

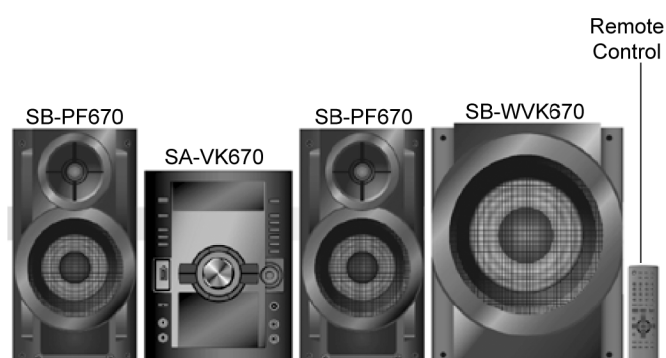
# Service Manual

## DVD Stereo System


**SA-VK670EE**

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  $\Omega$ ), 1 kHz, 10% THD

Subwoofer Ch

 250 W per channel (6  $\Omega$ ), 100 Hz, 10% THD

Total RMS Stereo mode power

500 W

PMPO output power

5500 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  $\Omega$  (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

# Panasonic®

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

|                              |                                                |
|------------------------------|------------------------------------------------|
| Normal                       | 35 Hz to 14 kHz                                |
| S/N ratio                    | 50 dB (A-Weighted)                             |
| Wow and flutter              | 0.18% (WRMS)                                   |
| Fast forward and rewind time | Approx. 120 seconds with<br>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 <sub>B</sub> output level | 0.7 Vp-p (75 Ω)            |
| P <sub>R</sub> output level | 0.7 Vp-p (75 Ω)            |
| Terminal output level       |                            |

Pin jack (Y: green, P<sub>B</sub>: blue, P<sub>R</sub>: red) (1 system)

## ■ USB SECTION

|                           |                                                                      |
|---------------------------|----------------------------------------------------------------------|
| USB Port                  |                                                                      |
| USB standard              | USB 2.0 full speed                                                   |
| Media file format support | MP3 (*.mp3)<br>WMA (*.wma)<br>JPEG (*.jpg) (*.jpeg)<br>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<sup>\* 6,\*7</sup> )
- (2) DVD-RAM (DVD-VR, JPEG<sup>\* 4,\*7</sup>, MP3<sup>\* 2,\*7</sup>, MPEG4<sup>\* 5,\*7</sup>, DivX<sup>\* 6,\*7</sup>)
- (3) DVD-R (DVD-Video, DVD-VR, JPEG<sup>\* 4,\*7</sup>, MP3<sup>\* 2,\*7</sup>, MPEG4<sup>\* 5,\*7</sup>, DivX<sup>\* 6,\*7</sup>)
- (4) DVD-R DL (DVD-Video, DVD-VR)
- (5) DVD-RW (DVD-Video, DVD-VR, JPEG<sup>\* 4,\*7</sup>, MP3<sup>\* 2,\*7</sup>, MPEG4<sup>\* 5,\*7</sup>, DivX<sup>\* 6,\*7</sup>)
- (6) +R/ +RW (Video)
- (7) +R DL (Video)
- (8) CD,CD-R/RW [CD-DA, Video CD, SVCD<sup>\* 1</sup>, MP3<sup>\* 2,\*7</sup>, WMA<sup>\* 3,\*7</sup>, JPEG<sup>\* 4,\*7</sup>, MPEG4<sup>\* 5,\*7</sup>, DivX<sup>\* 6,\*7</sup>]]

<sup>\* 1</sup> Conforming to IEC62107

<sup>\* 2</sup> MPEG-1 Layer 3, MPEG-2 Layer 3

<sup>\* 3</sup> Windows Media Audio Ver 9.0 L3

Not compatible with Multiple Bit Rate (MBR)

<sup>\* 4</sup> 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.

<sup>\* 5</sup> 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.

<sup>\* 6</sup> Plays all versions of DivX<sup>®</sup> video (including DivX<sup>®</sup>6) with standard playback of DivX<sup>®</sup> media files. Certified to the DivX<sup>®</sup> Home Theater Profile. GMC (Global Motion Compensation) is not supported.

<sup>\* 7</sup> 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

103 W

Power consumption in standby mode:

0.4 W (approx.)

Dimensions (W x H x D) 250 mm x 331 mm x 334 mm

Mass 4.9; kg

Operating temperature range +0 to +40°C

Operating humidity range 35 to 80% RH (no condensation)

## ■ SYSTEM

|             |                             |
|-------------|-----------------------------|
| SC-VK670(E) | Music Center: SA-VK670 (EE) |
|             | Speaker: SB-PF670 (GC)      |
|             | Subwoofer: SB-WVK670 (GC)   |

For information on speaker system, please refer to the original Service Manual (Order No. MD0805019CE) for SB-PF670GC-K.

For information on Subwoofer, please refer to the original Service Manual (Order No. MD0805030CE) for SB-WVK670GC-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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U.S. Patent Nos. 6,836,549; 6,381,747; 7,050,698; 6,516,132; and 5,583,936.

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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.

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### **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.

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# 1 Safety Precautions

## 1.1. GENERAL GUIDELINES

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

### 1.1.1. LEAKAGE CURRENT COLD CHECK

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

### 1.1.2. LEAKAGE CURRENT HOT CHECK

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

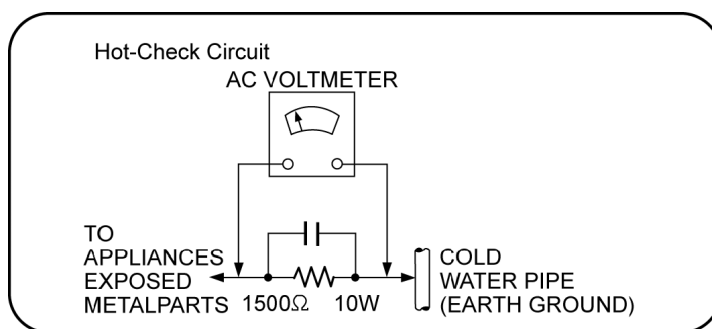


Figure 1

## 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  $10\Omega$ , 10 W resistor to ground.

### Caution:

DO NOT SHORT-CIRCUIT DIRECTLY (with a screwdriver blade, for instance), as this may destroy solid state devices. After repairs are completed, restore power gradually using a variac, to avoid overcurrent. Current consumption at AC 230 V, 50 Hz in NO SIGNAL mode volume minimal should be  $\sim 500$  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  $\triangle$  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       | RGRX0070N-B  | REAR PANEL              | [M] $\triangle$       |
| 36       | RKMX0144-K   | TOP CABINET             | [M] $\triangle$       |
| 68       | REXX0684     | BLACK WIRE              | [M] $\triangle$       |
| 69       | REXX0685     | RED WIRE                | [M] $\triangle$       |
| A2       | K2CQ2CA00007 | AC CORD                 | [M] $\triangle$       |
| PCB2     | REPX0676A    | SMPS P.C.B              | [M] (RTL) $\triangle$ |
| PCB3     | REPX0676A    | AC INLET P.C.B          | [M] (RTL) $\triangle$ |
| DZ5701   | ERZV10V511CS | ZNR                     | [M] $\triangle$       |
| L5701    | ELF15N035AN  | LINE FILTER             | [M] $\triangle$       |
| L5702    | ELF22V035B   | LINE FILTER             | [M] $\triangle$       |
| L5703    | ELF22V020A   | LINE FILTER             | [M] $\triangle$       |
| T2900    | G4D1A0000117 | SWITCHING TRANSFORMER   | [M] $\triangle$       |
| T5701    | ETS42BN1A6AD | MAIN POWER TRANSFORMER  | [M] $\triangle$       |
| T5751    | ETS19AB256AG | BACKUP TRANSFORMER      | [M] $\triangle$       |
| PC5701   | B3PBA0000402 | PHOTO COUPLER           | [M] $\triangle$       |
| PC5702   | B3PBA0000402 | PHOTO COUPLER           | [M] $\triangle$       |
| PC5720   | B3PBA0000402 | PHOTO COUPLER           | [M] $\triangle$       |
| PC5799   | B3PBA0000402 | PHOTO COUPLER           | [M] $\triangle$       |
| F1       | K5D502BNA005 | FUSE                    | [M] $\triangle$       |
| FP2901   | K5G401A00008 | FUSE PROTECTOR          | [M] $\triangle$       |
| TH5701   | D4CAC8R00002 | THERMISTOR              | [M] $\triangle$       |
| TH5860   | D4CC11040013 | THERMISTOR              | [M] $\triangle$       |
| P5701    | K2AA2B000017 | AC INLET                | [M] $\triangle$       |
| C5700    | F1BAF1020020 | 1000pF                  | [M] $\triangle$       |
| C5701    | F0CAF334A087 | 0.33uF                  | [M] $\triangle$       |
| C5704    | F1BAF1020020 | 1000pF                  | [M] $\triangle$       |
| C5705    | F1BAF1020020 | 1000pF                  | [M] $\triangle$       |
| C5706    | F1BAF1020020 | 1000pF                  | [M] $\triangle$       |
| C5707    | F1BAF1020020 | 1000pF                  | [M] $\triangle$       |

## 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.

USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

**CAUTION:**

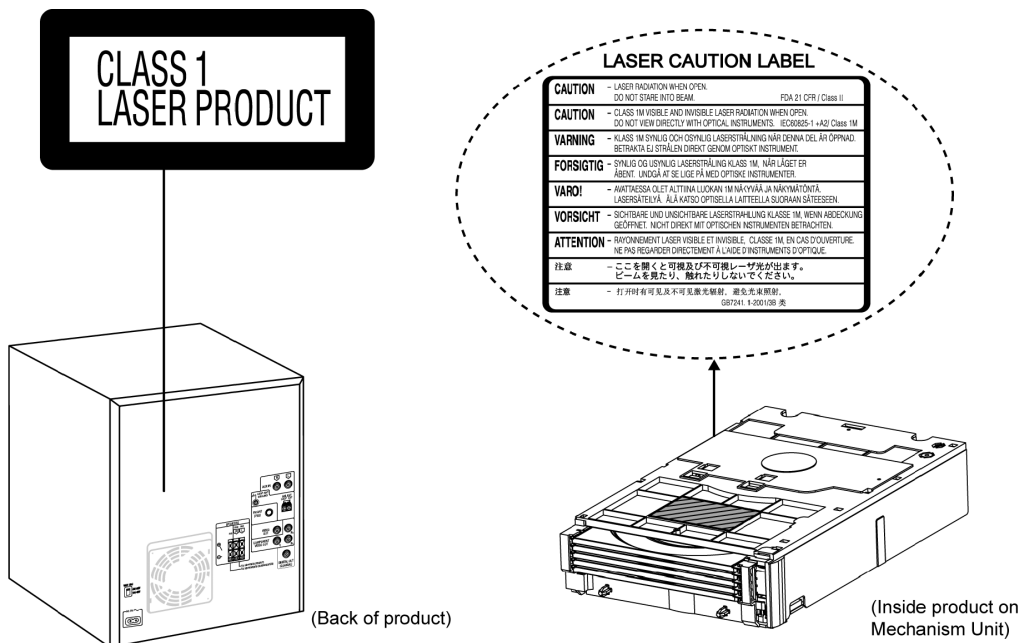
This product utilizes a laser diode with the unit turned "on", invisible laser radiation is emitted from the pickup lens.

Wavelength: 655 nm (DVD)/785 nm (CD)

Maximum output radiation power from pickup: 100  $\mu$ W/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.



## 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.<br>(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%

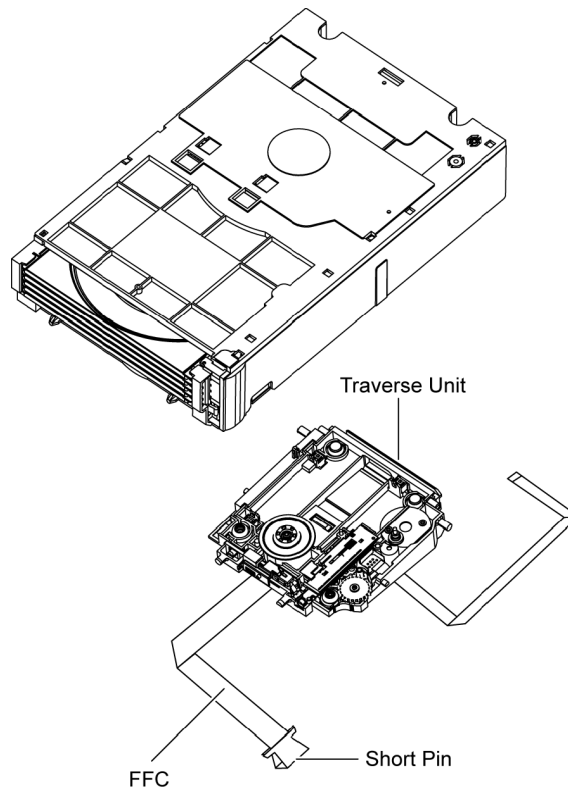
## 5 Handling Precautions for Traverse Unit

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

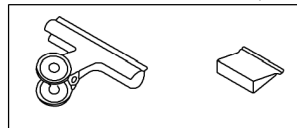
The laser diode in the optical pickup unit may be damaged due to electrostatic discharge generating from clothes or human body. Special care must be taken avoid caution to electrostatic discharge damage when servicing the laser diode.

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

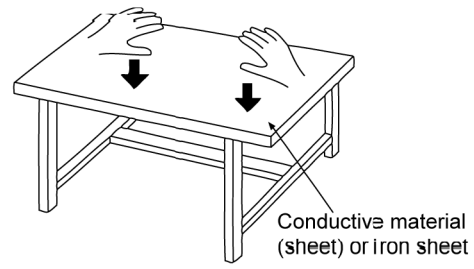
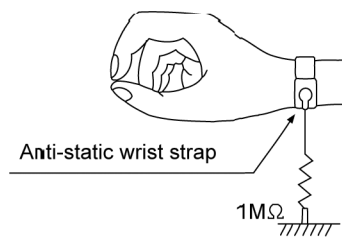
Some devices such as the DVD player use the optical pickup (laser diode) and the optical pickup will be damaged by static electricity in the working environment. Proceed servicing works under the working environment where grounding works is completed.

#### 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.

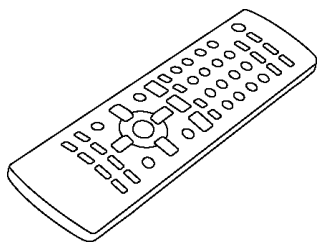
#### 5.2.2. Human body grounding

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

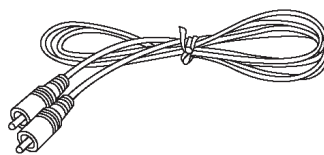


## 6 Accessories

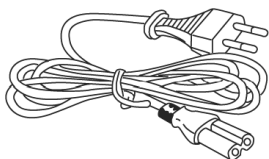
- Note: Refer to “Replacement Parts List” (Section 25) for the part number.



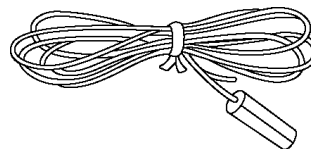
Remote control



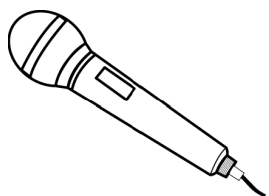
Video cable



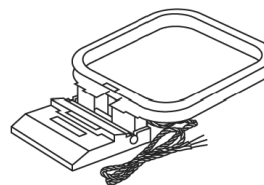
AC cord



FM indoor antenna



Microphone



AM Loop antenna

## 7 Operation Procedures

### 7.1. Main Unit key Button Operations

#### 1 AC supply indicator (AC IN)

This indicator lights when the unit is connected to the AC mains supply.

#### 2 Standby/on switch (⏻/⏻)

Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.

#### 3 Selecting desired display mode

#### 4 Using advanced surround

#### 5 Adjusting subwoofer level

#### 6 [• REC, TAPE]

#### 7 USB port

#### 8 Deck [⏮, OPEN]

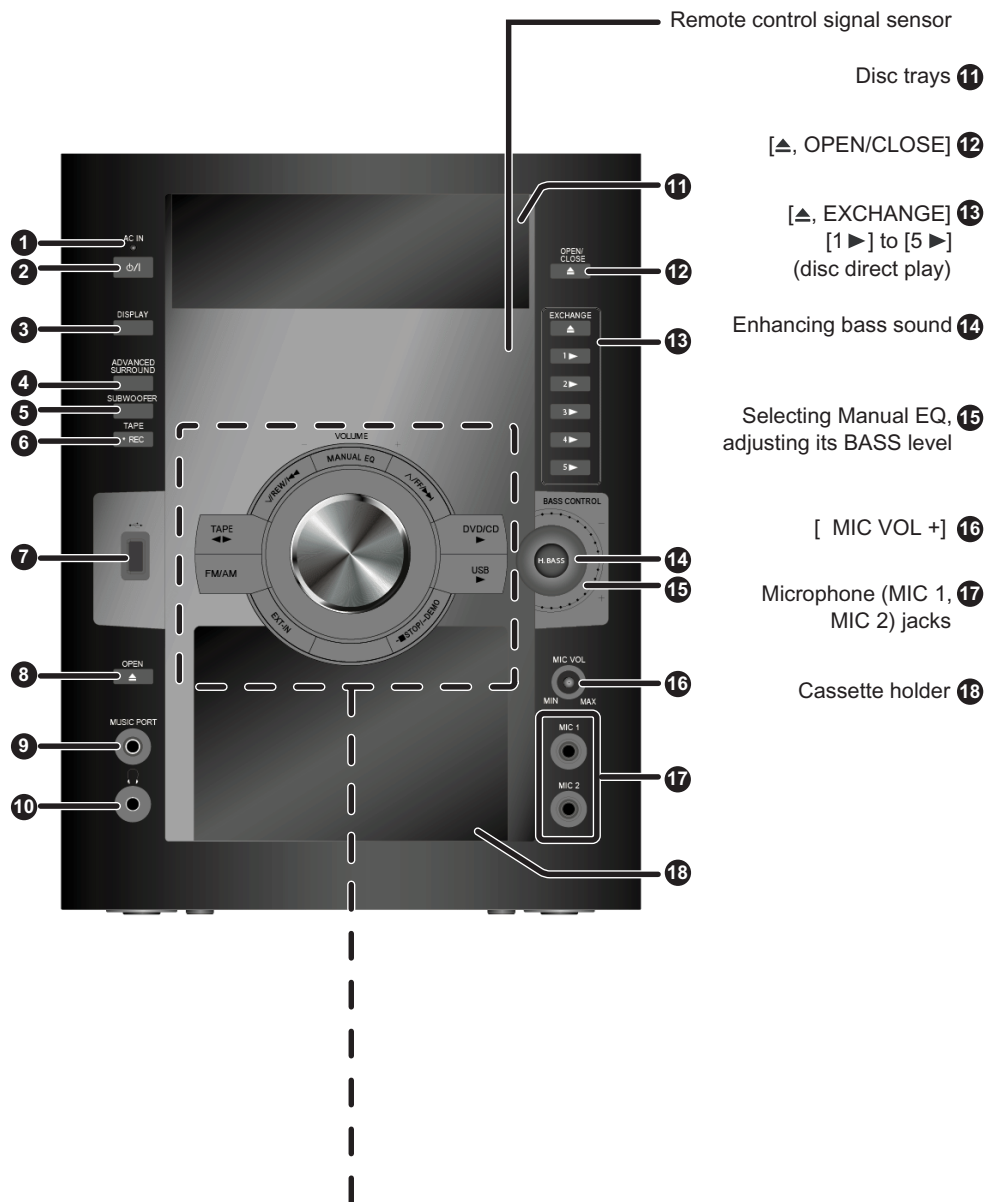
#### 9 MUSIC PORT jack

#### 10 Headphone jack

Reduce the volume level and connect the headphones. Headphones plug type : 3.5 mm stereo (not included).

Avoid listening for prolonged periods of time to prevent hearing damage.

Excessive sound pressure from earphones and headphones can cause hearing loss.



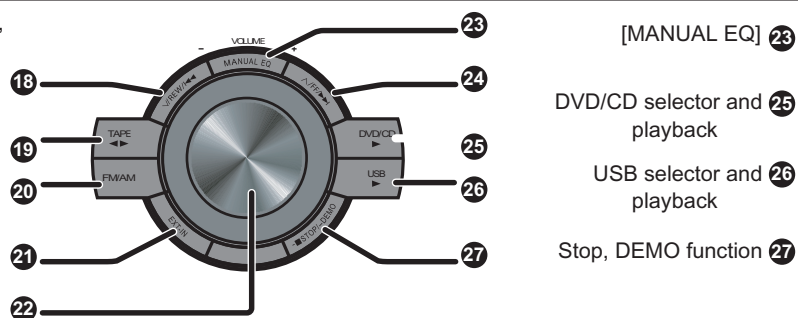
#### 18 24 Skip, rewind, fast forward, Tape Program Sensor, sound quality adjustment, time adjustment

#### 19 Tape playback and direction

#### 20 FM/AM selection

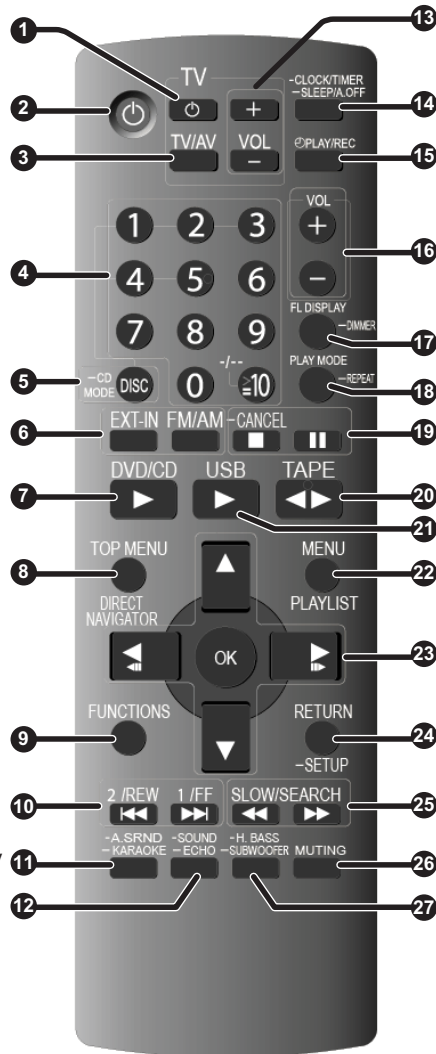
#### 21 MUSIC P./AUX selection

#### 22 [ VOLUME +]



## 7.2. Remote Control Key Buttons Operations

- 1 Television power on/off
- 2 Turn the unit on/off
- 3 Change the television's video input mode
- 4 Select channels and title numbers etc./Enter numbers
- 5 Show disc information/Select a disc  
Play loaded discs in order
- 6 **EXT-IN:** MUSIC P./AUX selection  
**FM/AM:** FM/AM selection
- 7 DVD/CD selector and playback
- 8 Show a disc top menu or program list
- 9 Show on-screen menu
- 10 Skip, rewind, fast forward, Tape  
Program Sensor, sound quality  
adjustment, preset channel selection,  
time adjustment
- 11 Using advanced surround  
Show karaoke settings menu
- 12 Adjust the sound field and sound quality  
Adjusting echo



- Adjust the television volume 13
- Clock and timer setting 14  
Sleep timer, Auto off operation setting
- PLAY/REC timer on/off 15
- Adjust the volume of the main unit 16
- Changes the unit's display 17  
Dim the display panel
- Random Play, Program Play 18  
Tape: Reverse mode selection  
Repeat play
- Stop, Cancel an item 19  
Pause
- Tape playback and direction 20
- USB selector and playback 21
- Show a disc menu or playlist 22
- Frame-by-frame/Select or register 23  
menu items
- Return to previous screen or change 24  
the player's settings
- Slow motion, search, tuning 25
- Mute the sound 26
- Enhancing bass sound 27  
Adjusting subwoofer level

## 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 |  | <b>DVD-V</b>                       | High quality movie and music discs.                                 |
| Video CD  |  | <b>VCD</b>                         | Music discs with video.<br>Including SVCD (Conforming to IEC62107). |
| CD        |  | <b>CD</b>                          | Music discs.                                                        |

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

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

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.

<sup>\*1</sup> This unit can play CD-R/RW recorded with CD-DA or Video CD format.

<sup>\*2</sup> Discs recorded on DVD video recorders or DVD video cameras, etc. using Version 1.1 of the Video Recording Format (a unified video recording standard).

<sup>\*3</sup> Discs recorded on DVD video recorders or DVD video cameras using Version 1.2 of the Video Recording Format (a unified video recording standard).

<sup>\*4</sup> Discs recorded on DVD video recorders or DVD video cameras using DVD-Video Format.

<sup>\*5</sup> Recorded using a format different from DVD-Video Format, therefore, some functions cannot be used.

<sup>\*6</sup> 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.

<sup>\*7</sup> Closing the session will also work.

<sup>\*8</sup> 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].

<sup>\*9</sup> 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 specifications 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.

#### Naming folders and files

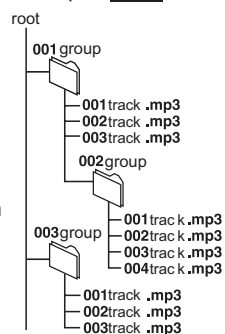
**Files are treated as contents and folders are treated as groups on this unit.**

At the time of recording, prefix folder and file names. This should be with numbers that have an equal number of digits, and should be done in the order you want to play them (this may not work at times). Files must have the extension ( below).

#### WMA (Extension: .WMA or .wma )

Compatible compression rate: between 48 kbps and 320 kbps. You cannot play WMA files that are copy-protected. This unit does not support Multiple Bit Rate (MBR).

Example: **MP3**



#### MP3 (Extension: .MP3 or .mp3 )

This unit does not support ID3 tags. Sampling frequency and compression rate: DVD-RAM, DVD-R/RW: 11.02, 12, 22.05, 24 kHz (8 to 160 kbps), 44.1 and 48 kHz (32 to 320 kbps) CD-R/RW: 8, 11.02, 12, 16, 22.05, 24 kHz (8 to 160 kbps), 32, 44.1 and 48 kHz (32 to 320 kbps)

#### JPEG (Extension: .JPG , .jpg , .JPEG or .jpeg )

JPEG files taken on a digital camera that conform to DCF Standard (Design rule for Camera File system) Version 1.0 are displayed. Files that have been altered, edited or saved with computer picture editing software may not be displayed. This unit cannot display moving pictures, MOTION JPEG and other such formats, and still pictures other than JPEG (Example: TIFF), or play pictures with attached audio.

#### MPEG4 (Extension: .ASF or .asf )

You can play MPEG4 data [conforming to SD VIDEO specifications (ASF standard)/MPEG4 (Simple Profile) video system/G.726 audio system] recorded with Panasonic SD multi cameras or DVD video recorders with this unit. The recording date may differ from that of the actual date.

#### DivX (Extension: .DIVX , .divx , .AVI or .avi )

You can play all versions of DivX<sup>®</sup> video (including DivX<sup>®</sup>6) [DivX video system/MP3, Dolby Digital or MPEG audio system] with standard playback of DivX<sup>®</sup> media files. Functions added with DivX Ultra are not supported. DivX files greater than 2 GB or have no index may not be played properly on this unit. This unit supports all resolutions up to maximum of 720 x 480 (NTSC)/720 x 576 (PAL). You can select up to eight types of audio and subtitles on this unit.

## 7.4. Using the Music Port

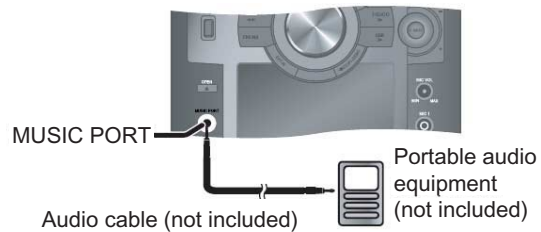
This feature enables you to enjoy music from a portable audio equipment.

### Using the Music Port

You can playback sound from portable audio equipment. Sound from the speaker may be distorted if the portable audio equipment's equalizer (if any) is turned on. Turn it off before you plug into the MUSIC PORT jack.

#### Preparation:

Reduce the volume of the unit and portable audio equipment before connecting or disconnecting.



- 1 Connect the portable audio equipment.**  
Plug type: 3.5 mm stereo
- 2 Press [EXT-IN] to select MUSIC PORT .**  
Every time you press the button:  
MUSIC PORT 1 AUX
- 3 For listening :** Proceed to step 4.  
**For recording :** Press [ •REC, TAPE] on the main unit to start recording
- 4 Playback the portable audio equipment.**  
(For details, refer to the external unit'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](http://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 first 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. (RENTED MOVIE EXPIRED or RENTAL EXPIRED is displayed.)

When playing this content

The number of remaining plays is reduced by one if

you press [⏮] or press and hold [SETUP].

you press [■]. [Press [⏮] (pause) to pause play.]

you press [⏮, ⏭] (skip) or [⏮, ⏭] (search) etc. and arrive at another content or the start of the content being played.

The Resume function does not work.

## 7.6. Connecting and Playing a USB Mass Storage Class Device



### Using the USB playback function

The USB connectivity enables you to connect and play tracks or files from USB mass storage class 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.

It is not recommended to use a USB extension cable.

The USB device is not recognised by this unit.

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

USB enabled device  
(not included)

#### 2 Press [▶, USB] to begin playback.

#### 3 Press [TOP MENU] or [MENU] to display the USB menu.

#### 4 Press [▲, ▼, ◀, ▶] and then [OK] to select the desired item.

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

#### Compatible Devices

Devices which are defined as USB mass storage class:

USB devices that support bulk only transfer.

USB devices that support USB 2.0 full speed.

#### Supported Formats

|                | File name           | File extension |
|----------------|---------------------|----------------|
| Still pictures | JPG <sup>*1</sup>   | .jpg .jpeg     |
| Music          | MP3<br>WMA          | .mp3<br>.wma   |
| Video          | MPEG4 <sup>*2</sup> | .asf           |

<sup>\*1</sup> It may not be possible to play all the files due to the condition on how they were created.

<sup>\*2</sup> For Panasonic D-Snap/DIGA

#### Note

|                               |      |
|-------------------------------|------|
| Maximum number of folders     | 256  |
| Maximum number of files       | 4000 |
| Maximum length of folder name | 12   |
| Maximum length of file name   | 12   |

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.

Only one memory card will be selected when connecting a multi-port 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.                                                                                                                                                |                                                                            |
|              | $\equiv 10$                                                                         | Initialization of the player (factory setting is restored).<br>Used after replacement of Micro-processor (DV5 LSI) IC, FLASH ROM IC (IC8651), EEPROM IC (IC8611) and DVD Module P.C.B. | (Refer to the section "8.2.4. Service Mode Table 4" for more information.) |
|              | [8]                                                                                 | DVD Module P.C.B. firmware version check.                                                                                                                                              |                                                                            |
|              | [DISC]                                                                              | CPPM/CRM keys check.                                                                                                                                                                   | (Refer to the section "8.2.5. Service Mode Table 5" for more information.) |
|              | [ENTER]                                                                             | DVD Module P.C.B. reset.                                                                                                                                                               |                                                                            |
|              |    | Timer 1 check.                                                                                                                                                                         |                                                                            |
|              |   | 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] +<br>[  ] | -                           | Entering into self-diagnostic mode. | (Refer to the section "8.3.1. Service Mode Table 1" for more information.) |
| [1]<br>(In self-diagnostic mode)                                                                    | -                           | Servicing the mechanism unit.       |                                                                            |
| [2]<br>(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)               |                                                                            |

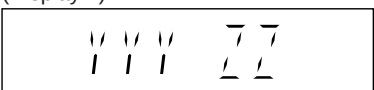
## 8.2. Service Mode Table (For DVD)

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

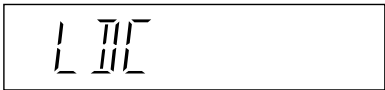
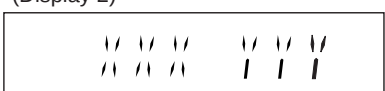
**Special Note:**

- 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”.

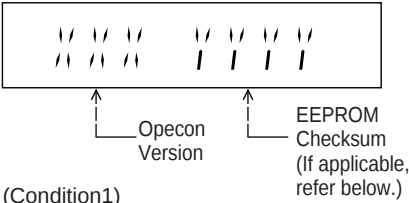
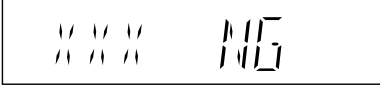
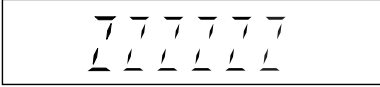
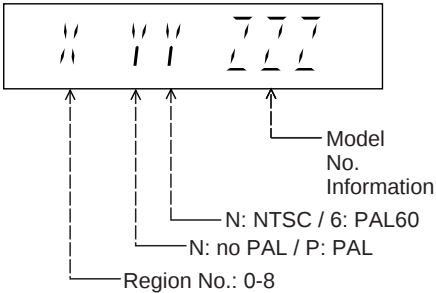
### 8.2.1. Service Mode Table 1

| Item                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | FL Display                                                                                                                                                                                                                                                                                                                                                                                                             | Key Operation                                                                                                                                                                                                                                                                |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mode Name                              | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                        | Front Key                                                                                                                                                                                                                                                                    |
| Jitter check                           | <p>Jitter check.<br/>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.<br/>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.<br/>In this case, the counter advances by one. When the error persists even after retry, the counter may jump by two or more.</p> <p>FL Display sequence:<br/>Display 1→2.</p> | <p>(Display 1)</p>  <p>Jitter rate is shown in decimal notation to one place of decimal.<br/>Focus drive value is shown in hexadecimal notation.</p> <p>(Display 2)</p>                                                                            | <p>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.</p> <p>Press [FL Display] on remote control unit for next page (FL Display).</p>                                                    |
| Error code display                     | <p>Error code check<br/>The latest error code stored in the EEPROM IC is displayed.</p> <p>Note: Refer to "Section 9.4 DVD Self Diagnostic Function-Error Code" for more detailed information on the error codes.</p>                                                                                                                                                                                                                                                                                                                                           |  <p>Error code (play_err) is expressed in the following convention.<br/>Error code = 0 x DAXX is expressed: → DVDnn U12<br/>Error code = 0 x DBXX is expressed: → DVDnn H12<br/>Error code = 0 x DXXX is expressed: → DVDnn F123<br/>Error code = 0 x 0000 is expressed: → DVDnn F---<br/>* "xx" denotes the error code</p>          | <p>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.<br/>To exit, press [POWER] button on main unit or remote control.</p> |
| Initial setting of laser drive current | <p>Initial setting of laser drive current.<br/>Initial current value for the DVD laser and CD laser is separately saved in the EEPROM IC.</p> <p>FL Display sequence:<br/>Display 1→2.</p>                                                                                                                                                                                                                                                                                                                                                                      | <p>(Display 1)</p>  <p>The value denotes the current in decimal notation.</p> <p>(Display 2)</p>  <p>The above example shows the initial current is XXXmA and YYYmA for CD laser and DVD laser respectively when the laser is switched on.</p> | <p>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.</p> <p>Press [FL Display] on remote control unit for next page (FL Display) on values of laser drive current.</p>   |

## 8.2.2. Service Mode Table 2

| Item                                |                                                                                                                                                                                                                                                                                                                                 | FL Display                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Key Operation                                                                                                                                                                                                                                                                |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mode Name                           | Description                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Front Key                                                                                                                                                                                                                                                                    |
| DVD laser drive current measurement | <p>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.</p> <p>After the measurement, DVD laser emission is kept on. It is turned off when POWER key is switched off.</p> <p>FL Display sequence:<br/>Display 1→2.</p> | <p>(Display 1)</p>  <p>↑<br/>DVD laser current measurement mode</p> <p>The value denotes the current in decimal notation.</p> <p>(Display 2)</p>  <p>↑                      ↑                      ↑<br/>DVD Laser          DVD Laser          Identify as<br/>Initial Value      Value              LDD mode</p> <p>The above example shows the initial current is XXXmA and the measured value is YYYmA.</p> | <p>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.</p> <p>Press [FL Display] on remote control unit for next page (FL Display) on values of dvd drive current.</p> |
| CD laser drive current measurement  | <p>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.</p> <p>After the measurement, CD laser emission is kept on. It is turned off when POWER key is switched off.</p> <p>FL Display sequence:<br/>Display 1→2.</p>    | <p>(Display 1)</p>  <p>↑<br/>CD Laser Current Measurement Mode</p> <p>The value denotes the current in decimal notation.</p> <p>(Display 2)</p>  <p>↑                      ↑<br/>CD Laser Initial      CD Laser<br/>Value                  Value</p> <p>The above example shows the initial current is XXXmA and the measured value is YYYmA.</p>                                                           | <p>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.</p> <p>Press [FL Display] on remote control unit for next page. (FL Display)</p>                                        |

### 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. | <p>Micro-processor firmware version display &amp; EEPROM checksum display. EEPROM checksum is only available due to existence of EEPROM IC.</p> <p>Note: Condition 1/2/3 shows the state of EEPROM IC. It is indicated in Display 2.</p> <p>FL Display sequence: Display 1→2→3.</p> | <p>(Display 1)</p>  <p>(Display 2)</p>  <p>(Condition1)</p>  <p>If the version of the EEPROM does not match, [NG] is displayed.</p> <p>(Condition 2)</p>  <p>(a) If there is NO EEPROM header string<br/>OR<br/>(b) If there is no EEPROM (no data is received by Micro-processor), [NO] is displayed.</p> <p>(Condition 3)</p>  <p>If the EEPROM version matches, checksum [YYYY] is displayed.</p> <p>(Display 3)</p>  | <p>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.</p> <p>Press [FL Display] button on remote control unit for next page. (FL Display)</p> |
| Initialization mode                                                 | <p>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) &amp; DVD Module P.C.B.</p>                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <p>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.</p>                                                                                   |
| Region display                                                      | <p>Region code display, TV broadcasting system &amp; the model no. information.</p> <p>Note: Refer to Fig. 8.1 for "Video Design Information".</p>                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <p>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.</p>                                                                                     |

| 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

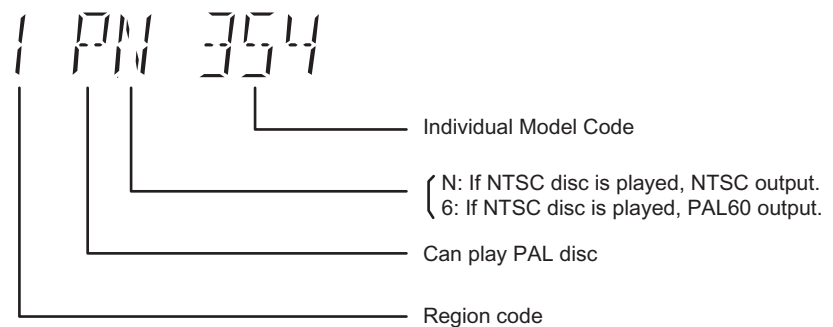
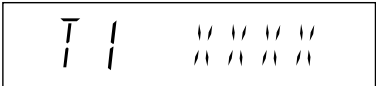
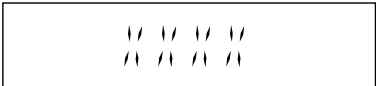
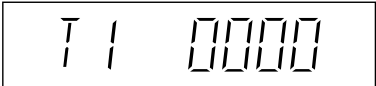
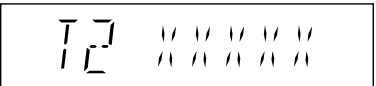


Figure 8.1 Video Design Information

## 8.2.4. Service Mode Table 4

| Item                                       |                                                                                                                                                                                                                                                  | FL Display                                                                                                                                                                                                                                                                                                                                                                                                                                          | Key Operation                                                                                                                                                         |
|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mode Name                                  | Description                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Front Key                                                                                                                                                             |
| DVD Module P.C.B. firmware version display | <p>DVD Module P.C.B. firmware version is displayed on the FL Display. The firmware version can be updated using recovery disc.</p> <p>Note: It is necessary to check for firmware version before carrying out the version up using the disc.</p> | <p>The diagram shows a 16-segment display divided into four groups of four segments each. Arrows point from labels to specific segments: 'Region No.: 0-8' points to the first two segments of the first group, 'System controller generation' points to the third segment of the second group, 'Destination' points to the fourth segment of the third group, and 'System controller version' points to the fifth segment of the fourth group.</p> | 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.                     |
| CPPM/CRM Keys Check                        | <p>CPPM/CRM refers to the Content Protection for Recordable Media and Pre-Recorded Media. It displays the existence of the keys as "1" or "0".</p> <p>OK: Existing of keys.<br/>NG: Non existing of keys.</p>                                    | <p>The diagram shows a 4-segment display. Below the segments are labels: '0: NG' under the first segment, '1: OK' under the second segment, '0: NG' under the third segment, and '1: OK' under the fourth segment.</p>                                                                                                                                                                                                                              | In STOP (no disc) mode, press [STOP] button on the main unit, and [DISC] 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.                                                                                                                           | <p>The diagram shows a 16-segment display with the word 'RESET' displayed in a stylized font.</p>                                                                                                                                                                                                                                                                                                                                                   | While in initialization mode, press & hold [STOP] button on the main unit, follow by [OK] button on the remote control unit. Cancelled automatically 5 seconds later. |

## 8.2.5. Service Mode Table 5

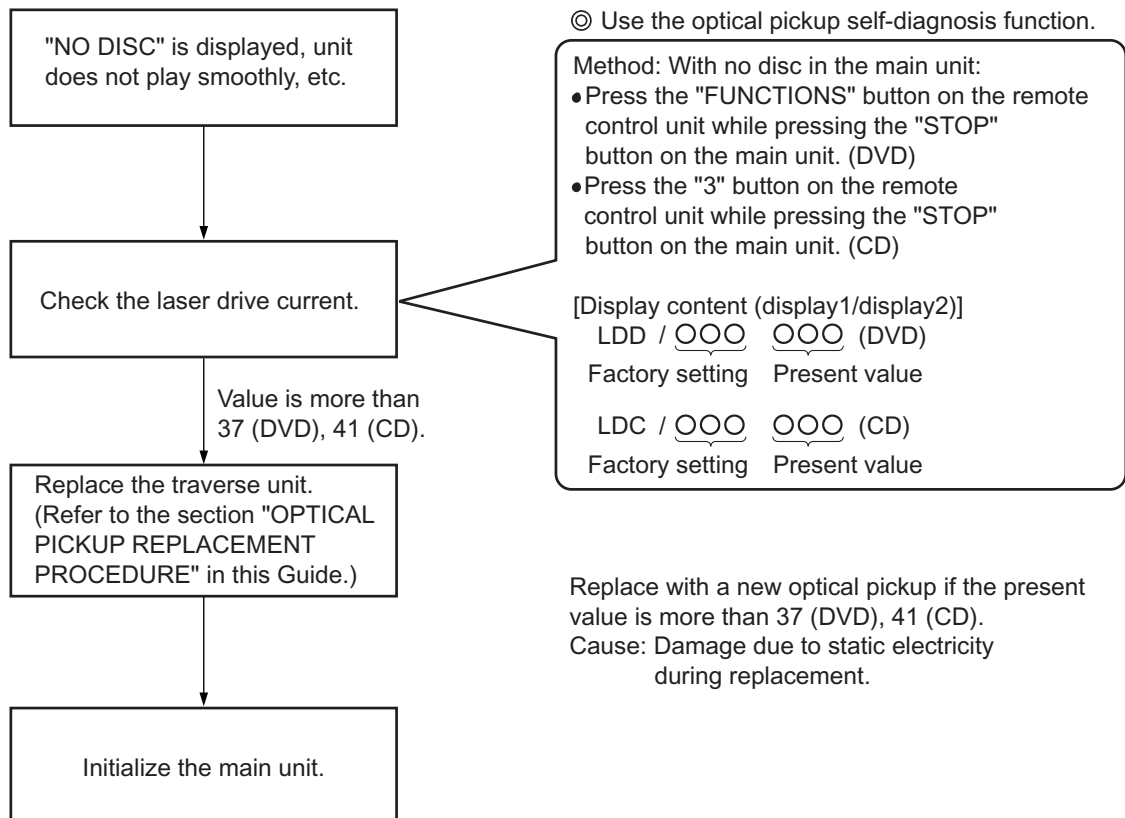
|               | Item                                                                                                                                           | FL Display                                                                                                                               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

### 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.

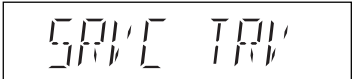
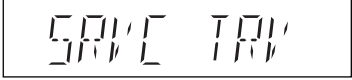
**Note:**

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

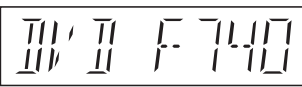
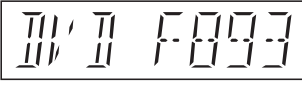
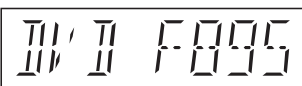
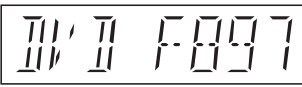
| Item                 |                                                                                                                                                                                                                                                                             | FL Display                                                                         | 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):<br>Press and hold [STOP] button for five seconds, followed by [^/FF/▶▶] button on the main unit.<br><br>To exit, press [⏻/AC IN] button on main unit or remote control unit. |
| Service Mode 1       | To unlock the mechanism unit for service.<br><br>In this mode, the disassembly of CR14 can be carry out. (Refer to original service manual for CR14)<br><br>1. All trays are set to "STOCK" position.<br>2. Mechanism set to tray 1.<br>3. Cam gear set to "HOME" position. |  | In self-diagnostic mode, press [1] button on main unit.<br><br>To exit, power off the main unit<br><br>Press [EXCHANGE] on main unit for error code.                                                                      |
| Service Mode 2       | To unlock the traverse unit for service.<br><br>In this mode, traverse unit can be disassembled. (Refer to original service manual for CR14)<br><br>1. Tray 5 set to "Play" position.<br>2. Mechanism set to tray 5.<br>3. Cam gear set to "HOME" position.                 |  | In self-diagnostic mode, press [2] button on main unit.<br><br>To exit, power off the main unit<br><br>Press [EXCHANGE] on main unit for error code.<br><br>(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<br>1<br>(Load cycle Test)     | To determine open/close operation of the mechanism (all trays).<br><br>In this mode, the trays are loaded & unloaded. | Display 1<br><br><br>Display 2<br><br><br>The counter will increment by one.<br>When reach 99999 will change to 00000       | In self-diagnostic mode, press [1] button on remote control.<br><br>To exit, press [⏏/I] button on the main unit or remote control unit. |
| Reliability<br>2<br>(Traverse Cycle Test) | To determine playability operation.                                                                                   | Display 1<br><br><br>Display 2<br><br><br>The counter will increment by one.<br>When reach 99999 will change to 00000      | In self-diagnostic mode, press [2] button on remote control.<br><br>To exit, press [⏏/I] button on the main unit or remote control unit. |
| Reliability<br>3<br>(Combi Cycle Test)    | The combine test for both load & traverse cycle test.                                                                 | Display 1<br><br><br>Display 2<br><br><br>The counter will increment by one.<br>When reach 99999 will change to 00000 | In self-diagnostic mode, press [3] button on remote control.<br><br>To exit, press [⏏/I] button on the main unit or remote control unit. |

## 8.4. DVD Self Diagnostic Function-Error Code

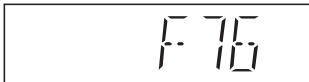
### 8.4.1. DVD Module Error Code Table

| 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. (Firmware)                                                                                                                    |  | Press [ ■STOP] on main unit for next error. |

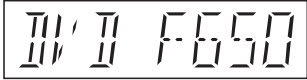
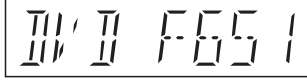
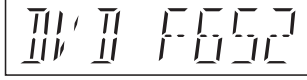
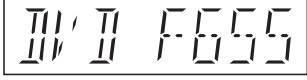
### 8.4.2. Mechanism Error Code Table

| 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.<br>(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.<br>(Unfinalized DVD-R is likely to become U11.)                    |
| U15        | Unfinalized DVD-R                        |                                                                                                                                                            |                      |                                                                                                                 |
| F500       | DSC error                                | DV5 LSI IC (IC8001) stops in the occurrence 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.                                                                    |

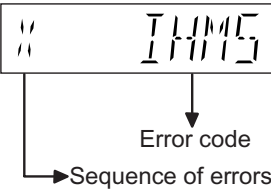
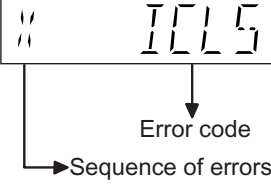
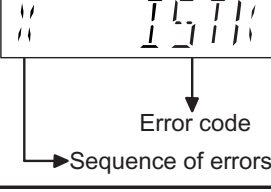
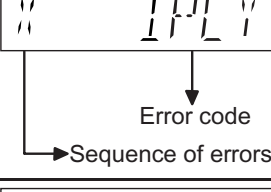
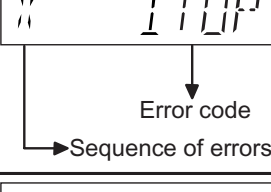
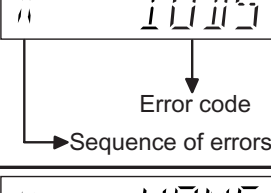
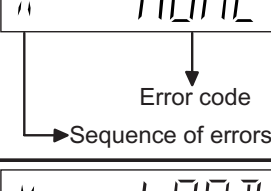
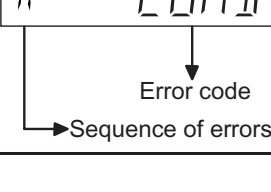
### 8.4.3. Power Supply & Digital Amplifier Error Code Table

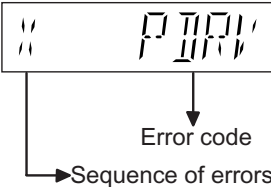
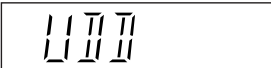
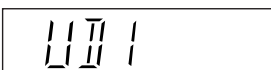
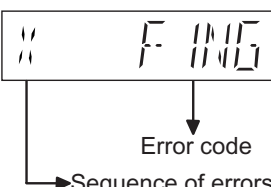
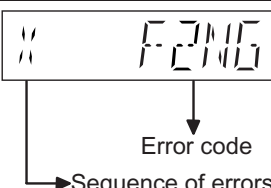
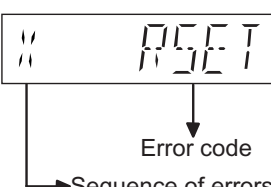
| Error Code | Diagnosis Contents                                                  | Description of error                                                                                                                                                                                                                                             | 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)<br>001b: Reduced Block Commands (RBC)<br>010b: SFF-8020i. MMC-2 (ATAPI)<br>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 hence 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:<br>1. After tray is loaded to "PLAY" position.<br>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.<br>(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.<br>(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.<br>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.<br>Press [STOP, ■] on main unit for next error. |
| H03        | HALF SW abnormal                            |                                                                                                                                                                                     |  | For deck mechanism unit.<br>Press [STOP, ■] on main unit for next error. |
| F01        | Reel pulse abnormal                         |                                                                                                                                                                                     |  | For deck mechanism unit.<br>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  $\geq 10$  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/R) LED 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)
- Replacement of Audio Digital Power Amp IC (IC5200)
- 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.

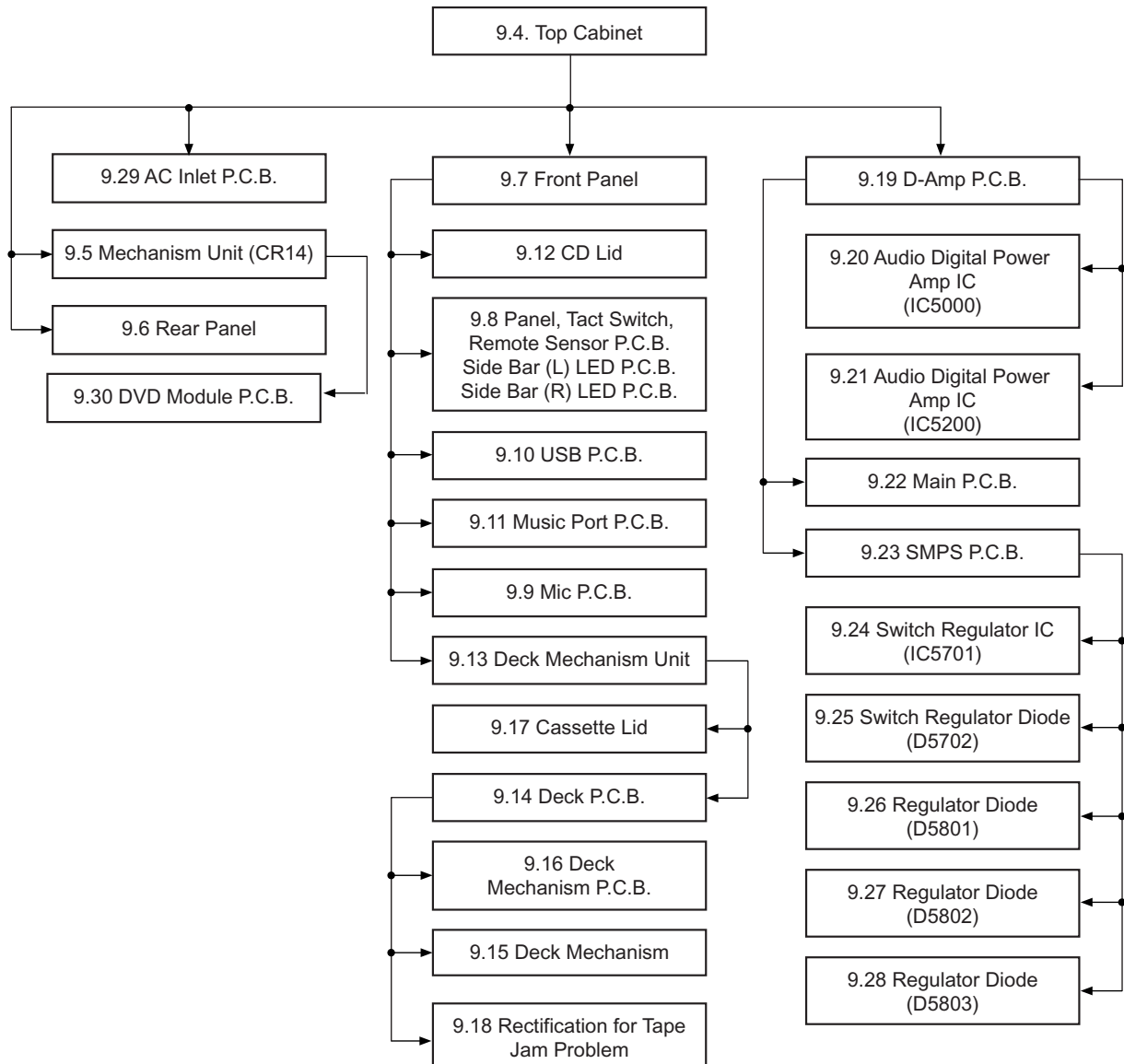
Below shown is part no. of different screw types used:

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

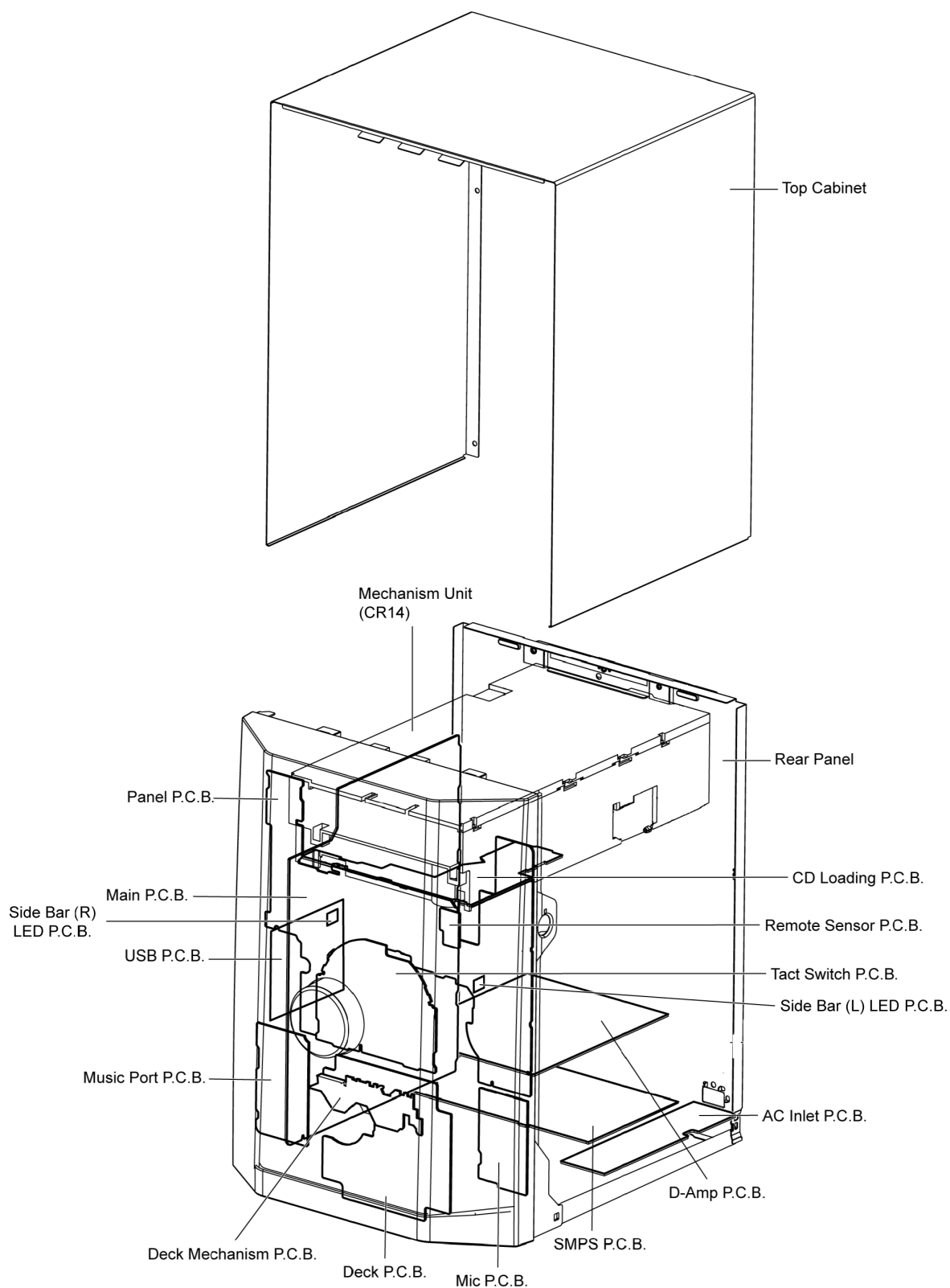
## 9.2. Disassembly flow chart

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.

