

# Service Manual

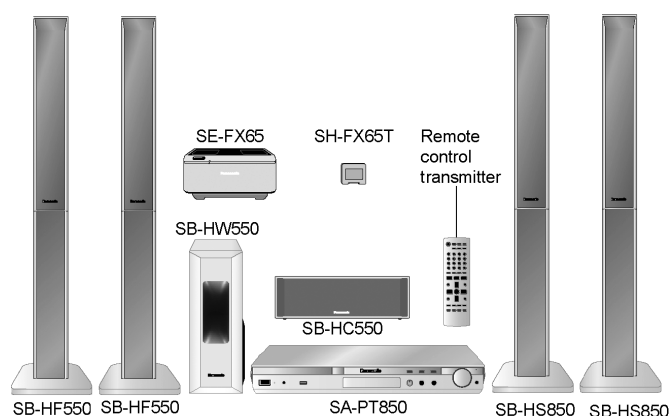
## DVD Home Theater Sound System



SA-PT850GC  
SA-PT850GCS  
SA-PT850GCT  
SA-PT850GS

Colour

(K).....Black Type



## Specifications

### ●GENERAL

Power Supply: AC 110-127 V/220-240 V,  
50/60 Hz

Power Consumption: 125 W

Power Consumption in Standby Mode:

approx. 0.8 W

Dimensions (W×H×D): 430×64.7×364.4 mm

Mass: Main unit approx. 3.5 kg

Operating Temperature Range: +5°C to +35°C (+41°F to +95°F)

Operating Humidity Range: 5% to 90% RH (no condensation)

### ●AMPLIFIER SECTION

RMS Output Power: Dolby Digital Mode

●Total RMS Dolby Digital mode power:

1000 W

At 1 kHz and total harmonic of 10%

●Front Ch: 125 W / Channel (3 Ω)

●Center Ch: 250 W / Channel (6 Ω)

●Surround Ch: 125 W / Channel (3 Ω)

At 100 Hz and total harmonic of 10%

●Subwoofer Ch: 250 W / Channel (6 Ω)

DIN Output Power: Dolby Digital Mode

●Total DIN Dolby Digital mode power:

580 W

At 1 kHz and total harmonic of 1%

●Front Ch: 70 W / Channel (3 Ω)

●Center Ch: 150 W / Channel (6 Ω)

●Surround Ch: 70 W / Channel (3 Ω)

At 100 Hz and total harmonic of 1%

●Subwoofer Ch: 150 W / Channel (6 Ω)

### ●FM TUNER, TERMINALS SECTION

Preset Memory: FM 30 stations

Frequency Modulation (FM)

Frequency range: 87.50-108.00 MHz  
(50-kHz step)

Sensitivity: 1.8 μV (IHF)

S/N 26 dB: 1.4 μV

Antenna terminals: 75 Ω (unbalanced)

Digital Audio Input:

Optical digital input: Optical terminal

# Panasonic®

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|                                   |                                                                     |
|-----------------------------------|---------------------------------------------------------------------|
| <b>Sampling frequency:</b>        | 32 kHz, 44.1 kHz, 48 kHz                                            |
| <b>Phone Jack:</b>                |                                                                     |
| <b>Terminal:</b>                  | Stereo, 3.5 mm jack                                                 |
| <b>Mic Jack:</b>                  |                                                                     |
| <b>Sensitivity:</b>               | 0.7 mV, 1.2 k $\Omega$                                              |
| <b>Terminal:</b>                  | Mono, 6.3 mm jack (2 system)                                        |
| <b>Music Port (Front):</b>        |                                                                     |
| <b>Sensitivity:</b>               | 100 mV, 1.4 k $\Omega$                                              |
| <b>Terminal:</b>                  | Stereo, 3.5 mm jack                                                 |
| <b>USB Port:</b>                  |                                                                     |
| <b>USB standard:</b>              | USB 2.0 full speed                                                  |
| <b>Media file format support:</b> | MP3 (*.mp3)<br>WMA (*.wma)<br>JPEG (*.Jpg, *.JPEG)<br>MPEG4 (*.asf) |
| <b>USB device file system:</b>    | (FAT12) (FAT16) (FAT32)                                             |
| <b>USB Port power:</b>            | Max. 500 mA                                                         |

**●DISC SECTION****Discs played (8 cm or 12 cm):**

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

\*1 Conforming to IEC62107

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

\*3 Windows Media Audio Ver.9.0 L3

●Not compatible with Multiple Bit Rate (MBR)

\*4 Exif Ver 2.1 JPEG Baseline files

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

\*5 MPEG4 data recorded with the Panasonic SD multi cameras or DVD video recorders.

●Conforming to SD VIDEO specifications (ASF standard)/MPEG4 (Simple Profile) video system/G.726 audio system.

\*6 Plays all versions of DivX® video (including DivX®6) with standard playback of DivX® media files. Certified to the DivX Home Theater Profile.

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

**Pick Up:****Wavelength:**

- CD: 785 nm
- DVD: 662 nm

**Laser power:**

- CD: CLASS 1M

●DVD: CLASS 1

**Audio Output (Disc):**

**Number of channels:** 5.1 ch (FL, FR, C, SL, SR, SW)

**●VIDEO SECTION**

**Video System:** PAL 625/50, PAL 525/60, NTSC

**Composite Video Output:**

- Output level: 1 Vp-p (75  $\Omega$ )
- Terminal: Pin jack (1 system)

**Component Video Output: (NTSC: 480p/480i, PAL: 576p/576i)**

- Y output level: 1 Vp-p (75  $\Omega$ )
- P<sub>B</sub> output level: 0.7 Vp-p (75  $\Omega$ )
- P<sub>R</sub> output level: 0.7 Vp-p (75  $\Omega$ )
- Terminal: Pin jack (Y: green, P<sub>B</sub>: blue, P<sub>R</sub>: red) (1 system)

**HDMI AV Output:**

- Terminal: Type A connector (19 pin)

This unit supports "HDAVI Control 2" function.

**Note:**

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

**Solder:**

This model uses lead free solder (PbF).

**Mechanism:**

This model uses DL2S (Single tray) mechanism.

| System       | Main unit   | Speaker system | Digital system | Subwoofer   |
|--------------|-------------|----------------|----------------|-------------|
| SC-PT850WGC  | SA-PT850GC  | SB-PT850E      | SH-PT850GC     | SB-HW550E*1 |
| SC-PT850WGCS | SA-PT850GCS |                | SH-PT850GCS    |             |
| SC-PT850WGCT | SA-PT850GCT |                | SH-PT850GCT    |             |
| SC-PT850WGS  | SA-PT850GS  |                | SH-PT850GS     |             |

| Speaker system    | SB-PT850E    |
|-------------------|--------------|
| Front speakers    | SB-HF550E *2 |
| Center speaker    | SB-HC550E *3 |
| Surround speakers | SB-HS850E *4 |

| Digital system | Digital transmitter | Digital receiver |
|----------------|---------------------|------------------|
| SH-PT850GC     | SH-FX65TGC*5        | SE-FX65GC *6     |
| SH-PT850GCS    | SH-FX65TGC          | SE-FX65GCS *7    |
| SH-PT850GCT    | SH-FX65TGC          | SE-FX65GCT *8    |
| SH-PT850GS     | SH-FX65TGC          | SE-FX65GS *9     |

Refer to their respective original service manuals for \*1, \*2, \*3, \*4, \*5, \*6, \*7, \*8, \*9.

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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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Official DivX® Certified product.

Plays all versions of DivX® video (including DivX®6) with standard playback of DivX® media files.

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#### ■ Built-in decoders

You can play discs with these symbols.



## ⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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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.

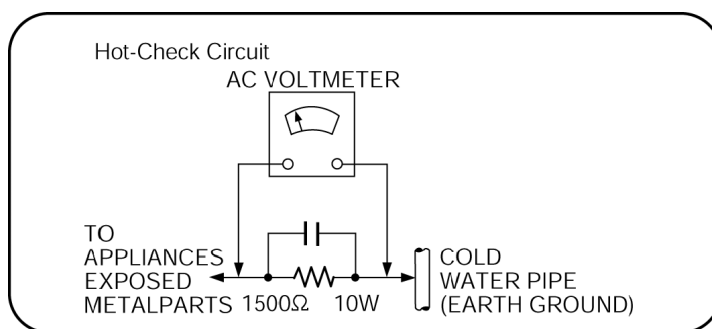


Figure 1

## 1.2. Before Repair and Adjustment

Disconnect AC power to discharge unit AC Capacitors as such C5700, C5701, C5703, C5704, C5705 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 110~127 V/220V~240 V, 50/60 Hz in NO SIGNAL mode volume minimal should be ~ 600 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  $\Delta$  in the Schematic Diagrams & Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire or other hazards. Do not modify the original design without permission of manufacturer.

**Table 1**

| Reference No. | Part No.     | Part Name & Description | Remarks          |
|---------------|--------------|-------------------------|------------------|
| 340           | RAE2024Z-S   | TRAVERSE UNIT           | [M] $\Delta$     |
| PC5701        | B3PBA0000402 | PHOTO COUPLER           | [M] $\Delta$     |
| PC5702        | B3PBA0000402 | PHOTO COUPLER           | [M] $\Delta$     |
| PC5720        | B3PBA0000402 | PHOTO COUPLER           | [M] $\Delta$     |
| PC5799        | B3PBA0000402 | PHOTO COUPLER           | [M] $\Delta$     |
| D5701         | B0FBA000041  | DIODE                   | [M] $\Delta$     |
| DZ5701        | ERZV10V511CS | ZENER                   | [M] $\Delta$     |
| TH5701        | D4CAC8R00002 | THERMISTOR              | [M] $\Delta$     |
| TH5860        | D4CC11040013 | THERMISTOR              | [M] $\Delta$     |
| L2101         | J0JBC0000015 | CHIP INDUCTOR           | [M] $\Delta$     |
| L2201         | J0JBC0000015 | CHIP INDUCTOR           | [M] $\Delta$     |
| L2802         | J0JBC0000015 | CHIP INDUCTOR           | [M] $\Delta$     |
| L2803         | J0JBC0000015 | CHIP INDUCTOR           | [M] $\Delta$     |
| L2804         | J0JBC0000015 | CHIP INDUCTOR           | [M] $\Delta$     |
| L2805         | J0JBC0000015 | CHIP INDUCTOR           | [M] $\Delta$     |
| L5001         | G0B9R5K00003 | LINE CHOKE COIL         | [M] $\Delta$     |
| L5002         | G0B9R5K00003 | LINE CHOKE COIL         | [M] $\Delta$     |
| L5201         | G0B9R5K00003 | LINE CHOKE COIL         | [M] $\Delta$     |
| L5301         | G0B9R5K00003 | LINE CHOKE COIL         | [M] $\Delta$     |
| L5701         | ELF15N035AN  | LINE FILTER             | [M] $\Delta$     |
| L5702         | ELF22V035B   | COIL                    | [M] $\Delta$     |
| L6101         | J0JBC0000019 | CHIP INDUCTOR           | [M] $\Delta$     |
| L6201         | J0JBC0000019 | CHIP INDUCTOR           | [M] $\Delta$     |
| L6801         | J0JBC0000019 | CHIP INDUCTOR           | [M] $\Delta$     |
| L6904         | J0JBC0000019 | CHIP INDUCTOR           | [M] $\Delta$     |
| L6905         | J0JBC0000019 | CHIP INDUCTOR           | [M] $\Delta$     |
| L6906         | J0JBC0000019 | CHIP INDUCTOR           | [M] $\Delta$     |
| L6907         | J0JBC0000019 | CHIP INDUCTOR           | [M] $\Delta$     |
| L6908         | J0JBC0000019 | CHIP INDUCTOR           | [M] $\Delta$     |
| L6909         | J0JBC0000019 | CHIP INDUCTOR           | [M] $\Delta$     |
| T2900         | G4D1A0000117 | SWITCHING TRANSFORMER   | [M] $\Delta$     |
| T5701         | ETS42BN1A6AD | MAIN TRANSFORMER        | [M] $\Delta$     |
| T5751         | ETS19AB236AG | BACK-UP TRANSFORMER     | [M] $\Delta$     |
| F1            | K5D802BNA005 | FUSE                    | [M] $\Delta$     |
| FP2900        | K5G401A00008 | FUSE PROTECTOR          | [M] $\Delta$     |
| P5701         | K2AA2B000015 | JACK AC INLET           | [M] $\Delta$     |
| A2            | K2CP2YY00001 | AC CORD                 | [M] $\Delta$ GCT |
| A2            | K2CQ2CA00002 | AC CORD                 | [M] $\Delta$ GCS |
| A2            | K2CQ2CA00007 | AC CORD                 | [M] $\Delta$ GC  |
| A2            | K2CT3CA00004 | AC CORD                 | [M] $\Delta$ GS  |
| A9            | J0KG00000037 | AC CLAMP FILTER         | [M] $\Delta$     |
| C5700         | F1BAF1020020 | 1000P                   | [M] $\Delta$     |
| C5701         | ECQU2A334MLA | 0.33                    | [M] $\Delta$     |
| C5703         | ECQU2A104MLC | 0.1                     | [M] $\Delta$     |
| C5704         | F1BAF1020020 | 1000P                   | [M] $\Delta$     |
| C5705         | F1BAF1020020 | 1000P                   | [M] $\Delta$     |

## 1.5. Caution for AC Cord

### (For Saudi Arabia and Kuwait)

("GS" area code model only)

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.

A 5-ampere fuse is fitted in this plug.

Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark  or the BSI mark  on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.

If you lose the fuse cover the plug must not be used until a replacement cover is obtained.

A replacement fuse cover can be purchased from your local dealer.

#### CAUTION!

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY. THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted please observe the wiring code as stated below.

If in any doubt please consult a qualified electrician.

#### IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:

Blue: Neutral, Brown: Live.

As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured Black or Blue.

The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured Brown or Red.

**WARNING: DO NOT CONNECT EITHER WIRE TO THE EARTH TERMINAL WHICH IS MARKED WITH THE LETTER E, BY THE EARTH SYMBOL  OR COLOURED GREEN OR GREEN/YELLOW.**

**THIS PLUG IS NOT WATERPROOF—KEEP DRY.**

#### Before use

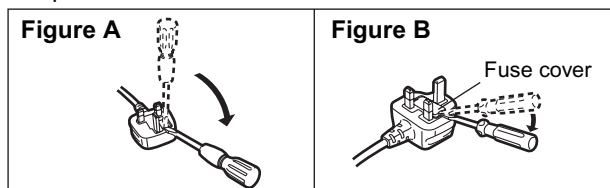
Remove the connector cover.

#### How to replace the fuse

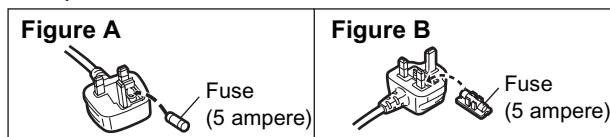
The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.

Illustrations may differ from actual AC mains plug.

1. Open the fuse cover with a screwdriver.



2. Replace the fuse and close or attach the fuse cover.



## 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 :**

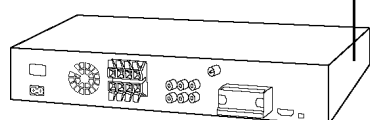
This product utilizes a laser diode with the unit turned on, invisible laser radiation is emitted from the pickup lens.

Wavelength : 662nm/785nm

Maximum output radiation power from pickup : 100μW/VDE

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

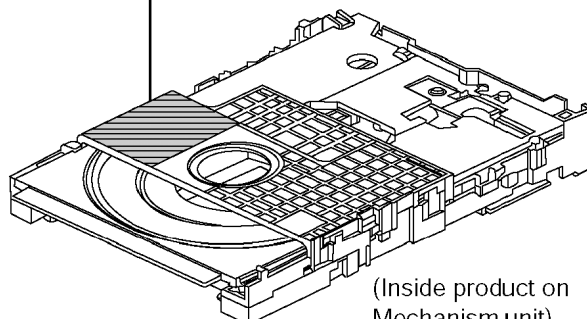
1. Do not disassemble the pickup unit, since radiation from exposed laser diode is dangerous.
2. Do not adjust the variable resistor on the pickup unit. It was already adjusted.
3. Do not look at the focus lens using optical instruments.
4. Recommend not to look at pickup lens for a long time.



(Side of product)

LASER CAUTION LABEL

|                  |                                                                                                                                           |                    |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| <b>CAUTION</b>   | - LASER RADIATION WHEN OPEN.<br>DO NOT STARE INTO BEAM.                                                                                   | FDA 21 CFR / Class |
| <b>CAUTION</b>   | - CLASS 1M VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN.<br>DO NOT VIEW DIRECTLY WITH OPTICAL INSTRUMENTS. IEC60825-1 -A2/ Class 1M    |                    |
| <b>WARNING</b>   | - KLASS 1M SYNLIIG OCH OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD.<br>BETRÄKTA EJ STRÅLEN DIREKT GENOM OPTISKT INSTRUMENT.            |                    |
| <b>FORSIGTIG</b> | - SYNLIIG OG USYNLIIG LASERSTRÅLNING KLASS 1M, NÄR LÅGET ER<br>ÅBENT. UNDGÅ AT SE LIGE PÅ MED OPTISKE INSTRUMENTER.                       |                    |
| <b>VARO!</b>     | - AVATTAESSA OLET ALTIIN LUKKAN 1M NÄKYVÄÄ JA NÄKYMÄTÖNÄ<br>LASERATYVÄÄ. ÄLÄ KATSO OPTISELLA LAITTEELLA SUORAAN SATEESEEN.                |                    |
| <b>VORSICHT</b>  | - SICHTBARE UND UNSICHTBARE LASERSTRÄHLUNG KLASSE 1M, WENN ABDECKUNG<br>GEÖFFNET. NICHT DIREKT MIT OPTISCHEN INSTRUMENTEN BETRACHTEN!     |                    |
| <b>ATTENTION</b> | - RAYONNEMENT LASER VISIBLE ET INVISIBLE, CLASSE 1M, EN CAS D'OUVERTURE.<br>NE PAS REGARDER DIRECTEMENT À L'AVEC D'INSTRUMENTS D'OPTIQUE. |                    |
| 注意               | - ここを開くと可視及び不可視レーザー光が出ます。<br>ビームを見たり、覗いたりしないでください。                                                                                        |                    |
| 注意               | - 打开时有可见及不可见激光辐射。避免光辐射。<br>GB7241.1-2001/IEC 86                                                                                           | HQJXS0075          |



(Inside product on Mechanism unit)

## 4 About Lead Free Solder (PbF)

### 4.1. Service caution based on legal restrictions

#### 4.1.1. General description about Lead Free Solder (PbF)

The lead free solder has been used in the mounting process of all electrical components on the printed circuit boards used for this equipment in considering the globally environmental conservation.

The normal solder is the alloy of tin (Sn) and lead (Pb). On the other hand, the lead free solder is the alloy mainly consists of tin (Sn), silver (Ag) and Copper (Cu), and the melting point of the lead free solder is higher approx.30 degrees C (86°F) more than that of the normal solder.

#### Definition of PCB Lead Free Solder being used

|                                                                                                                                 |            |
|---------------------------------------------------------------------------------------------------------------------------------|------------|
| The letter of "PbF" is printed either foil side or components side on the PCB using the lead free solder.<br>(See right figure) | <b>PbF</b> |
|---------------------------------------------------------------------------------------------------------------------------------|------------|

#### 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%

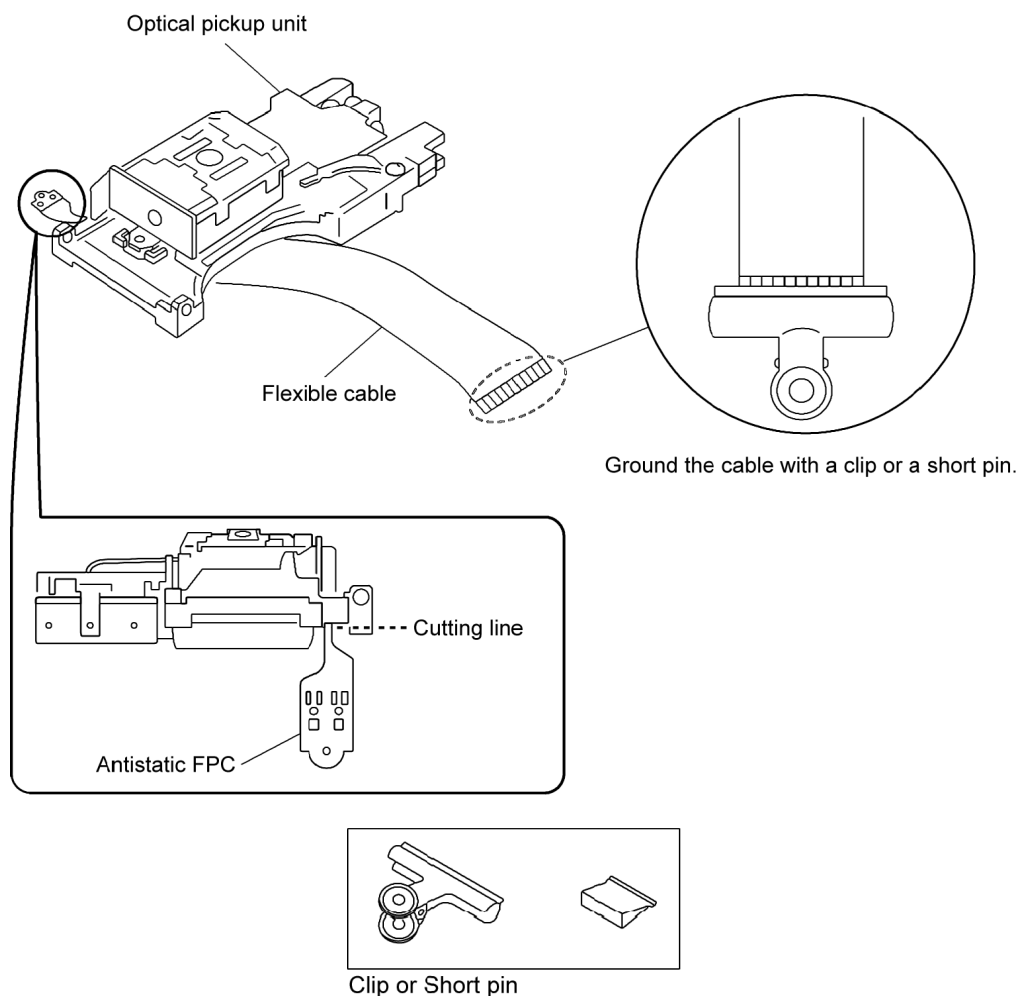
## 5 Handling Precautions for Traverse Unit

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.



### 5.2. Grounding for electrostatic breakdown prevention

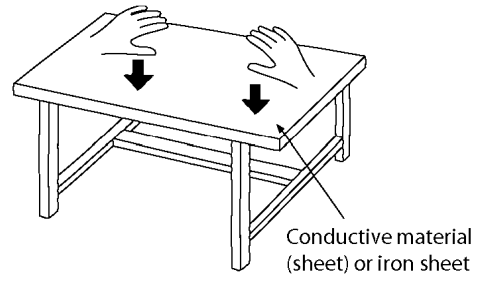
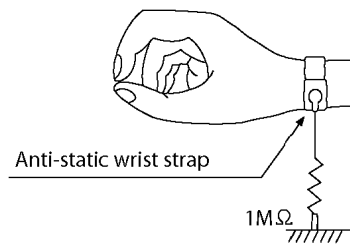
Some devices such as the DVD player use the optical pickup (laser diode) and the optical pickup will be damaged by static electricity in the working environment. Proceed servicing works under the working environment where grounding works is completed.

#### 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.

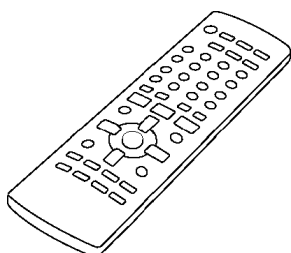
#### 5.2.2. Human body grounding

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

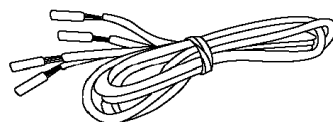


## 6 Accessories

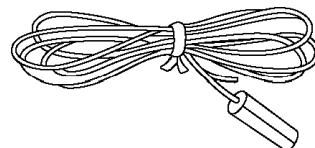
- Note: Refer to “Replacement Parts List” (Section 26) for the part number.



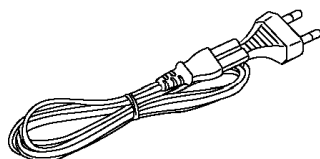
Remote control



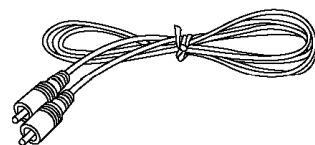
Speaker cord



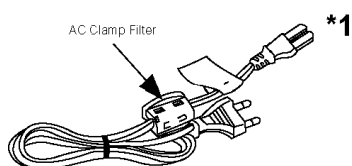
Antenna wire



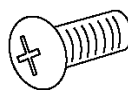
AC cord  
(GC/GCS/GCT)



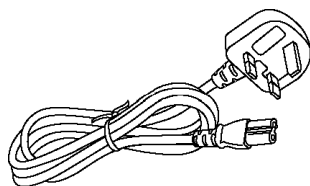
Video cable



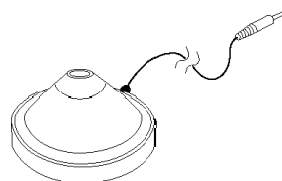
AC clamp filter  
(GC/GCS/GCT)



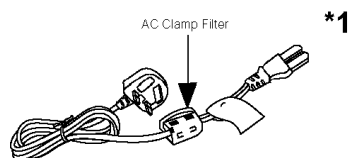
Screw



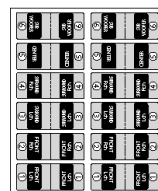
AC cord  
(GS only)



Calibration mic



AC clamp filter  
(GS only)



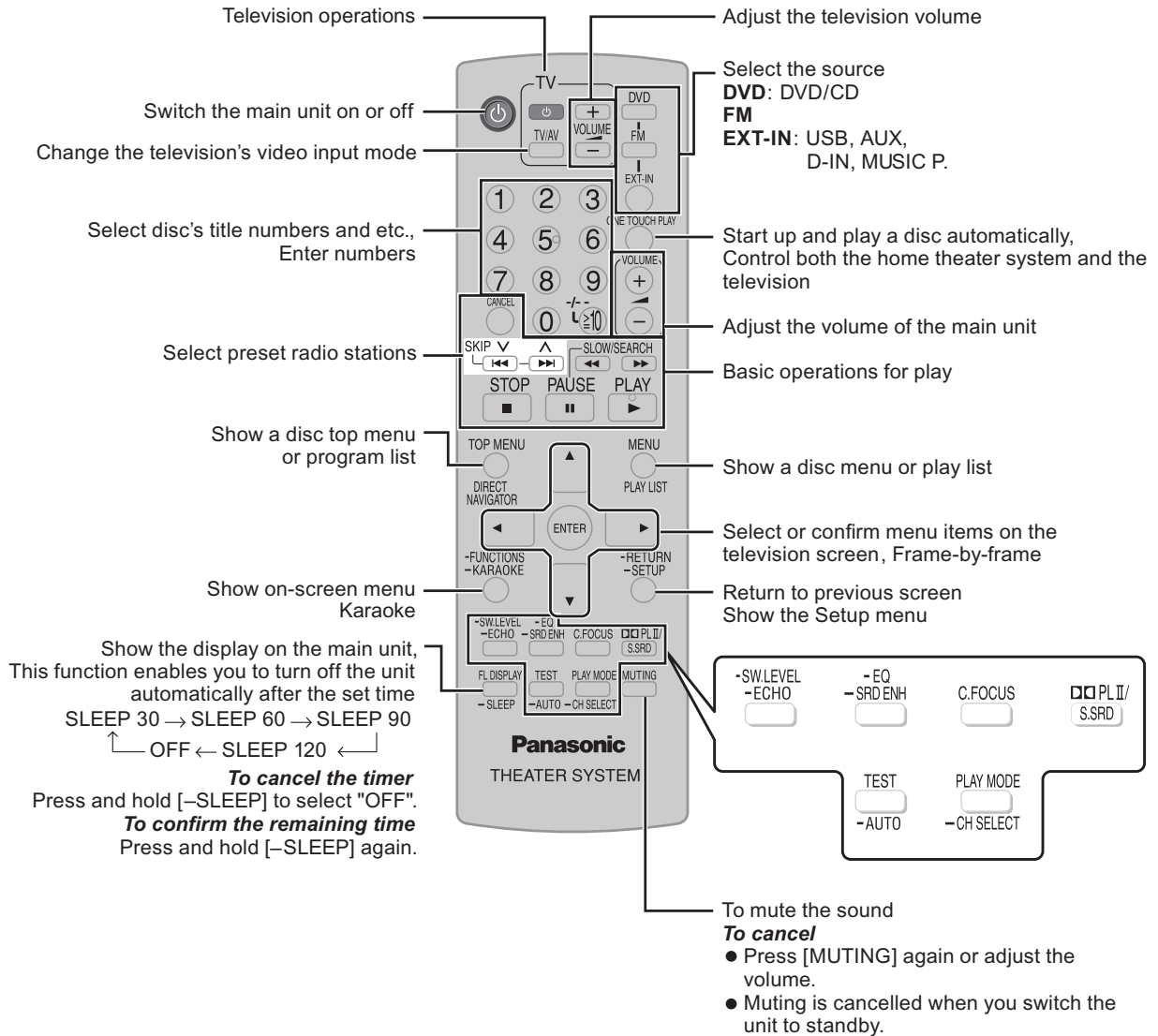
Speaker label

- Special Note:

