ORDER NO. MD0805014CE

Service Manual

DVD Stereo System

SA-VK470EE

Colour

(K).....Black Type

Notes: This model's DVD/CD mechanism changer unit is CR14. Please refer to the original service manual (Order No. MD0801004CE) for this mechanism.

Specifications

■ AMPLIFIER SECTION

RMS Output Power Stereo mode:

Front Ch

125 W per channel (3 Ω), 1 kHz, 10% THD

Total RMS Stereo mode power	250 W
PMPO output power	2800 W

■ FM/AM TUNER, TERMINALS SECTION

Preset station	FM 30 stations
	AM 15 stations
Frequency Modulation (FM)	
Frequency range	87.50 to 108.00 MHz (50 kHz step)
Antenna terminals	75 Ω (unbalanced)
Amplitude Modulation (AM)	
Frequency range	522 to 1629 kHz (9 kHz step)
Digital audio output	
Coaxial digital output	Pin jack
Music Port (Front)	
Terminal	Stereo, 3.5 mm jack
Phone jack	
Terminal	Stereo, 3.5 mm jack
Mic jack	
Terminal	Mono, 6.3 mm jack (1 system)
AUX	
Terminal	Stereo, RCA jack

■ CASSETTE DECK SECTION

Type	Auto reverse
Track system	2-Track, 1 Channel
Heads	
Record/playback	Solid permalloy head
Erasure	Double gap ferrite head
Motor	DC servo motor
Recording system	AC bias 100 kHz
Erasing system	AC erase 100 kHz
Tape speed	4.8 cm/s

Overall frequency response (+3, -6 dB) at DECK OUT

Normal	35 Hz to 14 kHz

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S/N ratio	50 dB (A-Weighted)
Wow and flutter	0.18% (WRMS)
Fast forward and rewind time	Approx. 120 seconds with C-60 cassette tape

■ VIDEO SECTION

Video system	PAL625/50, PAL525/60, NTSC
Composite video output	
Output level	1 Vp-p (75 Ω)
Terminal	Pin jack (1 system)
Component video output	
Y output level	0.7 Vp-p (75 Ω)
P_B output level	0.7 Vp-p (75 Ω)
P_R output level	0.7 Vp-p (75 Ω)
Terminal output level	
	Pin jack (Y: green, P_B: blue, P_R: red) (1 system)

■USB SECTION

USB Port	
USB standard	USB 2.0 full speed
Media file format support	MP3 (*.mp3)
	WMA (*.wma)
	JPEG (*.jpg) (*.jpeg)
	MPEG4 (*.asf)
USB device file system	FAT12, FAT16, FAT 32
USB Port power	Max. 500 mA

■ DISC SECTION

Disc played [8 cm or 12 cm]

(1) DVD (DVD-Video, DivX[*6,*7])

(2) DVD-RAM (DVD-VR, JPEG[*4,*7], MP3[*2,*7], MPEG4[*5,*7], DivX[*6,*7])

(3) DVD-R (DVD-Video, DVD-VR, JPEG[*4,*7], MP3[*2,*7], MPEG4[*5,*7], DivX[*6,*7])

(4) DVD-R DL (DVD-Video, DVD-VR)

(5) DVD-RW (DVD-Video, DVD-VR, JPEG[*4,*7], MP3[*2,*7], MPEG4[*5,*7], DivX[*6,*7])

(6) +R/ +RW (Video)

(7) +R DL (Video)

(8) CD,CD-R/RW [CD-DA, Video CD, SVCD[*1], MP3[*2,*7], WMA[*3,*7], JPEG[*4,*7], MPEG4[*5,*7], DivX[*6,*7], HighMAT Level 2 (Audio and Image)]

[*1] Conforming to IEC62107

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

[*3] Windows Media Audio Ver 9.0 L3

Not compatible with Multiple Bit Rate (MBR)

[*4] Exif Ver 2.1 JPEG Baseline files

Picture resolution: between 160 x 120 and 6144 x 4096 pixels (Sub sampling is 4:0:0, 4:2:0, 4:2:2 or 4:4:4). Extremely long and narrow pictures may not be displayed.

[*5] MPEG4 data recorded with the Panasonic SD multi cameras or DVD video recorders. Conforming to SD VIDEO specifications (ASF standard)/ MPEG4 (Simple Profile) video system/ G.726 audio system.

[*6] Plays all versions of DivX® video (including DivX®6) with standard playback of DivX® media files. Certified to the DixV® Home Theater Profile. GMC (Global Motion Compensation) is not supported.

[*7] The total combined maximum number of recognizable audio, picture and video contents and groups: 4000 audio, picture and video contents and 400 groups.

Pick up	
Wavelength	
CD	785 nm
DVD	655 nm
Laser Power	
CD	CLASS 1M
DVD	CLASS 1
Audio output (Disc)	
Number of channels	2 channel (FL, FR)

■ GENERAL

Power supply	
	AC 230 V 50 Hz
Power consumption	65 W
Power consumption in standby mode:	
	0.4 W (approx.)
Dimensions (W x H x D)	250 mm x 331 mm x 317 mm
Mass	4.7 kg
Operating temperature range	+0 to +40°C
Operating humidity range	35 to 80% RH (no condensation)

■ SYSTEM

SC-VK470(EE)	Music Center: SA-VK470 (EE)
	Speaker: SB-PF470 (GC)

For information on speaker system, please refer to the original Service Manual (Order No. MD0805016CE) for SB-PF470GC-K.

Notes:

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

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"DTS" and "DTS Digital Surround" are registered trademarks of DTS, Inc.

U.S. Patent Nos. 6,836,549; 6,381,747; 7,050,698; 6,516,132; and 5,583,936.

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Official DivX® Certified product.
Plays all versions of DivX® video (including DivX® 6) with standard playback of DivX® media files.
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WMA is a compression format developed by Microsoft Corporation. It achieves the same sound quality as MP3 with a file size that is smaller than that of MP3.

This product is licensed under the MPEG-4 Visual patent portfolio license for the personal and non-commercial use of a consumer for (i) encoding video in compliance with the MPEG-4 Visual Standar ("MPEG-4 Video") and/or (ii) decoding MPEG-4 Video that was encoded by a consumer engaged in a personal and non-commercial activity and/or was obtained from a video provider licensed by MPEG LA to provide MPEG-4 Video. No license is granted or shall be implied for any other use. Additional information including that relating to promotional, internal and commercial uses and licensing may be obtained from MPEG LA, LLC. See http://www.mpegla.com.

⚠ 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 or 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, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing, carry out the following leakage current checks to prevent the customer from being exposed to shock hazards.

1.1.1. LEAKAGE CURRENT COLD CHECK

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

1.1.2. LEAKAGE CURRENT HOT CHECK

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

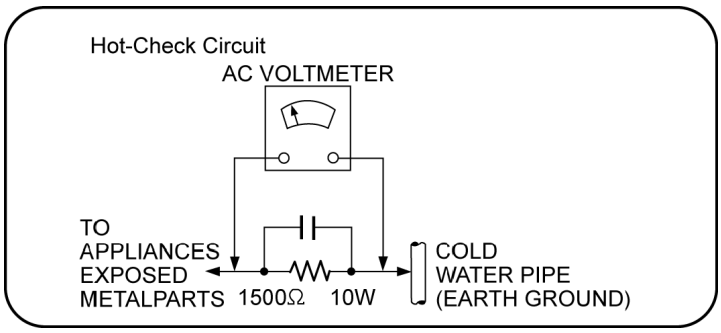


Figure 1

1.2. Before Repair and Adjustment

Disconnect AC power to discharge unit AC Capacitors as such (C5700, C5701, C5703, C5704, C5705, C5706, C5707) through a 10 Ω, 10 W resistor to ground.

Caution:

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

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

Current consumption at AC 230 V, 50 Hz in NO SIGNAL mode volume minimal should be ~ 500 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 Parts Information

Safety Parts List:

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

Table 1

Ref. No.	Part No.	Part Name & Description	Remarks
18	RGRX0070L-B	REAR PANEL	[M] ⚠
36	RKMX0144-K	TOP CABINET	[M] ⚠
68	REXX0684	BLACK WIRE	[M] ⚠
69	REXX0685	RED WIRE	[M] ⚠
A2	K2CQ2CA00007	AC CORD	[M] ⚠
PCB4	REPX0622Y	SMPS P.C.B	[M] (RTL) ⚠
PCB5	REPX0622Y	AC INLET P.C.B	[M] (RTL) ⚠
DZ5701	ERZV10V511CS	ZNR	[M] ⚠
L5701	ELF15N035AN	LINE FILTER	[M] ⚠
L5702	ELF22V035B	LINE FILTER	[M] ⚠
L5703	ELF22V020A	LINE FILTER	[M] ⚠
T2900	G4D1A0000117	SWITCHING TRANSFORMER	[M] ⚠
T5701	ETS42BN1A6AD	MAIN POWER TRANSFORMER	[M] ⚠
T5751	ETS19AB256AG	BACKUP SW TRANSFORMER	[M] ⚠
PC5701	B3PBA0000402	PHOTO COUPLER	[M] ⚠
PC5702	B3PBA0000402	PHOTO COUPLER	[M] ⚠
PC5720	B3PBA0000402	PHOTO COUPLER	[M] ⚠
PC5799	B3PBA0000402	PHOTO COUPLER	[M] ⚠
F1	K5D502BNA005	FUSE	[M] ⚠
FP2901	K5G401A00008	FUSE PROTECTOR	[M] ⚠
TH5701	D4CAC8R00002	THERMISTOR	[M] ⚠
TH5860	D4CC11040013	THERMISTOR	[M] ⚠
P5701	K2AA2B000017	AC INLET	[M] ⚠
C5701	F0CAF334A087	0.33uF	[M] ⚠
C5704	F1BAF1020020	1000pF	[M] ⚠
C5705	F1BAF1020020	1000pF	[M] ⚠
C5706	F1BAF1020020	1000pF	[M] ⚠
C5707	F1BAF1020020	1000pF	[M] ⚠

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

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

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

   Caution:

   Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient to damage an ES device).

3 Precaution of Laser Diode

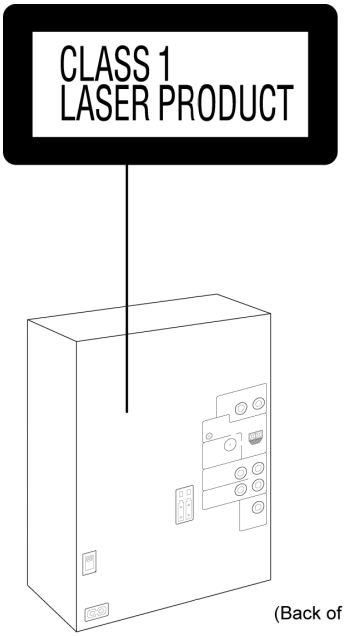
CAUTION:

This product utilizes a laser diode with the unit turned “on”, invisible laser radiation is emitted from the pickup lens.
Wavelength: 655 nm (DVD)/785 nm (CD)
Maximum output radiation power from pickup: 100 µW/VDE

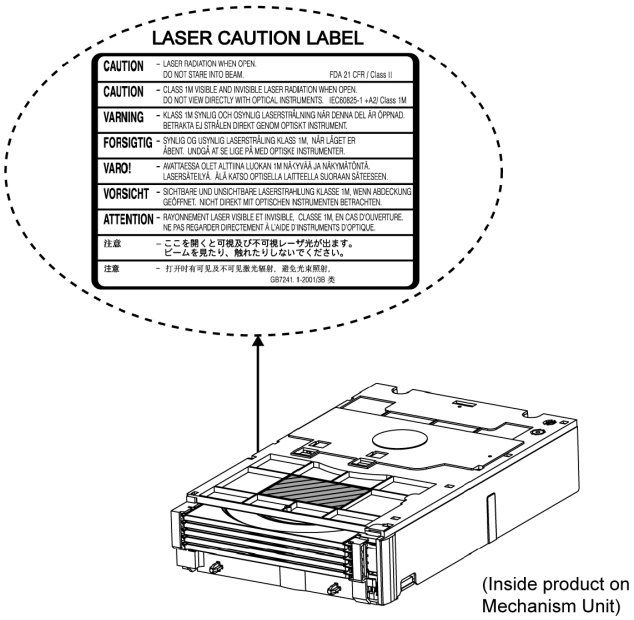
Laser radiation from the pickup unit is safety level, but be sure the followings:

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.

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.



(Back of product)



(Inside product on Mechanism Unit)

4 About Lead Free Solder (PbF)

4.1. Service caution based on legal restrictions

4.1.1. 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%

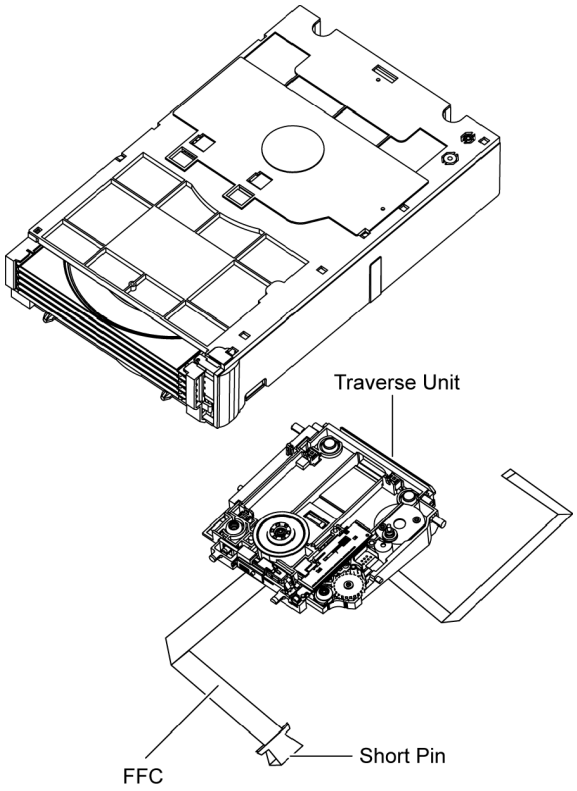
5 Handling Precautions for Traverse Unit

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

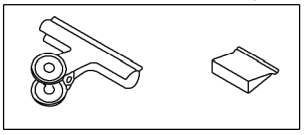
5.1. Cautions to Be Taken in Handling the Optical Pickup Unit

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

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



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



Clip or Short Pin

5.2. Grounding for electrostatic breakdown prevention

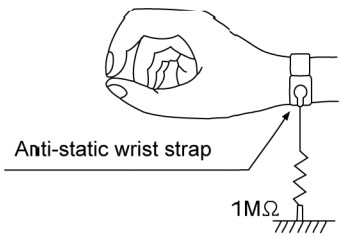
Some devices such as the DVD player use the optical pickup (laser diode) and the optical pickup will be damaged by static electricity in the working environment. Proceed servicing works under the working environment where grounding works is completed.

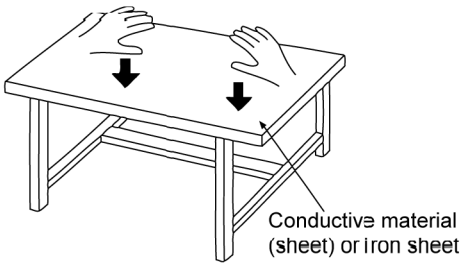
5.2.1. Worktable grounding

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

5.2.2. Human body grounding

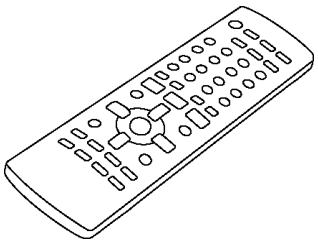
1. Use the anti-static wrist strap to discharge the static electricity form your body.


Anti-static wrist strap
1MΩ

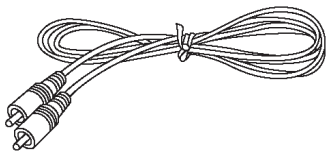

Conductive material
(sheet) or iron sheet

6 Accessories

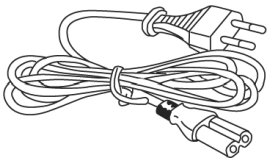
- **Note: Refer to “Replacement Parts List” (Section 25) for the part number.**



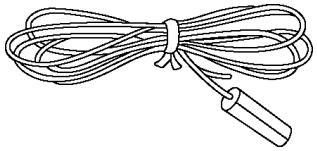
Remote control



Video cable

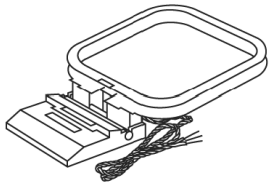


AC cord



FM indoor antenna

Mic



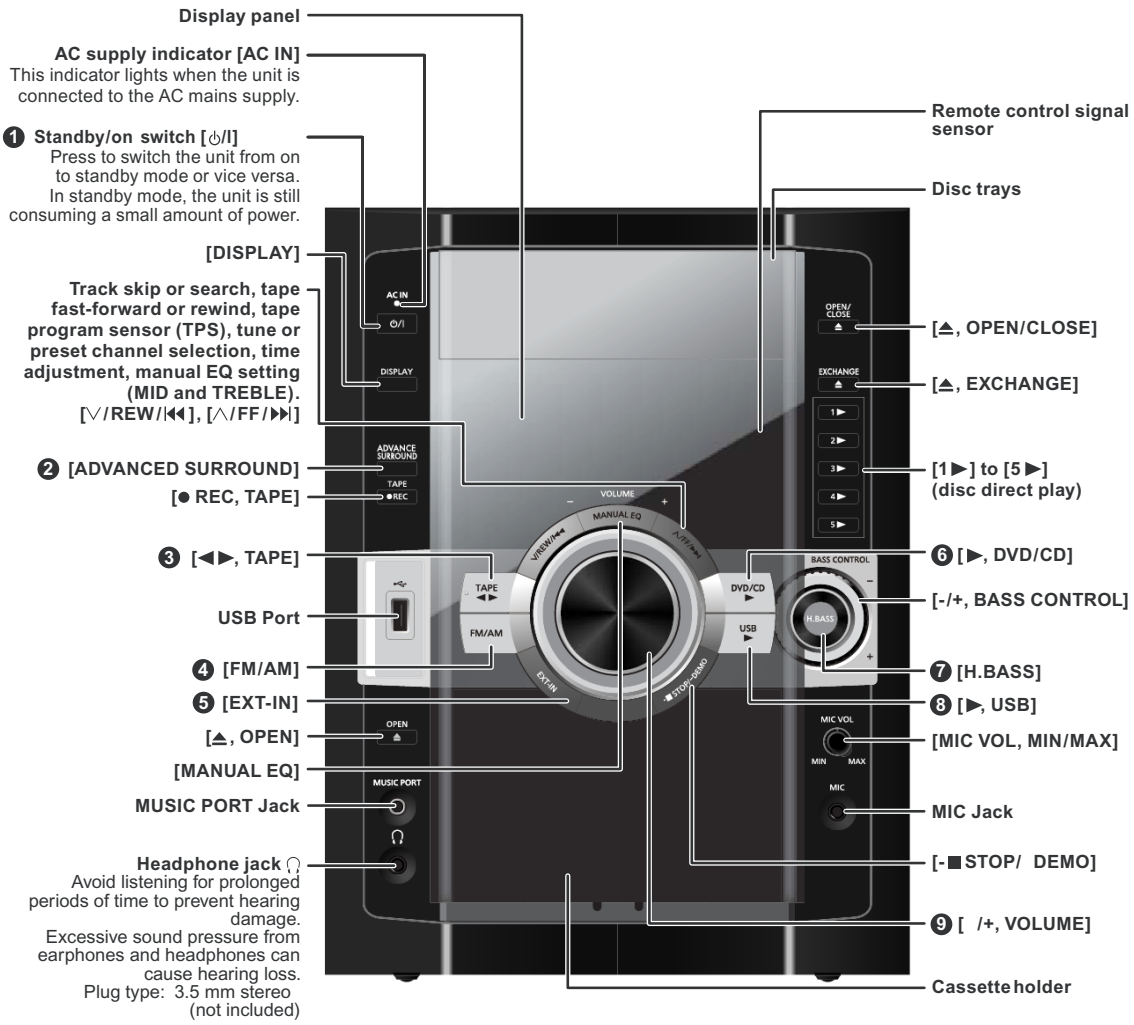
AM Loop antenna

7 Operation Procedures

7.1. Main Unit key Button Operations

Main unit

Refer to the numbers in parentheses for page reference. Buttons such as ❶, function the same as the controls on the remote control.



DISPLAY

To select the desired display mode
Every time you press the button

→ Normal → Peak hold → Re ection → Off ←

Normal
Indicates strength of the sound in each tonal range

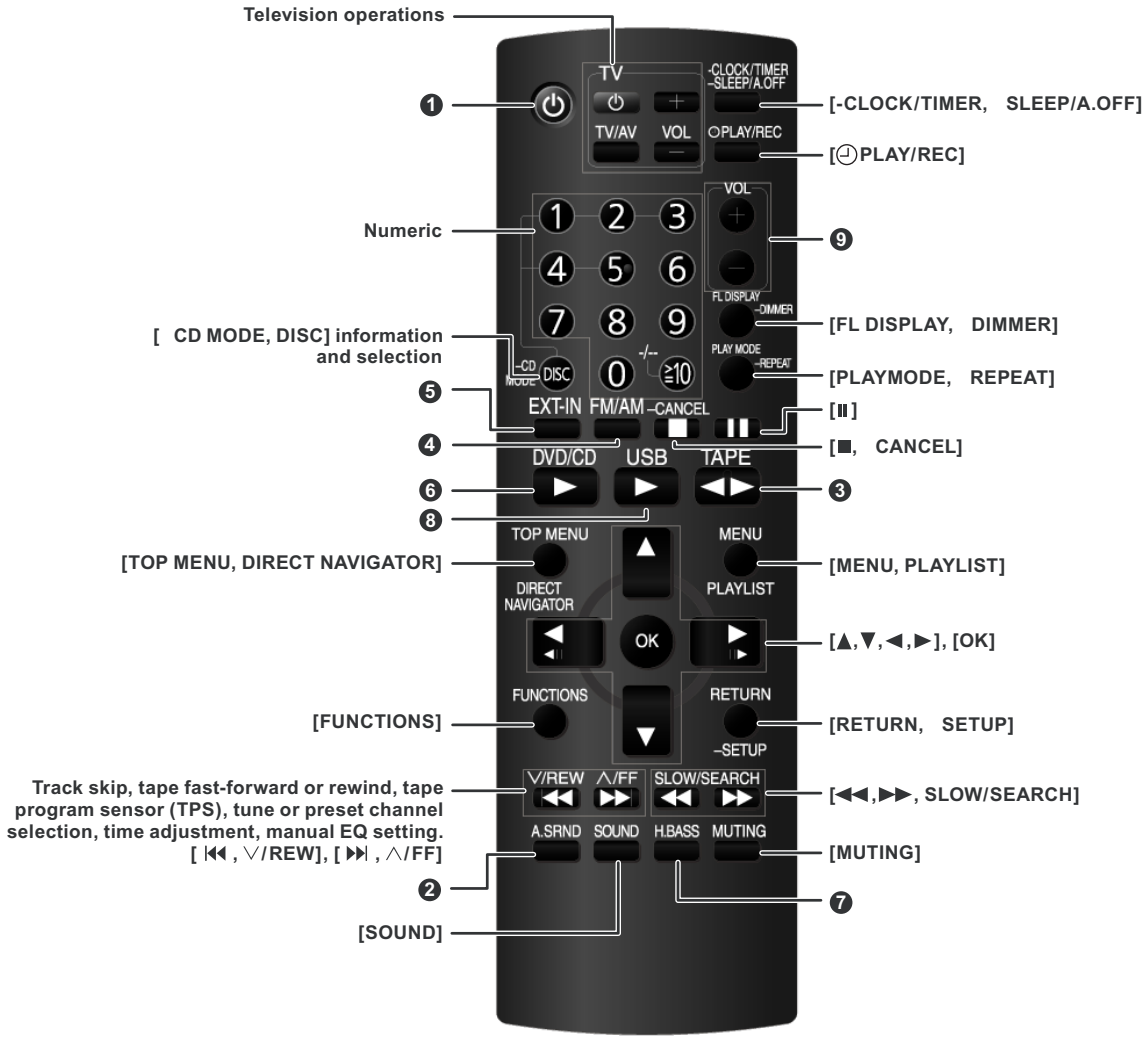
Peak hold
Peak sound value of each sound range (on display for about one second after it occurs).

Reflection
Indicates the strength of the sound in each tonal range (displayed in the opposite direction of normal mode).

7.2. Remote Control Key Buttons Operations

Remote control

Buttons labelled such as ❶ function in exactly the same way as the buttons on the main unit.



To mute the sound.

Press the button to activate. Press the button again or adjust the volume to cancel. Muting is also cancels when you switch the unit to standby.

To dim the display panel.

Press and hold again to cancel. The display is dimmed, but brightens when you perform some operations.

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 successively to select AUTO OFF to activate or cancel the function.

SLEEP 30 → SLEEP 60 → SLEEP 90 → SLEEP120 → SLEEPOFF → **AUTO OFF** → SLEEP 30

The setting is maintained even if the unit is turned off. If you select tuner or music port as the source, AUTO OFF turns off. It comes on again when you select disc or tape.

7.3. Disc Information

7.3.1. Disc Playability (Media)

Discs that can be played

■ **Commercial discs**

Disc	Logo	Indicated in these instructions by	Remarks
DVD-Video		DVD-V	High quality movie and music discs.
Video CD		VCD	Music discs with video. Including SVCD (Conforming to IEC62107).
CD		CD	Music discs.

■ **Recorded discs** (○: Playable, —: Not playable)

Disc	Logo	Recorded on a DVD video recorder, etc.		Recorded on a personal computer, etc.					Finalizing[*6]
		DVD-VR[*2]	DVD-V[*4]	WMA	MP3	JPEG	MPEG4[*8]	DivX[*9]	
DVD-RAM		○	—	—	○	○	○	○	Not necessary
DVD-R/RW		○	○	—	○	○	○	○	Necessary
DVD-R DL		[*3]	○	—	—	—	—	—	Necessary
+R/+RW	—	—	(○)[*5]	—	—	—	—	—	Necessary
+R DL	—	—	(○)[*5]	—	—	—	—	—	Necessary
CD-R/RW[*1]	—	—	—	○	○	○	○	○	Necessary[*7]

It may not be possible to play all the above-mentioned discs in some cases due to the type of disc, the condition of the recording, the recording method, or how the files were created.

[*1] This unit can play CD-R/RW recorded with CD-DA or Video CD format.
[*2] Discs recorded on DVD video recorders or DVD video cameras, etc. using Version 1.1 of the Video Recording Format (a unifed video recording standard).
[*3] Discs recorded on DVD video recorders or DVD video cameras using Version 1.2 of the Video Recording Format (a unified video recording standard).
[*4] Discs recorded on DVD video recorders or DVD video cameras using DVD-Video Format.
[*5] Recorded using a format different from DVD-Video Format, therefore, some functions cannot be used.
[*6] A process that allows play on compatible equipment. To play a disc that is displayed as Necessary on this unit, the disc must first be finalized on the device it was recorded on.
[*7] Closing the session will also work.
[*8] MPEG4 data recorded with the Panasonic SD multi cameras or DVD video recorders [conforming to SD VIDEO specifications (ASF standard)/MPEG4 (Simple Profile) video system/G.726 audio system].
[*9] Functions added with DivX Ultra are not supported.

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

■ **Discs that cannot be played**
Blu-ray, HD DVD, AVCHD discs, DVD-RW version 1.0, DVD-Audio, DVD-ROM, CD-ROM, CDV, CD-G, SACD, Photo CD, DVD-RAM that cannot be removed from their cartridge, 2.6 GB and 5.2 GB DVD-RAM, and Chaoji VCD available on the market including CVD, DVCD and SVCD that do not conform to IEC62107.

■ **Video systems**
- This unit can play PAL and NTSC, but your television must match the system used on the disc.
- PAL discs cannot be correctly viewed on an NTSC television.
- This unit can convert NTSC signals to PAL 60 for viewing on a PAL television.

7.3.2. Tips for Making Data Discs

Tips for making data discs

- When there are more than eight groups, the eighth group onwards will be displayed on one vertical line in the menu screen.
- There may be differences in the display order on the menu screen and computer screen.
- This unit cannot play files recorded using packet write.

DVD-RAM
- Discs must conform to UDF 2.0.

DVD-R/RW
- Discs must conform to UDF bridge (UDF 1.02/ISO9660).
- This unit does not support multi-session. Only the default session is played.

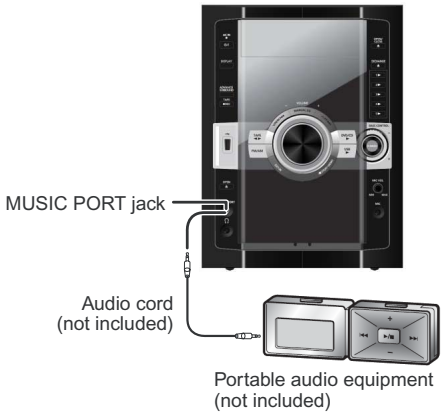
CD-R/RW
- Discs must conform to ISO9660 level 1 or 2 (except for extended formats).
- This unit supports multi-session but if there are many sessions it takes more time for play to start. Keep the number of sessions to a minimum to avoid this.

7.4. Using the Music Port

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

Connecting to a portable audio equipment

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



EXT-IN

Playing 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.

IMPORTANT
Reduce the volume of the main unit and the portable audio equipment before you plug or unplug the equipment into the MUSIC PORT jack.

1 **Plug the audio cord into the MUSIC PORT jack and press [EXT-IN] to select MUS IC PORT .**

2 **Play the portable audio equipment. (See the portable audio equipment s instruction manual.)**

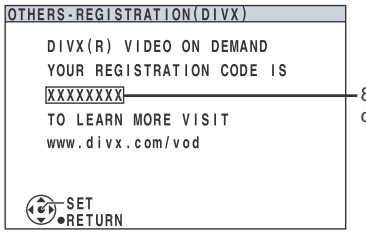
7.5. Divx VOD Content

About DivX VOD content

DivX Video-on-Demand (VOD) content is encrypted for copyright protection. In order to play DivX VOD content on this unit, you first need to register the unit.

Follow the online instructions for purchasing DivX VOD content to enter the unit s registration code and register the unit. For more information about DivX VOD, visit www.divx.com/vod.

■ Display the unit s registration code



- We recommend that you make a note of this code for future reference.
- After playing DivX VOD content for the rst time, another registration code is then displayed in REGISTRATION (DIVX) . Do not use this registration code to purchase DivX VOD content. If you use this code to purchase DivX VOD content, and then play the content on this unit, you will no longer be able to play any content that you purchased using the previous code.
- If you purchase DivX VOD content using a registration code different from this unit s code, you will not be able to play this content. (AUTHORIZATION ERROR is displayed.)

■ Regarding DivX content that can only be played a set number of times

Some DivX VOD content can only be played a set number of times. When you play this content, the remaining number of plays is displayed. You cannot play this content when the number of remaining plays is zero.
(RENTAL EXPIRED is displayed.)

When playing this content
- The number of remaining plays is reduced by one if
  y ou press [⏻] or press and hold [SETUP].
  y ou press [■]. [Press [❚❚] (pause) to pause play.]
  y ou press [⏮ , ⏭] (skip) or [◀◀ , ▶▶] (search) etc. and arrive at another content or the start of the content being played.
- Resume(Stop) function does not work.

7.6. Connecting and Playing a USB Mass Storage Class Device

Connecting and playing a USB mass storage device

WMA **MP3** **JPEG** **MPEG4**

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

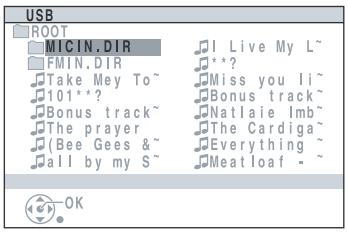
Preparation
Before connecting any USB mass storage device to the unit, ensure that the data stored therein has been backed up.

1 Connect the USB mass storage device (not included).

USB enab led de vice (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.

2 Press [►, USB] to select USB .

Example:



3 Adjust the volume of the main unit.

4 Press [▲] or [▼] followed by pressing [OK] to select your desired item for playback.

For other operating functions, they are similar as those described on DISC OPERATIONS .

Compatible Devices

Devices which are de ned as USB mass storage class:
USB devices that support bulk only transfer.
USB devices that support USB 2.0 full speed.

Supported Formats

	File name	File extension
Still pictures	JPG* 1	.jpg .jpeg
Music	MP3 WMA	.mp3 .wma
Video	MPEG4* 2	.asf

* 1 It may not be possible to play all the files due to the condition on how they were created.
* 2 For Panasonic D-Snap/DIGA.

Note:
- CBI (Control/Bulk/Interrupt) is not supported.
- Digital Cameras that use PTP protocol or which require additional program installation when connected to a PC are 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.
- It will not operate with Janus enabled MTP (Media Transfer Protocol) devices.
- Maximum folder: 256 folders
- Maximum file: 4000 les
- Maximum file name: 12 characters
- Maximum folder name: 12 characters
- Only one memory card will be selected when connecting a multiport USB card reader. Typically the first memory card inserted.

8 Self-Diagnosis and Special Mode Setting

8.1. Service Mode Summary Table

8.1.1. Service Mode Summary Table (For DVD)

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:

Main buttons	Remote control unit buttons	Application	Note
[STOP]	[0]	Error code display.	(Refer to the section "8.2.1. Service Mode Table 1" for more information.)
	[5]	Jitter checking.	
	[PAUSE]	Initial setting of laser drive current.	
	[FUNCTIONS]	DVD laser drive current check.	(Refer to the section "8.2.2. Service Mode Table 2" for more information.)
	[3]	CD laser drive current check.	
	[6]	Region display and mode.	(Refer to the section "8.2.3. Service Mode Table 3"for more information.)
	[7]	Micro-processor firmware version check.	
	≧10	Initialization of the player (factory setting is restored). Used after replacement of Micro-processor (DV5 LSI) IC, FLASH ROM IC (IC8651), EEPROM IC (IC8611) and DVD Module P.C.B.	
	[8]	DVD Module P.C.B. firmware version check.	(Refer to the section "8.2.4. Service Mode Table 4"for more information.)
	[ENTER]	DVD Module P.C.B. reset.	
	▲	Timer 1 check.	(Refer to the section "8.2.5. Service Mode Table 5"for more information.)
	▼	Timer 1 reset.	
	▶	Timer 2 check.	
	◀	Timer 2 reset.	

Note:

An error code will be canceled if a power supply is turned OFF.

*1: CPPM is the copy guard function beforehand written in the disk for protection of copyrights.

*2: CEC is the consumer electronic control used for high-level user control of HDMI-connected devices.

*3: HDCP is the specification developed to control digital audio & video contents transmission for DVI or HDMI connections.

8.1.2. Service Mode Summary Table (For CR14)

Main buttons	Remote control unit buttons	Application	Note
[STOP] + [▲ /FF/ ▶▶|]	-	Entering into self-diagnostic mode.	(Refer to the section "8.3.1. Service Mode Table 1" for more information.)
[1] (In self-diagnostic mode)	-	Servicing the mechanism unit.	
[2] (In self-diagnostic mode)	-	Servicing the traverse unit.	
In Self Diagnostic Mode	[1]	Reliability 1 (Load)	(Refer to the section "8.3.2. Service Mode Table 2" for more information.)
	[2]	Reliability 2 (Cycle)	
	[3]	Reliability 3 (Combi)	

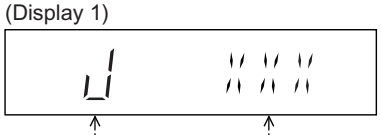
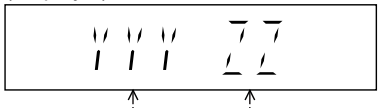
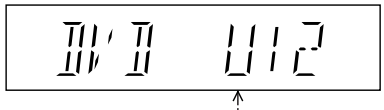
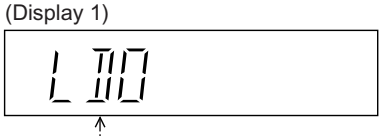
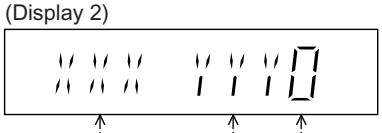
8.2. Service Mode Table (For DVD)

By pressing various button combinations on the main unit and remote control unit, you can activate the various service modes for checking.

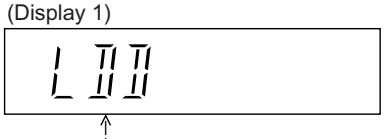
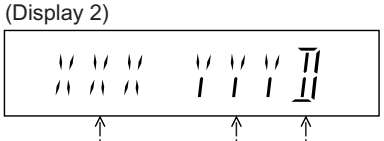
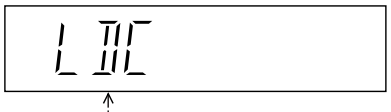
Special Note:

- Due to the limitations of the no. characters that can be shown on the FL Display, the “FL Display” button on the remote control unit can be used to show the two display pages. (Display 1 / Display 2).
- Refer to Section 7.2 for the section on “Remote Control Key Buttons Operations”.

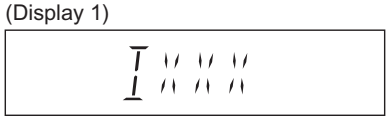
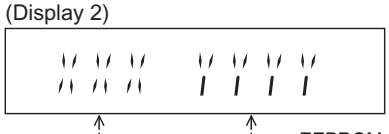
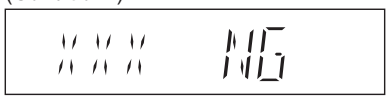
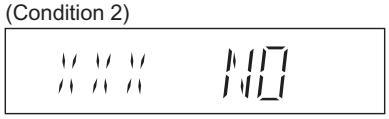
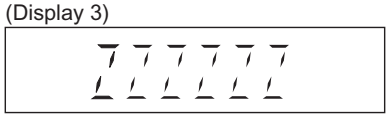
8.2.1. Service Mode Table 1

Item		FL Display	Key Operation
Mode Name	Description		Front Key
Jitter check	Jitter check. Jitter rate is measured and displayed. Measurement is repeatedly done in the cycle of one second. Read error counter starts from zero upon mode setting. When target block data failed to be read out, the counter advances by one increment. When the failure is caused by minor error, it may be corrected when retried to enable successful reading. In this case, the counter advances by one. When the error persists even after retry, the counter may jump by two or more. FL Display sequence: Display 1➞2.	(Display 1)  Jitter Check Mode / Jitter Rate Jitter rate is shown in decimal notation to one place of decimal. Focus drive value is shown in hexadecimal notation. (Display 2)  Lead Error Counter / Focus Drive Value	In STOP (no disc) mode, press [STOP] button on the main unit, and [5] button on the remote control unit. Press [STOP] button to exit. Press [FL Display] on remote control unit for next page (FL Display).
Error code display	Error code check The latest error code stored in the EEPROM IC is displayed. Note: Refer to "Section 8.4 DVD Self Diagnostic Function-Error Code" for more detailed information on the error codes.	 U / H / F Error code (play_err) is expressed in the following convention. Error code = 0 x DAXX is expressed: ➞ DVDnn U12 Error code = 0 x DBXX is expressed: ➞ DVDnn H12 Error code = 0 x DXXX is expressed: ➞ DVDnn F123 Error code = 0 x 0000 is expressed: ➞ DVDnn F--- * "xx" denotes the error code	In STOP (no disc) mode, press [STOP] button on the main unit, and [0] button on the remote control unit. * With pointing of cursor up and down on display. Cancelled automatically 5 seconds later. To exit, press [POWER] button on main unit or remote control.
Initial setting of laser drive current	Initial setting of laser drive current. Initial current value for the DVD laser and CD laser is separately saved in the EEPROM IC. FL Display sequence: Display 1➞2.	(Display 1)  Laser Current Measurement Mode The value denotes the current in decimal notation. (Display 2)  CD Laser / Identify as LDO mode / DVD Laser The above example shows the initial current is XXXmA and YYYmA for CD laser and DVD laser respectively when the laser is switched on.	In STOP (no disc) mode, press [STOP] button on the main unit, and [PAUSE] button on the remote control unit. Cancelled automatically 5 seconds later. Press [FL Display] on remote control unit for next page (FL Display) on values of laser drive current.

8.2.2. Service Mode Table 2

Item		FL Display	Key Operation
Mode Name	Description		Front Key
DVD laser drive current measurement	DVD laser drive current measurement. DVD laser drive current is measured and the result is displayed together with the initial value stored in the EEPROM IC. After the measurement, DVD laser emission is kept on. It is turned off when POWER key is switched off. FL Display sequence: Display 1➞2.	(Display 1)  DVD laser current measurement mode The value denotes the current in decimal notation. (Display 2)  DVD Laser Initial Value DVD Laser Value Identify as LDD mode The above example shows the initial current is XXXmA and the measured value is YYYmA.	In STOP (no disc) mode, press [STOP] button on the main unit, and [FUNCTIONS] button on the remote control unit. Cancelled automatically 5 seconds later. Press [FL Display] on remote control unit for next page (FL Display) on values of dvd drive current.
CD laser drive current measurement	CD laser drive current measurement. CD laser drive current is measured and the result is displayed together with the initial value stored in the EEPROM IC. After the measurement, CD laser emission is kept on. It is turned off when POWER key is switched off. FL Display sequence: Display 1➞2.	(Display 1)  CD Laser Current Measurement Mode The value denotes the current in decimal notation. (Display 2)  CD Laser Initial Value CD Laser Value The above example shows the initial current is XXXmA and the measured value is YYYmA.	In STOP (no disc) mode, press [STOP] button on the main unit, and [3] button on the remote control unit. Cancelled automatically 5 seconds later. Press [FL Display] on remote control unit for next page. (FL Display)

8.2.3. Service Mode Table 3

Item		FL Display	Key Operation
Mode Name	Description		Front Key
Micro-processor firmware version display & EEPROM checksum display.	Micro-processor firmware version display & EEPROM checksum display. EEPROM checksum is only available due to existence of EEPROM IC. Note: Condition 1/2/3 shows the state of EEPROM IC. It is indicated in Display 2. FL Display sequence: Display 1→2→3.	(Display 1)  (Display 2)  (Condition1)  If the version of the EEPROM does not match, [NG] is displayed. (Condition 2)  (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. (Condition 3)  If the EEPROM version matches, checksum [YYYY] is displayed. (Display 3) 	In STOP (no disc) mode, press [STOP] button on the main unit, and [7] button on the remote control unit. Cancelled automatically 5 seconds later. Press [FL Display] button on remote control unit for next page. (FL Display)
Initialization mode	Initialization. User settings are cancelled and player is initialized to factory setting. It is necessary when after replacement of Micro-processor (DV5 LSI) IC, FLASH ROM IC (IC8651), EEPROM IC (IC8611) & DVD Module P.C.B.		In STOP (no disc) mode, press [STOP] button on the main unit, and [≧10] button on the remote control unit. Cancelled automatically 5 seconds later.
Region display	Region code display, TV broadcasting system & the model no. information. Note: Refer to Fig. 8.1 for "Video Design Information".	 	In STOP (no disc) mode, press [STOP] button on the main unit, and [6] button on the remote control unit. Cancelled automatically 5 seconds later.

Model Series	Country Region	Region Code	TV Broadcasting System	Product			
				Signal System (Default)	Region Display (Default)	OSD Default	OSD Menu Language
P, PC, PX	USA, Canada, PX	1	NTSC	NTSC (*A)	1PN	English	English, Spanish, Canadian, French
(S)	Japan	2	NTSC	NTSC (*A)	2PN	Japanese	Japanese, English
E	Europe	2	PAL	PAL (*C)	2P6	English	English, French, German, Spanish, Polish, Russian, Czech, Hungarian
EB, EG	Europe	2	PAL	PAL (*C)	2P6	English	English, French, German, Italian, Spanish, Polish, Swedish, Dutch
GC, GS	Middle East	2	PAL	PAL (*C)	2P6	English	English, French, German, Spanish, Polish, Russian, Czech, Hungarian
GCS, GD, GT, GCT	South East Asia, Korea, Taiwan	3	PAL NTSC	NTSC (*B)	3PN	English	English, Traditional Chinese
GN	New Zealand, Australia	4	PAL	PAL (*C)	4P6	English	English, French, German, Italian, Spanish, Polish, Swedish, Dutch
PL, GCP, LB	Central/South/ Latin America	4	NTSC	NTSC (*D)	4PN	English	English, Spanish, French, Brazilian Portuguese
EE	CIS	5	SECAM	PAL (*C)	5P6	English	English, French, German, Spanish, Polish, Russian, Czech, Hungarian
GK	China	6	PAL	NTSC (*B)	6PN	English	English, Simplified Chinese

NTSC (*A)

Source	Output
Screen Saver	NTSC
NTSC disc	NTSC
PAL disc	PAL (DVD-V)
	NTSC (DVD-A/VCD)

NTSC (*B)

Source	Output
Screen Saver	NTSC
NTSC disc	NTSC (default)
	PAL60
PAL disc	PAL

PAL (*C)

Source	Output
Screen Saver	PAL
NTSC disc	PAL60 (default)
	NTSC
PAL disc	PAL

NTSC (*D)

Source	Output
Screen Saver	NTSC
NTSC disc	NTSC
PAL disc	NTSC

Explanation of Display

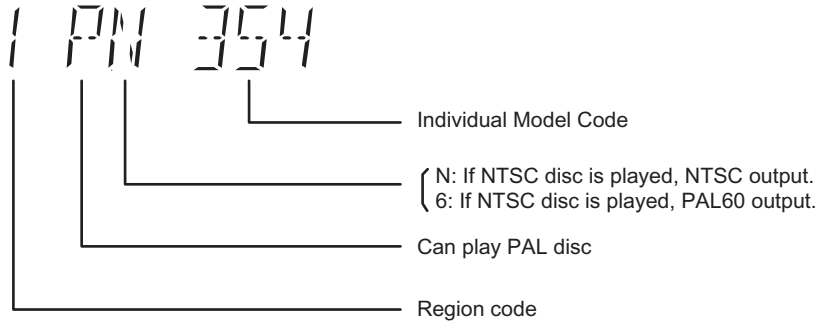
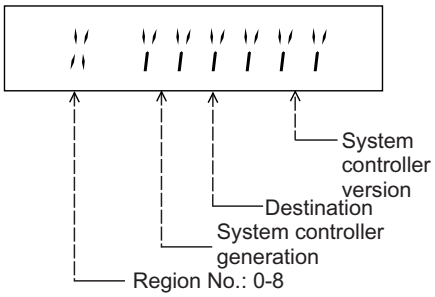
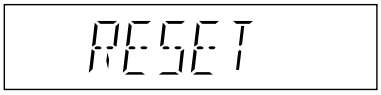
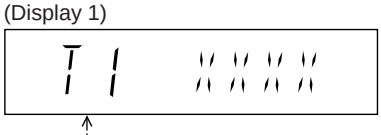
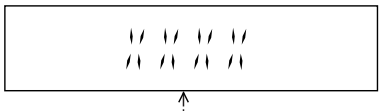


Figure 8.1 Video Design Information

8.2.4. Service Mode Table 4

Mode Name	Item Description	FL Display	Key Operation Front Key
DVD Module P.C.B. firmware version display	DVD Module P.C.B. firmware version is displayed on the FL Display. The firmware version can be updated using recovery disc. Note: It is necessary to check for firmware version before carrying out the version up using the disc.		In STOP (no disc) mode, press [STOP] button on the main unit, and [8] button on the remote control unit. Cancelled automatically 5 seconds later.
DVD Module P.C.B. Reset	To reset DVD Module P.C.B. This process is used when the DVD Module P.C.B. or FLASH ROM IC is replaced with a new one.		While in initialization mode, press & hold [STOP] button on the main unit, follow by [ENTER] button on the remote control unit. Cancelled automatically 5 seconds later.

8.2.5. Service Mode Table 5

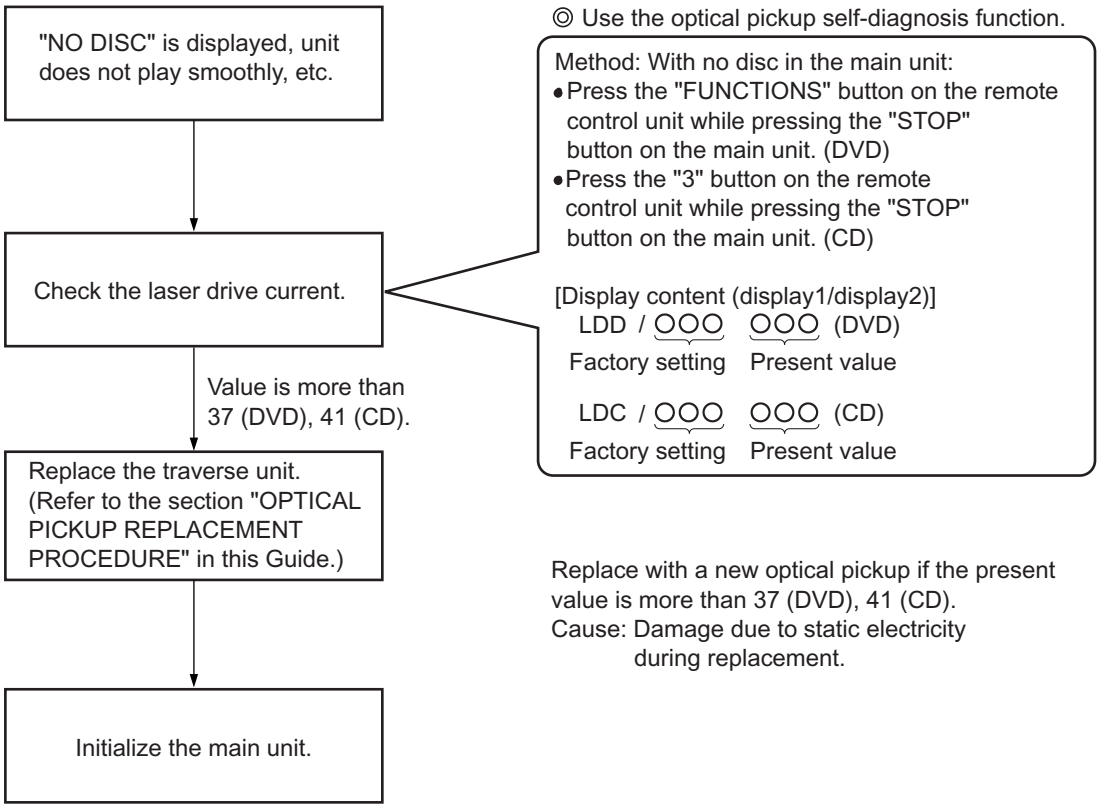
Mode Name	Item Description	FL Display	Key Operation Front Key
Timer 1 check	Timer 1 check Laser operation timer is measured separately for DVD laser and CD laser. FL Display sequence: Display 1➞2.	(Display 1)  DVD laser usage time Shown to the above is DVD laser usage time, and to the below is CD laser usage time. Time is shown in 4 digits of decimal notation in a unit of 10 hours. "0000" will follow "9999". (DVD laser) (Display 2)  CD laser usage time Time is shown in 4 digits of decimal notation in a unit of 10 hours. "0000" will follow "9999". (CD laser)	In STOP (no disc) mode, press [STOP] button on the main unit, and [▲] button on the remote control unit. Cancelled automatically 5 seconds later. Press [FL Display] button for next page of FL Display.
Timer 1 reset	Timer 1 reset Laser operation timer of both DVD laser and CD laser is reset all at once.	 Time is shown in 4 digits of decimal notation in a unit of 10 hours. It will clear to "0000" upon reset.	While displaying Timer 1 data, press [STOP] button on the main unit, and [▼] button on the remote control unit. Cancelled automatically 5 seconds later
Timer 2 check	Timer 2 check Spindle motor operation timer	 Time is shown in 5 digits of decimal notation in a unit of 1 hour. "00000" will follow "99999".	In STOP (no disc) mode, press [STOP] button on the main unit, and [▶] button on the remote control unit. Cancelled automatically 5 seconds later.
Timer 2 reset	Timer 2 reset Spindle motor operation timer	 Time is shown in 5 digits of decimal notation in a unit of 1 hour. It will be cleared to "00000" upon activating this.	While displaying Timer 2 data, press [STOP] button on the main unit, and [◀] button on the remote control unit. Cancelled automatically 5 seconds later.

8.2.6. Optical Pick-up Self-Diagnosis

The optical pickup self-diagnosis function and tilt adjustment check function have been included in this unit. When repairing, use the following procedure for effective self-diagnosis and tilt adjustment. Be sure to use the self-diagnosis function before replacing the optical pickup when “NO DISC” is displayed. As a guideline, you should replace the optical pickup when the value of the laser drive current is more than the specified value.

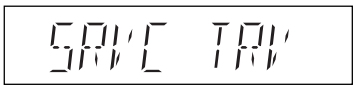
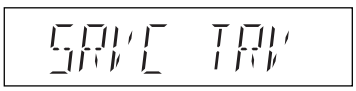
Note:

Press the power button to turn on the power, and check the value within three minutes before the unit warms up. (Otherwise, the result will be incorrect.)

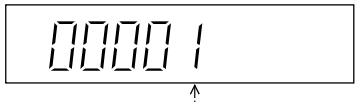
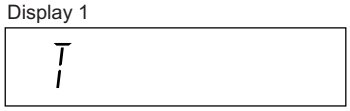
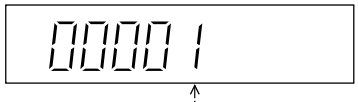
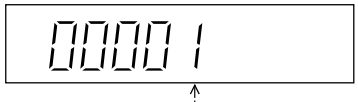


8.3. Service Mode Table (For CR14)

8.3.1. Service Mode Table 1

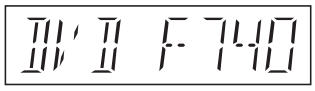
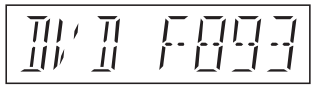
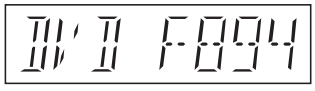
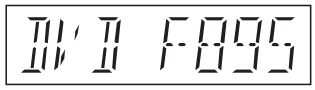
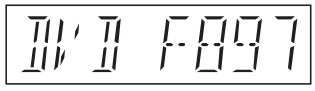
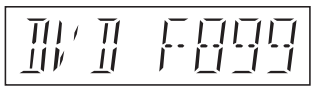
Item		FL Display	Key Operation
Mode Name	Description		Front Key
Self-Diagnostic Mode	To enter into self-diagnostic checking for CR14 mechanism.		In DVD/CD mode (ensure no disc is inserted): Press and hold [STOP] button for five seconds, followed by [∧/FF/►►I] button on the main unit. To exit, press [⏻/ǀ AC IN] button on main unit or remote control unit.
Service Mode 1	To unlock the mechanism unit for service. In this mode, the disassembly of CR14 can be carry out. (Refer to original service manual for CR14) 1. All trays are set to "STOCK" position. 2. Mechanism set to tray 1. 3. Cam gear set to "HOME" position.		In self-diagnostic mode, press [1] button on main unit. To exit, power off the main unit Press [EXCHANGE] on main unit for error code.
Service Mode 2	To unlock the traverse unit for service. In this mode, traverse unit can be disassembled. (Refer to original service manual for CR14) 1. Tray 5 set to "Play" position. 2. Mechanism set to tray 5. 3. Cam gear set to "HOME" position.		In self-diagnostic mode, press [2] button on main unit. To exit, power off the main unit Press [EXCHANGE] on main unit for error code. (Refer to section 8.6.1. for information)

8.3.2. Service Mode Table 2

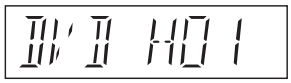
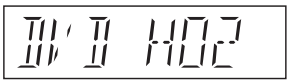
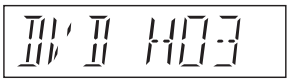
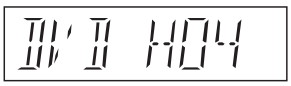
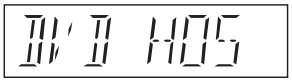
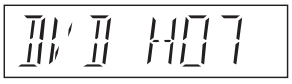
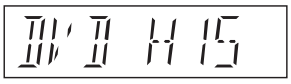
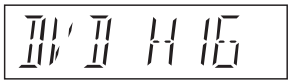
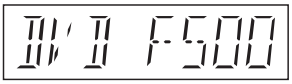
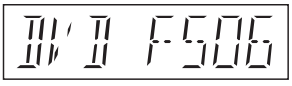
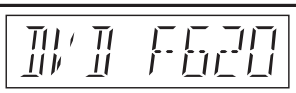
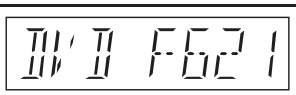
Item		FL Display	Key Operation
Mode Name	Description		Front Key
Reliability 1 (Load cycle Test)	To determine open/close operation of the mechanism (all trays). In this mode, the trays are loaded & unloaded.	Display 1  Display 2  The counter will increment by one. When reach 99999 will change to 00000	In self-diagnostic mode, press [1] button on remote control. To exit, press [⏻/I] button on the main unit or remote control unit.
Reliability 2 (Traverse Cycle Test)	To determine playability operation.	Display 1  Display 2  The counter will increment by one. When reach 99999 will change to 00000	In self-diagnostic mode, press [2] button on remote control. To exit, press [⏻/I] button on the main unit or remote control unit.
Reliability 3 (Combi Cycle Test)	The combine test for both load & traverse cycle test.	Display 1  Display 2  The counter will increment by one. When reach 99999 will change to 00000	In self-diagnostic mode, press [3] button on remote control. To exit, press [⏻/I] button on the main unit or remote control unit.

8.4. DVD Self Diagnostic Function-Error Code

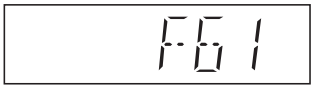
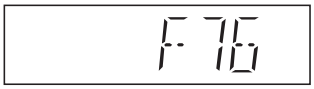
8.4.1. DVD Module Error Code Table

Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
U702	HDMI/DVI I2C communication error	The communication error of I2C when connecting it with HDMI/DVI. For instance, when EDID information to which information on the TV set side has been described cannot be read, it is generated.		Press [■STOP] on main unit for next error.
U703	HDMI/DVI attestation error	When attestation (HDCP) with the TV side fails when connecting it with HDMI/DVI, it is generated.		Press [■STOP] on main unit for next error.
U704	HDMI/DVI SRM Riborcerar	It is generated at the equipment to which the TV set is Riborced when connecting it with HDMI/DVI.		Press [■STOP] on main unit for next error.
U705	HDMI/DVI SRM disk falsification check error	It is generated at the time of it is time when illegal the SRM data of the reproducing disk (verify error), when connecting it with HDMI/DVI.		Press [■STOP] on main unit for next error.
F740	HDMI device key	I2C error when writing HDMI Key device into transmitter.		Press [■STOP] on main unit for next error.
F893	FLASH ROM IC data falsification error	Firmware error, DV5.0 LSI IC (IC8651) error.		Press [■STOP] on main unit for next error.
F894	EEPROM IC abnormality error	When failing in the access to EEPROM IC located in the DVD Module P.C.B. (IC8611).		Press [■STOP] on main unit for next error.
F895	Language area abnormal	Firmware version agreement check for factory preset setting failure prevention.		Press [■STOP] on main unit for next error.
F897	Initialization error	Incomplete initialization after writing of new firmware (Factory preset setting failure prevention)		Press [■STOP] on main unit for next error.
F899	The communication specification disagreement between micro-processor	Unsuitable combination of number of system com and panel com used. (Frimware)		Press [■STOP] on main unit for next error.

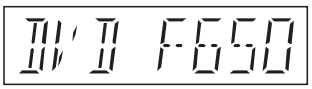
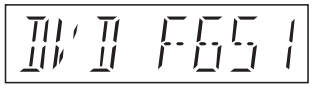
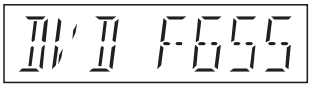
8.4.2. Mechanism Error Code Table

Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
H01	Tray loading error	The tray opening and closing is abnormal. CLOSE and OPEN of the tray cannot be carried out properly. Loading motor error, DV5 LSI IC (IC8001) error.		Press [■ STOP] on main unit for next error. (OPEN time: OPEN→CLOSE→OPEN→H01 at CLOSE: CLOSE→OPEN→CLOSE→H01)
H02	Spindle servo error	The spindle servo/motor is abnormal. The FG pulse is abnormal. CLV servo error.		Press [■ STOP] on main unit for next error.
H03	Traverse servo error	The traverse is abnormal. (Traverse servo, DV5 LSI IC (IC8001), TRV motor error.)		Press [■ STOP] on main unit for next error.
H04	Tracking servo error	Tracking coil NG (OPU unit abnormal), DV5 LSI IC (IC8001) error.		Press [■ STOP] on main unit for next error.
H05	Seek time out error	It is not possible to access the disc. TOC cannot read. Abnormal disc etc. Pickup abnormal or disk is dirty. (TRV motor error, DV5 LSI IC (IC8001) error.)		Press [■ STOP] on main unit for next error.
H07	Driver IC thermal shut down	The spindle motor is abnormal. (short between brushes)		Press [■ STOP] on main unit for next error.
H15	Disc tray open detection switch failure	The disc tray cannot be opened & it closes spontaneously.		Press [■ STOP] on main unit for next error.
H16	Disc tray close detection switch failure	The disc tray cannot be closed & it opens spontaneously.		Press [■ STOP] on main unit for next error.
U11	Focus servo error	Focus coil, FE signal error.		Press [■ STOP] on main unit for next error. (Unfinalized DVD-R is likely to beocme U11.)
U15	Unfinalized DVD-R			
F500	DSC error	DV5 LSI IC (IC8001) stops in the occurance of servo error (startup, focus error, etc)		Press [■ STOP] on main unit for next error.
F506	Invalid media	Disc is flipped over, TOC unreadable, incompatible disc.		Press [■ STOP] on main unit for next error.
F620	OPU unit abnormality temperature	Laser protection at high temperature.		Press [■ STOP] on main unit for next error.
F621	OPU unit circuitry temperature	Laser protection at circuit failure.		Press [■ STOP] on main unit for next error.

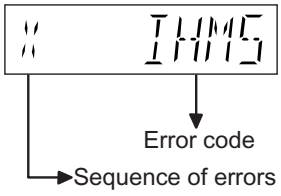
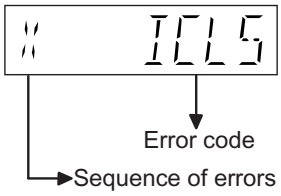
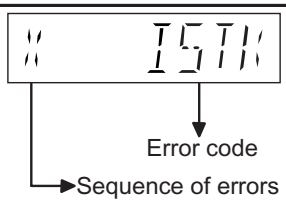
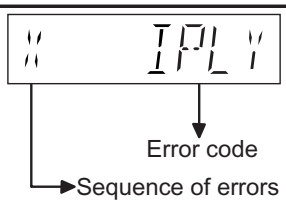
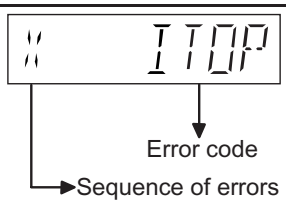
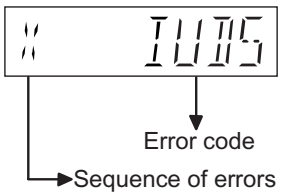
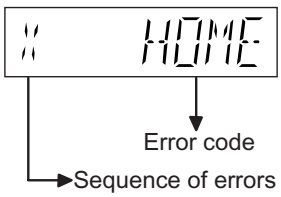
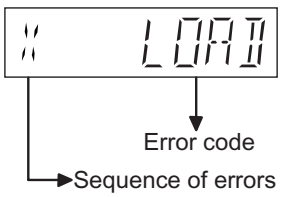
8.4.3. Power Supply & Digital Amplifier Error Code Table

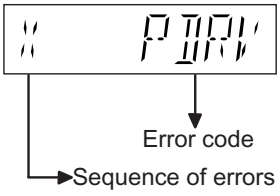
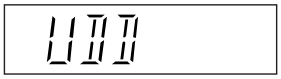
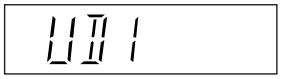
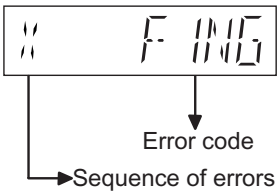
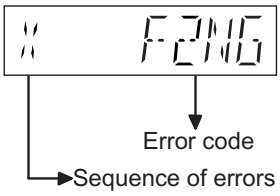
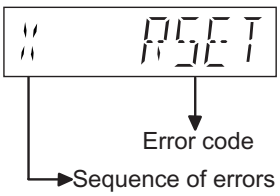
Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
F61	The abnormalities in an output or power supply circuit of POWER AMP	In normal operation, when DCDET2 goes to "L" (Low) (Not during POWER OFF condition), F61 appears on FLDisplay for 1 second and PCONT goes to "L" (Low).This is due to speaker output has DC voltage or fan is not working.		Press [■STOP] on main unit for next error.
F76	Abnormality in the output voltage of stabilized power supply	In normal operation when DCDET1 is detected "L" (Low) for two consecutive times, F76 is displayed on FL for 1 second and after that PCONT will be turned to "L" (Low). This is due to any of the DC voltages (+9V, +7V, -7V, +5V, +5.3V etc.) C22 not available.		Press [■STOP] on main unit for next error.

8.4.4. USB Error Code Table

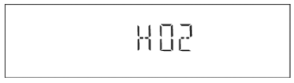
Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
F650	USB device: Devices other than mass storage	Devices other than the mass storage class are connected.		Press [■STOP] on main unit for next error.
F651	USB device: Non-Full Speed Device	The device that the transfer rate did not correspond to Full Speed was connected.		Press [■STOP] on main unit for next error.
F652	USB device: Interface NG	The device in the interface (subclass) outside correspondence was connected. (correspondence interface) 001b: Reduced Block Commands (RBC) 010b: SFF-8020i. MMC-2 (ATAPI) 110b: SCSI transparent command set.		Press [■STOP] on main unit for next error.
F655	USB device: Overcurrent detection	The overcurrent of 500mA or more was detected in VDD USB, and the USB device driver function was intercepted. (To intercept the current.)		Press [■STOP] on main unit for next error.

8.4.5. CD/DVD Changer Mechanism Error Code Table

Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
IHMS	Cam gear abnormality	Cam gear does not rotate to "HOME" position		For CD/DVD changer unit (CR14). Press [EXCHANGE] on main unit for next error.
ICSL	Cam gear/gear units abnormal	Cam gear does not rotate to "PLAY" driving position and ence does not drive playing tray to "STOCK" position.		For CD/DVD changer unit (CR14). Press [EXCHANGE] on main unit for next error.
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/DVD changer unit (CR14). Press [EXCHANGE] 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/DVD changer unit (CR14). Press [EXCHANGE] on main unit for next error.
ITOP	UD assembly	UD rack does not move to front position. This lead to UD base not raise to top position		For CD/DVD changer unit (CR14). Press [EXCHANGE] 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/DVD changer unit (CR14). Press [EXCHANGE] on main unit for next error.
HOME	Cam gear/gear assembly abnormal	Cam gear does not move to "HOME" position under the following conditions: 1. After tray is loaded to "PLAY" position. 2. After tray is loaded to "STOCK" position.		For CD/DVD changer unit (CR14). Press [EXCHANGE] on main unit for next error.
LOAD	Tray drive assembly abnormal	Tray unit does not move from "STOCK" to "PLAY" position.		For CD/DVD changer unit (CR14). Press [EXCHANGE] 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/DVD changer unit (CR14). Press [EXCHANGE] on main unit for next error.
UDU	UD base assembly abnormal	UD base assembly does not move upwards from tray 5 to tray 2.		For CD/DVD changer unit (CR14). Press [EXCHANGE] on main unit for next error.
UDD	UD base assembly abnormal	UD base assembly does not move downwards from tray 1 to tray 5.		For CD/DVD changer unit (CR14). Press [EXCHANGE] on main unit for next error.
UD1	UD base assembly abnormal	UD base assembly does not move to tray 1.		For CD/DVD changer unit (CR14). Press [EXCHANGE] 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/DVD changer unit (CR14). Press [EXCHANGE] on main unit for next error.
F2NG	Fail - safe mode. (For open/close tray unit(s))	When the tray open operation is performed, it fails to close. 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/DVD changer unit (CR14). Press [EXCHANGE] 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 gear position. When it fails, the error code will appear.		For CD/DVD changer unit (CR14). Press [EXCHANGE] on main unit for next error.

8.4.6. Deck Mechanism Error Code Table

Error Code	Diagnosis Contents	Description of Error	Automatic FL Display	Remarks
H01	Mode SW, plunger and capstan motor abnormal	Normal operation during mecha transition, MODE SW abnormal is memorized. The content of abnormality can be confirmed in the abnormal detection mode explained in the later section.		For deck mechanism unit. Press [STOP, ■] on main unit for next error.
H02	Rec INH SW abnormal	The content of abnormality can be confirmed in the abnormal detection mode explained in the later section.		For deck mechanism unit. Press [STOP, ■] on main unit for next error.
H03	HALF SW abnormal			For deck mechanism unit. Press [STOP, ■] on main unit for next error.
F01	Reel pulse abnormal			For deck mechanism unit. Press [STOP, ■] on main unit for next error.

8.5. Sales Demonstration Lock Function

This function prevents discs from being lost when the unit is used for sales demonstrations by disabling the disc eject function. “LOCKED” is displayed on the unit, and ordinary operation is disabled.

8.5.1. Setting

- **Prohibiting removal of disc**

1. Select the DVD/CD function.
2. At POWER ON condition, press and hold down the ■ button and the power button on the main unit for at least three seconds. (The message, “LOCKED” appears when the function is activated.)

Note:

OPEN/CLOSE ⏏ button is invalid and the main unit displays “LOCKED” while the lock function mode is entered.

- **Prohibiting operation of selector and disc**

1. Select the DVD/CD function.
2. At POWER ON condition, press and hold down the ▶ button and the power button on the main unit for at least three seconds. (The message, “LOCKED” appears when the function is activated.)

Note:

The following buttons are invalid and the main unit displays “LOCKED” while the lock function mode is entered.

Main unit	⏏ OPEN/CLOSE, ■ /-TUNE MODE/—FM MODE, SELECTOR, ⏮ / ◀◀ / ∨ , ∧ / ▶▶⏭ / ▶▶
Remote controller unit	iPod/USB, FM/EXT-IN, NUMERIC KEYS 0~9, ≧10 , ⏮ , ⏭ , ◀◀ , ▶▶ , ■ , ⏸ , RETURN, FUNCTIONS, FL DISPLAY/SLEEP, MUTING

8.5.2. Cancellation

The lock can be cancelled by the same procedure as used in setting. (“UNLOCKED” is displayed on cancellation. Disconnecting the power cable from power outlet does not cancel the lock.)

8.6. Service Precautions

8.6.1. Recovery after the DVD player is repaired

- When the FLASH ROM IC or DVD Module P.C.B. is replaced, carry out the recovery processing to optimize the drive.

  Playback the recovery disk to process the recovery automatically.
- Recovery disc (Product number: RFKZD03R005) [SPG]
- Performing recovery process

1. Load the recovery disc RFKZD03R005 on to the player and run it.
2. Recovery is performed automatically. When it is finished, a message appears on the screen.
3. Remove the recovery disc.

4. Turn off the power.
5. Initialize the player.

8.6.2. Firmware version-up of the DVD player

- The firmware of the DVD player may be renewed to improve the quality including operability and playability to the substandard discs.processing to optimize the drive.

  The recovery disc has also firmware version-up.
- After version-up, recovery processing is executed automatically.
- Part number of the recovery disc for version-up will be noticed when it is supplied.
- Updating firmware
  1. Load the recovery disc on to the player and run it.
  2. Firmware version of the player is automatically checked. Appropriate message appears whenever necessary.
  3. Using remote controller´s cursor key, select whether version updating is to be done or not. (Selection of Yes/No)
  4. a. If Yes is selected, version updating is performed.
     b. If No is selected, only recovery is performed.
  5. a. When updating is finished, remove the disc according to the message appearing on the screen.
     b. Remove the disc according to the message appearing on the screen.
  6. Turn off the power.

Note:

If the AC power supply is shut out during version-up due to a power failure, the version-up is improperly carried out.

In such a case, replace the FLASH ROM IC and carry out the version-up again.

8.6.3. DVD Module P.C.B. Reset

- When after replacing FLASH ROM IC or DVD Module P.C.B., FL displays error code “DVD F897”. This means the unit is not initialized properly and the following process needs to be carry out.
- Procedures:
  1. Press ≧10 on remote control while pressing “STOP” button on main unit. (To enter into initialization)
  2. FL display show “INIT”
  3. While still pressing “STOP” button on main unit, press “OK” on remote control. (To reset the unit)
  4. FL will display “RESET” before FL display will change to TOC reading again.
  5. Power off unit. Unplug the AC cord.
  6. Power on the unit. It should be no problem. If problem persist check on the DVD Module P.C.B. or FLASH ROM IC.

9 Assembling and Disassembling

9.1. Caution

“Attention Servicer”

Some chassis components may have sharp edges. Be careful when disassembling and servicing.

1. This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.
2. For reassembly after operation checks or replacement, reverse the respective procedures.
   Special reassembly procedures are described only when required.
3. Select items from the following index when checks or replacement are required.
4. Refer to the Parts No. on the page of “Replacement Parts List” (Section 25), if necessary.
5. This model uses CR14 Mechanism unit. This section includes disassembly & assembly procedures for traverse unit only. For more information on the operation of CR14 mechanism, refer original service manual (Order No. MD0801004CE).

CAUTION NOTE:

Please use original screws and at correct locations.

Caution:

After replacing of Mechanism Unit (CR14), ageing test is necessary. Please confirm operation for Mechanism Unit (CR14).