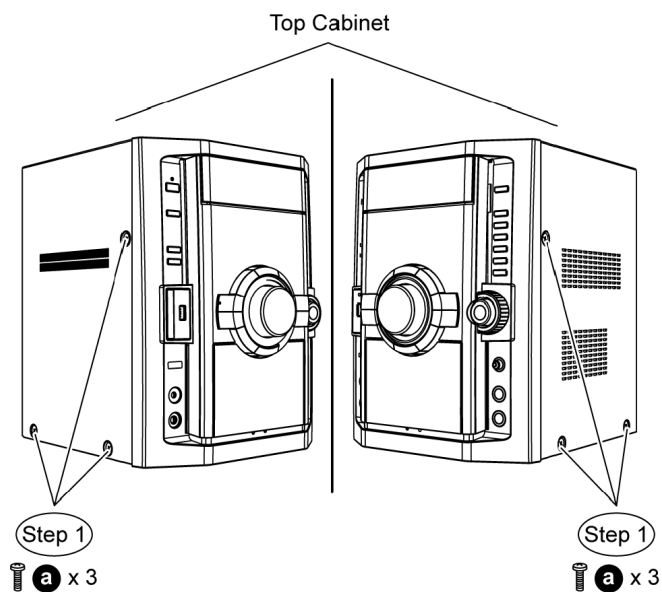


### 9.3. Main Components and P.C.B. Location

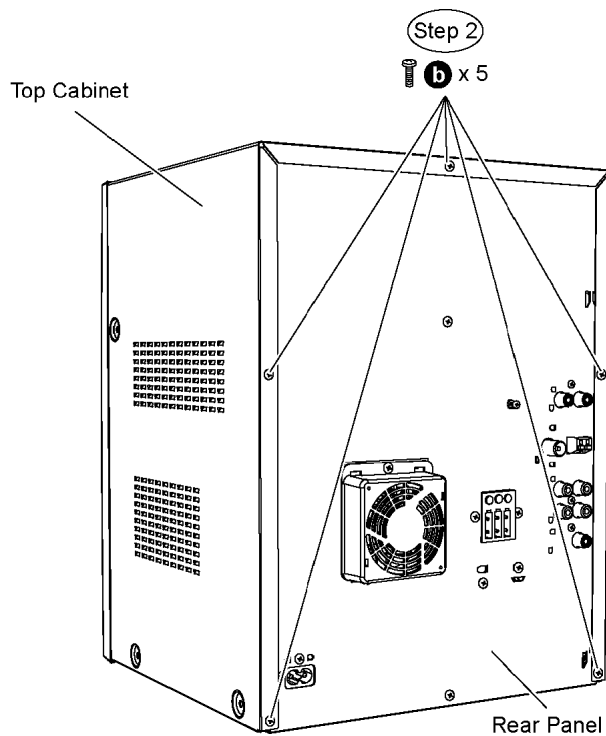


## 9.4. Disassembly of Top Cabinet

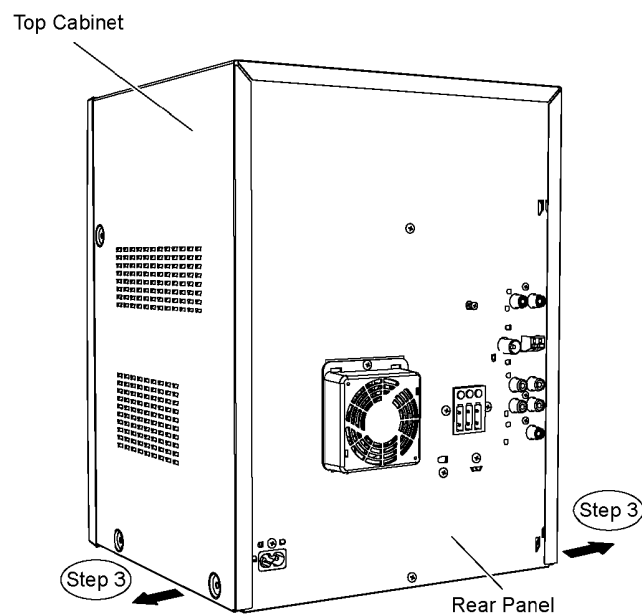
**Step 1** Remove 3 screws on both sides of the top cabinet.



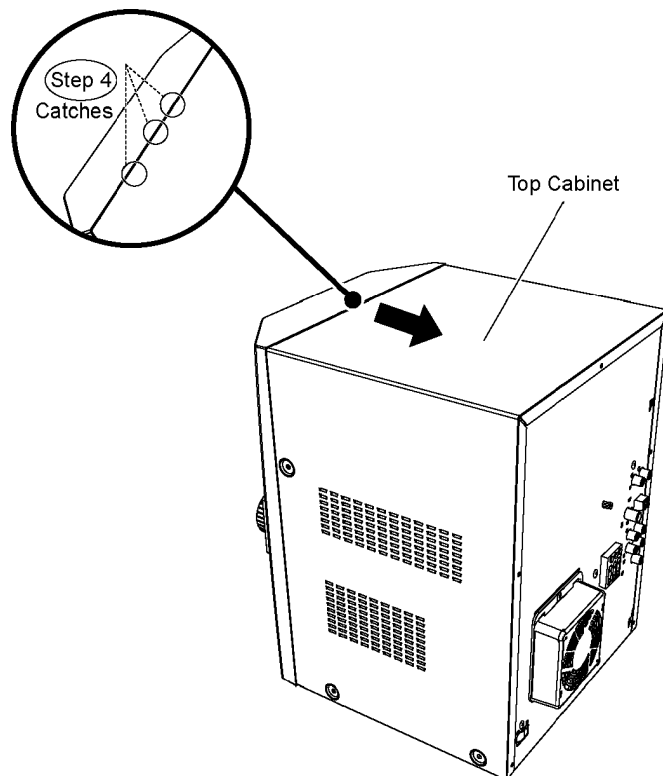
**Step 2** Remove 5 screws at the rear panel.



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

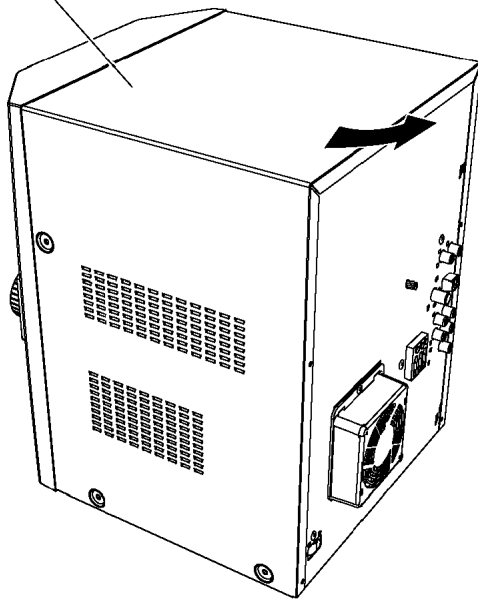


**Step 4** Push the top cabinet backwards as arrow shown to release the catches.



**Step 5** Remove the top cabinet.

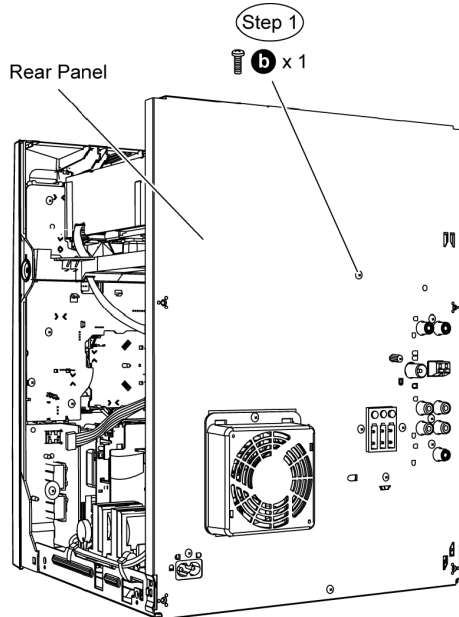
Top Cabinet



## 9.5. Disassembly of Mechanism Unit (CR14)

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

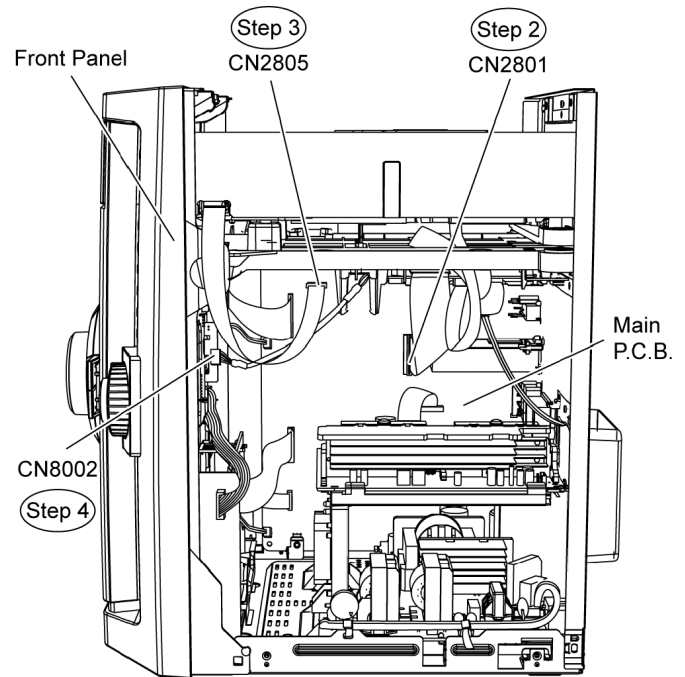
**Step 1** Remove 1 screw at rear panel.



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

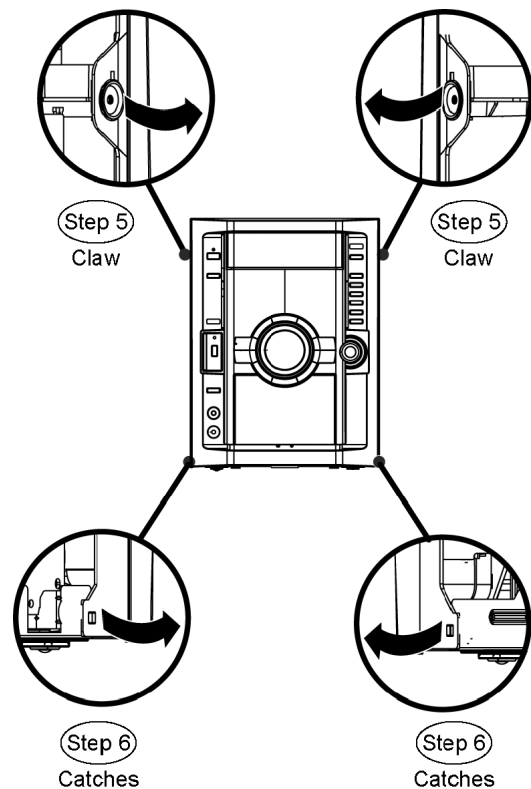
**Step 3** Detach 11P FFC cable at the connector (CN2805) on Main P.C.B..

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



**Step 5** Release the claws outwards on both sides.

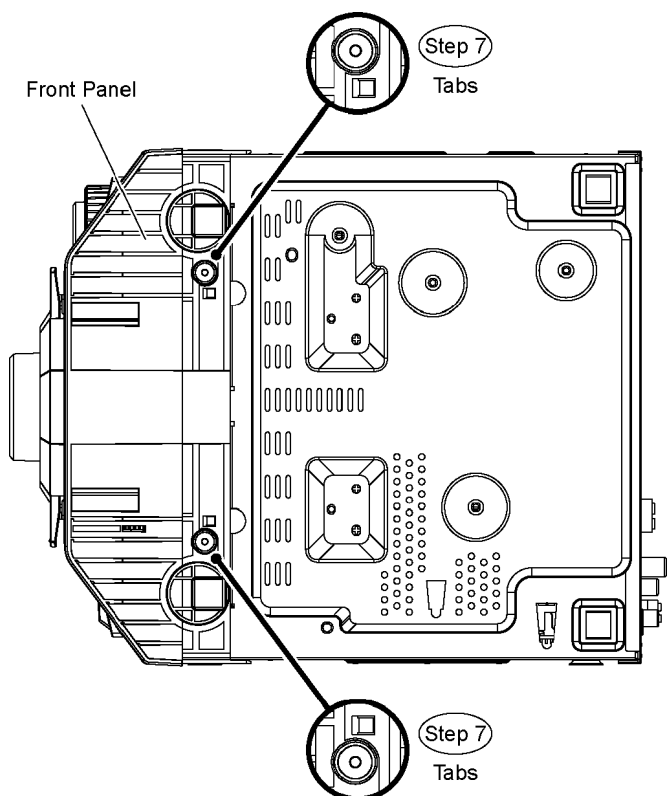
**Step 6** Release catches at both sides.



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

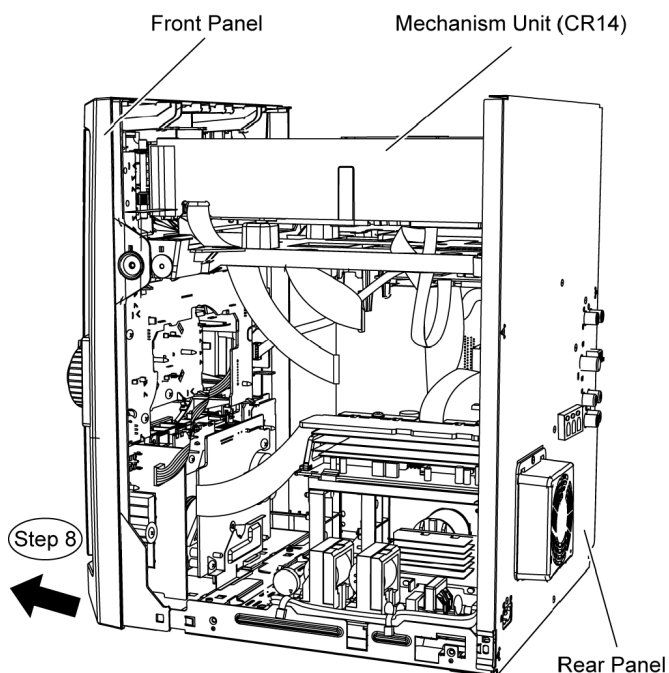
Assembly is secured upon hearing a click sound.

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



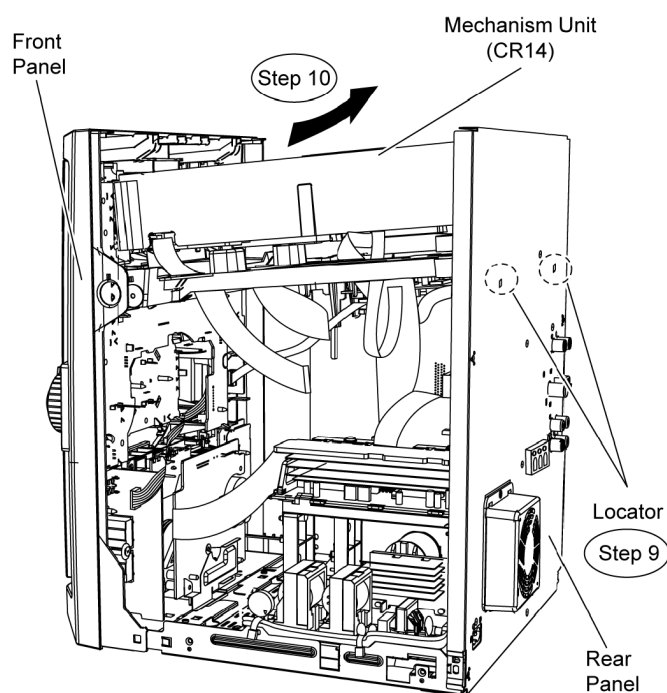
**Caution:** Do not exert strong force when releasing the tabs.

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



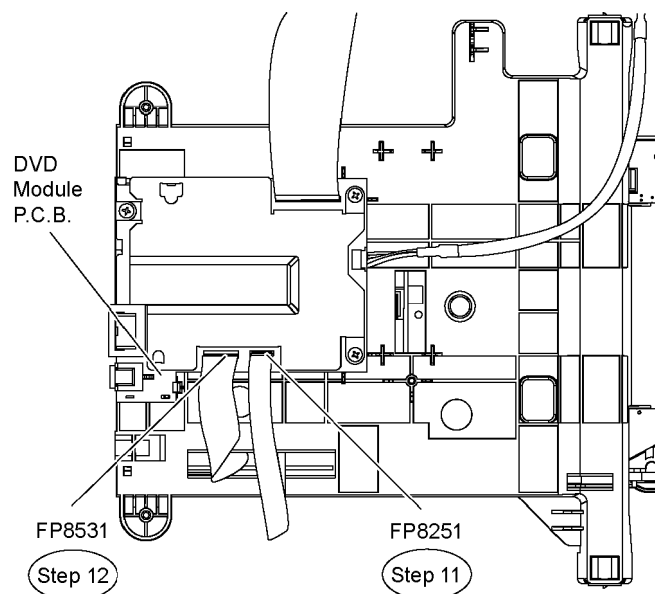
**Step 9** Release mechanism unit from the 2 locators..

**Step 10** Lift up the Mechanism Unit (CR14).



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

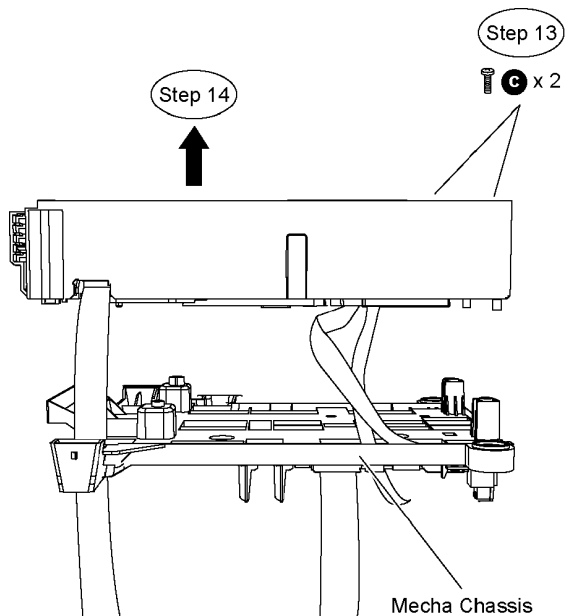
**Step 12** Detach 26P FFC cable at the connector (FP8531) on DVD Module P.C.B..



#### • 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).

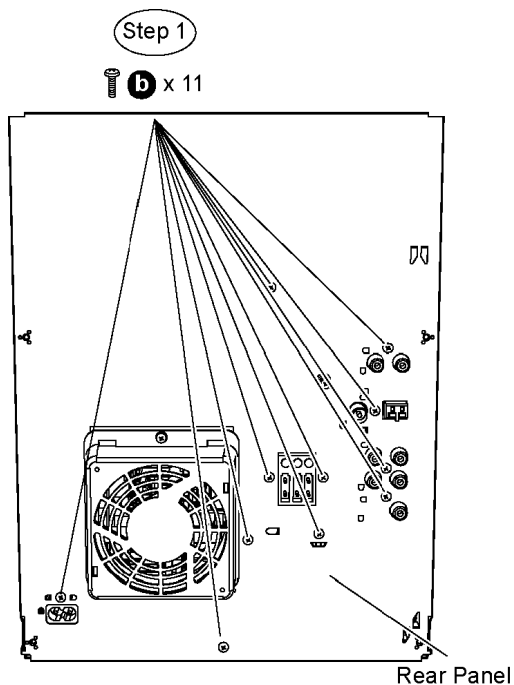
**Note 2:** During reassembling procedure, ensure the Mechanism Unit (CR14), is seated properly at the locators.

## 9.6. Disassembly of Rear Panel

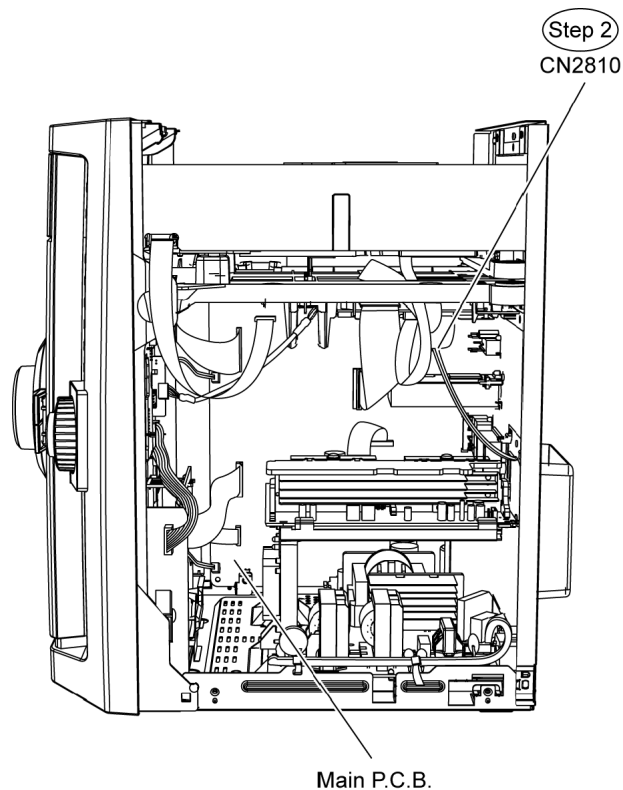
- Follow the (Step 1) to (Step 5) of Item 9.4

### • Disassembly of Rear Panel

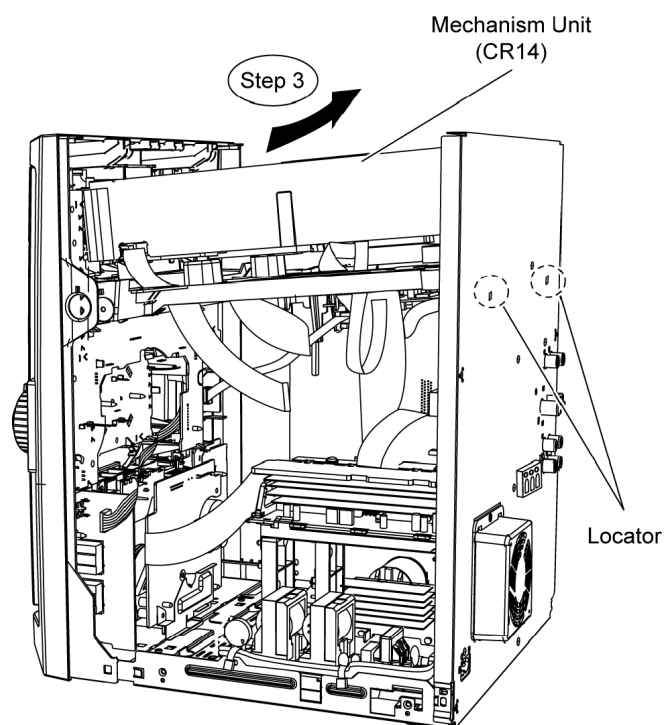
**Step 1** Remove 11 screws at rear panel.



**Step 2** Detach 2P cable at connector (CN2810) on Main P.C.B.

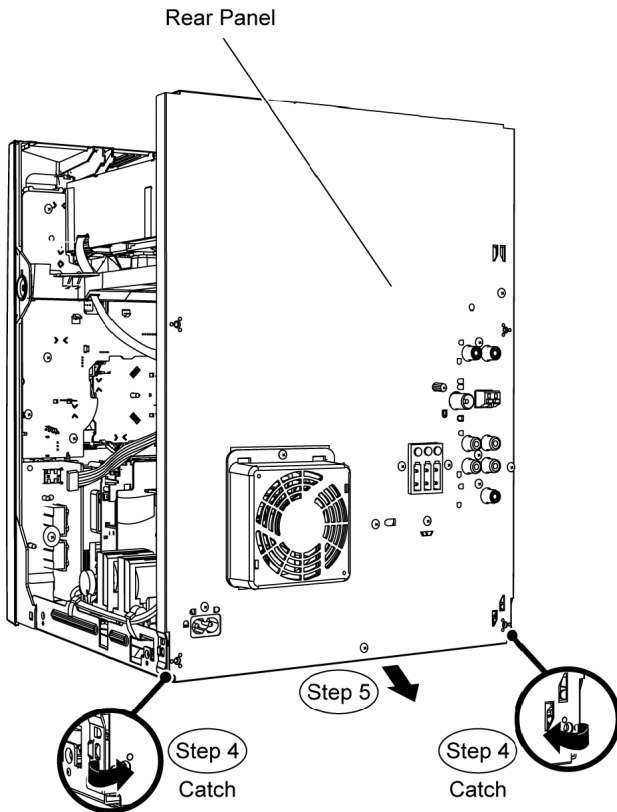


**Step 3** Slightly lift up the Mechanism Unit (CR14) from the two locators.



**Step 4** Release 2 catches from the side panel.

**Step 5** 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..

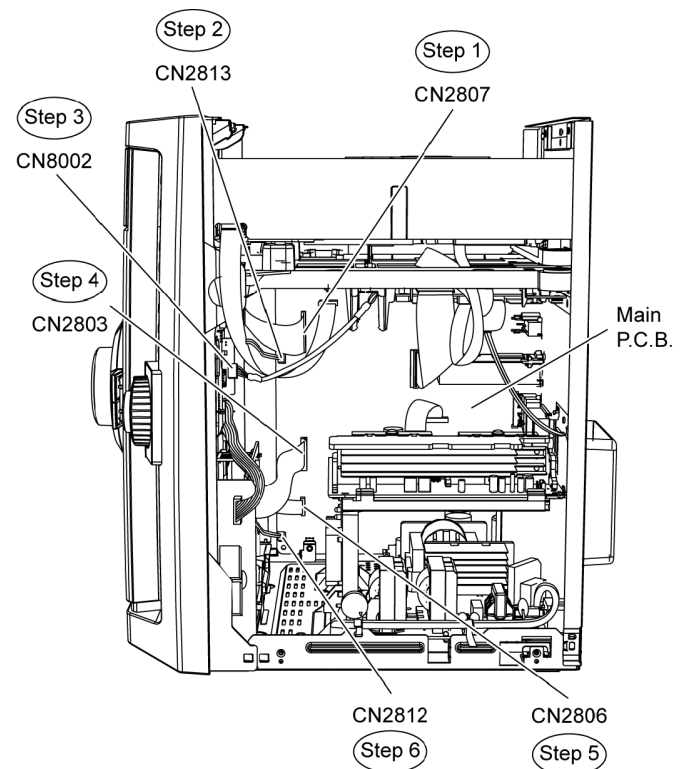
**Step 2** Detach 2P cable at connector (CN2813) on Main P.C.B..

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

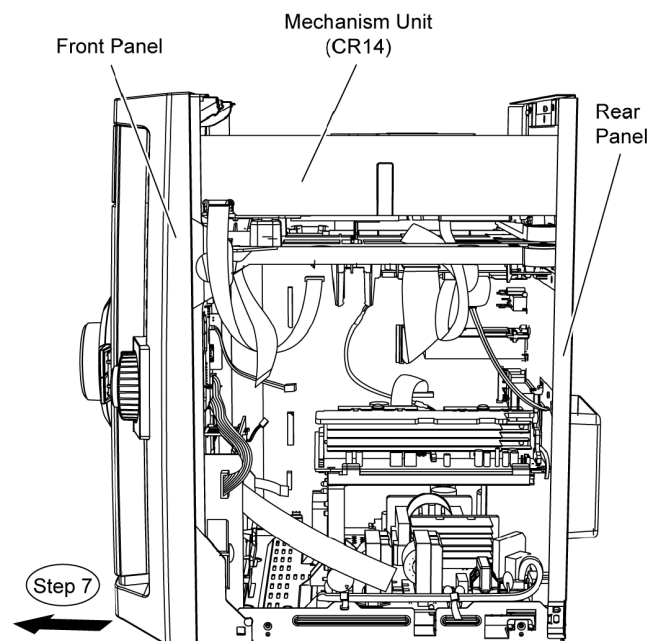
**Step 4** Detach 21P FFC cable at connector (CN2803) on Main P.C.B..

**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..



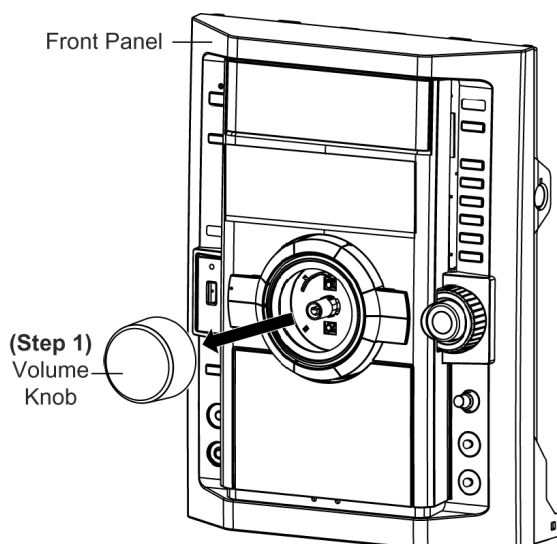
**Step 7** Detach the front panel unit in direction of arrow.



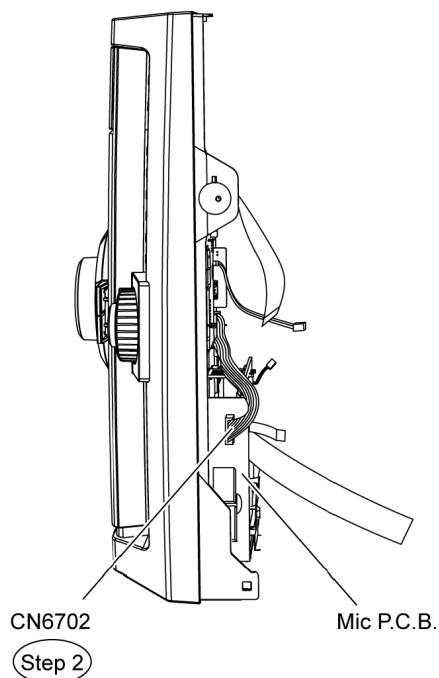
## 9.8. Disassembly of Panel P.C.B., Tact Switch P.C.B. & Remote Sensor P.C.B., Side Bar (L) LED P.C.B. and Side Bar (R) LED P.C.B.

- 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

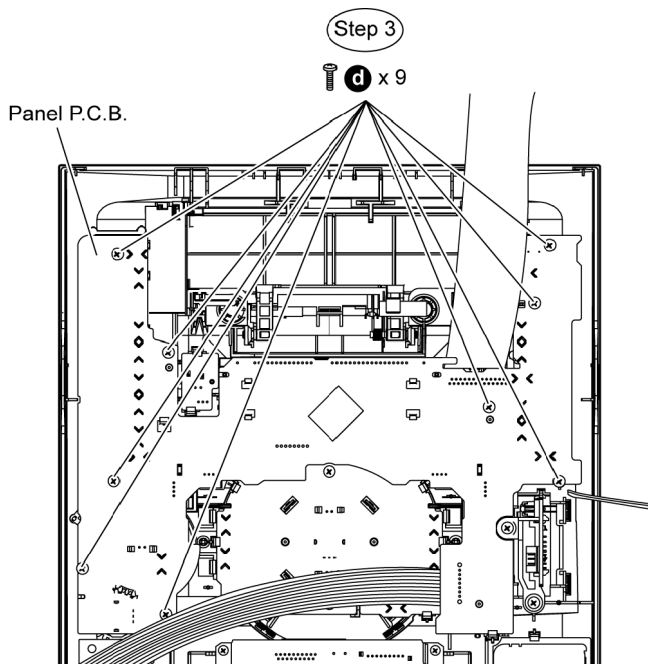
**Step 1** Remove Volume knob as arrow shown.



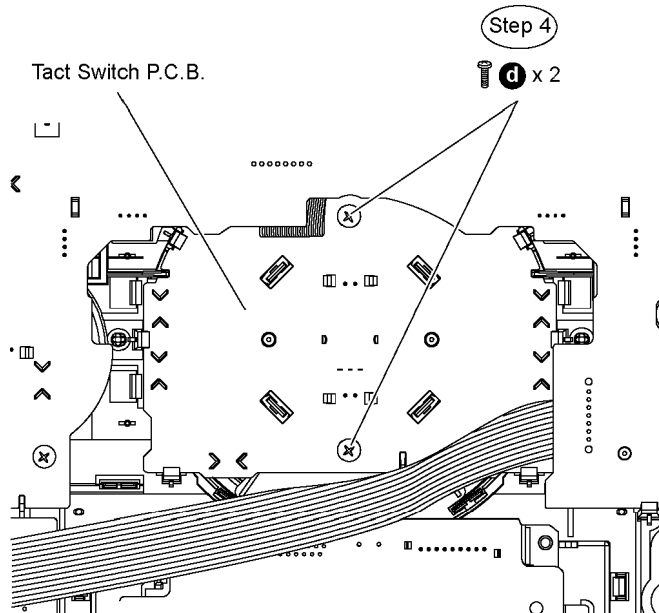
**Step 2** Detach 7P cable at the connector (CN6702) on Mic P.C.B..



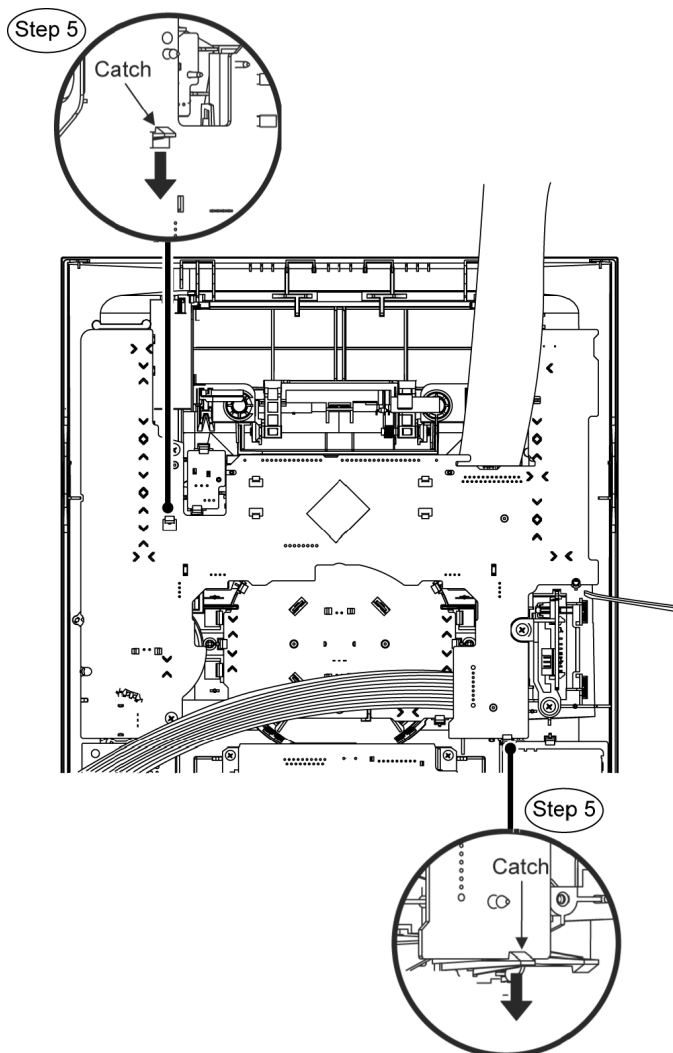
**Step 3** Remove 9 screws at Panel P.C.B..



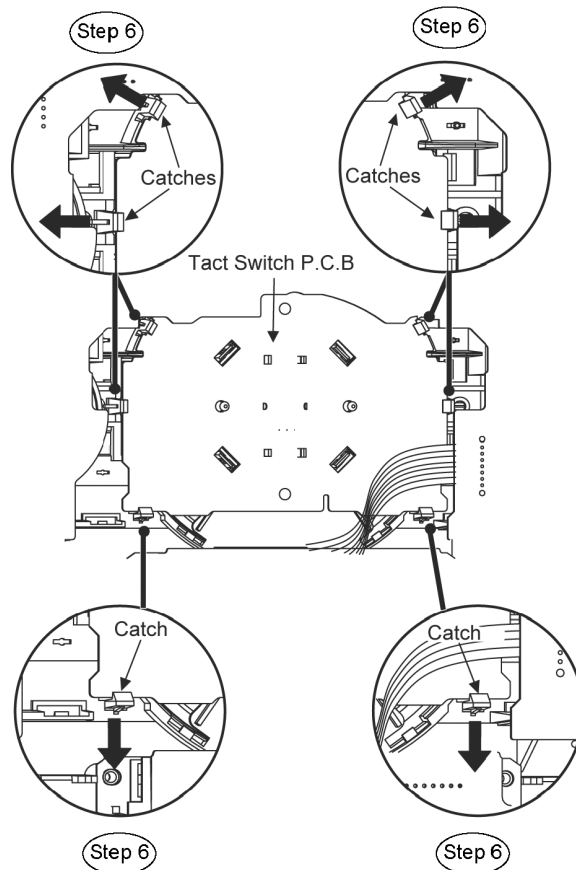
**Step 4** Remove 2 screws at Tact Switch P.C.B..



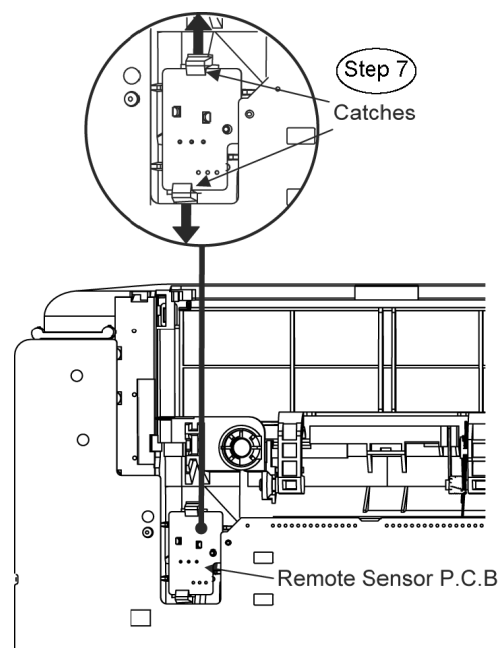
**Step 5** Release 2 catches at Panel P.C.B..



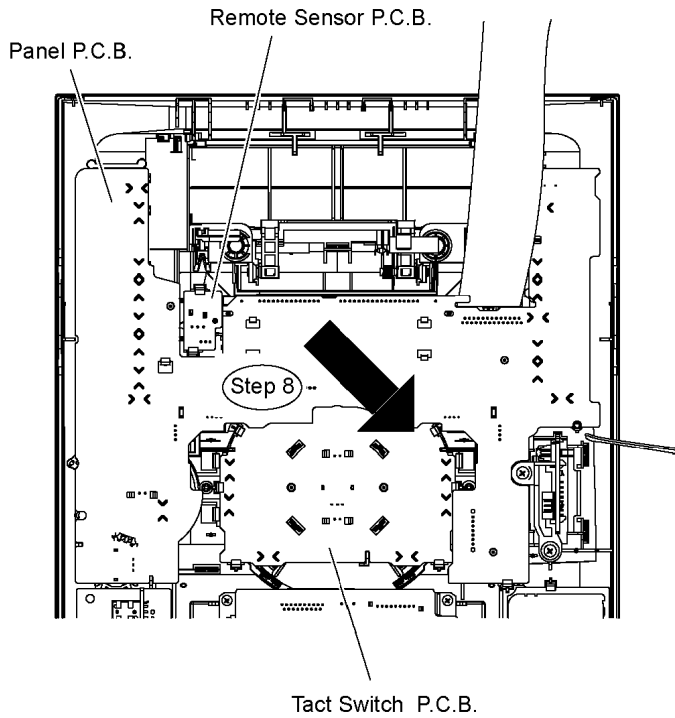
**Step 6** Release 6 catches at Tact Switch P.C.B..



**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.

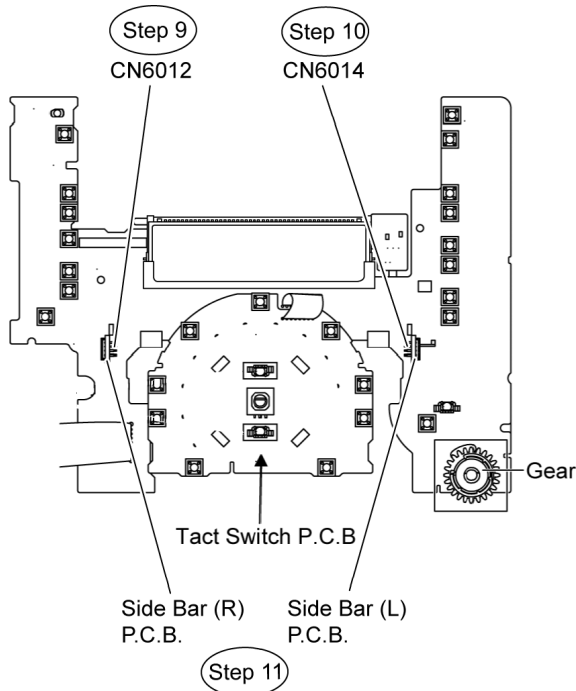


• **Disassembly of Side Bar (L) Led P.C.B. and Side Bar (R) P.C.B.**

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

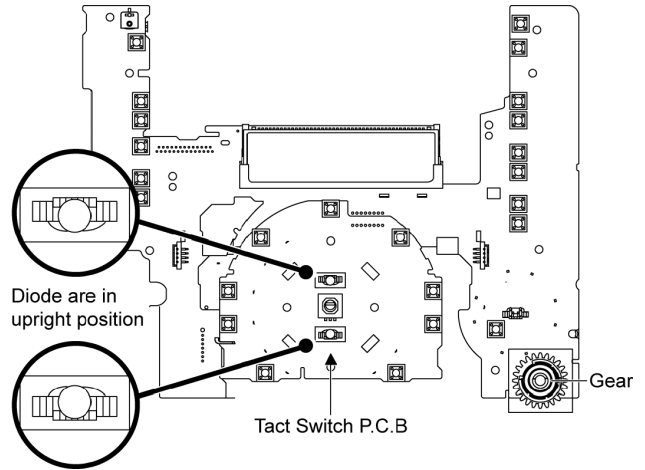
**Step 10** Detach Side Bar (R) P.C.B at the connector (CN6012) on Panel P.C.B.

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

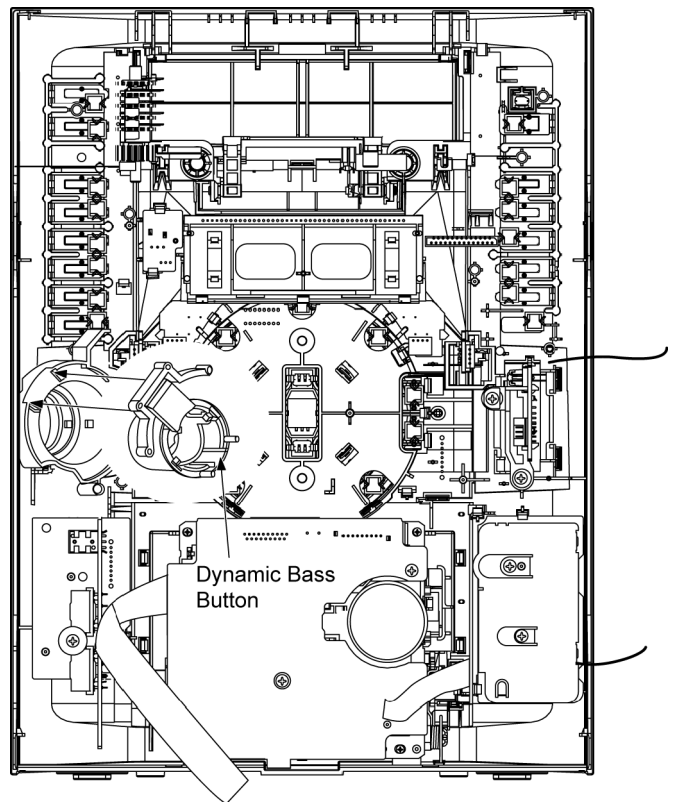


**Caution Notes:**

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



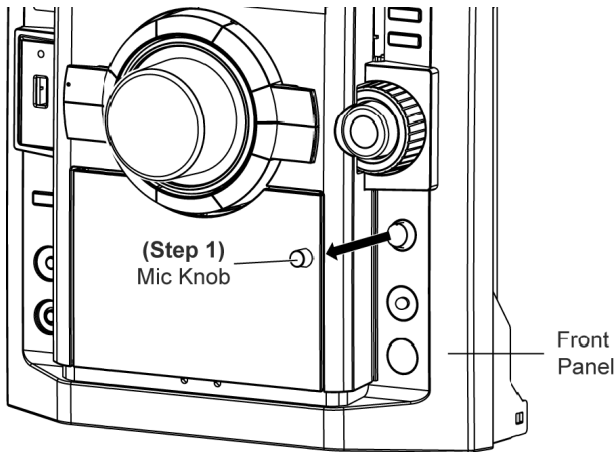
2. During reassembling procedures, ensure that D-Bass knob is seated properly.



## 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

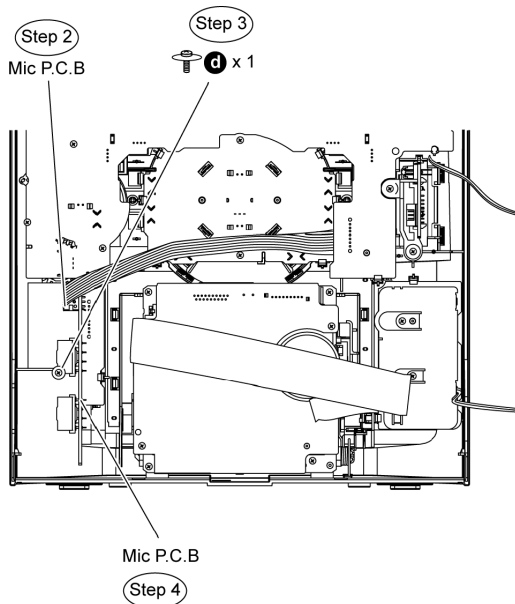
**Step 1** Remove Mic knob as arrow shown.



**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..



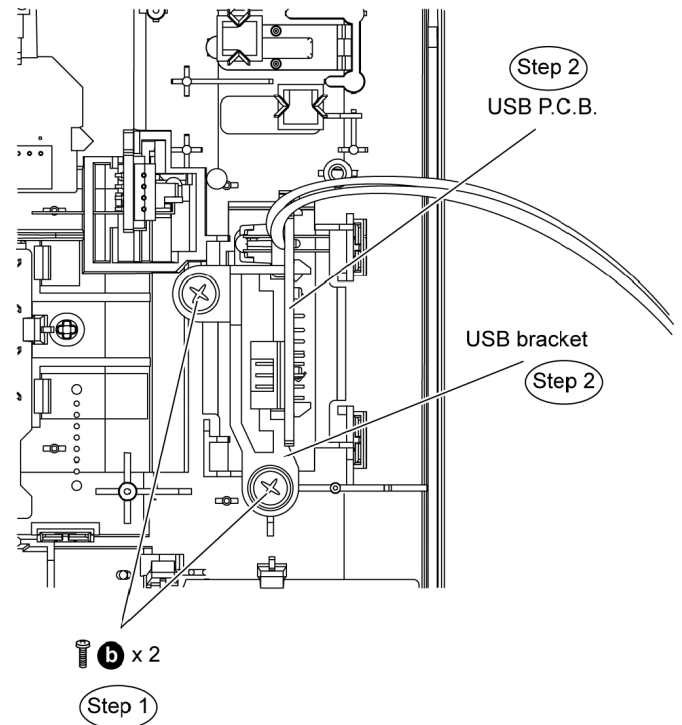
## 9.10. Disassembly of USB P.C.B.

- 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.

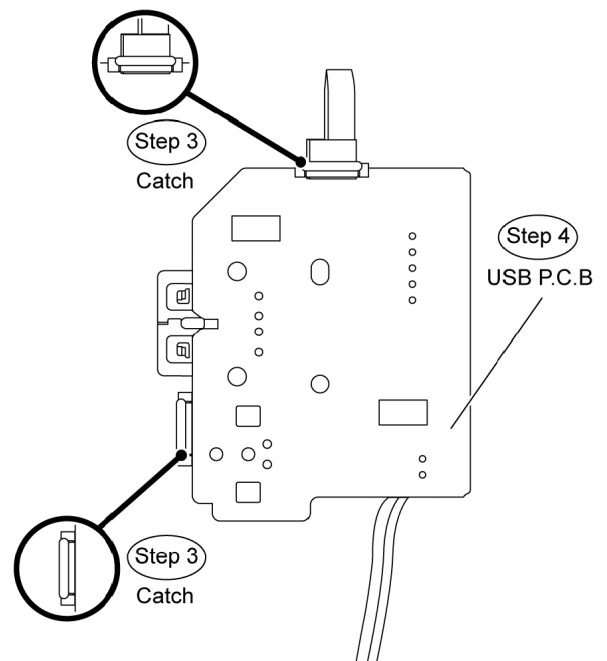
**Step 2** Remove the USB bracket together with USB P.C.B..



### • Disassembly of USB P.C.B..

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

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



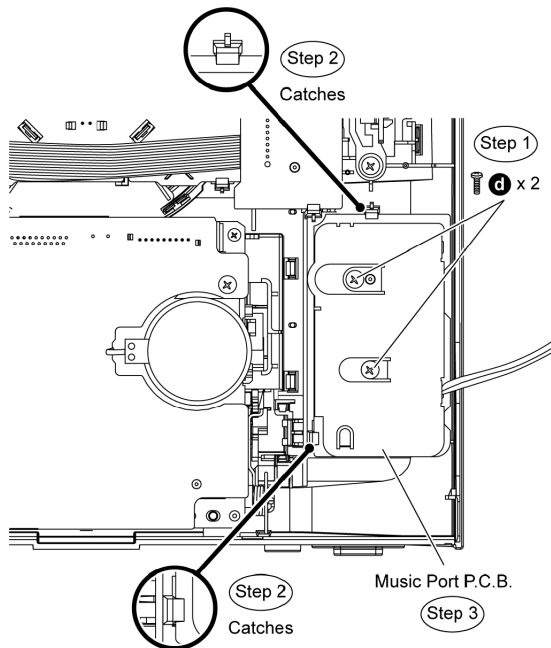
## 9.11. Disassembly of Music Port P.C.B.

- 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.

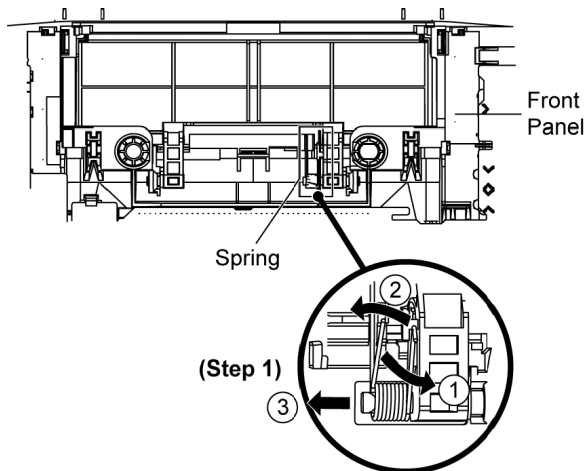
**Step 3** Lift up the Music Port P.C.B..



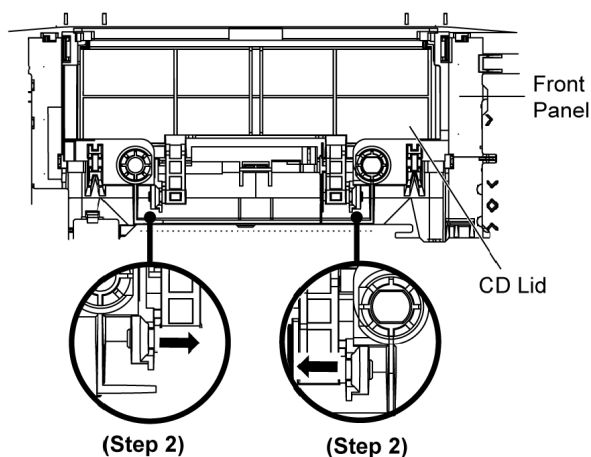
## 9.12. Disassembly of CD Lid

- 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.



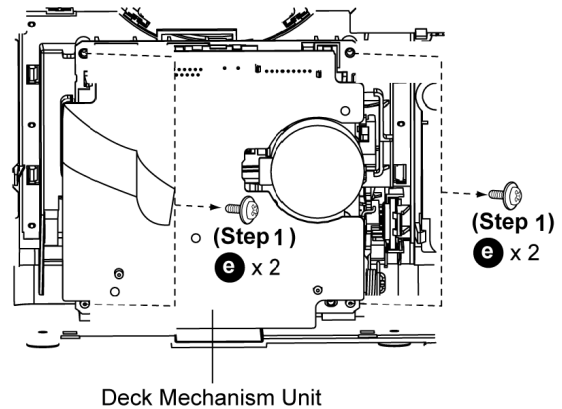
**Note:** Please ensure that the spring is assembly at right

position.

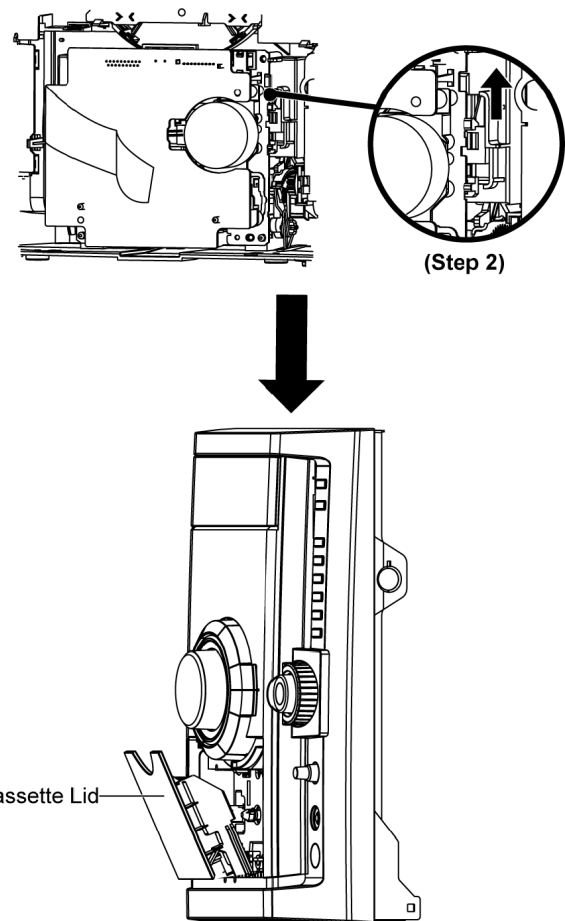
## 9.13. Disassembly of Deck Mechanism Unit

- 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

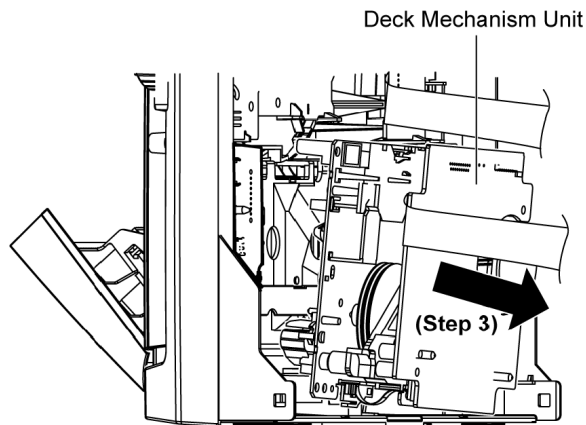
**Step 1** Remove 4 screws at Deck Mechanism.



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



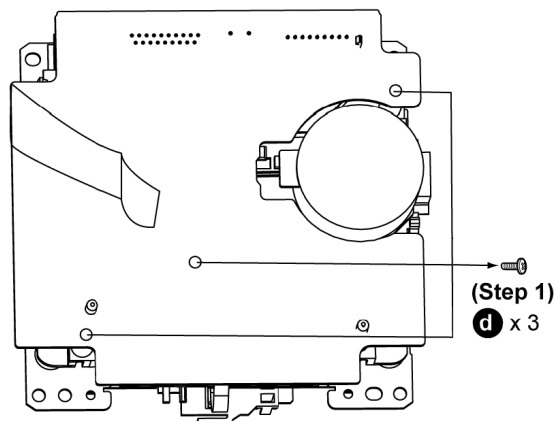
**Step 3** Remove the deck mechanism unit as arrow shown.



