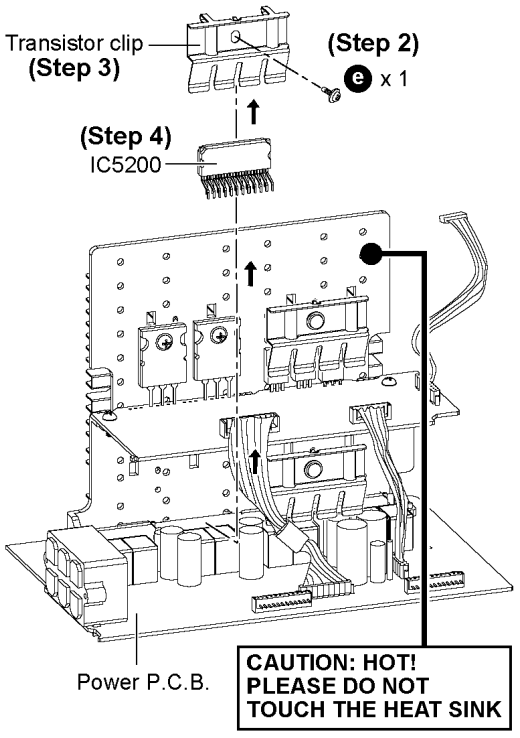
Caution : Before soldering, ensure all pins are properly seated and no 'Floating' of pins.

8.17. Replacement of Digital-Amp IC (IC5200)

- Follow the (Step 1) - (Step 6) of Item 8.3
- Follow the (Step 1) - (Step 7) of Item 8.4
- Follow the (Step 1) - (Step 7) of Item 8.8
- Follow the (Step 1) - (Step 4) of Item 8.15



Step 1 : Desolder pins of Digital-Amp IC (IC5200) on reverse side of Power P.C.B..



Step 2 : Remove 1 screw.

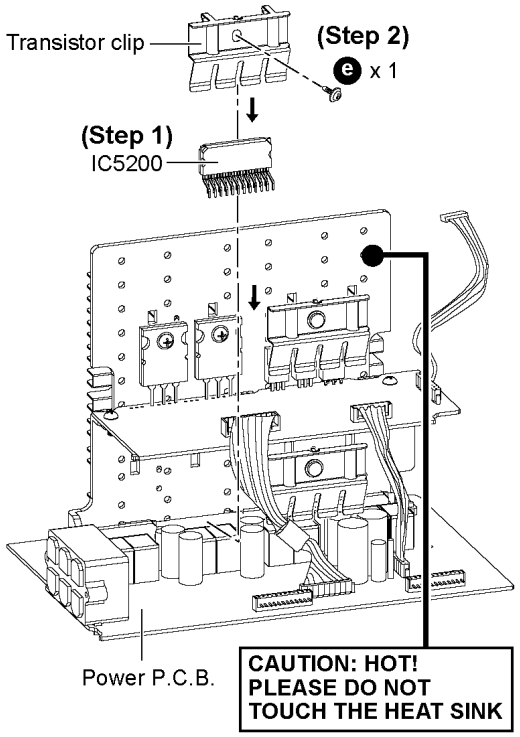
Step 3 : Remove Transistor clip in the direction of arrow shown.

Step 4 : Remove Digital-Amp IC (IC5200) from the heat sink unit.

Caution : Avoid touching the heat sink unit during replacement due to its hight temperature as it may lead to injuries/shock.

Caution : Before soldering, ensure all pins are properly seated and no 'Floating' of pins.

8.17.1. Assembly of Digital-Amp IC (IC5200)

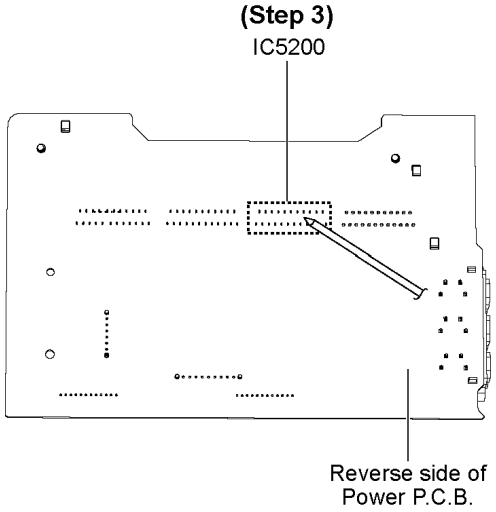


Step 1 : Mount the Digital-Amp IC (IC5200) onto the Power P.C.B..

Caution : Ensure all pins are seated properly.

Step 2 : Fix 1 screw to attach the Transistor clip to the heat sink unit.

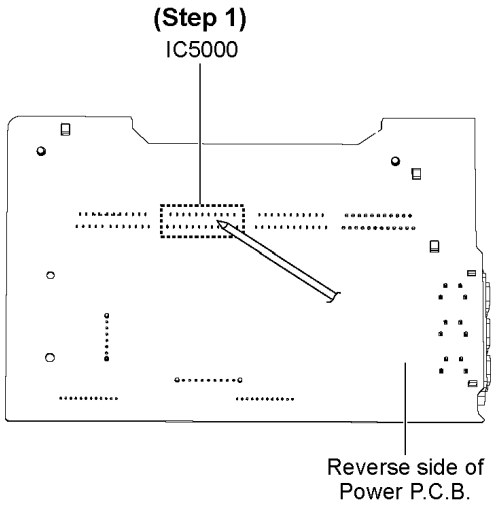
Make sure it is well tighten to prevent overheat.



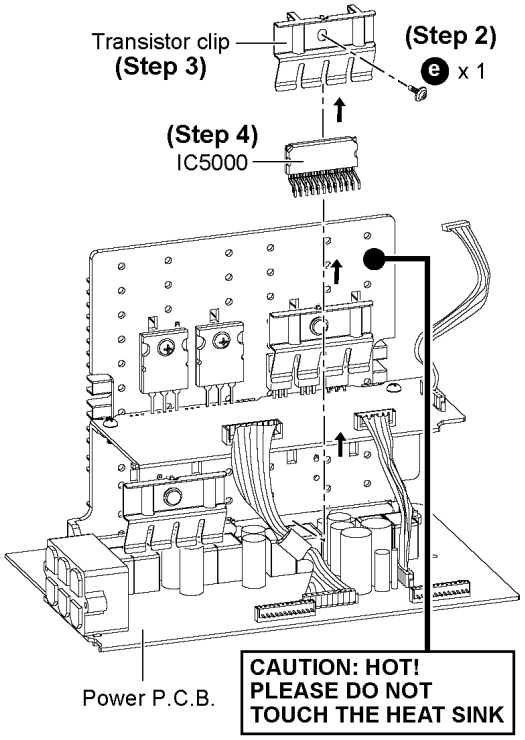
Step 3 : Solder the pins of the Digital-Amp IC (IC5200) on the reverse side of the Power P.C.B..

8.18. Replacement of Digital-Amp IC (IC5000)

- Follow the (Step 1) - (Step 6) of Item 8.3
- Follow the (Step 1) - (Step 7) of Item 8.4
- Follow the (Step 1) - (Step 7) of Item 8.8
- Follow the (Step 1) - (Step 4) of Item 8.15



Step 1 : Desolder pins of Digital-Amp IC (IC5000) on reverse side of Power P.C.B..



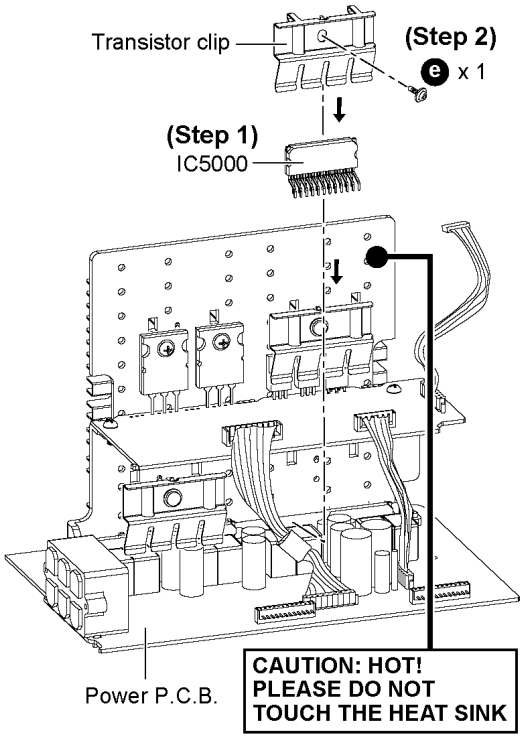
Step 2 : Remove 1 screw.

Step 3 : Remove Transistor clip in the direction of arrow shown.

Step 4 : Remove Digital-Amp IC (IC5000) from the heat sink unit.

Caution : Avoid touching the heat sink unit during replacement due to its hight temperature as it may lead to injuries/shock.

8.18.1. Assembly of Digital-Amp IC (IC5000)

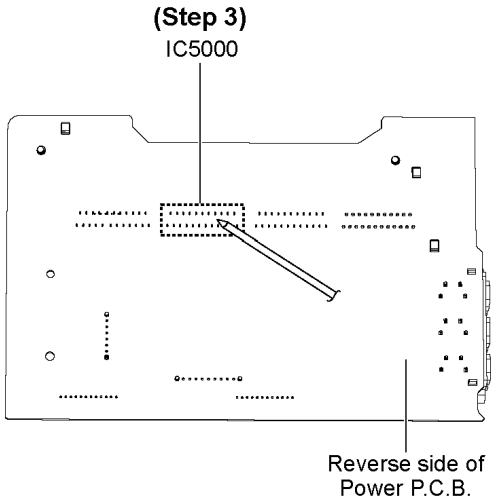


Step 1 : Mount the Digital-Amp IC (IC5000) onto the Power P.C.B..

Caution : Ensure all pins are seated properly.

Step 2 : Fix 1 screw to attach the Transistor clip to the heat sink unit.

Make sure it is well tighten to prevent overheat.

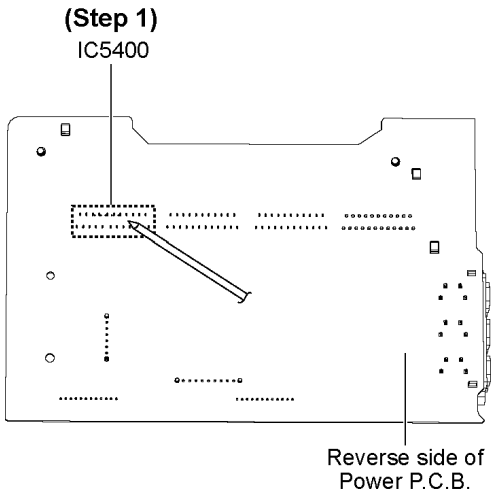


Step 3 : Solder the pins of the Digital-Amp IC (IC5000) on the reverse side of the Power P.C.B..

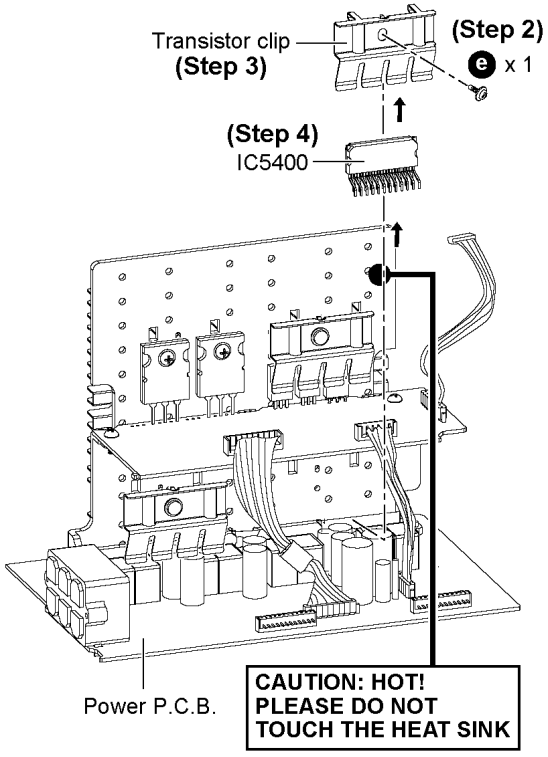
Caution : Before soldering, ensure all pins are properly seated and no 'Floating' of pins.

8.19. Replacement of Digital-Amp IC (IC5400)

- Follow the (Step 1) - (Step 6) of Item 8.3
- Follow the (Step 1) - (Step 7) of Item 8.4
- Follow the (Step 1) - (Step 7) of Item 8.8
- Follow the (Step 1) - (Step 4) of Item 8.15



Step 1 : Desolder pins of Digital-Amp IC (IC5400) on reverse side of Power P.C.B..



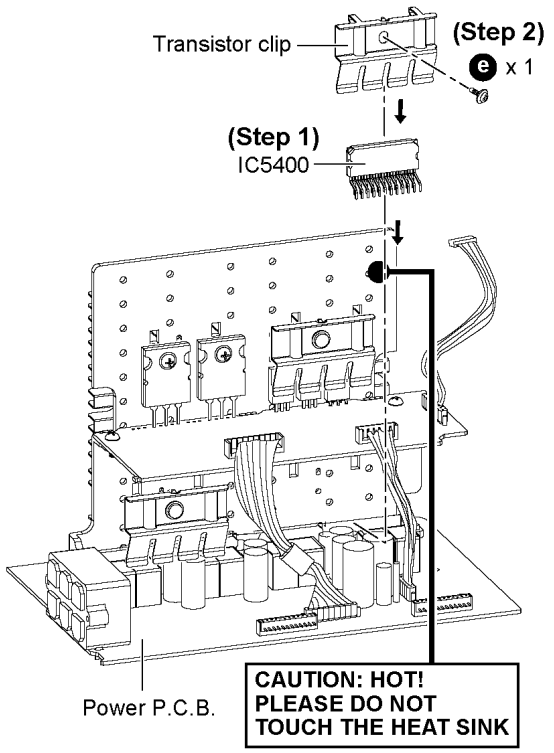
Step 2 : Remove 1 screw.

Step 3 : Remove Transistor clip in the direction of arrow shown.

Step 4 : Remove Digital-Amp IC (IC5400) from the heat sink unit.

Caution : Avoid touching the heat sink unit during replacement due to its hight temperature as it may lead to injuries/shock.

8.19.1. Assembly of Digital-Amp IC (IC5400)

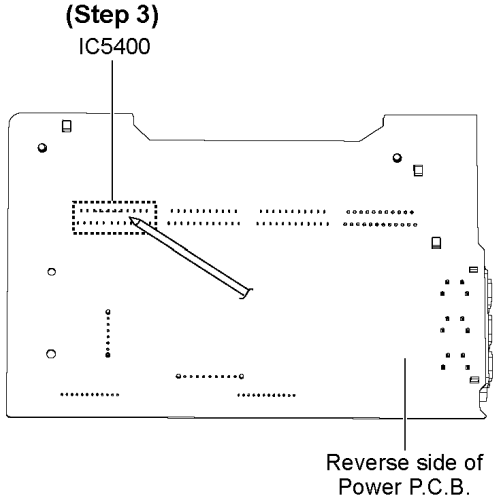


Step 1 : Mount the Digital-Amp IC (IC5400) onto the Power P.C.B..

Caution : Ensure all pins are seated properly.

Step 2 : Fix 1 screw to attach the Transistor clip to the heat sink unit.

Make sure it is well tighten to prevent overheat.

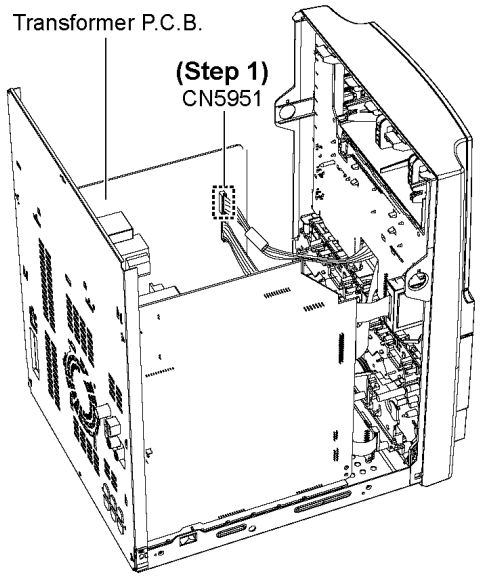


Step 3 : Solder the pins of the Digital-Amp IC (IC5400) on the reverse side of the Power P.C.B..

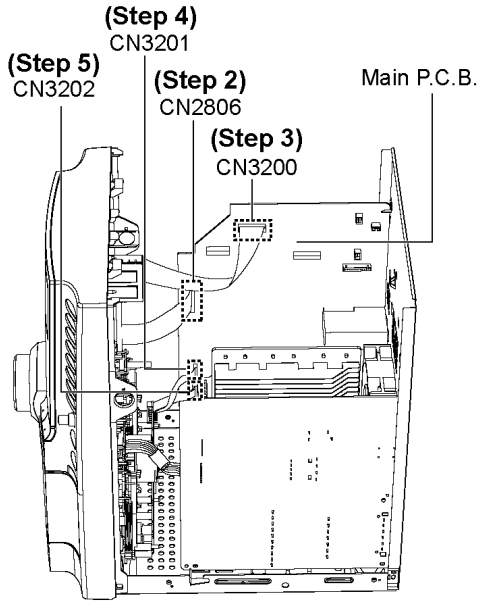
Caution : Before soldering, ensure all pins are properly seated and no 'Floating' of pins.

8.20. Disassembly of Front Panel

- Follow the (Step 1) - (Step 6) of Item 8.3
- Follow the (Step 1) - (Step 7) of Item 8.4



Step 1 : Detach 9P cable at connector (CN5951) on Transformer P.C.B.

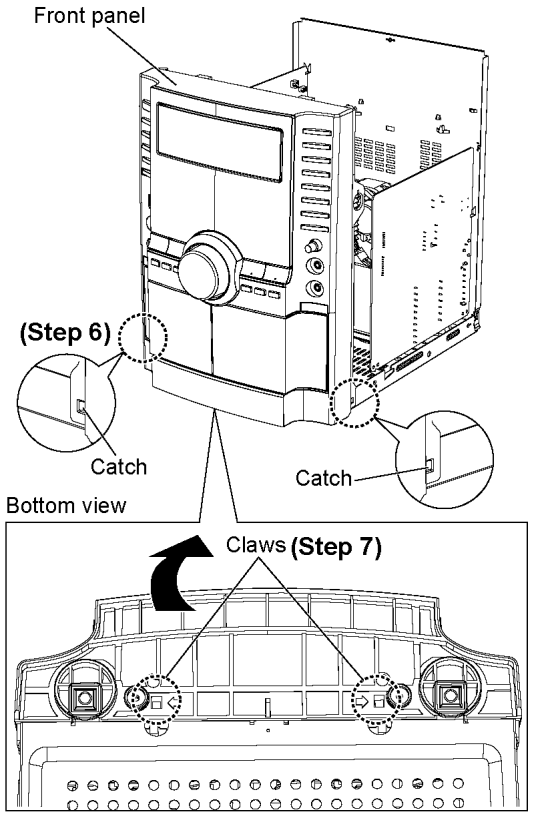


Step 2 : Detach 30P FFC cable at connector (CN2806) on Main P.C.B..

Step 3 : Detach 22P FFC cable at connector (CN3200) on Main P.C.B..

Step 4 : Detach 10P FFC cable at connector (CN3201) on Main P.C.B..

Step 5 : Detach 11P FFC cable at connector (CN3202) on Main P.C.B..



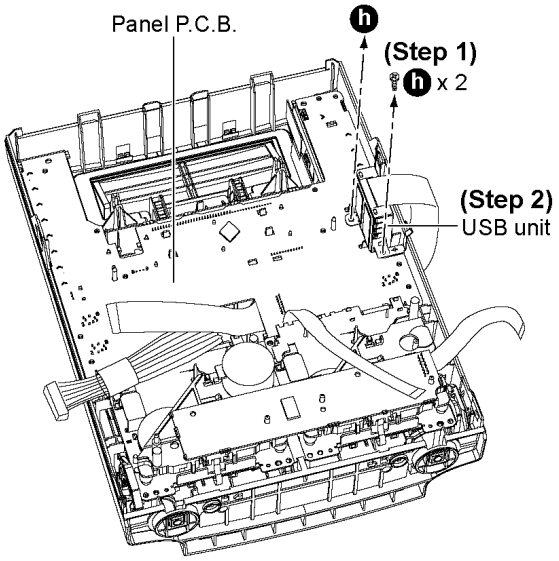
Step 6 : Release 2 catches.

Step 7 : Bend the front panel slightly forward to remove front panel.

Note: Ensure 2 claws located at the bottom chassis is seated into the 2 slots at bottom of front panel at 2 catches (one on each side) of bottom chassis to be aligned to front panel slot. Assembly is secured upon hearing clicking sound.

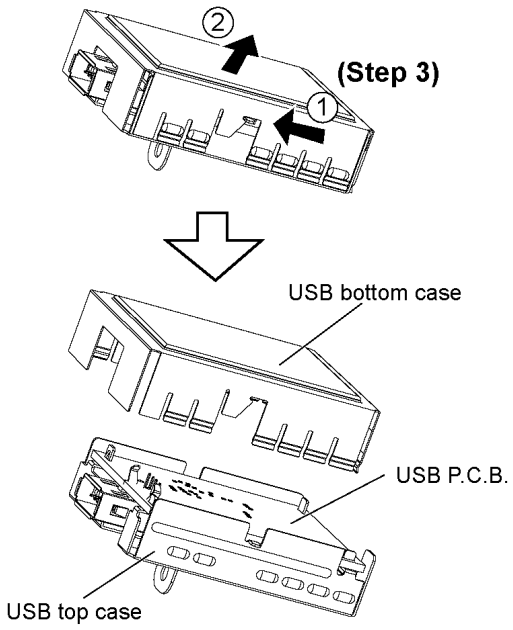
8.21. Disassembly of USB P.C.B.

- Follow the (Step 1) - (Step 6) of Item 8.3
- Follow the (Step 1) - (Step 7) of Item 8.4
- Follow the (Step 1) - (Step 7) of Item 8.20

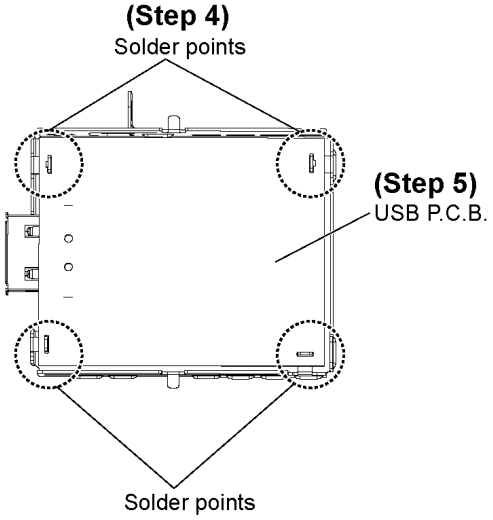


Step 1 : Remove 2 screws.

Step 2 : Remove USB unit.



Step 3 : Remove USB bottom case as arrow shown (1)→(2).

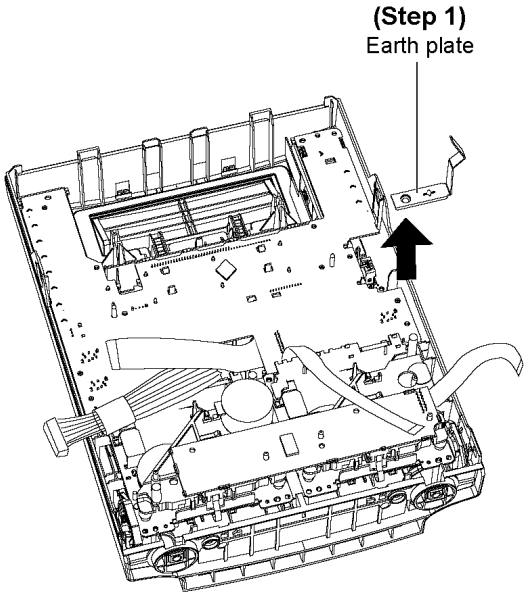


Step 4 : Desolder 4 points.

Step 5 : Remove USB P.C.B..

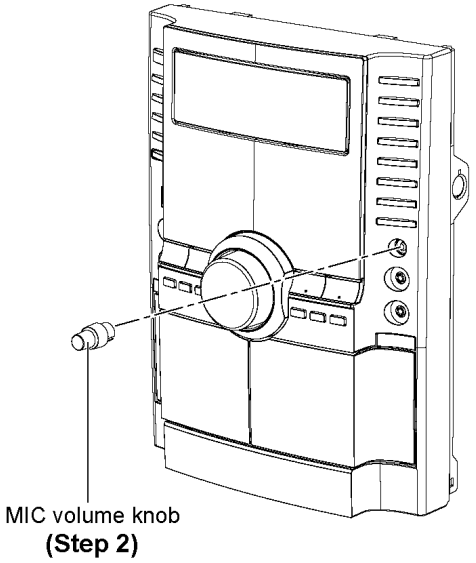
8.22. Disassembly for Panel P.C.B., Remote Sensor P.C.B. & Sub Panel P.C.B.

- Follow the (Step 1) - (Step 6) of Item 8.3
- Follow the (Step 1) - (Step 7) of Item 8.4
- Follow the (Step 1) - (Step 7) of Item 8.20
- Follow the (Step 1) - (Step 2) of Item 8.21

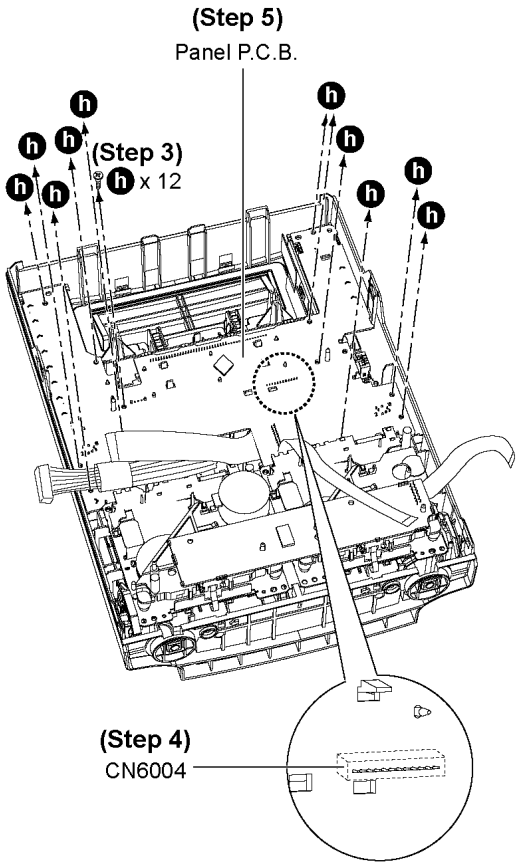


Step 1 : Remove the Earth Plate.

Note: Do not misplace the Earth Plate. Keep in safe place for assembling.



Step 2 : Remove the MIC Volume Knob.

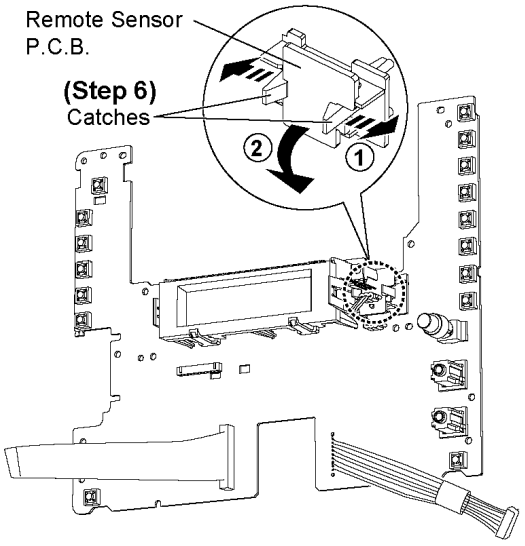


Step 3 : Remove 12 screws.

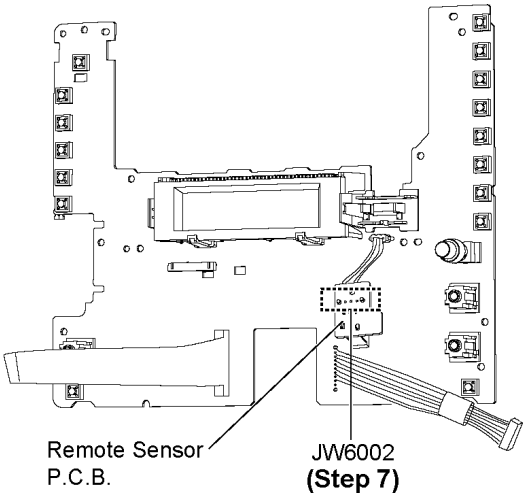
Step 4 : Detach 12P cable connector (CN6004) on Panel P.C.B..

Step 5 : Remove Panel P.C.B..

- **Disassembly of Remote Sensor P.C.B.**

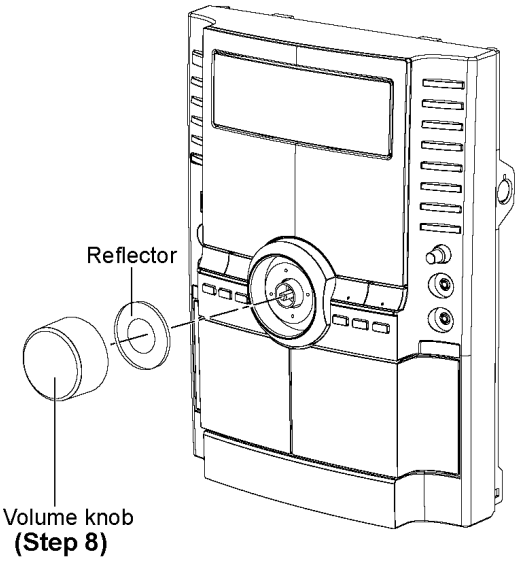


Step 6 : Release 2 catches and remove Remote Sensor P.C.B as arrow shown.

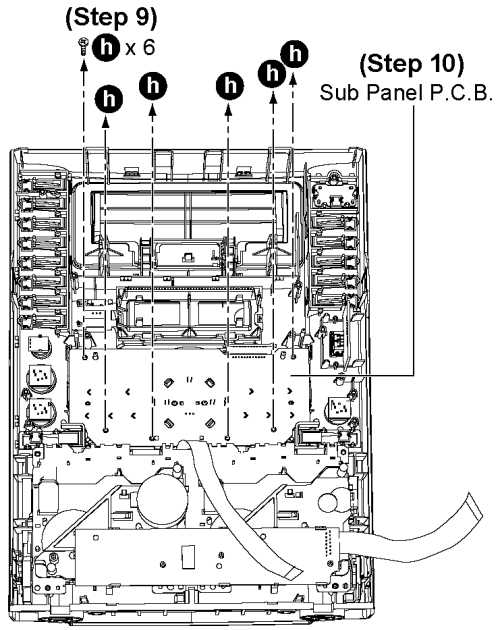


Step 7 : Desolder the pins (JW6002).

- **Disassembly of Sub Panel P.C.B.**



Step 8 : Remove the Volume Knob and Reflector.

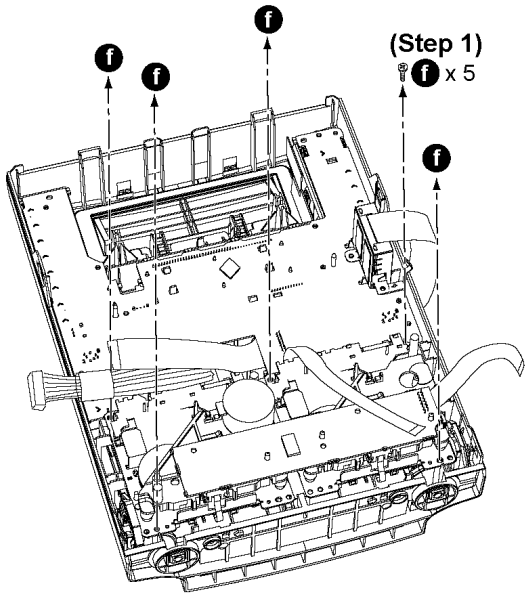


Step 9 : Remove 6 screws.

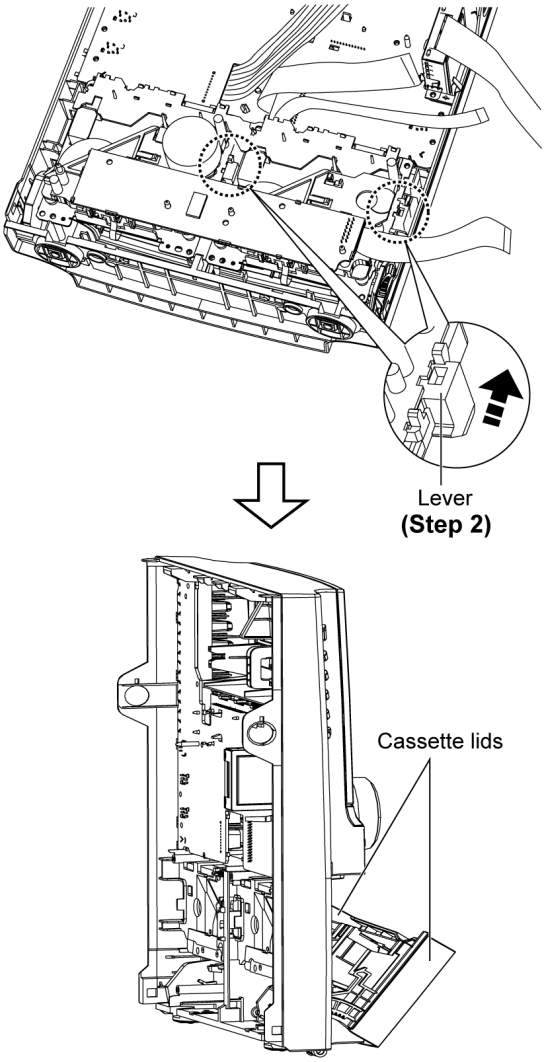
Step 10 : Remove Sub Panel P.C.B..

8.23. Disassembly of Deck mechanism unit

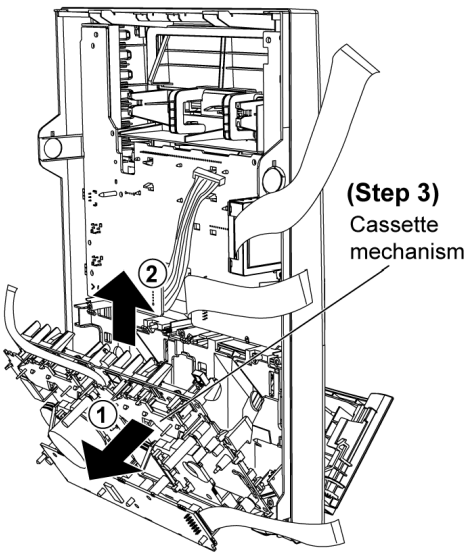
- Follow the (Step 1) - (Step 6) of Item 8.3
- Follow the (Step 1) - (Step 7) of Item 8.4
- Follow the (Step 1) - (Step 7) of Item 8.20



Step 1 : Remove 5 screws.



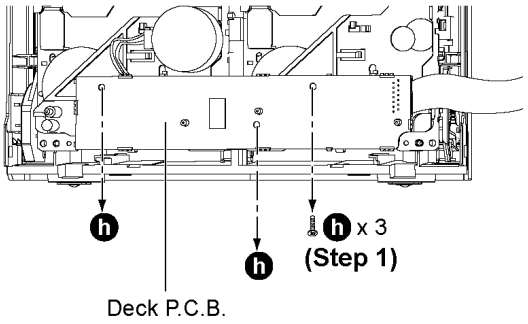
Step 2 : Push the lever upward, and then open the Cassette Lid ass'y (For DECK1 and DECK2).



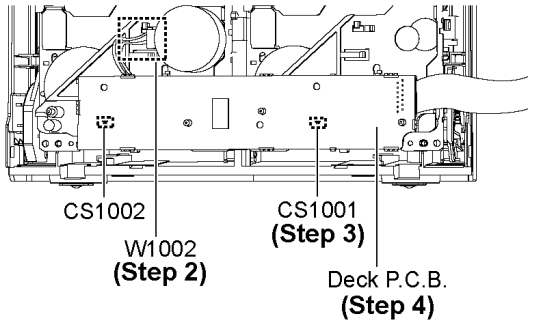
Step 3 : Tilt the cassette mechanism unit in the direction of arrow (1), and then remove it in the direction of arrow (2).

8.24. Disassembly of Deck P.C.B.

- Follow the (Step 1) - (Step 6) of Item 8.3
- Follow the (Step 1) - (Step 7) of Item 8.4
- Follow the (Step 1) - (Step 7) of Item 8.20



Step 1 : Remove 3 screws.



Step 2 : Desolder wire at Deck Motor Terminals (W1002).

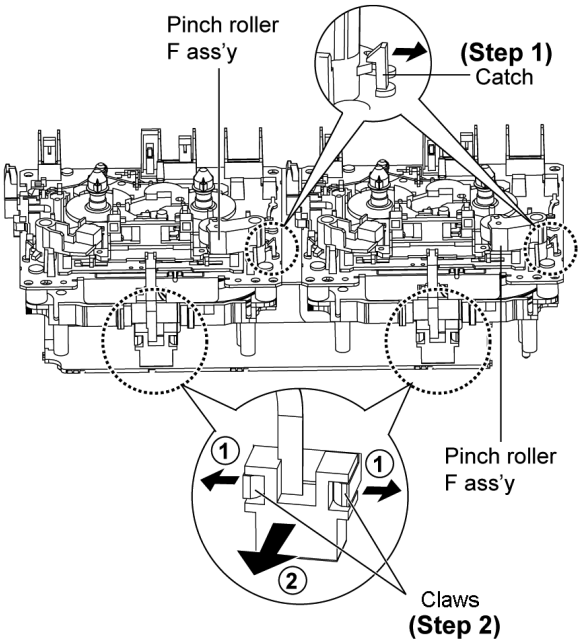
Step 3 : Detach connector (CS1001 and CS1002) on Deck P.C.B..

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

8.25. Disassembly for Deck Mechanism

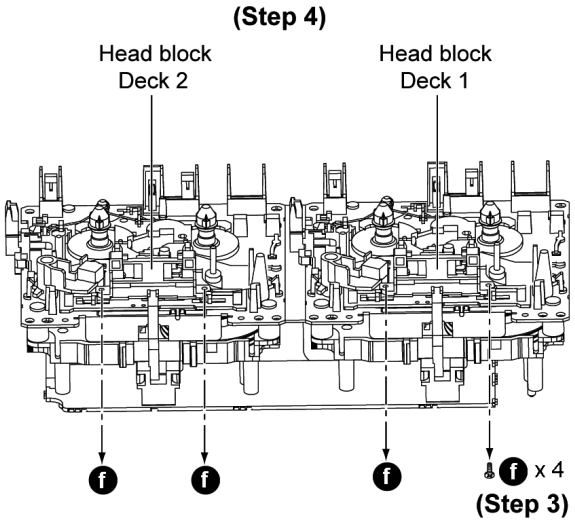
- Follow the (Step 1) - (Step 6) of Item 8.3
- Follow the (Step 1) - (Step 7) of Item 8.4
- Follow the (Step 1) - (Step 7) of Item 8.20
- Follow the (Step 1) - (Step 3) of Item 8.23

8.25.1. Disassembly of the pinch roller ass'y and head block



Step 1 : Release the catch, and then remove the pinch roller (F).

Step 2 : Release 2 claws and detach the head block connector for both Decks.

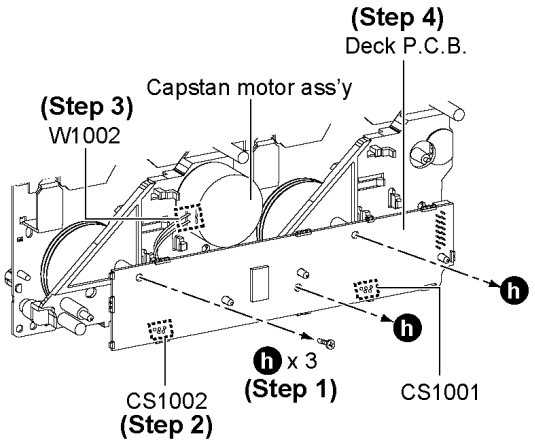


Step 3 : Remove 4 screws.

Step 4 : Remove head block.

8.25.2. Disassembly of capstan motor ass'y, capstan belt A, capstan belt B and winding belt

*** The mechanism as shown below is for DECK2. For DECK 1, perform the same procedures.**

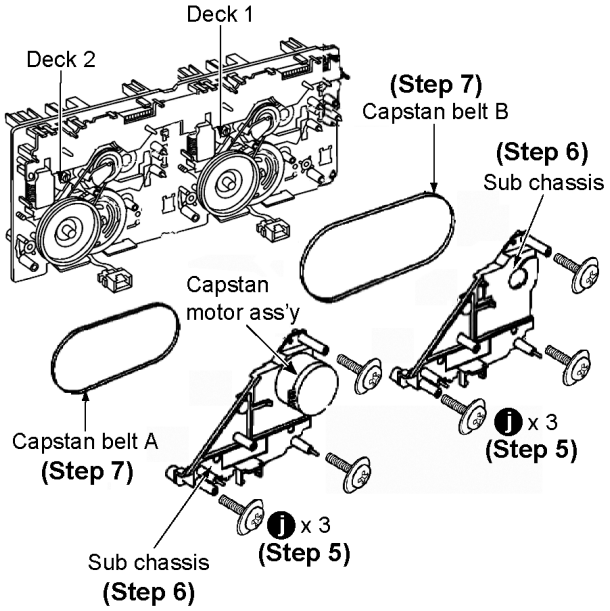


Step 1 : Remove 3 screws.

Step 2 : Detach connector (CS1001 and CS1002) on Deck P.C.B..

Step 3 : Desolder wire (W1002) at capstan motor assembly.

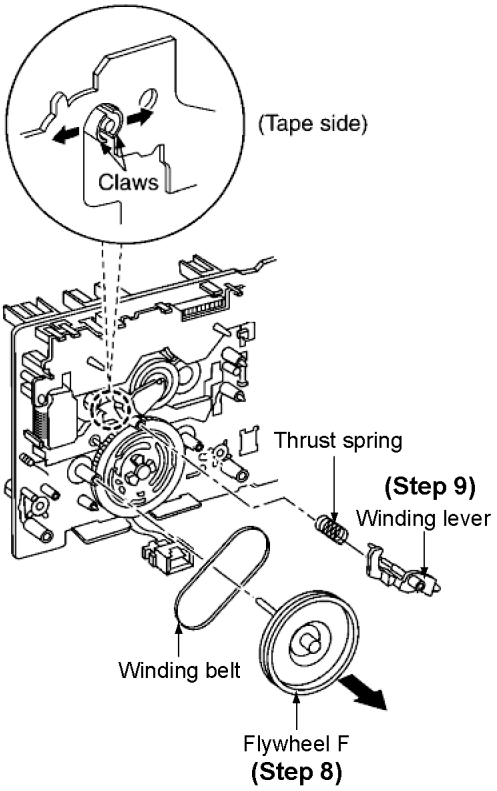
Step 4 : Remove Deck P.C.B.



Step 5 : Remove 6 screws (For deck 1 & 2).

Step 6 : Remove Sub chassis.

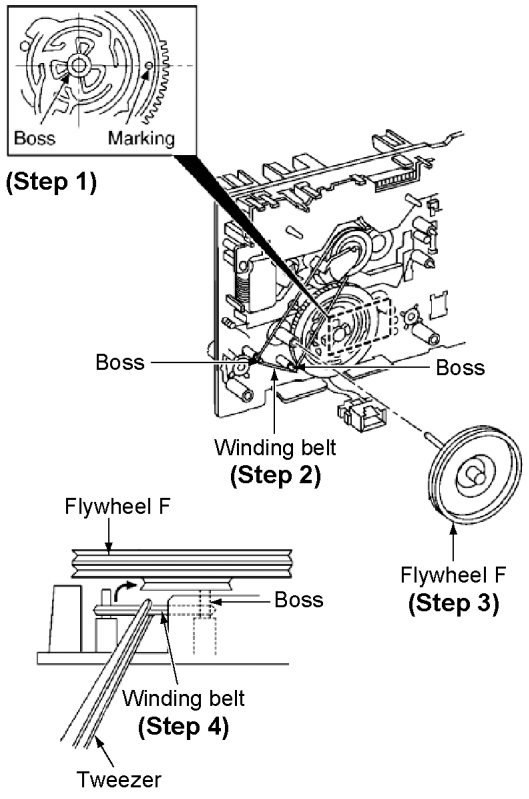
Step 7 : Remove Capstan belt A/B.



Step 8 : Remove Flywheel F and winding belt.

Step 9 : Release the claw and remove the Winding lever and Thrust spring..