Below is the list of disassembly sections

- **Disassembly of Top Cabinet**
- **Disassembly of Mechanism Unit (CR14)**
- **Disassembly of Rear Panel**
- **Disassembly of Front Panel Unit**
- **Disassembly of Panel P.C.B., Tact Switch P.C.B., Remote Sensor P.C.B., Side Bar (L) LED P.C.B. & Side Bar (R) P.C.B.**
- **Disassembly of Mic P.C.B.**
- **Disassembly of USB P.C.B.**
- **Disassembly of Music Port P.C.B.**
- **Disassembly of CD Lid**
- **Disassembly of Deck Mechanism Unit**
- **Disassembly of Deck P.C.B.**
- **Disassembly of Deck Mechanism**
- **Disassembly of Deck Mechanism P.C.B.**
- **Disassembly of Cassette Lid**
- **Rectification for Tape Jam Problem**
- **Disassembly of D-Amp P.C.B.**
- **Replacement of Audio Digital Power Amp IC (IC5000)**
- **Disassembly of Main P.C.B.**
- **Disassembly of SMPS P.C.B.**
- **Replacement for Switch Regulator IC (IC5701)**
- **Replacement for Switch Regulator Diode (D5702)**
- **Replacement for Regulator Diode (D5801)**
- **Replacement for Regulator Diode (D5802)**
- **Replacement for Regulator Diode (D5803)**
- **Disassembly of AC Inlet P.C.B.**
- **Disassembly of DVD Module P.C.B.**

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

CAUTION NOTE:

Please use original screw and at correct locations.

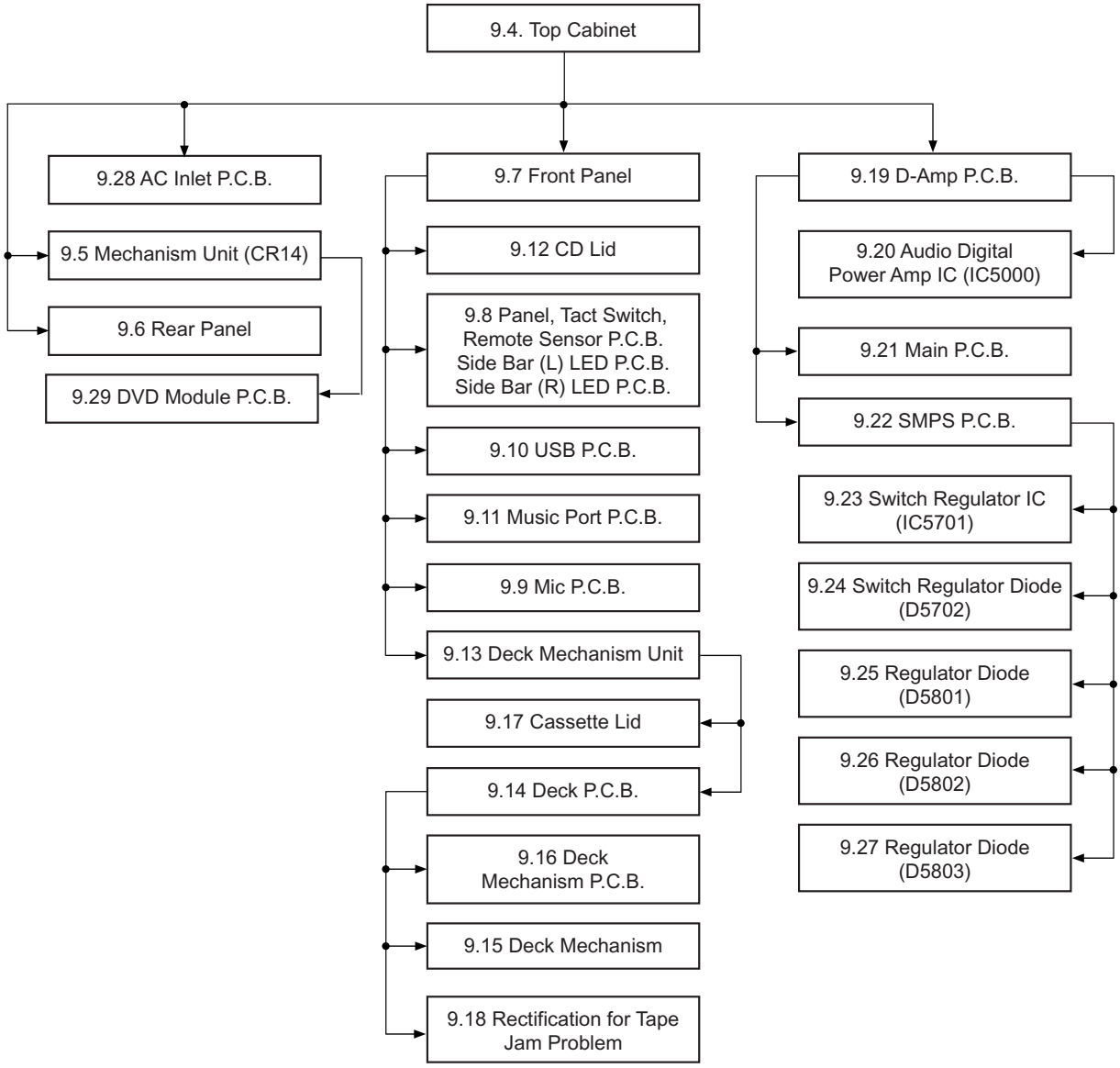
Below shown is part no. of different screw types used:

- ⓐ :RHD30007-K2J
- ⓑ :RHD30119-S
- ⓒ :XTW3+12TFJ
- ⓓ :RHD26046-L
- ⓔ :XTV3+10GFJ-M
- ⓕ :RHD30008
- ⓖ :RHD30111-3
- ⓗ :XTW3+8TFJ
- ⓘ :XTB3+10JFJ
- ⓙ :XTW2+5LFJ
- ⓚ :XYV2+JF17FJ
- ⓠ :XTW26+10SFJ
- ⓡ :RHD26022-1

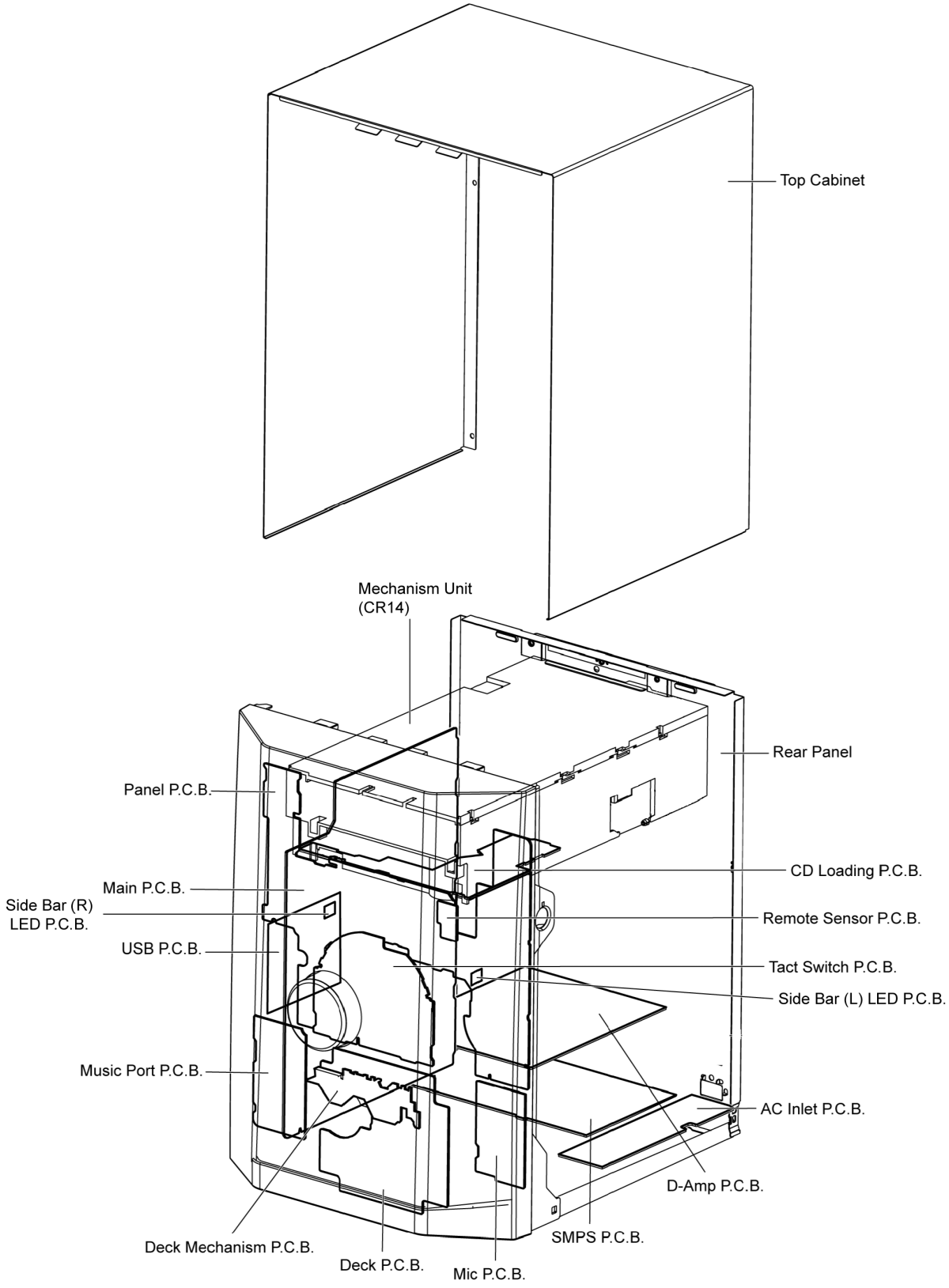
9.2. Disassembly flow chart

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 as below.

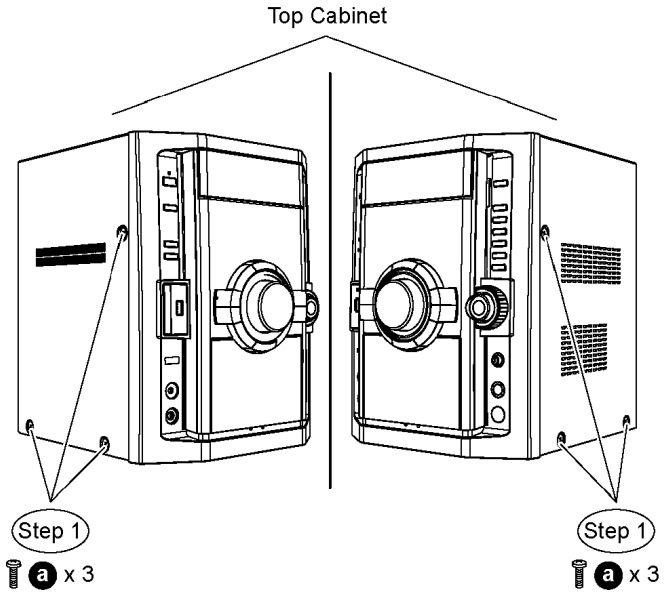


9.3. Main Components and P.C.B. Location

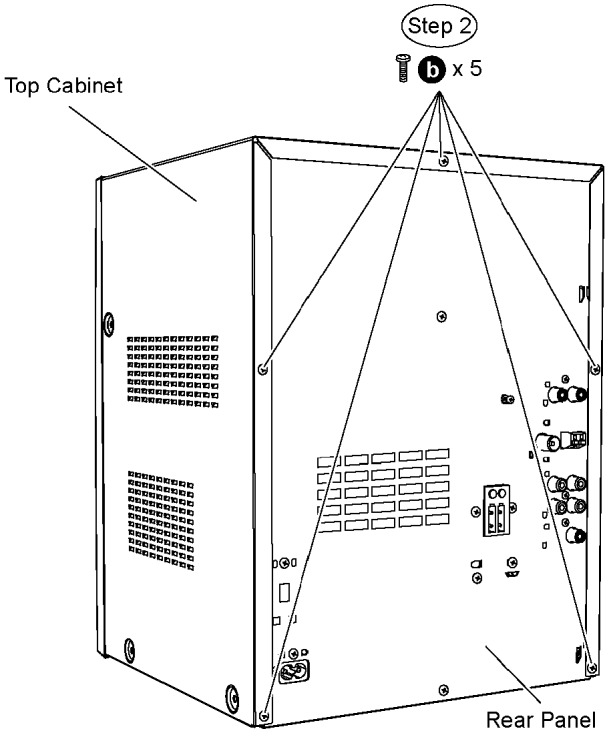


9.4. Disassembly of Top Cabinet

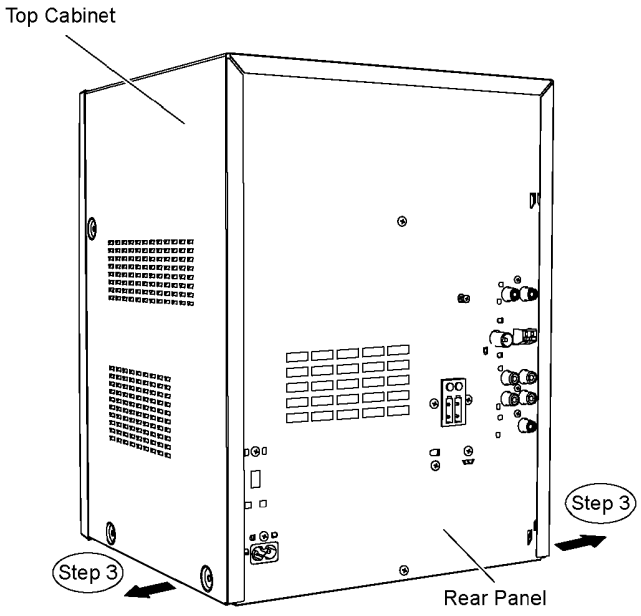
Step 1 Remove 3 screws on both sides of the top cabinet.



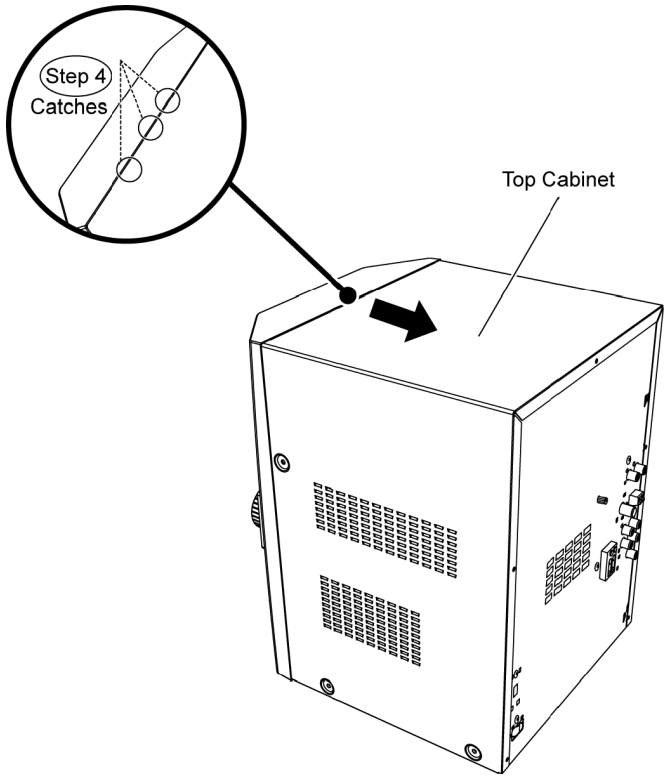
Step 2 Remove 5 screws at the rear panel.



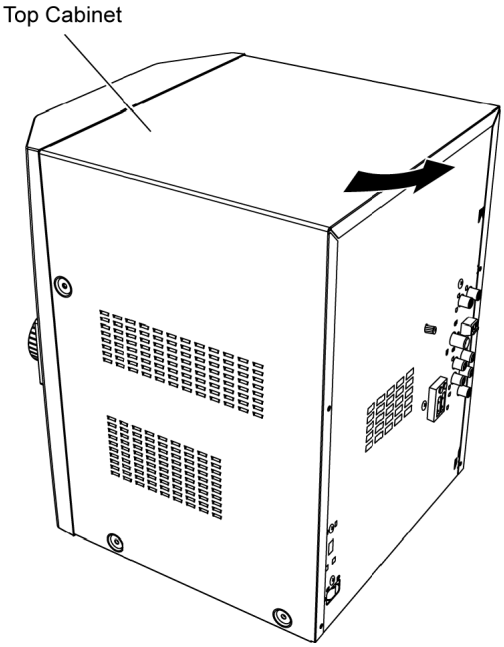
Step 3 Lift the sides of top cabinet outwards as arrow shown.



Step 4 Push the top cabinet backwards as arrow shown to release the catches.



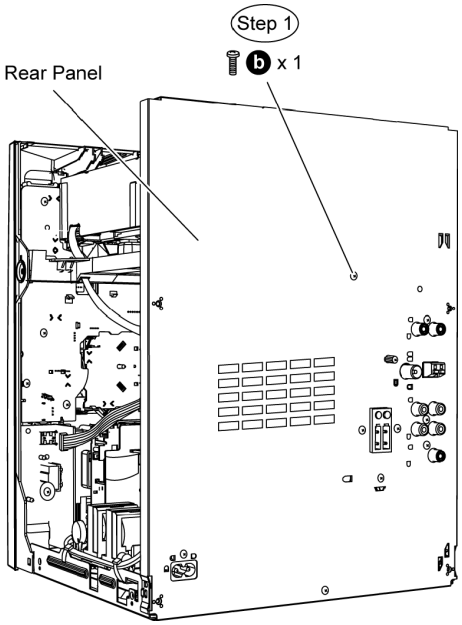
Step 5 Remove the top cabinet.



9.5. Disassembly of Mechanism Unit (CR14)

- Follow the (Step 1) to (Step 5) of Item 9.4

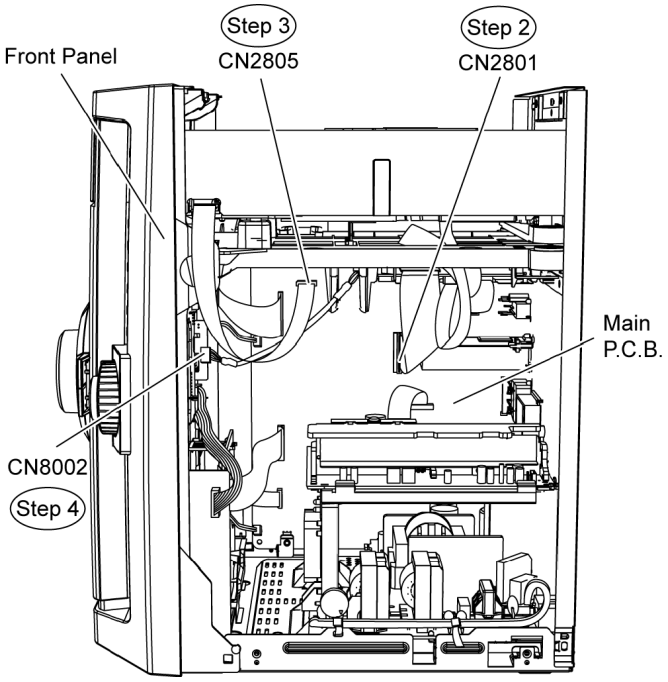
Step 1 Remove 1 screw at rear panel.



Step 2 Detach 50P FFC cable at the connector (CN2801) on Main P.C.B..

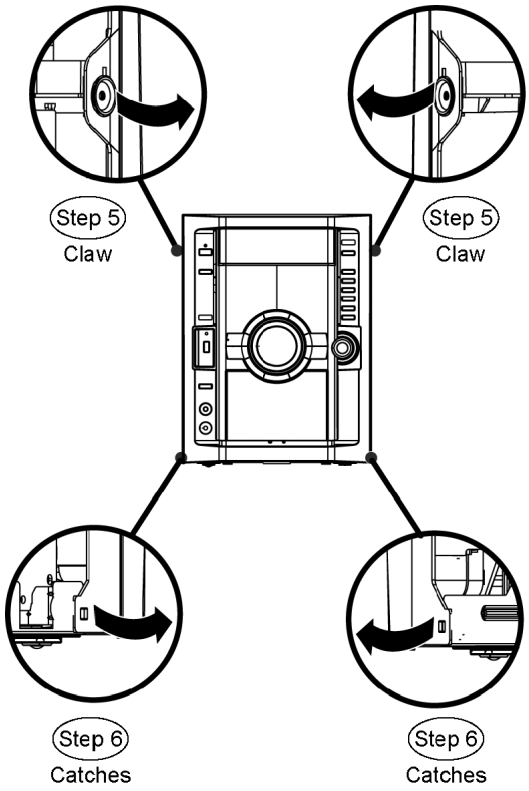
Step 3 Detach 11P FFC cable at the connector (CN2805) on Main P.C.B..

Step 4 Detach 5P cable at the connector (CN8002) on USB P.C.B..



Step 5 Release the claws outwards on both sides.

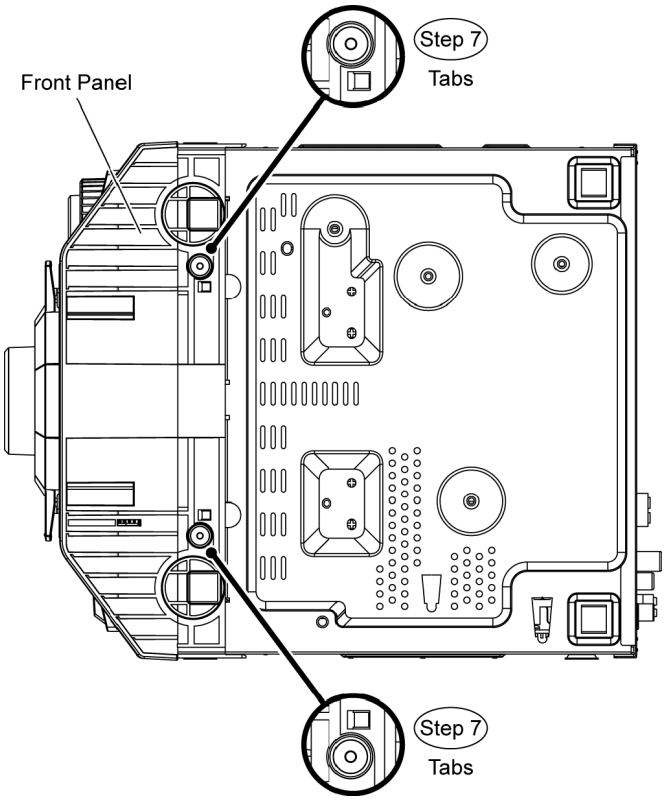
Step 6 Release catches at both sides.



Special Note: During reassembling procedure, ensure both the claws and catches are fully catched.

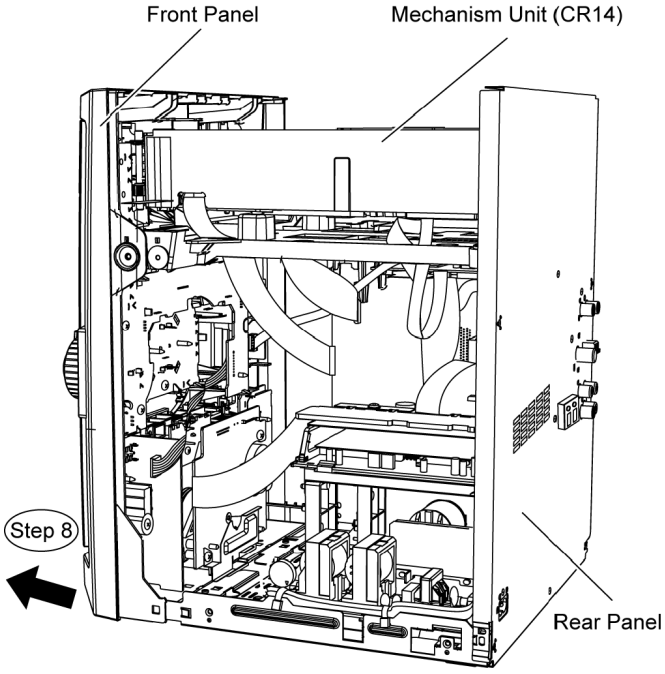
Assembly is secured upon hearing a click sound.

Step 7 Release the tabs at the bottom of the front panel.



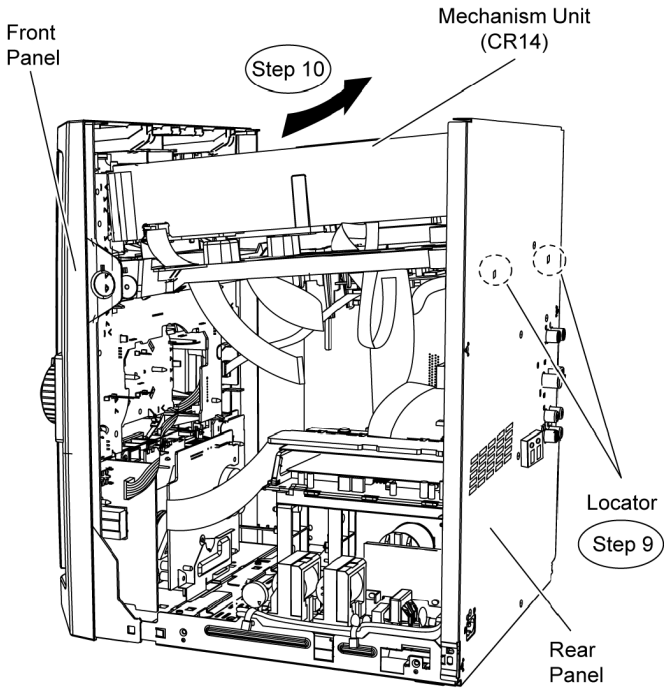
Caution: Do not exert strong force when releasing the tabs.

Step 8 Shift the front panel unit slightly forward in the direction of arrows.



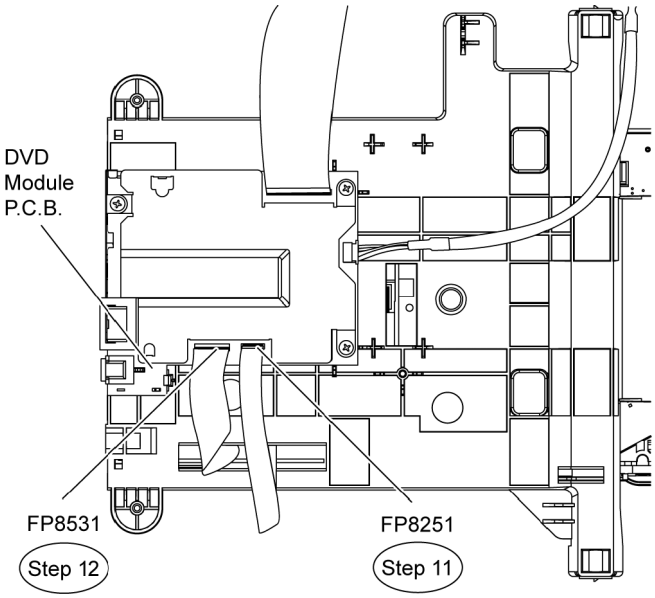
Step 9 Release mechanism unit from the 2 locators.

Step 10 Lift up the Mechanism Unit (CR14).



Step 11 Detach 7P FFC cable at the connector (FP8251) on DVD Module P.C.B..

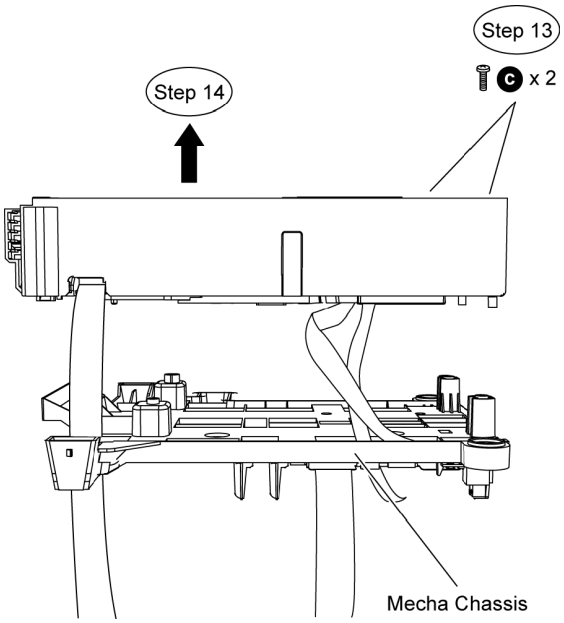
Step 12 Detach 26P FFC cable at the connector (FP8531) on DVD Module P.C.B..



- **Disassembly of Mecha Chassis**

Step 13 Remove 2 screws.

Step 14 Remove the Mecha Chassis as arrow shown.



Note 1: For disassembly & assembly of traverse unit, please refer to original Service Manual for the Disassembly and Assembly of the Mechanism Unit (CR14).

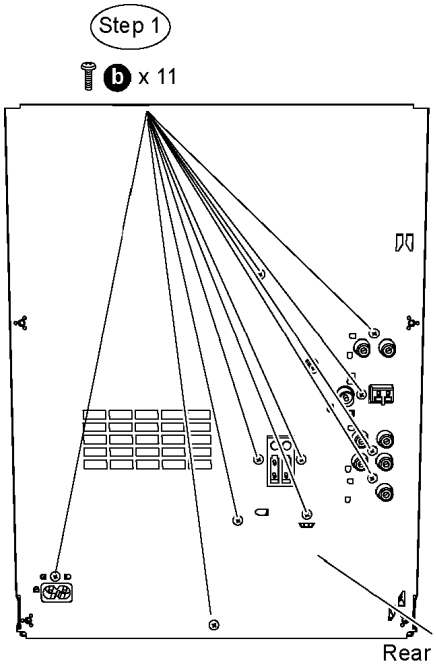
Note 2: During reassembling procedure, ensure the Mechanism Unit (CR14), is seated properly at the locators.

9.6. Disassembly of Rear Panel

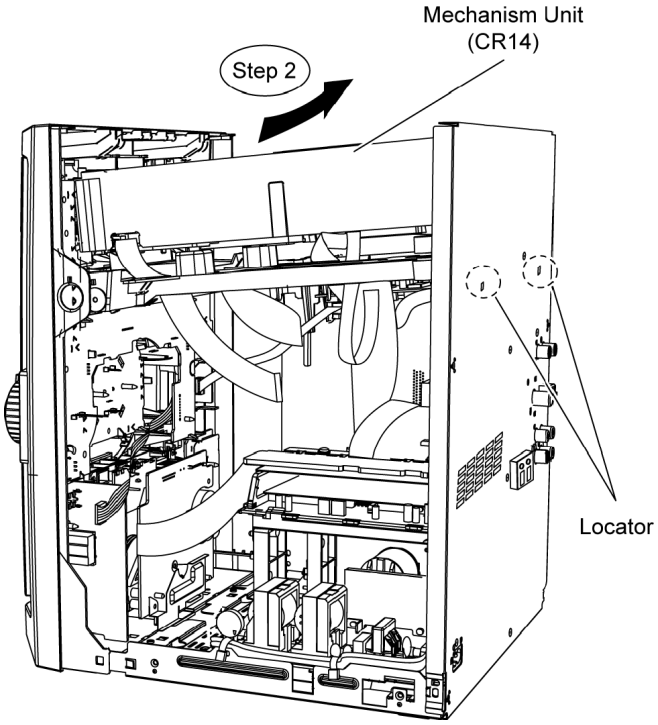
- Follow the (Step 1) to (Step 5) of Item 9.4

- **Disassembly of Rear Panel**

Step 1 Remove 11 screws at rear panel.

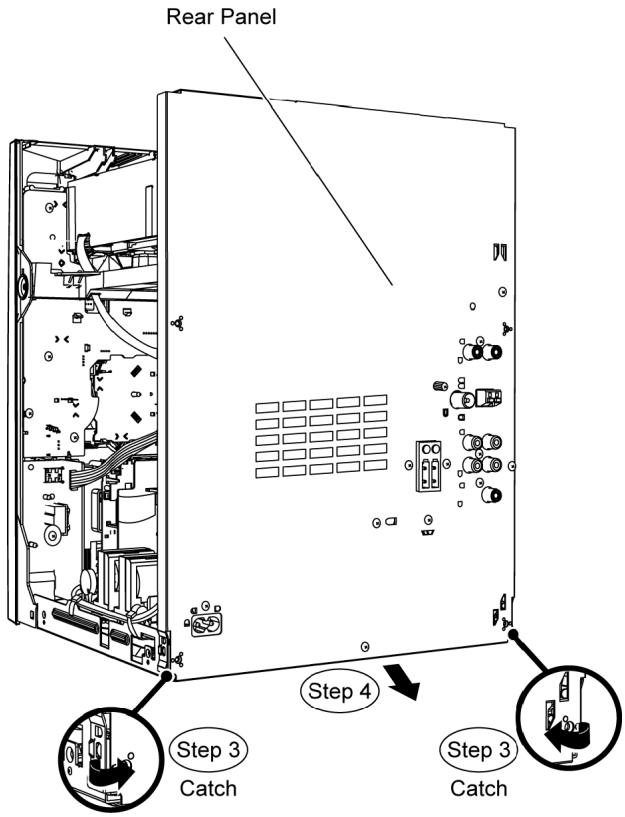


Step 2 Slightly lift up the Mechanism Unit (CR14) from the two locators.



Step 3 Release 2 catch from the side panel.

Step 4 Remove the rear panel in the direction of arrow.



9.7. Disassembly of Front Panel Unit

- Follow the (Step 1) to (Step 5) of Item 9.4
- Follow the (Step 5) to (Step 7) of Item 9.5

Step 1 Detach 27P FFC cable at connector (CN2807) on Main P.C.B..

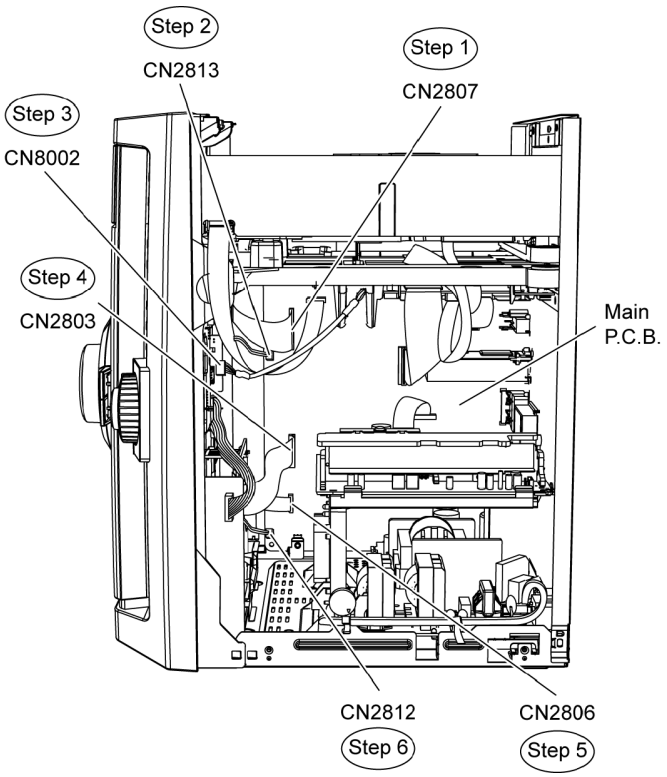
Step 2 Detach 2P cable at connector (CN2813) on Main P.C.B..

Step 3 Detach 5P cable at connector (CN8002) on USB P.C.B..

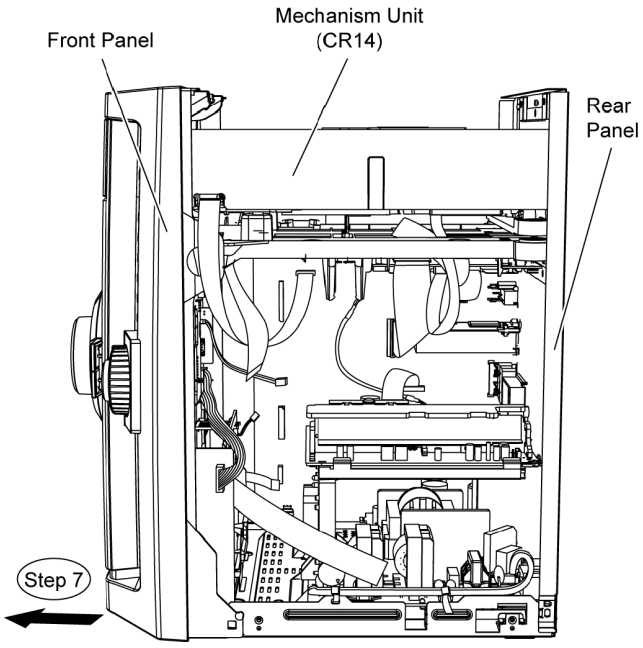
Step 4 Detach 21P FFC cable at connector (CN2803) on Main P.C.B..

Step 5 Detach 10P FFC cable at connector (CN2806) on Main P.C.B..

Step 6 Detach 2P cable at connector (CN2812) on Main P.C.B..



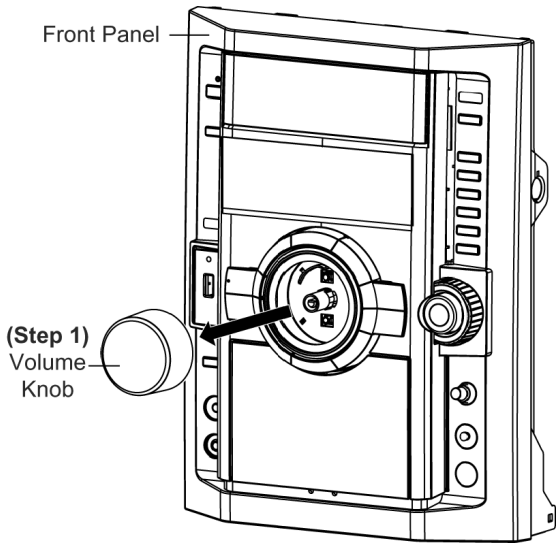
Step 7 Detach the front panel unit in direction of arrow.



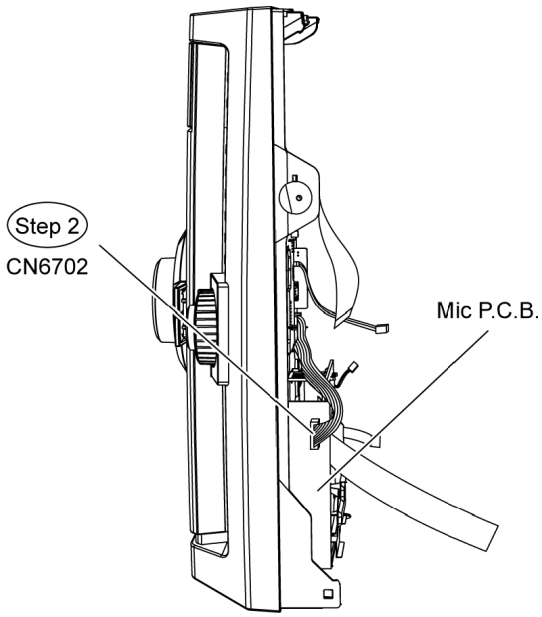
9.8. Disassembly of Panel P.C.B., Tact Switch P.C.B. & Remote Sensor P.C.B., Side Bar (L) LED P.C.B. and Side Bar (R) LED P.C.B.

- Follow the (Step 1) to (Step 5) of Item 9.4
- Follow the (Step 5) to (Step 7) of Item 9.5
- Follow the (Step 1) to (Step 7) of Item 9.7

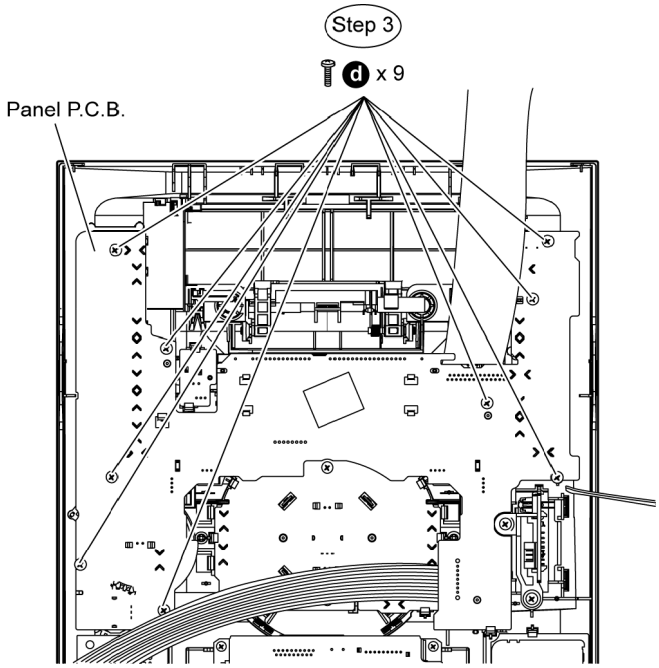
Step 1 Remove Volume knob as arrow shown.



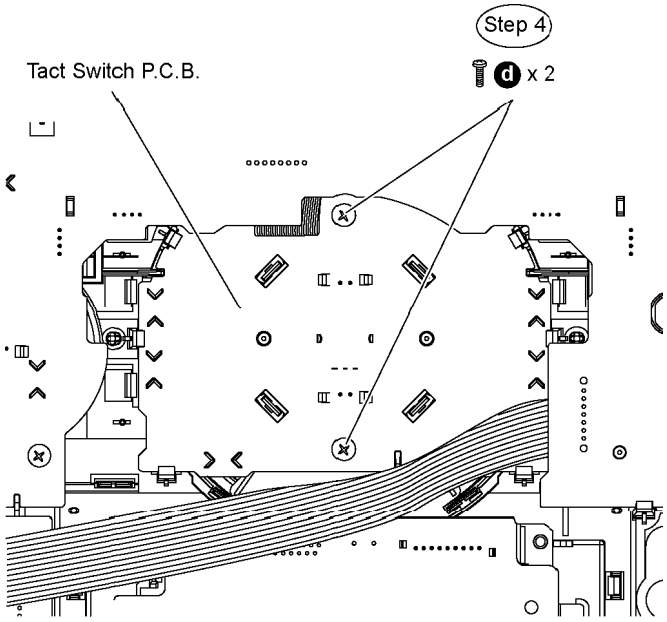
Step 2 Detach 7P cable at the connector (CN6702) on Mic P.C.B..



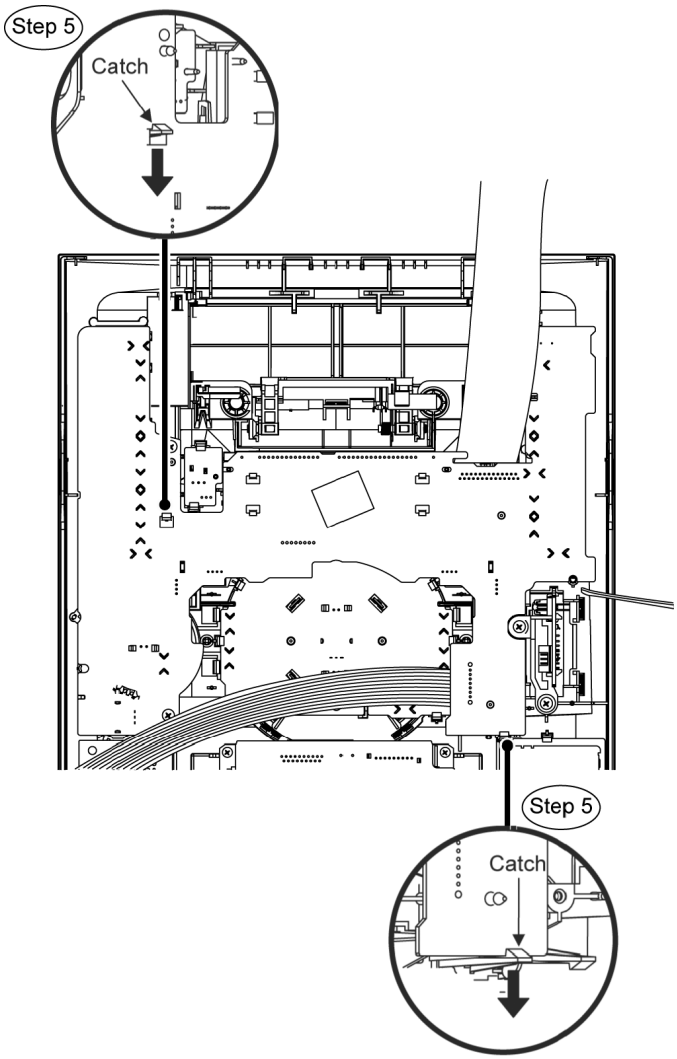
Step 3 Remove 9 screws at Panel P.C.B..



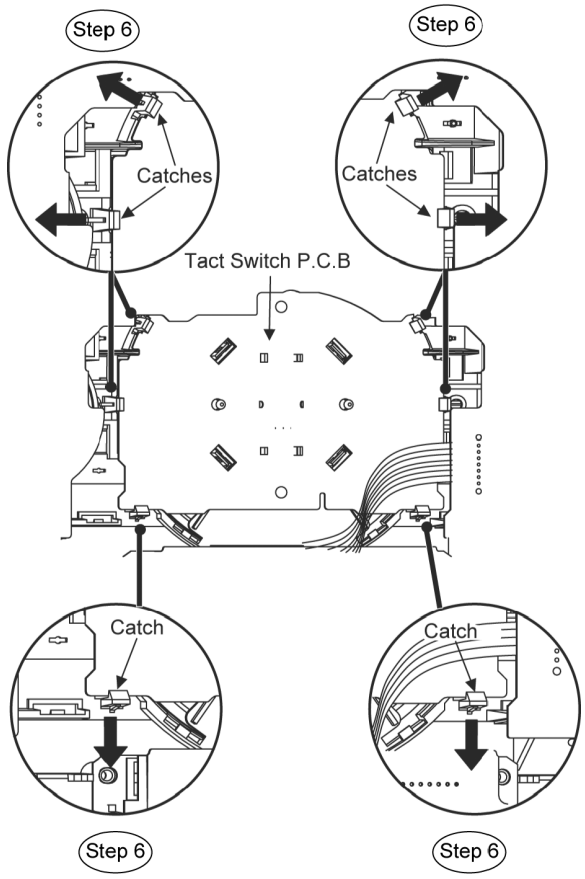
Step 4 Remove 2 screws at Tact Switch P.C.B..



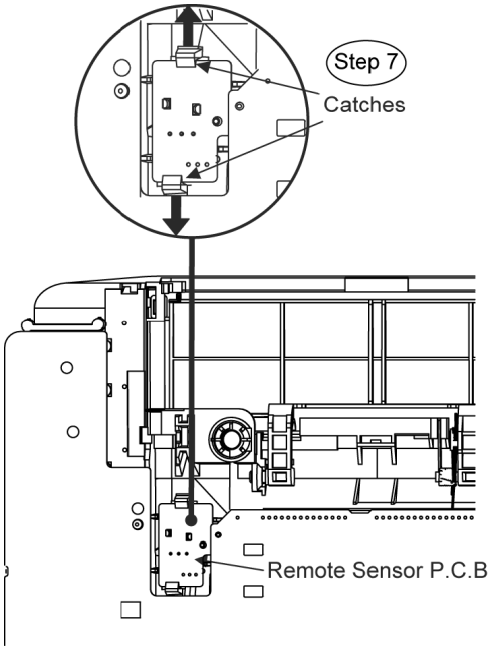
Step 5 Release 2 catches at Panel P.C.B..



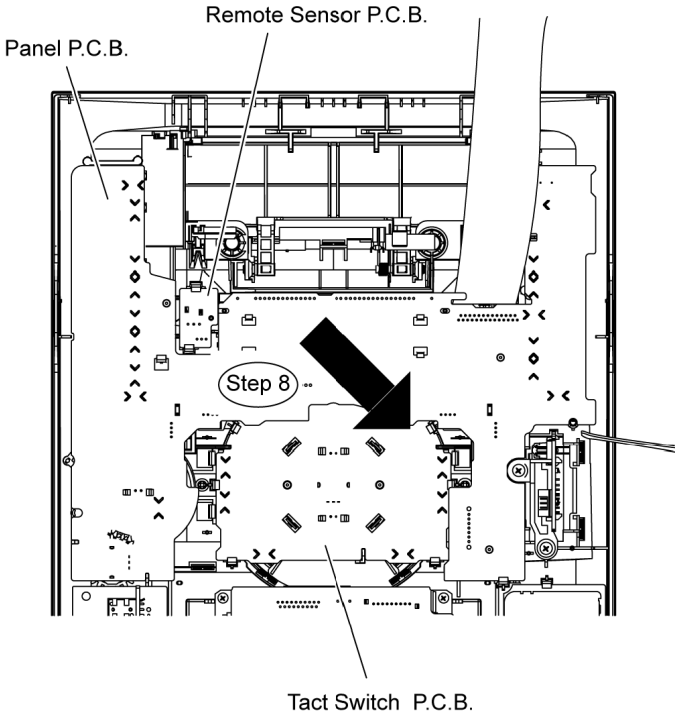
Step 6 Release 6 catches at Tact Switch P.C.B..



Step 7 Release 2 catches at Remote Sensor P.C.B..



Step 8 Lift up the Panel P.C.B., Tact Switch P.C.B. & Remote Sensor P.C.B. altogether as arrow shown.

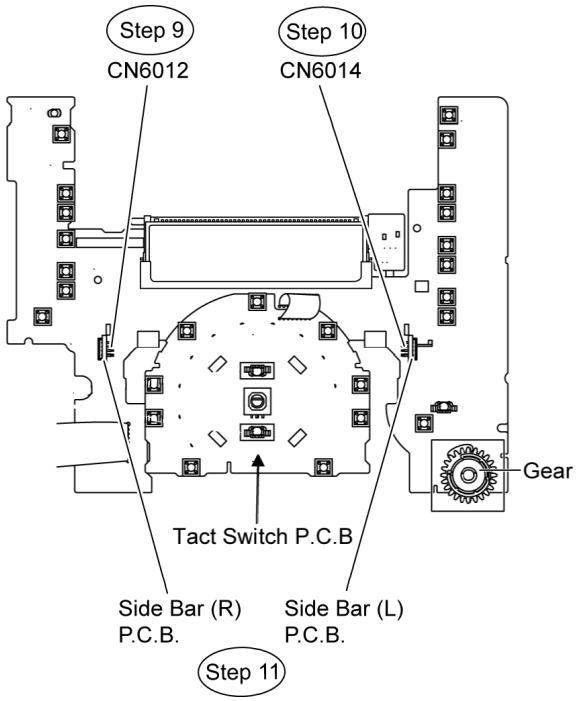


- **Disassembly of Side Bar (L) Led P.C.B. and Side Bar (R) P.C.B.**

Step 9 Detach Side Bar (L) P.C.B at the connector (CN6014) on Panel P.C.B.

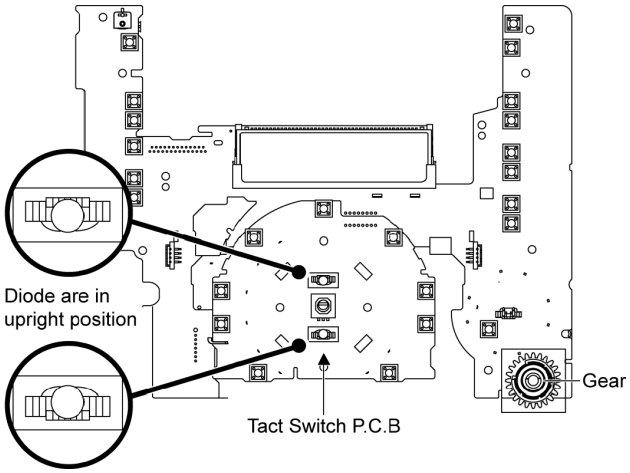
Step 10 Detach Side Bar (R) P.C.B at the connector (CN6012) on Panel P.C.B.

Step 11 Remove the Side Bar (L) P.C.B. and Side Bar (R) P.C.B.

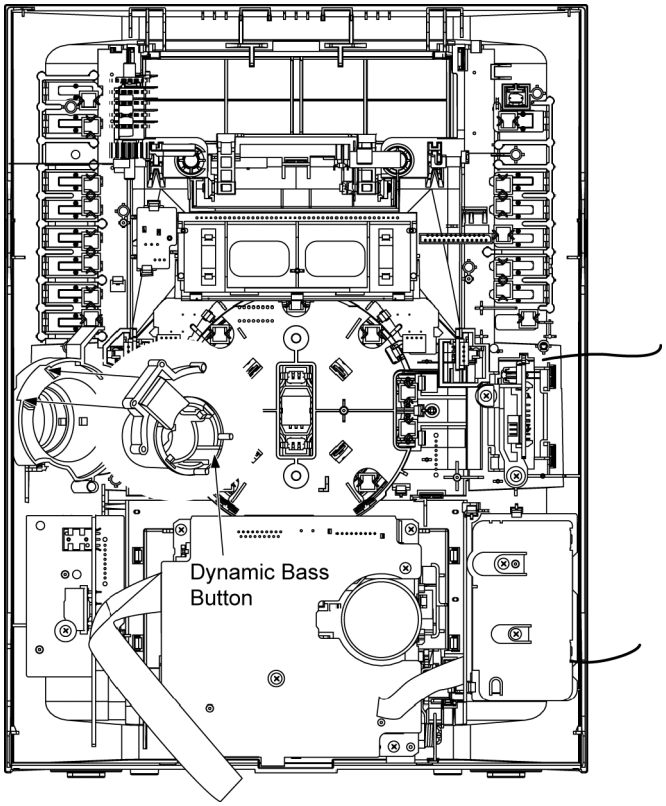


Caution Notes:

1. During assembling of the P.C.Bs, ensure that the diode shown on Tact Switch P.C.B. are in upright position.



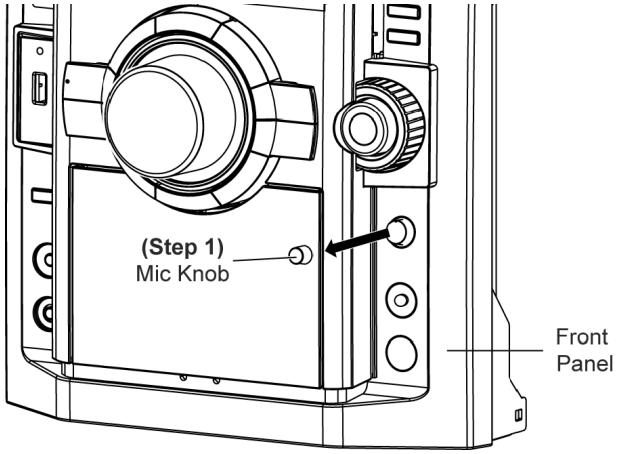
2. During reassembling procedures, ensure that Dynamic Bass Button is seated properly.



9.9. Disassembly of Mic P.C.B.

- Follow the (Step 1) to (Step 5) of Item 9.4
- Follow the (Step 5) to (Step 7) of Item 9.5
- Follow the (Step 1) to (Step 7) of Item 9.7

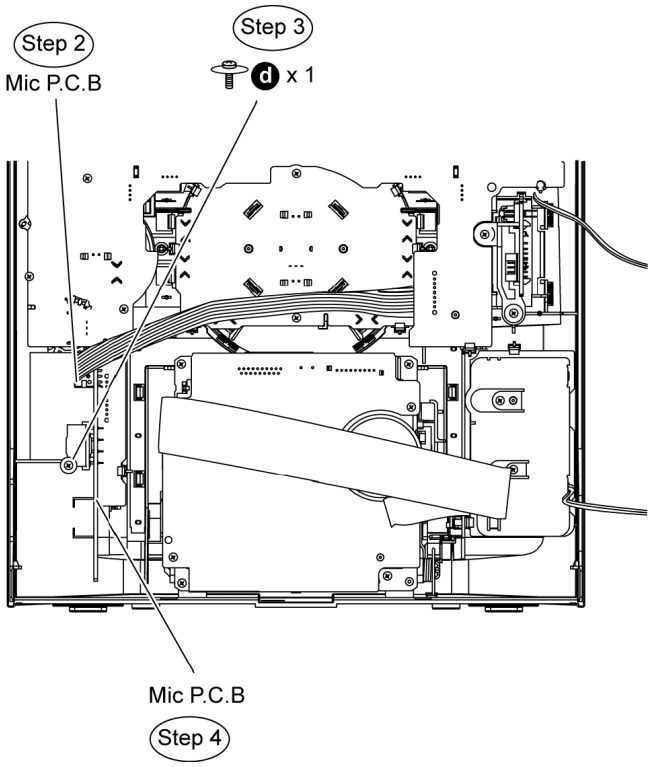
Step 1 Remove Mic knob as arrow shown.



Step 2 Detach 7P cable at the connector (CN6702) on Mic P.C.B..

Step 3 Remove 1 screw on Mic P.C.B..

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



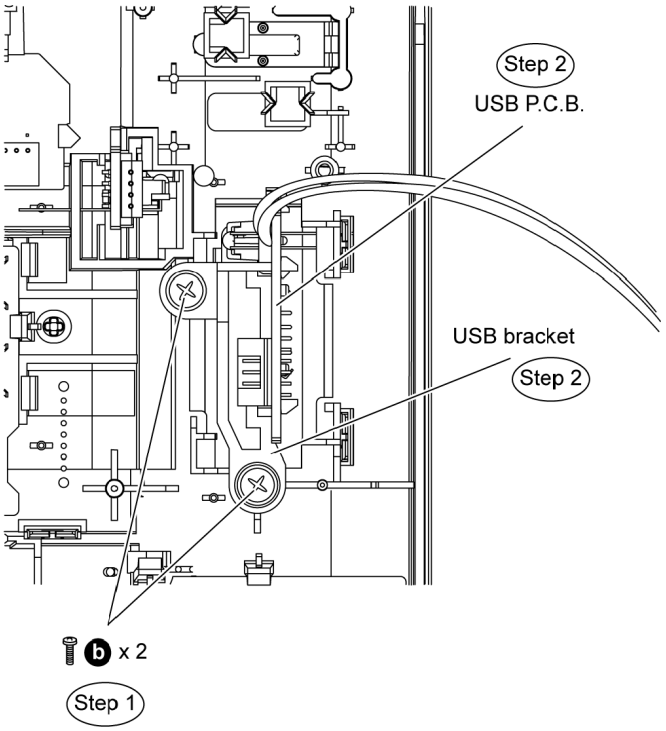
9.10. Disassembly of USB P.C.B.

- Follow the (Step 1) to (Step 5) of Item 9.4
- Follow the (Step 5) to (Step 8) of Item 9.5
- Follow the (Step 1) to (Step 7) of Item 9.7

- **Disassembly of USB bracket.**

Step 1 Remove 2 screws at USB bracket.

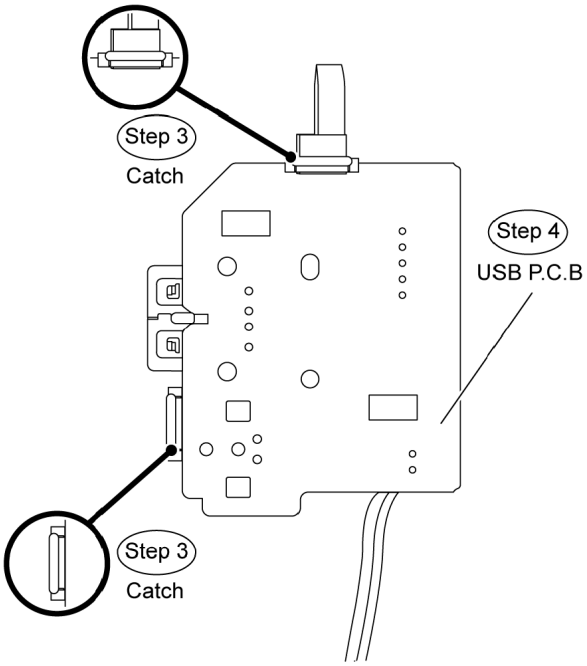
Step 2 Remove the USB bracket together with USB P.C.B..



- **Disassembly of USB P.C.B..**

Step 3 Release the catches at USB P.C.B..

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



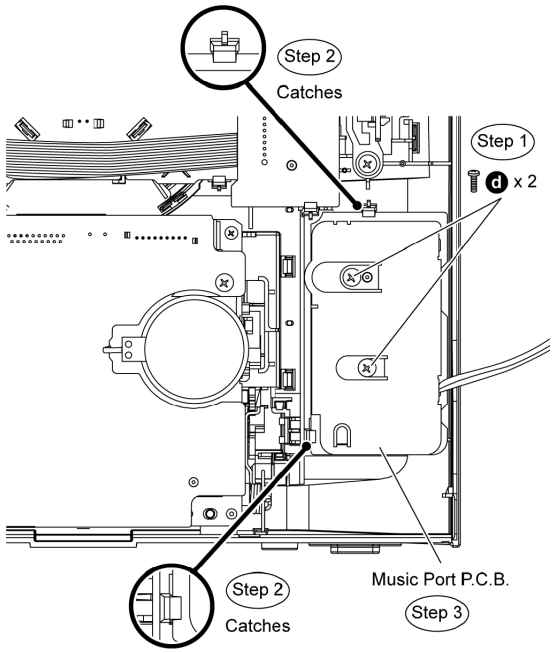
9.11. Disassembly of Music Port P.C.B.

- Follow the (Step 1) to (Step 5) of Item 9.4
- Follow the (Step 5) to (Step 7) of Item 9.5
- Follow the (Step 1) to (Step 7) of Item 9.7

Step 1 Remove 2 screws at Music Port P.C.B..

Step 2 Release 2 catches.

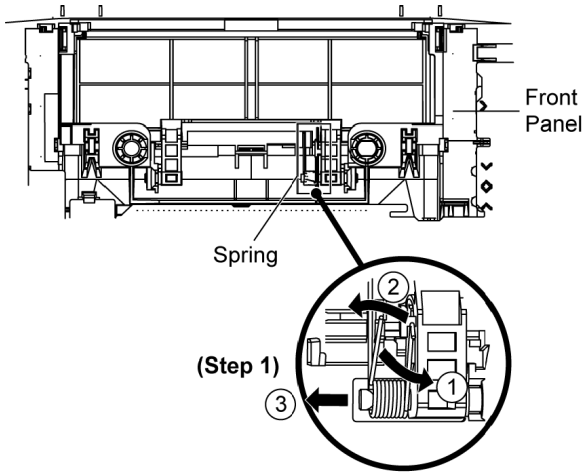
Step 3 Lift up the Music Port P.C.B..



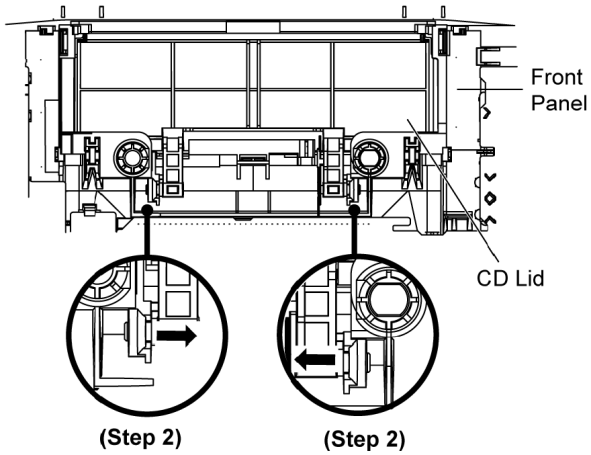
9.12. Disassembly of CD Lid

- Follow the (Step 1) to (Step 5) of Item 9.4
- Follow the (Step 5) to (Step 8) of Item 9.5
- Follow the (Step 1) to (Step 7) of Item 9.7

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



Step 2 Remove CD Lid as arrow shown.



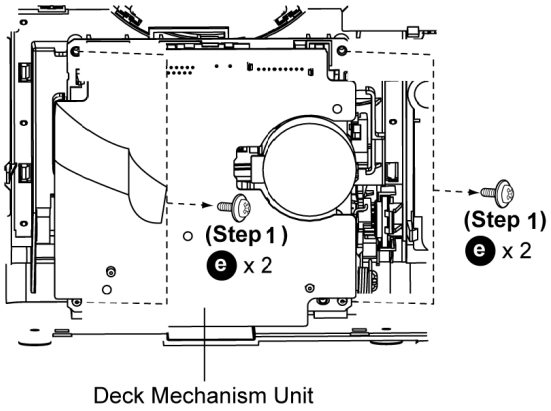
Note: Please ensure that the spring is assembly at right

position.

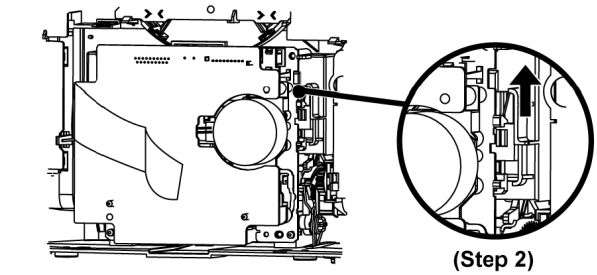
9.13. Disassembly of Deck Mechanism Unit

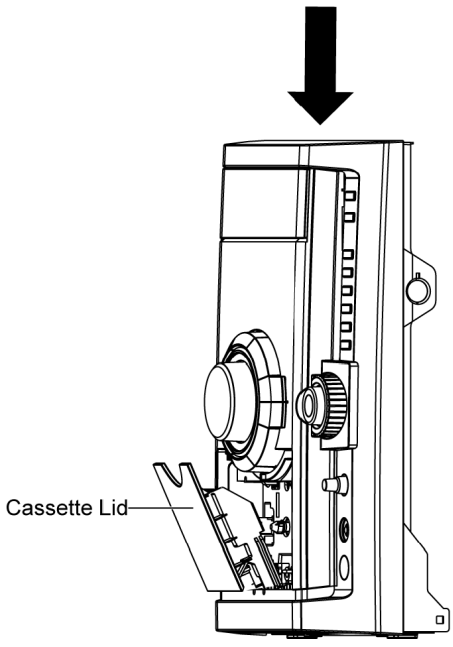
- Follow the (Step 1) to (Step 5) of Item 9.4
- Follow the (Step 5) to (Step 7) of Item 9.5
- Follow the (Step 1) to (Step 7) of Item 9.7

Step 1 Remove 4 screws at Deck Mechanism.

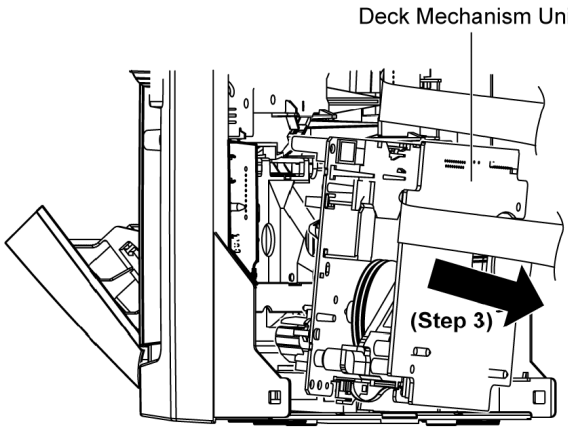


Step 2 Push the lever upward as arrow shown to open the cassette lid assembly.





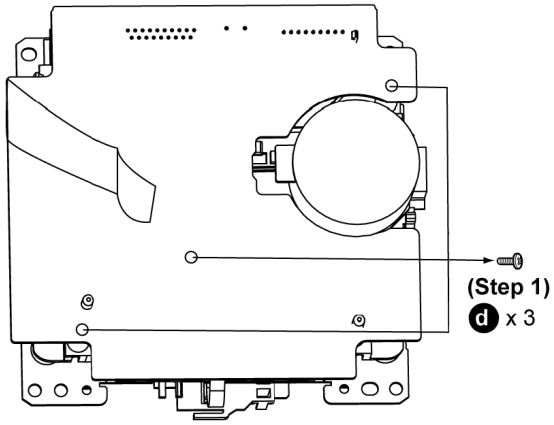
Step 3 Remove the deck mechanism unit as arrow shown.



9.14. Disassembly of Deck P.C.B.

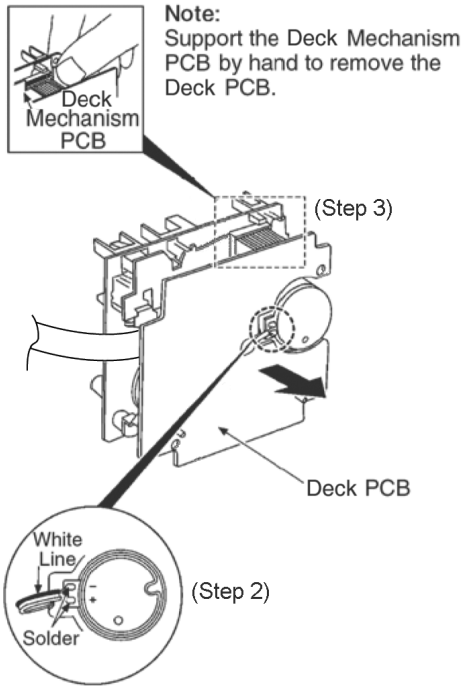
- Follow the (Step 1) to (Step 5) of Item 9.4
- Follow the (Step 5) to (Step 7) of Item 9.5
- Follow the (Step 1) to (Step 7) of Item 9.7
- Follow the (Step 1) to (Step 3) of Item 9.13

Step 1 Remove 3 screws.

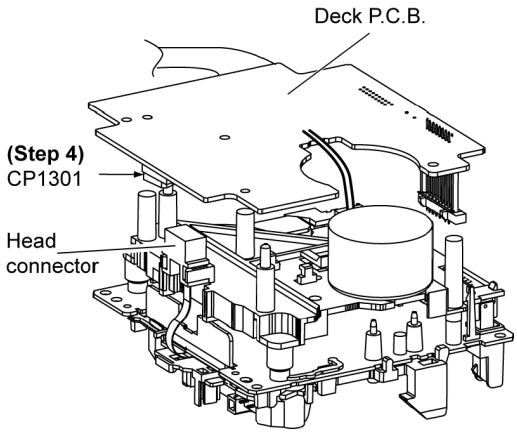


Step 2 Desolder 2P wires at the motor terminal.

Step 3 Detach 9P cable at connector (CP1902) on Deck P.C.B..



Step 4 Lift up the Deck P.C.B. to detach from head connector (CP1301).



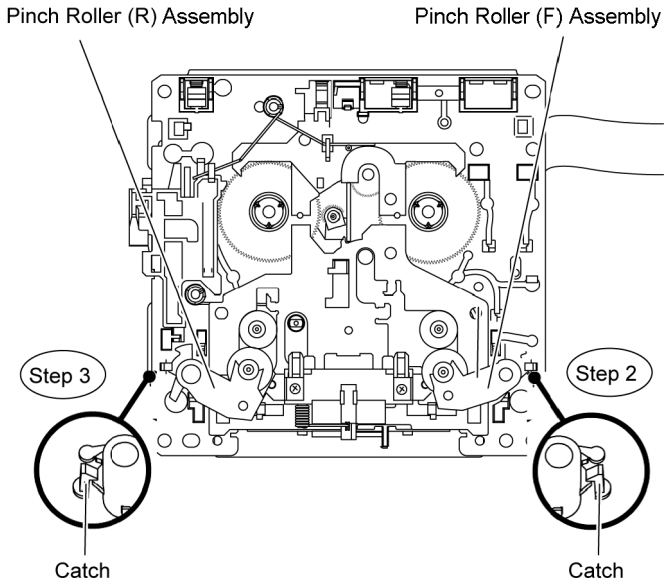
9.15. Disassembly of Deck Mechanism

- Follow the (Step 1) to (Step 5) of Item 9.4
- Follow the (Step 5) to (Step 7) of Item 9.5
- Follow the (Step 1) to (Step 7) of Item 9.7
- Follow the (Step 1) to (Step 3) of Item 9.13
- Follow the (Step 1) to (Step 4) of Item 9.14

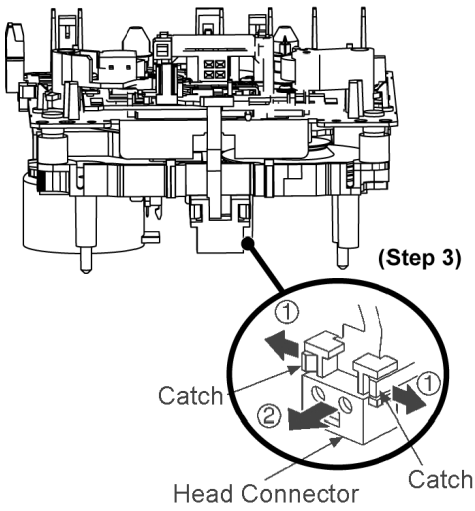
9.15.1. Replacement of Pinch Roller and Head Block

Step 1 Release catch to remove the Pinch Roller (F) Assembly.

Step 2 Release catch to remove the Pinch Roller (R) Assembly.