## 9.14. Disassembly of Deck P.C.B.

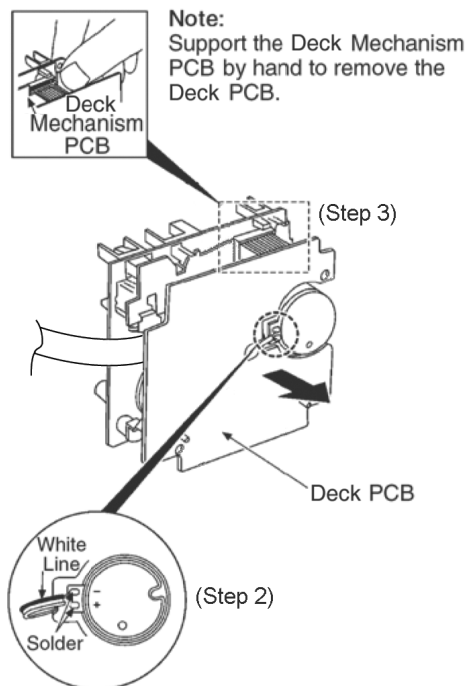
- Follow the (Step 1) to (Step 5) of Item 9.4
- Follow the (Step 5) to (Step 7) of Item 9.5
- Follow the (Step 1) to (Step 7) of Item 9.7
- Follow the (Step 1) to (Step 3) of Item 9.13

**Step 1** Remove 3 screws.

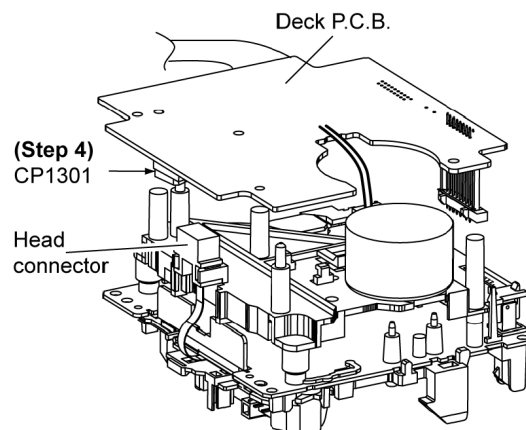


**Step 2** Desolder 2P wires at the motor terminal.

**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).



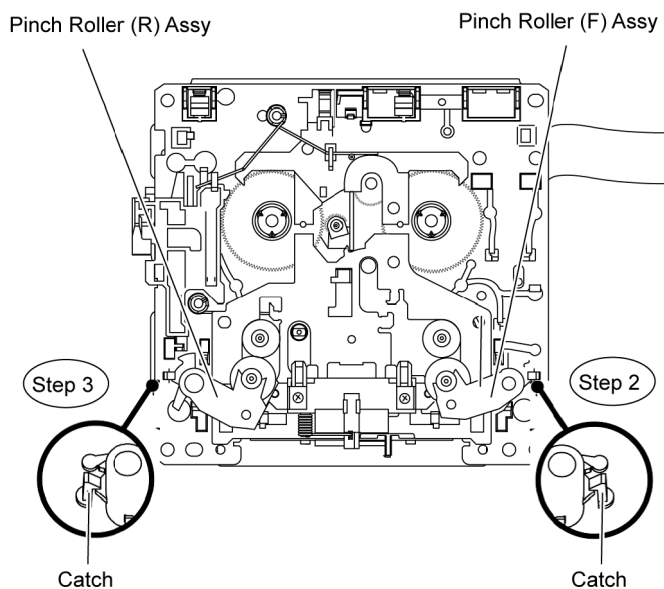
## 9.15. Disassembly of Deck Mechanism

- 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

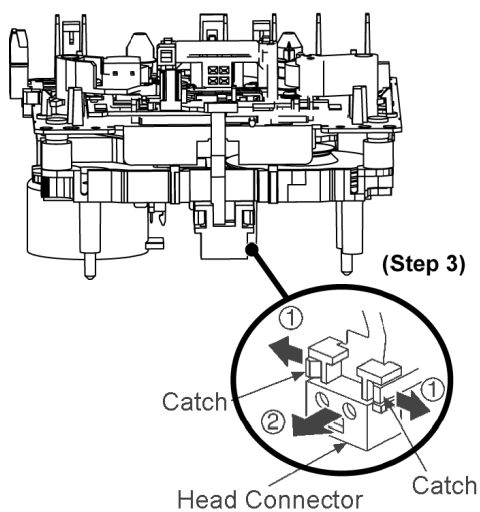
### 9.15.1. Replacement of Pinch Roller and Head Block

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

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

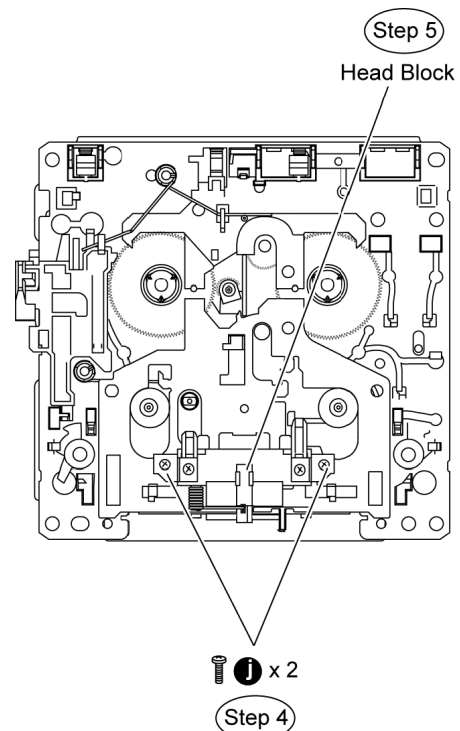


**Step 3** Release the catches to remove the head connector.

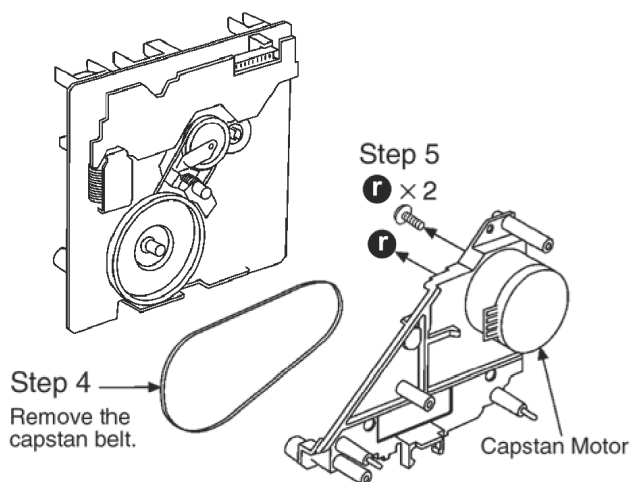
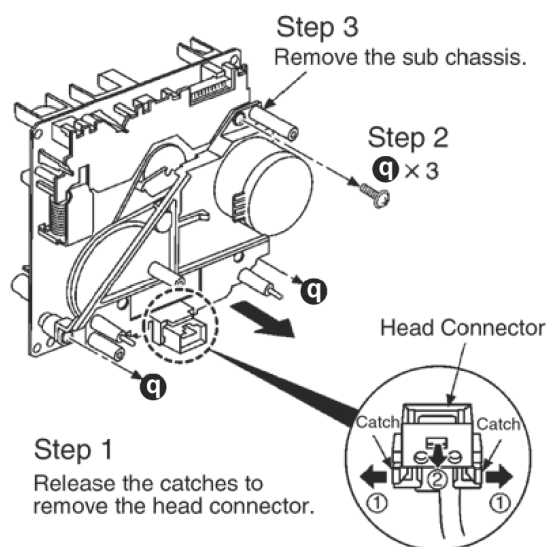


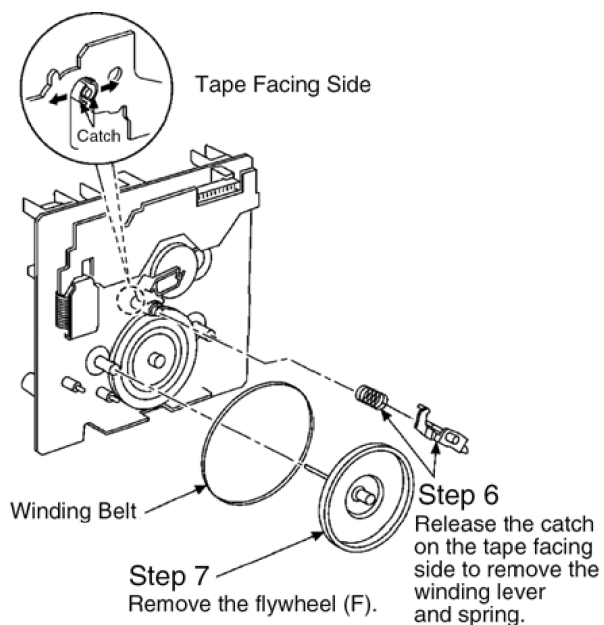
**Step 4** Remove 2 screws at the Deck Mechanism unit.

**Step 5** Remove head block.

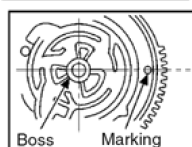


### 9.15.2. Replacement of Motor, Capstan Belt A, Capstan Belt B, and Winding Belt





#### Installing Belt



#### Step 1

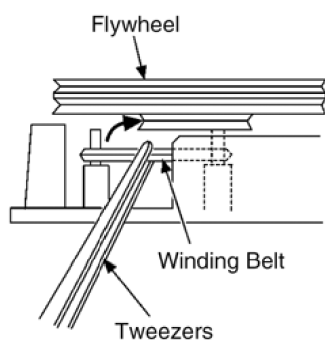
The positions of boss and marking hole should be horizontal to each other.

#### Step 2

Install the winding belt temporarily as shown in the figure above.

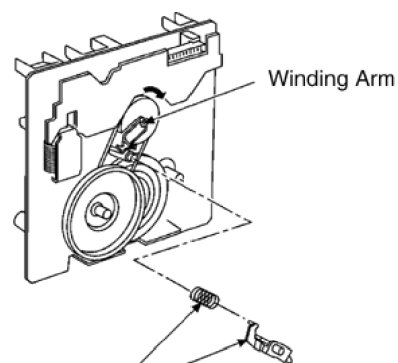
#### Step 3

Attach the flywheel (F).



#### Step 4

Catch the winding belt on the flywheel (F).

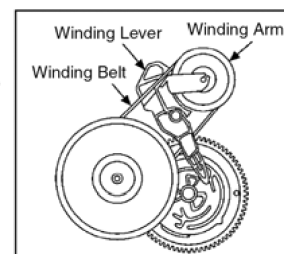


#### Step 5

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.)

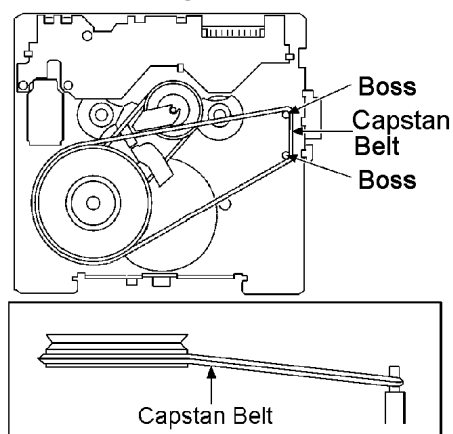
#### Note:

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:

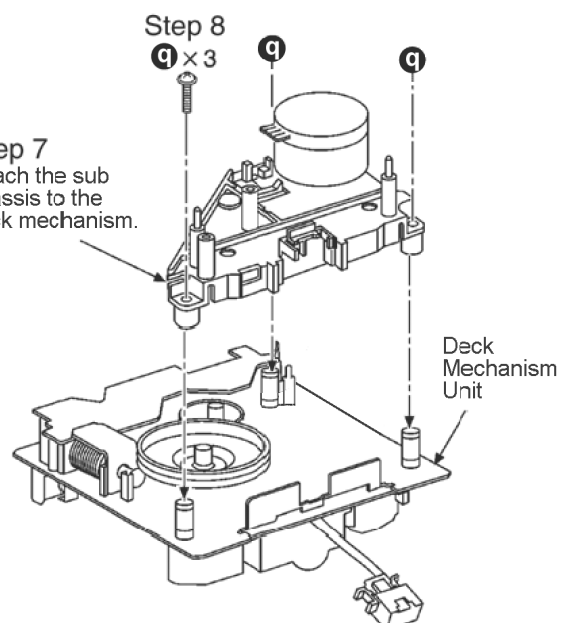
Keep the belt away from grease.

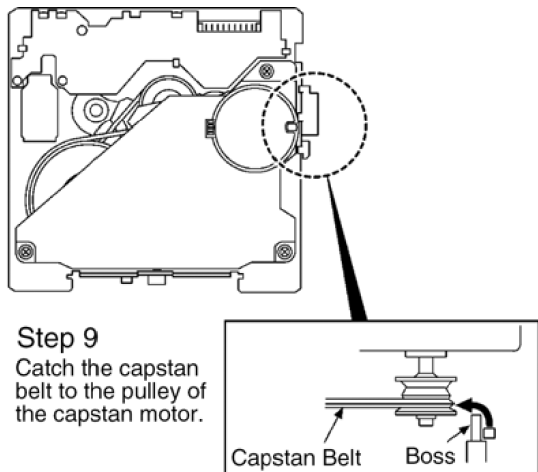
#### Step 8

q x 3

#### Step 7

Attach the sub chassis to the deck mechanism.

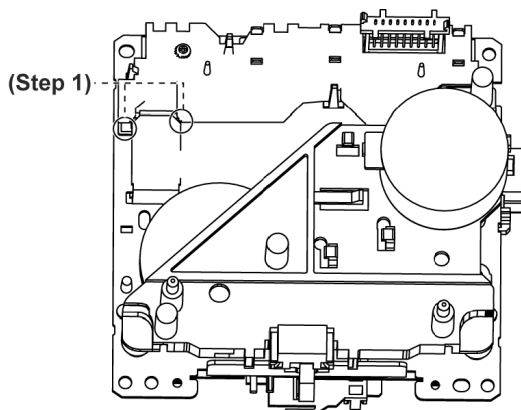




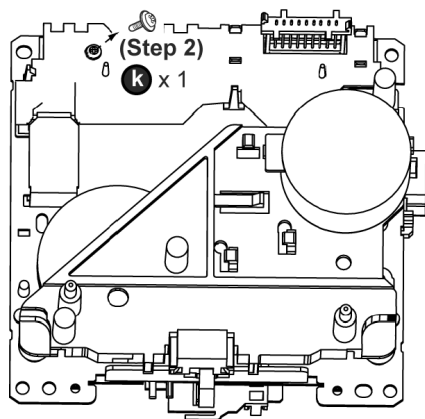
## 9.16. Disassembly of Deck Mechanism P.C.B.

- 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

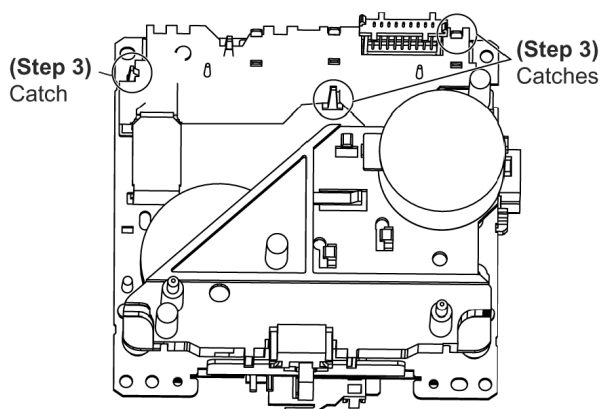
**Step 1** Desolder plunger terminals.



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



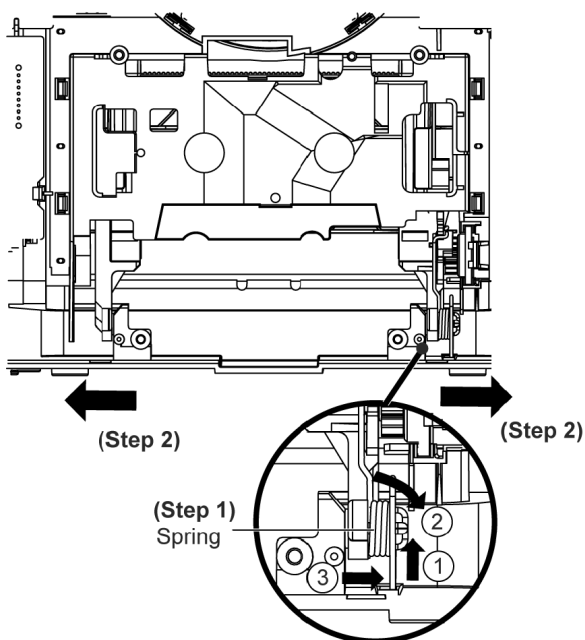
**Step 3** Release 3 catches to remove the Deck Mechanism P.C.B..



## 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.

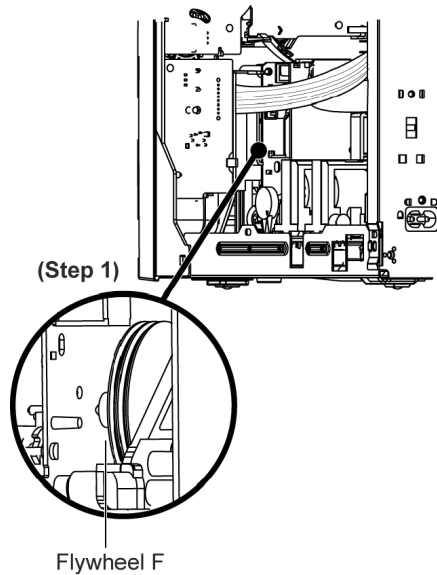


**Step 2** Push the cassette lid in the direction of arrows.

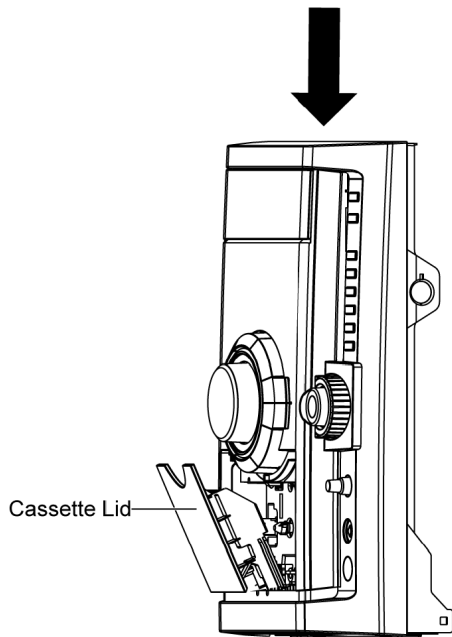
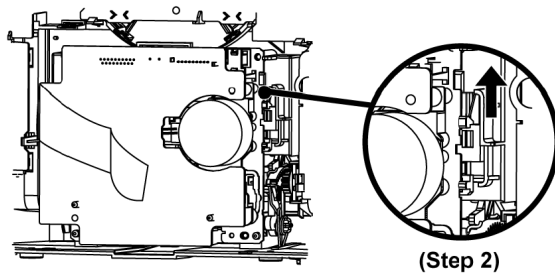
## 9.18. Rectification for Tape Jam Problem

- 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.

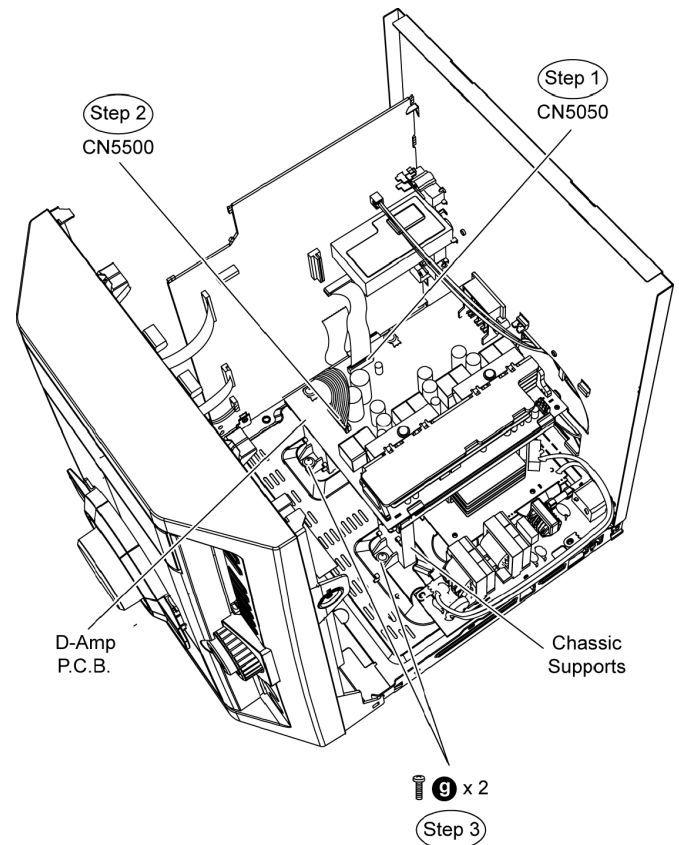
## 9.19. Disassembly of D-Amp P.C.B.

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

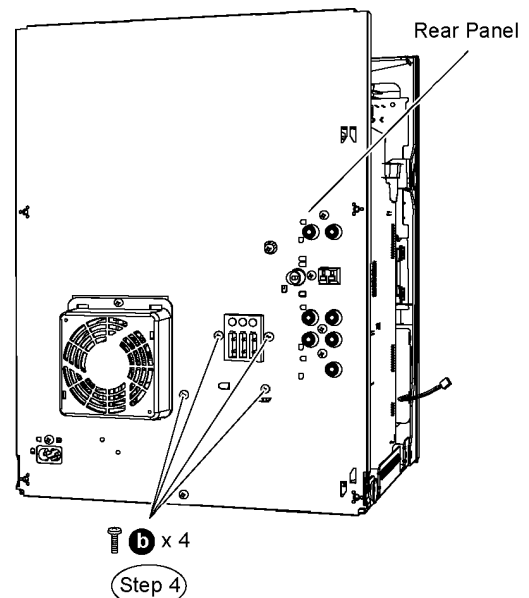
**Step 1** Detach 17P FFC cable at connector (CN5050) at D-Amp P.C.B..

**Step 2** Detach 8P wire 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.



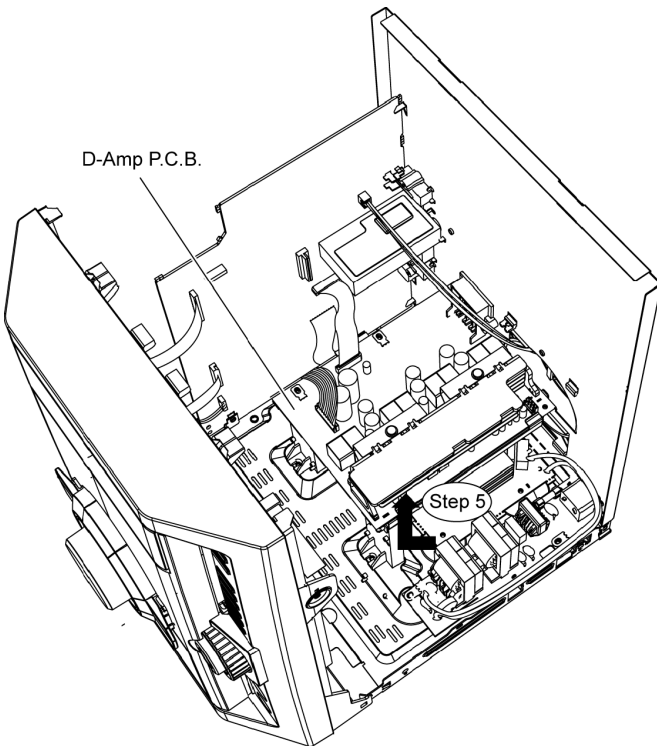
**Step 5** Lift up the D-Amp P.C.B. together with the chassis support as arrow shown.

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

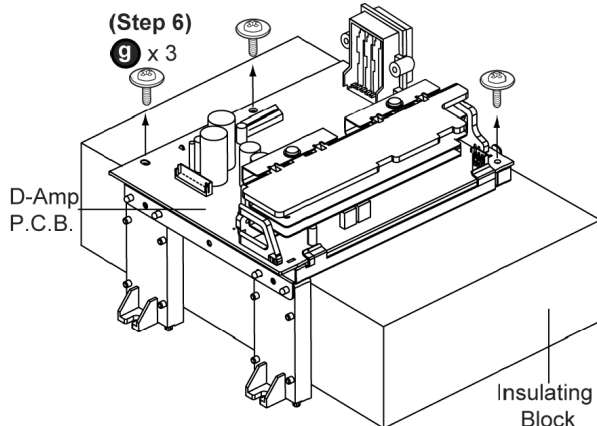
- Follow the (Step 1) to (Step 5) of Item 9.4
- Follow the (Step 1) to (Step 10) of Item 9.5
- Follow the (Step 1) to (Step 7) of Item 9.19

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

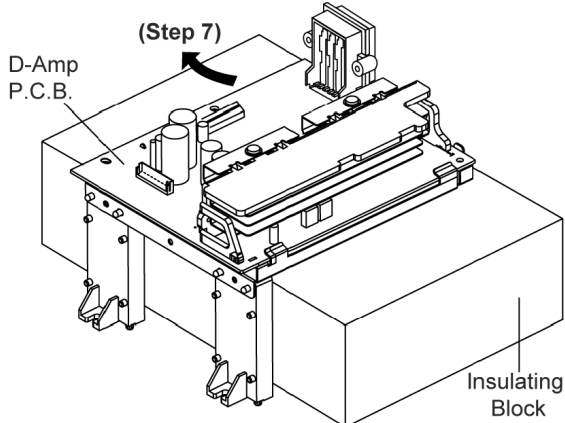
**Step 2** Desolder pins of the Audio Digital Power Amp IC (IC5000) on the reverse side of D-Amp P.C.B..



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

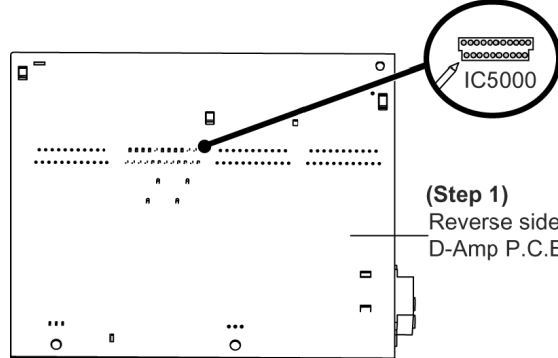


**Step 7** Lift up D-Amp P.C.B. as arrow shown.



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

(Step 2)



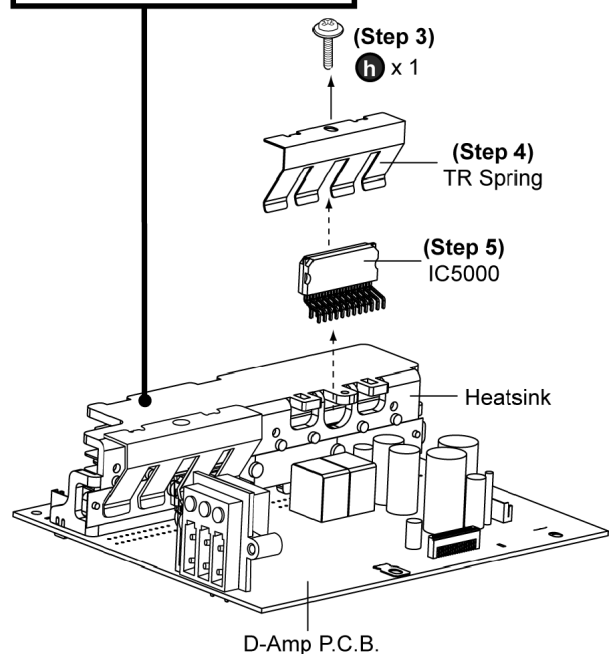
(Step 1)  
Reverse side of  
D-Amp P.C.B.

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



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

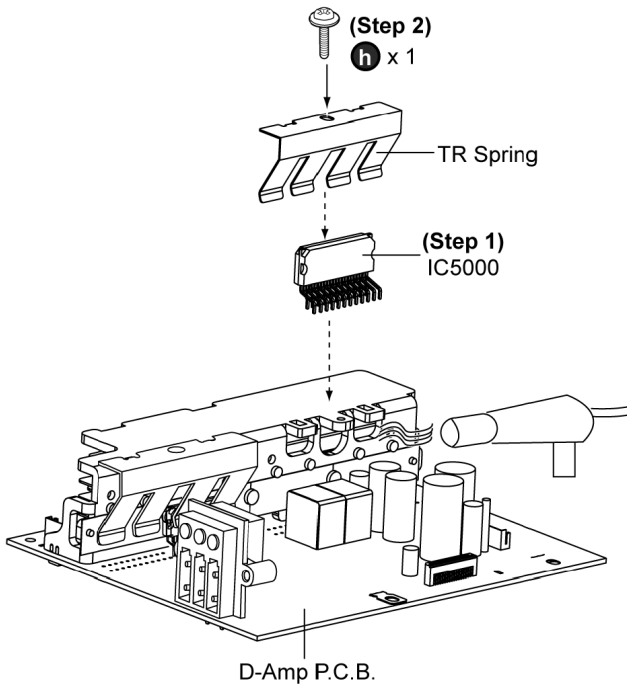
### 9.20.1. Assembly of Audio Digital Power Amp IC (IC5000)

**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 overheating.

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

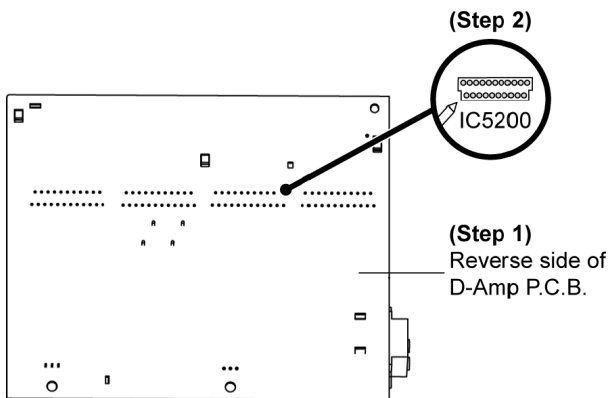


## 9.21. Replacement of Audio Digital Power Amp IC (IC5200)

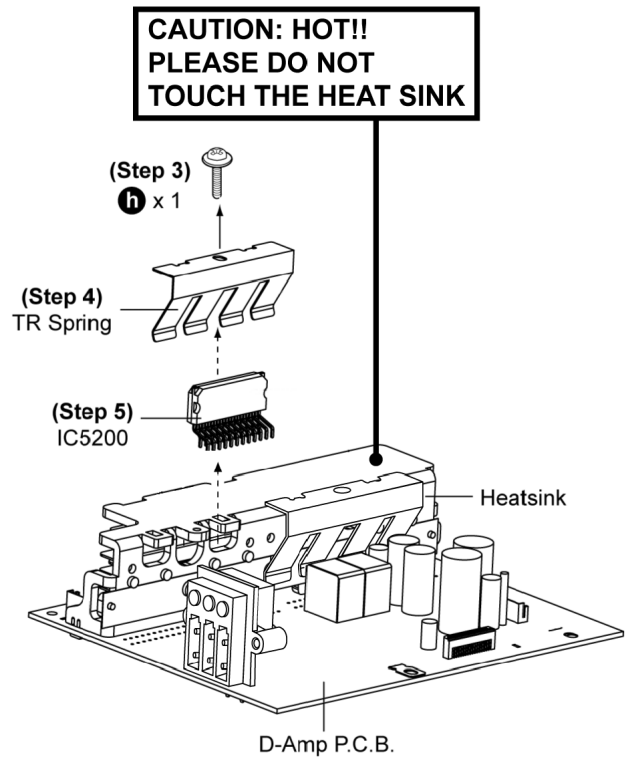
- Follow the (Step 1) to (Step 5) of Item 9.4
- Follow the (Step 1) to (Step 10) of Item 9.5
- Follow the (Step 1) to (Step 7) of Item 9.19

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

**Step 2** Desolder pins of the Audio Digital Power Amp IC (IC5200) 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 (IC5200) 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.

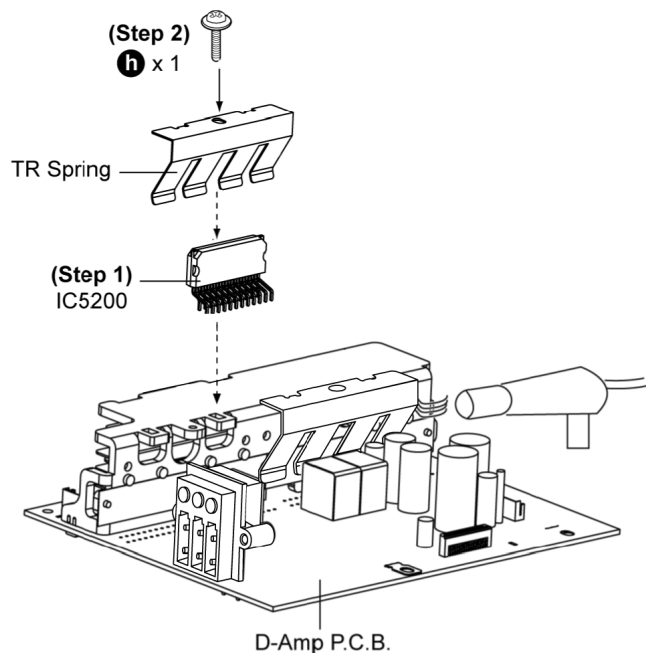
### 9.21.1. Assembly of Audio Digital Power Amp IC (IC5200)

**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 overheating.

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



## 9.22. 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

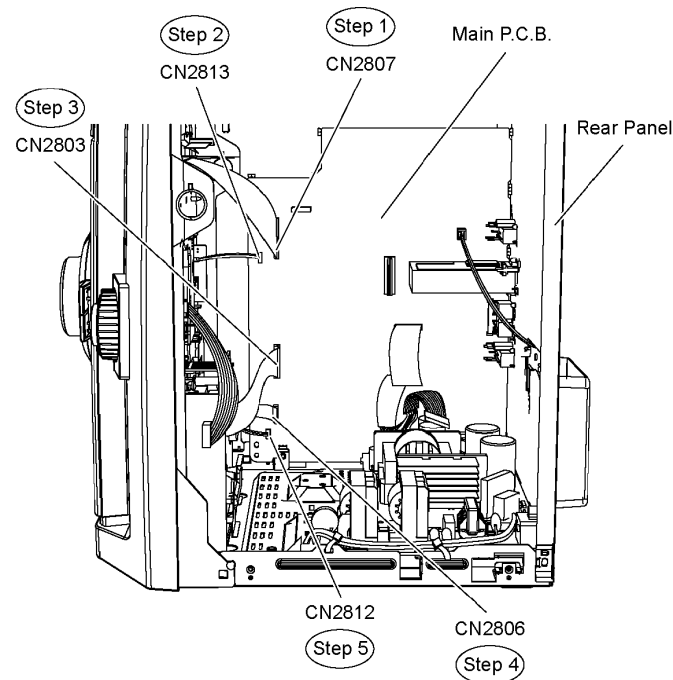
**Step 1** Detach 27P FFC cable at connector (CN2807) on Main P.C.B..

**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..

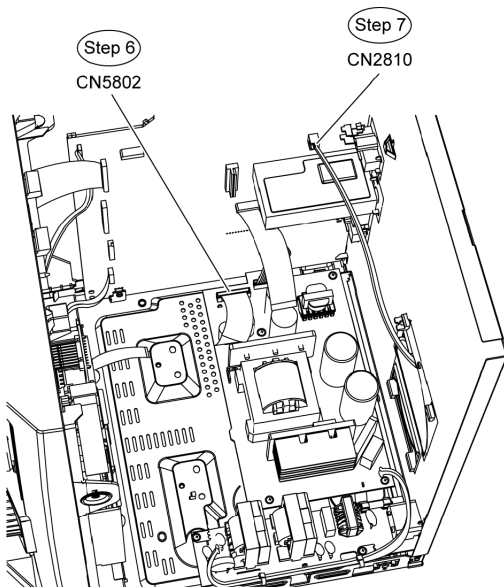
**Step 4** Detach 10P FFC cable at connector (CN2806) at Main P.C.B..

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

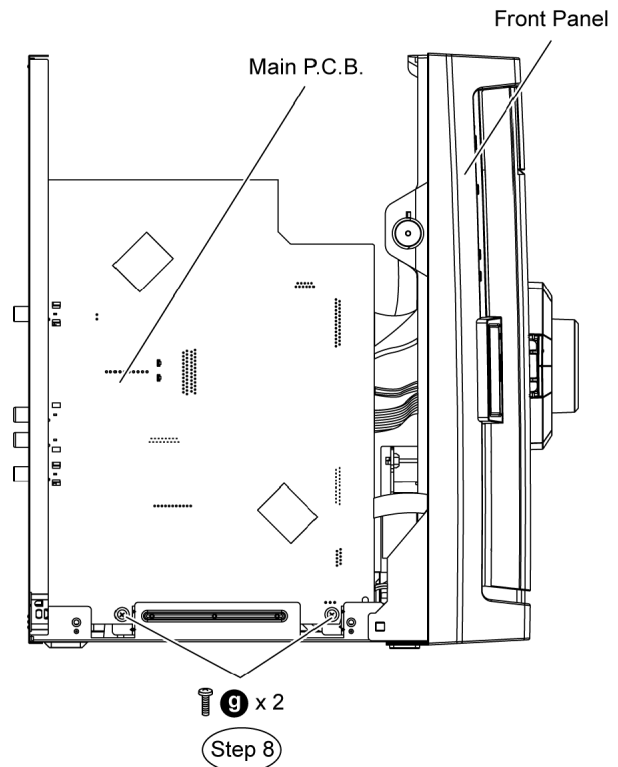


**Step 6** Detach 11P cable at connector (CN5802) on SMPS P.C.B..

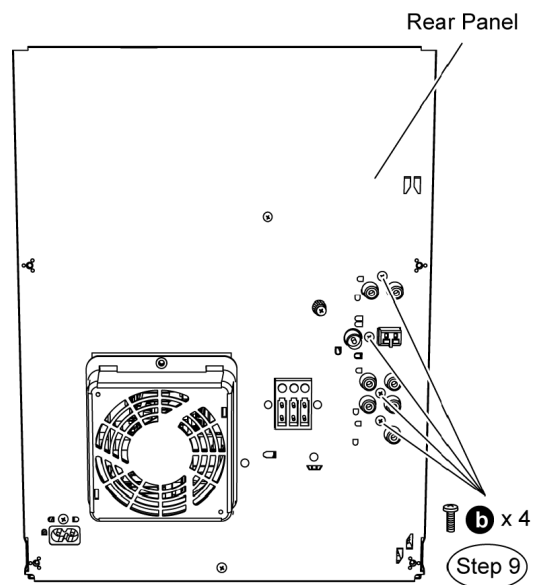
**Step 7** Detach 2P cable at connector (CN2810) on Main P.C.B..



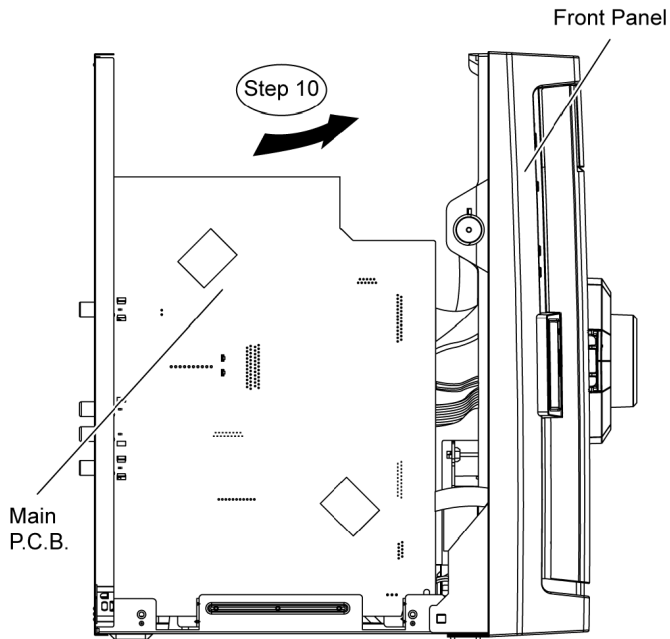
**Step 8** Remove 2 screws on Main P.C.B..



**Step 9** Remove 4 screws at rear panel.



**Step 10** Lift up Main P.C.B. as arrow shown.

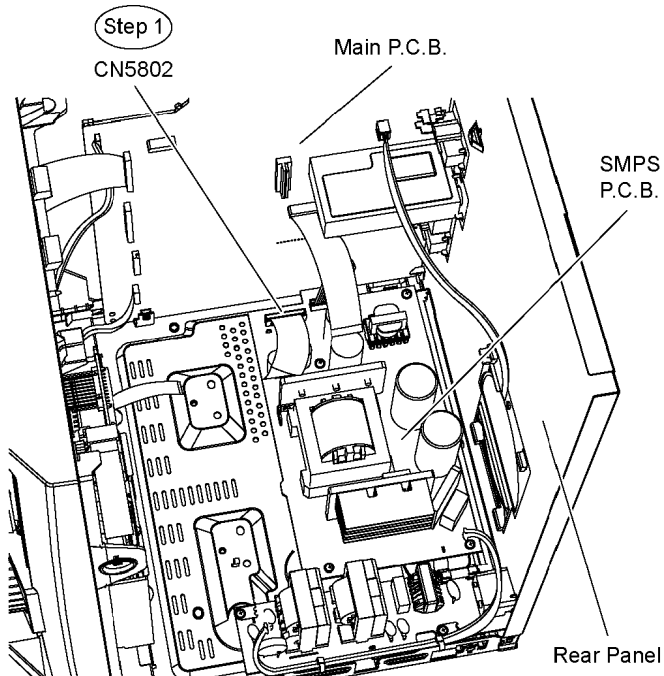


**Caution Note:** While lifting up Main P.C.B., please handle Jack (JK2801) and Tuner Pack with care.

## 9.23. Disassembly of SMPS P.C.B.

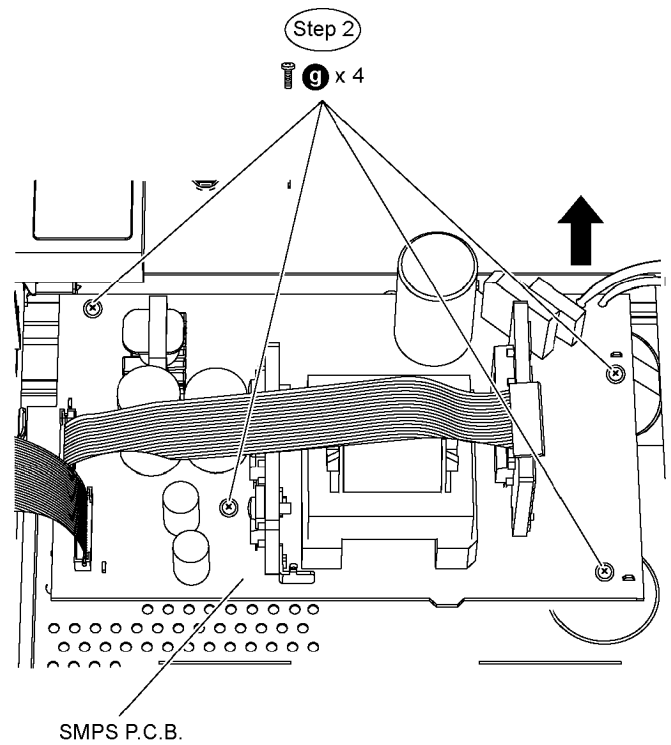
- Follow the (Step 1) to (Step 5) of Item 9.4
- Follow the (Step 1) to (Step 10) of Item 9.5
- Follow the (Step 1) to (Step 5) of Item 9.19

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

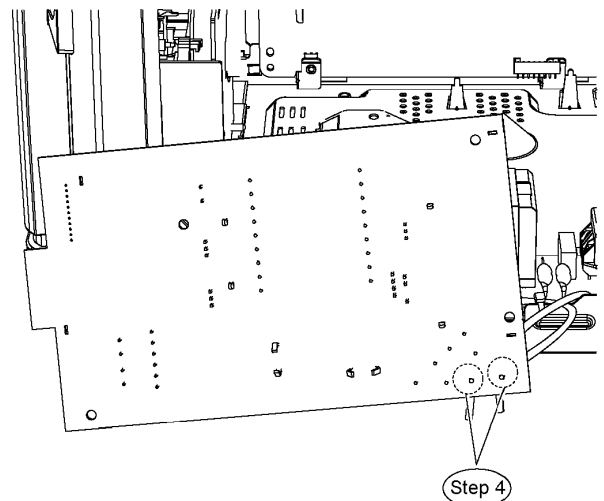


**Step 2** Remove 4 screws at SMPS P.C.B..

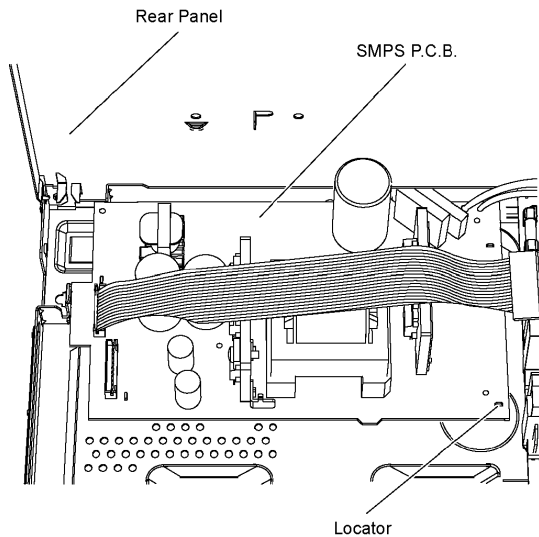
**Step 3** Lift up the SMPS P.C.B. as arrow shown.



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



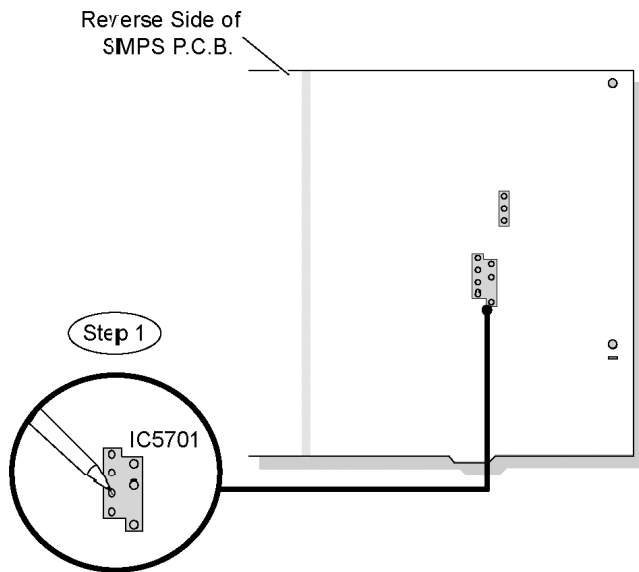
**Note:** During reassembling procedures, ensure the P.C.B. is seated properly at the locator.



## 9.24. 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 5) of Item 9.23.

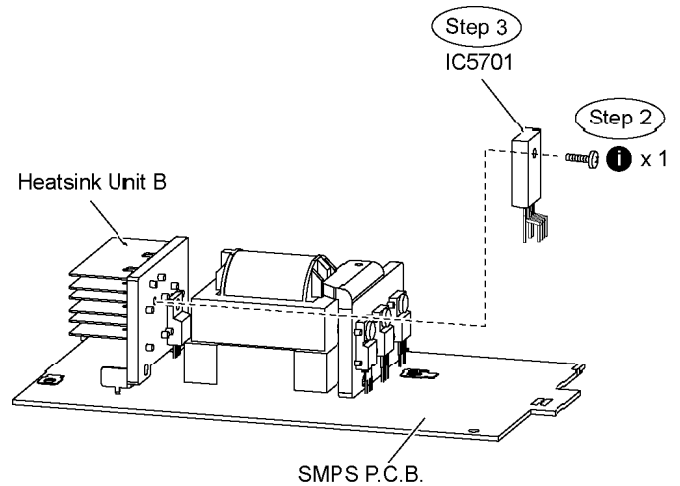
**Step 1** Desolder pins of the switch regulator IC (IC5701) on the reverse side of SMPS P.C.B.



**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.



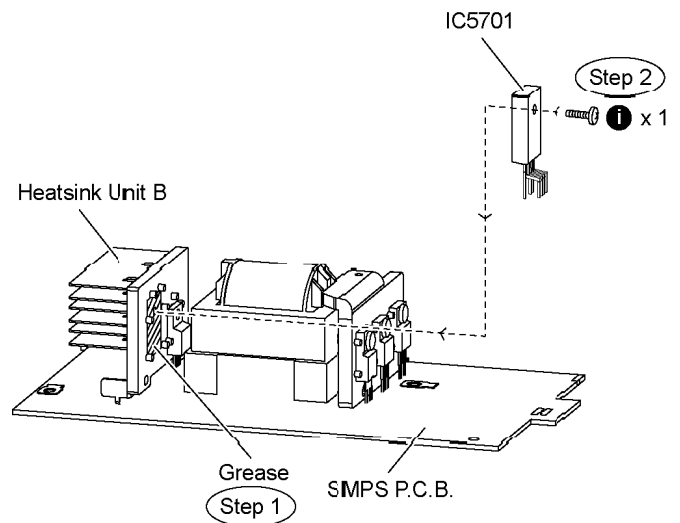
**Note :** Refer to the diagrams of SMPS P.C.B. (Item 20.5.) for location of the part.

### 9.24.1. Assembly of Switch Regulator IC (IC5701)

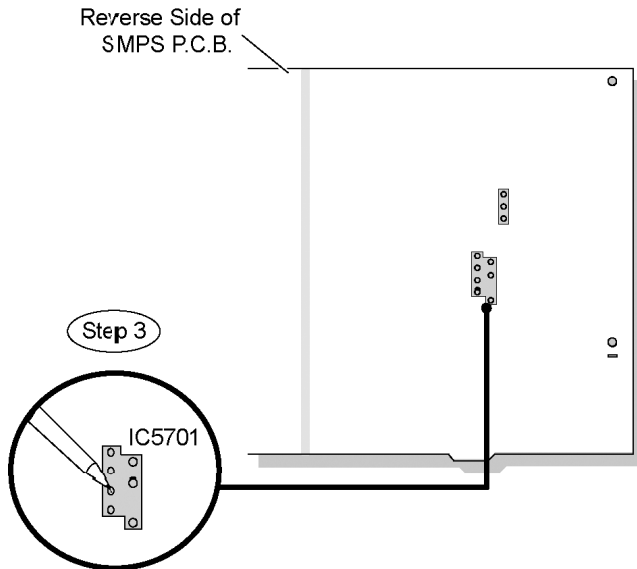
**Step 1** Apply grease to the heatsink unit B.

**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.



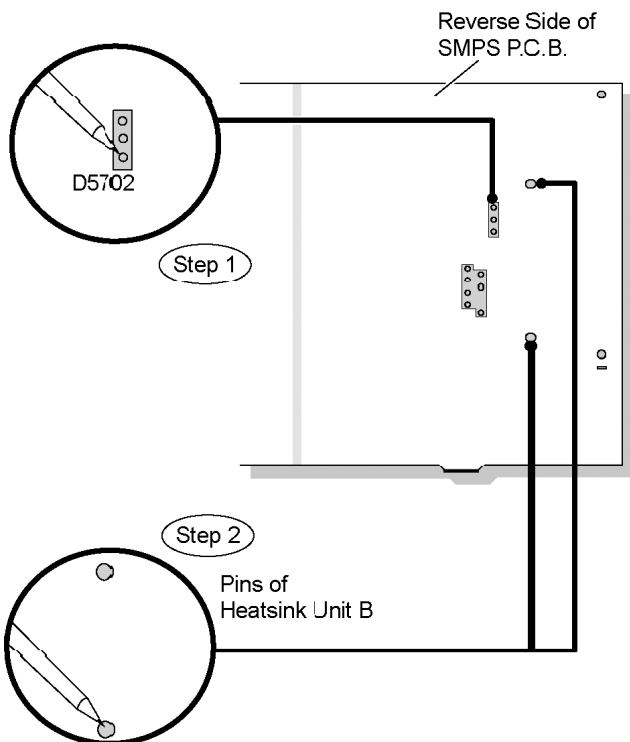
**Special Note:** Ensure pins of the switch regulator IC (IC5701) are properly seated and soldered on SMPS P.C.B.

## 9.25. 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 5) of Item 9.23.

**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).

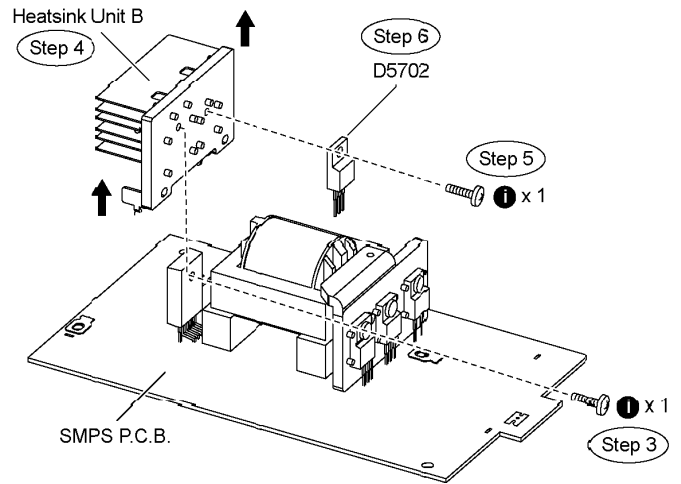
**Step 4** Remove the heatsink unit B in the direction of arrows.

**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.

### 9.25.1. Assembly of Switch Regulator Diode (D5702)

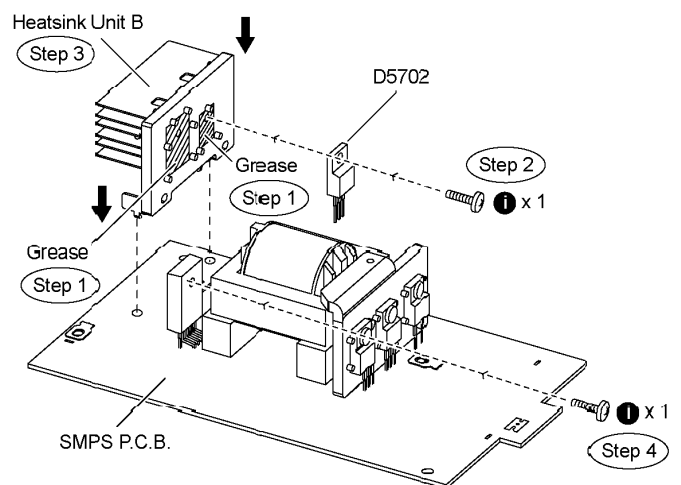
**Step 1** Apply grease to the heatsink unit B.

**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

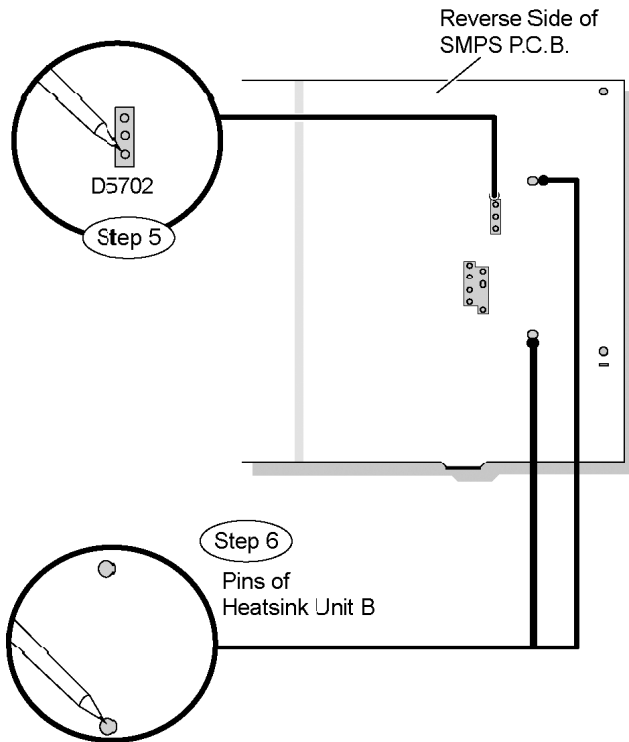


**Special Note:** Ensure the heatsink unit B is properly seated on

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.

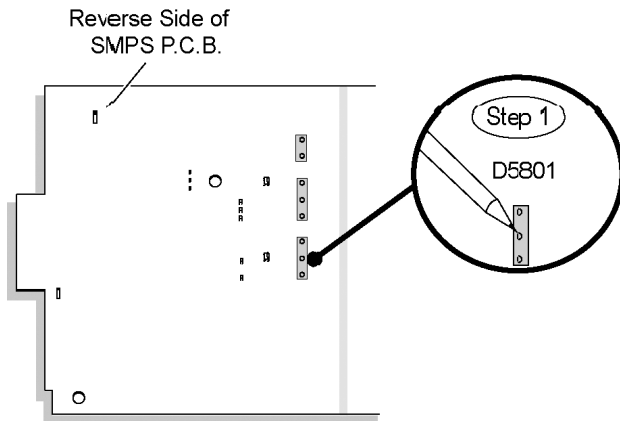


**Special Note:** Ensure pins of the switch regulator diode (D5702) are properly seated and soldered on SMPS P.C.B.

## 9.26. 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 5) of Item 9.23.

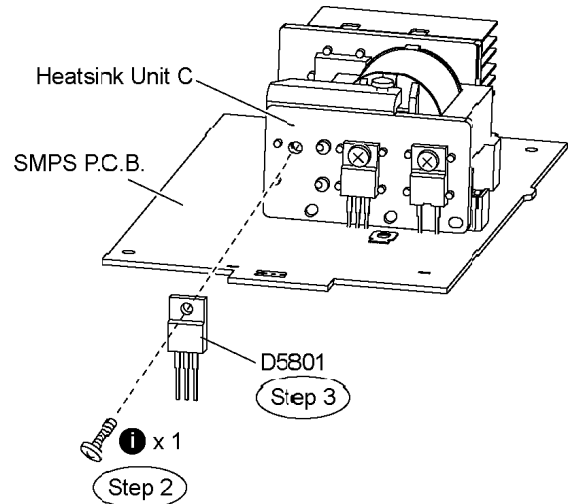
**Step 1** Desolder pins of the regulator diode (D5801) on the reverse side of SMPS P.C.B.



**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.



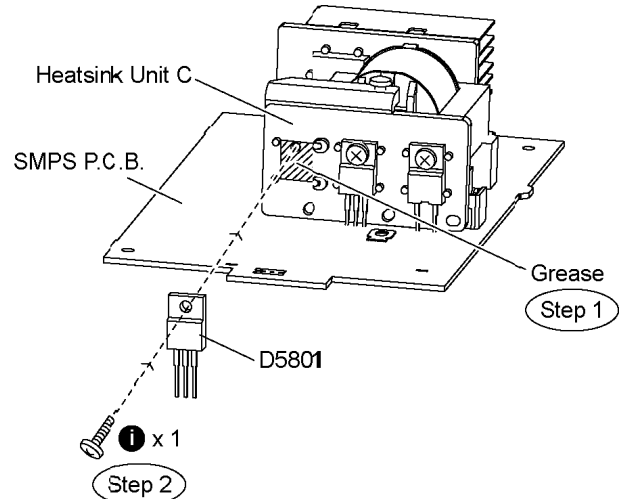
**Note:** Refer to the diagrams of SMPS P.C.B. (Item 20.5) for location of the part.