\*1 AC clamp filter is to be attached to the AC cord used for the wireless receiver unit. (SE-FX65)

## 7 Operation Procedures

### 7.1. Remote Control Key Buttons Operations



## 7.2. Main Unit Key Buttons Operations

### 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.

### MUSIC PORT jack

Connect an external device  
Auto speaker setup

### ▲ OPEN/CLOSE

Open or close the disc tray

### ■ /-TUNE MODE /-FM MODE

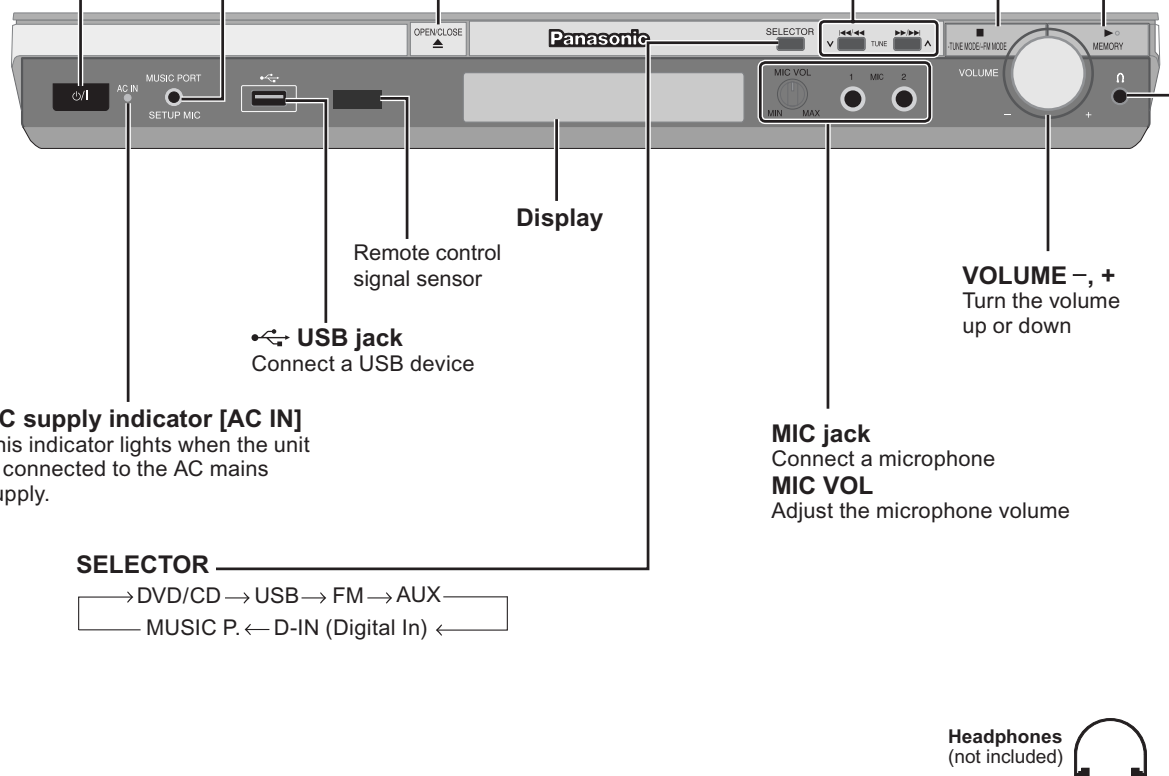
Stop playback, Select the tuning mode,  
Adjust the FM reception condition

### ▶ /MEMORY

Disc playback,  
Memorise the receiving  
radio stations

### ⏮/⏮, ⏭/⏭, ⏭/⏭, ⏭/⏭ / TUNE ^

Skipping or slow-search play,  
Select the radio stations



### AC supply indicator [AC IN]

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

### USB jack

Connect a USB device

Display

Remote control  
signal sensor

**VOLUME - , +**  
Turn the volume  
up or down

### MIC jack

Connect a microphone

### MIC VOL

Adjust the microphone volume

### SELECTOR

→ DVD/CD → USB → FM → AUX →  
← MUSIC P. ← D-IN (Digital In) ←

Headphones  
(not included)

### Headphone plug type:

- Ø3.5 mm stereo mini plug
- Reduce the volume before connecting.
- Audio is automatically switched to 2-channel stereo.
- To prevent hearing damage, avoid listening for prolonged periods of time.

## 7.3. Wireless Surround (SH-PT850)

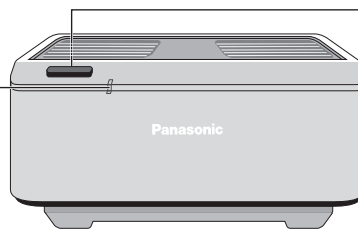
### 7.3.1. Wireless System Key Buttons Operations

The illustration shows the wireless system for SH-FX65.

#### AUTO OPERATION ON/OFF indicator

The indicator lights red when the wireless system is turned on and lights green when the wireless link is activated.

When the wireless link is inactive for a long time, it turns red.



Front panel of this unit

#### Unit on/off button [I, I⏻]

Use this button to turn the wireless system on and off.

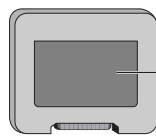
I: The unit is on.

I⏻: The unit is off.

### 7.3.2. Digital Transmitter Connection (SH-FX65T)

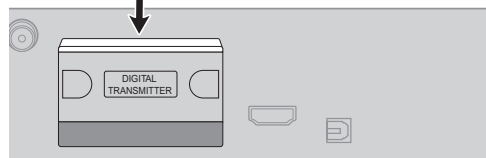
Insert the digital transmitter into the slot.

- Do not insert or remove while the main unit is on.



#### Digital transmitter

Insert fully until you hear a click.



Rear panel of this main unit

## 7.4. Using the VIERA Link "HDAVI Control™"

### What is VIERA Link "HDAVI Control"?

VIERA Link "HDAVI Control" is a convenient function that offers linked operation of this unit, and a Panasonic television (VIERA) under "HDAVI Control". You can use this function by connecting the equipment with the HDMI cable. See the operating instructions for connected equipment for operational details.

This unit supports "HDAVI Control 2" function.

The TV with "HDAVI Control 2" function enables the following operation:

VIERA Link Control only with TV's remote control (for "HDAVI Control 2") (→ see right)

"HDAVI Control 2" is the newest standard (current as of February, 2007) for Panasonic's HDAVI Control compatible equipment.

This standard is compatible with Panasonic's conventional HDAVI equipment.

#### Preparation

- Confirm that the HDMI connection (O/I page 13) has been made.
- Set "VIERA Link" to "On" (O/I page 28, "HDMI" tab).
- To complete and activate the connection correctly, turn on all VIERA Link "HDAVI Control" compatible equipment and set the television to the corresponding HDMI input mode for the home theater system.

- Whenever the connection or settings are changed, reconfirm the points above.

### One Touch Play

You can turn on the home theater system and television, and start playing the disc in the play position with a single press of a button.

ONE TOUCH PLAY



Theater speakers will be automatically activated (→ see below).

- This function also works if you press [▶, PLAY] on the home theater remote control during home theater standby mode.

#### Note

Playback may not be immediately displayed on the television. If you miss the beginning portion of playback, press [◀◀] or [◀] to go back to where playback started.

### Auto input switching

When you switch the television input to:

- TV tuner mode, the home theater system will automatically switch to "AUX\*" or "D-IN\*".
- HDMI input mode for the home theater system, the home theater system will automatically switch to "DVD/CD" if it is in "AUX\*" or "D-IN\*" mode.

When you start disc play, the television will automatically switch to the HDMI input mode for the home theater system.

- ※ To toggle the mode that this function works with, press [–SETUP] while the main unit is in "AUX" or "D-IN" mode.
  - The default setting is "AUX".

### Speaker control

You can select whether audio is output from the home theater system or the television speakers by using the television menu settings. For details, refer to the operating instructions of your television.

#### Home Cinema

Theater speakers are active.

- When the home theater system is in standby mode, changing the television speakers to theater speakers in the television menu will automatically turn the home theater system on and select "AUX\*" or "D-IN\*" as the source.
- The television speakers are automatically muted.
- You can control the volume setting using the volume or mute button on the TV's remote control. (The volume level is displayed on the main unit's FL display.)
- To cancel muting, you can also use the home theater remote control. (O/I page 17)
- If you turn off the home theater system, television speakers will be automatically activated.

#### TV

Television speakers are active.

- The volume of the home theater system is set to "0".
  - This function works only when "DVD/CD", "USB", "AUX\*" or "D-IN\*" is selected as the source on the home theater system.
- Audio output is 2-channel audio.

- When switching between the theater and television speakers, the TV screen may be blank for several seconds.
- ※ To toggle which input source the main unit will automatically switch to, press [–SETUP] while the main unit is in "AUX" or "D-IN" mode.
  - The default setting is "AUX".

### Power off link

When the television is turned off, the home theater system goes into standby mode automatically.

- This function works only when "DVD/CD", "USB", "AUX\*" or "D-IN\*" is selected as the source on the home theater system.
- When the television is turned on, the home theater system does not turn on automatically. (Power on link is not available.)
- ※ For "AUX" or "D-IN" mode, power off link can be set to work with one or the other. To toggle the mode that this function works with, press [–SETUP] while the main unit is in "AUX" or "D-IN" mode.
  - The default setting is "AUX".

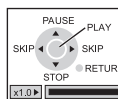
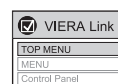
#### Note

Only the home theater system turns off when you press [⏻] for shutting it down. Other connected equipment compatible with VIERA Link "HDAVI Control" stay on.

### VIERA Link Control only with TV's remote control (for "HDAVI Control 2")

You can control the disc menus of the home theater system with the TV's remote control when using the "DVD/CD" or "USB" source. When operating the TV's remote control, refer to the below illustration for operation buttons.

- Select the theater operation menu by using the television menu settings.  
(For details, refer to the operating instructions of your television.)
  - The home theater system will automatically switch to "DVD/CD" if it is in "AUX\*" or "D-IN\*" mode.
  - ※ To toggle the mode that this function works with, press [–SETUP] while the main unit is in "AUX" or "D-IN" mode.
    - The default setting is "AUX".
- Select the desired item.
  - **"TOP MENU"** : Shows a disc top menu (O/I page 19,21) or program list (O/I page 22).
  - **"MENU"** : Shows a disc menu (O/I page 19,22) or play list (O/I page 22).
  - **"Control Panel"** : The basic operations for discs are available.



#### Note

- Depending on the menu, some button operations cannot be performed from the TV's remote control.
- "Control Panel" can be selected directly by using a button on the TV's remote control (e.g. [OPTION]).

## 7.5. Music Port Connection and Operation

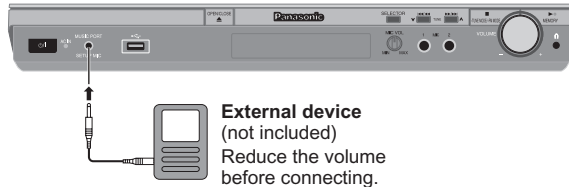
The Music Port allows you to connect and enjoy music from an external device (example: MP3 player) through your home theater system.

### Preparation

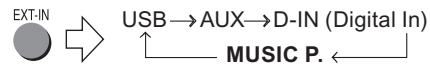
To avoid distorted sound, make sure that any equalizer function of your external device is turned off.

#### 1 Reduce the volume and connect the external device (not included).

Plug type: Ø3.5 mm stereo mini plug



#### 2 To select "MUSIC P.".



#### 3 Adjust the external device volume to a normal listening level, and then adjust the volume of the main unit.



- You can enjoy surround sound when you turn on Super Surround (MOVIE, MUSIC) (O/I page 33).

## 7.6. USB Connection and Operation

WMA MP3 JPEG MPEG4

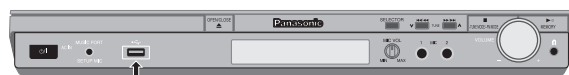
The USB connectivity enables you to connect and play tracks or files from USB mass storage class devices. Typically, USB memory devices. (Bulk only transfer)

### 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)

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

### 2 To select "USB" as the source, press several times.



USB → AUX → D-IN (Digital In)

MUSIC P. ←

### 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        | .jpg .jpeg     |
| Music          | MP3<br>WMA | .mp3<br>.wma   |
| Video          | MPEG4 *    | .asf           |

\* For Panasonic D-Snap/DIGA

Example:

| Playback Menu |          | USB |
|---------------|----------|-----|
| All           | Total 98 |     |
| Audio         | Total 58 |     |
| Picture       | Total 28 |     |
| Video         | Total 12 |     |

▲▼ to select and press ENTER

### 3 Adjust the volume of the main unit.



### 4 Begin playback by selecting the track from the USB mass storage device.

To return to the previous screen

Press [RETURN]

For other operating functions, they are similar as those described in "DISC OPERATIONS" (O/I page 18 to 31).

### Note

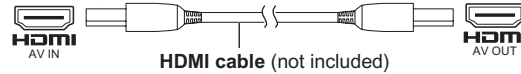
- CBI (Control/Bulk/Interrupt) is not supported.
- Digital Cameras that use PTP protocol or which require additional program installation when connected to a PC are not supported.
- A device using NTFS file system is not supported. [Only FAT 12/16/32 (File Allocation Table 12/16/32) file system is supported].
- Depending on the sector size, some files may not work.
- It will not operate with Janus enabled MTP (Media Transfer Protocol) devices.
- Maximum folder: 400 folders
- Maximum file: 4000 files
- Maximum file name: 44 characters
- Maximum folder name: 44 characters
- Only one memory card will be selected when connecting a multi-port USB card reader. Typically the first memory card inserted.

## 7.7. Audio & Video Connections

### 7.7.1. Television with an HDMI Terminal

#### ■ Television with an HDMI terminal

HDMI-compatible  
television  
(not included)



Use the HDMI connection to enjoy higher quality audio and video with a single cable.

- Set "Video Mode" to "On" and "Audio Output" to "On" (O/I page 28, "HDMI" tab).
- Set "Video Output Mode" (O/I page 24, Picture Menu).

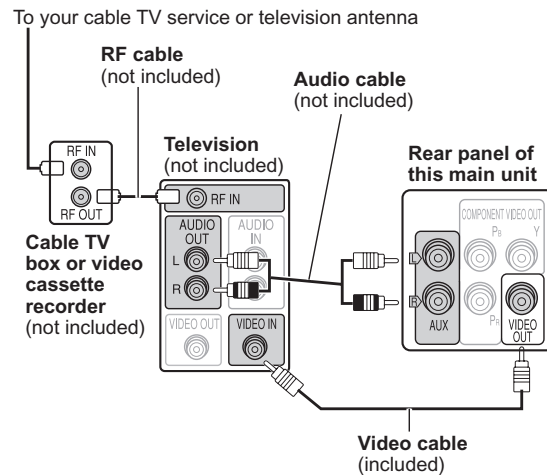
#### VIERA Link ("HDAVI Control")

If your Panasonic television is a VIERA Link compatible television, you can operate your television synchronising with home theater operations or vice versa (O/I page 39).

#### Note

- Make the extra audio connection (O/I page 36) when you use "HDAVI Control" function.
- It is recommended that you use Panasonic's HDMI cable.  
[Recommended part number: RP-CDHG15 (1.5 m), RP-CDHG30 (3.0 m), RP-CDHG50 (5.0 m), etc.]
- Non-HDMI-compliant cables cannot be utilised.

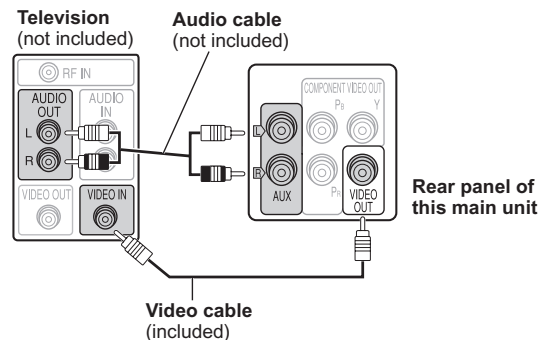
### 7.7.2. Optional Connection for Set Top Box, Cable TV, or Video Cassette Recorder



### 7.7.3. Optional Audio Connection for Video Cassette Recorder or Television

Press [EXT-IN] (O/I page 17) to select "AUX" as the source to operate the audio input.

This audio connection will enable you to play audio from your television through your home theater system.



## 7.8. Disc Information

### 7.8.1. 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, ※10</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 [Item 7.8.2 File Extension Type Support (WMA/MP3/JPEG/MPEG4/DivX)]

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

**WMA MP3 JPEG** This unit also plays HighMAT discs.

<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.

<sup>※10</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 Home Theater Profile.

#### 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

DVD-RW version 1.0, 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 (O/I page 28, "NTSC Disc Output" in "Video" tab).

## 7.8.2. File Extension Type Support (WMA/MP3/JPEG/MPEG4/DivX)

### 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 (→ see 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).

**MP3** (Extension: ".MP3" or ".mp3")

- Compatible compression rate: between 32 kbps and 320 kbps.
- This unit does not support ID3 tags.
- Compatible sampling rates:
  - DVD-RAM, DVD-R/RW: 11.02, 12, 22.05, 24, 44.1 and 48 kHz
  - CD-R/RW: 8, 11.02, 12, 16, 22.05, 24, 32, 44.1 and 48 kHz

**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.

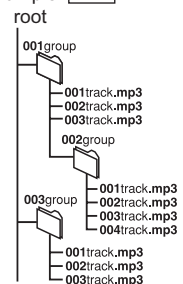
**MPEG4** (Extension: ".ASF" or ".asf")

- 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 rec orders 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® video (including DivX®6) [DivX video system/MP3, Dolby Digital or MPEG audio system] with standard playback of DivX® 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.

Example: **MP3**



## 8 New Features

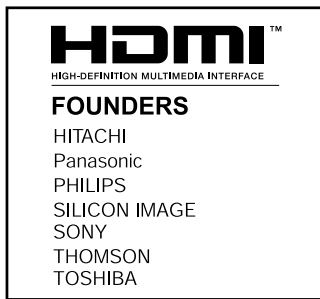
### 8.1. About HDMI

#### 8.1.1. What is HDMI?

##### AN INTERFACE DESIGNED FOR THE DIGITAL REVOLUTION

From broadcast equipment to TVs, the AV world is going digital. As this digital revolution unfolds, there's a growing need for an interface that digitally transmits signals between connected equipment. The solution: HDMI, or High-Definition Multimedia Interface.

HDMI transmits digital video and audio signals at speeds up to 5 Gps without compressing them. It supports high-definition images up to 1080p and high-quality, multi-channel audio formats such as DVD-Audio. And it provides all this performance with the ease of connecting a single cable. Also equipped with a copyright protection function, HDMI is a simple, high-performance interface that supports the growing digital age.



## HDMI™

### HIGH-DEFINITION MULTIMEDIA INTERFACE

#### 1. ADVANCED DIGITAL PICTURES

Digital transmission of video signals helps maximize the quality of HDTV images.

#### 2. ADVANCED DIGITAL SOUND

Digital transmission of multi-channel audio signals, such as DVD-Audio signals, provides an exceptionally pure sound.

#### 3. EASY TO USE

Both video and audio signals are transmitted over a single cable, so connection is easier and there's less clutter.

|            | Video Signal Type | Audio Signal | Copyright Protection | Signal Compression  |
|------------|-------------------|--------------|----------------------|---------------------|
| HDMI       | Digital           | ●            | ●                    | Without compression |
| IEEE 1394  | Digital           | ●            | ●                    | Compression         |
| DVI + HDCP | Digital           | —            | ●                    | Without compression |
| DVI        | Digital           | —            | —                    | Without compression |

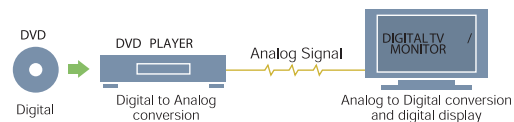
#### 8.1.2. Advanced Digital Pictures

Compare HDMI connection with conventional analog connection, using the DVD player as an example. With an analog connection, the digital signal from the DVD player is converted to analog and sent to the TV, then converted back to digital and displayed. Inevitably, there is some loss of picture quality due to conversion errors and to noise and signal degradation that occurs as the signal travels through the cable.

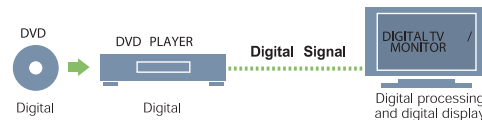
With HDMI, on the other hand, the DVD signal is transmitted to the TV in its original digital form. There is no conversion from digital to analog and back, and thus no quality loss from conversion errors. Image quality is thus higher. Plus, because HDMI supports 480p, 1080i, and up to 1080p high-definition images with copy protection, it produces images with quality that is ideal for large-screen viewing.

#### Video Signal Transmission – HDMI vs. Analog

##### Conventional Analog Connection



##### HDMI Connection



#### Monitors that Maximize HDMI's Advantages

In plasma display panels, liquid crystal displays, and LCD projectors, the image processing and display systems are digital. When a set-top box or DVD player is connected to one of these monitors via HDMI, the signal processing is digital all the way from transmission to display, so the images are beautiful.

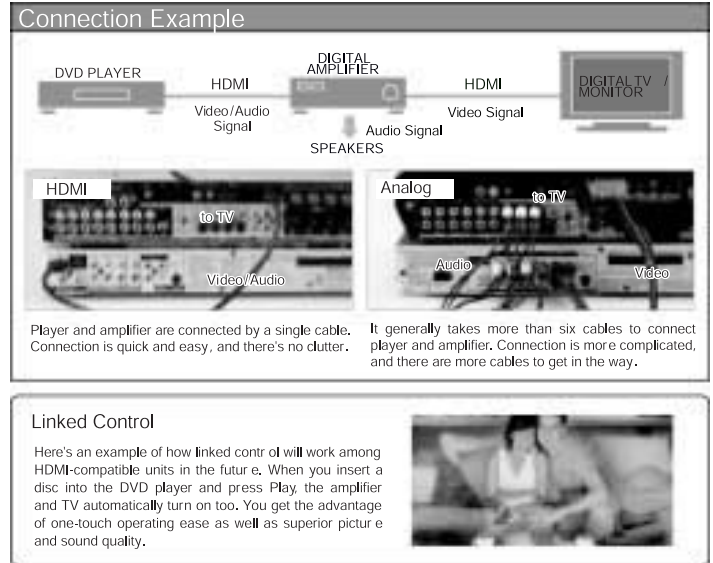


### 8.1.3. Advanced Digital Sound

The super-high-quality linear PCM sound provided by DVD-Audio is not given its full potential when the digital signal is transmitted through an analog cable.

With a conventional analog connection, the digital signal carrying DVD-Audio's detailed audio data is converted to analog before being sent to the amplifier and output. Sound quality is diminished due to noise and signal degradation.

HDMI, on the other hand, transmits the signal in its original digital form, so the sound is extremely pure. HDMI also supports up to eight channels of multi-channel sound. Plus, it connects the player and amplifier with a single cable, rather than the multiple cables needed in conventional connection.



### 8.1.4. Easy to Use

HDMI transmits both video and audio signals over a single cable, so connection is quick and easy and the area around the TV remains uncluttered. Also, when each of the connected units is HDMI-compatible, control signals can be exchanged among them. This means that, in the future, it will be possible to operate several units from a single remote control, or to operate several units via linked control.



### 8.1.5. HDMI Compatible Products

#### Monitors

**VIERA**

#### High-Definition Plasma TV High-Definition LCD TV

TH-50PX25U/P, TH-42PX25U/P  
TH-37PX25U/P



TH-50PX25U/P



TC-32LX20

#### LCD Projector

TH-AE700



#### DVD Players

#### DVD-Audio/Video Player

DVD-S97



#### Receivers

#### Home Theater Receiver

SA-XR70



## 8.2. Wireless Features

### 8.2.1. Function Overview

Year 2007 PT models support wireless which includes FX65/FX66, wireless subwoofer and FX85 as described below:-

#### 8.2.1.1. FX65/FX66

- The FX65/FX66 supports one-way wireless transmission only, that is, it will only transmit wireless audio signal to the rear surround speakers. The FX65/FX66 receiver module includes a D-AMP and SMPS. The transmitter interfaces with the main unit using serial communications to communicate information such as mute command request, link detection and ID setting request. Maximum range attainable is 15 meters.

#### 8.2.1.2. Wireless Subwoofer (For PT1050 Only)

- The wireless subwoofer receiver module is similar in operation with FX65/FX66 in such a way that it only supports one-way wireless transmission. It also includes a D-AMP and SMPS. The difference in the wireless subwoofer receiver module is the way its hardware interprets the audio it receives from the transmitter since it is the same audio received by the FX65/FX66 receiver. Maximum range attainable is 30 meters.