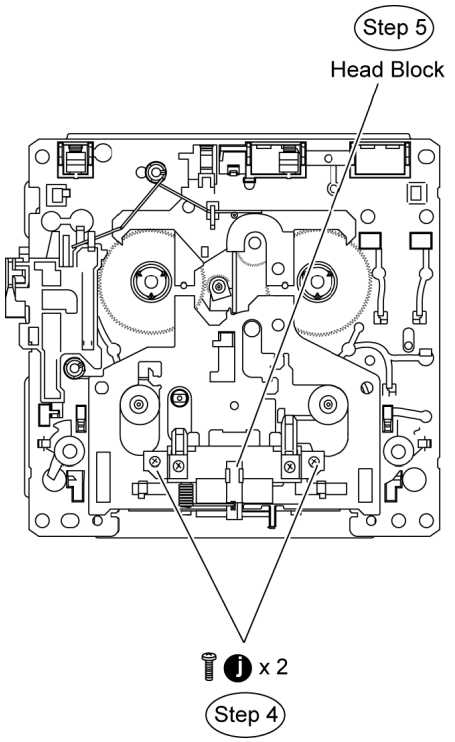


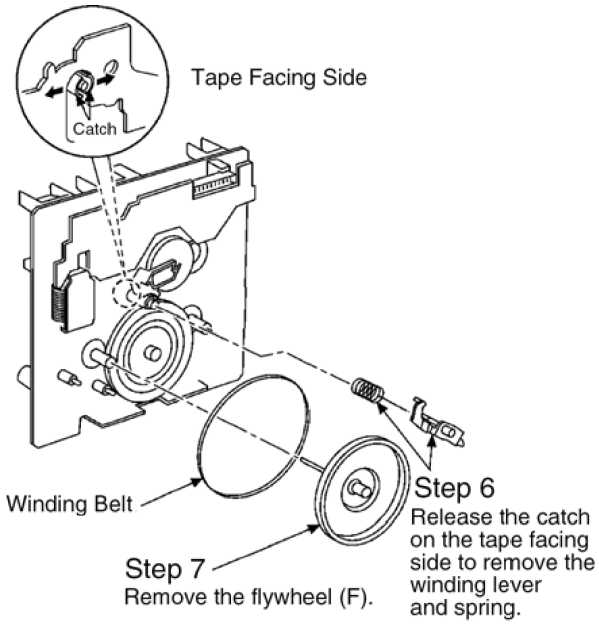
Step 3 Release the catches to remove the head connector.



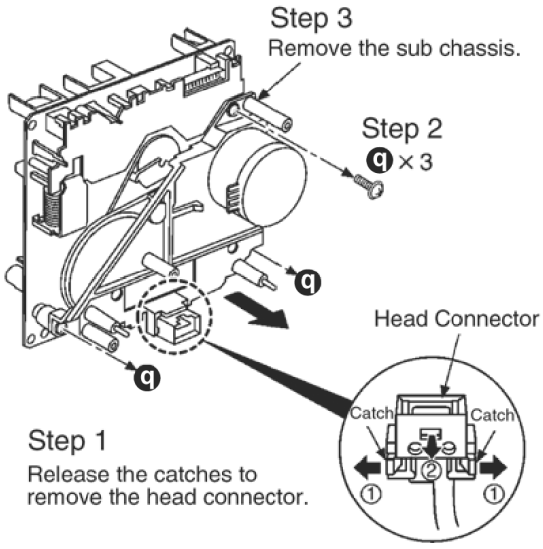
Step 4 Remove 2 screws at the Deck Mechanism unit.

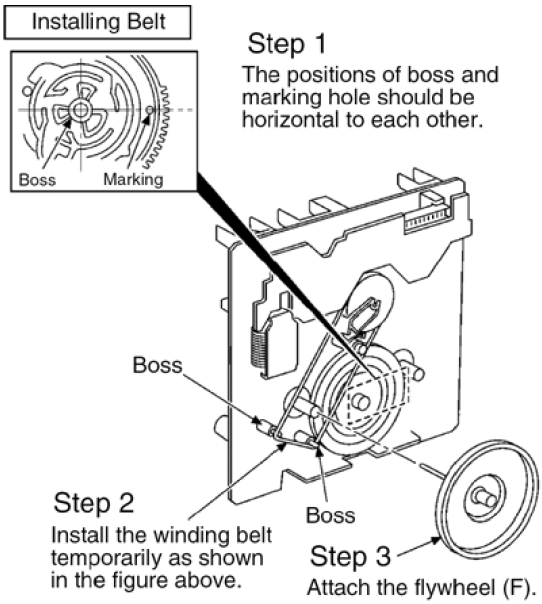
Step 5 Remove head block.

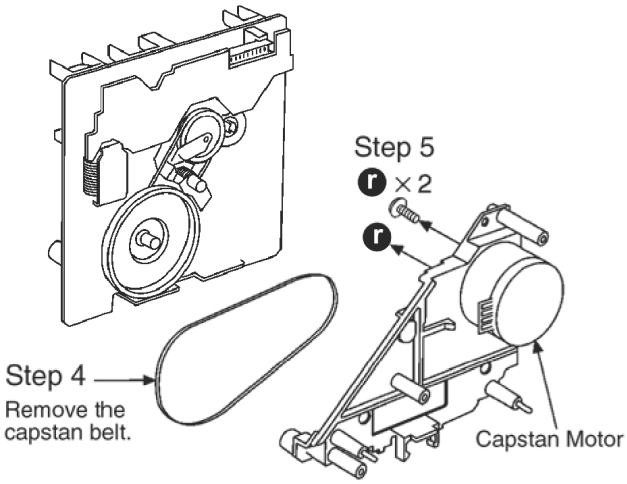


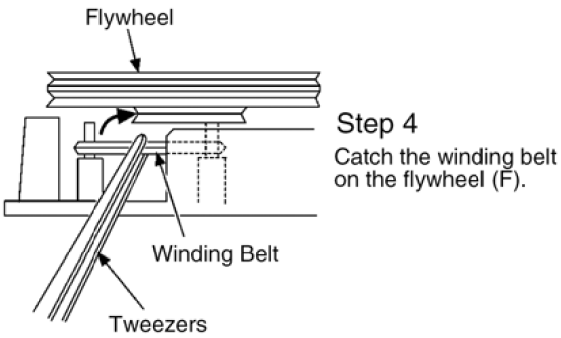


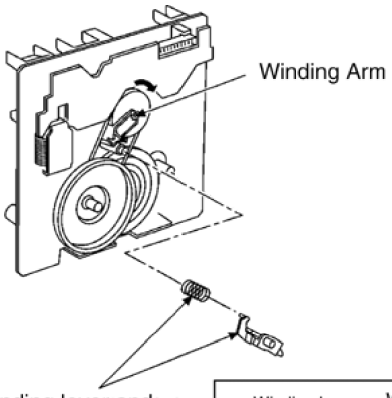
9.15.2. Replacement of Motor, Capstan Belt A, Capstan Belt B, and Winding Belt





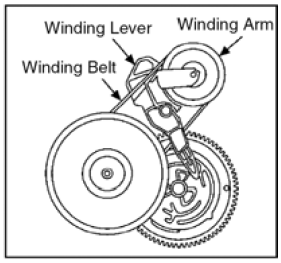






Step 5

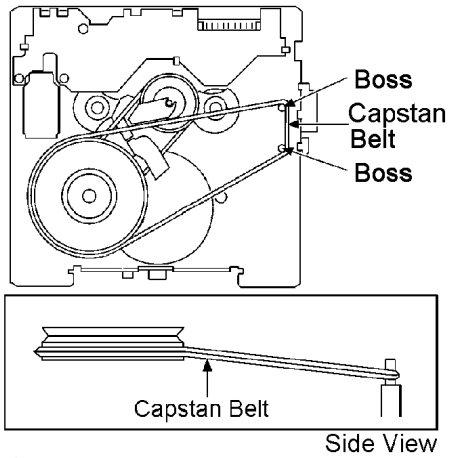
Install the winding lever and spring while the winding arm is pressed to the arrow direction. (Be sure that the winding lever is firmly inserted and the catch is hooked.)



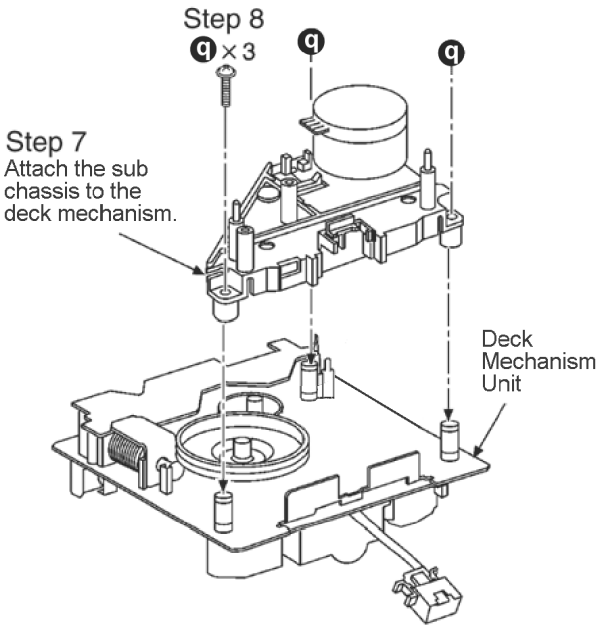
Note:
The winding lever should be positioned as shown in the right figure.

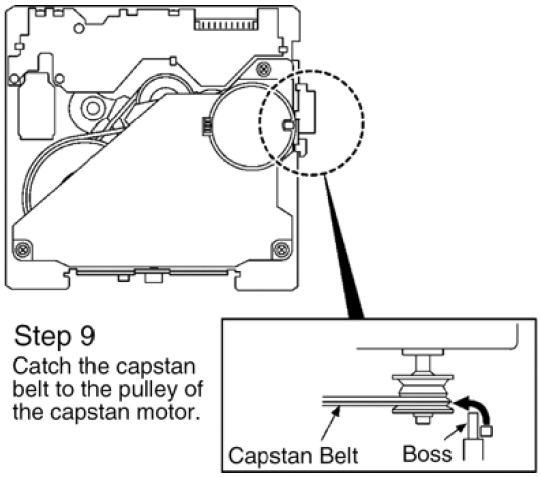
Step 6

Install the capstan belt temporarily as shown in the figure below.



Note:
Keep the belt away from grease.

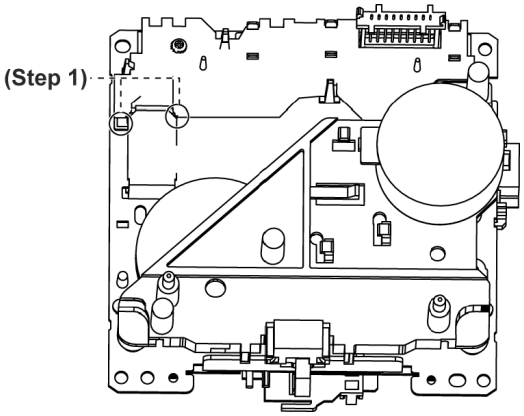




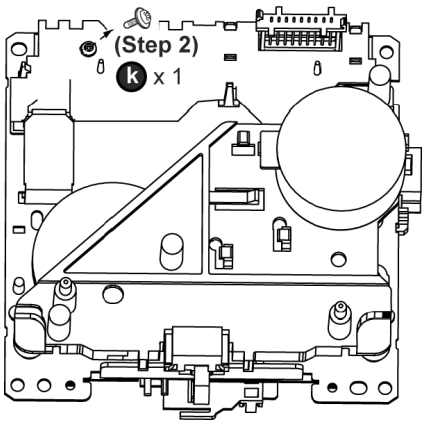
9.16. Disassembly of Deck Mechanism P.C.B.

- Follow the (Step 1) to (Step 5) of Item 9.4
- Follow the (Step 5) to (Step 8) of Item 9.5
- Follow the (Step 1) to (Step 7) of Item 9.7
- Follow the (Step 1) to (Step 3) of Item 9.13
- Follow the (Step 1) to (Step 4) of Item 9.14

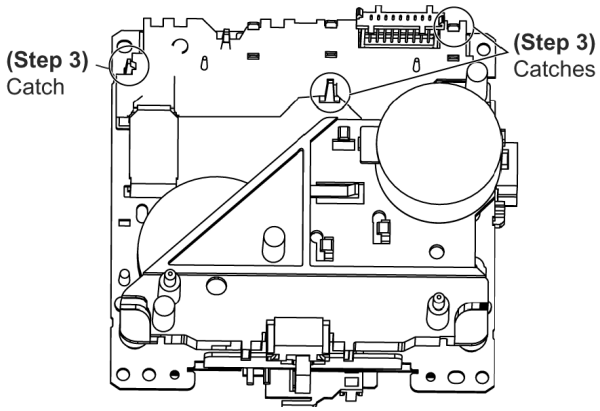
Step 1 Desolder plunger terminals.



Step 2 Remove 1 screw at Deck Mechanism P.C.B..



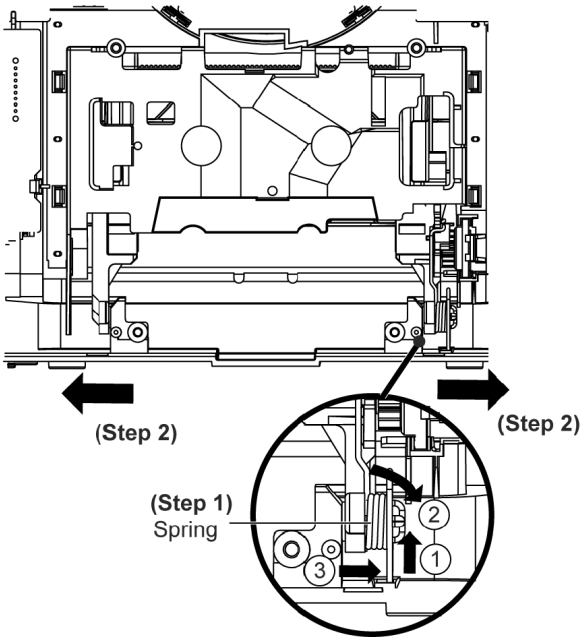
Step 3 Release 3 catches to remove the Deck Mechanism P.C.B..



9.17. Disassembly of Cassette Lid

- Follow the (Step 1) to (Step 5) of Item 9.4
- Follow the (Step 5) to (Step 7) of Item 9.5
- Follow the (Step 1) to (Step 7) of Item 9.7
- Follow the (Step 1) to (Step 3) of Item 9.13

Step 1 Remove the spring.

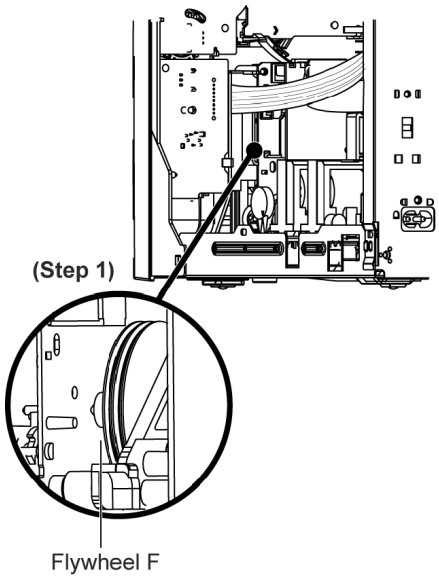


Step 2 Push the cassette lid in the direction of arrows.

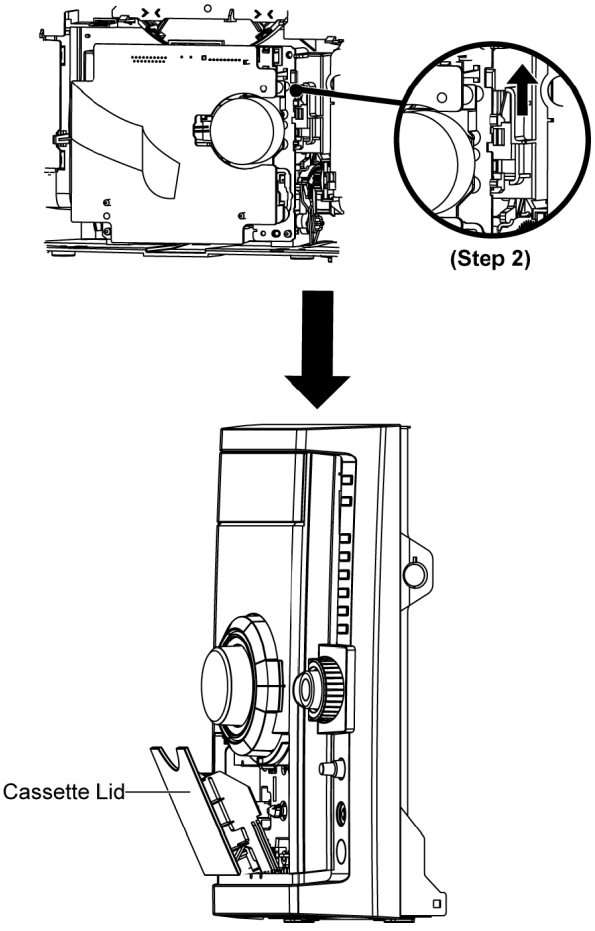
9.18. Rectification for Tape Jam Problem

- Follow the (Step 1) to (Step 5) of Item 9.4

Step 1 If a cassette tape cannot be removed from the deck (the tape is caught by the capstan or pinch roller during playback or recording), rotate the flywheel F in the direction of the arrow to remove it.



Step 2 Push the lever upward and open the cassette lid.



Note: Follow Disassembly of Cassette Lid. Remove the cassette tape.

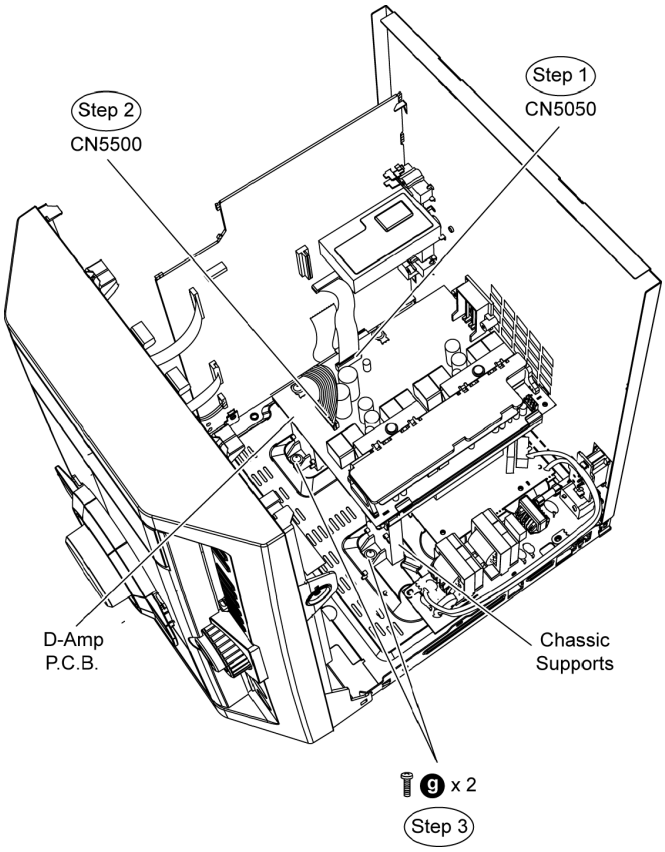
9.19. Disassembly of D-Amp P.C.B.

- Follow the (Step 1) to (Step 5) of Item 9.4
- Follow the (Step 1) to (Step 10) of Item 9.5

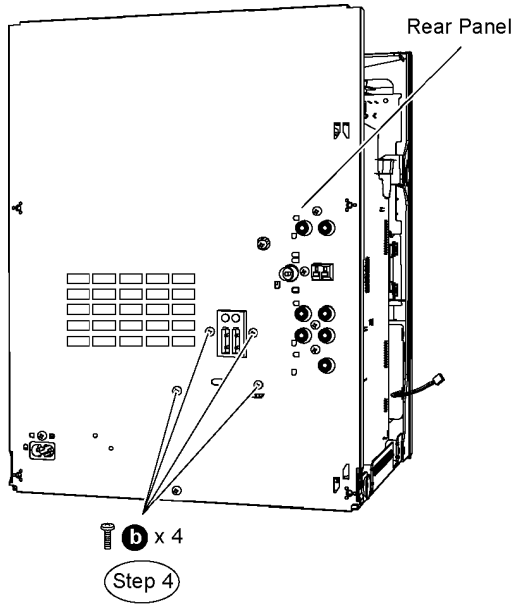
Step 1 Detach 17P FFC cable at connector (CN5050) at D-Amp P.C.B..

Step 2 Detach 8P wired connector (CN5500) at D-Amp P.C.B..

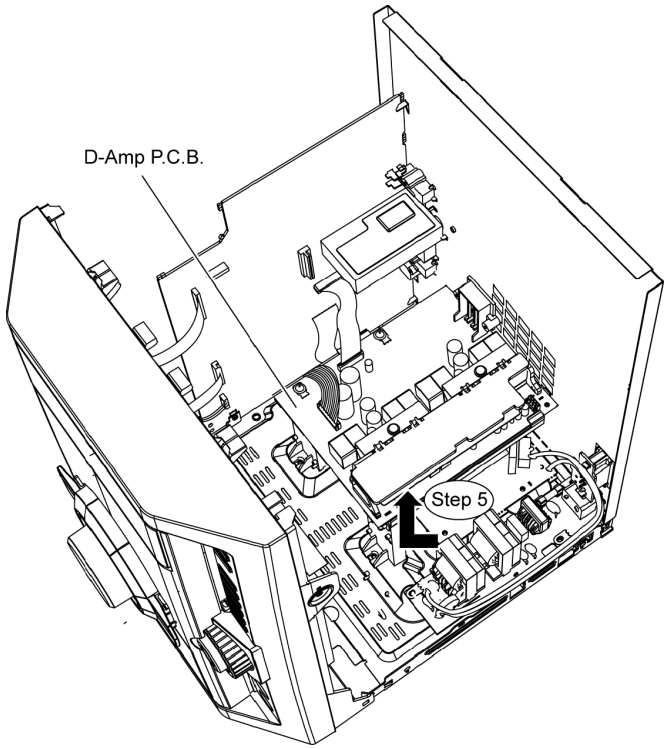
Step 3 Remove 2 screws at D-Amp P.C.B. chassis support.



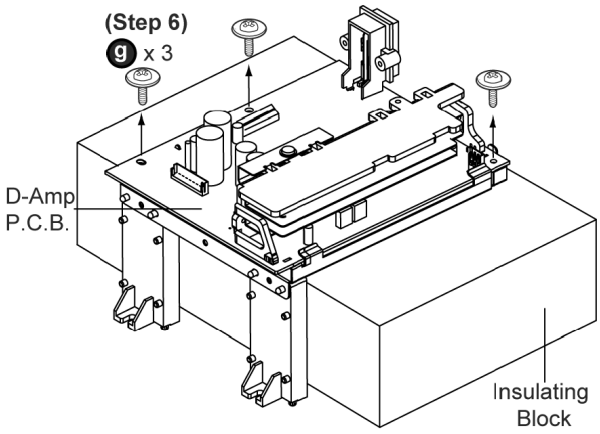
Step 4 Remove 4 screws at the rear panel.



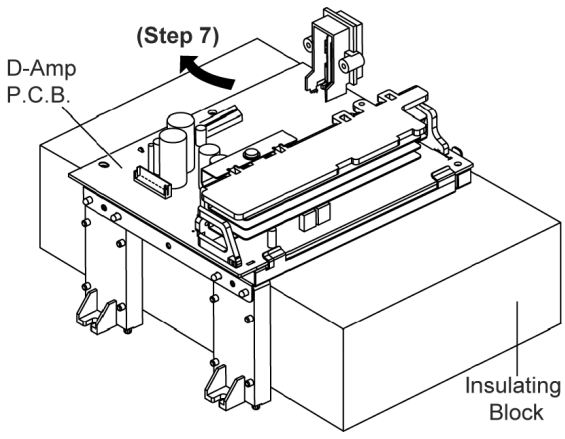
Step 5 Lift up the D-Amp P.C.B. together with the chassis support as arrow shown.



Step 6 Remove 3 screws from D-Amp P.C.B..



Step 7 Lift up D-Amp P.C.B. as arrow shown.



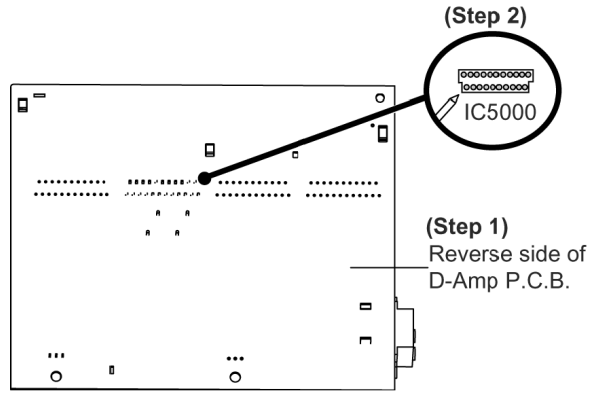
Note: During reassembling procedures, ensure the P.C.B. is seated properly at the chassis support.

9.20. Replacement of Audio Digital Power Amp IC (IC5000)

- Follow the (Step 1) to (Step 5) of Item 9.4
- Follow the (Step 1) to (Step 10) of Item 9.5
- Follow the (Step 1) to (Step 7) of Item 9.19

Step 1 Flip over D-Amp P.C.B..

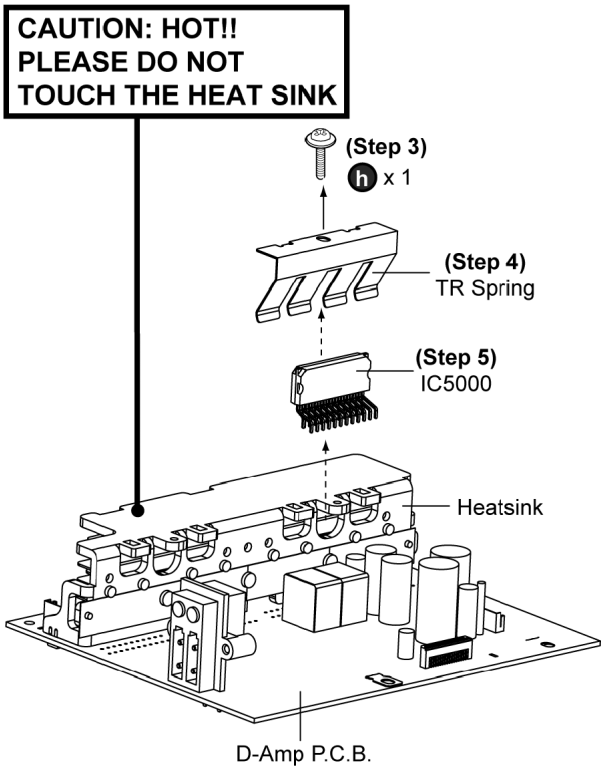
Step 2 Desolder pins of the Audio Digital Power Amp IC (IC5000) on the reverse side of D-Amp P.C.B..



Step 3 Remove 1 screw.

Step 4 Remove TR Spring in the direction of arrow shown.

Step 5 Remove Audio Digital Power Amp IC (IC5000) from the heat sink unit.



Caution: Handle the heat sink power unit with caution due to its high temperature after prolonged use. Touching it, may lead to injuries.

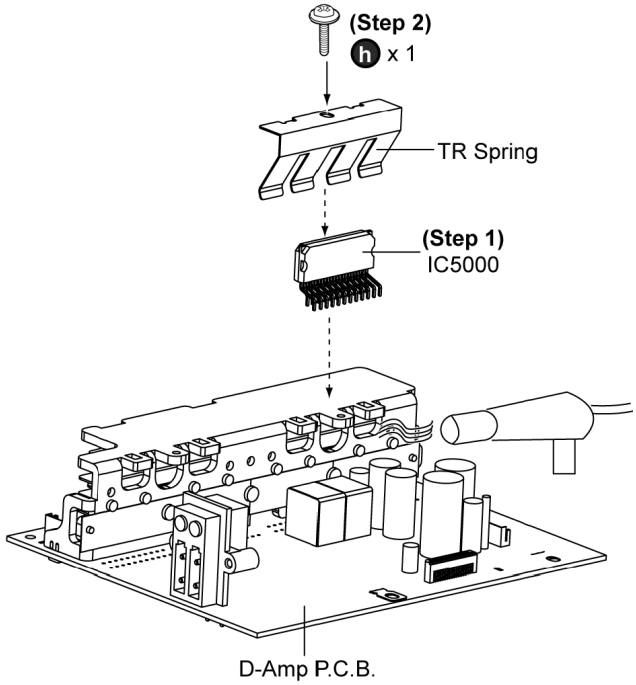
9.20.1. Assembly of Audio Digital Power Amp IC (IC5000)

Step 1 Fix the Audio Digital Power Amp IC onto the heatsink.

Step 2 Screw back TR Spring onto the heatsink.

Make sure it is well tighten to prevent overheat.

Note: Use a blower to remove the minute particles that might caused left on the TR Spring.



9.21. Disassembly of Main P.C.B.

- Follow the (Step 1) to (Step 5) of Item 9.4
- Follow the (Step 1) to (Step 10) of Item 9.5
- Follow the (Step 1) to (Step 5) of Item 9.19

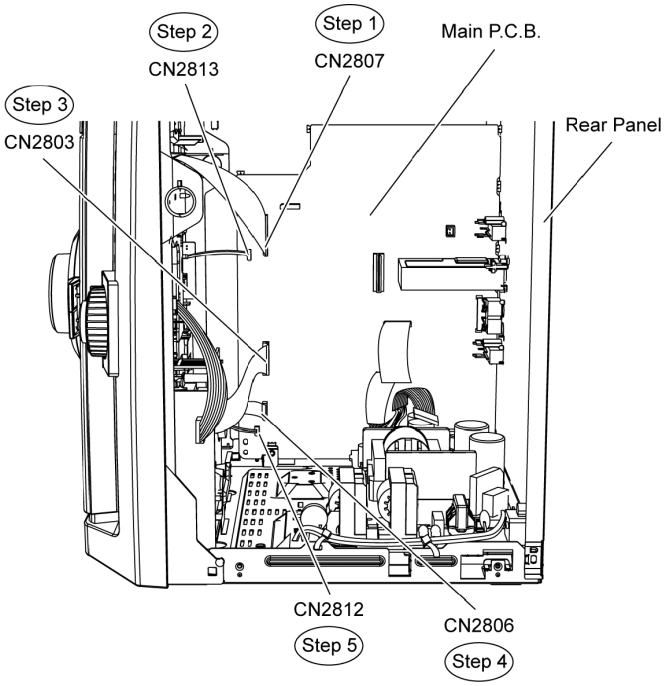
Step 1 Detach 27P FFC cable at connector (CN2807) on Main P.C.B..

Step 2 Detach 2P cable at connector (CN2813) on Main P.C.B..

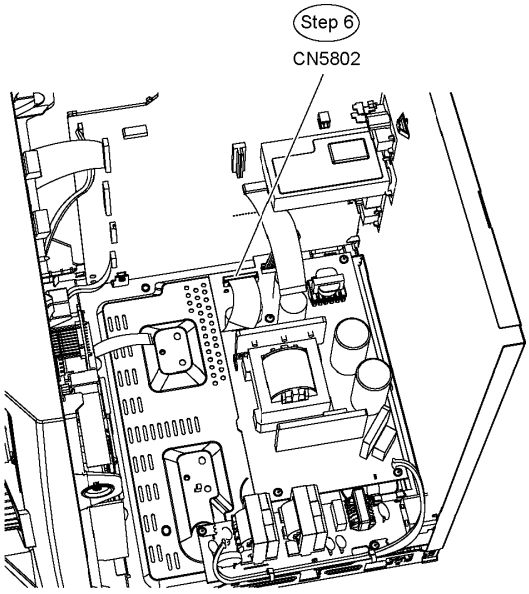
Step 3 Detach 21P FFC cable at connector (CN2803) on Main P.C.B..

Step 4 Detach 10P FFC cable at connector (CN2806) at Main P.C.B..

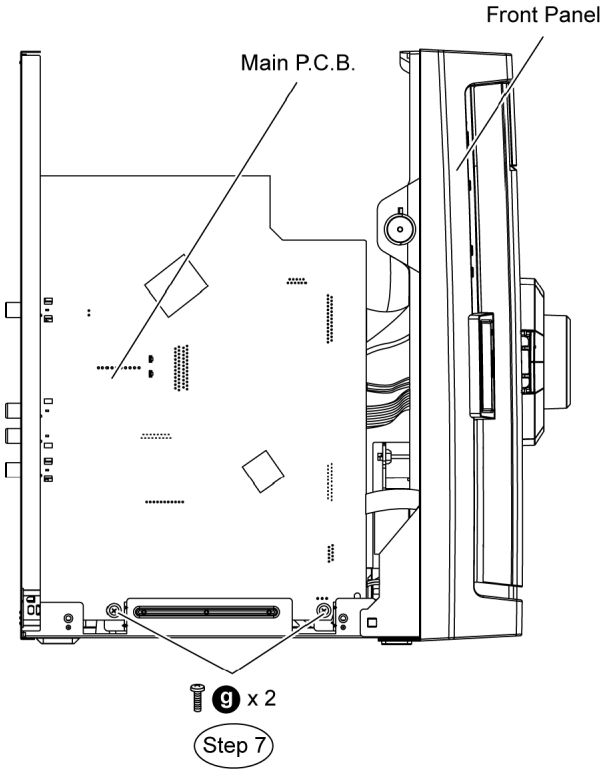
Step 5 Detach 2P cable at connector (CN2812) on Main P.C.B..



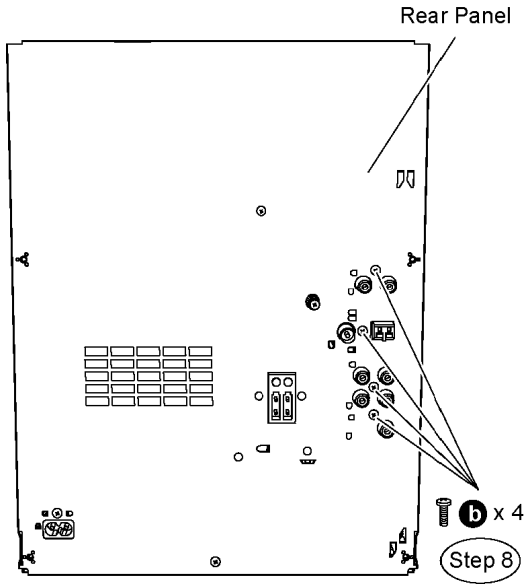
Step 6 Detach 11P cable at connector (CN5802) on SMPS P.C.B..



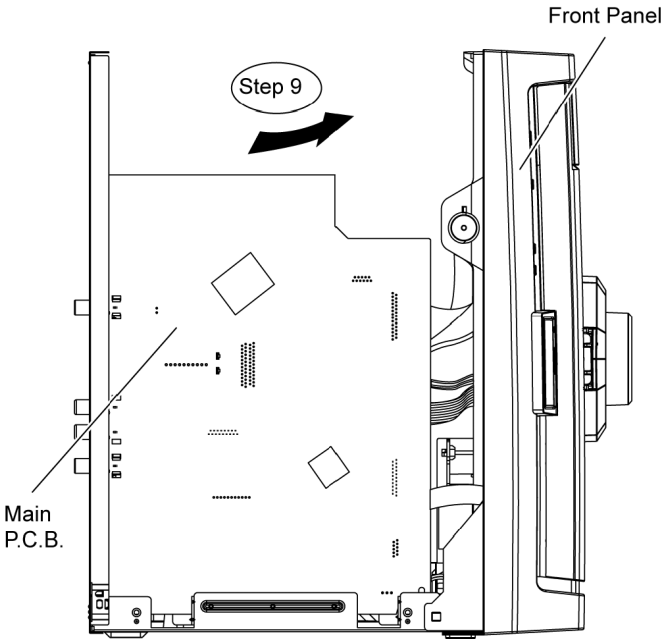
Step 7 Remove 2 screws on Main P.C.B..



Step 8 Remove 4 screws at rear panel.



Step 9 Lift up Main P.C.B. as arrow shown.

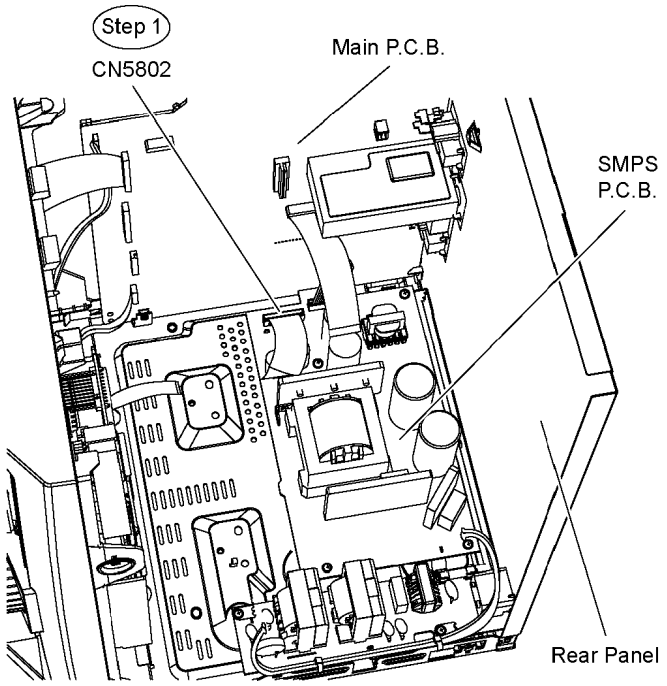


Caution Note: While lifting up Main P.C.B., please handle Jack (JK2801) and Tuner Pack with care.

9.22. Disassembly of SMPS P.C.B.

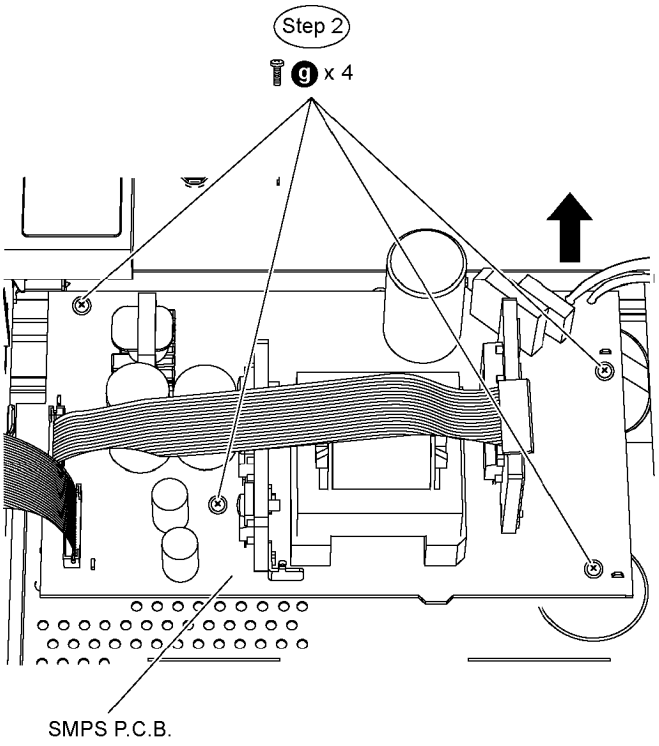
- Follow the (Step 1) to (Step 5) of Item 9.4
- Follow the (Step 1) to (Step 10) of Item 9.5
- Follow the (Step 1) to (Step 5) of Item 9.19

Step 1 Detach 11P wires at connector (CN5802) at SMPS P.C.B..

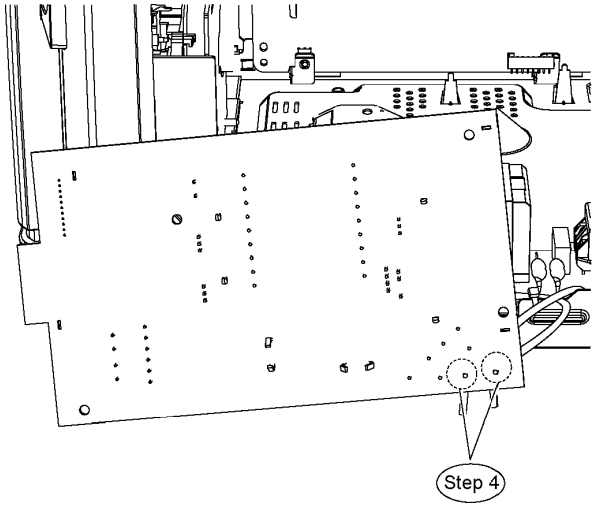


Step 2 Remove 4 screws at SMPS P.C.B..

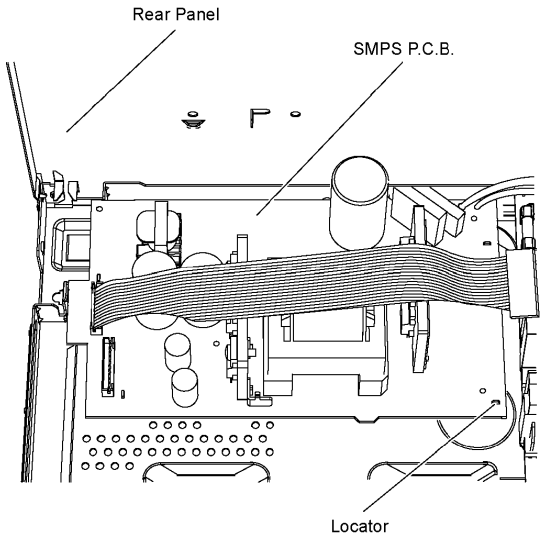
Step 3 Lift up the SMPS P.C.B. as arrow shown.



Step 4 Flip the SMPS P.C.B. and desolder 2 wires pins (red and black).



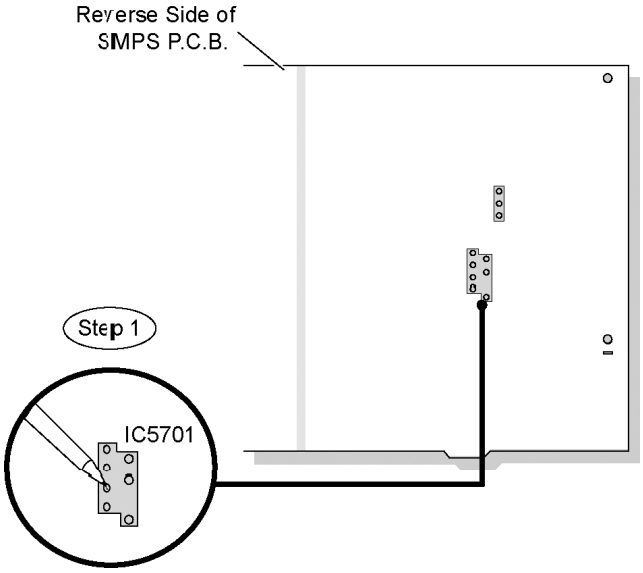
Note: During reassembling procedures, ensure the P.C.B. is seated properly at the locator.



9.23. Replacement of Switch Regulator IC (IC5701)

- Follow (Step 1) to (Step 3) of Item 9.3.
- Follow (Step 1) to (Step 8) of Item 9.13.
- Follow (Step 1) to (Step 6) of Item 9.19.
- Follow (Step 1) to (Step 4) of Item 9.22.

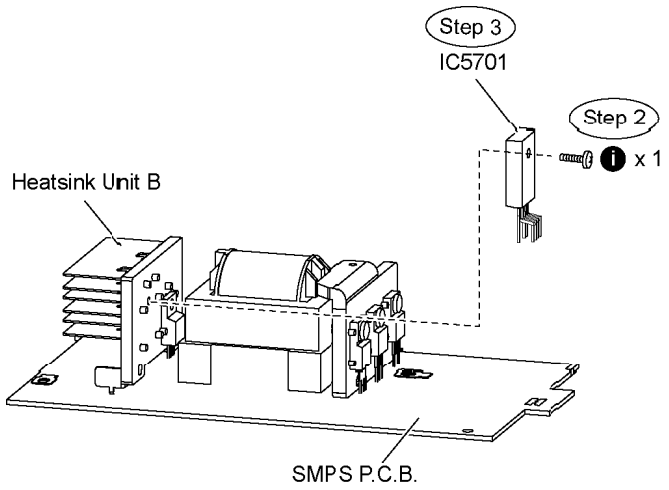
Step 1 Desolder pins of the switch regulator IC (IC5701) on the reverse side of SMPS P.C.B.



Step 2 Remove 1 screw from the switch regulator IC (IC5701).

Step 3 Remove the switch regulator IC (IC5701) from the heatsink unit B.

Caution: Handle the heatsink unit B with caution due to its high temperature after prolonged use. Touching it may lead to injuries.



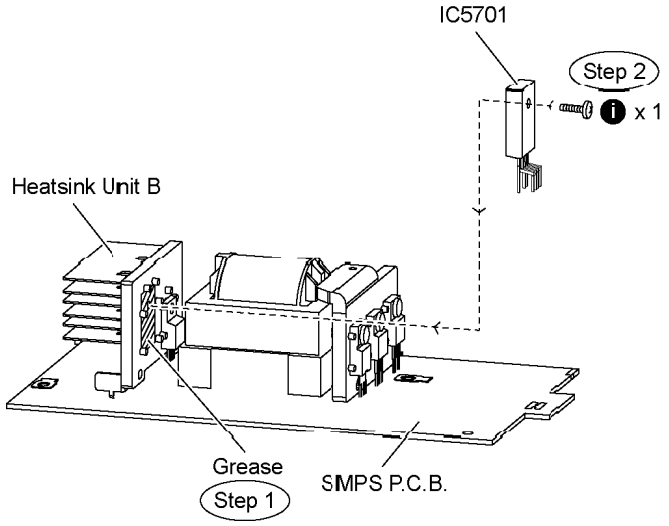
Note: Refer to the diagrams of SMPS P.C.B. (Item 20.5.) for location of the part.

9.23.1. Assembly of Switch Regulator IC (IC5701)

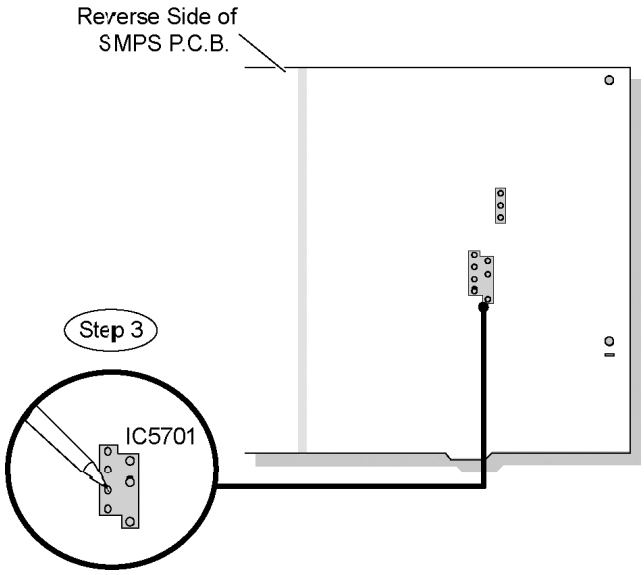
Step 1 Apply grease to the heatsink unit B.

Step 2 Fix and screw the switch regulator IC (IC5701) to the heatsink unit B.

Special Note: Ensure the switch regulator IC (IC5701) is tightly screwed to the heatsink unit B.



Step 3 Solder pins of the switch regulator IC (IC5701) on the reverse side of SMPS P.C.B.



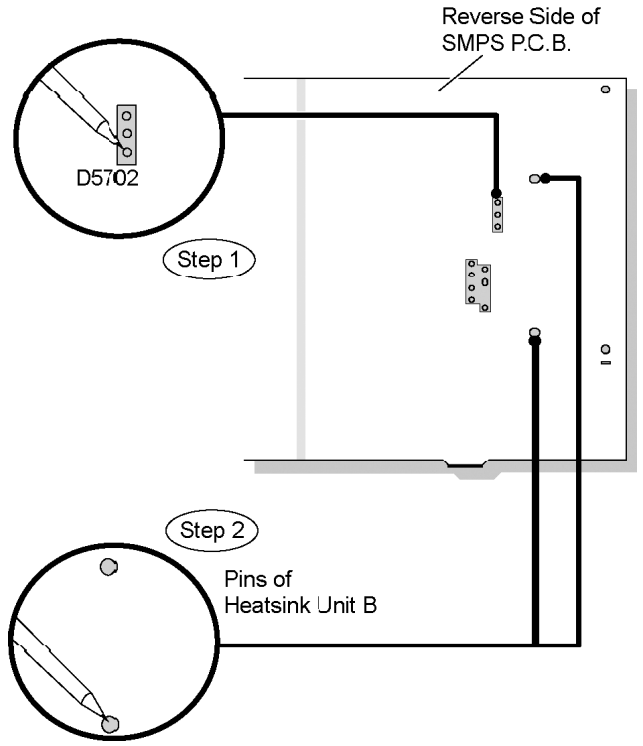
Special Note: Ensure pins of the switch regulator IC (IC5701) are properly seated and soldered on SMPS P.C.B.

9.24. Replacement of Switch Regulator Diode (D5702)

- Follow (Step 1) to (Step 3) of Item 9.3.
- Follow (Step 1) to (Step 8) of Item 9.13.
- Follow (Step 1) to (Step 6) of Item 9.19.
- Follow (Step 1) to (Step 4) of Item 9.22.

Step 1 Desolder pins of the switch regulator diode (D5702) on the reverse side of SMPS P.C.B.

Step 2 Desolder pins of the heatsink unit B.



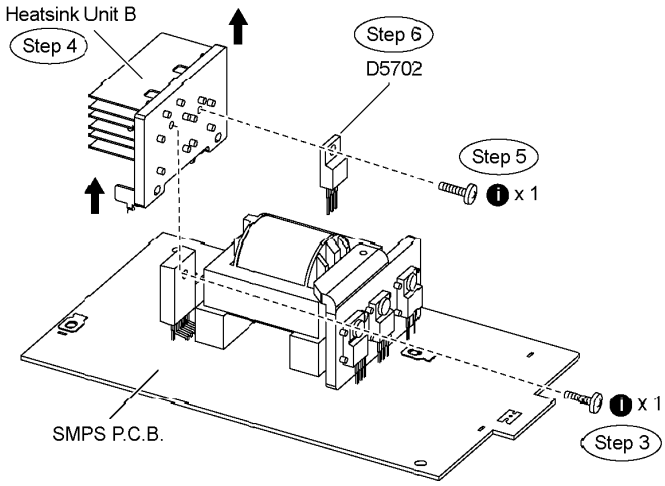
Step 3 Remove 1 screw from the switch regulator IC (IC5701).

Step 4 Remove the heatsink unit B in the direction of arrows.

Step 5 Remove 1 screw from the switch regulator diode. (D5702).

Step 6 Remove the switch regulator diode (D5702) from the heatsink unit B.

Caution: Handle the heatsink unit B with caution due to its high temperature after prolonged use. Touching it may lead to injuries.



Note: Refer to the diagrams of SMPS P.C.B. (Item 20.5) for location of the part.

9.24.1. Assembly of Switch Regulator Diode (D5702)

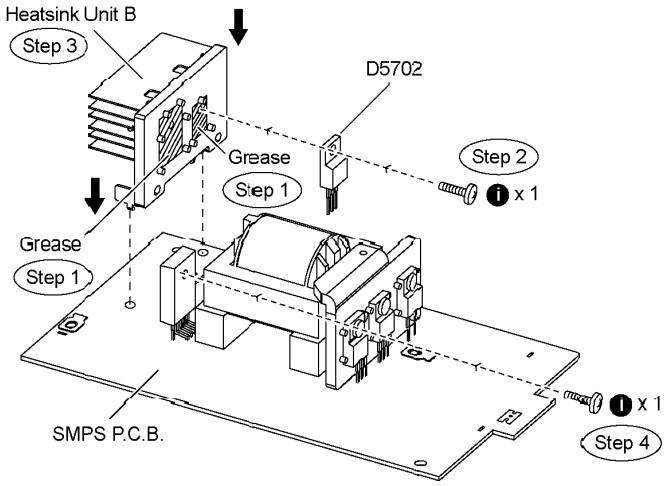
Step 1 Apply grease to the heatsink unit B.

Step 2 Fix and screw the switch regulator diode (D5702) to the heatsink unit B.

Special Note: Ensure the switch regulator diode (D5702) is tightly screwed to the heatsink unit B.

Step 3 Fix the heatsink unit B on SMPS P.C.B. in the direction of arrows.

Step 4 Fix and screw the switch regulator IC (IC5701) to the heatsink unit B

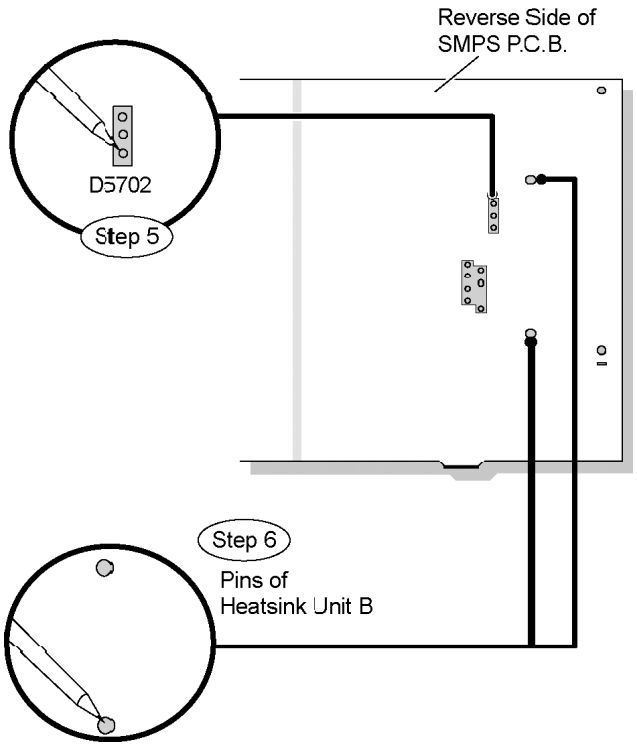


Special Note: Ensure the heatsink unit B is properly seated on

SMPS P.C.B.

Step 5 Solder pins of the switch regulator diode (D5702) on the reverse side of SMPS P.C.B.

Step 6 Solder pins of the heatsink unit B on the reverse side of SMPS P.C.B.

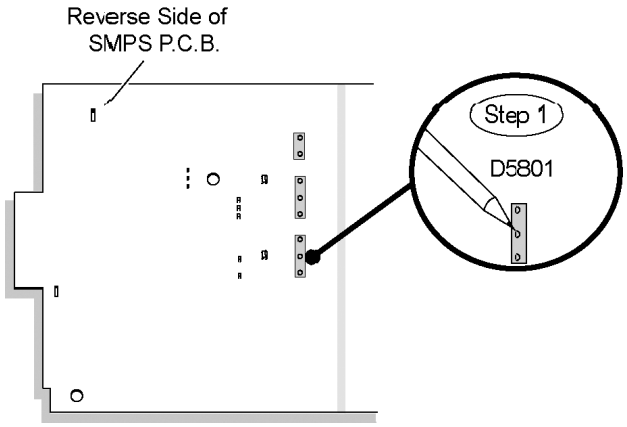


Special Note: Ensure pins of the switch regulator diode (D5702) are properly seated and soldered on SMPS P.C.B.

9.25. Replacement of Regulator Diode (D5801)

- Follow (Step 1) to (Step 3) of Item 9.3.
- Follow (Step 1) to (Step 8) of Item 9.13.
- Follow (Step 1) to (Step 6) of Item 9.19.
- Follow (Step 1) to (Step 4) of Item 9.22.

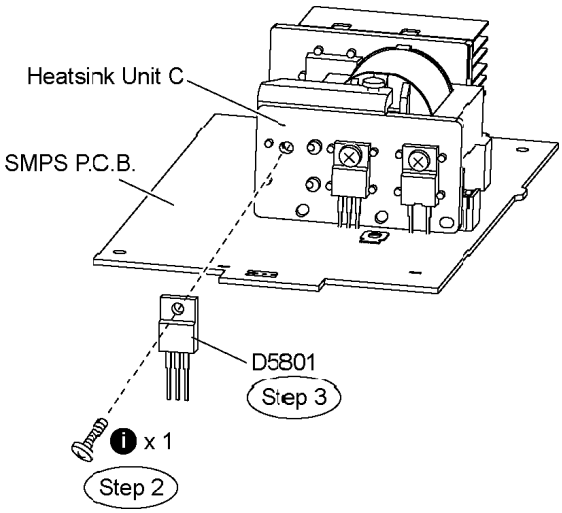
Step 1 Desolder pins of the regulator diode (D5801) on the reverse side of SMPS P.C.B.



Step 2 Remove 1 screw from the regulator diode (D5801).

Step 3 Remove the regulator diode (D5801) from the heatsink unit C.

Caution: Handle the heatsink unit C with caution due to its high temperature after prolonged use. Touching it may lead to injuries.



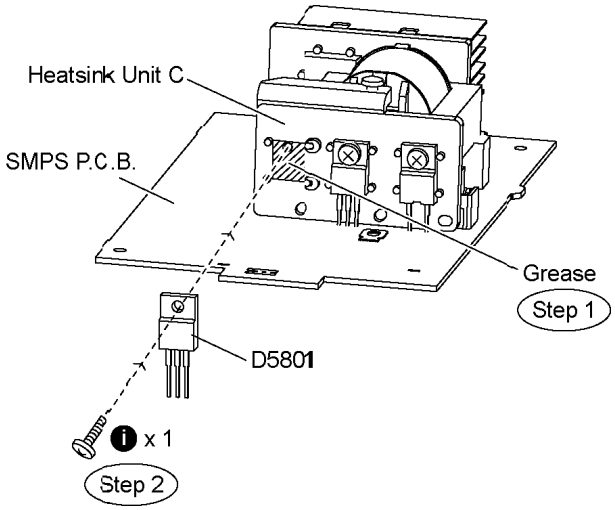
Note: Refer to the diagrams of SMPS P.C.B. (Item 20.5) for location of the part.

9.25.1. Assembly of Regulator Diode (D5801)

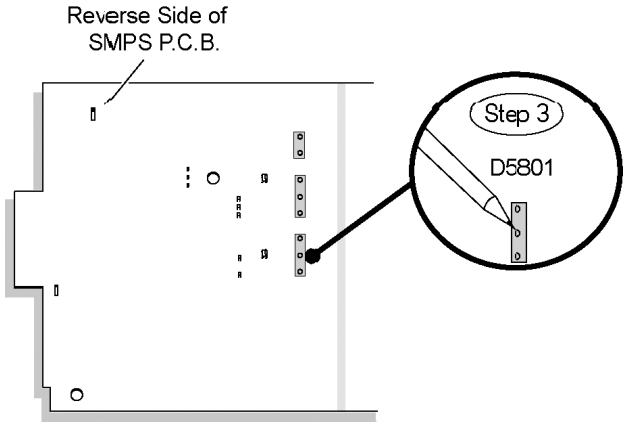
Step 1 Apply grease to the heatsink unit C.

Step 2 Fix and screw the regulator diode (D5801) to the heatsink unit C.

Special Note: Ensure the regulator diode (D5801) is tightly screwed to the heatsink unit C.



Step 3 Solder pins of the regulator diode (D5801) on the reverse side of SMPS P.C.B.

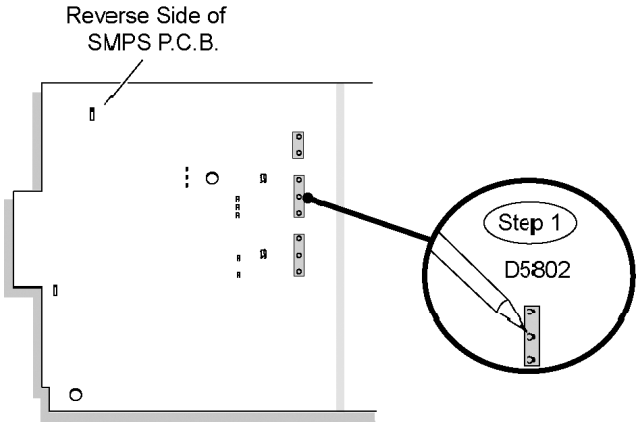


Special Note: Ensure pins of the regulator diode (D5801) are properly seated and soldered on SMPS P.C.B.

9.26. Replacement of Regulator Diode (D5802)

- Follow (Step 1) to (Step 3) of Item 9.3.
- Follow (Step 1) to (Step 8) of Item 9.13.
- Follow (Step 1) to (Step 6) of Item 9.19.
- Follow (Step 1) to (Step 4) of Item 9.22.

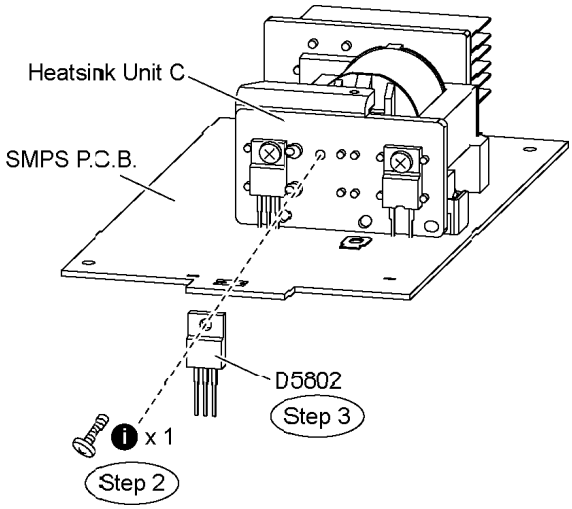
Step 1 Desolder pins of the regulator diode (D5802) on the reverse side of SMPS P.C.B.



Step 2 Remove 1 screw from the regulator diode (D5802).

Step 3 Remove the regulator diode (D5802) from the heatsink unit C.

Caution: Handle the heatsink unit C with caution due to its high temperature after prolonged use. Touching it may lead to injuries.



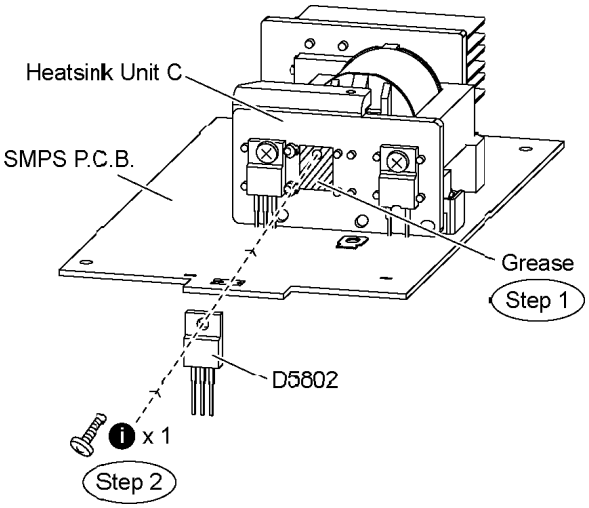
Note: Refer to the diagrams of SMPS P.C.B. (Item 20.5) for location of the part.

9.26.1. Assembly of Regulator Diode (D5802)

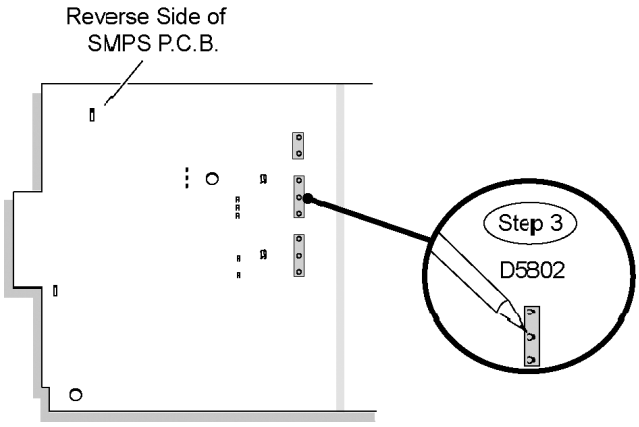
Step 1 Apply grease to the heatsink unit C.

Step 2 Fix and screw the regulator diode (D5802) to the heatsink unit C.

Special Note: Ensure the regulator diode (D5802) is tightly screwed to the heatsink unit C.



Step 3 Solder pins of the regulator diode (D5802) on the reverse side of SMPS P.C.B.

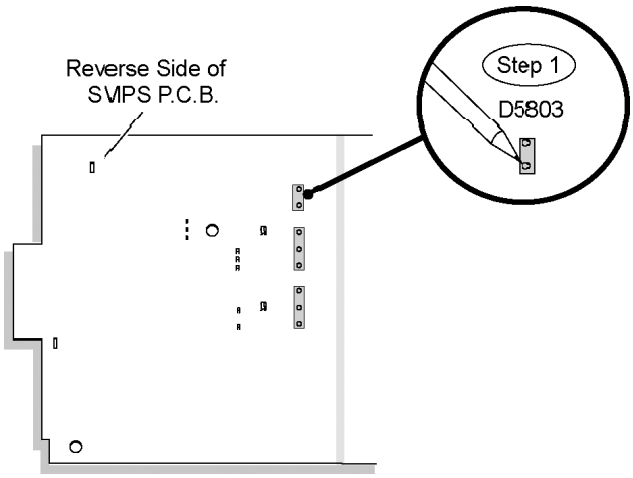


Special Note: Ensure pins of the regulator diode (D5802) are properly seated and soldered on SMPS P.C.B.

9.27. Replacement of Regulator Diode (D5803)

- Follow (Step 1) to (Step 3) of Item 9.3.
- Follow (Step 1) to (Step 8) of Item 9.13.
- Follow (Step 1) to (Step 6) of Item 9.19.
- Follow (Step 1) to (Step 4) of Item 9.22.

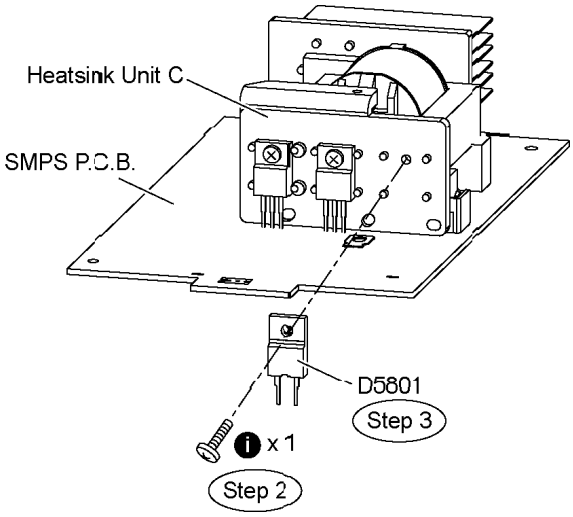
Step 1 Desolder pins of the regulator diode (D5803) on the reverse side of SMPS P.C.B.



Step 2 Remove 1 screw from the regulator diode (D5803).

Step 3 Remove the regulator diode (D5803) from the heatsink unit C.

Caution: Handle the heatsink unit C with caution due to its high temperature after prolonged use. Touching it may lead to injuries.



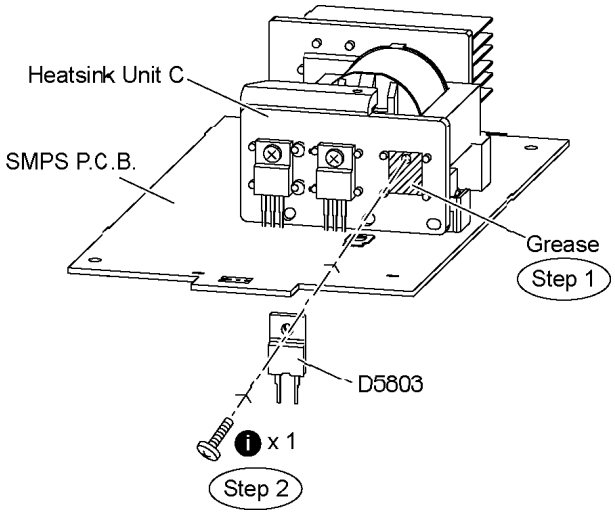
Note: Refer to the diagrams of SMPS P.C.B. (Item 20.5) for location of the part.

9.27.1. Assembly of Regulator Diode (D5803)

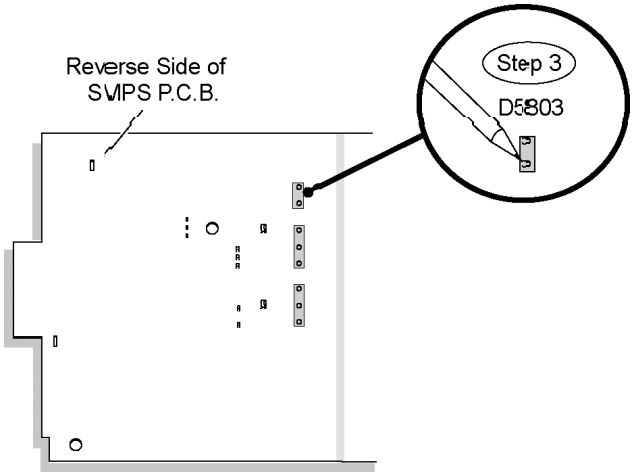
Step 1 Apply grease to the heatsink unit C.

Step 2 Fix and screw the regulator diode (D5803) to the heatsink unit C.

Special Note: Ensure the regulator diode (D5803) is tightly screwed to the heatsink unit C.



Step 3 Solder pins of the regulator diode (D5803) on the reverse side of SMPS P.C.B.



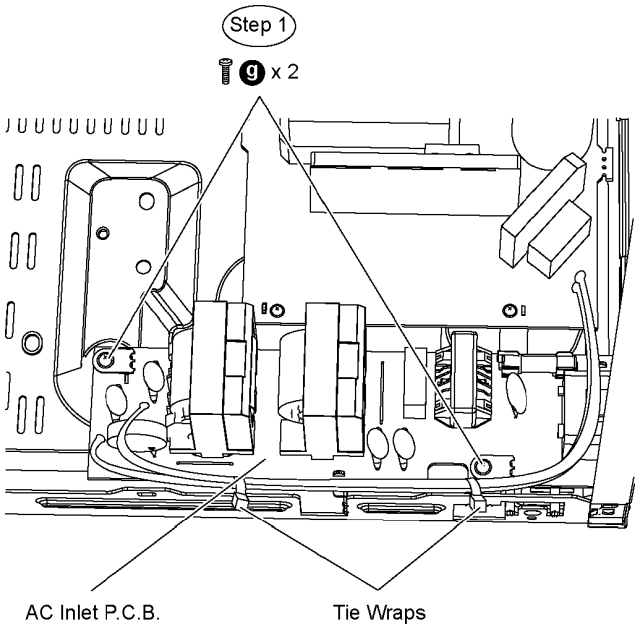
Special Note: Ensure pins of the regulator diode (D5803) are properly seated and soldered on SMPS P.C.B.

9.28. Disassembly of AC Inlet P.C.B.

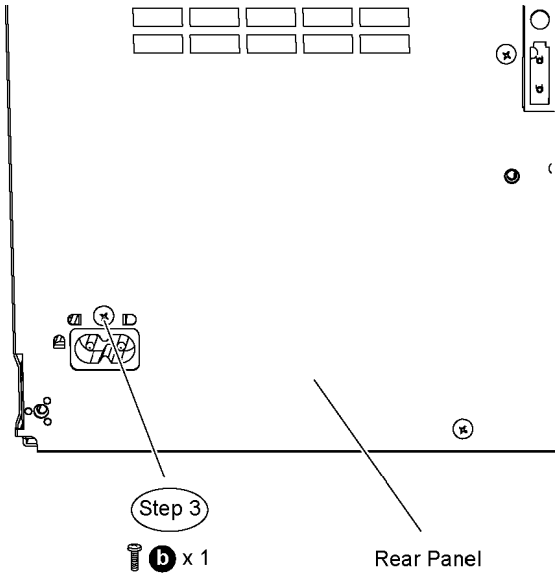
- Follow the (Step 1) to (Step 5) of Item 9.4

Step 1 Remove 2 screws at AC Inlet P.C.B..

Step 2 Cut 2 tie wraps.

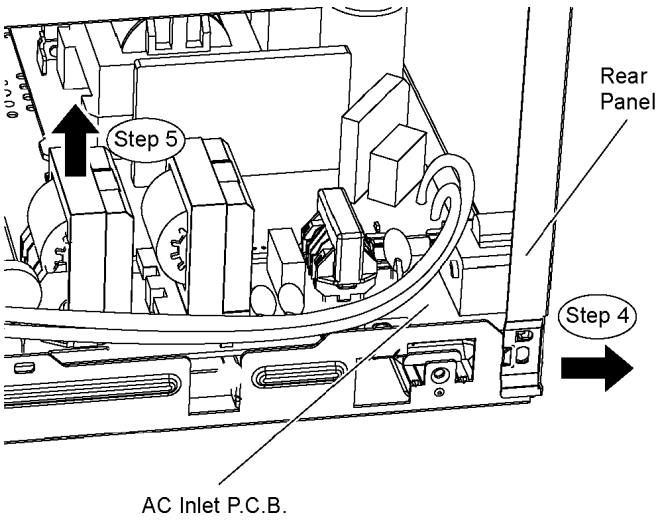


Step 3 Remove 1 screw at the rear panel.

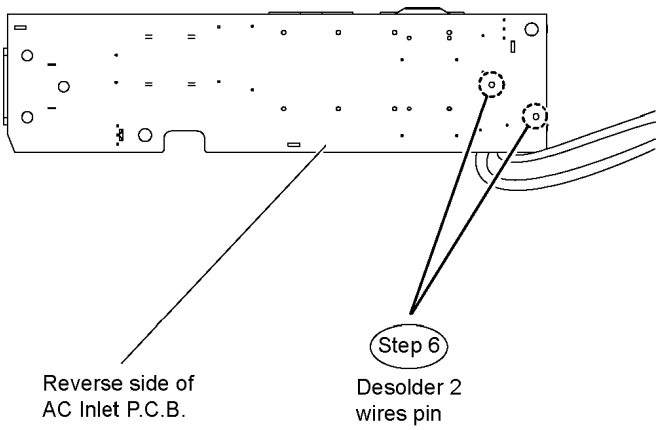


Step 4 Detach the rear panel slightly backward as arrow shown.

Step 5 Lift up the AC Inlet P.C.B..