### 9.26.1. Assembly of Regulator Diode (D5801)

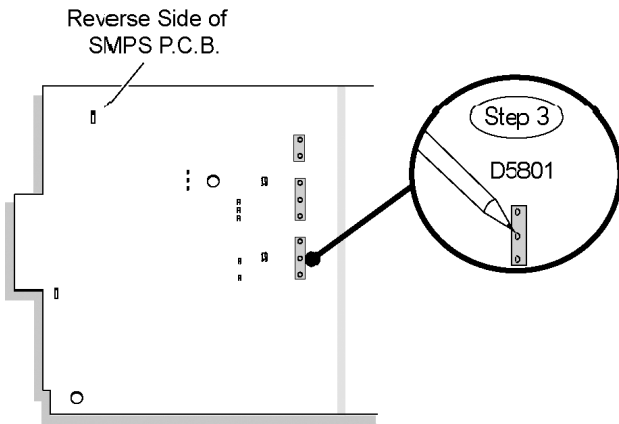
**Step 1** Apply grease to the heatsink unit C.

**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.

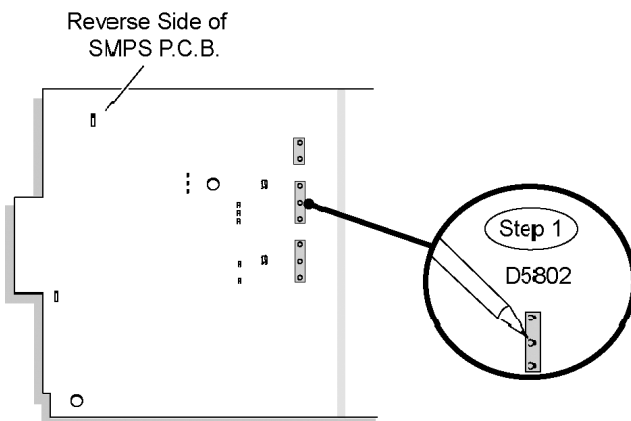


**Special Note:** Ensure pins of the regulator diode (D5801) are properly seated and soldered on SMPS P.C.B.

## 9.27. 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 5) of Item 9.23.

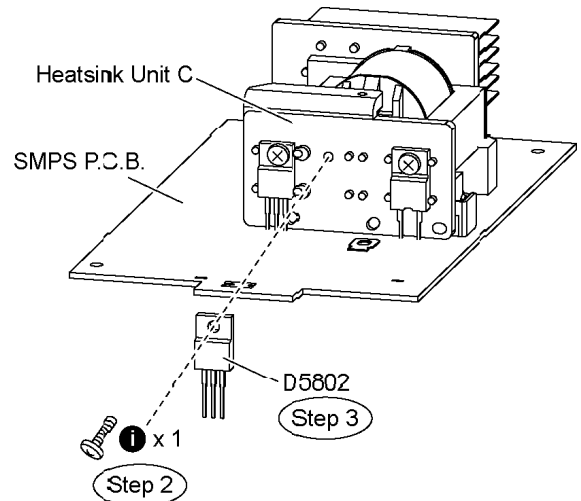
**Step 1** Desolder pins of the regulator diode (D5802) on the reverse side of SMPS P.C.B.



**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.



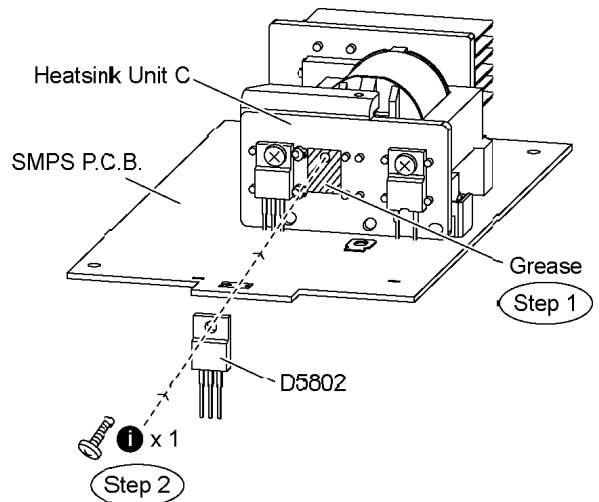
**Note:** Refer to the diagrams of SMPS P.C.B. (Item 20.5) for location of the part.

### 9.27.1. Assembly of Regulator Diode (D5802)

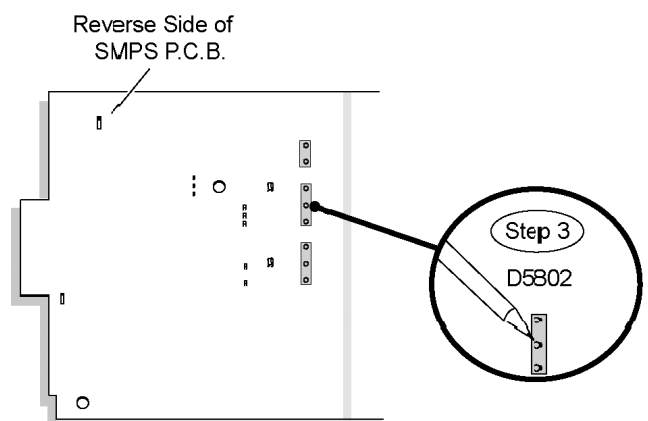
**Step 1** Apply grease to the heatsink unit C.

**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.

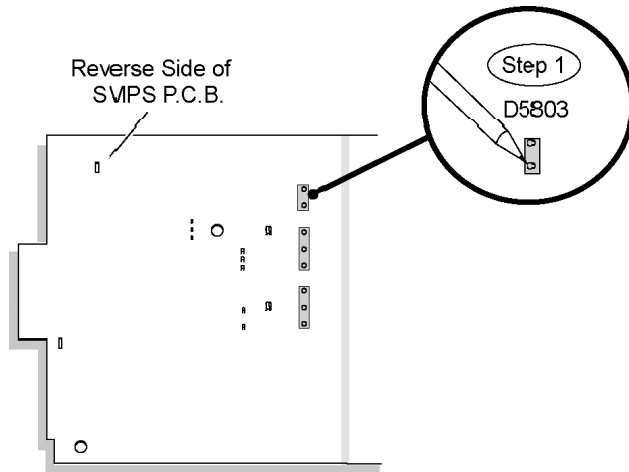


**Special Note:** Ensure pins of the regulator diode (D5802) are properly seated and soldered on SMPS P.C.B.

## 9.28. 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 5) of Item 9.23.

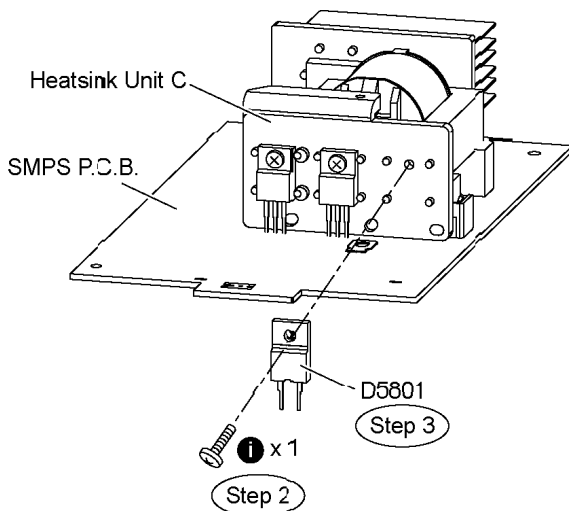
**Step 1** Desolder pins of the regulator diode (D5803) on the reverse side of SMPS P.C.B.



**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.

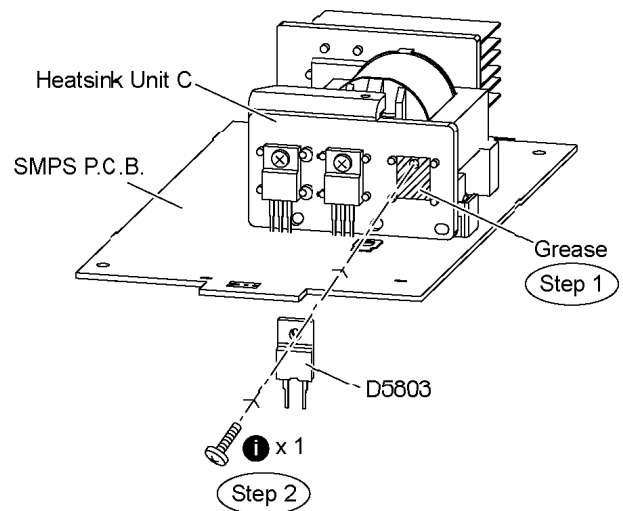
### 9.28.1. Assembly of Regulator Diode (D5803)

**Step 1** Apply grease to the heatsink unit C.

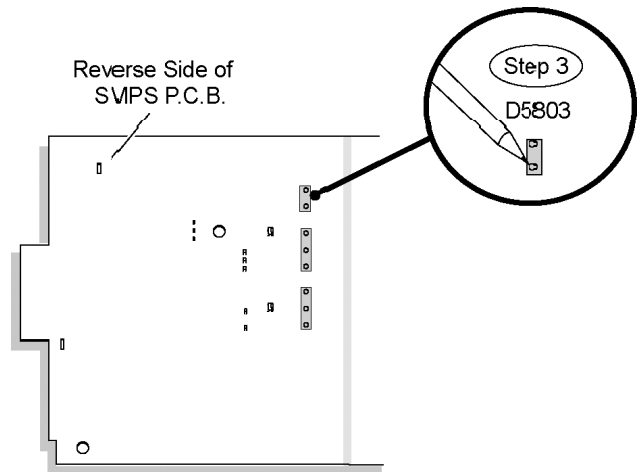
**Step 2** Fix and screw the regulator diode (D5803) to the

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.



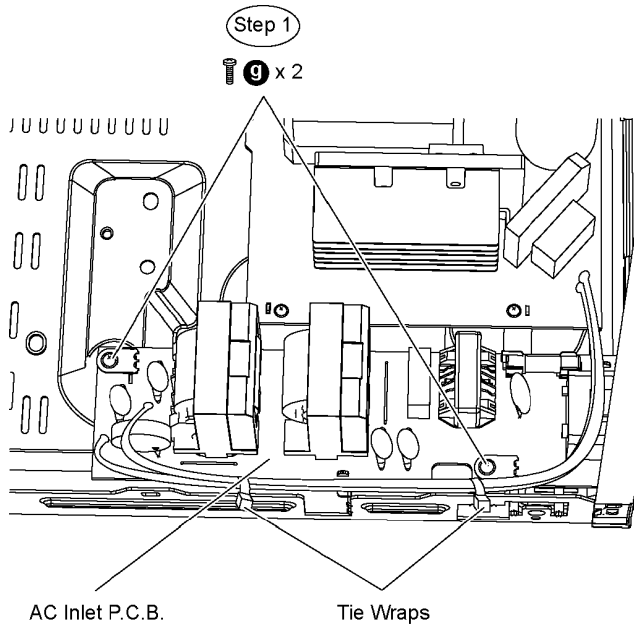
**Special Note:** Ensure pins of the regulator diode (D5803) are properly seated and soldered on SMPS P.C.B.

## 9.29. Disassembly of AC Inlet P.C.B.

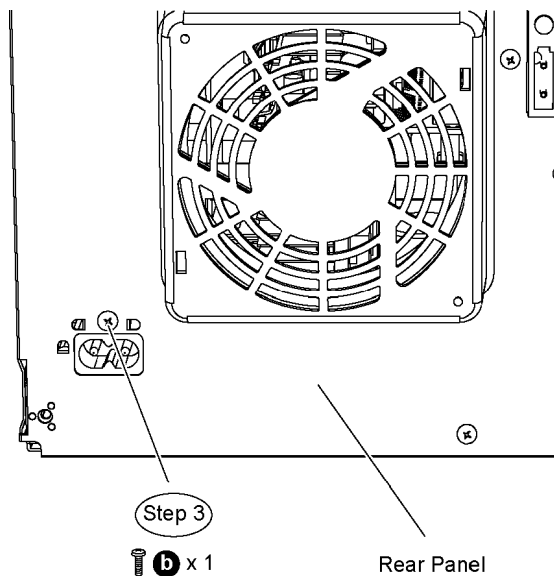
- Follow the (Step 1) to (Step 5) of Item 9.4

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

**Step 2** Cut 2 tie wraps.

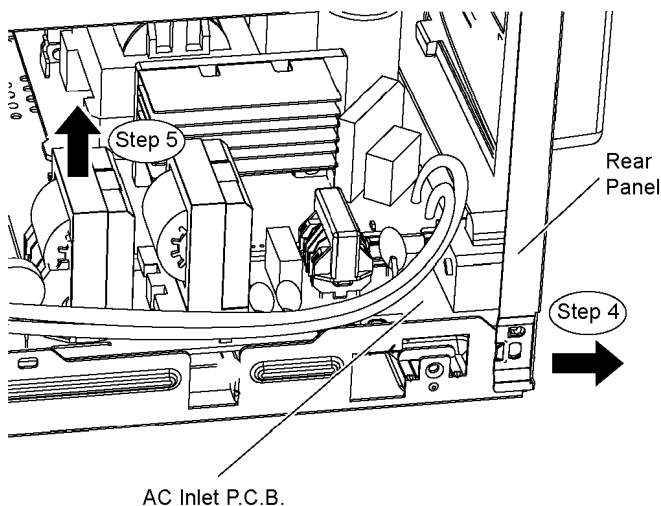


**Step 3** Remove 1 screw at the rear panel.



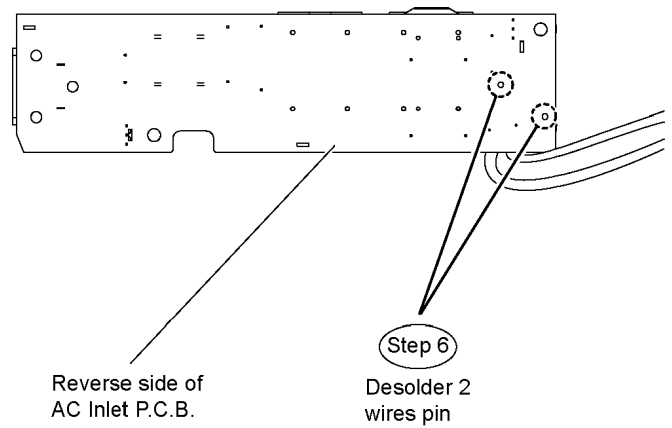
**Step 4** Detach the rear panel slightly backward as arrow shown.

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



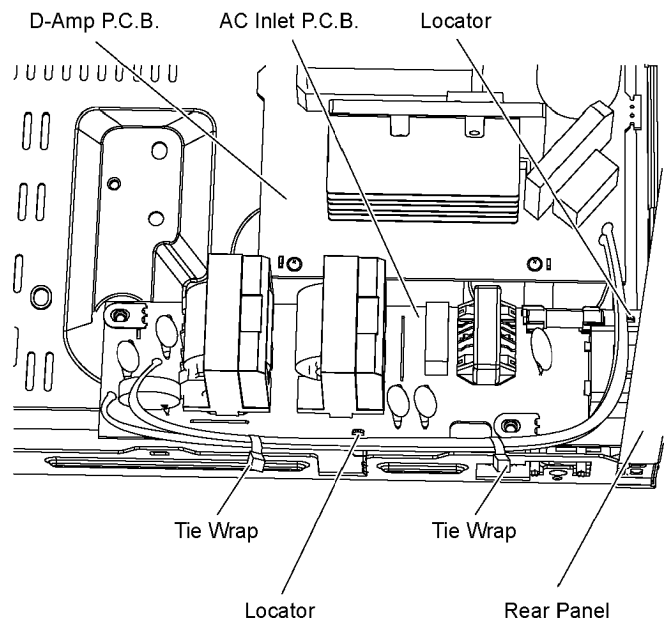
**Step 6** Flip over the AC Inlet P.C.B. and desolder 2 wires pins

(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.



## 9.30. Disassembly of DVD Module P.C.B.

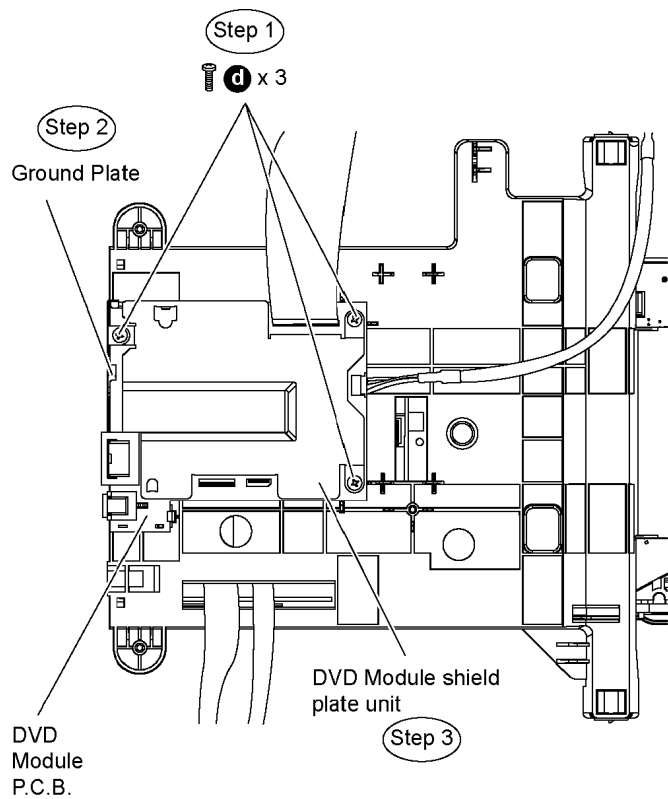
- Follow the (Step 1) to (Step 5) of Item 9.4
- Follow the (Step 1) to (Step 11) of Item 9.5

### • 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.

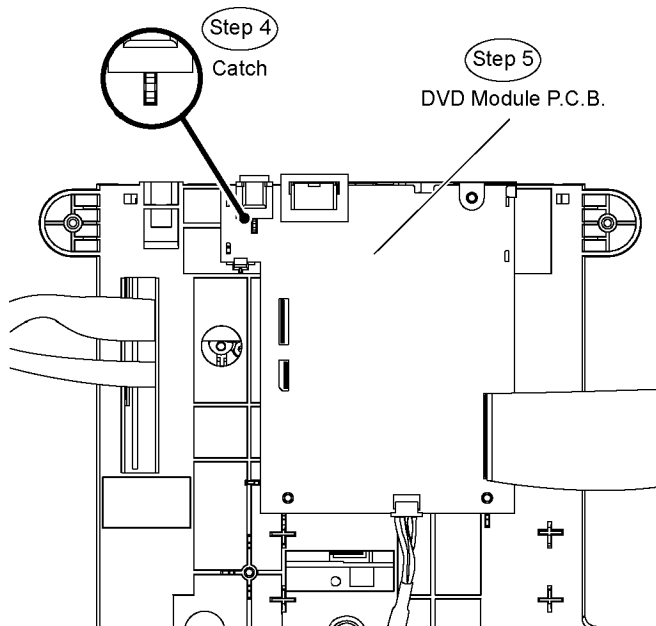
**Step 3** Remove the shield plate unit.



• Disassembly of DVD Module P.C.B.

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

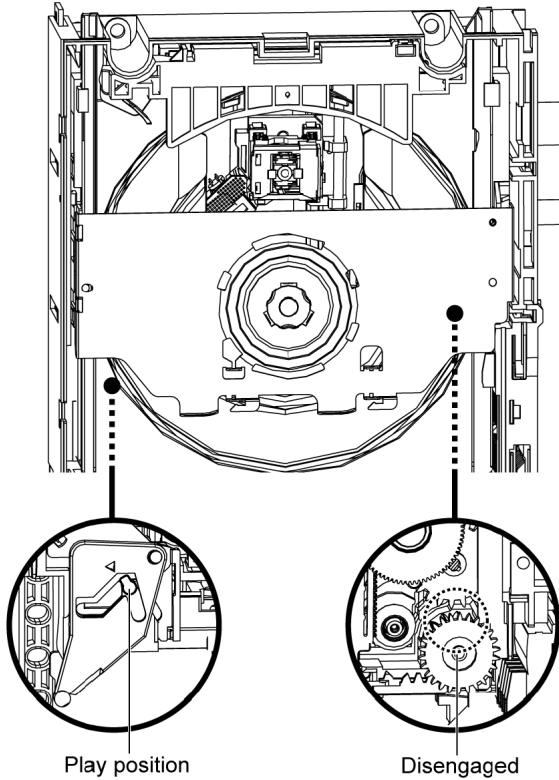
**Step 5** Remove DVD Module P.C.B..



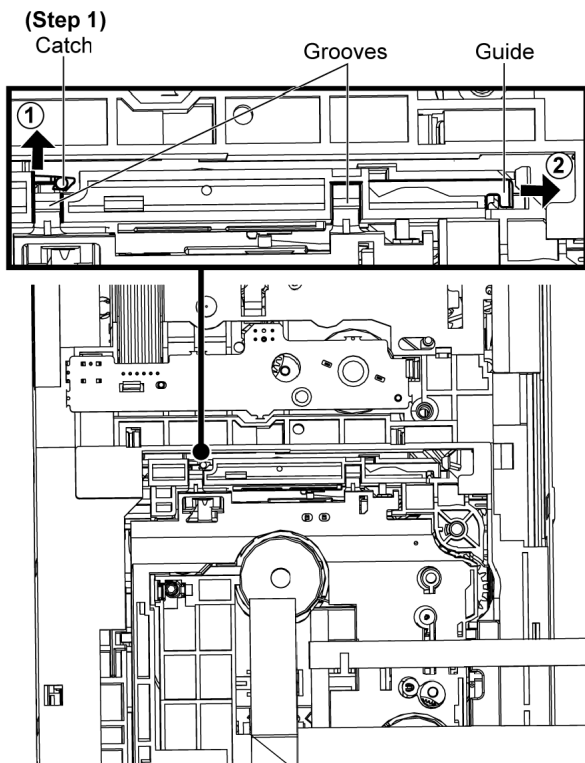
# 10 Disassembling and assembling Traverse Unit Assembly in play position

## 10.1. Disassembly of Traverse Unit Assembly

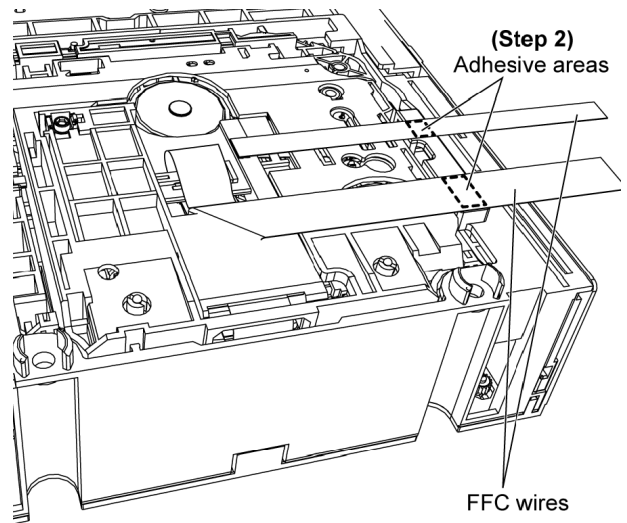
- Disassembly of traverse unit assembly in play position.



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



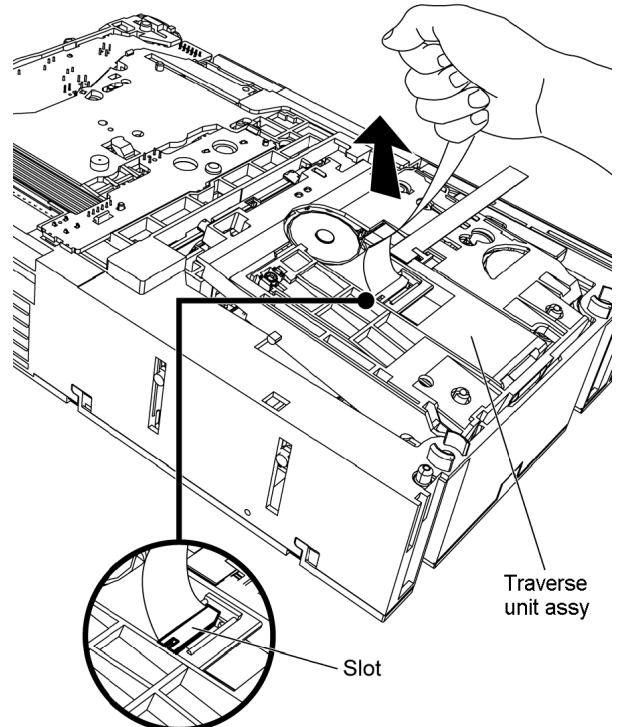
Step 1: Release the catch and push the guide as arrows shown to open both grooves.

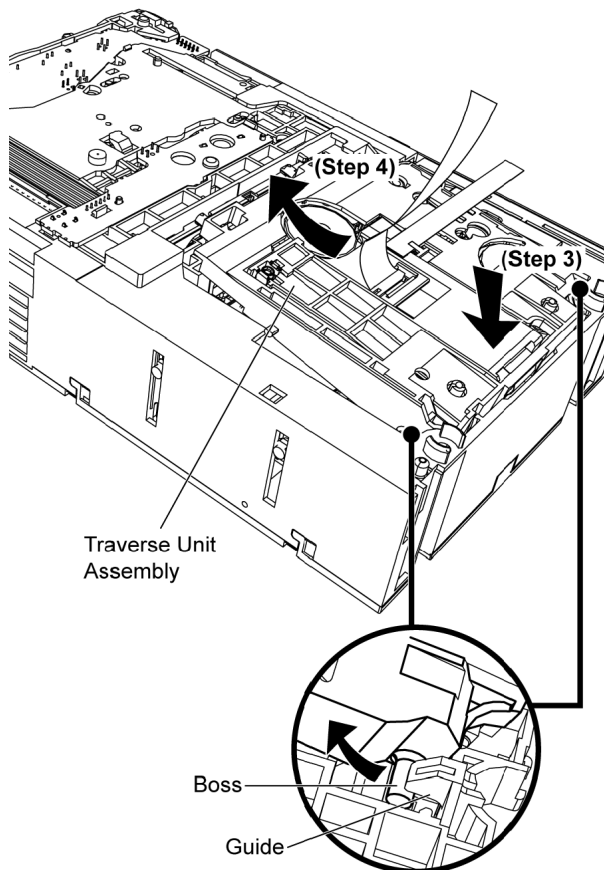


Step 2: Detach the FFC wires from the adhesive areas.

### Caution:

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

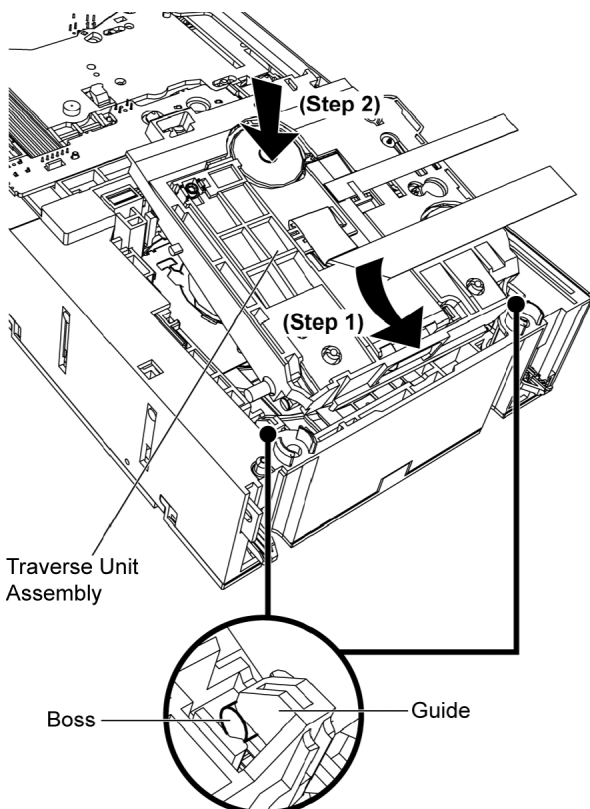




Step 3: Press down the traverse unit assembly.

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

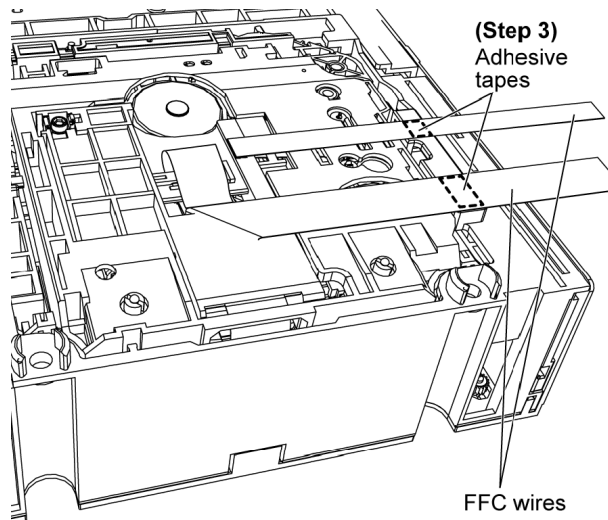
## 10.2. Assembly of Traverse Unit Assembly



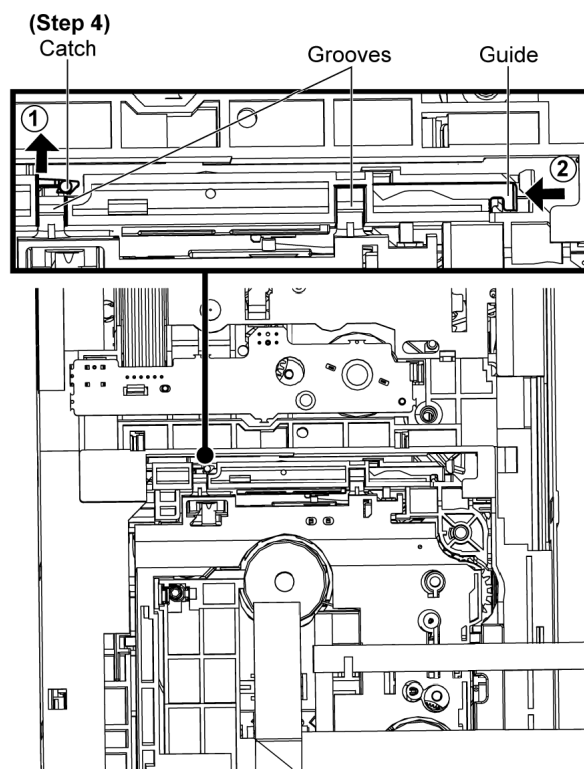
Step 1: Slot the traverse unit assembly into the guides as arrow shown.

**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.

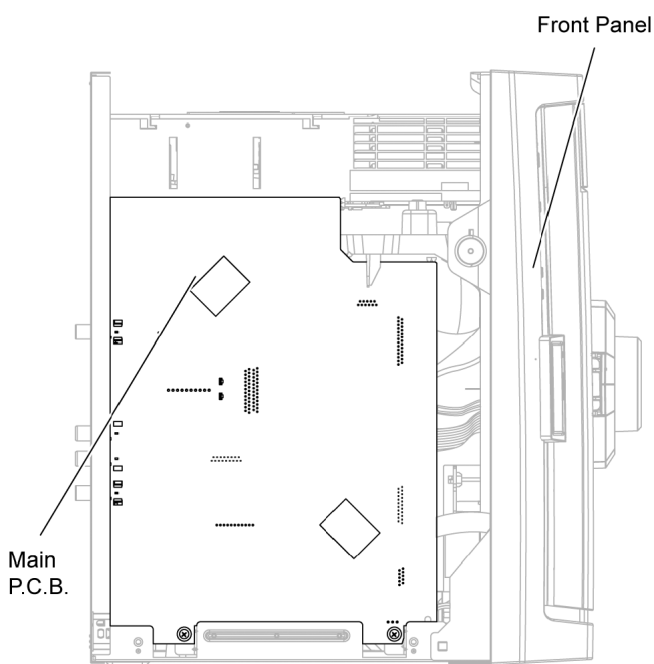
| Service Tools                                |                          | Remarks  |
|----------------------------------------------|--------------------------|----------|
| Main P.C.B. (CN2808) - D-Amp P.C.B. (CN5050) | REEX0930 (17P FFC Wires) | [M](RTL) |
| Main P.C.B. (CN2701) - SMPS P.C.B. (CN5802)  | REXX0680 (11P Wires)     | [M](RTL) |
| SMPS P.C.B. (H5801) - D-AMP P.C.B. (CN5500)  | REXX0683 (8P Flat Wires) | [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..

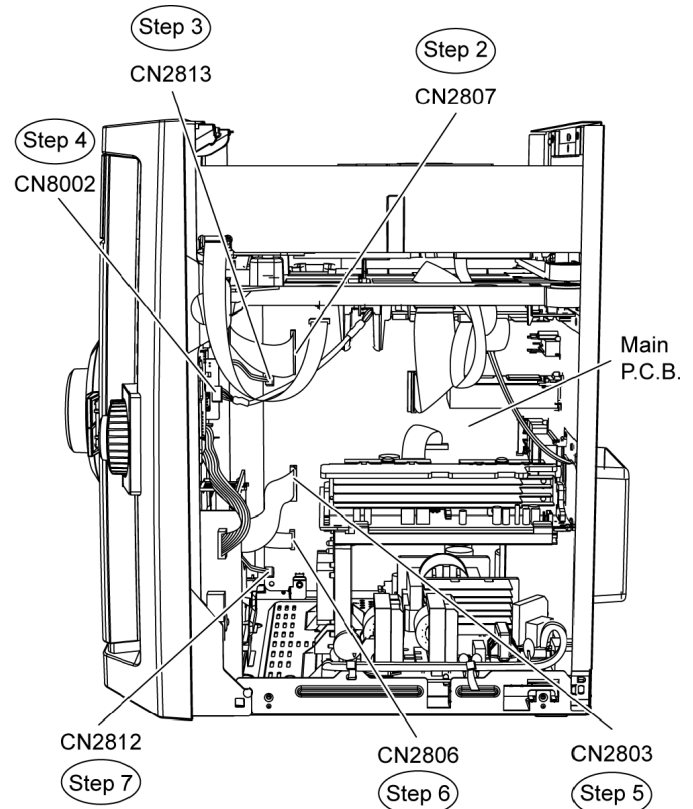
**Step 3** Detach 2P cable at connector (CN2813) on Main P.C.B..

**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..

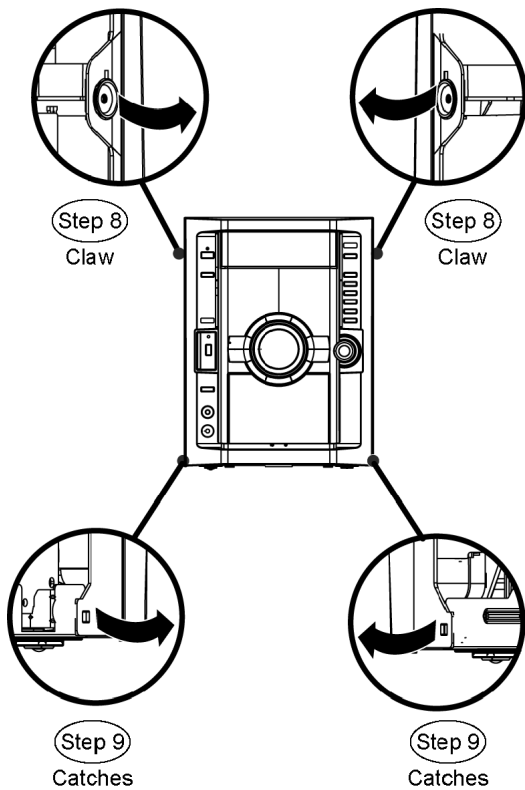
**Step 6** Detach 10P FFC cable at connector (CN2806) on Main P.C.B..

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

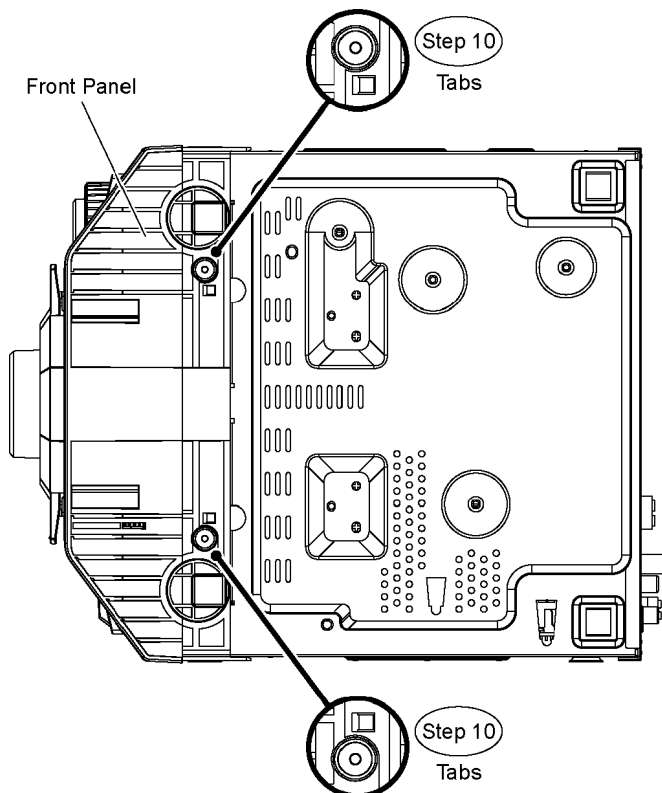


**Step 8** Release the claws outwards on both sides.

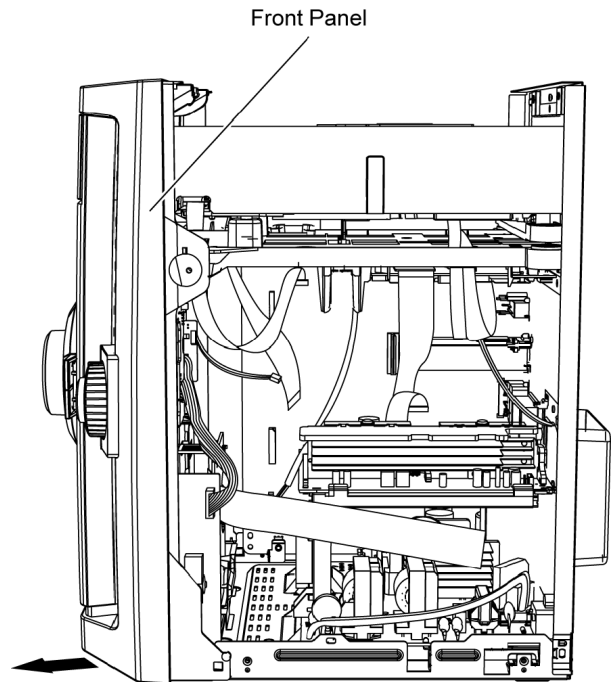
**Step 9** Release the catches at both sides.



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



**Step 11** Remove front panel unit in the direction of arrow.



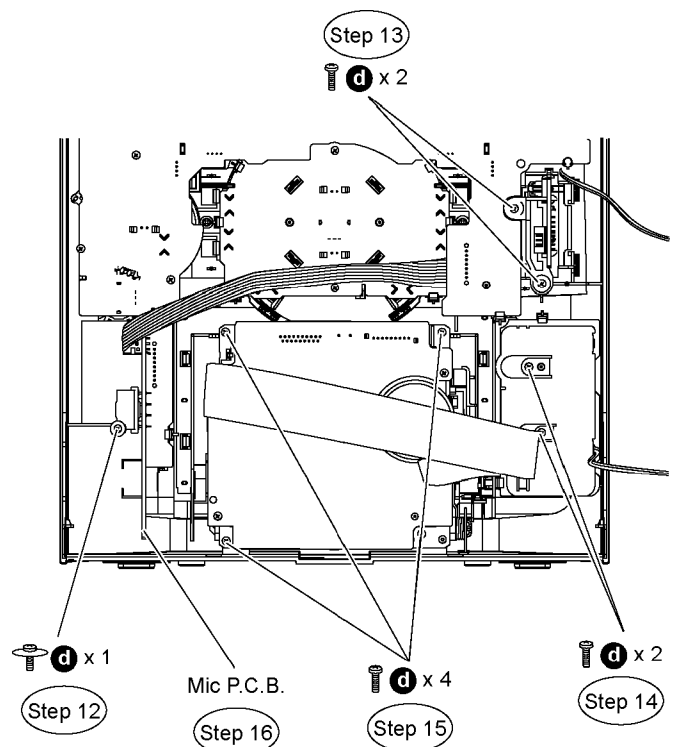
**Step 12** Remove 1 screw at Mic P.C.B..

**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..

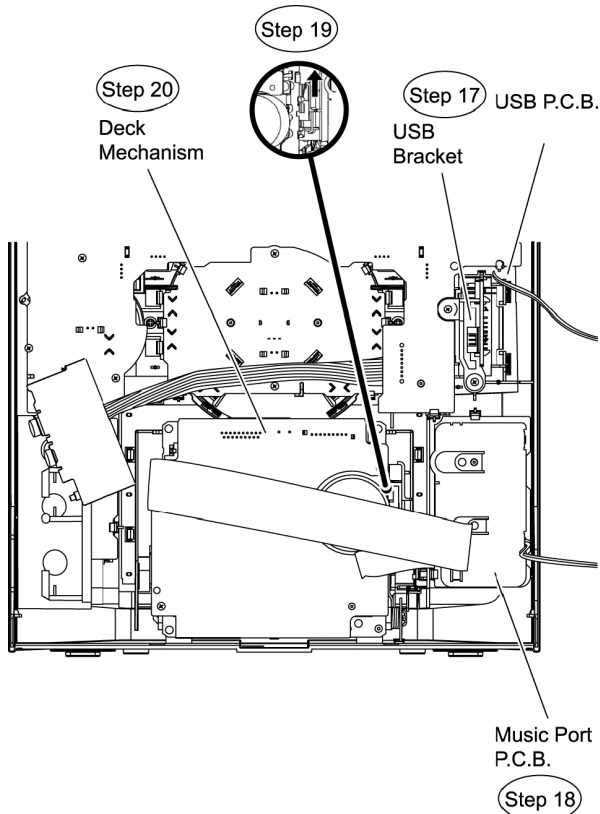


**Step 17** Remove USB P.C.B. with USB bracket.

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

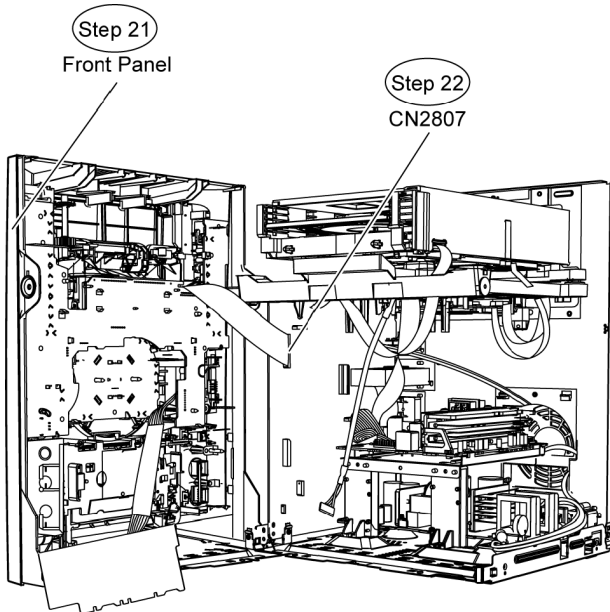
**Step 19** Push the lever upward as arrow shown to open the cassette lid assembly.

**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..

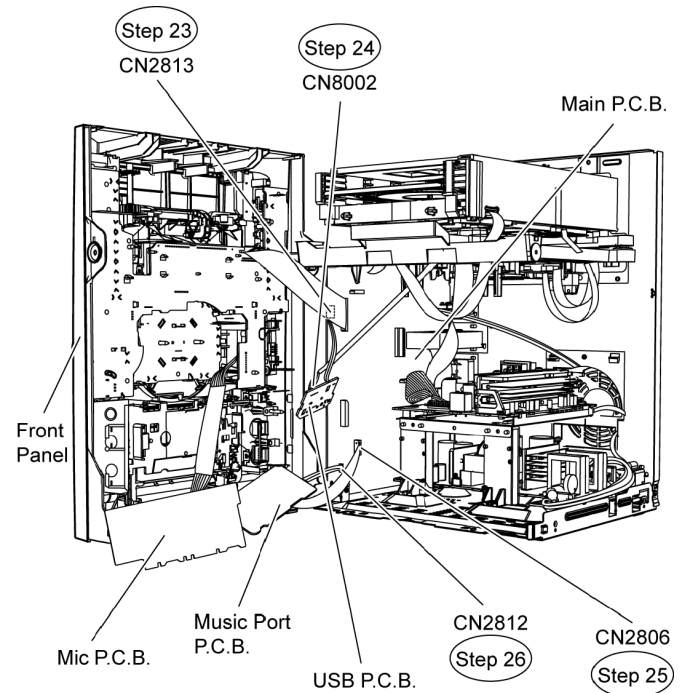


**Step 23** Connect 2P cable at connector (CN2813) on Main P.C.B..

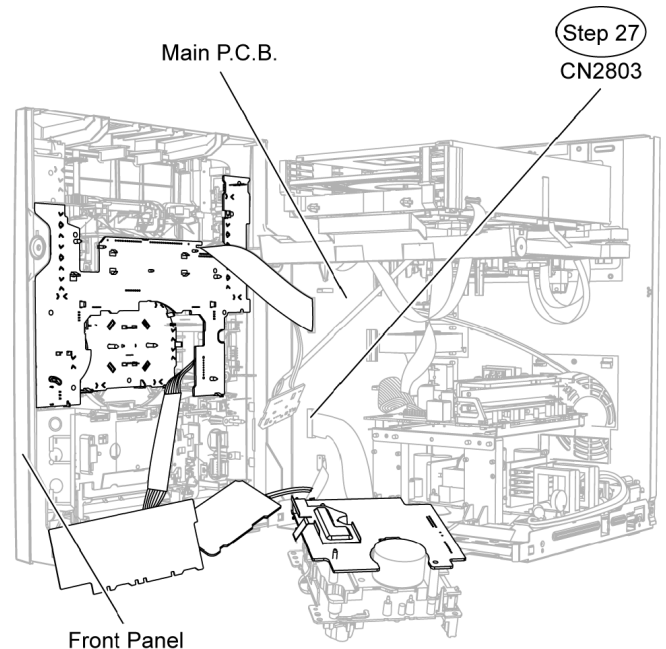
**Step 24** Connect 5P cable at connector (CN8002) on USB P.C.B..

**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.

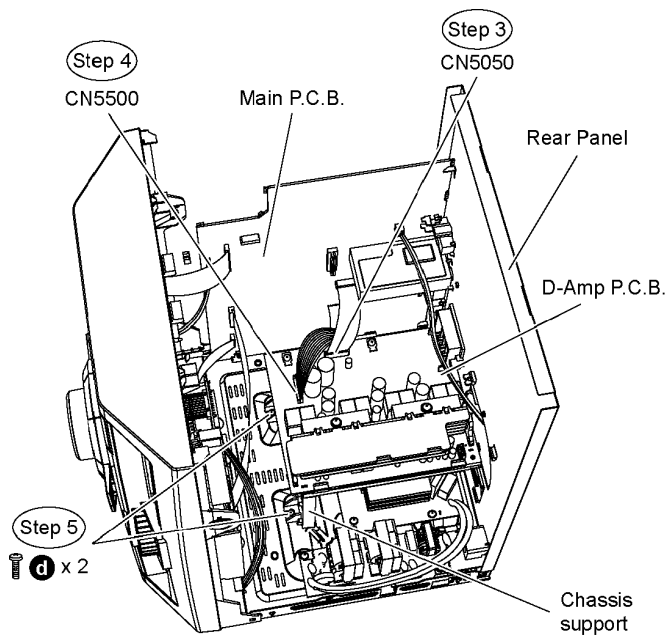
**Step 1** Remove the top cabinet.

**Step 2** Remove the Mechanism Unit.

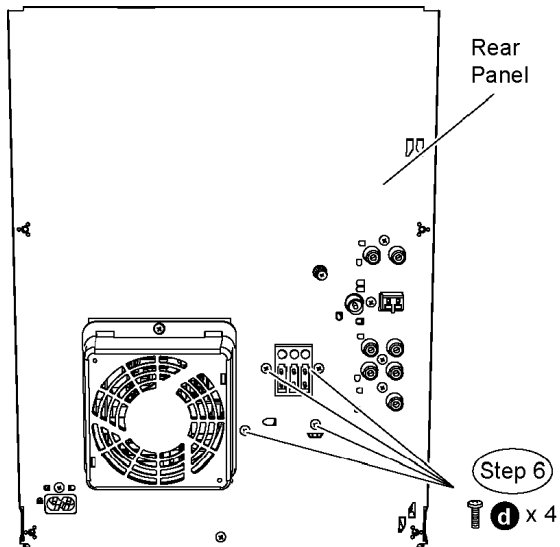
**Step 3** Detach 17P FFC cable at connector (CN5050) on D-Amp P.C.B..

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

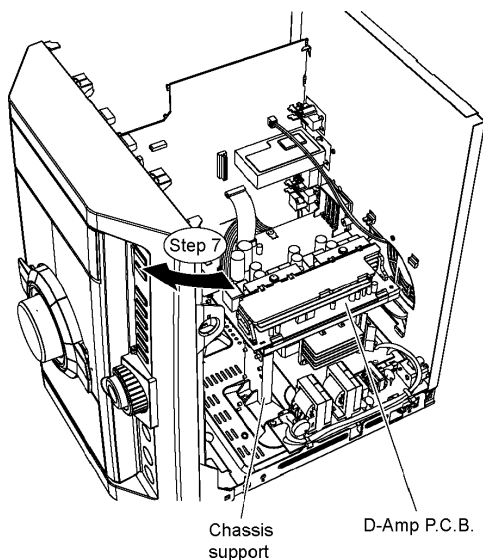
**Step 5** Remove 2 screws at chassis supports.



**Step 6** Remove 4 screws at the rear panel.

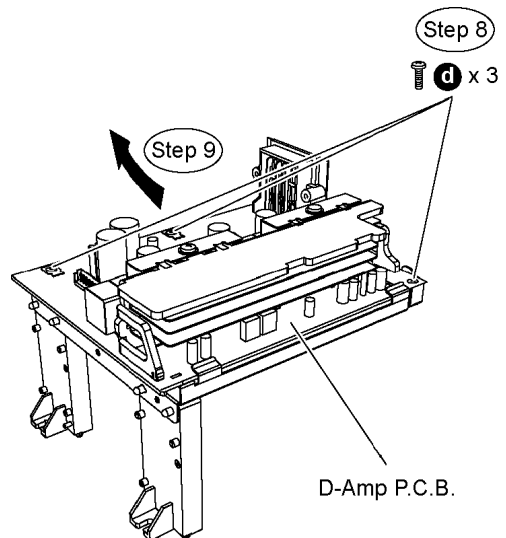


**Step 7** Lift up the D-Amp P.C.B. together with the chassis support as arrow shown.



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

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

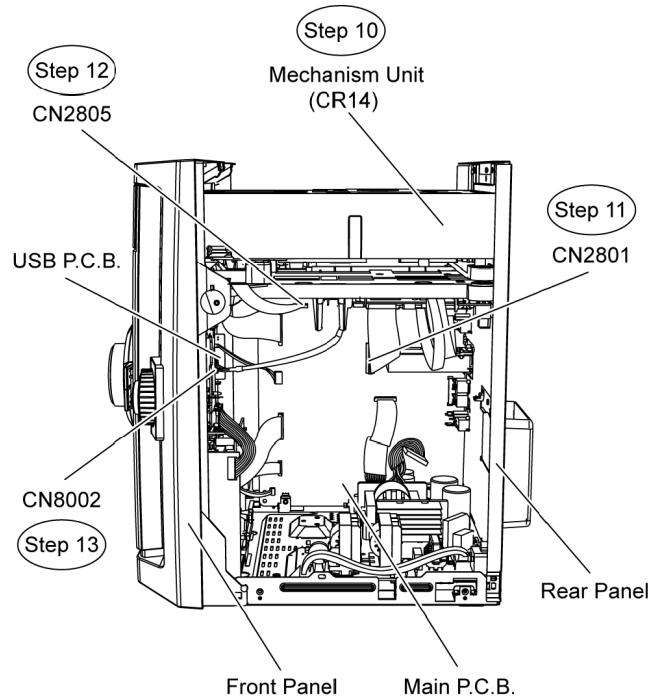


**Step 10** Position Mechanism unit (CR14) according to the diagram show.

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

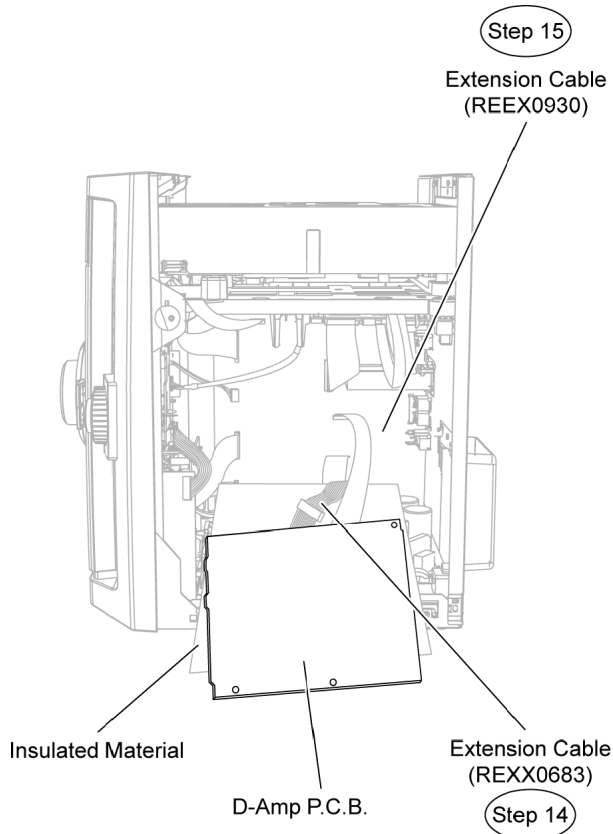
**Step 12** Connect 11P FFC cable at the connector (CN2805) on Main P.C.B..

**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.

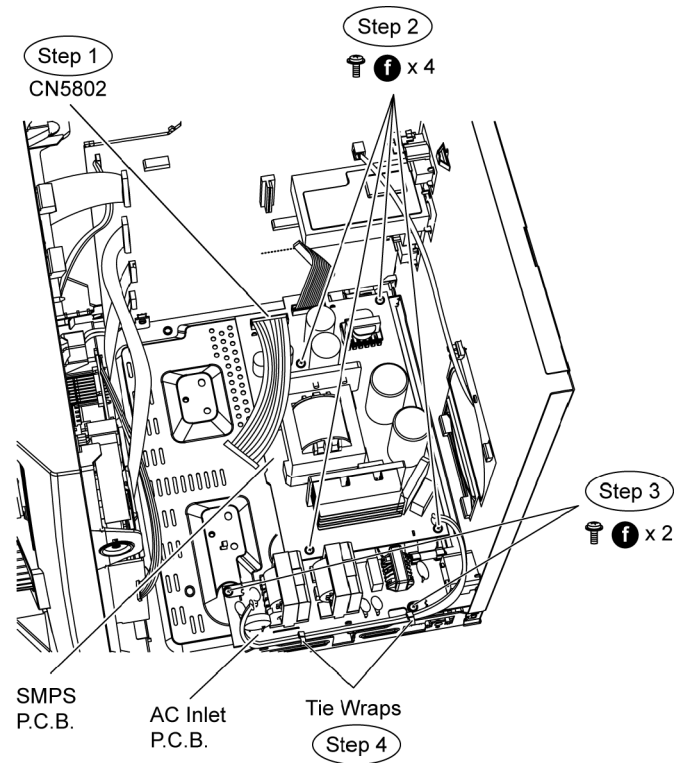
- Follow (Step 1) to (Step 9) of item 12.3

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

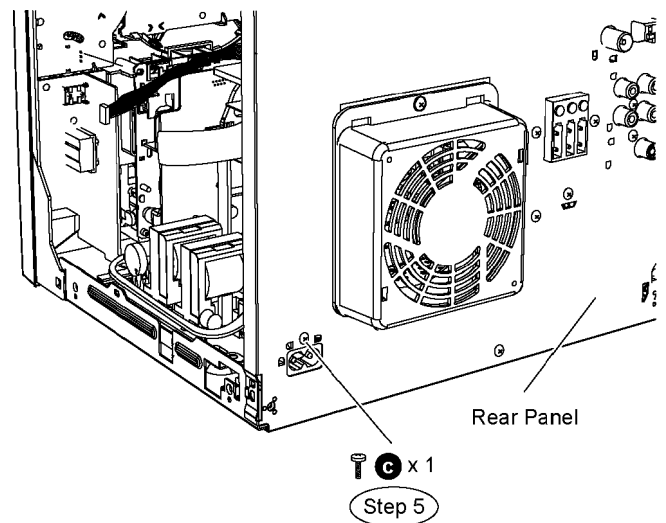
**Step 2** Remove 4 screws on SMPS P.C.B..