#### 8.2.1.3. FX85

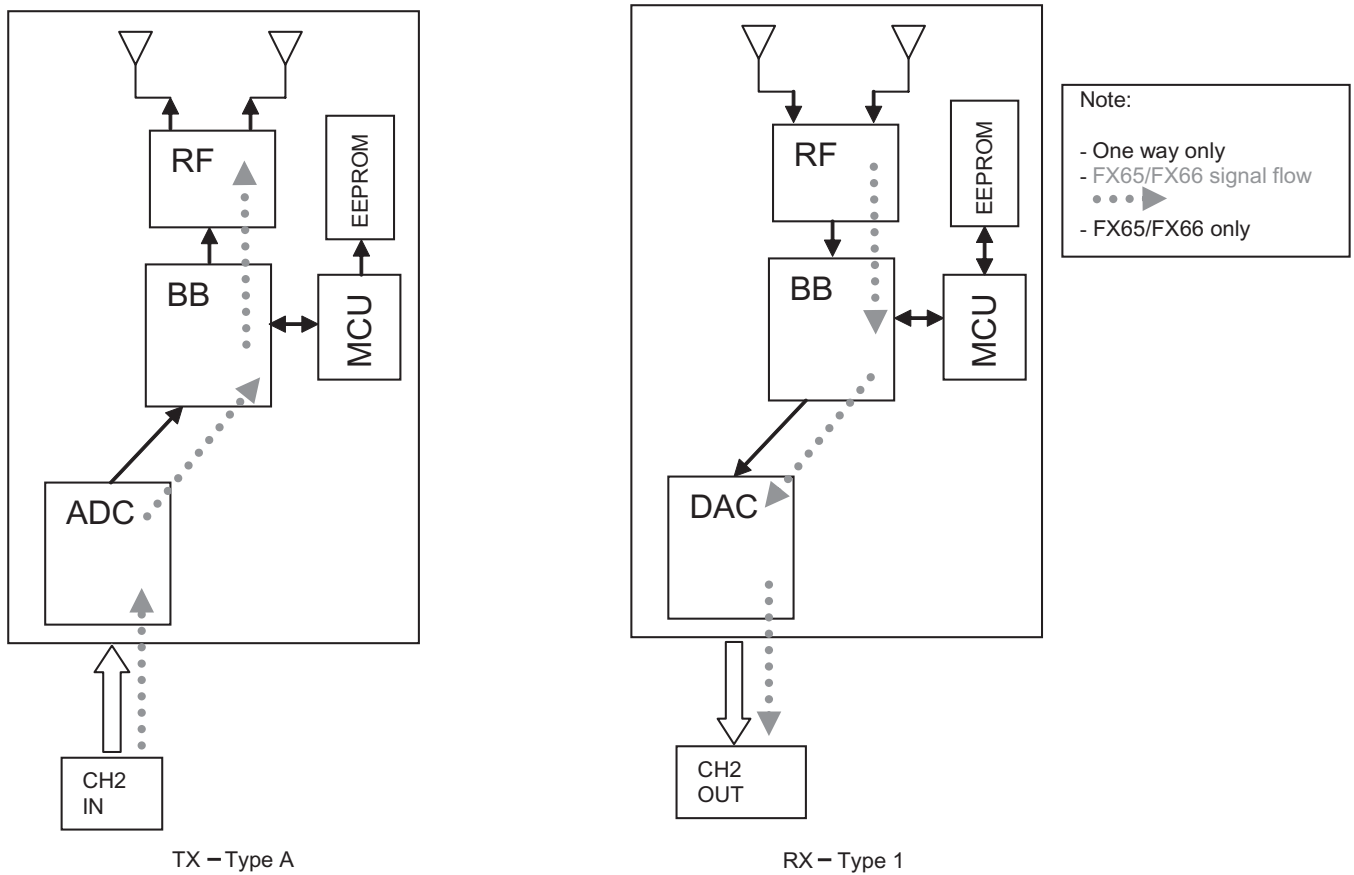
- The FX85 supports the multi-room function wherein it operates as a second room wireless receiver (up to a maximum of two). Maximum range attainable is 30 meters. It can send commands to the main unit to control functions such as Play, Stop, Forward Skip/Channel Up, Reverse Skip/Channel Down. It also has a built-in DAP pocket for stand-alone operation by inserting a DAP device (e.g. iPod) in the DAP pocket to play the device only via the device's own control buttons, FX85 cannot control the device using its own buttons. The transmitter interfaces with the main unit using serial communications to communicate information such as mute command request, link detection, ID setting request and button commands from the FX85 buttons (Play, Stop, Forward Skip/Channel Up, Reverse Skip/Channel Down). The FX85 receiver module has the following functions/terminals/buttons:

| FX85 BUTTONS              | FX85 FUNCTIONS   |
|---------------------------|------------------|
| FX 85 Power Button        | D-Amp            |
| Selector Button           | SMPS             |
| Play Button               | D-Port Connector |
| Stop Button               | ID Set Switch    |
| Forward Skip/Channel Up   | MPort            |
| Reverse Skip/Channel Down |                  |
| Volume Control            |                  |

## 8.2.2. Block Diagram

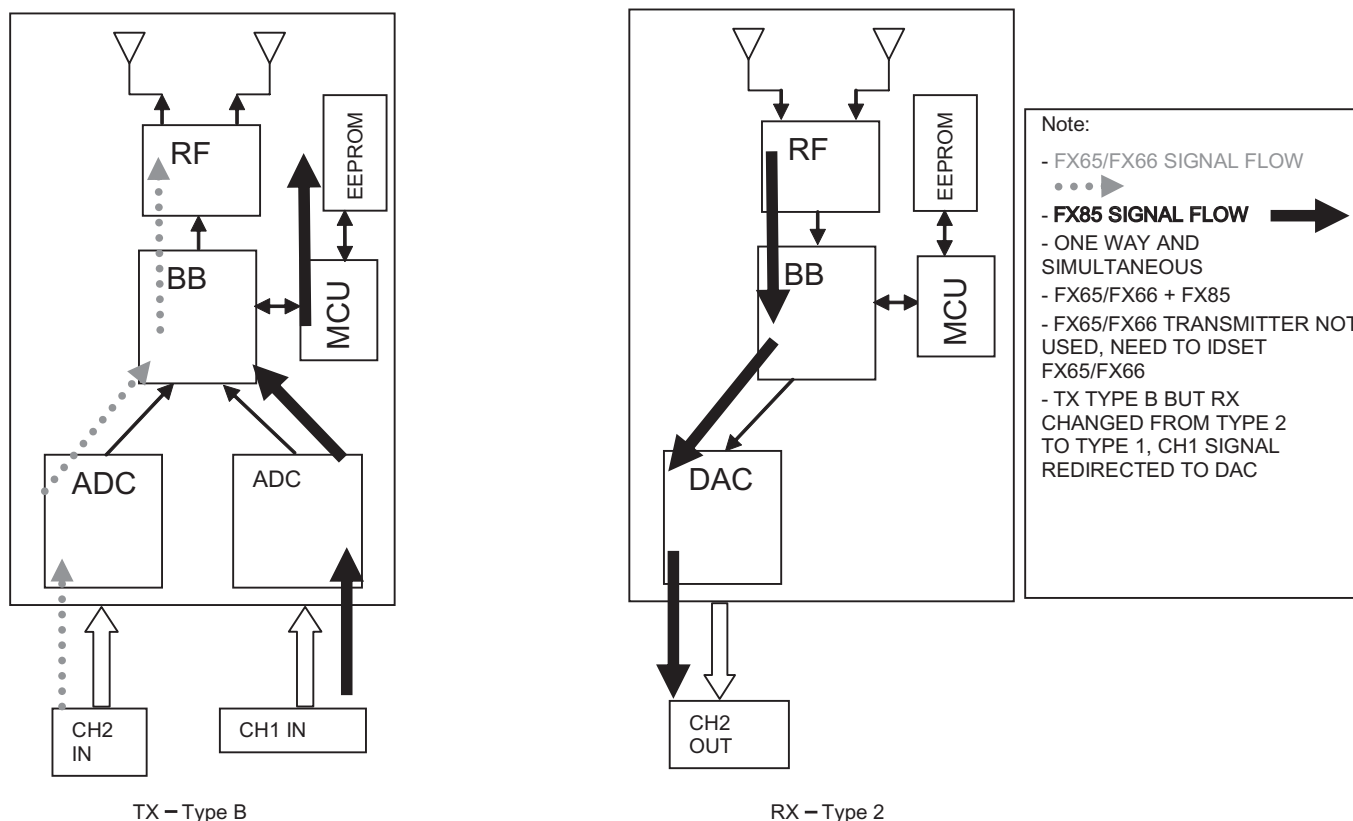
- There are two types of transmitter cards, Type A and Type B, and two types of receiver modules, Type 1 and Type 2 for the wireless configuration. The block diagrams below describe the differences of each of the types.

### 8.2.2.1. TX-TYPE A / RX-TYPE 1



- Type A transmitter uses one ADC (Analog to Digital Converter) and transmits audio through Channel 2. Type 1 receiver (Rx) uses one DAC and output audio through Channel 2. The firmware (that is downloaded to EEPROM IC) multiplexes which channel to listen to (in this case Channel 2 since type A is transmitting from channel 2 In) by setting the baseband accordingly.

### 8.2.2.2. TX-TYPE B / RX-TYPE 2



- Type B transmitter uses two ADC (Analog to Digital Converter) to send audio streams from Channel 1 and Channel 2 for the FX65/FX66 surround sound and FX85 second room audio, respectively. Type 2 receiver outputs audio through Channel 2. The software multiplexes which channel to listen to by setting the baseband accordingly. For example, if the receiver is configured as an FX85 receiver (Type 2), the baseband is configured to accept Channel 1 audio transmission and redirect it to Channel 2 Out. If the receiver is set as an FX65/FX66 or wireless subwoofer, the baseband is configured to accept channel 2 audio transmission and redirect it to the same Channel 2 Out.

### 8.2.3. Activation

- FX65/FX66 can be activated in the main unit by using either transmitter Type A or Type B and enabling surround sound by selecting Surround Music, DPL or Super Surround (Music/Movie).
- FX85 Wireless feature is enabled by default when the user uses transmitter type B.

### 8.2.4. LED Indication

- For FX65/FX66, there will be two-color LED that will be used to indicate Power On and Link. If link, the two-color LED will be green, else, it will be red.

For FX85, the front panel will have LED indicators for Standby, Wireless Link, Charge, Option and Music Port. During Power On, Standby LED will be OFF. Only during power OFF will this LED be ON (Red). Wireless Link indicator will be ON (Green) when link is established between TX and RX and OFF when link is lost. Pressing the selector button will toggle from any of the selector modes Wireless, Option and Music port. Only the currently selected mode will be ON (Green), the other two will be OFF. Charge LED will be ON (Red) once iPod charging is initiated.

### 8.2.5. Key Operation (FX85)

#### • Selector Button

This button will be used to select Wireless, Option or M.Port and enabling the corresponding LED indicators for each mode. During Power On, by default, selector mode is set to Wireless when power is initially supplied to the system. But during Power On/OFF button, it will remember the last selector mode setting.

#### • Play Button

This button will send command to the main unit to play CD/DVD as well as the iPod. This function is therefore meaningful only if the second room selector is in Main Source (with the first room user in CD/DVD or iPod) and iPod.

- **Stop Button**

This button will send command to the main unit to stop CD/DVD as well as the iPod. This function is therefore meaningful only if the second room selector is in Main Source (if the first room user is in CD/DVD mode or iPod) and iPod.

- **Forward Skip/Channel Up**

This button depends on the second room source currently selected. It will be interpreted as a Forward Skip by the main unit if the second room source is in Main Source (with the first room user is in CD/DVD or iPod mode) and iPod. It will be interpreted as a Channel Up (preset channels only) if the second room source is in FM, AM, or XM.

- **Reverse Skip/Channel Down**

This button depends on the second room source currently selected. It will be interpreted as a Reverse Skip by the main unit if the second room source is in Main Source (if the first room user is in CD/DVD or mode) and iPod. It will be interpreted as a Channel Down (preset channels only) if the second room source is in FM, AM, or XM.

- **Volume Control**

Volume control will be local to the FX85 module only. Default volume (TBD) will be set every time power is first supplied to the system or during exit from stand by mode.

- **ID-setting Operation**

ID setting operation can be invoked by pressing fast-forward key in the main unit and three [3] key in the remocon. Once ID-setting is triggered, the receiver must press its ID-setting button within 60 seconds. During this period, the transmitter will be in open connect mechanism whereby any receiver can pair with the transmitter. After this period elapsed, the transmitter will revert back to using close connect code whereby only those receivers which have the same ID as the transmitter will be able to link. The user also has the option to exit the ID setting operation by pressing the same keys.

- **iPod Detection and Charging**

iPod is detected once inserted on the FX85 and battery charging automatically starts.

– The iPod Charging in Standby Mode:

- Upon iPod insertion detection and FX85 is in Power OFF (stand by), FX85 set will enter iPod charging Standby Mode.
- The FX85's CHARGE LED will light up whenever the iPod is charging.
- FX85 will charge the battery up to five hours. After this period, FX85 will not try to recharge the iPod.
- After battery full condition, even if the iPod is operated such as play, FX85 will not retry to recharge the iPod (timer will start immediately once iPod is inserted).
- Re - charging of the battery in iPod Charging Standby Mode can be done only by removing and reinserting the iPod to the dock.

– The iPod charging in Power On Mode:

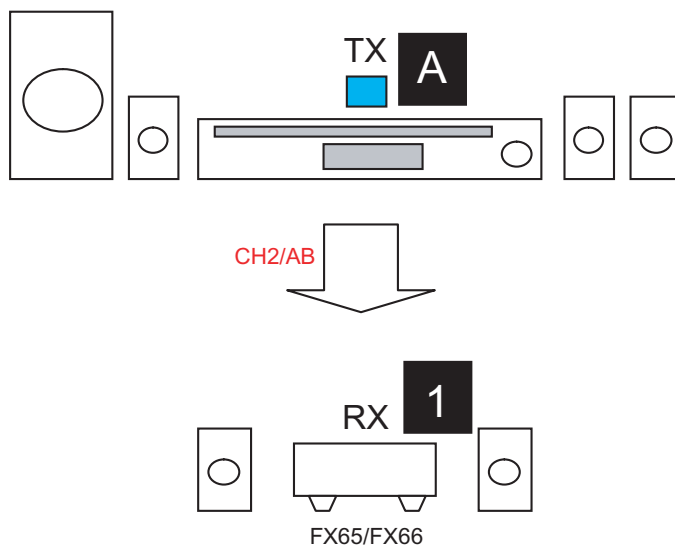
- The iPod automatically charges its battery whenever it is connected during Power ON.
- The FX85's CHARGE LED will light up whenever the iPod is charging.
- FX85 will continue charging the iPod as long as it is inserted (no charging time limit of five hours).

## 8.2.6. FX Configurations

There are four types of configurations for the FX series. This is explained by the following illustrations below:

### Case 1: FX65/FX66

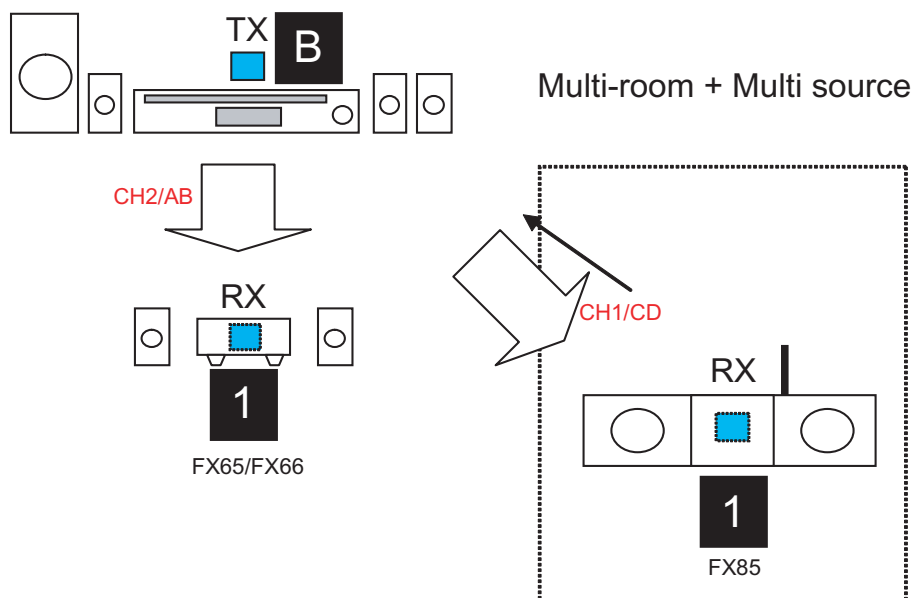
- This is the basic configuration of FX65/FX66 whereby it is only receiving wireless surround audio signal from the main set. This uses a Type A transmitter which is only able to send audio in one direction. Audio is sent using streams AB through Ch 2.



### Case 2 A: FX65/FX66 + FX85

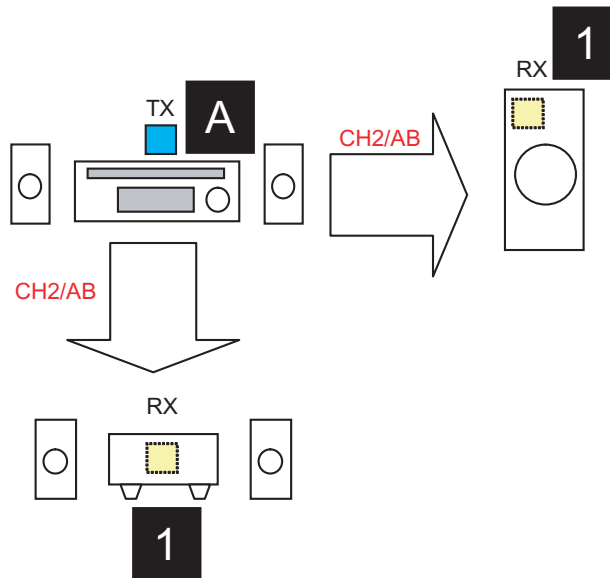
- In this configuration, a second receiver, an FX85, in another room is listening to another audio source from the main set. The FX85 also is able to send command to the main set such as Play, Stop, Skip, and Preset Tuner Channel Up/Down. This configuration uses Type B transmitter which is an upgrade of the Type A and can be used on Type 1 (FX65/FX66). This transmitter is able to send audio signal for second room via Ch 1 and first room via Ch 2.

In this configuration, streams AB is used to transmit the audio from main unit to the first room Type 1 receiver (FX65/FX66) via Ch 2. While the second room audio is transmitted through stream CD via Ch 1.



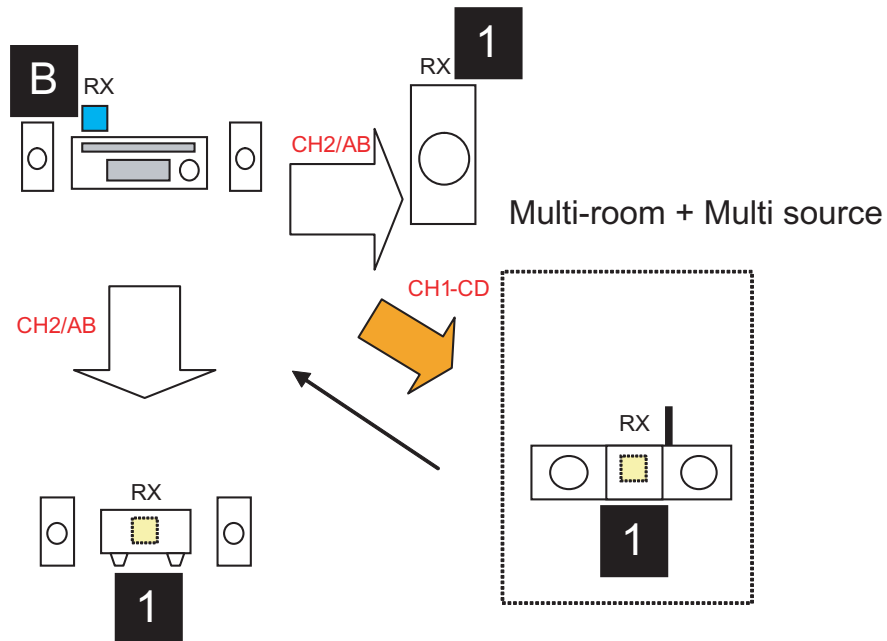
### Case 3 A: Wireless Subwoofer

- This configuration, Type A transmitter send signals to subwoofer and Type 1 receiver (FX65/FX66) via channel 2, which is the same audio signals sent to FX65/FX66 as well. The subwoofer only decodes the low frequency signal.

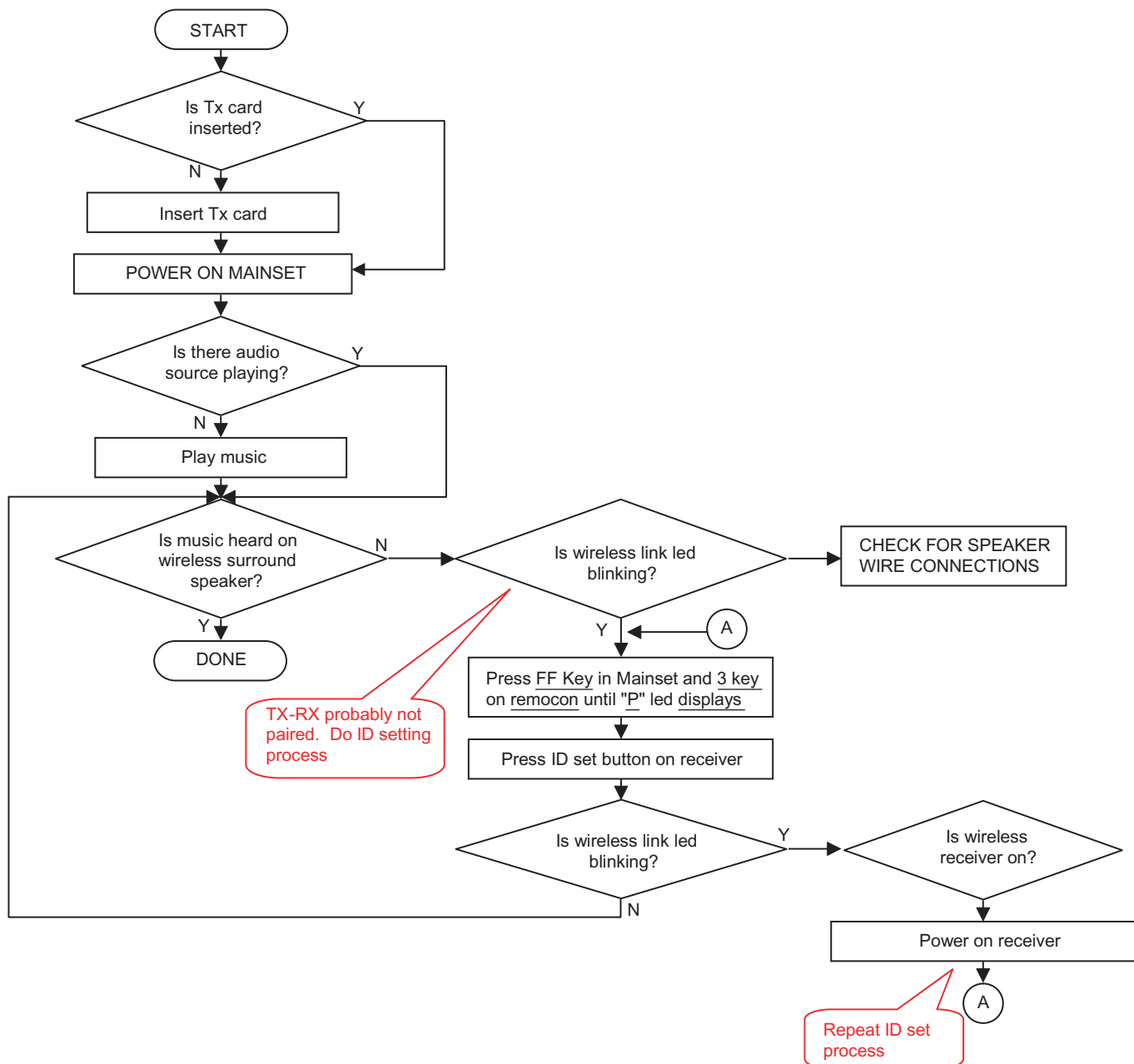


### Case 3 B: FX65/FX66 + FX85 + Wireless Subwoofer (for PTX7, PT1050)

- In this configuration, all audio source for the Type 1 subwoofer and Type 1 first room receiver (FX65/FX66) through streams AB via Ch 2 and Type 2 second room receiver (FX85) comes from transmitter B through streams CD via Ch 1. For this configuration, the user must perform ID setting for FX85 if it is sold as an accessory, but for bundled type, it already is paired with the transmitter.



## 8.2.7. User Operation Flow



## 8.2.8. Baseband Settings Update from EEPROM IC

- The software will read from an external EEPROM IC to get the selected baseband IC settings. Not all baseband register settings (a total of 512 bytes) will be read from the EEPROM IC, though. Aside from getting the baseband settings from the EEPROM IC, it is also used to enable FCC testing, select the application type and entering into doctor mode (this can be enabled also by sending a command via the main unit).

## 8.2.9. Doctor Mode

- For normal operation but automatic frequency selection is disabled, it can enter into Doctor Mode. This feature is hidden from normal user and will be used by the service center to fix to a particular RF Channel. With doctor mode, the user can disable frequency automatic allocation and sniffer and be able to select a fix RF Channel (Channels 1, 2 or 3) by a combination or remote control keys. Refer to Section 9.4 for Wireless Doctor Mode.

## 9 Self-Diagnosis and Special Mode Setting

### 9.1. Service Mode Summary Table

The service modes can be activated by pressing various button combination on the main unit and remote control unit.

Below is the summary for the various modes for checking:

| Player buttons | Remote control unit buttons | Application                                                                                                                                                                            | Note                                                                       |
|----------------|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|
| [STOP]         | [0]                         | Error code check.                                                                                                                                                                      | (Refer to the section "9.2.1. 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 "9.2.2. Service Mode Table 2" for more information.) |
|                | [1]                         | ADSC internal RAM data check.                                                                                                                                                          |                                                                            |
|                | [3]                         | CD laser drive current check.                                                                                                                                                          |                                                                            |
|                | [6]                         | Region display and mode.                                                                                                                                                               | (Refer to the section "9.2.3. Service Mode Table 3" for more information.) |
|                | [7]                         | Micro-processor firmware version check.                                                                                                                                                |                                                                            |
|                | [ ≥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. |                                                                            |
|                | [8]                         | DVD Module P.C.B. firmware version check.                                                                                                                                              | (Refer to the section "9.2.4. Service Mode Table 4" for more information.) |
|                | [MENU]                      | Communication error display.                                                                                                                                                           |                                                                            |
|                | [TOP MENU]                  | ECC error check.                                                                                                                                                                       |                                                                            |
|                | [EQ]                        | CPPM/CRM keys check.                                                                                                                                                                   |                                                                            |
|                | [ENTER]                     | DVD Module P.C.B. reset.                                                                                                                                                               |                                                                            |
|                | [ ▲ ]                       | Timer 1 check.                                                                                                                                                                         | (Refer to the section "9.2.5. Service Mode Table 5" for more information.) |
|                | [ ▼ ]                       | Timer 1 reset.                                                                                                                                                                         |                                                                            |
|                | [ ► ]                       | Timer 2 check.                                                                                                                                                                         |                                                                            |
|                | [ ◀ ]                       | Timer 2 reset.                                                                                                                                                                         |                                                                            |

**Note:**

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

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

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

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

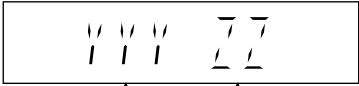
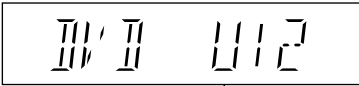
### 9.2. Service Mode Table

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

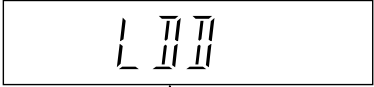
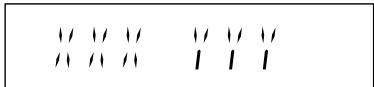
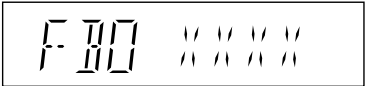
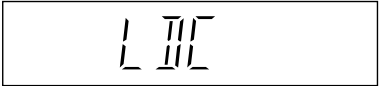
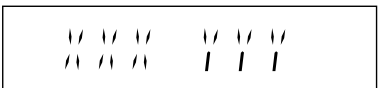
**Special Note:**

- 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 7.1 for the section on "Remote Control Key Buttons Operations".