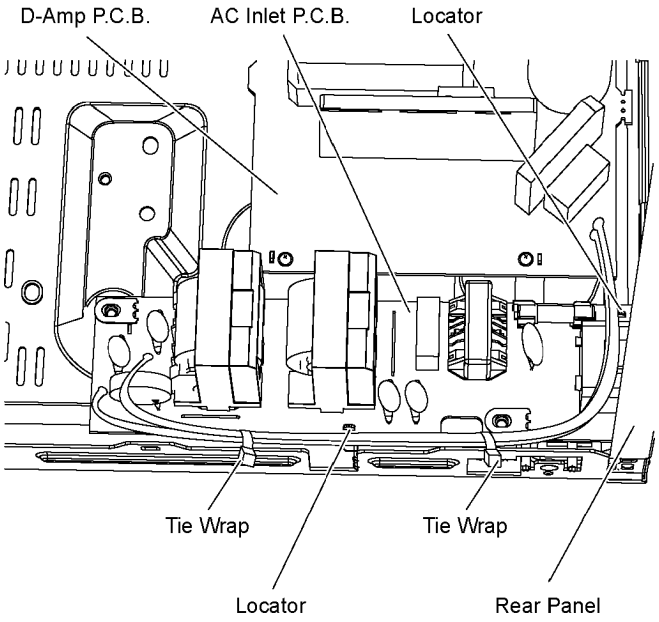


Step 6 Flip over the AC Inlet P.C.B. and desolder 2 wires pins (red and black).



Note 1: During reassembling procedures, ensure the P.C.B. is seated properly at the locators.

Note 2: Remember to use tie wraps to tie red.black wires between AC Inlet P.C.B. to the chassis.



9.29. Disassembly of DVD Module P.C.B.

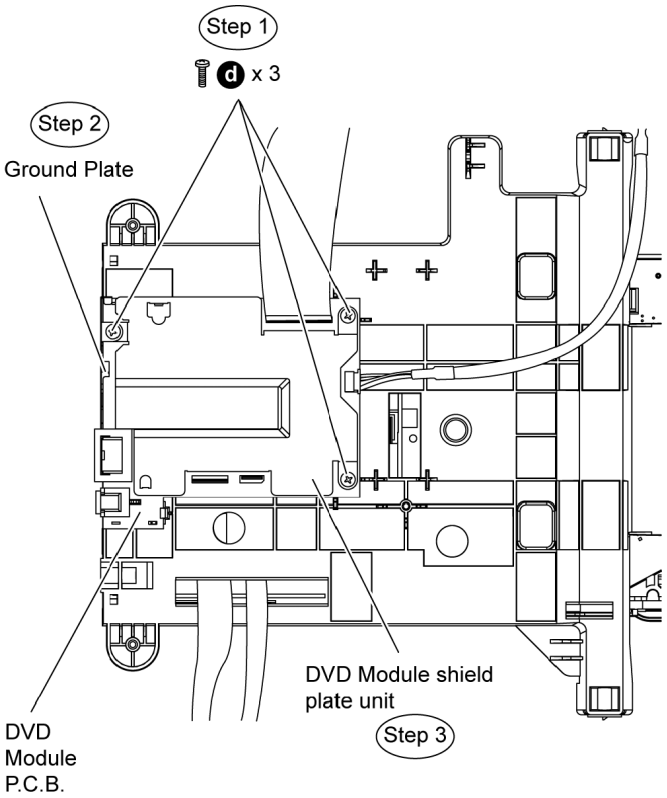
- Follow the (Step 1) to (Step 5) of Item 9.4
- Follow the (Step 1) to (Step 11) of Item 9.5

- **Disassembly of ground plate unit & DVD Module shield plate unit**

Step 1 Remove 3 screws at DVD Module shield plate unit.

Step 2 Remove the ground plate unit.

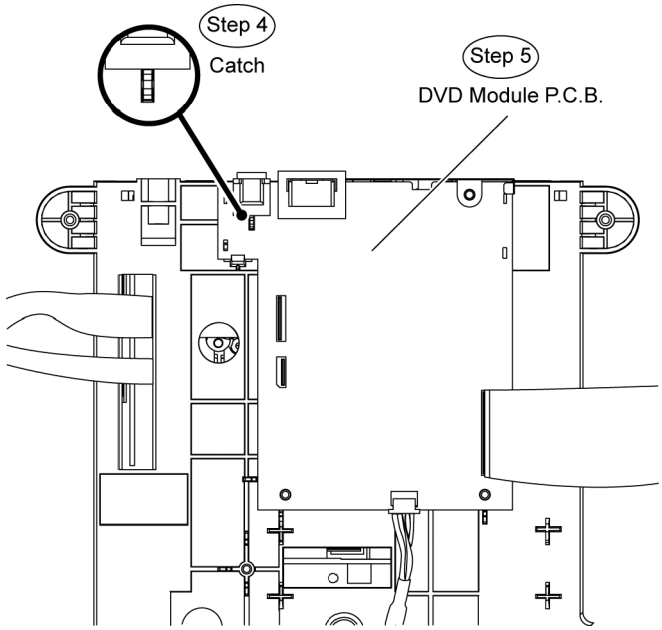
Step 3 Remove the shield plate unit.



- **Disassembly of DVD Module P.C.B.**

Step 4 Release the catch on DVD Module P.C.B..

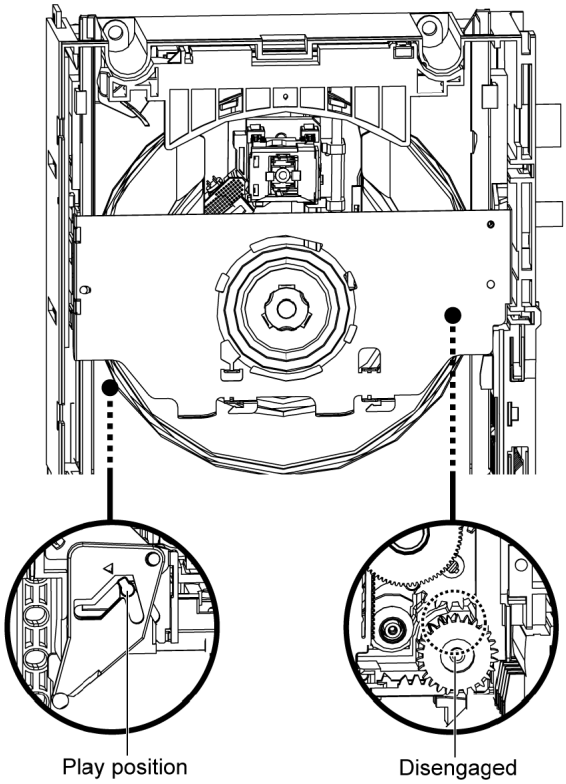
Step 5 Remove DVD Module P.C.B..



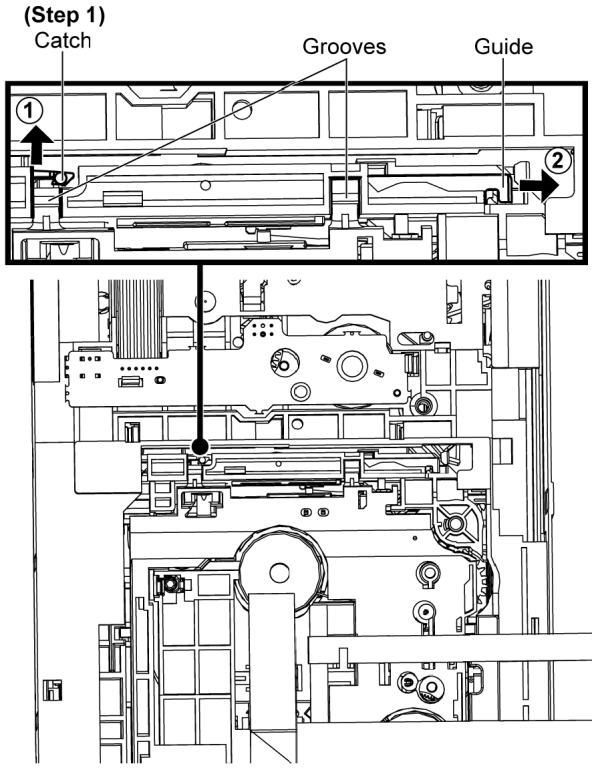
10 Disassembling and assembling Traverse Unit Assembly in play position

10.1. Disassembly of Traverse Unit (TRV) Assembly

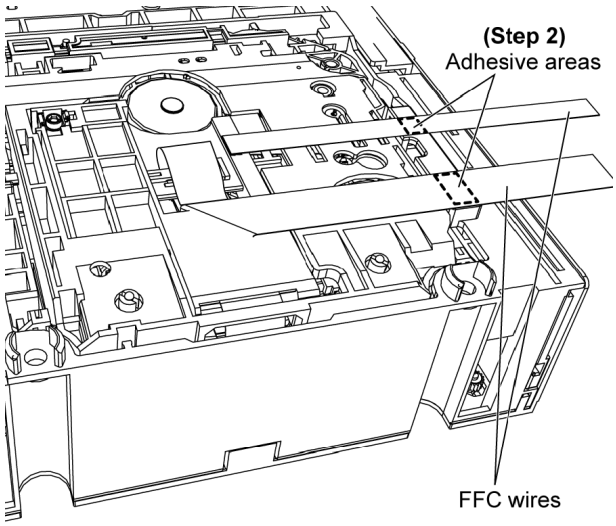
• Disassembly of TRV unit assembly in play position.



• Note: The above picture shows the units is in play position.



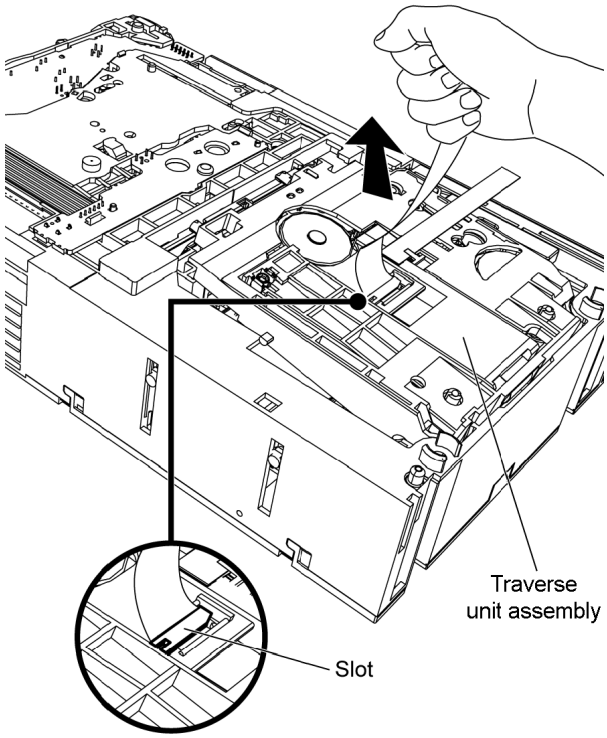
Step 1: Release the catch and push the guide as arrows shown to open both grooves.

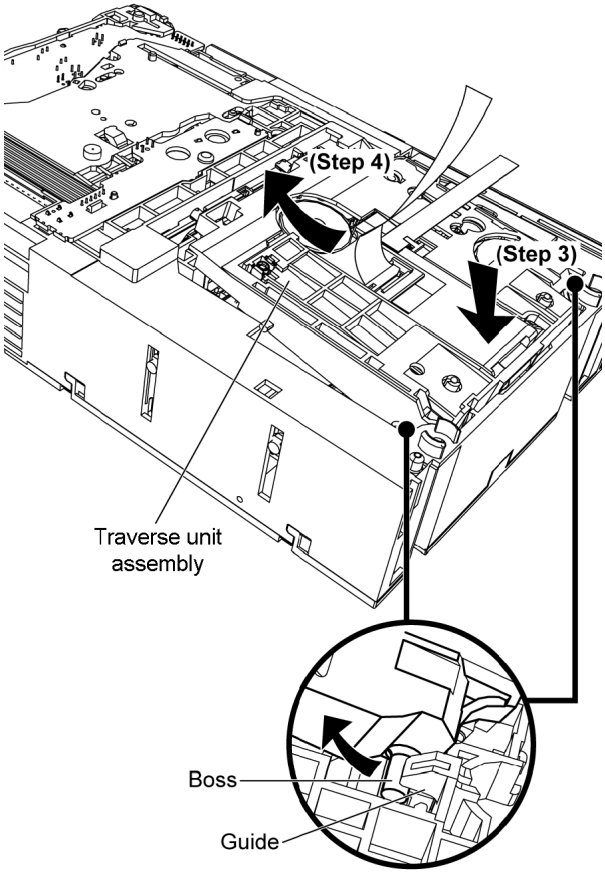


Step 2: Detach the FFC wires from the adhesive areas.

Caution:

Do not pull the FFC wire to remove the traverse unit assembly, as it may cause damage to the slot.

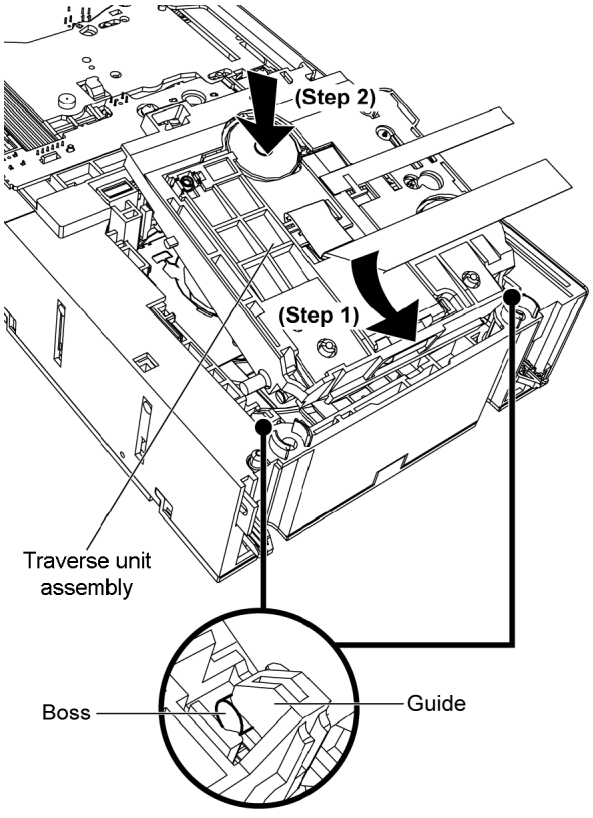




Step 3: Press down the traverse unit assembly.

Step 4: Remove the traverse unit assembly as arrow shown.

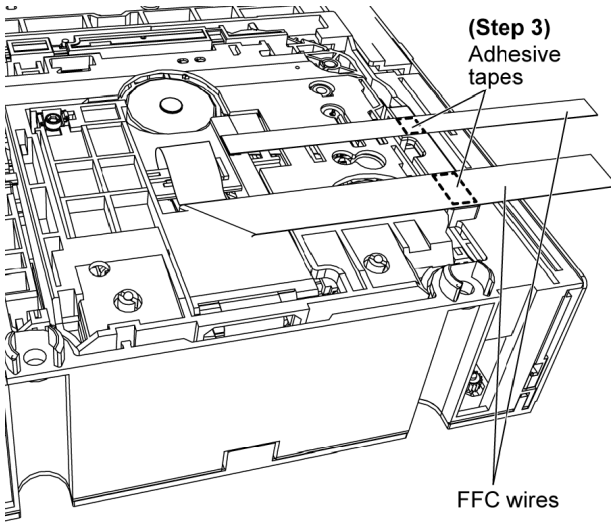
10.2. Assembly of Traverse Unit Assembly



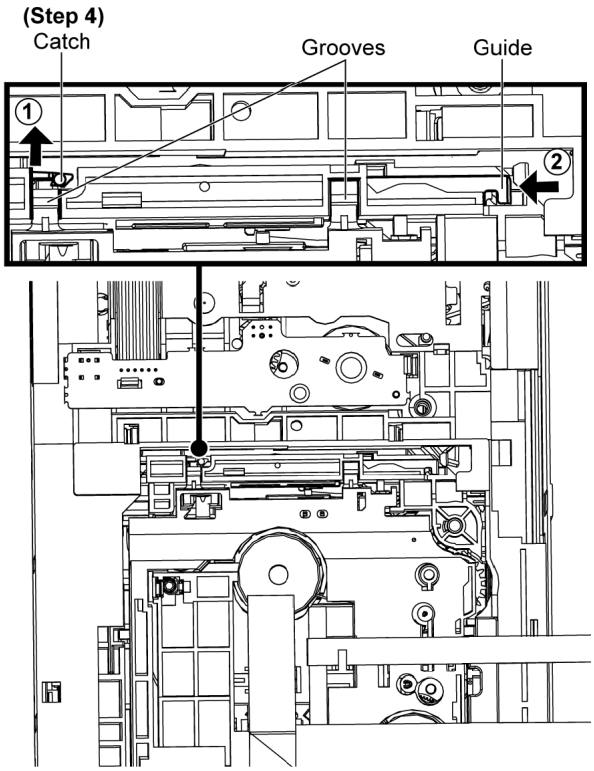
Step 1: Slot the traverse unit assembly into the guides as arrow shown.

Note: Ensure the bosses fix exactly onto the guides.

Step 2: Place down the traverse unit assembly.



Step 3: Fix the FFC wires by using the adhesive tapes.



Step 4: Release the catch and push the guide as arrows shown to close both grooves.

11 Service Fixture and Tools

Prepare service tools before process service position.

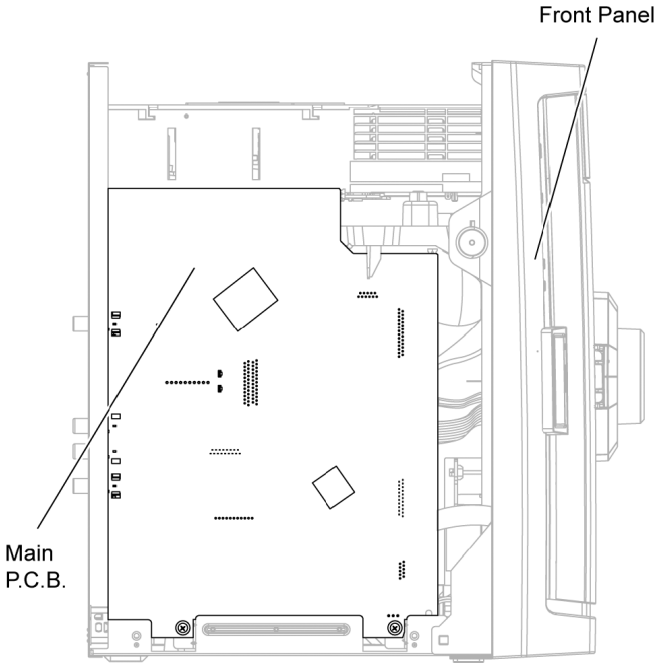
Service Tools		Remarks
Main P.C.B. (CN2808) - D-AMP P.C.B. (CN5050)	REXX0930 (17P cable)	[M](RTL)
Main P.C.B. (CN2701) - SMPS P.C.B. (CN5802)	REEX0680 (11P cable)	[M](RTL)
SMPS P.C.B. (H5801) - D-Amp P.C.B. (CN5500)	REXX0683 (8P cable)	[M](RTL)

12 Service Positions

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

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

Step 1 Remove the top cabinet.



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

12.2. Checking and Repairing Panel P.C.B., Deck P.C.B., Tact Switch P.C.B., Music Port P.C.B. and Mic P.C.B.

Step 1 Remove the top cabinet.

Step 2 Detach 27P FFC cable at connector (CN2807) on Main P.C.B..

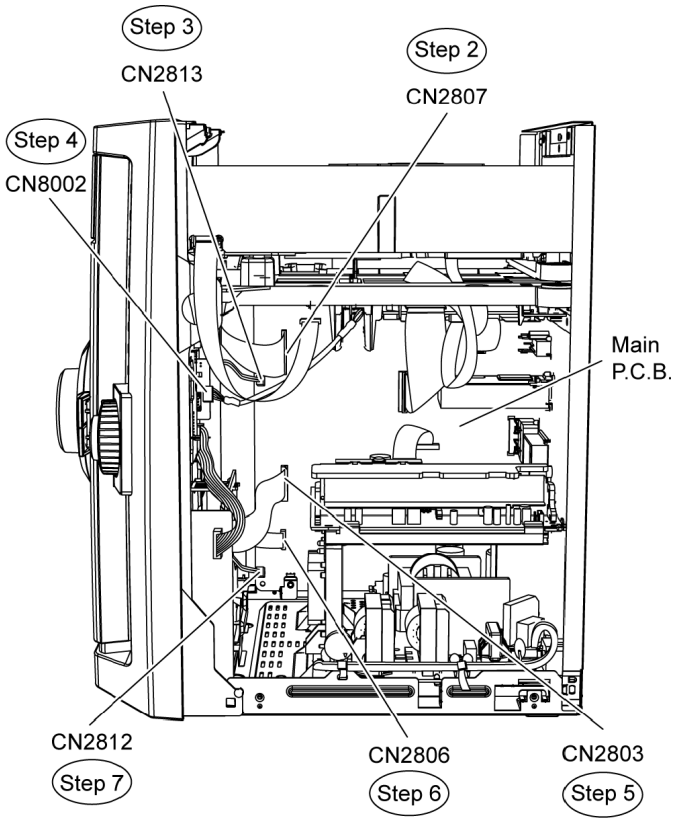
Step 3 Detach 2P cable at connector (CN2813) on Main P.C.B..

Step 4 Detach 5P cable at connector (CN8002) on USB P.C.B..

Step 5 Detach 21P FFC cable at connector (CN2803) on Main P.C.B..

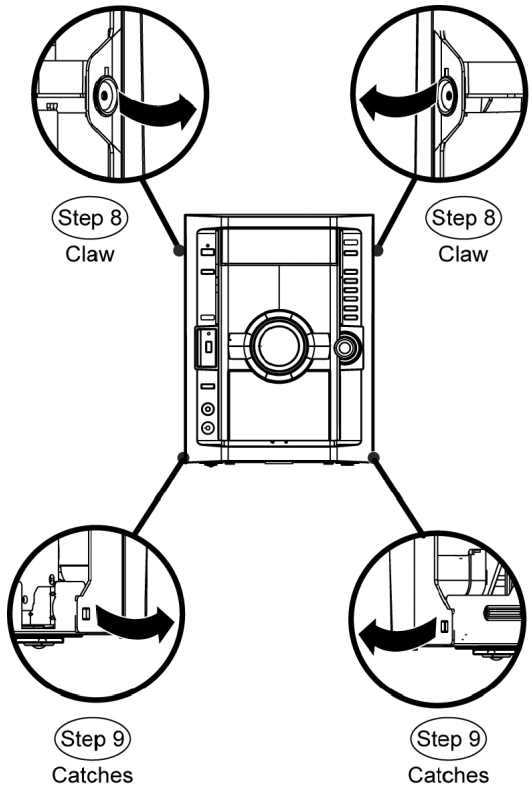
Step 6 Detach 10P FFC cable at connector (CN2806) on Main P.C.B..

Step 7 Detach 2P cable at connector (CN2812) on Main P.C.B..

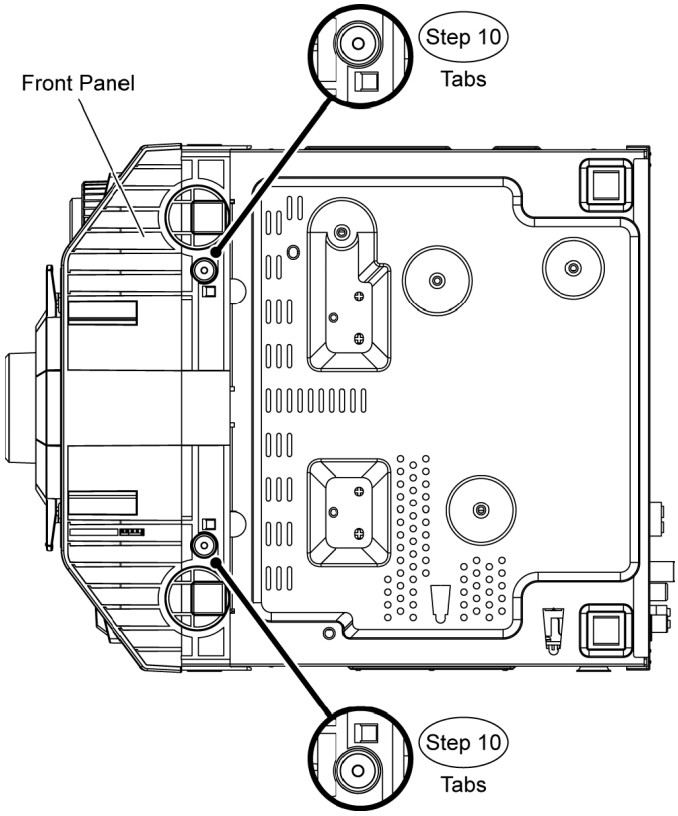


Step 8 Release the claws outwards on both sides.

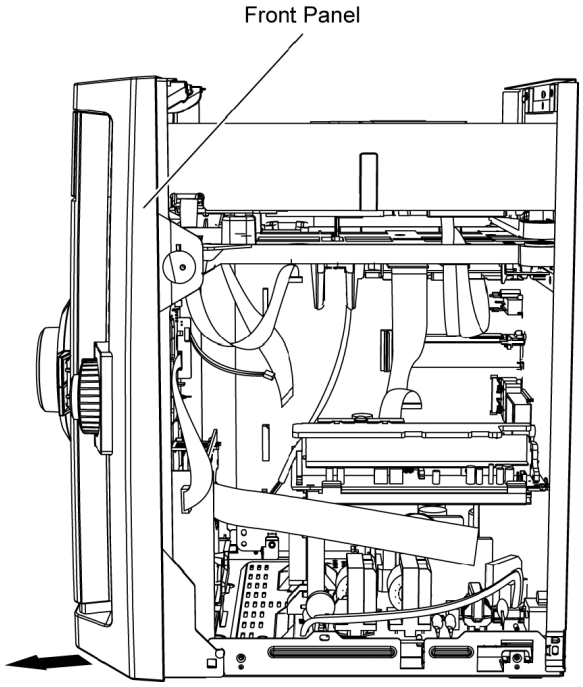
Step 9 Release the catches at both sides.



Step 10 Release the tabs at the bottom of front panel.



Step11 Remove front panel unit in the direction of arrow.



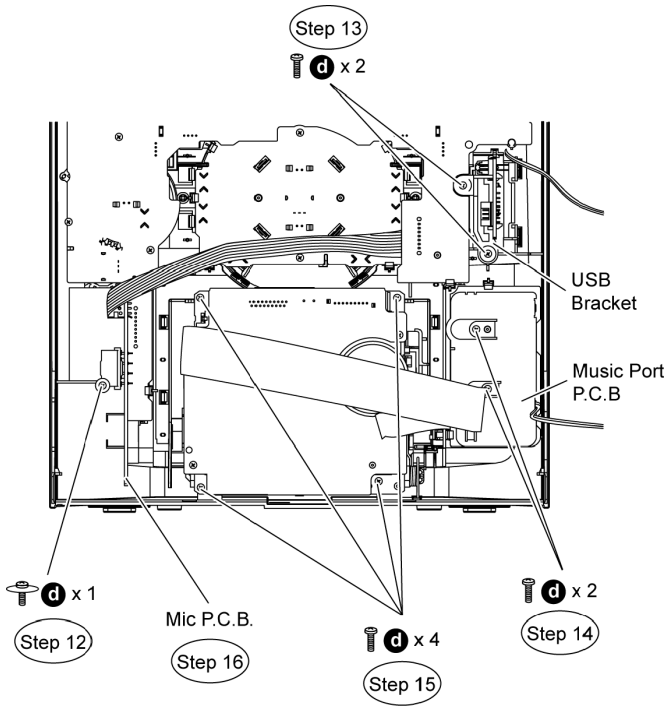
Step 12 Remove 1 screw at Mic P.C.B..

Step 13 Remove 2 screw on USB bracket.

Step 14 Remove 2 screw on Music Port P.C.B..

Step 15 Remove 4 screw at Deck Mechanism unit.

Step 16 Remove Mic P.C.B..

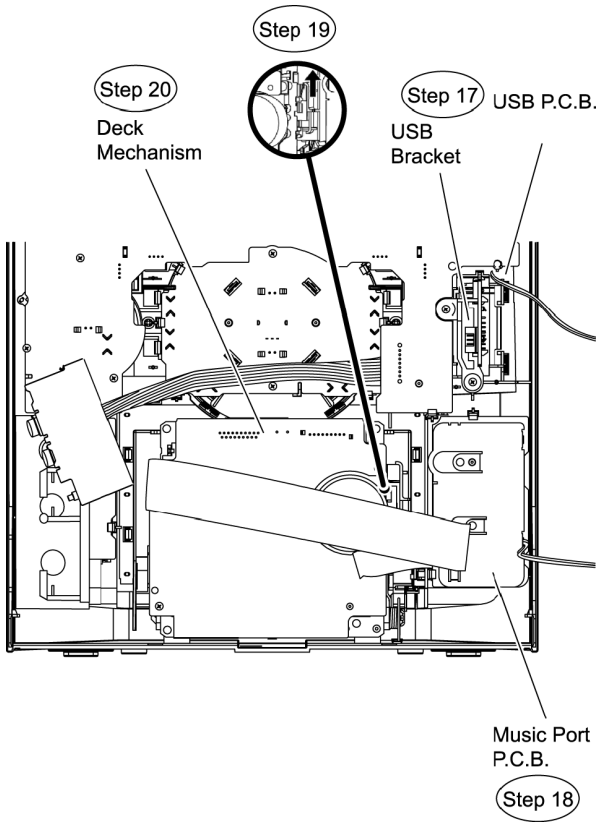


Step 17 Remove USB P.C.B. with USB bracket.

Step 18 Remove Music Port P.C.B..

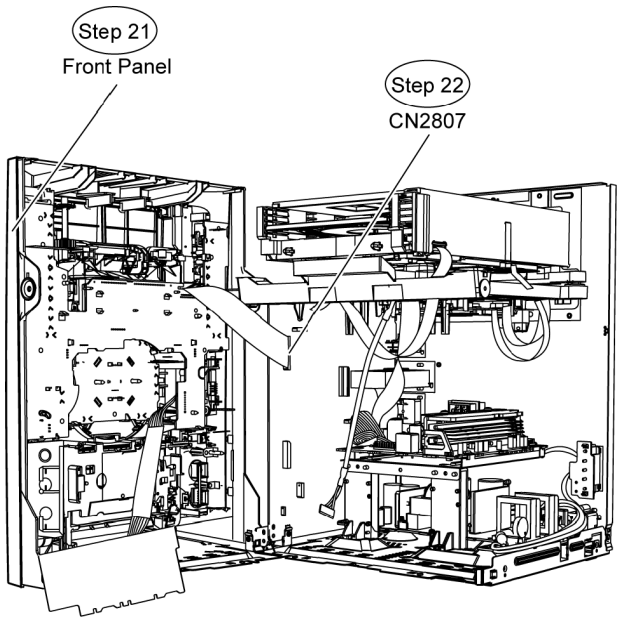
Step 19 Push the lever upward as arrow shown to open the cassette lid assembly.

Step 20 Remove Deck Mechanism unit.



Step 21 Position front panel unit according to the diagram show.

Step 22 Connect 27P FFC cable at connector (CN2807) on Main P.C.B..

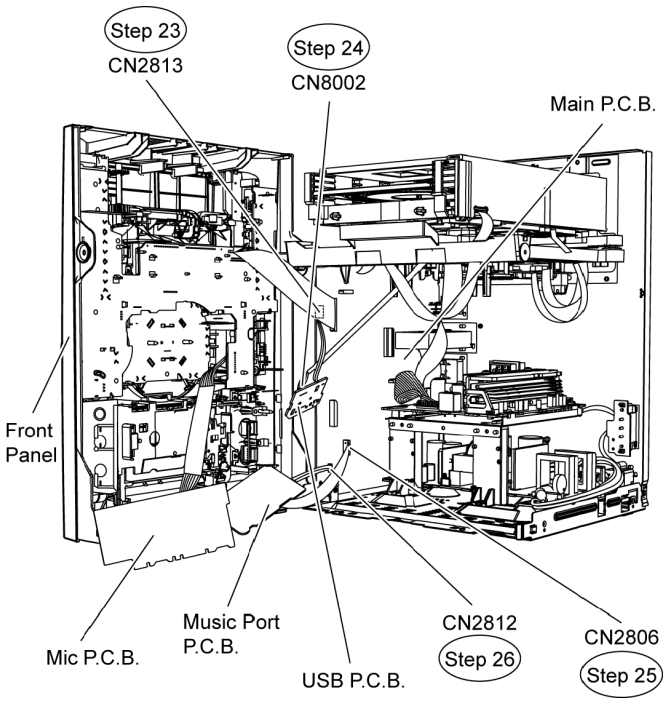


Step 23 Connect 2P cable at connector (CN2813) on Main P.C.B..

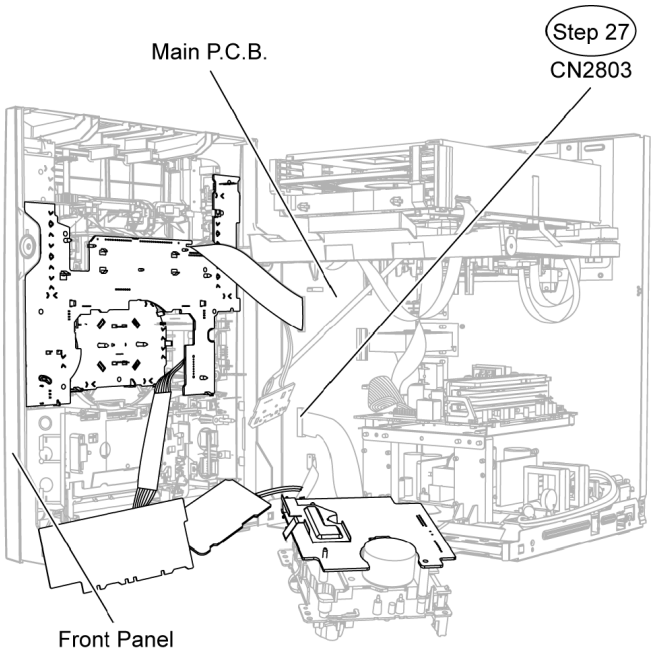
Step 24 Connect 5P cable at connector (CN8002) on USB P.C.B..

Step 25 Connect 10P FFC cable at connector (CN2806) on Main P.C.B..

Step 26 Connect 2P cable at connector (CN2812) on Main P.C.B..



Step 27 Connect 21P FFC cable at the connector (CN2803) on Main P.C.B..



Step 28 Check and repair panel P.C.B., Deck P.C.B., Tact Switch P.C.B., Music Port P.C.B. and Mic P.C.B..

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

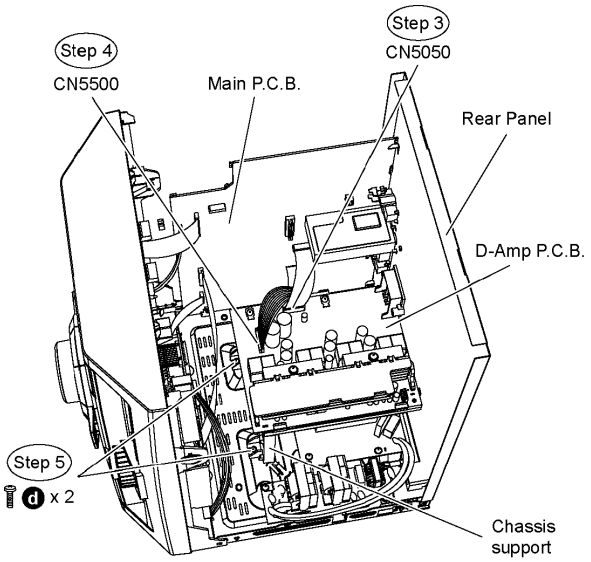
Step 1 Remove the top cabinet.

Step 2 Remove the Mechanism Unit.

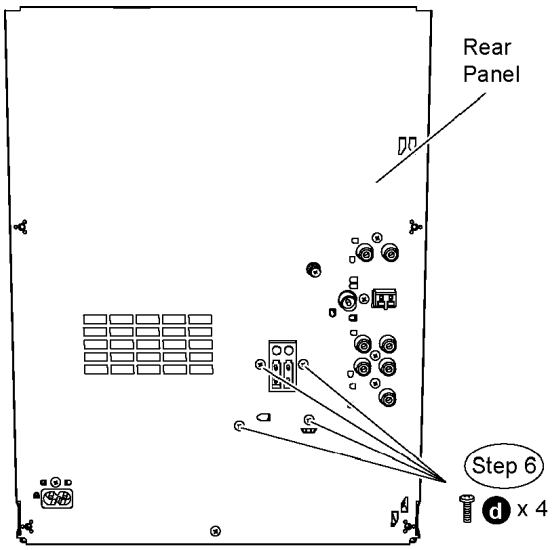
Step 3 Detach 17P FFC cable at connector (CN5050) on D-Amp P.C.B..

Step 4 Detach 8P wires cable at connector (CN5500) on D-Amp P.C.B..

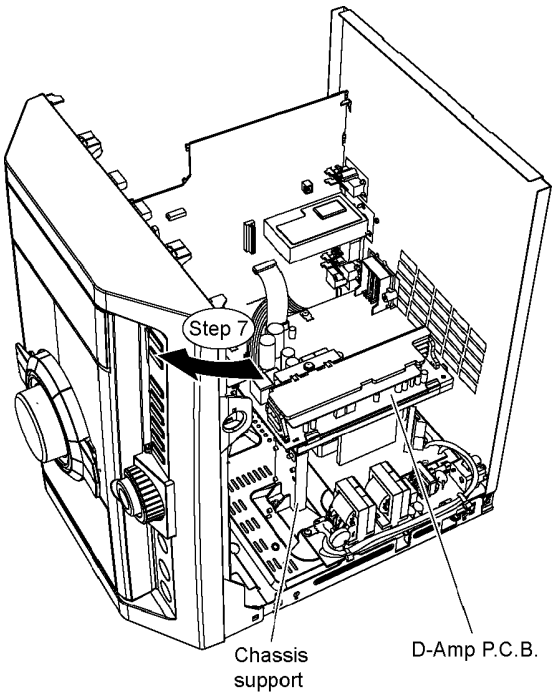
Step 5 Remove 2 screws at classic supports.



Step 6 Remove 4 screws at the rear panel.

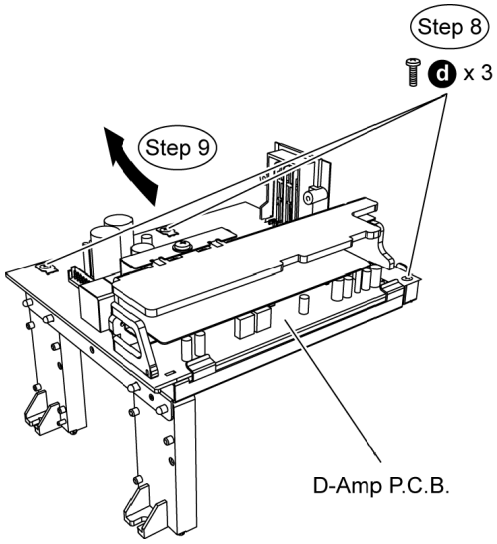


Step 7 Lift up the D-Amp P.C.B. together with the classic support as arrow shown.



Step 8 Remove 3 screws from D-Amp P.C.B..

Step 9 Lift up D-Amp P.C.B. as arrow shown.

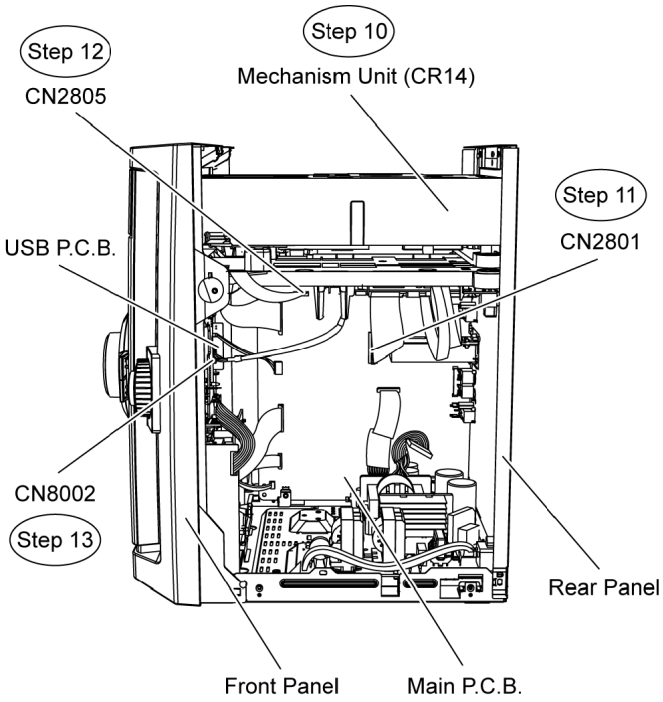


Step 10 Position Mechanism unit (CR14) according to the diagram show.

Step 11 Connect 50P FFC cable at the connector (CN2801) on Main P.C.B..

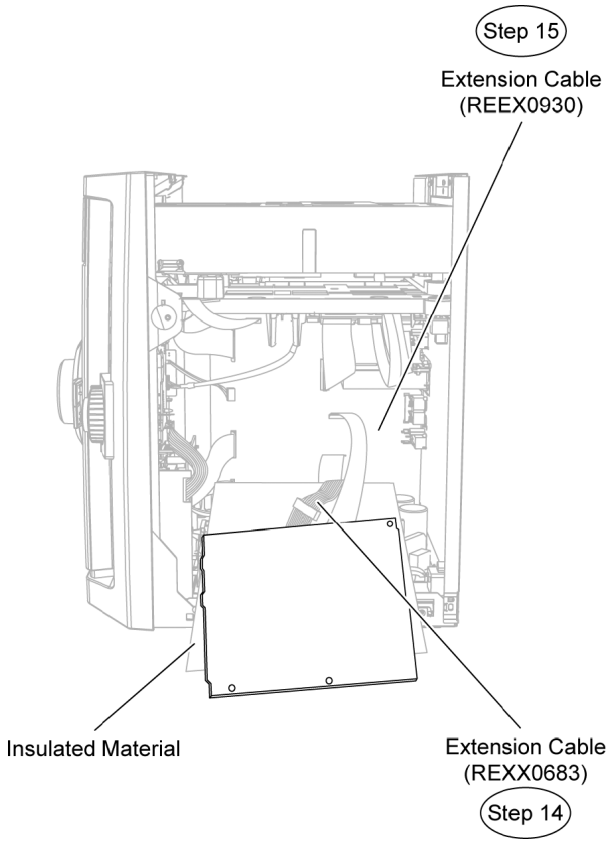
Step 12 Connect 11P FFC cable at the connector (CN2805) on Main P.C.B..

Step 13 Connect 5P cable at the connector (CN8002) on USB P.C.B..



Step 14 Attach original cable with extension cable (REXX0683) (8P cable from H5801 to CN5500).

Step 15 Connect extension cable (REEX0930) (17P cable from CN2808 to CN5050).



Step 16 Check and repair D-Amp P.C.B. according to the diagram shown.

12.4. Checking and Repairing of AC Inlet P.C.B. & SMPS P.C.B.

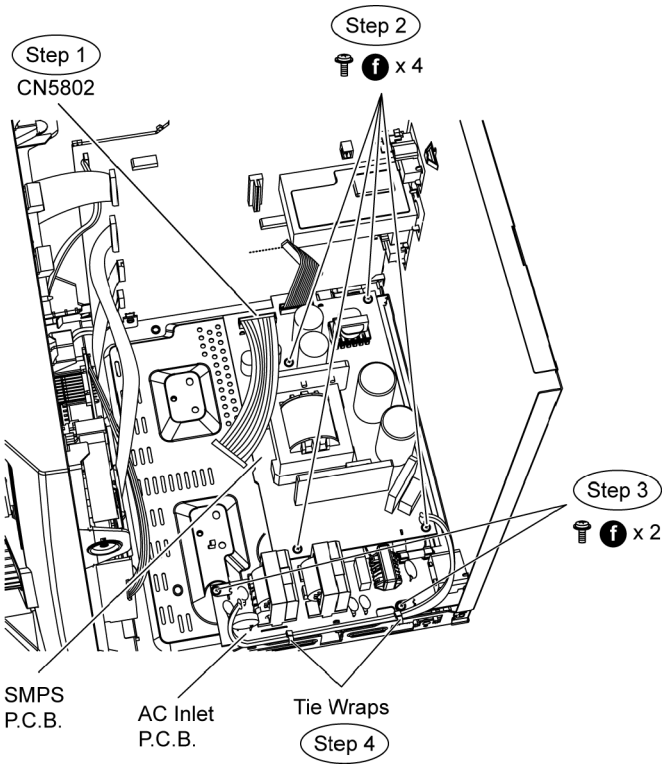
- Follow (Step 1) to (Step 9) of item 12.3

Step 1 Detach wire connector at connector CN5802 on SMPS P.C.B..

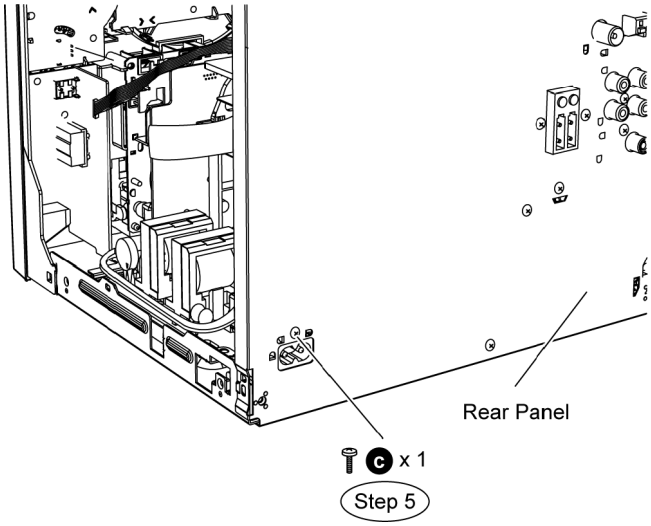
Step 2 Remove 4 screws on SMPS P.C.B..

Step 3 Remove 2 screws on AC Inlet P.C.B..

Step 4 Cut 2 tie wraps onto wires.

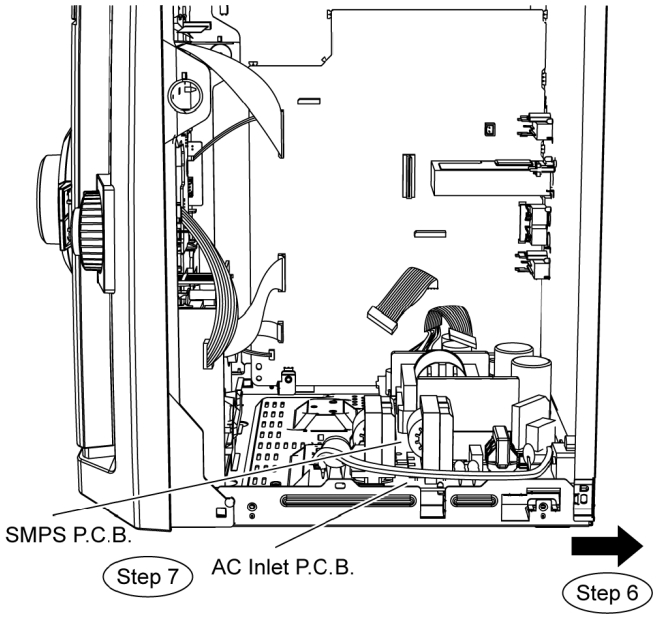


Step 5 Remove 1 screw at the rear panel.



Step 6 Move the rear panel slightly backward as arrow shown.

Step 7 Lift up the AC Inlet P.C.B. together with the SMPS P.C.B..

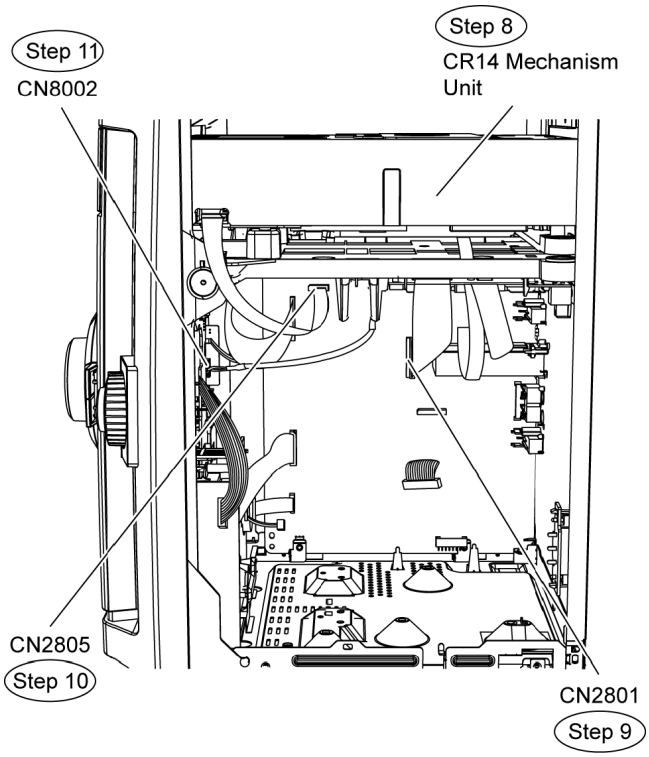


Step 8 Position Mechanism unit (CR14) according to the diagram show.

Step 9 Connect 50P FFC cable at the connector (CN2801) on Main P.C.B..

Step 10 Connect 11P FFC cable at the connector (CN2805) on Main P.C.B..

Step 11 Connect 5P cable at the connector (CN8002) on USB P.C.B..

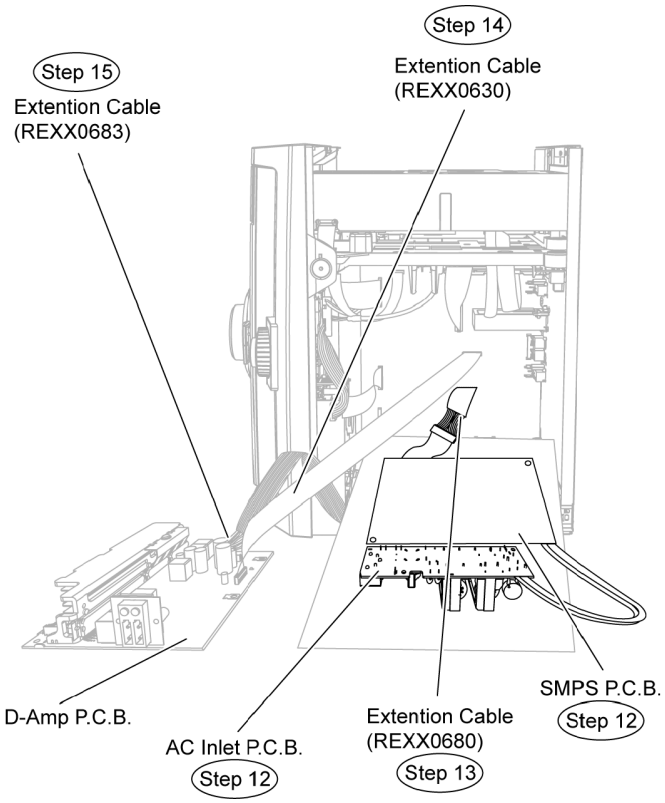


Step 12 Position SMPS and AC Inlet P.C.B. according to the diagram show.

Step 13 Attach original cable with extension cable (REXX0680) (11P cable from CN2701 to CN5050).

Step 14 Connect extension cable (REEX0930) (17P cable from CN2808 to CN5050).

Step 15 Attach original cable with extension cable (REXX0683) (8P cable from H5801 to CN5500).



Step 16 Service and repair AC Inlet P.C.B. and SMPS P.C.B. respectively.

13 Procedure for Checking Operation of Individual Parts of Deck Mechanism Unit

13.1. Operation Check with Cassette Tape

1. Pull up the EJECT lever using a rubber band. (Fig. 6)
2. Supply DC5V to MOTOR. (→ MOTOR rotates.) (Fig. 5)
3. Insert a cassette tape to the unit.
4. Supply DC9V to the plunger, and turn the power ON and OFF. (→ Power +PL, -PL) (Fig. 5)
   a. FWD PLAY: Supply the plunger power in a flash. (ON: approx. 5msec)
   b. FWD FF: Supply the plunger power in a flash at PLAY mode. (ON: approx. 5msec)
   c. STOP: Supply the plunger power in a flash at FWD FF mode. (ON: approx. 5msec)
   d. REV PLAY: Supply the plunger power in a normal timing at STOP mode. (ON: approx. 200msec)
   e. REV REW: Supply the plunger power in a flash at REV PLAY mode. (ON: approx. 50msec)
   f. STOP: Supply the plunger power in a flash at FF mode. (ON: approx. 50msec)
   Repeat the operation (→ FWD PLAY)
   (Note) Other operation may start if a timing of supplying the plunger power is missed.

13.1.1. Connection Status between Mechanism and Power Supply (Motor, Plunger)

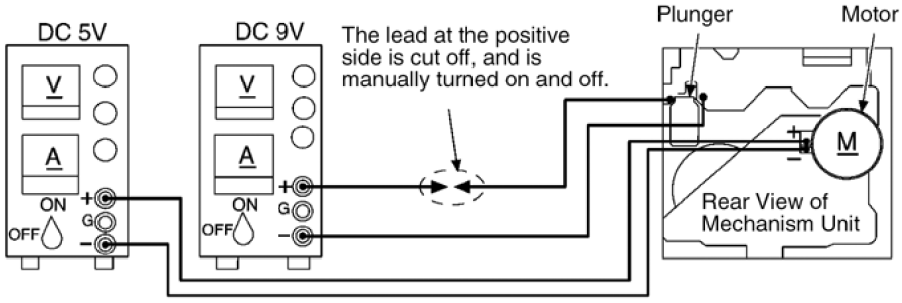


Fig. 5

13.1.2. Operative Parts of Deck Mechanism Unit (EJECT lever fitted with rubber band, Plunger/Rib operation)

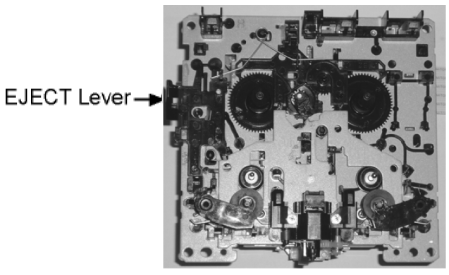
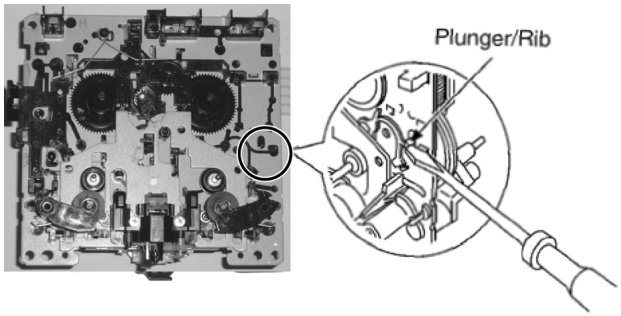


Fig. 6

13.2. Operation Check without Cassette Tape

1. Pull up the EJECT lever using a rubber band. (Fig. 6)
2. Supply DC5V to MOTOR. (→ MOTOR rotates.)
3. Lift up the mechanism unit's plunger/rib with the tip of a negative screwdriver, and operate the unit in the same timing as supplying the power. (Fig. 7)



14 Measurement And Adjustments

14.1. Cassette Deck Section

14.1.1. Requirements

- Test tape (QZZCFM) (QZZCWAT)
- Normal blank cassette tape (QZZCRA)
- Digital frequency counter
- Oscilloscope
- Electrical voltmeter
- Headphone jack output jig (Fig 8)

14.1.2. Setting of Unit

- VOLUME: MAX

14.1.3. Preparations

1. Apply under [9. Assembling and Disassembling].
2. Remove 4 screws from the mechanism unit to disassemble. under [9.13 Disassembly of Deck Mechanism Unit].
3. Connect the headphone jack output jig (Fig 8) to headphone jack.

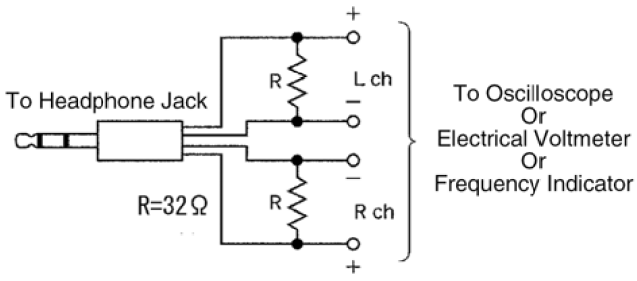


Fig. 8

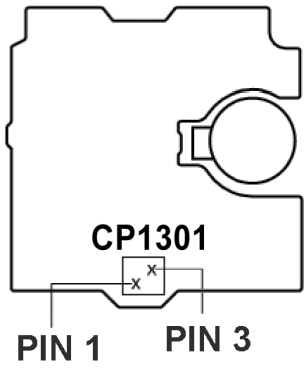


Fig. 9

14.1.4. Tape Speed Adjustment

- Normal speed adjustment (only during forward playback)

(Product reference value: 3,000±90Hz)

1. Connect a frequency indicator. (Fig 10)
2. Playback the middle portion of the test tape (QZZCWAT).
3. Adjust the motor screw so that the following output level is produced. (Fig 11)
   Adjustment Range: 3,000 ± 90Hz (a constant speed)

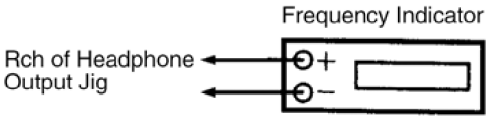


Fig. 10

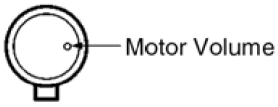


Fig. 11

14.1.5. Bias Voltage Check

1. Connect an electrical voltmeter. (Fig 12) (Fig 9 for location of Test point)
2. Set the function to “TAPE” position.
3. Insert a normal blank cassette tape (QZZCRA).
4. While pressing and holding down [REC(●)] button, press [TAPE(TAPE ▶)] button to pause the recording mode. (Repeat pressing the buttons till the recording pause mode is activated.)
5. Check that the output level is within the standard range.
   Standard Range: 14 ± 4mV

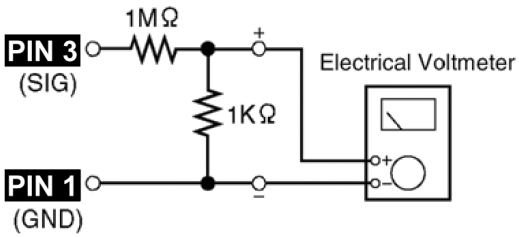


Fig. 12

14.1.6. Bias Frequency Check

1. Connect a digital frequency counter (Fig 13).
2. Set the function to “TAPE” position.
3. Insert a normal blank cassette tape (QZZCRA) and press “REC” mode on main unit.
4. Check that the output frequency is within the standard range.

Standard Value: 100 ±8 kHz

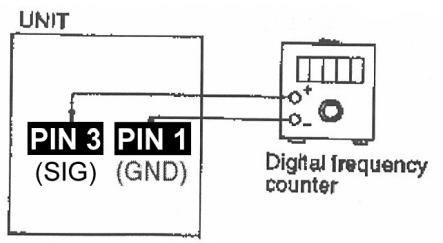


Fig. 13

15 Voltage and Waveform Chart

15.1. DVD Module P.C.B.

REF NO.	IC8001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	0	0.1	3.3	0.1	3.3	0.1	0.1	1.0	0.9	1.7	1.2	2.2	0.9	0.1	3.3	0.6	2.0	0.1	1.2
REF NO.	IC8001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	2.5	0	0	2.2	0	2.4	0	0.9	1.0	1.9	3.3	0	0	2.0	0.8	2.1	2.0	1.0	0.9	2.4
REF NO.	IC8001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	2.4	2.6	0.1	1.2	0.1	3.2	3.2	3.3	3.3	1.7	0.1	3.3	1.8	2.8	3.0	3.3	3.3	3.3	0.6	3.0
REF NO.	IC8001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
CD PLAY	1.6	0.1	0.1	0.9	3.3	1.9	1.7	0	3.3	3.3	0	3.3	3.3	0	0.3	1.2	3.3	3.3	3.3	3.3
REF NO.	IC8001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
CD PLAY	0.1	0.1	1.2	3.3	0.9	2.4	0.1	1.9	0.1	0.5	1.8	3.3	1.5	1.5	1.9	1.9	1.7	1.7	1.7	1.7
REF NO.	IC8001																			
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
CD PLAY	0	0	0.2	0.1	0.2	2.1	3.3	0	2.3	1.7	2.5	2.5	2.5	2.5	2.5	2.5	2.4	2.4	2.4	2.5
REF NO.	IC8001																			
MODE	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
CD PLAY	1.9	2.0	1.7	1.7	0.1	1.7	1.7	3.3	0.9	0.9	0.5	3.3	2.4	1.0	1.0	2.4	0.1	0.5	0.9	0.1
REF NO.	IC8001																			
MODE	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160
CD PLAY	3.3	3.3	0	0	0	0	3.3	1.5	1.7	1.7	0.9	1.7	0	3.3	1.5	1.6	0	1.2	3.0	-
REF NO.	IC8001																			
MODE	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
CD PLAY	3.0	3.0	3.1	3.0	0	3.3	3.0	3.2	3.2	3.0	3.0	3.2	0	3.3	3.0	3.1	3.2	2.9	2.9	2.9
REF NO.	IC8001																			
MODE	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200
CD PLAY	3.3	1.6	1.6	3.3	1.6	0	1.2	3.3	3.3	3.2	3.6	0	2.0	0	0	3.3	1.6	0.1	0	1.6
REF NO.	IC8001																			
MODE	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216				
CD PLAY	0.1	1.6	0.4	0	3.3	1.7	1.8	0.4	1.6	0	1.2	2.3	2.7	2.7	3.3	0				
REF NO.	IC8051																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	3.3	3.2	3.3	2.9	2.9	0	3.2	3.0	3.3	3.2	3.0	0	2.8	3.3	2.8	3.3	3.3	3.2	3.2	2.0
REF NO.	IC8051																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	1.6	0	0.1	0.4	0.4	1.6	3.3	0	1.5	1.7	1.7	1.6	0	0	0	-	3.3	1.6	2.9	-
REF NO.	IC8051																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54						
CD PLAY	0	3.2	3.3	3.0	0	0	3.2	2.9	3.3	3.1	2.9	0	3.0	0						
REF NO.	IC8111																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	3.3	-	0	1.9	4.8	-	-	5.1												
REF NO.	IC8151																			
MODE	1	2	3	4	5															
CD PLAY	2.3	2.3	0	1.3	0.8															
REF NO.	IC8251																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	1.7	1.7	1.7	2.2	2.2	2.0	0.1	5.1	3.3	0	2.5	2.7	2.5	2.7	4.1	4.2	5.0	3.3	0	3.3
REF NO.	IC8251																			
MODE	21	22	23	24	25	26	27	28	29	30										
CD PLAY	8.9	8.7	1.8	1.7	1.7	1.7	3.3	3.3	0	0										
REF NO.	IC8420																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
CD PLAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
REF NO.	IC8601																			
MODE	1	2	3	4																
CD PLAY	3.3	1.2	0	0																
REF NO.	IC8606																			
MODE	1	2	3	4	5															
CD PLAY	3.3	3.3	0	0	-															
REF NO.	IC8611																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	0	0	0	0	3.2	3.2	0	3.3												
REF NO.	IC8651																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	2.6	2.4	2.2	0.6	2.5	1.2	0.9	1.1	1.9	0	3.3	3.3	3.3	3.3	1.1	2.1	0.8	2.2	2.1	1.0
REF NO.	IC8651																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	0.9	2.5	2.4	2.6	2.3	2.7	0	2.7	2.2	2.5	2.3	2.2	0.5	2.4	1.1	1.0	3.3	1.0	2.2	2.1
REF NO.	IC8651																			
MODE	41	42	43	44	45	46	47	48												
CD PLAY	1.0	0	2.4	2.4	2.5	0	3.3	2.5												
REF NO.	IC8691																			
MODE	1	2	3	4	5															
CD PLAY	3.0	3.0	0	4.5	5.1															

REF NO.	IC8695																			
MODE	1	2	3	4	5															
CD PLAY	2.7	2.7	0	4.2	5.1															
REF NO.	IC9001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	2.2	2.6	2.4	2.4	0.9	0.9	2.0	2.2	0	2.7	2.2	2.1	1.0	0.9	2.5	2.4	2.6	2.3	3.3
REF NO.	IC9002																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	1	1	1.1	2.4	0.6	2.1	2.3	2.5	0	2.7	2.6	2.3	2.3	0.6	2.5	1.2	1.0	1.0	3.3
REF NO.	IC9003																			
MODE	1	2	3	4	5	6														
CD PLAY	1.6	0.1	1.6	1.7	3.3	1.6														
REF NO.	IC9005																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	0.1	5.1	5.1	0.1	3.3	1.1	1.1	1.1												
REF NO.	Q8321				Q8325				Q8331				Q8335				Q8341			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	1.2	0	0.5		1.5	0	0.9		1.2	0	0.5		1.5	0	0.9		1.5	0	0.9	
REF NO.	Q8551				Q8552				Q8561				Q8562				Q8563			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		S	D	G	
CD PLAY	0	5.1	0.1		5.1	0.1	5.1		1.5	3.7	2.1		4.3	1.9	3.7		0	0.2	0.1	
REF NO.	Q8564				Q8565				QR8111							QR8420				
MODE	S	D	G		S	D	G		1	2	3	4	5	6		E	C	B		
CD PLAY	0	0	3.3		0	0.1	0.7		0	0	1.2	0	0	4.8		0	4.3	0		
REF NO.	QR9030																			
MODE	E	C	B																	
CD PLAY	3.3	0	3.3																	

VK470EE DVD MODULE P.C.B.

15.2. D-Amp 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	2.5	0.1	0.1	2.9	0	-29.3	-29.3	29.3	11	-0.1	-29.5	-17.3	-29.5	-0.1	11	29.3	-29.3	-29.3	0	29
STANDBY	2.5	0.1	0.1	2.9	0	-29.3	-21	29.3	11	-0.1	-29.5	-17.3	-29.5	-0.1	11	29.3	-29.3	-29.2	0	29
REF NO.	IC5000																			
MODE	21	22	23																	
CD PLAY	-0.1	-0.1	2.5																	
STANDBY	-0.1	-0.1	2.5																	
REF NO.	IC5500																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
CD PLAY	0	5.2	5	0	2.7	2.2	0	2.5	2.6	2.6	2.5	0	5.2	5.2						
STANDBY	0	5.2	5	0	2.7	2.2	0	2.5	2.6	2.6	2.5	0	5.2	5.2						
REF NO.	IC5501																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
CD PLAY	2.5	2.6	2.5	0	2.6	0	0	0	0	0	0	0	5.2	5.2						
STANDBY	2.5	2.6	2.5	0	2.6	0	0	0	0	0	0	0	5.2	5.2						
REF NO.	Q5101				Q5102				Q5601				Q5603				Q5604			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	5.2	0		0	5.2	0		0	0	0.7		5.2	5.1	4.4		0	0	0.7	
STANDBY	0	5.2	0		0	5.2	0		0	0	0.7		5.2	5.1	4.5		0	0	0.7	

VK470EE D-AMP P.C.B.

15.3. Main P.C.B.

REF NO.	IC2002																			
MODE	1	2	3	4	5															
CD PLAY	5.1	0	5.0	-	3.3															
STANDBY	5.1	0	5.0	-	3.3															
REF NO.	IC2103																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	4.7	4.7	4.7	0	4.7	4.7	4.7	9.4												
STANDBY	4.7	4.7	4.7	0	4.7	4.7	4.7	9.4												
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	0.5	0	0	5.0	5.0	0	0	0	0	1.3	0.7	5.0	2.5	0	-	5.0	5.0	5.0	0	3.2
STANDBY	0.4	0	0	5.0	5.0	5.1	0	0	0	1.3	0.7	5.0	2.5	0	-	5.0	5.0	5.0	0	3.2
REF NO.																				
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	5.0	5.0	0	0	0	0	5.0	0	5.1	5.1	0	0	4.9	2.0	2.3	4.2	4.5	0	0	0
STANDBY	5.0	5.0	0	0	0	0	5.0	0	5.1	5.1	0	0	4.9	2.0	2.4	4.2	4.5	0	0	5.0
REF NO.																				
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	4.7	0	5.0	3.8	5.0	0	0	0	0	0	0	0	0	0	0	0	0
STANDBY	0	0	0	4.7	0	4.9	3.8	5.0	0	0	0	0	0	0	0	0	0	0	0	0
REF NO.																				
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
CD PLAY	0	5.0	5.0	0	5.0	0	0	0	5.0	0	0	3.4	0.4	4.3	0	5.0	0	0	0	0
STANDBY	0	5.0	5.0	0	5.0	0	0	0	5.0	0	0	3.4	0.4	4.3	0	5.0	0	0	0	0
REF NO.																				
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
CD PLAY	0.2	0	5.0	0.2	5.0	0.2	5.0	3.7	1.3	5.0	3.4	5.0	5.0	3.1	4.6	0	2.1	5.0	5.0	0
STANDBY	0.2	0	5.0	0.2	5.0	0.2	5.0	3.7	1.3	5.0	3.4	5.0	5.0	3.0	4.6	0	2.0	5.0	5.0	0
REF NO.	IC2802																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	-	5.0	0	0	0	0	0	-												
STANDBY	-	5.0	0	0	0	0	0	-												
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	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	0	0	0	4.7	4.7	4.7	4.7	4.7	4.7	4.7
STANDBY	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	0	0	0	4.7	4.7	4.7	4.7	4.7	4.7	4.7
REF NO.																				
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	4.7	4.7	4.7	4.7	4.7	4.7	4.7	-	-	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	9.4	5.0	0
STANDBY	4.7	4.7	4.7	4.7	4.7	4.7	4.7	-	-	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	9.4	5.0	0
REF NO.																				
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56				
CD PLAY	-	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.6	4.6	4.7	4.7	4.7	4.7	4.7				
STANDBY	-	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.6	4.6	4.7	4.7	4.7	4.7	4.7				
REF NO.	IC2804																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	0	0	0	-9.5	0	0	0	9.4												
STANDBY	0	0	0	-9.5	0	0	0	9.4												
REF NO.	IC2900																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	5.0	0	0	2.1	4.8	1.6	0	1.6	2.2	0	1.5	0	2.2	4.8	2.2	5.0	2.2	2.2	0	2.3
STANDBY	5.0	0	0	2.2	4.8	1.6	0	1.6	2.2	0	1.5	0	2.2	4.8	2.2	5.0	2.2	2.2	0	2.3
REF NO.																				
MODE	21	22	23	24	25	26	27	28	29	30	31	32								
CD PLAY	2.3	0	1.4	1.4	0	1.4	1.4	0	1.5	1.5	0	2.3								
STANDBY	2.3	0	1.4	1.4	0	1.4	1.4	0	1.5	1.5	0	2.3								
REF NO.	IC4000																			
MODE	1	2	3	4	5															
CD PLAY	15.3	5.2	0	1.0	3.3															
STANDBY	15.7	5.2	0	1.0	3.3															
REF NO.	IC4001																			
MODE	1	2	3	4	5															
CD PLAY	15.3	11.5	0	1.0	14.8															
STANDBY	15.7	11.5	0	1.0	15.2															
REF NO.	Q2004				Q2005				Q2011				Q2012				Q2051			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	1.7	0		3.3	1.7	5.0		0	10.7	0		0	10.7	0		5.1	-6.4	4.6	
STANDBY	0	1.7	0		3.3	1.7	5.0		0	10.7	0		0	10.7	0		2.4	2.3	1.0	
REF NO.	Q2052							Q2142				Q2143				Q2242				
MODE	1	2	3	4	5	6		E	C	B		E	C	B		E	C	B		
CD PLAY	0	-6.4	0	0	-6.4	0		0	0	0.2		0	0	-6.4		0	0	-0.1		
STANDBY	0	0.7	0	0	0.7	0		0	0	0		0	0	0.6		0	0	0		
REF NO.	Q2243				Q2366							Q2501								
MODE	E	C	B		1	2	3	4	5	6		E	C	B						
CD PLAY	0	0	-6.4		0	-6.4	0	0	-6.4	0		0	-6.4	0						
STANDBY	0	0	0.6		0	0.6	0	0	0.6	0		1.4	0.8	0						

REF NO.	Q2502							Q2600				Q2700				Q2701				
MODE	1	2	3	4	5	6		E	C	B		E	C	B		E	C	B		
CD PLAY	0	-6.4	0	0	-6.4	0		0	5.0	0		5.0	5.0	4.3		0	0	5.0		
STANDBY	0	0.6	0	0	0.6	0		0	5.0	0		5.0	5.0	4.3		0	0	5.0		
REF NO.	Q2702				Q2800				Q2810				Q2900				Q2912			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	0	5.0		3.7	3.7	4.9		5.1	11.5	5.7		0	15.1	-0.2		0	0	4.3	
STANDBY	0	0	5.0		3.7	3.7	4.8		5.1	11.5	5.7		0	15.4	-0.3		0	5.1	0	
REF NO.	Q2980				Q4000				Q4001				Q4002				Q4003			
MODE	E	C			E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	1.9	5.1	2.6		3.1	4.7	3.8		3.8	3.8	4.9		-9.5	-11.5	-10.1		9.4	11.5	10.1	
STANDBY	1.9	5.1	2.6		3.1	4.7	3.8		3.8	3.8	4.9		-9.5	-11.4	-10.1		9.4	11.5	10.1	
REF NO.	Q4005				Q4006				Q4007				Q5100				Q6910			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	3.8	-0.9		5.7	3.5	5.3		7.5	9.2	8.2		0	0	0.2		0	0	0	
STANDBY	0	3.7	-0.9		5.6	3.6	5.1		7.5	9.2	8.2		0	0	0.2		0	0	0	
REF NO.	QR4004																			
MODE	E	C	B																	
CD PLAY	3.8	3.8	4.9																	
STANDBY	3.8	3.8	4.9																	

VK470EE MAIN P.C.B.