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

**Step 4** Cut 2 tie wraps onto wires.

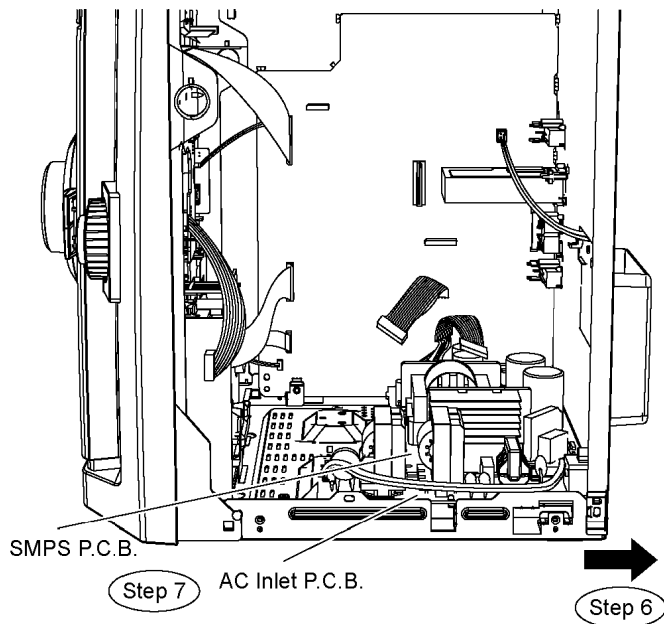


**Step 5** Remove 1 screw at the rear panel.



**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..

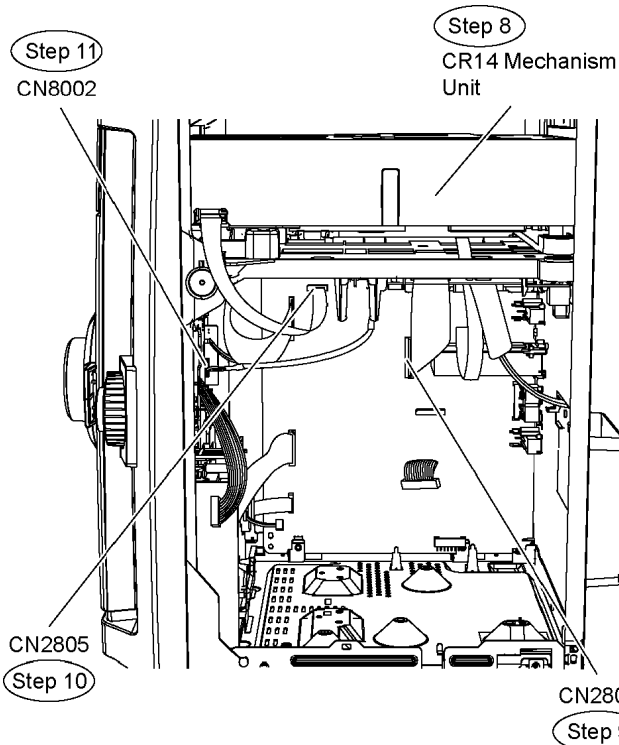


**Step 8** Position Mechanism unit (CR14) according to the diagram show.

**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..



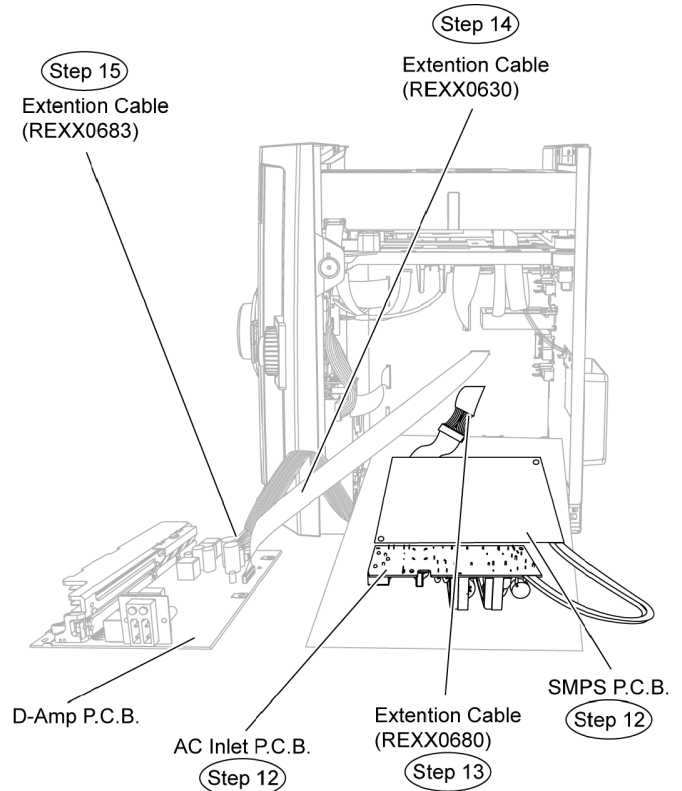
**Step 12** Position SMPS and AC Inlet P.C.B. according to the diagram show.

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

**Step 14** Connect extension cable (REEX0930) (17P cable from CN2802 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)

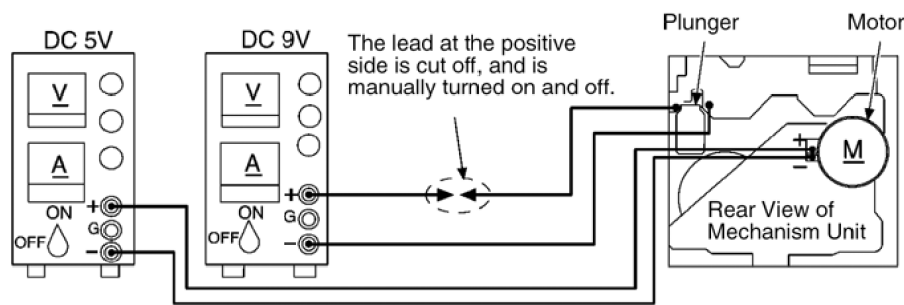


Fig. 5

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

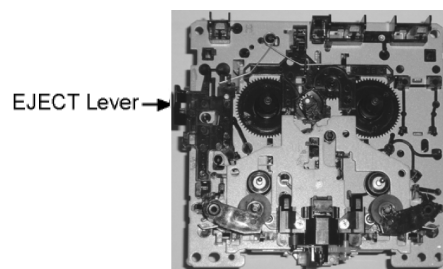
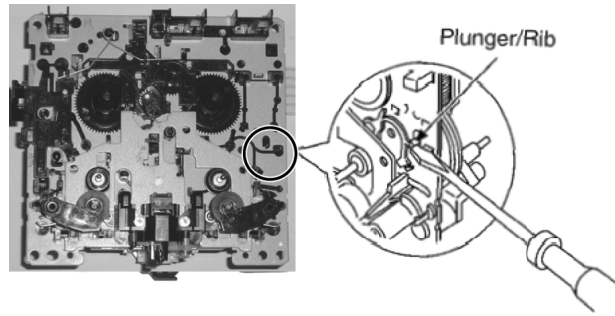


Fig. 6

### 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.

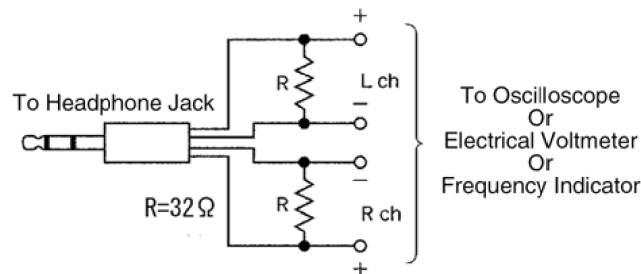


Fig. 8

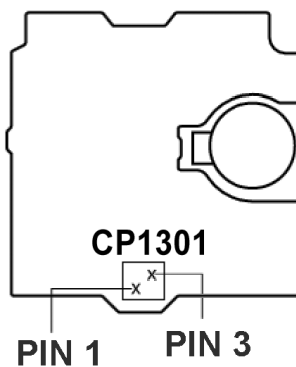


Fig. 9

#### 14.1.4. Tape Speed Adjustment

- Normal speed adjustment (only during forward playback)

(Product reference value:  $3,000 \pm 90\text{Hz}$ )

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:  $3,000 \pm 90\text{Hz}$  (a constant speed)

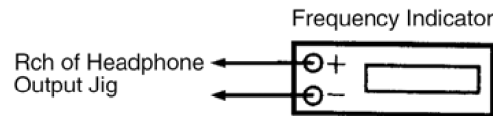


Fig. 10

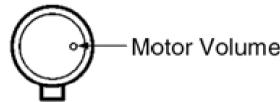


Fig. 11

#### 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:  $14 \pm 4\text{mV}$

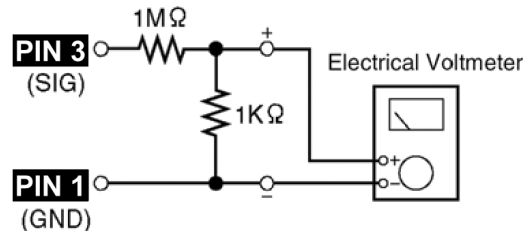


Fig. 12

#### 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:  $100 \pm 8\text{ kHz}$

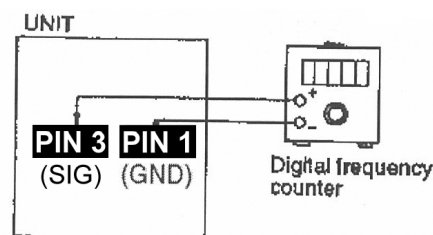


Fig. 13

# 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 |     |       |     |     |     |        |     |     |     |       |     |     |     |        |     |     |     |

VK670EE 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. | IC5200 |      |      |     |       |       |       |      |       |      |       |       |       |      |     |      |       |       |     |    |
| MODE    | 1      | 2    | 3    | 4   | 5     | 6     | 7     | 8    | 9     | 10   | 11    | 12    | 13    | 14   | 15  | 16   | 17    | 18    | 19  | 20 |
| CD PLAY | 2.5    | -0.1 | -0.1 | 29  | 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 | 29  | 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 |
| REF NO. | IC5200 |      |      |     |       |       |       |      |       |      |       |       |       |      |     |      |       |       |     |    |
| 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 |    |

VK670EE 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. | IC2061 |      |     |      |       |     |     |     |       |      |     |     |       |      |     |     |       |      |     |     |
| 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. | 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. | IC6931 |      |     |      |       |     |     |     |       |      |     |     |       |      |     |     |       |      |     |     |
| MODE    | 1      | 2    | 3   | 4    | 5     | 6   | 7   | 8   | 9     | 10   | 11  | 12  | 13    | 14   | 15  | 16  |       |      |     |     |
| CD PLAY | 5.2    | 2.6  | 0   | 0.1  | 2.8   | 2.6 | 0.6 | 0.6 | 2.6   | 2.6  | 2.6 | 2.6 | 2.6   | 2.6  | 2.6 | 2.6 |       |      |     |     |
| STANDBY | 5.2    | 2.6  | 0   | 0.1  | 2.8   | 2.6 | 0.6 | 0.6 | 2.6   | 2.6  | 2.6 | 2.6 | 2.6   | 2.6  | 2.6 | 2.6 |       |      |     |     |
| REF NO. |        |      |     |      |       |     |     |     |       |      |     |     |       |      |     |     |       |      |     |     |
| MODE    | 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  |      |      |       |      |      | Q2061 |       |       | Q2062 |      |      | Q2063 |     |      |
|---------|--------|------|------|-------|------|------|-------|-------|-------|-------|------|------|-------|-----|------|
| 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     | 0.8   | 0     | 0    | -2.6 | 4.7   | 4.7 | 0    |
| STANDBY | 0      | 0.7  | 0    | 0     | 0.7  | 0    | 0     | 0     | 0.8   | 0     | 0    | -2.4 | 4.7   | 4.7 | 0    |
| REF NO. | Q2064  |      |      | Q2065 |      |      | Q2142 |       |       | Q2143 |      |      | Q2242 |     |      |
| MODE    | E      | C    | B    | E     | C    | B    | E     | C     | B     | E     | C    | B    | E     | C   | B    |
| CD PLAY | 0      | -2.7 | 0    | 0     | 0    | -6.4 | 0     | 0     | 0.2   | 0     | 0    | -6.4 | 0     | 0   | -0.1 |
| STANDBY | 0      | -2.4 | 0    | 0     | 0    | 0.6  | 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    | 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. | Q2942  |      |      | Q2943 |      |      | Q2980 |       |       | Q2948 |      |      | Q2949 |     |      |
| MODE    | E      | C    | B    | E     | C    | B    | E     | C     | B     | E     | C    | B    | E     | C   | B    |
| CD PLAY | 10.7   | 0    | 10.7 | 0     | 10.7 | 0    | 1.9   | 5.1   | 2.6   | 0     | 0    | 0.2  | 0     | 3.8 | 0    |
| STANDBY | 10.7   | 0    | 10.7 | 0     | 10.7 | 0    | 1.9   | 5.1   | 2.6   | 0     | 0    | 0.2  | 0     | 3.8 | 0    |
| REF NO. | Q4000  |      |      | Q4001 |      |      | Q4002 |       |       | Q4003 |      |      | Q4005 |     |      |
| MODE    | E      | C    | B    | E     | C    | B    | E     | C     | B     | E     | C    | B    | E     | C   | B    |
| CD PLAY | 3.1    | 4.7  | 3.8  | 3.8   | 3.8  | 4.9  | -9.5  | -11.5 | -10.1 | 9.4   | 11.5 | 10.1 | 0     | 3.8 | -0.9 |
| STANDBY | 3.1    | 4.7  | 3.8  | 3.8   | 3.8  | 4.9  | -9.5  | -11.4 | -10.1 | 9.4   | 11.5 | 10.1 | 0     | 3.7 | -0.9 |
| REF NO. | Q4006  |      |      | Q4007 |      |      | Q5100 |       |       | Q6906 |      |      | Q6907 |     |      |
| MODE    | E      | C    | B    | E     | C    | B    | E     | C     | B     | E     | C    | B    | E     | C   | B    |
| CD PLAY | 5.7    | 3.5  | 5.3  | 7.5   | 9.2  | 8.2  | 0     | 0     | 0.2   | 0     | 0    | 0    | 0     | 0   | 5.0  |
| STANDBY | 5.6    | 3.6  | 5.1  | 7.5   | 9.2  | 8.2  | 0     | 0     | 0.2   | 0     | 0    | 0    | 0     | 0   | 5.0  |
| REF NO. | Q6908  |      |      | Q6909 |      |      | Q6910 |       |       |       |      |      |       |     |      |
| MODE    | E      | C    | B    | E     | C    | B    | E     | C     | B     |       |      |      |       |     |      |
| CD PLAY | 0      | 0    | 3.6  | 0     | 0    | 0    | 0     | 0     | 0     |       |      |      |       |     |      |
| STANDBY | 0      | 0    | 3.6  | 0     | 0    | 0    | 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  |       |      |      |       |       |       |       |      |      |       |     |      |

VK670EE 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  |      |      |      |      |      |

VK670EE 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 |  |  |  |  |  |  |  |  |

VK670EE MIC P.C.B.

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

VK670EE TACT SWITCH P.C.B.

## 15.5. Deck & Deck Mechanism P.C.B.

| REF NO.<br>MODE | IC1000 |     |     |     |   |       |     |     |   |    |       |     |     |    |     |       |    |    |     |     |
|-----------------|--------|-----|-----|-----|---|-------|-----|-----|---|----|-------|-----|-----|----|-----|-------|----|----|-----|-----|
|                 | 1      | 2   | 3   | 4   | 5 |       |     |     |   |    |       |     |     |    |     |       |    |    |     |     |
| CD PLAY         | 0      | 0   | 0   | 0   | 0 |       |     |     |   |    |       |     |     |    |     |       |    |    |     |     |
| STANDBY         | 0      | 0   | 0   | 0   | 0 |       |     |     |   |    |       |     |     |    |     |       |    |    |     |     |
| REF NO.<br>MODE | IC1001 |     |     |     |   |       |     |     |   |    |       |     |     |    |     |       |    |    |     |     |
|                 | 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.<br>MODE | IC1001 |     |     |     |   |       |     |     |   |    |       |     |     |    |     |       |    |    |     |     |
|                 | 21     | 22  |     |     |   |       |     |     |   |    |       |     |     |    |     |       |    |    |     |     |
| CD PLAY         | 0.3    | 0   |     |     |   |       |     |     |   |    |       |     |     |    |     |       |    |    |     |     |
| STANDBY         | 0.3    | 0   |     |     |   |       |     |     |   |    |       |     |     |    |     |       |    |    |     |     |
| REF NO.<br>MODE | Q1101  |     |     |     |   | Q1201 |     |     |   |    | Q1302 |     |     |    |     | Q1303 |    |    |     |     |
|                 | 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  |     |     |
| STANDBY         | 0      | 0   | 0   |     |   | 0     | 0   | 0   |   |    | 3.3   | 0   | 3.3 |    |     | 0     | 0  | 0  |     |     |
| REF NO.<br>MODE | Q1306  |     |     |     |   | Q1307 |     |     |   |    | Q1309 |     |     |    |     | Q1310 |    |    |     |     |
|                 | 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  |     |     |
| STANDBY         | 0      | 0   | 0   |     |   | 0     | 0   | 0   |   |    | 0     | 0   | 0   |    |     | 0     | 0  | 0  |     |     |
| REF NO.<br>MODE | Q1314  |     |     |     |   | Q1315 |     |     |   |    | Q1316 |     |     |    |     | Q1317 |    |    |     |     |
|                 | 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   | 2.1 | 2.2 |    |     | 0     | 0  | 0  |     |     |

VK670EE DECK P.C.B.

| REF NO.<br>MODE | IC971 |   |     |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------|-------|---|-----|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
|                 | 1     | 2 | 3   | 4 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CD PLAY         | 0.5   | 0 | 3.9 | 5 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| STANDBY         | 0     | 0 | 0   | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

VK670EE DECK MECHANISM P.C.B.

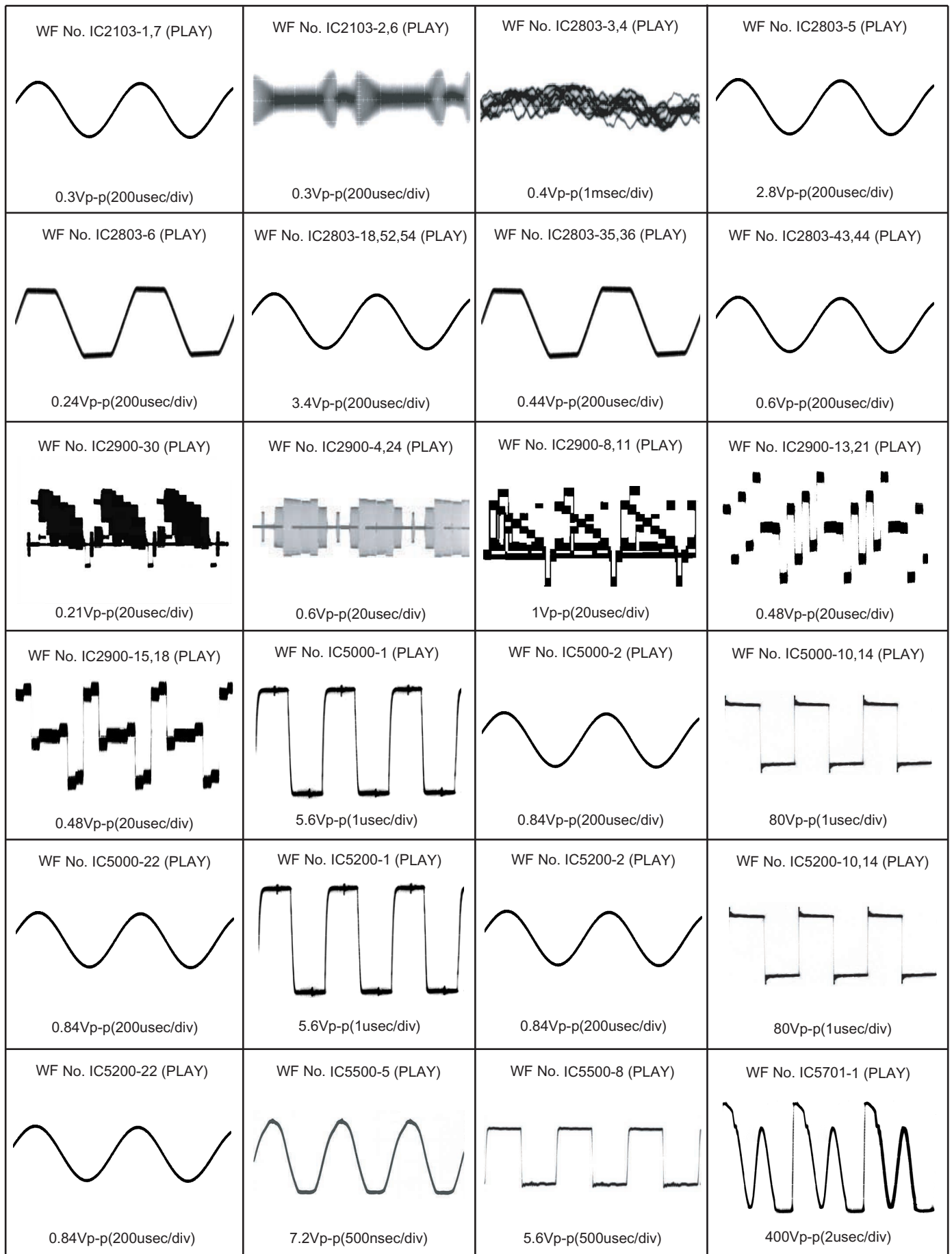
## 15.6. SMPS P.C.B.

| REF NO.<br>MODE | IC5701 |       |       |      |       |       |      |      |  |  |       |      |     |  |  |        |      |     |  |  |
|-----------------|--------|-------|-------|------|-------|-------|------|------|--|--|-------|------|-----|--|--|--------|------|-----|--|--|
|                 | 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.<br>MODE | IC5799 |       |       |      |       |       |      |      |  |  |       |      |     |  |  |        |      |     |  |  |
|                 | 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.<br>MODE | IC5801 |       |       |      |       |       |      |      |  |  |       |      |     |  |  |        |      |     |  |  |
|                 | 1      | 2     | 3     |      |       |       |      |      |  |  |       |      |     |  |  |        |      |     |  |  |
| CD PLAY         | -2.2   | -29.5 | -26.8 |      |       |       |      |      |  |  |       |      |     |  |  |        |      |     |  |  |
| STANDBY         | -2.2   | -29.5 | -26.8 |      |       |       |      |      |  |  |       |      |     |  |  |        |      |     |  |  |
| REF NO.<br>MODE | IC5899 |       |       |      |       |       |      |      |  |  |       |      |     |  |  |        |      |     |  |  |
|                 | 1      | 2     | 3     |      |       |       |      |      |  |  |       |      |     |  |  |        |      |     |  |  |
| CD PLAY         | 4.2    | 0     | 2.5   |      |       |       |      |      |  |  |       |      |     |  |  |        |      |     |  |  |
| STANDBY         | 4.2    | 0     | 2.5   |      |       |       |      |      |  |  |       |      |     |  |  |        |      |     |  |  |
| REF NO.<br>MODE | Q5720  |       |       |      |       | Q5721 |      |      |  |  | Q5722 |      |     |  |  | Q5802  |      |     |  |  |
|                 | 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 |  |  |
| STANDBY         | 5.9    | 6.6   | 5.6   |      |       | 19.9  | 19.9 | 19.2 |  |  | 0     | 16.8 | 0.1 |  |  | -21.8  | -2.2 | -22 |  |  |
| REF NO.<br>MODE | Q5860  |       |       |      |       | Q5861 |      |      |  |  | Q5862 |      |     |  |  | QR5801 |      |     |  |  |
|                 | 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   |  |  |
| STANDBY         | 1.3    | 0     | 0.7   |      |       | 0     | 0    | 0.7  |  |  | 0     | 5.2  | 0   |  |  | 0      | 5.0  | 0   |  |  |
| REF NO.<br>MODE | QR5810 |       |       |      |       | Q5898 |      |      |  |  |       |      |     |  |  |        |      |     |  |  |
|                 | 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  |  |  |       |      |     |  |  |        |      |     |  |  |

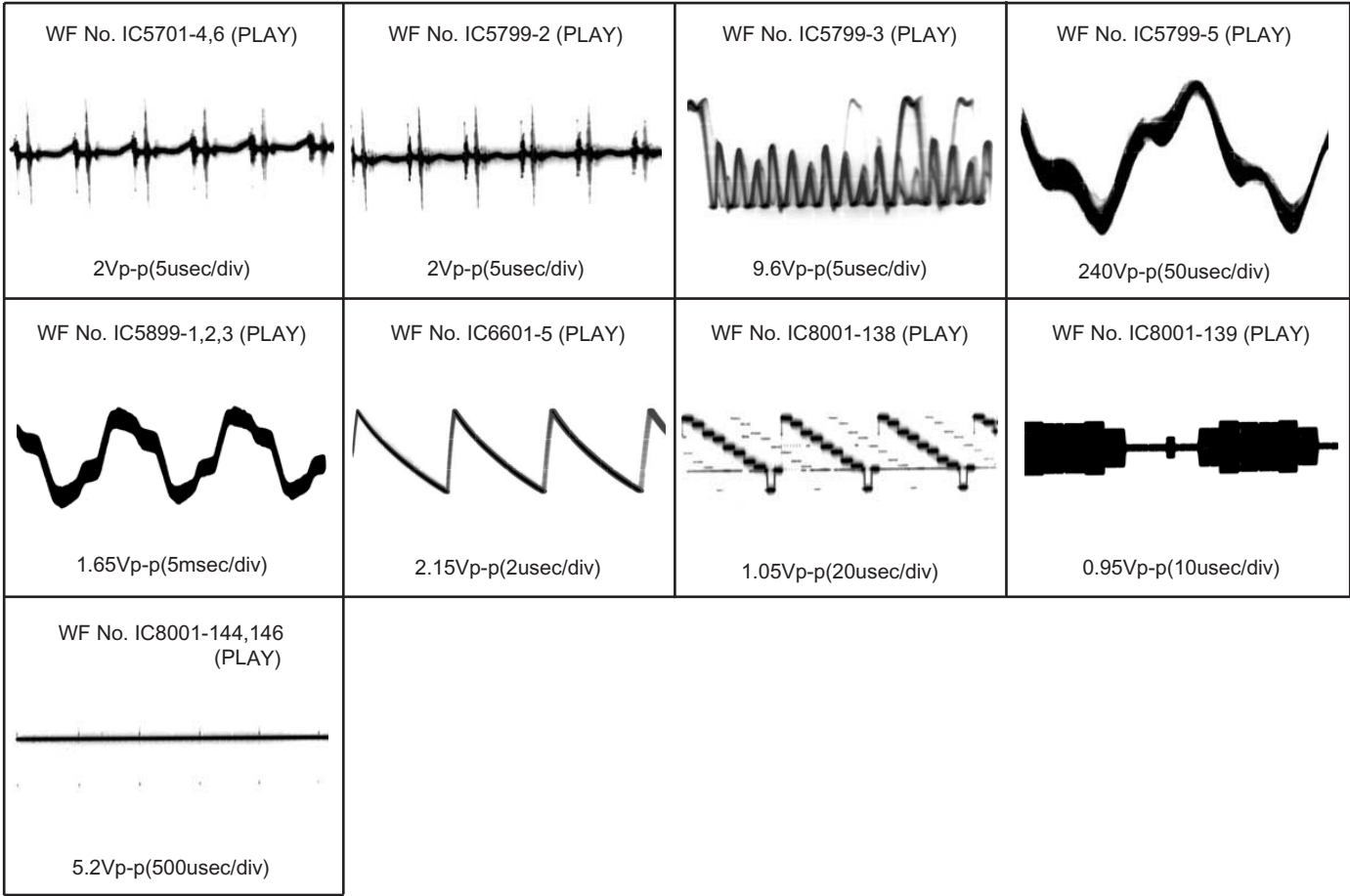
VK670EE SMPS P.C.B.

## 15.7. Waveform Chart

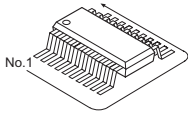
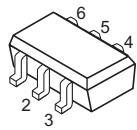
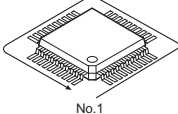
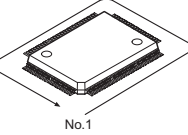
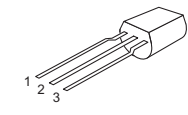
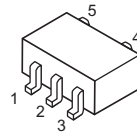
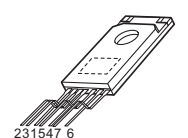
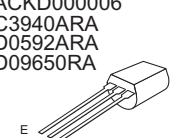
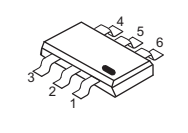
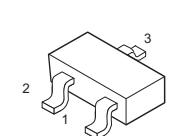
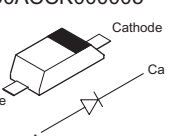
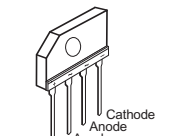
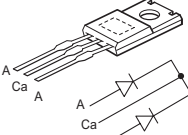
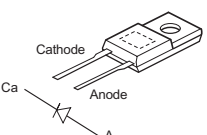
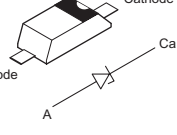
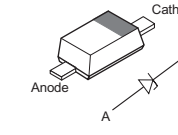
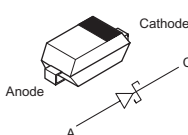
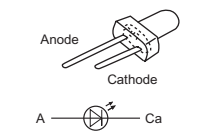
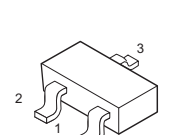
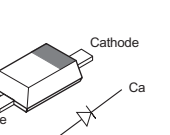
### 15.7.1. Waveform 1



15.7.2. Waveform 2

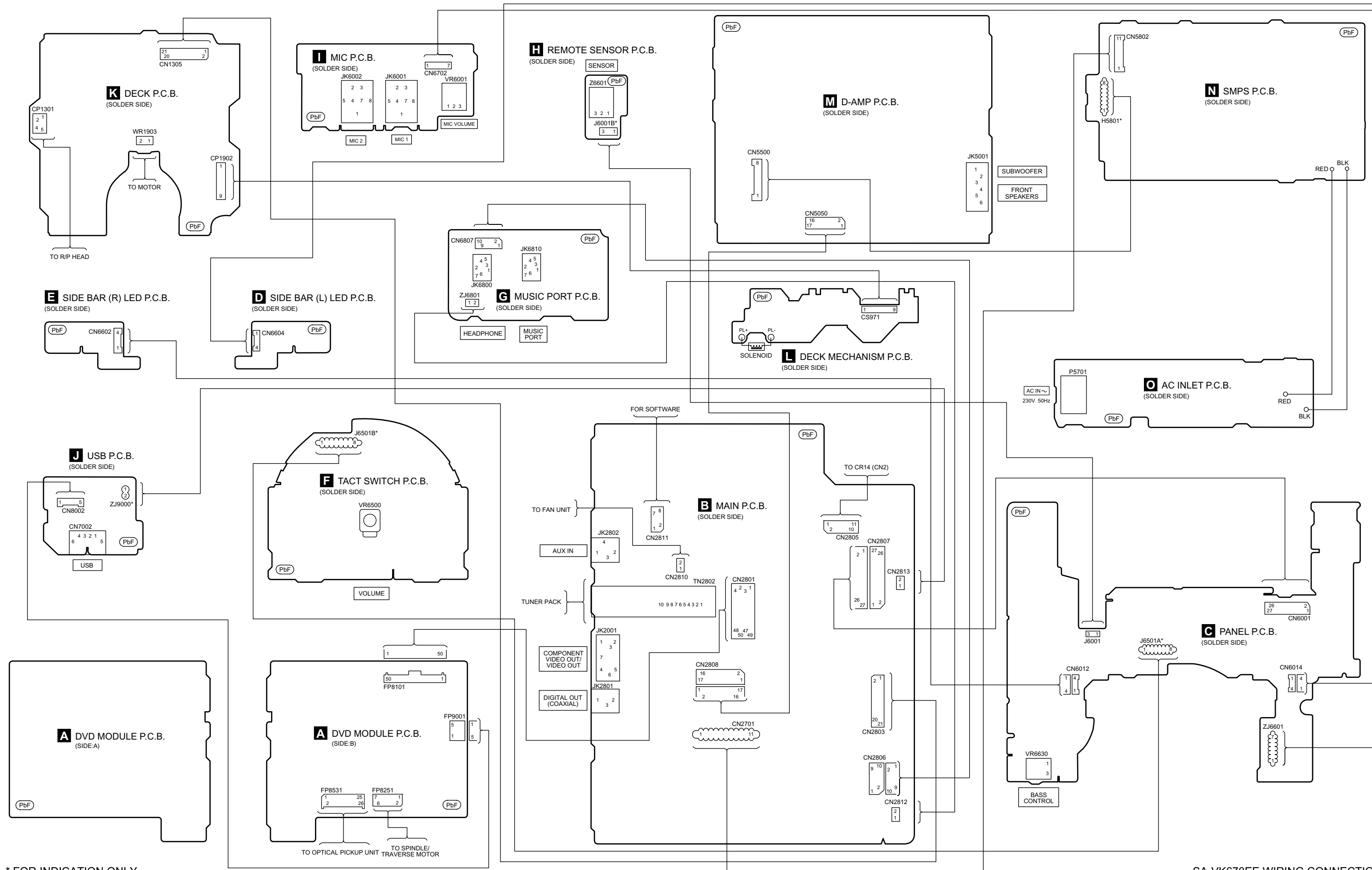


# 16 Illustration of IC's, Transistors and Diodes

|                                                                                                                         |                                                                                                                         |                                                                                                                                                       |                                                                                                                           |                                                                                                                                                              |                                                                                                                             |                                                                                                                            |              |
|-------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|--------------|
|  <p>No.1</p>                           | AN7326K (22p)<br>C0ABBB000230 (8p)<br>C0ABBB000228 (8p)<br>C0DBZYY00266 (8p)<br>C0JBAB000902 (14p)<br>C0CBCBD00018 (8p) | C0FBBK000047 (16p)<br>C0JBAF000716 (14p)<br>C0JBAZ001251 (20p)<br>C1AA00000612 (5p)<br>C1AB00002773 (16p)<br>C3ABPY000011 (54p)<br>C9ZB00000461 (32p) |  <p>6 5 4<br/>1 2 3</p>                 |  <p>No.1</p>                                                              | C0HBB0000057 (44p)<br>C1BB00001121 (58p)<br>MN2DS0018MP (216p)                                                              |                                                                                                                            |              |
|  <p>No.1</p>                           | RFKWVK470GC (100p)                                                                                                      | RFKWMH32B325 (48p)                                                                                                                                    | C0AABB000125 (8P)<br>C3EBGC000056 (8P)                                                                                    | C0GBG0000048 (28P)                                                                                                                                           | C1BA00000487 (23P)                                                                                                          | C0DBEHG00006 (5p)                                                                                                          |              |
|  <p>1 2 3</p>                          | C0DABFC00002 (3p)<br>C0DAEMZ00001 (3p)                                                                                  | MIP4110MSSCF (8P)                                                                                                                                     | C0DAAMH00012 (5p)<br>C0DAAYY00042 (5p)                                                                                    |  <p>5 4<br/>1 2 3</p>                                                      | C0CBCBC00140 (5p)<br>C0EBA0000039 (5p)<br>C0EBE0000456 (5p)                                                                 | C0JBAA000502 (5p)                                                                                                          |              |
|  <p>231547 6</p>                      | C5HACY00003 (7p)                                                                                                        | B1BABK000001                                                                                                                                          | B1BACG000023<br>B1BCCG000002                                                                                              |  <p>E C B</p>                                                             | B1AAGC000006<br>B1AAKD000012<br>B1ACKD000006<br>2SC3940ARA<br>2SD0592ARA<br>2SD09650ARA                                     | B1ACCF000094<br>B1BACD000018                                                                                               | B1GFGCAA0001 |
|  <p>4 5 6<br/>3 2 1</p>              | XP0621400L                                                                                                              | B1ABCF000176<br>B1ABEB000002<br>B1ADCE000012<br>B1ABGC000001                                                                                          | B1ADCF000001<br>B1ADGB000008<br>B1GBCFJJ0051<br>B1GBCFJN0033<br>B1GBCFLL0037<br>B1GDCFGA0018<br>B1ABCF000011              | B1GBCFGH0001<br>B1GDCFJJ0047<br>UNR221400L<br>UNR521100L<br>2SA207700L<br>2SB1218ARL                                                                         | 2SD0601AHL<br>2SD1819A0L                                                                                                    | B1CFHA000002                                                                                                               |              |
|  <p>3<br/>2 1</p>                    | B1GDCFGH0002<br>B1GDCFJJ0002                                                                                            | B0EAKM000117<br>B0EAMM000057<br>B0HAMP000094<br>B0JAME000029<br>B0JAM6000114                                                                          | MA2C16500E<br>MA2J11100L<br>MA2J72800L                                                                                    |  <p>Cathode<br/>Anode<br/>A</p>                                          | B0ACCE000003<br>B0ACCK000005                                                                                                |  <p>Cathode<br/>Anode<br/>Anode</p>   | B0ZAZ0000052 |
|  <p>A Ca A<br/>A Ca A<br/>A Ca A</p> | B0HBSM000043                                                                                                            |  <p>Cathode<br/>Ca<br/>Anode<br/>A</p>                             |  <p>Cathode<br/>Ca<br/>Anode<br/>A</p> | B0BC01000014<br>B0BC010A0007<br>B0BC019A0007<br>B0BC2R4A0006<br>B0BC3R700004<br>B0BC4R600016<br>B0BC5R000009<br>B0BC5R600003<br>B0BC6R100010<br>B0BC8R100004 |  <p>Cathode<br/>Ca<br/>Anode<br/>A</p> | MAZ80510ML<br>MAZ80750ML<br>MAZ81800ML<br>MAZ82400HL                                                                       |              |
|  <p>Cathode<br/>Anode<br/>A</p>      | B0JCPD000025<br>B0HCMM000019                                                                                            |  <p>Anode<br/>Cathode<br/>A</p>                                    | B3AAA0000803<br>B3AEA0000107                                                                                              |  <p>3<br/>2 1</p>                                                         | B0ADCC000002<br>B0ADCJ000020                                                                                                |  <p>Cathode<br/>Ca<br/>Anode<br/>A</p> | B0BC035A0007 |



# 17 Wiring Connection Diagram



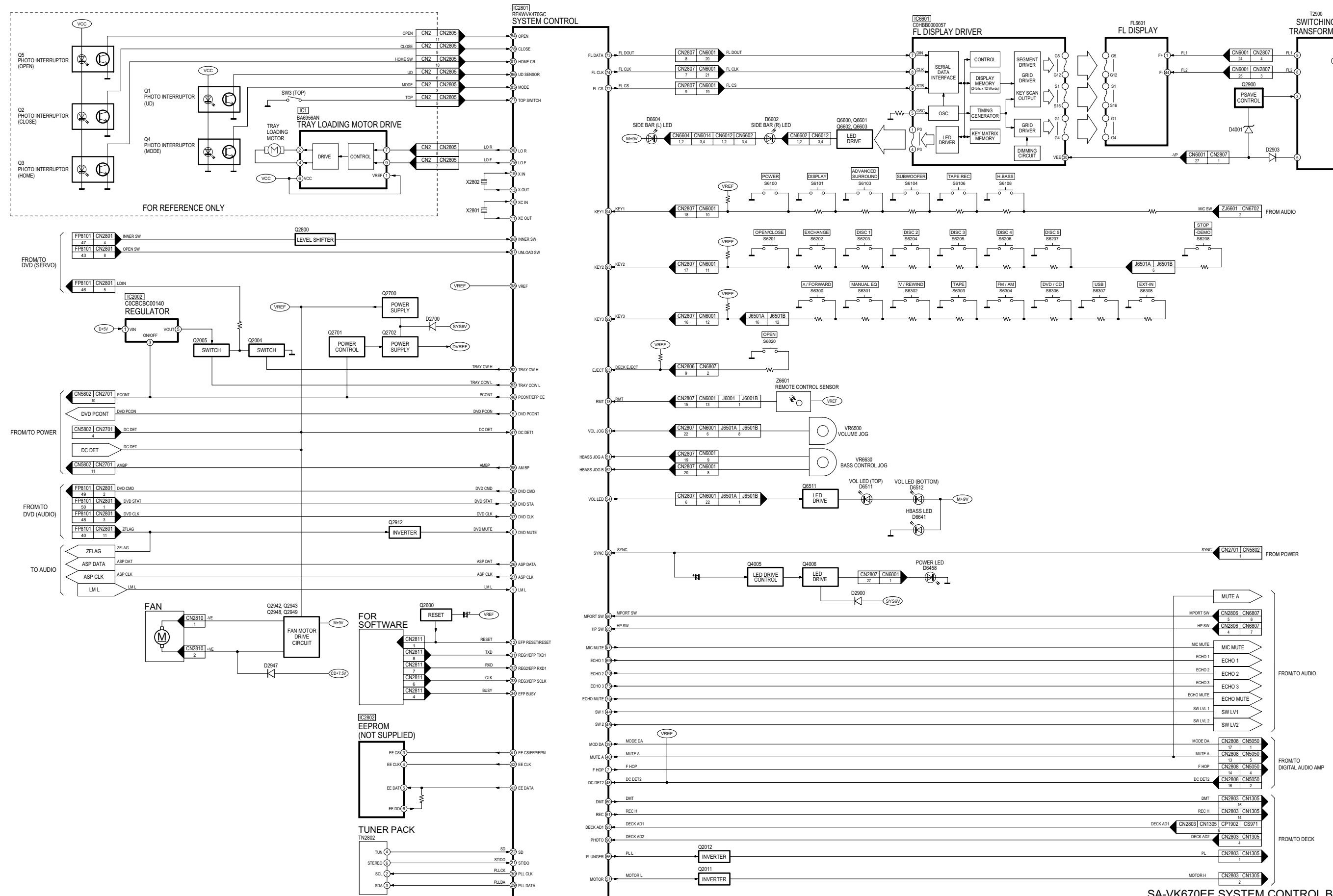
\* FOR INDICATION ONLY

SA-VK670EE WIRING CONNECTION



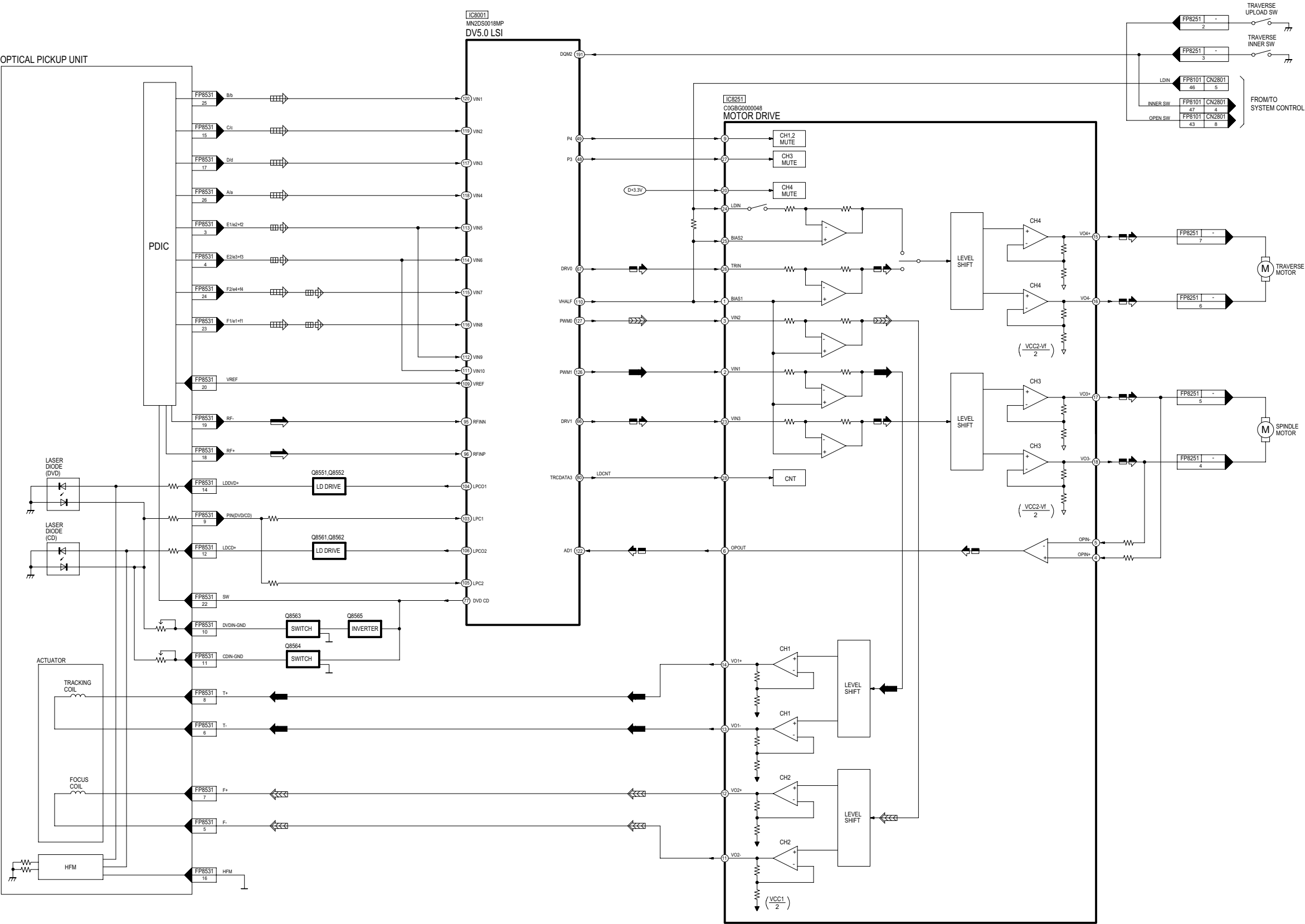
# 18 Block Diagram

## 18.1. System Control



18.2. DVD (Servo)

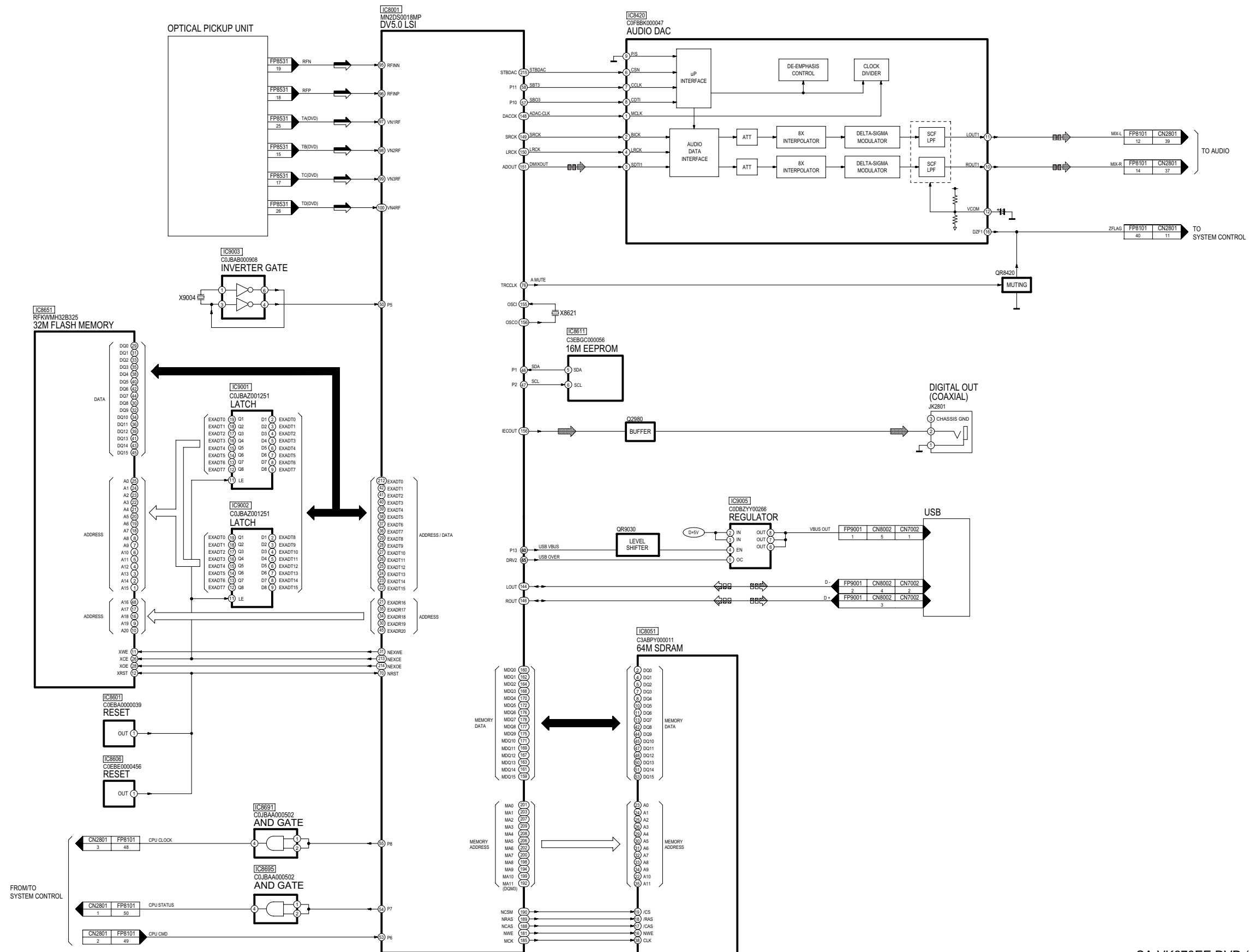
: DVD HEAD SIGNAL LINE  
 : CD HEAD SIGNAL LINE  
 : DVD RF SIGNAL LINE  
 : MOTOR DRIVE SIGNAL LINE  
 : TRACKING ERROR SIGNAL LINE  
 : FOCUS ERROR SIGNAL LINE



SA-VK670EE DVD (SERVO) BLOCK DIAGRAM

## 18.3. DVD (Audio)

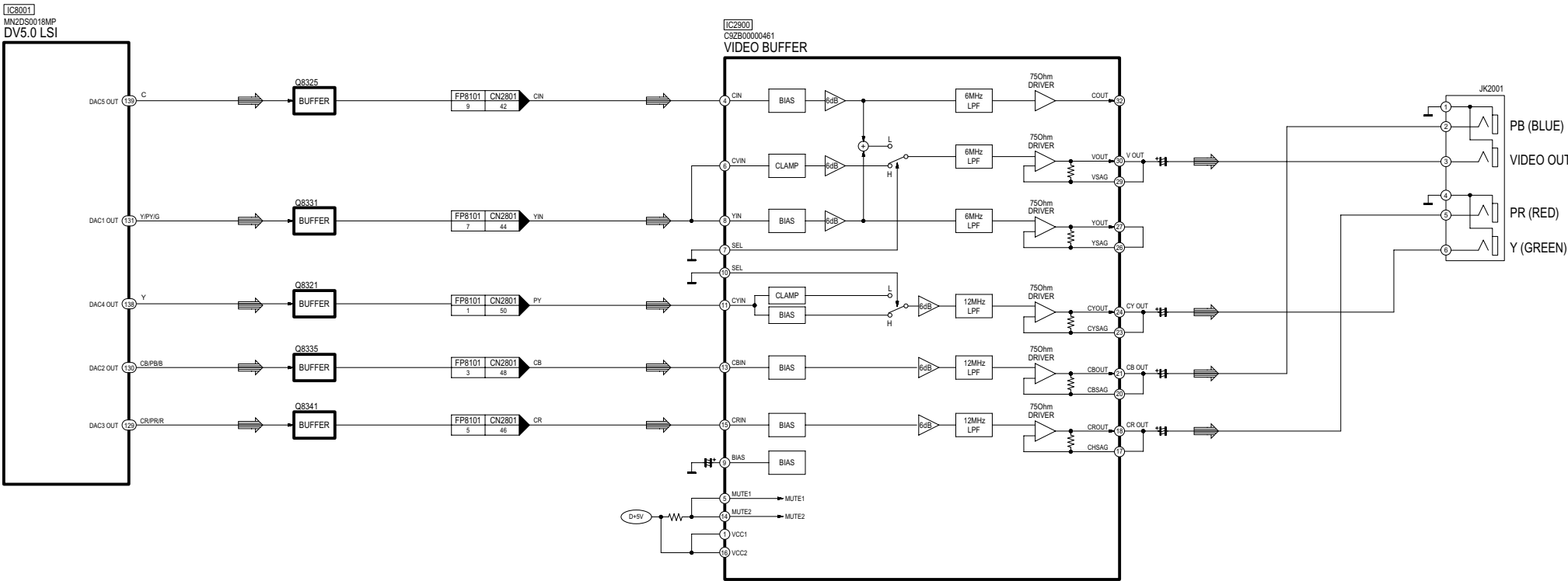
 : MAIN SIGNAL LINE  
  : DVD AUDIO SIGNAL LINE  
  : USB SIGNAL LINE  
  : DVD RF SIGNAL LINE  
  : AUDIO SIGNAL LINE