[Installation of the belt]

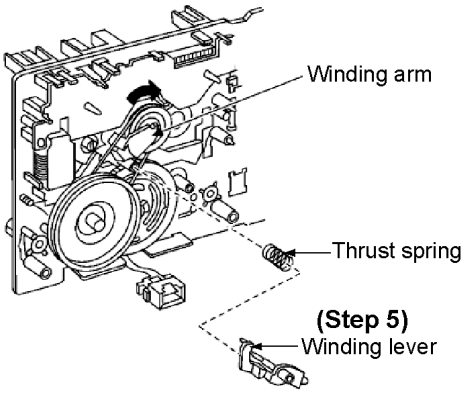


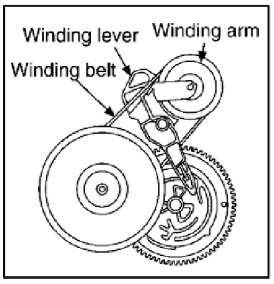
Step 1 : The boss and the marking should be positioned horizontally.

Step 2 : Put the winding belt temporarily at Bosses as shown.

Step 3 : Install the flywheel F.

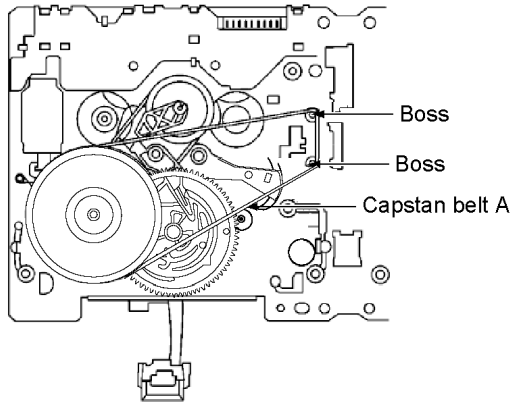
Step 4 : Put the Winding belt on the flywheel F.

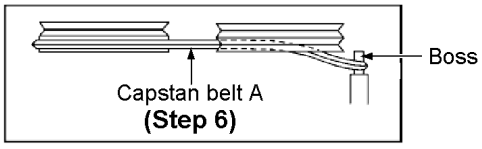




NOTE:
The winding lever should be positioned as shown.

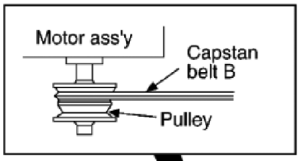
Step 5 : Install the Winding lever and Thrust spring while pressing the winding arm in the direction of arrow.

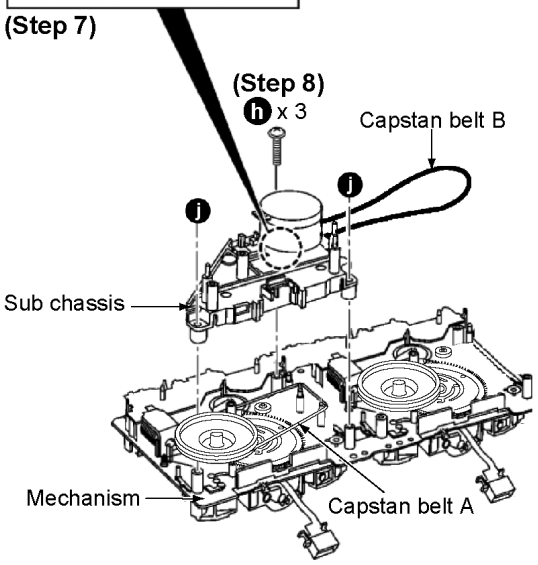




(Side view)

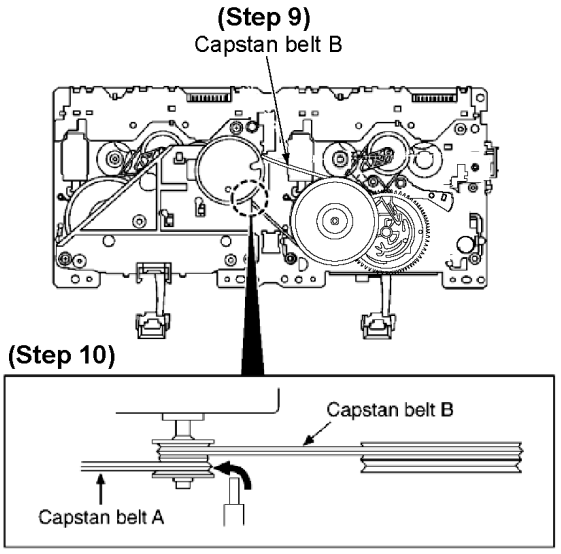
Step 6 : Put the Capstan belt A temporarily as shown.





Step 7 : Put the capstan belt B on the motor ass'y pulley.

Step 8 : Mount the sub chassis to the mechanism, and then tighten with 3 screws.

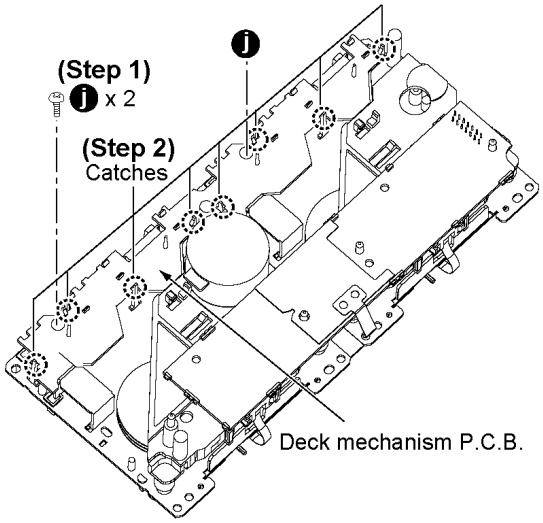


Step 11 : Put the capstan belt B as shown below.

Step 12 : Put the capstan belt A on the motor ass'y pulley.

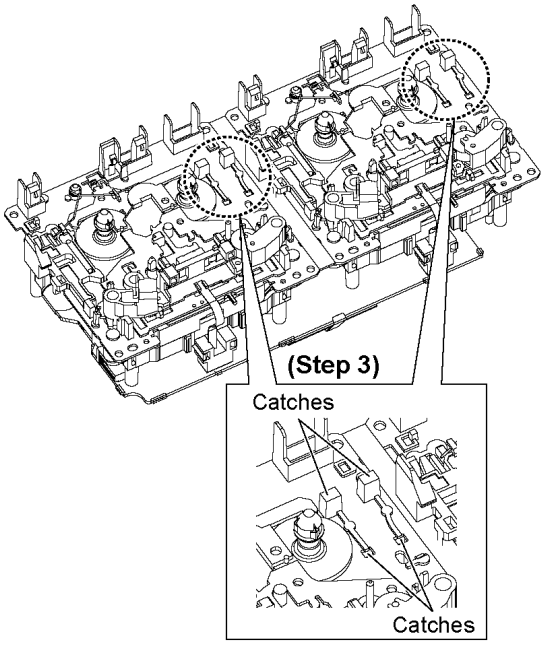
8.26. Disassembly of Deck mechanism P.C.B.

- Follow the (Step 1) - (Step 6) of Item 8.3
- Follow the (Step 1) - (Step 7) of Item 8.4
- Follow the (Step 1) - (Step 7) of Item 8.20
- Follow the (Step 1) - (Step 3) of Item 8.23

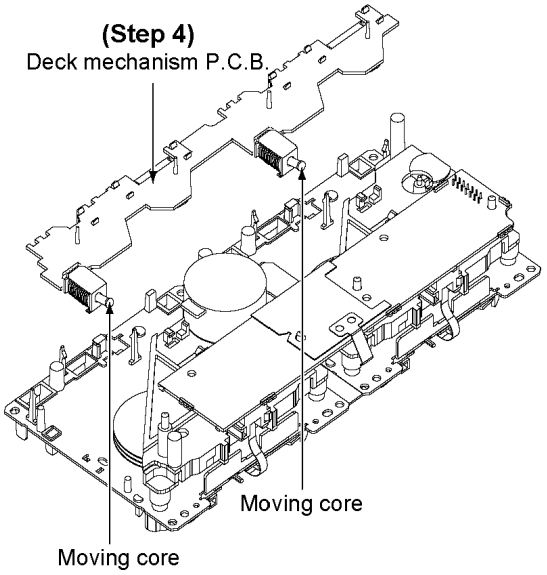


Step 1 : Remove 2 screws.

Step 2 : Release 8 catches.



Step 3 : Release 8 catches.



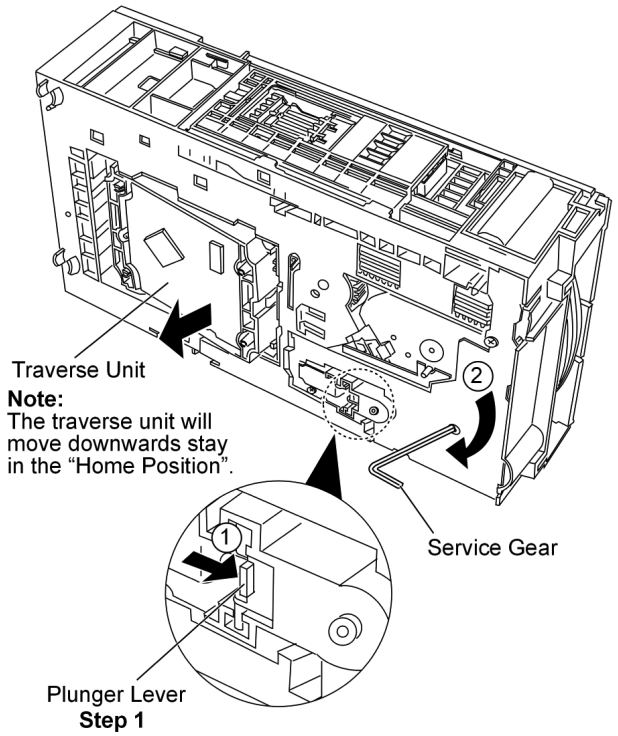
Step 4 : Remove Deck Mechanism P.C.B..

Caution : Keep the Moving core in safe place. place it back during assembling.

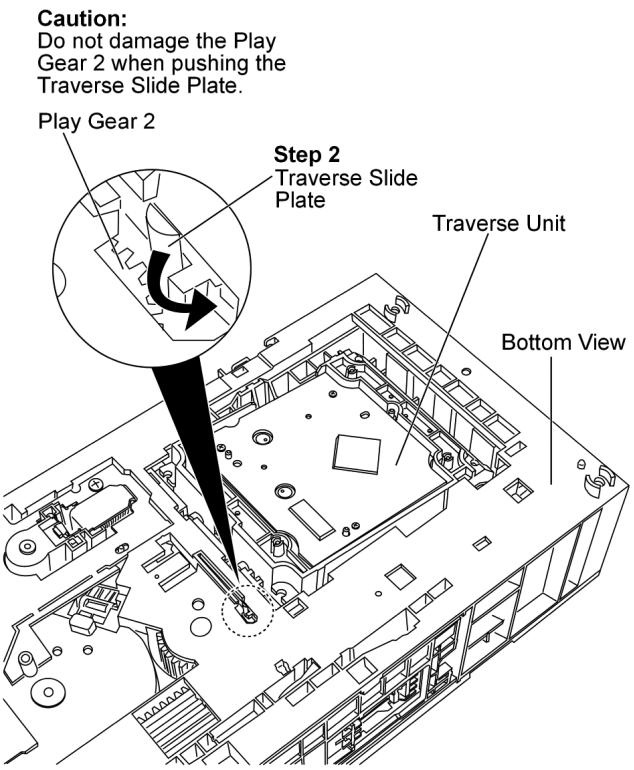
8.27. Disassembly of Traverse Unit

- Follow the (Step 1) - (Step 6) of Item 8.3
- Follow the (Step 1) - (Step 9) of Item 8.4

Important notes: Ensure all the trays are in the "STOCK" position before proceeding to the disassemble of traverse unit. For procedures to set the trays in "STOCK" position, please refer to (5.3 Setting the Tray In "STOCK" position for CRS1 Service Manual order no. MD0509368C0)

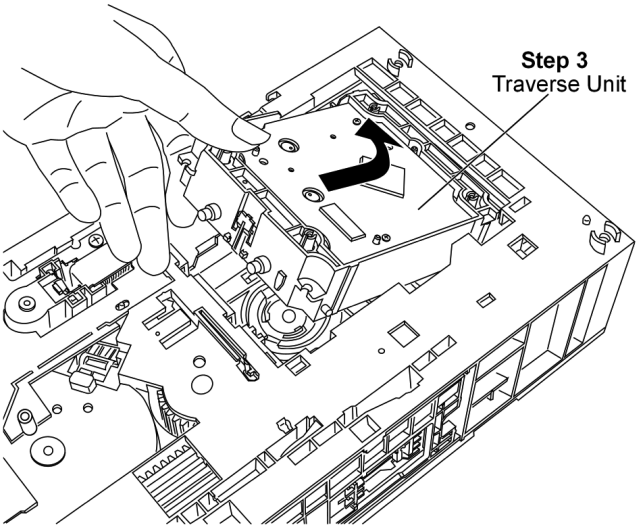


Step 1 : Press and hold the plunger lever and rotate the gear as arrows shown until it stop.



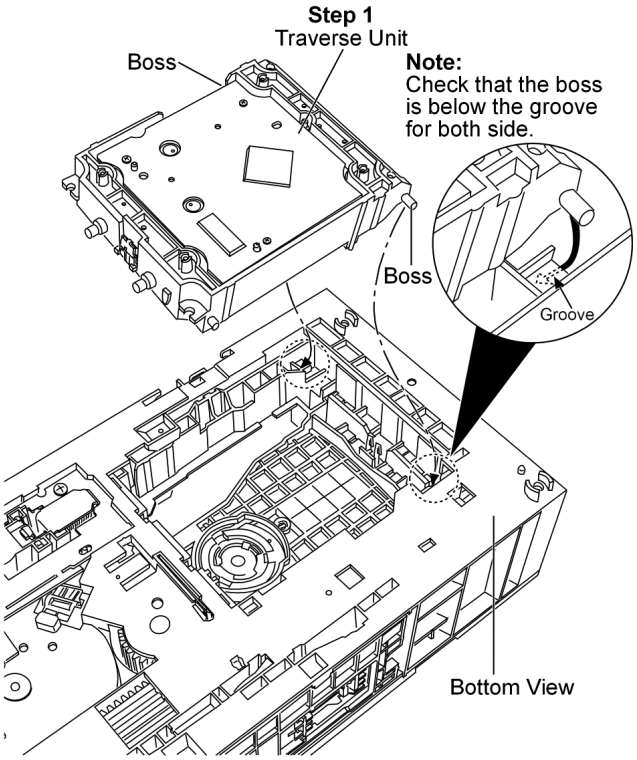
Step 2 : Push the traverse slide plate as arrow shown to release the traverse unit.

Caution: Do not exert strong force on the traverse slide plate.

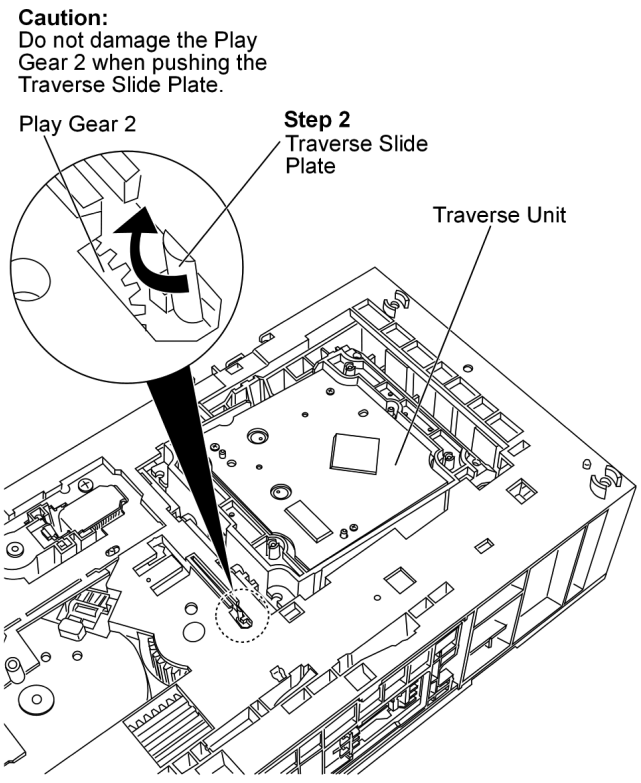


Step 3 : Remove the traverse unit as arrow shown.

- Assembly of Traverse Unit



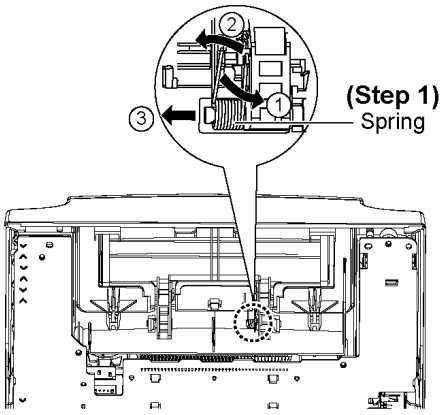
Step 1 : Turn over the unit and install the traverse unit.



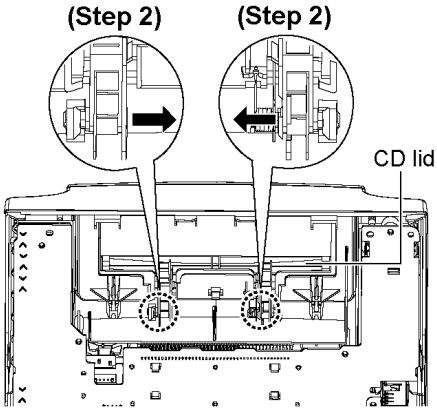
Step 2: Push the traverse slide plate as arrow shown to lock the traverse unit.

8.28. Disassembly of CD Lid

- Follow the (Step 1) - (Step 6) of Item 8.3
- Follow the (Step 1) - (Step 7) of Item 8.4



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

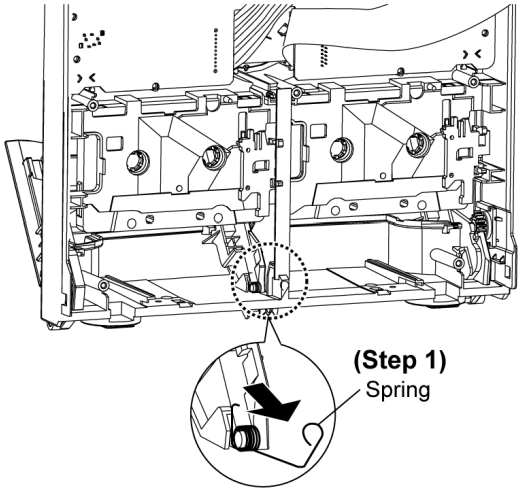


Step 2 : Remove CD Lid as arrow shown.

Note : Please ensure that the spring is assembly at right position.

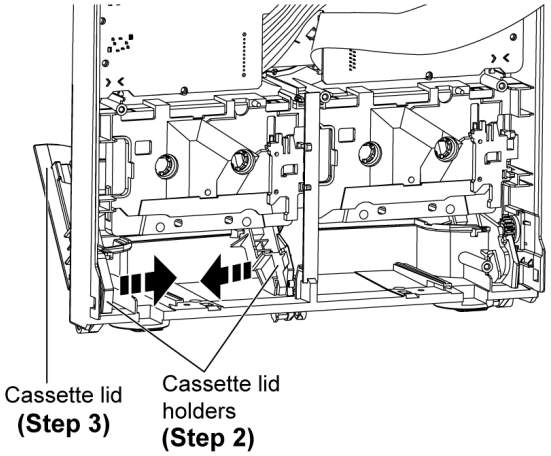
8.29. Disassembly of Cassette Lid

- Follow the (Step 1) - (Step 6) of Item 8.3
- Follow the (Step 1) - (Step 7) of Item 8.4
- Follow the (Step 1) - (Step 7) of Item 8.20
- Follow the (Step 1) - (Step 3) of Item 8.23



Step 1 : Lift the Spring sideward. (For DECK1 and DECK2).

Note: Do not misplace the Spring.

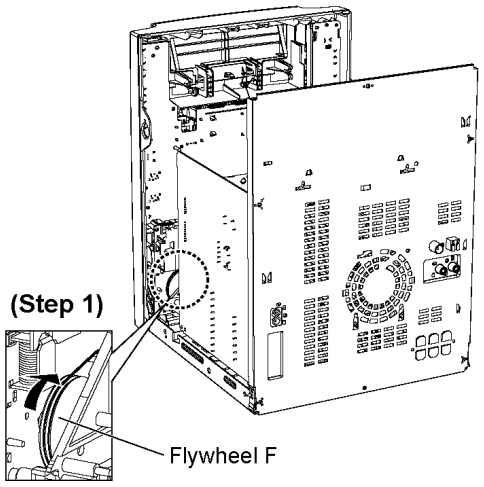


Step 2 : Push the sides of Cassette Lid Holders in the direction of the arrows shown. (For DECK1 and DECK2).

Step 3 : Remove Cassette Lid. (For DECK1 and DECK2).

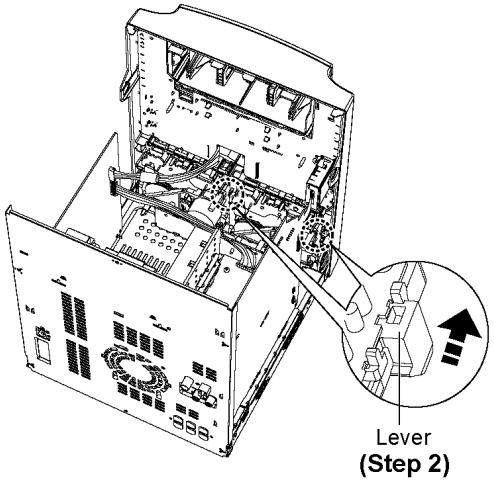
8.30. Rectification for Tape Jam Problem

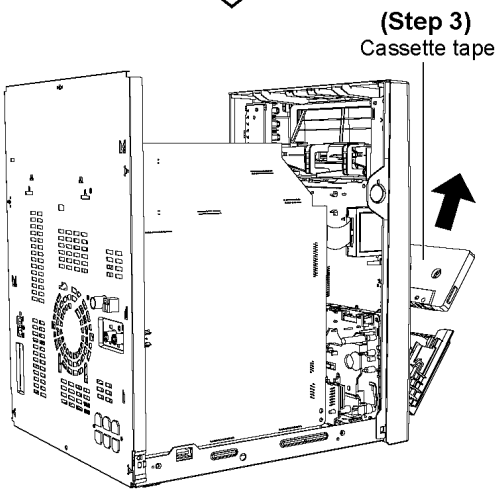
- Follow the (Step 1) - (Step 6) of Item 8.3



If a cassette tape cannot be removed from the deck (the tape is caught by the capstan or pinch roller during playback or recording).

Step 1 : Rotate the flywheel F in the direction of the arrow to remove it.





Step 2 : Push the lever upward and open the Cassette Lid.

Step 3 : Remove the Cassette Tape.

9 Service Fixture and Tools

Prepare service tools before proccess service position.

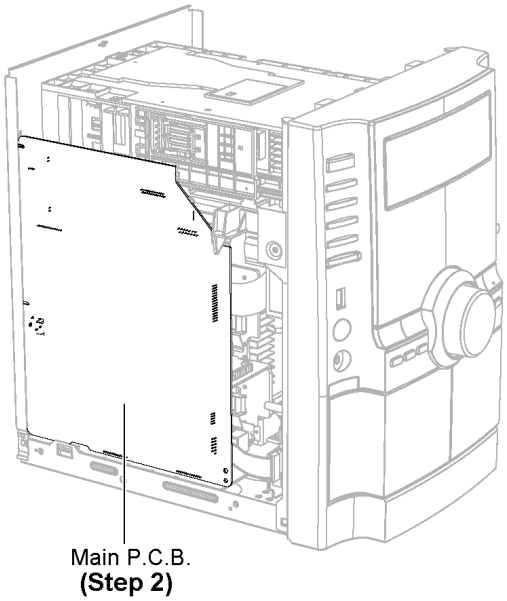
Service Tools		Remarks
(A) Panel P.C.B. (H6555) - Transformer P.C.B. (CN5951)	RFKZAK960P-K (9P Cable)	[M](RTL)

10 Service Position

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

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

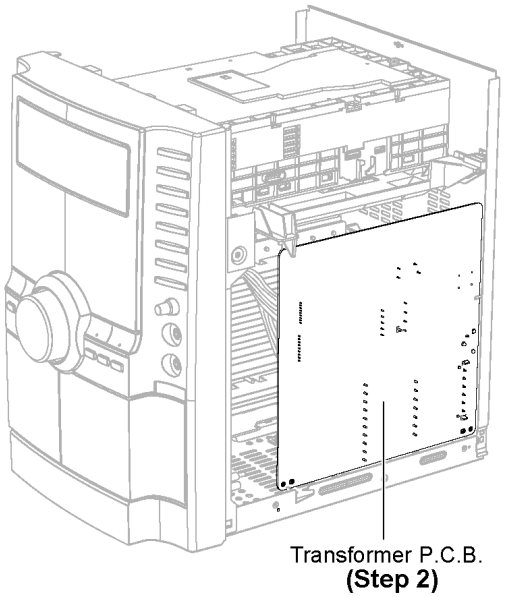
Step 1 : Remove Top Cabinet.



Step 2 : Main P.C.B. can be checked at its original position.

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

Step 1 : Remove Top Cabinet.

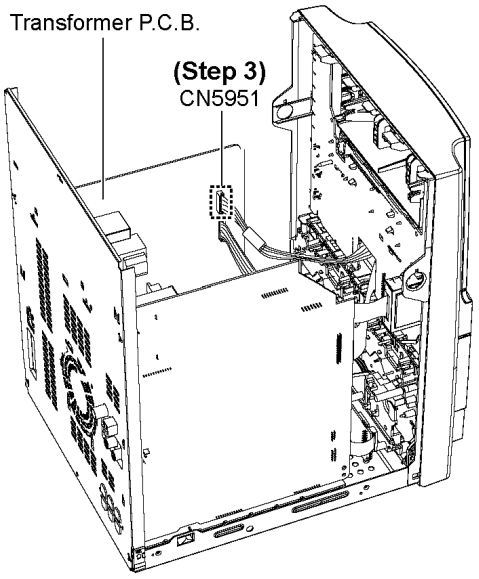


Step 2 : Transformer P.C.B. can be checked at its original position.

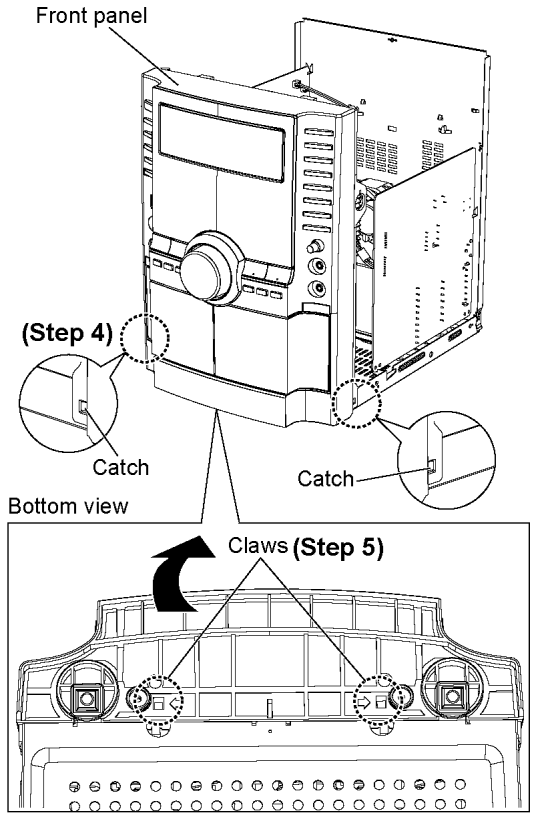
10.3. Checking & Repairing Panel P.C.B./Deck P.C.B./Deck Mechanism P.C.B.

Step 1 : Remove the Top Cabinet.

Step 2 : Remove the CD Changer Unit (CRS1).



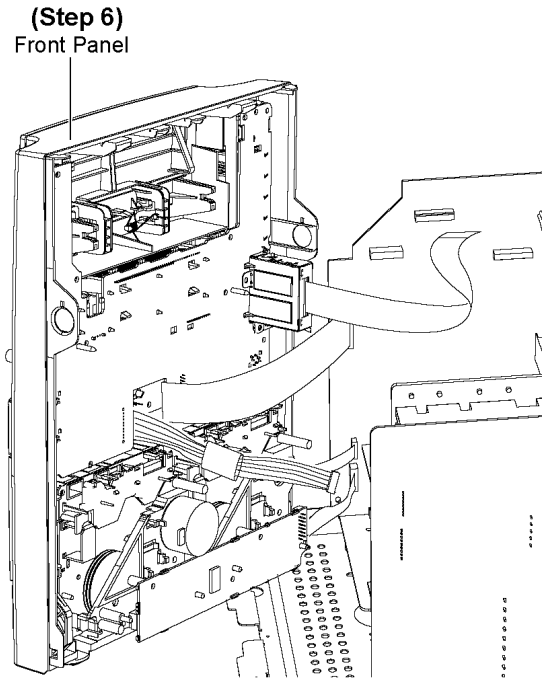
Step 3 : Detach 9P cable at connector (CN5951) on Transformer P.C.B..



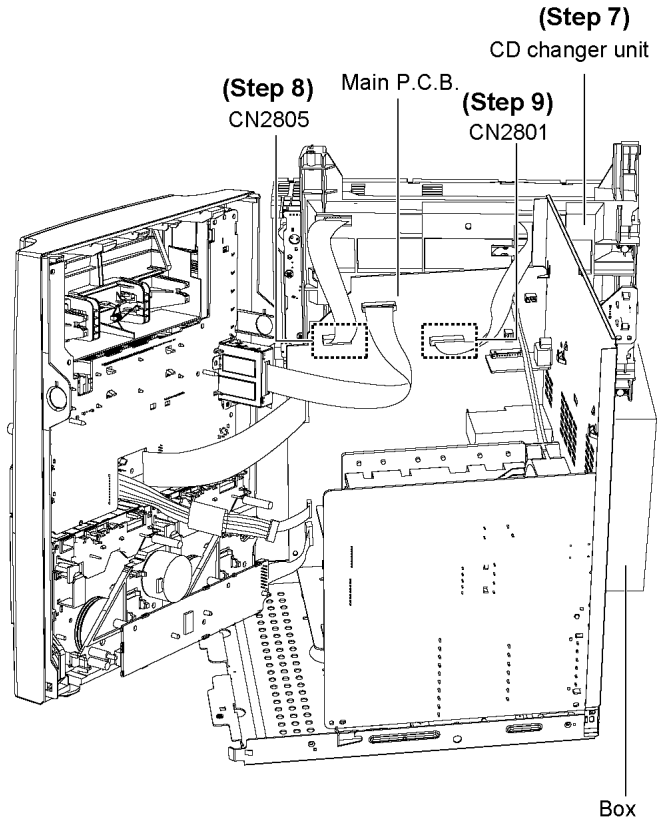
Step 4 : Release 2 catches.

Step 5 : Bend the front panel slighly forward to remove front

panel.



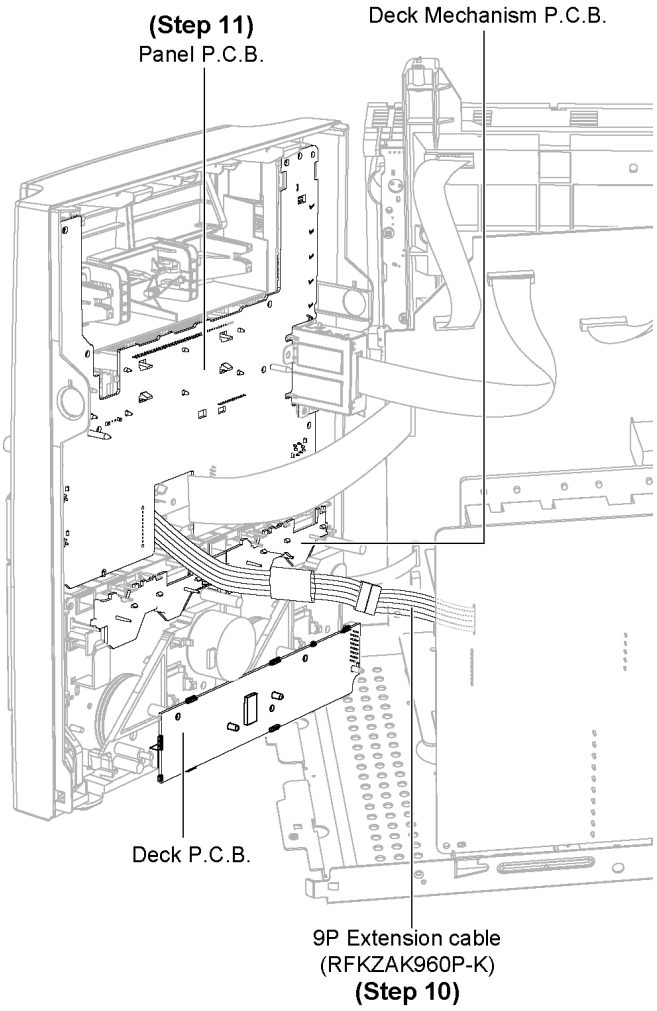
Step 6 : Move one side of the front panel slightly forward.



Step 7 : Place a box underneath the CD changer unit to adjust its position higher.

Step 8 : Connect 14P FFC cable at connector (CN2085) on Main P.C.B..

Step 9 : Connect 22P FFC cable at connector (CN2081) on Main P.C.B..



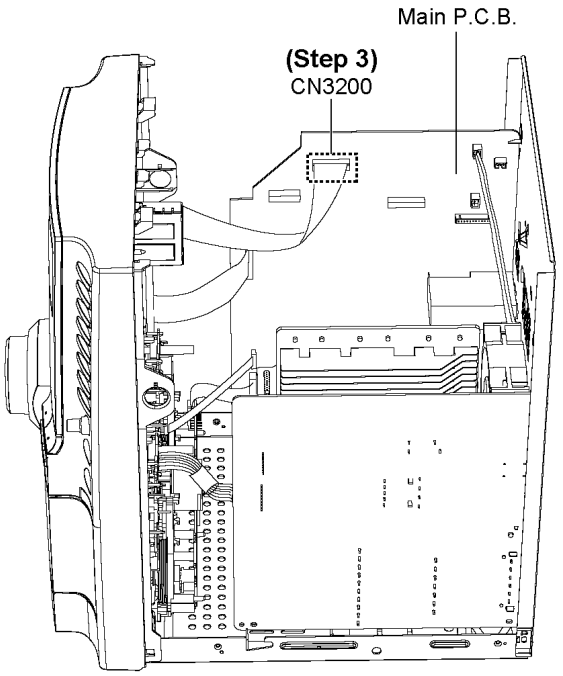
Step 10 : Attach original cable with extension cable (RFKZAK960P-K) (9P cable from H6555 to CN5951).

Step 11 : Check and repair Panel P.C.B., Deck P.C.B. and Deck Mechanism.

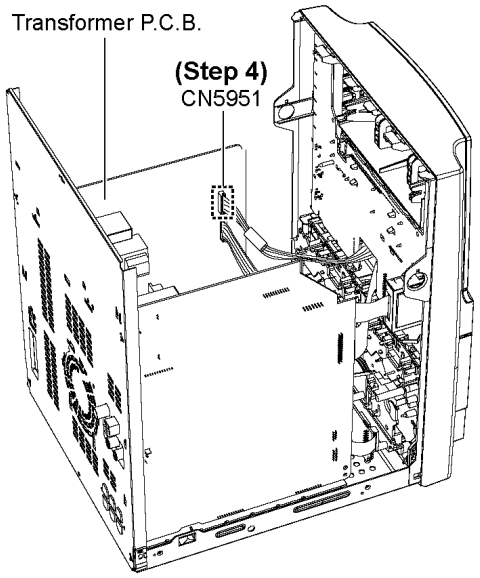
10.4. Checking & Repairing USB P.C.B. (Side B)

Step 1 : Remove Top Cabinet.

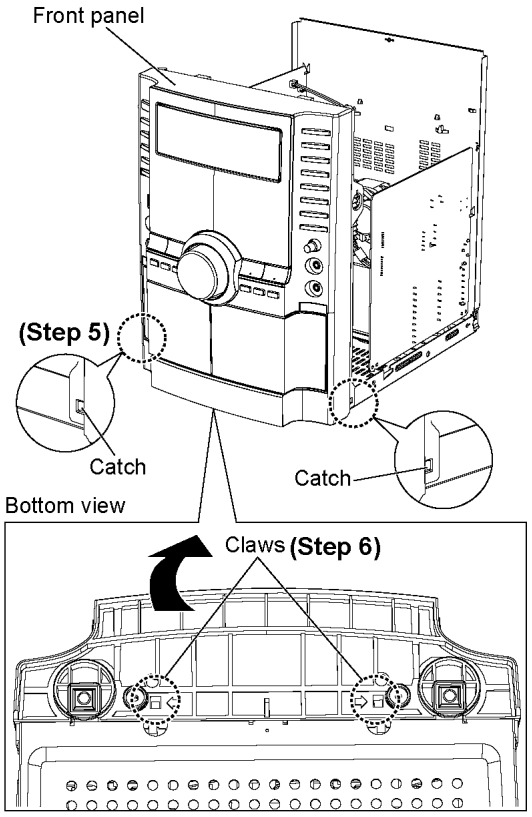
Step 2 : Remove CD Changer Unit (CRS1).



Step 3 : Detach 22P FFC cable at connector (CN3200) on Main P.C.B..

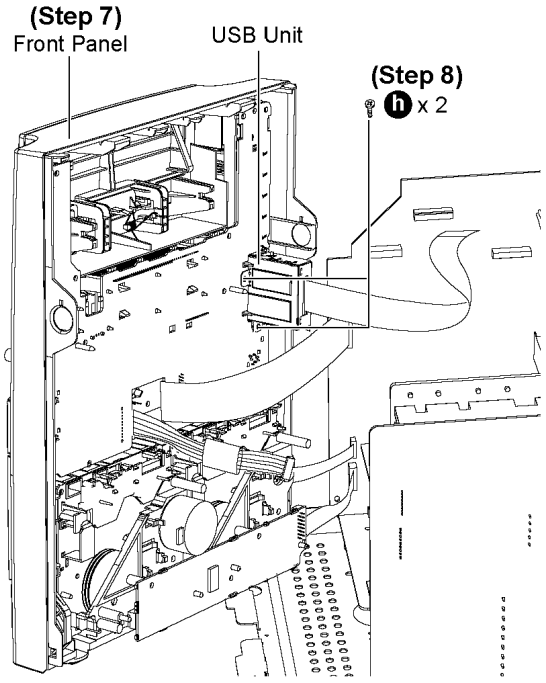


Step 4 : Detach 9P cable at connector (CN5951) on Transformer P.C.B..



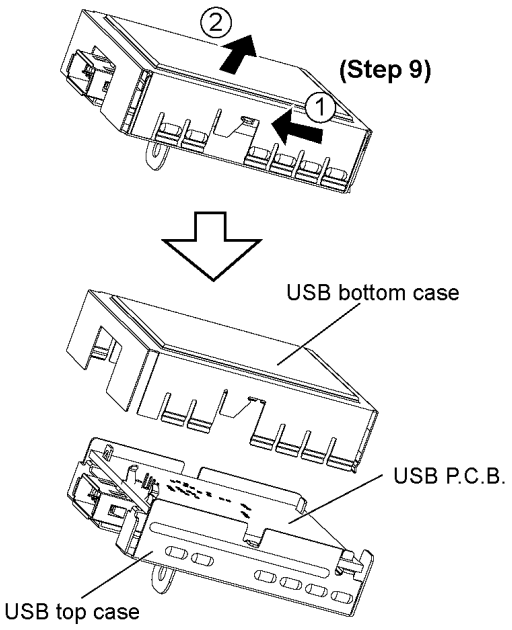
Step 5 : Release 2 catches.

Step 6 : Bend the front panel slighly forward to remove front panel.

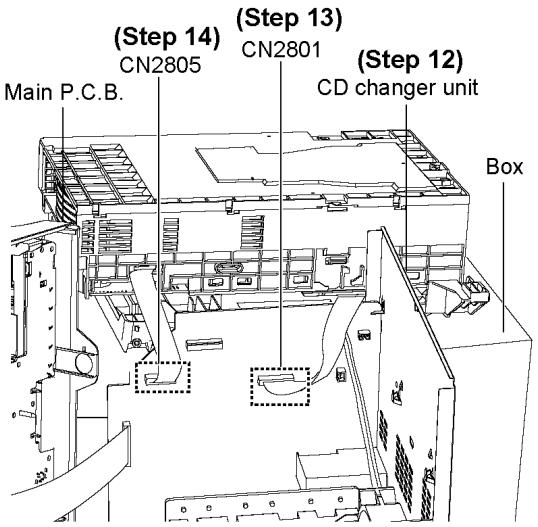


Step 7 : Move one side of the front panel slightly forward.

Step 8 : Remove 2 screws.



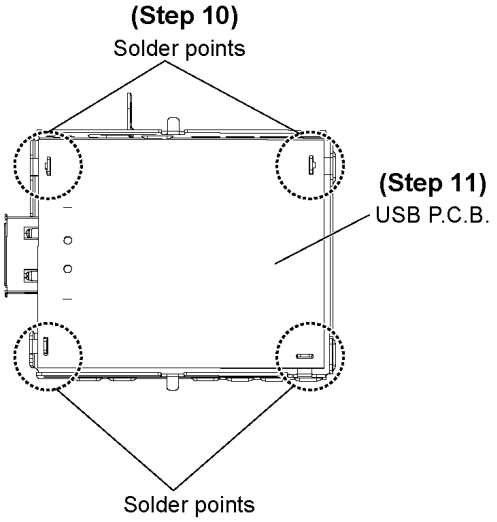
Step 9 : Remove USB bottom case as arrow shown (1)→(2).



Step 12 : Place a box underneath the CD changer unit to adjust its position higher.

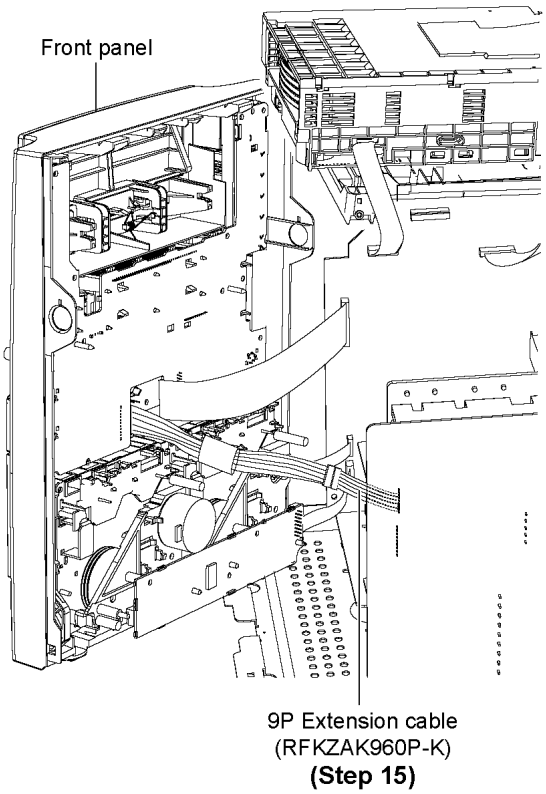
Step 13 : Connect 22P FFC cable at connector (CN2801) on Main P.C.B..

Step 14 : Connect 14P FFC cable at connector (CN2805) on Main P.C.B..

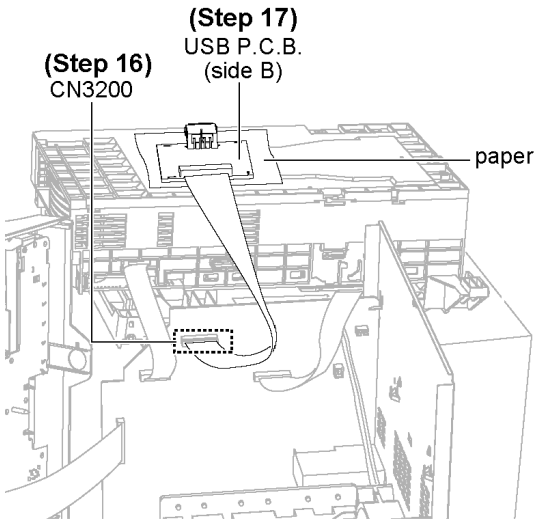


Step 10 : Desolder 4 points.

Step 11 : Desolder USB P.C.B..



Step 15 : Attach original cable with extension cable (RFKZAK960P-K) (9P cable from H6555 to CN5951).