15.4. Panel, Mic, Tact Switch 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	29	0	0	4.1	2.5	1.9	1.9	0	5.0	24.4	24.4	22	24.4	17.2	19.7	14.9
STANDBY	0	0	0	0	29	0	0	4.1	2.5	1.9	1.9	0	5.0	24.5	24.5	22	24.4	14.9	19.7	12.
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	24.4	24.4	24.4	17.2	17.2	24.4	24.4	24.4	17.3	24.9	15	17.4	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3
STANDBY	24.5	24.5	24.5	17.3	17.3	24.5	24.5	24.5	17.3	25	15	15.1	22.4	22.3	22.3	22.3	22.3	22.3	22.3	22.3
REF NO.	IC6601																			
MODE	41	42	43	44																
CD PLAY	22.3	22.2	5.0	0																
STANDBY	22.3	22.2	5.0	0																
REF NO.	Q6600				Q6601				Q6602				Q6603							
MODE	E	C	B		E	C	B		E	C	B		E	C	B					
CD PLAY	0	5.2	0		0	0	5.0		0	0	5.0		0	0	5.0					
STANDBY	0	5.2	0		0	0	5.0		0	0	5.0		0	0	5.0					

VK470EE PANEL P.C.B.

REF NO.	IC6000																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	0	0	0	-9.5	0	0	0	9.4												
STANDBY	0	0	0	-9.5	0	0	0	9.4												

VK470EE MIC P.C.B.

REF NO.	Q6511																			
MODE	E	C	B																	
CD PLAY	0	0	5.0																	
STANDBY	0	0	5.0																	

VK470EE TACT SWITCH P.C.B.

15.5. Deck, Deck Mechanism P.C.B.

REF NO.	IC1000																			
MODE	1	2	3	4	5															
CD PLAY	0	0	0	0	0															
STANDBY	0	0	0	0	0															
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	0.3	0.3	0.1	0	0	0	0.1	0	0	0	0	0	0	0.1	0	0	0	0.1	0.3
STANDBY	0	0.3	0.3	0.1	0	0	0	0.1	0	0	0	0	0	0	0.1	0	0	0	0.1	0.3
REF NO.	IC1001																			
MODE	21	22																		
CD PLAY	0.3	0																		
STANDBY	0.3	0																		
REF NO.	Q1101				Q1201				Q1302				Q1303				Q1304			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	0	0		0	0	0		3.3	0	3.3		0	0	0		0	0	0	
STANDBY	0	0	0		0	0	0		3.3	0	3.3		0	0	0		0	0	0	
REF NO.	Q1306				Q1307				Q1309				Q1310				Q1312			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	0	0		0	0	0		0	0	0		0	0	0		0	0	0	
STANDBY	0	0	0		0	0	0		0	0	0		0	0	0		0	0	0	
REF NO.	Q1314				Q1315				Q1316				Q1317							
MODE	E	C	B		E	C	B		E	C	B		E	C	B					
CD PLAY	3	3	0.5		3	1.7	9.1		1.7	1.7	2.4		0	0	0					
STANDBY	2.2	2.2	0.3		2.2	2.2	1.5		2.1	.21	2.2		0	0	0					

VK470EE DECK P.C.B.

REF NO.	IC971																			
MODE	1	2	3	4																
CD PLAY	0.5	0	3.9	5																
STANDBY	0	0	0	0																

VK470EE DECK MECHANISM P.C.B.

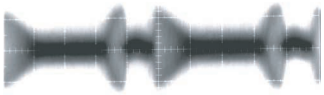
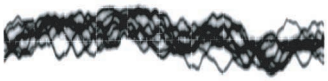
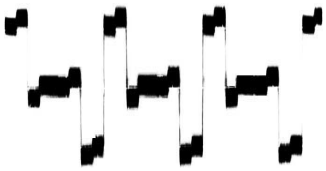
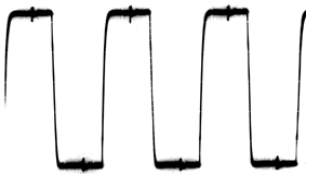
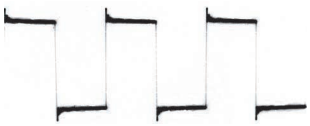
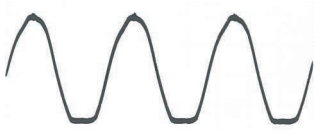
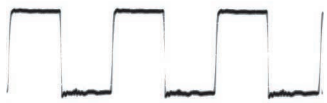
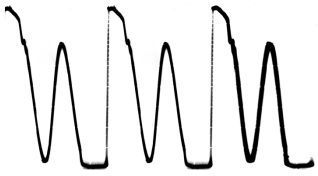
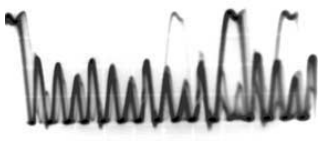
15.6. SMPS P.C.B.

REF NO.	IC5701																			
MODE	1	2	3	4	5	6	7													
CD PLAY	162	0	0	19.3	0.1	1.4	0.5													
STANDBY	162	0	0	19.3	0.1	1.4	0.5													
REF NO.	IC5799																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	6.0	1.6	1.8	20.3	162.2	-	0	0												
STANDBY	6.0	1.6	2.0	20.3	163.0	-	0	0												
REF NO.	IC5801																			
MODE	1	2	3																	
CD PLAY	-2.2	-29.5	-26.8																	
STANDBY	-2.2	-29.5	-26.8																	
REF NO.	IC5899																			
MODE	1	2	3																	
CD PLAY	4.2	0	2.5																	
STANDBY	4.2	0	2.5																	
REF NO.	Q5720				Q5721				Q5722				Q5802				Q5803			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	5.9	6.5	5.6		19.9	19.9	19.2		0	17.0	0.1		-21.9	-2.2	-22		0	5.8	0	
STANDBY	5.9	6.6	5.6		19.9	19.9	19.2		0	16.8	0.1		-21.8	-2.2	-22		0	5.8	0	
REF NO.	Q5860				Q5861				Q5862				QR5801				QR5802			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	1.3	0	0.7		0	0	0.7		0	5.2	0		0	5.0	0		0	4.5	0	
STANDBY	1.3	0	0.7		0	0	0.7		0	5.2	0		0	5.0	0		1.5	1.5	0	
REF NO.	QR5810				Q5898															
MODE	E	C	B		E	C	B													
CD PLAY	0	0.1	5		0	3.2	0.5													
STANDBY	0	0	5		0	3.2	0.5													

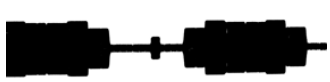
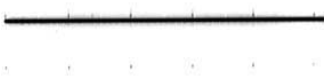
VK470EE SMPS P.C.B.

15.7. Waveform Chart

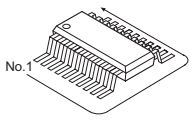
15.7.1. Waveform 1

WF No. IC2103-1,7 (PLAY)  0.3Vp-p(200usec/div)	WF No. IC2103-2,6 (PLAY)  0.3Vp-p(200usec/div)	WF No. IC2803-3,4 (PLAY)  0.4Vp-p(1msec/div)	WF No. IC2803-5 (PLAY)  2.8Vp-p(200usec/div)
WF No. IC2803-6 (PLAY)  0.24Vp-p(200usec/div)	WF No. IC2803-18,52,54 (PLAY)  3.4Vp-p(200usec/div)	WF No. IC2803-35,36 (PLAY)  0.44Vp-p(200usec/div)	WF No. IC2803-43,44 (PLAY)  0.6Vp-p(200usec/div)
WF No. IC2900-30 (PLAY)  0.21Vp-p(20usec/div)	WF No. IC2900-4,24 (PLAY)  0.6Vp-p(20usec/div)	WF No. IC2900-8,11 (PLAY)  1Vp-p(20usec/div)	WF No. IC2900-13,21 (PLAY)  0.48Vp-p(20usec/div)
WF No. IC2900-15,18 (PLAY)  0.48Vp-p(20usec/div)	WF No. IC5000-1 (PLAY)  5.6Vp-p(1usec/div)	WF No. IC5000-2 (PLAY)  0.84Vp-p(200usec/div)	WF No. IC5000-10,14 (PLAY)  80Vp-p(1usec/div)
WF No. IC5000-22 (PLAY)  0.84Vp-p(200usec/div)	WF No. IC5500-5 (PLAY)  7.2Vp-p(500nsec/div)	WF No. IC5500-8 (PLAY)  5.6Vp-p(500usec/div)	WF No. IC5701-1 (PLAY)  400Vp-p(2usec/div)
WF No. IC5701-4,6 (PLAY)  2Vp-p(5usec/div)	WF No. IC5799-2 (PLAY)  2Vp-p(5usec/div)	WF No. IC5799-3 (PLAY)  9.6Vp-p(5usec/div)	WF No. IC5799-5 (PLAY)  240Vp-p(50usec/div)

15.7.2. Waveform 2

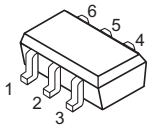
WF No. IC5899-1,2,3 (PLAY)  1.65Vp-p(5msec/div)	WF No. IC6601-5 (PLAY)  2.15Vp-p(2usec/div)	WF No. IC8001-138 (PLAY)  1.05Vp-p(20usec/div)	WF No. IC8001-139 (PLAY)  0.95Vp-p(10usec/div)
WF No. IC8001-144,146 (PLAY)  5.2Vp-p(500usec/div)			

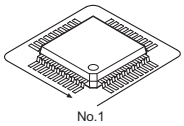
16 Illustration of IC's, Transistors and Diodes



AN7326K (22p)
C0ABBB000230 (8p)
C0DBZYY00266 (8p)
C0JBAB000902 (14p)
C0CBCBD00018 (8p)
C1AA00000612 (5p)
C0JBAF000716 (14p)
C0JBAZ001251 (20p)
C3ABPY000011 (54p)
C9ZB00000461 (32p)
C0FBBK000047 (16p)

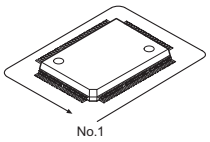
C0JBAB000908 (6p)



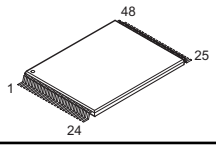


C0HBB0000057 (44p)
C1BB00001121 (58p)
MN2DS0018MP (216p)

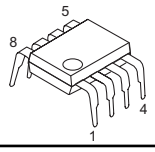
RFKWVK470GC (100p)



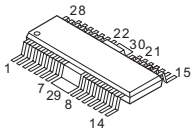
RFKWMH32B325 (48p)



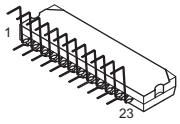
C0AABB000125 (8P)
C3EBGC000056 (8P)



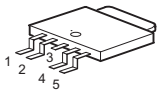
C0GBG0000048 (28P)



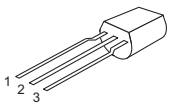
C1BA00000487 (23P)



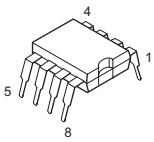
C0DBEHG00006 (5p)



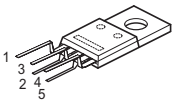
C0DABFC00002 (3p)
C0DAEMZ00001 (3p)

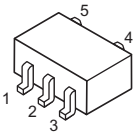


MIP4110MSSCF (8P)



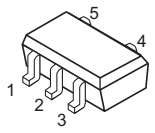
C0DAAMH00012 (5p)
C0DAAYY00042 (5p)



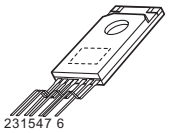


C0CBCBC00140 (5p)
C0EBA0000039 (5p)
C0EBE0000456 (5p)

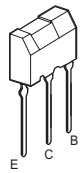
C0JBAA000502 (5p)



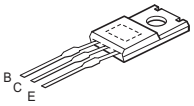
C5HACYY00003 (7p)



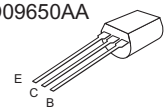
B1BABK000001



B1BACG000023
B1BCCG000002



B1AAGC000006
B1AAKD000012
B1ACKD000006
2SC3940ARA
2SD0592ARA
2SD09650AA



B1ACCF000094
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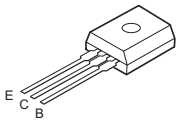

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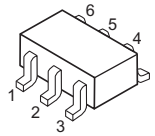
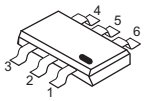


XP0621400L



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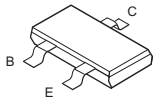
B1ADCE000012
B1ABGC000001



B1ADCF000001
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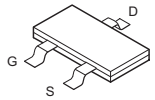
B1GBCFJJ0051
B1GBCFJN0033
B1GBCFLL0037
B1GDCFGA0018
B1ABCF000011

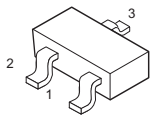
B1GBCFGH0001
B1GDCFJJ0047
UNR221400L
UNR521100L
2SA207700L
2SB1218ARL

2SD0601AHL
2SD1819A0L

B1CFHA000002



B1GDCFGH0002
B1GDCFJJ0002



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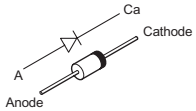
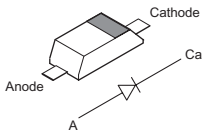
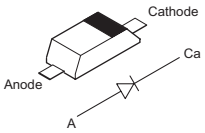
B0EAMM000057
B0HAMP000094
B0JAME000029
B0JAM6000114



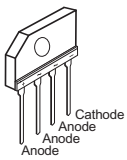
MA2C16500E
MA2J11100L
MA2J72800L



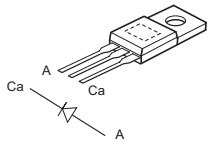
B0ACCE000003
B0ACCK000005



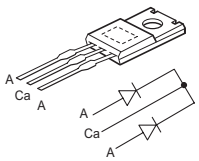
B0FBAR000041



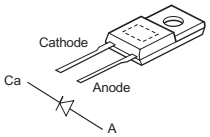
B0ZAZ0000052

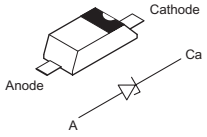


B0HBSM000043



B0HFRJ000012





B0BC01000014
B0BC019A0007
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B0BC4R600016
B0BC5R000009
B0BC5R600003
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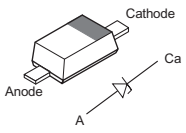
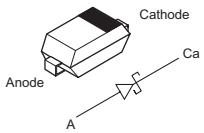
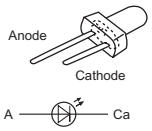


MAZ80510ML
MAZ80750ML
MAZ81800ML
MAZ82400HL

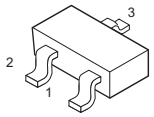
B0JCPD000025
B0HCMM000019



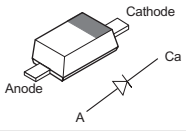
B3AAA0000803
B3AEA0000107



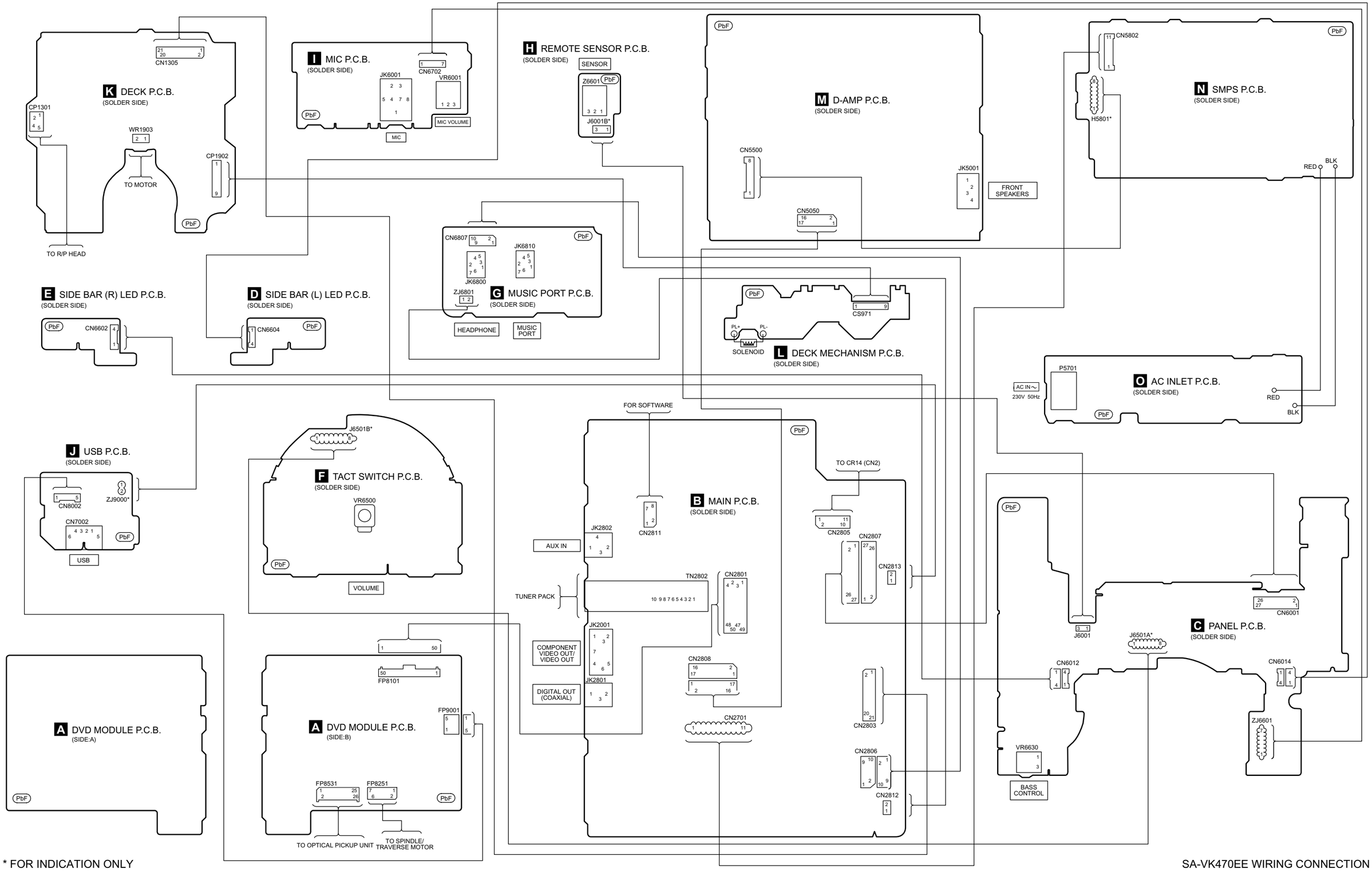
B0ADCC000002
B0ADCJ000020



B0BC035A0007



17 Wiring Connection Diagram

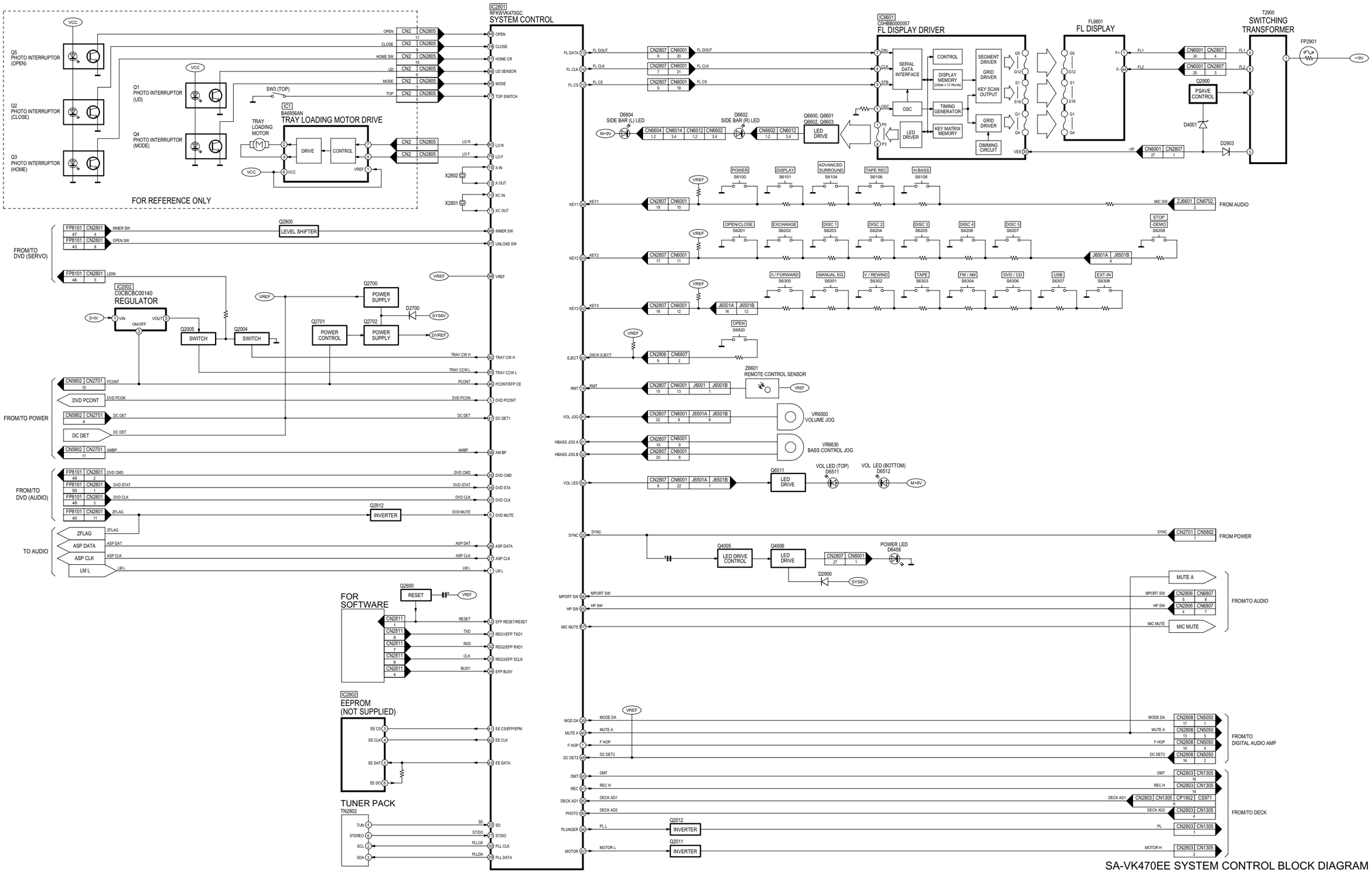


* FOR INDICATION ONLY

SA-VK470EE WIRING CONNECTION

18 Block Diagram

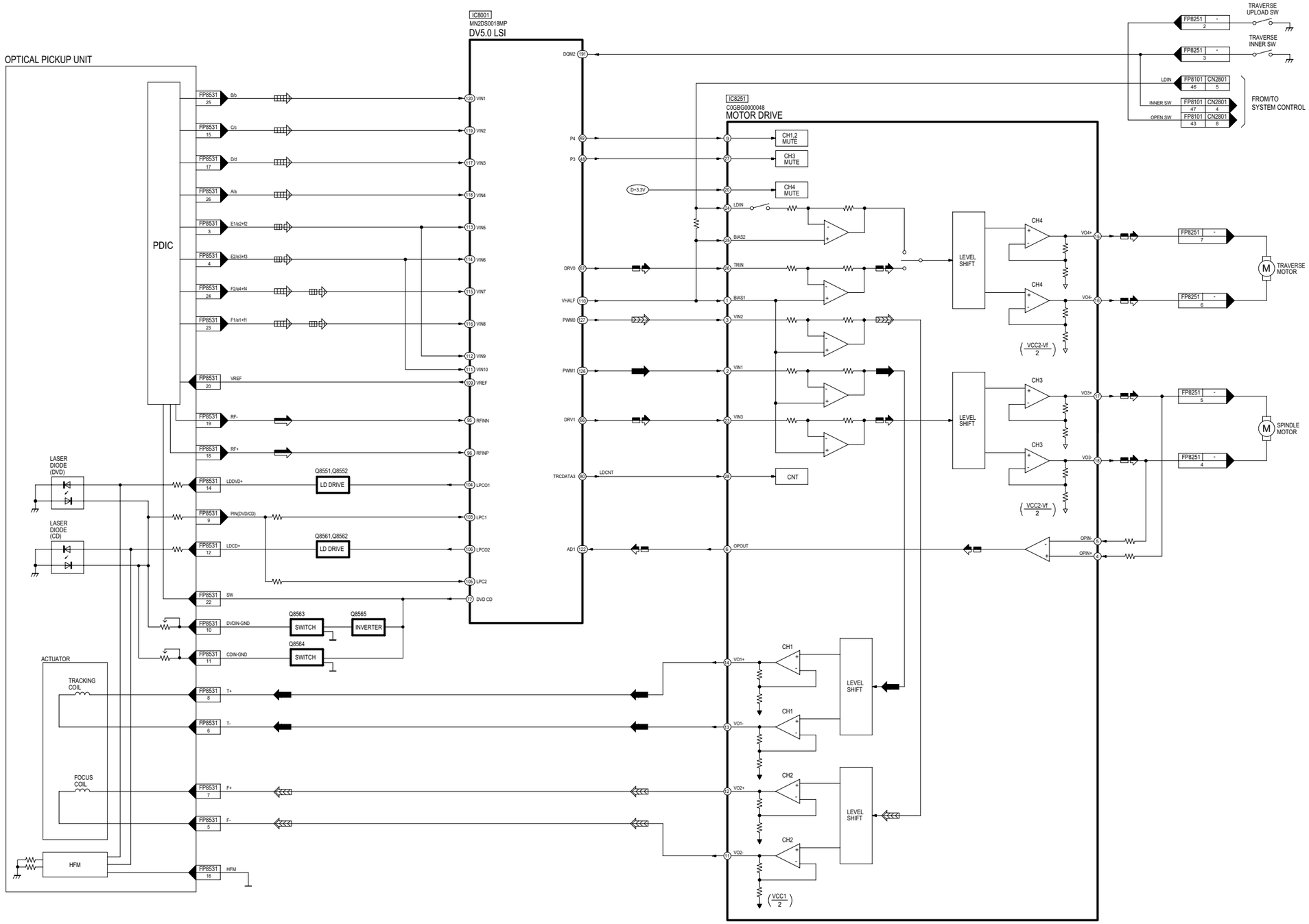
18.1. System Control



SA-VK470EE SYSTEM CONTROL BLOCK DIAGRAM

18.2. DVD (Servo)

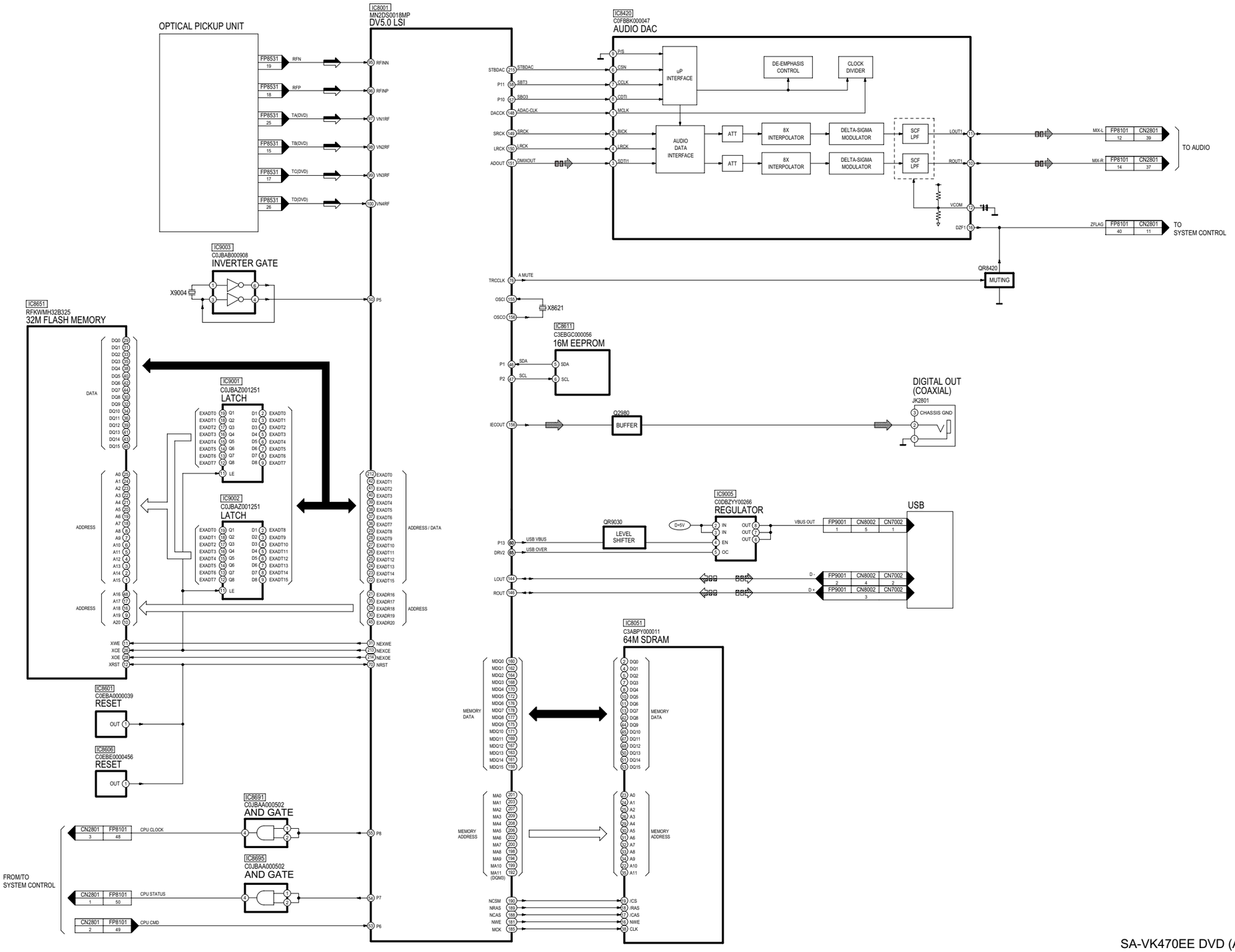
: DVD HEAD SIGNAL LINE : CD HEAD SIGNAL LINE : DVD RF SIGNAL LINE : MOTOR DRIVE SIGNAL LINE : TRACKING ERROR SIGNAL LINE : FOCUS ERROR SIGNAL LINE



SA-VK470EE DVD (SERVO) BLOCK DIAGRAM

18.3. DVD (Audio)

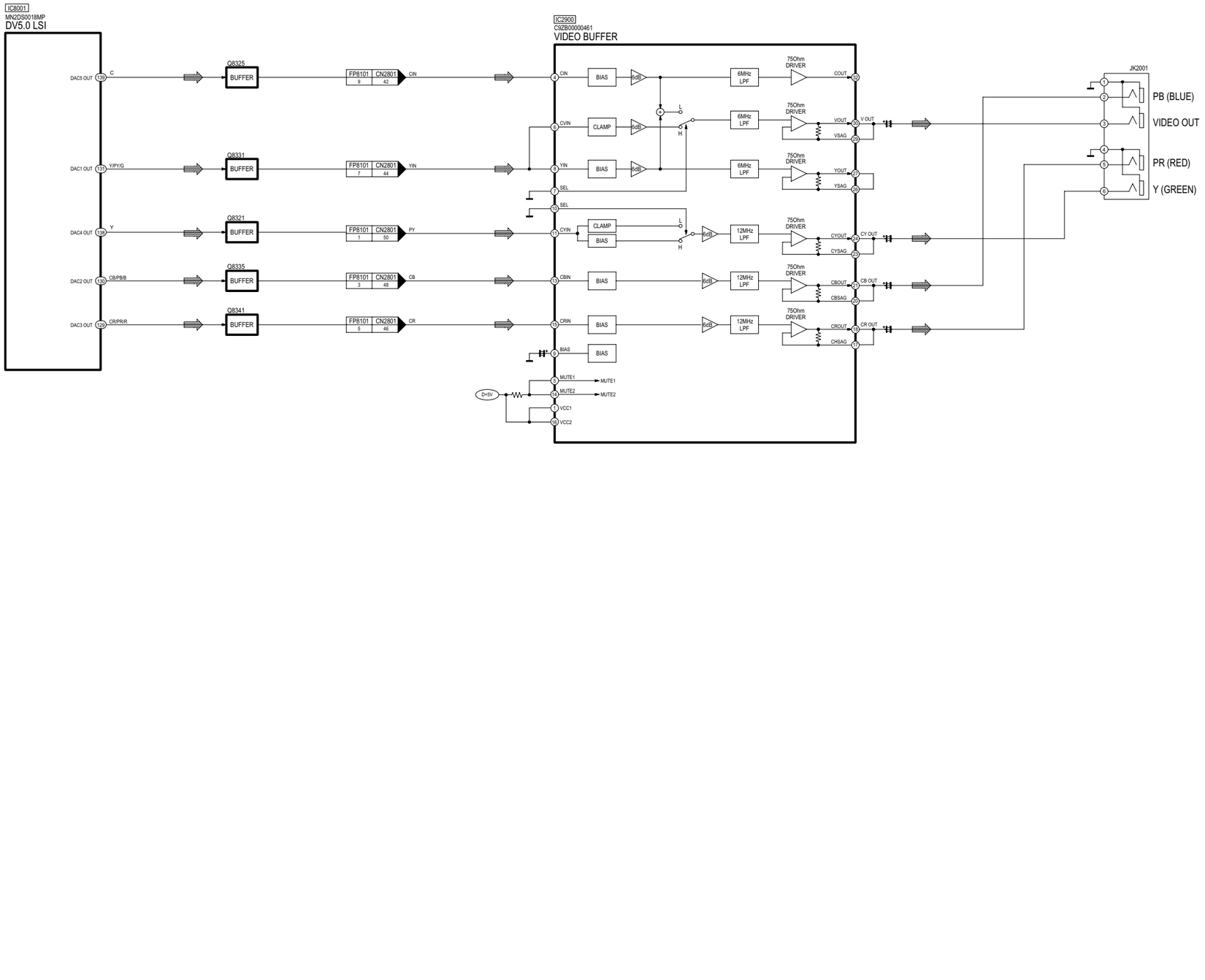
: MAIN SIGNAL LINE : DVD AUDIO SIGNAL LINE : USB SIGNAL LINE : DVD RF SIGNAL LINE : AUDIO SIGNAL LINE



SA-VK470EE DVD (AUDIO) BLOCK DIAGRAM

18.4. Video

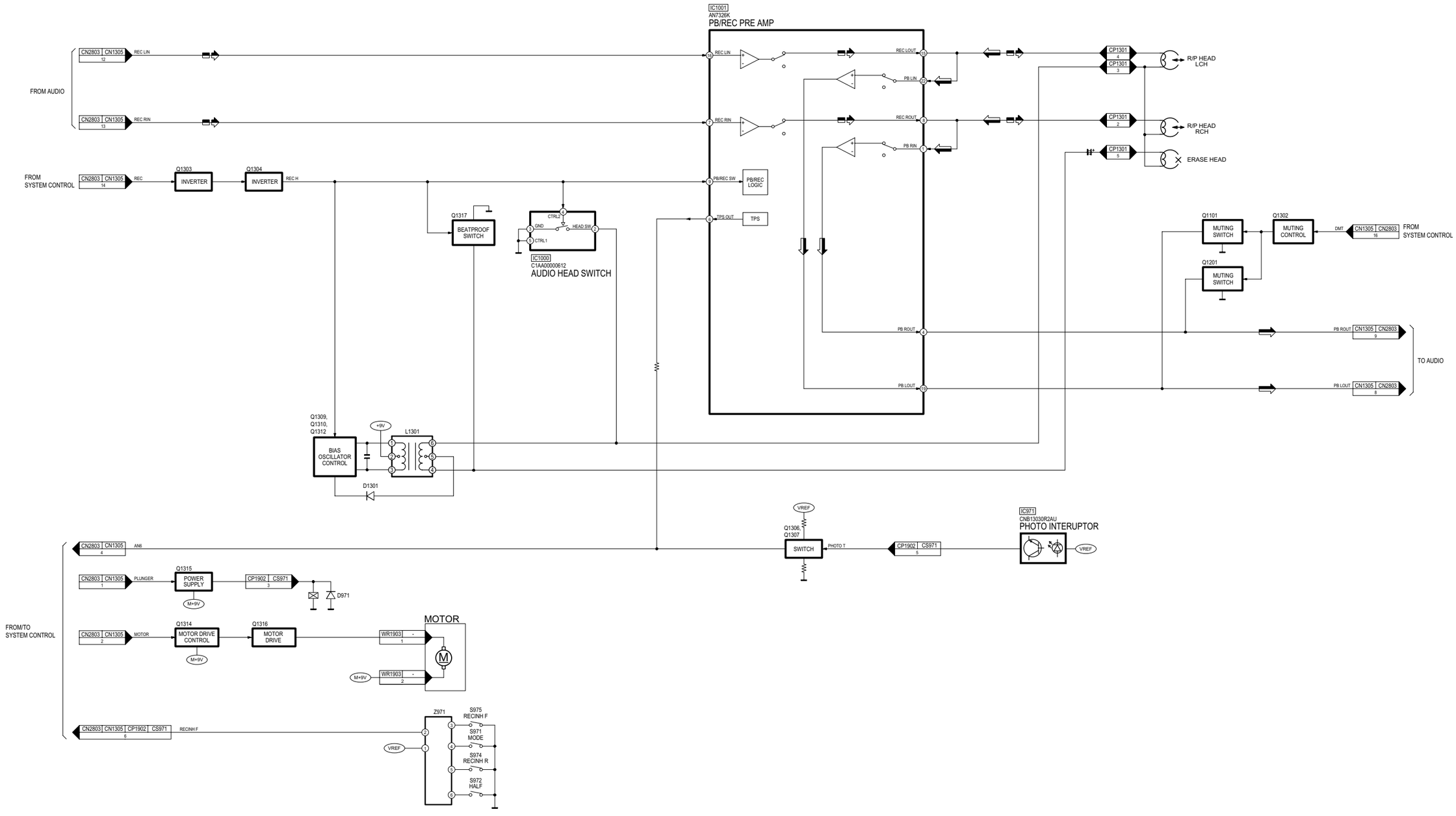
: DVD VIDEO SIGNAL LINE



SA-VK470EE VIDEO BLOCK DIAGRAM

18.5. Deck

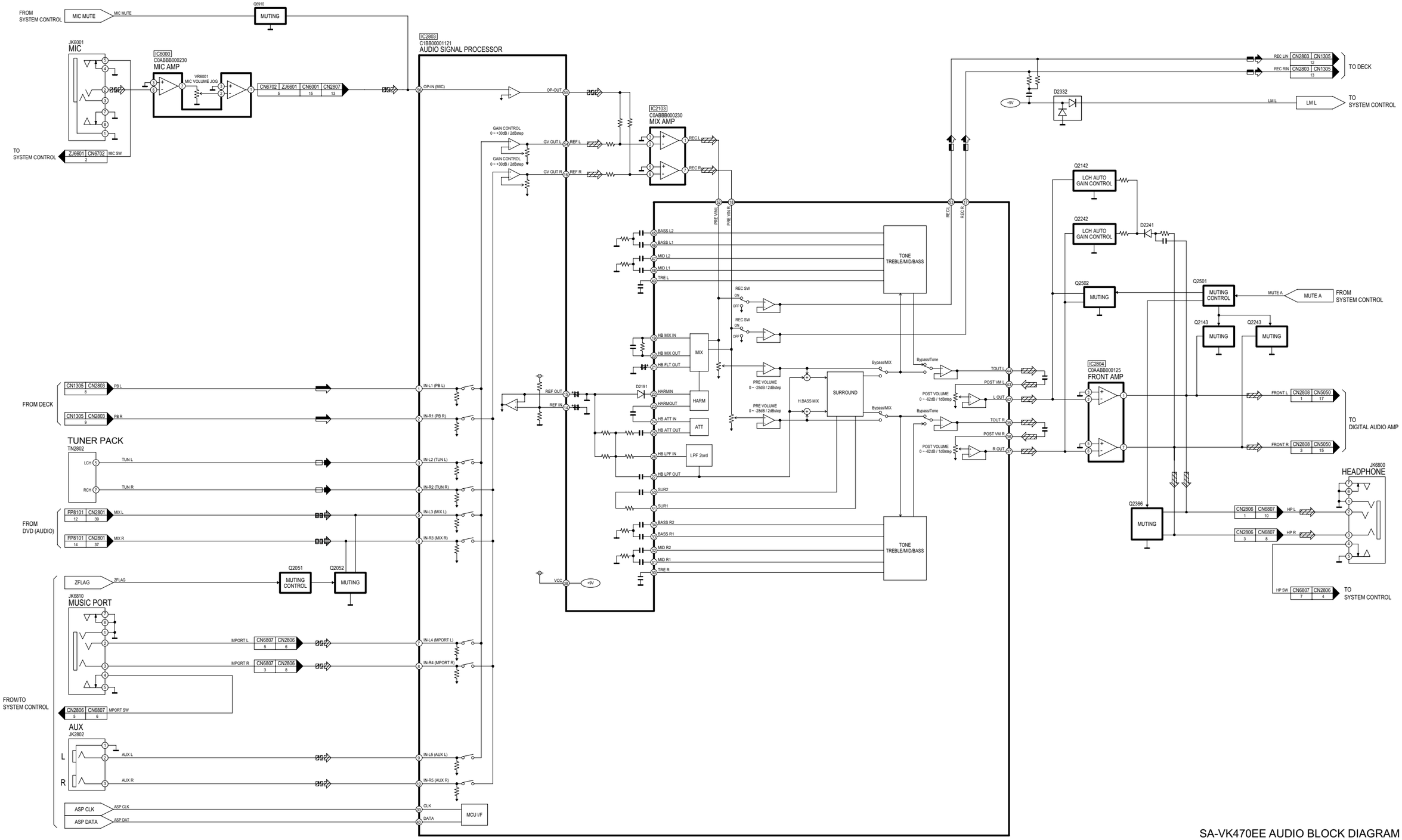
: TAPE RECORD SIGNAL LINE : TAPE PLAYBACK SIGNAL LINE



SA-VK470EE DECK BLOCK DIAGRAM

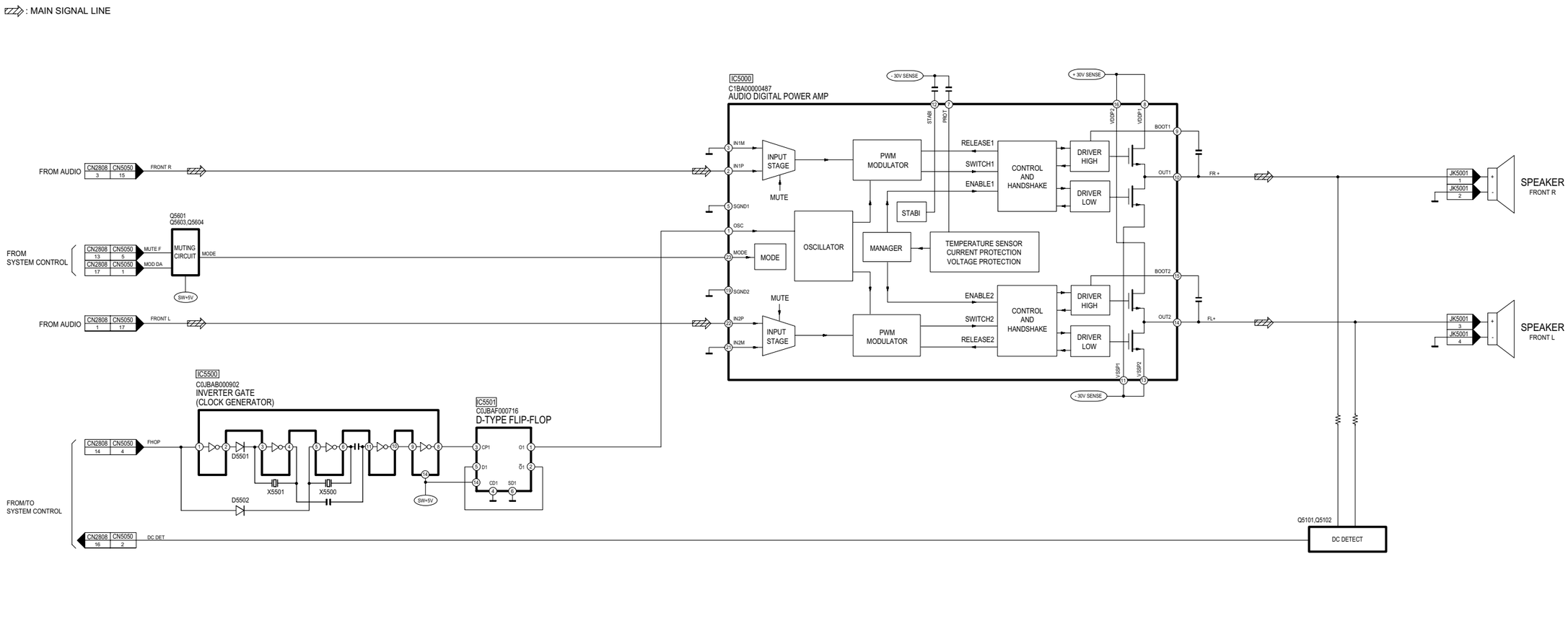
18.6. Audio

: MAIN SIGNAL LINE : DVD AUDIO SIGNAL LINE : AM / FM SIGNAL LINE : TAPE RECORD SIGNAL LINE : TAPE PLAYBACK SIGNAL LINE : AUX / MIC / MUSIC PORT SIGNAL LINE



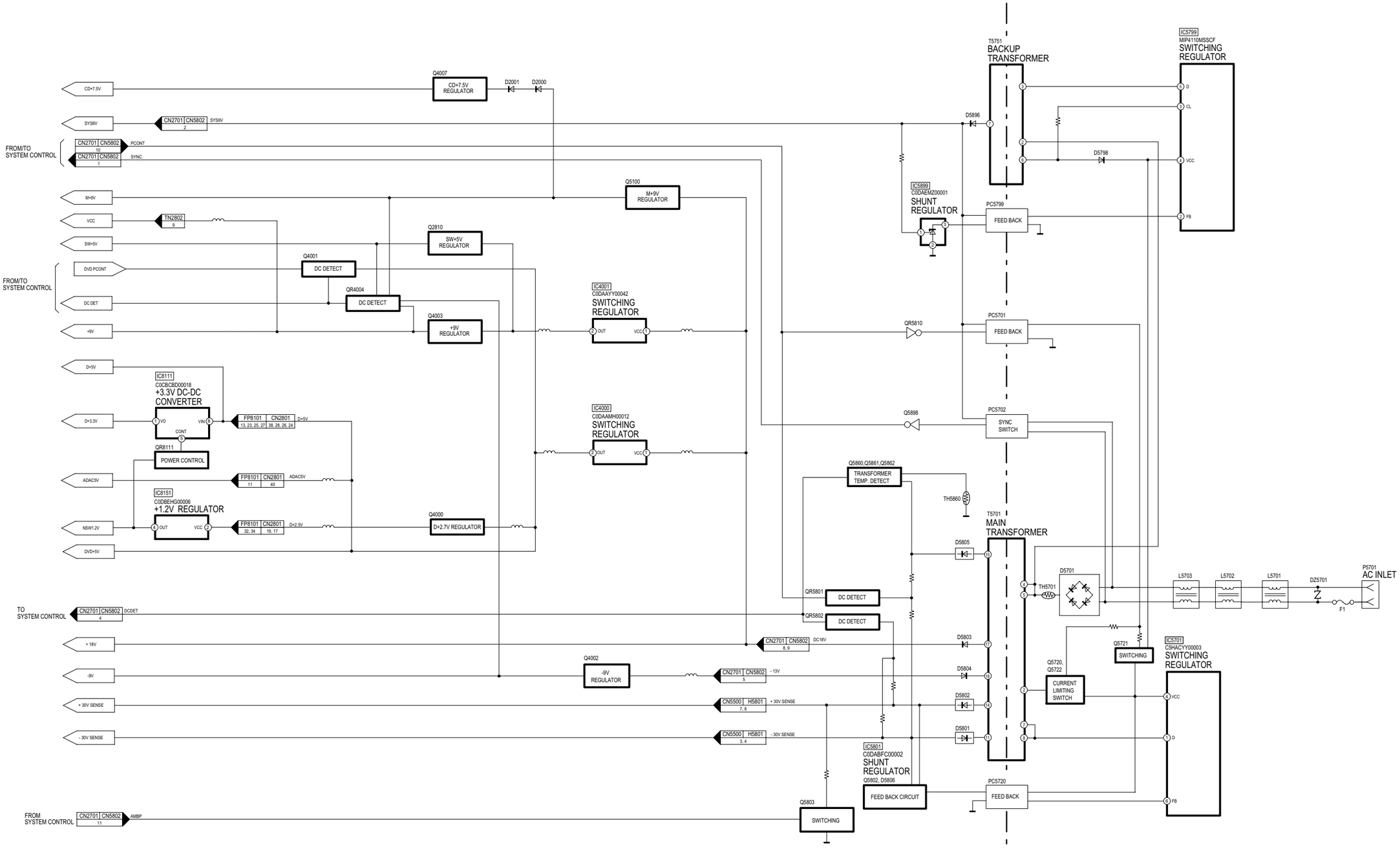
SA-VK470EE AUDIO BLOCK DIAGRAM

18.7. Digital Audio Amp



SA-VK470EE DIGITAL AUDIO AMP BLOCK DIAGRAM

18.8. Power



SA-VK470EE POWER BLOCK DIAGRAM

19 Schematic Diagram Notes

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

Notes:

S971:	Mode Switch.
S972:	Half Switch.
S974:	RECINH_R Switch.
S975:	RECINH_F Switch.
S5701:	Voltage Selector Switch.
S6100:	Power (⏻/I) Switch.
S6101:	Display Switch.
S6104:	Advanced Surround Switch.
S6106:	Tape Rec (TAPE ●REC) Switch.
S6108:	H.Bass Switch.
S6201:	Open/Close (⏏) Switch.
S6202:	Exchange (⏏) Switch.
S6203:	Disc 1 (1 ▶) Switch.
S6204:	Disc 2 (2 ▶) Switch.
S6205:	Disc 3 (3 ▶) Switch.
S6206:	Disc 4 (4 ▶) Switch.
S6207:	Disc 5 (5 ▶) Switch.
S6208:	Stop/-Demo (■ STOP/DEMO) Switch.
S6300:	/Forward (/FF/▶▶I) Switch.
S6301:	Manual EQ Switch.
S6302:	/Rewind (/REW/I◀◀) Switch.
S6303:	Tape (◀ ▶) Switch.
S6304:	FM/AM Switch.
S6306:	DVD/CD Switch.
S6307:	USB (USB ▶) Switch.
S6308:	EXT-IN Switch.
S6820:	Open (⏏) Switch.
VR6001:	Mic Volume Jog.
VR6500:	Volume Jog.
VR6630:	Bass Control Jog.

- Important safety notice:

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

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

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

- In case of AC rated voltage Capacitor, the part no. and values will be indicated in the Schematic Diagram.

  AC rated voltage capacitor:

  C5700, C5701, C5703, C5704, C5705, C5706, C5707,

- **Resistor**

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

- **Capacitor**

  Unit of capacitance 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 line

: +B signal line

: -B signal line


: USB signal line


: DVD RF /Tape Playback signal line


: Motor Drive /Tape Record signal line


: DVD Audio signal line


: DVD Video signal line


: CD Head signal line


: DVD Head signal line


: Main signal line


: Tracking Error signal line


: Focus Error signal line


: AM/FM signal line


: AUX /Mic /Music Port signal line

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE F1 T5AH 250V FUSE

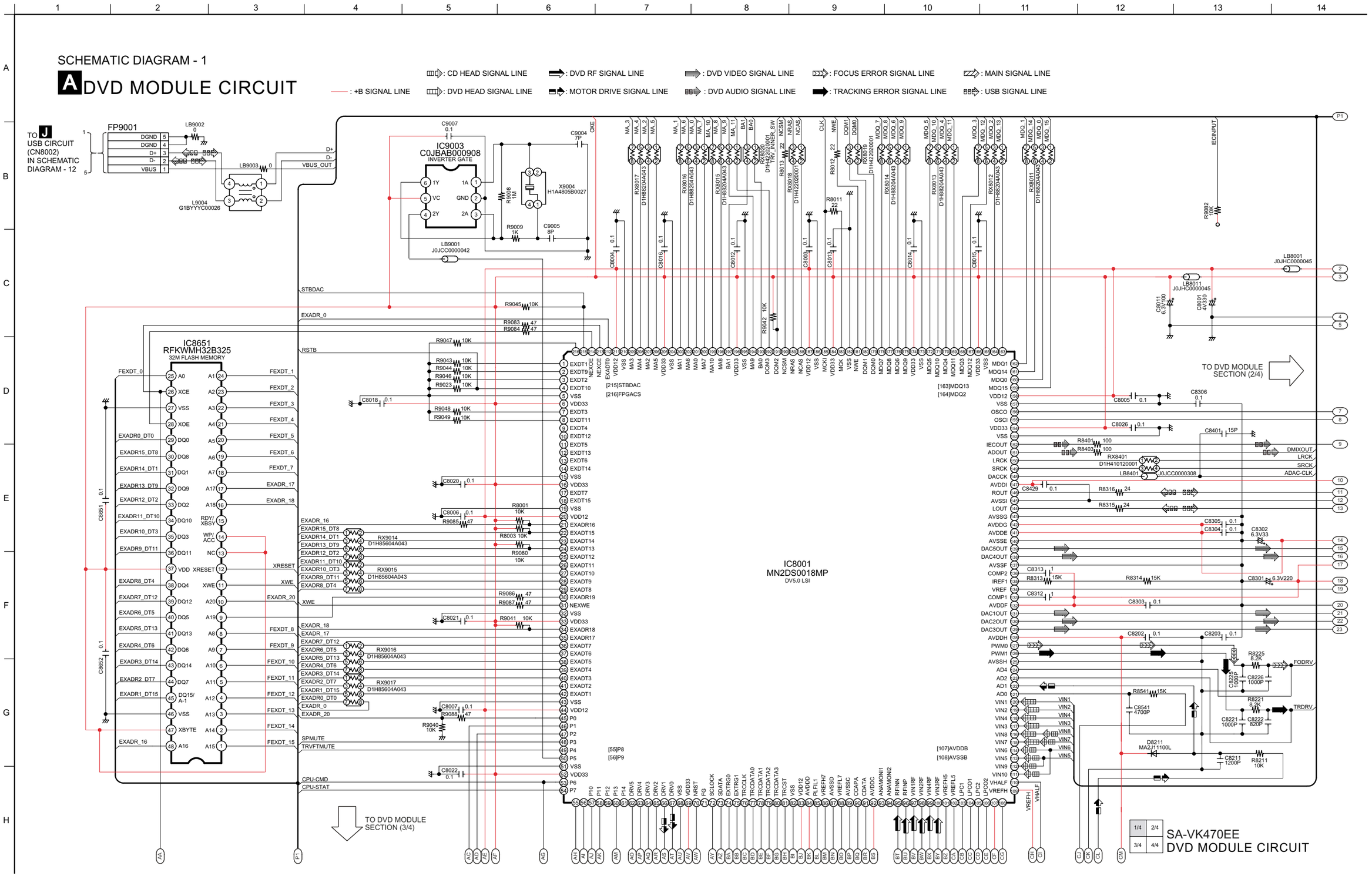
RISK OF FIRE-REPLACE FUSE AS MARKED.

FUSE CAUTION

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

20 Schematic Diagram

20.1. DVD Module Circuit



SCHEMATIC DIAGRAM - 2

A DVD MODULE CIRCUIT

: +B SIGNAL LINE
: CD HEAD SIGNAL LINE
: DVD HEAD SIGNAL LINE
: DVD RF SIGNAL LINE
: MOTOR DRIVE SIGNAL LINE
: DVD VIDEO SIGNAL LINE
: DVD AUDIO SIGNAL LINE
: FOCUS ERROR SIGNAL LINE
: TRACKING ERROR SIGNAL LINE
: MAIN SIGNAL LINE
: USB SIGNAL LINE

TO DVD MODULE SECTION (1/4)

IC9005 C0DBZYY00266 REGULATOR

IC8420 C0FBBK000047 AUDIO DAC

IC8151 C0DBEHG00006 +1.2V REGULATOR

QR8420 UNR521100L MUTING

Q8325 2SB1218ARL BUFFER

Q8321 2SB1218ARL BUFFER

Q8331 2SB1218ARL BUFFER

Q8335 2SB1218ARL BUFFER

Q8341 2SB1218ARL BUFFER

IC8691 C0JBAA000502 AND GATE

IC8695 C0JBAA000502 AND GATE

FP8101

1	Y/PY/G
2	VGND
3	CB/PB/B
4	VGND
5	CR/PR/R
6	VGND
7	Y
8	VGND
9	C
10	VGND
11	ADAC5V
12	MIX-L
13	D+5V
14	MIX-R
15	ADGND
16	FL
17	ADGND
18	FR
19	ADGND
20	SL
21	ADGND
22	SR
23	D+5V
24	CNT
25	D+5V
26	SW
27	D+5V
28	A_LIN
29	DGND
30	A_RIN
31	DGND
32	D+2.5V
33	DGND
34	D+2.5V
35	DGND
36	M+9V
37	MGND
38	M+9V
39	MGND
40	ZFLAG&AMUTE
41	NSW+6V
42	AUDIODIGITAL
43	OPEN_SW
44	CECIN
45	CECOUT
46	LDIN
47	INNER_SW
48	DOP_CPU-CLK
49	DOP_CPU-CMD
50	DOP_CPU-STAT

TO B MAIN CIRCUIT (CN2801) IN SCHEMATIC DIAGRAM - 5

TO DVD MODULE SECTION (4/4)

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

SA-VK470EE
DVD MODULE CIRCUIT

SCHEMATIC DIAGRAM - 3

A DVD MODULE CIRCUIT

: +B SIGNAL LINE
: CD HEAD SIGNAL LINE
: DVD HEAD SIGNAL LINE
: DVD RF SIGNAL LINE
: MOTOR DRIVE SIGNAL LINE
: DVD VIDEO SIGNAL LINE
: DVD AUDIO SIGNAL LINE
: FOCUS ERROR SIGNAL LINE
: TRACKING ERROR SIGNAL LINE
: MAIN SIGNAL LINE
: USB SIGNAL LINE

TO DVD MODULE SECTION (1/4)

IC9001 C0JBAZ001251 LATCH

QR9030 B1GDCFJJ0002 LEVEL SHIFTER

IC8611 C3EBGC000056 16M EEPROM

IC8601 C0EBA0000039 RESET

IC8606 C0EBE0000456 RESET

IC9002 C0JBAZ001251 LATCH

IC8051 C3ABPY000011 64M SDRAM

TO DVD MODULE SECTION (4/4)

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

SA-VK470EE
DVD MODULE CIRCUIT

SCHEMATIC DIAGRAM - 4

A DVD MODULE CIRCUIT

: +B SIGNAL LINE
: CD HEAD SIGNAL LINE
: DVD HEAD SIGNAL LINE
: DVD RF SIGNAL LINE
: MOTOR DRIVE SIGNAL LINE
: DVD VIDEO SIGNAL LINE
: DVD AUDIO SIGNAL LINE
: FOCUS ERROR SIGNAL LINE
: TRACKING ERROR SIGNAL LINE
: MAIN SIGNAL LINE
: USB SIGNAL LINE

TO DVD MODULE SECTION (3/4)

TO DVD MODULE SECTION (2/4)

IC8111 C0CBCBD00018 +3.3V DC-DC CONVERTER

QR8111 XP0621400L POWER CONTROL

IC8251 C0GBG0000048 MOTOR DRIVE

Q8561 2SD1819A0L LD DRIVE

Q8562 B1ADGB000008 LD DRIVE

Q8551 2SD1819A0L LD DRIVE

Q8552 B1ADGB000008 LD DRIVE

Q8563 B1CFHA000002 SWITCH

Q8564 B1CFHA000002 SWITCH

Q8565 2SD1819A0L INVERTER

FP8251

1	DGND
2	UNLOAD_SW
3	INNER_SW
4	SP-
5	SP+
6	TR-
7	TR+

TO TRAVERSE / SPINDLE

FP8531

1	NC
2	VCC
3	E1/e2+f2
4	E2/e3+f3
5	F-
6	T-
7	F+
8	T+
9	PIN(DVD/CD)
10	DVDIN-GND
11	CDIN-GND
12	LDCD+
13	LDGND
14	LDDVD+
15	C/c
16	HFM
17	D/d
18	RF+
19	RF-
20	VREF
21	PD GND
22	SW
23	F1/e1+F1
24	F2/e4+f4
25	B/b
26	A/a

TO OPTICAL PICKUP UNIT

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

SA-VK470EE
DVD MODULE CIRCUIT

20.2. Main Circuit

SCHEMATIC DIAGRAM - 5

B MAIN CIRCUIT

: -B SIGNAL LINE
: +B SIGNAL LINE
: DVD VIDEO SIGNAL LINE
: DVD AUDIO SIGNAL LINE
: MAIN SIGNAL LINE
: AM / FM SIGNAL LINE
: TAPE RECORD SIGNAL LINE
: TAPE PLAYBACK SIGNAL LINE
: AUX / MIC / MUSIC PORT SIGNAL LINE

JK2801 DIGITAL OUT (COAXIAL)
JK2001 COMPONENT VIDEO OUT / VIDEO OUT
JK2802 AUX IN
TN2802 ENG07825QRF TUNER PACK
IC2900 C9ZB00000461 VIDEO BUFFER
Q2980 B1ABCF000176 BUFFER
Q2912 B1GBCFJN0033 INVERTER
Q2005 B1ADCE000012 SWITCH
Q2004 2SD0601AHL SWITCH
IC2002 C0CBCBC00140 REGULATOR
CN2813 TO J USB CIRCUIT (ZJ9000*) IN SCHEMATIC DIAGRAM - 12
CN2812 TO G MUSIC PORT CIRCUIT (ZJ6801) IN SCHEMATIC DIAGRAM - 12
CN2801 TO A DVD MODULE CIRCUIT (FP8101) IN SCHEMATIC DIAGRAM - 2
TO MAIN SECTION (4/6)
TO MAIN SECTION (2/6)

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

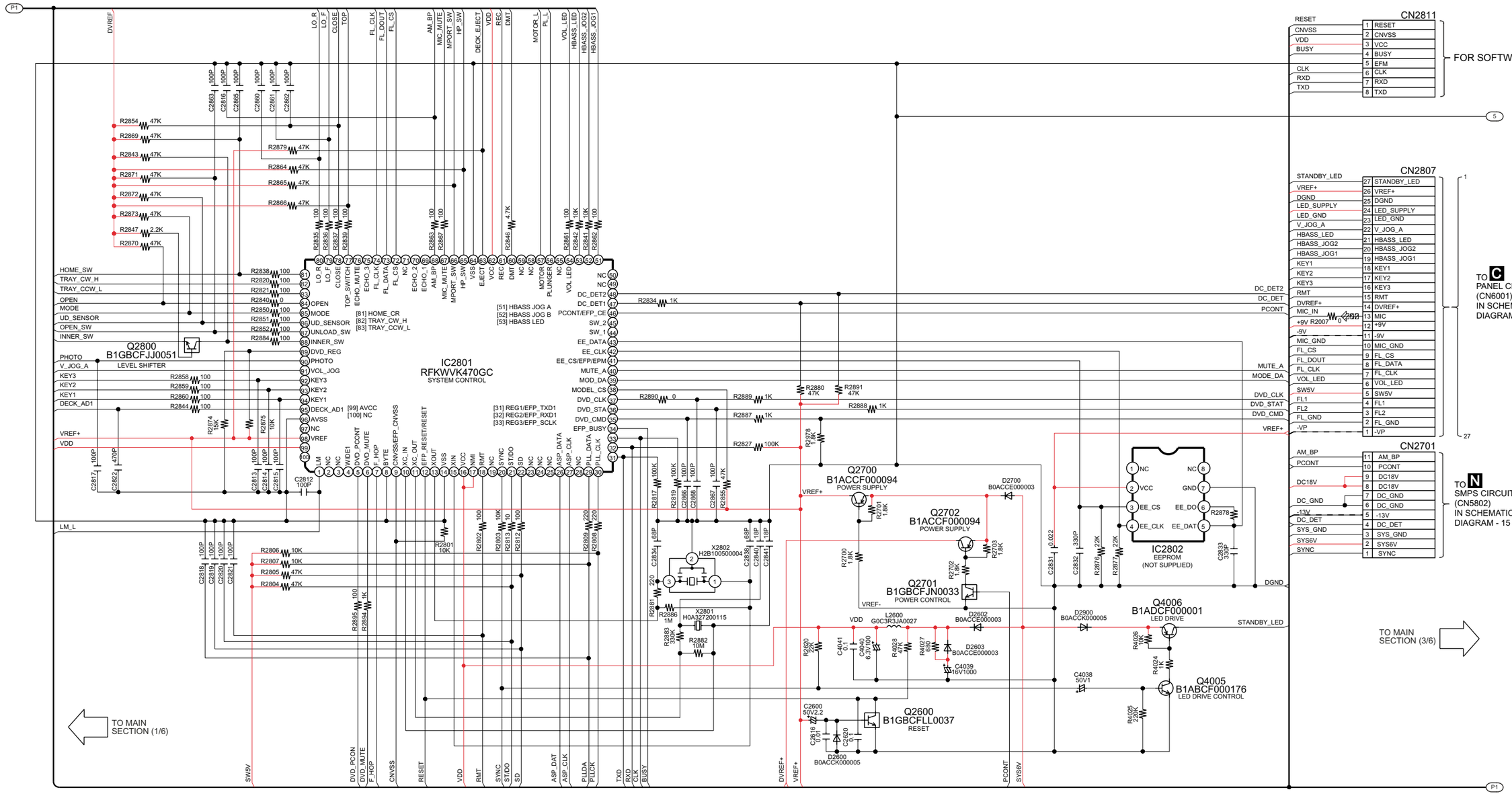
SA-VK470EE MAIN CIRCUIT

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

SCHEMATIC DIAGRAM - 6

B MAIN CIRCUIT

-----: -B SIGNAL LINE
——: +B SIGNAL LINE
: DVD VIDEO SIGNAL LINE
: DVD AUDIO SIGNAL LINE
: MAIN SIGNAL LINE
: AM / FM SIGNAL LINE
: TAPE RECORD SIGNAL LINE
: TAPE PLAYBACK SIGNAL LINE
: AUX / MIC / MUSIC PORT SIGNAL LINE



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

SA-VK470EE MAIN CIRCUIT

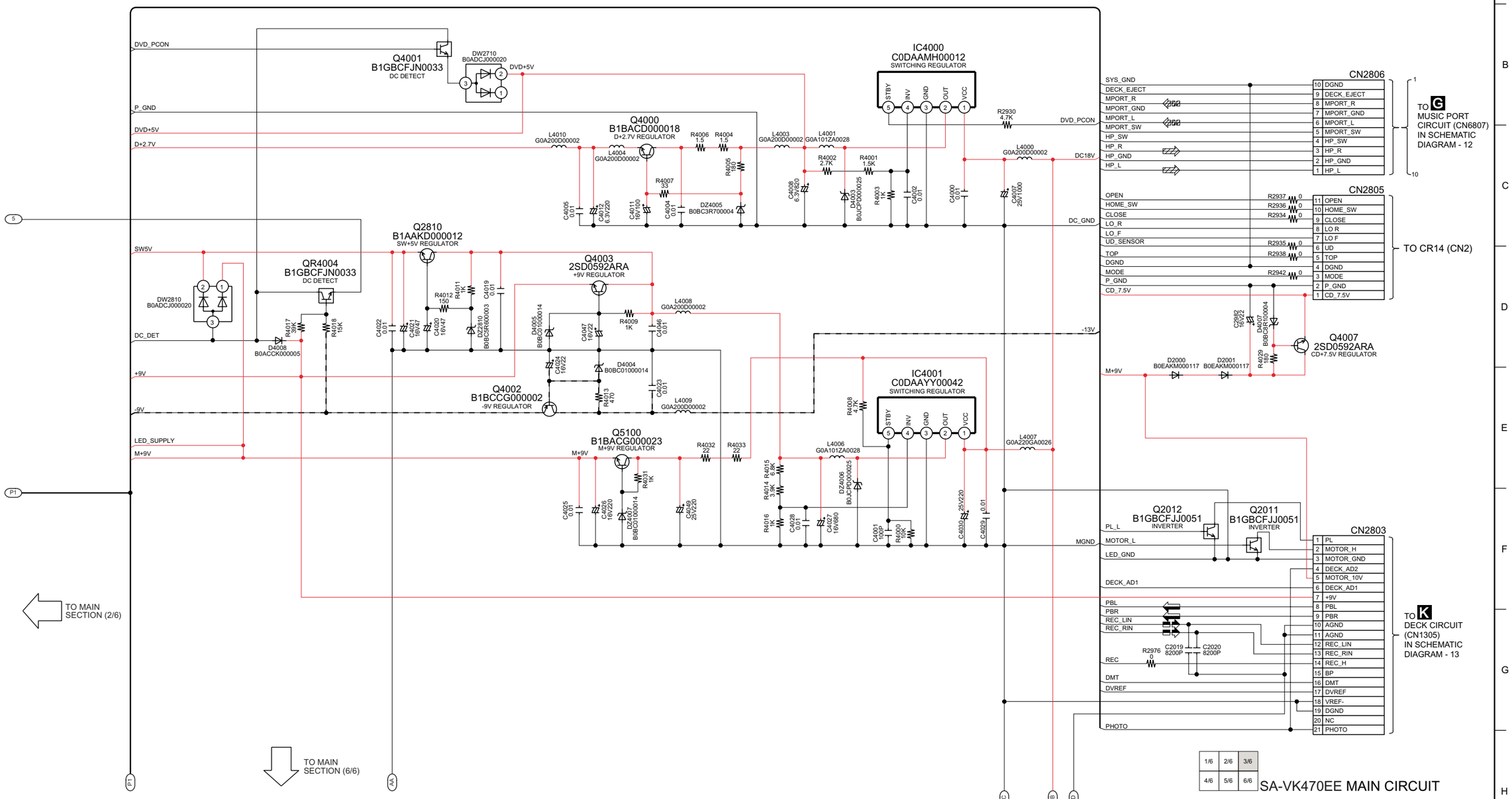
29 30 31 32 33 34 35 36 37 38 39 40 41 42

A B C D E F G H

SCHEMATIC DIAGRAM - 7

B MAIN CIRCUIT

-----: -B SIGNAL LINE
——: +B SIGNAL LINE
: DVD VIDEO SIGNAL LINE
: DVD AUDIO SIGNAL LINE
: MAIN SIGNAL LINE
: AM / FM SIGNAL LINE
: TAPE RECORD SIGNAL LINE
: TAPE PLAYBACK SIGNAL LINE
: AUX / MIC / MUSIC PORT SIGNAL LINE



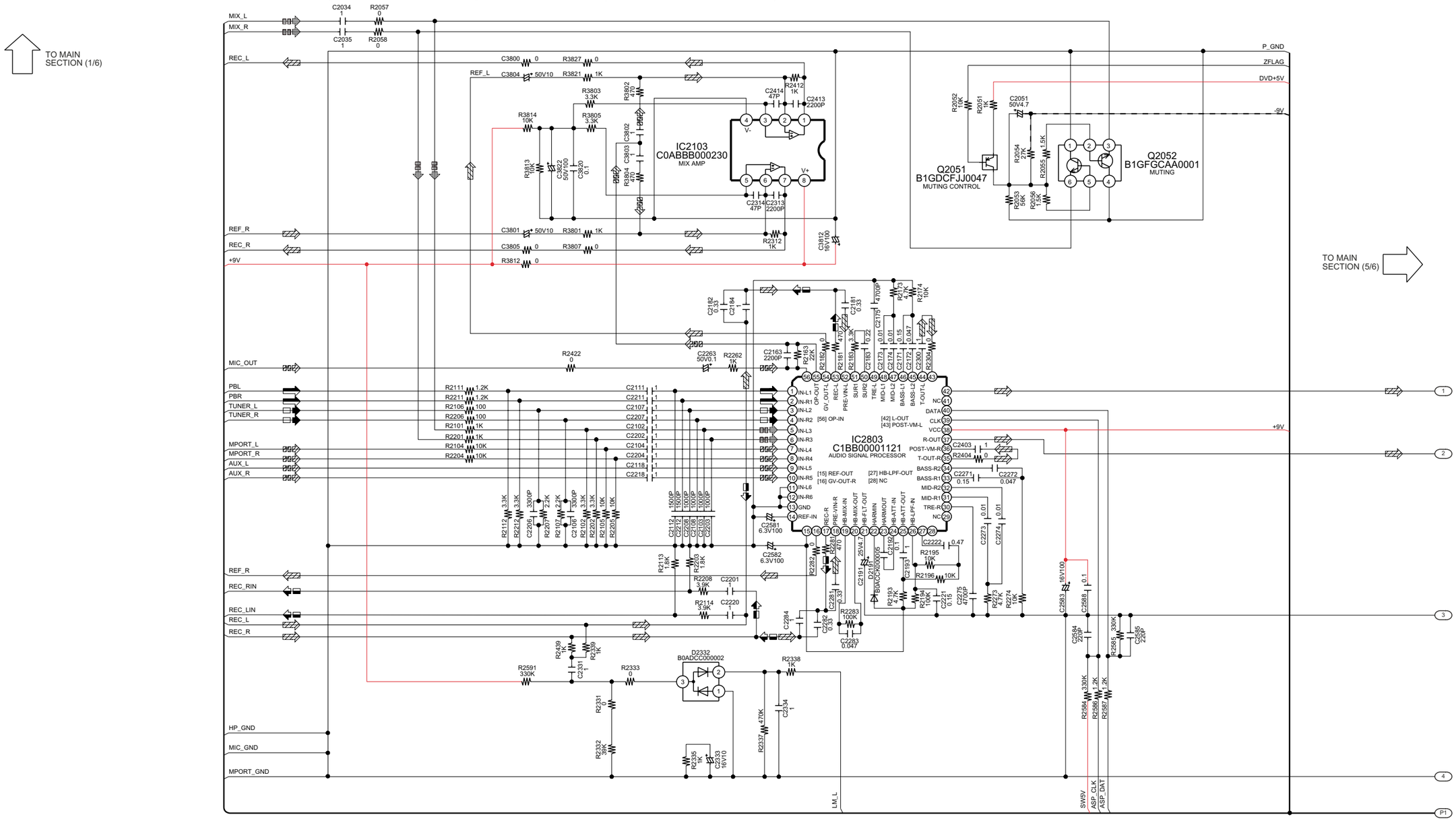
1/6	2/6	3/6
4/6	5/6	6/6

SCHEMATIC DIAGRAM - 8

B MAIN CIRCUIT

: -B SIGNAL LINE　: DVD VIDEO SIGNAL LINE　: MAIN SIGNAL LINE　: TAPE RECORD SIGNAL LINE

: +B SIGNAL LINE　: DVD AUDIO SIGNAL LINE　: AM / FM SIGNAL LINE　: TAPE PLAYBACK SIGNAL LINE　: AUX / MIC / MUSIC PORT SIGNAL LINE