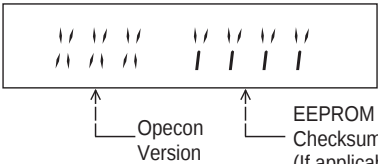
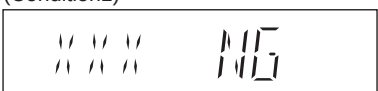
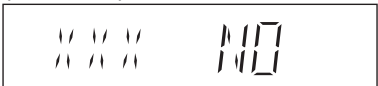
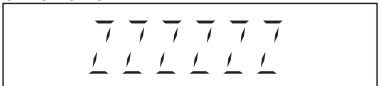
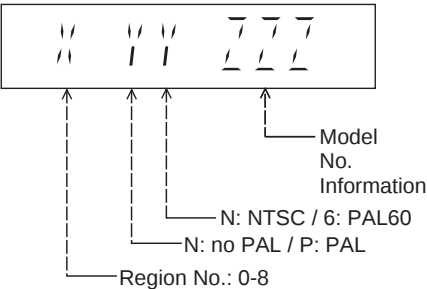
## 9.2.1. Service Mode Table 1

| 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 [POWER] button to exit.</p> <p>Press [FL Display] on remote control unit for next page (FL Display).</p>                                                   |
| Error code check                       | <p>Error code check<br/>The latest error code stored in the EEPROM IC is displayed.</p> <p>Note: Refer to "Section 9.5 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>   |

## 9.2.2. 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>↑ DVD laser current measurement mode</p> <p>The value denotes the current in decimal notation.</p> <p>(Display 2)</p>  <p>↑ DVD Laser Initial Value      ↑ DVD Laser 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 [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> |
| ADSC internal RAM data check        | <p>ADSC internal RAM data check. ADSC internal RAM data is read out and displayed.</p>                                                                                                                                                                                                                                          |  <p>↑ Address      ↑ RAM data for specified address</p> <p>The value is shown in hexadecimal notation. The above example shows the data in ADSC address FBOh is XXXXh.</p>                                                                                                                                                                                                            | <p>In STOP (no disc) mode, press [STOP] button on the main unit, and [1] button on the remote. To exit, press [POWER] button.</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>↑ CD laser current measurement mode</p> <p>The value denotes the current in decimal notation.</p> <p>(Display 2)</p>  <p>↑ CD laser initial value      ↑ CD laser value</p> <p>The above example shows the initial current is 0XXmA and the measured value is 0YYmA.</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>                                        |

### 9.2.3. 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.</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                                                      | <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 Figure 2 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 Menu Language                                                   |
| P, PC, PX        | USA, Canada, PX                | 1           | NTSC                   | NTSC (*A)               | 1PN                      | English, Spanish, Canadian French                                   |
| (S)              | Japan                          | 2           | NTSC                   | NTSC (*A)               | 2PN                      | Japanese, English                                                   |
| E                | Europe                         | 2           | PAL                    | PAL (*C)                | 2P6                      | English, French, German, Spanish, Polish, Russian, Czech, Hungarian |
| EB, EG           | Europe                         | 2           | PAL                    | PAL (*C)                | 2P6                      | English, French, German, Italian, Spanish, Polish, Swedish, Dutch   |
| GC, GS           | Middle East                    | 2           | PAL                    | PAL (*C)                | 2P6                      | English, French, German, Spanish, Polish, Russian, Czech, Hungarian |
| GCS, GD, GT, GCT | South East Asia, Korea, Taiwan | 3           | PAL NTSC               | NTSC (*B)               | 3PN                      | English, Traditional Chinese                                        |
| GN               | New Zealand, Australia         | 4           | PAL                    | PAL (*C)                | 4P6                      | English, French, German, Italian, Spanish, Polish, Swedish, Dutch   |
| PL, GCP, LB      | Central/South/Latin America    | 4           | NTSC                   | NTSC (*D)               | 4PN                      | English, Spanish, French, Brazilian Portuguese                      |
| EE               | CIS                            | 5           | SECAM                  | PAL (*C)                | 5P6                      | English, French, German, Spanish, Polish, Russian, Czech, Hungarian |
| GK               | China                          | 6           | PAL                    | NTSC (*B)               | 6PN                      | 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     | PAL60          |

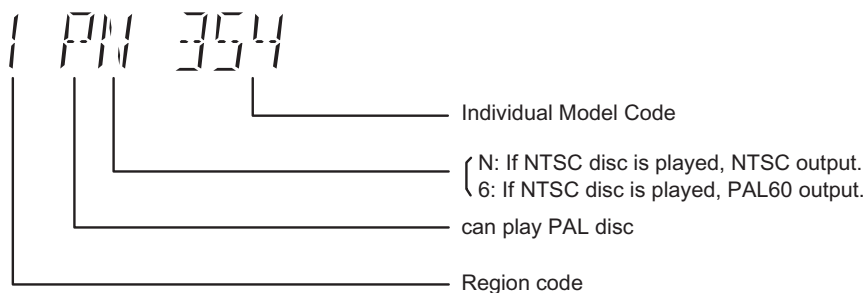
PAL (\*C)

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

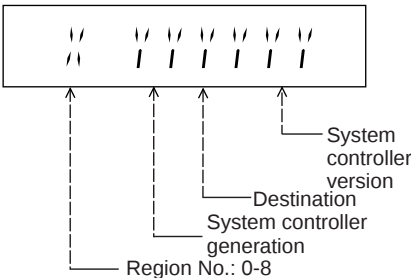
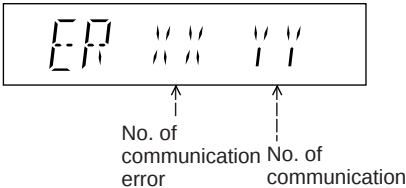
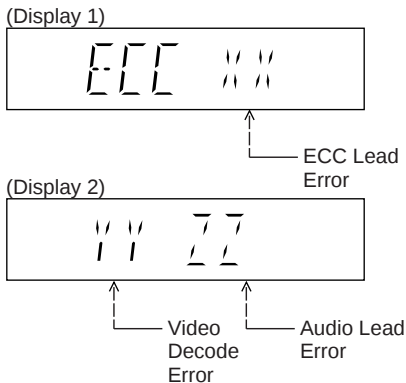
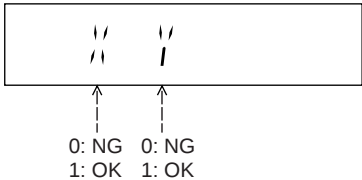
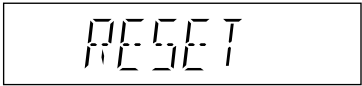
NTSC (\*D)

| Source       | Output |
|--------------|--------|
| Screen Saver | NTSC   |
| NTSC disc    | NTSC   |
| PAL disc     | NTSC   |

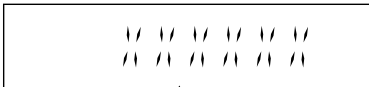
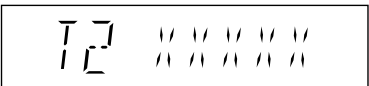
## Explanation of Display



## 9.2.4. Service Mode Table 4

|                                            | Item                                                                                                                                                                                                                                      | FL Display                                                                           | Key Operation                                                                                                                                                                                                          |
|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mode Name                                  | Description                                                                                                                                                                                                                               |                                                                                      | Front Key                                                                                                                                                                                                              |
| DVD Module P.C.B. firmware version display | DVD Module P.C.B. firmware version is displayed on the FL Display. The firmware version can be updated using recovery disc.<br><br>Note: It is necessary to check for firmware version before carrying out the version up using the disc. |    | In STOP (no disc) mode, press [STOP] button on the main unit, and [8] button on the remote control unit. Cancelled automatically 5 seconds later.                                                                      |
| Communication error display                | Displays frequency of communication errors between system control IC and mechanism control IC in the DVD Module P.C.B.                                                                                                                    |    | In STOP (no disc) mode, press [STOP] button on the main unit, and [MENU] button on the remote control unit. Cancelled automatically 5 seconds later.                                                                   |
| ECC Error Check                            | ECC refers to Error Correction Code. It describes the error correction code that was carried out for the decoding of audio & video.<br><br>FL Display sequence:<br>Display 1→2.                                                           |   | In STOP (no disc) mode, press [STOP] button on the main unit, and [TOP MENU] button on the remote control unit. Press [POWER] button to exit.<br>Press [FL Display] on remote control unit for next page (FL Display). |
| CPPM/CRM Keys Check                        | 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".<br>OK: Existing of keys.<br>NG: Non existing of keys.                                         |  | In STOP (no disc) mode, press [STOP] button on the main unit, and [EQ] button on the remote control unit. Cancelled automatically 5 seconds later.                                                                     |
| DVD Module P.C.B. Reset                    | To reset DVD Module P.C.B. This process is used when the DVD Module P.C.B. or FLASH ROM IC is replaced with a new one.                                                                                                                    |  | While in initialization mode, press & hold [STOP] button on the main unit, follow by [ENTER] button on the remote control unit. Cancelled automatically 5 seconds later.                                               |

## 9.2.5. Service Mode Table 5

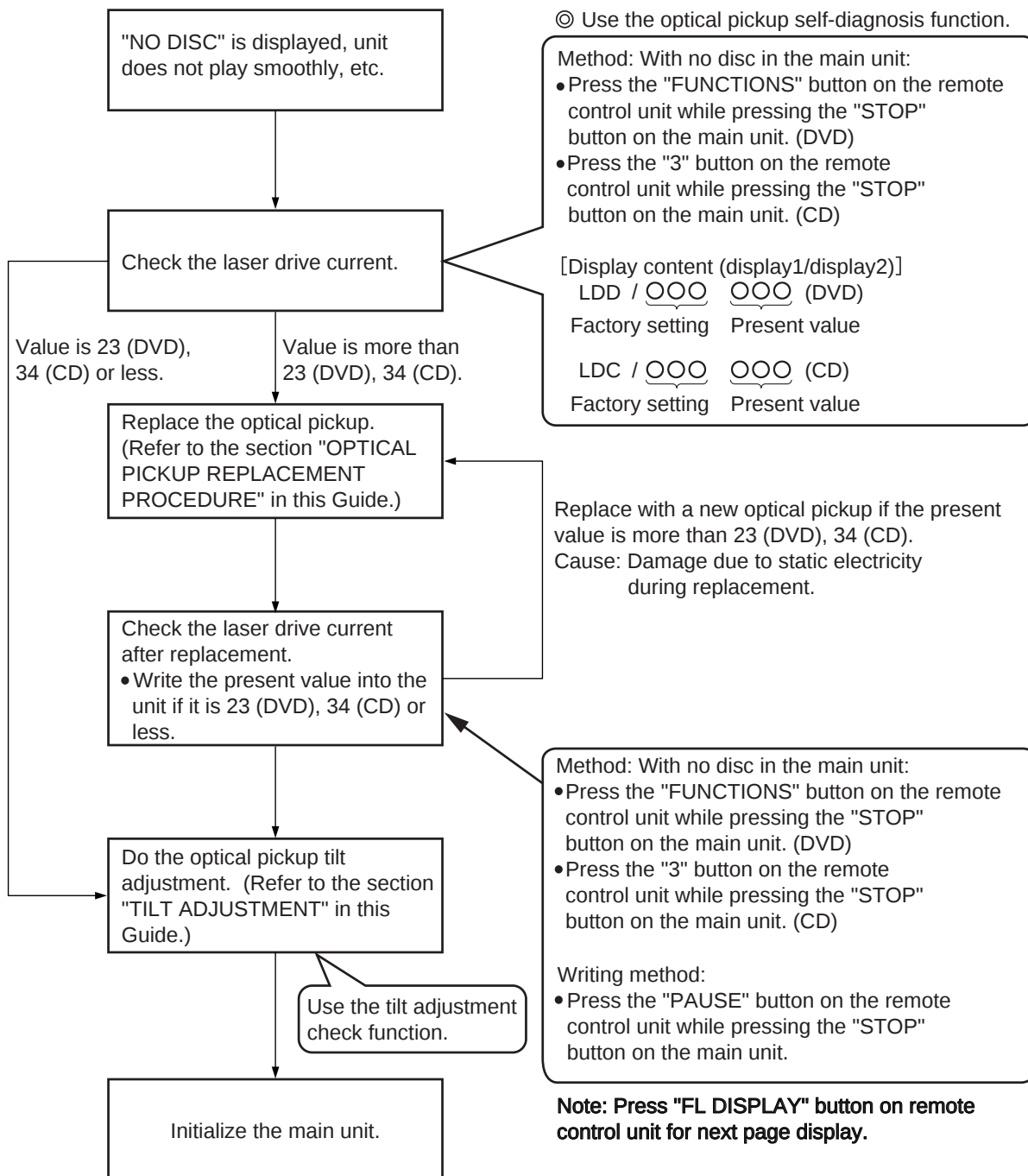
| Mode Name     | Item                                                                                                                                           | FL Display                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Key Operation                                                                                                                                                                                                          |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|               | 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 5 digits of decimal notation in a unit of 10 hours.<br/>"00000" will follow "99999". (DVD laser)</p> <p>(Display 2)</p>  <p>Time is shown in 6 digits of decimal notation in a unit of 10 hours.<br/>"000000" will follow "999999". (CD laser)</p> | <p>In STOP (no disc) mode, press [STOP] button on the main unit, and [▲] button on the remote control unit. 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 5 digits of decimal notation in a unit of 10 hours.<br/>It will clear to "00000" upon reset.</p>                                                                                                                                                                                                                                                                                                                                                | <p>While displaying Timer 1 data, press [STOP] button on the main unit, and [▼] button on the remote control unit. 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. 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. Cancelled automatically 5 seconds later.</p>                                                        |

## 9.2.6. 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 55.

### 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.)



### 9.3. Wireless Service Mode Summary Table

The service modes can be activated by pressing various button combination on the player and remote control unit.

Below is the summary of major checking:

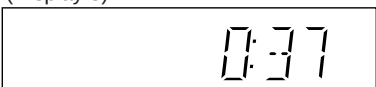
| Player buttons          | Remote control unit buttons | Application             | Note                                                                       |
|-------------------------|-----------------------------|-------------------------|----------------------------------------------------------------------------|
| [FAST FORWARD]          | [3]                         | ID setting              | (Refer to the section "9.4.1. Service Mode Table 1" for more information). |
| [STOP]<br>(only in AUX) | [4]                         | RF channel 1 display    | (Refer to the section "9.4.2. Service Mode Table 2" for more information). |
|                         | [5]                         | RF channel 2 display    |                                                                            |
|                         | [6]                         | RF channel 3 display    |                                                                            |
|                         | [7]                         | Auto RF channel display |                                                                            |

**Note:** Main room refers to the location of the main unit.

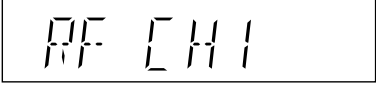
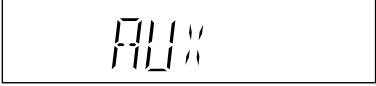
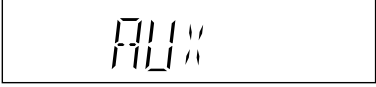
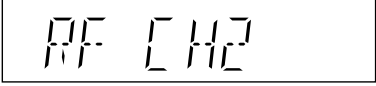
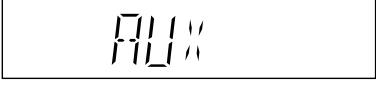
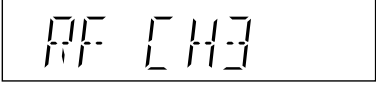
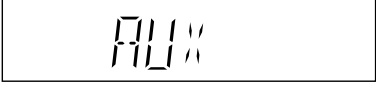
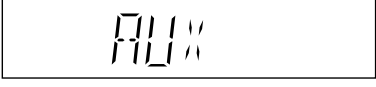
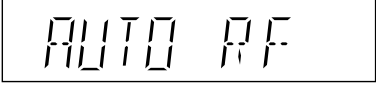
## 9.4. Service Mode Table (Wireless)

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

### 9.4.1. Service Mode Table 1

| Item       |                                                                                                                                                                                                                                                                                                                                                                                                                                                     | FL Display                                                                                                                                                                                                                                                                                                        | Key Operation                                                                                                                                                                                                |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mode Name  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                   | Front Key                                                                                                                                                                                                    |
| ID Setting | <p>To set the ID in the Tx &amp; Rx. The system goes into "Pairing Mode". [P] will be displayed for 60 seconds to indicate it is in "Pairing Mode". During this condition, the "ID set" button on the receiver unit can be pressed to pair the Tx &amp; Rx. After 60 seconds, the FL display will return to its previous display.</p> <p>FL Display sequence:<br/>Display 1→2→3.</p> <p>Note: Carry out pairing when Tx or Rx has been changed.</p> | <p>(Display 1)</p>  <p>(Display 2)</p>  <p>(Display 3)</p>  | <p>Main room is in CD/DVD mode.</p> <p>Press and hold [FAST FORWARD] button on the main unit, and [3] button on the remote control unit.</p> <p>After 10 seconds.<br/>To cancel, press the same buttons.</p> |

### 9.4.2. Service Mode Table 2

| Item                         |                                                                   | FL Display                                                                                                                                                                                                                                                                                                        | Key Operation                                                                                                                                      |
|------------------------------|-------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Mode Name                    | Description                                                       |                                                                                                                                                                                                                                                                                                                   | Front Key                                                                                                                                          |
| RF Channel Selection Display | RF Channel 1 Display*<br>FL Display sequence:<br>Display 1→2→3    | (Display 1)<br><br>(Display 2)<br><br>(Display 3)<br>       | Main room is in AUX mode.<br><br>Press and hold [STOP] button on the main unit, and [4] button on the remote control unit.<br><br>After 2 seconds. |
|                              | RF Channel 2 Display*<br>FL Display sequence:<br>Display 1→2→3    | (Display 1)<br><br>(Display 2)<br><br>(Display 3)<br>      | Main room is in AUX mode.<br><br>Press and hold [STOP] button on the main unit, and [5] button on the remote control unit.<br><br>After 2 seconds. |
|                              | RF Channel 3 Display*<br>FL Display sequence:<br>Display 1→2→3    | (Display 1)<br><br>(Display 2)<br><br>(Display 3)<br> | Main room is in AUX mode.<br><br>Press and hold [STOP] button on the main unit, and [6] button on the remote control unit.<br><br>After 2 seconds. |
|                              | Auto RF Channel Display*<br>FL Display sequence:<br>Display 1→2→3 | (Display 1)<br><br>(Display 2)<br><br>(Display 3)<br> | Main room is in AUX mode.<br><br>Press and hold [STOP] button on the main unit, and [7] button on the remote control unit.<br><br>After 2 seconds. |

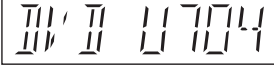
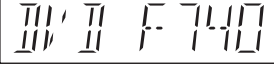
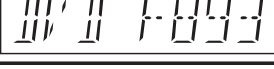
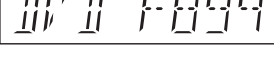
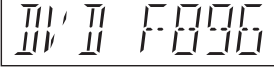
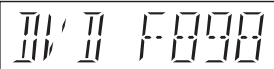
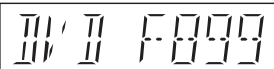
\*Note: This mode is for purpose of disabling/enabling the frequency of automatic allocation and be able to select a fixed RF channel (channels 1, 2 or 3).

## 9.5. DVD Self Diagnostic Function-Error Code

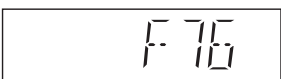
### 9.5.1. Mechanism Error Code Table

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

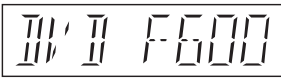
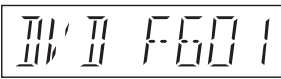
### 9.5.2. DVD Module Error Code Table

| 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 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. |
| F896       | No existence model                                                   | 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. |
| F898       | Disagreement of hardware and software                                | Unsuitable combination of AV Decoder, SDRAM & FLASH ROM IC (firmware).                                                                                                                           |  | Press [ ■ STOP] on main unit for next error. |
| F899       | The communication specification disagreement between micro-processor | Unsuitable combination of number of system com and panel com used. (Frimware)                                                                                                                    |  | Press [ ■ STOP] on main unit for next error. |

### 9.5.3. Power Supply 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 FL Display 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 2 seconds 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.) not available. |  | Press [ ■ STOP] on main unit for next error. |

### 9.5.4. ECC Error Code Table

| Error Code | Diagnosis Contents                                                   | Description of error                                                                                                                                                                                     | Automatic FL Display                                                                 | Remarks                                      |
|------------|----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|----------------------------------------------|
| F600       | Administrative information cannot be acquired by the recovery error. | It becomes impossible NaviPack etc. were done, and not to be able to acquire necessary information in the navigation's changing due to wound etc. of DISC, and to have done the reproduction transition. |  | Press [ ■ STOP] on main unit for next error. |
| F601       | Irregular sector ID was demanded.                                    | It tried to access the position that did not exist on DISC by the recording error etc. of authoring.                                                                                                     |  | Press [ ■ STOP] on main unit for next error. |
| F603       | KEYDET cannot be acquired by the recovery error.                     | The data for decoding copyright protection (CSS) cannot be acquired due to wound etc. of DISC, and it is not possible to reproduce.                                                                      |  | Press [ ■ STOP] on main unit for next error. |

### 9.5.5. 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. |

## 9.6. 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.

### 9.6.1. 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 player for at least three seconds. (The message, "\_\_\_LOCKED\_" appears when the function is activated.)

#### Note:

OPEN/CLOSE ▲ is invalid and the player 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 player for at least three seconds. (The message, "\_\_\_LOCKED\_" appears when the function is activated.)

#### Note:

The following buttons are invalid and the player displays "\_\_\_LOCKED\_" while the lock function mode is entered.

|                        |                                                                                                                                                                                                       |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Player                 | ▲, ■, SELECTOR, ►►►/ , ►►►, ◀◀◀/ ◀◀◀                                                                                                                                                                  |
| Remote controller unit | NUMERIC KEYS 0~9, ≥10, ■,   , ►►►, ◀◀◀, ►►►, ◀◀◀, FUNCTIONS/KARAOKE, TOP MENU/DIRECT NAVIGATOR, RETURN/SETUP, FL DISPLAY/SLEEP, MUTING, MENU/PLAY LIST, TEST/AUTO, EXT-IN, FM, UP, DOWN, LEFT & RIGHT |

### 9.6.2. 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.)

## 9.7. Service Precautions

### 9.7.1. 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.

### 9.7.2. 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.

### 9.7.3. 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 "ENTER" 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.

# 10 Assembling and Disassembling

## “ATTENTION SERVICER”

Be careful when disassembling and servicing.

Some chassis components may have sharp edges.

### Special Note:

1. This section describes the disassembly procedures for all the major printed circuit boards and main components.
2. Before the disassembly process was carried out, do take special note that all safety precautions are to be carried out.  
(Ensure that no AC power supply is connected during disassembling.)
3. For assembly after operation checks or replacement, reverse the respective procedures.  
Special reassembly procedures are described only when required.
4. The Switch Regulator IC may have high temperature after prolonged use.
5. Use caution when removing the top cabinet and avoid touching heat sinks located in the unit.

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

### 6. Select items from the following index when checks or replacement are required.

- Disassembly of Top Cabinet
- Disassembly of DVD Lid (When taking out disc manually)
- Disassembly of Front Panel
- Disassembly of Volume P.C.B.
- Disassembly of Mic P.C.B.
- Disassembly of Panel P.C.B.
- Disassembly of USB P.C.B.
- Disassembly of Rear Panel
- Disassembly of DVD Mechanism Unit
- Disassembly of Relay P.C.B.
- Disassembly of DVD Module P.C.B.
- Disassembly of Main P.C.B.
- Replacement of Regulator IC (IC2903)
- Disassembly of Wireless Adapter P.C.B.
- Disassembly of D-Amp P.C.B.
- Replacement of Digital Amp IC (IC5000)
- Disassembly of SMPS, AC-Inlet & Voltage Selector P.C.B.
- Replacement of Switch Regulator IC/Diode (IC5701/D5702)
- Replacement of Regulator Diode (D5801/D5802)
- Replacement of Regulator Diode (D5803)

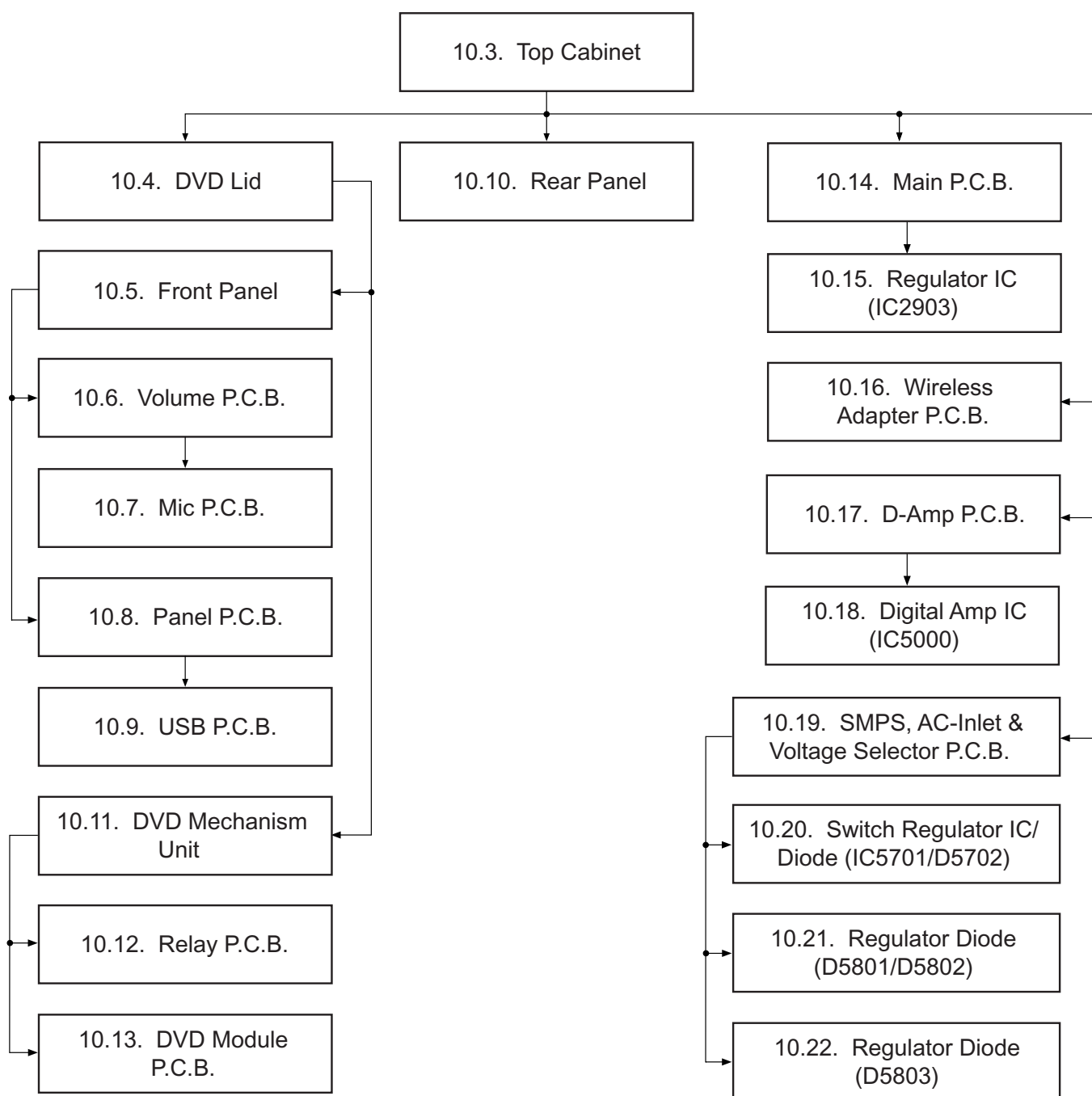
### CAUTION NOTE:

Please use original screw and at correct locations.

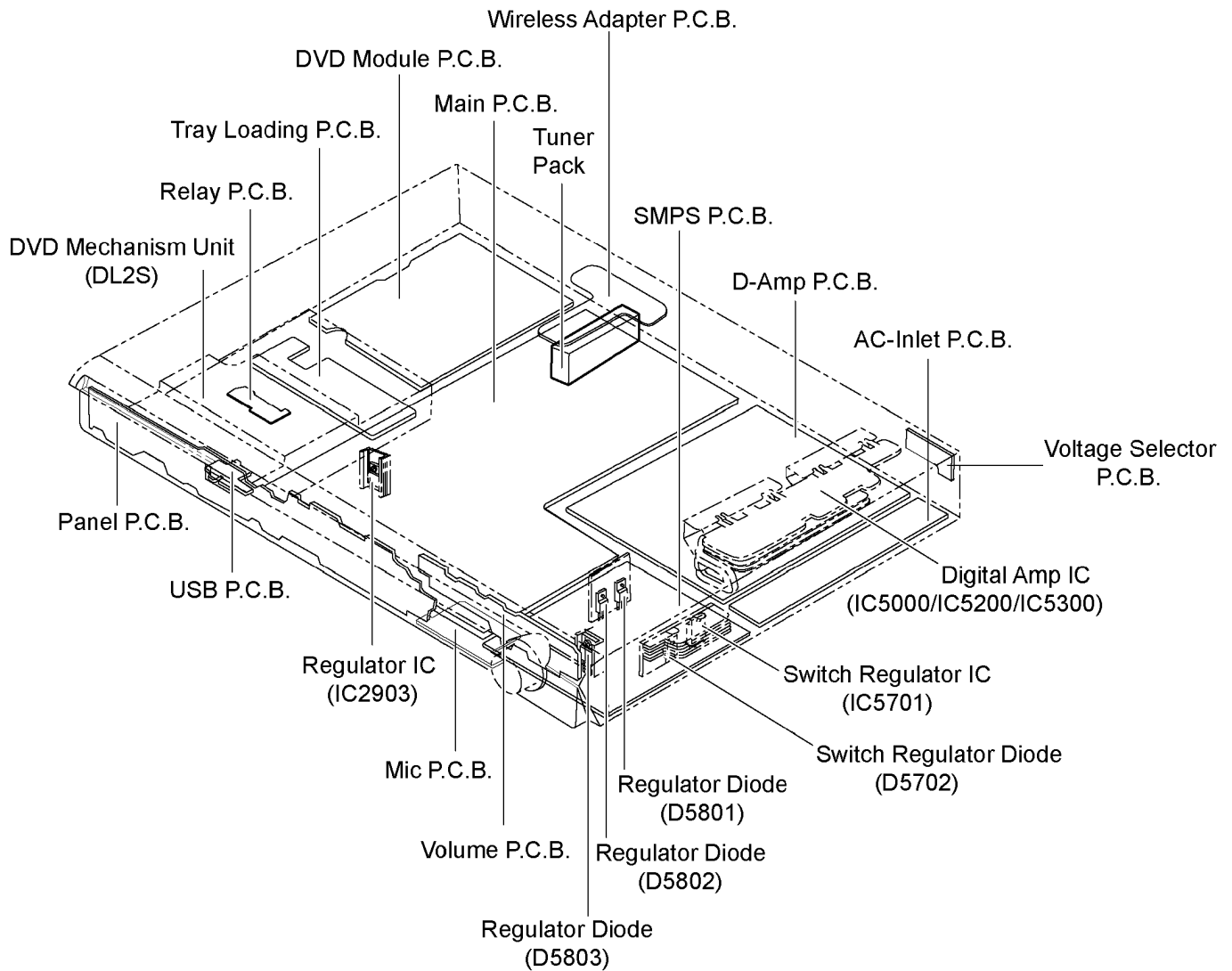
Below shown is part no. of different screw types used:

- |                        |                      |
|------------------------|----------------------|
| <b>a</b> :RHD30007-1SJ | <b>g</b> :XTB3+10JFJ |
| <b>b</b> :RHD30119-S   | <b>h</b> :XTW3+8TFJ  |
| <b>c</b> :RHD26046     | <b>i</b> :XTN26+6GFJ |
| <b>d</b> :RHDC0023     | <b>j</b> :XTB3+8JFJ  |
| <b>e</b> :XTV2+6GFJ    | <b>k</b> :XSN3+4FJ   |
| <b>f</b> :RHD30111-3   |                      |

## 10.1. Disassembly Flow Chart

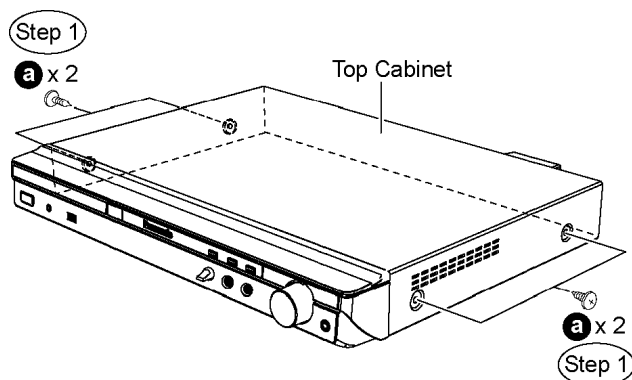


## 10.2. Main Components and P.C.B. Locations



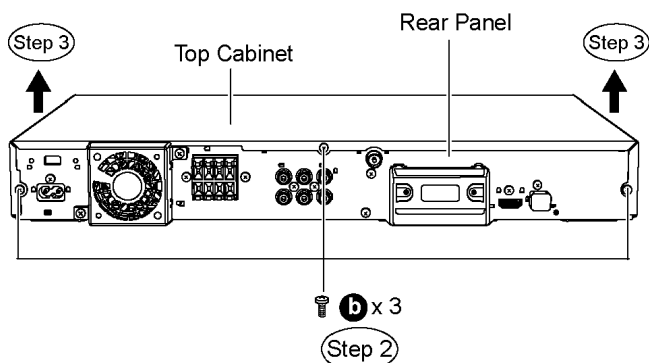
## 10.3. Disassembly of Top Cabinet

**Step 1** Remove 4 screws.



**Step 2** Remove 3 screws at the rear panel

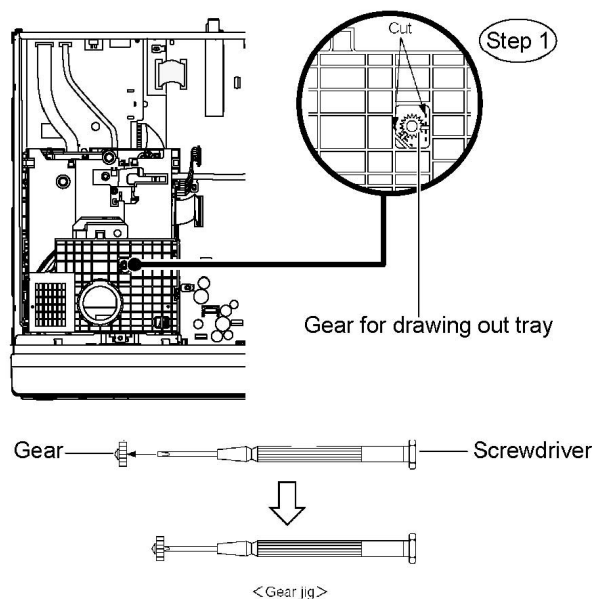
**Step 3** Lift up and remove the top cabinet in the direction of arrows.