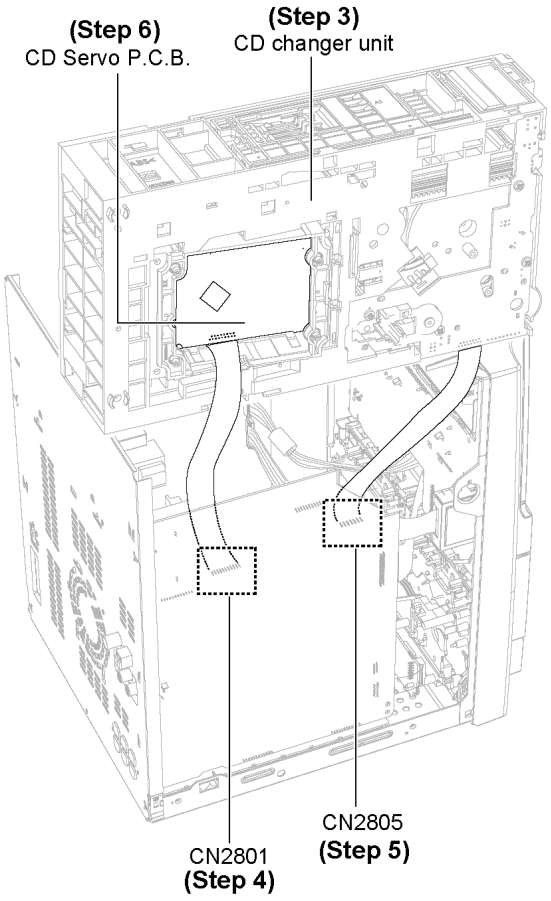
Step 16 : Connect 22P FFC cable at connector (CN3200) on Main P.C.B..

Step 17 : Check and repair USB P.C.B..

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

Step 1 : Remove Top Cabinet

Step 2 : Remove CD Changer Unit (CRS1)



Step 3 : Place the CD changer unit as shown.

Step 4 : Connect 14P FFC cable at connector (CN2801) on Main P.C.B..

Step 5 : Connect 22P FFC cable at connector (CN2805) on Main P.C.B..

Step 6 : Check and repair CD servo P.C.B..

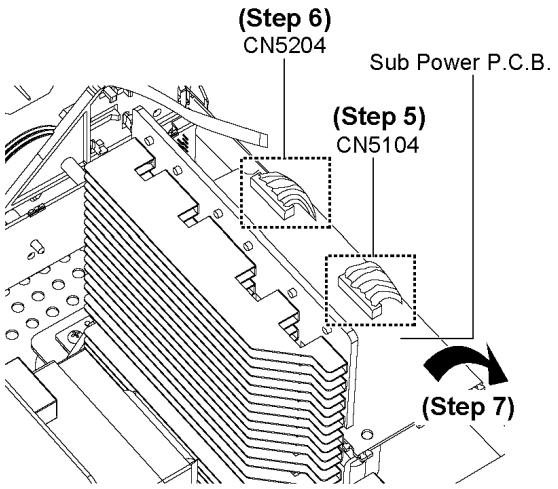
10.6. Checking & Repairing Sub Power P.C.B.

Step 1 : Remove top cabinet.

Step 2 : Remove CD Changer Unit (CRS1).

Step 3 : Remove Main P.C.B..

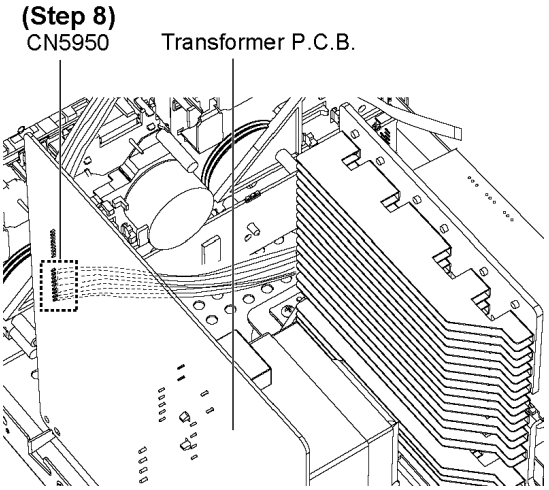
Step 4 : Remove Sub Power P.C.B..



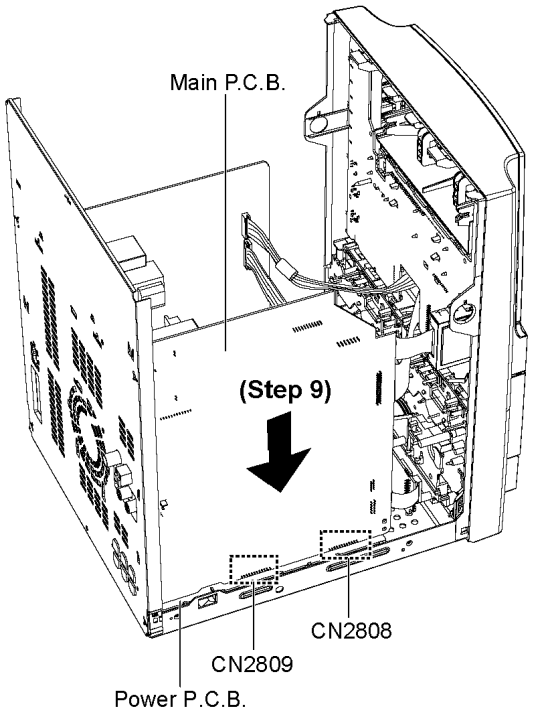
Step 5 : Connect 9P cable at connector (CN5104) on Sub power P.C.B..

Step 6 : Connect 6P cable at connector (CN5204) on Sub power P.C.B..

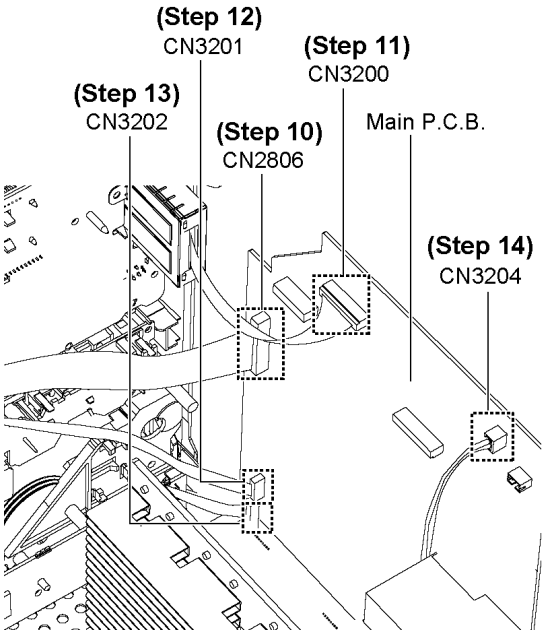
Step 7 : Flip over Sub Power P.C.B..



Step 8 : Connect 9P cable at connector (CN5950) on Transformer P.C.B..



Step 9 : Connect Main P.C.B. to Power P.C.B..



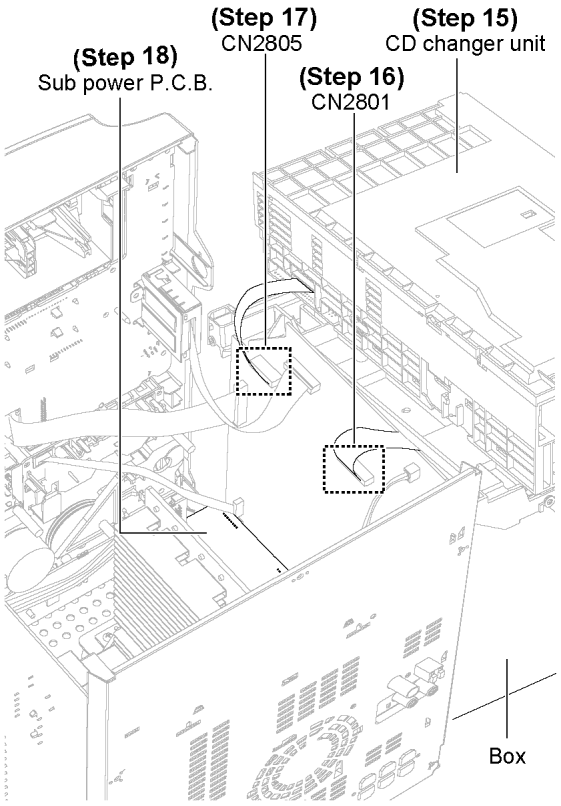
Step 10 : Connect 30P FFC cable to connector (CN2806) on Main P.C.B..

Step 11 : Connect 22P FFC cable to connector (CN3200) on Main P.C.B..

Step 12 : Connect 10P FFC cable to connector (CN3201) on Main P.C.B..

Step 13 : Connect 11P FFC cable to connector (CN3202) on Main P.C.B..

Step 14 : Connect 2P cable to connector (CN3204) on Main P.C.B..



Step 15 : Place a box underneath the CD changer unit to adjust its position higher.

Step 16 : Connect 22P FFC cable to connector (CN2801) on Main P.C.B..

Step 17 : Connect 14P FFC cable to connector (CN2805) on Main P.C.B..

Step 18 : Check and repair Sub power P.C.B..

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

Step 1 : Remove Top Cabinet.

Step 2 : Remove CD Changer Unit (CRS1).

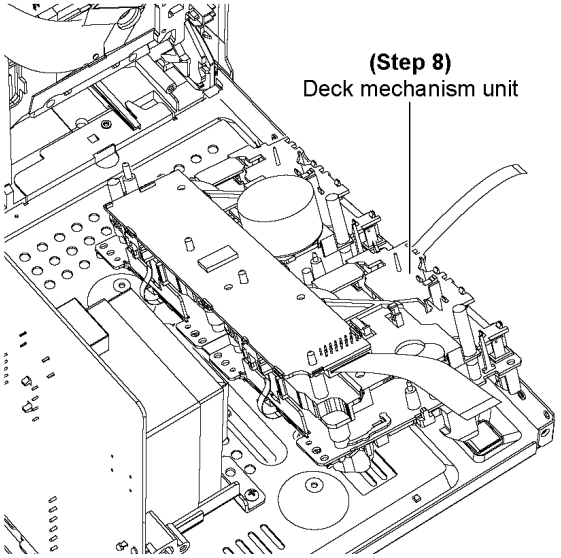
Step 3 : Remove Rear Panel.

Step 4 : Remove Main P.C.B.

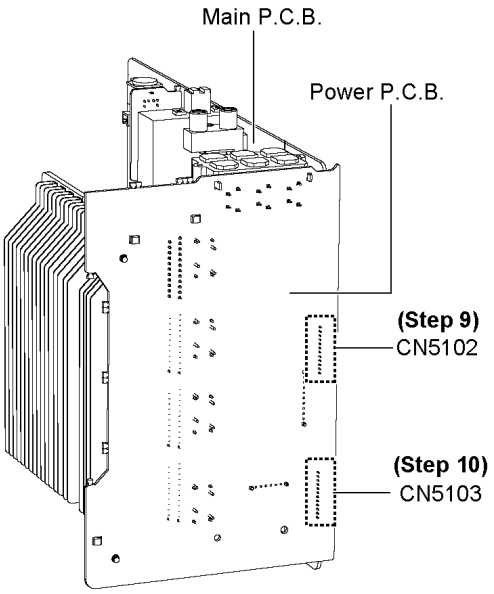
Step 5 : Remove Power P.C.B.

Step 6 : Remove Front Panel.

Step 7 : Remove Deck Mechanism Unit.

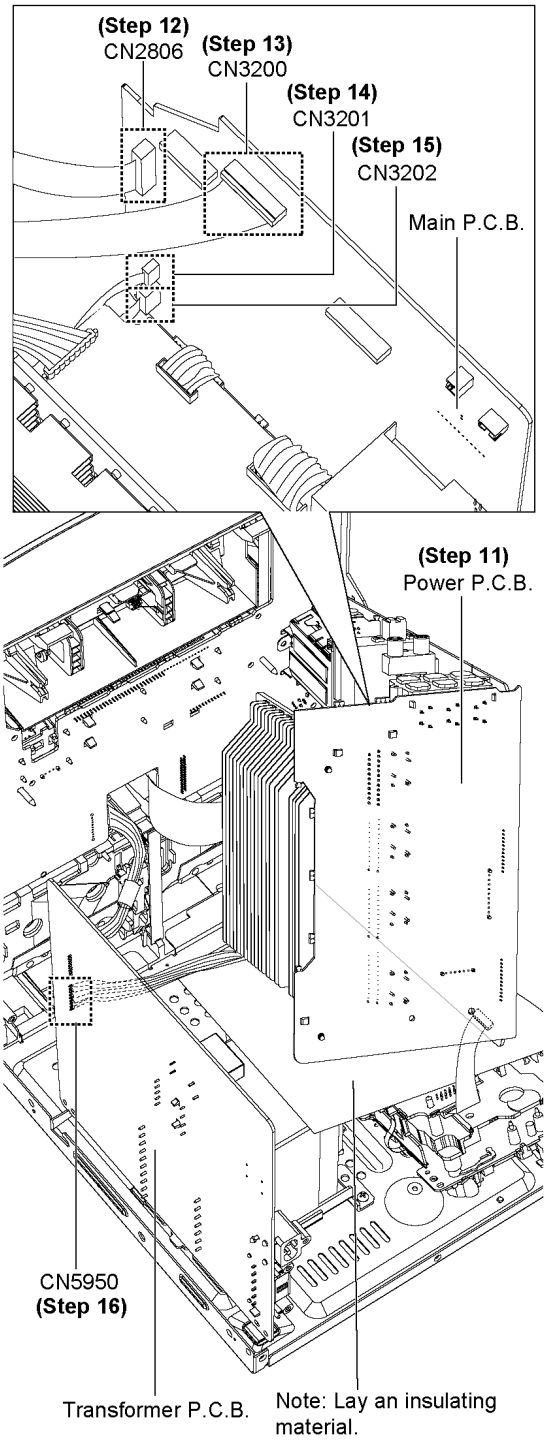


Step 8 : Place the Deck Mechanism Unit on the bottom chassis.



Step 9 : Connect Main P.C.B. to Power P.C.B. (12P connector from CN2808 to CN5102).

Step 10 : Connect Main P.C.B. to Power P.C.B. (12P connector CN2809 to CN5103).



Step 11 : Place Power P.C.B. on top of the Deck Mechanism Unit.

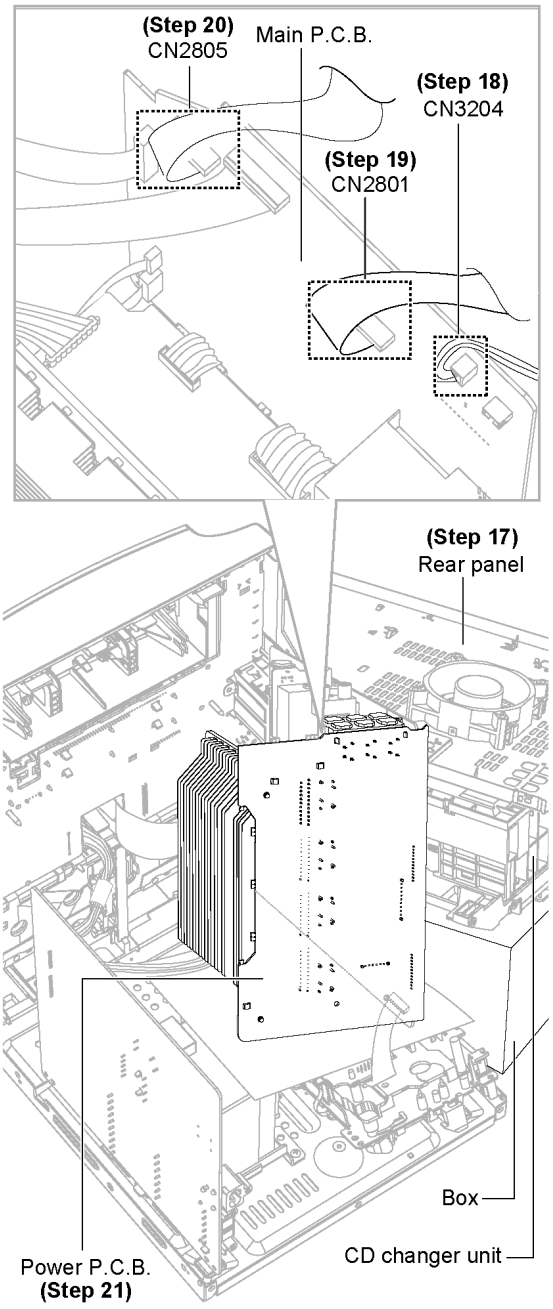
Step 12 : Connect 30P FFC cable at connector (CN2806) on Main P.C.B..

Step 13 : Connect 22P FFC cable at connector (CN3200) on Main P.C.B..

Step 14 : Connect 10P FFC cable at connector (CN3201) on Main P.C.B..

Step 15 : Connect 11P FFC cable at connector (CN3202) on Main P.C.B..

Step 16 : Connect 9P cable at connector (CN5950) on Transformer P.C.B..



Step 17 : Place both CD Changer Unit & Rear Panel on the box to adjust its position higher.

Step 18 : Connect 2P cable at connector (CN3204) on Main P.C.B..

Step 19 : Connect 22P FFC cable at connector (CN2801) on Main P.C.B..

Step 20 : Connect 14P FFC cable at connector (CN2805) on Main P.C.B..

Step 21 : Check and repair Power P.C.B..

11 Adjustment Procedures

11.1. Cassette Deck Section

- Measurement Condition
  - Deck Tape Select: NORMAL
  - Make sure head, capstan and press roller are clean.
  - Judgeable room temperature 20 ± 5 °C (68 ± 9°F)
- Measuring instrument
  - EVM (DC Electronic voltmeter)
  - Digital frequency counter
- Test Tape
  - Tape speed gain adjustment (3 kHz, -10 dB); QZZCWAT

11.1.1. Tape Speed Adjustment (Deck 1/2)

1. Set the tape edit button to “NORMAL” position.
2. Insert the test tape (QZZCWAT) to DECK 2 and playback (FWD side) the middle portion of it.
3. Adjust Motor VR (DECK 2) for the output value shown below.

Adjustment target: 3000±90Hz (NORMAL speed)

4. After alignment, assure that the output frequency of the DECK 1 FWD are within 90 Hz of the value of the output frequency of DECK 2 FWD.

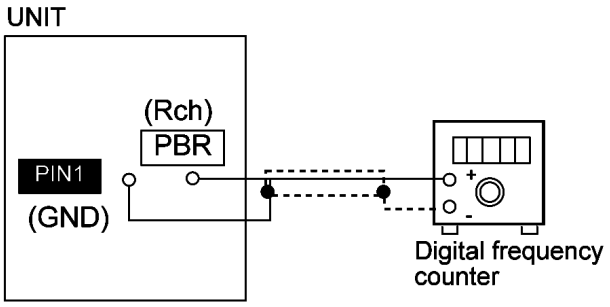


Fig. 1

11.1.2. Bias Voltage Check

1. Set the unit “AUX” position.
2. Insert the Normal blank tape (QZZCRA) into DECK 2 and the unit to “REC” mode (use “I REC” key).
3. Measure and make sure that the output is within the standard value.

Bias voltage for Deck 2 14±4mV (Normal)

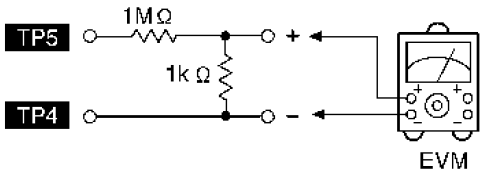


Fig. 2

Erase voltage for Deck 2 80mV (Normal)

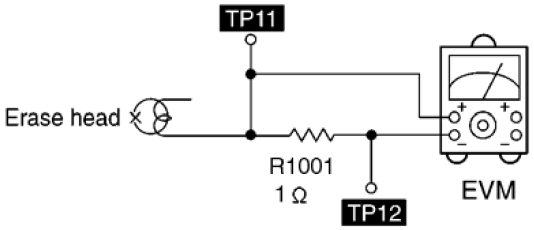


Fig. 3

11.1.3. Bias Frequency Adjustment (Deck 1/2)

1. Set the unit to “AUX” position.
2. Insert the Normal blank tape (QZZCRA) into DECK 2 and set the unit to “REC” mode (use “I REC” key).
3. Adjust L1002 so that the output frequency is within the standard value as below.

Standard Value: 89 ~ 110 kHz

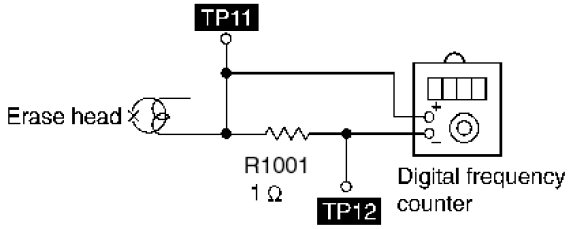


Fig. 4

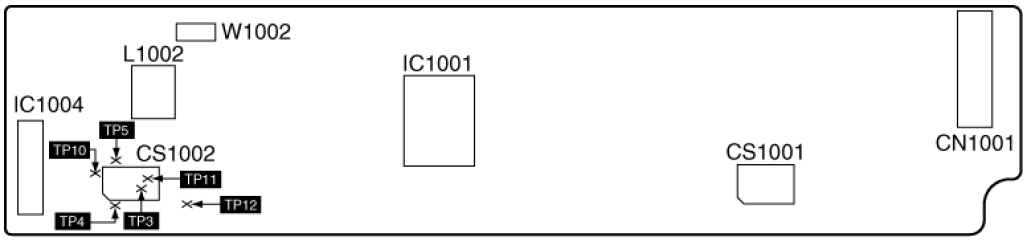
11.2. Tuner section

No adjustment is required.

11.3. Aligment Points

11.3.1. Cassette Deck Section

Below is the locations of test points for Deck P.C.B.:-



12 Voltage Measurement & Waveform Chart

Note:

- Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard.

  Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.
- Circuit voltage and waveform described herein shall be regarded as reference information when probing defect point because it may differ from actual measuring value due to difference of Measuring instrument and its measuring condition and product itself.

12.1. Voltage Measurement

12.1.1. CD SERVO P.C.B.

Ref No.	IC7001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.2
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ref No.	IC7001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	1.6	0	1.6	1.6	1.8	0	3.2	1.5	3.2	3.2	0	1.6	1.6	0	0	1.9	1.9	0	1.7	1.7
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ref No.	IC7001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	0.2	2.4	1.7	1.9	1	0	3.2	1.2	0	1.2	1.6	1.6	0.9	1.4	1.5	1.5	0	3.2	0	0
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ref No.	IC7001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
CD PLAY	3.2						3	3	3	2.9	0	3.2	0	1.6	0	1.6	3.2	0	3.2	1.6
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ref No.	IC7001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
CD PLAY	1.6	1.6	0	0	0	0	0	0	0	0	0	0	3.2	0	0	0	0	0	0	0
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ref No.	IC7002																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	1.6	0	1.5	0	0	0	0	0	0	0	1.7	3.2	3.2	3.2	2.8	3.8	3.2	3.2	0	7.1
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ref No.	IC7002																			
MODE	21	22	23	24	25	26	27	28	29	30										
CD PLAY	0	0	0	0	7.1	1.6	1.6	1.6	0	0										
STANDBY	0	0	0	0	0	0	0	0	0	0										
Ref No.	Q7601																			
MODE	E	C	B																	
CD PLAY	3.1	2	2.4																	
STANDBY	0	0.1	0																	

SA-AK960P CD SERVO P.C.B.

12.1.2. MAIN P.C.B.

Ref No.	IC2801																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	3.7	0	3.1	0	0	0	0	0	0	0.8	0.7	3.3	1.6	0	1.6	3.3	3.3	3.3	0	1.8
STANDBY	0	0	0	0	0	0	0	0	0	0.7	0.7	3.3	1.6	0	1.6	3.3	3.3	3.3	0	1.8
Ref No.	IC2801																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	0	0	0	0	0	0	0	3.3	0	0	3.2	3.2	0	0	0	0	0	0	3.2	0
STANDBY	0	0	0	0	0	0	0	3.3	0	0	3.3	3.3	0	0	3.3	0	0	0	3.1	3.2
Ref No.	IC2801																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	0	0	0	0	0	3.2	3.2	0	0	0	0	0	3.2	0	0.1	0	0	3.3	3.3	0
STANDBY	0	0	1.3	0	0	3.2	3.2	0	0	0	0	0	0	0	0.1	0	0	3.3	3.3	0
Ref No.	IC2801																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
CD PLAY	3.2	3.3	0	0	1.4	3.2	0	0	0	1.9	1.9	2.8	0	0	2.4	3.3	3.1	3.1	3.3	0
STANDBY	3.2	3.3	0	0	1.4	3.2	0	0	0	2.4	2.5	2.9	0	0	0	3.3	3.3	3.3	3.3	0
Ref No.	IC2801																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
CD PLAY	3.3	0.1	3.2	0	0	3.2	0	0	0.2	1.4	3.3	2.9	2.8	2.9	2.6	0	3	3.3	3.3	1.6
STANDBY	3.3	0.1	3.3	0	0	3.2	0	0	2.6	1.8	3.3	2.9	2.8	2.9	2.7	0	3	3.3	3.3	1.6
Ref No.	IC2803																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	0	4.6	4.6	4.6	4.6	4.6	4.6	4.6
STANDBY	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	0	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Ref No.	IC2803																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	4.6	4.6	4.6	4.6	4.6	4.6	4.6	-	-	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	9.2	3.3	0
STANDBY	4.6	4.6	4.6	4.6	4.6	4.6	4.6	-	-	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	9.3	0	0
Ref No.	IC2803																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56				
CD PLAY	-	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6				
STANDBY	-	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6				
Ref No.	IC2804									IC2805										
MODE	1	2	3	4	5	6	7	8		1	2	3	4	5						
CD PLAY	7.5	7.5	7.5	0	7.5	7.5	7.5	15		3.4	0	1.3	3.3	3.4						
STANDBY	7.5	7.5	7.5	0	7.5	7.5	7.5	15.1		3.4	0	1.3	3.3	3.4						
Ref No.	IC2810									IC2871										
MODE	1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8			
CD PLAY	7.6	7.6	7.3	0	7.4	7.5	7.6	15		-	3.3	0	0	0	0	0	-			
STANDBY	7.8	7.8	7.4	0	7.6	7.7	7.7	15.4		-	3.3	0	0	0	0	0	-			
Ref No.	IC2872				IC2900															
MODE	1	2	3		1	2	3	4	5	6	7	8	9	10	11	12	13	14		
CD PLAY	11.4	0	9		5.1	5.2	5.2	0	-	-	-	-	-	0	-	5.1	5.1	-		
STANDBY	11.6	0	9		5.1	4.7	4.7	0	-	-	-	-	-	0	-	5.1	5.1	-		
Ref No.	IC3800																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	4.6	4.6	4.6	0	4.6	4.6	4.6	9.1												
STANDBY	4.6	4.6	4.6	0	4.6	4.6	4.6	9.2												
Ref No.	Q2311				Q2317				Q2341				Q2411				Q2417			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	0	-0.9		0	0	-0.9		0	0	-0.9		0	0	0.6		0	0	-0.9	
STANDBY	0	0	0.6		0	0	0.6		0	0	0.6		0	0	0.6		0	0	0.6	
Ref No.	Q2441				Q2501				Q2511				Q2551				Q2552			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	0	-0.9		0.4	1.7	1		0	-0.9	0		0	-1.8	0		0	-1.8	0	
STANDBY	0	0	0.6		0.4	0.6	1.1		1.3	1	0		0	-1.9	0		0	-1.9	0	
Ref No.	Q2553				Q2554				Q2555				Q2556				Q2557			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	0	-2		0	0	-1.8		0	0	0.6		0	-2.1	0		0	0	0.7	
STANDBY	0	0	-1.9		0	0	-1.8		0	0	0.6		2.9	2.8	0		0	2.9	0	
Ref No.	Q2558				Q2559				Q2803				Q2936				Q2937			
MODE	E	C	B		E	C	B		E	c	B		E	C	B		E	C	B	
CD PLAY	0	0	-2.4		3.7	4.2	2.9		0	3.3	0		12.3	0	12.3		0	12.1	0	
STANDBY	0	0	0.7		1.8	4.2	0		0	3.2	0		12.4	0	12.4		0	12.2	0	
Ref No.	Q2950				Q2951				Q2952				Q3100				Q3500			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	3.3	3.3	2.6		3.3	3.3	2.6		0	0	3.2		0	3.2	0		0	12.3	0	
STANDBY	3.3	3.3	2.6		3.3	3.3	2.6		0	0	3.2		0	0	2.6		0	12.1	0	
Ref No.	Q3501				Q3502				Q3503				Q3504				Q3505			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	12.1	0		0	0.8	1.5		12.3	0	12.2		12.3	0	12.2		12.1	0	12.1	
STANDBY	0	12.1	0		0	0.8	1.5		12.2	0	12.2		12.2	0	12.2		12.1	0	12.1	
Ref No.	Q3506				Q3507				Q3508				Q3535				Q3537			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	12.1	0		0	0	0.2		0	3.3	0		11.6	0	0.1		11.6	0	0.1	
STANDBY	0	12.1	0		0	0	0.2		0	3.3	0		11.6	0	0.1		11.6	0	0.1	
Ref No.	Q3601				QR3513															
MODE	E	C	B		E	C	B													
CD PLAY	8.7	15.3	9.3		0	0.1	2.8													
STANDBY	8.6	15	9.3		0	0.1	2.8													

SA-AK960P MAIN P.C.B.

12.1.3. PANEL P.C.B.

Ref No.	IC6601																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	0	0	0	1.8	1.3	1.9	2.7	1.9	0	0	0	3.3	-17.1	-11	-18	-24.6	-24.6	-22.7	-22.7
STANDBY	0	0	0	0	1.8	1.5	2.5	2.9	2.4	0	0	0	3.3	-17	-11	-17	-22.6	-24.6	-24.2	-24.2
Ref No.	IC6601																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	-20.8	-24.5	-22.6	-22.7	-16.9	-22.6	-18.8	-22.7	-22.6	-23	-23.3	-23	-23.1	-22.8	-22.9	-22.9	-22.8	-22.9	-22.9	-22.8
STANDBY	-24.2	-24.3	-24.1	-24.2	-24.3	-24.1	-24.2	-24.2	-24.3	-24.4	-24.2	-24.1	-24.1	-24.1	-24.2	-24.2	-24.1	-24.1	-24.3	-24.1
Ref No.	IC6601																			
MODE	41	42	43	44																
CD PLAY	-22.8	-22.9	3.2	0																
STANDBY	-24.1	-24.1	3.3	0																
Ref No.	Q6501				Q6502															
MODE	E	C	B		E	C	B													
CD PLAY	0.7	5.6	0.1		5.8	9.3	5.3													
STANDBY	0.7	5.5	0.1		5.8	9.4	5.2													

SA-AK960P PANEL P.C.B.

12.1.4. SUB PANEL P.C.B.

Ref No.	IC6701																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
CD PLAY	0	0	0	0	1.3	1.3	1.4	1.4	1.4	1.9	1.8	1.7	1.5	1.5	1.5	3.3				
STANDBY	0	0	0	0	0	-	0	-	-	0.2	0.2	0.2	0.2	0.2	0.2	3.3				

SA-AK960P SUB PANEL P.C.B.

12.1.5. POWER P.C.B.

Ref No.	IC5000																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	2.9	0	0	30.1	0	-29.2	-21.1	30.4	91.2	79.6	-29.2	-17	-29.2	81.1	92.8	30.3	-29	-29	0	30
STANDBY	2.9	0	0	30.2	0	-29.1	-21.3	30.6	90	78.4	-29.3	-17.2	-29.3	79.7	91.1	30.6	-29	-29.1	0	30.2
Ref No.	IC5000																			
MODE	21	22	23																	
CD PLAY	0	0	3.7																	
STANDBY	0	0	2.2																	
Ref No.	IC5200																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	2.9	0	0	30.1	0	-29	-20.9	30.4	91	79.7	-29.2	-17.3	-29.2	79.9	91	30.4	-29	-29	0	30.1
STANDBY	2.9	0	0	30	0	-29	-29.9	30.4	90.7	79.4	-29.2	-17.2	-29.2	79.1	90.5	30.3	-29	-29	0	29.9
Ref No.	IC5200																			
MODE	21	22	23																	
CD PLAY	0	0	3.7																	
STANDBY	0	0	2.2																	
Ref No.	IC5300																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	2.9	0	0	30.1	0	-29	-21	30.4	94	82.2	-29.2	-16.9	-29.2	83.1	95.1	30.5	-29	-29	0	30
STANDBY	2.9	0	0	29.9	0	-28.9	-21	30.2	93.3	81.8	-29.1	-16.8	-29.1	82.2	94.1	30.2	-28.9	-28.9	0	29.9
Ref No.	IC5300																			
MODE	21	22	23																	
CD PLAY	0	0	3.7																	
STANDBY	0	0	2.2																	
Ref No.	IC5400																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	2.9	0	0	29.9	0	-28.9	-20.7	30.3	91.1	78.4	-29.2	-16.7	-29.2	78.4	90.2	30.4	-29	-29	0	30
STANDBY	2.8	0	0	-29.9	0	-29.9	-20.8	30.3	92.2	80.6	-29.3	-16.8	-29.3	80.7	90.9	30.5	29.1	-29.1	0	30.1
Ref No.	IC5400																			
MODE	21	22	23																	
CD PLAY	0	0	3.7																	
STANDBY	0	0	2.2																	
Ref No.	IC5500																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
CD PLAY	0	5.2	4.7	0	3	2.8	0	2.9	2.9	2.9	2.5	0	5.2	5.2						
STANDBY	0	5.2	4.2	0	2.9	2.8	0	2.9	2.9	2.3	2.4	0	5.2	5.2						
Ref No.	Q5103				Q5104				Q5153				Q5154				Q5173			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	3.2	0		0	3.2	0		0	3.7	0		3.7	0	3.2		0	3.7	0	
STANDBY	0	3.3	0		0	3.3	0		0	0	0.7		2.2	0	3.2		0	2.2	0	

SA-AK960P POWER P.C.B.

12.1.6. SUB POWER P.C.B.

Ref No.	IC5101																			
MODE	1	2	3	4	5															
CD PLAY	3.8	5.6	0	12.1	3.3															
STANDBY	3.8	5.6	0	12.1	3.3															
Ref No.	Q5091				Q5092				Q5100				Q5103				Q5104			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	3.7	3.0		3.0	3.7	0		0	0	0.1		0	3.7	-0.1		-0.1	3.7	0	
STANDBY	0	3.7	3.0		3.0	3.7	0		0	0	0.2		0	3.7	-0.1		-0.1	3.7	0	
Ref No.	Q5105				Q5106				Q5108				Q5109				Q5111			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	30.3	32	47.8		-48.4	-46.8	-29.1		-45.9	-42.1	-45.4		-4.8	-19.6	-5.4		15.2	28.4	15.8	
STANDBY	30.4	32	47.8		-48.4	-46.8	-29.2		-46	-42.3	-45.4		-4.8	-19.6	-5.4		15.2	28.5	15.9	
Ref No.	Q5112				Q5113				Q5114				Q5191				Q5192			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	17.1	12.1	16.4		17.5	16.5	17.1		0	14.9	12		0	3.7	3.0		3.0	3.7	0	
STANDBY	17.3	12.1	16.4		17.5	17	17.4		0	15	12		0	3.7	3		3	3.7	0	

SA-AK960P SUB POWER P.C.B.

12.1.7. DECK P.C.B.

Ref No.	IC1001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	0	0.6	5.5	5.5	2.8	0	0.3	0	1.9	7.2	0	11.3	0	0	0	0.3	0	0.2	5.4
STANDBY	0	0	0.4	0.4	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0.3	0	0.2	0.1
Ref No.	IC1001																			
MODE	21	22	23	24																
CD PLAY	6.3	0.7	0	0																
STANDBY	0.3	0.3	0	0																
Ref No.	IC1004																			
MODE	1	2	3	4	5															
CD PLAY	7.9	0	0	0	0															
STANDBY	0	0	0	0	0															
Ref No.	Q1003				Q1004				Q1005				Q1007				Q1017			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	-0.1	0		0	15.3	0		0	15.3	0		0	0	0		0	11.6	-0.6	
STANDBY	0	0	0		0	0	0		0	0	0		0	0	0		0	0	0	

SA-AK960P DECK P.C.B.

12.1.8. DECK MECHANISM P.C.B.

Ref No.	IC951					IC971														
MODE	1	2	3	4		1	2	3	4											
CD PLAY	0.7	5	4.2	5.3		0.5	0	3.9	5											
STANDBY	0	0	0	0		0	0	0	0											

SA-AK960P DECK MECHANISM P.C.B.

12.1.9. TRANSFORMER P.C.B.

Ref No.	Q5950				Q5951				Q5952				Q5953				Q5954			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	5.7	6.3	12.1		-25.2	-45.1	-25.8		0	-1.1	1.8		0	0.7	0.1		12	29.6	11.3	
STANDBY	5.5	6.3	12.2		-25.1	-44.6	-25.7		0	-1.1	1.8		0	0.7	0.1		12.1	29.3	11.2	

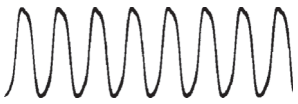
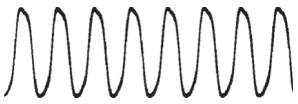
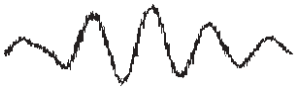
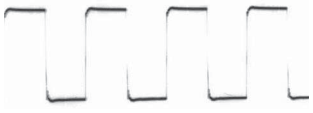
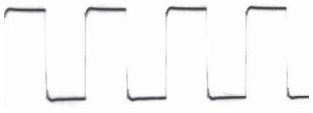
SA-AK960P TRANSFORMER P.C.B.

12.1.10. USB P.C.B.

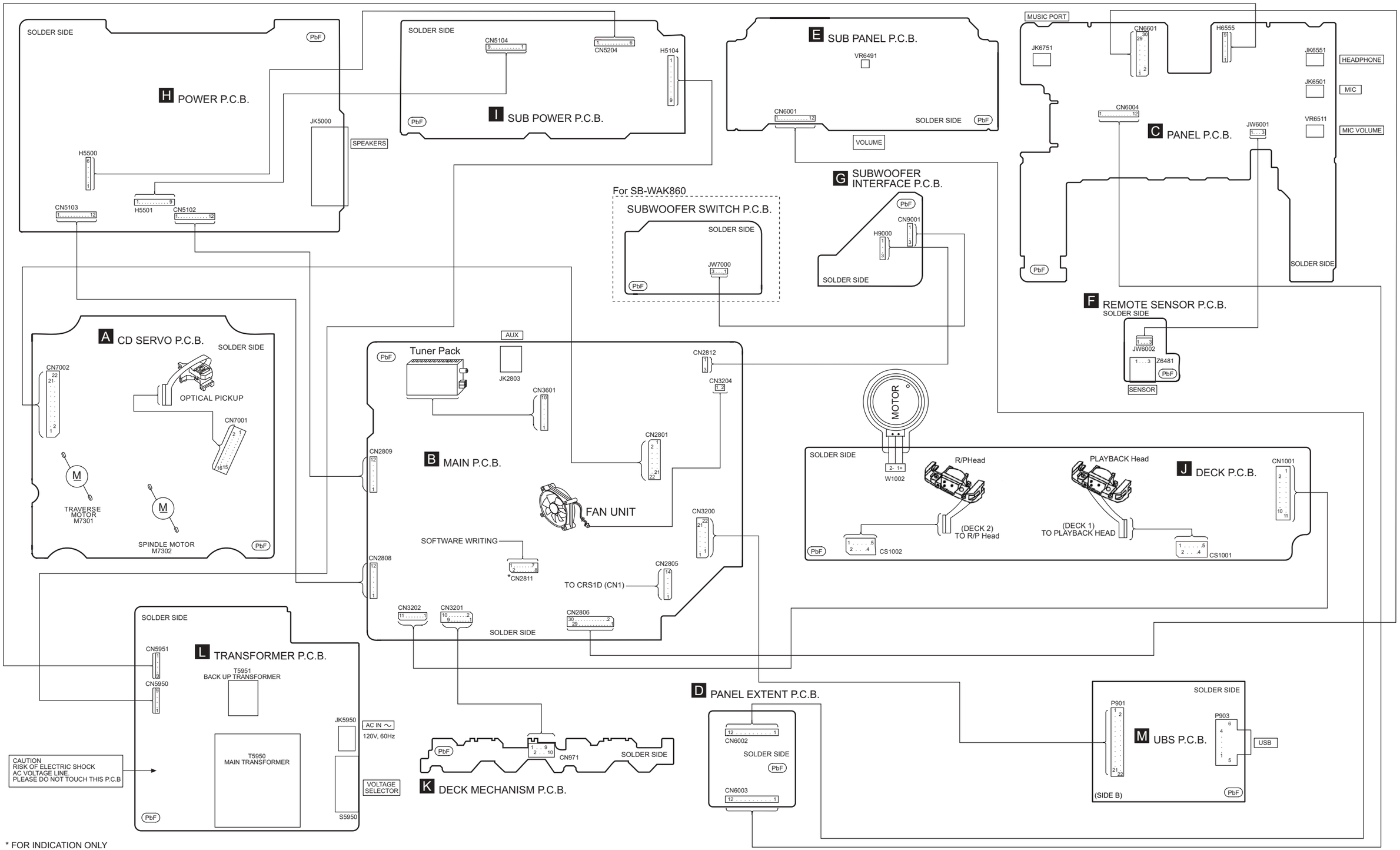
Ref No. / MODE	IC900																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	1.3	3.2	3.2	0	0	0	3.2	3.2	3.2	1.8	0	1.5	0	0	0	0	3.2	0	0	0
STANDBY	0	0	0	0	0	0	0.6	0	0.6	0.6	0	0	0	0	0	0	0	0	0	0
Ref No. / MODE	IC900																			
	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	3.3	3.3	3.3	1.4	1.4	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	3.3	1.4	0
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0
Ref No. / MODE	IC900																			
	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	1.4	1.2	1.8	0	1.4	3.2	3.2	0.1	3.2	0	0	1.2	0.1	0	1.4	3.1	3.1	3.1	0	1.3
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ref No. / MODE	IC900																			
	61	62	63	64																
CD PLAY	0	1.8	1.4	3.2																
STANDBY	0	0.6	0	0																
Ref No. / MODE	IC951																			
	1	2	3	4	5	6	7	8												
CD PLAY	0	5	5	3.2	3.3	0.5	0.5	0.5												
STANDBY	0	0	0	0.6	0	0	0	0												

SA-AK960P USB P.C.B.