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

SA-VK470EE MAIN CIRCUIT

SCHEMATIC DIAGRAM - 9

B MAIN CIRCUIT

: -B SIGNAL LINE
: +B SIGNAL LINE
: DVD VIDEO SIGNAL LINE
: DVD AUDIO SIGNAL LINE
: MAIN SIGNAL LINE
: AM / FM SIGNAL LINE
: TAPE RECORD SIGNAL LINE
: TAPE PLAYBACK SIGNAL LINE
: AUX / MIC / MUSIC PORT SIGNAL LINE

TO MAIN SECTION (2/6)

MUTE_A
-9V
Q2501 B1GDCFJJ0047 MUTING CONTROL
R2503 27K
R2501 2.2K
C2501 10/10
R2502 56K
Q2243 B1ABEB000002 MUTING
R2252 680
C2251 16V10
R2249 22K
R2254 100K
R2253 1.5K
Q2143 B1ABEB000002 MUTING
C2151 16V10
R2152 680
R2214 22K
R2153 1.5K
R2154 100K
C2141 1
R2141 2.7K
C2142 1
R2142 1.5K
R2143 100K
Q2502 B1GFGCAA0001 MUTING
C2241 1
R2241 2.7K
C2242 1
R2242 1.5K
R2243 100K
R2291 0
Q2142 B1ABCF000176 LCH AUTO GAIN CONTROL
R2145 1.8K
R2146 5.6K
R2245 1.8K
Q2242 B1ABCF000176 RCH AUTO GAIN CONTROL
C2295 0.018
R2297 5.6K
R2292 2.7K
R2299 10K
C2297 0
R2246 5.6K
D2241 B0ACCK000005
C2245 16V10
R2247 100K
R2248 6.8K
R2270 0
R2271 3.3K
C2266 1000P
R2269 10
R2268 10
R2267 10
R2266 10
R2170 0
R2171 3.3K
C2166 1000P
R2169 10
R2168 10
R2167 10
R2166 10
Q2366 B1GFGCAA0001 MUTING
R2172 560
R2272 560
R2191 0
C2195 0.018
R2197 10K
R2199 10K
R2192 2.7K
C2197 0
R2302 3.3K
C2521 0.01
C2301 10P
C2302 47P
R2303 22K
IC2804 C0AABB000125 FRONT AMP
V-
V+
R2532 0
R2403 22K
C2402 47P
R2402 3.3K
C2401 10P
C2520 0.01
HP_R
HP_L
-9V
+9V
FRONT_R
FRONT_L
P1

TO MAIN SECTION (4/6)

CN2808

MOD_DA	17	1	MODE_DA
DC_DET2	16	2	DC_DET2
FAN	15	3	FAN
FHOP	14	4	F_HOP
MUTE_F_SW	13	5	MUTE_A
MUTE_S_C	12		
CENTER	11		
AGND	10		
SURROUND_R	9		
AGND	8		
SURROUND_L	7		
AGND	6		
SUBWOOFER	5		
AGND	4		
FRONT_R	3		FRONT_R
SIGNAL_A_GND	2		
FRONT_L	1		FRONT_L

TO M D-AMP CIRCUIT (CN5050) IN SCHEMATIC DIAGRAM - 14

C2062 0.01
C2073 0.01
R2087 330K
C2070 100P
R2086 3.9K
C2074 47P
C2068 1
R2076 2.2K
C2069 0.47
C2071 0.01
R2076 0
R2075 47K
R2088 15K
C2067 1
R2074 47K
R2073 100K
C2561 1
-9V

TO MAIN SECTION (6/6)

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

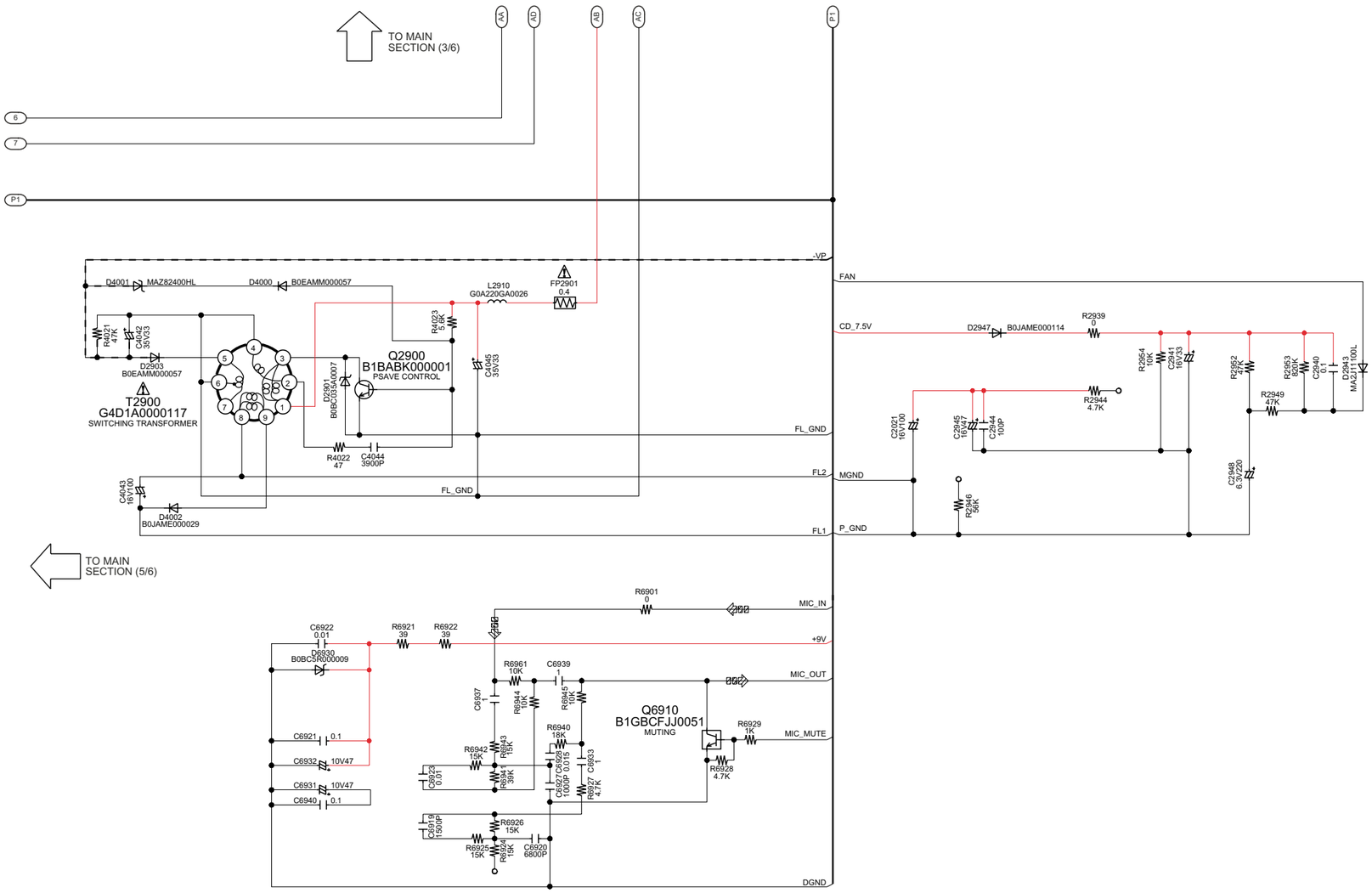
SA-VK470EE MAIN CIRCUIT

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

SCHEMATIC DIAGRAM - 10

B MAIN CIRCUIT

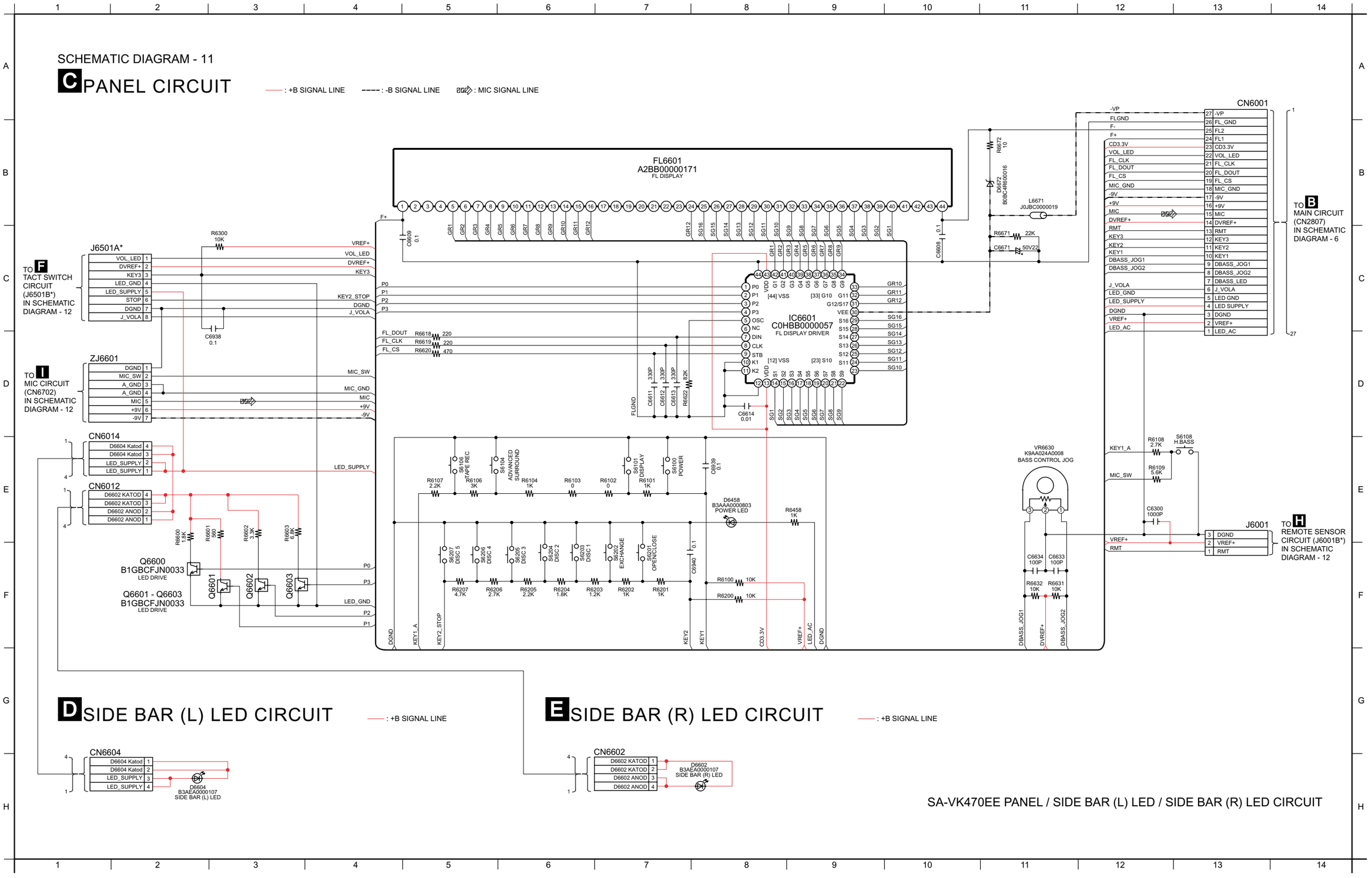
: -B SIGNAL LINE
: +B SIGNAL LINE
: DVD VIDEO SIGNAL LINE
: DVD AUDIO SIGNAL LINE
: MAIN SIGNAL LINE
: AM / FM SIGNAL LINE
: TAPE RECORD SIGNAL LINE
: TAPE PLAYBACK SIGNAL LINE
: AUX / MIC / MUSIC PORT SIGNAL LINE



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

SA-VK470EE MAIN CIRCUIT

20.3. Panel, Side Bar (L) Led, Side Bar (R) Led Circuit

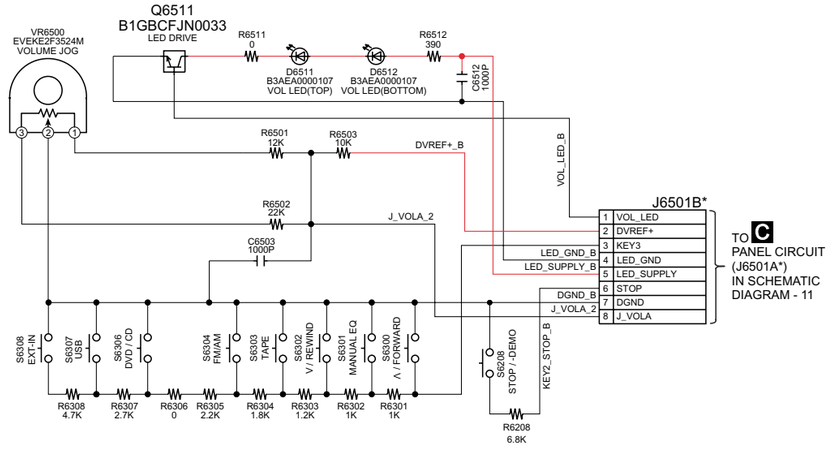


20.4. Tact Switch, Music Port, Remote Sensor, Mic, USB Circuit

SCHEMATIC DIAGRAM - 12

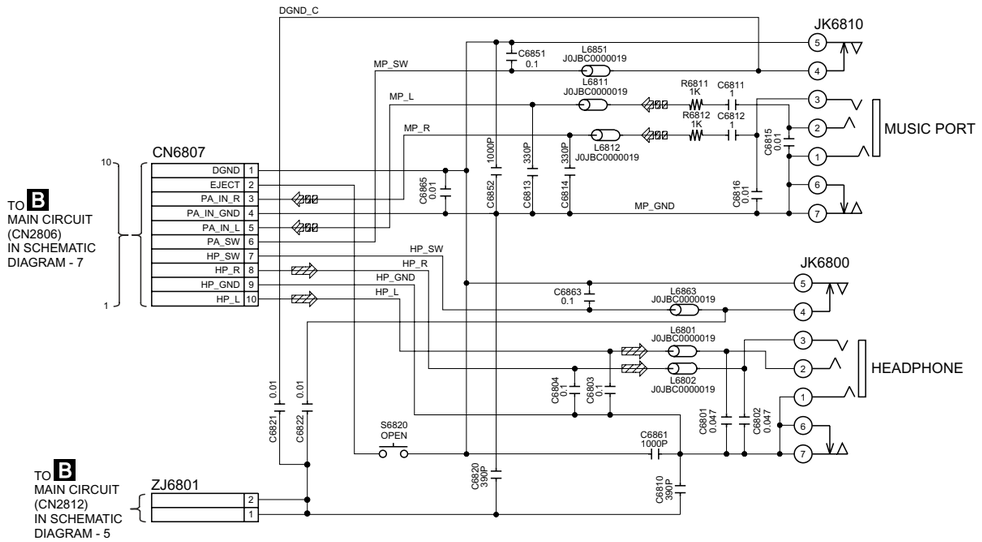
F TACT SWITCH CIRCUIT

: +B SIGNAL LINE



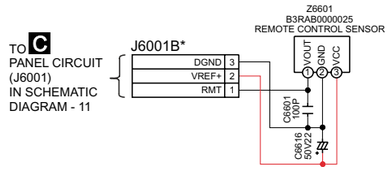
G MUSIC PORT CIRCUIT

: +B SIGNAL LINE : MAIN SIGNAL LINE : MUSIC PORT SIGNAL LINE



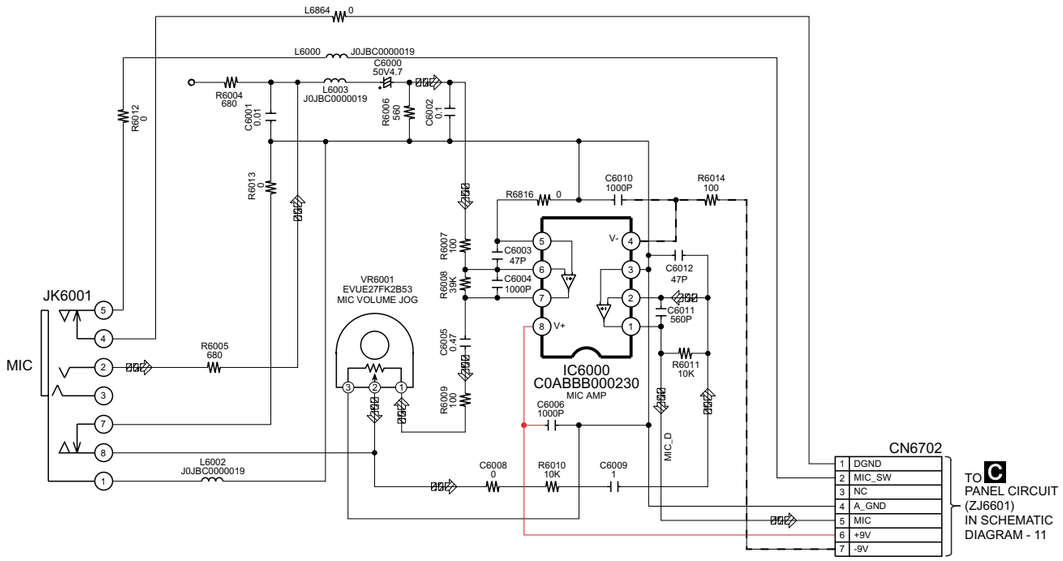
H REMOTE SENSOR CIRCUIT

: +B SIGNAL LINE



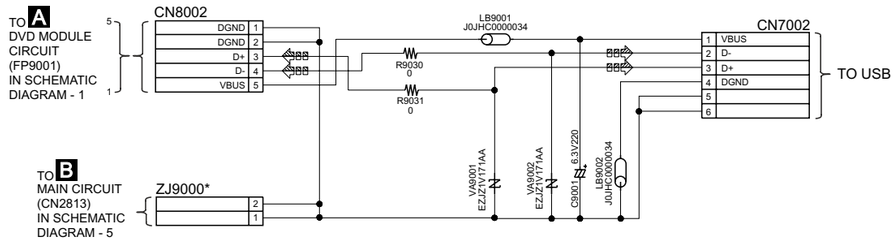
I MIC CIRCUIT

: +B SIGNAL LINE : -B SIGNAL LINE : MIC SIGNAL LINE



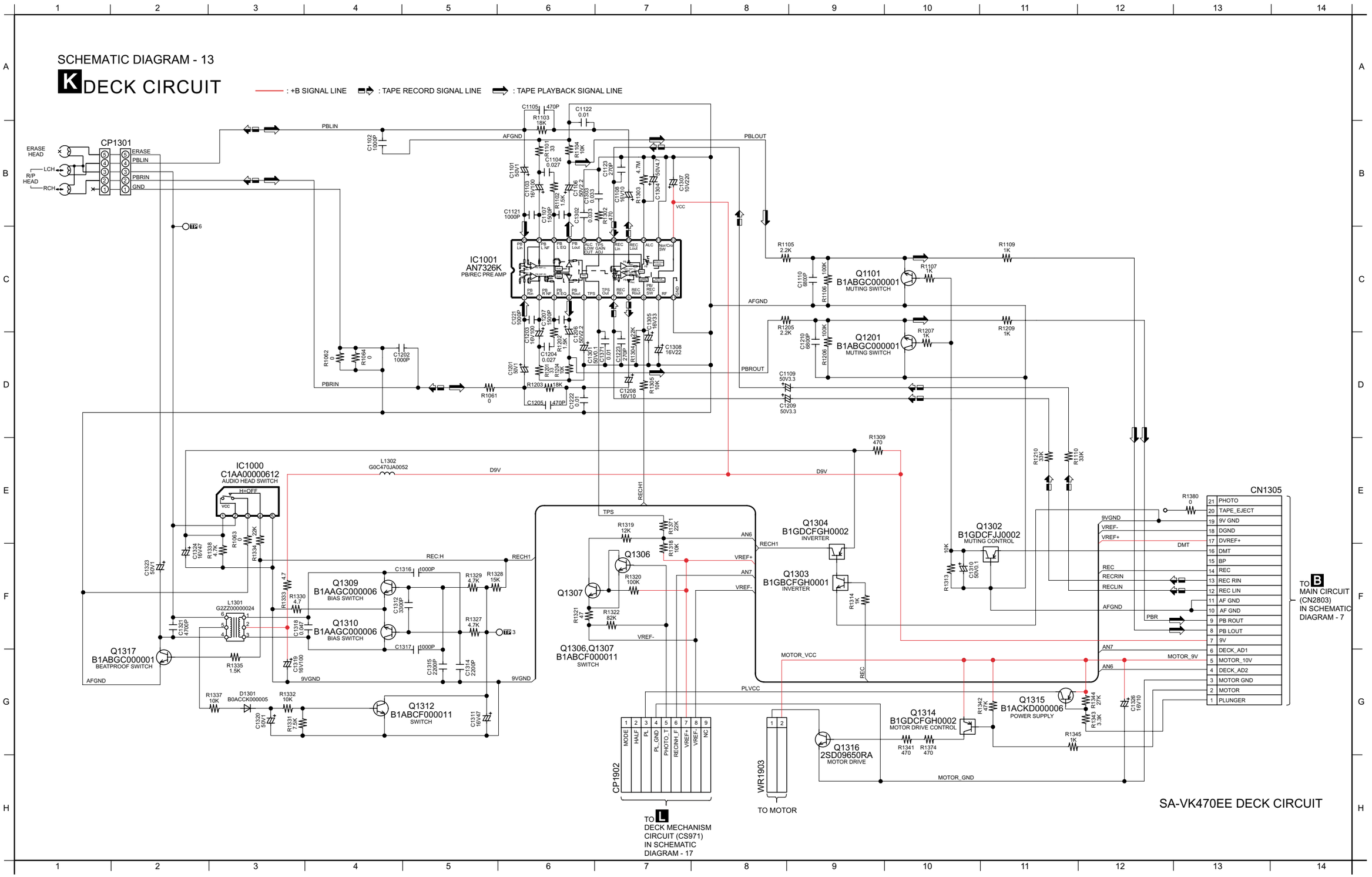
J USB CIRCUIT

: USB SIGNAL LINE



SA-VK470EE TACT SWITCH / MUSIC PORT / REMOTE SENSOR / MIC / USB CIRCUIT

20.5. Deck Circuit



20.6. D-Amp Circuit

SCHEMATIC DIAGRAM - 14

M D-AMP CIRCUIT

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

IC5500
C0JBAB000902
INVERTER GATE
(CLOCK GENERATOR)

IC5000
C1BA00000487
AUDIO DIGITAL POWER AMP

IC5501
C0JBAF000716
D-TYPE FLIP-FLOP

CN5550
TO **N** SMPS CIRCUIT (H5801*) IN SCHEMATIC DIAGRAM - 15

JK5001
TO SPEAKERS

CN5050
TO **B** MAIN CIRCUIT (CN2808) IN SCHEMATIC DIAGRAM - 9

Q5603 B1ADCE000012 SWITCH
Q5601 B1ABCF000176 SWITCH
Q5604 B1ABCF000176 SWITCH
Q5101 B1ABCF000176 DC DETECT
Q5102 B1ABCF000176 DC DETECT

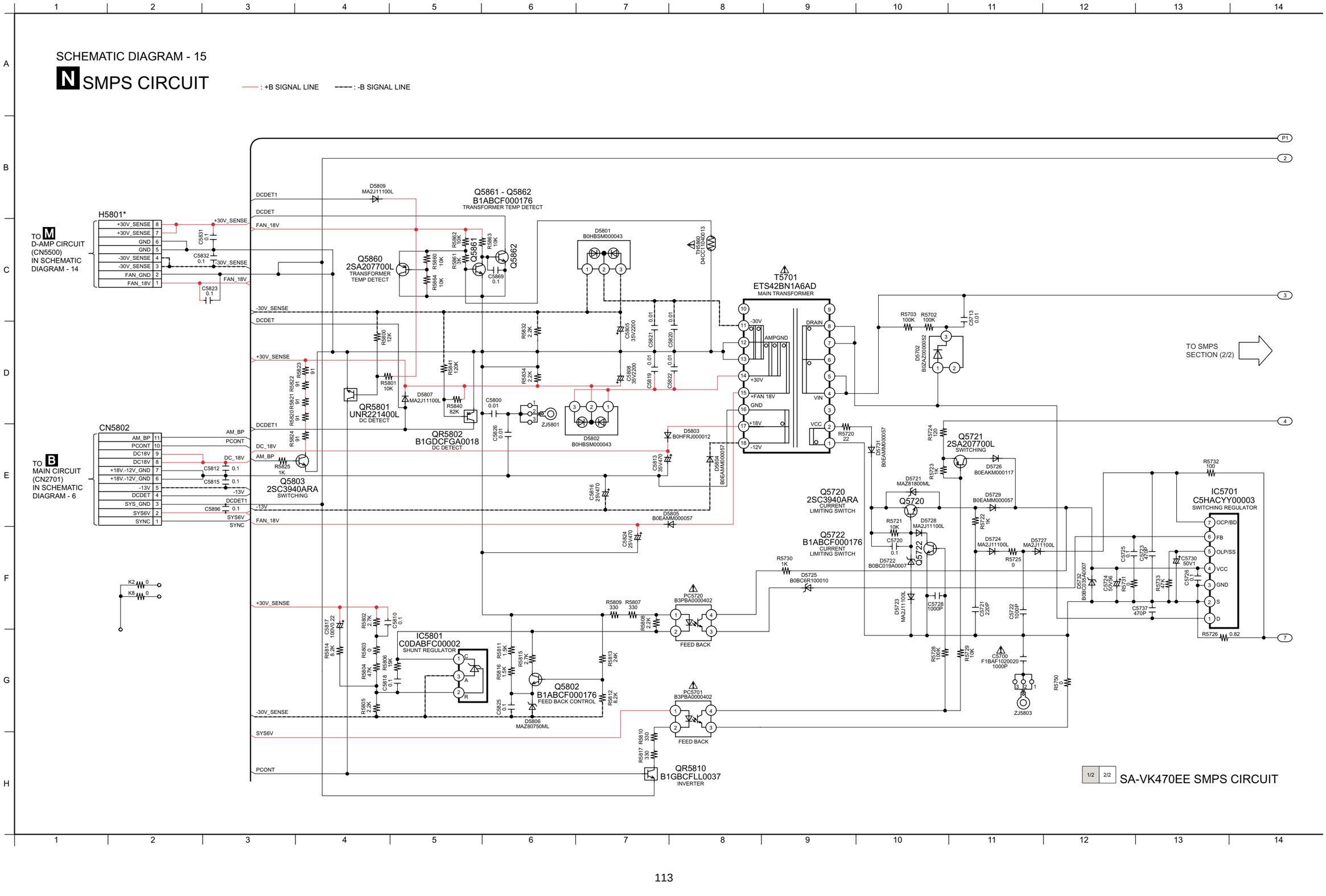
SA-VK470EE D-AMP CIRCUIT

20.7. SMPS Circuit

SCHEMATIC DIAGRAM - 15

N SMPS CIRCUIT

: +B SIGNAL LINE : -B SIGNAL LINE

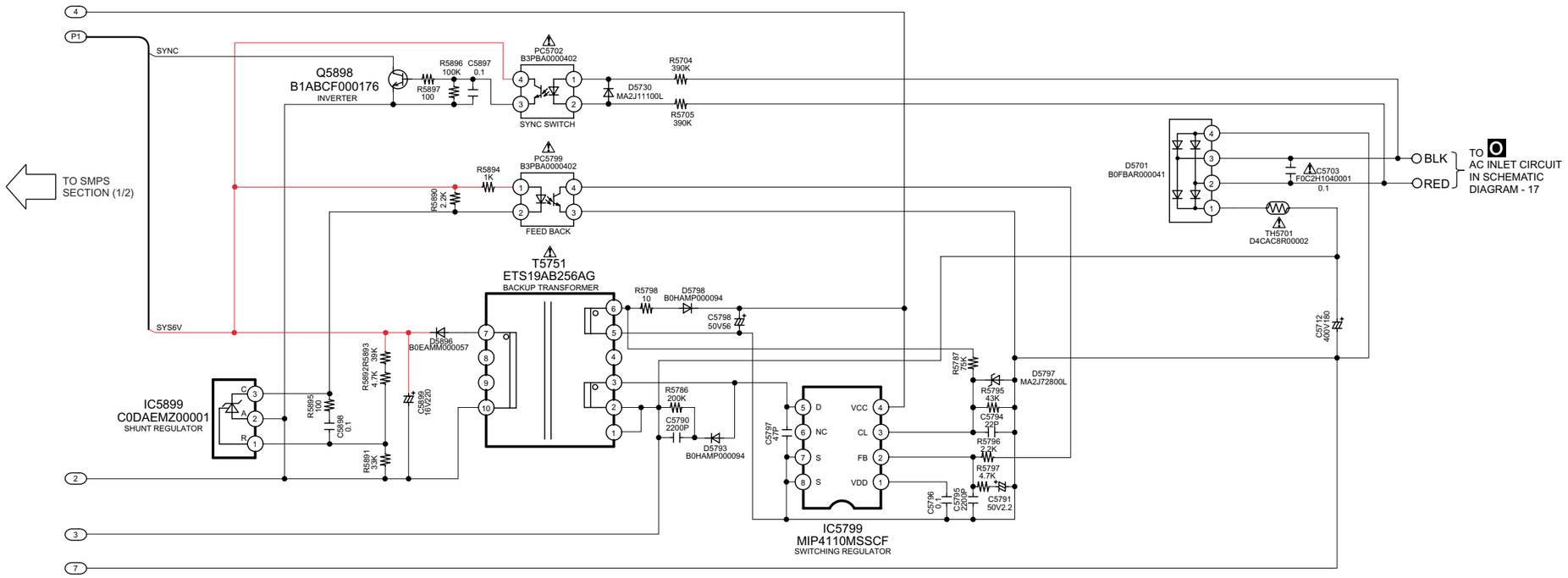


15 16 17 18 19 20 21 22 23 24 25 26 27 28

SCHEMATIC DIAGRAM - 16

N SMPS CIRCUIT

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



1/2 2/2 SA-VK470EE SMPS CIRCUIT

A B C D E F G H

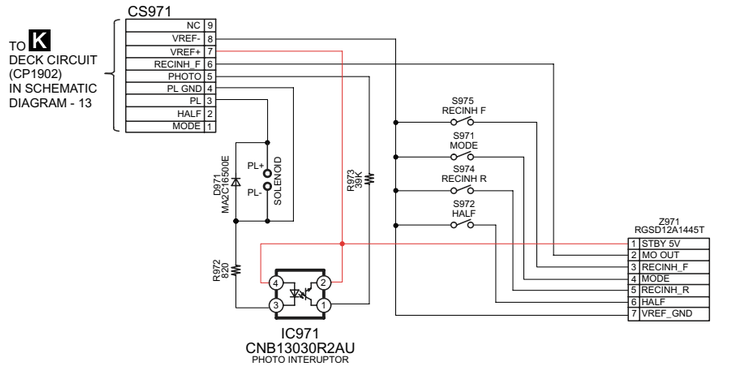
15 16 17 18 19 20 21 22 23 24 25 26 27 28

20.8. Deck Mechanism & AC Inlet Circuit

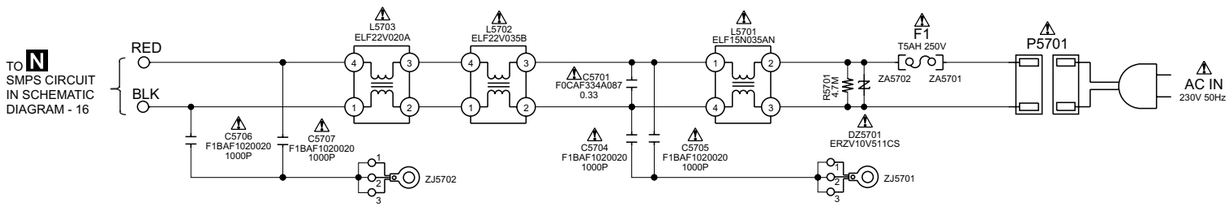
SCHEMATIC DIAGRAM - 17

L DECK MECHANISM CIRCUIT

: +B SIGNAL LINE



O AC INLET CIRCUIT

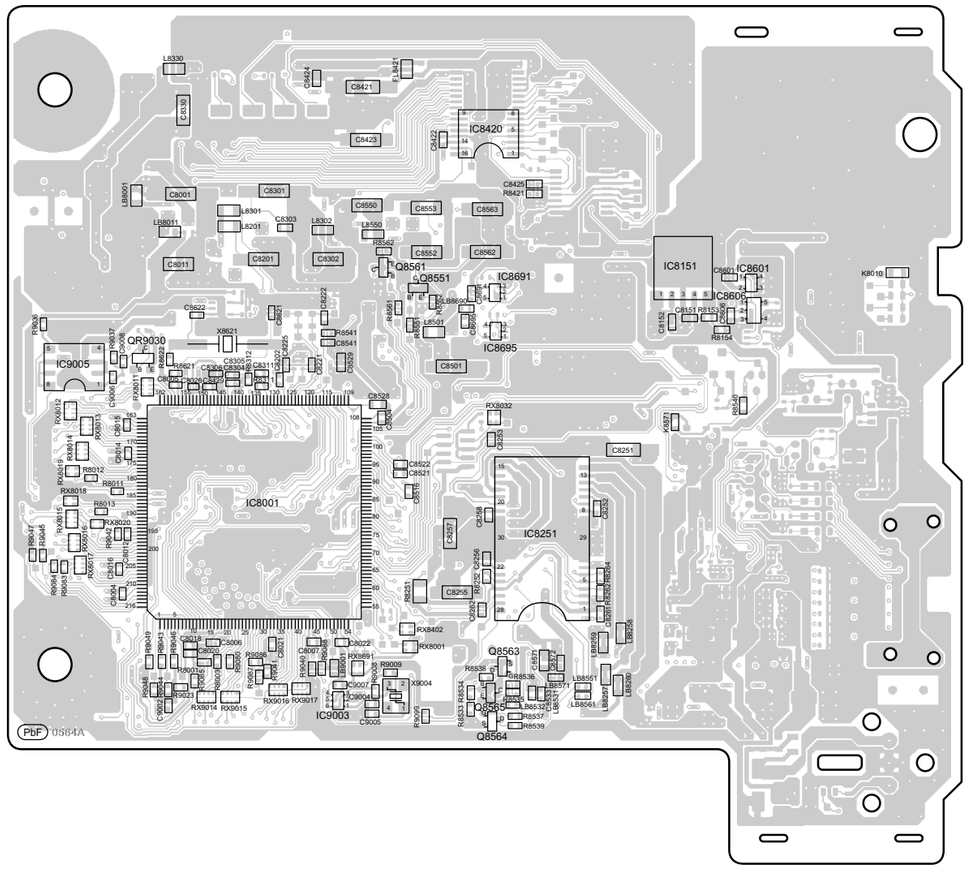


SA-VK470EE DECK MECHANISM / AC INLET CIRCUIT

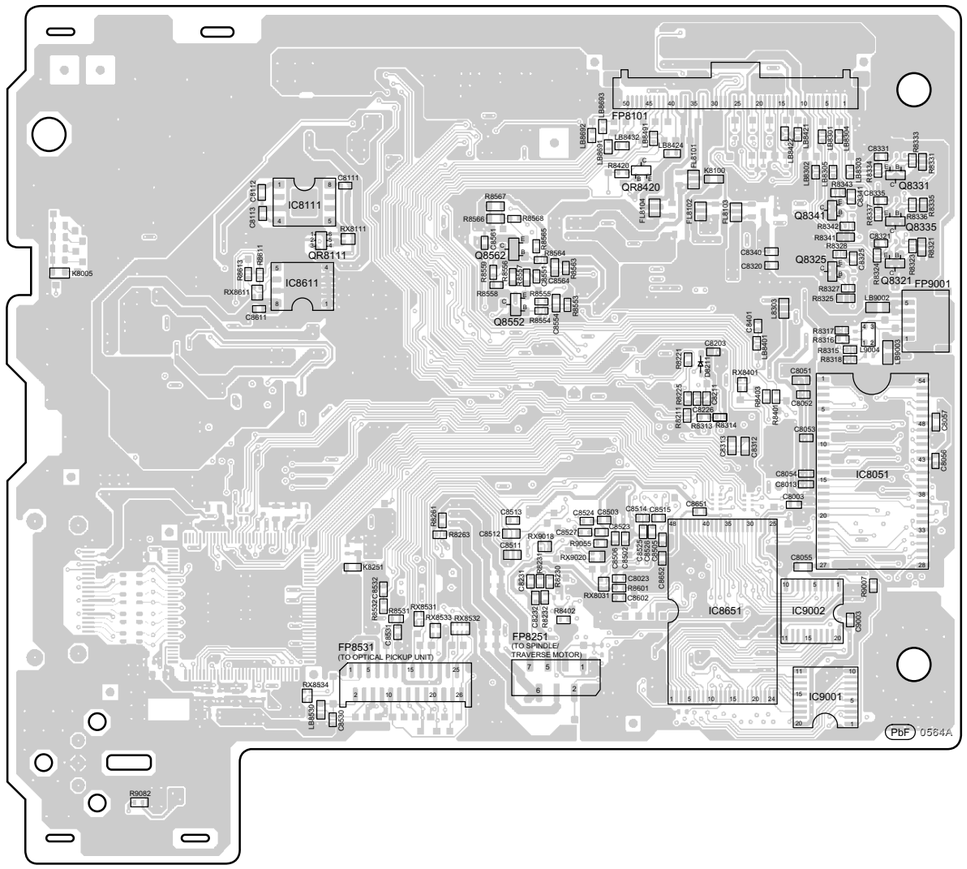
21 Printed Circuit Board

21.1. DVD Module P.C.B.

A DVD MODULE P.C.B. (REPX0620F-M)



(SIDE A)

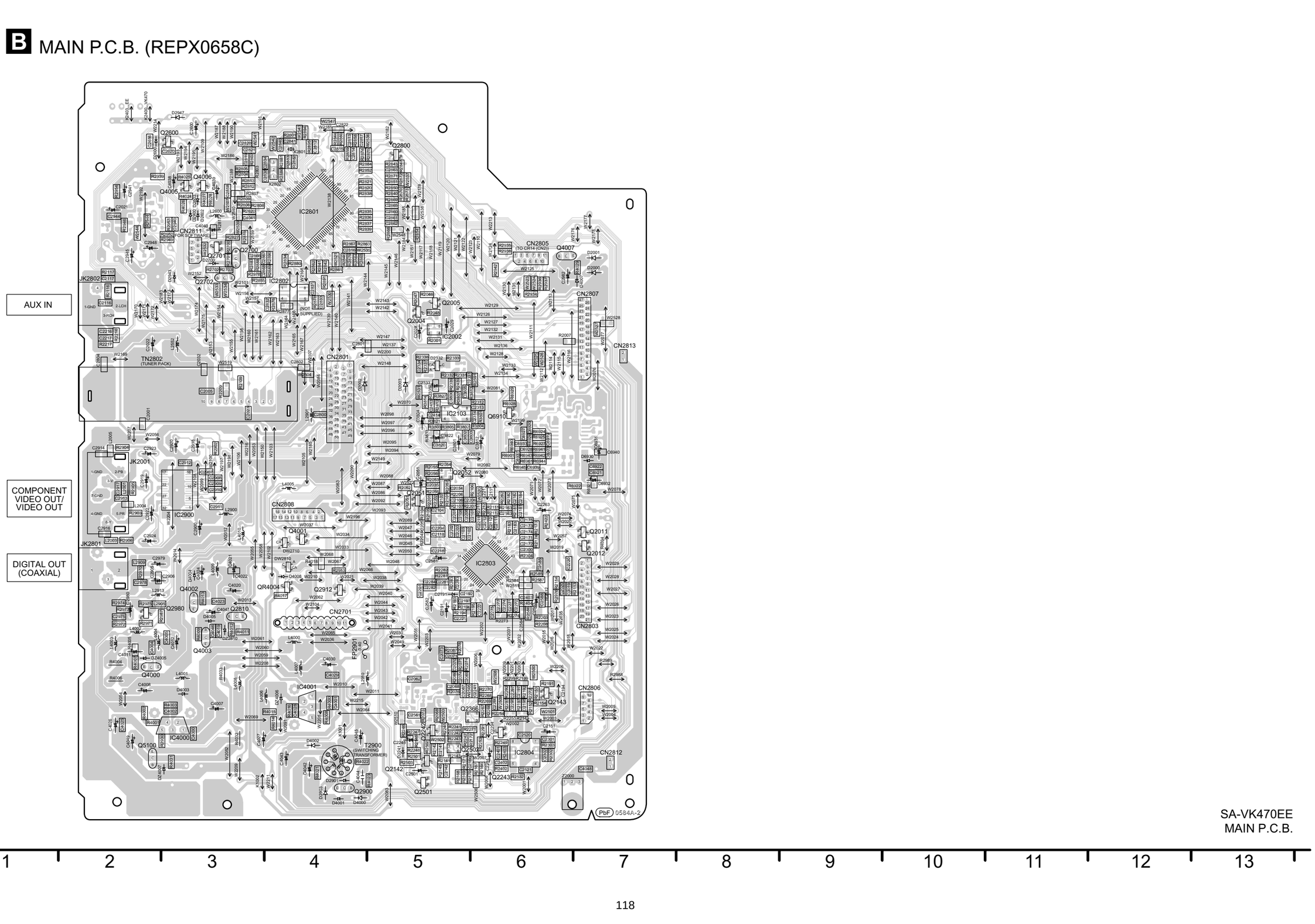


(SIDE B)

SA-VK470EE
DVD MODULE P.C.B.

21.2. Main P.C.B.

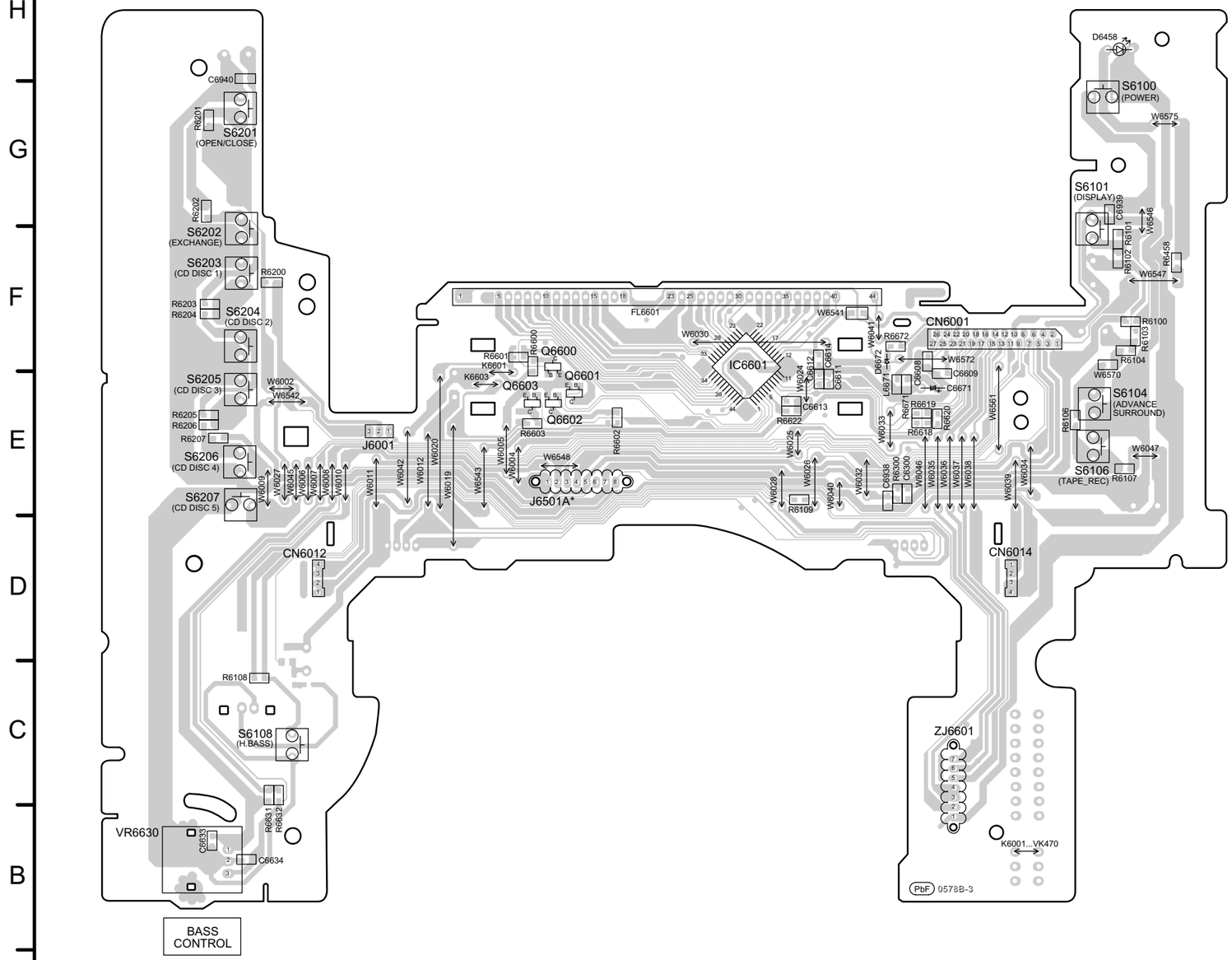
B MAIN P.C.B. (REPX0658C)



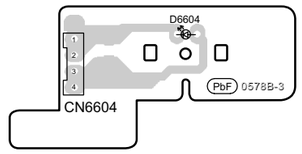
SA-VK470EE
MAIN P.C.B.

21.3. Panel, Side Bar (L) LED & Side Bar (R) LED P.C.B.

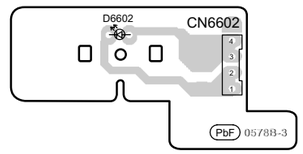
C PANEL P.C.B. (REPX0671A)



D SIDE BAR (L) LED P.C.B. (REPX0671A)



E SIDE BAR (R) LED P.C.B. (REPX0671A)

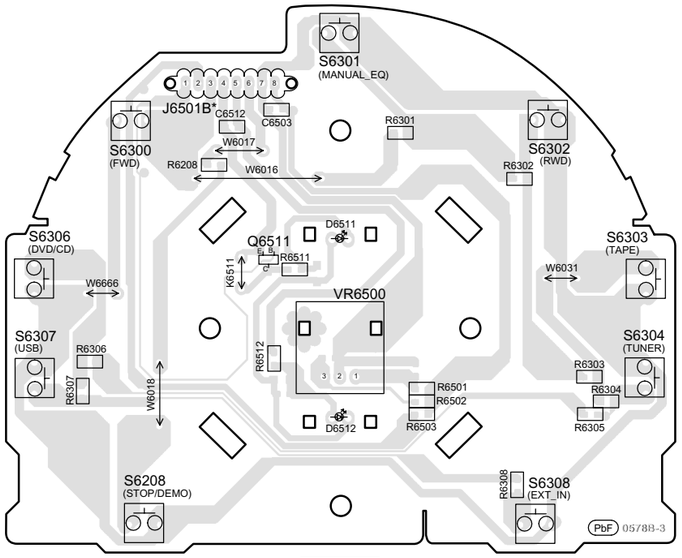


* FOR INDICATION ONLY

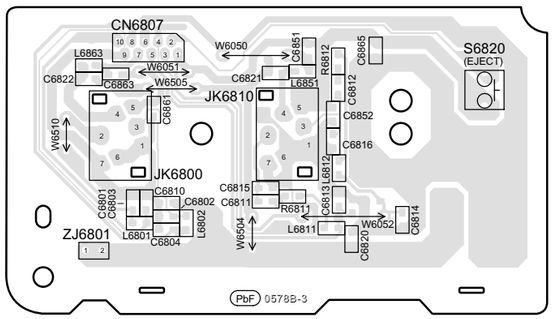
SA-VK470EE
PANEL/SIDE BAR (L) LED/SIDE BAR (R) LED P.C.B.

21.4. Tact Switch, Music Port, Remote Sensor, Mic, USB P.C.B.

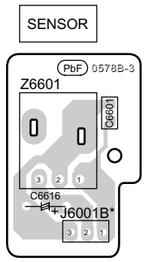
F TACT SWITCH P.C.B. (REPX0671A)



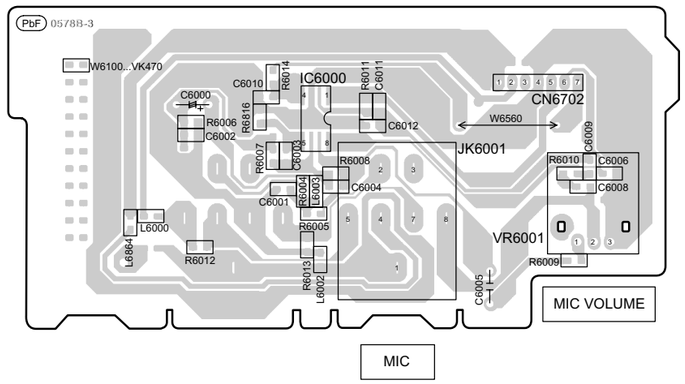
G MUSIC PORT P.C.B. (REPX0671A)



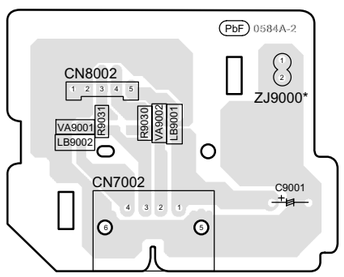
H REMOTE SENSOR P.C.B. (REPX0671A)



I MIC P.C.B. (REPX0671A)



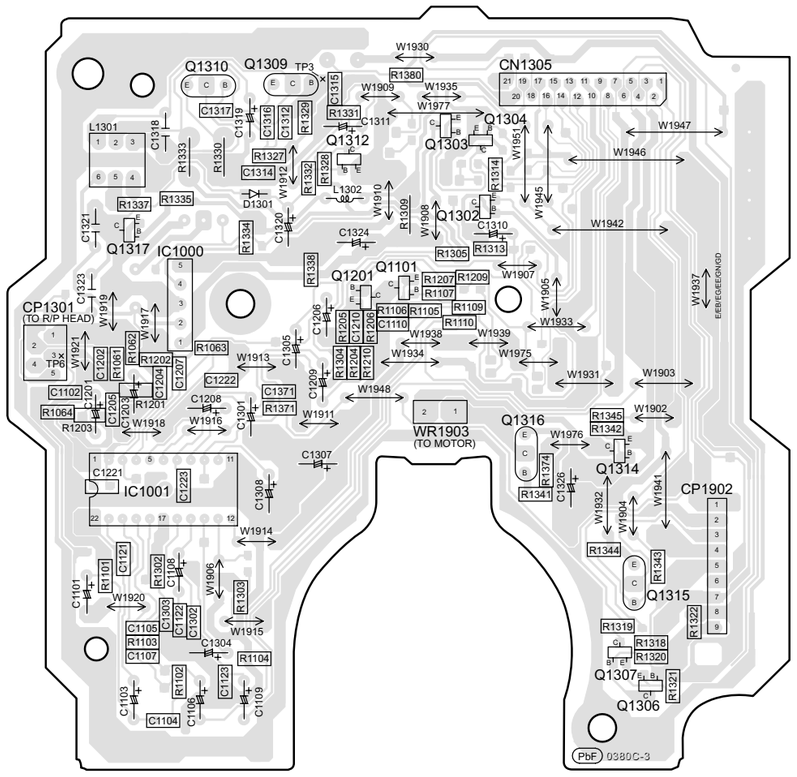
J USB P.C.B. (REPX0658C)



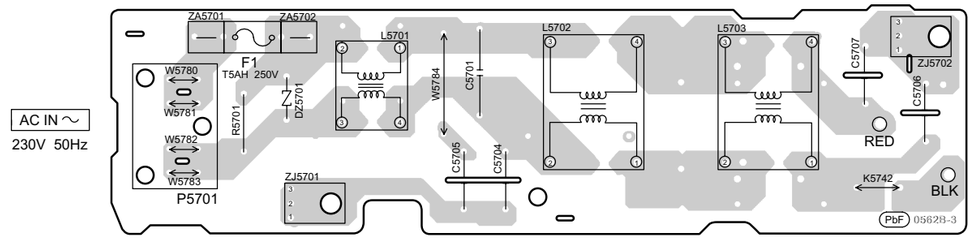
* FOR INDICATION ONLY

21.5. Deck, Deck Mechanism & AC Inlet P.C.B.

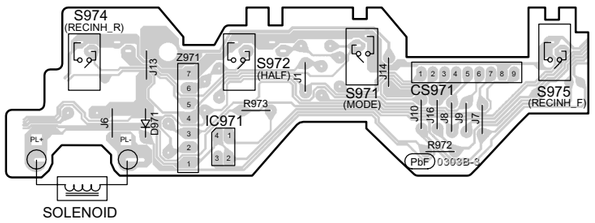
K DECK P.C.B. (REPX0411D)



O AC INLET P.C.B. (REPX0622Y)



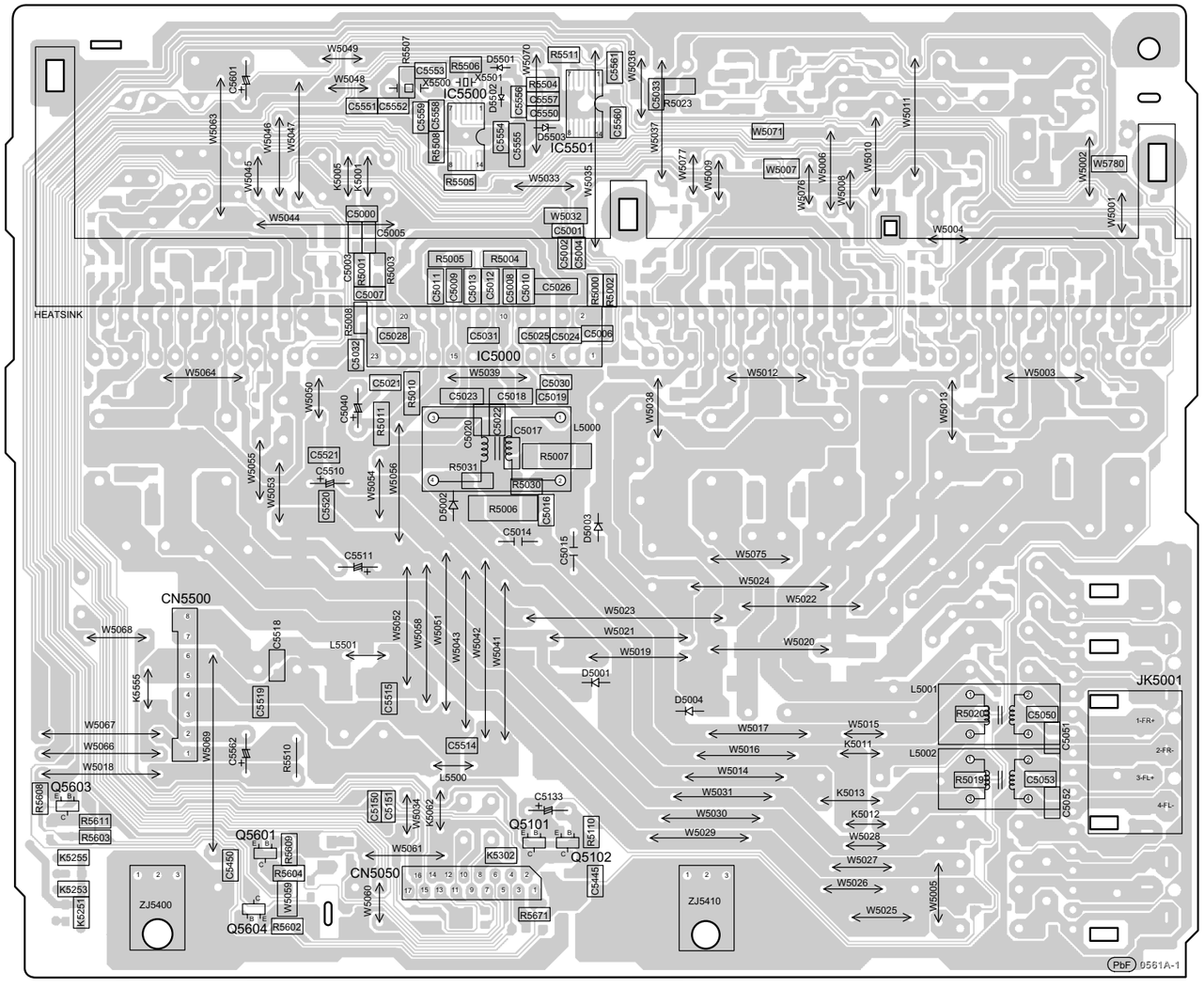
L DECK MECHANISM P.C.B. (REPX0321K)



SA-VK470EE
DECK/DECK MECHANISM/AC INLET P.C.B.

21.6. D-Amp P.C.B.

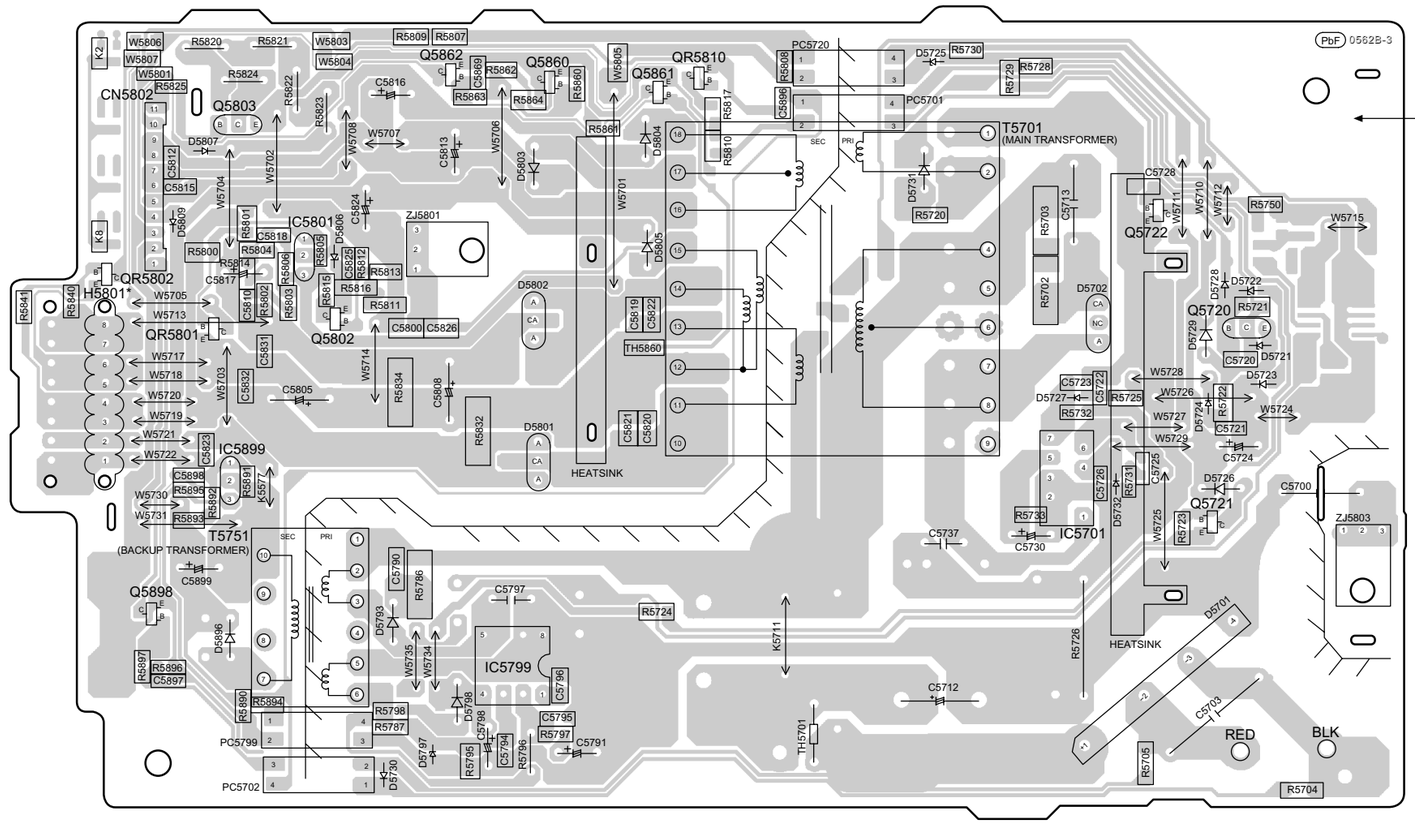
M D-AMP P.C.B. (REPX0638G)



SA-VK470EE
D-AMP P.C.B.

21.7. SMPS P.C.B.

N SMPS P.C.B. (REPX0622Y)



* FOR INDICATION ONLY

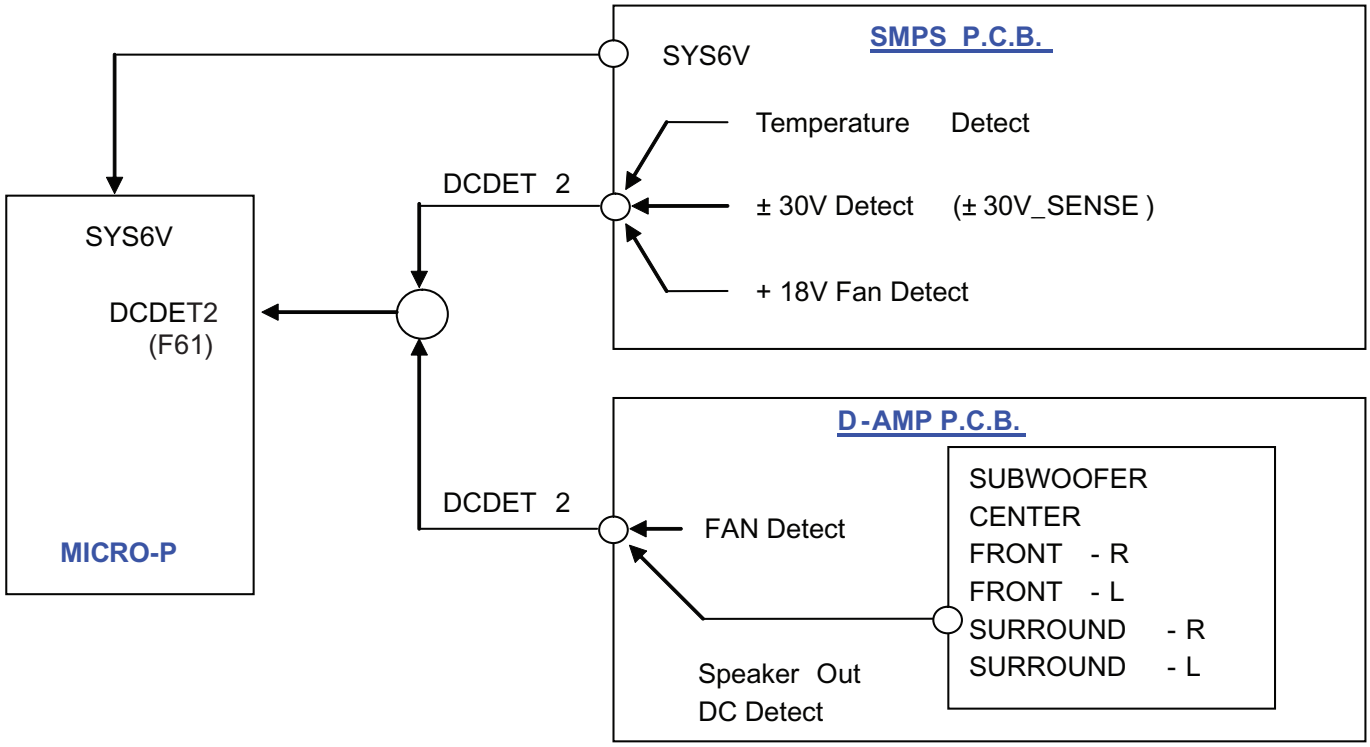
SA-VK470EE
SMPS P.C.B.

22 Basic Troubleshooting Guide

22.1. Troubleshooting Guide for F61 and/or F76

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

22.1.1. Block Diagram



22.1.2. Troubleshooting Guide

Symptom	Checking Items	Repair Items	Remarks
FL display blinking with abnormal segment when power ON the set or "F61"	Check the soldering of the SMPS P.C.B. • Is there any solder crack at area (Q5860,Q5861, Q5862,TH5860, QR5801) • Check all the supply line ± 30V • Is there any solderability at area of feedback circuit • Check feedback circuit (IC5801, Q5802, D5806, PC5720, D5725)	Touch-up the solder crack area/ Change the defective parts. • Q5860,Q5861,Q5862,TH5860 (Temperature Detect) • QR5801 & QR5802 (± 30V Detect) • Touch-up the necessary areas • IC5801, D5806, PC5720, D5725	SMPS P.C.B. Refer to Fig. 1
First Power ON Display immediate show "F61".	Check Speaker output by using multi-meter, • If there is a DC Voltage around ± 30V • Check Output IC (Pin 10 & 14) which have DC Voltage at Speaker output short to ± Vdd/Vss • If shorted that means D-Amp damage already.	Change the defective parts. D-AMP IC: IC5000/IC5200 P/N = C1BA00000487 For Configuration Refer to Table 1	D-AMP P.C.B. Refer to Fig. 2
Power ON for a while then only trigger "F61". (Symptom always happen)	Check the fan connection & feedback loop: • If the fan not proper connected, "F61" will trigger when the volume increase. • If the fan is not working, check for fan circuit. Check the soldering of the SMPS P.C.B. • Is there any solder crack at area (Q5860,Q5861, Q5862,TH5860, QR5801) • Check all the supply line ± 30V	Re-connect the Fan to CN2810 Fan circuit: Q2942, Q2943, Q2948 & Q2949 Touch-up the solder crack area/ Change the defective parts. • Q5860,Q5861,Q5862,TH5860 (Temperature Detect) • QR5801 & QR5802 (± 30V Detect) Feedback Circuit: IC5801, PC5720, D5725	Main P.C.B. Refer to Fig. 4 D-Amp P.C.B. Refer to Fig. 2
Power ON for a while and then trigger "F76"	Check all supply voltages as follows: Step 1: Check for supply voltages from SMPS P.C.B to Power Supply P.C.B at pin 2,5,6,7,8,9 of CN5802. If there are supply voltages, proceed to Step 2. If no voltages detected, check wire connection and circuitry connection from SMPS P.C.B. Step 2: Check if there is supply voltages for –Vp, FL1 & FL2 CN2807 • If there is supply voltages of +5V,+2.7V (For DVD), +6V (SYS6V), +9V & +18V at CN2807 • If there is supply voltages of ±9V at CN6001	Check and change the possible defective parts. • FP2901 (Fuse Protector), T2900, D2901, D2906, D2908, D2909 • IC4000 (DC-DC Converter IC) & related regulator circuit components • IC4001 (DC-DC Converter IC) & related regulator circuit components	Main P.C.B. Refer to Fig. 4

22.1.3. Part Location

22.1.3.1. SMPS P.C.B.

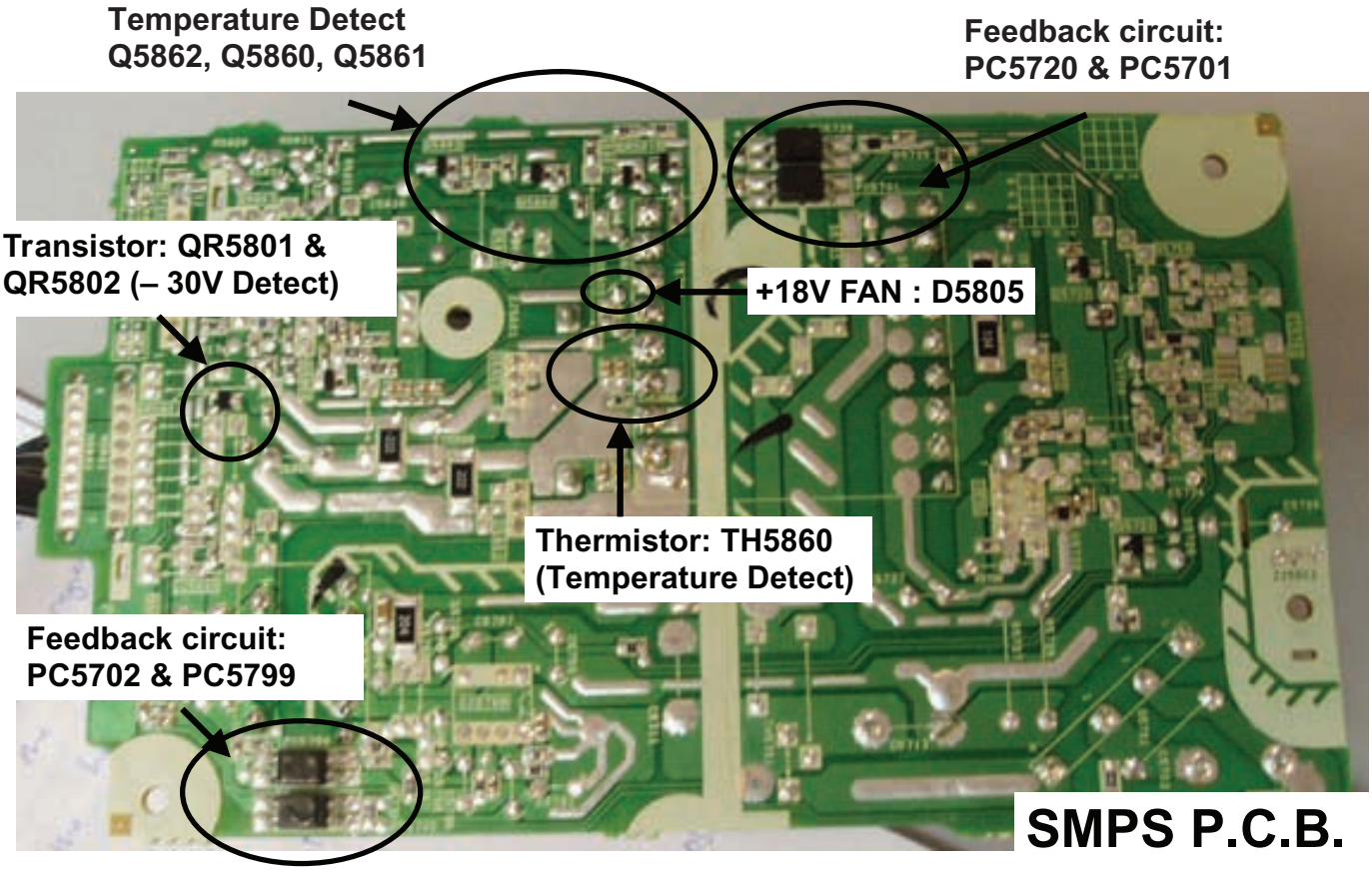


Fig. 1 SMPS P.C.B.