## 10.4. Disassembly of the DVD Lid (When taking out disc manually)

- Follow (Step 1) to (Step 3) of Item 10.3.

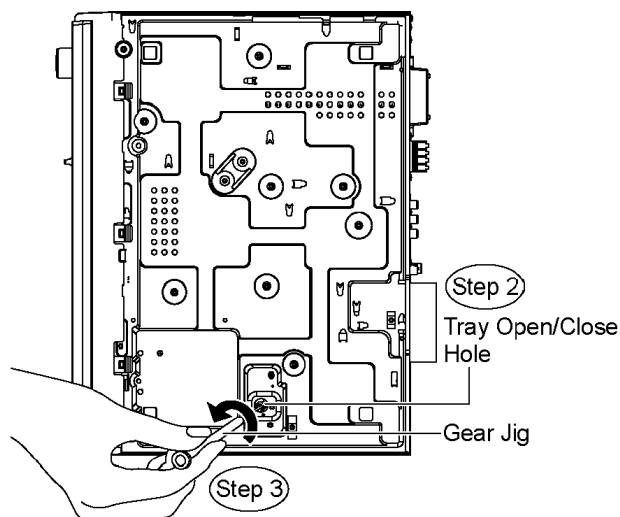
**Step 1** Detach the gear (For drawing out tray) from the mechanism unit. It inserts a screw driver in the gear. (The gear jig)



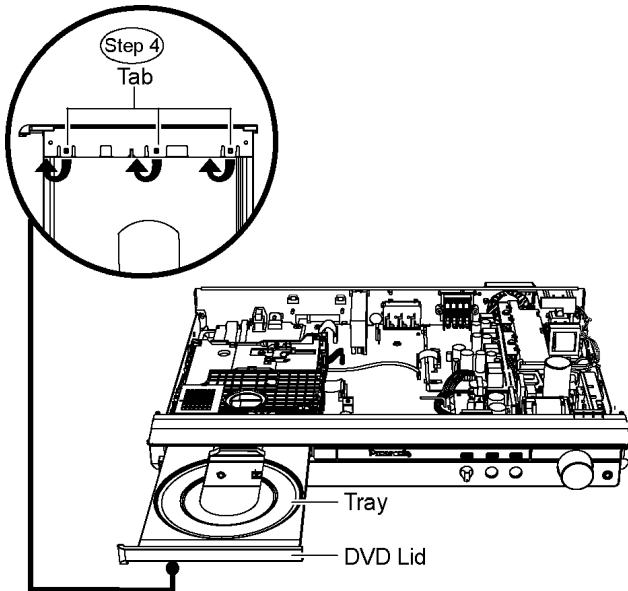
**Step 2** Insert the gear jig into the tray open/ close hole.

**Step 3** Turn the gear jig counterclockwise to open the tray.

**Note :** Do not use force to push the tray backwards as it can damage the mechanism unit.



**Step 4** Release the tabs in the direction of arrows and remove the DVD lid.



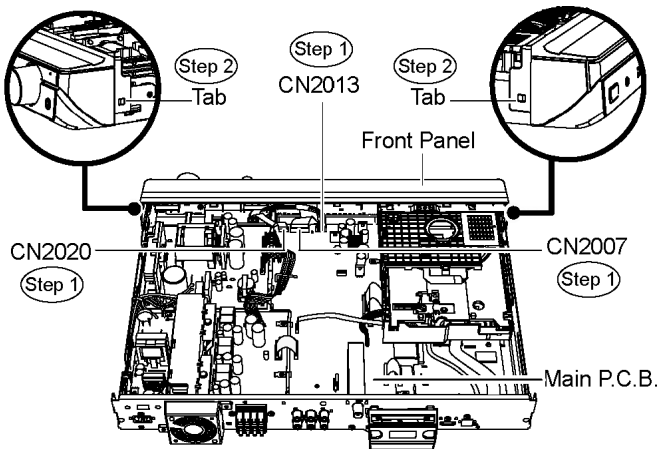
**Note :** You can return the tray by turning the gear jig clockwise.

## 10.5. Disassembly of Front Panel

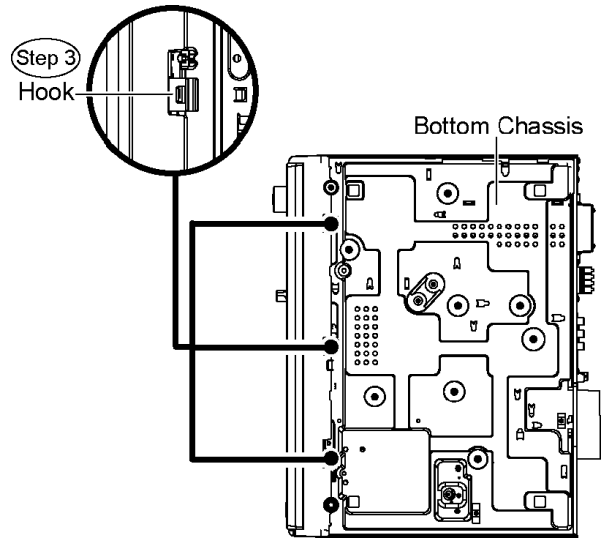
- Follow (Step 1) to (Step 3) of Item 10.3.
- Follow (Step 1) to (Step 4) of Item 10.4.

**Step 1** Detach FFC cables from the connectors. (CN2007, CN2013 & CN2020) on Main P.C.B.

**Step 2** Release the tab on each side of the front panel.



**Step 3** Upset the unit and release 3 hooks at the bottom chassis.



**Special Note :** Avoid placing the set in a position that might cause damage to the jacks when removing the front panel.

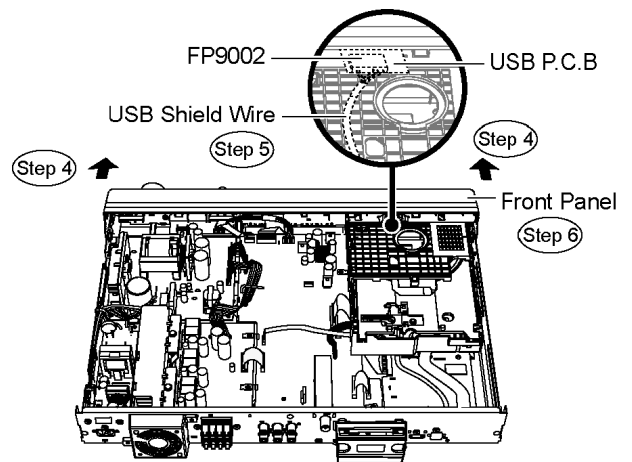
**Step 4** Detach the front panel slightly forward in the direction of arrows.

**Caution:** Do not attempt to exert strong force when detaching the front panel.

**Step 5** Detach the USB shield wire from the connector (FP9002) from USB P.C.B.

**Caution:** Remember to attach USB shield wire during assembling.

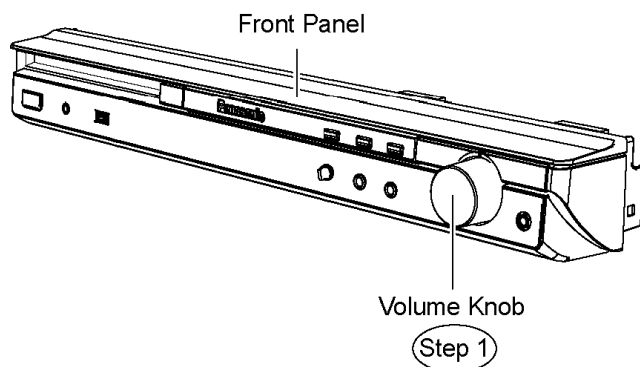
**Step 6** Remove the front panel.



## 10.6. Disassembly of Volume P.C.B.

- Follow (Step 1) to (Step 3) of Item 10.3.
- Follow (Step 1) to (Step 4) of Item 10.4.
- Follow (Step 1) to (Step 6) of Item 10.5.

**Step 1** Remove the volume knob from the front panel.



- Disassembly of Earth Spring

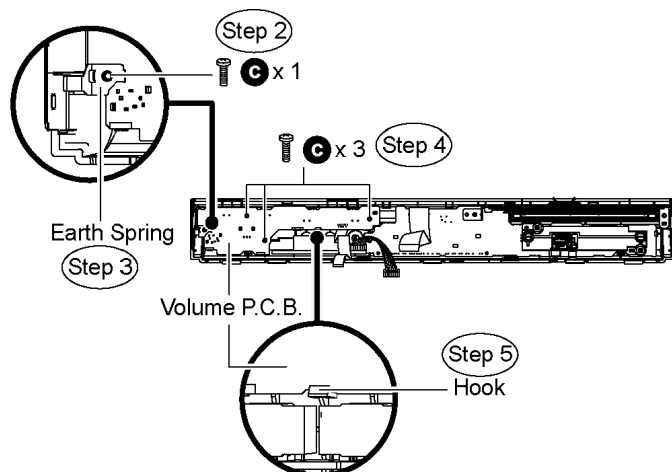
**Step 2** Remove 1 screw from the earth spring.

**Step 3** Remove the earth spring.

- Disassembly of Volume P.C.B.

**Step 4** Remove 3 screws from the Volume P.C.B.

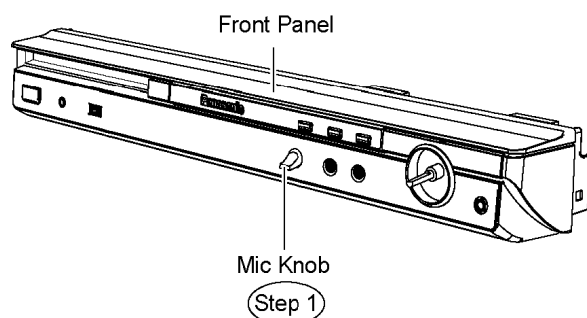
**Step 5** Release the hook & remove Volume P.C.B.



## 10.7. Disassembly of Mic P.C.B.

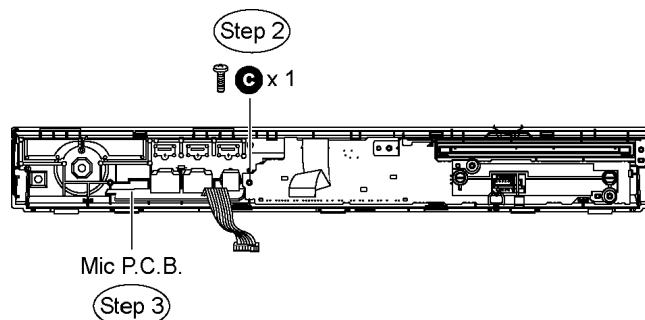
- Follow (Step 1) to (Step 3) of Item 10.3.
- Follow (Step 1) to (Step 4) of Item 10.4.
- Follow (Step 1) to (Step 6) of Item 10.5.
- Follow (Step 1) to (Step 5) of Item 10.6.

**Step 1** Remove the mic knob.



**Step 2** Remove 1 screw from Panel P.C.B.

**Step 3** Remove Mic P.C.B.



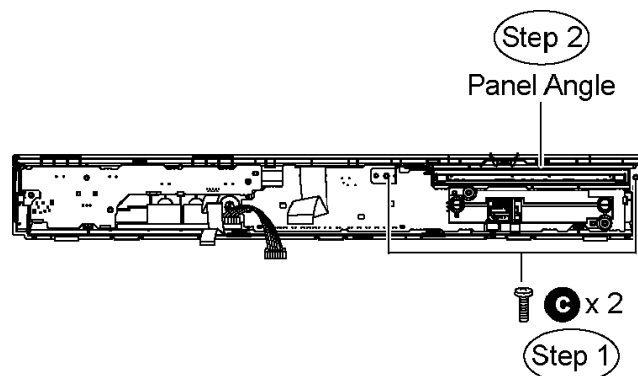
## 10.8. Disassembly of Panel P.C.B.

- Follow (Step 1) to (Step 3) of Item 10.3.
- Follow (Step 1) to (Step 4) of Item 10.4.
- Follow (Step 1) to (Step 6) of Item 10.5.

- Disassembly of Panel Angle

**Step 1** Remove 2 screws.

**Step 2** Remove the panel angle.



- Disassembly of Mecha Holder

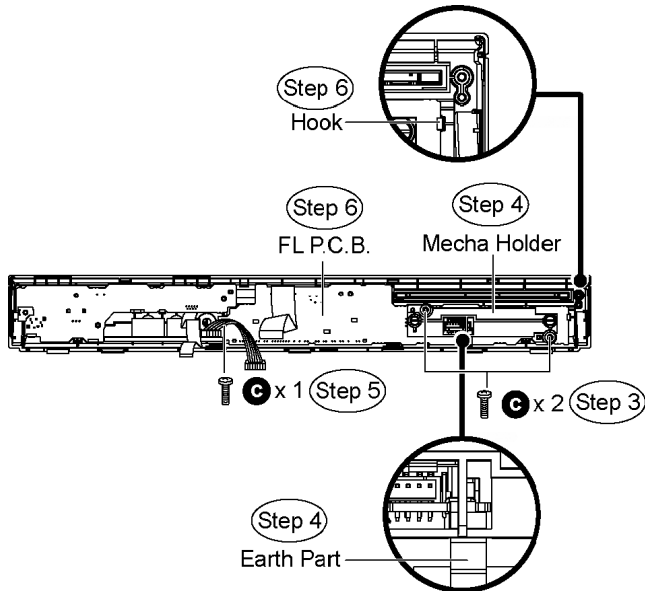
**Step 3** Remove 2 screws.

**Step 4** Remove the USB earth part & mecha holder.

- Disassembly of Panel P.C.B.

**Step 5** Remove 1 screw from Panel P.C.B.

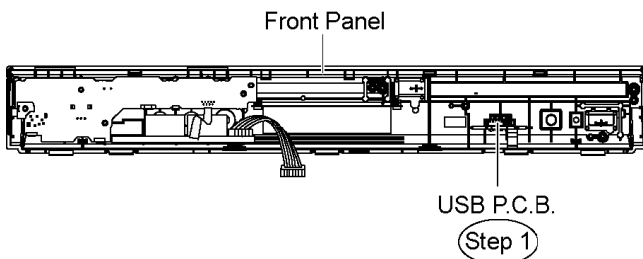
**Step 6** Release the hook and remove Panel P.C.B.



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

- Follow (Step 1) to (Step 3) of Item 10.3.
- Follow (Step 1) to (Step 4) of Item 10.4.
- Follow (Step 1) to (Step 6) of Item 10.5.
- Follow (Step 1) to (Step 6) of Item 10.8.

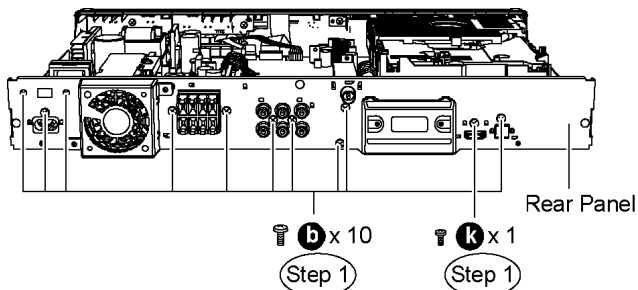
**Step 1** Remove USB P.C.B. from the front panel.



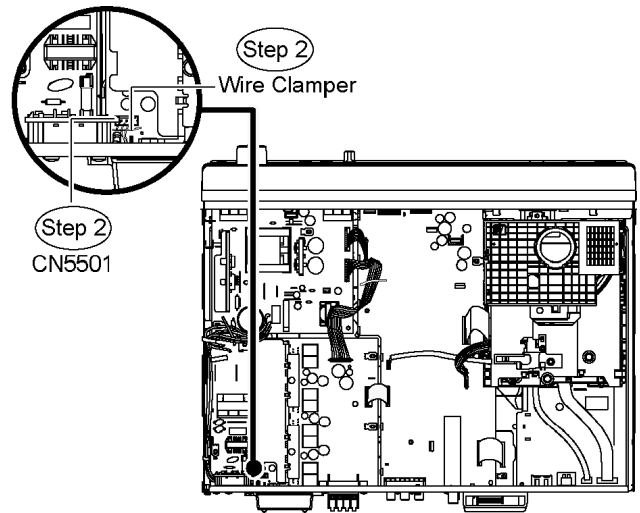
## 10.10. Disassembly of Rear Panel

- Follow (Step 1) to (Step 3) of Item 10.3.

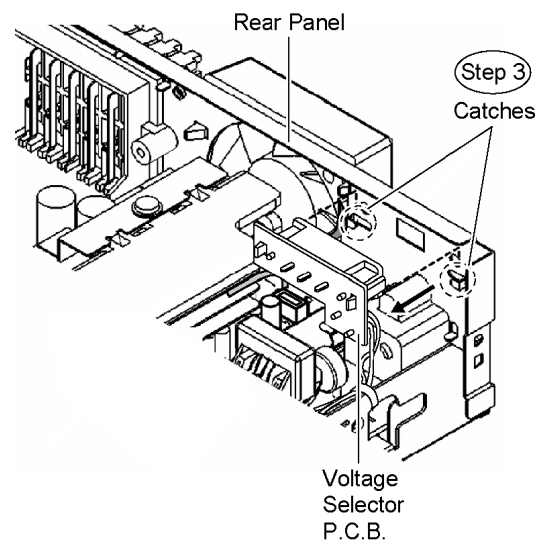
**Step 1** Remove 11 screws from the rear panel.



**Step 2** Remove the wire clumper to detach the fan unit connector (CN5501) on D-Amp P.C.B.

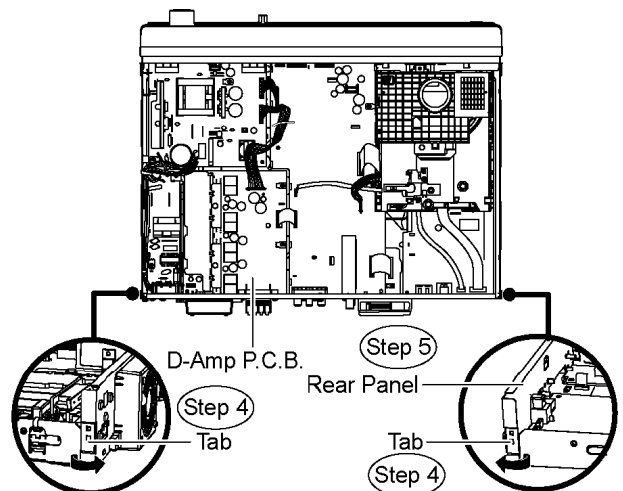


**Step 3** Remove Voltage Selector P.C.B. from the catches at the rear panel.



**Step 4** Release the tab on each side of the rear panel in the direction of arrows.

**Step 5** Remove the rear panel.



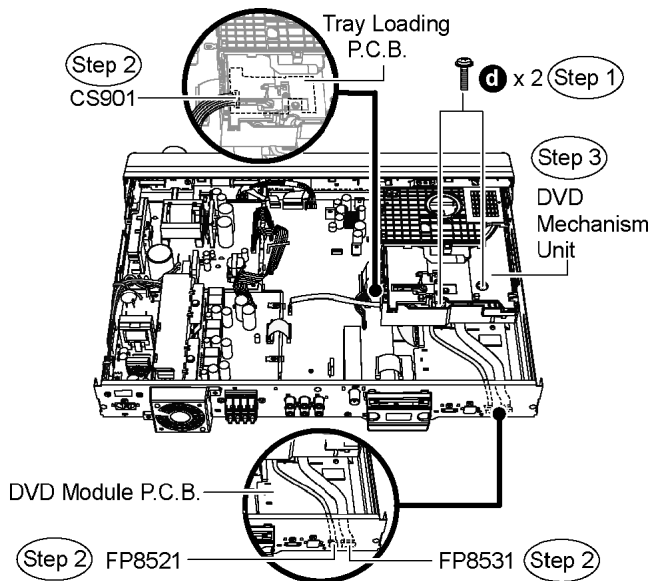
## 10.11. Disassembly of DVD Mechanism Unit

- Follow (Step 1) to (Step 3) of Item 10.3.
- Follow (Step 1) to (Step 4) of Item 10.4.

**Step 1** Remove 2 screws from the DVD mechanism unit.

**Step 2** Detach FFC cable from the connectors (FP8251 & FP8531) on DVD Module P.C.B. and (CS901) on Tray Loading P.C.B.

**Step 3** Lift up & remove the DVD mechanism unit.



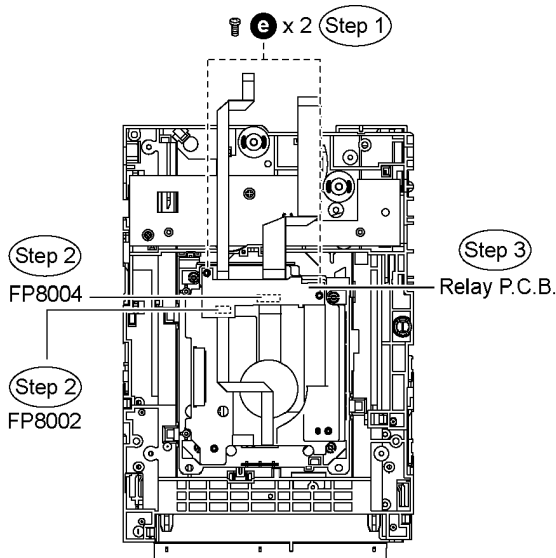
## 10.12. Disassembly of Relay P.C.B.

- Follow (Step 1) to (Step 3) of Item 10.3.
- Follow (Step 1) to (Step 4) of Item 10.4.
- Follow (Step 1) to (Step 3) of Item 10.11.

**Step 1** Remove 2 screws from the Relay P.C.B.

**Step 2** Detach FFC cable from the connectors (FP8002 & FP8004)

**Step 3** Remove Relay P.C.B.



**Caution :** Do not use strong or excessive force to avoid damage to FFC cables.

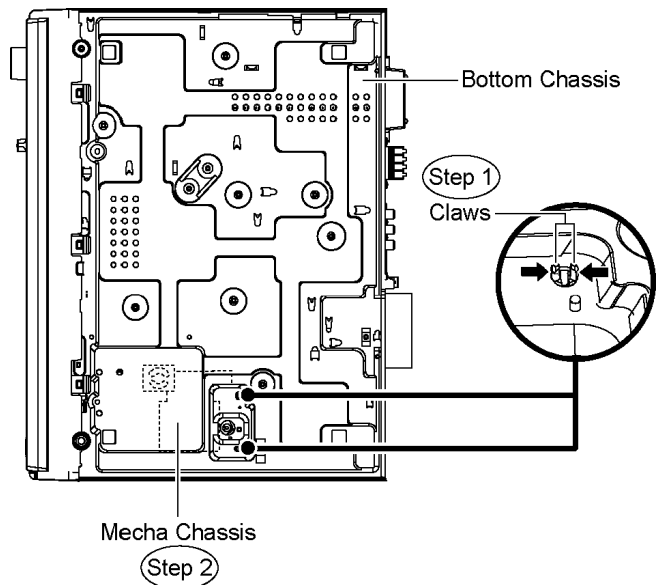
## 10.13. Disassembly of DVD Module P.C.B.

- Follow (Step 1) to (Step 3) of Item 10.3.
- Follow (Step 1) to (Step 4) of Item 10.4.
- Follow (Step 1) to (Step 3) of Item 10.11.

- Disassembly of Mecha Chassis

**Step 1** Release the claws of the mecha chassis in the direction of arrows at the bottom chassis.

**Step 2** Remove the mecha chassis.



- Disassembly of DVD Module P.C.B.

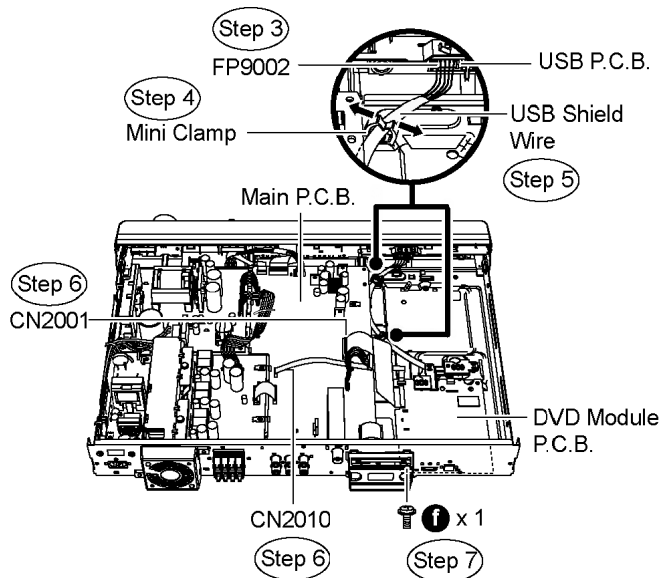
**Step 3** Detach the USB shield wire from the connector (FP9002) on USB P.C.B.