12.2. Waveform Chart

WF No. IC2801-13,15 (PLAY)  3.2Vp-p (50nsec/div)	WF No. IC2803-3,4 (PLAY)  0.9Vp-p (5msec/div)	WF No. IC2803-5,6,37,42 (PLAY)  0.9Vp-p (10msec/div)	WF No. IC2804-1,3,5,7 (PLAY)  0.1Vp-p (10msec/div)
WF No. IC2810-1,2,4,6 (PLAY)  1.5Vp-p (50nsec/div)	WF No. IC2900-2,3,12,13 (PLAY)  0.1Vp-p (10nsec/div)	WF No. IC3800-1,3,5,7(PLAY)  1.3Vp-p (50usec/div)	WF No. IC5000-2,22 (PLAY)  1.2Vp-p (20usec/div)
WF No. IC5000-10,14 (PLAY)  60Vp-p (20usec/div)	WF No. IC5200-2,22 (PLAY)  1.2Vp-p (20usec/div)	WF No. IC5200-10,14 (PLAY)  60Vp-p (20usec/div)	WF No. IC5300-2,22 (PLAY)  1.2Vp-p (20usec/div)
WF No. IC5300-10,14 (PLAY)  60Vp-p (20usec/div)	WF No. IC5400-2,22 (PLAY)  1.2Vp-p (20usec/div)	WF No. IC5400-10,14 (PLAY)  60Vp-p (20usec/div)	

13 Wiring Connection Diagram

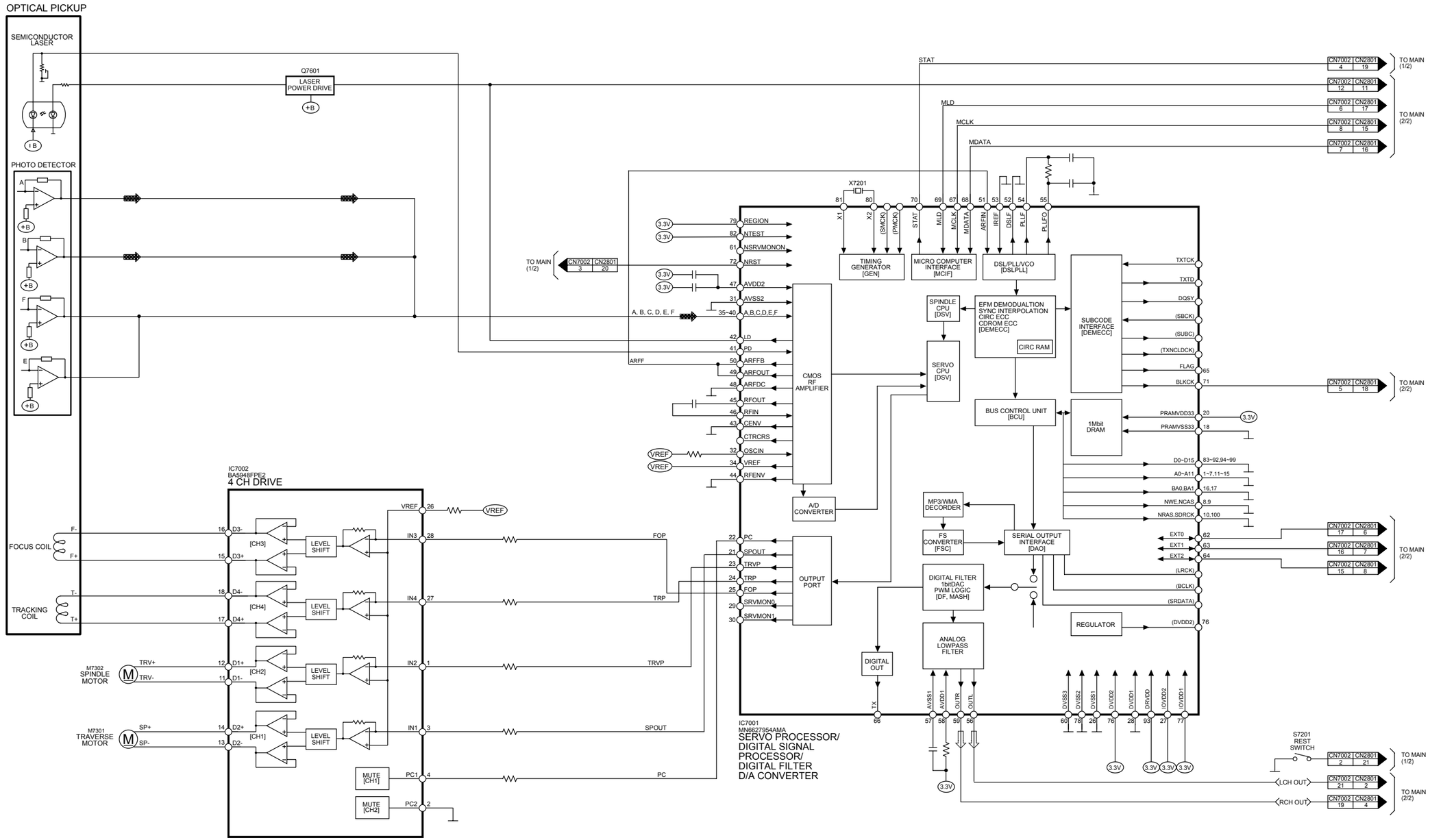


* FOR INDICATION ONLY

SA-AK960P

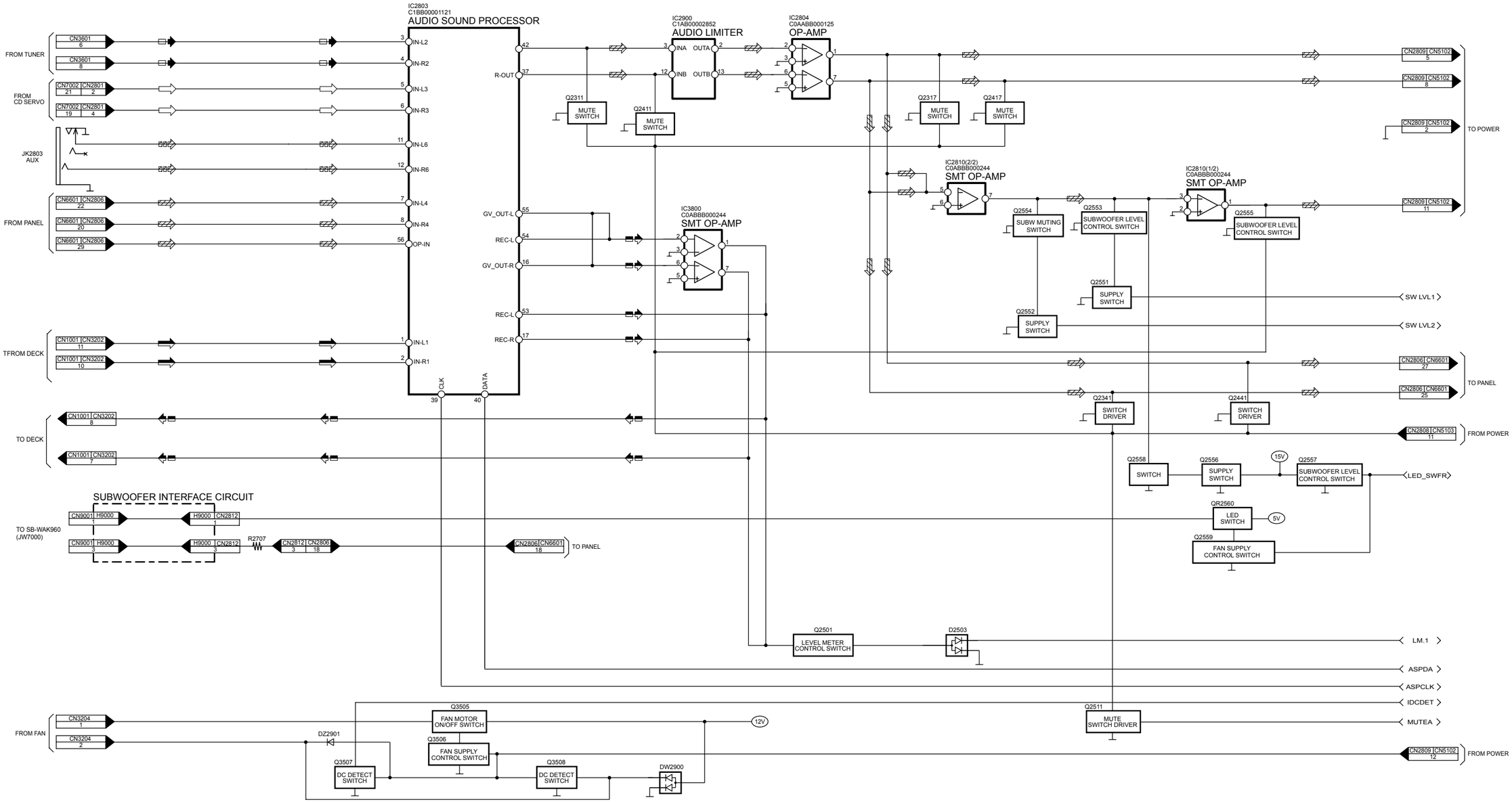
14 Block Diagram

14.1. CD SERVO BLOCK DIAGRAM



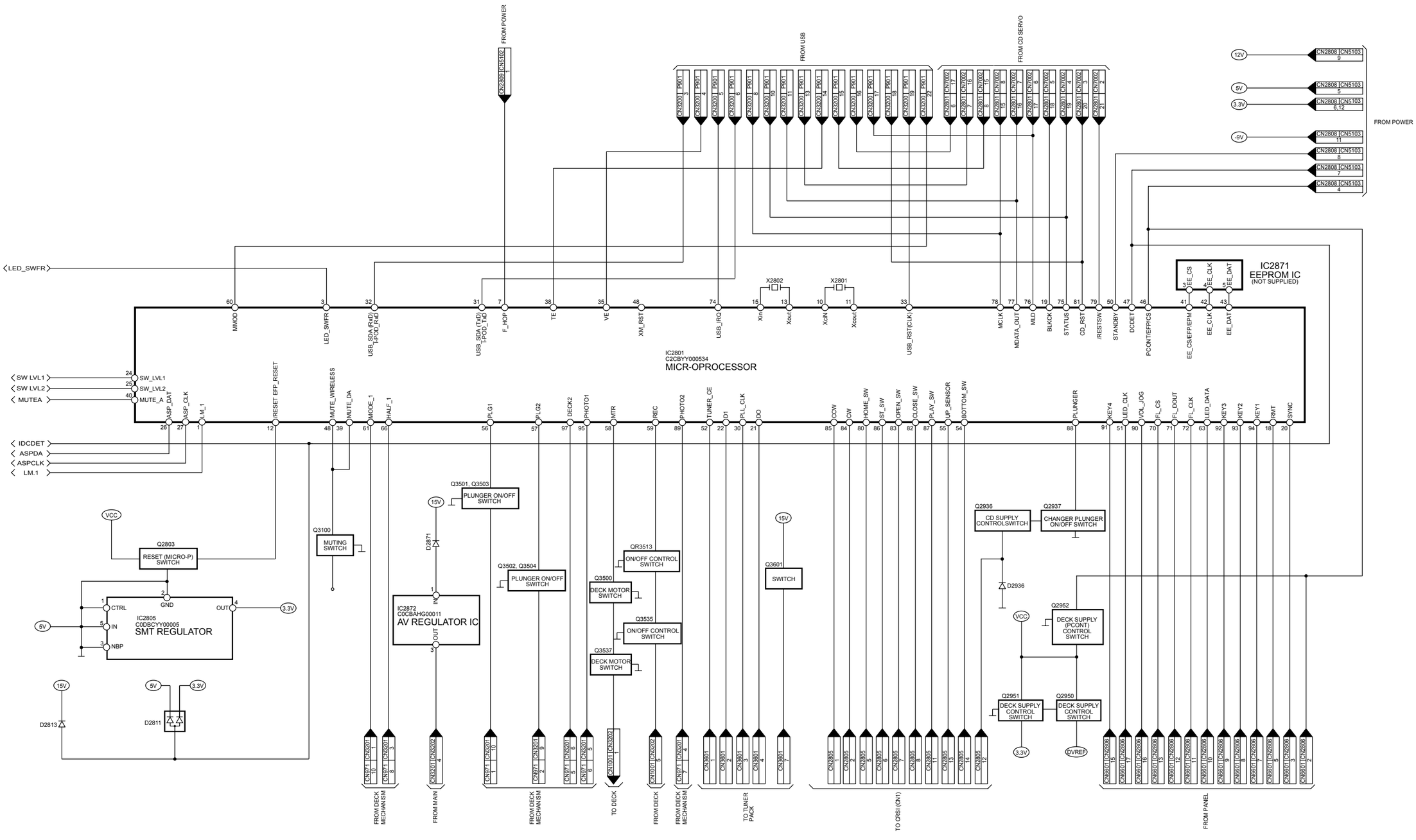
SA-AK960P CD SERVO BLOCK DIAGRAM

14.2. MAIN (1/2) AND SUBWOOFER INTERFACE BLOCK DIAGRAM



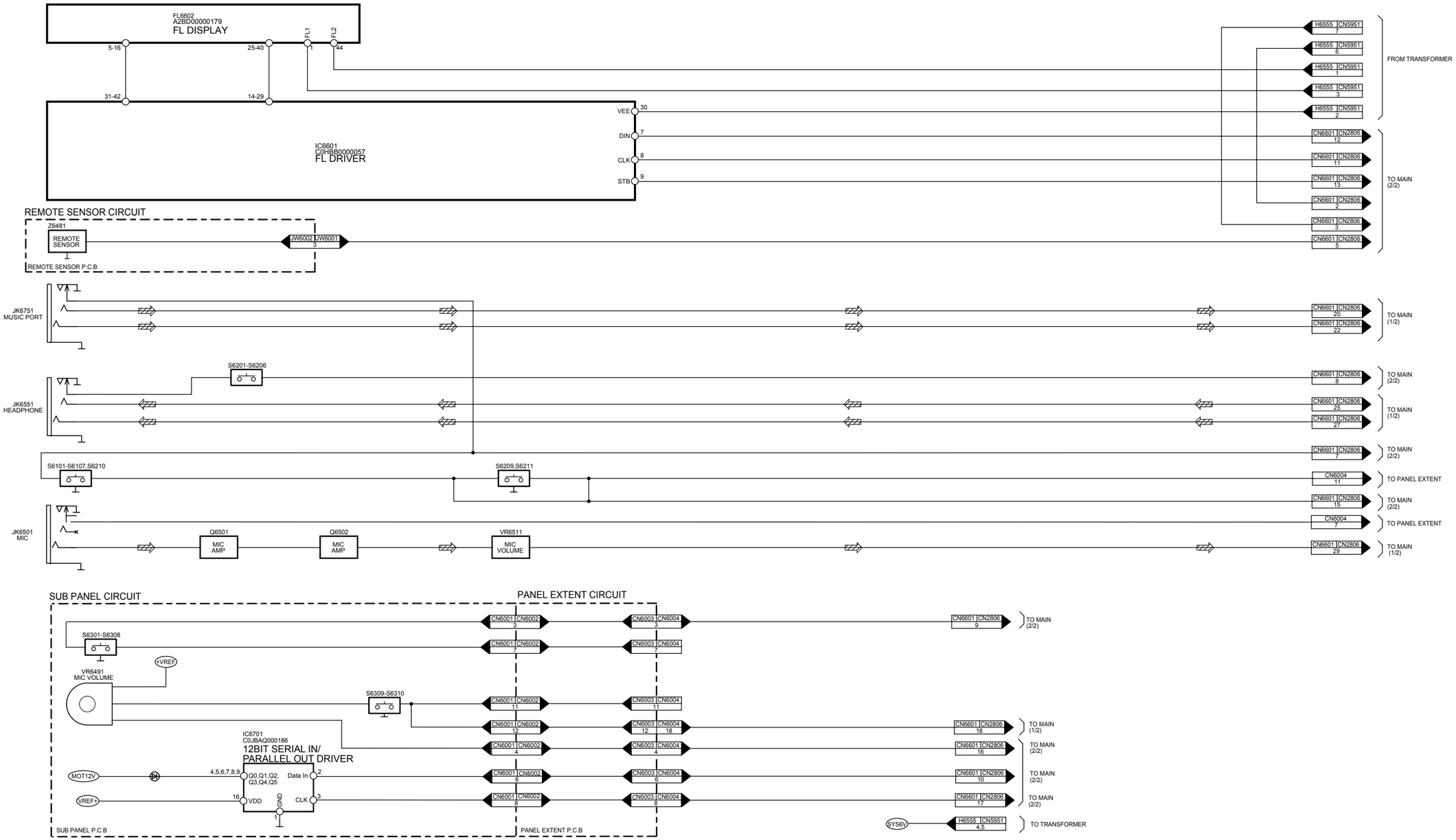
SA-AK960P MAIN (1/2) AND SUBWOOFER INTERFACE BLOCK DIAGRAM

14.3. MAIN (2/2) BLOCK DIAGRAM



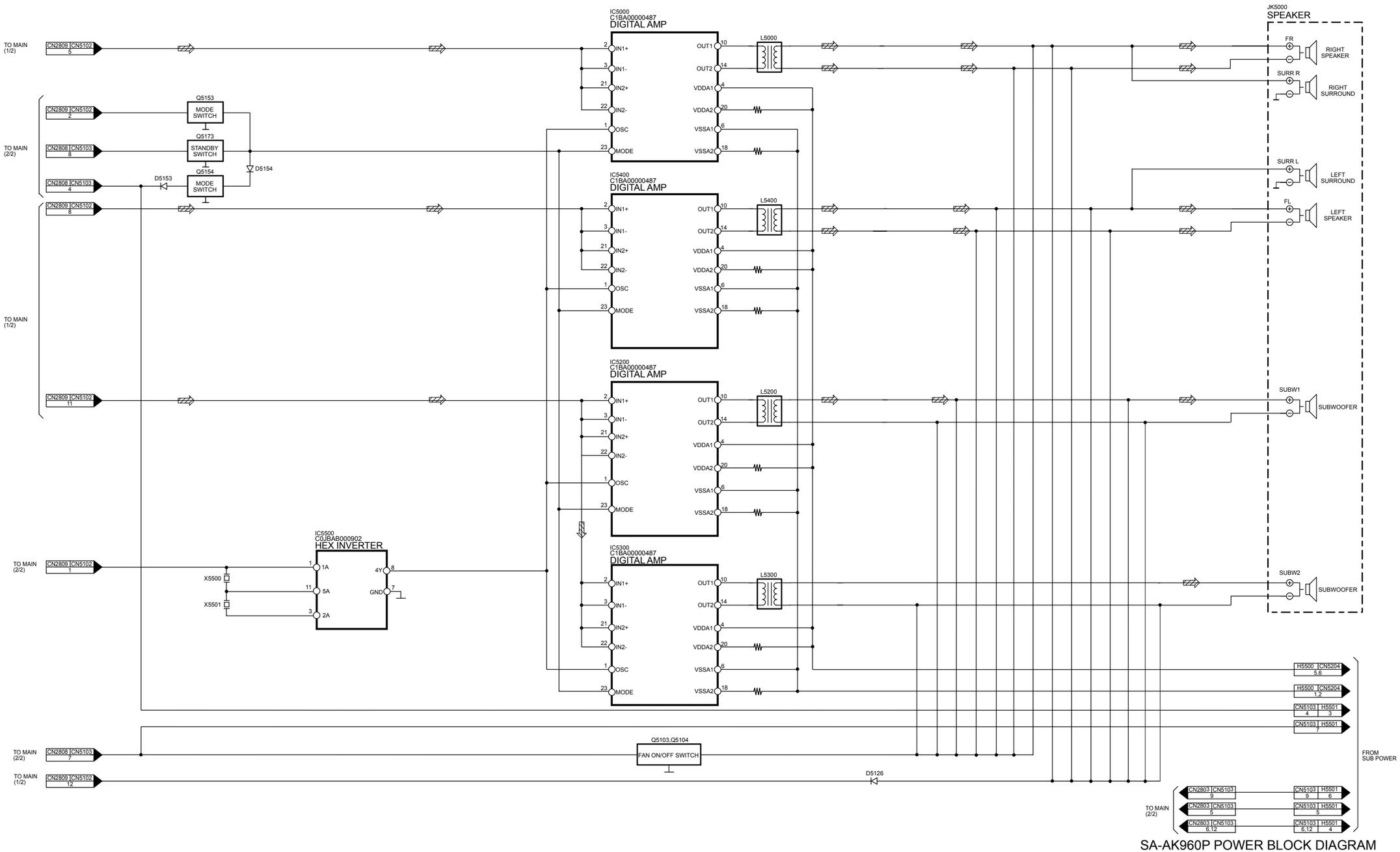
SA-AK960P MAIN (2/2) BLOCK DIAGRAM

14.4. PANEL BLOCK DIAGRAM

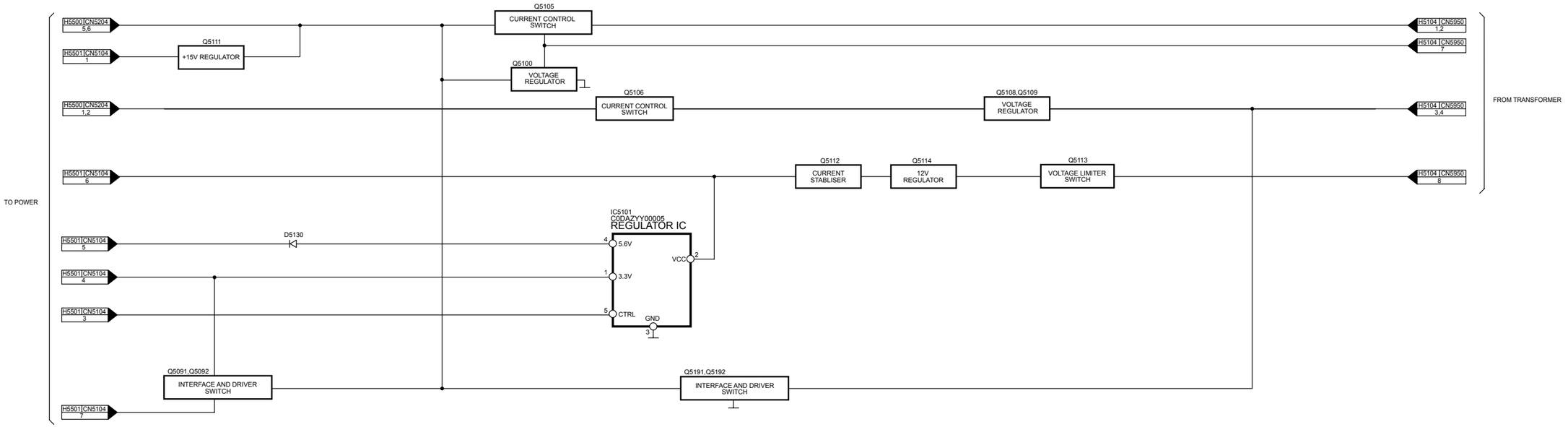


SA-AK960P PANEL BLOCK DIAGRAM

14.5. POWER BLOCK DIAGRAM

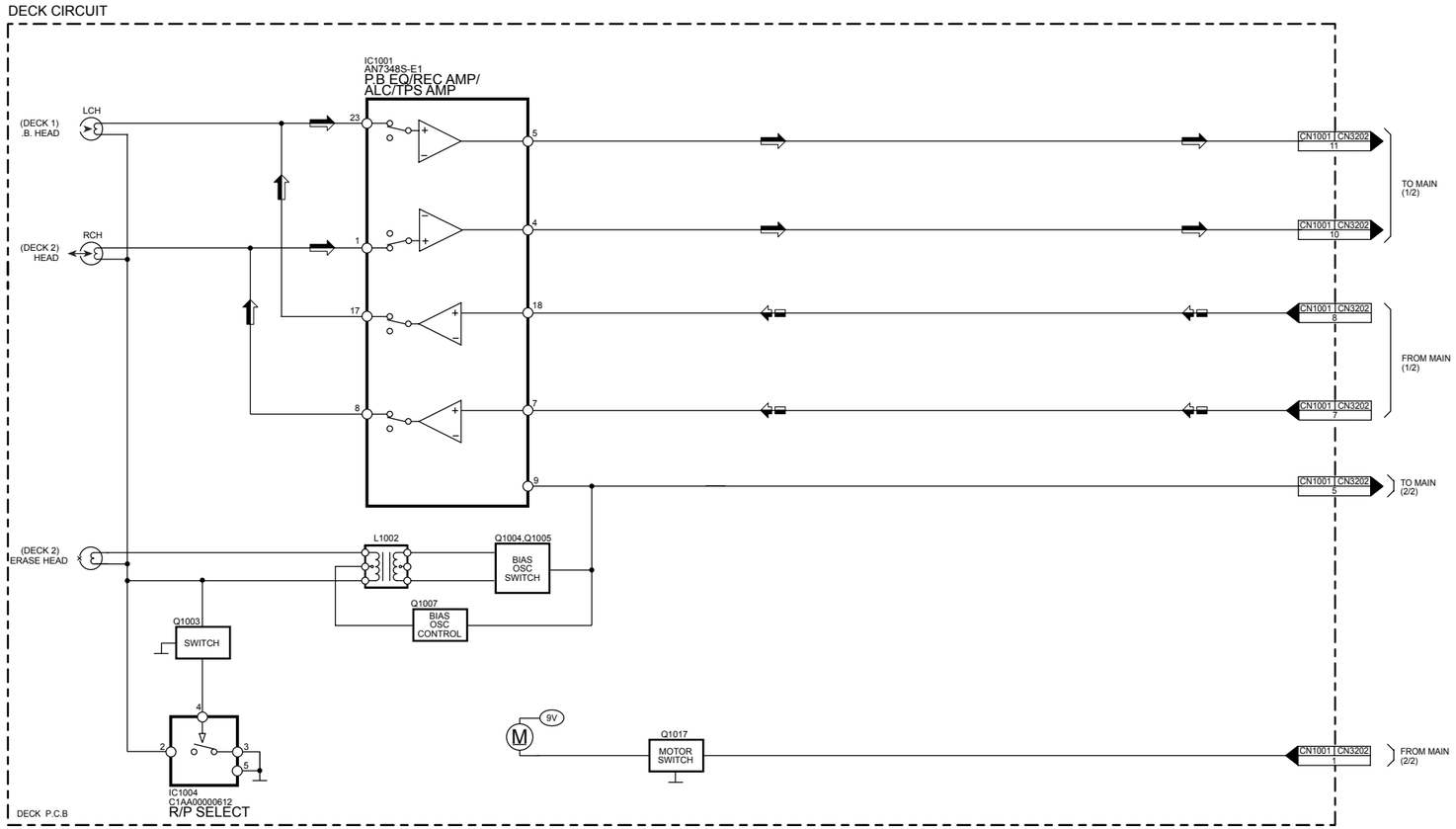


SA-AK960P POWER BLOCK DIAGRAM



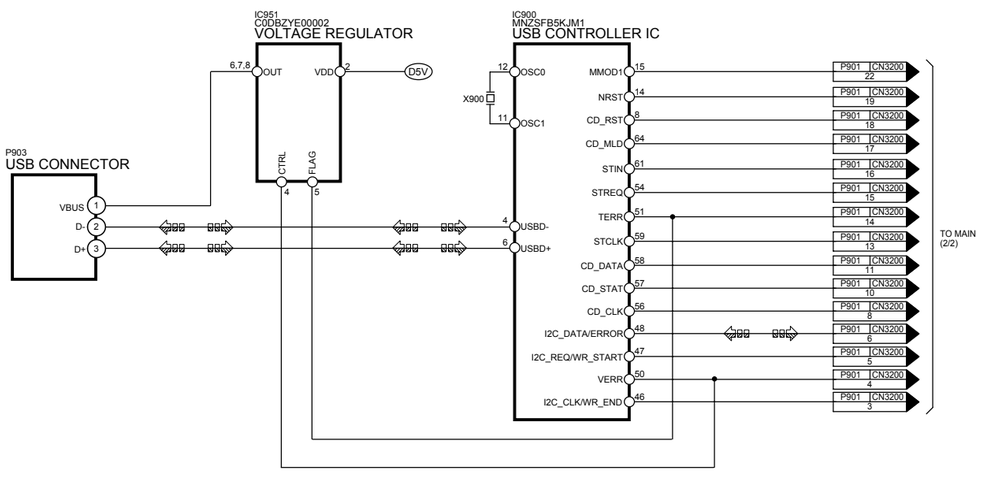
SA-AK960P SUB POWER BLOCK DIAGRAM

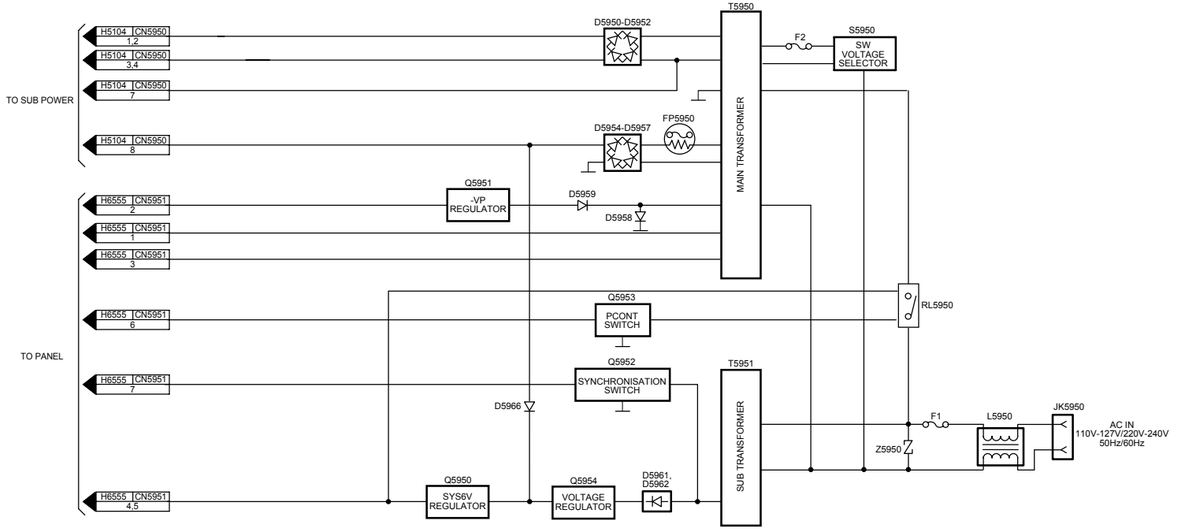
14.6. DECK/DECK MECHANISM BLOCK DIAGRAM



SA-AK960P DECK/DECK MECHANISM BLOCK DIAGRAM

14.7. USB /TRANSFORMER BLOCK DIAGRAM





SIGNAL LINES

: MAIN SIGNAL LINE
: TAPE PLAYBACK SIGNAL LINE
: TAPE RECORD SIGNAL LINE
: CD SIGNAL LINE
: FM/AM SIGNAL LINE
: AUX/MIC/MUSIC PORT SIGNAL LINE
: CD-DA SIGNAL LINE
: USB SIGNAL LINE

( ) Indicates the Pin No. of Right Channel.

NOTE : Signal Lines are applicable to the Left Channel only.

SA-AK960P USB /TRANSFORMER BLOCK DIAGRAM

15 Notes Of Schematic Diagram

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

Notes:

S951:	Mode switch.
S952:	Half switch.
S971:	Mode switch.
S972:	Half switch.
S975:	Recinh_F switch.
S6101:	Power (⏻/I) switch.
S6102:	M.EQ- (-) switch.
S6103:	M.EQ switch.
S6104:	M.EQ+ (+) switch.
S6105:	Hard Bass switch.
S6106:	USB (►/II) switch.
S6107:	Deck Open_1 (▲) switch.
S6201:	Single Change (▲) switch.
S6202:	CD1 (1 ▶) switch.
S6203:	CD2 (2 ▶) switch.
S6204:	CD3 (3 ▶) switch.
S6205:	CD4 (4 ▶) switch.
S6206:	CD5 (5 ▶) switch.
S6209:	Multi Change (▲) switch.
S6210:	Deck Open_2 (▲) switch.
S6211:	Open/Close (▲) switch.
S6301:	EXT-IN switch.
S6302:	CD (CD ►/II) switch.
S6303:	Display/-Light effect switch.
S6304:	Deck 1/2 switch.
S6305:	Rec (●) switch.
S6306:	REW (**REW/**I◄◄) switch.
S6307:	FF (**FF/**►►I) switch.
S6308:	Stop/ -Demo (STOP, ■) switch.
S6309:	Tuner/Band switch.
S6310:	Tape (TAPE, ►) switch.
S7201:	Rest switch.
VR6491:	VR Volume jog.
VR6511:	VR Mic volume jog.

- **Importance safety notice :**

  Components identified by ⚠ mark have special characteristics important for safety.
  Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.
  When replacing any of components, be sure to use only manufacturer´s specified parts shown in the parts list.

- **Resistor**

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

- **Capacitor**

  Unit of resistance is µF, unless otherwise noted. F=Farad, pF=Pico-Farad

- **Coil**

  Unit of inductance is H, unless otherwise noted.

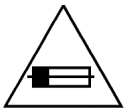
- *****

  For Indication only.

- **Voltage and Signal lines:**

: +B Signal line
: -B Signal line
: CD-DA signal line
: CD signal line
: FM/AM signal line
: MAIN signal line
: TAPE PLAYBACK signal line
: TAPE RECORD signal line
: AUX / MIC / MUSIC PORT signal line
: USB signal line

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE F1 T8A, 125V FUSE



RISK OF FIRE-REPLACE FUSE AS MARKED.

FUSE CAUTION

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

16 Schematic Diagram

16.1. CD SERVO CIRCUIT

SCHEMATIC DIAGRAM - 1

OPTICAL PICKUP CIRCUIT (FOR REFERENCE ONLY)

A CD SERVO CIRCUIT

: + B SIGNAL LINE : CD DA SIGNAL LINE : CD SIGNAL LINE

LASER DIODE

CN7001

Q7601 B1ADCF000001 LASER POWER DRIVE

IC7001 MN6627954AMA SERVO PROCESSOR/ DIGITAL SIGNAL PROCESSOR/ DIGITAL FILTER D/A CONVERTER

IC7002 BA5948FPE2 4 CH DRIVE IC

M7301* TRAVERSE MOTOR

M7302* SPINDLE MOTOR

CN7002

TO B MAIN CIRCUIT (CN2801) IN SCHEMATIC DIAGRAM - 4

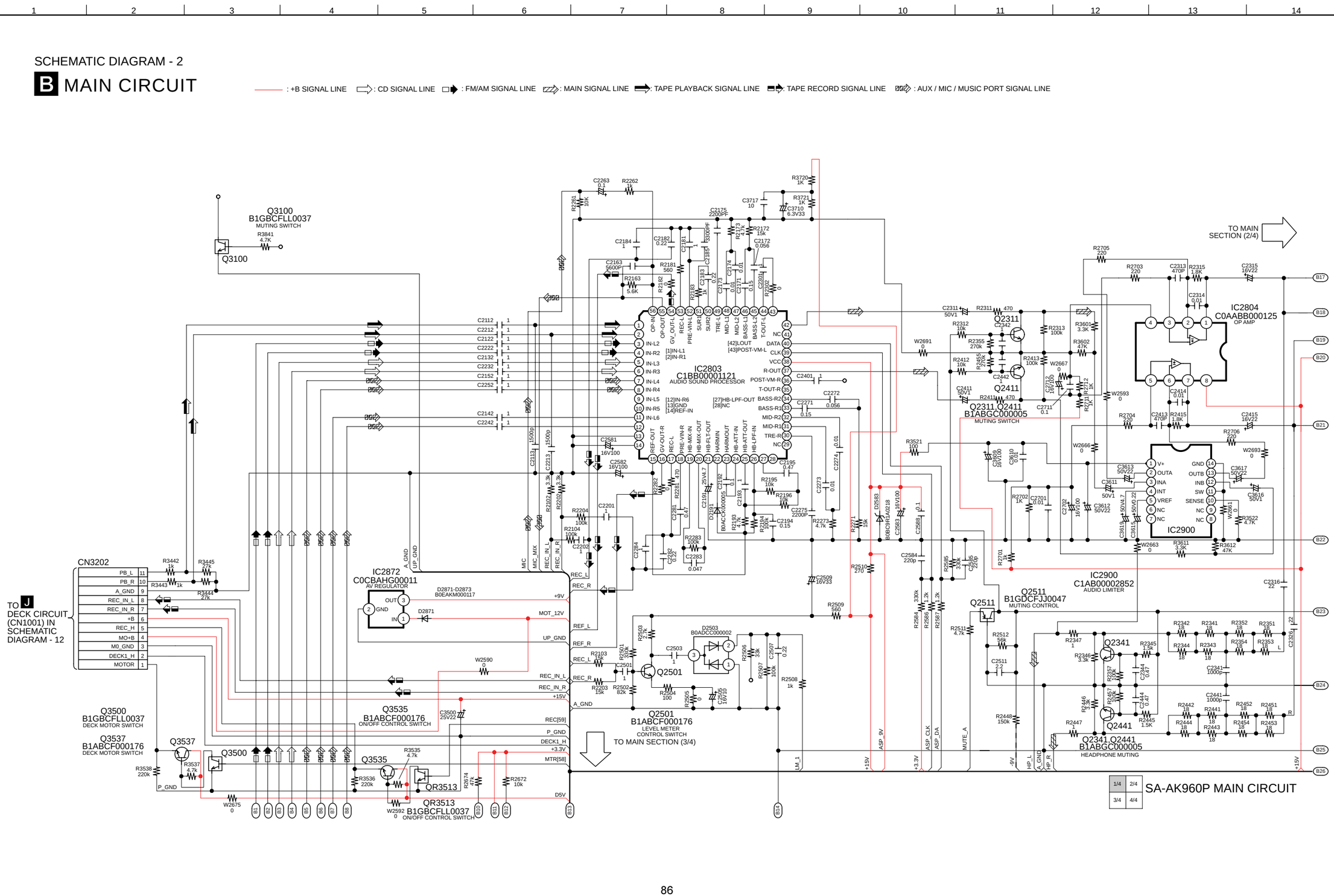
SA-AK960P CD SERVO CIRCUIT

16.2. MAIN CIRCUIT

SCHEMATIC DIAGRAM - 2

B MAIN CIRCUIT

: +B SIGNAL LINE : CD SIGNAL LINE : FM/AM SIGNAL LINE : MAIN SIGNAL LINE : TAPE PLAYBACK SIGNAL LINE : TAPE RECORD SIGNAL LINE : AUX / MIC / MUSIC PORT SIGNAL LINE



SCHEMATIC DIAGRAM - 3

B MAIN CIRCUIT

: +B SIGNAL LINE : MAIN SIGNAL LINE

Q2317,Q2417
B1ABGC000005
MUTING SWITCH

IC2810
C0ABBB000244
SMT OP-AMP IC

Q2551,Q2552,Q2556
B1GDCFJJ0047
SWITCH SUPPLY SWITCH

Q2553,Q2555
B1ABCF000176
SUBWOOFER LEVEL CONTROL SWITCH

Q2557,Q2558
B1ABCF000176
SUBWOOFER LEVEL CONTROL SWITCH

Q2554
B1ABCF000176
SUB MUTING SWITCH

Q3501,Q3502
B1GBCFLL0037
PLUNGER ON/OFF SWITCH

Q3503,Q3504
B1ACKD000006
PLUNGER ON/OFF SWITCH

CN2809

1	F_HOP
2	MUTE-D-AMP
3	T-GND
4	+15V
5	FRONT L1 IN
6	NC
7	ASP_GND
8	FRONT R1 IN
9	NC
10	A_GND
11	SUBWOOFER
12	FAN

TO H POWER CIRCUIT (CN5102) IN SCHEMATIC DIAGRAM - 9

CN3201

10	PL2
9	PL1
8	DVREF
7	PL_GND
6	DECK_2
5	PHOTO_PB
4	PHOTO_RP
3	HALF_PB
2	VREF_GND
1	MODE_PB

TO K DECK MECHANISM CIRCUIT (CN971) IN SCHEMATIC DIAGRAM - 8

CN2812

1	SW_LED
2	DGND
3	KEY4_2

TO G SUBWOOFER INTERFACE CIRCUIT (H9000)IN SCHEMATIC DIAGRAM - 8

TO MAIN SECTION (1/4)

TO MAIN SECTION (4/4)

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

SA-AK960P MAIN CIRCUIT

SCHEMATIC DIAGRAM - 4

B MAIN CIRCUIT

: +B SIGNAL LINE : CD SIGNAL LINE : FM/AM SIGNAL LINE : MAIN SIGNAL LINE : AUX / MIC / MUSIC PORT SIGNAL LINE : TAPE RECORD SIGNAL LINE : USB SIGNAL LINE

TO MAIN SECTION (4/4)

TO TUNER PACK

CN3601: CE 1, D1 2, CLK 3, D0 4, GND 5, L-OUT 6, VCC 7, R-OUT 8, VSM 9, FM DET/RDS 10

CN2801: CD_GND 1, L 2, A_GND 3, R 4, CD_GND 5, ST_IN 6, ST_CLK 7, ST_REQ 8, CD_3.3V 9, CD_GND 10, LD_SW 11, TX 12, +7.5V 13, PGND 14, MCLK 15, MDATA 16, MLD 17, BLKCK 18, STAT 19, /RST 20, /REST_SW 21, LOADING 22

TO A CD_SERVO CIRCUIT (CN7002) IN SCHEMATIC DIAGRAM - 1

AUX

JK2803

TO MAIN SECTION (1/4)

Q3601 2SC3940A0A SWITCH

D3101,D3102 B0EAKM000117

D2603 B0BC9R1A0218

Q2950,Q2951 B1ACKD000006 DECK SUPPLY CONTROL SWITCH

Q2952 B1GBCFLL0037 DECK SUPPLY (PCONT) CONTROL SWITCH

IC3800 C0ABBB000244 SMT OP-AMP IC

IC2801 C2CBYY000534 MICROPROCESSOR

[80] HOME_SW
[81] CD_RST
[82] CLOSE_SW
[82] OPEN_SW

[50] STANDBY
[49] NC
[48] MUTE_WLESS

[100] DEMO_SET

[34] XM_MUTE(BUSY)
[33] USB_RST
[32] USB_SCL (RxD)
[31] USB_SDA (TxD)

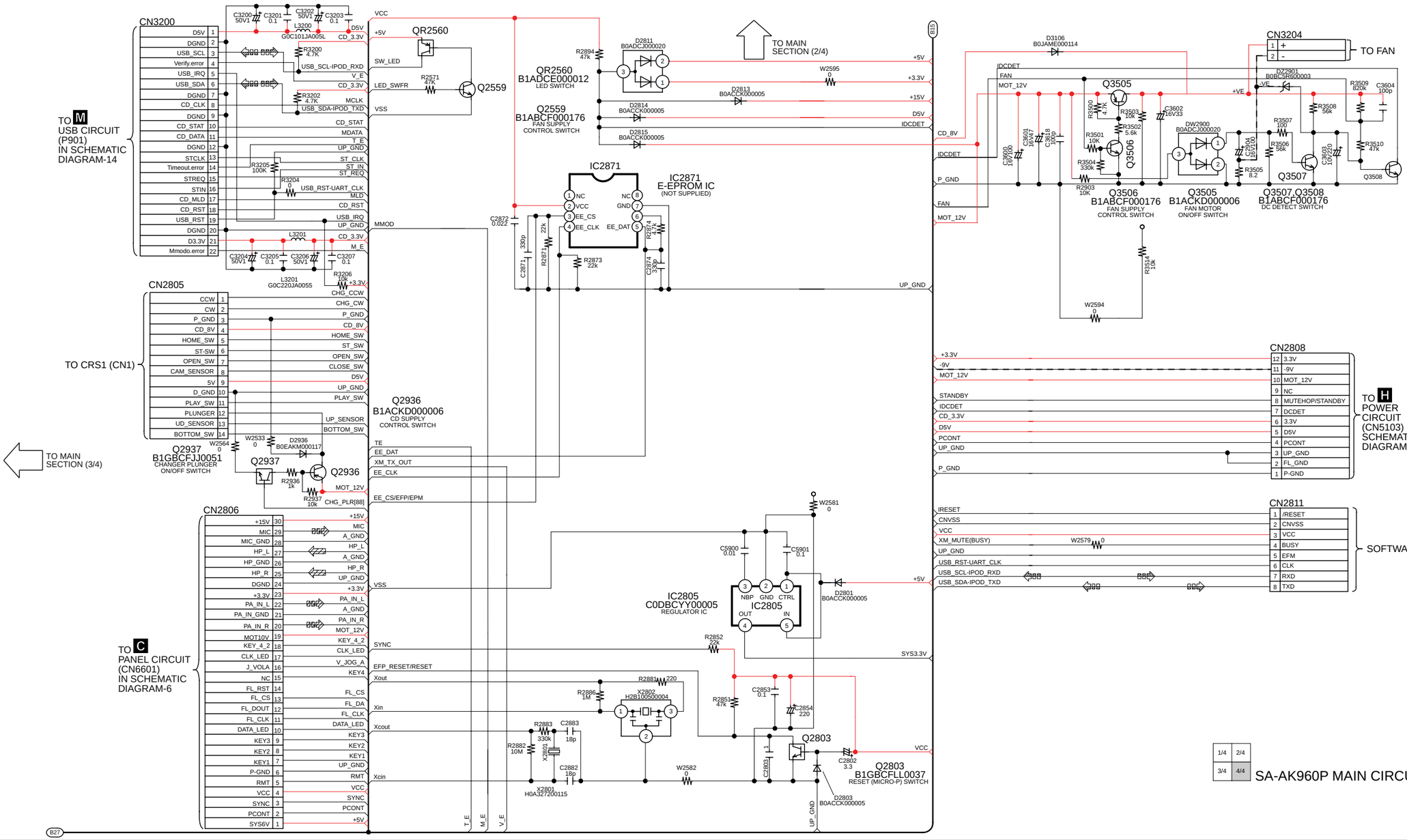
SA-AK960P MAIN CIRCUIT

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

SCHEMATIC DIAGRAM - 5

B MAIN CIRCUIT

: +B SIGNAL LINE : CD SIGNAL LINE : FM/AM SIGNAL LINE : MAIN SIGNAL LINE : MUSIC PORT / MIC SIGNAL LINE : USB SIGNAL LINE