22.1.3.2. D-Amp P.C.B.

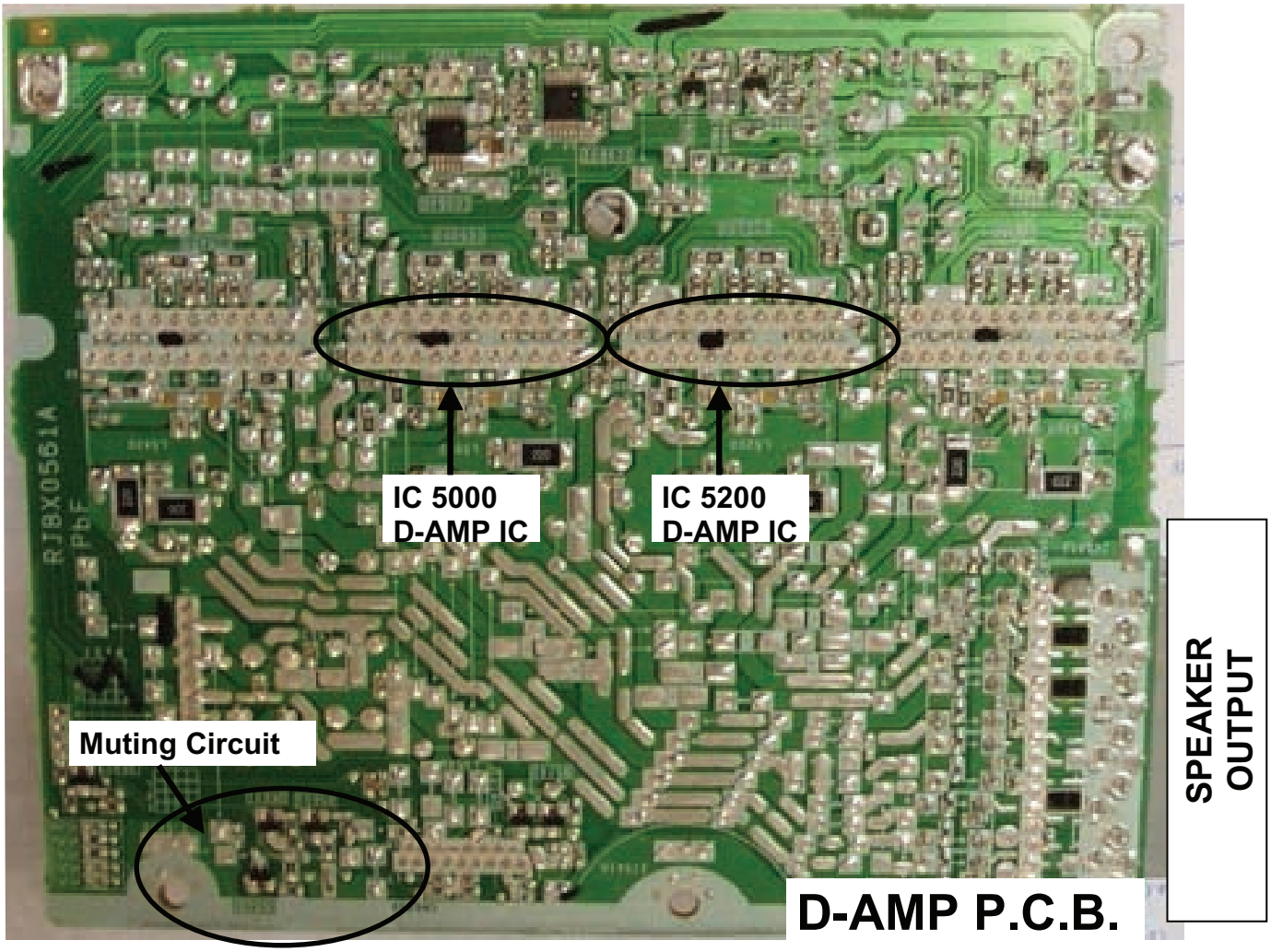


Fig. 2 D-Amp P.C.B

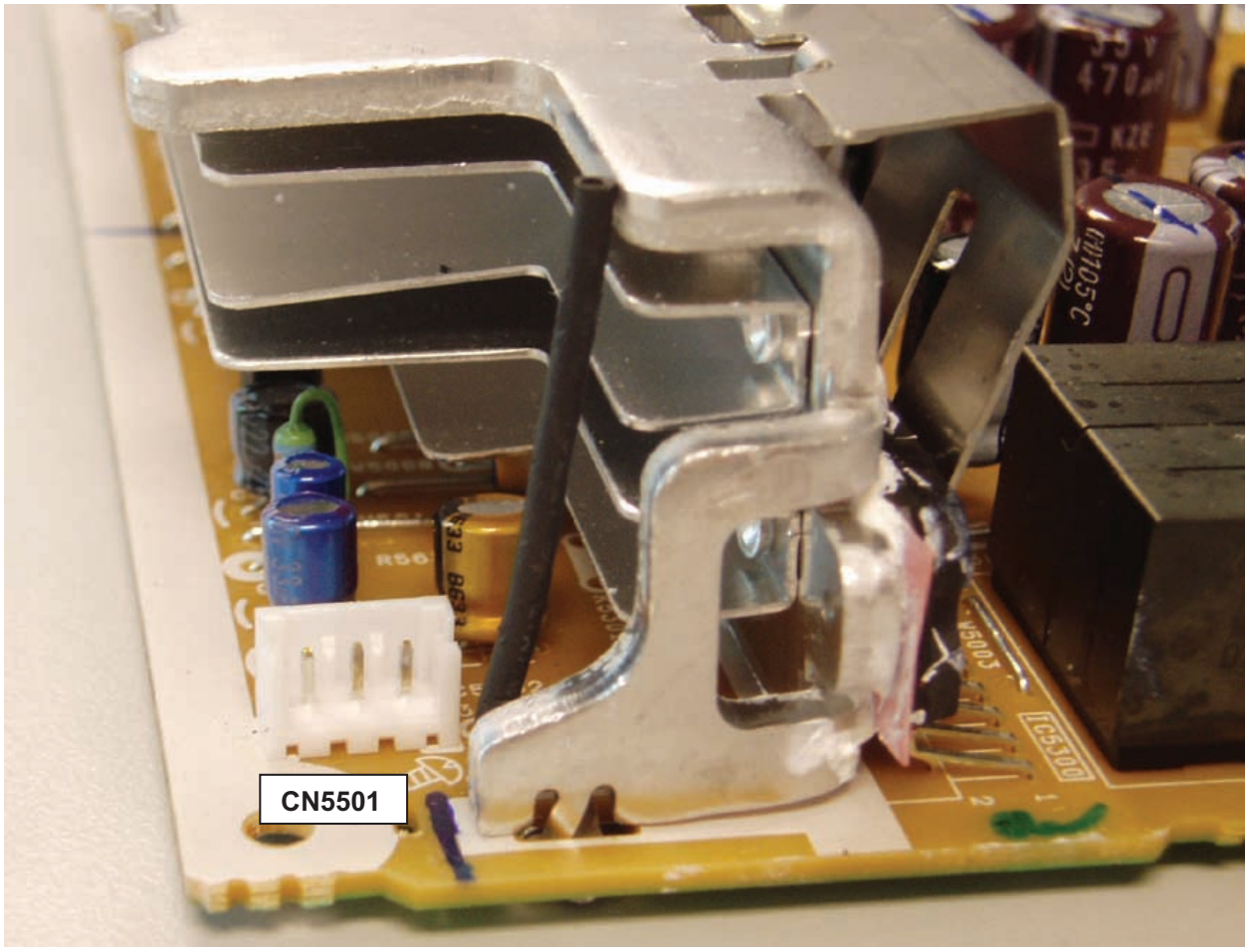


Fig. 3 Fan Connector

22.1.3.3. D-Amp IC Configuration

		VK470EE
IC5000	Pin (10)	Front Right
	Pin (14)	Front Left

Table 1

22.1.3.4. Main P.C.B.

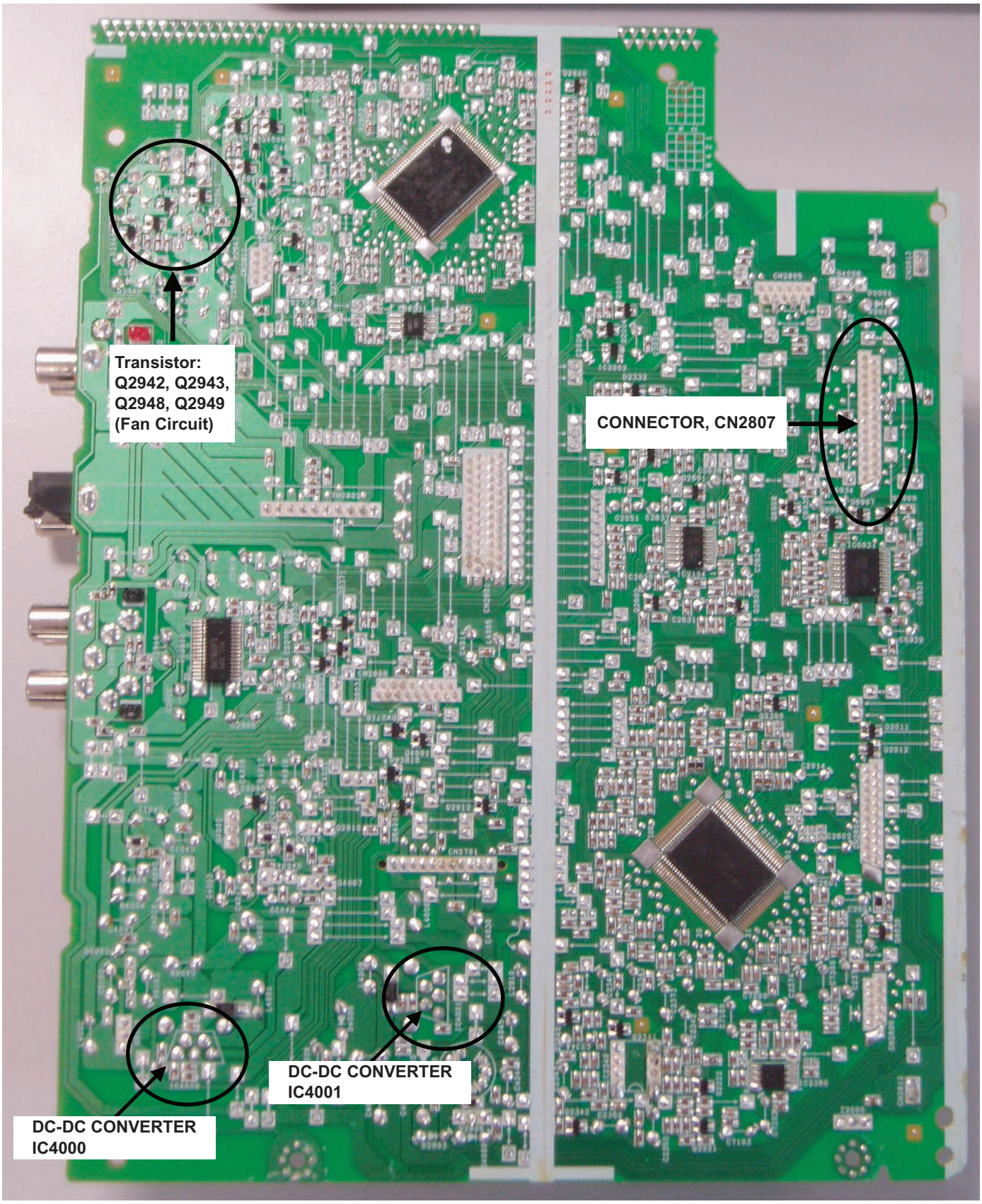


Fig. 4 Main P.C.B

22.2. Basic Troubleshooting Guide for Traverse Unit (DVD Module P.C.B.)

Problems	Checking Points	Checking components
1) Distorted picture or abnormal sound is head during the initialization	a) Check SDRAM address, data bus, CLK and other control signals waveform	IC8051
	b) Check video signals (Y,C)	LB8301, R8321, R8323, LB8302, R8325, R8327
	c) Check audio DAC circuitry * Compare the above with OK condition DVD Module P.C.B	IC8421 (Pin 9 to 11 & 17 to 22) LB8425, LB8426, LB8427, LB8428, LB8429, LB8431 *Check for solder short and/or component missing/damaged
2) No TOC/Long TOC	a) Check motor driver circuitry (+5V)	IC8251 Pin 8, 21
	b) Check laser drive circuitry (Voltages & current)	Q8551, Q8552 (For DVD), Q8561, Q8562 (For CD)
	c) Check LSI IC connection to motor drive circuitry * Compare the above with OK condition DVD Module P.C.B.	IC8001 Pin 66, 67 IC8251 Pin 15 to 16 * Check for solder short and/or component missing/damaged
3) Disc not spinning 4) Traverse not moving 5) Traverse and spindle abnormal movement	a) Check connection from DVD Module to Traverse unit	FP8251
	b) Check motor driver circuitry on the voltages and control signals * Compare the above with OK condition DVD Module P.C.B.	IC8251 * Check for solder short and/or component damaged
6) Cannot read the disc but spindle motor is spinning - Cannot read CD/DVD	a) Check laser drive circuitry (voltages and current) - Check CD Laser Drive - Check DVD Laser Drive * Check voltages and LD current and compare with OK condition DVD Module P.C.B.	Q8551, Q8552, LB8551 (For DVD Laser Drive current) Q8561, Q8562, LB8561 (For CD Laser Drive current)
7) Block Noise during play	a) Check SDRAM address and data bus signal	IC8051
8) Jitter out of specification	a) Check LD current b) Check OPU (Change to other unit and confirmed operating condition)	OPU Unit (Traverse unit), FPC connection (FP8531 & FP8251)

22.3. Basic Troubleshooting Guide for HDMI AV Output

Problems	Checking Points	Checking components
1) TV does not have any display. Set FL display shows U702/U703	1) Check setting of the set in Setup Menu whether the HDMI Video output is turned ON	* This year HDMI always ON. No need check Setup Menu. If no resolution selection GUI, then only check SETUP.
	2) +5V Supply to the TV	IC3952 (Pin 4)
	3) HDMI Connector Solderability condition	P3901
	4) HDMI Output TDMS signal lines (IC3901) - Data (TX0P/M => 14, 16) - Data (TX1P/M => 18, 20) - Data (TX2P/M => Pin 22, 24) - Clock (TXCP/TXCM => Pin 10, 12)	 L3905 L3904 L3903 L3906
	5) HDMI Transmitter communication lines to TV - Data, SDA (Pin 120, IC3901) - Clock, SCL (Pin 121, IC3901)	 LB3905, R3905, Q3902, R3904 LB3904, R3907, Q3903, R3906
	6) HDMI Transmitter communication from LSI (IC8001) (I2C_SCL/I2C_SDA signals)	RX3901
	7) Local Port Slave Address setting resistor at Pin 99 of HDMI Transmitter LSI IC (IC3901) for LPSA signal	R3921
	8) HDMI Transmitter LSI IC (IC3901) +3.3V Supply	LB3901, LB3902, IC3901 (Pin 9, 13, 17, 21, 25, 124)
	9) HDMI Transmitter LSI IC (IC3901) +1.2V Supply	IC3901 (Pin 5, 26, 42, 47, 55, 75, 85, 102, 109, 116, 123), LB3908, IC8151 (Pin 4), LB8001, IC8001 (Pin 20, 44, 83, 158, 187, 211)
	10) HDMI Up-Con +3.3V Supply	LB3901
	11) HDMI Pixel Clock Output from Up-Con to HDMI Transmitter (VCLK)	LB8901
	12) Up-Con IC I2C Data and Clock Line	RX3901

Problems	Checking Points	Checking components
1) TV does not have any display. Set FL display shows U702/U703	13) Hot-Plug Signal	LB3906, R3902, R3903, Q3901, D3901
	14) TDMS Output swing amplitude control resistor	R3901
	15) Host Interface External Input Clock from LSI (IC8001) to Up-Con IC (IC3901) - OSC27M	LB8702
	16) Video Data Lines from LSI (IC8001) to Up-Con (IC3901)	RX3707, RX3708, IC3901 (Pin 92 to 95, Pin 87 to 90)
2) When switching the video output mode from 480P to 720p/1080i, TV display becomes blank	1) Supply for Up-Con (IC3901) - Pin 9,124 2) GND for Up-Con - Pin 7,125 3) Check for capacitor short to GND	LB3902 C3902, C3928, C3925
3) Color Problem. TV Screen is White/Blue/Purple	1) Check digital video data line from LSI(IC8001) to Up-Converter (IC3901), VOUT0-VOUT7.	RX3707, RX3708
4) HDMI got no audio output	1) Audio data lines 2) Check setting of the set in Setup Menu whether the HDMI Audio output is turned On	R8402, RX8402 * Check for solder short and/or component missing/damaged as well as signal condition.

23 Terminal Function of IC's

23.1. IC2801 (RFKWVK470GC): IC System Control

Pin No.	Terminal Name	I/O	Function
1	LM	I	Level Meter Left
2	NC	-	No Connection
3	NC	-	No Connection
4	WIDE1	O	S. Video Output Control
5	DVD_PCONT	O	Power Control pin for DVD Module
6	DVD_Mute	I	Signal from DVD module control mute circuit
7	F_HOP	O	F_Hop for Digital Amplifier
8	BYTE	-	External Data Bus Width Select Input (Connect to Ground)
9	CNVss/EFP_CNVss	-	Flash Mode Terminal (Connected to Ground)
10	Xc_in	-	32.768 kHz Sub Clock
11	Xc_out	-	32.768 kHz Sub Clock
12	RESET/EFP_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	NC	-	No Connection
20	SYNC	I	AC Failure Detect Input
21	ST/DO	I	Tuner IF Data / Stereo Input
22	SD	I	Tuner Signal Detect Input
23	NC	-	No Connection
24	NC	-	No Connection
25	NC	-	No Connection
26	ASP_DATA	O	ASP DATA
27	ASP_CLK	O	ASP CLOCK
28	NC	-	No Connection
29	PLL_DATA	O	PLL DATA
30	PLL_CLK	O	PLL CLOCK
31	REG1/EFP_TxD1	I	TUNER Region Setting 1
32	REG2/EFP_RxD1	I	TUNER Region Setting 2
33	REG3/EFP_SCLK	I	TUNER Region Setting 3
34	EFP_BUSY	I	EFP BUSY
35	DVD_CMD	O	CMD Signal for DVD Module
36	DVD_STA	I	STATUS Signal from DVD module
37	DVD_CLK	I	CLOCK Signal from DVD module
38	MODEL_CS	I	To Select model when power on (VK470:H, VK670:L)
39	MOD_DA	O	Digital Amplifier Muting
40	MUTE_A	O	Audio Mute
41	EE_CS/EFP/EPM	O	EEPROM Chip Select
42	EE_CLK	O/I	EEPROM CLOCK
43	EE_DATA	O/I	EEPROM DATA
44	SW_1	-	Subwoofer Level 1
45	SW_2	-	Subwoofer Level 2
46	PCONT/EFP_CE	O	Main Transformer Control Output
47	DC_DET1	I	DC Detect Input
48	DC_DET2	I	DC Detect Input
49	NC	-	No Connection
50	NC	-	No Connection
51	H.BASS JOG A	I	Bass Control 1
52	H.BASS JOG B	I	Bass Control 2
53	H.BASS LED	O	Bass Led
54	VOL LED	O	Volume Led
55	NC	-	No Connection
56	PLUNGER	O	Deck plunger control (L : OFF; H : ON)
57	MOTOR	O	Deck motor control (L : OFF; H : ON)
58	NC	-	No Connection
59	NC	-	No Connection
60	DMT	O	Deck Mute
61	REC	O	Deck Recording control (H : Recording)
62	Vcc	-	Power Supply (+5V)
63	EJECT	I	Deck Eject
64	Vss	-	Ground (0V)
65	HP_SW	I	Head Phone Detection
66	MPORT_SW	I	Music Port Detection
67	MIC mute	O	Mute when Mic is in
68	AM_BP	O	AM Beaf Proof
69	ECHO_1	-	ECHO Level Control 1
70	ECHO_2	-	ECHO Level Control 2
71	NC	-	No Connection
72	FL_CS	O	FL Driver Chip Select
73	FL_DATA	O	Serial Data to FL Driver
74	FL_CLK	O	Serial Clock to FL Driver
75	ECHO_3	-	ECHO Level Control 3
76	ECHO_MUTE	-	ECHO Muting
77	TOP SWITCH	I	CR14 control
78	CLOSE	I	CR14 control
79	LO_F	O	CR14 control
80	LO_R	O	CR14 control
81	HOME_CR	I	CR14 control for Change detect
82	TRAY_CW_H	O	CR14 control
83	TRAY_CCW_L	O	CR14 control
84	OPEN	I	CR14 control
85	MODE	I	CR14 control
86	UD_SENSOR	I	CR14 control Position detect
87	UNLOAD SW	I	CR14 control Open SW (Unload SW)
88	INNER_SW	I	CR14 control
89	DVD_REG	I	DVD Region Setting
90	PHOTO	I	Mecha condition input 2 (PHOTO/TPS)
91	VOL_JOG	I	Volume control
92	KEY3	I	Keyline 3 input
93	KEY2	I	Keyline 2 Input
94	KEY1	I	Keyline 1 input
95	DECK_AD1	I	Mecha condition input 1 (RECINH_F, MODE, RECINH_R,HALF)
96	AVss	-	Analog Power Supply Input Connect to Ground)
97	NC		No Connection
98	Vref	-	Reference for A-D (+5V)
99	AVcc	-	Analog Power Supply Input
100	NC	-	No Connection

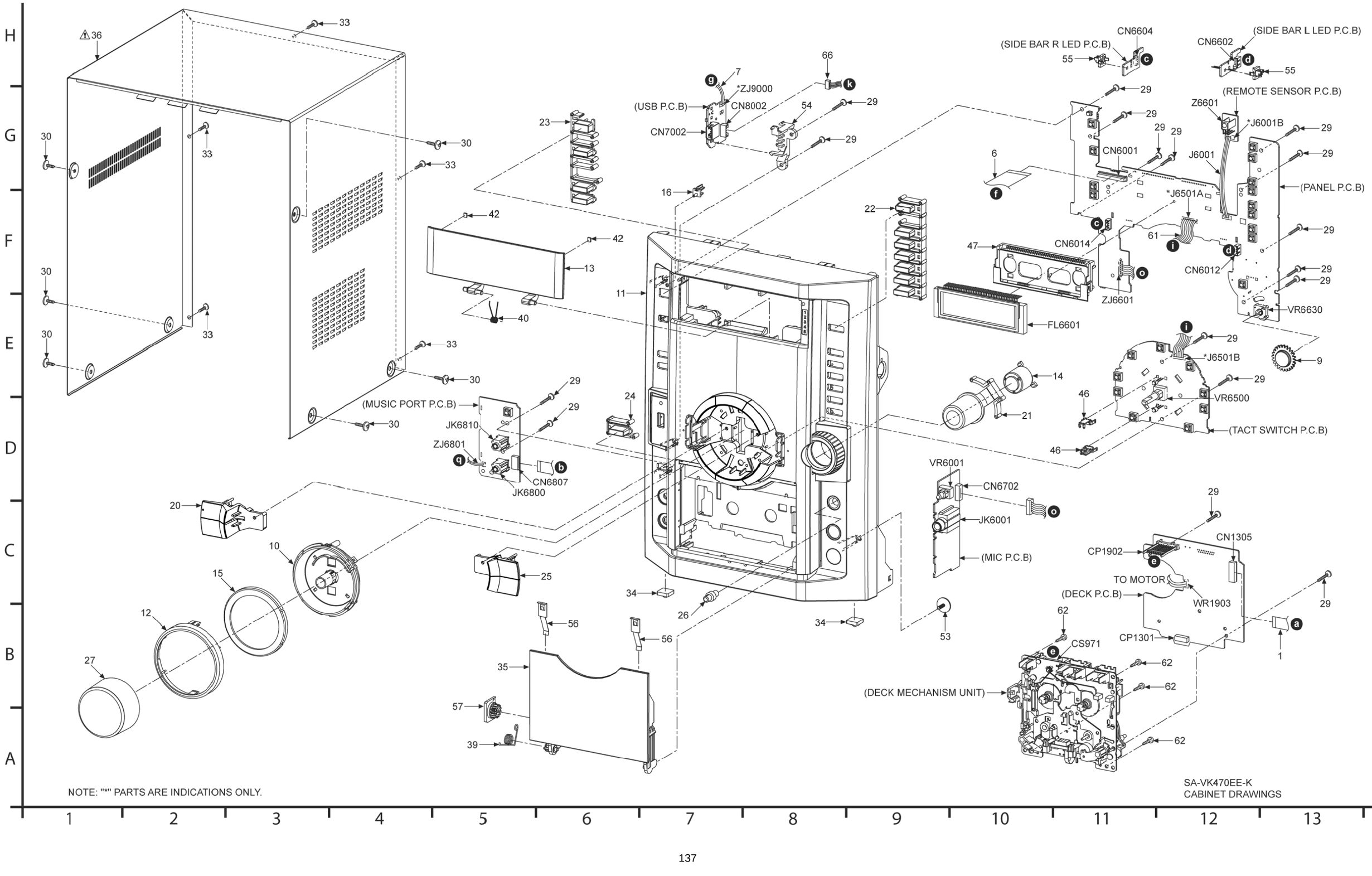
23.2. IC6901(C0HBB0000057): IC FL Driver

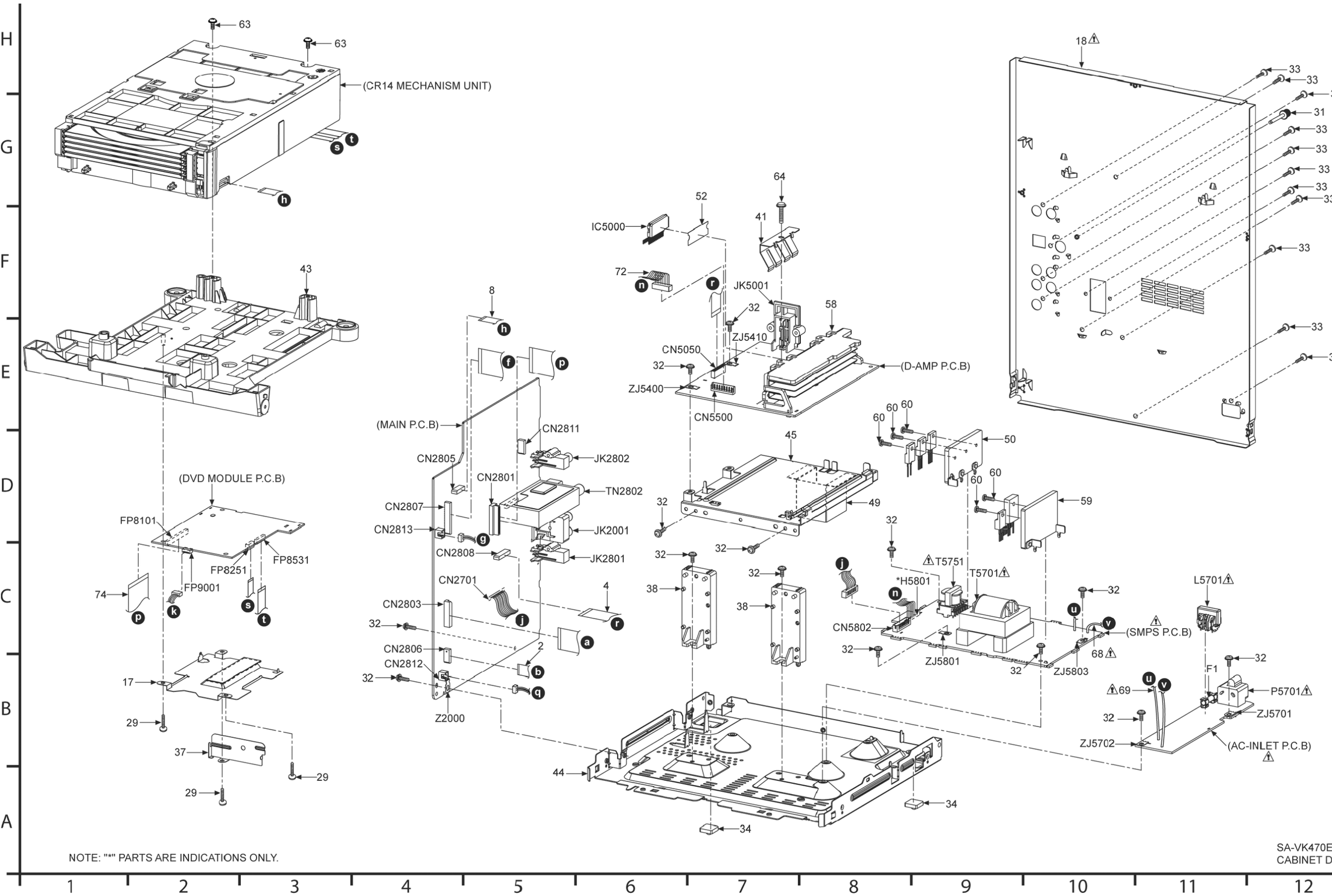
Pin No.	Terminal Name	I/O	Function
1	LED2	O	Led Drive Output
2	LED3	-	Led Drive Output
3	LED4	-	Led Drive Output
4	LED5	-	Led Drive Output

Pin No.	Terminal Name	I/O	Function
5	OSC	I	Oscillator Input
6	DOUT	-	Data Output
7	DIN	I	Data Input
8	CLK	I	Clock Input
9	STB	I	Serial Interface Strobe
10	K1	-	Key Data Input 1 (No Connection)
11	K2	-	Key Data Input 2 (No Connection)
12	GND	-	GND
13	VCC	-	Power Supply (+5V)
14	P18	O	Segment Output 18
15	P17	O	Segment Output 17
16	P16	O	Segment Output 16
17	P15	O	Segment Output 15
18	P14	O	Segment Output 14
19	P13	O	Segment Output 13
20	P12	O	Segment Output 12
21	P11	O	Segment Output 11
22	P10	O	Segment Output 10
23	P9	O	Segment Output 9
24	P8	O	Segment Output 8
25	P7	O	Segment Output 7
26	P6	O	Segment Output 6
27	P5	O	Segment Output 5
28	P4	O	Segment Output 4
29	P3	O	Segment Output 3
30	-VP	-	Voltage Supply
31	P2	O	Segment Output 2
32	P1	O	Segment Output 1
33	G1	O	Grid Segment Output 1
34	G2	O	Grid Segment Output 2
35	G3	O	Grid Segment Output 3
36	G4	O	Grid Segment Output 4
37	G5	O	Grid Segment Output5
38	G6	O	Grid Segment Output 6
39	G7	O	Grid Segment Output7
40	G8	O	Grid Segment Output 8
41	G9	O	Grid Segment Output 9
42	G10	O	Grid Segment Output 10
43	VCC	-	Voltage Supply (+5V)
44	GND	-	GND

24 Exploded Views

24.1. Cabinet Parts Location

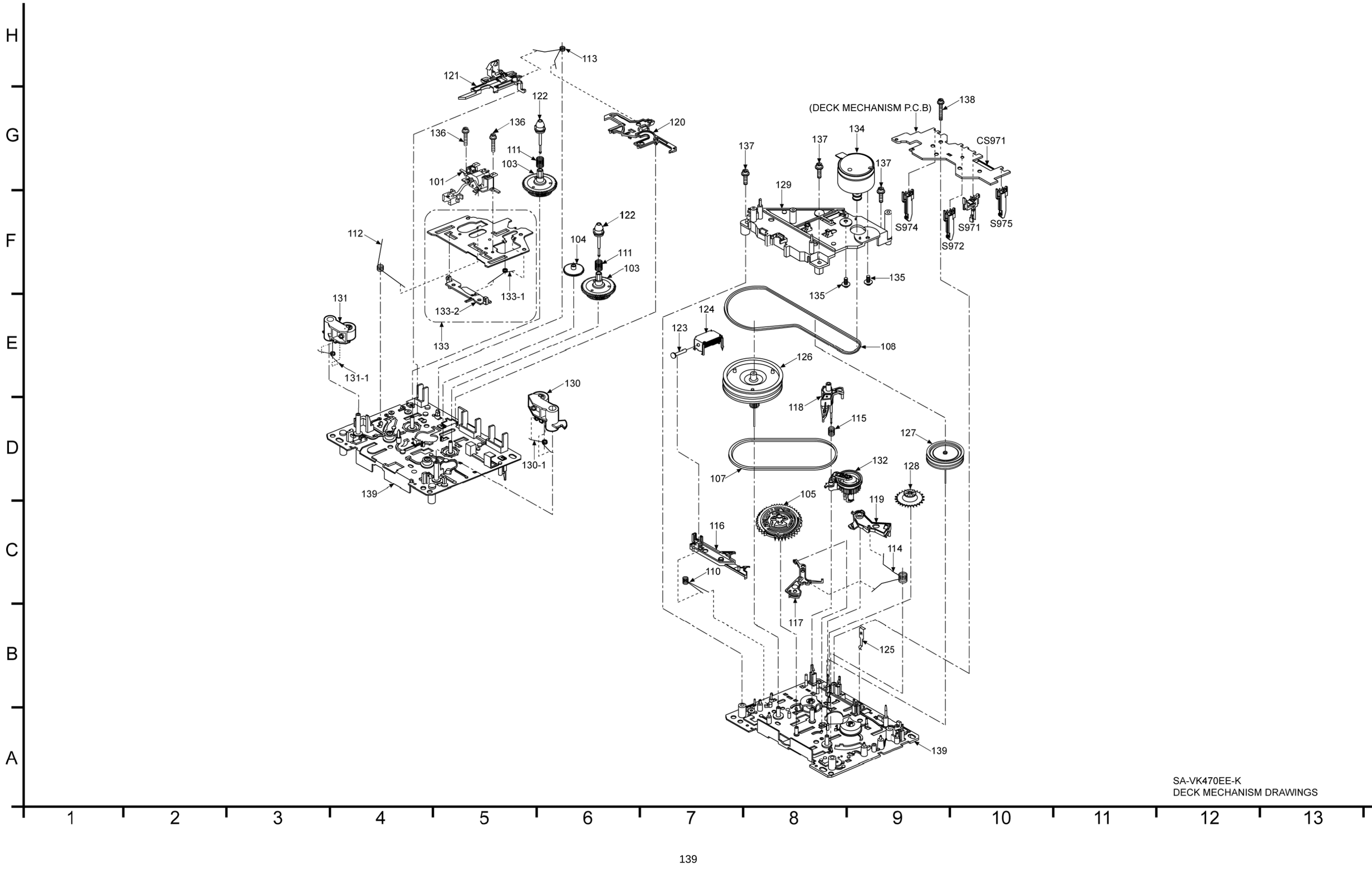




NOTE: "*" PARTS ARE INDICATIONS ONLY.

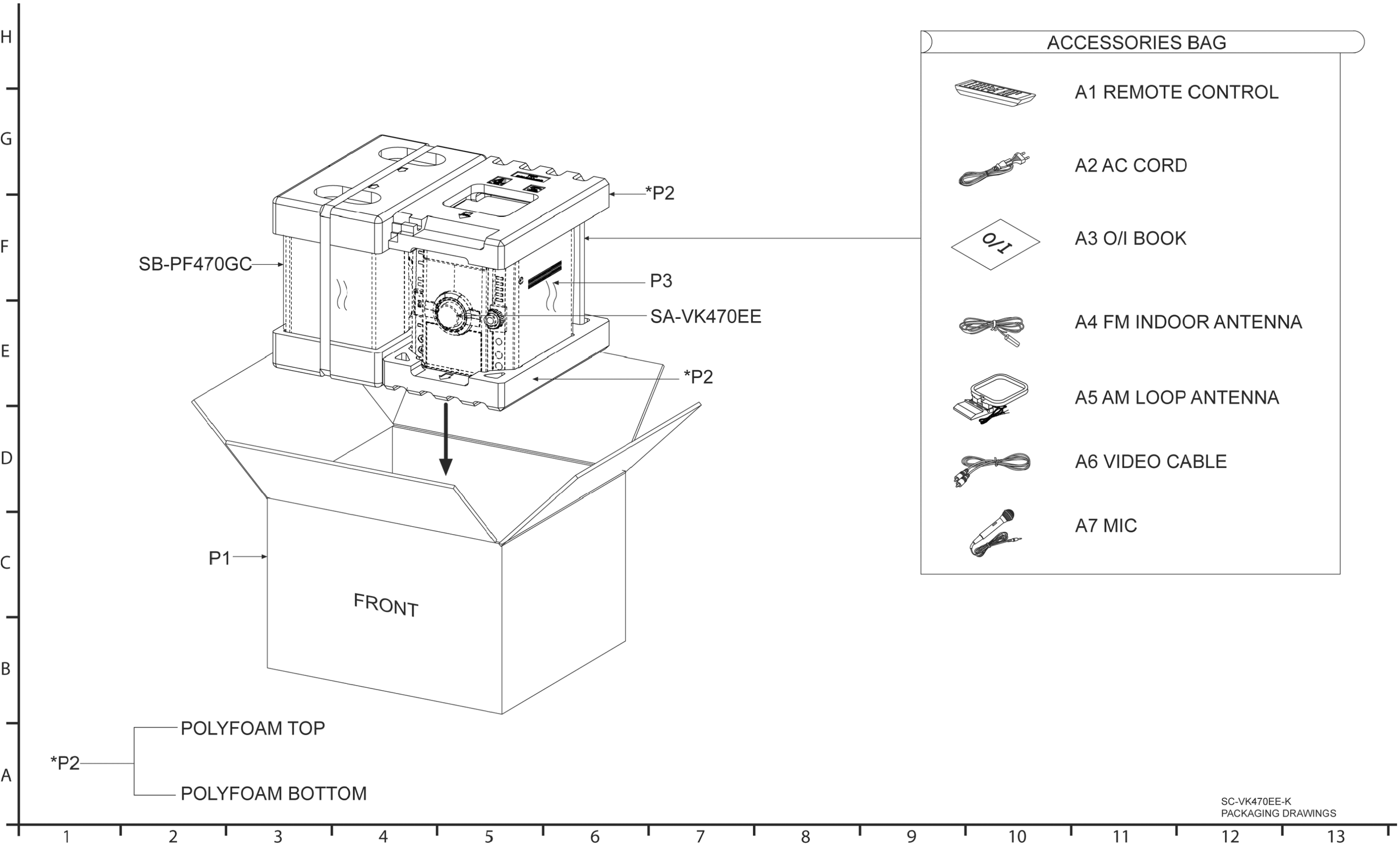
SA-VK470EE-K
CABINET DRAWINGS

24.2. Deck Mechanism Parts Location (RAA4111-S)



SA-VK470EE-K
DECK MECHANISM DRAWINGS

24.3. Packaging



25 Replacement Parts List

Notes:

- Important safety notice:

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

  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.
- Warning: This product uses a laser diode. Refer to caution statements.
- Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM), 1M=1,000K (OHM).
- The parenthesized indications in the Remarks columns specify the model names and areas. (Refer to the cover page)
- The marking (RTL) indicates the retention time is limited for this item. After the discontinuation of this assembly in production, it will no longer be available.
- Parts mentioned [M] are supplied from PAVCSG.
- Parts mentioned [SPG] are supplied from PAVC.
- 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:	Ukrainian	Pr:	Portuguese		

25.1. Component Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS	
1	REEV0139	21P FFC CABLE (DECK-MAIN)	[M]
2	REEX0740	10P FFC CABLE (MUSIC-MN)	[M]
4	REEX0881	17P FFC CABLE (MAIN-DAMP)	[M]
6	REEX0883	27P FFC CABLE (MAIN-PANEL)	[M]
7	REXX0681	2P WIRE (USB-MAIN)	[M]
8	REEX0904	11P FFC CABLE (MAIN-CD)	[M]
9	RDGX0040	VOLUME GEAR	[M]
10	RGCX0010A-W	LIGHT REFLECTOR	[M]
11	RFKGAVK470GC	FRONT PANEL ASS´Y	[M]
12	RGKX0482-S	VOLUME ORNAMENT	[M]
13	RGKX0483A-K1	CD LID	[M]
14	RGKX0488A-B	DYNAMIC BASS ORNAMENT	[M]
15	RGLX0164-Q	VOLUME BASS ORNAMENT	[M]
16	RGLX0167-Q	POWER LIGHT PIECE	[M]
17	RXQX0084A	HDMI SHIELD PLATE UNIT	[M]
18	RGRX0070L-B	REAR PANEL	[M] ⚠
20	RGUX0764A-S	FUNCTION BUTTON L	[M]
21	RGUX0765-S	DYNAMIC BASS BUTTON	[M]
22	RGUX0766A-K	5CD CHANGE BUTTON	[M]
23	RGUX0767B-K	POWER LIGHT PIECE	[M]
24	RGUX0768-K	CASSETTE EJECT BUTTON	[M]
25	RGUX0777A-S	FUNCTION BUTTON R	[M]
26	RGWX0056-1K	MIC VOLUME KNOB	[M]
27	RGWX0072A-1S	VOLUME KNOB	[M]
29	RHD26046-L	SCREW	[M]
30	RHD30007-K2J	SCREW	[M]
31	RHD30070	EARTH TERMINAL SCREW	[M]
32	RHD30111-3	SCREW	[M]
33	RHD30119-S	SCREW	[M]
34	RKA0072-KJ	LEG CUSHION	[M]
35	RKFX0143A-K1	CASS LID	[M]
36	RKMX0144-K	TOP CABINET	[M] ⚠
37	RSCX0196	GROUND GEAR	[M]
38	RMAX0333	CHASSIS SUPPORT	[M]
39	RMBV0042-2	CASSETTE LID SPRING	[M]
40	RMBX0086	CD LID OPEN SPRING	[M]
41	RMC0465	TR SPRING	[M]
42	RMGX0033	CUSHION RUBBER	[M]
43	RMKX0151	CD CHASSIS	[M]
44	RMKX0148	BOTTOM CHASSIS	[M]
45	RMKX0149	INNER CHASSIS	[M]
46	RMNV0059	LED HOLDER	[M]
47	RMNV0079-1	FL HOLDER	[M]
49	RMVX0119	BARRIER COVER	[M]
50	RXXX0105	HEATSINK UNIT C	[M]
52	RMZX0041	IC INSULATOR SHEET	[M]
53	RHD30008	SCREW	[M]
54	RMNX0287	USB JACK HOLDER	[M]
55	RMNX0190	LED HOLDER	[M]
56	RUS757ZAA	CASSETTE HALF SPRING	[M]
57	RXGX0002	DAMPER GEAR	[M]
58	RXXX0085A-1J	HEAT SINK UNIT A	[M]
59	RXXX0104A	HEAT SINK UNIT B	[M]
60	XTB3+10JFJ	SCREW	[M]
61	RWJ1108055SS	8P WIRE (PANEL - TACT)	[M]
62	XTV3+10GFJ-M	SCREW	[M]
63	XTW3+12TFJ	SCREW	[M]
64	XTW3+8TFJ	SCREW	[M]
66	REXX0690	5P SHIELD WIRE (BE-USB)	[M]
68	REXX0684	BLACK WIRE	[M] ⚠
69	REXX0685	RED WIRE	[M] ⚠
72	REXX0683	8P WIRE (SMPS-DAMP)	[M]
74	REEX0905	50P FFC CABLE (MAIN-BE)	[M]
		CASSETTE DECK	
101	RED0064-2	R/P 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	RDV0034-2	CAPSTAN BELT A	[M]
110	RMB0312	TRIGGER LEVER SPRING	[M]
111	RMB0400	REEL SPRING	[M]
112	RMB0403	HEAD PANEL SPRING	[M]
113	RMB0404	BRAKE ROD SPRING	[M]
114	RMB0406-5	FR LEVER SPRING	[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	SOLENOLD ASS´Y	[M]
125	RMC0061	PACK SPRING	[M]
126	RXF0061-1	FLYWHEEL F ASS´Y	[M]
127	RXF0062-1	FLYWHEEL R 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]
131	RXL0125	PINCH ROLLER R ASS´Y	[M]
131-1	RMB0402	PINCH ARM SPRING R	[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	REM0120	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	RFKJSTR280PP	MAIN CHASSIS ASS´Y	[M]
		PACKING MATERIALS	
P1	RPGX1941	PACKING CASE	[M]
P2	RPNX0548	POLYFOAM	[M]
P3	RPFX0198	MIRAMAT	[M]
		ACCESSORIES	
A1	N2QAYB000266	REMOTE CONTROL	[M]
A1-1	RKK-HTR0051K	R/C BATTERY COVER	[M]
A2	K2CQ2CA00007	AC CORD	[M] ⚠
A3	RQTV0313-R	O/I BOOK (Ru/Ur)	[M]
A4	RSA0007-L1	FM INDOOR ANTENNA	[M]
A5	N1DYYYY00003	AM LOOP ANTENNA	[M]
A6	K2KA2CA00011	VIDEO CABLE	[M]
A7	RP-VK21E-K	MICROPHONE	[M]
		PRINTED CIRCUIT BOARDS	
PCB1	REPX0321K	DECK MECHANISM P.C.B	[M] (RTL)
PCB2	REPX0411D	DECK P.C.B	[M] (RTL)
PCB3	REPX0620F-M	DVD MODULE P.C.B	[M] (RTL)
PCB4	REPX0622Y	SMPS P.C.B	[M] (RTL) ⚠
PCB5	REPX0622Y	AC INLET P.C.B	[M] (RTL) ⚠
PCB6	REPX0638G	D-AMP P.C.B	[M] (RTL)
PCB7	REPX0658C	MAIN P.C.B	[M] (RTL)
PCB8	REPX0658C	USB P.C.B	[M] (RTL)

Ref. No.	Part No.	Part Name & Description	Remarks
PCB9	REPX0671A	PANEL P.C.B	[M] (RTL)
PCB10	REPX0671A	TACT SWITCH P.C.B	[M] (RTL)
PCB11	REPX0671A	SIDE BAR (R) LED P.C.B	[M] (RTL)
PCB12	REPX0671A	SIDE BAR (L) LED P.C.B	[M] (RTL)
PCB13	REPX0671A	REMOTE SENSOR P.C.B	[M] (RTL)
PCB14	REPX0671A	MIC P.C.B	[M] (RTL)
PCB15	REPX0671A	MUSIC PORT P.C.B	[M] (RTL)
		INTEGRATED CIRCUITS	
IC971	CNB13030R2AU	IC PHOTO INTERUPTOR	[M]
IC1000	C1AA00000612	IC ANALOG SWITCH	[M]
IC1001	AN7326K	IC DECK R/P	[M]
IC2002	C0CBCBC00140	IC VOLTAGE REGULATOR	[M]
IC2103	C0ABBB000230	IC OP-AMP	[M]
IC2801	RFKWVK470GC	IC MICRO-PROCESSOR	[M]
IC2803	C1BB00001121	IC ASP	[M]
IC2804	C0AABB000125	IC OP-AMP	[M]
IC2900	C9ZB00000461	IC DSP	[M]
IC4000	C0DAAMH00012	IC SWITCHING REGULATOR	[M]
IC4001	C0DAAYY00042	IC SWITCHING REGULATOR	[M]
IC5000	C1BA00000487	IC AUDIO DIGITAL POWER AMP	[M]
IC5500	C0JBAB000902	IC INVERTER GATE	[M]
IC5501	C0JBAF000716	IC D-TYPE FLIP-FLOP	[M]
IC5701	C5HACYY00003	IC SWITCHING REGULATOR	[M]
IC5799	MIP4110MSSCF	IC SWITCHING REGULATOR	[M]
IC5801	C0DABFC00002	IC SHUNT REGULATOR	[M]
IC5899	C0DAEMZ00001	IC SHUNT REGULATOR	[M]
IC6000	C0ABBB000230	IC IPOD DIFFERENTIAL AMP	[M]
IC6601	C0HBB0000057	IC FL DRIVER	[M]
IC8001	MN2DS0018MP	IC DV5.0 LSI	[M]
IC8051	C3ABPY000011	IC 64M SDRAM	[M]
IC8111	C0CBCBD00018	IC +3.3V DC-DC CONVERTER	[M]
IC8151	C0DBEHG00006	IC +1.2V REGULATOR	[M]
IC8251	C0GBG0000048	IC MOTOR DRIVE	[M]
IC8420	C0FBBK000047	IC AUDIO DAC	[M]
IC8601	C0EBA0000039	IC RESET	[M]
IC8606	C0EBE0000456	IC RESET	[M]
IC8611	C3EBGC000056	IC EEPROM	[M]
IC8651	RFKWMH32B325	IC FLASH ROM	[SPG]
IC8691	C0JBAA000502	IC AND GATE	[M]
IC8695	C0JBAA000502	IC AND GATE	[M]
IC9001	C0JBAZ001251	IC LATCH	[M]
IC9002	C0JBAZ001251	IC LATCH	[M]
IC9003	C0JBAB000908	IC INVERTER GATE	[M]
IC9005	C0DBZYY00266	IC REGULATOR	[M]
		TRANSISTORS	
Q1101	B1ABGC000001	TRANSISTOR	[M]
Q1201	B1ABGC000001	TRANSISTOR	[M]
Q1302	B1GDCFJJ0002	TRANSISTOR	[M]
Q1303	B1GBCFGH0001	TRANSISTOR	[M]
Q1304	B1GDCFGH0002	TRANSISTOR	[M]
Q1306	B1ABCF000011	TRANSISTOR	[M]
Q1307	B1ABCF000011	TRANSISTOR	[M]
Q1309	B1AAGC000006	TRANSISTOR	[M]
Q1310	B1AAGC000006	TRANSISTOR	[M]
Q1312	B1ABCF000011	TRANSISTOR	[M]
Q1314	B1GDCFGH0002	TRANSISTOR	[M]
Q1315	B1ACKD000006	TRANSISTOR	[M]
Q1316	2SD09650RA	TRANSISTOR	[M]
Q1317	B1ABGC000001	TRANSISTOR	[M]
Q2004	2SD0601AHL	TRANSISTOR	[M]
Q2005	B1ADCE000012	TRANSISTOR	[M]
Q2011	B1GBCFJJ0051	TRANSISTOR	[M]
Q2012	B1GBCFJJ0051	TRANSISTOR	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
Q2051	B1GDCFJJ0047	TRANSISTOR	[M]
Q2052	B1GFGCAA0001	TRANSISTOR	[M]
Q2142	B1ABCF000176	TRANSISTOR	[M]
Q2143	B1ABEB000002	TRANSISTOR	[M]
Q2242	B1ABCF000176	TRANSISTOR	[M]
Q2243	B1ABEB000002	TRANSISTOR	[M]
Q2366	B1GFGCAA0001	TRANSISTOR	[M]
Q2501	B1GDCFJJ0047	TRANSISTOR	[M]
Q2502	B1GFGCAA0001	TRANSISTOR	[M]
Q2600	B1GBCFLL0037	TRANSISTOR	[M]
Q2700	B1ACCF000094	TRANSISTOR	[M]
Q2701	B1GBCFJN0033	TRANSISTOR	[M]
Q2702	B1ACCF000094	TRANSISTOR	[M]
Q2800	B1GBCFJJ0051	TRANSISTOR	[M]
Q2810	B1AAKD000012	TRANSISTOR	[M]
Q2900	B1BABK000001	TRANSISTOR	[M]
Q2912	B1GBCFJN0033	TRANSISTOR	[M]
Q2980	B1ABCF000176	TRANSISTOR	[M]
Q4000	B1BACD000018	TRANSISTOR	[M]
Q4001	B1GBCFJN0033	TRANSISTOR	[M]
Q4002	B1BCCG000002	TRANSISTOR	[M]
Q4003	2SD0592ARA	TRANSISTOR	[M]
Q4005	B1ABCF000176	TRANSISTOR	[M]
Q4006	B1ADCF000001	TRANSISTOR	[M]
Q4007	2SD0592ARA	TRANSISTOR	[M]
Q5100	B1BACG000023	TRANSISTOR	[M]
Q5101	B1ABCF000176	TRANSISTOR	[M]
Q5102	B1ABCF000176	TRANSISTOR	[M]
Q5601	B1ABCF000176	TRANSISTOR	[M]
Q5603	B1ADCE000012	TRANSISTOR	[M]
Q5604	B1ABCF000176	TRANSISTOR	[M]
Q5720	2SC3940ARA	TRANSISTOR	[M]
Q5721	2SA207700L	TRANSISTOR	[M]
Q5722	B1ABCF000176	TRANSISTOR	[M]
Q5802	B1ABCF000176	TRANSISTOR	[M]
Q5803	2SC3940ARA	TRANSISTOR	[M]
Q5860	2SA207700L	TRANSISTOR	[M]
Q5861	B1ABCF000176	TRANSISTOR	[M]
Q5862	B1ABCF000176	TRANSISTOR	[M]
Q5898	B1ABCF000176	TRANSISTOR	[M]
Q6511	B1GBCFJN0033	TRANSISTOR	[M]
Q6600	B1GBCFJN0033	TRANSISTOR	[M]
Q6601	B1GBCFJN0033	TRANSISTOR	[M]
Q6602	B1GBCFJN0033	TRANSISTOR	[M]
Q6603	B1GBCFJN0033	TRANSISTOR	[M]
Q6910	B1GBCFJJ0051	TRANSISTOR	[M]
Q8321	2SB1218ARL	TRANSISTOR	[M]
Q8325	2SB1218ARL	TRANSISTOR	[M]
Q8331	2SB1218ARL	TRANSISTOR	[M]
Q8335	2SB1218ARL	TRANSISTOR	[M]
Q8341	2SB1218ARL	TRANSISTOR	[M]
Q8551	2SD1819A0L	TRANSISTOR	[M]
Q8552	B1ADGB000008	TRANSISTOR	[M]
Q8561	2SD1819A0L	TRANSISTOR	[M]
Q8562	B1ADGB000008	TRANSISTOR	[M]
Q8563	B1CFHA000002	TRANSISTOR	[M]
Q8564	B1CFHA000002	TRANSISTOR	[M]
Q8565	2SD1819A0L	TRANSISTOR	[M]
QR4004	B1GBCFJN0033	TRANSISTOR	[M]
QR5801	UNR221400L	TRANSISTOR	[M]
QR5802	B1GDCFGA0018	TRANSISTOR	[M]
QR5810	B1GBCFLL0037	TRANSISTOR	[M]
QR8111	XP0621400L	TRANSISTOR	[M]
QR8420	UNR521100L	TRANSISTOR	[M]
QR9030	B1GDCFJJ0002	TRANSISTOR	[M]
		DIODES	
D971	MA2C16500E	DIODE	[M]
D1301	B0ACCK000005	DIODE	[M]
D2000	B0EAKM000117	DIODE	[M]
D2001	B0EAKM000117	DIODE	[M]
D2002	B0EAKM000117	DIODE	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
D2003	B0EAKM000117	DIODE	[M]
D2191	B0ACCK000005	DIODE	[M]
D2241	B0ACCK000005	DIODE	[M]
D2332	B0ADCC000002	DIODE	[M]
D2600	B0ACCK000005	DIODE	[M]
D2602	B0ACCE000003	DIODE	[M]
D2603	B0ACCE000003	DIODE	[M]
D2700	B0ACCE000003	DIODE	[M]
D2900	B0ACCK000005	DIODE	[M]
D2901	B0BC035A0007	DIODE	[M]
D2903	B0EAMM000057	DIODE	[M]
D2943	MA2J11100L	DIODE	[M]
D2947	B0JAME000114	DIODE	[M]
D4000	B0EAMM000057	DIODE	[M]
D4001	MAZ82400HL	DIODE	[M]
D4002	B0JAME000029	DIODE	[M]
D4003	B0JCPD000025	DIODE	[M]
D4004	B0BC01000014	DIODE	[M]
D4005	B0BC01000014	DIODE	[M]
D4007	B0BC8R100004	DIODE	[M]
D4008	B0ACCK000005	DIODE	[M]
D5001	B0HCMM000019	DIODE	[M]
D5002	B0HCMM000019	DIODE	[M]
D5003	B0HCMM000019	DIODE	[M]
D5004	B0HCMM000019	DIODE	[M]
D5501	MA2J11100L	DIODE	[M]
D5502	MA2J11100L	DIODE	[M]
D5503	MAZ80510ML	DIODE	[M]
D5701	B0FBAR000041	DIODE	[M]
D5702	B0ZAZ0000052	DIODE	[M]
D5721	MAZ81800ML	DIODE	[M]
D5722	B0BC019A0007	DIODE	[M]
D5723	MA2J11100L	DIODE	[M]
D5724	MA2J11100L	DIODE	[M]
D5725	B0BC6R100010	DIODE	[M]
D5726	B0EAKM000117	DIODE	[M]
D5727	MA2J11100L	DIODE	[M]
D5728	MA2J11100L	DIODE	[M]
D5729	B0EAMM000057	DIODE	[M]
D5730	MA2J11100L	DIODE	[M]
D5731	B0EAMM000057	DIODE	[M]
D5732	B0BC035A0007	DIODE	[M]
D5793	B0HAMP000094	DIODE	[M]
D5797	MA2J72800L	DIODE	[M]
D5798	B0HAMP000094	DIODE	[M]
D5801	B0HBSM000043	DIODE	[M]
D5802	B0HBSM000043	DIODE	[M]
D5803	B0HFRJ000012	DIODE	[M]
D5804	B0EAMM000057	DIODE	[M]
D5805	B0EAMM000057	DIODE	[M]
D5806	MAZ80750ML	DIODE	[M]
D5807	MA2J11100L	DIODE	[M]
D5809	MA2J11100L	DIODE	[M]
D5896	B0EAMM000057	DIODE	[M]
D6458	B3AAA0000803	DIODE	[M]
D6511	B3AEA0000107	DIODE	[M]
D6512	B3AEA0000107	DIODE	[M]
D6602	B3AEA0000107	DIODE	[M]
D6604	B3AEA0000107	DIODE	[M]
D6672	B0BC4R600016	DIODE	[M]
D6930	B0BC5R000009	DIODE	[M]
D8211	MA2J11100L	DIODE	[M]
DZ2810	B0BC5R600003	DIODE	[M]
DZ4005	B0BC3R700004	DIODE	[M]
DZ4006	B0JCPD000025	DIODE	[M]
DZ4007	B0BC01000014	DIODE	[M]
DZ5701	ERZV10V511CS	ZNR	[M] ⚠
DW2710	B0ADCJ000020	DIODE	[M]
DW2810	B0ADCJ000020	DIODE	[M]
		VARISTORS	
VA9001	EZJZ1V171AA	VARISTOR	[M]
VA9002	EZJZ1V171AA	VARISTOR	[M]
		VARIABLE RESISTORS	
VR6001	EVUE27FK2B53	MIC VOLUME	[M]
VR6500	EVEKE2F3524M	VOLUME JOG	[M]
VR6630	K9AA024A0008	BASS CONTROL	[M]
		SWITCHES	
S971	K0J1BB000017	SW MODE	[M]
S972	K0J1BB000021	SW HALF	[M]
S974	K0J1BB000021	SW RECIN_R	[M]
S975	K0J1BB000021	SW RECIN_F	[M]
S6100	EVQ21405RJ	SW POWER	[M]
S6101	EVQ21405RJ	SW DISPLAY	[M]
S6104	EVQ21405RJ	SW ADVANCE SURROUND	[M]
S6106	EVQ21405RJ	SW TAPE/REC	[M]
S6108	EVQ21405RJ	SW H.BASS	[M]
S6201	EVQ21405RJ	SW OPEN/CLOSE	[M]
S6202	EVQ21405RJ	SW EXCHANGE	[M]
S6203	EVQ21405RJ	SW CD1	[M]
S6204	EVQ21405RJ	SW CD2	[M]
S6205	EVQ21405RJ	SW CD3	[M]
S6206	EVQ21405RJ	SW CD4	[M]
S6207	EVQ21405RJ	SW CD5	[M]
S6208	EVQ21405RJ	SW STOP/DEMO	[M]
S6300	EVQ21405RJ	SW FWD	[M]
S6301	EVQ21405RJ	SW MANUAL EQ	[M]
S6302	EVQ21405RJ	SW REW	[M]
S6303	EVQ21405RJ	SW TAPE	[M]
S6304	EVQ21405RJ	SW FM.AM	[M]
S6306	EVQ21405RJ	SW DVD/CD	[M]
S6307	EVQ21405RJ	SW USB	[M]
S6308	EVQ21405RJ	SW EXT IN	[M]
S6820	EVQ21405RJ	SW OPEN/CLOSE	[M]
		CONNECTORS	
CN1305	K1MN21B00010	21P FFC CONNECTOR	[M]
CN2801	K1MY50AA0029	50P CONNECTOR	[M]
CN2803	K1MN21A00031	21P CONNECTOR	[M]
CN2805	K1MN11AA0003	11P CONNECTOR	[M]
CN2806	K1MN10AA0003	10P FFC CONNECTOR	[M]
CN2807	K1MY27AA0124	27P FFC CONNECTOR	[M]
CN2808	K1MN17AA0004	17P CONNECTOR	[M]
CN2811	K1MN08A00064	8P CONNECTOR	[M]
CN2812	K1KA02AA0186	2P CONNECTOR	[M]
CN2813	K1KA02AA0186	2P CONNECTOR	[M]
CN5050	K1MN17AA0004	17P CONNECTOR	[M]
CN5500	K1KA08AA0180	8P CONNECTOR	[M]
CN5802	K1KA11AA0194	11P CONNECTOR	[M]
CN6001	K1MY27AA0124	27P FFC CONNECTOR	[M]
CN6012	K1KA04AA0031	4P CONNECTOR	[M]
CN6014	K1KA04AA0031	4P CONNECTOR	[M]
CN6602	K1KB04A00046	4P CONNECTOR	[M]
CN6604	K1KB04A00046	4P CONNECTOR	[M]
CN6702	K1KA07AA0193	7P CONNECTOR	[M]
CN6807	K1MN10AA0003	10P FFC CONNECTOR	[M]
CN7002	K1FY104B0011	USB CONNECTOR	[M]
CN8002	K1KA05BA0061	5P CONNECTOR	[M]
CP1301	K1MY05AA0043	5P CONNECTOR	[M]
CP1902	K1KA09BA0153	9P CONNECTOR	[M]
CS971	RJU071H09M1	9P CONNECTOR	[M]
FP8101	K1MN50AA0082	50P CONNECTOR	[M]
FP8251	K1MN07AA0076	7P CONNECTOR	[M]
FP8531	K1MY26AA0021	26P CONNECTOR	[M]
FP9001	K1KA05BA0014	5P CONNECTOR	[M]
		COILS & INDUCTORS	
L1301	G2ZZ00000024	BIAS OSC COIL	[M]
L1302	G0C470JA0052	INDUCTOR	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
L2001	J0JBC0000015	INDUCTOR	[M]
L2003	J0JBC0000015	INDUCTOR	[M]
L2004	J0JBC0000015	INDUCTOR	[M]
L2005	J0JBC0000015	INDUCTOR	[M]
L2552	G0C220JA0055	INDUCTOR	[M]
L2600	G0C3R3JA0027	INDUCTOR	[M]
L2900	G0C220JA0055	INDUCTOR	[M]
L2901	G0A220GA0026	CHOKE COIL	[M]
L2909	J0JBC0000019	INDUCTOR	[M]
L2910	G0A220GA0026	CHOKE COIL	[M]
L2913	G0A100G00005	CHOKE COIL	[M]
L4000	G0A200D00002	CHOKE COIL	[M]
L4001	G0A101ZA0028	CHOKE COIL	[M]
L4002	G0A200D00002	CHOKE COIL	[M]
L4003	G0A200D00002	CHOKE COIL	[M]
L4004	G0A200D00002	CHOKE COIL	[M]
L4005	G0A200D00002	CHOKE COIL	[M]
L4006	G0A101ZA0028	CHOKE COIL	[M]
L4007	G0A220GA0026	CHOKE COIL	[M]
L4008	G0A200D00002	CHOKE COIL	[M]
L4009	G0A200D00002	CHOKE COIL	[M]
L4010	G0A200D00002	CHOKE COIL	[M]
L5000	G0A150L00003	CHOKE COIL	[M]
L5001	G0B9R5K00003	LINE FILTER	[M]
L5002	G0B9R5K00004	LINE FILTER	[M]
L5701	ELF15N035AN	LINE FILTER	[M] ⚠
L5702	ELF22V035B	LINE FILTER	[M] ⚠
L5703	ELF22V020A	LINE FILTER	[M] ⚠
L6000	J0JBC0000019	INDUCTOR	[M]
L6002	J0JBC0000019	INDUCTOR	[M]
L6003	J0JBC0000019	INDUCTOR	[M]
L6671	J0JBC0000019	INDUCTOR	[M]
L6801	J0JBC0000019	INDUCTOR	[M]
L6802	J0JBC0000019	INDUCTOR	[M]
L6811	J0JBC0000019	INDUCTOR	[M]
L6812	J0JBC0000019	INDUCTOR	[M]
L6851	J0JBC0000019	INDUCTOR	[M]
L6863	J0JBC0000019	INDUCTOR	[M]
L8201	G1C100M00049	INDUCTOR	[M]
L8301	G1C100M00049	INDUCTOR	[M]
L8302	G1C100M00049	INDUCTOR	[M]
L8303	G1C100M00049	INDUCTOR	[M]
L8330	G1C100M00049	INDUCTOR	[M]
L8501	G1C100M00049	INDUCTOR	[M]
L8550	G1C100M00049	INDUCTOR	[M]
L9004	G1BYYYC00026	COMMON MODE EMI FILTER	[M]
LB8001	J0JHC0000045	INDUCTOR	[M]
LB8011	J0JHC0000045	INDUCTOR	[M]
LB8401	J0JCC0000308	INDUCTOR	[M]
LB8530	J0JHC0000045	INDUCTOR	[M]
LB8532	J0JDC0000045	INDUCTOR	[M]
LB8551	J0JDC0000045	INDUCTOR	[M]
LB8561	J0JDC0000045	INDUCTOR	[M]
LB8571	J0JDC0000045	INDUCTOR	[M]
LB9001	J0JCC0000042	INDUCTOR	[M]
LB9001	J0JHC0000034	INDUCTOR	[M]
LB9002	J0JHC0000034	INDUCTOR	[M]
		TRANSFORMERS	
T2900	G4D1A0000117	SWITCHING TRANSFORMER	[M] ⚠
T5701	ETS42BN1A6AD	MAIN POWER TRANSFORMER	[M] ⚠
T5751	ETS19AB256AG	BACKUP SW TRANSFORMER	[M] ⚠
		COMPOMENT COMBINATION	
TN2802	ENG07825QRF	TUNER PACK	[M]
Z971	RGSD12A1445T	RADA	[M]
Z2000	K9ZZ00001279	EARTH PLATE	[M]
Z6601	B3RAB0000025	REMOTE SENSOR	[M]
ZJ5400	K4CZ01000027	TERMINAL	[M]
ZJ5410	K4CZ01000027	TERMINAL	[M]
ZJ5701	K4CZ01000027	TERMINAL	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
ZJ5702	K4CZ01000027	TERMINAL	[M]
ZJ5801	K4CZ01000027	TERMINAL	[M]
ZJ5803	K4CZ01000027	TERMINAL	[M]
ZA5701	K3GE1ZZ00001	FUSE HOLDER	[M]
ZA5702	K3GE1ZZ00001	FUSE HOLDER	[M]
		PHOTO COUPLERS	
PC5701	B3PBA0000402	PHOTO COUPLER	[M] ⚠
PC5702	B3PBA0000402	PHOTO COUPLER	[M] ⚠
PC5720	B3PBA0000402	PHOTO COUPLER	[M] ⚠
PC5799	B3PBA0000402	PHOTO COUPLER	[M] ⚠
		WIRE	
CN2701	REXX0680	11P WIRE (MAIN-SMPS)	[M]
J6001	JWJ1103055SS	3P WIRE (PANEL-REMOTE SENSOR)	[M]
WR1903	RWJ0102050KR	2P WIRE	[M]
ZJ6601	REXX0679	7P WIRE (PANEL-MIC)	[M]
ZJ6801	REXX0681	3P WIRE (PANEL-REMOTE)	[M]
		OSCILLATORS	
X2801	H0A327200115	CRYSTAL OSCILLATOR	[M]
X2802	H2B100500004	CRYSTAL OSCILLATOR	[M]
X5500	H2A6023A0011	CRYSTAL OSCILLATOR	[M]
X5501	H2A7003A0011	CRYSTAL OSCILLATOR	[M]
X8621	H0J270500085	CRYSTAL OSCILLATOR	[M]
X9004	H1A4805B0027	CRYSTAL OSCILLATOR	[M]
		FL DISPLAY	
FL6601	A2BB00000171	LCD DISPLAY	[M]
		FUSE	
F1	K5D502BNA005	FUSE	[M] ⚠
		FUSE PROTECTOR	
FP2901	K5G401A00008	FUSE PROTECTOR	[M] ⚠
		THERMISTORS	
TH5701	D4CAC8R00002	THERMISTOR	[M] ⚠
TH5860	D4CC11040013	THERMISTOR	[M] ⚠
		JACKS	
JK2001	K2HA4YYB0002	JK COMPONENT VIDEO OUT	[M]
JK2801	K2HA1YYB0004	JK DIGITAL OUT (COAXIAL)	[M]
JK2802	K2HA204B0153	JK AUX IN	[M]
JK5001	K4AL04B00001	JK SPEAKER	[M]
JK6001	K2HB102J0038	JK MIC	[M]
JK6800	K2HC103A0031	JK HEADPHONE	[M]
JK6810	K2HC1YYA0002	JK MUSIC PORT	[M]
P5701	K2AA2B000017	AC INLET	[M] ⚠
		CHIP JUMPERS	
K2	ERJ3GEY0R00V	0 1/10W	[M]
K8	ERJ3GEY0R00V	0 1/10W	[M]
K5251	ERJ3GEY0R00V	0 1/10W	[M]
K5253	ERJ3GEY0R00V	0 1/10W	[M]
K5255	ERJ3GEY0R00V	0 1/10W	[M]
K5302	ERJ3GEY0R00V	0 1/10W	[M]
K8005	D0GBR00JA008	0 1/16W	[M]
K8010	D0GBR00JA008	0 1/16W	[M]
K8100	D0GBR00JA008	0 1/16W	[M]
K8251	D0GBR00JA008	0 1/16W	[M]
K8571	D0GBR00JA008	0 1/16W	[M]
L2905	D0GBR00JA008	0 1/16W	[M]
L6864	D0GBR00JA008	0 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
LB8257	D0GBR00JA008	0 1/16W	[M]
LB8258	D0GBR00JA008	0 1/16W	[M]
LB8259	D0GBR00JA008	0 1/16W	[M]
LB8260	D0GBR00JA008	0 1/16W	[M]
LB8301	ERJ2GE0R00X	0 1/16W	[M]
LB8302	ERJ2GE0R00X	0 1/16W	[M]
LB8303	ERJ2GE0R00X	0 1/16W	[M]
LB8304	ERJ2GE0R00X	0 1/16W	[M]
LB8305	ERJ2GE0R00X	0 1/16W	[M]
LB8421	ERJ2GE0R00X	0 1/16W	[M]
LB8422	ERJ2GE0R00X	0 1/16W	[M]
LB8424	ERJ2GE0R00X	0 1/16W	[M]
LB8432	ERJ2GE0R00X	0 1/16W	[M]
LB8491	ERJ2GE0R00X	0 1/16W	[M]
LB8531	ERJ2GE0R00X	0 1/16W	[M]
LB8690	ERJ2GE0R00X	0 1/16W	[M]
LB9002	D0GBR00JA008	0 1/16W	[M]
LB9003	D0GBR00JA008	0 1/16W	[M]
W2500	ERJ6GEY0R00V	0 1/8W	[M]
W2501	ERJ6GEY0R00V	0 1/8W	[M]
W2502	ERJ6GEY0R00V	0 1/8W	[M]
W2503	ERJ6GEY0R00V	0 1/8W	[M]
W2504	D0GBR00JA008	0 1/16W	[M]
W2505	D0GBR00JA008	0 1/16W	[M]
W2506	D0GBR00JA008	0 1/16W	[M]
W2507	D0GBR00JA008	0 1/16W	[M]
W2508	ERJ6GEY0R00V	0 1/8W	[M]
W2509	D0GBR00JA008	0 1/16W	[M]
W2510	ERJ6GEY0R00V	0 1/8W	[M]
W2511	D0GBR00JA008	0 1/16W	[M]
W2512	D0GBR00JA008	0 1/16W	[M]
W2519	D0GBR00JA008	0 1/16W	[M]
W2520	D0GBR00JA008	0 1/16W	[M]
W2521	ERJ6GEY0R00V	0 1/8W	[M]
W2522	D0GBR00JA008	0 1/16W	[M]
W2523	ERJ6GEY0R00V	0 1/8W	[M]
W2524	D0GBR00JA008	0 1/16W	[M]
W2525	D0GBR00JA008	0 1/16W	[M]
W2526	ERJ6GEY0R00V	0 1/8W	[M]
W2527	D0GBR00JA008	0 1/16W	[M]
W2528	ERJ6GEY0R00V	0 1/8W	[M]
W2530	ERJ6GEY0R00V	0 1/8W	[M]
W2531	D0GBR00JA008	0 1/16W	[M]
W2532	D0GBR00JA008	0 1/16W	[M]
W2533	ERJ6GEY0R00V	0 1/8W	[M]
W2534	ERJ6GEY0R00V	0 1/8W	[M]
W2535	D0GBR00JA008	0 1/16W	[M]
W2536	ERJ6GEY0R00V	0 1/8W	[M]
W2537	ERJ6GEY0R00V	0 1/8W	[M]
W2538	ERJ6GEY0R00V	0 1/8W	[M]
W2539	ERJ6GEY0R00V	0 1/8W	[M]
W2540	D0GBR00JA008	0 1/16W	[M]
W2541	ERJ6GEY0R00V	0 1/8W	[M]
W2542	ERJ6GEY0R00V	0 1/8W	[M]
W2543	D0GBR00JA008	0 1/16W	[M]
W2544	ERJ6GEY0R00V	0 1/8W	[M]
W2547	D0GBR00JA008	0 1/16W	[M]
W2548	D0GBR00JA008	0 1/16W	[M]
W5007	ERJ6GEY0R00V	0 1/8W	[M]
W5032	ERJ8GEY0R00V	0 1/4W	[M]
W5059	ERJ6GEY0R00V	0 1/8W	[M]
W5071	ERJ3GEY0R00V	0 1/10W	[M]
W5780	ERJ6GEY0R00V	0 1/8W	[M]
W5801	ERJ3GEY0R00V	0 1/10W	[M]
W5803	ERJ6GEY0R00V	0 1/8W	[M]
W5804	ERJ3GEY0R00V	0 1/10W	[M]
W5805	ERJ6GEY0R00V	0 1/8W	[M]
W5806	ERJ6GEY0R00V	0 1/8W	[M]
W5807	ERJ6GEY0R00V	0 1/8W	[M]
W6541	ERJ6GEY0R00V	0 1/8W	[M]
W6570	D0GBR00JA008	0 1/16W	[M]
		RESISTORS	