SA-VK670EE DVD (AUDIO) BLOCK DIAGRAM

18.4. Video

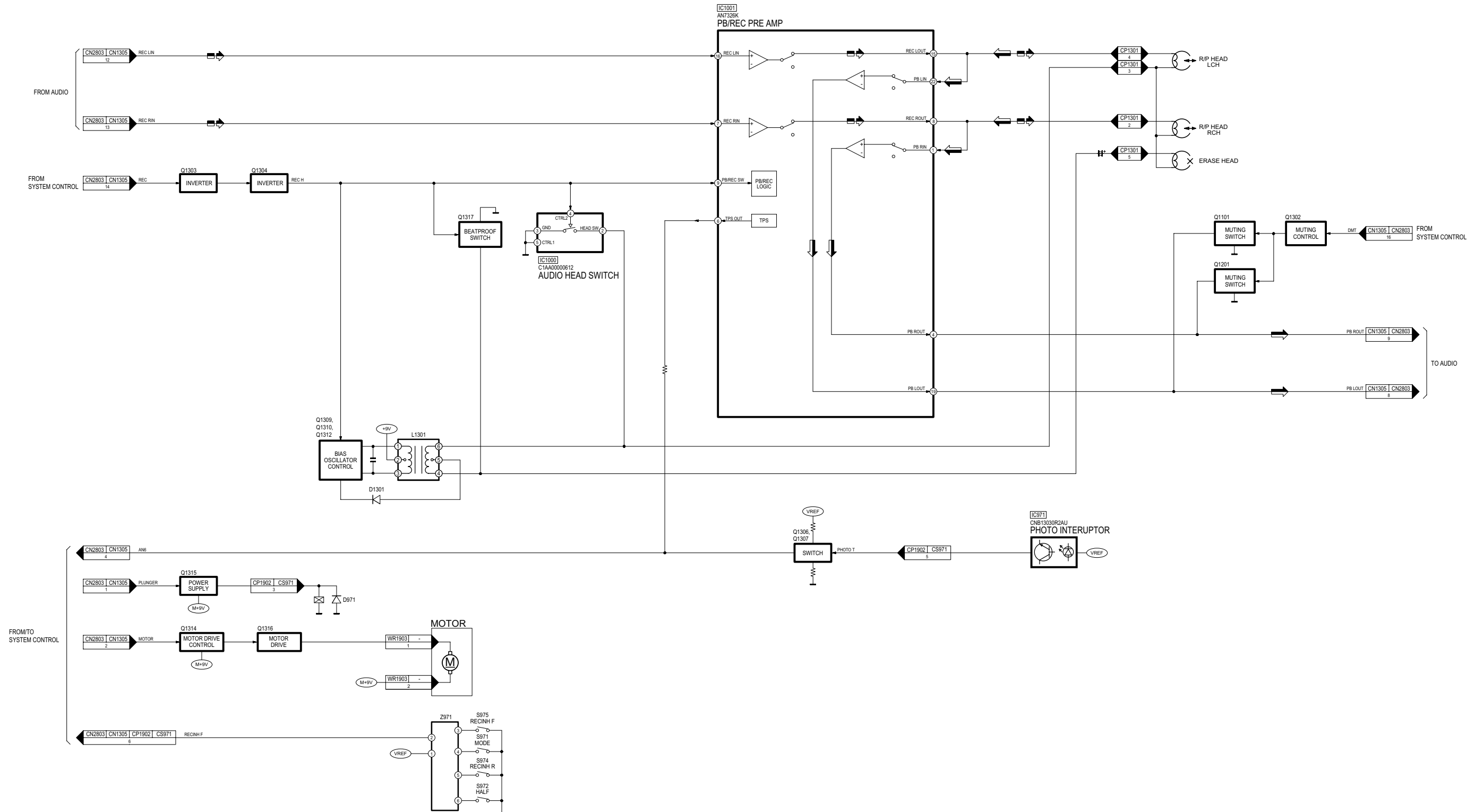
⇒ : DVD VIDEO SIGNAL LINE



SA-VK670EE VIDEO BLOCK DIAGRAM

## 18.5. Deck

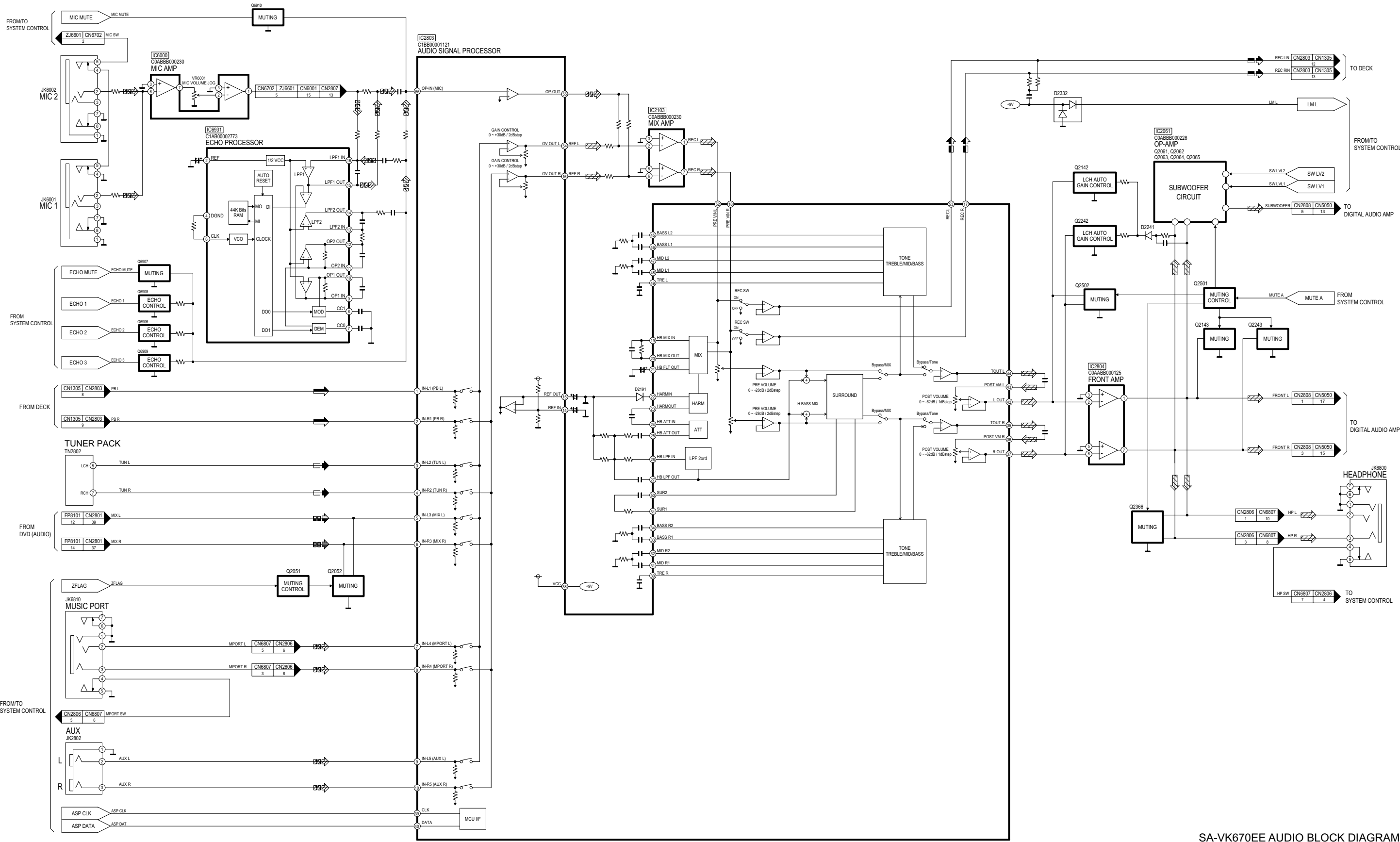
 : TAPE RECORD SIGNAL LINE    
  : TAPE PLAYBACK SIGNAL LINE



SA-VK670EE DECK BLOCK DIAGRAM

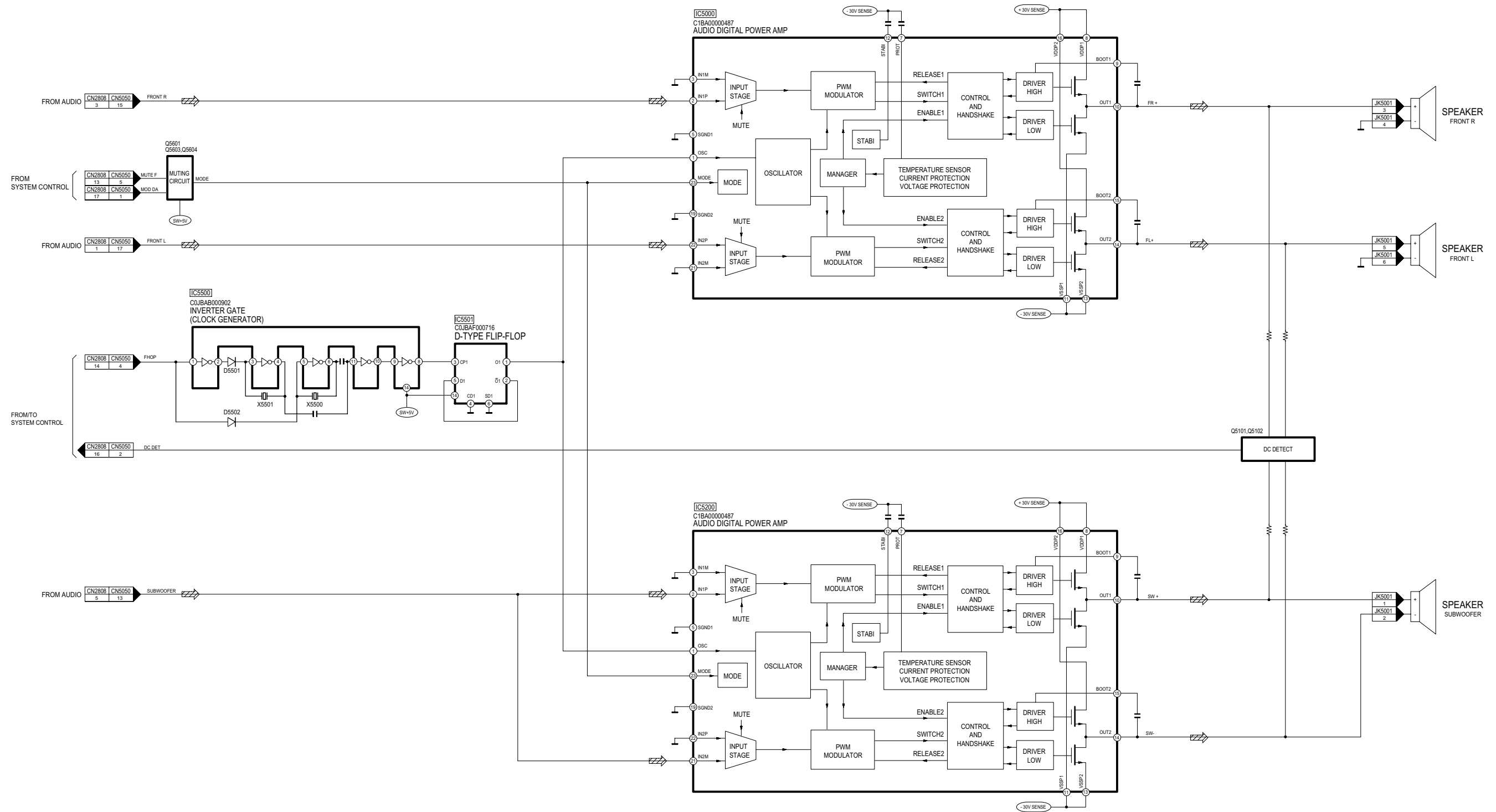
18.6. Audio

 : 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



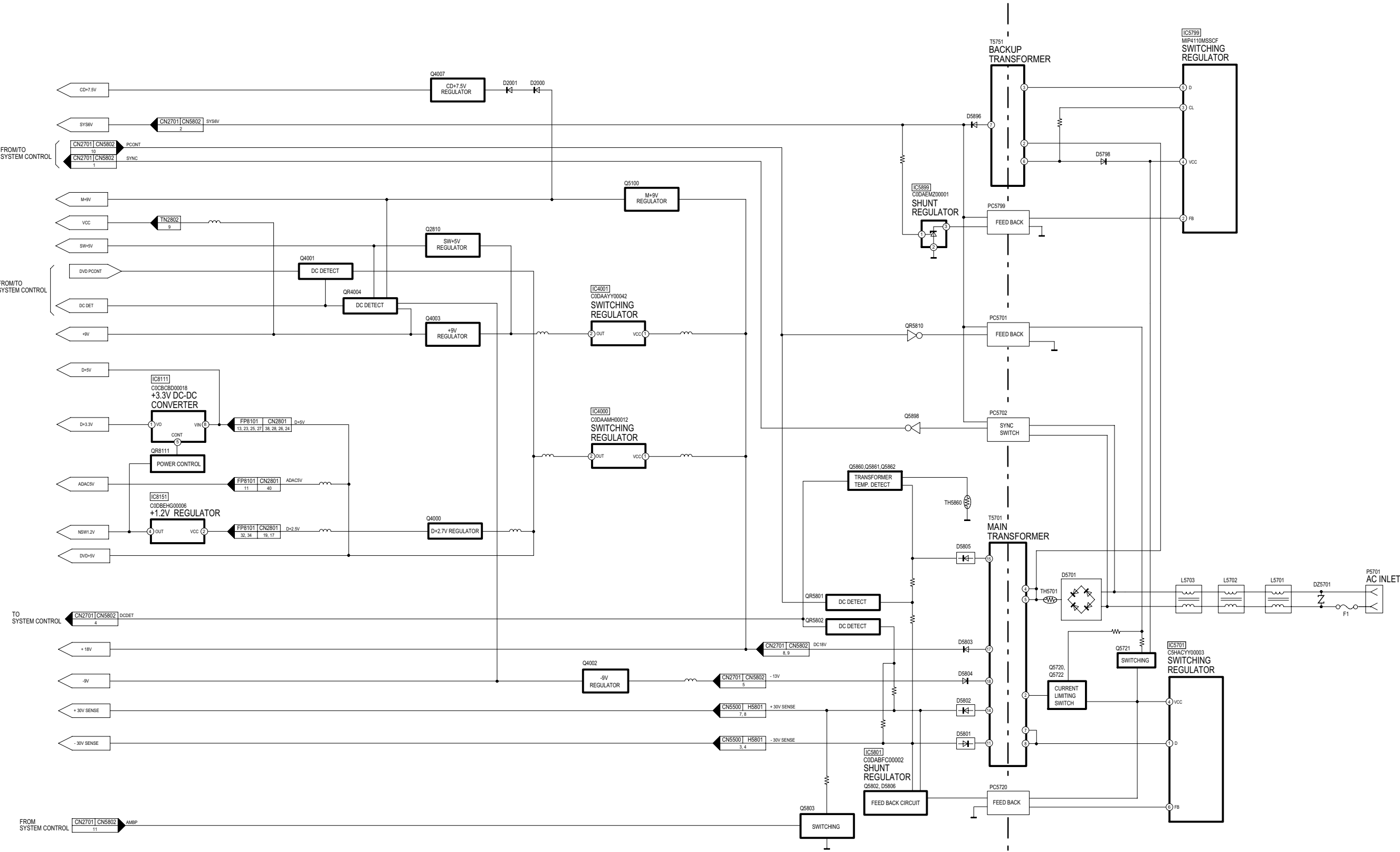
SA-VK670EE AUDIO BLOCK DIAGRAM

## 18.7. Digital Audio Amp

: MAIN SIGNAL LINE


SA-VK670EE DIGITAL AUDIO AMP BLOCK DIAGRAM

18.8. Power



SA-VK670EE POWER BLOCK DIAGRAM

# 19 Schematic Diagram Notes

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

## Notes:

|                |                                                                                                                                                                                                                                                                                      |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>S971:</b>   | Mode Switch.                                                                                                                                                                                                                                                                         |
| <b>S972:</b>   | Half Switch.                                                                                                                                                                                                                                                                         |
| <b>S974:</b>   | RECINH_R Switch.                                                                                                                                                                                                                                                                     |
| <b>S975:</b>   | RECINH_F Switch.                                                                                                                                                                                                                                                                     |
| <b>S6100:</b>  | Power (  ) Switch.                                                                                                                                                                                  |
| <b>S6101:</b>  | Display Switch.                                                                                                                                                                                                                                                                      |
| <b>S6103:</b>  | Advanced Surround Switch.                                                                                                                                                                                                                                                            |
| <b>S6104:</b>  | Subwoofer Switch.                                                                                                                                                                                                                                                                    |
| <b>S6106:</b>  | Tape Rec (TAPE  REC) Switch.                                                                                                                                                                        |
| <b>S6108:</b>  | H.Bass Switch.                                                                                                                                                                                                                                                                       |
| <b>S6201:</b>  | Open/Close (  ) Switch.                                                                                                                                                                             |
| <b>S6202:</b>  | Exchange (  ) Switch.                                                                                                                                                                               |
| <b>S6203:</b>  | Disc 1 ( 1  ) Switch.                                                                                                                                                                               |
| <b>S6204:</b>  | Disc 2 ( 2  ) Switch.                                                                                                                                                                               |
| <b>S6205:</b>  | Disc 3 ( 3  ) Switch.                                                                                                                                                                               |
| <b>S6206:</b>  | Disc 4 ( 4  ) Switch.                                                                                                                                                                               |
| <b>S6207:</b>  | Disc 5 ( 5  ) Switch.                                                                                                                                                                               |
| <b>S6208:</b>  | Stop/-Demo (  STOP/DEMO ) Switch.                                                                                                                                                                   |
| <b>S6300:</b>  |  /Forward (  /FF/  ) Switch.      |
| <b>S6301:</b>  | Manual EQ Switch.                                                                                                                                                                                                                                                                    |
| <b>S6302:</b>  |  /Rewind (  /REW/  ) Switch. |
| <b>S6303:</b>  | Tape (   ) Switch.                                                                                             |
| <b>S6304:</b>  | FM/AM Switch.                                                                                                                                                                                                                                                                        |
| <b>S6306:</b>  | DVD/CD Switch.                                                                                                                                                                                                                                                                       |
| <b>S6307:</b>  | USB (USB  ) Switch.                                                                                                                                                                               |
| <b>S6308:</b>  | EXT-IN Switch.                                                                                                                                                                                                                                                                       |
| <b>S6820:</b>  | Open (  ) Switch.                                                                                                                                                                                 |
| <b>VR6001:</b> | Mic Volume Jog.                                                                                                                                                                                                                                                                      |
| <b>VR6500:</b> | Volume Jog.                                                                                                                                                                                                                                                                          |
| <b>VR6630:</b> | 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 [ $\Omega$ ] (K=1,000, M=1,000,000).

- Capacitor

Unit of capacitance is  $\mu$ F, unless otherwise noted. F=Farad, pF=Pico-Farad

- Coil

Unit of inductance is H, unless otherwise noted.

- \*

For indication only.

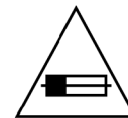
- Test Pad

 : Test Pad Position.

- 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 against fire hazard, replace with the same type fuse. For rating, refer to the marking adjacent to the symbol.



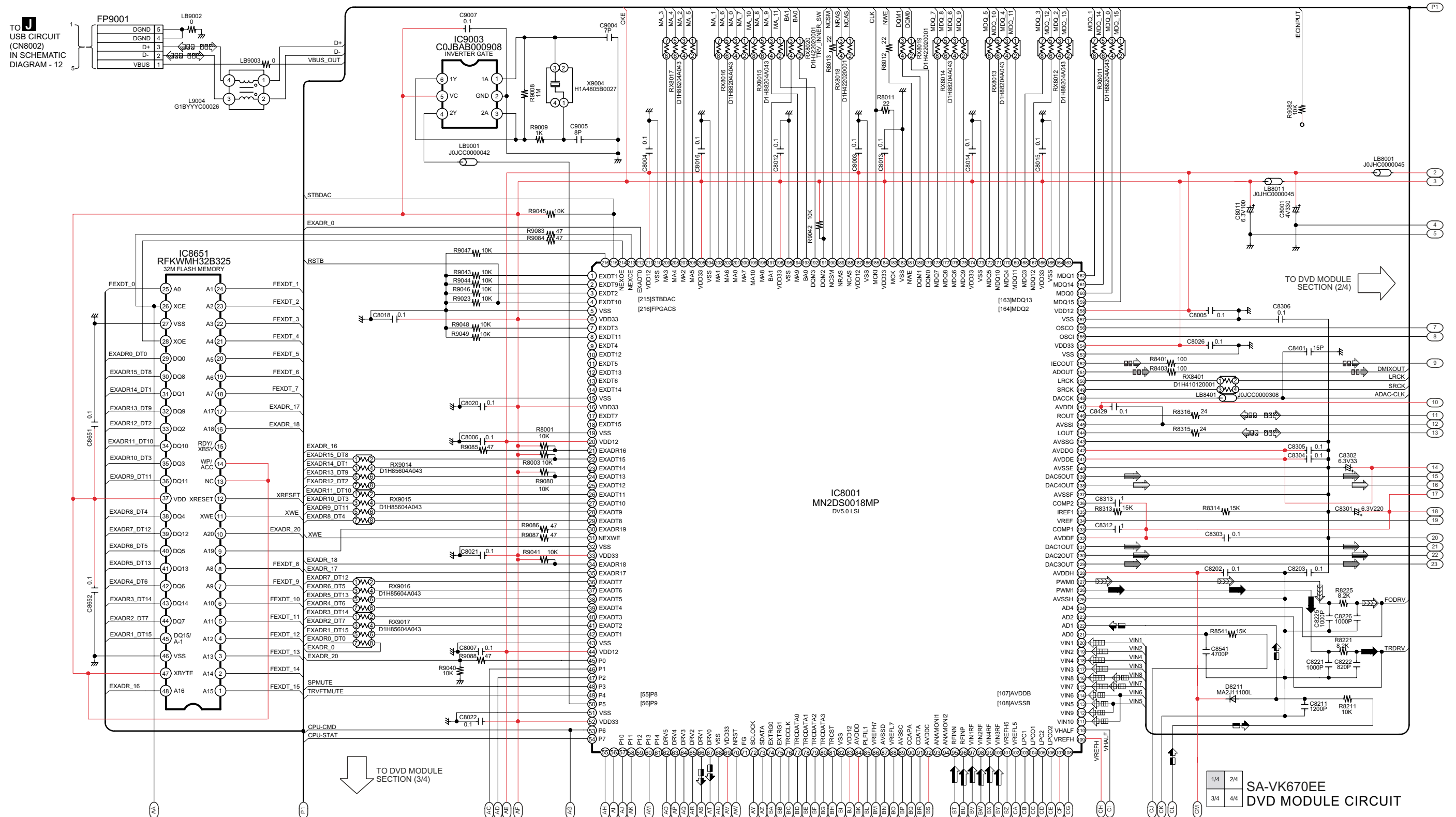
# 20 Schematic Diagram

## 20.1. DVD Module Circuit

SCHEMATIC DIAGRAM - 1

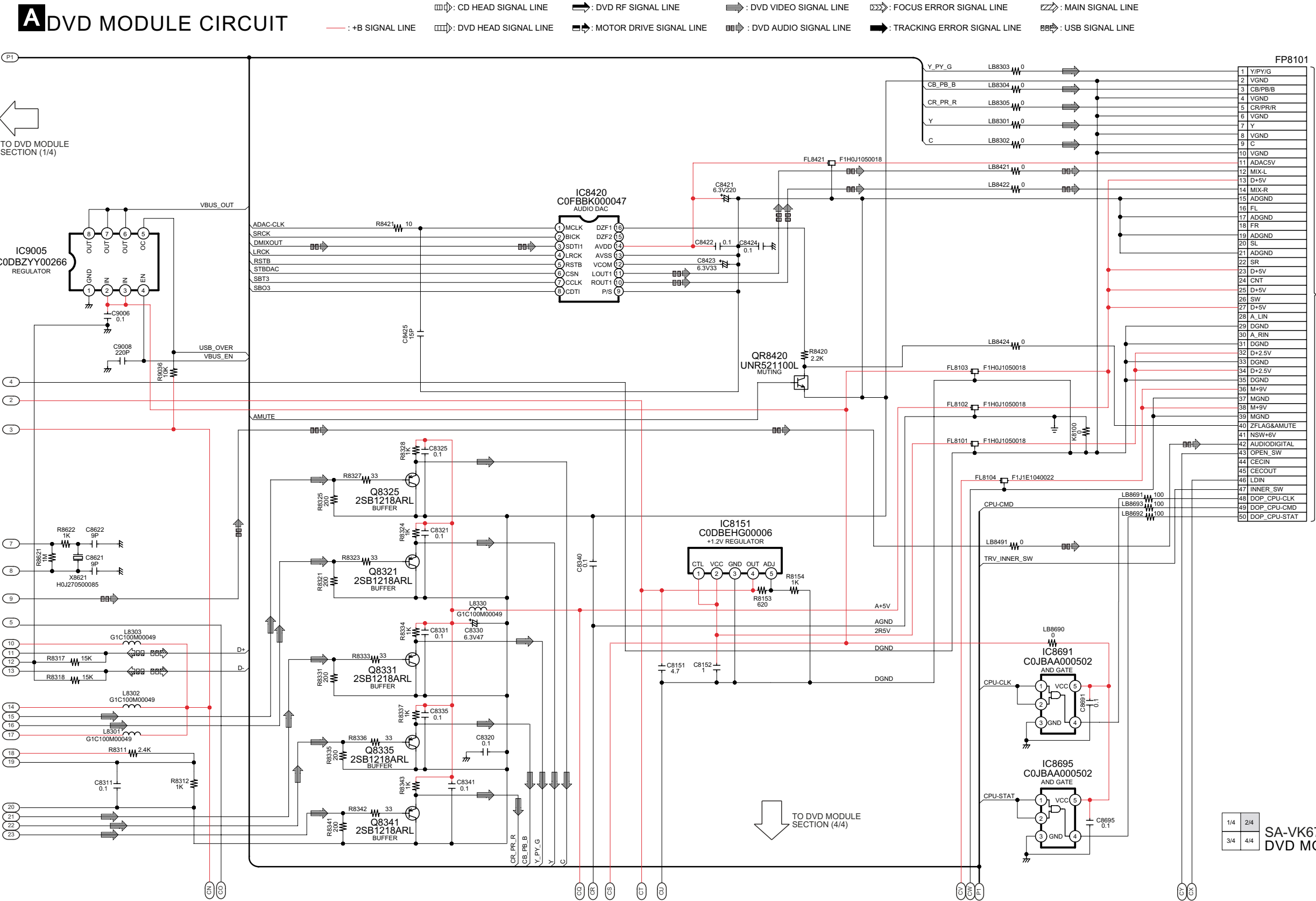
### A DVD MODULE CIRCUIT

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



SCHEMATIC DIAGRAM - 2

**A** DVD MODULE CIRCUIT

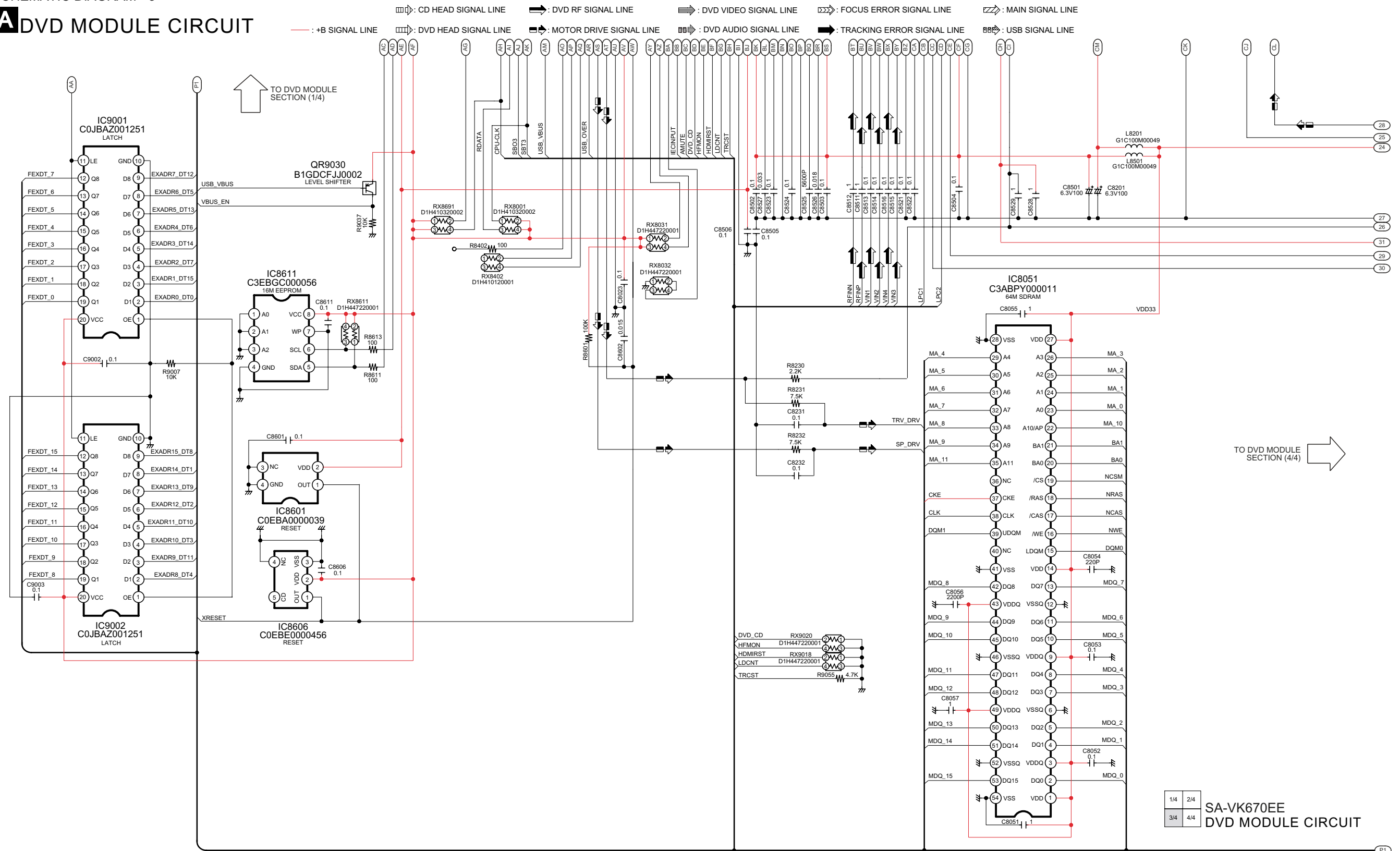


TO **B** MAIN CIRCUIT (CN2801) IN SCHEMATIC DIAGRAM - 5

1/4 2/4  
3/4 4/4  
SA-VK670EE  
DVD MODULE CIRCUIT

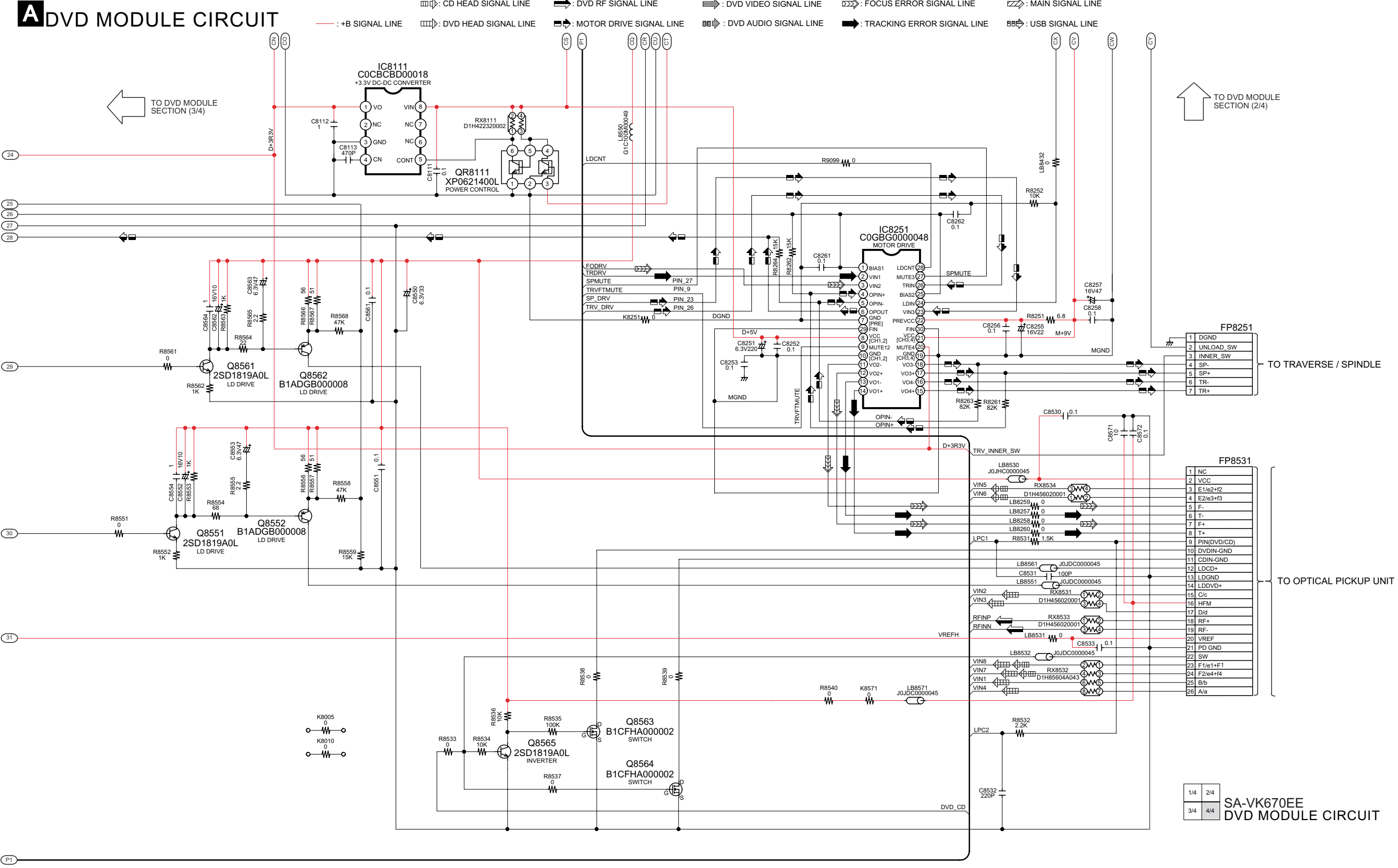
SCHEMATIC DIAGRAM - 3

## DVD MODULE CIRCUIT

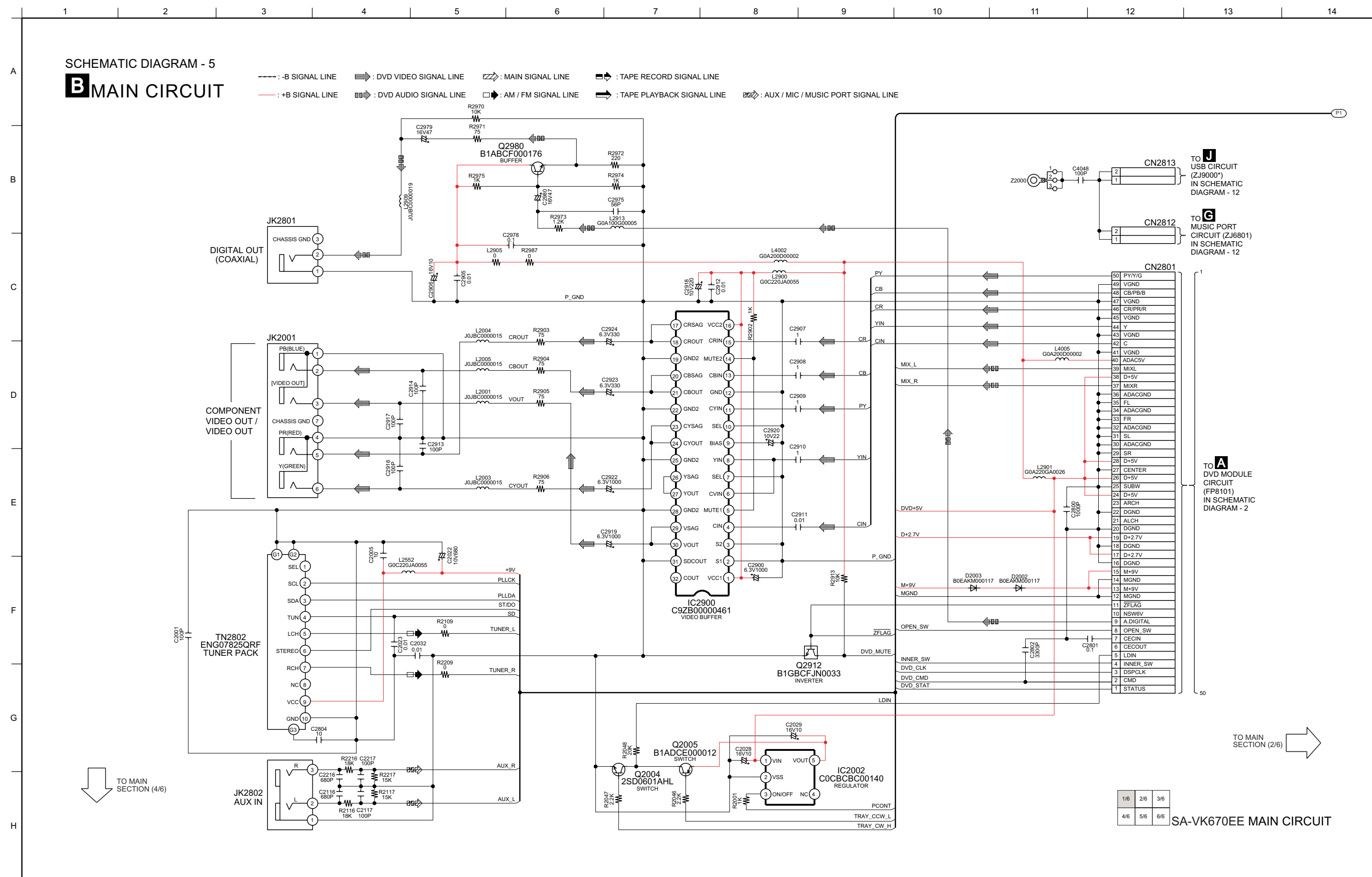


SCHEMATIC DIAGRAM - 4

A DVD MODULE CIRCUIT



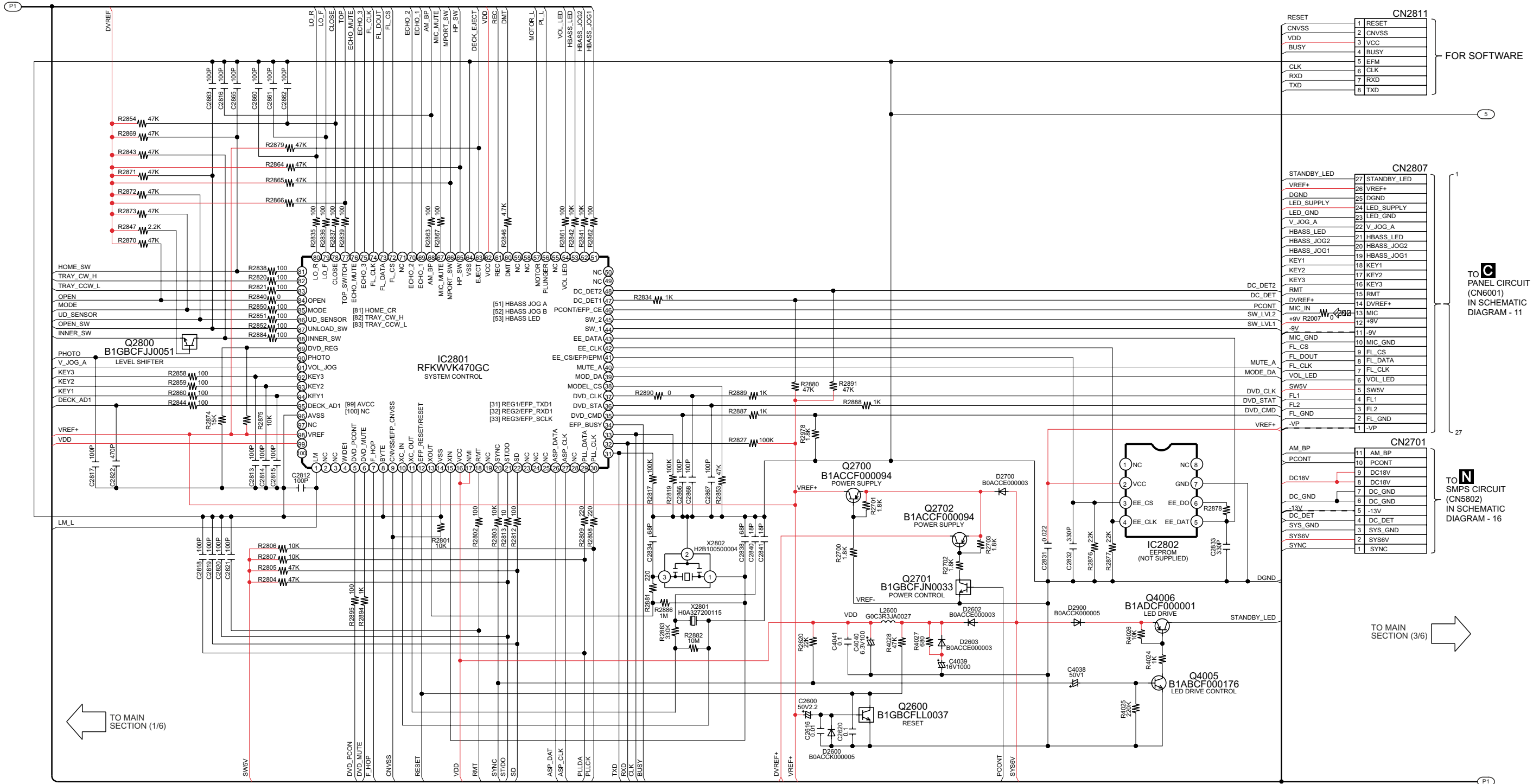
## 20.2. Main Circuit



SCHEMATIC DIAGRAM - 6

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



TO MAIN SECTION (5/6)

|     |     |     |
|-----|-----|-----|
| 1/6 | 2/6 | 3/6 |
| 4/6 | 5/6 | 6/6 |

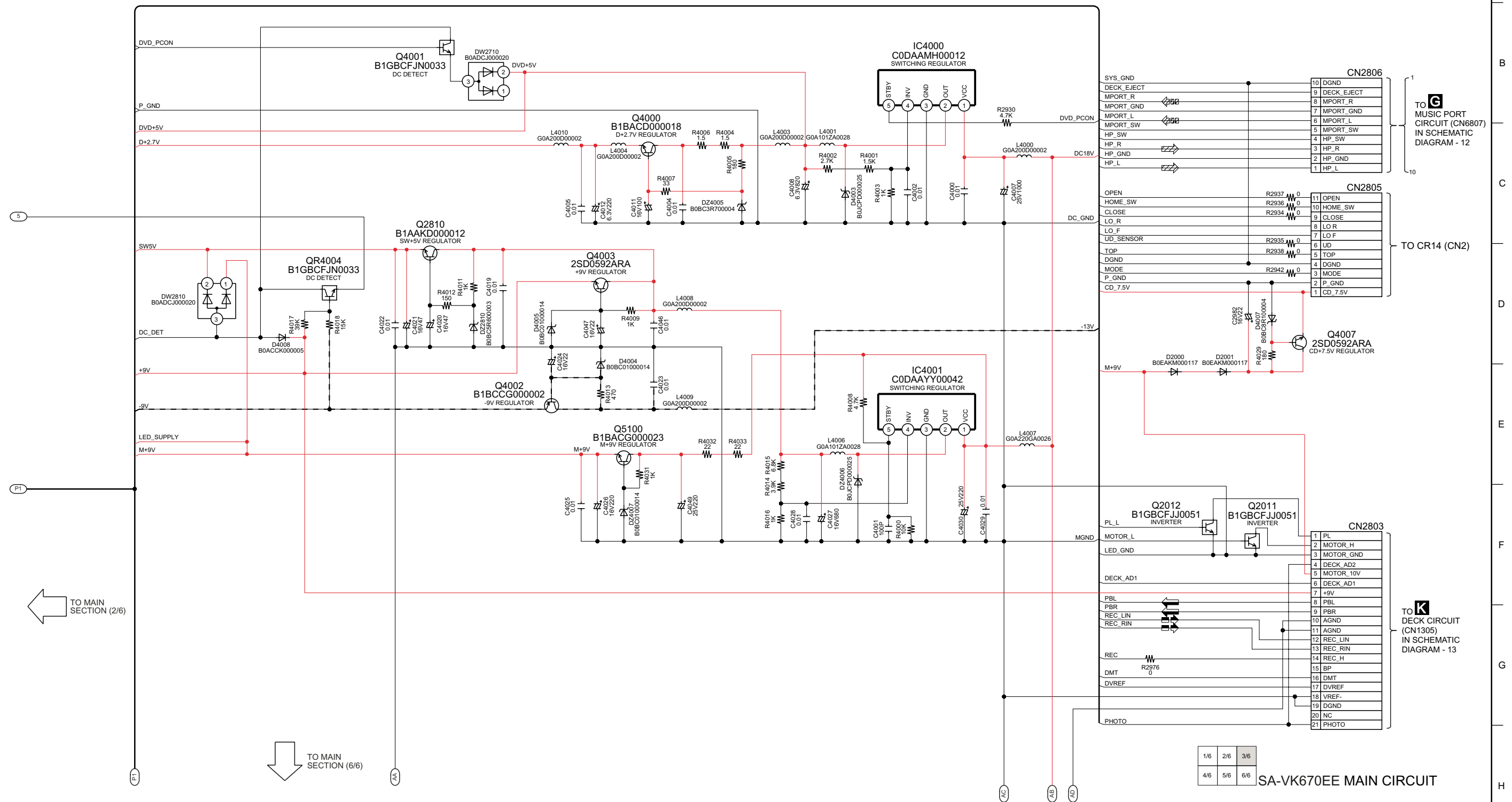
SA-VK670EE MAIN CIRCUIT

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

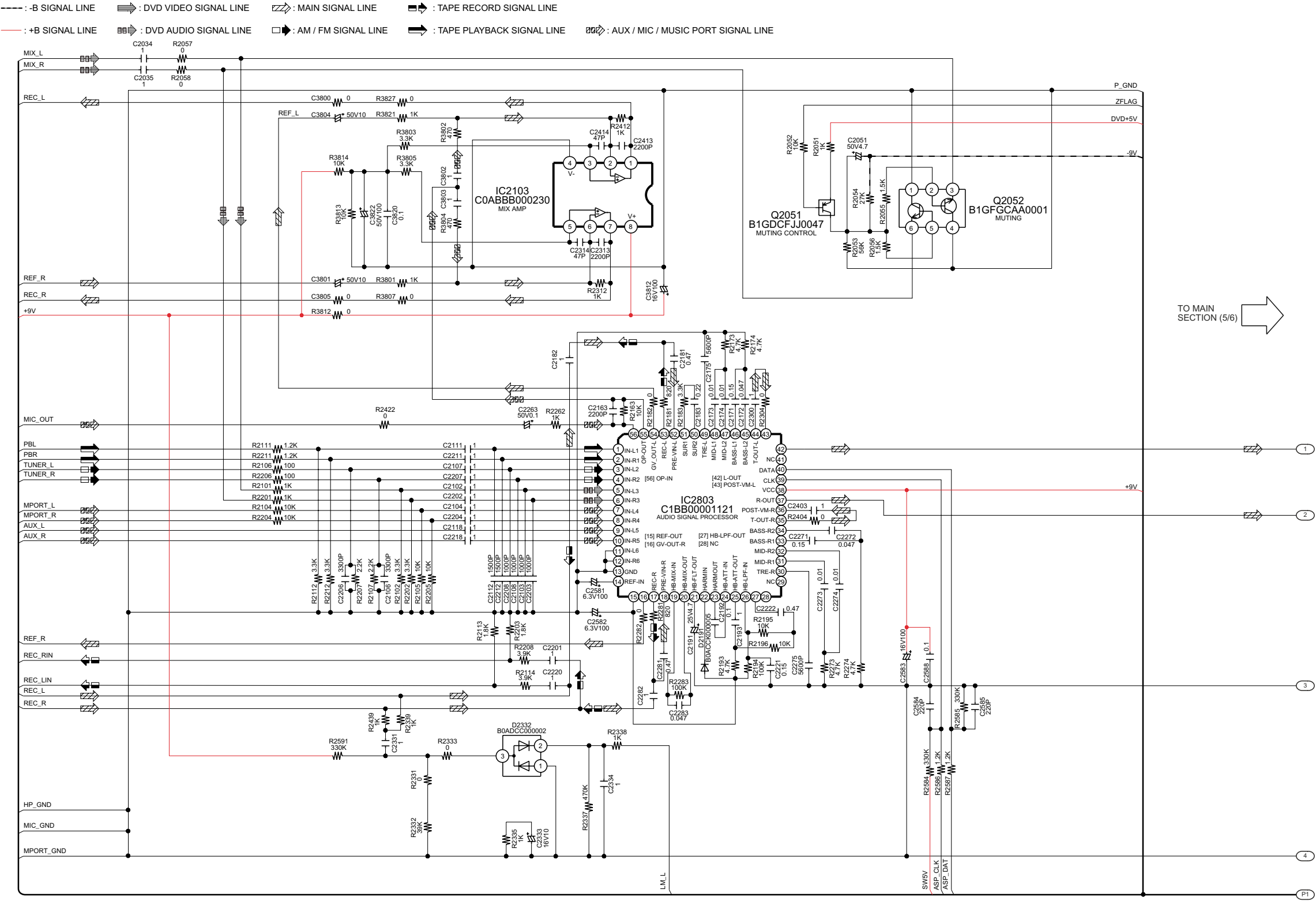
SCHEMATIC DIAGRAM - 7

**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



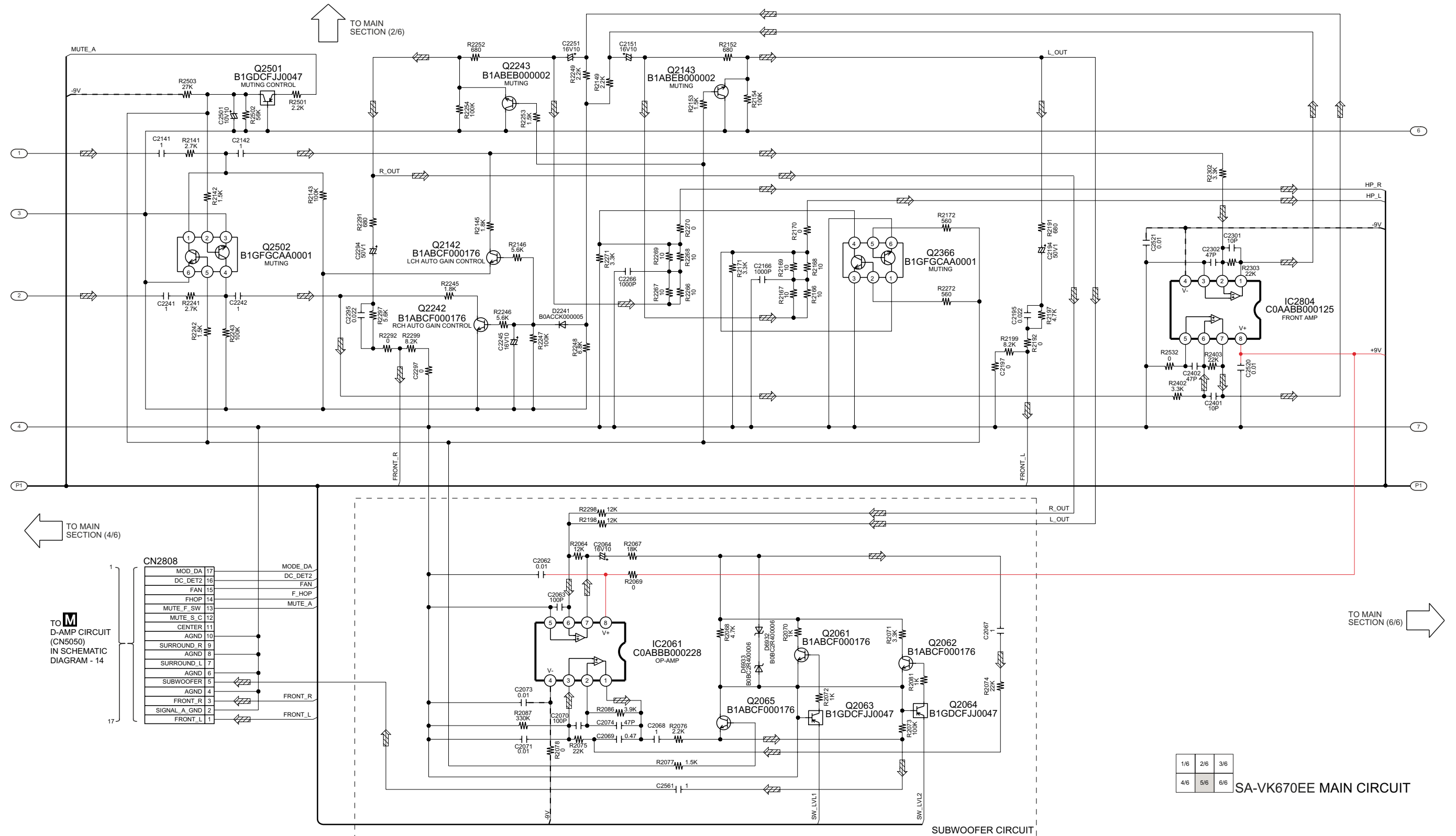
SCHEMATIC DIAGRAM - 8  
**B** MAIN CIRCUIT



SCHEMATIC DIAGRAM - 9

**B** MAIN CIRCUIT

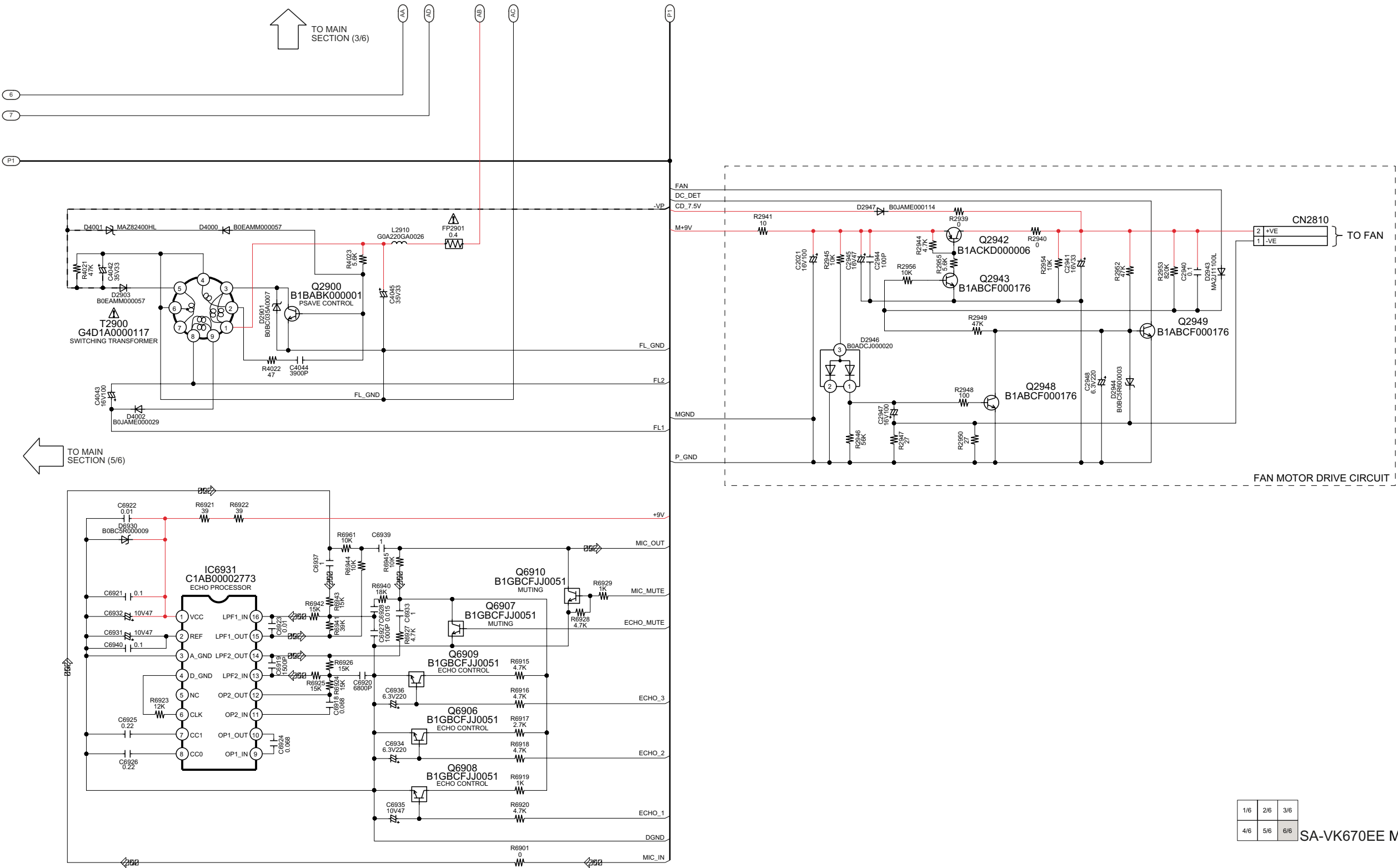
--- : -B SIGNAL LINE     : DVD VIDEO SIGNAL LINE     : MAIN SIGNAL LINE     : TAPE RECORD SIGNAL LINE  
 --- : +B SIGNAL LINE     : DVD AUDIO SIGNAL LINE     : AM / FM SIGNAL LINE     : TAPE PLAYBACK SIGNAL LINE     : AUX / MIC / MUSIC PORT SIGNAL LINE



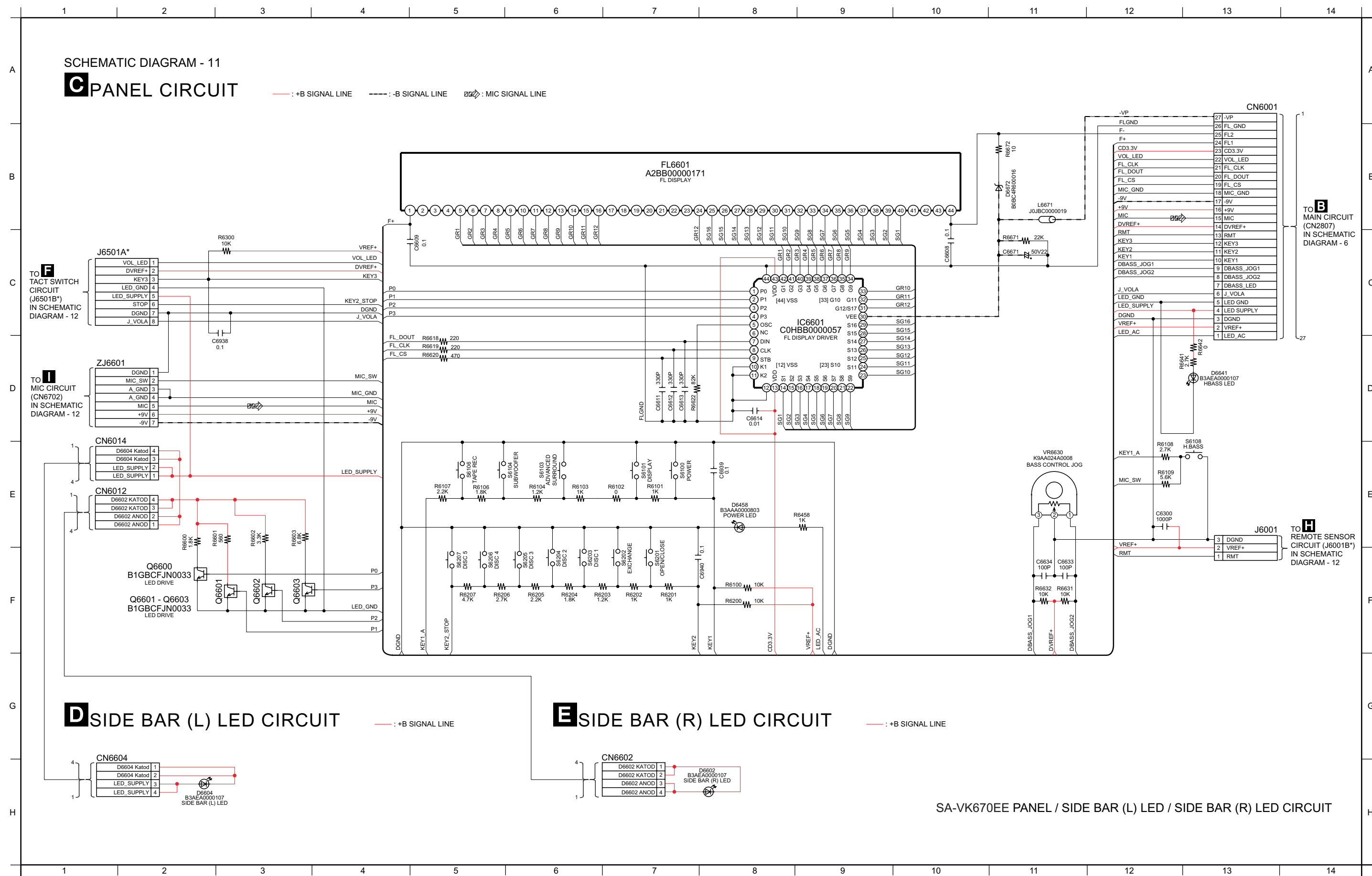
SCHEMATIC DIAGRAM - 10

B MAIN CIRCUIT

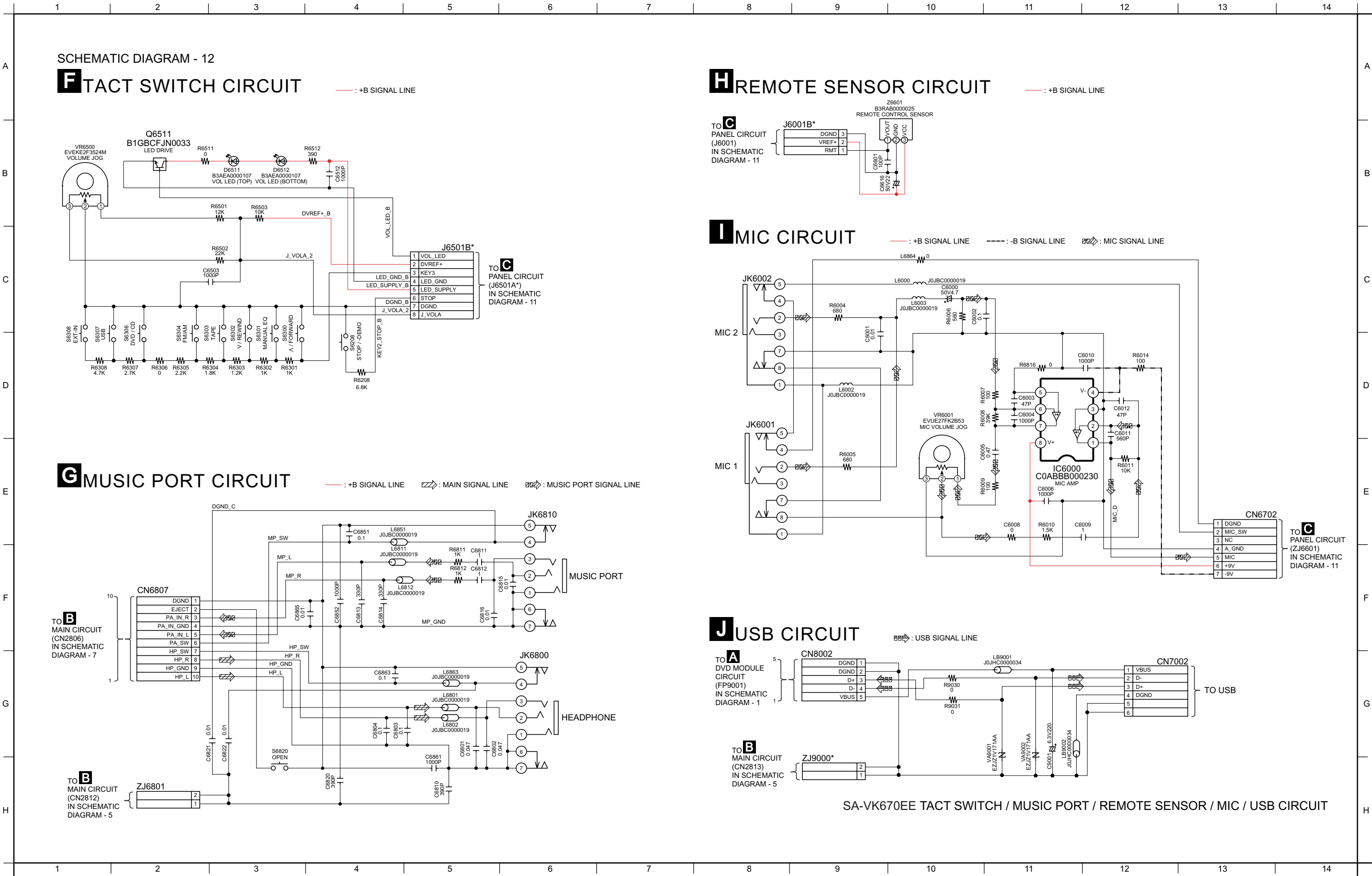
- : -B SIGNAL LINE     : DVD VIDEO SIGNAL LINE     : MAIN SIGNAL LINE     : TAPE RECORD SIGNAL LINE
- : +B SIGNAL LINE     : DVD AUDIO SIGNAL LINE     : AM / FM SIGNAL LINE     : TAPE PLAYBACK SIGNAL LINE     : AUX / MIC / MUSIC PORT SIGNAL LINE