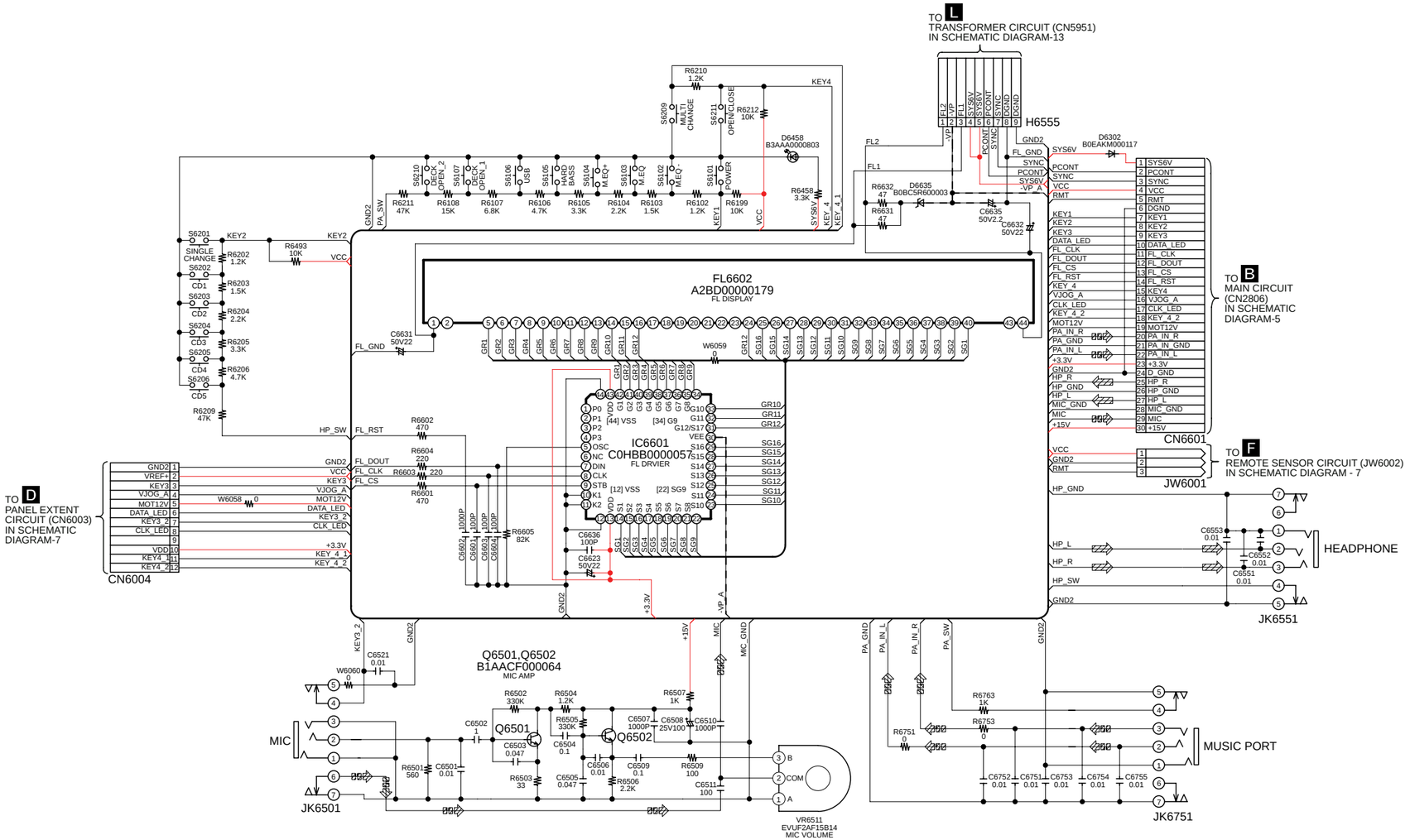


16.3. PANEL CIRCUIT

SCHEMATIC DIAGRAM - 6

C PANEL CIRCUIT

:+B SIGNAL LINE :-B SIGNAL LINE : MAIN SIGNAL LINE : MIC / MUSIC PORT SIGNAL LINE



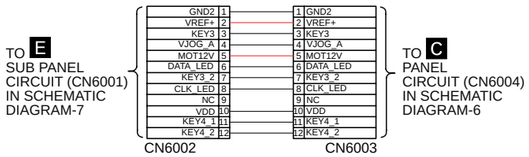
SA-AK960P PANEL CIRCUIT

16.4. SUB PANEL/PANEL EXTENT/REMOTE SENSOR CIRCUIT

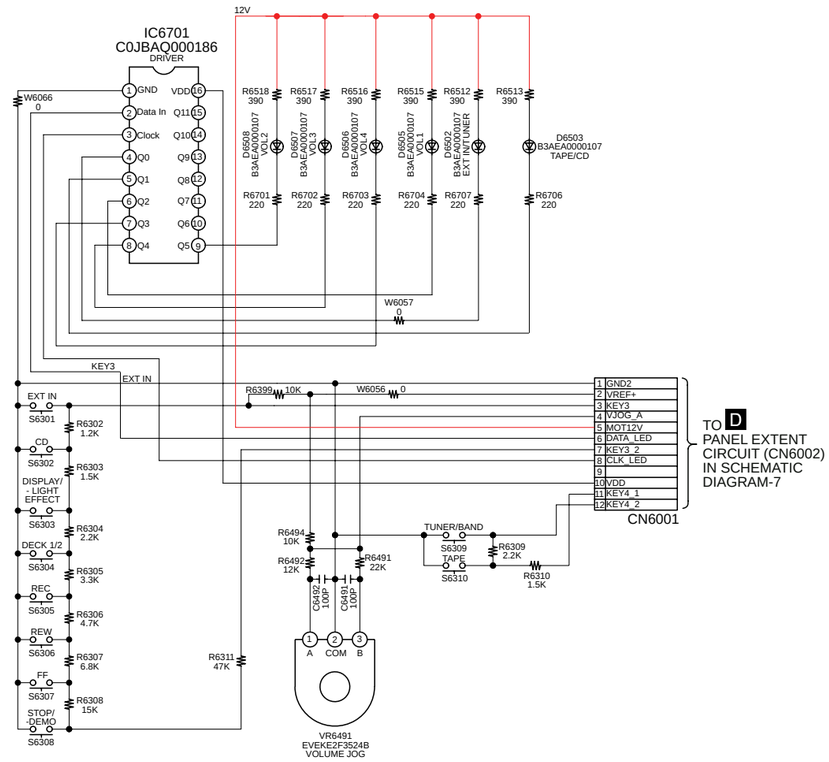
SCHEMATIC DIAGRAM - 7

D PANEL EXTENT CIRCUIT

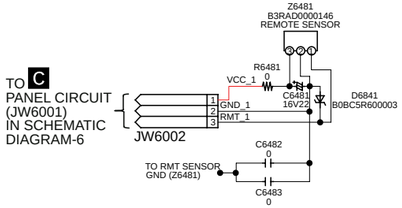
:+B SIGNAL LINE :-B SIGNAL LINE



E SUB PANEL CIRCUIT



F REMOTE SENSOR CIRCUIT



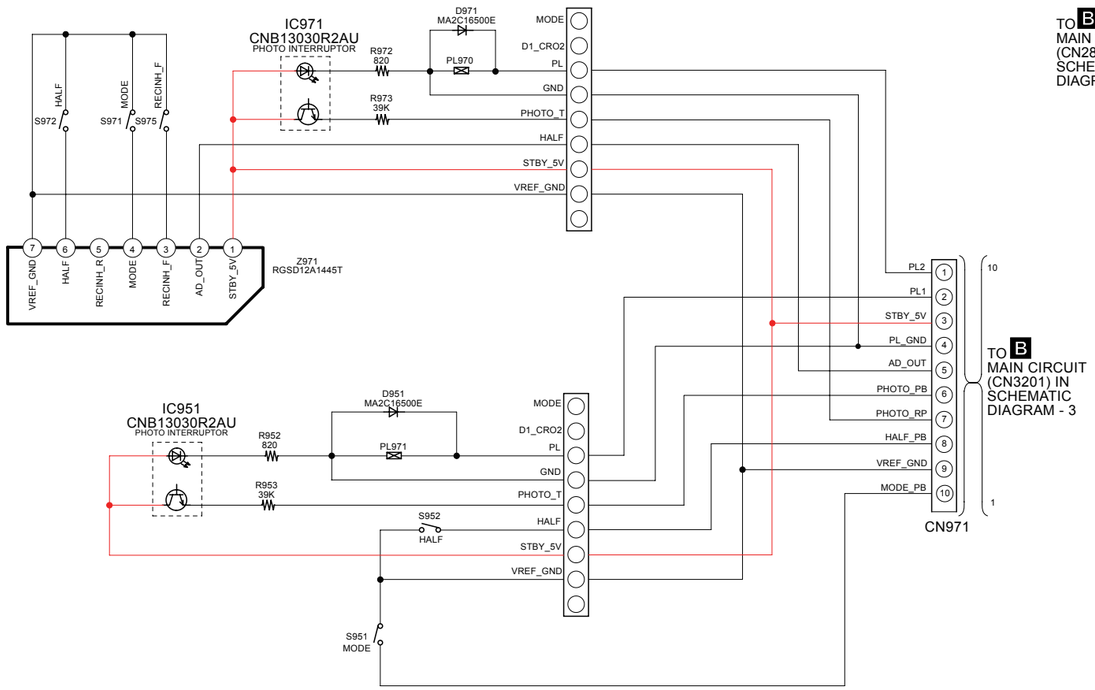
SA-AK960P SUB PANEL/PANEL EXTENT/REMOTE SENSOR CIRCUIT

16.5. SUBWOOFER INTERFACE/DECK MECHANISM CIRCUIT

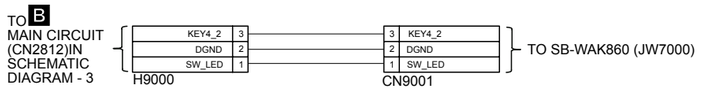
SCHEMATIC DIAGRAM - 8

K DECK MECHANISM CIRCUIT

+B SIGNAL LINE



G SUBWOOFER INTERFACE CIRCUIT



SA-AK960P SUBWOOFER INTERFACE / DECK MECHANISM CIRCUIT

16.6. POWER CIRCUIT

SCHEMATIC DIAGRAM - 9

H POWER CIRCUIT

: +B SIGNAL LINE : -B SIGNAL LINE : MAIN SIGNAL LINE

TO I SUB POWER CIRCUIT (CN5204) IN SCHEMATIC DIAGRAM - 11

H5500

TO B MAIN CIRCUIT (CN2809) IN SCHEMATIC DIAGRAM - 3

CN5102

IC5000 C1BA00000487 DIGITAL AMP

IC5400 C1BA00000487 DIGITAL AMP

TO POWER SECTION (2/2)

SPEAKERS

JK5000

Q5103,Q5104 B1ABCF000176 FAN ON/OFF SWITCH

D5126 B0ACCK0000005

1/2

2/2

SA-AK960P POWER CIRCUIT

SCHEMATIC DIAGRAM - 10

H POWER CIRCUIT

: +B SIGNAL LINE : -B SIGNAL LINE : MAIN SIGNAL LINE

TO POWER SECTION (1/2)

TO B MAIN CIRCUIT (CN2808) IN SCHEMATIC DIAGRAM - 5

CN5103
PGND 1
FLGND 2
DGND 3
PCONT 4
D5V 5
CD3.3V 6
DC_DETECT 7
STANDBY 8
MOTOR_12V 9
NC 10
-9V 11
+3.3V 12

TO I SUB POWER CIRCUIT (CN5104) IN SCHEMATIC DIAGRAM - 11

H5501
-9V 9
AGND 8
DCDETI 7
MOTOR 12V 6
+5V 5
CD3.3V 4
PCONT 3
PGND 2
+15V 1

IC5200
C1BA00000487
DIGITAL AMP

IC5300
C1BA00000487
DIGITAL AMP

IC5500
C0JBAB000902
HEX INVERTER

Q5154
2SB0709AHL
PCONT SWITCH

Q5153
B1ABCF000176
MODE SWITCH

Q5173
B1ABCF000176
STANDBY SWITCH

L5200
G0B120M00001

L5300
G0B120M00001

D5165-D5168
B0HCMM000019

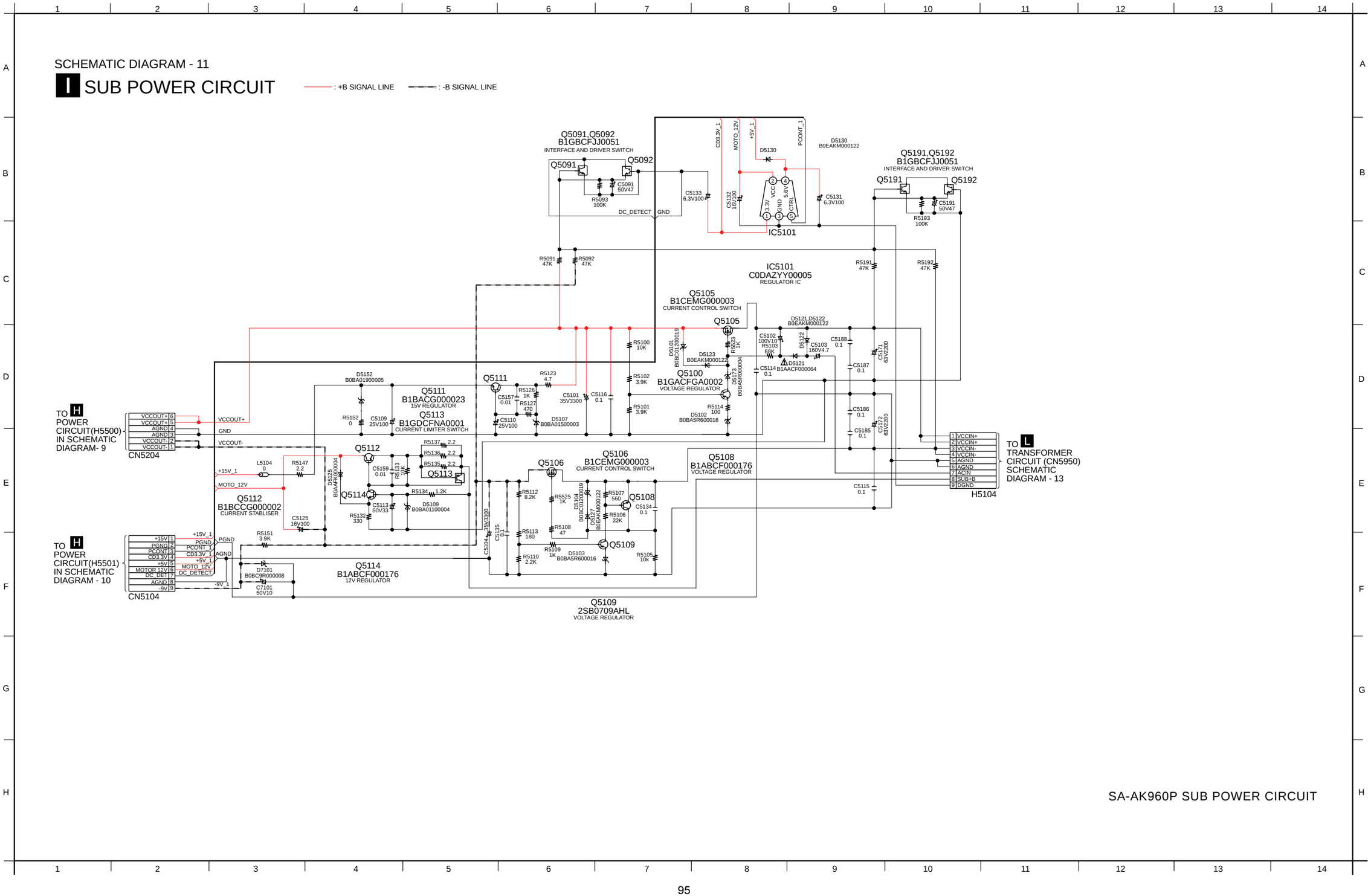
1/2
2/2
SA-AK960P POWER CIRCUIT

16.7. SUB POWER CIRCUIT

SCHEMATIC DIAGRAM - 11

I SUB POWER CIRCUIT

: +B SIGNAL LINE : -B SIGNAL LINE

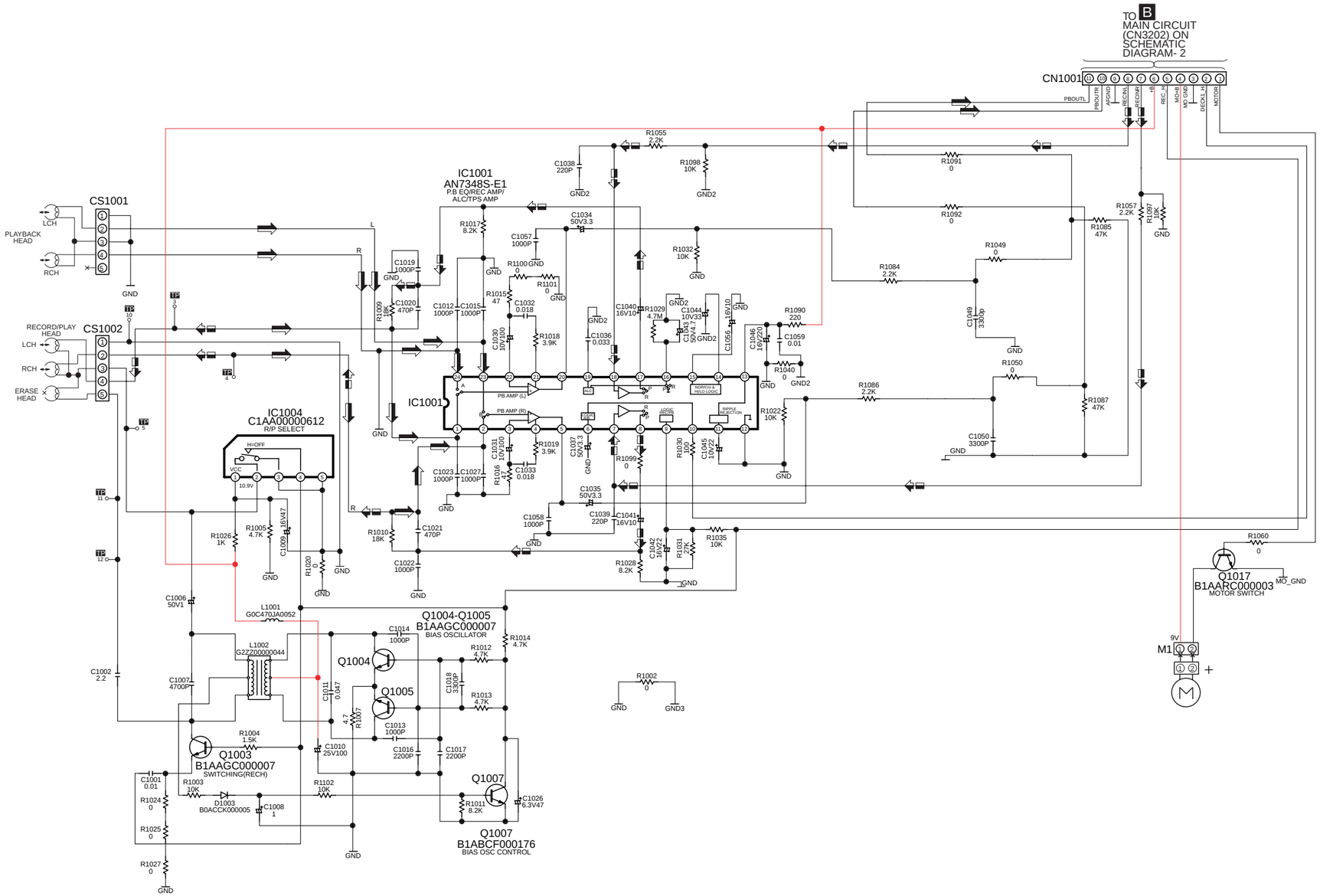


16.8. DECK CIRCUIT

SCHEMATIC DIAGRAM - 12

J DECK CIRCUIT

: +B SIGNAL LINE : TAPE RECORD SIGNAL LINE : TAPE PLAYBACK SIGNAL LINE



16.9. TRANSFORMER CIRCUIT

SCHEMATIC DIAGRAM - 13

L TRANSFORMER CIRCUIT

:+B SIGNAL LINE

:-B SIGNAL LINE

TO I SUB POWER CIRCUIT (H5104) IN SCHEMATIC DIAGRAM- 11

CN5950: +VCC 1, +VCC 2, -VCC 3, -VCC 4, AGND 5, AGND 6, AC IN 7, SUB+B 8, SUB+B GND 9

TO C PANEL CIRCUIT (H6555) IN SCHEMATIC DIAGRAM - 6

CN5951: FL2 1, -VP 2, FL1 3, SYS6V 4, SYS6V 5, PCONT 6, SYNC 7, FL GND 8, DGND 9

C5940 2200 63V

C5920 2200 63V

D5950 B0FBAM000009

D5951 B0FBAM000009

D5952 B0FBAM000009

C5972 250V0.1

C5973 250V0.1

C5974 250V0.1

T5950 G4CYAYY00186 MAIN TRANSFORMER

Q5951 2SB0621AHA -VP REGULATOR

C5958 0.01

R5960 47K

R5961 150

C5957 10

D5960 B0BA02400030

D5959 B0EAKM000122

C5955 22

C5956 63V47

D5958 B0EAKM000122

C5950 25V4700

GND

D5956 B0EAKM000122

C5959 0.01

D5954 B0EAKM000122

D5957 B0EAKM000122

D5955 B0EAKM000122

FP5950 4A

R5950 3.3M

R5951 3.3K

Q5954 B1AAGC000007 VOLTAGE REGULATOR

D5966 B0AACK000004

R5963 82

D5967 B0AACK000004

Q5950 B1AAKD000014 SYS6V REGULATOR

Q5954

C5964 0.01

R5954 820k

R5965 4.7K

C5963 0.01

D5968 B0AACK000004

R5962 4.7K

D5969

D5969 B0AACK000004

D5964 B0BA6R800008

C5952 47

C5961 25V220F

D5961 B0AACK000004

C5951 0.01

C5962 16V220

D5962 B0AACK000004

T5951 G4C2AAJ00005 BACK UP TRANSFORMER

RL5950 K6B1AEA00003

D5965 B0AACK000004

Q5953 B1ABCF000176 PCONT SWITCH

Z5950 ERZV10V511CS

F1 125V 8A

FC1 FC2

L5950 ELF15N035AN

JK5950

AC IN 120V 60Hz

Q5952 B1GBCFJJ0051 SYNCHRONISATION SWITCH

R5958 10K

C5963 4.7

C5954 0.01

R5957 10K

SA-AK960P TRANSFORMER CIRCUIT

16.10. USB CIRCUIT

SCHEMATIC DIAGRAM - 14

M USB CIRCUIT

: + B SIGNAL LINE

: USB SIGNAL LINE

IC900
MNZSFB5KJM1
USB CONTROLLER IC

IC951
C0DBZYE00002
VOLTAGE REGULATOR

P903
USB CONNECTOR

P901

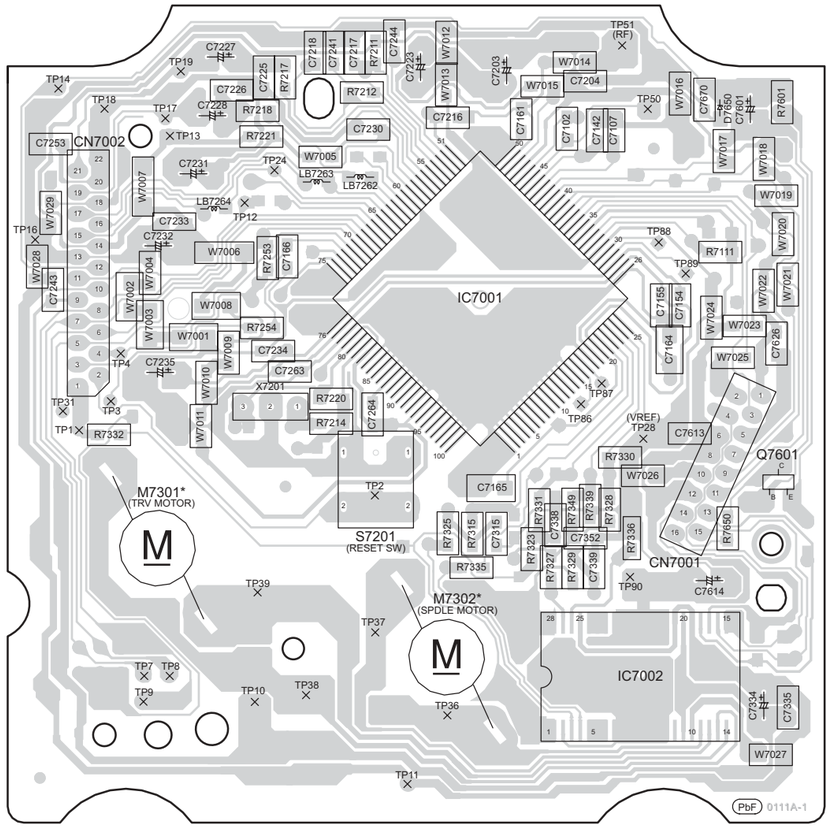
TO B MAIN CIRCUIT (CN3200) IN SCHEMATIC DIAGRAM - 5

SA-AK960P USB CIRCUIT

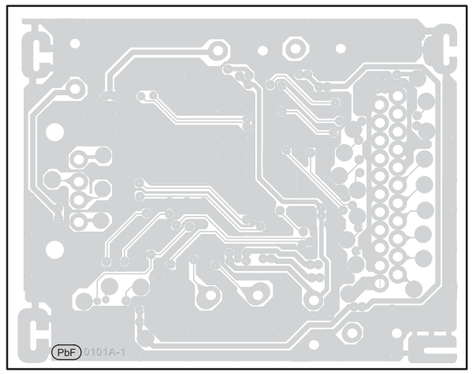
17 Printed Circuit Board

17.1. CD SERVO P.C.B. & USB P.C.B.

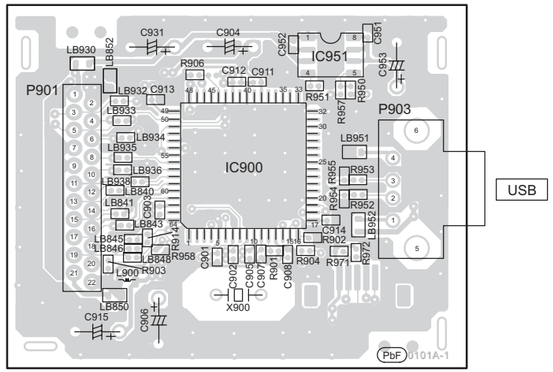
A CD SERVO P.C.B. (REPV0111A)



M USB P.C.B. (REPV0101A)



(SIDE A)



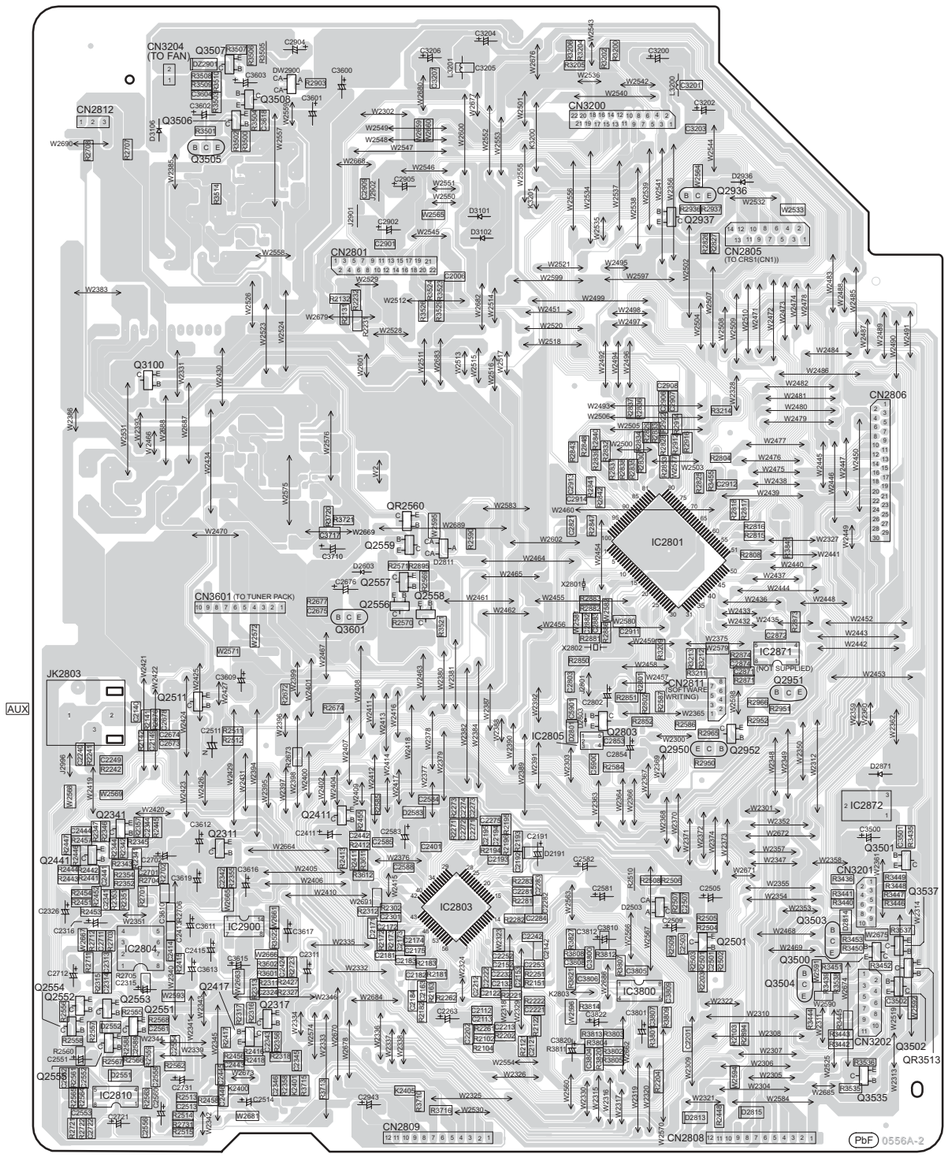
(SIDE B)

*FOR INDICATION ONLY

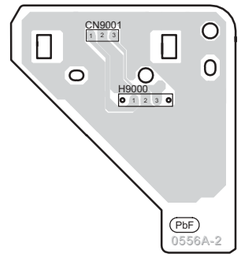
SA-AK960P
CD SERVO/ USB P.C.B.

17.2. MAIN/SUBWOOFER INTERFACE P.C.B.

B MAIN P.C.B. (REPX0607B)



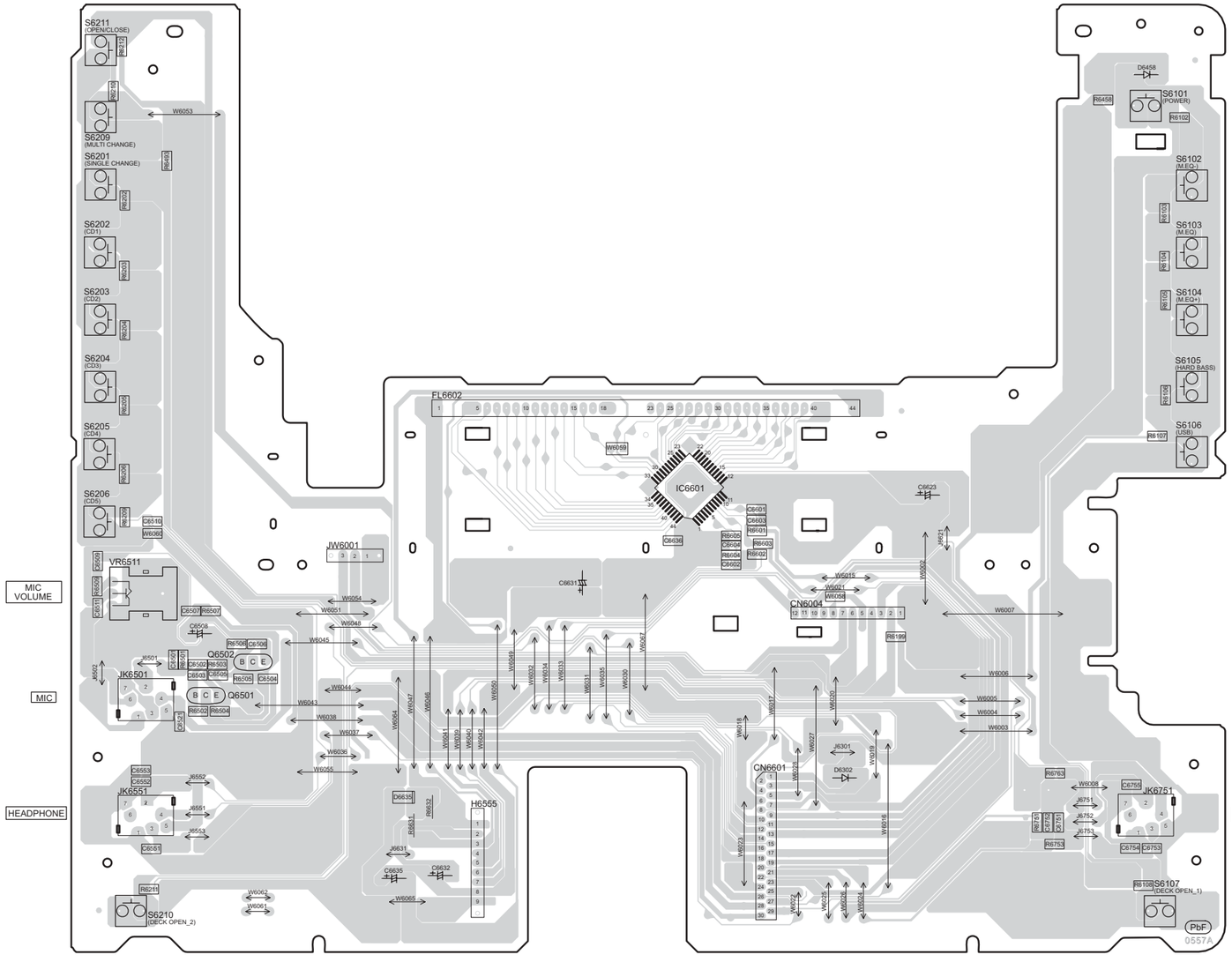
G SUBWOOFER INTERFACE P.C.B. (REPX0607B)



SA-AK960P
MAIN/ SUBWOOFER INTERFACE P.C.B.

17.3. PANEL P.C.B.

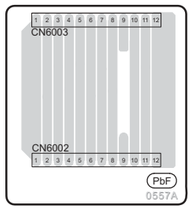
C PANEL P.C.B. (REPX0608A)



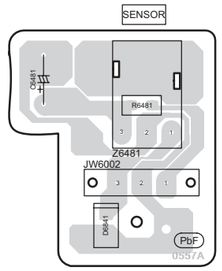
SA-AK960P
PANEL P.C.B.

17.4. PANEL EXTENT/SUB PANEL/REMOTE SENSOR P.C.B.

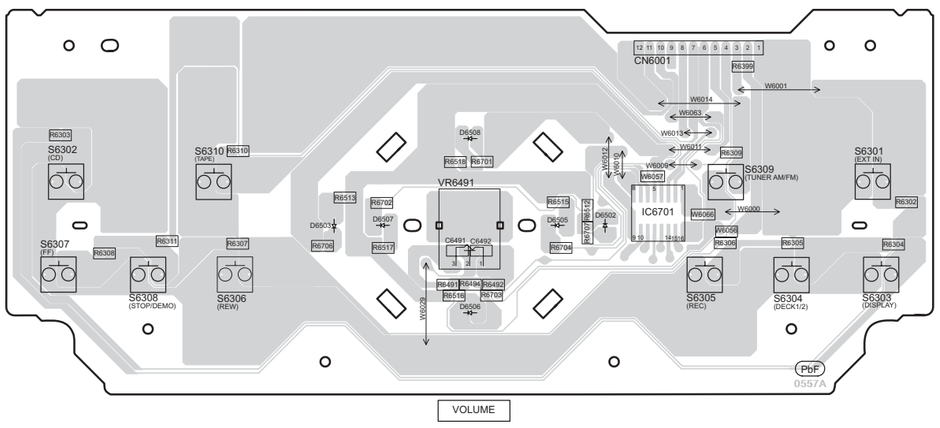
D PANEL EXTENT P.C.B. (REPX0608A)



F REMOTE SENSOR P.C.B. (REPX0608A)



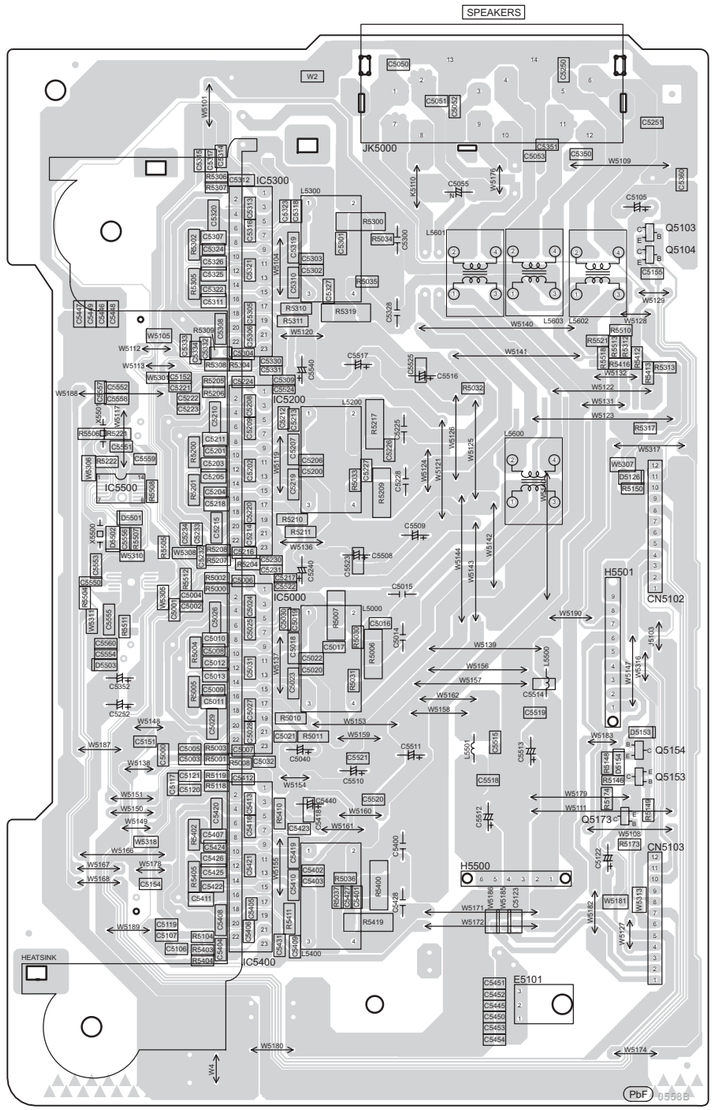
E SUB PANEL P.C.B. (REPX0608A)



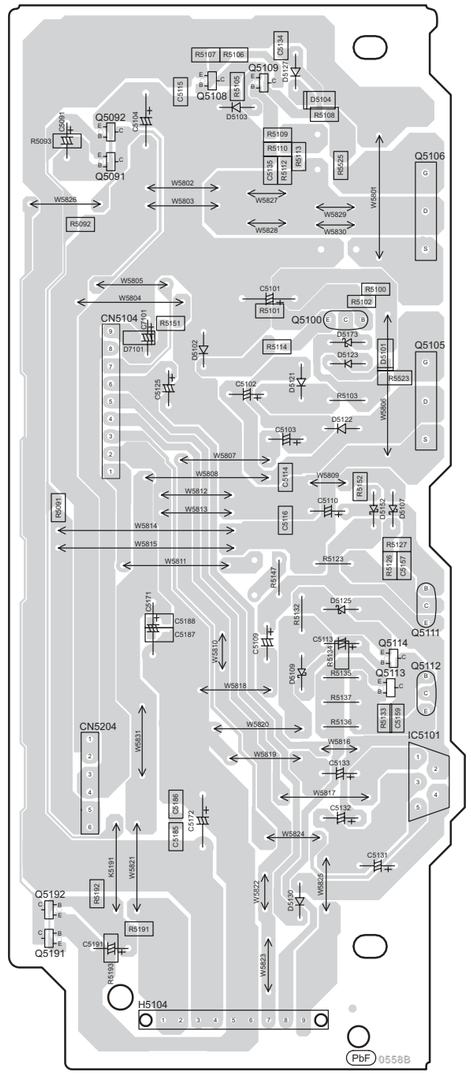
SA-AK960P
PANEL EXTENT/ SUB PANEL/ REMOTE SENSOR P.C.B.

17.5. POWER/SUB POWER P.C.B.

H POWER P.C.B. (REPX0609B)



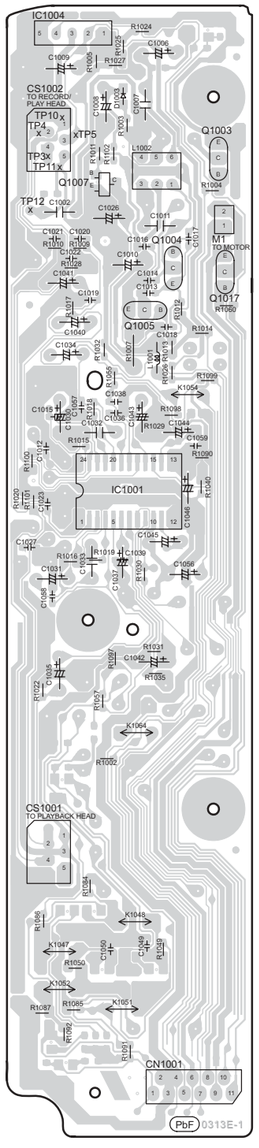
I SUB POWER P.C.B. (REPX0609B)



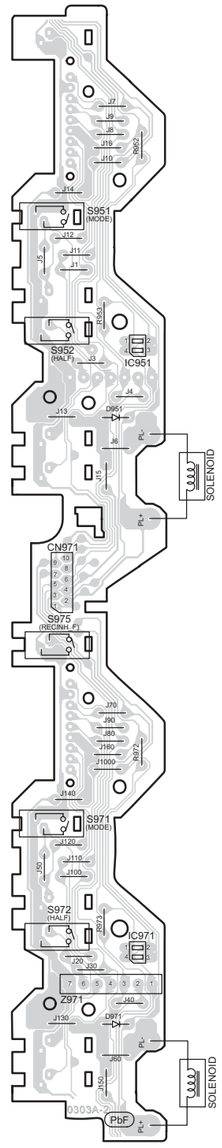
SA-AK960P
POWER/ SUB POWER P.C.B.

17.6. DECK/DECK MECHANISM P.C.B.

J DECK P.C.B. (REPX0618A)



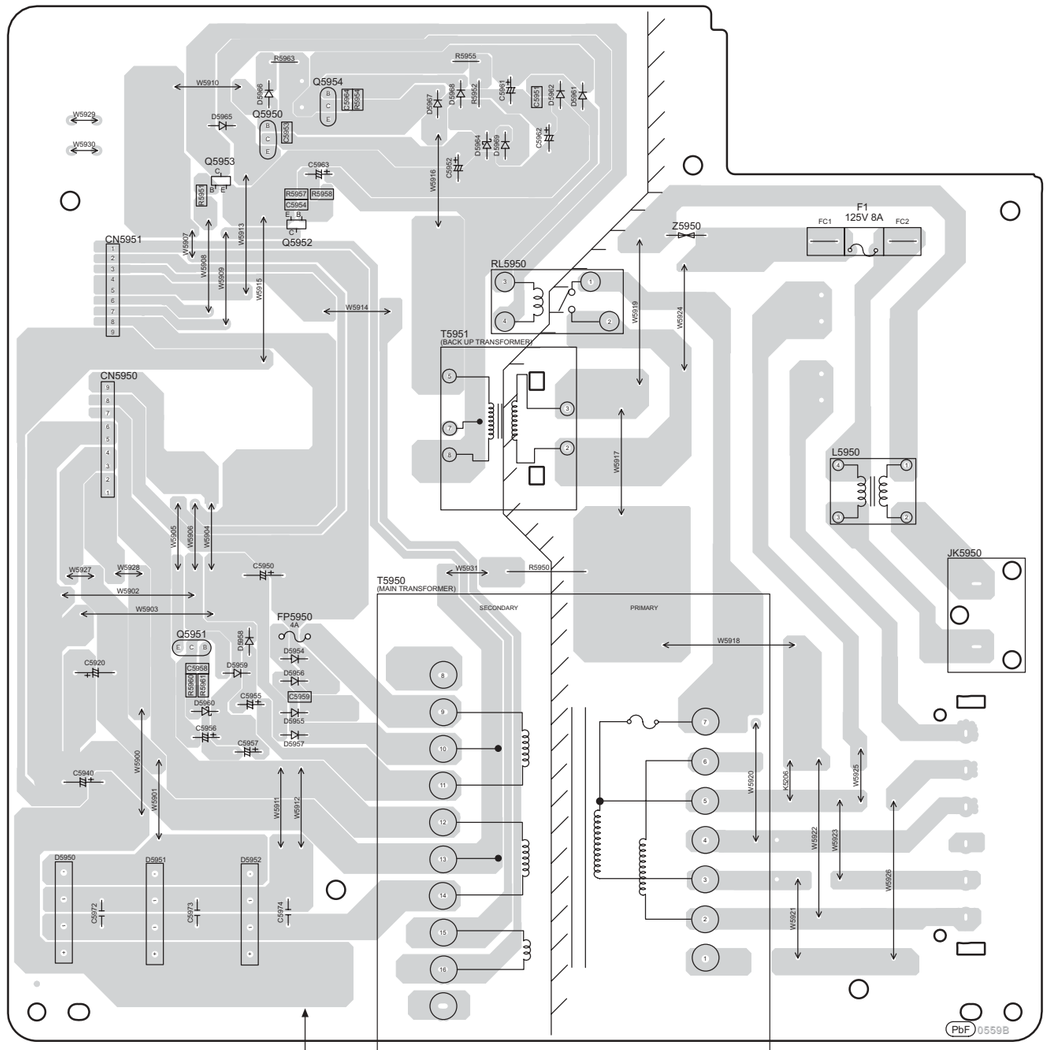
K DECK MECHANISM P.C.B. (REPX0321A)



SA-AK960P
DECK/ DECK MECHANISM P.C.B.

17.7. TRANSFORMER P.C.B.

L TRANSFORMER P.C.B. (REPX0610B)



AC IN ~
120V 60Hz

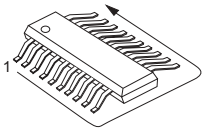
CAUTION
RISK OF ELECTRIC SHOCK
AC VOLTAGE LINE.
PLEASE DO NOT TOUCH THIS P.C.B

SA-AK960P
TRANSFORMER P.C.B.