**Step 4** Release the claws of two mini clamps on the bottom chassis in the direction of arrows.

**Step 5** Remove the USB shield wire from the mini clamps.

**Step 6** Detach FFC cable from the connectors (CN2001 & CN2010) on Main P.C.B.

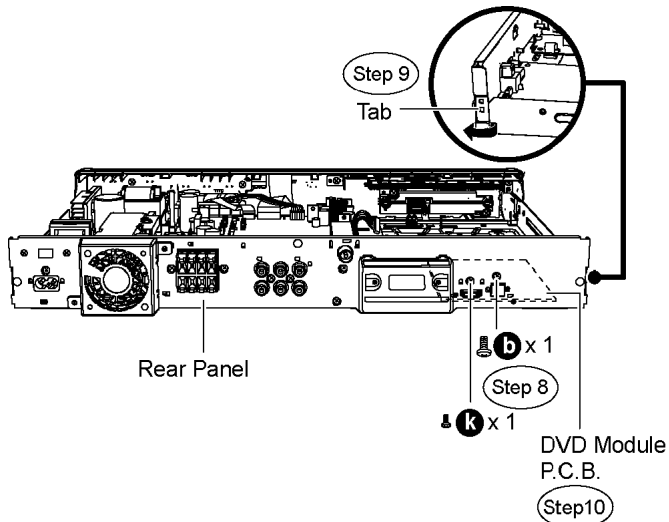
**Step 7** Remove 1 screw from DVD Module P.C.B.



**Step 8** Remove 2 screws from the rear panel.

**Step 9** Release the tab of rear panel in the direction of arrow.

**Step 10** Remove DVD Module P.C.B.



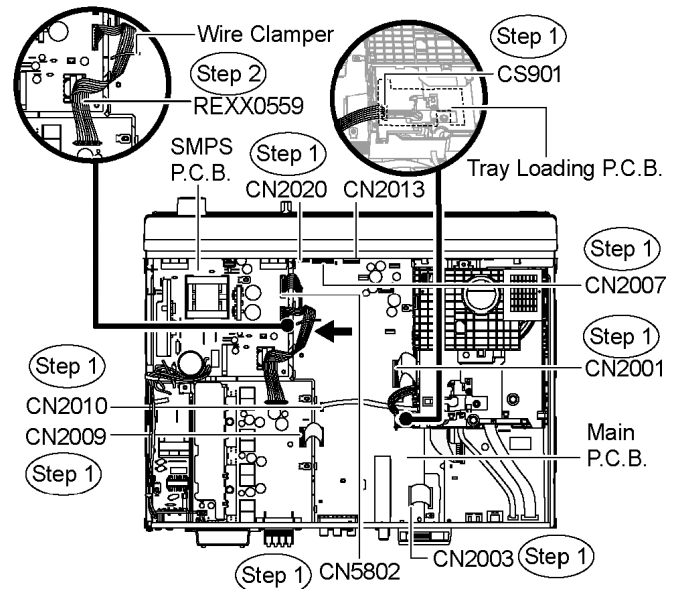
**Caution :** Do not use strong or excessive force to avoid damage to FFC cables.

## 10.14. Disassembly of Main P.C.B.

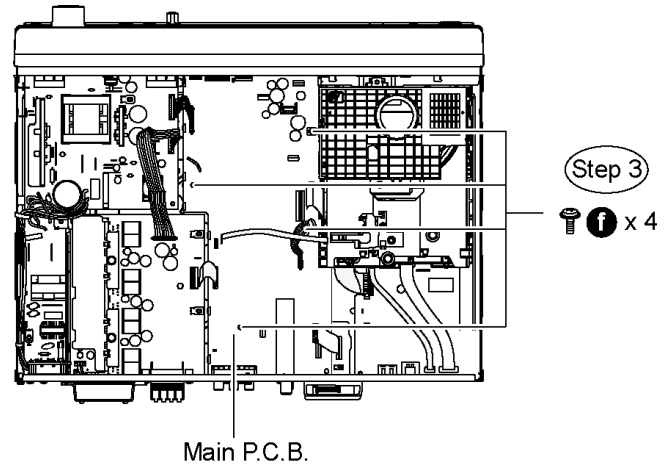
- Follow (Step 1) to (Step 3) of Item 10.3.

**Step 1** Detach FFC cable from the connectors (CN2001, CN2003, CN2007, CN2009, CN2010, CN2013 & CN2020) on Main P.C.B., (CS901) on Tray Loading P.C.B. and (CN5802) on SMPS P.C.B.

**Step 2** Remove the wire clammer to move aside the FFC cable (REXX0559, SMPS to D-Amp) in the direction of arrow.



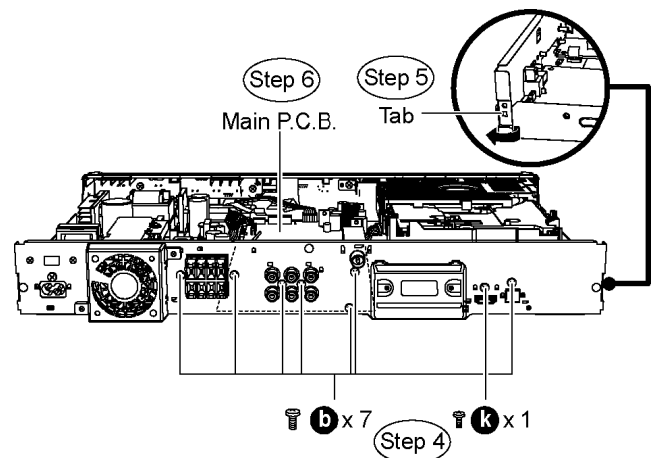
**Step 3** Remove 4 screws from Main P.C.B.



**Step 4** Remove 8 screws from the rear panel.

**Step 5** Release the tab of the rear panel in the direction of arrow.

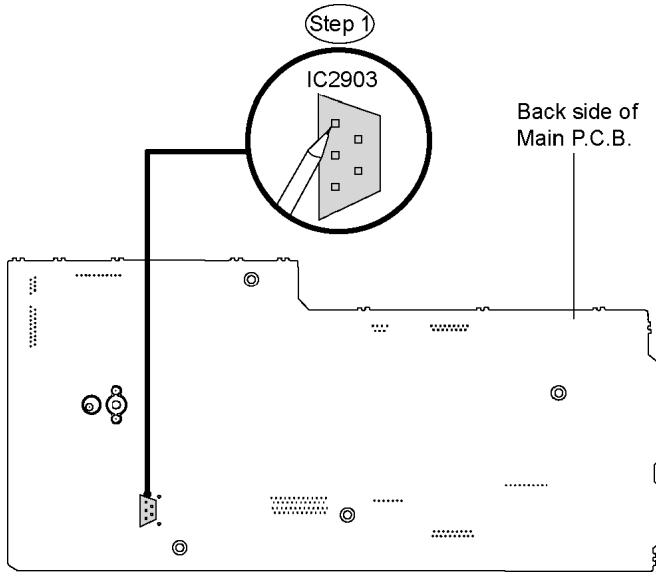
**Step 6** Remove Main P.C.B.



## 10.15. Replacement of Regulator IC (IC2903)

- Follow (Step 1) to (Step 3) of Item 10.3.
- Follow (Step 1) to (Step 6) of Item 10.14.

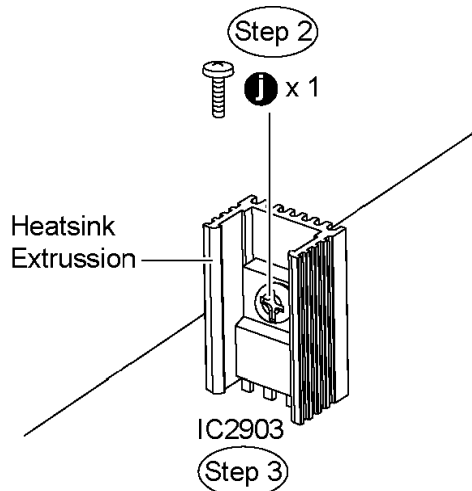
**Step 1** Desolder pins of the regulator IC (IC2903) on the back side of Main P.C.B.



**Step 2** Remove 1 screw from the regulator IC (IC2903).

**Step 3** Remove the regulator IC (IC2903) from the heatsink extrusion.

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



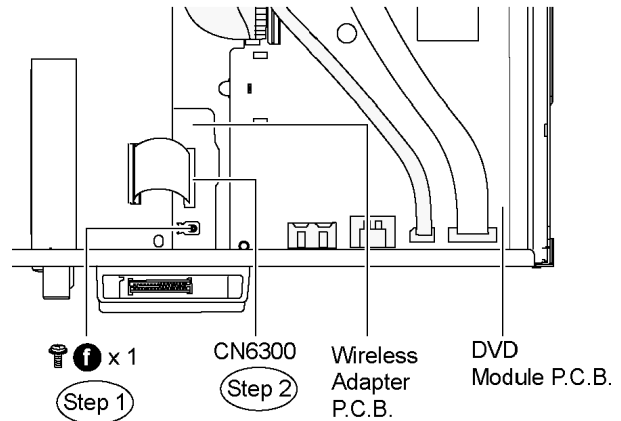
**Note:** Refer to the diagrams of Main P.C.B. (Item 10.14) for the location of the part.

## 10.16. Disassembly of Wireless Adapter P.C.B.

- Follow (Step 1) to (Step 3) of Item 10.3.

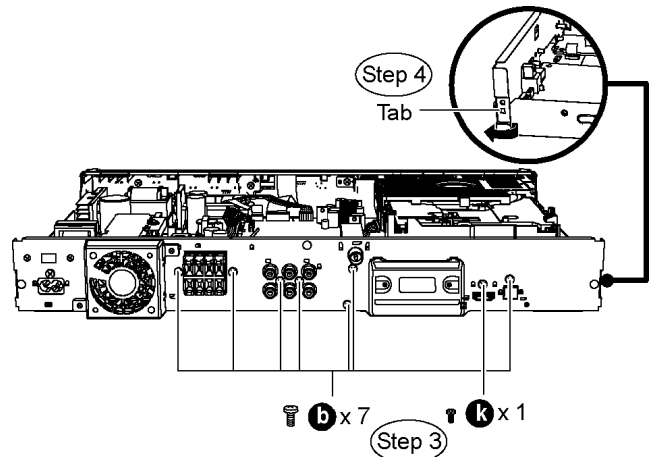
**Step 1** Remove 1 screw from Wireless Adapter P.C.B.

**Step 2** Detach FFC cable from the connector (CN6300) on Wireless Adapter P.C.B.

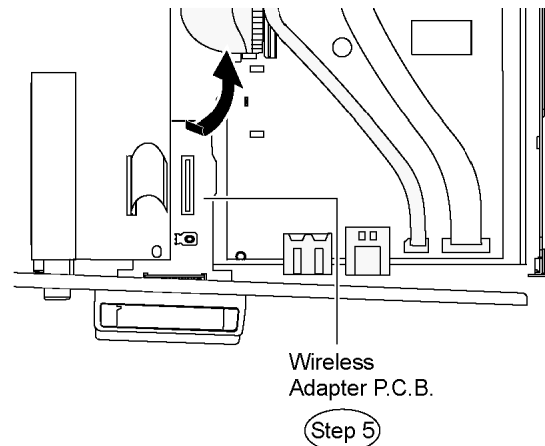


**Step 3** Remove 8 screws.

**Step 4** Release the tab of the rear panel in the direction of arrow.



**Step 5** Remove Wireless Adapter P.C.B. in the direction of arrow.



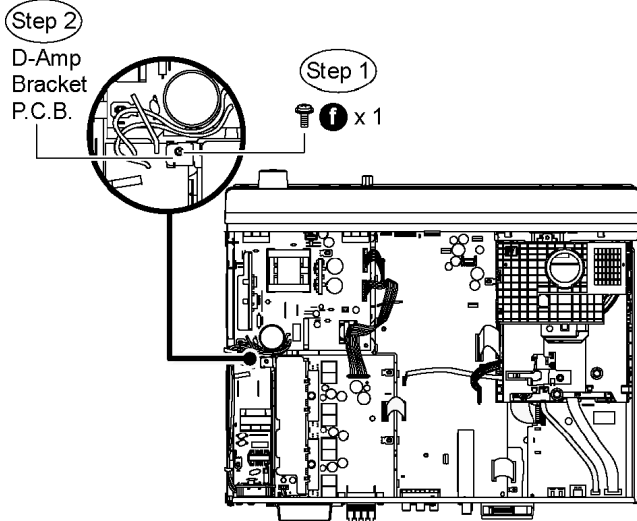
## 10.17. Disassembly of D-Amp P.C.B.

- Follow (Step 1) to (Step 3) of Item 10.3.

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

**Step 1** Remove 1 screw from AC-Inlet P.C.B.

**Step 2** Remove the D-Amp P.C.B. bracket.



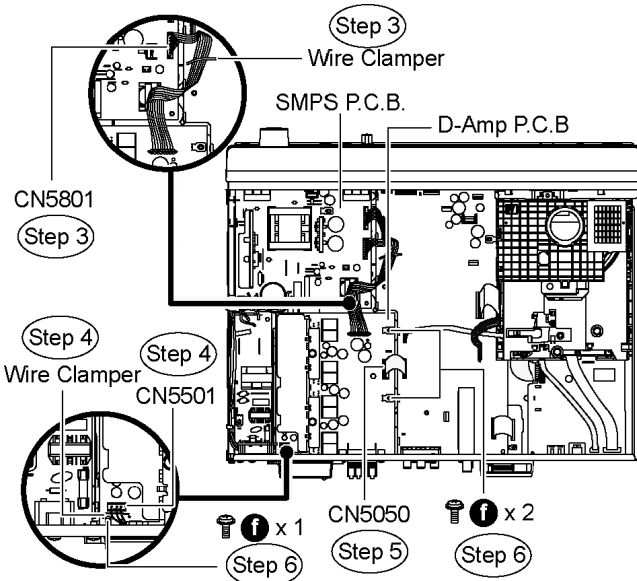
• Disassembly of D-Amp P.C.B.

**Step 3** Remove the wire clammer to detach FFC cable from the connector (CN5801) on SMPS P.C.B.

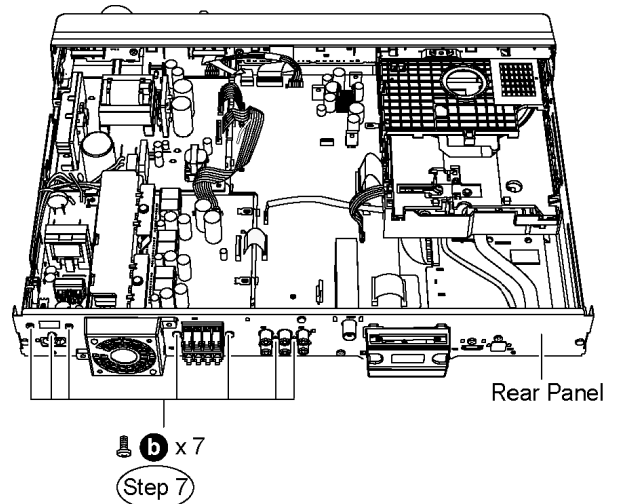
**Step 4** Remove the wire clammer to detach FFC cable from the connector (CN5501) of fan unit on D-Amp P.C.B.

**Step 5** Detach FFC cable from the connector (CN5050) on D-Amp P.C.B.

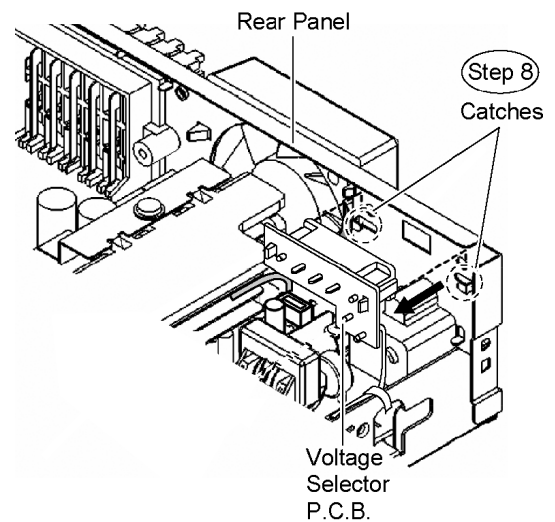
**Step 6** Remove 3 screws from D-Amp P.C.B.



**Step 7** Remove 7 screws from the rear panel.

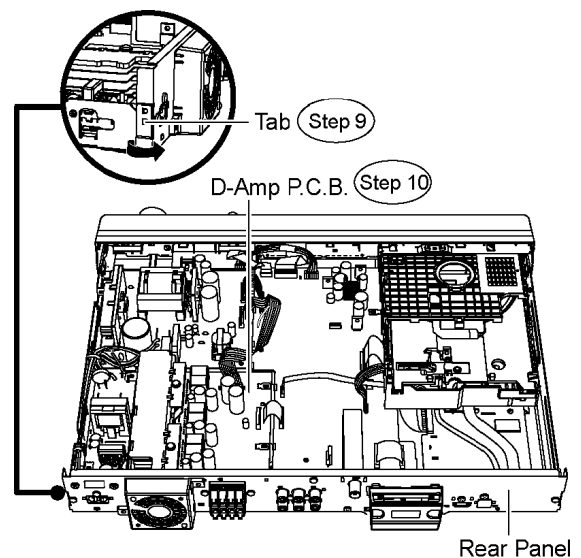


**Step 8** Remove Voltage Selector P.C.B. from the catches at the rear panel.



**Step 9** Release the tab of the rear panel in the direction of arrow.

**Step 10** Remove D-Amp P.C.B.

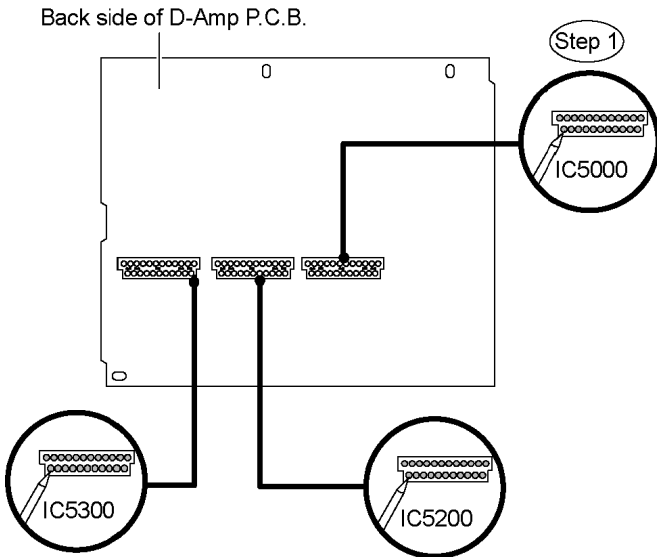


## 10.18. Replacement of Digital Amp IC (IC5000)

- Follow (Step 1) to (Step 3) of Item 10.3.

- Follow (Step 1) to (Step 10) of Item 10.17.

**Step 1** Desolder pins of the digital amp IC (IC5000) on the back side of D-Amp P.C.B.



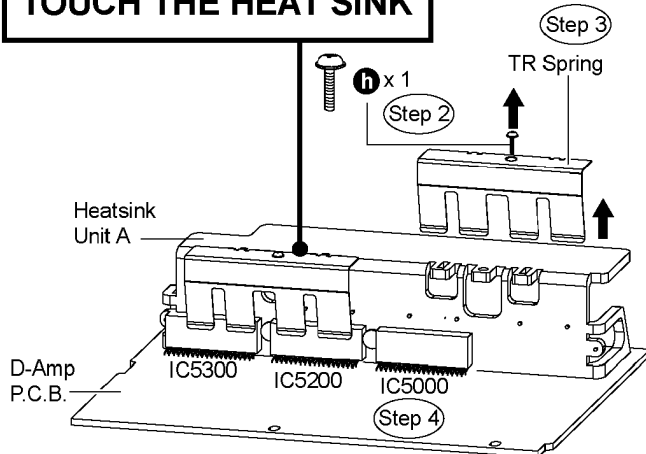
**Step 2** Remove 1 screw from the top of the heatsink unit A.

**Step 3** Remove the TR spring in the direction of the arrow.

**Step 4** Remove the digital amp IC (IC5000) from the heatsink unit A.

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

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



**Note :** For replacement of IC5200 & IC5300, repeat the (Step 1) to (Step 4). Refer to the diagrams of D-Amp P.C.B. (Item 10.17) for location of the parts.

## 10.19. Disassembly of SMPS, AC-Inlet & Voltage Selector P.C.B.

- Follow (Step 1) to (Step 3) of Item 10.3.
- Follow (Step 1) to (Step 2) of Item 10.17. for Disassembly of D-Amp P.C.B. Bracket.

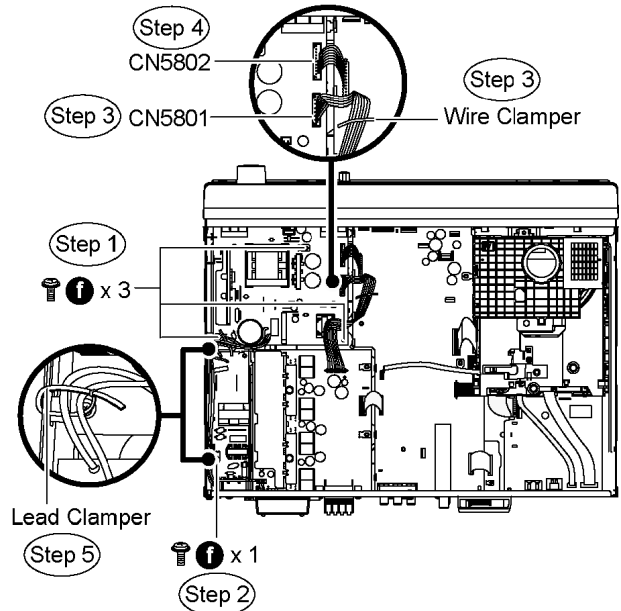
**Step 1** Remove 3 screws from SMPS P.C.B.

**Step 2** Remove 1 screw from AC-Inlet P.C.B.

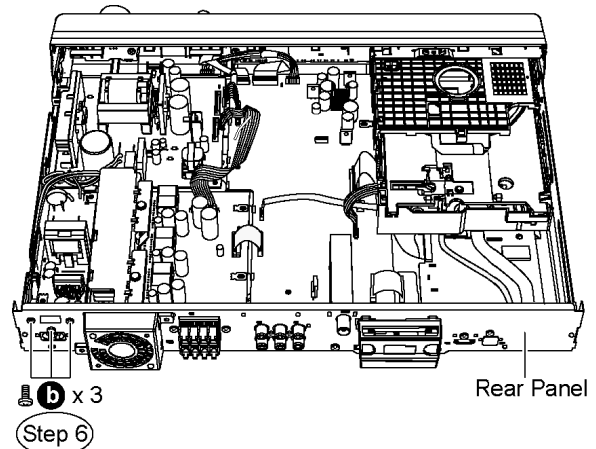
**Step 3** Remove the wire clammer to detach FFC cable from the connector (CN5801) on SMPS P.C.B.

**Step 4** Detach FFC cable from the connector (CN5802) on SMPS P.C.B.

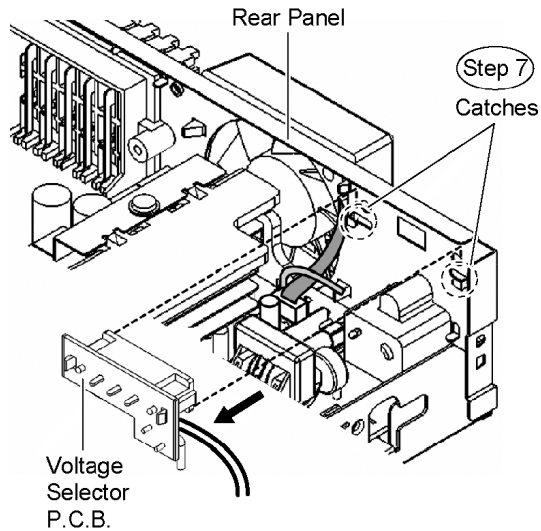
**Step 5** Remove the lead clammers.



**Step 6** Remove 3 screws from the rear panel.

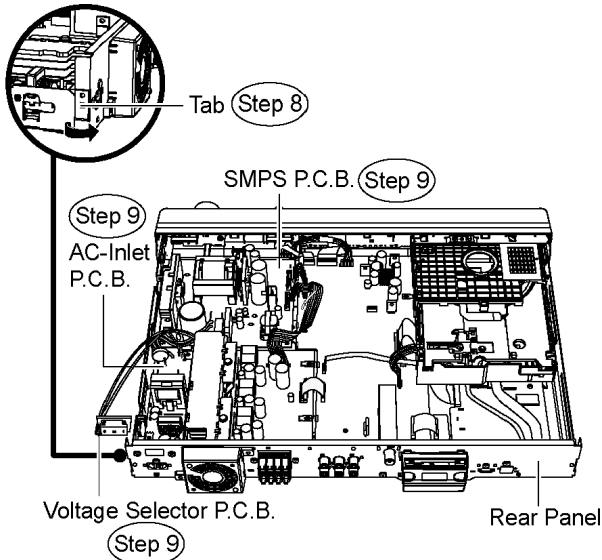


**Step 7** Remove Voltage Selector P.C.B. from the catches at the rear panel.



**Step 8** Release the tab of the rear panel in the direction of arrow.

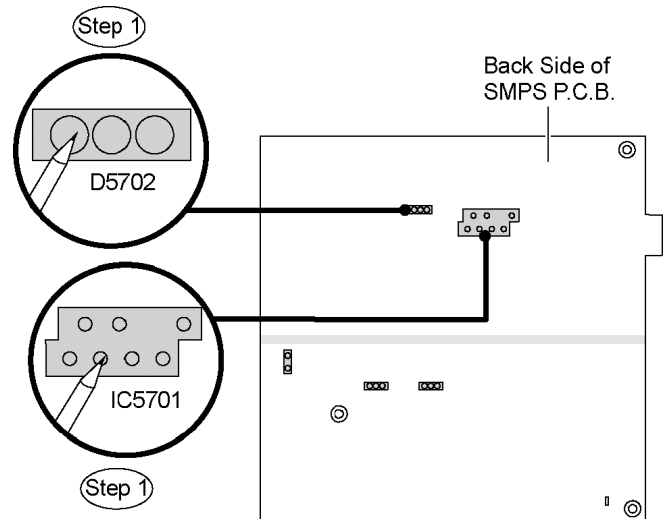
**Step 9** Remove SMPS, AC-Inlet & Voltage Selector P.C.B.



## 10.20. Replacement of Switch Regulator IC/Diode (IC5701/D5702)

- Follow (Step 1) to (Step 3) of Item 10.3.
- Follow (Step 1) to (Step 9) of Item 10.19.

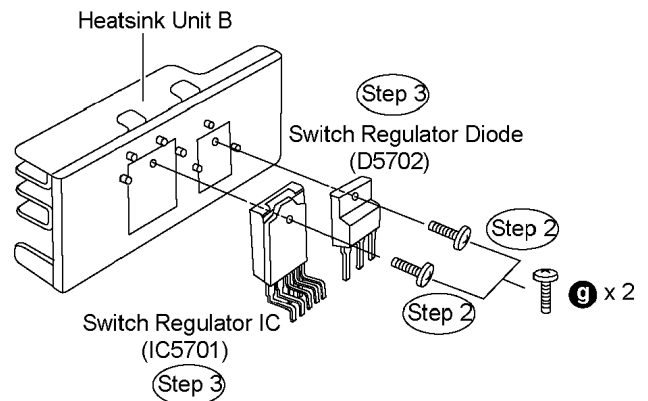
**Step 1** Desolder pins of the switch regulator IC (IC5701) or diode (D5702) on the back side of SMPS P.C.B.



**Step 2** Remove 1 screw from the switch regulator IC (IC5701) or diode (D5702).

**Step 3** Remove the switch regulator IC (IC5701) or 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.

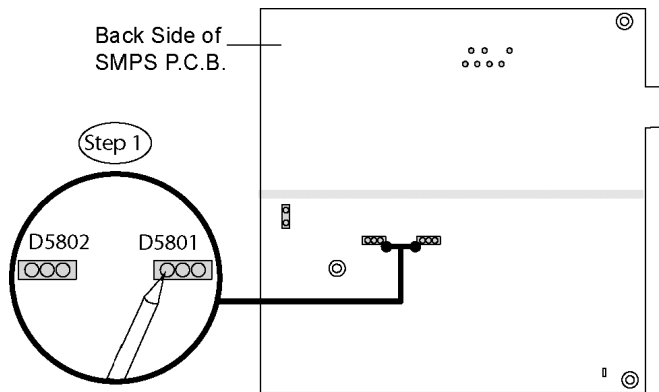


**Note :** Refer to the diagrams of SMPS P.C.B. (Item 10.19) for location of the parts.

## 10.21. Replacement of Regulator Diode (D5801/D5802)

- Follow (Step 1) to (Step 3) of Item 10.3.
- Follow (Step 1) to (Step 9) of Item 10.19.