Ref. No.	Part No.	Part Name & Description	Remarks
LB8691	D0GA101JA023	100 1/16W	[M]
LB8692	D0GA101JA023	100 1/16W	[M]
LB8693	D0GA101JA023	100 1/16W	[M]
R972	D0AE821JA178	820 1/4W	[M]
R973	D0AE393JA178	39K 1/4W	[M]
R1061	D0GBR00JA008	0 1/16W	[M]
R1062	D0GBR00JA008	0 1/16W	[M]
R1063	D0GBR00JA008	0 1/16W	[M]
R1064	D0GBR00JA008	0 1/16W	[M]
R1101	D0GB330JA007	33 1/10W	[M]
R1102	D0GB152JA007	1.5K 1/10W	[M]
R1103	D0GB183JA007	18K 1/10W	[M]
R1104	ERJ3GEYJ103V	10K 1/10W	[M]
R1105	D0GB222JA007	2.2K 1/10W	[M]
R1106	D0GB104JA007	100K 1/10W	[M]
R1107	ERJ3GEYJ102V	1K 1/10W	[M]
R1109	ERJ3GEYJ102V	1K 1/10W	[M]
R1110	D0GB333JA007	33K 1/10W	[M]
R1201	D0GB330JA007	33 1/10W	[M]
R1202	D0GB152JA007	1.5K 1/10W	[M]
R1203	D0GB183JA007	18K 1/10W	[M]
R1204	ERJ3GEYJ103V	10K 1/10W	[M]
R1205	D0GB222JA007	2.2K 1/10W	[M]
R1206	D0GB104JA007	100K 1/10W	[M]
R1207	ERJ3GEYJ102V	1K 1/10W	[M]
R1209	ERJ3GEYJ102V	1K 1/10W	[M]
R1210	D0GB333JA007	33K 1/10W	[M]
R1302	D0GB471JA007	470 1/10W	[M]
R1303	D0GB475JA007	4.7M 1/10W	[M]
R1304	D0GB223JA007	22K 1/10W	[M]
R1305	ERJ3GEYJ103V	10K 1/10W	[M]
R1309	D0AF471JA039	470 1/2W	[M]
R1313	ERJ3GEYJ103V	10K 1/10W	[M]
R1314	ERJ3GEYJ102V	1K 1/10W	[M]
R1318	ERJ3GEYJ103V	10K 1/10W	[M]
R1319	D0GB123JA007	12K 1/10W	[M]
R1320	D0GB104JA007	100K 1/10W	[M]
R1321	D0GB470JA008	47 1/16W	[M]
R1322	D0GB823JA007	82K 1/10W	[M]
R1327	D0GB472JA007	4.7K 1/10W	[M]
R1328	D0GB153JA007	15K 1/10W	[M]
R1329	D0GB472JA007	4.7K 1/10W	[M]
R1330	ERD2FCVJ4R7T	4.7 1/4W	[M]
R1331	D0GB752JA007	7.5K 1/10W	[M]
R1332	ERJ3GEYJ103V	10K 1/10W	[M]
R1333	ERD2FCVJ4R7T	4.7 1/4W	[M]
R1334	D0GB223JA007	22K 1/10W	[M]
R1335	D0GB152JA007	1.5K 1/10W	[M]
R1337	ERJ3GEYJ103V	10K 1/10W	[M]
R1338	D0GB472JA007	4.7K 1/10W	[M]
R1341	D0GB471JA007	470 1/10W	[M]
R1342	D0GB473JA007	47K 1/10W	[M]
R1343	D0GB332JA007	3.3K 1/10W	[M]
R1344	D0GB273JA007	27K 1/10W	[M]
R1345	ERJ3GEYJ102V	1K 1/10W	[M]
R1371	D0GB223JA007	22K 1/10W	[M]
R1374	D0GB471JA007	470 1/10W	[M]
R1380	D0GBR00JA008	0 1/16W	[M]
R2001	D0GB102JA007	1K 1/10W	[M]
R2007	D0GBR00JA008	0 1/16W	[M]
R2046	D0GB222JA007	2.2K 1/10W	[M]
R2047	D0GB222JA007	2.2K 1/10W	[M]
R2048	D0GB203JA007	20K 1/10W	[M]
R2051	D0GB102JA007	1K 1/10W	[M]
R2052	D0GB103JA007	10K 1/10W	[M]
R2053	D0GB563JA007	56K 1/10W	[M]
R2054	D0GB273JA007	27K 1/10W	[M]
R2055	D0GB152JA007	1.5K 1/10W	[M]
R2056	D0GB152JA007	1.5K 1/10W	[M]
R2057	D0GBR00JA008	0 1/16W	[M]
R2058	D0GBR00JA008	0 1/16W	[M]
R2068	D0GB153JA007	15K 1/10W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R2073	D0GB104JA007	100K 1/10W	[M]
R2074	D0GB473JA007	47K 1/10W	[M]
R2075	D0GB473JA007	47K 1/10W	[M]
R2076	D0GB222JA007	2.2K 1/10W	[M]
R2078	D0GBR00JA008	0 1/16W	[M]
R2086	ERJ3GEYJ392V	3.9K 1/10W	[M]
R2087	ERJ3GEYJ334V	330K 1/10W	[M]
R2101	D0GB102JA007	1K 1/10W	[M]
R2102	D0GB332JA007	3.3K 1/10W	[M]
R2104	D0GB103JA007	10K 1/10W	[M]
R2105	D0GB103JA007	10K 1/10W	[M]
R2106	D0GB101JA007	100 1/10W	[M]
R2107	D0GB222JA007	2.2K 1/10W	[M]
R2109	D0GBR00JA008	0 1/16W	[M]
R2111	D0GB122JA007	1.2K 1/10W	[M]
R2112	D0GB332JA007	3.3K 1/10W	[M]
R2113	D0GB182JA007	1.8K 1/10W	[M]
R2114	D0GB392JA007	3.9K 1/10W	[M]
R2116	D0GB183JA007	18K 1/10W	[M]
R2117	D0GB153JA007	15K 1/10W	[M]
R2141	D0GB272JA007	2.7K 1/10W	[M]
R2142	D0GB152JA007	1.5K 1/10W	[M]
R2143	D0GB104JA007	100K 1/10W	[M]
R2145	D0GB182JA007	1.8K 1/10W	[M]
R2146	D0GB562JA007	5.6K 1/10W	[M]
R2149	D0GB222JA007	2.2K 1/10W	[M]
R2152	ERJ3GEYJ681V	680 1/10W	[M]
R2153	D0GB152JA007	1.5K 1/10W	[M]
R2154	D0GB104JA007	100K 1/10W	[M]
R2163	D0GB223JA007	22K 1/10W	[M]
R2166	ERJ3GEYJ100V	10 1/10W	[M]
R2167	ERJ3GEYJ100V	10 1/10W	[M]
R2168	ERJ3GEYJ100V	10 1/10W	[M]
R2169	ERJ3GEYJ100V	10 1/10W	[M]
R2170	D0GBR00JA008	0 1/16W	[M]
R2171	D0GB332JA007	3.3K 1/10W	[M]
R2172	D0GB561JA007	560 1/10W	[M]
R2173	D0GB472JA007	4.7K 1/10W	[M]
R2174	D0GB103JA007	10K 1/10W	[M]
R2181	D0GB471JA007	470 1/10W	[M]
R2182	D0GBR00JA008	0 1/16W	[M]
R2183	D0GB332JA007	3.3K 1/10W	[M]
R2191	D0GBR00JA008	0 1/16W	[M]
R2192	D0GB272JA007	2.7K 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]
R2197	D0GB562JA007	5.6K 1/10W	[M]
R2199	D0GB103JA007	10K 1/10W	[M]
R2201	D0GB102JA007	1K 1/10W	[M]
R2202	D0GB332JA007	3.3K 1/10W	[M]
R2203	D0GB182JA007	1.8K 1/10W	[M]
R2204	D0GB103JA007	10K 1/10W	[M]
R2205	D0GB103JA007	10K 1/10W	[M]
R2206	D0GB101JA007	100 1/10W	[M]
R2207	D0GB222JA007	2.2K 1/10W	[M]
R2208	D0GB392JA007	3.9K 1/10W	[M]
R2209	D0GBR00JA008	0 1/16W	[M]
R2211	D0GB122JA007	1.2K 1/10W	[M]
R2212	D0GB332JA007	3.3K 1/10W	[M]
R2216	D0GB183JA007	18K 1/10W	[M]
R2217	D0GB153JA007	15K 1/10W	[M]
R2241	D0GB272JA007	2.7K 1/10W	[M]
R2242	D0GB152JA007	1.5K 1/10W	[M]
R2243	D0GB104JA007	100K 1/10W	[M]
R2245	D0GB182JA007	1.8K 1/10W	[M]
R2246	D0GB562JA007	5.6K 1/10W	[M]
R2247	D0GB104JA007	100K 1/10W	[M]
R2248	ERJ3GEYJ682V	6.8K 1/10W	[M]
R2249	D0GB222JA007	2.2K 1/10W	[M]
R2252	ERJ3GEYJ681V	680 1/10W	[M]
R2253	D0GB152JA007	1.5K 1/10W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R2254	D0GB104JA007	100K 1/10W	[M]
R2262	D0GB102JA007	1K 1/10W	[M]
R2266	ERJ3GEYJ100V	10 1/10W	[M]
R2267	ERJ3GEYJ100V	10 1/10W	[M]
R2268	ERJ3GEYJ100V	10 1/10W	[M]
R2269	ERJ3GEYJ100V	10 1/10W	[M]
R2270	D0GBR00JA008	0 1/16W	[M]
R2271	D0GB332JA007	3.3K 1/10W	[M]
R2272	D0GB561JA007	560 1/10W	[M]
R2273	D0GB472JA007	4.7K 1/10W	[M]
R2274	D0GB103JA007	10K 1/10W	[M]
R2281	D0GB471JA007	470 1/10W	[M]
R2282	ERJ3GEY0R00V	0 1/10W	[M]
R2283	D0GB104JA007	100K 1/10W	[M]
R2291	D0GBR00JA008	0 1/16W	[M]
R2292	D0GB272JA007	2.7K 1/10W	[M]
R2297	D0GB562JA007	5.6K 1/10W	[M]
R2299	D0GB103JA007	10K 1/10W	[M]
R2302	ERJ3GEYJ332V	3.3K 1/10W	[M]
R2303	D0GB223JA007	22K 1/10W	[M]
R2304	D0GBR00JA008	0 1/16W	[M]
R2312	D0GB102JA007	1K 1/10W	[M]
R2331	D0GBR00JA008	0 1/16W	[M]
R2332	D0GB393JA007	39K 1/10W	[M]
R2333	D0GBR00JA008	0 1/16W	[M]
R2335	D0GB102JA007	1K 1/10W	[M]
R2337	D0GB474JA041	470K 1/10W	[M]
R2338	D0GB102JA007	1K 1/10W	[M]
R2339	D0GB102JA007	1K 1/10W	[M]
R2402	ERJ3GEYJ332V	3.3K 1/10W	[M]
R2403	D0GB223JA007	22K 1/10W	[M]
R2404	D0GBR00JA008	0 1/16W	[M]
R2412	D0GB102JA007	1K 1/10W	[M]
R2422	D0GBR00JA008	0 1/16W	[M]
R2439	D0GB102JA007	1K 1/10W	[M]
R2501	D0GB222JA007	2.2K 1/10W	[M]
R2502	D0GB563JA007	56K 1/10W	[M]
R2503	D0GB273JA007	27K 1/10W	[M]
R2532	D0GBR00JA008	0 1/16W	[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]
R2591	D0GB334JA007	330K 1/10W	[M]
R2620	D0GB223JA007	22K 1/10W	[M]
R2700	D0GB182JA007	1.8K 1/10W	[M]
R2701	D0GB182JA007	1.8K 1/10W	[M]
R2702	D0GB182JA007	1.8K 1/10W	[M]
R2703	D0GB182JA007	1.8K 1/10W	[M]
R2801	D0GB103JA007	10K 1/10W	[M]
R2802	D0GB101JA007	100 1/10W	[M]
R2803	D0GB103JA007	10K 1/10W	[M]
R2804	D0GB473JA007	47K 1/10W	[M]
R2805	D0GB473JA007	47K 1/10W	[M]
R2806	D0GB103JA007	10K 1/10W	[M]
R2807	D0GB103JA007	10K 1/10W	[M]
R2808	D0GB221JA041	220 1/10W	[M]
R2809	D0GB221JA041	220 1/10W	[M]
R2812	ERJ3GEYJ101V	100 1/10W	[M]
R2813	ERJ3GEYJ100V	10 1/10W	[M]
R2817	D0GB104JA007	100K 1/10W	[M]
R2819	D0GB104JA007	100K 1/10W	[M]
R2820	D0GB101JA007	100 1/10W	[M]
R2821	D0GB101JA007	100 1/10W	[M]
R2827	D0GB104JA007	100K 1/10W	[M]
R2834	D0GB102JA007	1K 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	D0GBR00JA008	0 1/16W	[M]
R2841	D0GB103JA007	10K 1/10W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R2842	D0GB103JA007	10K 1/10W	[M]
R2843	D0GB473JA007	47K 1/10W	[M]
R2844	ERJ3GEYJ101V	100 1/10W	[M]
R2846	D0GB472JA007	4.7K 1/10W	[M]
R2847	D0GB222JA007	2.2K 1/10W	[M]
R2850	D0GB101JA007	100 1/10W	[M]
R2851	D0GB101JA007	100 1/10W	[M]
R2852	D0GB101JA007	100 1/10W	[M]
R2854	D0GB473JA007	47K 1/10W	[M]
R2855	D0GB473JA007	47K 1/10W	[M]
R2858	D0GB101JA007	100 1/10W	[M]
R2859	D0GB101JA007	100 1/10W	[M]
R2860	D0GB101JA007	100 1/10W	[M]
R2861	D0GB101JA007	100 1/10W	[M]
R2862	D0GB101JA007	100 1/10W	[M]
R2863	D0GB101JA007	100 1/10W	[M]
R2864	D0GB473JA007	47K 1/10W	[M]
R2865	D0GB473JA007	47K 1/10W	[M]
R2866	D0GB473JA007	47K 1/10W	[M]
R2867	D0GB101JA007	100 1/10W	[M]
R2869	D0GB473JA007	47K 1/10W	[M]
R2870	D0GB473JA007	47K 1/10W	[M]
R2871	D0GB473JA007	47K 1/10W	[M]
R2872	D0GB473JA007	47K 1/10W	[M]
R2873	D0GB473JA007	47K 1/10W	[M]
R2874	D0GB153JA007	15K 1/10W	[M]
R2875	D0GB103JA007	10K 1/10W	[M]
R2876	D0GB223JA007	22K 1/10W	[M]
R2877	D0GB223JA007	22K 1/10W	[M]
R2878	D0GB472JA007	4.7K 1/10W	[M]
R2879	D0GB473JA007	47K 1/10W	[M]
R2880	D0GB473JA007	47K 1/10W	[M]
R2881	D0GB221JA041	220 1/10W	[M]
R2882	D0GB106JA008	10M 1/16W	[M]
R2883	D0GB334JA007	330K 1/10W	[M]
R2884	D0GB101JA007	100 1/10W	[M]
R2886	D0GB105JA007	1M 1/10W	[M]
R2887	D0GB102JA007	1K 1/10W	[M]
R2888	D0GB102JA007	1K 1/10W	[M]
R2889	D0GB102JA007	1K 1/10W	[M]
R2890	D0GBR00JA008	0 1/16W	[M]
R2891	D0GB473JA007	47K 1/10W	[M]
R2894	D0GB102JA007	1K 1/10W	[M]
R2895	D0GB101JA007	100 1/10W	[M]
R2902	D0GB102JA007	1K 1/10W	[M]
R2903	ERJ3GEYJ750V	75 1/10W	[M]
R2904	ERJ3GEYJ750V	75 1/10W	[M]
R2905	ERJ3GEYJ750V	75 1/10W	[M]
R2906	ERJ3GEYJ750V	75 1/10W	[M]
R2913	D0GB103JA007	10K 1/10W	[M]
R2930	ERJ3GEYJ472V	4.7K 1/10W	[M]
R2934	D0GBR00JA008	0 1/16W	[M]
R2935	D0GBR00JA008	0 1/16W	[M]
R2936	D0GBR00JA008	0 1/16W	[M]
R2937	D0GBR00JA008	0 1/16W	[M]
R2938	D0GBR00JA008	0 1/16W	[M]
R2939	D0GBR00JA008	0 1/16W	[M]
R2942	D0GBR00JA008	0 1/16W	[M]
R2944	D0GB472JA007	4.7K 1/10W	[M]
R2946	D0GB563JA007	56K 1/10W	[M]
R2949	D0GB473JA007	47K 1/10W	[M]
R2952	D0GB473JA007	47K 1/10W	[M]
R2953	ERJ3GEYJ824V	820K 1/10W	[M]
R2954	D0GB103JA007	10K 1/10W	[M]
R2970	D0GB103JA007	10K 1/10W	[M]
R2971	ERJ3GEYJ750V	75 1/10W	[M]
R2972	D0GB221JA041	220 1/10W	[M]
R2973	D0GB122JA007	1.2K 1/10W	[M]
R2974	D0GB102JA007	1K 1/10W	[M]
R2975	D0GB102JA007	1K 1/10W	[M]
R2976	D0GBR00JA008	0 1/16W	[M]
R2978	D0GB182JA007	1.8K 1/10W	[M]
R2987	D0GBR00JA008	0 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R3801	D0GB102JA007	1K 1/10W	[M]
R3802	D0GB471JA041	470 1/10W	[M]
R3803	ERJ3GEYJ332V	3.3K 1/10W	[M]
R3804	D0GB471JA041	470 1/10W	[M]
R3805	ERJ3GEYJ332V	3.3K 1/10W	[M]
R3807	D0GBR00JA008	0 1/16W	[M]
R3812	D0GBR00JA008	0 1/16W	[M]
R3813	D0GB103JA007	10K 1/10W	[M]
R3814	D0GB103JA007	10K 1/10W	[M]
R3821	D0GB102JA007	1K 1/10W	[M]
R3827	D0GBR00JA008	0 1/16W	[M]
R4000	D0GB103JA007	10K 1/10W	[M]
R4001	D0GB152JA007	1.5K 1/10W	[M]
R4002	ERJ3GEYJ272V	2.7K 1/10W	[M]
R4003	D0GB102JA007	1K 1/10W	[M]
R4004	ERX2SJ1R5E	1.5 2W	[M]
R4005	D0GB181JA007	180 1/10W	[M]
R4006	ERX2SJ1R5E	1.5 2W	[M]
R4007	D0GB330JA007	33 1/10W	[M]
R4008	D0GB472JA041	4.7K 1/10W	[M]
R4009	D0GB102JA007	1K 1/10W	[M]
R4011	D0GB102JA007	1K 1/10W	[M]
R4012	D0GB151JA007	150 1/10W	[M]
R4013	D0GB471JA041	470 1/10W	[M]
R4014	ERJ3GEYF392V	3.9K 1/10W	[M]
R4015	ERJ3GEYF682V	6.8K 1/10W	[M]
R4016	ERJ3GEYF102V	1K 1/10W	[M]
R4017	D0GB393JA007	39K 1/10W	[M]
R4018	D0GB153JA007	15K 1/10W	[M]
R4021	D0GB473JA008	47K 1/16W	[M]
R4022	D0GB470JA008	47 1/16W	[M]
R4023	D0GB562JA008	5.6K 1/16W	[M]
R4024	D0GB102JA007	1K 1/10W	[M]
R4025	ERJ3GEYJ224V	220K 1/10W	[M]
R4026	D0GB103JA007	10K 1/10W	[M]
R4027	ERJ3GEYJ681V	680 1/10W	[M]
R4028	D0GB473JA041	47K 1/10W	[M]
R4029	D0GB181JA007	180 1/10W	[M]
R4031	D0GB102JA007	1K 1/10W	[M]
R4032	ERG2SJ220E	22 2W	[M]
R4033	ERG2SJ220E	22 2W	[M]
R5000	ERJ3GEYJ562V	5.6K 1/10W	[M]
R5001	ERJ3GEYJ562V	5.6K 1/10W	[M]
R5002	ERJ3GEYJ562V	5.6K 1/10W	[M]
R5003	ERJ3GEYJ562V	5.6K 1/10W	[M]
R5004	D0GF100JA014	10 1/8W	[M]
R5005	D0GF100JA014	10 1/8W	[M]
R5006	D0GZ220JA012	22 1W	[M]
R5007	D0GZ220JA012	22 1W	[M]
R5008	ERJ3GEYJ101V	100 1/10W	[M]
R5010	D0GF100JA014	10 1/8W	[M]
R5011	D0GF100JA014	10 1/8W	[M]
R5019	ERJ3GEYJ683V	68K 1/10W	[M]
R5020	ERJ3GEYJ683V	68K 1/10W	[M]
R5023	ERJ3GEYJ122V	1.2K 1/10W	[M]
R5030	ERJ3GEYJ562V	5.6K 1/10W	[M]
R5031	ERJ3GEYJ562V	5.6K 1/10W	[M]
R5110	ERJ3GEYJ682V	6.8K 1/10W	[M]
R5504	ERJ3GEYJ220V	22 1/10W	[M]
R5505	ERJ3GEYJ101V	100 1/10W	[M]
R5506	ERJ3GEYJ105V	1M 1/10W	[M]
R5507	ERJ3GEYJ105V	1M 1/10W	[M]
R5508	ERJ3GEYJ105V	1M 1/10W	[M]
R5510	ERG2SJ471E	470 2W	[M]
R5511	ERJ3GEYJ220V	22 1/10W	[M]
R5602	ERJ3GEYJ103V	10K 1/10W	[M]
R5603	ERJ3GEYJ103V	10K 1/10W	[M]
R5604	ERJ3GEYJ122V	1.2K 1/10W	[M]
R5608	ERJ3GEYJ103V	10K 1/10W	[M]
R5609	ERJ3GEYJ103V	10K 1/10W	[M]
R5611	ERJ3GEYJ122V	1.2K 1/10W	[M]
R5671	ERJ3GEY0R00V	0 1/10W	[M]
R5701	ERDS1TJ475B	4.7M 1W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R5702	ERJ1TYJ104U	100K 1W	[M]
R5703	ERJ1TYJ104U	100K 1W	[M]
R5704	ERJ8GEYJ394V	390K 1/4W	[M]
R5705	ERJ8GEYJ394V	390K 1/4W	[M]
R5720	ERJ6GEYJ220V	22 1/8W	[M]
R5721	ERJ6GEYJ103V	10K 1/8W	[M]
R5722	ERJ6GEYJ102V	1K 1/8W	[M]
R5723	ERJ3GEYJ102V	1K 1/10W	[M]
R5724	ERJ6GEYJ121V	120 1/8W	[M]
R5725	ERJ3GEY0R00V	0 1/10W	[M]
R5726	ERX2LJ82MP	82m 2W	[M]
R5728	ERJ3GEYJ104V	100K 1/10W	[M]
R5729	ERJ6GEYJ103V	10K 1/8W	[M]
R5730	ERJ3GEYJ102V	1K 1/10W	[M]
R5731	ERJ3GEY0R00V	0 1/10W	[M]
R5732	ERJ3GEYJ101V	100 1/10W	[M]
R5733	ERJ3GEYJ473V	47K 1/10W	[M]
R5750	ERJ3GEY0R00V	0 1/10W	[M]
R5786	ERJ1TYJ204U	200K 1W	[M]
R5787	ERJ3GEYJ753V	75K 1/10W	[M]
R5795	ERJ6GEYJ433V	43K 1/8W	[M]
R5796	ERDS1FVJ222T	2.2K 1/2W	[M]
R5797	ERJ6GEYJ472V	4.7K 1/8W	[M]
R5798	ERJ6GEYJ100V	10 1/8W	[M]
R5800	ERJ6GEYJ123V	12K 1/8W	[M]
R5801	ERJ6GEYJ103V	10K 1/8W	[M]
R5802	ERJ3RBD272V	2.7K 1/16W	[M]
R5803	ERJ6GEY0R00V	0 1/8W	[M]
R5804	ERJ6RBD473V	47K 1/10W	[M]
R5805	ERJ3RBD222V	2.2K 1/16W	[M]
R5806	ERJ3GEYJ153V	15K 1/10W	[M]
R5807	ERJ6GEYJ331V	330 1/8W	[M]
R5808	ERJ6GEYJ222V	2.2K 1/8W	[M]
R5809	ERJ6GEYJ331V	330 1/8W	[M]
R5810	ERJ3GEYJ331V	330 1/10W	[M]
R5811	ERJ8GEYJ152V	1.5K 1/4W	[M]
R5812	ERJ3RBD822V	8.2K 1/16W	[M]
R5813	ERJ3RBD243V	24K 1/16W	[M]
R5814	ERJ3GEYJ822V	8.2K 1/10W	[M]
R5815	ERJ3GEYJ272V	2.7K 1/10W	[M]
R5816	ERJ8GEYJ152V	1.5K 1/4W	[M]
R5817	ERJ3GEYJ331V	330 1/10W	[M]
R5820	ERG2SJ910E	91 2W	[M]
R5821	ERG2SJ910E	91 2W	[M]
R5822	ERG2SJ910E	91 2W	[M]
R5823	ERG2SJ910E	91 2W	[M]
R5824	ERG2SJ910E	91 2W	[M]
R5825	ERJ3GEYJ102V	1K 1/10W	[M]
R5832	ERJ1TYJ222U	2.2K 1W	[M]
R5834	ERJ1TYJ222U	2.2K 1W	[M]
R5840	ERJ3GEYJ823V	82K 1/10W	[M]
R5841	ERJ3GEYJ124V	120K 1/10W	[M]
R5860	ERJ3GEYF103V	1K 1/10W	[M]
R5861	ERJ3GEYF302V	3K 1/10W	[M]
R5862	ERJ6GEYJ103V	10K 1/8W	[M]
R5863	ERJ6GEYJ103V	10K 1/8W	[M]
R5864	ERJ6GEYF103V	10K 1/8W	[M]
R5890	ERJ3GEYJ222V	2.2K 1/10W	[M]
R5891	ERJ3RBD333V	33K 1/16W	[M]
R5892	ERJ3RBD472V	4.7K 1/16W	[M]
R5893	ERJ3RBD393V	39K 1/16W	[M]
R5894	ERJ3GEYJ102V	1K 1/10W	[M]
R5895	ERJ3GEYJ101V	100 1/10W	[M]
R5896	ERJ3GEYJ104V	100K 1/10W	[M]
R5897	ERJ3GEYJ101V	100 1/10W	[M]
R6004	ERJ3GEYJ681V	680 1/10W	[M]
R6005	ERJ3GEYJ681V	680 1/10W	[M]
R6006	D0GB561JA007	560 1/10W	[M]
R6007	D0GB101JA007	100 1/10W	[M]
R6008	D0GB393JA007	39K 1/10W	[M]
R6009	D0GB101JA007	100 1/10W	[M]
R6010	D0GB103JA007	10K 1/10W	[M]
R6011	D0GB103JA007	10K 1/10W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R6012	D0GBR00JA008	0 1/16W	[M]
R6013	D0GBR00JA008	0 1/16W	[M]
R6014	D0GB101JA007	100 1/10W	[M]
R6100	D0GB103JA008	10K 1/16W	[M]
R6101	D0GB102JA008	1K 1/16W	[M]
R6102	D0GBR00JA008	0 1/16W	[M]
R6103	D0GBR00JA008	0 1/16W	[M]
R6104	D0GB102JA007	1K 1/10W	[M]
R6106	D0GB302JA007	3.0K 1/10W	[M]
R6107	D0GB222JA008	2.2K 1/16W	[M]
R6108	D0GB272JA008	2.7K 1/16W	[M]
R6109	D0GB562JA008	5.6K 1/16W	[M]
R6200	D0GB103JA008	10K 1/16W	[M]
R6201	D0GB102JA008	1K 1/16W	[M]
R6202	D0GB102JA008	1K 1/16W	[M]
R6203	D0GB122JA008	1.2K 1/16W	[M]
R6204	D0GB182JA008	1.8K 1/16W	[M]
R6205	D0GB222JA008	2.2K 1/16W	[M]
R6206	D0GB272JA008	2.7K 1/16W	[M]
R6207	D0GB472JA008	4.7K 1/16W	[M]
R6208	D0GB682JA008	6.8K 1/16W	[M]
R6300	D0GB103JA008	10K 1/16W	[M]
R6301	D0GB102JA008	1K 1/16W	[M]
R6302	D0GB102JA008	1K 1/16W	[M]
R6303	D0GB122JA008	1.2K 1/16W	[M]
R6304	D0GB182JA008	1.8K 1/16W	[M]
R6305	D0GB222JA008	2.2K 1/16W	[M]
R6306	D0GBR00JA008	0 1/16W	[M]
R6307	D0GB272JA008	2.7K 1/16W	[M]
R6308	D0GB472JA008	4.7K 1/16W	[M]
R6458	D0GB102JA008	1K 1/16W	[M]
R6501	D0GB123JA008	12K 1/16W	[M]
R6502	D0GB223JA008	22K 1/16W	[M]
R6503	D0GB103JA008	10K 1/16W	[M]
R6511	D0GBR00JA008	0 1/16W	[M]
R6512	D0GB391JA007	390 1/10W	[M]
R6600	D0GB182JA007	1.8K 1/10W	[M]
R6601	D0GB561JA007	560 1/10W	[M]
R6602	D0GB332JA008	3.3K 1/16W	[M]
R6603	D0GB682JA008	6.8K 1/16W	[M]
R6618	D0GB221JA008	220 1/16W	[M]
R6619	D0GB221JA008	220 1/16W	[M]
R6620	D0GB471JA008	470 1/16W	[M]
R6622	D0GB823JA008	82K 1/16W	[M]
R6631	D0GB103JA008	10K 1/16W	[M]
R6632	D0GB103JA008	10K 1/16W	[M]
R6671	D0GB223JA008	22K 1/16W	[M]
R6672	D0GB100JA008	10 1/16W	[M]
R6811	D0GB102JA007	1K 1/10W	[M]
R6812	D0GB102JA007	1K 1/10W	[M]
R6816	D0GBR00JA008	0 1/16W	[M]
R6901	ERJ3GEY0R00V	0 1/10W	[M]
R6921	D0GB390JA041	39 1/10W	[M]
R6922	D0GB390JA041	39 1/10W	[M]
R6924	D0GB153JA007	15K 1/10W	[M]
R6925	D0GB153JA007	15K 1/10W	[M]
R6926	D0GB153JA007	15K 1/10W	[M]
R6927	D0GB472JA041	4.7K 1/10W	[M]
R6928	D0GB472JA007	4.7K 1/10W	[M]
R6929	D0GB102JA007	1K 1/10W	[M]
R6940	D0GB183JA007	18K 1/10W	[M]
R6941	D0GB393JA007	39K 1/10W	[M]
R6942	D0GB153JA007	15K 1/10W	[M]
R6943	D0GB153JA007	15K 1/10W	[M]
R6944	D0GB103JA007	10K 1/10W	[M]
R6945	D0GB103JA007	10K 1/10W	[M]
R6961	D0GB103JA007	10K 1/10W	[M]
R8001	D0GA103JA023	10K 1/16W	[M]
R8003	D0GA103JA023	10K 1/16W	[M]
R8011	D0GA220JA023	22 1/16W	[M]
R8012	D0GA220JA023	22 1/16W	[M]
R8013	D0GA220JA023	22 1/16W	[M]
R8153	ERJ2RHD621X	620 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R8154	ERJ2RHD102X	1K 1/16W	[M]
R8211	D0GA103JA023	10K 1/16W	[M]
R8221	D0GA822JA023	8.2K 1/16W	[M]
R8225	D0GA822JA023	8.2K 1/16W	[M]
R8230	D0GA222JA023	2.2K 1/16W	[M]
R8231	D0GA752JA023	7.5K 1/16W	[M]
R8232	D0GA752JA023	7.5K 1/16W	[M]
R8251	D0GD6R8JA017	6.8 1/10W	[M]
R8252	D0GA103JA023	10K 1/16W	[M]
R8261	D0GA823JA023	82K 1/16W	[M]
R8262	D0GA153JA023	15K 1/16W	[M]
R8263	D0GA823JA023	82K 1/16W	[M]
R8264	D0GA153JA023	15K 1/16W	[M]
R8311	ERJ2RHD242X	2.4K 1/16W	[M]
R8312	ERJ2RHD102X	1K 1/16W	[M]
R8313	ERJ2RHD153X	15K 1/16W	[M]
R8314	ERJ2RHD153X	15K 1/16W	[M]
R8315	ERJ2RKD240X	24 1/16W	[M]
R8316	ERJ2RKD240X	24 1/16W	[M]
R8317	D0GA153JA023	15K 1/16W	[M]
R8318	D0GA153JA023	15K 1/16W	[M]
R8321	ERJ3RBD201V	200 1/16W	[M]
R8323	D0GA330JA023	33 1/16W	[M]
R8324	D0GA102JA023	1K 1/16W	[M]
R8325	ERJ3RBD201V	200 1/16W	[M]
R8327	D0GA330JA023	33 1/16W	[M]
R8328	D0GA102JA023	1K 1/16W	[M]
R8331	ERJ3RBD201V	200 1/16W	[M]
R8333	D0GA330JA023	33 1/16W	[M]
R8334	D0GA102JA023	1K 1/16W	[M]
R8335	ERJ3RBD201V	200 1/16W	[M]
R8336	D0GA330JA023	33 1/16W	[M]
R8337	D0GA102JA023	1K 1/16W	[M]
R8341	ERJ3RBD201V	200 1/16W	[M]
R8342	D0GA330JA023	33 1/16W	[M]
R8343	D0GA102JA023	1K 1/16W	[M]
R8401	D0GA101JA023	100 1/16W	[M]
R8402	D0GA101JA023	100 1/16W	[M]
R8403	D0GA101JA023	100 1/16W	[M]
R8420	D0GA222JA023	2.2K 1/16W	[M]
R8421	ERJ2GEJ100X	10 1/16W	[M]
R8531	D0GA152JA023	1.5K 1/16W	[M]
R8532	D0GA222JA023	2.2K 1/16W	[M]
R8533	ERJ2GE0R00X	0 1/16W	[M]
R8534	D0GA103JA023	10K 1/16W	[M]
R8535	D0GA104JA023	100K 1/16W	[M]
R8536	D0GA103JA023	10K 1/16W	[M]
R8537	ERJ2GE0R00X	0 1/16W	[M]
R8538	ERJ2GE0R00X	0 1/16W	[M]
R8539	ERJ2GE0R00X	0 1/16W	[M]
R8540	D0GBR00JA008	0 1/16W	[M]
R8541	D0GA153JA023	15K 1/16W	[M]
R8551	ERJ2GE0R00X	0 1/16W	[M]
R8552	D0GA102JA023	1K 1/16W	[M]
R8553	D0GA102JA023	1K 1/16W	[M]
R8554	ERJ2GEJ680X	68 1/16W	[M]
R8555	D0GA2R2JA023	2.2 1/16W	[M]
R8556	D0GB560JA007	56 1/10W	[M]
R8557	D0GB510JA007	51 1/10W	[M]
R8558	D0GA473JA023	47K 1/16W	[M]
R8559	D0GA153JA023	15K 1/16W	[M]
R8561	ERJ2GE0R00X	0 1/16W	[M]
R8562	D0GA102JA023	1K 1/16W	[M]
R8563	D0GA102JA023	1K 1/16W	[M]
R8564	D0GA220JA023	22 1/16W	[M]
R8565	D0GA2R2JA023	2.2 1/16W	[M]
R8566	D0GB560JA007	56 1/10W	[M]
R8567	D0GB510JA007	51 1/10W	[M]
R8568	D0GA473JA023	47K 1/16W	[M]
R8601	D0GA104JA023	100K 1/16W	[M]
R8611	D0GA101JA023	100 1/16W	[M]
R8613	D0GA101JA023	100 1/16W	[M]
R8621	D0GA105JA023	1M 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R8622	ERJ2RHD102X	1K 1/16W	[M]
R9007	D0GA103JA023	10K 1/16W	[M]
R9008	D0GA105JA023	1M 1/16W	[M]
R9009	D0GA102JA023	1K 1/16W	[M]
R9023	D0GA103JA023	10K 1/16W	[M]
R9030	ERJ3GEY0R00V	0 1/10W	[M]
R9031	ERJ3GEY0R00V	0 1/10W	[M]
R9036	D0GA103JA023	10K 1/16W	[M]
R9037	D0GA103JA023	10K 1/16W	[M]
R9040	D0GA103JA023	10K 1/16W	[M]
R9041	D0GA103JA023	10K 1/16W	[M]
R9042	D0GA103JA023	10K 1/16W	[M]
R9043	D0GA103JA023	10K 1/16W	[M]
R9044	D0GA103JA023	10K 1/16W	[M]
R9045	D0GA103JA023	10K 1/16W	[M]
R9046	D0GA103JA023	10K 1/16W	[M]
R9047	D0GA103JA023	10K 1/16W	[M]
R9048	D0GA103JA023	10K 1/16W	[M]
R9049	D0GA103JA023	10K 1/16W	[M]
R9055	D0GA472JA023	4.7K 1/16W	[M]
R9080	D0GA103JA023	10K 1/16W	[M]
R9082	D0GA103JA023	10K 1/16W	[M]
R9083	D0GA470JA023	47 1/16W	[M]
R9084	D0GA470JA023	47 1/16W	[M]
R9085	D0GA470JA023	47 1/16W	[M]
R9086	D0GA470JA023	47 1/16W	[M]
R9087	D0GA470JA023	47 1/16W	[M]
R9088	D0GA470JA023	47 1/16W	[M]
R9099	ERJ2GE0R00X	0 1/16W	[M]
RX8001	D1H410320002	CHIP RESISTOR	[M]
RX8011	D1H88204A043	CHIP RESISTOR	[M]
RX8012	D1H88204A043	CHIP RESISTOR	[M]
RX8013	D1H88204A043	CHIP RESISTOR	[M]
RX8014	D1H88204A043	CHIP RESISTOR	[M]
RX8015	D1H88204A043	CHIP RESISTOR	[M]
RX8016	D1H88204A043	CHIP RESISTOR	[M]
RX8017	D1H88204A043	CHIP RESISTOR	[M]
RX8018	D1H422020001	CHIP RESISTOR	[M]
RX8019	D1H422020001	CHIP RESISTOR	[M]
RX8020	D1H422020001	CHIP RESISTOR	[M]
RX8031	D1H447220001	CHIP RESISTOR	[M]
RX8032	D1H447220001	CHIP RESISTOR	[M]
RX8111	D1H422320002	CHIP RESISTOR	[M]
RX8401	D1H410120001	CHIP RESISTOR	[M]
RX8402	D1H410120001	CHIP RESISTOR	[M]
RX8531	D1H456020001	CHIP RESISTOR	[M]
RX8532	D1H85604A043	CHIP RESISTOR	[M]
RX8533	D1H456020001	CHIP RESISTOR	[M]
RX8534	D1H456020001	CHIP RESISTOR	[M]
RX8611	D1H447220001	CHIP RESISTOR	[M]
RX8691	D1H410320002	CHIP RESISTOR	[M]
RX9014	D1H85604A043	CHIP RESISTOR	[M]
RX9015	D1H85604A043	CHIP RESISTOR	[M]
RX9016	D1H85604A043	CHIP RESISTOR	[M]
RX9017	D1H85604A043	CHIP RESISTOR	[M]
RX9018	D1H447220001	CHIP RESISTOR	[M]
RX9020	D1H447220001	CHIP RESISTOR	[M]
		CAPACITORS	
C1101	ECA1HAK010XB	1uF 50V	[M]
C1102	F1H1H102A219	1000pF 50V	[M]
C1103	ECA1CAK101XB	100uF 16V	[M]
C1104	F1H1C2730001	0.027uF 16V	[M]
C1105	F1H1H471A219	470pF 50V	[M]
C1106	ECA1HAK2R2XB	2.2uF 50V	[M]
C1107	F1H1H152A219	1500pF 50V	[M]
C1108	ECA1CAK100XB	10uF 16V	[M]
C1109	ECA1HAK3R3XB	3.3uF 50V	[M]
C1110	F1H1H682A219	6800pF 50V	[M]
C1121	F1H1H102A219	1000pF 50V	[M]
C1122	F1H1H103A219	0.01uF 50V	[M]
C1123	ECJ1VB1H271K	270pF 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C1201	ECA1HAK010XB	1uF 50V	[M]
C1202	F1H1H102A219	1000pF 50V	[M]
C1203	ECA1CAK101XB	100uF 16V	[M]
C1204	F1H1C2730001	0.027uF 16V	[M]
C1205	F1H1H471A219	470pF 50V	[M]
C1206	ECA1HAK2R2XB	2.2uF 50V	[M]
C1207	F1H1H152A219	1500pF 50V	[M]
C1208	ECA1CAK100XB	10uF 16V	[M]
C1209	ECA1HAK3R3XB	3.3uF 50V	[M]
C1210	F1H1H682A219	6800pF 50V	[M]
C1221	F1H1H102A219	1000pF 50V	[M]
C1222	F1H1H103A219	0.01uF 50V	[M]
C1223	ECJ1VB1H271K	270pF 50V	[M]
C1301	ECA1HAK0R1XB	0.1uF 50V	[M]
C1302	F1H1C333A071	0.033uF 16V	[M]
C1303	F1H1C333A071	0.033uF 16V	[M]
C1304	ECA1HAK4R7XB	4.7uF 50V	[M]
C1305	ECA1CAK330XB	33uF 16V	[M]
C1307	ECA1AAK221XQ	220uF 10V	[M]
C1308	ECA1CAK220XB	22uF 16V	[M]
C1310	ECA1HAK0R1XB	0.1uF 50V	[M]
C1311	ECA1CAK470XB	47uF 16V	[M]
C1312	F1H1H332A013	3300pF 50V	[M]
C1314	F1H1H222A013	2200pF 50V	[M]
C1315	F1H1H222A013	2200pF 50V	[M]
C1316	F1H1H102A219	1000pF 50V	[M]
C1317	F1H1H102A219	1000pF 50V	[M]
C1318	ECQV1H473JL3	0.047uF 50V	[M]
C1319	ECA1CAK101XB	100uF 16V	[M]
C1320	ECA1HAK010XB	1uF 50V	[M]
C1321	F0A2A472A019	4700pF 100V	[M]
C1323	ECEA1HKN010B	1uF 50V	[M]
C1324	ECA1CAK470XB	47uF 16V	[M]
C1326	ECA1CAK100XB	10uF 16V	[M]
C1371	F1H1H103A219	0.01uF 50V	[M]
C2001	F1H1H101A230	100pF 50V	[M]
C2005	ECJ3YB1C106K	10uF 16V	[M]
C2019	ECJ1VB1H822K	8200pF 50V	[M]
C2020	ECJ1VB1H822K	8200pF 50V	[M]
C2021	F2A1C101A147	100uF 16V	[M]
C2022	EEUFM1A681B	680uF 10V	[M]
C2023	F1H1H103A219	0.01uF 50V	[M]
C2028	ECEA1CKA100B	10uF 16V	[M]
C2029	ECEA1CKA100B	10uF 16V	[M]
C2032	F1H1H103A219	0.01uF 50V	[M]
C2034	ECJ1VB1C105K	1uF 16V	[M]
C2035	ECJ1VB1C105K	1uF 16V	[M]
C2051	F2A1H4R7A234	4.7uF 50V	[M]
C2062	F1H1H103A219	0.01uF 50V	[M]
C2067	ECJ1VB1C105K	1uF 16V	[M]
C2068	ECJ1VB1C105K	1uF 16V	[M]
C2069	ECJ1VB1A474K	0.47uF 10V	[M]
C2070	ECJ1VC1H101K	100pF 50V	[M]
C2071	F1H1H103A219	0.01uF 50V	[M]
C2073	F1H1H103A219	0.01uF 50V	[M]
C2074	ECJ1VC1H470J	47pF 50V	[M]
C2102	ECJ1VB1C105K	1uF 16V	[M]
C2103	F1H1H102A219	1000pF 50V	[M]
C2104	ECJ1VB1C105K	1uF 16V	[M]
C2106	F1H1H332A013	3300pF 50V	[M]
C2107	ECJ1VB1C105K	1uF 16V	[M]
C2108	F1H1H102A219	1000pF 50V	[M]
C2111	ECJ1VB1C105K	1uF 16V	[M]
C2112	F1H1H152A219	1500pF 50V	[M]
C2116	ECJ1VB1H681K	680pF 50V	[M]
C2117	ECJ1VC1H101K	100pF 50V	[M]
C2118	ECJ1VB1C105K	1uF 16V	[M]
C2141	ECJ1VB1C105K	1uF 16V	[M]
C2142	ECJ1VB1C105K	1uF 16V	[M]
C2151	F2A1C100A234	10uF 16V	[M]
C2163	ECJ1VB1H222K	2200pF 50V	[M]
C2166	F1H1H102A219	1000pF 50V	[M]
C2171	F1H1A154A001	0.15uF 10V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C2172	ECJ1VB1C473K	0.047uF 16V	[M]
C2173	F1H1H103A219	0.01uF 50V	[M]
C2174	F1H1H103A219	0.01uF 50V	[M]
C2175	ECJ1VB1H472K	4700pF 50V	[M]
C2181	ECJ1VB1A334K	0.33uF 10V	[M]
C2182	ECJ1VB1A334K	0.33uF 10V	[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]
C2195	ECJ1VB1C183K	0.018uF 16V	[M]
C2197	D0GBR00JA008	0 1/16W	[M]
C2201	ECJ1VB1C105K	1uF 16V	[M]
C2202	ECJ1VB1C105K	1uF 16V	[M]
C2203	F1H1H102A219	1000pF 50V	[M]
C2204	ECJ1VB1C105K	1uF 16V	[M]
C2206	F1H1H332A013	3300pF 50V	[M]
C2207	ECJ1VB1C105K	1uF 16V	[M]
C2208	F1H1H102A219	1000pF 50V	[M]
C2211	ECJ1VB1C105K	1uF 16V	[M]
C2212	F1H1H152A219	1500pF 50V	[M]
C2216	ECJ1VB1H681K	680pF 50V	[M]
C2217	ECJ1VC1H101K	100pF 50V	[M]
C2218	ECJ1VB1C105K	1uF 16V	[M]
C2220	ECJ1VB1C105K	1uF 16V	[M]
C2221	F1H1A154A001	0.15uF 10V	[M]
C2222	ECJ1VB1C474K	0.47uF 16V	[M]
C2241	ECJ1VB1C105K	1uF 16V	[M]
C2242	ECJ1VB1C105K	1uF 16V	[M]
C2245	F2A1C100A234	10uF 16V	[M]
C2251	F2A1C100A234	10uF 16V	[M]
C2263	ECA1HAK0R1XB	0.1uF 50V	[M]
C2266	F1H1H102A219	1000pF 50V	[M]
C2271	F1H1A154A001	0.15uF 10V	[M]
C2272	ECJ1VB1C473K	0.047uF 16V	[M]
C2273	F1H1H103A219	0.01uF 50V	[M]
C2274	F1H1H103A219	0.01uF 50V	[M]
C2275	ECJ1VB1H472K	4700pF 50V	[M]
C2281	ECJ1VB1A334K	0.33uF 10V	[M]
C2282	ECJ1VB1A334K	0.33uF 10V	[M]
C2283	ECJ1VB1H473K	0.047uF 50V	[M]
C2284	ECJ1VB1C105K	1uF 16V	[M]
C2295	ECJ1VB1C183K	0.018uF 16V	[M]
C2297	D0GBR00JA008	0 1/16W	[M]
C2300	ECJ1VB1C105K	1uF 16V	[M]
C2301	ECJ1VC1H100D	10pF 50V	[M]
C2302	F1H1H470A230	47pF 50V	[M]
C2313	F1H1H222A013	2200pF 50V	[M]
C2314	F1H1H470A230	47pF 50V	[M]
C2331	ECJ1VB1C105K	1uF 16V	[M]
C2333	F2A1C100A147	10uF 16V	[M]
C2334	ECJ1VB1C105K	1uF 16V	[M]
C2401	ECJ1VC1H100D	10pF 50V	[M]
C2402	F1H1H470A230	47pF 50V	[M]
C2403	ECJ1VB1C105K	1uF 16V	[M]
C2413	F1H1H222A013	2200pF 50V	[M]
C2414	F1H1H470A230	47pF 50V	[M]
C2501	ECEA1AKN100B	10uF 10V	[M]
C2520	F1H1H103A219	0.01uF 50V	[M]
C2521	F1H1H103A219	0.01uF 50V	[M]
C2561	ECJ1VB1C105K	1uF 16V	[M]
C2581	F2A0J101A181	100uF 6.3V	[M]
C2582	F2A0J101A181	100uF 6.3V	[M]
C2583	F2A1C101A234	100uF 16V	[M]
C2584	F1H1H221A219	220pF 50V	[M]
C2585	F1H1H221A219	220pF 50V	[M]
C2588	F1H1C104A041	0.1uF 16V	[M]
C2600	F2A1H2R2A013	2.2uF 50V	[M]
C2616	F1H1H103A219	0.01uF 50V	[M]
C2620	ECJ1VB1H104K	0.1uF 50V	[M]
C2800	F1H1H102A219	1000pF 50V	[M]
C2801	ECJ1VB1C104K	0.1uF 16V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C2802	F1H1H332A013	3300pF 50V	[M]
C2804	ECJ3YB1C106K	10uF 16V	[M]
C2812	ECJ1VC1H101K	100pF 50V	[M]
C2813	ECJ1VC1H101K	100pF 50V	[M]
C2814	ECJ1VC1H101K	100pF 50V	[M]
C2815	ECJ1VC1H101K	100pF 50V	[M]
C2816	ECJ1VC1H101K	100pF 50V	[M]
C2817	ECJ1VC1H101K	100pF 50V	[M]
C2818	ECJ1VC1H101K	100pF 50V	[M]
C2819	ECJ1VC1H101K	100pF 50V	[M]
C2820	ECJ1VC1H101K	100pF 50V	[M]
C2821	ECJ1VC1H101K	100pF 50V	[M]
C2822	F1H1H471A219	470pF 50V	[M]
C2831	F1H1C223A001	0.022uF 16V	[M]
C2832	F1H1H331A013	330pF 50V	[M]
C2833	F1H1H331A013	330pF 50V	[M]
C2834	ECJ1VC1H680J	68pF 50V	[M]
C2838	ECJ1VC1H680J	68pF 50V	[M]
C2840	ECJ1VC1H180J	18pF 50V	[M]
C2841	ECJ1VC1H180J	18pF 50V	[M]
C2860	ECJ1VC1H101K	100pF 50V	[M]
C2861	ECJ1VC1H101K	100pF 50V	[M]
C2862	ECJ1VC1H101K	100pF 50V	[M]
C2863	ECJ1VC1H101K	100pF 50V	[M]
C2865	ECJ1VC1H101K	100pF 50V	[M]
C2866	ECJ1VC1H101K	100pF 50V	[M]
C2867	ECJ1VC1H101K	100pF 50V	[M]
C2868	ECJ1VC1H101K	100pF 50V	[M]
C2900	F2A0J102A130	1000uF 6.3V	[M]
C2905	F1H1H103A219	0.01uF 50V	[M]
C2906	F2A1C100A234	10uF 16V	[M]
C2907	ECJ1VB1C105K	1uF 16V	[M]
C2908	ECJ1VB1C105K	1uF 16V	[M]
C2909	ECJ1VB1C105K	1uF 16V	[M]
C2910	ECJ1VB1C105K	1uF 16V	[M]
C2911	F1H1H103A219	0.01uF 50V	[M]
C2912	F1H1H103A219	0.01uF 50V	[M]
C2913	F1H1H101A230	100pF 50V	[M]
C2914	F1H1H101A230	100pF 50V	[M]
C2916	F1H1H101A230	100pF 50V	[M]
C2917	F1H1H101A230	100pF 50V	[M]
C2918	ECEA1AKA221B	220uF 10V	[M]
C2919	F2A0J102A130	1000uF 6.3V	[M]
C2920	ECEA1AKA220B	22uF 10V	[M]
C2922	F2A0J102A130	1000uF 6.3V	[M]
C2923	ECA0JM331B	330uF 6.3V	[M]
C2924	ECA0JM331B	330uF 6.3V	[M]
C2940	F1H1C104A041	0.1uF 16V	[M]
C2941	F2A1C330A234	33uF 16V	[M]
C2944	ECJ1VC1H101K	100pF 50V	[M]
C2945	F2A1C470A234	47uF 16V	[M]
C2948	F2A0J221A167	220uF 6.3V	[M]
C2975	ECJ1VC1H560J	56pF 50V	[M]
C2978	F1H1C104A041	0.1uF 16V	[M]
C2979	F2A1C470A234	47uF 16V	[M]
C2980	F2A1C470A234	47uF 16V	[M]
C2982	F2A1C220A234	22uF 16V	[M]
C3800	D0GBR00JA008	0 1/16W	[M]
C3801	ECA1HAK100XB	10uF 50V	[M]
C3802	ECJ1VB1C105K	1uF 16V	[M]
C3803	ECJ1VB1C105K	1uF 16V	[M]
C3804	ECA1HAK100XB	10uF 50V	[M]
C3805	D0GBR00JA008	0 1/16W	[M]
C3812	ECA1CAK101XB	100uF 16V	[M]
C3820	F1H1H104A748	0.1uF 50V	[M]
C3822	F2A1H1010039	100uF 50V	[M]
C4000	F1H1H103A219	0.01uF 50V	[M]
C4001	F1H1H101A230	100pF 50V	[M]
C4002	F1H1H103A219	0.01uF 50V	[M]
C4004	F1H1H103A219	0.01uF 50V	[M]
C4005	F1H1H103A219	0.01uF 50V	[M]
C4007	EEUFC1E102B	1000uF 25V	[M]
C4008	EEUFC0J821B	820uF 6.3V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C4011	ECEA1CKA101B	100uF 16V	[M]
C4012	ECA0JAK221XB	220uF 6.3V	[M]
C4019	F1H1H103A219	0.01uF 50V	[M]
C4020	ECEA1CKA470B	47uF 16V	[M]
C4021	ECEA1CKA470B	47uF 16V	[M]
C4022	F1H1H103A219	0.01uF 50V	[M]
C4023	ECJ1VB1H103K	0.01uF 50V	[M]
C4024	F2A1C220A234	22uF 16V	[M]
C4025	ECJ1VB1H103K	0.01uF 50V	[M]
C4026	ECA1CM221B	220uF 16V	[M]
C4027	F2A1C681B473	680uF 16V	[M]
C4028	ECJ1VB1H103K	0.01uF 50V	[M]
C4029	ECJ1VB1H103K	0.01uF 50V	[M]
C4030	ECA1EM221B	220uF 25V	[M]
C4038	ECA1HAK010XB	1uF 50V	[M]
C4039	ECA1CM102B	1000uF 16V	[M]
C4040	F2A0J101A013	100uF 6.3V	[M]
C4041	ECJ1VB1H104K	0.1uF 50V	[M]
C4042	F2A1V330A379	33uF 35V	[M]
C4043	ECEA1CKS101B	100uF 16V	[M]
C4044	ECQB1H392KF3	3900pF 50V	[M]
C4045	F2A1V330A379	33uF 35V	[M]
C4046	ECJ1VB1H103K	0.01uF 50V	[M]
C4047	F2A1C220A234	22uF 16V	[M]
C4048	F1H1H101A230	100pF 50V	[M]
C4049	ECA1EM221B	220uF 25V	[M]
C5000	ECJ1VB1H102K	1000pF 50V	[M]
C5001	ECJ1VB1H102K	1000pF 50V	[M]
C5002	F1H1A474A001	0.47uF 10V	[M]
C5003	F1H1A474A001	0.47uF 10V	[M]
C5004	F1H1A474A001	0.47uF 10V	[M]
C5005	F1H1A474A001	0.47uF 10V	[M]
C5006	ECJ1VB1H331K	330pF 50V	[M]
C5007	ECJ1VB1H331K	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	ECQV1H684JL3	0.68uF 50V	[M]
C5015	ECQV1H684JL3	0.68uF 50V	[M]
C5016	ECJ1VB1H104K	0.1uF 50V	[M]
C5017	ECJ1VB1H104K	0.1uF 50V	[M]
C5018	F1K2A1040007	0.1uF 100V	[M]
C5019	ECJ1VB1H104K	0.1uF 50V	[M]
C5020	ECJ1VB1H104K	0.1uF 50V	[M]
C5021	ECJ1VB1H104K	0.1uF 50V	[M]
C5022	ECJ1VB1H104K	0.1uF 50V	[M]
C5023	F1K2A1040007	0.1uF 100V	[M]
C5024	ECJ1VB1H104K	0.1uF 50V	[M]
C5025	ECJ1VB1H104K	0.1uF 50V	[M]
C5026	F1K2A1040007	0.1uF 100V	[M]
C5028	ECJ1VB1H104K	0.1uF 50V	[M]
C5030	ECJ1VC1H221J	220pF 50V	[M]
C5031	ECJ1VB1C224K	0.22uF 16V	[M]
C5032	ECJ1VB1H102K	1000pF 50V	[M]
C5033	ECJ1VB1H104K	0.1uF 50V	[M]
C5040	F2A2A2200035	22uF 100V	[M]
C5050	ECJ1VB1H104K	0.1uF 50V	[M]
C5051	ECJ1VB1H104K	0.1uF 50V	[M]
C5052	ECJ1VB1H104K	0.1uF 50V	[M]
C5053	ECJ1VB1H104K	0.1uF 50V	[M]
C5133	F2A0J101A245	100uF 6.3V	[M]
C5150	ECJ1VB1H102K	1000pF 50V	[M]
C5151	ECJ1VB1H102K	1000pF 50V	[M]
C5445	ECJ1VB1H104K	0.1uF 50V	[M]
C5450	ECJ1VB1H104K	0.1uF 50V	[M]
C5510	F2A1V4710074	470uF 35V	[M]
C5511	F2A1V4710074	470uF 35V	[M]
C5514	ECJ1VB1H104K	0.1uF 50V	[M]
C5515	ECJ1VB1H104K	0.1uF 50V	[M]
C5518	ECJ1VB1H104K	0.1uF 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C5519	ECJ1VB1H104K	0.1uF 50V	[M]
C5520	ECJ1VB1H104K	0.1uF 50V	[M]
C5521	ECJ1VB1H104K	0.1uF 50V	[M]
C5550	ECJ1VB1H103K	0.01uF 50V	[M]
C5551	ECJ1VB1H391K	390pF 50V	[M]
C5552	ECJ1VB1H391K	390pF 50V	[M]
C5553	ECJ1VC1H101J	100pF 50V	[M]
C5554	ECJ1VB1H104K	0.1uF 50V	[M]
C5555	F1K1C1060001	10uF 16V	[M]
C5556	ECJ1VB1H103K	0.01uF 50V	[M]
C5557	ECJ1VC1H101J	100pF 50V	[M]
C5558	ECJ1VC1H470J	47pF 50V	[M]
C5559	ECJ1VC1H470J	47pF 50V	[M]
C5560	ECJ1VB1H104K	0.1uF 50V	[M]
C5561	ECJ1VC1H101J	100pF 50V	[M]
C5562	F2A0J102A016	1000uF 6.3V	[M]
C5601	ECA1CAK100XB	10uF 16V	[M]
C5700	F1BAF1020020	1000pF	[M]
C5701	F0CAF334A087	0.33uF	[M] ⚠
C5703	F0C2H1040001	0.1uF 500V	[M]
C5704	F1BAF1020020	1000pF	[M] ⚠
C5705	F1BAF1020020	1000pF	[M] ⚠
C5706	F1BAF1020020	1000pF	[M] ⚠
C5707	F1BAF1020020	1000pF	[M] ⚠
C5712	F2B2G1810011	180uF 400V	[M]
C5713	F0C2J1030005	0.01uF 630V	[M]
C5720	ECJ1VB1H104K	0.1uF 50V	[M]
C5721	ECJ1VB1H221K	220pF 50V	[M]
C5722	ECJ1VB1H102K	1000pF 50V	[M]
C5723	ECJ1VB1H471K	470pF 50V	[M]
C5724	F2A1H5600009	56uF 50V	[M]
C5725	ECJ1VB1H104K	0.1uF 50V	[M]
C5726	ECJ1VB1H104K	0.1uF 50V	[M]
C5728	ECJ1VB1H102K	1000pF 50V	[M]
C5730	ECEA1HKS010B	1uF 50V	[M]
C5737	F1A3A471A035	470pF 1000V	[M]
C5790	ECJ3YB2J222K	2200pF 630V	[M]
C5791	ECEA1HKA2R2B	2.2uF 50V	[M]
C5794	ECJ1VC1H220J	22pF 50V	[M]
C5795	ECJ2VC1H222J	2200pF 50V	[M]
C5796	F1J1H104A717	0.1uF 50V	[M]
C5797	F1A3A470A023	47pF 1000V	[M]
C5798	F2A1H5600009	56uF 50V	[M]
C5800	F1J2E1030004	0.01uF 250V	[M]
C5805	F2B1V222A007	2200uF 35V	[M]
C5808	F2B1V222A007	2200uF 35V	[M]
C5810	ECJ1VB1H104K	0.1uF 50V	[M]
C5812	ECJ1VB1H104K	0.1uF 50V	[M]
C5813	F2A1V4710035	470uF 35V	[M]
C5815	ECJ1VB1H104K	0.1uF 50V	[M]
C5816	F2A1E471A652	470uF 25V	[M]
C5817	F2A2AR22A358	0.22uF 100V	[M]
C5818	ECJ1VB1H104K	0.1uF 50V	[M]
C5819	F1J2E1030004	0.01uF 250V	[M]
C5820	F1J2E1030004	0.01uF 250V	[M]
C5821	F1J2E1030004	0.01uF 250V	[M]
C5822	F1J2E1030004	0.01uF 250V	[M]
C5823	ECJ1VB1H104K	0.1uF 50V	[M]
C5824	F2A1E471A652	470uF 25V	[M]
C5825	ECJ1VB1H104K	0.1uF 50V	[M]
C5826	F1J2E1030004	0.01uF 250V	[M]
C5831	ECJ1VB1H104K	0.1uF 50V	[M]
C5832	ECJ1VB1H104K	0.1uF 50V	[M]
C5869	ECJ1VB1H104K	0.1uF 50V	[M]
C5896	ECJ1VB1H104K	0.1uF 50V	[M]
C5897	ECJ1VB1H104K	0.1uF 50V	[M]
C5898	ECJ1VB1H104K	0.1uF 50V	[M]
C5899	F2A1C221A104	220uF 16V	[M]
C6000	F2A1H4R7A213	4.7uF 50V	[M]
C6001	F1H1H103A219	0.01uF 50V	[M]
C6002	F1H1H104A013	0.1uF 50V	[M]
C6003	ECJ1VC1H470J	47pF 50V	[M]
C6004	F1H1H102A219	1000pF 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C6005	ECQV1H474JL3	0.47uF 50V	[M]
C6006	F1H1H102A219	1000pF 50V	[M]
C6008	D0GBR00JA008	0 1/16W	[M]
C6009	F1H1A105A025	1uF 10V	[M]
C6010	F1H1H102A219	1000pF 50V	[M]
C6011	F1H1H561A013	560pF 50V	[M]
C6012	ECJ1VC1H470J	47pF 50V	[M]
C6300	F1H1H102A219	1000pF 50V	[M]
C6503	F1H1H102A219	1000pF 50V	[M]
C6512	F1H1H102A219	1000pF 50V	[M]
C6601	F1H1H101A720	100pF 50V	[M]
C6608	F1H1H104A013	0.1uF 50V	[M]
C6609	F1H1H104A013	0.1uF 50V	[M]
C6611	F1H1H331A013	330pF 50V	[M]
C6612	F1H1H331A013	330pF 50V	[M]
C6613	F1H1H331A013	330pF 50V	[M]
C6614	F1H1H103A219	0.01uF 50V	[M]
C6616	F2A1H220A182	22uF 50V	[M]
C6633	F1H1H101A720	100pF 50V	[M]
C6634	F1H1H101A720	100pF 50V	[M]
C6671	F2A1H220A182	22uF 50V	[M]
C6801	F1H1H473A783	0.047uF 50V	[M]
C6802	F1H1H473A783	0.047uF 50V	[M]
C6803	F1H1C104A042	0.1uF 16V	[M]
C6804	F1H1C104A042	0.1uF 16V	[M]
C6810	ECJ1VB1H391K	390pF 50V	[M]
C6811	F1H0J1050013	1uF 6.3V	[M]
C6812	F1H0J1050013	1uF 6.3V	[M]
C6813	F1H1H331A013	330pF 50V	[M]
C6814	F1H1H331A013	330pF 50V	[M]
C6815	F1H1H103A219	0.01uF 50V	[M]
C6816	F1H1H103A219	0.01uF 50V	[M]
C6820	ECJ1VB1H391K	390pF 50V	[M]
C6821	F1H1H103A219	0.01uF 50V	[M]
C6822	F1H1H103A219	0.01uF 50V	[M]
C6851	F1H1C104A042	0.1uF 16V	[M]
C6852	F1H1H102A219	1000pF 50V	[M]
C6861	F1H1H102A219	1000pF 50V	[M]
C6863	F1H1C104A042	0.1uF 16V	[M]
C6865	F1H1H103A219	0.01uF 50V	[M]
C6919	ECJ1VB1H152K	1500pF 50V	[M]
C6920	ECJ1VB1H682K	6800pF 50V	[M]
C6921	F1H1C104A041	0.1uF 16V	[M]
C6922	ECJ1VB1C103K	0.01uF 16V	[M]
C6923	F1H1H103A219	0.01uF 50V	[M]
C6927	F1H1H102A219	1000pF 50V	[M]
C6928	ECJ1VB1H153K	0.015uF 50V	[M]
C6931	F2A1A470A388	47uF 10V	[M]
C6932	F2A1A470A388	47uF 10V	[M]
C6933	F1H1A105A025	1uF 10V	[M]
C6937	F1H1A105A025	1uF 10V	[M]
C6938	F1H1C104A042	0.1uF 16V	[M]
C6939	ECJ1VB1C105K	1uF 16V	[M]
C6939	F1H1C104A042	0.1uF 16V	[M]
C6940	F1H1C104A042	0.1uF 16V	[M]
C6940	F1H1H104A748	0.1uF 50V	[M]
C8001	EEE0GA331WP	330uF 4V	[M]
C8003	F1G1C104A083	0.1uF 16V	[M]
C8004	F1G1C104A083	0.1uF 16V	[M]
C8005	F1G1C104A083	0.1uF 16V	[M]
C8006	F1G1C104A083	0.1uF 16V	[M]
C8007	F1G1C104A083	0.1uF 16V	[M]
C8011	F2G0J101A031	100uF 6.3V	[M]
C8012	F1G1C104A083	0.1uF 16V	[M]
C8013	F1G1C104A083	0.1uF 16V	[M]
C8014	F1G1C104A083	0.1uF 16V	[M]
C8015	F1G1C104A083	0.1uF 16V	[M]
C8016	F1G1C104A083	0.1uF 16V	[M]
C8018	F1G1C104A083	0.1uF 16V	[M]
C8020	F1G1C104A083	0.1uF 16V	[M]
C8021	F1G1C104A083	0.1uF 16V	[M]
C8022	F1G1C104A083	0.1uF 16V	[M]
C8023	F1G1C104A083	0.1uF 16V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C8026	F1G1C104A083	0.1uF 16V	[M]
C8051	F1H0J1050013	1uF 6.3V	[M]
C8052	F1G1A1040006	0.1uF 10V	[M]
C8053	F1G1C104A083	0.1uF 16V	[M]
C8054	F1G1H221A444	220pF 50V	[M]
C8055	F1H0J1050013	1uF 6.3V	[M]
C8056	F1G1E2220001	2200pF 25V	[M]
C8057	F1H0J1050013	1uF 6.3V	[M]
C8111	F1G1A1040006	0.1uF 10V	[M]
C8112	F1H0J1050013	1uF 6.3V	[M]
C8113	F1G1E4710001	470pF 25V	[M]
C8151	F1H0J4750005	4.7uF 6.3V	[M]
C8152	F1H1C105A097	1uF 16V	[M]
C8201	F2G0J101A031	100uF 6.3V	[M]
C8202	F1G1A1040006	0.1uF 10V	[M]
C8203	F1G1A1040006	0.1uF 10V	[M]
C8211	F1G1E1220001	1200pF 25V	[M]
C8221	F1G1E1020001	1000pF 25V	[M]
C8222	F1G1E8210002	820pF 25V	[M]
C8225	F1G1E1020001	1000pF 25V	[M]
C8226	F1G1E1020001	1000pF 25V	[M]
C8231	F1G1A1040006	0.1uF 10V	[M]
C8232	F1G1A1040006	0.1uF 10V	[M]
C8251	F2G0J221A031	220uF 6.3V	[M]
C8252	F1G1C104A083	0.1uF 16V	[M]
C8253	F1G1C104A083	0.1uF 16V	[M]
C8255	F2G1C220A037	22uF 16V	[M]
C8256	F1G1C104A083	0.1uF 16V	[M]
C8257	F2G1C470A076	47uF 16V	[M]
C8258	F1G1C104A083	0.1uF 16V	[M]
C8261	F1G1C104A083	0.1uF 16V	[M]
C8262	F1G1C104A083	0.1uF 16V	[M]
C8301	F2G0J221A031	220uF 6.3V	[M]
C8302	F2G0J330A031	33uF 6.3V	[M]
C8303	F1G1A1040006	0.1uF 10V	[M]
C8304	F1G1A1040006	0.1uF 10V	[M]
C8305	F1G1A1040006	0.1uF 10V	[M]
C8306	F1G1A1040006	0.1uF 10V	[M]
C8311	F1G1A1040006	0.1uF 10V	[M]
C8312	F1H0J1050013	1uF 6.3V	[M]
C8313	F1H0J1050013	1uF 6.3V	[M]
C8320	F1G1C104A083	0.1uF 16V	[M]
C8321	F1G1A1040006	0.1uF 10V	[M]
C8325	F1G1A1040006	0.1uF 10V	[M]
C8330	F2G0J470A031	47uF 6.3V	[M]
C8331	F1G1A1040006	0.1uF 10V	[M]
C8335	F1G1A1040006	0.1uF 10V	[M]
C8340	F1G1C104A083	0.1uF 16V	[M]
C8341	F1G1A1040006	0.1uF 10V	[M]
C8401	F1G1H150A565	15pF 50V	[M]
C8421	F2G0J221A031	220uF 6.3V	[M]
C8422	F1G1C104A083	0.1uF 16V	[M]
C8423	F2G0J330A031	33uF 6.3V	[M]
C8424	F1G1C104A083	0.1uF 16V	[M]
C8425	F1G1H150A565	15pF 50V	[M]
C8429	F1G1C104A083	0.1uF 16V	[M]
C8501	F2G0J101A031	100uF 6.3V	[M]
C8502	F1G1C104A083	0.1uF 16V	[M]
C8503	F1G1C104A083	0.1uF 16V	[M]
C8504	F1G1C104A083	0.1uF 16V	[M]
C8505	F1G1C104A083	0.1uF 16V	[M]
C8506	F1G1C104A083	0.1uF 16V	[M]
C8511	F1H0J1050013	1uF 6.3V	[M]
C8512	F1H0J1050013	1uF 6.3V	[M]
C8513	F1G1A1040006	0.1uF 10V	[M]
C8514	F1G1A1040006	0.1uF 10V	[M]
C8515	F1G1A1040006	0.1uF 10V	[M]
C8516	F1G1A1040006	0.1uF 10V	[M]
C8521	F1G1A1040006	0.1uF 10V	[M]
C8522	F1G1A1040006	0.1uF 10V	[M]
C8523	F1G1C104A083	0.1uF 16V	[M]
C8524	F1G1C104A083	0.1uF 16V	[M]
C8525	F1G1C562A039	5600pF 16V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C8526	F1G1C183A039	0.018uF 16V	[M]
C8527	F1G1A333A013	0.033uF 10V	[M]
C8528	F1H0J1050013	1uF 6.3V	[M]
C8529	F1H0J1050013	1uF 6.3V	[M]
C8530	F1G1C104A083	0.1uF 16V	[M]
C8531	F1G1H101A566	100pF 50V	[M]
C8532	F1G1H221A444	220pF 50V	[M]
C8533	F1G1C104A083	0.1uF 16V	[M]
C8541	F1G1E4720002	4700pF 25V	[M]
C8550	F2G0J330A031	33uF 6.3V	[M]
C8551	F1G1C104A083	0.1uF 16V	[M]
C8552	F2G1C100A072	10uF 16V	[M]
C8553	F2G0J470A031	47uF 6.3V	[M]
C8554	F1H0J1050013	1uF 6.3V	[M]
C8561	F1G1C104A083	0.1uF 16V	[M]
C8562	F2G1C100A072	10uF 16V	[M]
C8563	F2G0J470A031	47uF 6.3V	[M]
C8564	F1H0J1050013	1uF 6.3V	[M]
C8571	F1J1A106A043	10uF 10V	[M]
C8572	F1G1C104A083	0.1uF 16V	[M]
C8601	F1G1C104A083	0.1uF 16V	[M]
C8602	F1G1C153A039	0.015uF 16V	[M]
C8606	F1G1C104A083	0.1uF 16V	[M]
C8611	F1G1C104A083	0.1uF 16V	[M]
C8621	ECJ0EC1H090D	9pF 50V	[M]
C8622	ECJ0EC1H090D	9pF 50V	[M]
C8651	F1G1C104A083	0.1uF 16V	[M]
C8652	F1G1C104A083	0.1uF 16V	[M]
C8691	F1G1C104A083	0.1uF 16V	[M]
C8695	F1G1C104A083	0.1uF 16V	[M]
C9001	ECA0JAK221XB	220uF 6.3V	[M]
C9002	F1G1C104A083	0.1uF 16V	[M]
C9003	F1G1C104A083	0.1uF 16V	[M]
C9004	F1G1H7R0A445	7.0pF 50V	[M]
C9005	F1G1H8R0A456	8.0pF 50V	[M]
C9006	F1G1A1040006	0.1uF 10V	[M]
C9007	F1G1C104A083	0.1uF 16V	[M]
C9008	F1G1H221A444	220pF 50V	[M]
FL8101	F1H0J1050018	1uF 6.3V	[M]
FL8102	F1H0J1050018	1uF 6.3V	[M]
FL8103	F1H0J1050018	1uF 6.3V	[M]
FL8104	F1J1E1040022	0.1uF 25V	[M]
FL8421	F1H0J1050018	1uF 6.3V	[M]