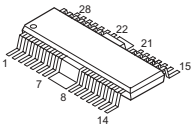
SA-AK960P

18 Illustration of IC's, Transistors and Diodes

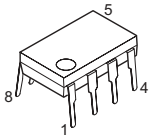
AN7348S-E1 (24P)
C0JBAQ000186 (16P)
C1AB00002852 (14P)



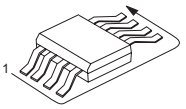
BA5948FPE2



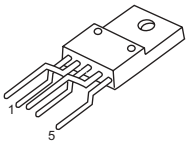
C0AABB000125



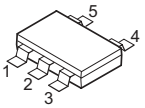
C0ABBB000244 (8P)
C0DBZYE00002 (8P)



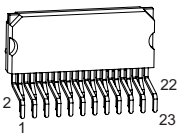
C0DAZYY00005



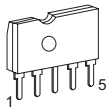
C0DBCYY00005



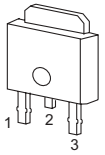
C1BA00000487



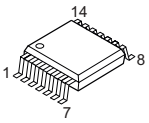
C1AA00000612



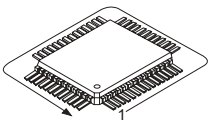
C0CBAHG00011



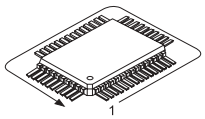
C0JBAB000902



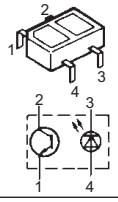
C1BB00001121 (56P)
C0HBB0000057 (44P)
MN6627954MA (100P)
MNZSFB5KJM1 (64P)



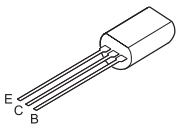
C2CBYY000534



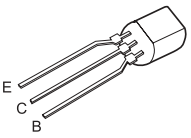
CNB13030R2AU



2SC3940A0A



2SB0621AHA



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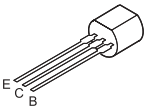

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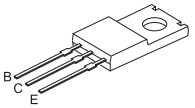

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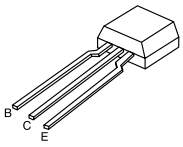

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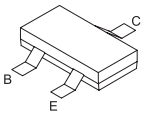

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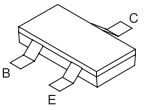

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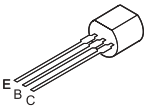

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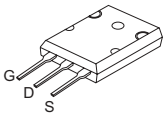

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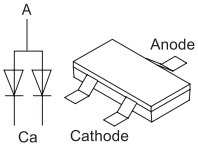

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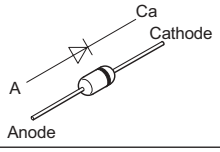

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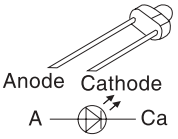

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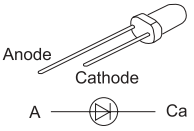

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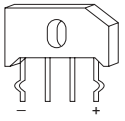

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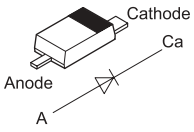

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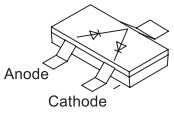

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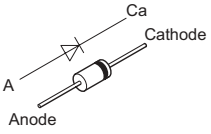

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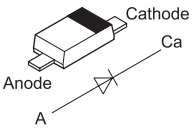

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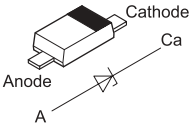

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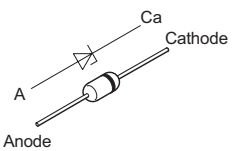


19 Terminal Function of IC's

19.1. IC7001 (MN6627954MA) IC SERVO PROCESSOR/DIGITAL SIGNAL PROCESSOR/DIGITAL FILTER D/A CONVERTER

Pin No.	Mark	I/O	Function
1	A11	O	DRAM address signal O/P 11
2	A9	O	DRAM address signal O/P 9
3	A8	O	DRAM address signal O/P 8
4	A7	O	DRAM address signal O/P 7
5	A6	O	DRAM address signal O/P 6
6	A5	O	DRAM address signal O/P 5
7	A4	O	DRAM address signal O/P 4
8	NWE	O	Write Enable Signal (DRAM)
9	NCAS	O	DRAM CAS Control Signal
10	NRAS	O	DRAM ARS Control Signal
11	A3	O	DRAM address Signal O/P 3
12	A2	O	DRAM address Signal O/P 2
13	A1	O	DRAM address Signal O/P 1
14	A0	O	DRAM address Signal O/P 0
15	A10	O	DRAM address Signal O/P 10
16	BA0	-	Motor O/P (0);/Serial I/P
17	BA1	-	Motor O/P (1);/Serial I/P
18	PRAMVSS33	-	GND (DRAM)
19	PRAMVDD15	-	Power Supply Voltage (DRAM)
20	PRAMVDD33	-	Power Supply Voltage (+1.6V)
21	SPOUT	O	Spindle Drive O/P
22	PC	I/O	Spindle motor drive O/P signal serial data/Monitoring I/P
23	TRVP	O	Traverse Drive O/P (+ve)
24	TRP	O	Tracking Drive O/P (+ve)
25	FOP	O	Focusing Drive O/P (+ve)
26	DVSS1	-	GND
27	IOVDD2	-	Digital Power Supply Voltage 2
28	DVDD1	-	Digital Power Supply Voltage 1 (Built-In)
29	SRVMON0	-	Servo Monitor (0) O/P
30	SRVMON1	-	Servo Monitor (1) O/P
31	AVSS2	-	GND
32	OSCIN	-	Oscillating Input
33	CTRCRS	-	Tracking Cross Comparator
34	VREF	-	+Vref Supply Voltage
35	E	I	Tracking Input Signal 1
36	F	I	Tracking Input Signal 2
37	D	I	Focusing Input Signal 4
38	B	I	Focusing Input Signal 2
39	C	I	Focusing Input Signal 3
40	A	I	Focusing Input Signal 1
41	PD	I	APC Amp I/P
42	LD	O	Laser Drive Current O/P
43	CENV	-	Detection Capacitance Connection terminal
44	RFENV	O	RF Envelope O/P
45	RFOUT	O	RF Summing Amp O/P
46	RFIN	I	SGC I/P
47	AVDD2	-	Analog Power Supply voltage 2 (For DSL/PLL)
48	ARFDC	-	AGC Capacitive Connection Terminal
49	ARFOUT	O	AGC Output
50	ARFFB	I	ARF Feedback Signal I/P
51	ARFIN	I	Audio RF Signal I/P
52	DSLF	-	Loop Filter Terminal (For DSL)
53	IREF	I	Reference I/P
54	PLLF	I	PLL Loop Filter Terminal (Phase Compare)
55	PLLF0	O	PLL Loop Filter Terminal (Speed Compare)

Pin No.	Mark	I/O	Function
56	OUTL	O	Audio O/P (LCH)
57	AVSS1	-	GND
58	AVDD1	-	Analog Power Supply Voltage 1
59	OUTR	O	Audio O/P (RCH)
60	DVSS3	-	GND3 (Digital Circuit)
61	NSRVMONON	I	Servo Motor O/P Enabling
62	EXT0	-	Expansion O/P Port 0
63	EXT1	-	Expansion O/P Port 1
64	EXT2	-	Expansion O/P Port 2
65	FLAG	-	Flag Signal O/P
66	TX	-	Digital Audio Interface O/P signal
67	MCLK	I	Micro-Computer Command Clock I/P
68	MDATA	I	Micro-Computer Data I/P
69	MLD	I	Micro-Computer Load I/P
70	STAT	O	Status Signal O/P
71	BLKCK	O	Subcode Blk Clock
72	NRST	O	LSI Reset Signal
73	DQSYTXT	-	Pack Signal O/P for CD-Text data
74	SMCK	-	Micro-Computer Clock O/P
75	PMCK	-	IOCNT Serial data O/P (Synchronous O/P)
76	DVDD2	-	Digital Power Supply Voltage 2 (+1.5V)
77	IOVDD1	-	Digital Power Supply Voltage 1 (For I/O)
78	DVSS2	-	GND2 (For Digital Circuit)
79	REGION	-	Test Mode Setting (ON:H)
80	X2	O	Crystal Oscillating Circuit O/P
81	X1	I	Crystal Oscillating Circuit I/P
82	NTEST	I	Test Mode Setting I/P (ON:H)
83	D2	O	Data Signal O/P 2
84	D1	O	Data Signal O/P 1
85	D0	O	Data Signal O/P 0
86	D3	O	Data Signal O/P 3
87	D4	O	Data Signal O/P 4
88	D5	O	Data Signal O/P 5
89	D6	O	Data Signal O/P 6
90	D7	O	Data Signal O/P 7
91	D15	O	Data Signal O/P 15
92	D14	O	Data Signal O/P 14
93	DRVDD	-	I/O Power Supply Voltage (DRAM)
94	D13	O	Data Signal O/P 13
95	D12	O	Data Signal O/P 12
96	D11	O	Data Signal O/P 11
97	D10	O	Data Signal O/P 10
98	D9	O	Data Signal O/P 9
99	D8	O	Data Signal O/P 8
100	SDRCK	O	Clock Signal O/P

19.2. IC7002 (BA5948FPE2) IC 4CH Drive

Pin No.	Mark	I/O	Function
1	IN2	I	Motor Driver Input
2	PC2	I	Turntable Motor Drive Signal ("L":ON)
3	IN1	I	Motor Drive (1) Input
4	PC1	-	Traverse Motor Drive Signal ("L"): ON)
5-8	N.C.	-	No Connection
9	PGND1	-	Ground Connection (1) for Drive
10	PVCC1	-	Power Supply (1) for Drive
11	D1-	O	Motor Drive (1) reverse - action output
12	D1+	O	Motor Drive (1) forward - action output
13	D2-	O	Motor Drive (2) reverse - action output
14	D2+	O	Motor Drive (2) forward - action output
15	D3-	O	Motor Drive (3) reverse - action output
16	D3+	O	Motor Drive (3) forward - action output
17	D4-	O	Motor Drive (4) reverse - action output
18	D4+	O	Motor Drive (4) forward - action output
19	PVCC2	-	Power Supply (2) for Driver
20	PGND2	-	Ground Connection (2) for Driver
21-24	N.C.	-	No Connection
25	VCC	-	Power Supply terminal
26	VREF	-	Reference Voltage Input
27	IN4	I	Motor Driver (4) Input
28	IN3	I	Motor Driver (3) Input

19.3. IC2801 (C2CBYY000534) System Micro-processor

Pin No.	Mark	I/O	Function
1	LM_1	I/O	Level Meter 1
2	N.C.	-	No connection
3	LED_SWFR	O	Subwoofer LED Drive
4	N.C.	-	No connection
5	N.C.	-	No connection
6	N.C.	-	No connection
7	F_HOP	O	Frequency Hopping
8	BYTE	-	External Data Bus Width Select Input (Connect to Ground)
9	CNVSS/EFP_CNVSS	-	Flash Mode Terminal
10	Xcin	-	32.768 kHz Sub Clock
11	Xcout	-	32.768 kHz Sub Clock
12	/RESET	-	/RESET Input (ACTIVE L)
13	Xout	-	10 MHz Main Clock
14	Vss	-	Ground (0V)
15	Xin	-	10 MHz Main Clock
16	Vcc	-	Power Supply (+5V)
17	/NMI	-	Connect to Vcc (+5V)
18	RMT	I	Remote Control Input
19	BLKCK	I	CD Block Clock Input (Inverted)
20	SYNC	I	AC Failure Detect Input
21	DO	O	Serial Output Data
22	DI	I	Serial Input Data
23	SUBWOOFER SCS	-	Subwoofer Chip Select
24	SW_LVL1	-	No connection
25	SW_LVL2	-	No connection
26	ASP DAT	O	ASP Data
27	ASP_CLK	O	ASP Clock
28	FL_CS	I	FL Chip Select
29	N.C.	-	No connection
30	PLL_CLK	I	Tuner PLL Clock
31	USB_SDA (TxD)	I/O	USB Serial Data
32	USB_SCL (RxD)	I/O	USB Serial Clock
33	USB_RST	O	USB Reset
34	XM_MUTE (BUSY)	-	Flash busy flag for pn board writer
35	VE	-	Verify error
36	N.C.	-	No connection
37	N.C.	-	No connection
38	TE	-	Time out error for USB version up using CD
39	MUTE_DA	O	D-Amp Muting Control
40	MUTE_A	O	Audio Muting Control
41	EE_CS/EFP/EPM	O	EEPROM Chip Select (Flash EPM for On board writer)
42	EE_CLK	O	EEPROM CLOCK
43	EE_DAT	I/O	EEPROM DATA
44	N.C.	-	No connection
45	N.C.	-	No connection
46	PCONT/EFP/CS	O	Power Control Output
47	DCDET	I	DC Detect Input
48	MUTE_WLESS	-	Wireless Muting Control
49	N.C.	-	No connection
50	STANDBY	O	For Digital AMP 5->0v during FHOP
51	LED_CLK	O	LED Drive
52	TUNER_CE	I	TUNER CE
53	DECK1_H	O	Deck mute at mecha transition. L=mute OFF, H=mute ON
54	BOTTOM_SW	I	Bottom switch for CRS1
55	UD_SENSOR	I	Up/Down sensor for CRS1
56	PLG1	O	Plunger Control O/P
57	PLG2	O	Plunger Control O/P
58	MTR	I/O	Deck motor control ("L" for motor OFF)
59	REC	I/O	H when record circuit is operating
60	MMOD	I	Micon Mode Switching for USB Version Up using CD
61	MODE_1	I	Mode select
62	VCC	-	Power Supply (+5V)
63	LED_DATA	O	LED Drive
64	Vss	-	Ground (0V)
65	SOUND_CS	-	Sound chip select HALF_1
66	HALF_1	-	Deck 1 half control
67	N.C.	-	No connection
68	N.C.	-	No connection
69	N.C.	-	No connection
70	FL_CS	O	FL Driver Chip Select
71	FL_DOUT	O	Serial Data To FL Driver
72	FL_CLK	O	Serial Clock To FL Driver
73	N.C.	-	No connection
74	USB_IRQ	I	USB Request.
75	STATUS	I	CD Servo LSI Status Input
76	MLD	I/O	CD Command Load Output
77	MDATA_OUT	I/O	CD Command Data Output
78	MCLK	I/O	CD Command Clock Output

Pin No.	Mark	I/O	Function
79	/RESET_SW	I	CD Limit Switch Input for the most Inner Point (Active Low)
80	HOME_SW	I	Home Switch for CRS1
81	CD_RST	I/O	CD Reset output
82	CLOSE_SW	I	CLOSE switch for CRS1
83	OPEN_SW	I	Open switch for CRS1
84	CW	O	CRS1 motor CW
85	CCW	O	CRS1 motor CCW
86	ST_SW	I	Stock switch for CRS1
87	PLAY_SW	I	Play switch for CRS1
88	PLUNGER	O	Plunger for CRS1
89	PHOTO2	I	Deck AD Input 2

Pin No.	Mark	I/O	Function
90	VOL_JOG	I	Volume jog
91	KEY4	I	Key 4 Input
92	KEY3	I	Key 3 Input
93	KEY2	I	Key 2 Input
94	KEY1	I	Key 1 Input
95	PHOTO1	I	Deck AD input 1
96	AVSS	-	Analog Power Supply Input (Connect to GND)
97	DECK	I	Deck AD Input
98	VREF	-	Reference for A-D (5V)
99	AVCC	-	Analog Power Supply Input
100	DEMO_SET	I	(H= Default demo On, L= Default demo off)

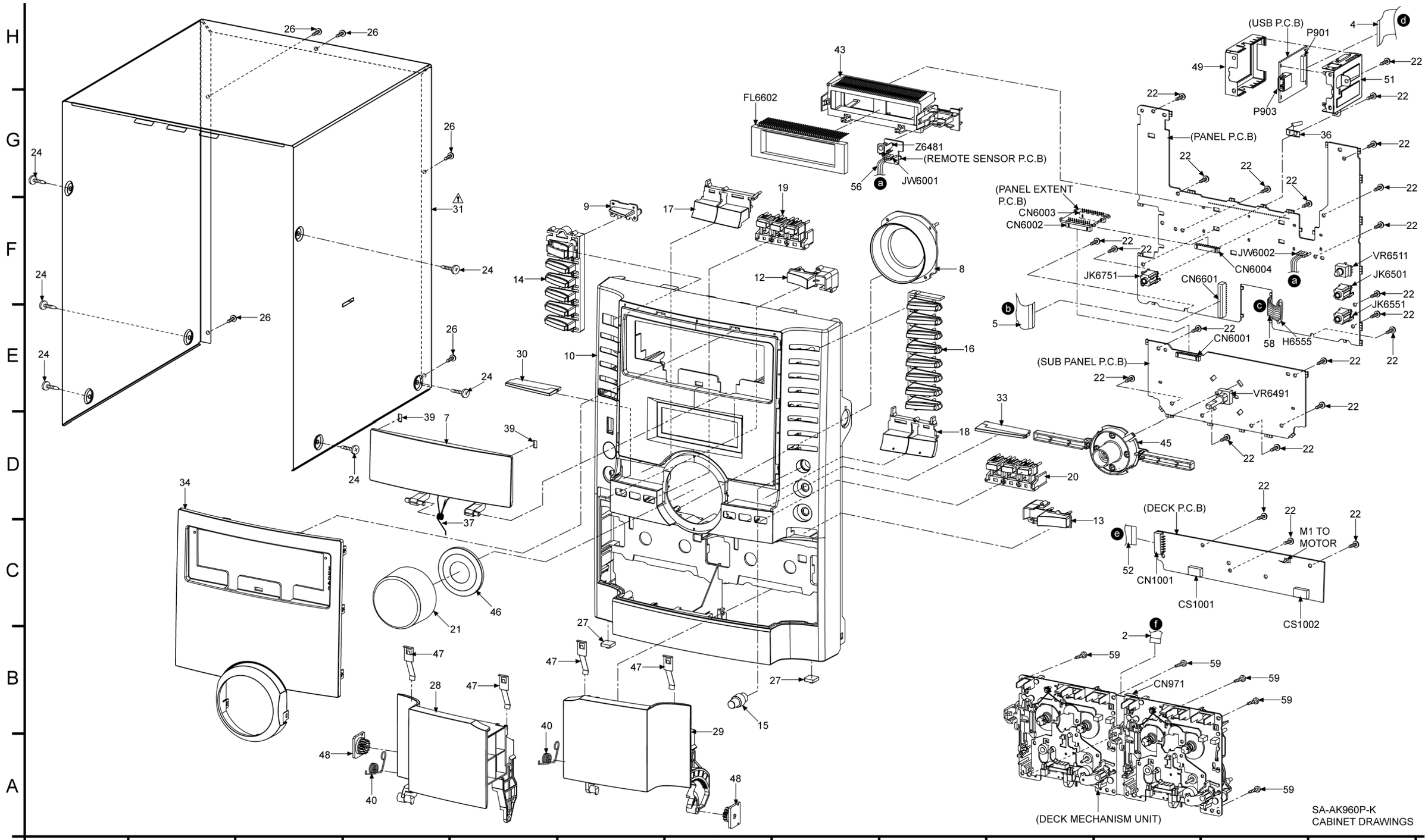
19.4. IC6601 (C0HBB0000057) FL Driver

Pin No.	Mark	I/O	Function
1	P0	-	No connection
2	P1	-	No connection
3	P2	-	No connection
4	P3	-	No connection
5	OSC	I	Oscillator Input Pin
6	N.C.	-	No connection
7	DIN	I	Data Input Pin
8	CLK	I	Clock Input Pin
9	STB	I	Serial Interface Strobe Pin
10	K1	I	Key Data Input Pin
11	K2	I	Key Data Input Pin
12	VSS	-	Logic Ground Pin
13	VDD	-	Logic Power Supply
14	S1	O	High-Voltage Segmant Output Pin
15	S2	O	High-Voltage Segmant Output Pin
16	S3	O	High-Voltage Segmant Output Pin
17	S4	O	High-Voltage Segmant Output Pin
18	S5	O	High-Voltage Segmant Output Pin
19	S6	O	High-Voltage Segmant Output Pin
20	S7	O	High-Voltage Segmant Output Pin
21	S8	O	High-Voltage Segmant Output Pin
22	S9	O	High-Voltage Segmant Output Pin
23	S10	O	High-Voltage Segmant Output Pin
24	S11	O	High-Voltage Segmant Output Pin
25	S12	O	High-Voltage Segmant Output Pin
26	S13	O	High-Voltage Segmant Output Pin
27	S14	O	High-Voltage Segmant Output Pin
28	S15	O	High-Voltage Segmant Output Pin
29	S16	O	High-Voltage Segmant Output Pin
30	VEE	-	Pull-Down Level
31	G12	O	High-Voltage Segmant/Grid Output Pin
32	G11	O	High-Voltage Segmant/Grid Output Pin
33	G10	O	High-Voltage Segmant/Grid Output Pin
34	G9	O	High-Voltage Segmant/Grid Output Pin

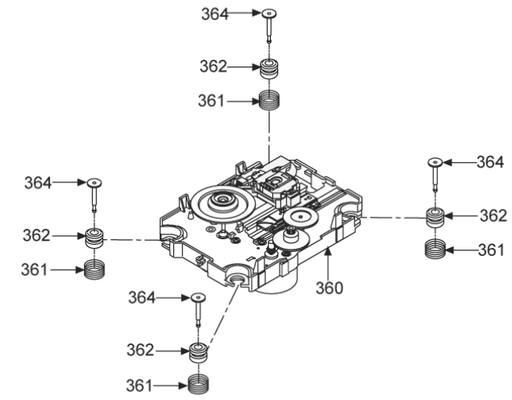
Pin No.	Mark	I/O	Function
35	G8	O	High-Voltage Segmant/Grid Output Pin
36	G7	O	High-Voltage Segmant/Grid Output Pin
37	G6	O	High-Voltage Segmant/Grid Output Pin
38	G5	O	High-Voltage Segmant/Grid Output Pin
39	G4	O	High-Voltage Grid Output Pin
40	G3	O	High-Voltage Grid Output Pin
41	G2	O	High-Voltage Grid Output Pin
42	G1	O	High-Voltage Grid Output Pin
43	VDD	-	Logic Power Supply
44	VSS	-	Logic Ground Pin

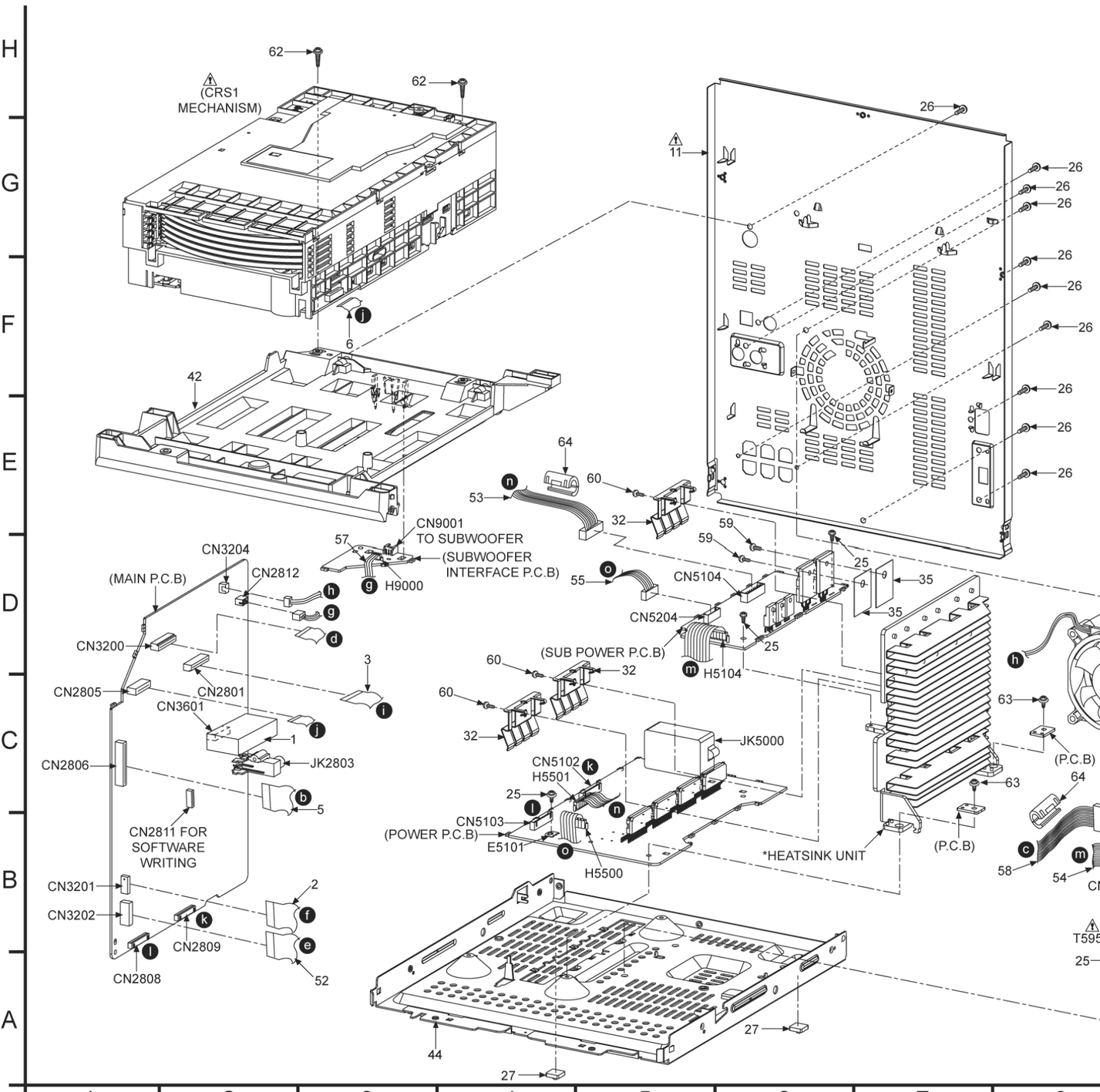
20 Exploded Views

20.1. Cabinet Parts Location & Traverse Parts Location



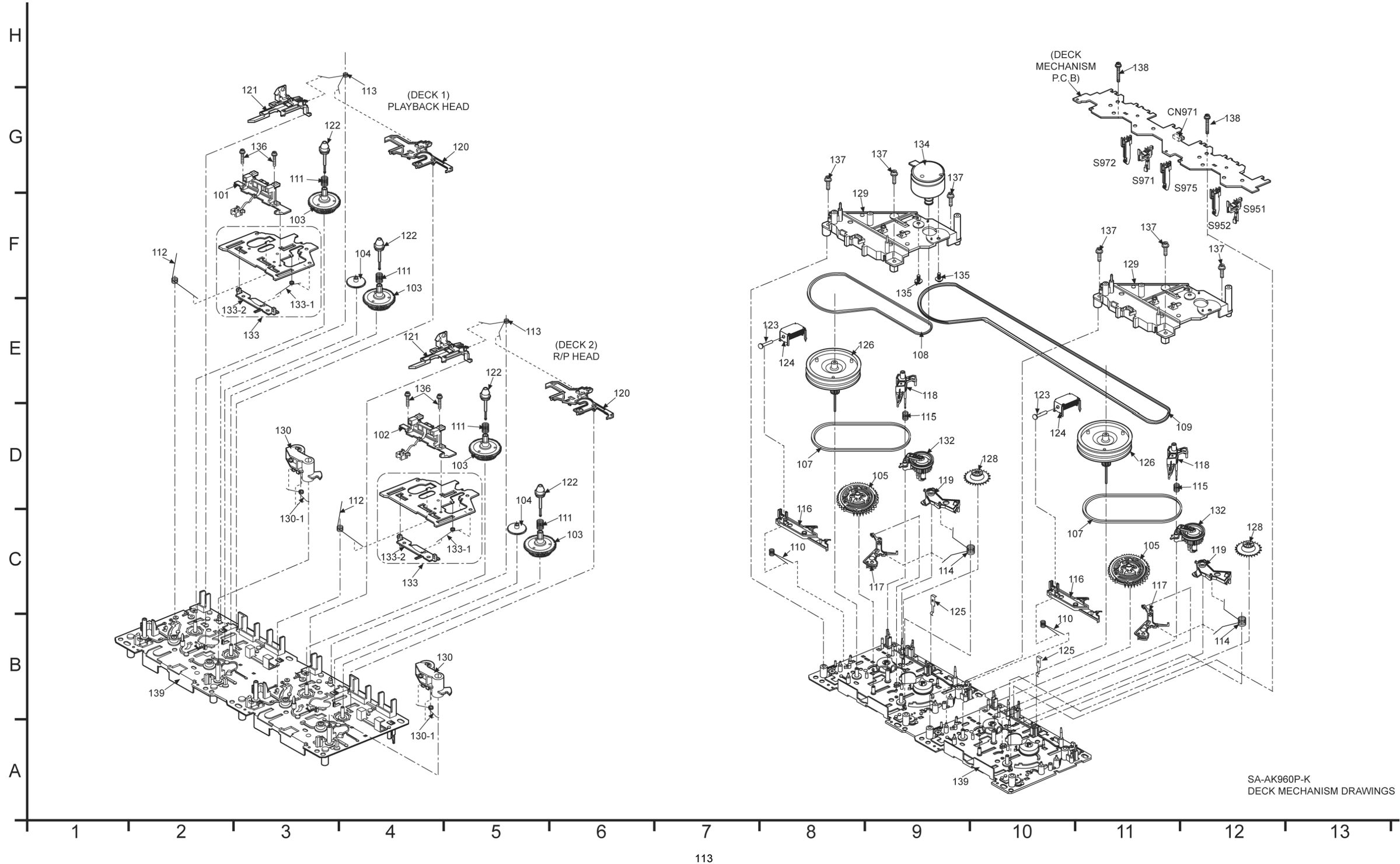
TRAVERSE UNIT



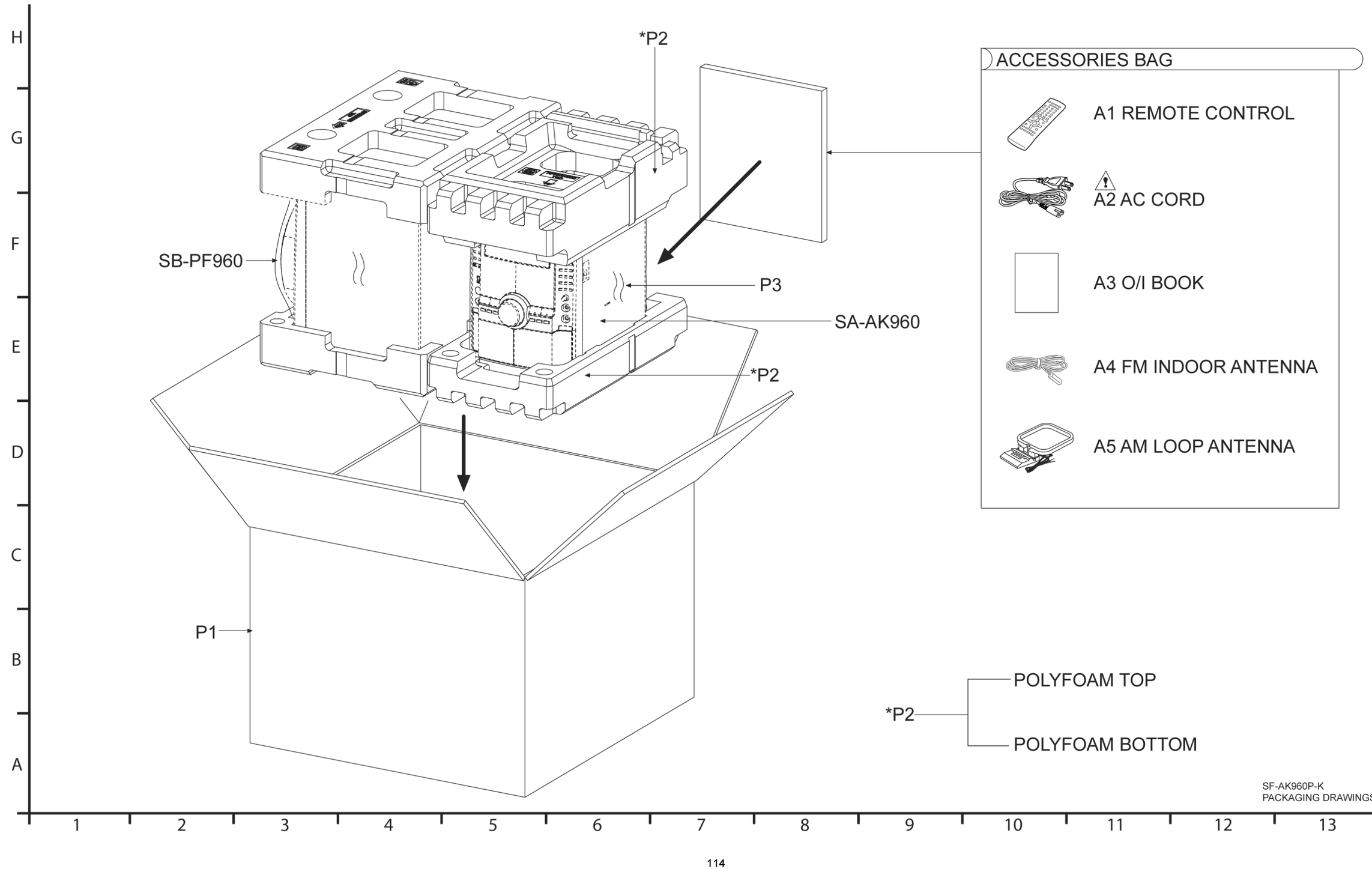


SA-AK960P-K
CABINET/TRAVERSE DRAWINGS

20.2. Deck Mechanism Parts Location (RAA4502-1S)



20.3. Packaging



21 Replacement Parts List

Notes:

- Important safety notice:

  Components identified by ⚠ mark have special characteristics important for safety.

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

  When replacing any of these components, be sure to use only manufacturer's specified parts shown in the parts list.
- The parenthesized indications in the Remarks columns specify the areas or colour. (Refer to the cover page for area or colour)

  Parts without these indications can be used for all areas.
- Warning: This product uses a laser diode. Refer to "Precaution of Laser Diode".
- Capacitor values are in microfarads (μF) unless specified otherwise, P= Pico-farads (pF), F= Farads.
- Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM).
- The marking (RTL) indicates that the Retention Time is limited for this items. 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 a availability is dependent 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.
- [M] Indicates in the Remarks columns indicates parts supplied by **PAVCSG.**
- 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		

Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS	
1	J3CCBB000009	TUNER PACK	[M]
2	REEX0503-1	10P FFC CABLE	[M]
3	REEV0140	22P FFC CABLE (CD-MAIN)	[M]
4	REEV0142	22P FFC CABLE (CD-MAIN)	[M]
5	REEV0190	30P FFC CABLE	[M]
6	REEX0747	14P FFC CABLE	[M]
7	RGKX0439-K	CD LID	[M]
8	RGLX0157-Q1	VOLUME LIGHTING RING	[M]
9	RGLX0154-Q	POWER LIGHTING PIECE	[M]
10	RGPX0328B-K	FRONT PANEL	[M]
11	RGRX0068E-A	REAR PANEL	[M] ⚠
12	RGUX0737-K	CASSETTE OPEN BUTTON L	[M]
13	RGUX0738-K	CASSETTE OPEN BUTTON R	[M]
14	RGUX0739-K	SELECTOR BUTTON	[M]
15	RGWX0056-1K	MIC VOLUME KNOB	[M]
16	RGUX0736-K	5CD BUTTON	[M]
17	RGUX0732-K	FUNCTION BUTTON L	[M]
18	RGUX0733-K	FUNCTION BUTTON R	[M]
19	RGUX0734-K	CONTROL BUTTON L	[M]
20	RGUX0735-K	CONTROL BUTTON R	[M]
21	RGWX0072-S	VOLUME KNOB	[M]
22	RHD26046-L	SCREW	[M]
24	RHD30007-K2J	SCREW	[M]
25	RHD30111-31	SCREW	[M]
26	RHD30119-S	SCREW	[M]
27	RKA0072-KJ	LEG CUSHION	[M]
28	RKFX0138-K1	CASSETTE LID L	[M]
29	RKFX0139-K1	CASSETTE LID R	[M]
30	RGLX0155-Q	LIGHTING PIECE L	[M]
31	RKMV0071A-KJ	TOP CABINET	[M] ⚠
32	RMCX0021-J	TRANSISTOR CLIP	[M]
33	RGLX0156-Q	LIGHTING PIECE R	[M]
34	RKWX0278-H	FL WINDOW	[M]
35	RMZX0040	IC INSULATOR	[M]
36	RMBX0070	USB GROUND SPRING	[M]
37	RMBX0072	CD LID OPEN SPRING	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
39	RMG0547-K	CUSHION	[M]
40	RMBX0069	CASSETTE OPEN SPRING	[M]
41	L6FALEFH0030	FAN UNIT	[M]
42	RMKX0113A-4	CD CHASSIS	[M]
43	RMNX0242	FL HOLDER	[M]
44	RMKX0138	BOTTOM CHASSIS	[M]
45	RMQX0279-W	LIGHT REFLECTOR	[M]
46	RMQV0076-W	REFLECTOR	[M]
47	RUS757ZAA	CASSETTE HALF SPRING	[M]
48	RXGX0002	DAMPER GEAR	[M]
49	RSCV0086-2	USB CASING (BOTTOM)	[M]
51	RSCV0087B-1	USB CASING (TOP)	[M]
52	REEX0568	11P FFC CABLE	[M]
53	REXX0622	9P WIRE (UPPER-BOT-POWER)	[M]
54	REXX0623	9P WIRE (TRANS-PWR)	[M]
55	REXX0624	6P WIRE (PWR)	[M]
56	REXX0628	3P WIRE (PANEL-REMOTE)	[M]
57	REXX0635	3P WIRE (MAIN SW PCB)	[M]
58	REXX0655	9P WIRE (PANEL-TRANS)	[M]
59	XTV3+10GFJ-M	SCREW	[M]
60	XTWS3+6TFJ	SCREW	[M]
62	XTW3+10TFJ	SCREW	[M]
63	XTW3+12TFJ	SCREW	[M]
64	J0KG00000037	AC CLAMP FILTER	[M]
		CASSETTE DECK	
101	RED0069-2	R/P HEAD BLOCK UNIT	[M]
102	RED0070-1	P/B HEAD BLOCK UNIT	[M]
103	RDG0300	REEL BASE GEAR	[M]
104	RDG0301	WINDING RELAY GEAR	[M]
105	RDK0026-4	MAIN GEAR	[M]
107	RDV0033-4	WINDING BELT	[M]
108	RDV0064-1	CAPSTAN BELT A	[M]
109	RDV0071-2	CAPSTAN BELT B	[M]
110	RMB0312	TRIGGER LEVER SPRING	[M]
111	RMB0400	REEL SPRING	[M]
112	RMB0403	HEAD PANEL SPRING	[M]
113	RMB0404	BRAKE ROD SPRING	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
114	RMB0406-5	FR LEVER SP	[M]
115	RMB0408	THRUST SPRING	[M]
116	RML0370-4	TRIGGER LEVER	[M]
117	RML0371	FR LEVER	[M]
118	RML0372-2	WINDING LEVER	[M]
119	RML0374-2	EJECT LEVER	[M]
120	RMM0131-1	BRAKE ROD	[M]
121	RMM0133-1	EJECT ROD	[M]
122	RMQ0519	REEL HUB	[M]
123	RMS0398-1	MOVING CORE	[M]
124	RSJ0003	PLUNGER ASS'Y	[M]
125	RMC0061	PACK SPRING	[M]
126	RXF0061-1	FLYWHEEL 'F' ASS'Y	[M]
128	RXG0040	FF RELAY GEAR ASS'Y	[M]
129	RMK0283A-2	SUB CHASSIS	[M]
130	RXL0124	PINCH ROLLER 'F' ASS'Y	[M]
130-1	RMB0401	PINCH ARM SPRING 'F'	[M]
132	RXL0126	WINDING ARM ASS'Y	[M]
133	RXQ0412-3	HEAD PANEL ASS'Y	[M]
133-1	RMB0405-1	FR ROD SPRING	[M]
133-2	RMM0132-2	FR ROD	[M]
134	REM0121	CAP MOTOR ASS'Y	[M]
135	RHD26022-1	MOTOR SCREW	[M]
136	XTW2+5LFJ	HEAD BLOCK UNIT SCREW	[M]
137	XTW26+10SFJ	SUB-CHASSIS SCREW	[M]
138	XYC2+JF17FJ	PCB EARTH SCREW	[M]
139	RFKJAA4502-S	CHASSIS ASS'Y	[M]
		TRAVERSE DECK	
360	RAE0165A-V	TRAVERSE	[M] ⚠
361	RME0109-1	FLOATING SPRING	[M]
362	RMG0703-R	FLOATING RUBBER	[M]
363	RMRX0064-1	MIDDLE CHASSIS	[M]
364	RMS0757-1	FIXED PIN	[M]
365	XTN2+6GFJ	SCREW	[M]
		PACKING MATERIALS	
P1	RPGX2024	PACKING CASE	[M]
P2	RPNX0499	POLYFOAM	[M]
P3	RPFX0198	MIRAMAT	[M]
		ACCESSORIES	
A1	N2QAYB000189	REMOTE CONTROL	[M]
A1-1	RKK-HTR0283H	R/C BATTERY COVER	[M]
A2	K2CB2CB00021	AC CORD	[M] ⚠
A3	RQTX0169-P	O/I BOOK (En)	[M]
A4	RSA0007-L1	FM INDOOR ANTENNA	[M]
A5	N1DAAAA00001	AM LOOP ANTENNA	[M]
		PRINTED CIRCUIT BOARDS	
PCB1	REPV0101A	USB PCB UNIT	[M] (RTL)
PCB2	REPV0111A	CD SERVO P.C.B	[M] (RTL)
PCB3	REPX0321A	DECK MECHANISM P.C.B	[M] (RTL)
PCB4	REPX0607B	MAIN / SUBWOOFER INTERFACE P.C.B	[M] (RTL)
PCB5	REPX0608A	PANEL / PANEL EXTENT / SUB PANEL / REMOTE SENSOR P.C.B	[M] (RTL)
PCB6	REPX0609B	POWER / SUB-POWER P.C.B	[M] (RTL)
PCB7	REPX0610B	TRANSFORMER P.C.B	[M] ⚠ (RTL)
PCB8	REPX0618A	DECK P.C.B	[M] (RTL)
		INTEGRATED CIRCUITS	
IC900	MNZSFB5KJM1	IC USB CONTROLLER	[M]
IC951	C0DBZYE00002	IC REGULATOR	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
IC951	CNB13030R2AU	IC PHOTO INTERUPTOR	[M]
IC971	CNB13030R2AU	IC PHOTO INTERUPTOR	[M]
IC1001	AN7348S-E1	IC IC P/B EQ / REC AMP / ALC / TPS AMP	[M]
IC1004	C1AA00000612	IC R/P SELECT	[M]
IC2801	C2CBYY000534	IC MICRO-PROCESSOR	[M]
IC2803	C1BB00001121	IC ASP	[M]
IC2804	C0AABB000125	IC OP AMP	[M]
IC2805	C0DBCYY00005	IC REGULATOR	[M]
IC2810	C0ABBB000244	IC OP AMP	[M]
IC2872	C0CBAHG00011	IC AV REGULATOR	[M]
IC2900	C1AB00002852	IC AUDIO LIMITER	[M]
IC3800	C0ABBB000244	IC OP AMP	[M]
IC5000	C1BA00000487	IC DIGITAL AMP	[M]
IC5101	C0DAZYY00005	IC REGULATOR	[M]
IC5200	C1BA00000487	IC DIGITAL AMP	[M]
IC5300	C1BA00000487	IC DIGITAL AMP	[M]
IC5400	C1BA00000487	IC DIGITAL AMP	[M]
IC5500	C0JBAB000902	IC HEX INVERTER	[M]
IC6601	C0HBB0000057	IC FL DRIVER	[M]
IC6701	C0JBAQ000186	IC DRIVER	[M]
IC7001	MN6627954AMA	IC IC SERVO PROCESSOR / DIGITAL SIGNAL PROCESSOR / DIGITAL FILTER D/A CONVERTER	[M]
IC7002	BA5948FPE2	IC 4 CH DRIVE	[M]
		TRANSISTORS	
Q1003	B1AAGC000007	TRANSISTOR	[M]
Q1004	B1AAGC000007	TRANSISTOR	[M]
Q1005	B1AAGC000007	TRANSISTOR	[M]
Q1007	B1ABCF000176	TRANSISTOR	[M]
Q1017	B1AARC000003	TRANSISTOR	[M]
Q2311	B1ABGC000005	TRANSISTOR	[M]
Q2317	B1ABGC000005	TRANSISTOR	[M]
Q2341	B1ABGC000005	TRANSISTOR	[M]
Q2411	B1ABGC000005	TRANSISTOR	[M]
Q2417	B1ABGC000005	TRANSISTOR	[M]
Q2441	B1ABGC000005	TRANSISTOR	[M]
Q2501	B1ABCF000176	TRANSISTOR	[M]
Q2511	B1GDCFJJ0047	TRANSISTOR	[M]
Q2551	B1GDCFJJ0047	TRANSISTOR	[M]
Q2552	B1GDCFJJ0047	TRANSISTOR	[M]
Q2553	B1ABCF000176	TRANSISTOR	[M]
Q2554	B1ABCF000176	TRANSISTOR	[M]
Q2555	B1ABCF000176	TRANSISTOR	[M]
Q2556	B1GDCFJJ0047	TRANSISTOR	[M]
Q2557	B1ABCF000176	TRANSISTOR	[M]
Q2558	B1ABCF000176	TRANSISTOR	[M]
Q2559	B1ABCF000176	TRANSISTOR	[M]
Q2803	B1GBCFLL0037	TRANSISTOR	[M]
Q2936	B1ACKD000006	TRANSISTOR	[M]
Q2937	B1GBCFJJ0051	TRANSISTOR	[M]
Q2950	B1ACKD000006	TRANSISTOR	[M]
Q2951	B1ACKD000006	TRANSISTOR	[M]
Q2952	B1GBCFLL0037	TRANSISTOR	[M]
Q3100	B1GBCFLL0037	TRANSISTOR	[M]
Q3500	B1GBCFLL0037	TRANSISTOR	[M]
Q3501	B1GBCFLL0037	TRANSISTOR	[M]
Q3502	B1GBCFLL0037	TRANSISTOR	[M]
Q3503	B1ACKD000006	TRANSISTOR	[M]
Q3504	B1ACKD000006	TRANSISTOR	[M]
Q3505	B1ACKD000006	TRANSISTOR	[M]
Q3506	B1ABCF000176	TRANSISTOR	[M]
Q3507	B1ABCF000176	TRANSISTOR	[M]
Q3508	B1ABCF000176	TRANSISTOR	[M]
Q3535	B1ABCF000176	TRANSISTOR	[M]
Q3537	B1ABCF000176	TRANSISTOR	[M]
Q3601	2SC3940A0A	TRANSISTOR	[M]
Q5091	B1GBCFJJ0051	TRANSISTOR	[M]
Q5092	B1GBCFJJ0051	TRANSISTOR	[M]
Q5100	B1GACFGA0002	TRANSISTOR	[M]
Q5103	B1ABCF000176	TRANSISTOR	[M]
Q5104	B1ABCF000176	TRANSISTOR	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
Q5105	B1CEMG000003	TRANSISTOR	[M]
Q5106	B1CEMG000003	TRANSISTOR	[M]
Q5108	B1ABCF000176	TRANSISTOR	[M]
Q5109	2SB0709AHL	TRANSISTOR	[M]
Q5111	B1BACG000023	TRANSISTOR	[M]
Q5112	B1BCCG000002	TRANSISTOR	[M]
Q5113	B1GDCFNA0001	TRANSISTOR	[M]
Q5114	B1ABCF000176	TRANSISTOR	[M]
Q5153	B1ABCF000176	TRANSISTOR	[M]
Q5154	2SB0709AHL	TRANSISTOR	[M]
Q5173	B1ABCF000176	TRANSISTOR	[M]
Q5191	B1GBCFJJ0051	TRANSISTOR	[M]
Q5192	B1GBCFJJ0051	TRANSISTOR	[M]
Q5950	B1AAKD000014	TRANSISTOR	[M]
Q5951	2SB0621AHA	TRANSISTOR	[M]
Q5952	B1GBCFJJ0051	TRANSISTOR	[M]
Q5953	B1ABCF000176	TRANSISTOR	[M]
Q5954	B1AAGC000007	TRANSISTOR	[M]
Q6501	B1AACF000064	TRANSISTOR	[M]
Q6502	B1AACF000064	TRANSISTOR	[M]
Q7601	B1ADCF000001	TRANSISTOR	[M]
QR2560	B1ADCE000012	TRANSISTOR	[M]
QR3513	B1GBCFLL0037	TRANSISTOR	[M]
		DIODES	
D951	MA2C16500E	DIODE	[M]
D971	MA2C16500E	DIODE	[M]
D1003	B0ACCK000005	DIODE	[M]
D2191	B0ACCK000005	DIODE	[M]
D2503	B0ADCC000002	DIODE	[M]
D2551	B0BC2R4A0006	DIODE	[M]
D2552	B0BC2R4A0006	DIODE	[M]
D2583	B0BC9R1A0218	DIODE	[M]
D2603	B0BC9R1A0218	DIODE	[M]
D2801	B0ACCK000005	DIODE	[M]
D2803	B0ACCK000005	DIODE	[M]
D2811	B0ADCJ000020	DIODE	[M]
D2813	B0ACCK000005	DIODE	[M]
D2814	B0ACCK000005	DIODE	[M]
D2815	B0ACCK000005	DIODE	[M]
D2871	B0EAKM000117	DIODE	[M]
D2936	B0EAKM000117	DIODE	[M]
D3101	B0EAKM000117	DIODE	[M]
D3102	B0EAKM000117	DIODE	[M]
D3106	B0JAME000114	DIODE	[M]
D5101	B0BC01200019	DIODE	[M]
D5102	B0BA5R600016	DIODE	[M]
D5103	B0BA5R600016	DIODE	[M]
D5104	B0BC01200019	DIODE	[M]
D5107	B0BA01500003	DIODE	[M]
D5109	B0BA01100004	DIODE	[M]
D5121	B0EAKM000122	DIODE	[M]
D5122	B0EAKM000122	DIODE	[M]
D5123	B0EAKM000122	DIODE	[M]
D5125	B0AAFK000004	DIODE	[M]
D5126	B0ACCK000005	DIODE	[M]
D5127	B0EAKM000122	DIODE	[M]
D5130	B0EAKM000122	DIODE	[M]
D5152	B0BA01900005	DIODE	[M]
D5153	B0ACCK000005	DIODE	[M]
D5154	B0ACCK000005	DIODE	[M]
D5173	B0BA5R000004	DIODE	[M]
D5501	B0ACCE000003	DIODE	[M]
D5502	B0ACCE000003	DIODE	[M]
D5503	B0BC5R000009	DIODE	[M]
D5950	B0FBAM000009	DIODE	[M]
D5951	B0FBAM000009	DIODE	[M]
D5952	B0FBAM000009	DIODE	[M]
D5954	B0EAKM000122	DIODE	[M]
D5955	B0EAKM000122	DIODE	[M]
D5956	B0EAKM000122	DIODE	[M]
D5957	B0EAKM000122	DIODE	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
D5958	B0EAKM000122	DIODE	[M]
D5959	B0EAKM000122	DIODE	[M]
D5960	B0BA02400030	DIODE	[M]
D5961	B0AACK000004	DIODE	[M]
D5962	B0AACK000004	DIODE	[M]
D5964	B0BA6R800008	DIODE	[M]
D5965	B0AACK000004	DIODE	[M]
D5966	B0AACK000004	DIODE	[M]
D5967	B0AACK000004	DIODE	[M]
D5968	B0AACK000004	DIODE	[M]
D5969	B0AACK000004	DIODE	[M]
D6302	B0EAKM000117	DIODE	[M]
D6458	B3AAA0000803	DIODE	[M]
D6502	B3AEA0000107	DIODE	[M]
D6503	B3AEA0000107	DIODE	[M]
D6505	B3AEA0000107	DIODE	[M]
D6506	B3AEA0000107	DIODE	[M]
D6507	B3AEA0000107	DIODE	[M]
D6508	B3AEA0000107	DIODE	[M]
D6635	B0BC5R600003	DIODE	[M]
D6841	B0BC5R600003	DIODE	[M]
D7101	B0BC9R000008	DIODE	[M]
D7650	MAZ80560ML	DIODE	[M]
DZ2901	B0BC5R600003	DIODE	[M]
DW2900	B0ADCJ000020	DIODE	[M]
		VARIABLE RESISTORS	
VR6491	EVEKE2F3524B	VOLUME JOG	[M]
VR6511	EVUF2AF15B14	MIC VOLUME JOG	[M]
		SWITCHES	
S951	K0J1BB000017	SW MODE	[M]
S952	K0J1BB000021	SW HALF	[M]
S971	K0J1BB000017	SW MODE	[M]
S972	K0J1BB000021	SW HALF	[M]
S975	K0J1BB000021	SW RECINH_F	[M]
S6101	EVQ21405RJ	SW POWER	[M]
S6102	EVQ21405RJ	SW M.EQ-	[M]
S6103	EVQ21405RJ	SW M.EQ	[M]
S6104	EVQ21405RJ	SW M.EQ+	[M]
S6105	EVQ21405RJ	SW HARD BASS	[M]
S6106	EVQ21405RJ	SW USB	[M]
S6107	EVQ21405RJ	SW DECK OPEN_1	[M]
S6201	EVQ21405RJ	SW SINGLE CHANGE	[M]
S6202	EVQ21405RJ	SW CD1	[M]
S6203	EVQ21405RJ	SW CD2	[M]
S6204	EVQ21405RJ	SW CD3	[M]
S6205	EVQ21405RJ	SW CD4	[M]
S6206	EVQ21405RJ	SW CD5	[M]
S6209	EVQ21405RJ	SW MULTI CHANGE	[M]
S6210	EVQ21405RJ	SW DECK OPEN_2	[M]
S6211	EVQ21405RJ	SW OPEN/CLOSE	[M]
S6301	EVQ21405RJ	SW EXT IN	[M]
S6302	EVQ21405RJ	SW CD	[M]
S6303	EVQ21405RJ	SW DISPLAY/-LIGHT EFFECT	[M]
S6304	EVQ21405RJ	SW DECK 1/2	[M]
S6305	EVQ21405RJ	SW REC	[M]
S6306	EVQ21405RJ	SW REW	[M]
S6307	EVQ21405RJ	SW FF	[M]
S6308	EVQ21405RJ	SW STOP/-DEMO	[M]
S6309	EVQ21405RJ	SW TUNER/BAND	[M]
S6310	EVQ21405RJ	SW TAPE	[M]
S7201	RSH1A048-A	SW REST	[M]
		CONNECTORS	
CN971	K1MN10B00104	10P FFC CONNECTOR	[M]
CN1001	K1MN11B00016	11P CONNECTOR	[M]
CN2801	K1MN22AA0004	22P CONNECTOR	[M]
CN2805	K1MN14A00049	14P FFC CONNECTOR	[M]
CN2806	K1MN30AA0004	30P CONNECTOR	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
CN2808	K1KB12B00037	12P CONNECTOR	[M]
CN2809	K1KB12B00037	12P CONNECTOR	[M]
CN2811	K1MN08AA0003	8P CONNECTOR	[M]
CN2812	K1KA03AA0319	3P CONNECTOR	[M]
CN3200	K1MN22AA0004	22P CONNECTOR	[M]
CN3201	K1MN10AA0003	10P FFC CONNECTOR	[M]
CN3202	K1MN11A00008	11P CONNECTOR	[M]
CN3204	K1KA02AA0186	2P CONNECTOR	[M]
CN3601	K1KA10AA0031	10P CONNECTOR	[M]
CN5102	K1KA12AA0031	12P CONNECTOR	[M]
CN5103	K1KA12AA0031	12P CONNECTOR	[M]
CN5104	K1KA09AA0319	9P CONNECTOR	[M]
CN5204	K1KA06AA0319	6P CONNECTOR	[M]
CN5950	K1KA09AA0319	9P CONNECTOR	[M]
CN5951	K1KA09AA0193	9P CONNECTOR	[M]
CN6001	K1KB12B00037	12P CONNECTOR	[M]
CN6002	K1KA12AA0031	12P CONNECTOR	[M]
CN6003	K1KB12B00037	12P CONNECTOR	[M]
CN6004	K1KA12AA0031	12P CONNECTOR	[M]
CN6601	K1MN30AA0004	30P CONNECTOR	[M]
CN7001	K1MN16B00154	16P CONNECTOR	[M]
CN7002	K1MN22BA0005	22P CONNECTOR	[M]
CN9001	K1KA03BA0154	3P CONNECTOR	[M]
CS1001	K1MY05AA0043	5P CONNECTOR	[M]
CS1002	K1MY05AA0043	5P CONNECTOR	[M]
P901	K1MN22BA0005	22P CONNECTOR	[M]
P903	K1FY104B0011	USB CONNECTOR	[M]
		COILS & INDUCTORS	
L900	G1C100K00019	INDUCTOR	[M]
L1001	G0C470JA0052	INDUCTOR	[M]
L1002	G2ZZ00000044	BIAS OSC COIL	[M]
L3200	G0C101JA0052	INDUCTOR	[M]
L3201	G0C220JA0055	INDUCTOR	[M]
L5000	G0B120M00001	LINE FILTER	[M]
L5200	G0B120M00001	LINE FILTER	[M]
L5300	G0B120M00001	LINE FILTER	[M]
L5400	G0B120M00001	LINE FILTER	[M]
L5500	J0JKB0000020	INDUCTOR	[M]
L5501	J0JKB0000020	INDUCTOR	[M]
L5600	G0B340K00001	LINE FILTER	[M]
L5601	G0B340K00001	LINE FILTER	[M]
L5602	G0B340K00001	LINE FILTER	[M]
L5603	G0B340K00001	LINE FILTER	[M]
L5950	ELF15N035AN	LINE FILTER	[M] ⚠
LB840	J0JAC0000021	INDUCTOR	[M]
LB841	J0JAC0000021	INDUCTOR	[M]
LB843	J0JAC0000021	INDUCTOR	[M]
LB845	J0JAC0000021	INDUCTOR	[M]
LB846	J0JAC0000021	INDUCTOR	[M]
LB848	J0JAC0000021	INDUCTOR	[M]
LB850	J0JHC0000045	INDUCTOR	[M]
LB852	J0JHC0000045	INDUCTOR	[M]
LB930	J0JHC0000045	INDUCTOR	[M]
LB932	J0JAC0000021	INDUCTOR	[M]
LB933	J0JAC0000021	INDUCTOR	[M]
LB934	J0JAC0000021	INDUCTOR	[M]
LB935	J0JAC0000021	INDUCTOR	[M]
LB936	J0JAC0000021	INDUCTOR	[M]
LB938	J0JAC0000021	INDUCTOR	[M]
LB951	J0JHC0000045	INDUCTOR	[M]
LB952	J0JHC0000045	INDUCTOR	[M]
		TRANSFORMERS	
T5950	G4CYAYY00186	MAIN TRANSFORMER	[M] ⚠
T5951	G4C2AAJ00005	BACK UP TRANSFORMER	[M] ⚠
		COMPONENT COMBINATION	
Z971	RGSD12A1445T	RADA RESISTOR	[M]
Z5950	ERZV10V511CS	ZENER	[M] ⚠

Ref. No.	Part No.	Part Name & Description	Remarks
Z6481	B3RAD0000146	REMOTE CONTROL SENSOR	[M]
		OSCILLATORS	
X900	H0D120500009	CRYSTAL OSCILLATOR	[M]
X2801	H0A327200115	CRYSTAL OSCILLATOR	[M]
X2802	H2B100500004	CRYSTAL OSCILLATOR	[M]
X5500	H2A375300003	CRYSTAL OSCILLATOR	[M]
X5501	H2A415300001	CRYSTAL OSCILLATOR	[M]
X7201	H2B169500005	CRYSTAL OSCILLATOR	[M]
		FL DISPLAY	
FL6602	A2BD00000179	FL DISPLAY	[M]
		RELAY	
RL5950	K6B1AEA00003	POWER RELAY	[M] ⚠
		FUSE	
F1	K5D802APA008	FUSE	[M] ⚠
		HOLDERS	
H5104	K1YF09000001	9P WIRE HOLDER	[M]
H5500	K1YF06000002	6P WIRE HOLDER	[M]
H5501	K1YF09000001	9P WIRE HOLDER	[M]
H6555	K1YZ09000002	9P CABLE HOLDER	[M]
H9000	K1YF03000003	3P CABLE HOLDER	[M]
JW6001	K1YF03000003	3P CABLE HOLDER	[M]
JW6002	K1YF03000003	3P CABLE HOLDER	[M]
		FUSE HOLDERS	
FC1	EYF52BCY	FUSE CLIP	[M]
FC2	EYF52BCY	FUSE CLIP	[M]
		FUSE PROTECTOR	
FP5950	K5G402AA0002	FUSE PROTECTOR	[M] ⚠
		JACKS	
JK2803	K2HA204B0153	JK AV	[M]
JK5000	K4AC06D00004	JK SPEAKER	[M]
JK5950	K2AB2B000007	AC INLET	[M] ⚠
JK6501	K2HC103A0024	JK MIC	[M]
JK6551	K2HC103A0024	JK HP	[M]
JK6751	K2HC1YYA0002	JK MUSIC PORT	[M]
		EARTH TERMINAL	
E5101	K9ZZ00001279	EARTH PLATE	[M]
		CHIP JUMPERS	
LB7262	D0GBR00JA008	0 1/16W	[M]
LB7263	D0GBR00JA008	0 1/16W	[M]
LB7264	D0GBR00JA008	0 1/16W	[M]
W2	D0GBR00JA008	0 1/16W	[M]
W2323	D0GDR00JA017	0 1/10W	[M]
W2533	D0GDR00JA017	0 1/10W	[M]
W2564	D0GBR00JA008	0 1/16W	[M]
W2565	D0GBR00JA008	0 1/16W	[M]
W2568	D0GDR00JA017	0 1/10W	[M]
W2569	D0GBR00JA008	0 1/16W	[M]
W2571	D0GBR00JA008	0 1/16W	[M]
W2572	D0GBR00JA008	0 1/16W	[M]
W2577	D0GBR00JA008	0 1/16W	[M]
W2579	D0GDR00JA017	0 1/10W	[M]
W2580	D0GDR00JA017	0 1/10W	[M]
W2581	D0GBR00JA008	0 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
W2582	D0GBR00JA008	0 1/16W	[M]
W2590	D0GBR00JA008	0 1/16W	[M]
W2591	D0GBR00JA008	0 1/16W	[M]
W2592	D0GBR00JA008	0 1/16W	[M]
W2593	D0GDR00JA017	0 1/10W	[M]
W2594	D0GBR00JA008	0 1/16W	[M]
W2595	D0GDR00JA017	0 1/10W	[M]
W2596	D0GDR00JA017	0 1/10W	[M]
W2659	D0GBR00JA008	0 1/16W	[M]
W2660	D0GBR00JA008	0 1/16W	[M]
W2661	D0GBR00JA008	0 1/16W	[M]
W2663	D0GDR00JA017	0 1/10W	[M]
W2665	D0GDR00JA017	0 1/10W	[M]
W2666	D0GBR00JA008	0 1/16W	[M]
W2667	D0GBR00JA008	0 1/16W	[M]
W2675	D0GDR00JA017	0 1/10W	[M]
W2681	D0GBR00JA008	0 1/16W	[M]
W2691	D0GBR00JA008	0 1/16W	[M]
W5105	D0GDR00JA017	0 1/10W	[M]
W5181	D0GDR00JA017	0 1/10W	[M]
W5185	D0GDR00JA017	0 1/10W	[M]
W5186	D0GDR00JA017	0 1/10W	[M]
W5301	D0GBR00JA008	0 1/16W	[M]
W5305	D0GBR00JA008	0 1/16W	[M]
W5306	D0GDR00JA017	0 1/10W	[M]
W5307	D0GDR00JA017	0 1/10W	[M]
W5308	D0GBR00JA008	0 1/16W	[M]
W5310	D0GBR00JA008	0 1/16W	[M]
W5311	D0GBR00JA008	0 1/16W	[M]
W5313	D0GDR00JA017	0 1/10W	[M]
W5318	D0GBR00JA008	0 1/16W	[M]
W6056	D0GBR00JA008	0 1/16W	[M]
W6057	D0GBR00JA008	0 1/16W	[M]
W6058	D0GBR00JA008	0 1/16W	[M]
W6059	D0GDR00JA017	0 1/10W	[M]
W6060	D0GBR00JA008	0 1/16W	[M]
W6066	D0GBR00JA008	0 1/16W	[M]
W7001	D0GDR00JA017	0 1/10W	[M]
W7002	D0GDR00JA017	0 1/10W	[M]
W7003	D0GDR00JA017	0 1/10W	[M]
W7004	D0GBR00JA008	0 1/16W	[M]
W7005	D0GBR00JA008	0 1/16W	[M]
W7006	ERJ8GEY0R00V	0 1/4W	[M]
W7007	ERJ8GEY0R00V	0 1/4W	[M]
W7008	D0GDR00JA017	0 1/10W	[M]
W7009	D0GBR00JA008	0 1/16W	[M]
W7010	D0GBR00JA008	0 1/16W	[M]
W7011	D0GBR00JA008	0 1/16W	[M]
W7012	D0GBR00JA008	0 1/16W	[M]
W7013	D0GBR00JA008	0 1/16W	[M]
W7014	D0GBR00JA008	0 1/16W	[M]
W7015	D0GBR00JA008	0 1/16W	[M]
W7016	D0GBR00JA008	0 1/16W	[M]
W7017	D0GBR00JA008	0 1/16W	[M]
W7018	D0GBR00JA008	0 1/16W	[M]
W7019	D0GBR00JA008	0 1/16W	[M]
W7020	D0GBR00JA008	0 1/16W	[M]
W7021	D0GBR00JA008	0 1/16W	[M]
W7022	D0GBR00JA008	0 1/16W	[M]
W7023	D0GBR00JA008	0 1/16W	[M]
W7024	D0GBR00JA008	0 1/16W	[M]
W7025	D0GBR00JA008	0 1/16W	[M]
W7026	D0GBR00JA008	0 1/16W	[M]
W7027	D0GBR00JA008	0 1/16W	[M]
W7028	D0GBR00JA008	0 1/16W	[M]
W7029	D0GBR00JA008	0 1/16W	[M]
		WIRE	
M1	RWJ0102050CK	2P WIRE	[M]
		RESISTORS	