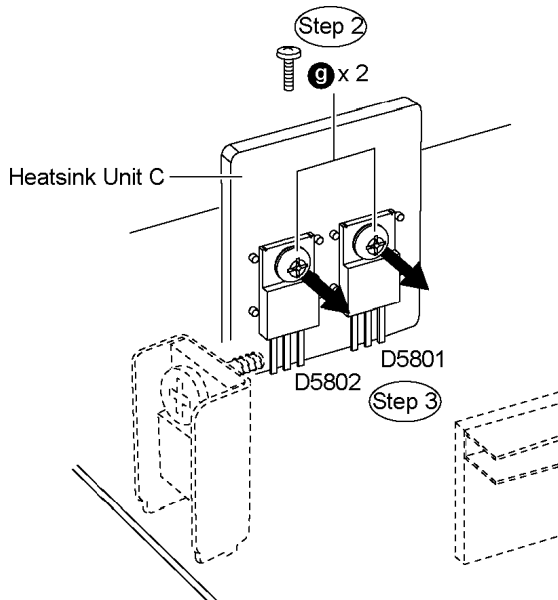
**Step 1** Desolder pins of the regulator diode (D5801/ D5802) on the back side of SMPS P.C.B.



**Step 2** Remove 1 screw from the regulator diode (D5801/D5802).

**Step 3** Remove the regulator diode (D5801/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.

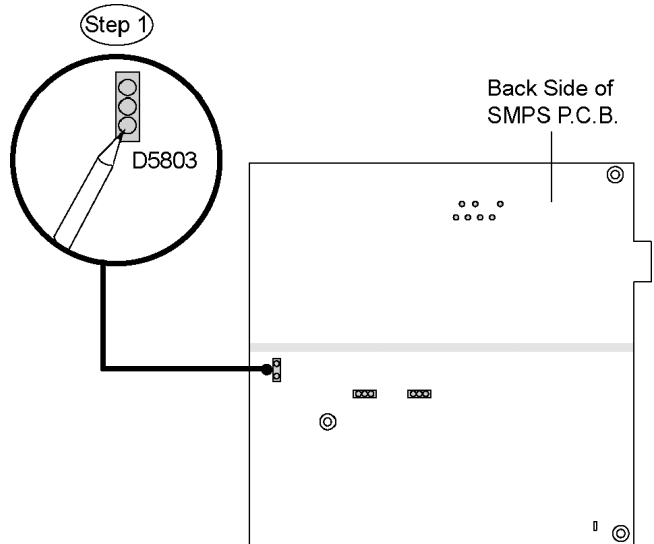


**Note :** Refer to the diagrams of SMPS P.C.B. (Item 10.19) for location of the parts.

## 10.22. Replacement of Regulator Diode (D5803)

- Follow (Step 1) to (Step 3) of Item 10.3.
- Follow (Step 1) to (Step 9) of Item 10.19.

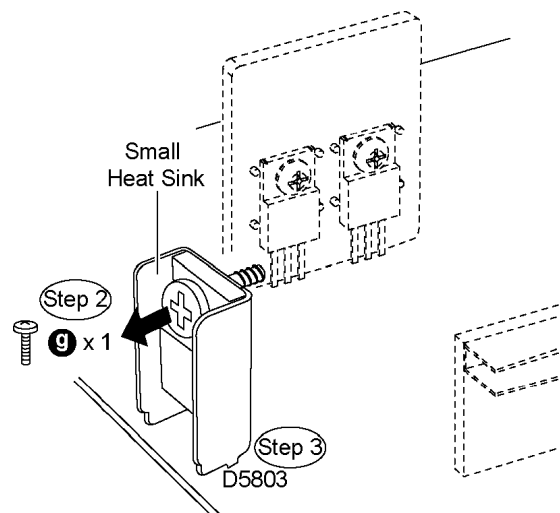
**Step 1** Desolder pins of the regulator diode (D5803) on the back side of SMPS P.C.B.



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

**Step 3** Remove the regulator diode (D5803) from the small heatsink .

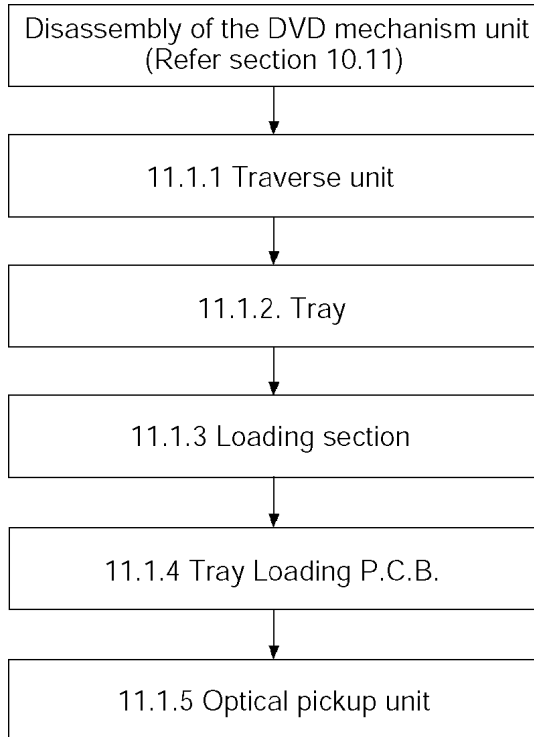
**Caution :** Handle the small heatsink with caution due to its high temperature after prolonged use. Touching it may lead to injuries.



**Note :** Refer to the diagrams of SMPS P.C.B. (Item 10.19) for location of the part.

# 11 Assembly and Disassembly of DVD Mechanism Unit

## 11.1. Disassembly Procedure

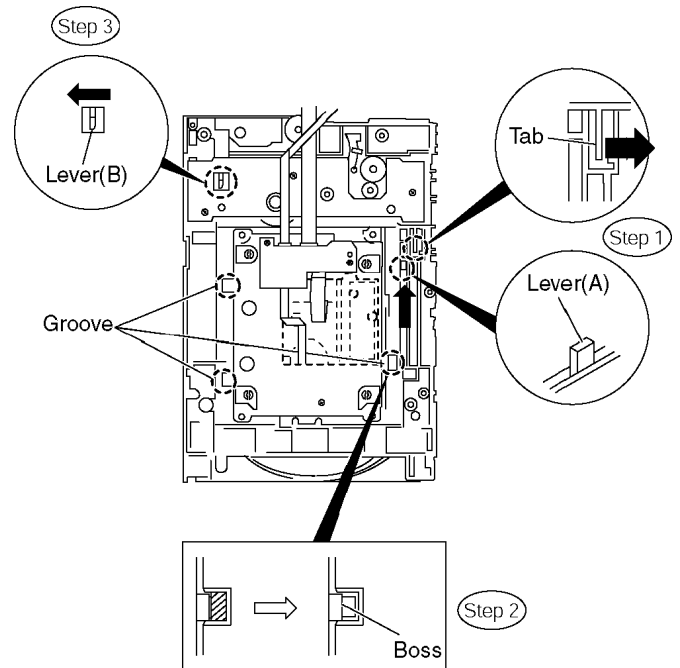


### 11.1.1. Disassembly of Traverse Unit (with Middle Chassis)

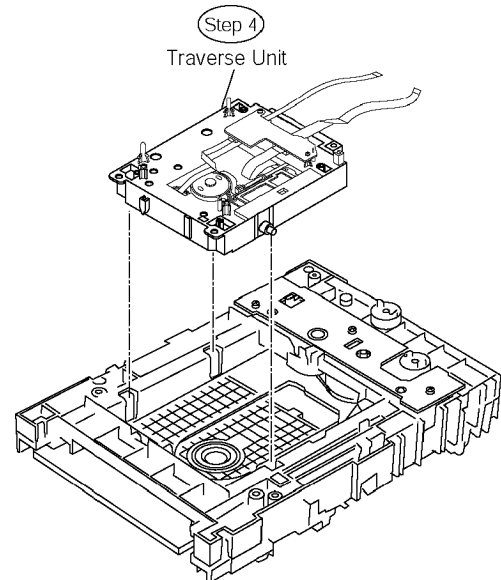
**Step 1** Slide the lever (A) in the arrow direction (to the opposite side) till it stops.

**Step 2** Slide the lever (A) further by bending the tab at the right side of the lever A in the right direction. (The right groove opens and the boss becomes seen.)

**Step 3** Open the lever (B) to left. (The 2 grooves at the left side open.).

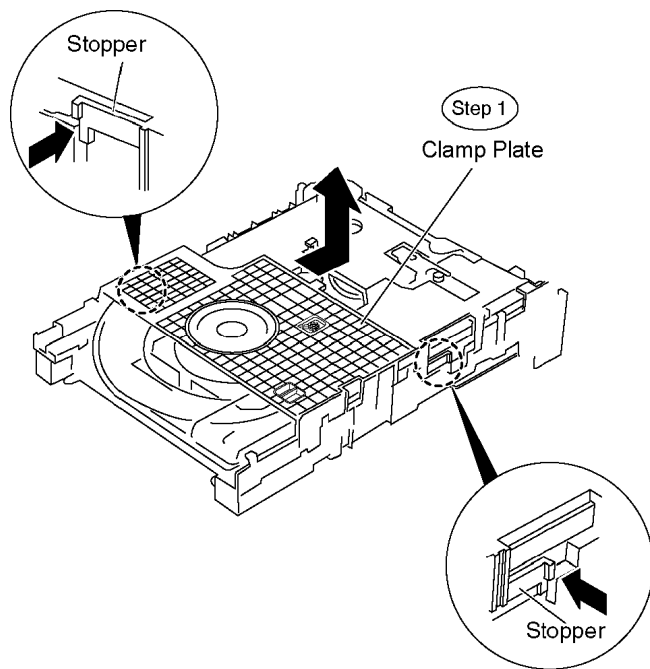


**Step 4** Remove the traverse unit.



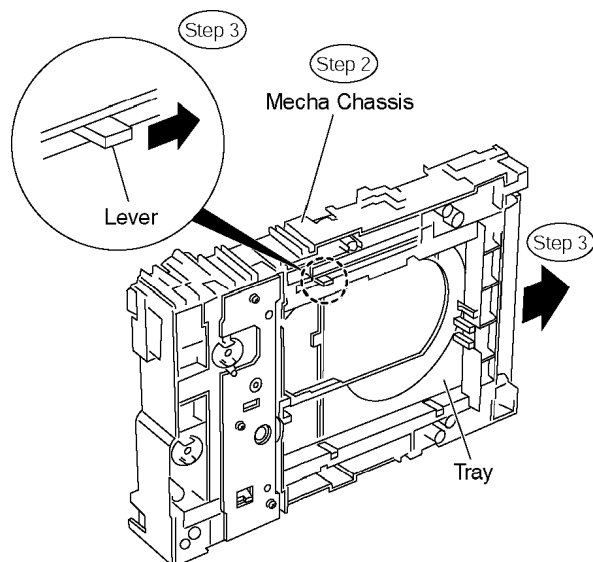
### 11.1.2. Disassembly of Tray

**Step 1** Slide the clamp plate while pressing the stopper in the arrow direction, and remove the clamp plate.

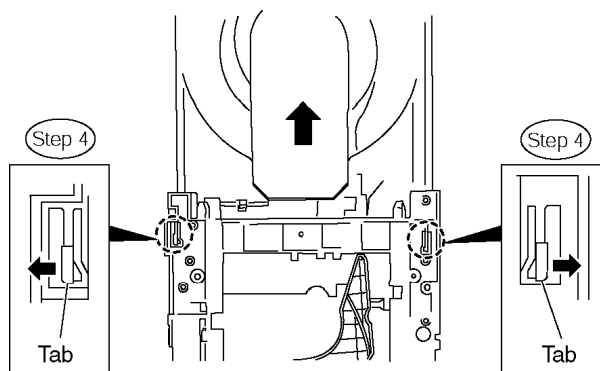


**Step 2** Raise the mecha chassis vertically.

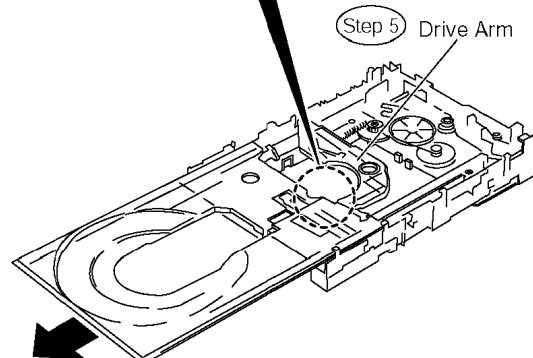
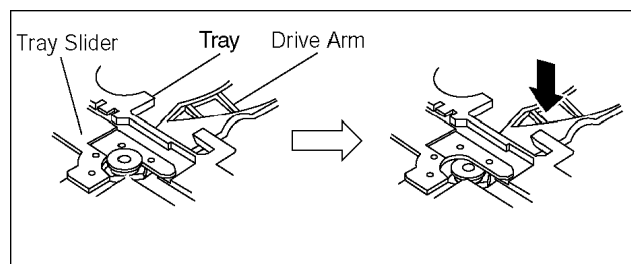
**Step 3** Slide the lever in the arrow direction till it stops and pull the tray out.



**Step 4** Spread the tabs at the both sides and pull the tray out. (The tray slides a little forward and stops.)



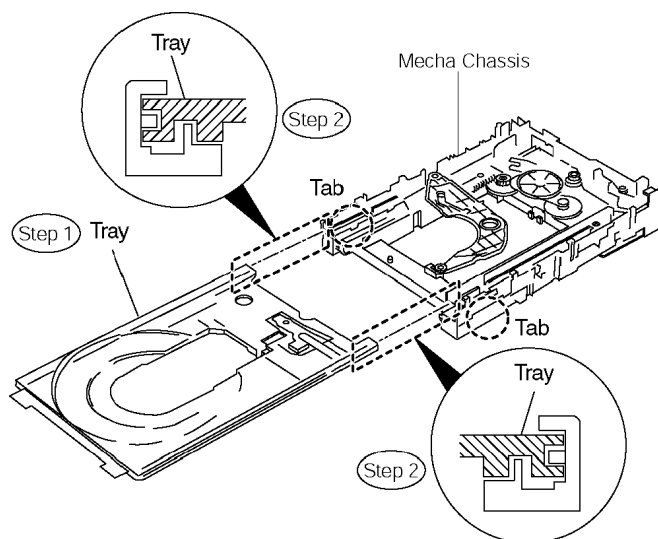
**Step 5** Remove the drive arm concave phase from the tray slider and tray.



### ●(Assembly of the tray unit)

**Step 1** Insert a part of the tray into the unit sliding over the groove on the mecha chassis.

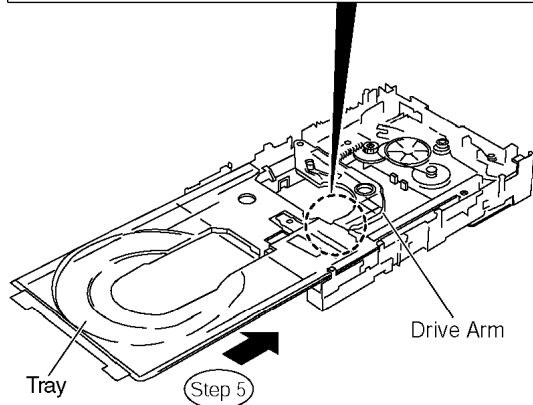
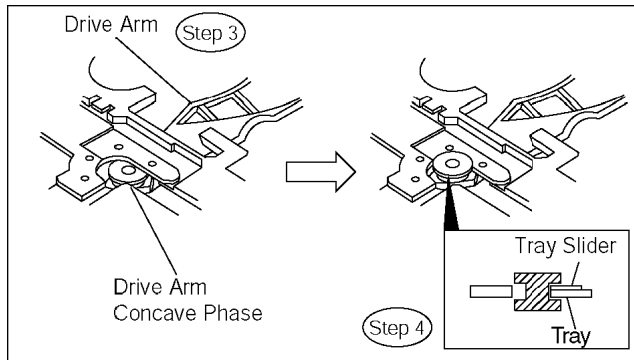
**Step 2** Insert the tray to the point before the tab of the mecha chassis.



**Step 3** Hook the drive arm concave phase over the tray and the tray slider.

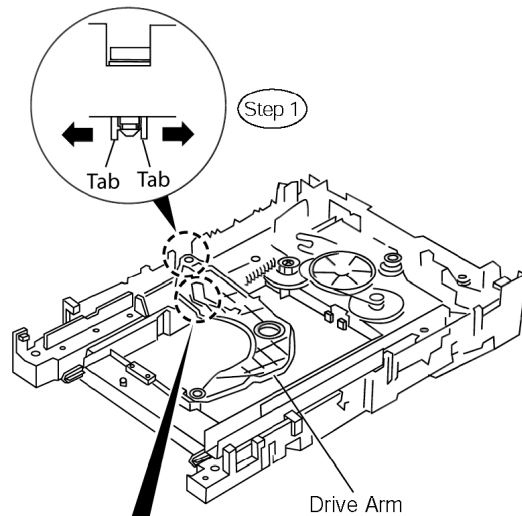
**Step 4** Press in the tray.

**Step 5** Make sure that the tray and the drive arm move smoothly.



### 11.1.3. Disassembly of Loading Section

**Step 1** Spread the tabs at the both sides and push out the drive arm.

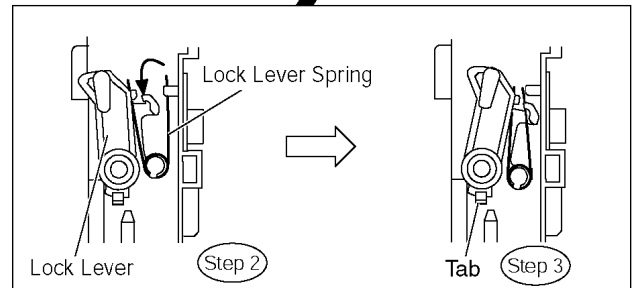
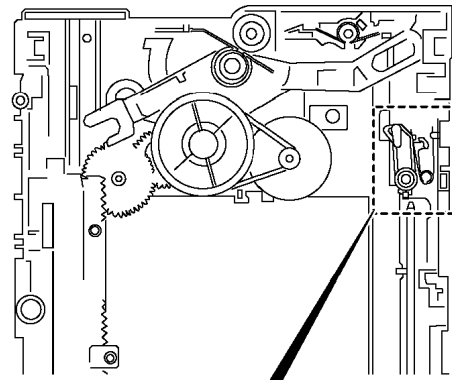


#### ■ Important point in installing the drive rack

- Install the boss of the drive rack into the drive arm groove securely.
- Boss
- Groove

**Step 2** Hook the lock lever spring on the lock lever projection part temporarily.

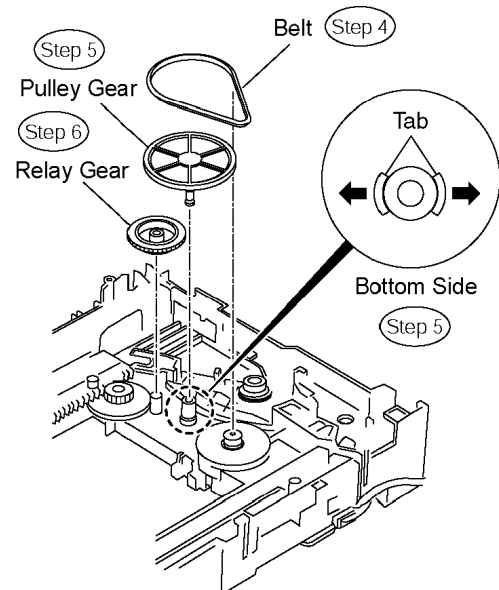
**Step 3** Unlock the tab and remove the lock lever.



**Step 4** Remove the belt.

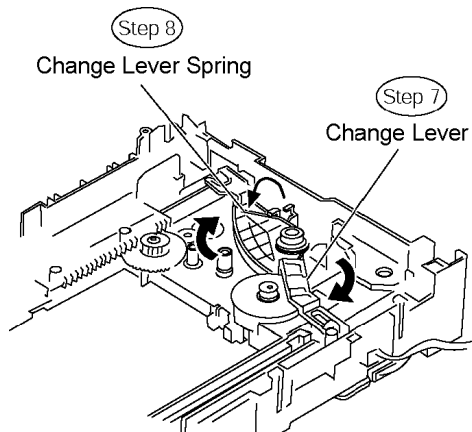
**Step 5** Unlock the tab and remove the pulley gear.

**Step 6** Remove the relay gear.

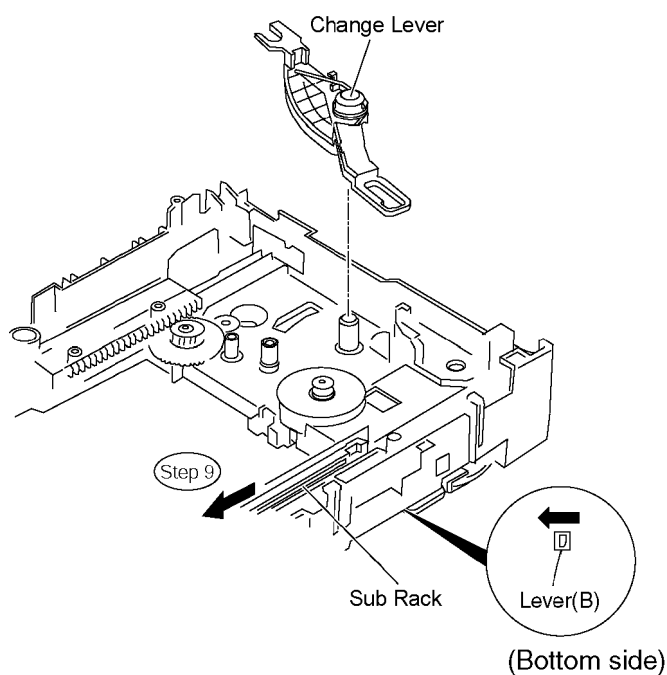


**Step 7** Turn the change lever in the arrow direction till it stops.

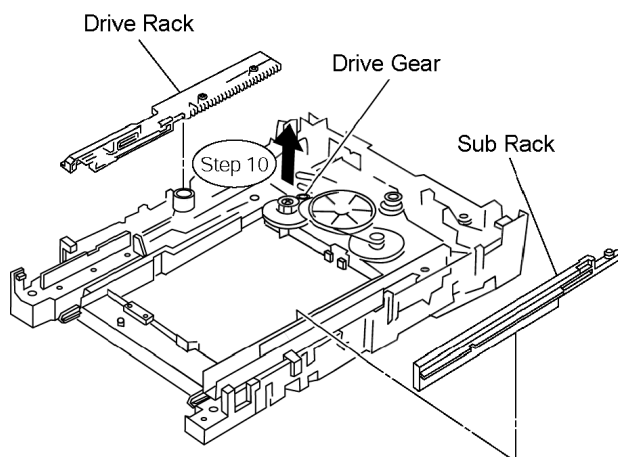
**Step 8** Hook the change lever spring on the change lever project part temporarily.



**Step 9** Pull the lever (B) at the bottom side in the direction of arrow and remove the change lever.



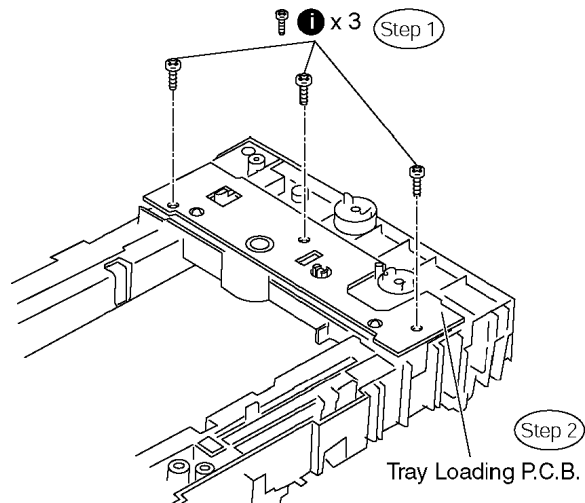
**Step 10** Remove the drive rack, the sub rack and the drive gear in the direction of arrow.



#### 11.1.4. Disassembly of Tray Loading P.C.B.

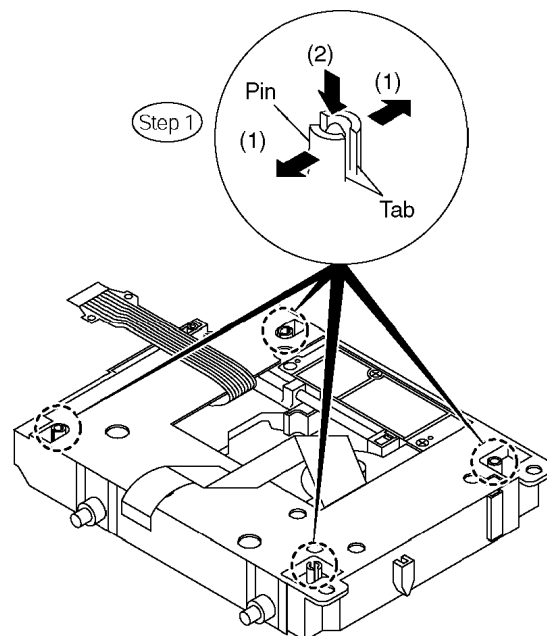
**Step 1** Remove 3 screws

**Step 2** Remove Tray Loading P.C.B.

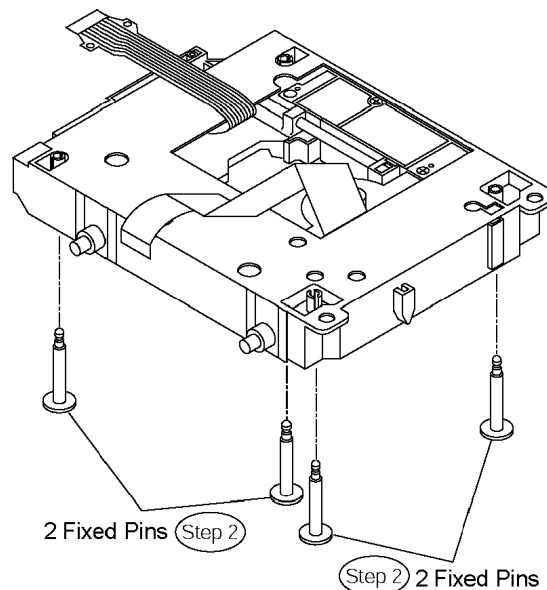


#### 11.1.5. Disassembly of Traverse Unit

**Step 1** Spread the tabs to push in the pin in the direction of arrows.

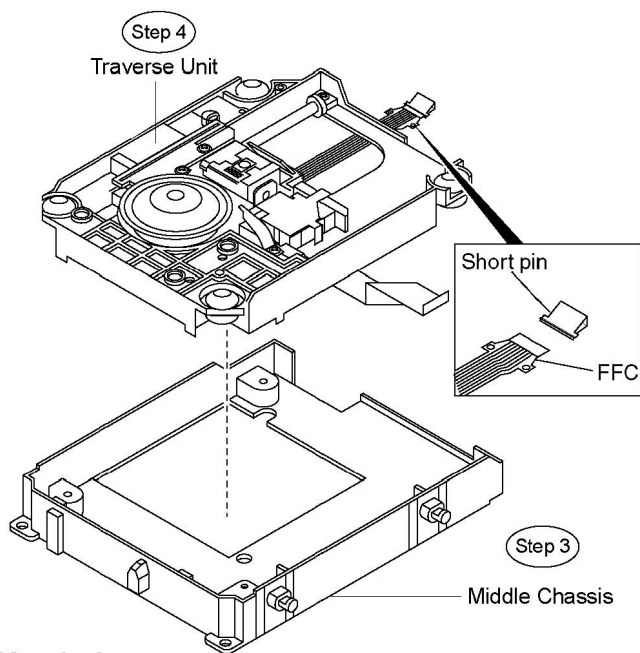


**Step 2** Remove 4 fixed pins.



**Step 3** Remove the middle chassis.

**Step 4** Remove the traverse unit.



**[Caution]**

Insert the short pin into the FFC of the optical pickup unit.  
[See "Caution to be taken in handling the optical pickup unit" ]

## 12 Service Position

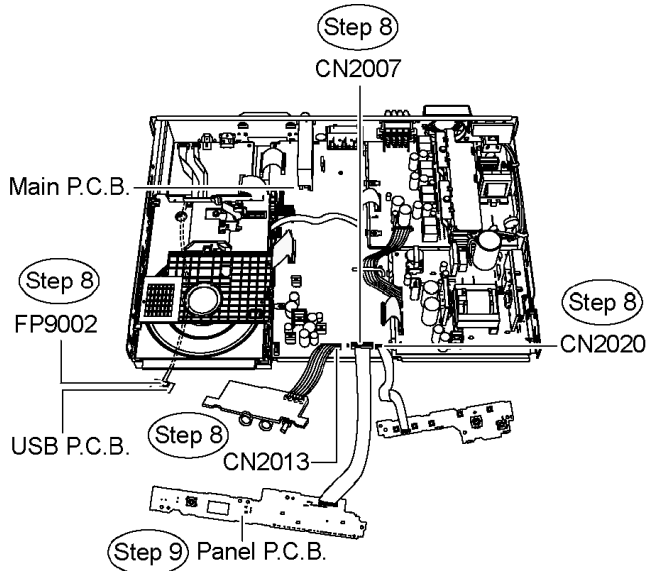
### 12.1. Checking & Repairing Panel P.C.B.