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



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



I

MIC CIRCUIT

— : +B SIGNAL LINE  
--- : -B SIGNAL LINE  
⚡ : MIC SIGNAL LINE

G

MUSIC PORT CIRCUIT

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

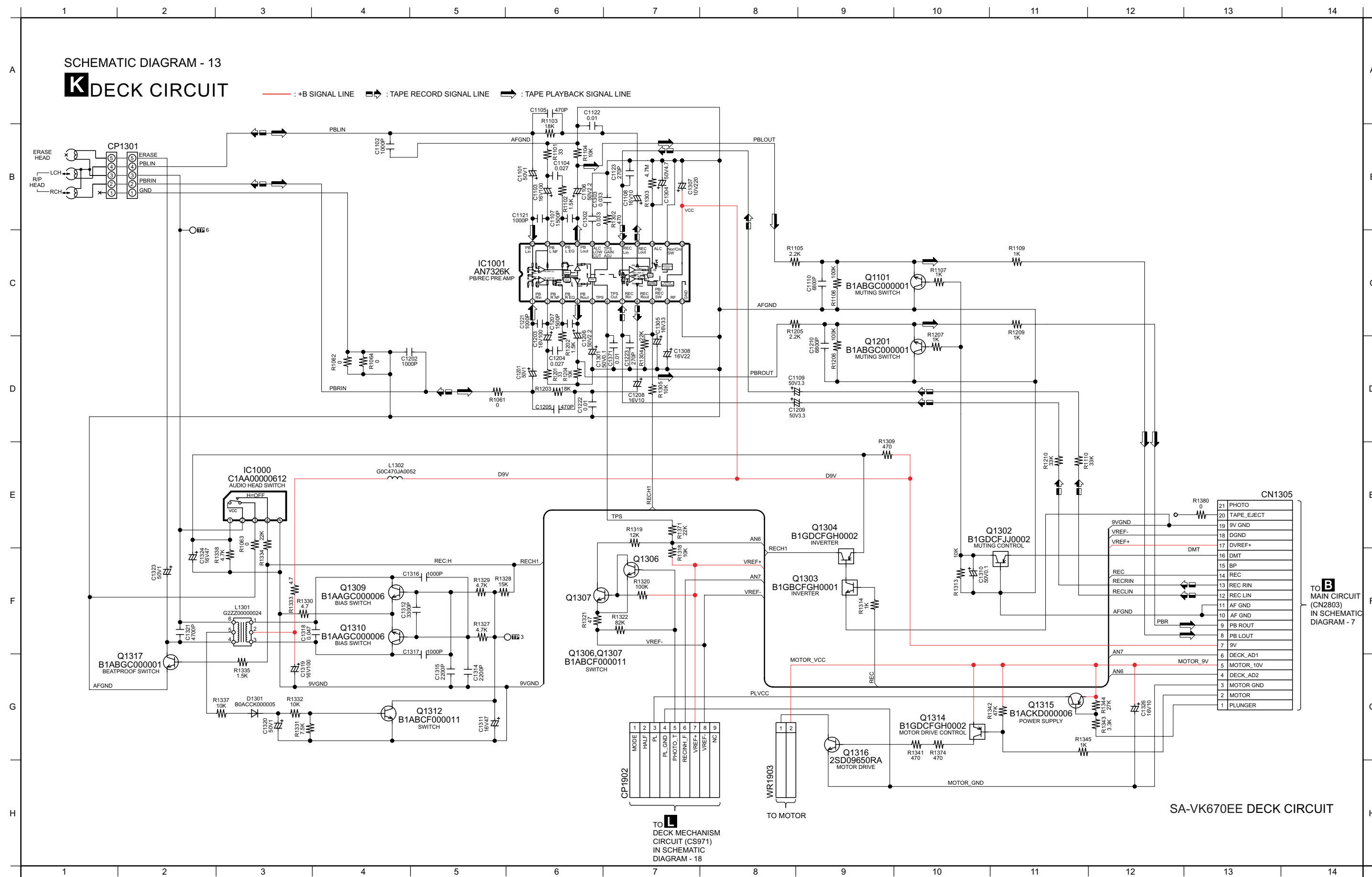
J

USB CIRCUIT

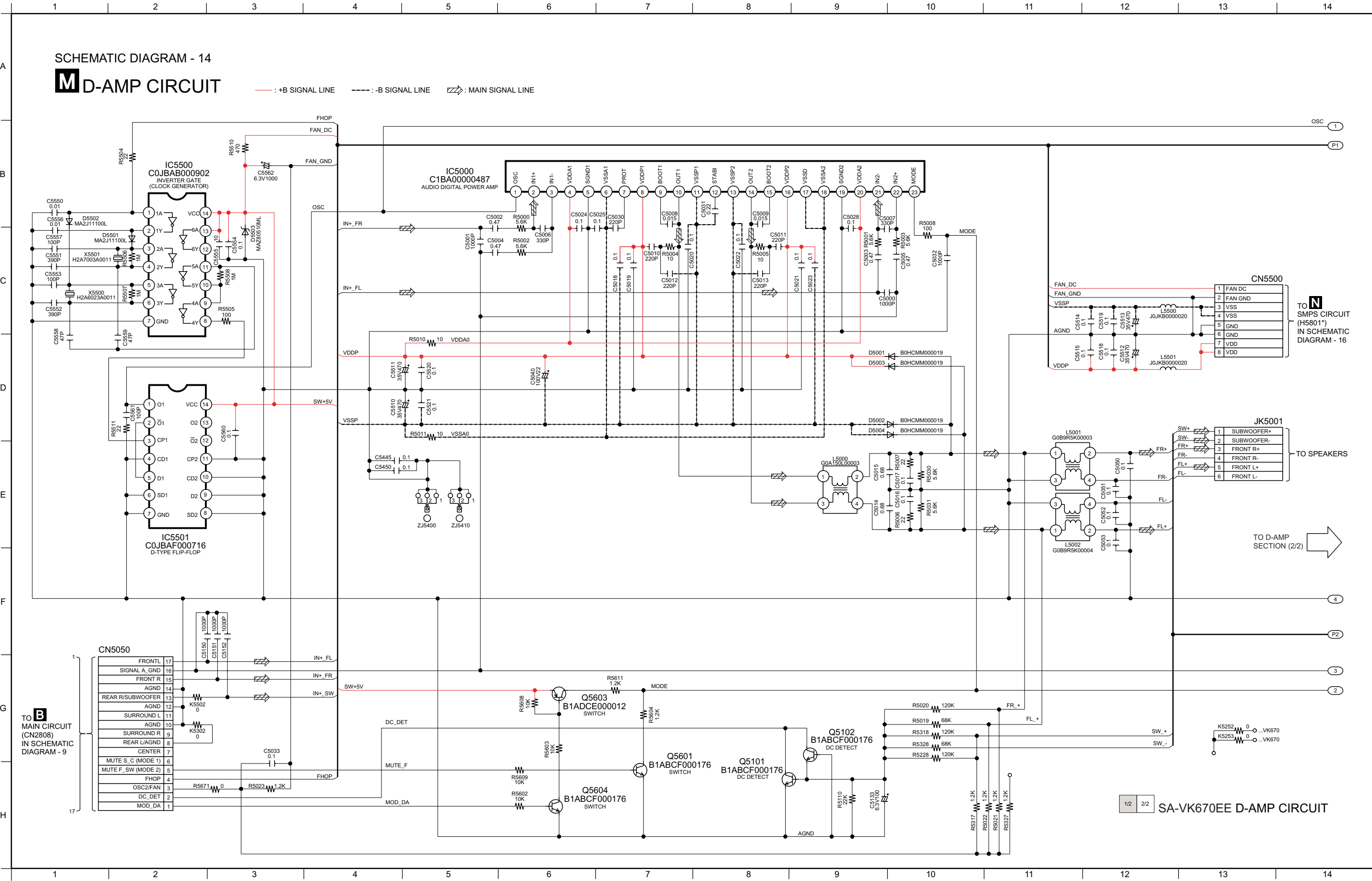
⚡ : USB SIGNAL LINE

SA-VK670EE TACT SWITCH / MUSIC PORT / REMOTE SENSOR / MIC / USB CIRCUIT

## 20.5. Deck Circuit

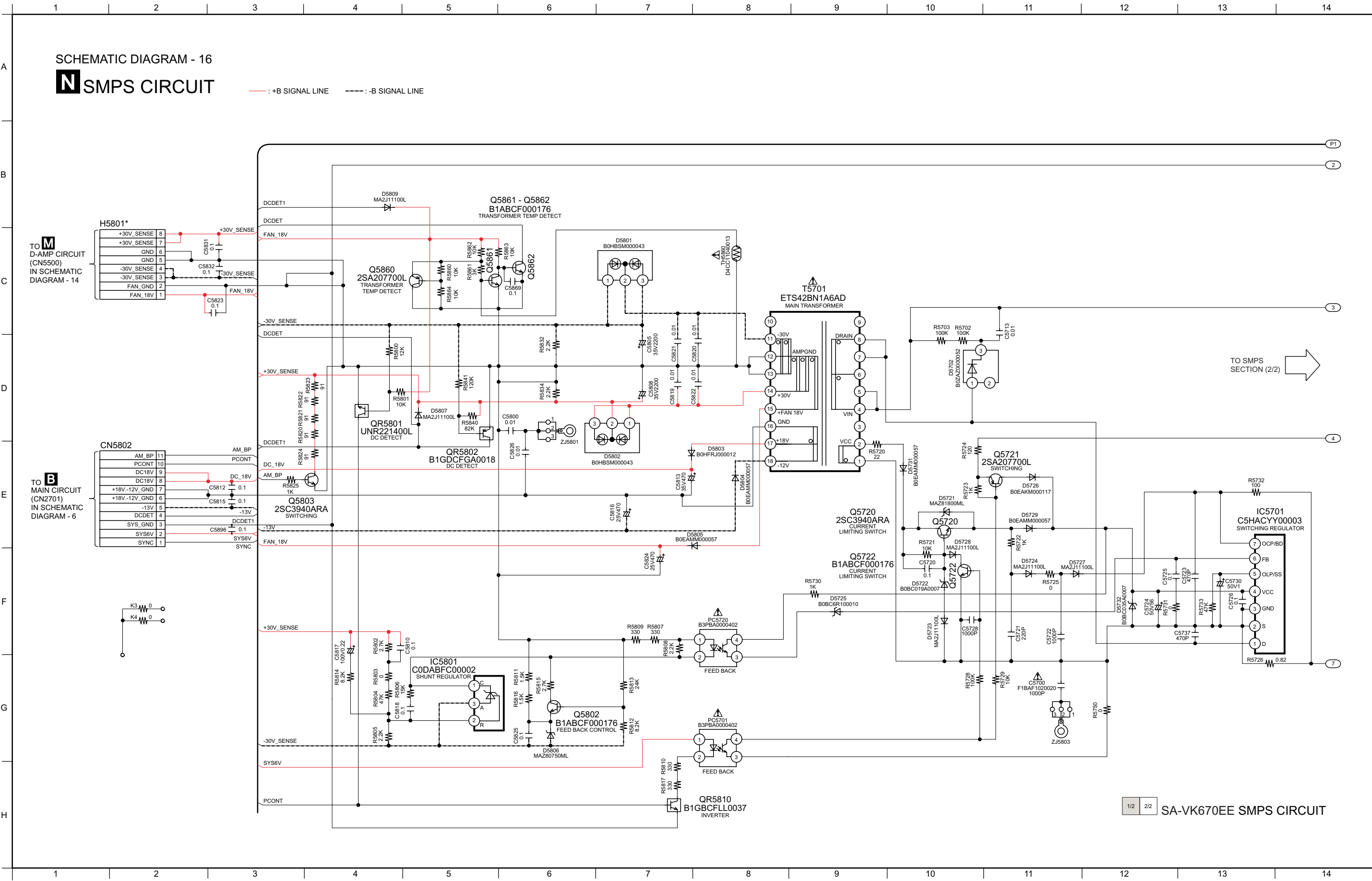


20.6. D-Amp Circuit





20.7. SMPS Circuit

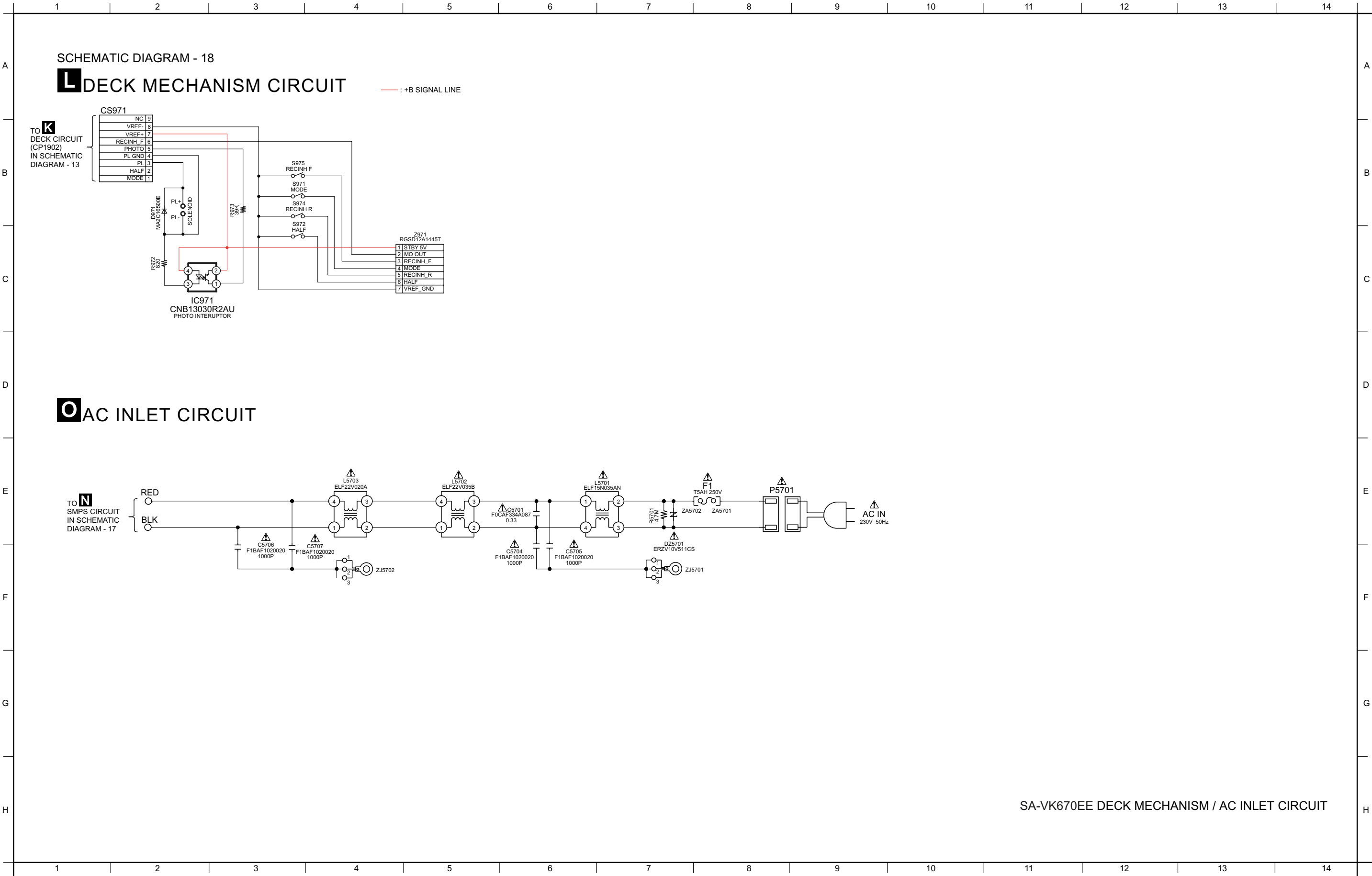


## N SMPS CIRCUIT

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

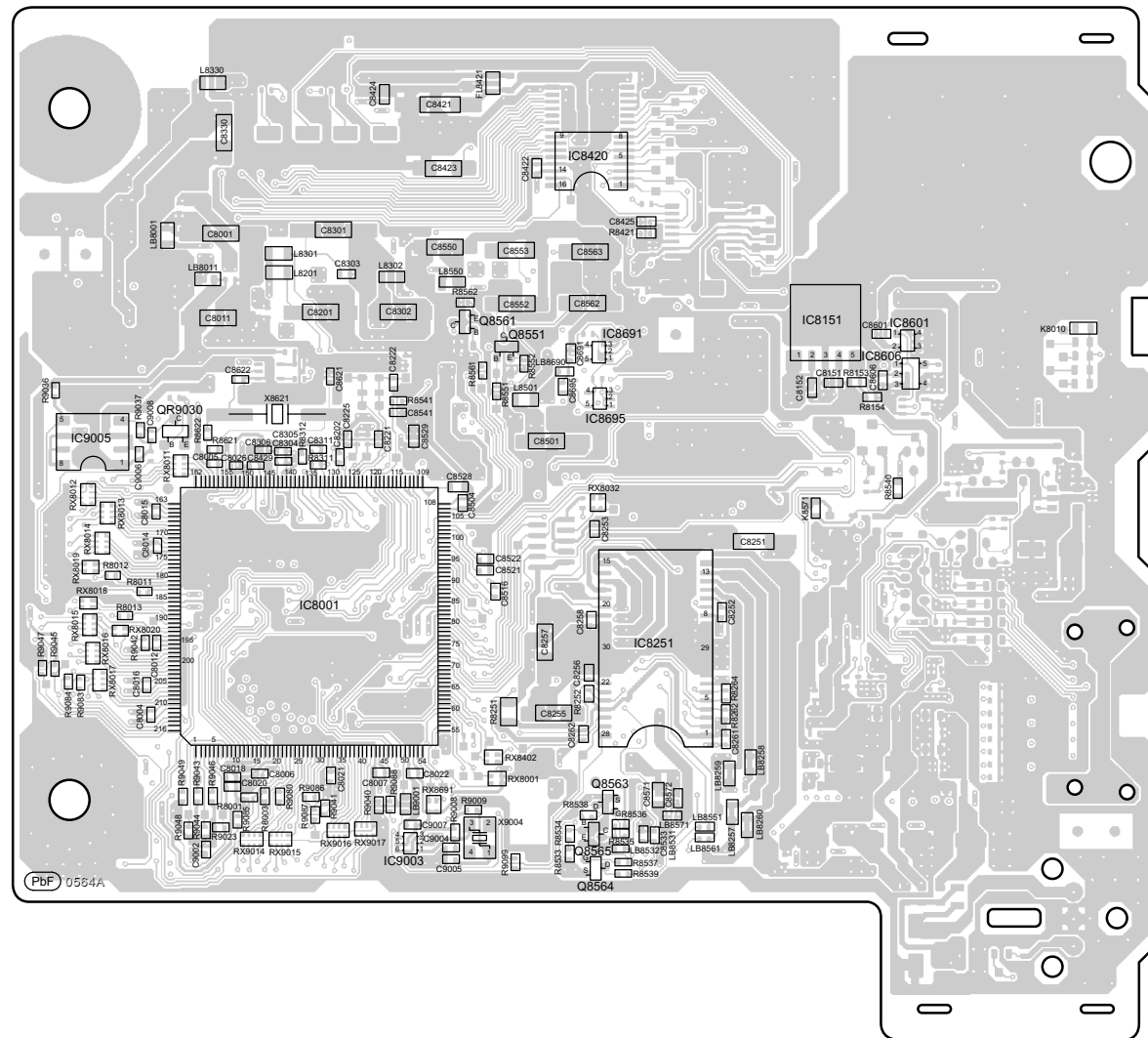


20.8. Deck Mechanism, AC Inlet Circuit

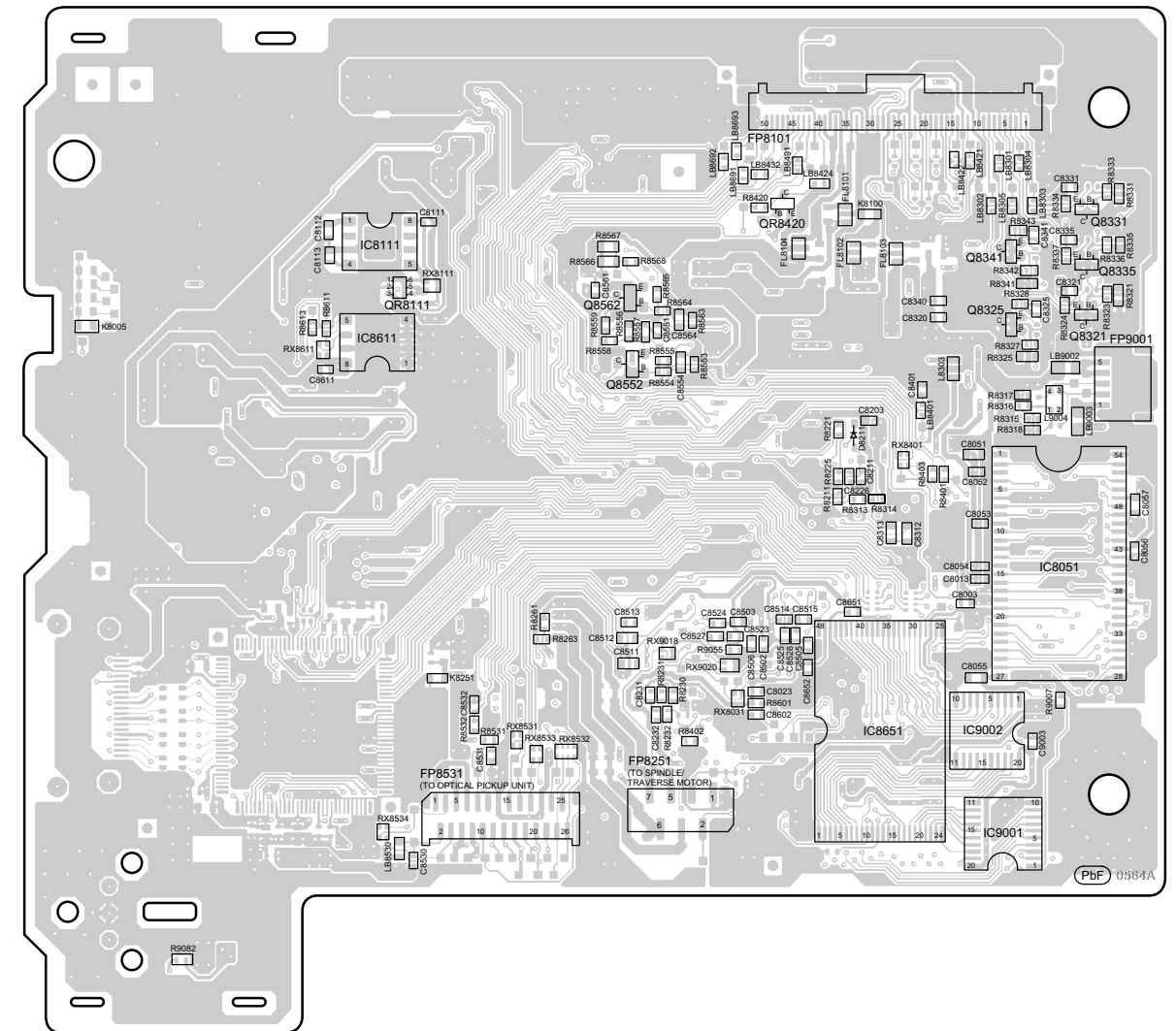


## 21.1. DVD Module P.C.B.

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



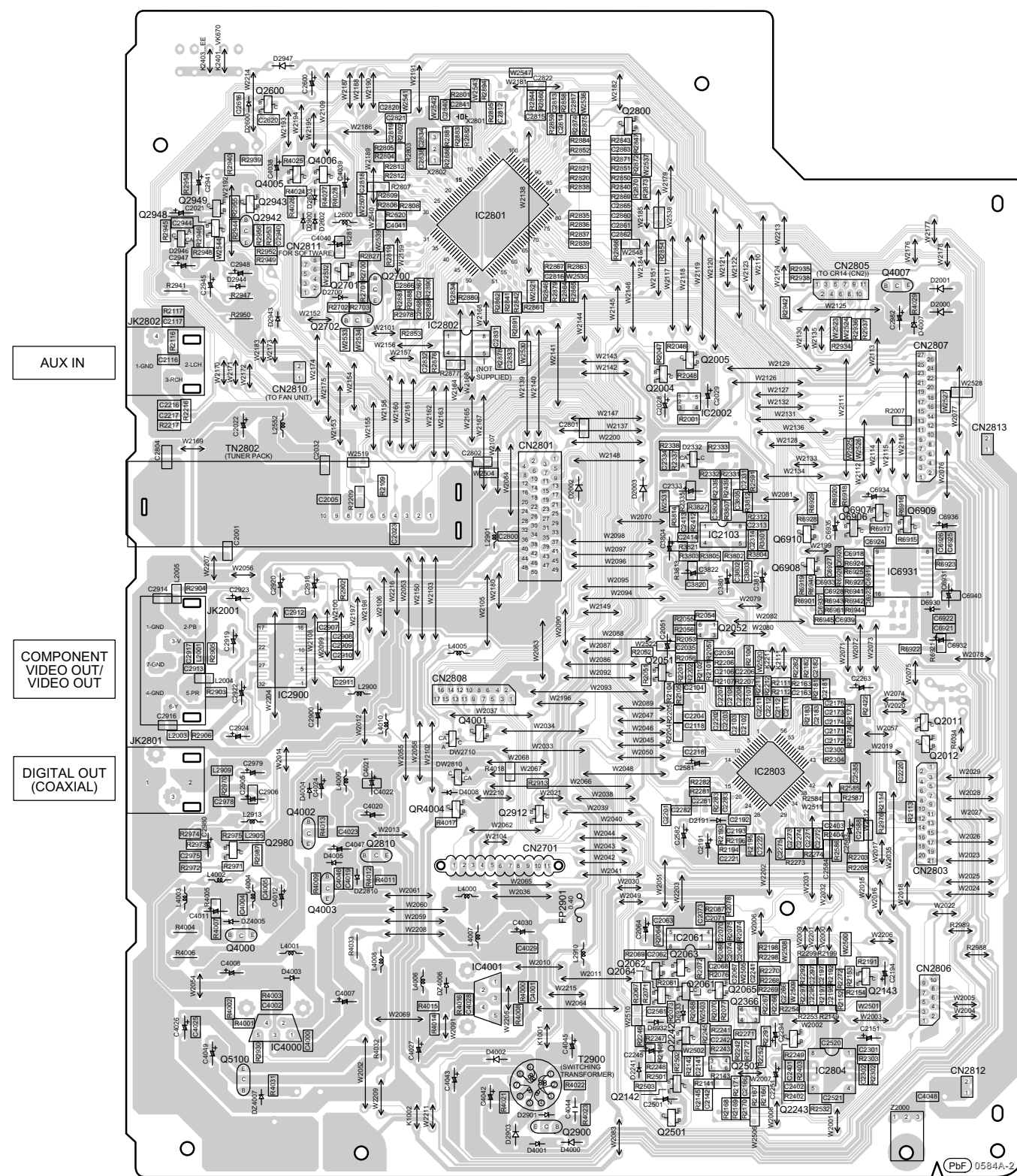
(SIDE A)



(SIDE B)

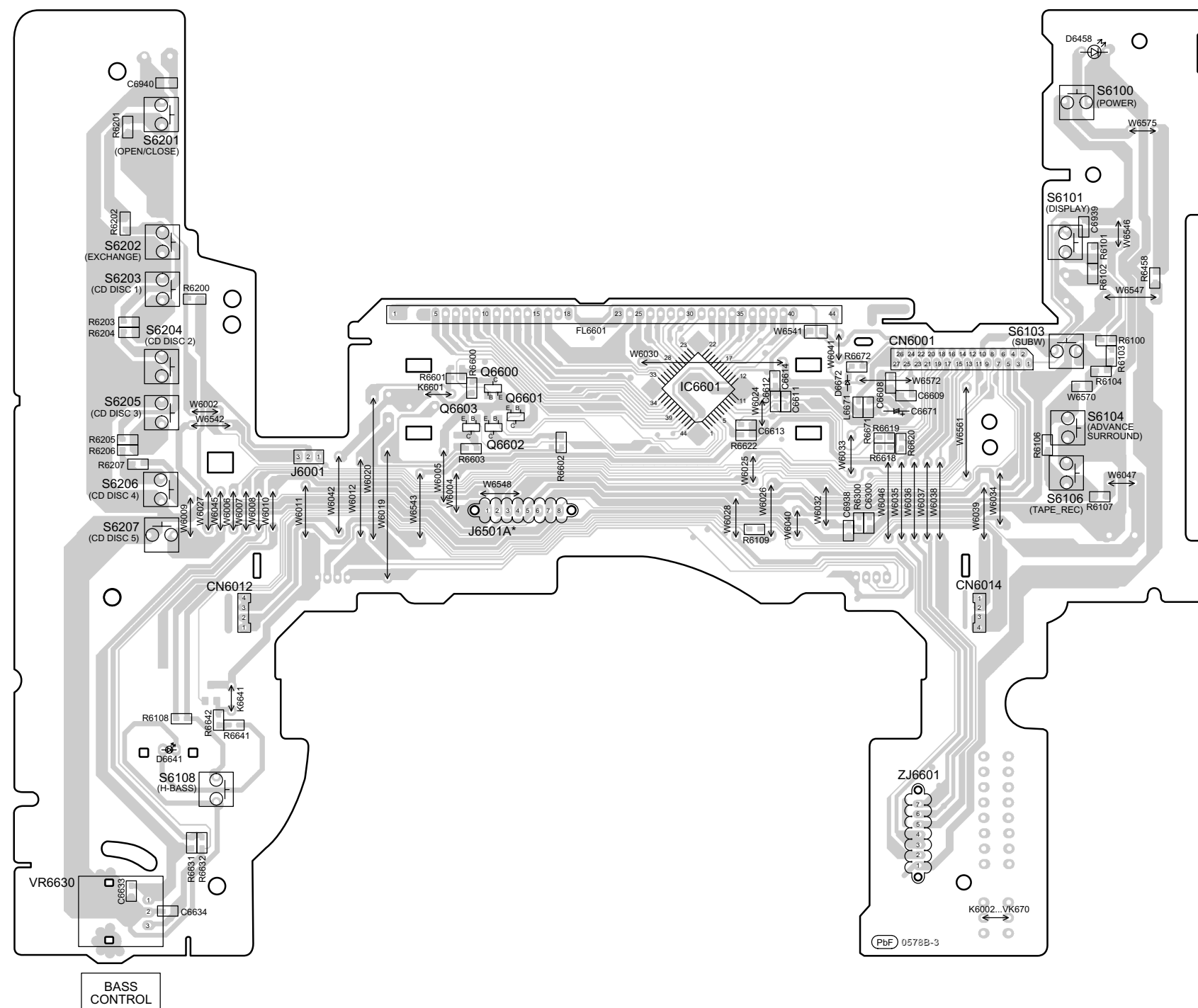
## 21.2. Main P.C.B.

**B** MAIN P.C.B. (REPX0658F)

SA-VK670EE  
MAIN P.C.B.

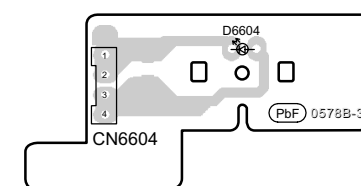
### 21.3. Panel, Side Bar (L) Led, Side Bar (R) Led P.C.B.

**C** PANEL P.C.B. (REPX0671B)



\* FOR INDICATION ONLY

**D** SIDE BAR (L) LED P.C.B. (REPX0671B)



**E** SIDE BAR (R) LED P.C.B. (REPX0671B)

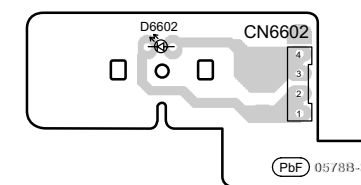
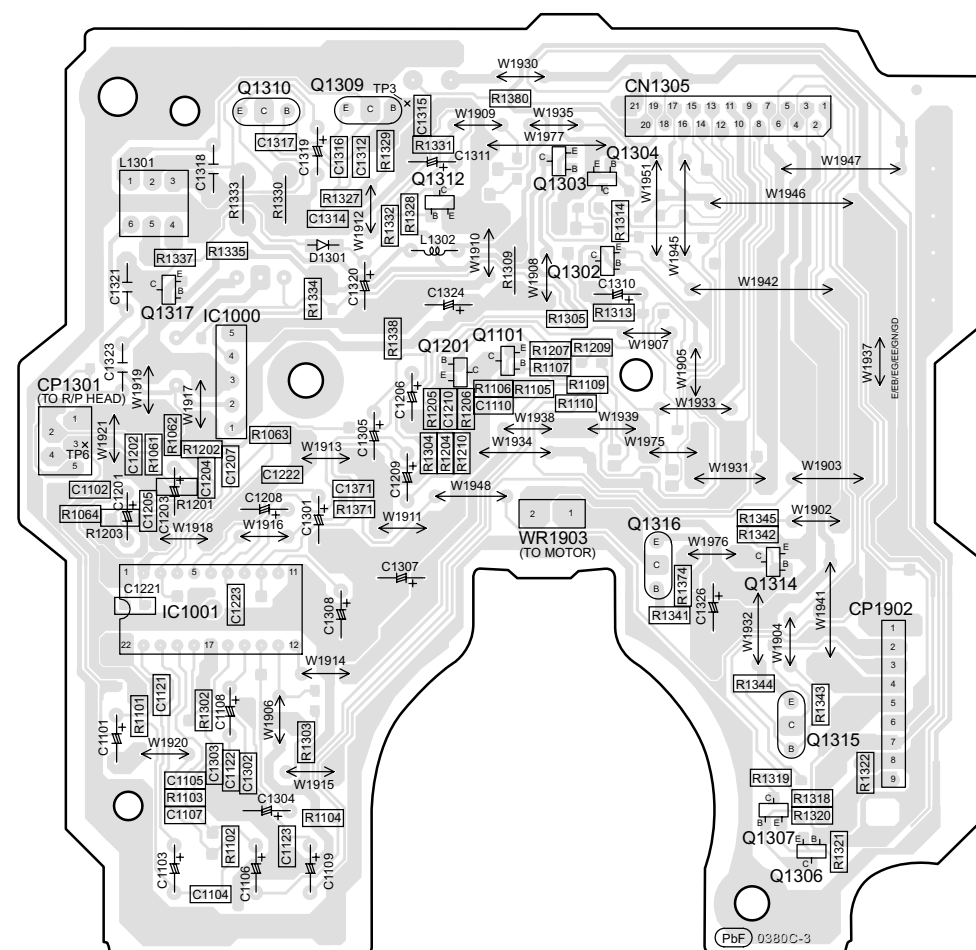


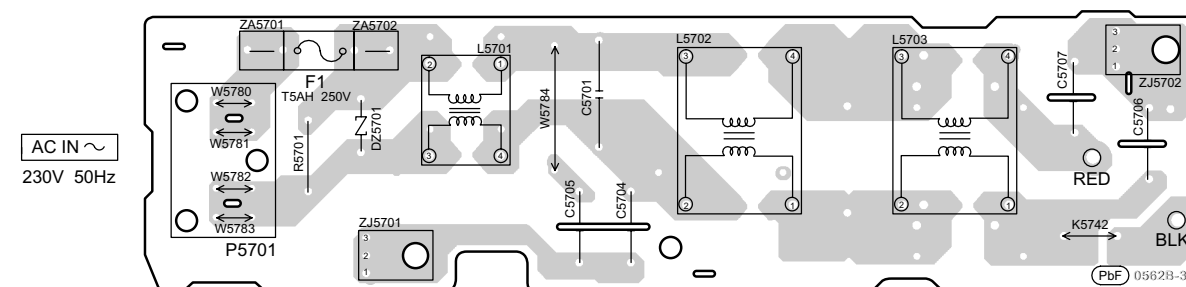
Diagram of the bottom of the PCB showing components CN8002, CN7002, J9000\*, C9001, and a USB connector.

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

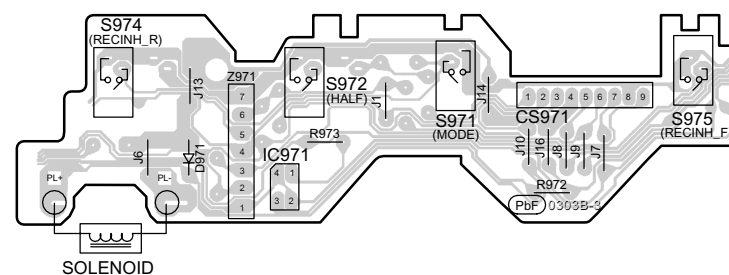
**K** DECK P.C.B. (REPX0411D)



**O** AC INLET P.C.B. (REPX0676A)

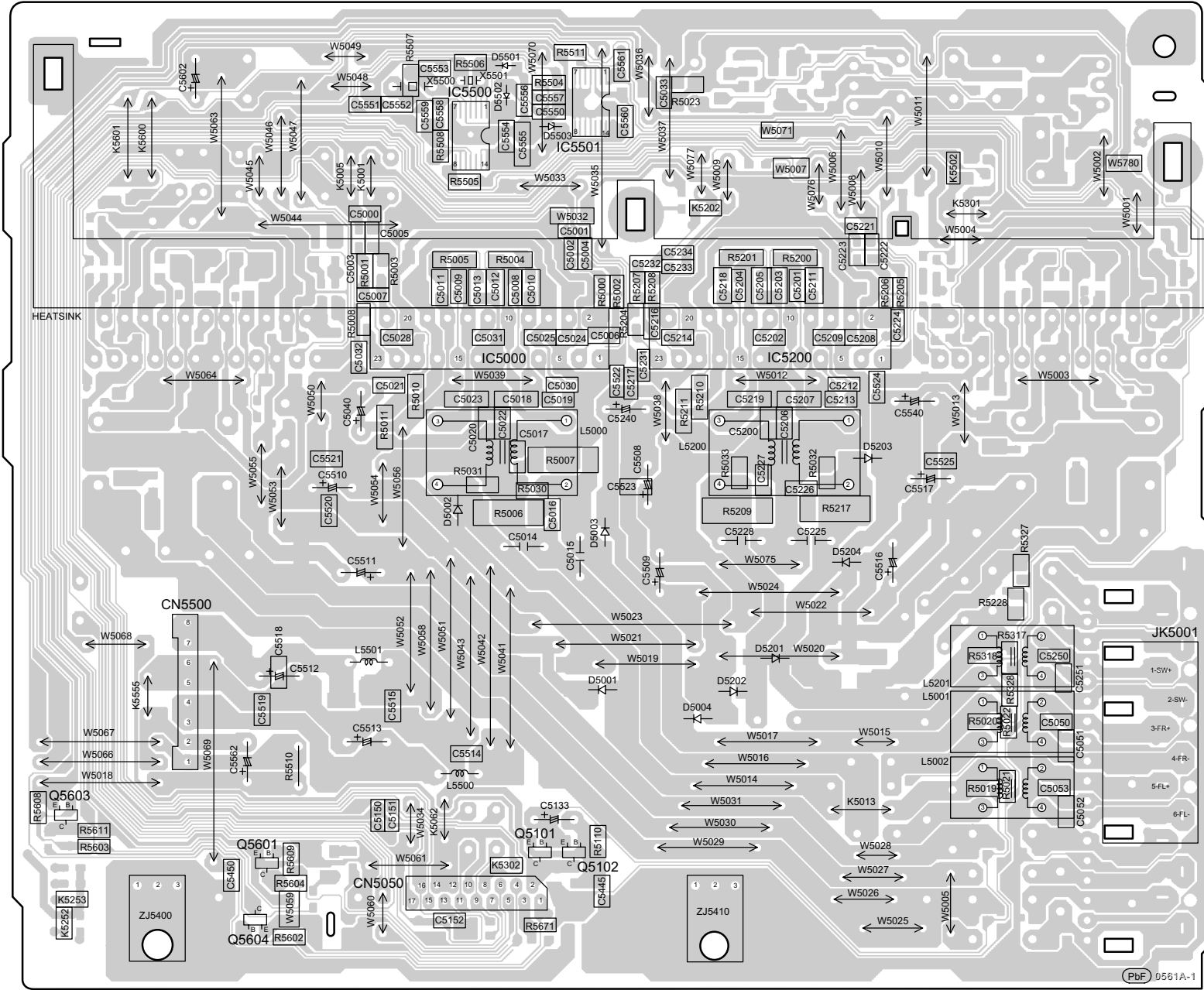


**L** DECK MECHANISM P.C.B. (REPX0321K)



21.6. D-Amp P.C.B.

**M** D-AMP P.C.B. (REPX0638F)

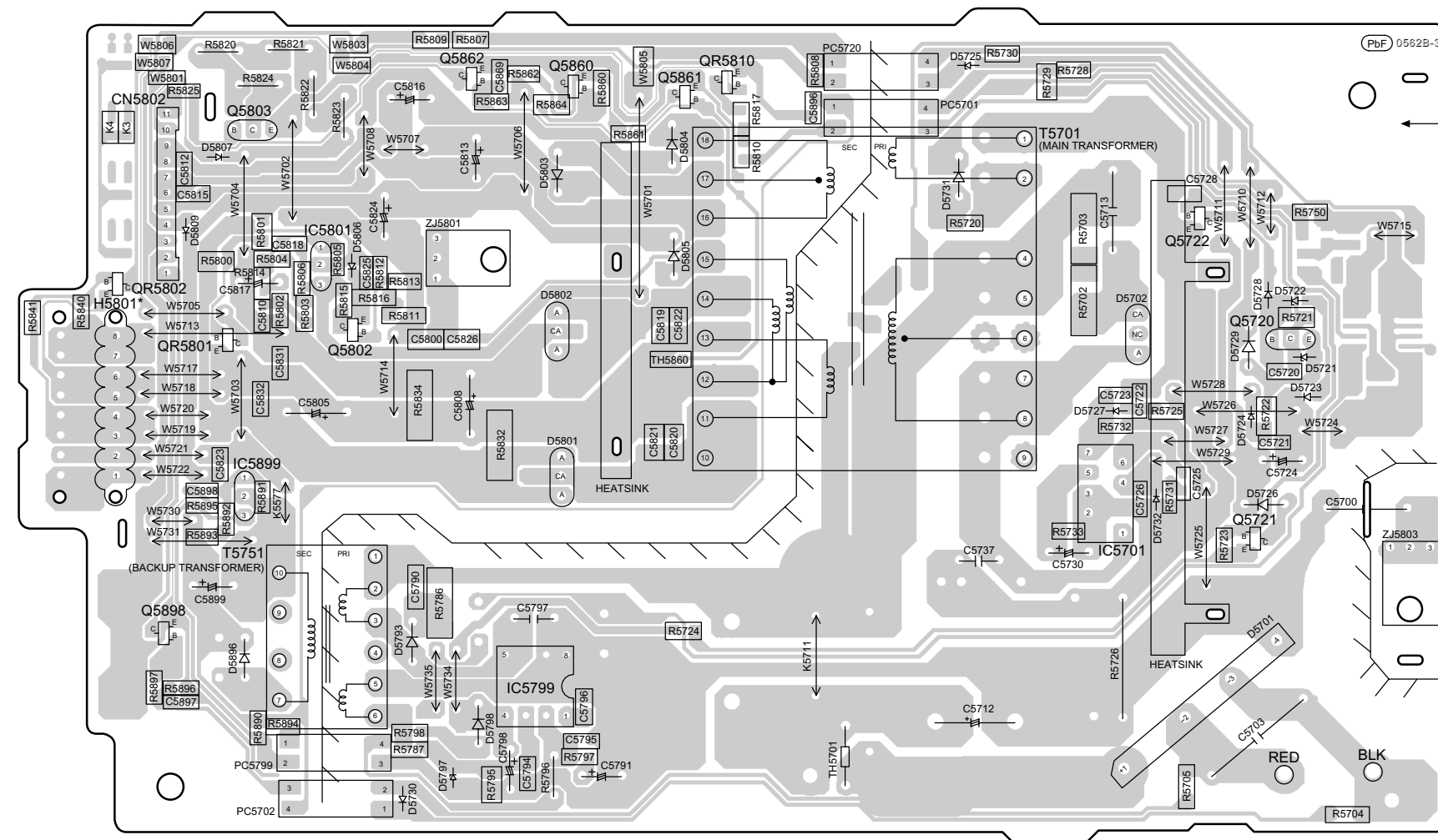


SUBWOOFER

FRONT SPEAKERS

## 21.7. SMPS P.C.B.

**N** SMPS P.C.B. (REPX0676A)



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

\* FOR INDICATION ONLY

SA-VK670EE  
SMPS P.C.B.

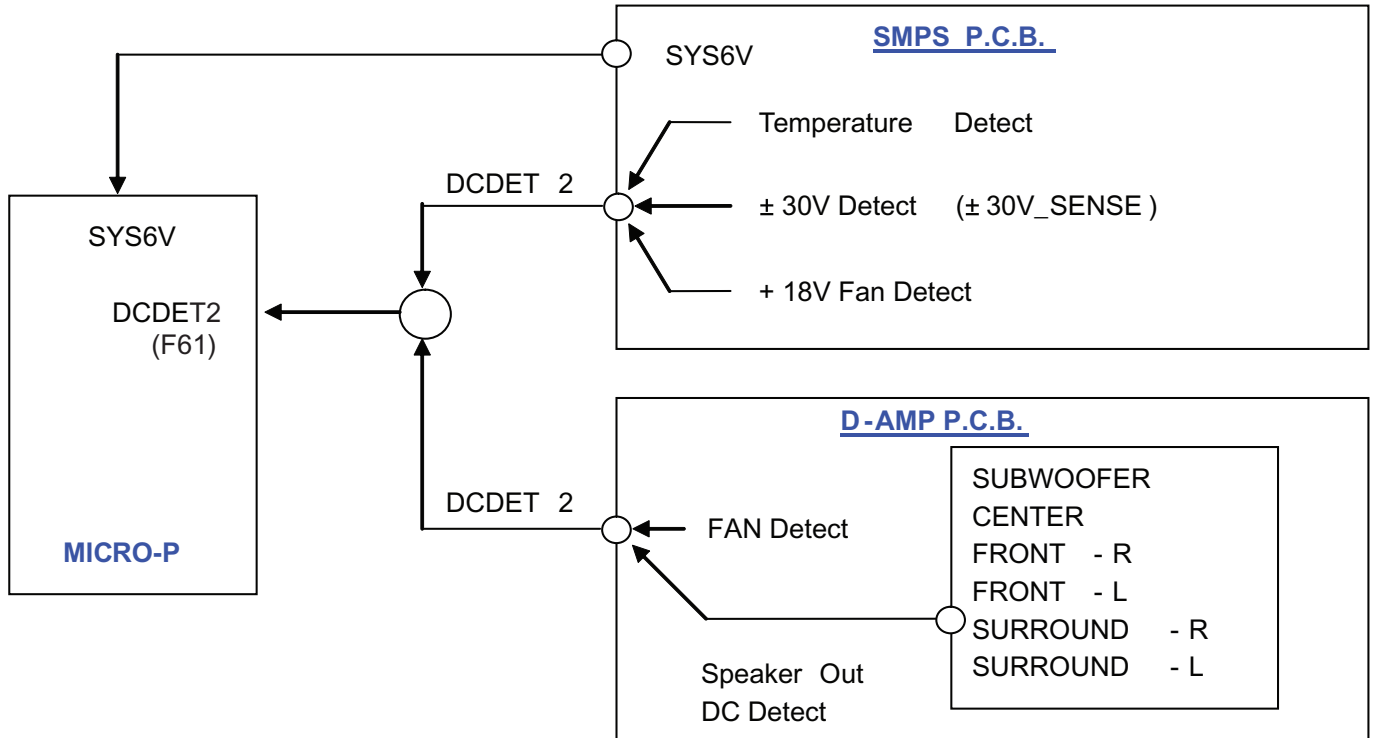


## 22 Basic Troubleshooting Guide

### 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" | <p>Check the soldering of the SMPS P.C.B.</p> <ul style="list-style-type: none"> <li>Is there any solder crack at area (Q5860, Q5861, Q5862, TH5860, QR5801)</li> <li>Check all the supply line <math>\pm 30V</math></li> <li>Is there any solderability at area of feedback circuit</li> <li>Check feedback circuit (IC5801, Q5802, D5806, PC5720, D5725)</li> </ul>                                                                                                                                                                                                                                               | <p>Touch-up the solder crack area/<br/>Change the defective parts.</p> <ul style="list-style-type: none"> <li>Q5860, Q5861, Q5862, TH5860 (Temperature Detect)</li> <li>QR5801 &amp; QR5802 (<math>\pm 30V</math> Detect)</li> <li>Touch-up the necessary areas</li> <li>IC5801, D5806, PC5720, D5725</li> </ul>                                                            | <p>SMPS P.C.B.</p> <p>Refer to Fig. 1</p>                                            |
| First Power ON Display immediate show "F61".                             | <p>Check Speaker output by using multi-meter,</p> <ul style="list-style-type: none"> <li>If there is a DC Voltage around <math>\pm 30V</math></li> <li>Check Output IC (Pin 10 &amp; 14) which have DC Voltage at Speaker output short to <math>\pm V_{dd}/V_{ss}</math></li> <li>If shorted that means D-Amp damage already.</li> </ul>                                                                                                                                                                                                                                                                            | <p>Change the defective parts.</p> <p>D-AMP IC:<br/>IC5000/IC5200<br/>P/N = C1BA00000487</p> <p>For Configuration<br/>Refer to Table 1</p>                                                                                                                                                                                                                                  | <p>D-AMP P.C.B.</p> <p>Refer to Fig. 2</p>                                           |
| Power ON for a while then only trigger "F61".<br>(Symptom always happen) | <p>Check the fan connection &amp; feedback loop:</p> <ul style="list-style-type: none"> <li>If the fan not proper connected, "F61" will trigger when the volume increase.</li> <li>If the fan is not working, check for fan circuit.</li> </ul> <p>Check the soldering of the SMPS P.C.B.</p> <ul style="list-style-type: none"> <li>Is there any solder crack at area (Q5860, Q5861, Q5862, TH5860, QR5801)</li> <li>Check all the supply line <math>\pm 30V</math></li> </ul>                                                                                                                                     | <p>Re-connect the Fan to CN2810</p> <p>Fan circuit: Q2942, Q2943, Q2948 &amp; Q2949</p> <p>Touch-up the solder crack area/<br/>Change the defective parts.</p> <ul style="list-style-type: none"> <li>Q5860, Q5861, Q5862, TH5860 (Temperature Detect)</li> <li>QR5801 &amp; QR5802 (<math>\pm 30V</math> Detect)</li> </ul> <p>Feedback Circuit: IC5801, PC5720, D5725</p> | <p>Main P.C.B.</p> <p>Refer to Fig. 4</p> <p>D-Amp P.C.B.</p> <p>Refer to Fig. 2</p> |
| Power ON for a while and then trigger "F76"                              | <p>Check all supply voltages as follows:</p> <p>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.</p> <p>Step 2: Check if there is supply voltages for <math>-V_p</math>, FL1 &amp; FL2 CN2807</p> <ul style="list-style-type: none"> <li>If there is supply voltages of +5V, +2.7V (For DVD), +6V (SYS6V), +9V &amp; +18V at CN2807</li> <li>If there is supply voltages of <math>\pm 9V</math> at CN6001</li> </ul> | <p>Check and change the possible defective parts.</p> <ul style="list-style-type: none"> <li>FP2901 (Fuse Protector), T2900, D2901, D2906, D2908, D2909</li> <li>IC4000 (DC-DC Converter IC) &amp; related regulator circuit components</li> <li>IC4001 (DC-DC Converter IC) &amp; related regulator circuit components</li> </ul>                                          | <p>Main P.C.B.</p> <p>Refer to Fig. 4</p>                                            |

### 22.1.3. Part Location

#### 22.1.3.1. SMPS P.C.B.

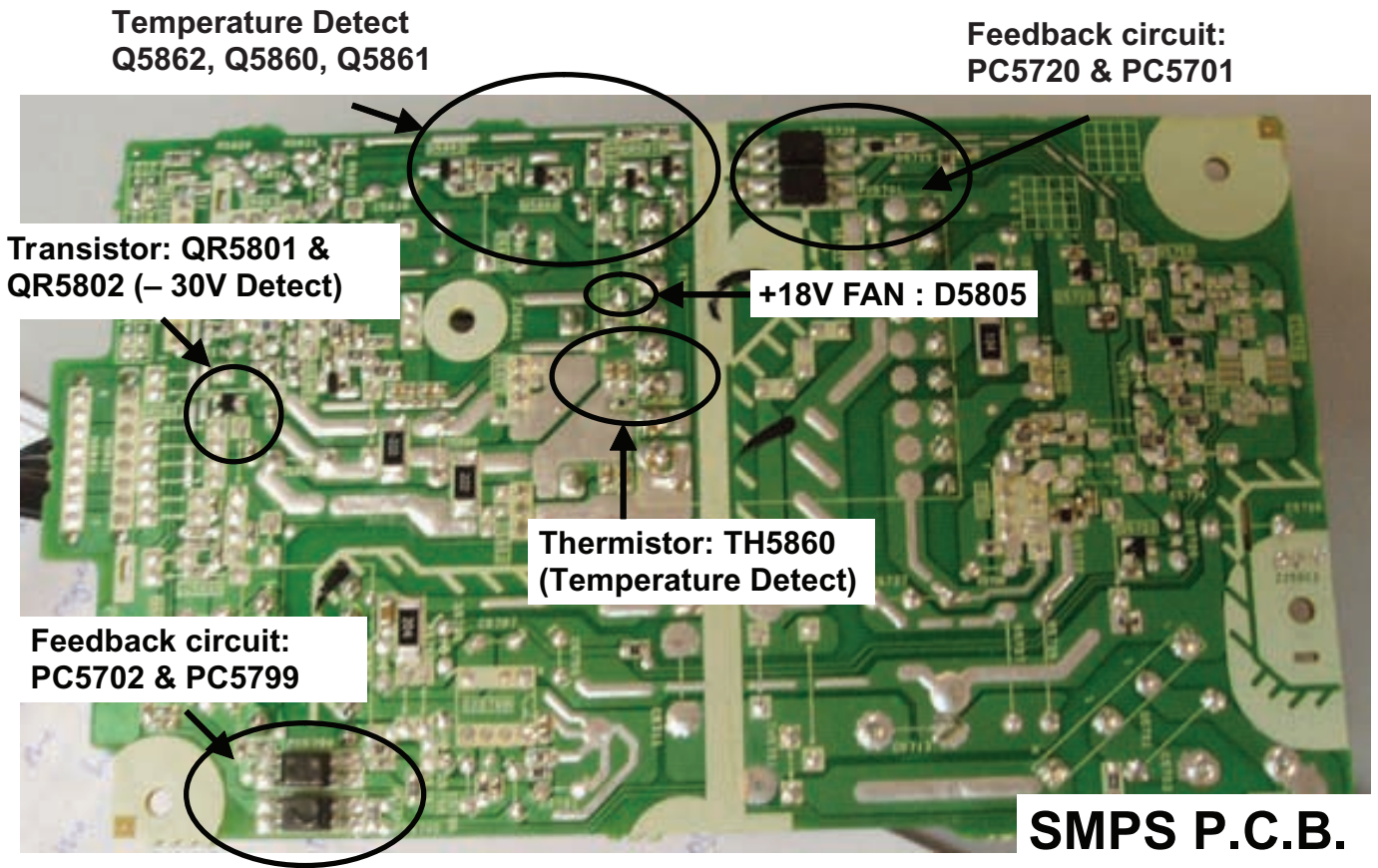


Fig. 1 SMPS P.C.B.