Ref. No.	Part No.	Part Name & Description	Remarks
R901	ERJ2GEJ102X	1K 1/16W	[M]
R902	ERJ2GEJ102X	1K 1/16W	[M]
R903	ERJ2GE0R00X	0 1/16W	[M]
R904	ERJ2GE0R00X	0 1/16W	[M]
R906	ERJ2GE0R00X	0 1/16W	[M]
R914	ERJ2GE0R00X	0 1/16W	[M]
R950	ERJ2GEJ223X	22K 1/16W	[M]
R951	ERJ2GE0R00X	0 1/16W	[M]
R952	ERJ2GEJ240X	24 1/16W	[M]
R952	D0AE821JA048	820 1/4W	[M]
R953	ERJ2GEJ240X	24 1/16W	[M]
R953	D0AE393JA048	39K 1/4W	[M]
R954	ERJ2GEJ153X	15K 1/16W	[M]
R955	ERJ2GEJ153X	15K 1/16W	[M]
R957	ERJ2GEJ222X	2.2K 1/16W	[M]
R958	ERJ2GEJ104X	100K 1/16W	[M]
R971	ERJ2GEJ102X	1K 1/16W	[M]
R972	ERJ2GEJ102X	1K 1/16W	[M]
R972	D0AE821JA048	820 1/4W	[M]
R973	D0AE393JA048	39K 1/4W	[M]
R1002	D0GBR00JA008	0 1/16W	[M]
R1003	ERJ3GEYJ103V	10K 1/10W	[M]
R1004	D0GB152JA007	1.5K 1/10W	[M]
R1005	D0GB472JA041	4.7K 1/10W	[M]
R1007	ERD25FVJ4R7T	4.7 1/4W	[M]
R1009	D0GB183JA007	18K 1/10W	[M]
R1010	D0GB183JA007	18K 1/10W	[M]
R1011	ERJ3GEYJ822V	8.2K 1/10W	[M]
R1012	D0GB472JA041	4.7K 1/10W	[M]
R1013	D0GB472JA041	4.7K 1/10W	[M]
R1014	D0GB472JA041	4.7K 1/10W	[M]
R1015	D0GB470JA008	47 1/16W	[M]
R1016	D0GB470JA008	47 1/16W	[M]
R1017	ERJ3GEYJ822V	8.2K 1/10W	[M]
R1018	D0GB392JA007	3.9K 1/10W	[M]
R1019	D0GB392JA007	3.9K 1/10W	[M]
R1020	D0GBR00JA008	0 1/16W	[M]
R1022	ERJ3GEYJ103V	10K 1/10W	[M]
R1024	D0GBR00JA008	0 1/16W	[M]
R1025	D0GBR00JA008	0 1/16W	[M]
R1026	ERJ3GEYJ102V	1K 1/10W	[M]
R1027	D0GBR00JA008	0 1/16W	[M]
R1028	ERJ3GEYJ822V	8.2K 1/10W	[M]
R1029	D0GB475JA007	4.7M 1/10W	[M]
R1030	D0GB101JA007	100 1/10W	[M]
R1031	D0GB273JA007	27K 1/10W	[M]
R1032	ERJ3GEYJ103V	10K 1/10W	[M]
R1035	ERJ3GEYJ103V	10K 1/10W	[M]
R1040	D0GBR00JA008	0 1/16W	[M]
R1049	D0GBR00JA008	0 1/16W	[M]
R1050	D0GBR00JA008	0 1/16W	[M]
R1055	D0GB222JA041	2.2K 1/10W	[M]
R1057	D0GB222JA041	2.2K 1/10W	[M]
R1060	D0GBR00JA008	0 1/16W	[M]
R1084	D0GB222JA041	2.2K 1/10W	[M]
R1085	D0GB473JA041	47K 1/10W	[M]
R1086	D0GB222JA041	2.2K 1/10W	[M]
R1087	D0GB473JA041	47K 1/10W	[M]
R1090	D0GB221JA041	220 1/10W	[M]
R1091	D0GBR00JA008	0 1/16W	[M]
R1092	D0GBR00JA008	0 1/16W	[M]
R1097	ERJ3GEYJ103V	10K 1/10W	[M]
R1098	ERJ3GEYJ103V	10K 1/10W	[M]
R1099	D0GBR00JA008	0 1/16W	[M]
R1100	D0GBR00JA008	0 1/16W	[M]
R1101	D0GBR00JA008	0 1/16W	[M]
R1102	ERJ3GEYJ103V	10K 1/10W	[M]
R2102	D0GB332JA007	3.3K 1/10W	[M]
R2103	D0GB153JA007	15K 1/10W	[M]
R2104	D0GB273JA007	27K 1/10W	[M]
R2121	D0GB182JA007	1.8K 1/10W	[M]
R2122	D0GB332JA007	3.3K 1/10W	[M]
R2131	D0GB182JA007	1.8K 1/10W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R2132	D0GB332JA007	3.3K 1/10W	[M]
R2141	D0GB123JA007	12K 1/10W	[M]
R2142	D0GB272JA007	2.7K 1/10W	[M]
R2151	D0GB153JA007	15K 1/10W	[M]
R2163	D0GB562JA007	5.6K 1/10W	[M]
R2172	D0GB153JA007	15K 1/10W	[M]
R2173	D0GB472JA007	4.7K 1/10W	[M]
R2181	D0GB561JA007	560 1/10W	[M]
R2182	D0GBR00JA008	0 1/16W	[M]
R2183	D0GB332JA007	3.3K 1/10W	[M]
R2193	D0GB472JA007	4.7K 1/10W	[M]
R2194	D0GB104JA007	100K 1/10W	[M]
R2195	D0GB103JA007	10K 1/10W	[M]
R2196	D0GB103JA007	10K 1/10W	[M]
R2202	D0GB332JA007	3.3K 1/10W	[M]
R2203	D0GB153JA007	15K 1/10W	[M]
R2204	D0GB273JA007	27K 1/10W	[M]
R2221	D0GB182JA007	1.8K 1/10W	[M]
R2222	D0GB332JA007	3.3K 1/10W	[M]
R2231	D0GB182JA007	1.8K 1/10W	[M]
R2232	D0GB332JA007	3.3K 1/10W	[M]
R2241	D0GB123JA007	12K 1/10W	[M]
R2242	D0GB272JA007	2.7K 1/10W	[M]
R2251	D0GB153JA007	15K 1/10W	[M]
R2261	D0GB103JA007	10K 1/10W	[M]
R2262	D0GB102JA007	1K 1/10W	[M]
R2271	D0GB153JA007	15K 1/10W	[M]
R2273	D0GB472JA007	4.7K 1/10W	[M]
R2281	D0GB561JA007	560 1/10W	[M]
R2282	D0GBR00JA008	0 1/16W	[M]
R2283	D0GB104JA007	100K 1/10W	[M]
R2302	D0GBR00JA008	0 1/16W	[M]
R2311	D0GB471JA007	470 1/10W	[M]
R2312	D0GB103JA007	10K 1/10W	[M]
R2313	D0GB104JA007	100K 1/10W	[M]
R2315	D0GB182JA007	1.8K 1/10W	[M]
R2316	D0GB471JA007	470 1/10W	[M]
R2317	D0GB103JA007	10K 1/10W	[M]
R2318	D0GB104JA007	100K 1/10W	[M]
R2327	D0GB123JA007	12K 1/10W	[M]
R2341	D0GB180JA008	18 1/16W	[M]
R2342	D0GB180JA008	18 1/16W	[M]
R2343	D0GB180JA008	18 1/16W	[M]
R2344	D0GB180JA008	18 1/16W	[M]
R2345	D0GB152JA007	1.5K 1/10W	[M]
R2346	D0GB332JA007	3.3K 1/10W	[M]
R2347	D0GB1R0JA007	1.0 1/10W	[M]
R2351	D0GB180JA008	18 1/16W	[M]
R2352	D0GB180JA008	18 1/16W	[M]
R2353	D0GB180JA008	18 1/16W	[M]
R2354	D0GB180JA008	18 1/16W	[M]
R2355	D0GB274JA007	270K 1/10W	[M]
R2356	D0GB184JA007	180K 1/10W	[M]
R2357	D0GB104JA007	100K 1/10W	[M]
R2358	D0GB103JA007	10K 1/10W	[M]
R2411	D0GB471JA007	470 1/10W	[M]
R2412	D0GB103JA007	10K 1/10W	[M]
R2413	D0GB104JA007	100K 1/10W	[M]
R2415	D0GB182JA007	1.8K 1/10W	[M]
R2416	D0GB471JA007	470 1/10W	[M]
R2417	D0GB103JA007	10K 1/10W	[M]
R2418	D0GB104JA007	100K 1/10W	[M]
R2427	D0GB123JA007	12K 1/10W	[M]
R2441	D0GB180JA008	18 1/16W	[M]
R2442	D0GB180JA008	18 1/16W	[M]
R2443	D0GB180JA008	18 1/16W	[M]
R2444	D0GB180JA008	18 1/16W	[M]
R2445	D0GB152JA007	1.5K 1/10W	[M]
R2446	D0GB332JA007	3.3K 1/10W	[M]
R2447	D0GB1R0JA007	1.0 1/10W	[M]
R2448	D0GB154JA007	150K 1/10W	[M]
R2451	D0GB180JA008	18 1/16W	[M]
R2452	D0GB180JA008	18 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R2453	D0GB180JA008	18 1/16W	[M]
R2454	D0GB180JA008	18 1/16W	[M]
R2455	D0GB274JA007	270K 1/10W	[M]
R2456	D0GB184JA007	180K 1/10W	[M]
R2457	D0GB104JA007	100K 1/10W	[M]
R2458	D0GB103JA007	10K 1/10W	[M]
R2501	D0GB334JA007	330K 1/10W	[M]
R2502	D0GB823JA007	82K 1/10W	[M]
R2503	D0GB272JA007	2.7K 1/10W	[M]
R2504	D0GB101JA007	100 1/10W	[M]
R2505	D0GBR00JA008	0 1/16W	[M]
R2506	D0GB333JA007	33K 1/10W	[M]
R2507	D0GB104JA007	100K 1/10W	[M]
R2508	D0GB102JA007	1K 1/10W	[M]
R2509	D0GB561JA007	560 1/10W	[M]
R2510	ERG2SJ271E	270 2W	[M]
R2511	D0GB472JA008	4.7K 1/16W	[M]
R2512	D0GB563JA007	56K 1/10W	[M]
R2513	D0GB103JA007	10K 1/10W	[M]
R2514	D0GB103JA007	10K 1/10W	[M]
R2515	D0GB334JA007	330K 1/10W	[M]
R2555	D0GB102JA007	1K 1/10W	[M]
R2556	D0GB102JA007	1K 1/10W	[M]
R2557	D0GB102JA007	1K 1/10W	[M]
R2558	D0GB332JA007	3.3K 1/10W	[M]
R2559	D0GB183JA008	18K 1/16W	[M]
R2560	D0GB332JA007	3.3K 1/10W	[M]
R2561	D0GB392JA007	3.9K 1/10W	[M]
R2562	D0GB223JA007	22K 1/10W	[M]
R2563	D0GB223JA007	22K 1/10W	[M]
R2564	D0GB392JA007	3.9K 1/10W	[M]
R2565	D0GB102JA007	1K 1/10W	[M]
R2566	D0GB471JA007	470 1/10W	[M]
R2567	D0GB183JA008	18K 1/16W	[M]
R2568	D0GB561JA007	560 1/10W	[M]
R2569	D0GB102JA007	1K 1/10W	[M]
R2570	D0GB102JA007	1K 1/10W	[M]
R2571	D0GB473JA007	47K 1/10W	[M]
R2584	D0GB334JA007	330K 1/10W	[M]
R2585	D0GB334JA007	330K 1/10W	[M]
R2586	D0GB122JA007	1.2K 1/10W	[M]
R2587	D0GB122JA007	1.2K 1/10W	[M]
R2588	D0GB184JA007	180K 1/10W	[M]
R2590	D0GB102JA007	1K 1/10W	[M]
R2672	D0GB103JA007	10K 1/10W	[M]
R2673	D0GB473JA007	47K 1/10W	[M]
R2674	D0GB473JA007	47K 1/10W	[M]
R2676	D0GB103JA007	10K 1/10W	[M]
R2677	D0GB241JA008	240 1/16W	[M]
R2701	D0GB102JA007	1K 1/10W	[M]
R2702	D0GB102JA007	1K 1/10W	[M]
R2703	D0GB221JA041	220 1/10W	[M]
R2704	D0GB221JA041	220 1/10W	[M]
R2705	D0GB221JA041	220 1/10W	[M]
R2706	D0GB221JA041	220 1/10W	[M]
R2707	D0GB332JA007	3.3K 1/10W	[M]
R2708	D0GB331JA008	330 1/16W	[M]
R2711	D0GB102JA007	1K 1/10W	[M]
R2712	D0GB102JA007	1K 1/10W	[M]
R2721	D0GB103JA007	10K 1/10W	[M]
R2722	D0GB103JA007	10K 1/10W	[M]
R2723	D0GB102JA007	1K 1/10W	[M]
R2731	D0GBR00JA008	0 1/16W	[M]
R2801	D0GB101JA007	100 1/10W	[M]
R2802	D0GB103JA007	10K 1/10W	[M]
R2804	D0GBR00JA008	0 1/16W	[M]
R2808	D0GBR00JA008	0 1/16W	[M]
R2815	D0GB101JA007	100 1/10W	[M]
R2816	D0GB101JA007	100 1/10W	[M]
R2817	D0GB472JA007	4.7K 1/10W	[M]
R2818	D0GB472JA007	4.7K 1/10W	[M]
R2825	D0GB101JA007	100 1/10W	[M]
R2826	D0GB473JA007	47K 1/10W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R2827	D0GB473JA007	47K 1/10W	[M]
R2828	D0GB473JA007	47K 1/10W	[M]
R2829	D0GB473JA007	47K 1/10W	[M]
R2830	D0GB473JA007	47K 1/10W	[M]
R2831	D0GB473JA007	47K 1/10W	[M]
R2832	D0GB473JA007	47K 1/10W	[M]
R2833	D0GB101JA007	100 1/10W	[M]
R2834	D0GB101JA007	100 1/10W	[M]
R2835	D0GB101JA007	100 1/10W	[M]
R2836	D0GB101JA007	100 1/10W	[M]
R2837	D0GB101JA007	100 1/10W	[M]
R2838	D0GB101JA007	100 1/10W	[M]
R2839	D0GB101JA007	100 1/10W	[M]
R2840	D0GB101JA007	100 1/10W	[M]
R2841	D0GB101JA007	100 1/10W	[M]
R2842	D0GB101JA007	100 1/10W	[M]
R2843	D0GB101JA007	100 1/10W	[M]
R2847	D0GB104JA007	100K 1/10W	[M]
R2848	D0GB101JA007	100 1/10W	[M]
R2850	D0GB103JA007	10K 1/10W	[M]
R2851	D0GB473JA007	47K 1/10W	[M]
R2852	D0GB223JA007	22K 1/10W	[M]
R2853	D0GB101JA007	100 1/10W	[M]
R2871	D0GB223JA007	22K 1/10W	[M]
R2873	D0GB223JA007	22K 1/10W	[M]
R2874	D0GB472JA007	4.7K 1/10W	[M]
R2881	D0GB221JA041	220 1/10W	[M]
R2882	D0GB106JA007	10M 1/10W	[M]
R2883	D0GB334JA007	330K 1/10W	[M]
R2886	D0GB105JA007	1M 1/10W	[M]
R2894	D0GB473JA007	47K 1/10W	[M]
R2895	D0GB101JA007	100 1/10W	[M]
R2903	ERJ3GEYJ103V	10K 1/10W	[M]
R2912	D0GB101JA007	100 1/10W	[M]
R2914	D0GB101JA007	100 1/10W	[M]
R2916	D0GB101JA007	100 1/10W	[M]
R2922	D0GB103JA007	10K 1/10W	[M]
R2936	D0GB102JA007	1K 1/10W	[M]
R2937	D0GB103JA007	10K 1/10W	[M]
R2950	D0GB474JA041	470K 1/10W	[M]
R2951	D0GB474JA041	470K 1/10W	[M]
R2952	D0GB102JA007	1K 1/10W	[M]
R2965	D0GB472JA007	4.7K 1/10W	[M]
R2966	D0GB122JA007	1.2K 1/10W	[M]
R3200	D0GB472JA007	4.7K 1/10W	[M]
R3202	D0GB472JA007	4.7K 1/10W	[M]
R3204	D0GBR00JA008	0 1/16W	[M]
R3205	D0GB104JA007	100K 1/10W	[M]
R3206	D0GB103JA007	10K 1/10W	[M]
R3209	D0GB103JA007	10K 1/10W	[M]
R3211	D0GB101JA007	100 1/10W	[M]
R3212	D0GB101JA007	100 1/10W	[M]
R3213	D0GB101JA007	100 1/10W	[M]
R3214	D0GB101JA007	100 1/10W	[M]
R3435	D0GB104JA007	100K 1/10W	[M]
R3436	D0GB104JA007	100K 1/10W	[M]
R3439	D0GB221JA007	220 1/10W	[M]
R3440	D0GB101JA007	100 1/10W	[M]
R3441	D0GB101JA007	100 1/10W	[M]
R3442	D0GB102JA007	1K 1/10W	[M]
R3443	D0GB102JA007	1K 1/10W	[M]
R3444	D0GB332JA007	3.3K 1/10W	[M]
R3445	D0GB332JA007	3.3K 1/10W	[M]
R3446	D0GB274JA007	270K 1/10W	[M]
R3447	D0GB274JA007	270K 1/10W	[M]
R3448	D0GB103JA007	10K 1/10W	[M]
R3449	D0GB103JA007	10K 1/10W	[M]
R3450	D0GB223JA007	22K 1/10W	[M]
R3451	D0GB223JA007	22K 1/10W	[M]
R3452	D0GB102JA007	1K 1/10W	[M]
R3453	D0GB102JA007	1K 1/10W	[M]
R3455	D0GB103JA007	10K 1/10W	[M]
R3500	D0GB472JA007	4.7K 1/10W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R3501	ERJ3GEYJ103V	10K 1/10W	[M]
R3502	D0GB562JA007	5.6K 1/10W	[M]
R3503	ERJ3GEYJ103V	10K 1/10W	[M]
R3504	D0GB334JA007	330K 1/10W	[M]
R3505	D0AF8R2JA039	8.2 1/2W	[M]
R3506	D0GB563JA007	56K 1/10W	[M]
R3507	D0GB101JA007	100 1/10W	[M]
R3508	D0GB563JA007	56K 1/10W	[M]
R3509	ERJ3GEYJ824V	820K 1/10W	[M]
R3510	D0GB473JA007	47K 1/10W	[M]
R3514	ERJ3GEYJ103V	10K 1/10W	[M]
R3521	D0GB101JA007	100 1/10W	[M]
R3522	D0GB472JA007	4.7K 1/10W	[M]
R3523	D0GB102JA007	1K 1/10W	[M]
R3524	D0GB102JA007	1K 1/10W	[M]
R3526	D0GB102JA007	1K 1/10W	[M]
R3529	D0GB103JA007	10K 1/10W	[M]
R3535	D0GB472JA007	4.7K 1/10W	[M]
R3536	D0GB224JA007	220K 1/10W	[M]
R3537	D0GB472JA007	4.7K 1/10W	[M]
R3538	D0GB224JA007	220K 1/10W	[M]
R3601	D0GB332JA007	3.3K 1/10W	[M]
R3602	D0GB473JA007	47K 1/10W	[M]
R3611	D0GB332JA007	3.3K 1/10W	[M]
R3612	D0GB473JA007	47K 1/10W	[M]
R3710	D0GB103JA007	10K 1/10W	[M]
R3713	D0GBR00JA008	0 1/16W	[M]
R3715	D0GBR00JA008	0 1/16W	[M]
R3716	D0GB103JA007	10K 1/10W	[M]
R3720	D0GB102JA007	1K 1/10W	[M]
R3721	D0GB102JA007	1K 1/10W	[M]
R3801	D0GB102JA007	1K 1/10W	[M]
R3802	D0GB471JA007	470 1/10W	[M]
R3803	D0GB332JA007	3.3K 1/10W	[M]
R3804	D0GB471JA007	470 1/10W	[M]
R3805	D0GB332JA007	3.3K 1/10W	[M]
R3807	D0GBR00JA008	0 1/16W	[M]
R3808	D0GB102JA007	1K 1/10W	[M]
R3809	D0GB102JA007	1K 1/10W	[M]
R3811	D0GB103JA007	10K 1/10W	[M]
R3812	D0GB103JA007	10K 1/10W	[M]
R3813	D0GB103JA007	10K 1/10W	[M]
R3814	D0GB103JA007	10K 1/10W	[M]
R3820	D0GBR00JA008	0 1/16W	[M]
R3821	D0GB102JA007	1K 1/10W	[M]
R3827	D0GBR00JA008	0 1/16W	[M]
R3841	D0GB472JA007	4.7K 1/10W	[M]
R5000	D0GB562JA007	5.6K 1/10W	[M]
R5001	D0GB562JA007	5.6K 1/10W	[M]
R5002	D0GB562JA007	5.6K 1/10W	[M]
R5003	D0GB562JA007	5.6K 1/10W	[M]
R5004	ERJ8GEYJ100V	10 1/4W	[M]
R5005	ERJ8GEYJ100V	10 1/4W	[M]
R5006	ERJ1TYJ220U	22 1W	[M]
R5007	ERJ1TYJ220U	22 1W	[M]
R5008	D0GB101JA007	100 1/10W	[M]
R5010	ERJ8GEYJ100V	10 1/4W	[M]
R5011	ERJ8GEYJ100V	10 1/4W	[M]
R5030	D0GB562JA007	5.6K 1/10W	[M]
R5031	D0GB562JA007	5.6K 1/10W	[M]
R5032	D0GB562JA007	5.6K 1/10W	[M]
R5033	D0GB562JA007	5.6K 1/10W	[M]
R5034	D0GB562JA007	5.6K 1/10W	[M]
R5035	D0GB562JA007	5.6K 1/10W	[M]
R5036	D0GB562JA007	5.6K 1/10W	[M]
R5037	D0GB562JA007	5.6K 1/10W	[M]
R5091	D0GB473JA007	47K 1/10W	[M]
R5092	D0GB473JA007	47K 1/10W	[M]
R5093	D0GB104JA007	100K 1/10W	[M]
R5100	ERJ3RBD103V	10K 1/16W	[M]
R5101	ERJ3RBD392V	3.9K 1/16W	[M]
R5102	D0GB392JA007	3.9K 1/10W	[M]
R5103	ERG2SJ683E	68K 2W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R5104	D0GB562JA007	5.6K 1/10W	[M]
R5105	D0GB103JA007	10K 1/10W	[M]
R5106	D0GB223JA007	22K 1/10W	[M]
R5107	D0GB561JA007	560 1/10W	[M]
R5108	D0GB470JA008	47 1/16W	[M]
R5109	D0GB102JA007	1K 1/10W	[M]
R5110	ERJ3RBD222V	2.2K 1/16W	[M]
R5111	D0GB104JA007	100K 1/10W	[M]
R5112	ERJ3RBD822V	8.2K 1/16W	[M]
R5113	D0GB181JA007	180 1/10W	[M]
R5114	D0GB101JA007	100 1/10W	[M]
R5118	D0GB562JA007	5.6K 1/10W	[M]
R5119	D0GB562JA007	5.6K 1/10W	[M]
R5123	D0C14R7JA020	4.7 1W	[M]
R5126	D0GB102JA007	1K 1/10W	[M]
R5127	D0GB471JA007	470 1/10W	[M]
R5132	D0AF331JA039	330 1/2W	[M]
R5133	D0GB103JA007	10K 1/10W	[M]
R5134	D0GB122JA007	1.2K 1/10W	[M]
R5135	D0AE2R2JA048	2.2 1/4W	[M]
R5136	D0AE2R2JA048	2.2 1/4W	[M]
R5137	D0AE2R2JA048	2.2 1/4W	[M]
R5146	D0GB561JA007	560 1/10W	[M]
R5147	D0AF2R2JA039	2.2 1/2W	[M]
R5148	D0GB471JA007	470 1/10W	[M]
R5149	D0GB102JA007	1K 1/10W	[M]
R5150	D0GB224JA007	220K 1/10W	[M]
R5151	D0GB392JA007	3.9K 1/10W	[M]
R5152	D0GBR00JA008	0 1/16W	[M]
R5173	D0GB102JA007	1K 1/10W	[M]
R5174	D0GBR00JA008	0 1/16W	[M]
R5191	D0GB473JA007	47K 1/10W	[M]
R5192	D0GB473JA007	47K 1/10W	[M]
R5193	D0GB104JA007	100K 1/10W	[M]
R5200	ERJ8GEYJ100V	10 1/4W	[M]
R5201	ERJ8GEYJ100V	10 1/4W	[M]
R5204	D0GB101JA007	100 1/10W	[M]
R5205	D0GB562JA007	5.6K 1/10W	[M]
R5206	D0GB562JA007	5.6K 1/10W	[M]
R5207	D0GB562JA007	5.6K 1/10W	[M]
R5208	D0GB562JA007	5.6K 1/10W	[M]
R5209	ERJ1TYJ220U	22 1W	[M]
R5210	ERJ8GEYJ100V	10 1/4W	[M]
R5211	ERJ8GEYJ100V	10 1/4W	[M]
R5217	ERJ1TYJ220U	22 1W	[M]
R5221	D0GB102JA007	1K 1/10W	[M]
R5222	D0GB102JA007	1K 1/10W	[M]
R5300	ERJ1TYJ220U	22 1W	[M]
R5302	ERJ8GEYJ100V	10 1/4W	[M]
R5304	D0GB101JA007	100 1/10W	[M]
R5305	ERJ8GEYJ100V	10 1/4W	[M]
R5306	D0GB562JA007	5.6K 1/10W	[M]
R5307	D0GB562JA007	5.6K 1/10W	[M]
R5308	D0GB562JA007	5.6K 1/10W	[M]
R5309	D0GB562JA007	5.6K 1/10W	[M]
R5310	ERJ8GEYJ100V	10 1/4W	[M]
R5311	ERJ8GEYJ100V	10 1/4W	[M]
R5312	D0GB563JA007	56K 1/10W	[M]
R5313	D0GB154JA007	150K 1/10W	[M]
R5317	D0GB472JA007	4.7K 1/10W	[M]
R5319	ERJ1TYJ220U	22 1W	[M]
R5400	ERJ1TYJ220U	22 1W	[M]
R5402	ERJ8GEYJ100V	10 1/4W	[M]
R5403	D0GB562JA007	5.6K 1/10W	[M]
R5404	D0GB101JA007	100 1/10W	[M]
R5405	ERJ8GEYJ100V	10 1/4W	[M]
R5410	ERJ8GEYJ100V	10 1/4W	[M]
R5411	ERJ8GEYJ100V	10 1/4W	[M]
R5412	D0GB224JA007	220K 1/10W	[M]
R5413	D0GB104JA007	100K 1/10W	[M]
R5416	D0GB472JA007	4.7K 1/10W	[M]
R5419	ERJ1TYJ220U	22 1W	[M]
R5504	D0GB220JA007	22 1/10W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R5505	D0GB101JA007	100 1/10W	[M]
R5506	D0GB105JA007	1M 1/10W	[M]
R5507	D0GB105JA007	1M 1/10W	[M]
R5508	D0GB105JA007	1M 1/10W	[M]
R5510	D0GB274JA007	270K 1/10W	[M]
R5512	D0GBR00JA008	0 1/16W	[M]
R5513	D0GB334JA007	330K 1/10W	[M]
R5518	D0GB472JA007	4.7K 1/10W	[M]
R5521	D0GB274JA007	270K 1/10W	[M]
R5523	D0GB102JA007	1K 1/10W	[M]
R5525	D0GB102JA007	1K 1/10W	[M]
R5950	ERC12UGK335D	3.3M 1/2W	[M] ⚠
R5951	D0GB332JA007	3.3K 1/10W	[M]
R5952	D0AE472JA048	4.7K 1/4W	[M]
R5954	ERJ3GEYJ824V	820K 1/10W	[M]
R5955	D0AE472JA048	4.7K 1/4W	[M]
R5957	ERJ3GEYJ103V	10K 1/10W	[M]
R5958	ERJ3GEYJ103V	10K 1/10W	[M]
R5960	ERJ3GEYJ822V	8.2K 1/10W	[M]
R5961	D0GB151JA007	150 1/10W	[M]
R5963	D0AF820JA039	82 1/2W	[M]
R6102	D0GB122JA007	1.2K 1/10W	[M]
R6103	D0GB152JA007	1.5K 1/10W	[M]
R6104	D0GB222JA007	2.2K 1/10W	[M]
R6105	D0GB332JA007	3.3K 1/10W	[M]
R6106	D0GB472JA007	4.7K 1/10W	[M]
R6107	D0GB682JA008	6.8K 1/16W	[M]
R6108	D0GB153JA007	15K 1/10W	[M]
R6199	D0GB103JA007	10K 1/10W	[M]
R6202	D0GB122JA007	1.2K 1/10W	[M]
R6203	D0GB152JA007	1.5K 1/10W	[M]
R6204	D0GB222JA007	2.2K 1/10W	[M]
R6205	D0GB332JA007	3.3K 1/10W	[M]
R6206	D0GB472JA007	4.7K 1/10W	[M]
R6209	D0GB473JA007	47K 1/10W	[M]
R6210	D0GB122JA007	1.2K 1/10W	[M]
R6211	D0GB473JA007	47K 1/10W	[M]
R6212	D0GB103JA007	10K 1/10W	[M]
R6302	D0GB122JA007	1.2K 1/10W	[M]
R6303	D0GB152JA007	1.5K 1/10W	[M]
R6304	D0GB222JA007	2.2K 1/10W	[M]
R6305	D0GB332JA007	3.3K 1/10W	[M]
R6306	D0GB472JA007	4.7K 1/10W	[M]
R6307	D0GB682JA008	6.8K 1/16W	[M]
R6308	D0GB153JA007	15K 1/10W	[M]
R6309	D0GB222JA007	2.2K 1/10W	[M]
R6310	D0GB152JA007	1.5K 1/10W	[M]
R6311	D0GB473JA007	47K 1/10W	[M]
R6399	D0GB103JA007	10K 1/10W	[M]
R6458	D0GB332JA007	3.3K 1/10W	[M]
R6481	D0GBR00JA008	0 1/16W	[M]
R6491	D0GB223JA007	22K 1/10W	[M]
R6492	D0GB123JA007	12K 1/10W	[M]
R6493	D0GB103JA007	10K 1/10W	[M]
R6494	D0GB103JA007	10K 1/10W	[M]
R6501	D0GB561JA007	560 1/10W	[M]
R6502	D0GB334JA007	330K 1/10W	[M]
R6503	D0GB330JA007	33 1/10W	[M]
R6504	D0GB122JA007	1.2K 1/10W	[M]
R6505	D0GB334JA007	330K 1/10W	[M]
R6506	D0GB222JA007	2.2K 1/10W	[M]
R6507	D0GB102JA007	1K 1/10W	[M]
R6509	D0GB101JA007	100 1/10W	[M]
R6512	D0GB391JA007	390 1/10W	[M]
R6513	D0GB391JA007	390 1/10W	[M]
R6515	D0GB391JA007	390 1/10W	[M]
R6516	D0GB391JA007	390 1/10W	[M]
R6517	D0GB391JA007	390 1/10W	[M]
R6518	D0GB391JA007	390 1/10W	[M]
R6601	D0GB471JA007	470 1/10W	[M]
R6602	D0GB471JA007	470 1/10W	[M]
R6603	D0GB221JA007	220 1/10W	[M]
R6604	D0GB221JA007	220 1/10W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R6605	D0GB823JA007	82K 1/10W	[M]
R6631	ERD2FCVG470T	47 1/4W	[M]
R6632	ERD2FCVG470T	47 1/4W	[M]
R6701	D0GB221JA007	220 1/10W	[M]
R6702	D0GB221JA007	220 1/10W	[M]
R6703	D0GB221JA007	220 1/10W	[M]
R6704	D0GB221JA007	220 1/10W	[M]
R6706	D0GB221JA007	220 1/10W	[M]
R6707	D0GB221JA007	220 1/10W	[M]
R6751	D0GBR00JA008	0 1/16W	[M]
R6753	D0GBR00JA008	0 1/16W	[M]
R6763	D0GB102JA007	1K 1/10W	[M]
R7111	D0GB103JA008	10K 1/16W	[M]
R7211	ERJ3GEYJ823V	82K 1/10W	[M]
R7212	ERJ3GEYJ821V	820 1/10W	[M]
R7214	ERJ3GEYJ471V	470 1/10W	[M]
R7217	D0GB102JA008	1K 1/16W	[M]
R7218	D0GB102JA008	1K 1/16W	[M]
R7220	ERJ3GEYJ105V	1M 1/10W	[M]
R7221	ERJ3GEYJ101V	100 1/10W	[M]
R7253	ERJ3GEYJ100V	10 1/10W	[M]
R7254	D0GB102JA008	1K 1/16W	[M]
R7315	ERJ3GEYJ332V	3.3K 1/10W	[M]
R7323	ERJ3GEYJ332V	3.3K 1/10W	[M]
R7325	ERJ3GEYJ331V	330 1/10W	[M]
R7327	D0GB102JA008	1K 1/16W	[M]
R7328	D0GB103JA008	10K 1/16W	[M]
R7329	D0GB102JA008	1K 1/16W	[M]
R7330	ERJ3GEYJ562V	5.6K 1/10W	[M]
R7331	D0GB223JA008	22K 1/16W	[M]
R7332	D0GB102JA008	1K 1/16W	[M]
R7335	ERJ3GEYJ101V	100 1/10W	[M]
R7336	ERJ3GEYJ100V	10 1/10W	[M]
R7339	D0GB102JA008	1K 1/16W	[M]
R7349	ERJ3GEYJ183V	18K 1/10W	[M]
R7601	ERJ3GEYJ4R7V	4.7 1/10W	[M]
R7650	ERJ3GEYJ5R6V	5.6 1/10W	[M]
K2400	D0GBR00JA008	0 1/16W	[M]
K2401	D0GBR00JA008	0 1/16W	[M]
K2405	D0GBR00JA008	0 1/16W	[M]
		CAPACITORS	
C901	F1G1C104A083	0.1uF 16V	[M]
C902	F1G1C104A083	0.1uF 16V	[M]
C903	F1G1C104A083	0.1uF 16V	[M]
C904	F2A1C100A234	10uF 16V	[M]
C905	F1G1C104A083	0.1uF 16V	[M]
C906	F2A1C100A234	10uF 16V	[M]
C907	F1G1H180A565	18pF 50V	[M]
C908	F1G1H220A565	22pF 50V	[M]
C911	F1G1C104A083	0.1uF 16V	[M]
C912	F1G1C104A083	0.1uF 16V	[M]
C913	F1G1C104A083	0.1uF 16V	[M]
C914	F1G1C104A083	0.1uF 16V	[M]
C915	F2A1C470A234	47uF 16V	[M]
C931	F2A1C100A234	10uF 16V	[M]
C951	F1G1C104A083	0.1uF 16V	[M]
C952	F1G1C104A083	0.1uF 16V	[M]
C953	F2A0J101A245	100uF 6.3V	[M]
C1002	ECEA1HKN2R2B	2.2uF 50V	[M]
C1006	ECA1HAK010XB	1uF 50V	[M]
C1007	F0A2A472A034	4700pF 100V	[M]
C1008	ECEA1HKA010B	1uF 50V	[M]
C1009	ECEA1CKA470B	47uF 16V	[M]
C1010	ECA1EAM101XB	100uF 25V	[M]
C1011	ECQV1H473JL3	0.047uF 50V	[M]
C1012	F1H1H102A219	1000pF 50V	[M]
C1013	F1H1H102A219	1000pF 50V	[M]
C1014	F1H1H102A219	1000pF 50V	[M]
C1015	F1H1H102A219	1000pF 50V	[M]
C1016	F1H1H222A013	2200pF 50V	[M]
C1017	F1H1H222A013	2200pF 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C1018	F1H1H332A013	3300pF 50V	[M]
C1019	F1H1H102A219	1000pF 50V	[M]
C1020	F1H1H471A219	470pF 50V	[M]
C1021	F1H1H471A219	470pF 50V	[M]
C1022	F1H1H102A219	1000pF 50V	[M]
C1023	F1H1H102A219	1000pF 50V	[M]
C1026	ECA0JAK470XB	47uF 6.3V	[M]
C1027	F1H1H102A219	1000pF 50V	[M]
C1030	ECEA1AKA101B	100uF 10V	[M]
C1031	ECEA1AKA101B	100uF 10V	[M]
C1032	F1C1C183A023	0.018uF 16V	[M]
C1033	F1C1C183A023	0.018uF 16V	[M]
C1034	ECA1HAK3R3XB	3.3uF 50V	[M]
C1035	ECA1HAK3R3XB	3.3uF 50V	[M]
C1036	F1H1C333A071	0.033uF 16V	[M]
C1037	ECA1HAK3R3XB	3.3uF 50V	[M]
C1038	F1H1H221A748	220pF 50V	[M]
C1039	F1H1H221A748	220pF 50V	[M]
C1040	ECA1CAK100XB	10uF 16V	[M]
C1041	ECA1CAK100XB	10uF 16V	[M]
C1042	ECA1CAK220XB	22uF 16V	[M]
C1043	ECA1HAK4R7XB	4.7uF 50V	[M]
C1044	ECA1AAK330XB	33uF 10V	[M]
C1045	ECA1AAK220XB	22uF 10V	[M]
C1046	ECA1CAM221XB	220uF 16V	[M]
C1049	F1H1H332A013	3300pF 50V	[M]
C1050	F1H1H332A013	3300pF 50V	[M]
C1056	ECA1CAK100XB	10uF 16V	[M]
C1057	F1H1H102A219	1000pF 50V	[M]
C1058	F1H1H102A219	1000pF 50V	[M]
C1059	F1H1H103A219	0.01uF 50V	[M]
C2006	F1H1H102A219	1000pF 50V	[M]
C2112	ECJ1VB1C105K	1uF 16V	[M]
C2113	F1H1H152A219	1500pF 50V	[M]
C2121	ECJ1VB1H392K	3900pF 50V	[M]
C2122	ECJ1VB1C105K	1uF 16V	[M]
C2132	ECJ1VB1C105K	1uF 16V	[M]
C2140	F1H1H102A219	1000pF 50V	[M]
C2142	ECJ1VB1C105K	1uF 16V	[M]
C2149	ECJ1VC1H101K	100pF 50V	[M]
C2152	ECJ1VB1C105K	1uF 16V	[M]
C2153	D0GB272JA007	2.7K 1/10W	[M]
C2163	ECJ1VB1H562K	5600pF 50V	[M]
C2171	F1H1A154A001	0.15uF 10V	[M]
C2172	ECJ1VB1C563K	0.056uF 16V	[M]
C2173	F1H1H103A219	0.01uF 50V	[M]
C2174	F1H1H103A219	0.01uF 50V	[M]
C2175	ECJ1VB1H222K	2200pF 50V	[M]
C2181	ECJ1VB1C105K	1uF 16V	[M]
C2182	ECJ1VB1C224K	0.22uF 16V	[M]
C2183	ECJ1VB1C224K	0.22uF 16V	[M]
C2184	ECJ1VB1C105K	1uF 16V	[M]
C2191	ECEA1EKA4R7B	4.7uF 25V	[M]
C2192	F1H1C104A041	0.1uF 16V	[M]
C2193	ECJ1VB1C105K	1uF 16V	[M]
C2194	F1H1A154A001	0.15uF 10V	[M]
C2195	ECJ1VB1C474K	0.47uF 16V	[M]
C2201	ECJ1VB1C105K	1uF 16V	[M]
C2202	ECJ1VB1C105K	1uF 16V	[M]
C2212	ECJ1VB1C105K	1uF 16V	[M]
C2213	F1H1H152A219	1500pF 50V	[M]
C2221	ECJ1VB1H392K	3900pF 50V	[M]
C2222	ECJ1VB1C105K	1uF 16V	[M]
C2232	ECJ1VB1C105K	1uF 16V	[M]
C2240	F1H1H102A219	1000pF 50V	[M]
C2242	ECJ1VB1C105K	1uF 16V	[M]
C2249	ECJ1VC1H101K	100pF 50V	[M]
C2252	ECJ1VB1C105K	1uF 16V	[M]
C2253	D0GB272JA007	2.7K 1/10W	[M]
C2263	ECA1HAK0R1XB	0.1uF 50V	[M]
C2271	F1H1A154A001	0.15uF 10V	[M]
C2272	ECJ1VB1C563K	0.056uF 16V	[M]
C2273	F1H1H103A219	0.01uF 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C2274	F1H1H103A219	0.01uF 50V	[M]
C2275	ECJ1VB1H222K	2200pF 50V	[M]
C2281	ECJ1VB1C105K	1uF 16V	[M]
C2282	ECJ1VB1C224K	0.22uF 16V	[M]
C2283	ECJ1VB1H473K	0.047uF 50V	[M]
C2284	ECJ1VB1C105K	1uF 16V	[M]
C2301	ECJ1VB1C105K	1uF 16V	[M]
C2311	ECA1HAK010XB	1uF 50V	[M]
C2313	ECJ1VB1H471K	470pF 50V	[M]
C2314	F1H1H103A219	0.01uF 50V	[M]
C2315	F2A1C220A234	22uF 16V	[M]
C2316	F2A1C220A234	22uF 16V	[M]
C2324	ECJ1VB1C105K	1uF 16V	[M]
C2326	F2A1C220A234	22uF 16V	[M]
C2341	F1H1H102A219	1000pF 50V	[M]
C2342	ECJ1VB1C105K	1uF 16V	[M]
C2343	ECJ1VB1C474K	0.47uF 16V	[M]
C2344	ECJ1VB1C474K	0.47uF 16V	[M]
C2345	F1H1H104A783	0.1uF 50V	[M]
C2346	ECJ1VB1H682K	6800pF 50V	[M]
C2401	ECJ1VB1C105K	1uF 16V	[M]
C2411	ECA1HAK010XB	1uF 50V	[M]
C2413	ECJ1VB1H471K	470pF 50V	[M]
C2414	F1H1H103A219	0.01uF 50V	[M]
C2415	F2A1C220A234	22uF 16V	[M]
C2424	ECJ1VB1C105K	1uF 16V	[M]
C2441	F1H1H102A219	1000pF 50V	[M]
C2442	ECJ1VB1C105K	1uF 16V	[M]
C2443	ECJ1VB1C474K	0.47uF 16V	[M]
C2444	ECJ1VB1C474K	0.47uF 16V	[M]
C2445	F1H1H104A783	0.1uF 50V	[M]
C2446	ECJ1VB1H682K	6800pF 50V	[M]
C2501	ECJ1VB1C105K	1uF 16V	[M]
C2503	ECJ1VB1C105K	1uF 16V	[M]
C2505	F2A1C100A180	10uF 16V	[M]
C2507	ECJ1VB1C224K	0.22uF 16V	[M]
C2509	F2A1C330A234	33uF 16V	[M]
C2511	ECEA1EKN220B	22uF 25V	[M]
C2513	F1H1H104A783	0.1uF 50V	[M]
C2514	F2A1C101A180	100uF 16V	[M]
C2551	F2A1C100A180	10uF 16V	[M]
C2552	F1H1H101A230	100pF 50V	[M]
C2553	F1H1H103A219	0.01uF 50V	[M]
C2554	ECJ1VB1C105K	1uF 16V	[M]
C2556	ECJ1VB1H153K	0.015uF 50V	[M]
C2558	ECJ1VB1C224K	0.22uF 16V	[M]
C2560	ECA1HAK3R3XB	3.3uF 50V	[M]
C2561	ECJ1VB1C105K	1uF 16V	[M]
C2562	ECJ1VB1H473K	0.047uF 50V	[M]
C2581	F2A0J101A181	100uF 6.3V	[M]
C2582	F2A0J101A181	100uF 6.3V	[M]
C2583	F2A1C101A234	100uF 16V	[M]
C2584	F1H1H221A748	220pF 50V	[M]
C2585	F1H1H221A748	220pF 50V	[M]
C2588	F1H1C104A041	0.1uF 16V	[M]
C2589	ECJ1VB1C474K	0.47uF 16V	[M]
C2673	F1H1H101A230	100pF 50V	[M]
C2674	F1H1H103A219	0.01uF 50V	[M]
C2675	F1H1H101A230	100pF 50V	[M]
C2676	F2A1C220A234	22uF 16V	[M]
C2678	F1H1H103A219	0.01uF 50V	[M]
C2701	F1H1H103A219	0.01uF 50V	[M]
C2702	F2A1C101A234	100uF 16V	[M]
C2711	F1H1H104A783	0.1uF 50V	[M]
C2712	F2A1C101A234	100uF 16V	[M]
C2721	ECEA1AKA101B	100uF 10V	[M]
C2722	F1H1H104A783	0.1uF 50V	[M]
C2731	F2A1C101A234	100uF 16V	[M]
C2802	ECA1HAK3R3XB	3.3uF 50V	[M]
C2803	ECJ1VB1C105K	1uF 16V	[M]
C2821	F1H1H101A230	100pF 50V	[M]
C2853	F1H1C104A041	0.1uF 16V	[M]
C2854	F2A0J221A181	220uF 6.3V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C2871	F1H1H331A013	330pF 50V	[M]
C2872	F1H1C223A001	0.022uF 16V	[M]
C2874	F1H1H331A013	330pF 50V	[M]
C2882	ECJ1VC1H180J	18pF 50V	[M]
C2883	ECJ1VC1H180J	18pF 50V	[M]
C2901	F1H1C104A041	0.1uF 16V	[M]
C2902	F2A1C100A180	10uF 16V	[M]
C2904	ECA1CAK101XB	100uF 16V	[M]
C2905	ECA1CAM331XB	330uF 16V	[M]
C2906	F1H1H101A230	100pF 50V	[M]
C2907	F1H1H101A230	100pF 50V	[M]
C2908	F1H1H101A230	100pF 50V	[M]
C2909	F1H1C104A041	0.1uF 16V	[M]
C2911	F1H1C104A041	0.1uF 16V	[M]
C2912	F1H1C104A041	0.1uF 16V	[M]
C2913	F1H1C104A041	0.1uF 16V	[M]
C2914	F1H1C104A041	0.1uF 16V	[M]
C2943	F2A1H2R2A234	2.2uF 50V	[M]
C3200	ECA1HAK010XB	1uF 50V	[M]
C3201	F1H1H104A783	0.1uF 50V	[M]
C3202	ECA1HAK010XB	1uF 50V	[M]
C3203	F1H1H104A783	0.1uF 50V	[M]
C3204	ECA1HAK010XB	1uF 50V	[M]
C3205	F1H1H104A783	0.1uF 50V	[M]
C3206	ECA1HAK010XB	1uF 50V	[M]
C3207	F1H1H104A783	0.1uF 50V	[M]
C3500	ECA1EAK220XB	22uF 25V	[M]
C3501	F1H1H101A230	100pF 50V	[M]
C3502	F1H1H101A230	100pF 50V	[M]
C3600	ECA1CAK101XB	100uF 16V	[M]
C3601	ECA1CAK470XB	47uF 16V	[M]
C3602	ECA1CAK330XB	33uF 16V	[M]
C3603	ECEA1AKA221B	220uF 10V	[M]
C3604	F1H1H101A230	100pF 50V	[M]
C3609	ECA1CAK101XB	100uF 16V	[M]
C3610	F1H1H103A219	0.01uF 50V	[M]
C3611	ECA1HAK010XB	1uF 50V	[M]
C3612	F2A1HR22A234	0.22uF 50V	[M]
C3613	ECA1HAK220XB	22uF 50V	[M]
C3615	F2A1HR22A234	0.22uF 50V	[M]
C3616	ECA1HAK010XB	1uF 50V	[M]
C3617	ECA1HAK220XB	22uF 50V	[M]
C3618	F1H1H101A230	100pF 50V	[M]
C3619	F2A1H4R7A234	4.7uF 50V	[M]
C3710	ECA1AAK330XB	33uF 10V	[M]
C3717	F1J0J106A014	10uF 6.3V	[M]
C3800	D0GBR00JA008	0 1/16W	[M]
C3801	ECA1HAK100XB	10uF 50V	[M]
C3804	ECA1HAK100XB	10uF 50V	[M]
C3805	D0GBR00JA008	0 1/16W	[M]
C3806	F1H1H101A230	100pF 50V	[M]
C3807	F1H1H101A230	100pF 50V	[M]
C3808	ECJ1VB1H562K	5600pF 50V	[M]
C3809	ECJ1VB1H562K	5600pF 50V	[M]
C3810	F1H1H104A783	0.1uF 50V	[M]
C3812	ECA1CAK101XB	100uF 16V	[M]
C3820	F1H1H104A013	0.1uF 50V	[M]
C3822	F2A1H1010039	100uF 50V	[M]
C5000	F1H1H102A219	1000pF 50V	[M]
C5001	F1H1H102A219	1000pF 50V	[M]
C5002	ECJ1VB1A474K	0.47uF 10V	[M]
C5003	ECJ1VB1A474K	0.47uF 10V	[M]
C5004	ECJ1VB1A474K	0.47uF 10V	[M]
C5005	ECJ1VB1A474K	0.47uF 10V	[M]
C5006	F1H1H331A013	330pF 50V	[M]
C5007	F1H1H331A013	330pF 50V	[M]
C5008	ECJ1VB1H153K	0.015uF 50V	[M]
C5009	ECJ1VB1H153K	0.015uF 50V	[M]
C5010	ECJ2VC2A221J	220pF 100V	[M]
C5011	ECJ2VC2A221J	220pF 100V	[M]
C5012	ECJ2VC2A221J	220pF 100V	[M]
C5013	ECJ2VC2A221J	220pF 100V	[M]
C5014	ECQV1H824JL3	0.82uF 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C5015	ECQV1H824JL3	0.82uF 50V	[M]
C5016	F1H1H104A783	0.1uF 50V	[M]
C5017	F1H1H104A783	0.1uF 50V	[M]
C5018	F1K2A1040007	0.1uF 100V	[M]
C5019	F1H1H104A783	0.1uF 50V	[M]
C5020	F1H1H104A783	0.1uF 50V	[M]
C5021	F1H1H104A783	0.1uF 50V	[M]
C5022	F1H1H104A783	0.1uF 50V	[M]
C5023	F1K2A1040007	0.1uF 100V	[M]
C5024	F1H1H104A783	0.1uF 50V	[M]
C5025	F1H1H104A783	0.1uF 50V	[M]
C5026	F1K2A1040007	0.1uF 100V	[M]
C5027	F1H1H104A783	0.1uF 50V	[M]
C5028	F1H1H104A783	0.1uF 50V	[M]
C5029	F1K2A1040007	0.1uF 100V	[M]
C5030	ECJ1VC1H221J	220pF 50V	[M]
C5031	ECJ1VB1C474K	0.47uF 16V	[M]
C5032	F1H1H102A219	1000pF 50V	[M]
C5040	ECA2AM470B	47uF 100V	[M]
C5050	F1H1H104A783	0.1uF 50V	[M]
C5051	F1H1H104A783	0.1uF 50V	[M]
C5052	F1H1H104A783	0.1uF 50V	[M]
C5053	F1H1H104A783	0.1uF 50V	[M]
C5055	F2A1J1010036	100uF 63V	[M]
C5091	ECA1HAM470XB	47uF 50V	[M]
C5101	ECA1VM332B	3300uF 35V	[M]
C5102	ECA2AM100B	10uF 100V	[M]
C5103	F2A2C4R7A028	4.7uF 160V	[M]
C5104	ECA1VM332B	3300uF 35V	[M]
C5105	ECA1AAK221XB	220uF 10V	[M]
C5106	ECJ1VB1A474K	0.47uF 10V	[M]
C5107	ECJ1VB1A474K	0.47uF 10V	[M]
C5109	ECA1EAM101XB	100uF 25V	[M]
C5110	ECA1EAM101XB	100uF 25V	[M]
C5113	ECA1HM330B	33uF 50V	[M]
C5114	F1K2A1040007	0.1uF 100V	[M]
C5115	F1K2A1040007	0.1uF 100V	[M]
C5116	F1H1H104A783	0.1uF 50V	[M]
C5117	F1H1H102A219	1000pF 50V	[M]
C5119	F1H1H102A219	1000pF 50V	[M]
C5120	ECJ1VB1A474K	0.47uF 10V	[M]
C5121	ECJ1VB1A474K	0.47uF 10V	[M]
C5122	ECA1HAM470XB	47uF 50V	[M]
C5123	F1H1H104A783	0.1uF 50V	[M]
C5125	F2A1C101A234	100uF 16V	[M]
C5131	ECA0JAK101XB	100uF 6.3V	[M]
C5132	ECA1CAK101XB	100uF 16V	[M]
C5133	ECA0JAK101XB	100uF 6.3V	[M]
C5134	F1H1H104A783	0.1uF 50V	[M]
C5135	F1H1H104A783	0.1uF 50V	[M]
C5151	F1H1H102A219	1000pF 50V	[M]
C5152	F1H1H102A219	1000pF 50V	[M]
C5154	F1H1H102A219	1000pF 50V	[M]
C5155	F1H1H102A219	1000pF 50V	[M]
C5157	F1H1H103A219	0.01uF 50V	[M]
C5159	F1H1H103A219	0.01uF 50V	[M]
C5171	ECA1JM222B	2200uF 63V	[M]
C5172	ECA1JM222B	2200uF 63V	[M]
C5185	F1H1H104A783	0.1uF 50V	[M]
C5186	F1H1H104A783	0.1uF 50V	[M]
C5187	F1H1H104A783	0.1uF 50V	[M]
C5188	F1H1H104A783	0.1uF 50V	[M]
C5191	ECA1HAM470XB	47uF 50V	[M]
C5200	F1H1H104A783	0.1uF 50V	[M]
C5201	ECJ1VB1H153K	0.015uF 50V	[M]
C5202	ECJ1VB1C474K	0.47uF 16V	[M]
C5203	ECJ2VC2A221J	220pF 100V	[M]
C5204	ECJ1VB1H153K	0.015uF 50V	[M]
C5205	ECJ2VC2A221J	220pF 100V	[M]
C5206	F1H1H104A783	0.1uF 50V	[M]
C5207	F1K2A1040007	0.1uF 100V	[M]
C5208	F1H1H104A783	0.1uF 50V	[M]
C5209	F1H1H104A783	0.1uF 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C5210	F1K2A1040007	0.1uF 100V	[M]
C5211	ECJ2VC2A221J	220pF 100V	[M]
C5212	ECJ1VC1H221J	220pF 50V	[M]
C5213	F1H1H104A783	0.1uF 50V	[M]
C5214	F1H1H104A783	0.1uF 50V	[M]
C5215	F1K2A1040007	0.1uF 100V	[M]
C5216	F1H1H331A013	330pF 50V	[M]
C5217	F1H1H104A783	0.1uF 50V	[M]
C5218	ECJ2VC2A221J	220pF 100V	[M]
C5219	F1K2A1040007	0.1uF 100V	[M]
C5220	F1H1H104A783	0.1uF 50V	[M]
C5221	F1H1H102A219	1000pF 50V	[M]
C5222	ECJ1VB1A474K	0.47uF 10V	[M]
C5223	ECJ1VB1A474K	0.47uF 10V	[M]
C5224	F1H1H331A013	330pF 50V	[M]
C5225	ECQV1H824JL3	0.82uF 50V	[M]
C5226	F1H1H104A783	0.1uF 50V	[M]
C5227	F1H1H104A783	0.1uF 50V	[M]
C5228	ECQV1H824JL3	0.82uF 50V	[M]
C5230	F1H1H222A219	2200pF 50V	[M]
C5231	F1H1H102A219	1000pF 50V	[M]
C5232	ECJ1VB1A474K	0.47uF 10V	[M]
C5233	ECJ1VB1A474K	0.47uF 10V	[M]
C5234	F1H1H102A219	1000pF 50V	[M]
C5240	ECA2AM470B	47uF 100V	[M]
C5250	F1H1H104A783	0.1uF 50V	[M]
C5251	F1H1H104A783	0.1uF 50V	[M]
C5252	ECA1CAK100XB	10uF 16V	[M]
C5300	ECQV1H824JL3	0.82uF 50V	[M]
C5301	F1H1H104A783	0.1uF 50V	[M]
C5302	F1H1H104A783	0.1uF 50V	[M]
C5303	F1H1H104A783	0.1uF 50V	[M]
C5304	F1H1H331A013	330pF 50V	[M]
C5305	F1H1H104A783	0.1uF 50V	[M]
C5306	F1H1H104A783	0.1uF 50V	[M]
C5307	ECJ2VC2A221J	220pF 100V	[M]
C5308	F1K2A1040007	0.1uF 100V	[M]
C5309	F1H1H104A783	0.1uF 50V	[M]
C5310	F1K2A1040007	0.1uF 100V	[M]
C5311	ECJ2VC2A221J	220pF 100V	[M]
C5312	F1H1H331A013	330pF 50V	[M]
C5313	F1H1H104A783	0.1uF 50V	[M]
C5314	ECJ1VB1C474K	0.47uF 16V	[M]
C5315	ECJ1VC1H102J	1000pF 50V	[M]
C5316	F1H1H104A783	0.1uF 50V	[M]
C5317	ECJ1VB1A474K	0.47uF 10V	[M]
C5318	F1H1H104A783	0.1uF 50V	[M]
C5319	F1K2A1040007	0.1uF 100V	[M]
C5320	F1K2A1040007	0.1uF 100V	[M]
C5321	ECJ1VB1C474K	0.47uF 16V	[M]
C5322	ECJ1VB1H153K	0.015uF 50V	[M]
C5323	ECJ1VC1H221J	220pF 50V	[M]
C5324	ECJ1VB1H153K	0.015uF 50V	[M]
C5325	ECJ2VC2A221J	220pF 100V	[M]
C5326	ECJ2VC2A221J	220pF 100V	[M]
C5327	F1H1H104A783	0.1uF 50V	[M]
C5328	ECQV1H824JL3	0.82uF 50V	[M]
C5330	F1H1H222A219	2200pF 50V	[M]
C5331	F1H1H102A219	1000pF 50V	[M]
C5332	ECJ1VB1C474K	0.47uF 16V	[M]
C5333	ECJ1VC1H102J	1000pF 50V	[M]
C5334	ECJ1VB1A474K	0.47uF 10V	[M]
C5350	F1H1H104A783	0.1uF 50V	[M]
C5351	F1H1H104A783	0.1uF 50V	[M]
C5352	ECA1CAK100XB	10uF 16V	[M]
C5360	F1H1H104A903	0.1uF 50V	[M]
C5400	ECQV1H824JL3	0.82uF 50V	[M]
C5401	F1H1H104A783	0.1uF 50V	[M]
C5402	F1H1H104A783	0.1uF 50V	[M]
C5403	F1H1H104A783	0.1uF 50V	[M]
C5404	F1H1H331A013	330pF 50V	[M]
C5405	F1H1H104A783	0.1uF 50V	[M]
C5406	F1H1H104A783	0.1uF 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C5407	ECJ2VC2A221J	220pF 100V	[M]
C5408	F1K2A1040007	0.1uF 100V	[M]
C5409	F1H1H104A783	0.1uF 50V	[M]
C5410	F1K2A1040007	0.1uF 100V	[M]
C5411	ECJ2VC2A221J	220pF 100V	[M]
C5412	F1H1H331A013	330pF 50V	[M]
C5413	F1H1H104A783	0.1uF 50V	[M]
C5416	F1H1H104A783	0.1uF 50V	[M]
C5418	F1H1H104A783	0.1uF 50V	[M]
C5419	F1K2A1040007	0.1uF 100V	[M]
C5420	F1K2A1040007	0.1uF 100V	[M]
C5421	ECJ1VB1C474K	0.47uF 16V	[M]
C5422	ECJ1VB1H153K	0.015uF 50V	[M]
C5423	ECJ1VC1H221J	220pF 50V	[M]
C5424	ECJ1VB1H153K	0.015uF 50V	[M]
C5425	ECJ2VC2A221J	220pF 100V	[M]
C5426	ECJ2VC2A221J	220pF 100V	[M]
C5427	F1H1H104A783	0.1uF 50V	[M]
C5428	ECQV1H824JL3	0.82uF 50V	[M]
C5431	F1H1H102A219	1000pF 50V	[M]
C5440	ECA2AM470B	47uF 100V	[M]
C5445	F1H1H104A783	0.1uF 50V	[M]
C5446	F1H1H104A903	0.1uF 50V	[M]
C5447	F1H1H104A903	0.1uF 50V	[M]
C5448	F1H1H104A903	0.1uF 50V	[M]
C5449	F1H1H104A903	0.1uF 50V	[M]
C5450	F1H1H104A783	0.1uF 50V	[M]
C5451	F1H1H104A903	0.1uF 50V	[M]
C5452	F1H1H104A903	0.1uF 50V	[M]
C5453	F1H1H104A903	0.1uF 50V	[M]
C5454	F1H1H104A903	0.1uF 50V	[M]
C5508	F2A1V4710036	470uF 35V	[M]
C5509	F2A1V4710036	470uF 35V	[M]
C5510	F2A1V4710036	470uF 35V	[M]
C5511	F2A1V4710036	470uF 35V	[M]
C5512	F2A1V102A083	1000uF 35V	[M]
C5513	F2A1V102A083	1000uF 35V	[M]
C5514	F1H1H104A783	0.1uF 50V	[M]
C5515	F1H1H104A783	0.1uF 50V	[M]
C5516	F2A1V4710036	470uF 35V	[M]
C5517	F2A1V4710036	470uF 35V	[M]
C5518	F1H1H104A783	0.1uF 50V	[M]
C5519	F1H1H104A783	0.1uF 50V	[M]
C5520	F1H1H104A783	0.1uF 50V	[M]
C5521	F1H1H104A783	0.1uF 50V	[M]
C5522	F1H1H104A783	0.1uF 50V	[M]
C5523	F1H1H104A783	0.1uF 50V	[M]
C5524	F1H1H104A783	0.1uF 50V	[M]
C5525	F1H1H104A783	0.1uF 50V	[M]
C5540	ECA2AM470B	47uF 100V	[M]
C5550	F1H1H103A219	0.01uF 50V	[M]
C5551	F1H1H391A013	390pF 50V	[M]
C5552	F1H1H391A013	390pF 50V	[M]
C5553	F1H1H101A230	100pF 50V	[M]
C5554	F1H1H104A783	0.1uF 50V	[M]
C5555	ECJ3YB1C106K	10uF 16V	[M]
C5556	F1H1H103A219	0.01uF 50V	[M]
C5557	F1H1H101A230	100pF 50V	[M]
C5558	F1H1H470A230	47pF 50V	[M]
C5559	F1H1H470A230	47pF 50V	[M]
C5560	F1H1H104A783	0.1uF 50V	[M]
C5900	F1H1H103A219	0.01uF 50V	[M]
C5901	F1H1H104A783	0.1uF 50V	[M]
C5920	ECA1JM222B	2200uF 63V	[M]
C5940	ECA1JM222B	2200uF 63V	[M]
C5950	ECA1EM472E	4700uF 25V	[M]
C5951	F1H1H103A219	0.01uF 50V	[M]
C5952	ECA1AAK470XB	47uF 10V	[M]
C5953	F1H1H103A219	0.01uF 50V	[M]
C5954	F1H1H103A219	0.01uF 50V	[M]
C5955	ECA1HM220B	22uF 50V	[M]
C5956	ECA1JM470B	47uF 63V	[M]
C5957	ECA1HAK100XB	10uF 50V	[M]
C5958	F1H1H103A219	0.01uF 50V	[M]
C5959	F1H1H103A219	0.01uF 50V	[M]
C5961	F2A1E2210050	220uF 25V	[M]
C5962	ECA1CM221B	220uF 16V	[M]
C5963	ECEA1EKA4R7B	4.7uF 25V	[M]
C5964	F1H1H103A219	0.01uF 50V	[M]
C5972	ECQE2104KF3	0.1uF 100V	[M]
C5973	ECQE2104KF3	0.1uF 100V	[M]
C5974	ECQE2104KF3	0.1uF 100V	[M]
C6481	ECA1CAK220XB	22uF 16V	[M]
C6491	F1H1H101A230	100pF 50V	[M]
C6492	F1H1H101A230	100pF 50V	[M]
C6501	F1H1H103A219	0.01uF 50V	[M]
C6502	ECJ1VB1C105K	1uF 16V	[M]
C6503	ECJ1VB1H473K	0.047uF 50V	[M]
C6504	F1H1H104A783	0.1uF 50V	[M]
C6505	ECJ1VB1H473K	0.047uF 50V	[M]
C6506	F1H1H103A219	0.01uF 50V	[M]
C6507	ECJ1VC1H102J	1000pF 50V	[M]
C6508	ECA1CAK101XB	100uF 16V	[M]
C6509	F1H1H104A783	0.1uF 50V	[M]
C6510	D0GB102JA007	1K 1/10W	[M]
C6511	F1H1H101A230	100pF 50V	[M]
C6521	F1H1H103A219	0.01uF 50V	[M]
C6551	F1H1H103A219	0.01uF 50V	[M]
C6552	F1H1H103A219	0.01uF 50V	[M]
C6553	F1H1H103A219	0.01uF 50V	[M]
C6601	F1H1H101A230	100pF 50V	[M]
C6602	ECJ1VC1H102J	1000pF 50V	[M]
C6603	F1H1H101A230	100pF 50V	[M]
C6604	F1H1H101A230	100pF 50V	[M]
C6623	F2A1H220A182	22uF 50V	[M]
C6631	F2A1H220A182	22uF 50V	[M]
C6632	F2A1H220A182	22uF 50V	[M]
C6635	F2A1H2R2A234	2.2uF 50V	[M]
C6636	F1H1H101A230	100pF 50V	[M]
C6751	F1H1H103A219	0.01uF 50V	[M]
C6752	F1H1H103A219	0.01uF 50V	[M]
C6753	F1H1H103A219	0.01uF 50V	[M]
C6754	F1H1H103A219	0.01uF 50V	[M]
C6755	F1H1H103A219	0.01uF 50V	[M]
C7101	F2A1H100A014	10uF 50V	[M]
C7102	F1H1A474A025	0.47uF 10V	[M]
C7107	ECJ1VB1H223K	0.022uF 50V	[M]
C7142	ECJ1VB1H332K	3300pF 50V	[M]
C7154	ECJ1VB1C104K	0.1uF 16V	[M]
C7155	ECJ1VB1C104K	0.1uF 16V	[M]
C7161	ECJ1VB1C104K	0.1uF 16V	[M]
C7164	ECJ2FF1A106Z	10uF 10V	[M]
C7165	ECJ2FF1A106Z	10uF 10V	[M]
C7166	F1H1H103A219	0.01uF 50V	[M]
C7203	F2A0J221A200	220uF 6.3V	[M]
C7204	ECJ1VB1C104K	0.1uF 16V	[M]
C7216	ECJ1VB1H681K	680pF 50V	[M]
C7217	ECJ1VB1C104K	0.1uF 16V	[M]
C7218	ECJ1VB1C823K	0.082uF 16V	[M]
C7223	F2A1H4R70037	4.7uF 50V	[M]
C7225	F1H1H102A219	1000pF 50V	[M]
C7226	F1H1H102A219	1000pF 50V	[M]
C7227	ECA1HAK010XI	1uF 50V	[M]
C7228	ECA1HAK010XI	1uF 50V	[M]
C7230	ECJ1VB1C104K	0.1uF 16V	[M]
C7231	F2A0J221A200	220uF 6.3V	[M]
C7232	F2A0J221A200	220uF 6.3V	[M]
C7233	F1H1C104A008	0.1uF 16V	[M]
C7234	ECJ1VB1C104K	0.1uF 16V	[M]
C7235	F2A1C100A133	10uF 16V	[M]
C7241	F1H1H102A219	1000pF 50V	[M]
C7243	F1H1C104A008	0.1uF 16V	[M]
C7244	ECJ1VB1C153K	0.015uF 16V	[M]
C7253	F1H1H471A219	470pF 50V	[M]
C7263	ECJ1VB1C104K	0.1uF 16V	[M]
C7264	ECJ1VB1C104K	0.1uF 16V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C7315	F1H1A474A025	0.47uF 10V	[M]
C7334	ECEA1AKA221I	220uF 10V	[M]
C7335	F1H1C104A008	0.1uF 16V	[M]
C7338	ECJ1VB1C563K	0.056uF 16V	[M]
C7339	ECJ1VB1C183K	0.018uF 16V	[M]
C7352	ECJ1VB1C183K	0.018uF 16V	[M]
C7601	ECEA0JKA330I	33uF 6.3V	[M]
C7613	ECJ1VB1C104K	0.1uF 16V	[M]
C7614	F2A0J101A198	100uF 6.3V	[M]
C7626	ECJ1VB1C104K	0.1uF 16V	[M]
C7670	ECJ1VB1C104K	0.1uF 16V	[M]