### 22.1.3.2. D-Amp P.C.B.

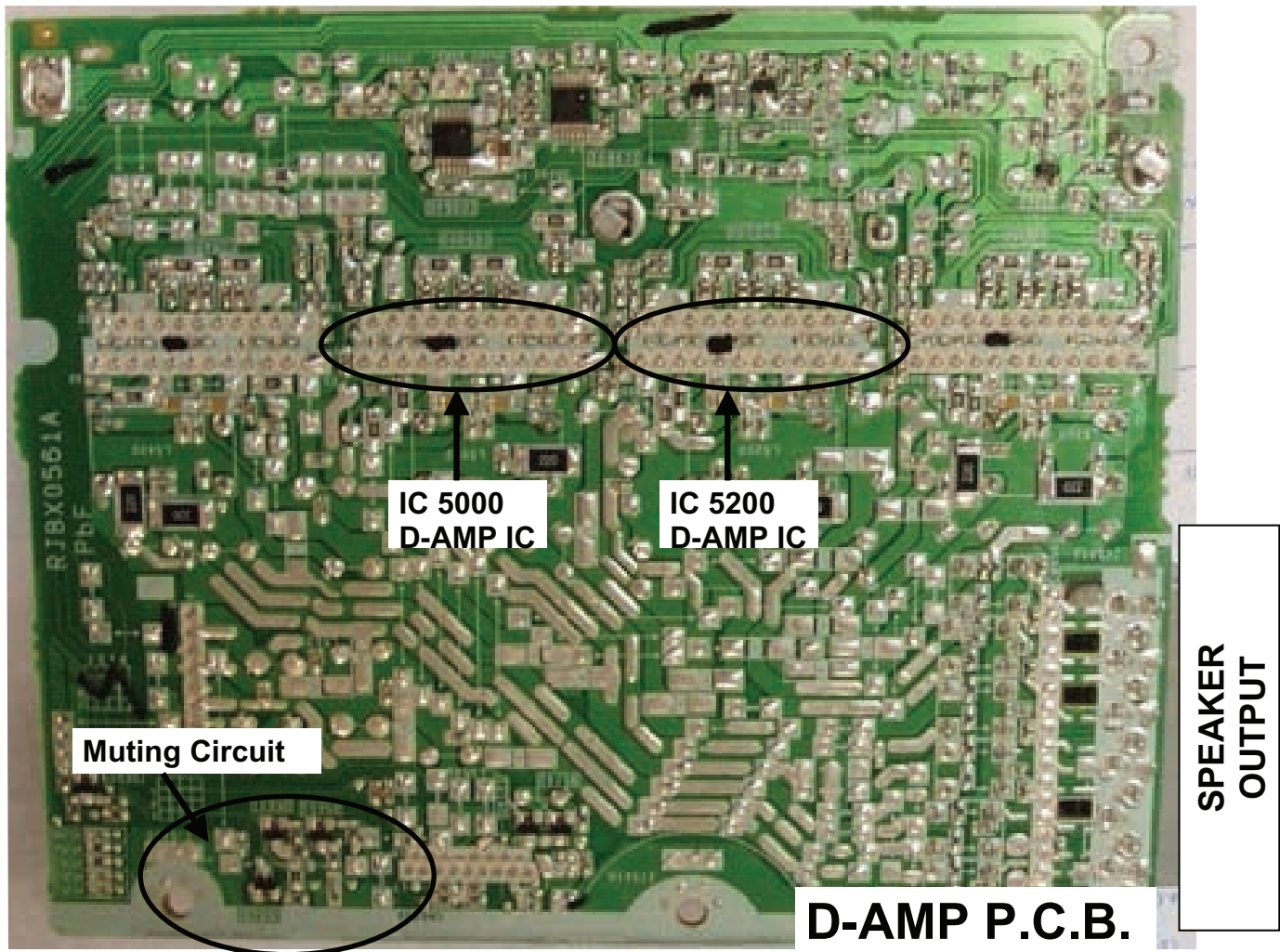


Fig. 2 D-Amp P.C.B

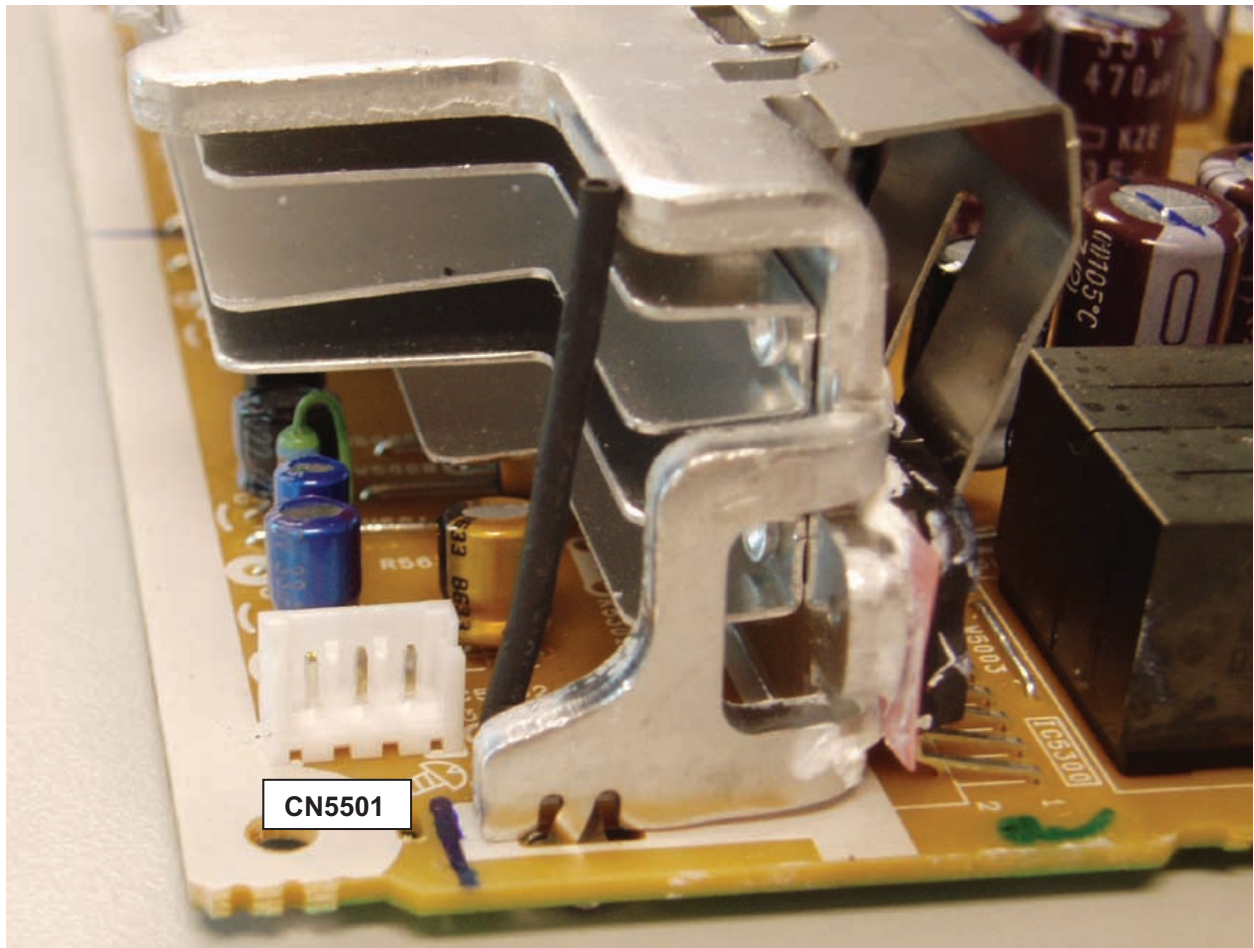


Fig. 3 Fan Connector

### 22.1.3.3. D-Amp IC Configuration

|               |                 |                    |
|---------------|-----------------|--------------------|
|               |                 | <b>VK670EE</b>     |
| <b>IC5200</b> | <b>Pin (10)</b> | <b>Woofer +</b>    |
|               | <b>Pin (14)</b> | <b>Woofer</b>      |
| <b>IC5000</b> | <b>Pin (10)</b> | <b>Front Right</b> |
|               | <b>Pin (14)</b> | <b>Front Left</b>  |

Table 1

## 22.1.3.4. Main P.C.B.

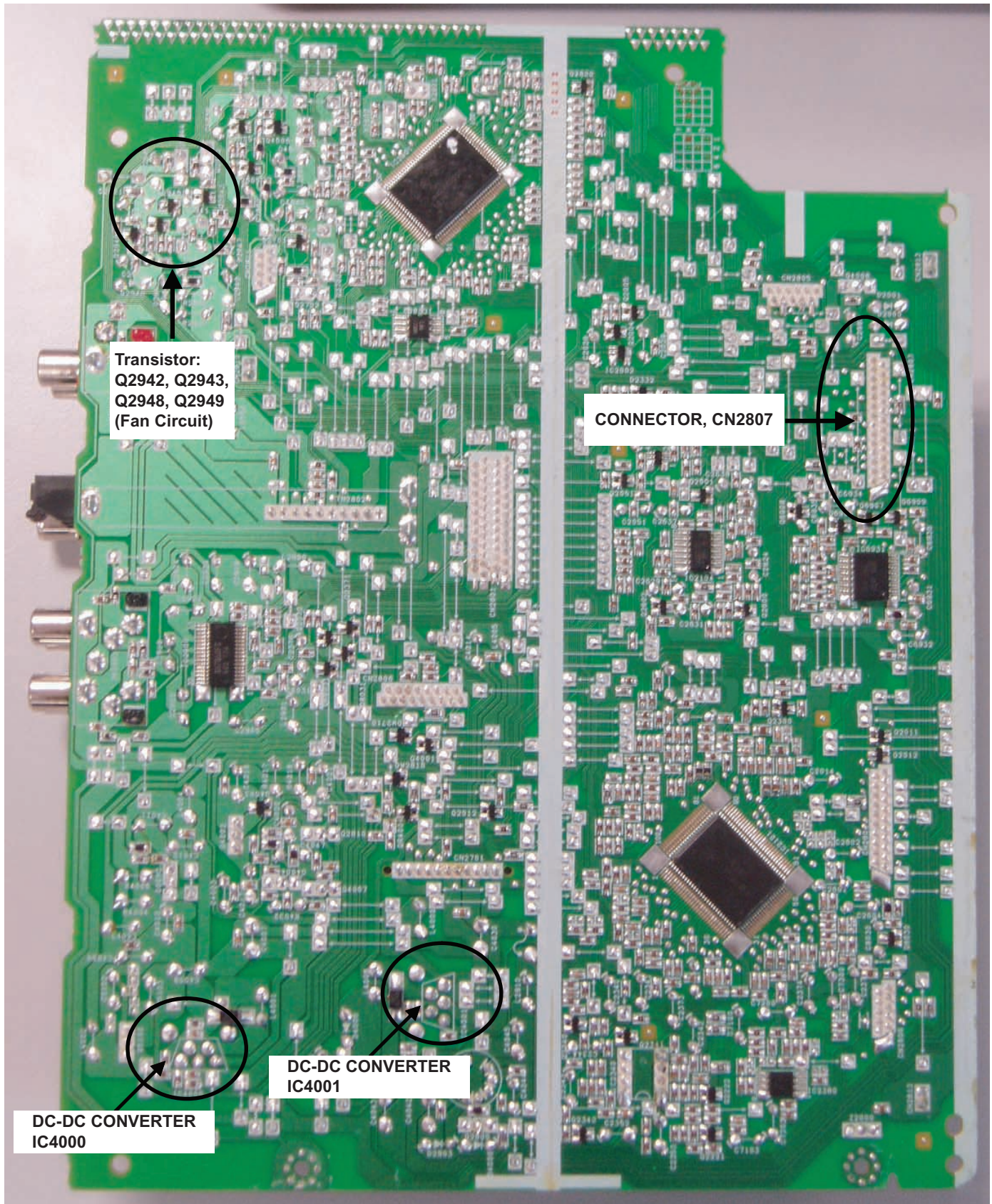


Fig. 4 Main P.C.B.

## 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 heard 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<br>* Compare the above with OK condition DVD Module P.C.B                                                                                                        | IC8421 (Pin 9 to 11 & 17 to 22)<br>LB8425, LB8426, LB8427, LB8428, LB8429, LB8431<br>*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<br>* Compare the above with OK condition DVD Module P.C.B.                                                                                | IC8001 Pin 66, 67<br>IC8251 Pin 15 to 16<br>* Check for solder short and/or component missing/damaged                                         |
| 3) Disc not spinning<br>4) Traverse not moving<br>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<br>* Compare the above with OK condition DVD Module P.C.B.                                                                | IC8251<br><br>* Check for solder short and/or component damaged                                                                               |
| 6) Cannot read the disc but spindle motor is spinning<br>- Cannot read CD/DVD               | a) Check laser drive circuitry (voltages and current)<br>- Check CD Laser Drive<br>- Check DVD Laser Drive<br>* Check voltages and LD current and compare with OK condition DVD Module P.C.B. | Q8551, Q8552, LB8551 (For DVD Laser Drive current)<br>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<br>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.<br>No need check Setup Menu.<br>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)<br>- Data (TX0P/M => 14, 16)<br>- Data (TX1P/M => 18, 20)<br>- Data (TX2P/M => Pin 22, 24)<br>- Clock (TXCP/TXCM => Pin 10, 12) | L3905<br>L3904<br>L3903<br>L3906                                                                                                   |
|                                                                 | 5) HDMI Transmitter communication lines to TV<br>- Data, SDA (Pin 120, IC3901)<br>- Clock, SCL (Pin 121, IC3901)                                                          | LB3905, R3905, Q3902, R3904<br>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)<br>- Pin 9,124<br>2) GND for Up-Con<br>- Pin 7,125<br>3) Check for capacitor short to GND | LB3902<br><br>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<br><br>2) Check setting of the set in Setup Menu whether the HDMI Audio output is turned On         | R8402, RX8402<br><br>* Check for solder short and/or component missing/damaged as well as signal condition. |

## 23 Terminal Function of ICs

### 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_SCL_K  | 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                                            |

| Pin No. | Terminal Name | I/O | Function                                               |
|---------|---------------|-----|--------------------------------------------------------|
| 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 (L 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                                          |

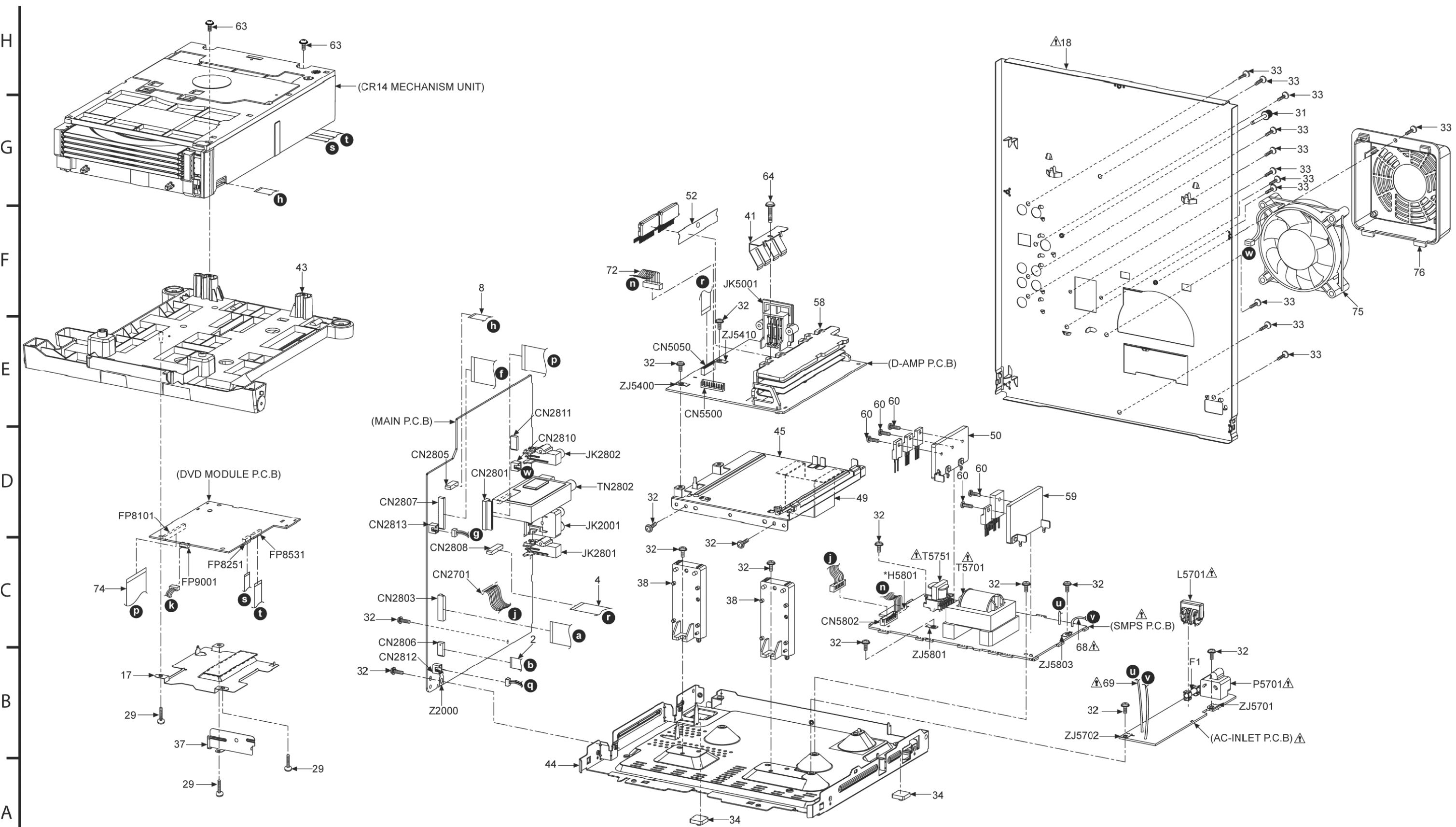
### 23.2. IC6901(C0HBB0000057): IC FL Driver

| 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        |
| 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 |

| Pin No. | Terminal Name | I/O | Function                         |
|---------|---------------|-----|----------------------------------|
| 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                              |

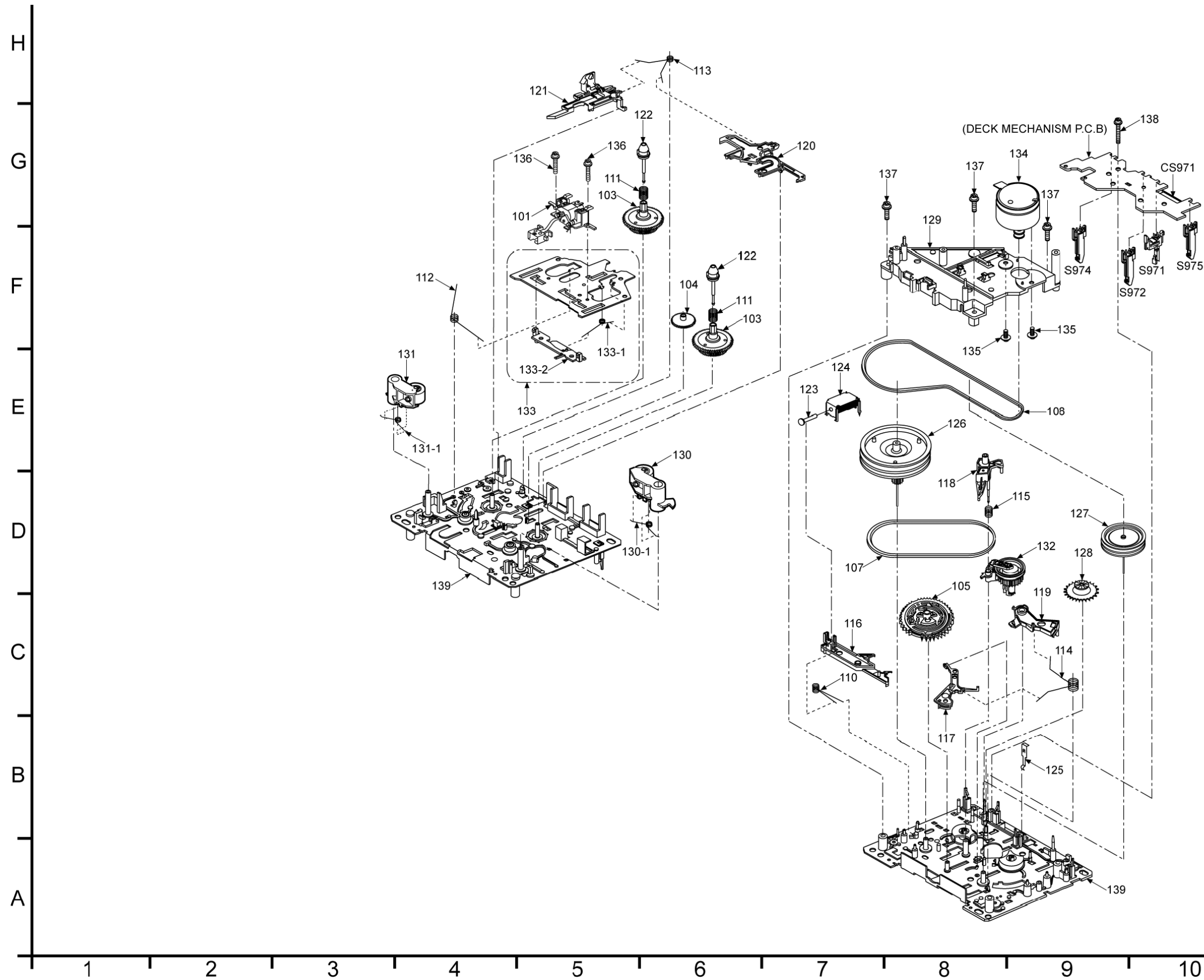




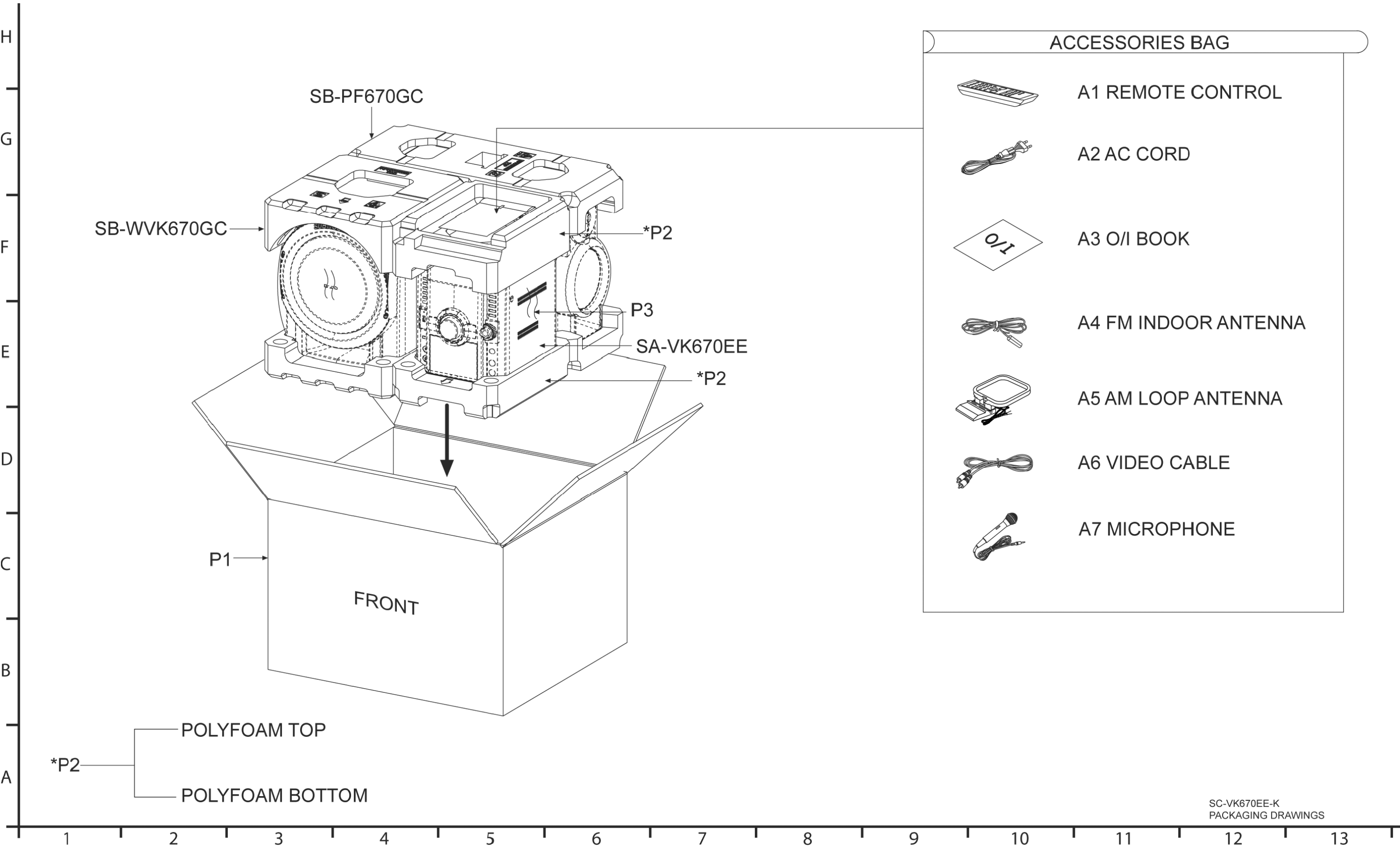


NOTE: "\*" PARTS ARE INDICATIONS ONLY.

## 24.2. Deck Mechanism Parts Location (RAA4111-S)



24.3. Packaging



# 25 Replacement Parts List

## Notes:

- Important safety notice:  
Components identified by  $\triangle$  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 WIRE (MAIN-CD)     | [M]     |
| 9        | RDGX0040     | VOLUME GEAR                | [M]     |
| 10       | RGCX0010A-W  | LIGHT REFLECTOR            | [M]     |
| 11       | RFKGAVK670GC | 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 LIGH PIECE          | [M]     |
| 16       | RGLX0167-Q   | POWER LIGHT PIECE          | [M]     |
| 17       | RXQX0084A    | HDMI SHIELD PLATE UNIT     | [M]     |
| 18       | RGRX0070N-B  | REAR PANEL                 | [M] △   |
| 20       | RGUX0764A-S  | FUNCTION BUTTON R          | [M]     |
| 21       | RGUX0765-1S  | DYNAMIC BASS BUTTON        | [M]     |
| 22       | RGUX0766A-K  | 5CD CHANGE BUTTON          | [M]     |
| 23       | RGUX0767C-K  | POWER CONTROL BUTTON       | [M]     |
| 24       | RGUX0768-K   | CASSETTE EJECT BUTTON      | [M]     |
| 25       | RGUX0777A-S  | FUNCTION BUTTON R          | [M]     |
| 26       | RGWX0056-1K  | MIC VOLUME KNOB            | [M]     |
| 27       | RGWX0072-S   | 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 | CASSETTE LID               | [M]     |
| 36       | RKMXX0144-K  | TOP CABINET                | [M] △   |
| 37       | RSCX0196     | GROUND PLATE               | [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       | RMZX0043     | IC INSULATOR               | [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 | HEATSINK UNIT A            | [M]     |
| 59       | RXXX0104     | HEATSINK 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 (DVD-USB)   | [M]     |
| 68       | REXX0684     | BLACK WIRE                 | [M] △   |
| 69       | REXX0685     | RED WIRE                   | [M] △   |
| 72       | REXX0683     | 8P FLAT WIRE (SMPS-DAMP)   | [M]     |
| 74       | REEX0905     | 50P FFC CABLE (MAIN-BE)    | [M]     |
| 75       | L6FALEFH0023 | FAN UNIT                   | [M]     |
| 76       | RMQX0318-K   | FAN COVER                  | [M]     |
|          |              | CASSETTE DECK              |         |

| Ref. No. | Part No.     | Part Name & Description | Remarks           |
|----------|--------------|-------------------------|-------------------|
| 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      | RM0131-1     | BRAKE ROD               | [M]               |
| 121      | RMM0133-1    | EJECT ROD               | [M]               |
| 122      | RMQ0519      | REEL HUB                | [M]               |
| 123      | RMS0398-1    | MOVING CORE             | [M]               |
| 124      | RSJ0003      | SOLENOID 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       | RP6X1935     | PACKING CASE            | [M]               |
| P2       | RPNX0534     | POLYFOAM                | [M]               |
| P3       | RPF0198      | MIRAMAT SHEET           | [M]               |
|          |              | ACCESSORIES             |                   |
| A1       | N2QAYB000267 | REMOTE CONTROL          | [M]               |
| A1-1     | RKK-HTR0051K | R/C BATTERY COVER       | [M]               |
| A2       | K2CQ2CA00007 | AC CORD                 | [M] △             |
| A3       | RQTV0317-R   | O/I BOOK (Ru/Ur)        | [M]               |
| A4       | RSA0007-L1   | FM INDOOR ANTENNA       | [M]               |
| A5       | N1DYVYY00003 | AM LOOP ANTENNA         | [M]               |
| A6       | K2KA2CA00011 | VIDEO CABLE             | [M]               |
| A7       | RP-VK21E-K   | MICROPHONE              | [M]               |
|          |              | PRINTED CIRCUIT BOARDS  |                   |
| PCB1     | REPX0411D    | DECK P.C.B              | [M]<br>(RTL)      |
| PCB2     | REPX0676A    | SMPS P.C.B              | [M]<br>(RTL)<br>△ |
| PCB3     | REPX0676A    | AC INLET P.C.B          | [M]<br>(RTL)<br>△ |
| PCB4     | REPX0638F    | D-AMP PCB               | [M]<br>(RTL)      |
| PCB5     | REPX0658F    | MAIN PCB                | [M]<br>(RTL)      |
| PCB6     | REPX0658F    | USB P.C.B               | [M]<br>(RTL)      |

| Ref. No. | Part No.     | Part Name & Description    | Remarks      |
|----------|--------------|----------------------------|--------------|
| PCB7     | REPX0671B    | PANEL PCB                  | [M]<br>(RTL) |
| PCB8     | REPX0671B    | SIDE BAR (L) P.C.B         | [M]<br>(RTL) |
| PCB9     | REPX0671B    | SIDE BAR (R) P.C.B         | [M]<br>(RTL) |
| PCB10    | REPX0671B    | MIC P.C.B                  | [M]<br>(RTL) |
| PCB11    | REPX0671B    | TACT SWITCH P.C.B          | [M]<br>(RTL) |
| PCB12    | REPX0671B    | MUSIC PORT P.C.B           | [M]<br>(RTL) |
| PCB13    | REPX0671B    | REMOTE SENSOR P.C.B        | [M]<br>(RTL) |
| PCB14    | REPX0321K    | DECK MECHANISM P.C.B       | [M]<br>(RTL) |
| PCB15    | REPX0620F-M  | DVD MODULE P.C.B           | [M]<br>(RTL) |
|          |              |                            |              |
|          |              | INTEGRATED CIRCUITS        |              |
|          |              |                            |              |
| IC971    | CNB13030R2AU | IC PHOTO INTERRUPTOR       | [M]          |
| IC1000   | C1AA00000612 | IC ANALOG SWITCH           | [M]          |
| IC1001   | AN7326K      | IC DECK R/P                | [M]          |
| IC2002   | C0CBCBC00140 | IC VOLTAGE REGULATOR       | [M]          |
| IC2061   | C0ABBB000228 | IC OP-AMP                  | [M]          |
| IC2103   | C0ABBB000230 | IC OP-AMP                  | [M]          |
| IC2801   | RFKWKV470GC  | 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]          |
| IC5200   | 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]          |
| IC6931   | C1AB00002773 | IC ECHO                    | [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    | B1GDCFJH0002 | TRANSISTOR                 | [M]          |
| Q1306    | B1ABCF000011 | TRANSISTOR                 | [M]          |
| Q1307    | B1ABCF000011 | TRANSISTOR                 | [M]          |
| Q1309    | B1AAGC000006 | TRANSISTOR                 | [M]          |
| Q1310    | B1AAGC000006 | TRANSISTOR                 | [M]          |
| Q1312    | B1ABCF000011 | TRANSISTOR                 | [M]          |
| Q1314    | B1GDCFJH0002 | TRANSISTOR                 | [M]          |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| 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]     |
| Q2051    | B1GDCFJJ0047 | TRANSISTOR              | [M]     |
| Q2052    | B1GFGCAA0001 | TRANSISTOR              | [M]     |
| Q2061    | B1ABCF000176 | TRANSISTOR              | [M]     |
| Q2062    | B1ABCF000176 | TRANSISTOR              | [M]     |
| Q2063    | B1GDCFJJ0047 | TRANSISTOR              | [M]     |
| Q2064    | B1GDCFJJ0047 | TRANSISTOR              | [M]     |
| Q2065    | B1ABCF000176 | 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    | B1BARK000001 | TRANSISTOR              | [M]     |
| Q2912    | B1GBCFJN0033 | TRANSISTOR              | [M]     |
| Q2942    | B1ACKD000006 | TRANSISTOR              | [M]     |
| Q2943    | B1ABCF000176 | TRANSISTOR              | [M]     |
| Q2948    | B1ABCF000176 | TRANSISTOR              | [M]     |
| Q2949    | B1ABCF000176 | 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]     |
| Q6906    | B1GBCFJJ0051 | TRANSISTOR              | [M]     |
| Q6907    | B1GBCFJJ0051 | TRANSISTOR              | [M]     |
| Q6908    | B1GBCFJJ0051 | TRANSISTOR              | [M]     |
| Q6909    | B1GBCFJJ0051 | 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]     |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| 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]     |
| 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]     |
| D2944    | B0BC5R600003 | DIODE                   | [M]     |
| D2946    | B0ADCJ000020 | 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    | B0HCM0000019 | DIODE                   | [M]     |
| D5002    | B0HCM0000019 | DIODE                   | [M]     |
| D5003    | B0HCM0000019 | DIODE                   | [M]     |
| D5004    | B0HCM0000019 | DIODE                   | [M]     |
| D5201    | B0HCM0000019 | DIODE                   | [M]     |
| D5202    | B0HCM0000019 | DIODE                   | [M]     |
| D5203    | B0HCM0000019 | DIODE                   | [M]     |
| D5204    | B0HCM0000019 | 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]     |

| Ref. No. | Part No.      | Part Name & Description | Remarks |
|----------|---------------|-------------------------|---------|
| 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    | B3AAA00000803 | DIODE                   | [M]     |
| D6511    | B3AEA0000107  | DIODE                   | [M]     |
| D6512    | B3AEA0000107  | DIODE                   | [M]     |
| D6602    | B3AEA0000107  | DIODE                   | [M]     |
| D6604    | B3AEA0000107  | DIODE                   | [M]     |
| D6641    | B3AEA0000107  | DIODE                   | [M]     |
| D6672    | B0BC4R600016  | DIODE                   | [M]     |
| D6930    | B0BC5R000009  | DIODE                   | [M]     |
| D6932    | B0BC2R4A0006  | DIODE                   | [M]     |
| D6933    | B0BC2R4A0006  | 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 RECINH_R             | [M]     |
| S975     | K0J1BB000021  | SW RECIN_F              | [M]     |
| S6100    | EVQ21405RJ    | SW POWER                | [M]     |
| S6101    | EVQ21405RJ    | SW DISPLAY              | [M]     |
| S6103    | EVQ21405RJ    | SW ADVANCE SURROUND     | [M]     |
| S6104    | EVQ21405RJ    | SW SUBWOOFER            | [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 DISC 1               | [M]     |
| S6204    | EVQ21405RJ    | SW DISC 2               | [M]     |
| S6205    | EVQ21405RJ    | SW DISC 3               | [M]     |
| S6206    | EVQ21405RJ    | SW DISC 4               | [M]     |
| S6207    | EVQ21405RJ    | SW DISC 5               | [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                 | [M]     |
|          |               |                         |         |
|          |               | CONNECTORS              |         |
|          |               |                         |         |
| CN2      | K1MN11BA0004  | 11P CONNECTOR           | [M]     |
| CN1305   | K1MN21B00010  | 21P FFC CONNECTOR       | [M]     |
| CN2801   | K1MY50AA0029  | 50P CONNECTOR           | [M]     |
| CN2803   | K1MN21A00031  | 21P CONNECTOR           | [M]     |

| Ref. No. | Part No.      | Part Name & Description | Remarks |
|----------|---------------|-------------------------|---------|
| CN2805   | K1MN11AA0003  | 11P CONNECTOR           | [M]     |
| CN2806   | K1MN10AA0003  | 10P FFC CONNECTOR       | [M]     |
| CN2807   | K1MY27AA0124  | 27P FFC CONNECTOR       | [M]     |
| CN2808   | K1MN17AA0004  | 17P CONNECTOR           | [M]     |
| CN2810   | K1KA02AA0186  | 2P CONNECTOR            | [M]     |
| CN2811   | K1MN08AA00064 | 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   | K1KB04AA00046 | 4P CONNECTOR            | [M]     |
| CN6604   | K1KB04AA00046 | 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]     |
| 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]     |
| L5200    | G0A150L00003  | CHOKE COIL              | [M]     |
| L5201    | G0B9R5K00003  | LINE FILTER             | [M]     |
| L5500    | J0JKB0000020  | INDUCTOR                | [M]     |
| L5501    | J0JKB0000020  | INDUCTOR                | [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]     |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| 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 TRANSFORMER      | [M] △   |
|          |              |                         |         |
|          |              | COMPONENT COMBINATION   |         |
|          |              |                         |         |
| TN2802   | ENG07825QRF  | TUNER PACK              | [M]     |
| Z971     | R6SD12A1445T | RADA                    | [M]     |
| Z2000    | K9ZZ00001279 | EARTH PLATE             | [M]     |
| Z6601    | B3RAB0000025 | REMOTE CONTROL SENSOR   | [M]     |
| ZA5701   | K3GE1ZZ00001 | FUSE HOLDER             | [M]     |
| ZA5702   | K3GE1ZZ00001 | FUSE HOLDER             | [M]     |
| ZJ5400   | K4CZ01000027 | TERMINAL                | [M]     |
| ZJ5410   | K4CZ01000027 | TERMINAL                | [M]     |
| ZJ5701   | K4CZ01000027 | TERMINAL                | [M]     |
| ZJ5702   | K4CZ01000027 | TERMINAL                | [M]     |
| ZJ5801   | K4CZ01000027 | TERMINAL                | [M]     |
| ZJ5803   | K4CZ01000027 | TERMINAL                | [M]     |
|          |              |                         |         |
|          |              | PHOTO COUPLERS          |         |
|          |              |                         |         |
| PC5701   | B3PBA0000402 | PHOTO COUPLER           | [M] △   |
| PC5702   | B3PBA0000402 | PHOTO COUPLER           | [M] △   |
| PC5720   | B3PBA0000402 | PHOTO COUPLER           | [M] △   |
| PC5799   | B3PBA0000402 | PHOTO COUPLER           | [M] △   |
|          |              |                         |         |
|          |              | OSCILLATOR              |         |
|          |              |                         |         |
| 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] △   |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| TH5860   | D4CC11040013 | THERMISTOR              | [M] △   |
|          |              | JACKS                   |         |
| JK2001   | K2HA4YYB0002 | JK COMPONENT VIDEO-OUT  | [M]     |
| JK2801   | K2HA1YYB0004 | JK DIGITAL OUT          | [M]     |
| JK2802   | K2HA204B0153 | JK AUX                  | [M]     |
| JK5001   | K4AL06B00001 | JK SPEAKER              | [M]     |
| JK6001   | K2HB102J0038 | JK MIC1                 | [M]     |
| JK6002   | K2HB102J0038 | JK MIC2                 | [M]     |
| JK6800   | K2HC103A0031 | JK HEADPHONE            | [M]     |
| JK6810   | K2HC1YYA0002 | JK MUSIC PORT           | [M]     |
| P5701    | K2AA2B000017 | AC INLET                | [M] △   |
|          |              | CHIP JUMPERS            |         |
| K3       | ERJ3GEY0R00V | 0 1/16W                 | [M]     |
| K4       | ERJ3GEY0R00V | 0 1/16W                 | [M]     |
| K5202    | ERJ3GEY0R00V | 0 1/16W                 | [M]     |
| K5252    | ERJ3GEY0R00V | 0 1/16W                 | [M]     |
| K5253    | ERJ3GEY0R00V | 0 1/16W                 | [M]     |
| K5302    | ERJ3GEY0R00V | 0 1/16W                 | [M]     |
| K5502    | ERJ3GEY0R00V | 0 1/16W                 | [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]     |
| 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]     |

| Ref. No. | Part No.     | Part Name & Description       | Remarks |
|----------|--------------|-------------------------------|---------|
| 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 1/16W                       | [M]     |
| W5780    | ERJ6GEY0R00V | 0 1/8W                        | [M]     |
| W5801    | ERJ3GEY0R00V | 0 1/16W                       | [M]     |
| W5803    | ERJ6GEY0R00V | 0 1/8W                        | [M]     |
| W5804    | ERJ3GEY0R00V | 0 1/16W                       | [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]     |
|          |              | WIRES                         |         |
| CN2701   | REXX0680     | 11P WIRE (MAIN-SMPS)          | [M]     |
| J6001    | RWJ1103055SS | 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]     |
|          |              | RESISTORS                     |         |
| 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]     |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| 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]     |
| R2064    | D0GB123JA007 | 12K 1/10W               | [M]     |
| R2067    | D0GB183JA007 | 18K 1/10W               | [M]     |
| R2068    | D0GB472JA007 | 4.7K 1/10W              | [M]     |
| R2069    | D0GBR00JA008 | 0 1/16W                 | [M]     |
| R2070    | D0GB102JA007 | 1K 1/10W                | [M]     |
| R2071    | D0GB332JA007 | 3.3K 1/10W              | [M]     |
| R2072    | D0GB102JA007 | 1K 1/10W                | [M]     |
| R2073    | D0GB104JA007 | 100K 1/10W              | [M]     |
| R2074    | D0GB223JA007 | 22K 1/10W               | [M]     |
| R2075    | D0GB223JA007 | 22K 1/10W               | [M]     |
| R2076    | D0GB222JA007 | 2.2K 1/10W              | [M]     |
| R2077    | D0GB152JA007 | 1.5K 1/10W              | [M]     |
| R2078    | D0GBR00JA008 | 0 1/16W                 | [M]     |
| R2081    | D0GB102JA007 | 1K 1/10W                | [M]     |
| R2086    | D0GB392JA007 | 3.9K 1/10W              | [M]     |
| R2087    | D0GB334JA007 | 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]     |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| R2153    | D0GB152JA007 | 1.5K 1/10W              | [M]     |
| R2154    | D0GB104JA007 | 100K 1/10W              | [M]     |
| R2163    | D0GB103JA007 | 10K 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    | D0GB472JA007 | 4.7K 1/10W              | [M]     |
| R2181    | ERJ3GEYJ821V | 820 1/10W               | [M]     |
| R2182    | D0GBR00JA008 | 0 1/16W                 | [M]     |
| R2183    | D0GB332JA007 | 3.3K 1/10W              | [M]     |
| R2191    | ERJ3GEYJ681V | 680 1/10W               | [M]     |
| R2192    | D0GBR00JA008 | 0 1/16W                 | [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    | D0GB472JA007 | 4.7K 1/10W              | [M]     |
| R2198    | D0GB123JA007 | 12K 1/10W               | [M]     |
| R2199    | D0GB822JA007 | 8.2K 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    | D0GB682JA007 | 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]     |
| 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    | D0GB472JA007 | 4.7K 1/10W              | [M]     |
| R2281    | ERJ3GEYJ821V | 820 1/10W               | [M]     |
| R2282    | D0GBR00JA008 | 0 1/16W                 | [M]     |
| R2283    | D0GB104JA007 | 100K 1/10W              | [M]     |
| R2291    | ERJ3GEYJ681V | 680 1/10W               | [M]     |
| R2292    | D0GBR00JA008 | 0 1/16W                 | [M]     |
| R2297    | D0GB472JA007 | 4.7K 1/10W              | [M]     |
| R2298    | D0GB123JA007 | 12K 1/10W               | [M]     |
| R2299    | D0GB822JA007 | 8.2K 1/10W              | [M]     |
| R2302    | D0GB332JA007 | 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]     |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| 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    | D0GB332JA007 | 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    | D0GB101JA007 | 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]     |
| R2842    | D0GB103JA007 | 10K 1/10W               | [M]     |
| R2843    | D0GB473JA007 | 47K 1/10W               | [M]     |
| R2844    | D0GB101JA007 | 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]     |
| R2853    | D0GB473JA007 | 47K 1/10W               | [M]     |
| R2854    | 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]     |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| 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    | D0GB472JA041 | 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]     |
| R2940    | D0GBR00JA008 | 0 1/16W                 | [M]     |
| R2941    | ERG1SJ100E   | 10 1W                   | [M]     |
| R2942    | D0GBR00JA008 | 0 1/16W                 | [M]     |
| R2944    | D0GB472JA007 | 4.7K 1/10W              | [M]     |
| R2945    | D0GB103JA007 | 10K 1/10W               | [M]     |
| R2946    | D0GB563JA007 | 56K 1/10W               | [M]     |
| R2947    | D0AF270JA039 | 27 1/2W                 | [M]     |
| R2948    | D0GB101JA007 | 100 1/10W               | [M]     |
| R2949    | D0GB473JA007 | 47K 1/10W               | [M]     |
| R2950    | D0AF270JA039 | 27 1/2W                 | [M]     |
| R2952    | D0GB473JA007 | 47K 1/10W               | [M]     |
| R2953    | ERJ3GEYJ824V | 820K 1/10W              | [M]     |
| R2954    | D0GB103JA007 | 10K 1/10W               | [M]     |
| R2955    | D0GB562JA007 | 5.6K 1/10W              | [M]     |
| R2956    | 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]     |
| R3801    | D0GB102JA007 | 1K 1/10W                | [M]     |
| R3802    | D0GB471JA041 | 470 1/10W               | [M]     |
| R3803    | D0GB332JA007 | 3.3K 1/10W              | [M]     |
| R3804    | D0GB471JA041 | 470 1/10W               | [M]     |
| R3805    | D0GB332JA007 | 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    | D0GB272JA007 | 2.7K 1/10W              | [M]     |
| R4003    | D0GB102JA007 | 1K 1/10W                | [M]     |
| R4004    | ERX2SJ1R5E   | 1.5 2W                  | [M]     |
| R4005    | ERJ3GEYJ181V | 180 1/10W               | [M]     |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| 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    | D0GB224JA007 | 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    | ERJ3GEYJ124V | 120K 1/10W              | [M]     |
| R5021    | ERJ3GEYJ181V | 180 1/10W               | [M]     |
| R5022    | ERJ3GEYJ122V | 1.2K 1/10W              | [M]     |
| R5023    | ERJ3GEYJ122V | 1.2K 1/10W              | [M]     |
| R5030    | ERJ3GEYJ562V | 5.6K 1/10W              | [M]     |
| R5031    | ERJ3GEYJ562V | 5.6K 1/10W              | [M]     |
| R5032    | ERJ3GEYJ562V | 5.6K 1/10W              | [M]     |
| R5033    | ERJ3GEYJ562V | 5.6K 1/10W              | [M]     |
| R5110    | ERJ3GEYJ223V | 22K 1/10W               | [M]     |
| R5200    | D0GF100JA014 | 10 1/8W                 | [M]     |
| R5201    | D0GF100JA014 | 10 1/8W                 | [M]     |
| R5204    | ERJ3GEYJ101V | 100 1/10W               | [M]     |
| R5205    | ERJ3GEYJ562V | 5.6K 1/10W              | [M]     |
| R5206    | ERJ3GEYJ562V | 5.6K 1/10W              | [M]     |
| R5207    | ERJ3GEYJ562V | 5.6K 1/10W              | [M]     |
| R5208    | ERJ3GEYJ562V | 5.6K 1/10W              | [M]     |
| R5209    | D0GZ220JA012 | 22 1W                   | [M]     |
| R5210    | D0GF100JA014 | 10 1/8W                 | [M]     |
| R5211    | D0GF100JA014 | 10 1/8W                 | [M]     |
| R5217    | D0GZ220JA012 | 22 1W                   | [M]     |
| R5228    | ERJ3GEYJ124V | 120K 1/10W              | [M]     |
| R5317    | ERJ3GEYJ122V | 1.2K 1/10W              | [M]     |
| R5318    | ERJ3GEYJ124V | 120K 1/10W              | [M]     |
| R5327    | ERJ3GEYJ122V | 1.2K 1/10W              | [M]     |
| R5328    | ERJ3GEYJ683V | 68K 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]     |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| R5611    | ERJ3GEYJ122V | 1.2K 1/10W              | [M]     |
| R5671    | ERJ3GEY0R00V | 0 1/10W                 | [M]     |
| R5701    | ERDS1TJ475B  | 4.7M 1W                 | [M]     |
| 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 | 10K 1/10W               | [M]     |
| R5861    | ERJ3GEYF392V | 3.9K 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]     |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| R6009    | D0GB101JA007 | 100 1/10W               | [M]     |
| R6010    | D0GB152JA007 | 1.5K 1/10W              | [M]     |
| R6011    | D0GB103JA007 | 10K 1/10W               | [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    | D0GB102JA007 | 1K 1/10W                | [M]     |
| R6104    | D0GB122JA007 | 1.2K 1/10W              | [M]     |
| R6106    | D0GB182JA007 | 1.8K 1/10W              | [M]     |
| R6107    | D0GB222JA007 | 2.2K 1/10W              | [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    | D0GB561JA007 | 560 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]     |
| R6641    | D0GB272JA008 | 2.7K 1/16W              | [M]     |
| R6642    | D0GBR00JA008 | 0 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    | D0GBR00JA008 | 0 1/16W                 | [M]     |
| R6915    | D0GB472JA007 | 4.7K 1/10W              | [M]     |
| R6916    | D0GB472JA007 | 4.7K 1/10W              | [M]     |
| R6917    | D0GB272JA007 | 2.7K 1/10W              | [M]     |
| R6918    | D0GB472JA007 | 4.7K 1/10W              | [M]     |
| R6919    | D0GB102JA007 | 1K 1/10W                | [M]     |
| R6920    | D0GB472JA007 | 4.7K 1/10W              | [M]     |
| R6921    | D0GB390JA041 | 39 1/10W                | [M]     |
| R6922    | D0GB390JA041 | 39 1/10W                | [M]     |
| R6923    | D0GB123JA007 | 12K 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]     |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| 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]     |
| 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]     |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| 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]     |
| 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    | D0GBR00JA008 | 0 1/16W                 | [M]     |
| R9031    | D0GBR00JA008 | 0 1/16W                 | [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]     |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| 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]     |
| 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]     |
| 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]     |
| C2063    | ECJ1VC1H101K | 100pF 50V               | [M]     |
| C2064    | F2A1C100A234 | 10uF 16V                | [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]     |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| 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]     |
| C2172    | ECJ1VB1C473K | 0.047uF 16V             | [M]     |
| C2173    | F1H1H103A219 | 0.01uF 50V              | [M]     |
| C2174    | F1H1H103A219 | 0.01uF 50V              | [M]     |
| C2175    | ECJ1VB1H562K | 5600pF 50V              | [M]     |
| C2181    | ECJ1VB1C474K | 0.47uF 16V              | [M]     |
| C2182    | ECJ1VB1C105K | 1uF 16V                 | [M]     |
| C2183    | ECJ1VB1C224K | 0.22uF 16V              | [M]     |
| C2191    | ECEA1EKA4R7B | 4.7uF 25V               | [M]     |
| C2192    | F1H1C104A041 | 0.1uF 16V               | [M]     |
| C2193    | ECJ1VB1C105K | 1uF 16V                 | [M]     |
| C2194    | ECA1HAK0R1XB | 0.1uF 50V               | [M]     |
| C2195    | F1H1C223A001 | 0.022uF 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    | ECJ1VB1H562K | 5600pF 50V              | [M]     |
| C2281    | ECJ1VB1C474K | 0.47uF 16V              | [M]     |
| C2282    | ECJ1VB1C105K | 1uF 16V                 | [M]     |
| C2283    | ECJ1VB1H473K | 0.047uF 50V             | [M]     |
| C2294    | ECA1HAK0R1XB | 0.1uF 50V               | [M]     |
| C2295    | F1H1C223A001 | 0.022uF 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]     |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| 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]     |
| 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]     |
| C2947    | ECEA1CKA101B | 100uF 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]     |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| 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]     |
| 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]     |
| 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]     |

| Ref. No. | Part No.     | Part Name & Description | Remarks                                                                                   |
|----------|--------------|-------------------------|-------------------------------------------------------------------------------------------|
| C5133    | F2A0J101A245 | 100uF 6.3V              | [M]                                                                                       |
| C5150    | ECJ1VB1H102K | 1000pF 50V              | [M]                                                                                       |
| C5151    | ECJ1VB1H102K | 1000pF 50V              | [M]                                                                                       |
| C5152    | ECJ1VB1H102K | 1000pF 50V              | [M]                                                                                       |
| C5200    | ECJ1VB1H104K | 0.1uF 50V               | [M]                                                                                       |
| C5201    | ECJ1VB1H153K | 0.015uF 50V             | [M]                                                                                       |
| C5202    | ECJ1VB1C224K | 0.22uF 16V              | [M]                                                                                       |
| C5203    | ECJ2VC2A221J | 220pF 100V              | [M]                                                                                       |
| C5204    | ECJ1VB1H153K | 0.015uF 50V             | [M]                                                                                       |
| C5205    | ECJ2VC2A221J | 220pF 100V              | [M]                                                                                       |
| C5206    | ECJ1VB1H104K | 0.1uF 50V               | [M]                                                                                       |
| C5207    | F1K2A1040007 | 0.1uF 100V              | [M]                                                                                       |
| C5208    | ECJ1VB1H104K | 0.1uF 50V               | [M]                                                                                       |
| C5209    | ECJ1VB1H104K | 0.1uF 50V               | [M]                                                                                       |
| C5211    | ECJ2VC2A221J | 220pF 100V              | [M]                                                                                       |
| C5212    | ECJ1VC1H221J | 220pF 50V               | [M]                                                                                       |
| C5213    | ECJ1VB1H104K | 0.1uF 50V               | [M]                                                                                       |
| C5214    | ECJ1VB1H104K | 0.1uF 50V               | [M]                                                                                       |
| C5216    | ECJ1VB1H331K | 330pF 50V               | [M]                                                                                       |
| C5217    | ECJ1VB1H104K | 0.1uF 50V               | [M]                                                                                       |
| C5218    | ECJ2VC2A221J | 220pF 100V              | [M]                                                                                       |
| C5219    | F1K2A1040007 | 0.1uF 100V              | [M]                                                                                       |
| C5221    | ECJ1VB1H102K | 1000pF 50V              | [M]                                                                                       |
| C5222    | F1H1A474A001 | 0.47uF 10V              | [M]                                                                                       |
| C5223    | F1H1A474A001 | 0.47uF 10V              | [M]                                                                                       |
| C5224    | ECJ1VB1H331K | 330pF 50V               | [M]                                                                                       |
| C5225    | ECQV1H684JL3 | 0.68uF 50V              | [M]                                                                                       |
| C5226    | ECJ1VB1H104K | 0.1uF 50V               | [M]                                                                                       |
| C5227    | ECJ1VB1H104K | 0.1uF 50V               | [M]                                                                                       |
| C5228    | ECQV1H684JL3 | 0.68uF 50V              | [M]                                                                                       |
| C5231    | ECJ1VB1H102K | 1000pF 50V              | [M]                                                                                       |
| C5232    | F1H1A474A001 | 0.47uF 10V              | [M]                                                                                       |
| C5233    | F1H1A474A001 | 0.47uF 10V              | [M]                                                                                       |
| C5234    | ECJ1VB1H102K | 1000pF 50V              | [M]                                                                                       |
| C5240    | F2A2A2200035 | 22uF 100V               | [M]                                                                                       |
| C5250    | ECJ1VB1H104K | 0.1uF 50V               | [M]                                                                                       |
| C5251    | ECJ1VB1H104K | 0.1uF 50V               | [M]                                                                                       |
| C5445    | ECJ1VB1H104K | 0.1uF 50V               | [M]                                                                                       |
| C5450    | ECJ1VB1H104K | 0.1uF 50V               | [M]                                                                                       |
| C5508    | F2A1V4710074 | 470uF 35V               | [M]                                                                                       |
| C5509    | F2A1V4710074 | 470uF 35V               | [M]                                                                                       |
| C5510    | F2A1V4710074 | 470uF 35V               | [M]                                                                                       |
| C5511    | F2A1V4710074 | 470uF 35V               | [M]                                                                                       |
| C5512    | F2A1V4710074 | 470uF 35V               | [M]                                                                                       |
| C5513    | F2A1V4710074 | 470uF 35V               | [M]                                                                                       |
| C5514    | ECJ1VB1H104K | 0.1uF 50V               | [M]                                                                                       |
| C5515    | ECJ1VB1H104K | 0.1uF 50V               | [M]                                                                                       |
| C5516    | F2A1V4710074 | 470uF 35V               | [M]                                                                                       |
| C5517    | F2A1V4710074 | 470uF 35V               | [M]                                                                                       |
| C5518    | ECJ1VB1H104K | 0.1uF 50V               | [M]                                                                                       |
| C5519    | ECJ1VB1H104K | 0.1uF 50V               | [M]                                                                                       |
| C5520    | ECJ1VB1H104K | 0.1uF 50V               | [M]                                                                                       |
| C5521    | ECJ1VB1H104K | 0.1uF 50V               | [M]                                                                                       |
| C5522    | ECJ1VB1H104K | 0.1uF 50V               | [M]                                                                                       |
| C5523    | ECJ1VB1H104K | 0.1uF 50V               | [M]                                                                                       |
| C5524    | ECJ1VB1H104K | 0.1uF 50V               | [M]                                                                                       |
| C5525    | ECJ1VB1H104K | 0.1uF 50V               | [M]                                                                                       |
| C5540    | F2A2A2200035 | 22uF 100V               | [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]                                                                                       |
| C5602    | ECA1CAK100XB | 10uF 16V                | [M]                                                                                       |
| C5700    | F1BAF1020020 | 1000pF                  | [M]  |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| 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]     |
| 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    | ECJ1VC1H470K | 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]     |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| 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]     |
| C6918    | ECJ1VB1C683K | 0.068uF 16V             | [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]     |
| C6924    | ECJ1VB1C683K | 0.068uF 16V             | [M]     |
| C6925    | ECJ1VB1C224K | 0.22uF 16V              | [M]     |
| C6926    | ECJ1VB1C224K | 0.22uF 16V              | [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]     |
| C6934    | F2A0J221A167 | 220uF 6.3V              | [M]     |
| C6935    | F2A1A470A388 | 47uF 10V                | [M]     |
| C6936    | F2A0J221A167 | 220uF 6.3V              | [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]     |
| 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]     |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| 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]     |
| 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]     |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| 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]     |