- Step 1** Remove the top cabinet.
- Step 2** Remove the DVD lid.
- Step 3** Disassemble the front panel.
- Step 4** Disassemble Panel P.C.B.
- Step 5** Disassemble Volume P.C.B.
- Step 6** Disassemble Mic P.C.B.
- Step 7** Disassemble USB P.C.B.

- Servicing Position of Panel P.C.B.

**Step 8** Connect FFC cable at the connectors (CN2020, CN2013 & CN2007) on Main P.C.B and (FP9002) on USB P.C.B.

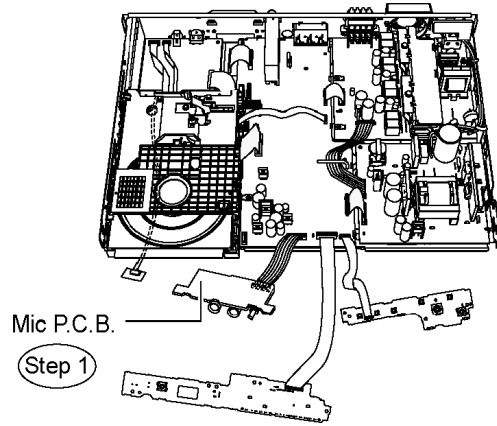
**Step 9** Turn over Panel P.C.B horizontally and place it according to the diagram shown below.



### 12.2. Checking & Repairing Mic P.C.B.

- Follow (Step 1) to (Step 8) of Item 12.1.

**Step 1** Turn over Mic P.C.B horizontally and place it according to the diagram shown below.

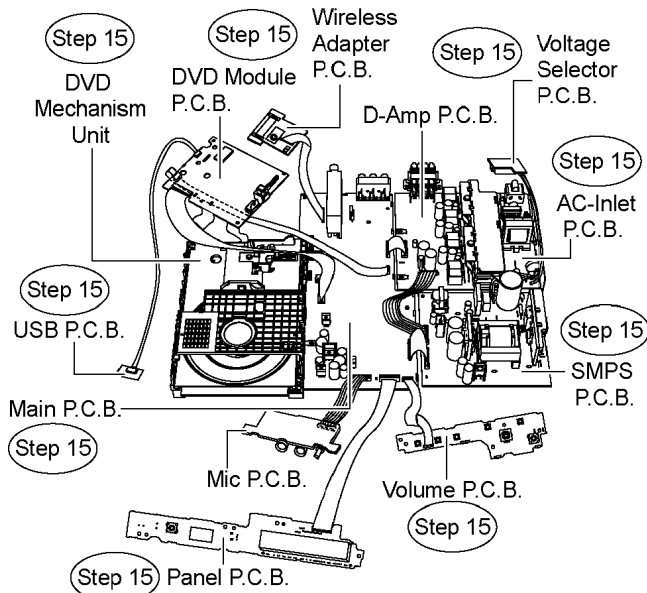


### 12.3. Checking & Repairing Main P.C.B.

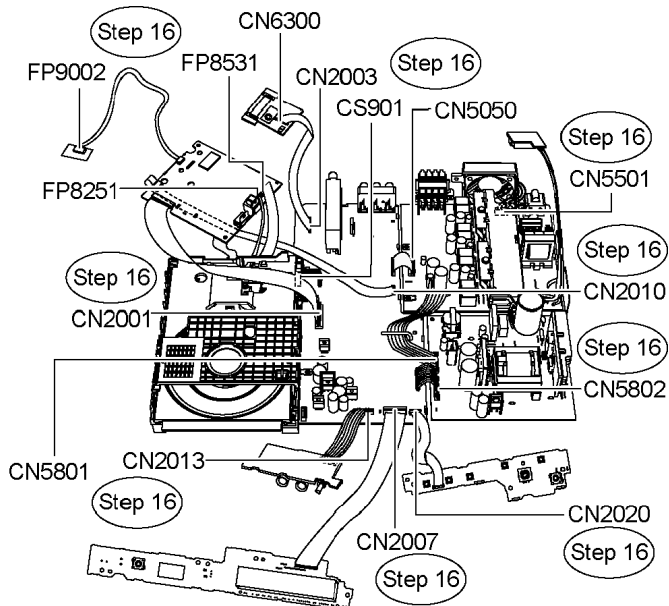
- Step 1** Remove the top cabinet.
- Step 2** Remove the DVD lid.
- Step 3** Disassemble the front panel.
- Step 4** Disassemble Volume P.C.B.
- Step 5** Disassemble Mic P.C.B.
- Step 6** Disassemble Panel P.C.B.
- Step 7** Disassemble USB P.C.B.
- Step 8** Disassemble Wireless Adapter P.C.B.
- Step 9** Disassemble the rear panel.
- Step 10** Disassemble the DVD mechanism unit.
- Step 11** Disassemble DVD Module P.C.B.
- Step 12** Disassemble Main P.C.B.
- Step 13** Disassemble D-Amp P.C.B.
- Step 14** Disassemble SMPS, AC-Inlet & Voltage Selector P.C.B.

- Servicing Position of Main P.C.B.

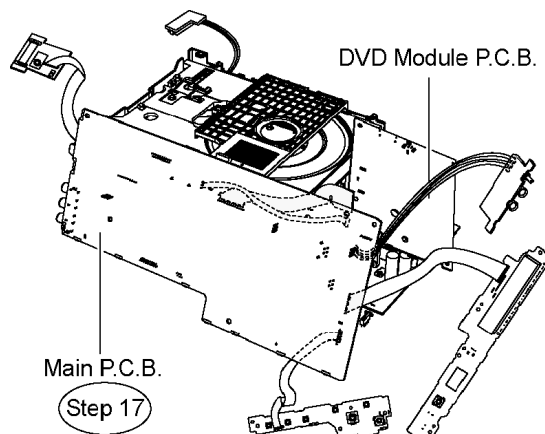
**Step 15** Position Volume P.C.B., Mic P.C.B., Panel P.C.B., USB P.C.B., Wireless Adapter P.C.B., DVD mechanism unit, DVD Module P.C.B., Main P.C.B., D-Amp P.C.B., SMPS P.C.B., AC-Inlet & Voltage Selector P.C.B. according to the diagram shown below.



**Step 16** Connect FFC cable at the connectors (CN2001, CN2003, CN2007, CN2010, CN2013 & CN2020) on Main P.C.B., (CN5050 & CN5501) on D-Amp P.C.B., (CN5801 & CN5802) on SMPS P.C.B., (CS901) on Tray Loading P.C.B., (FP8251 & FP8531) on DVD Module P.C.B., (CN6300) on Wireless Adapter P.C.B. and (FP9002) on USB P.C.B.



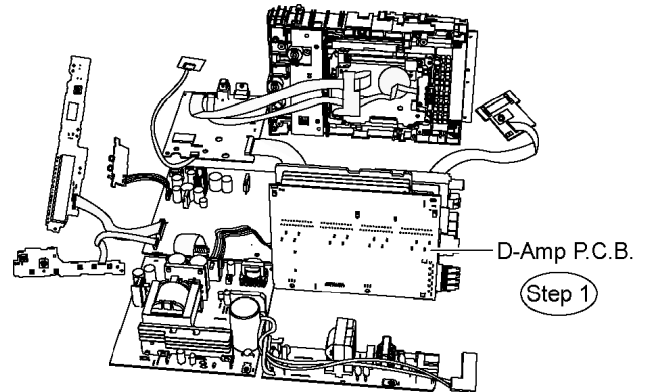
**Step 17** Turn over Main P.C.B. vertically and place it according to the diagram shown below.



## 12.4. Checking & Repairing D-Amp P.C.B.

- Follow (Step 1) to (Step 16) of Item 12.3.

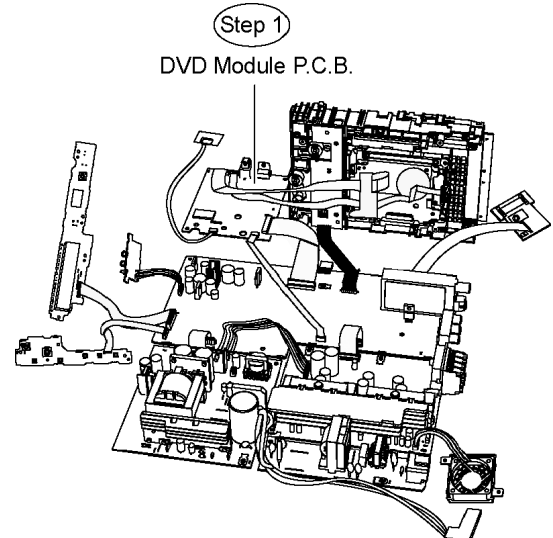
**Step 1** Turn over D-Amp P.C.B. vertically and place it according to the diagram shown below.



## 12.5. Checking & Repairing DVD Module P.C.B.

- Follow (Step 1) to (Step 16) of Item 12.3.

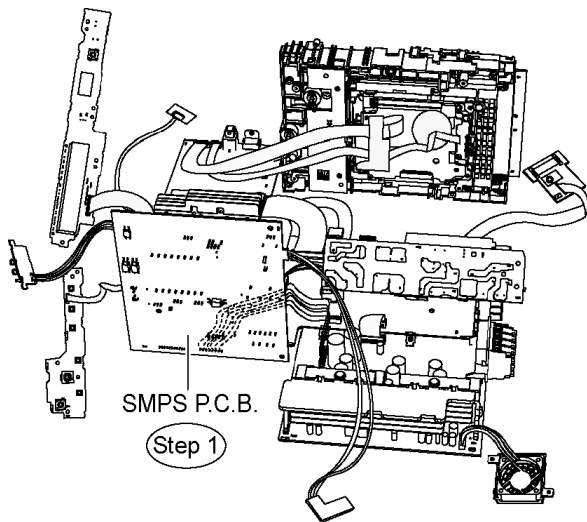
**Step 1** Turn over DVD Module P.C.B. vertically and place it according to the diagram shown below.



## 12.6. Checking & Repairing SMPS P.C.B.

- Follow (Step 1) to (Step 16) of Item 12.3.

**Step 1** Turn over SMPS P.C.B. vertically and place it according to the diagram shown below.



## 13 Measurements and Adjustments

### 13.1. Service Tools and Equipment

| Application     | Name                   | Number                                            |
|-----------------|------------------------|---------------------------------------------------|
| Tilt adjustment | DVD test disc          | DVDT-S20 [SPG]                                    |
|                 | TORX screw driver (T6) | Available on sales route. (T6) or RFKZ0185 [SPG]  |
| Others          | Grease                 | RFKXPG641 [SPG]                                   |
| Confirmation    | CD test disc           | PVCD-K06 or any other commercially available disc |
|                 | VCD test disc          | PVCD-K06 or any other commercially available disc |
|                 | Recovery disc          | RFKZD03R005 [SPG]                                 |

### 13.2. Important points in adjustment

#### 13.2.1. Important points in optical adjustment

- Before starting optical adjustment, be sure to take anti-static measures.
- Optical pickup tilt adjustment is needed after replacement of the following components.
  1. Optical pickup unit
  2. Spindle motor unit
  3. Optical pickup peripheral parts

#### Notes

Adjustment is generally unnecessary after replacing other parts of the traverse unit. However, make adjustment if there is a noticeable degradation in picture quality. Optical adjustments cannot be made inside the optical pickup. Adjustment is generally unnecessary after replacing the traverse unit.

#### 13.2.2. Important points in electrical adjustment

- Follow the adjustment procedures described in this manual.

### 13.3. Storing and handling of test discs

- Surface precision is vital for DVD test discs. Be sure to store and handle them carefully.
  1. Do not place discs directly onto the workbench, etc., after use.
  2. Handle discs carefully in order to maintain their flatness. Place them into their case after use and store them vertically. Store discs in a cool place where they are not exposed to direct sunlight or air from air conditioners.
  3. Accurate adjustment will not be possible if the disc is warped when placed on a surface made of glass, etc. If this happens, use a new test disc to make optical adjustments.
  4. If adjustment is done using a warped disc, the adjustment will be incorrect and some discs will not be playable.

## 13.4. Optical adjustment

### 13.4.1. Optical pickup tilt adjustment

| Measurement point                               | Adjustment point                                     | Mode                                                                               | Disc           |
|-------------------------------------------------|------------------------------------------------------|------------------------------------------------------------------------------------|----------------|
|                                                 | Tangential adjustment screw<br>Tilt adjustment screw | T01 (inner periphery) play<br>T30 (center periphery)<br>T43 (outer periphery) play | DVDT-S20 [SPG] |
| Measuring equipment                             | Adjustment value                                     |                                                                                    |                |
| None (Main unit display for servicing is used.) |                                                      | Adjust to the minimum jitter value.                                                |                |

#### 13.4.1.1. Adjustment procedure

1. While pressing STOP button on the main unit, press "5" on the remote control unit.
2. Confirm that "J\_xxx/yyy\_zz" (display1/display2) is shown on the front display.

##### For your information:

"yyy" and "zz" shown to the right have nothing to do with the jitter value. "yyy" is the error counter, while "zz" is the focus drive value.

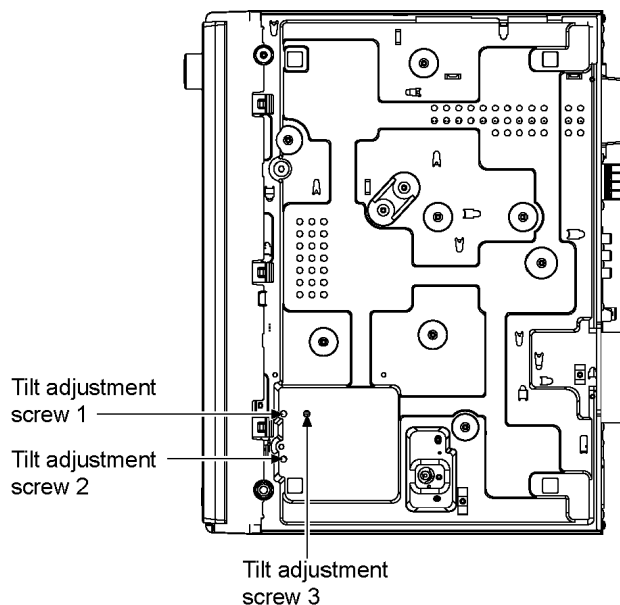
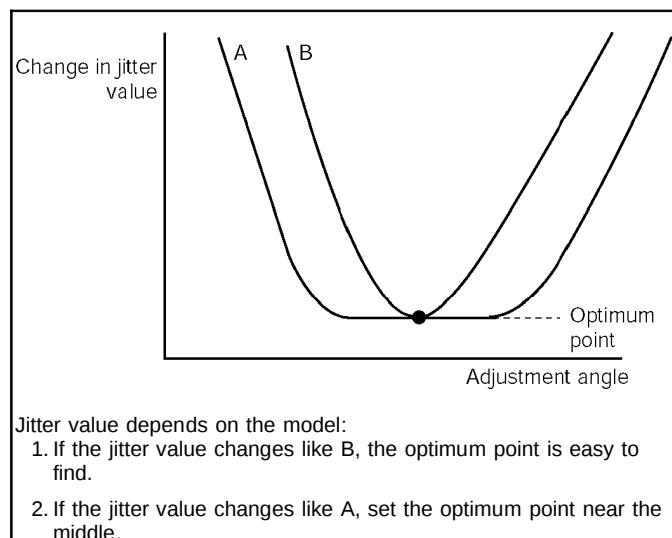
##### Note:

Jitter value appears on the front display.

3. Play test disc T30 (center periphery).
4. Adjust tangential adjustment screw so that the jitter value is minimized.
5. Play test disc T30 (center periphery).
6. Adjust tilt adjustment screw 1 so that the jitter value is minimized.
7. Play test disc T30 (center periphery).
8. Adjust tilt adjustment screw 2 so that the jitter value is minimized.
9. Repeat adjusting tilt adjustment screws 1 and 2 alternately until the jitter value is minimized.

#### 13.4.1.2. Important points

1. Make tangential adjustment first, and then make tilt adjustment.
2. Repeat adjusting two or three times to find the optimum point.
3. Finish the procedure with tilt adjustment.

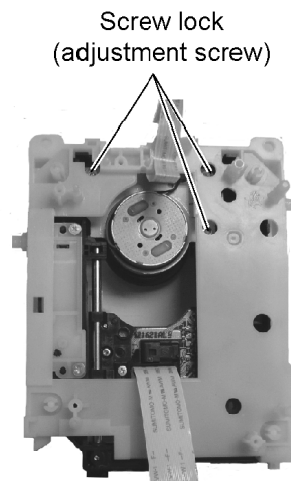


#### 13.4.1.3. Check after adjustment

Play test disc or any other disc to make sure there is no picture degradation in the inner, middle and outer peripheries, and no audio skipping. After adjustment is finished, lock each adjustment screw in position using screw lock.

#### 13.4.1.4. Procedure for screw lock

1. After adjustment, remove top cover, tray, clamper base and traverse unit in this sequence.
2. Lay the traverse unit upside down, and fix adjustment screw with screw lock.
3. After fixing, reassemble traverse unit, clamper base, tray and top cover.



# 14 Abbreviations

| INITIAL/LOGO |          | ABBREVIATIONS               |
|--------------|----------|-----------------------------|
| A            | A0-UP    | ADDRESS                     |
|              | ACLK     | AUDIO CLOCK                 |
|              | AD0-UP   | ADDRESS BUS                 |
|              | ADATA    | AUDIO PES PACKET DATA       |
|              | ALE      | ADDRESS LATCH ENABLE        |
|              | AMUTE    | AUDIO MUTE                  |
|              | AREQ     | AUDIO PES PACKET REQUEST    |
|              | ARF      | AUDIO RF                    |
|              | ASI      | SERVO AMP INVERTED INPUT    |
|              | ASO      | SERVO AMP OUTPUT            |
|              | ASYN     | AUDIO WORD DISTINCTION SYNC |
| B            | BCK      | BIT CLOCK (PCM)             |
|              | BCKIN    | BIT CLOCK INPUT             |
|              | BDO      | BLACK DROP OUT              |
|              | BLKCK    | SUB CODE BLOCK CLOCK        |
|              | BOTTOM   | CAP. FOR BOTTOM HOLD        |
|              | BYP      | BYPATH                      |
|              | BYTCK    | BYTE CLOCK                  |
| C            | CAV      | CONSTANT ANGULAR VELOCITY   |
|              | CBDO     | CAP. BLACK DROP OUT         |
|              | CD       | COMPACT DISC                |
|              | CDSCK    | CD SERIAL DATA CLOCK        |
|              | CDSRDATA | CD SERIAL DATA              |
|              | CDRF     | CD RF (EFM) SIGNAL          |
|              | CDV      | COMPACT DISC-VIDEO          |
|              | CHNDATA  | CHANNEL DATA                |
|              | CKSL     | SYSTEM CLOCK SELECT         |
|              | CLV      | CONSTANT LINEAR VELOCITY    |
|              | COFTR    | CAP. OFF TRACK              |
|              | CPA      | CPU ADDRESS                 |
|              | CPCS     | CPU CHIP SELECT             |
|              | CPDT     | CPU DATA                    |
|              | CPUADR   | CPU ADDRESS LATCH           |
|              | CPUADT   | CPU ADDRESS DATA BUS        |
|              | CPUIRQ   | CPU INTERRUPT REQUEST       |
|              | CPRD     | CPU READ ENABLE             |
|              | CPWR     | CPU WRITE ENABLE            |
|              | CS       | CHIP SELECT                 |
|              | CSYNIN   | COMPOSITE SYNC IN           |
|              | CSYNOUT  | COMPOSITE SYNC OUT          |
| D            | DACCK    | D/A CONVERTER CLOCK         |
|              | DEEMP    | DEEMPHASIS BIT ON/OFF       |
|              | DEMPH    | DEEMPHASIS SWITCHING        |
|              | DIG0-UP  | FL DIGIT OUTPUT             |
|              | DIN      | DATA INPUT                  |
|              | DMSRCK   | DM SERIAL DATA READ CLOCK   |
|              | DMUTE    | DIGITAL MUTE CONTROL        |
|              | DO       | DROP OUT                    |
|              | DOUT0-UP | DATA OUTPUT                 |
|              | DRF      | DATA SLICE RF (BIAS)        |
|              | DRPOUT   | DROP OUT SIGNAL             |
|              | DREQ     | DATA REQUEST                |
|              | DRESP    | DATA RESPONSE               |
|              | DSC      | DIGITAL SERVO CONTROLLER    |
|              | DSLIF    | DATA SLICE LOOP FILTER      |
|              | DVD      | DIGITAL VIDEO DISC          |

| INITIAL/LOGO |          | ABBREVIATIONS                    |
|--------------|----------|----------------------------------|
| E            | EC       | ERROR TORQUE CONTROL             |
|              | ECR      | ERROR TORQUE CONTROL REFERENCE   |
|              | ENCSEL   | ENCODER SELECT                   |
|              | ETMCLK   | EXTERNAL M CLOCK (81MHz/40.5MHz) |
|              | ETSCLK   | EXTERNAL S CLOCK (54MHz)         |
| F            | FBAL     | FOCUS BALANCE                    |
|              | FCLK     | FRAME CLOCK                      |
|              | FE       | FOCUS ERROR                      |
|              | FFI      | FOCUS ERROR AMP INVERTED INPUT   |
|              | FEO      | FOCUS ERROR AMP OUTPUT           |
|              | FG       | FREQUENCY GENERATOR              |
|              | FSC      | FREQUENCY SUB CARRIER            |
|              | FSCK     | FS (384 OVER SAMPLING) CLOCK     |
|              |          |                                  |
| G            | GND      | COMMON GROUNDING (EARTH)         |
| H            | HA0-UP   | HOST ADDRESS                     |
|              | HD0-UP   | HOST DATA                        |
|              | HINT     | HOST INTERRUPT                   |
|              | HRXW     | HOST READ/WRITE                  |
| I            | IECOUT   | IEC958 FORMAT DATA OUTPUT        |
|              | IPFRAG   | INTERPOLATION FLAG               |
|              | IREF     | I (CURRENT) REFERENCE            |
|              | ISEL     | INTERFACE MODE SELECT            |
| L            | LDON     | LASER DIODE CONTROL              |
|              | LPC      | LASER POWER CONTROL              |
|              | LRCK     | L CH/R CH DISTINCTION CLOCK      |
| M            | MA0-UP   | MEMORY ADDRESS                   |
|              | MCK      | MEMORY CLOCK                     |
|              | MCKI     | MEMORY CLOCK INPUT               |
|              | MCLK     | MEMORY SERIAL COMMAND CLOCK      |
|              | MDATA    | MEMORY SERIAL COMMAND DATA       |
|              | MDQ0-UP  | MEMORY DATA INPUT/OUTPUT         |
|              | MDQM     | MEMORY DATA I/O MASK             |
|              | MLD      | MEMORY SERIAL COMMAND LOAD       |
|              | MPEG     | MOVING PICTURE EXPERTS GROUP     |
| O            | ODC      | OPTICAL DISC CONTROLLER          |
|              | OFTR     | OFF TRACKING                     |
|              | OSCI     | OSCILLATOR INPUT                 |
|              | OSCO     | OSCILLATOR OUTPUT                |
|              | OSD      | ON SCREEN DISPLAY                |
| P            | P1-UP    | PORT                             |
|              | PCD      | CD TRACKING PHASE DIFFERENCE     |
|              | PCK      | PLL CLOCK                        |
|              | PDVD     | DVD TRACKING PHASE DIFFERENCE    |
|              | PEAK     | CAP. FOR PEAK HOLD               |
|              | PLLCLK   | CHANNEL PLL CLOCK                |
|              | PLLOK    | PLL LOCK                         |
|              | PWMCTL   | PWM OUTPUT CONTROL               |
|              | PWMDA    | PULSE WAVE MOTOR DRIVE A         |
|              | PWMOA, B | PULSE WAVE MOTOR OUT A, B        |

| INITIAL/LOGO |                 | ABBREVIATIONS               |
|--------------|-----------------|-----------------------------|
| R            | RE              | READ ENABLE                 |
|              | RFENV           | RF ENVELOPE                 |
|              | RFO             | RF PHASE DIFFERENCE OUTPUT  |
|              | RS              | (CD-ROM) REGISTER SELECT    |
|              | RSEL            | RF POLARITY SELECT          |
|              | RST             | RESET                       |
|              | RSV             | RESERVE                     |
| S            | SBI0, 1         | SERIAL DATA INPUT           |
|              | SBO0            | SERIAL DATA OUTPUT          |
|              | SBT0, 1         | SERIAL CLOCK                |
|              | SCK             | SERIAL DATA CLOCK           |
|              | SCKR            | AUDIO SERIAL CLOCK RECEIVER |
|              | SCL             | SERIAL CLOCK                |
|              | SCLK            | SERIAL CLOCK                |
|              | SDA             | SERIAL DATA                 |
|              | SEG0~UP         | FL SEGMENT OUTPUT           |
|              | SELCLK          | SELECT CLOCK                |
|              | SEN             | SERIAL PORT ENABLE          |
|              | SIN1, 2         | SERIAL DATA IN              |
|              | SOUT1, 2        | SERIAL DATA OUT             |
|              | SPDI            | SERIAL PORT DATA INPUT      |
|              | SPDO            | SERIAL PORT DATA OUTPUT     |
|              | SPEN            | SERIAL PORT R/W ENABLE      |
|              | SPRCLK          | SERIAL PORT READ CLOCK      |
|              | SPWCLK          | SERIAL PORT WRITE CLOCK     |
|              | SQCK            | SUB CODE Q CLOCK            |
|              | SQCX            | SUB CODE Q DATA READ CLOCK  |
|              | SRDATA          | SERIAL DATA                 |
|              | SRMADR          | SRAM ADDRESS BUS            |
|              | SRMDT0~7        | SRAM DATA BUS 0~7           |
|              | SS              | START/STOP                  |
|              | STAT            | STATUS                      |
|              | STCLK           | STREAM DATA CLOCK           |
|              | STD0~UP         | STREAM DATA                 |
|              | STENABLE        | STREAM DATA INPUT ENABLE    |
|              | STSEL           | STREAM DATA POLARITY SELECT |
|              | STVALID         | STREAM DATA VALIDITY        |
|              | SUBC            | SUB CODE SERIAL             |
|              | SBCK            | SUB CODE CLOCK              |
| SUBQ         | SUB CODE Q DATA |                             |
| SYSCLK       | SYSTEM CLOCK    |                             |
| T            | TE              | TRACKING ERROR              |
|              | TIBAL           | BALANCE CONTROL             |
|              | TID             | BALANCE OUTPUT 1            |
|              | TIN             | BALANCE INPUT               |
|              | TIP             | BALANCE INPUT               |
|              | TIS             | BALANCE OUTPUT 2            |
|              | TPSN            | OP AMP INPUT                |
|              | TPSO            | OP AMP OUTPUT               |
|              | TPSP            | OP AMP INVERTED INPUT       |
|              | TRCRS           | TRACK CROSS SIGNAL          |
|              | TRON            | TRACKING ON                 |
|              | TRSON           | TRAVERSE SERVO ON           |

| INITIAL/LOGO |                                                                                                                                                                     | ABBREVIATIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| V            | VBLANK<br>VCC<br><br>VCDCONT<br><br>VDD<br>VFB<br>VREF<br>VSS                                                                                                       | V BLANKING<br>COLLECTOR POWER SUPPLY<br>VOLTAGE<br>VIDEO CD CONTROL (TRACKING<br>BALANCE)<br>DRAIN POWER SUPPLY VOLTAGE<br>VIDEO FEED BACK<br>VOLTAGE REFERENCE<br>SOURCE POWER SUPPLY VOLTAGE                                                                                                                                                                                                                                                                 |
| W            | WAIT<br>WDCK<br>WEH<br>WSR                                                                                                                                          | BUS CYCLE WAIT<br>WORD CLOCK<br>WRITE ENABLE HIGH<br>WORD SELECT RECEIVER                                                                                                                                                                                                                                                                                                                                                                                      |
| X            | X<br>XALE<br>XAREQ<br>XCDROM<br>XCS<br>XCSYNC<br>XDS<br>XHSYNCO<br>XHINT<br>XI<br>XINT<br>XMW<br>XO<br>XRE<br>XSRMCE<br>XSRMOE<br>XSRMWE<br>XVCS<br>XVDS<br>XVSYNCO | X' TAL<br>X ADDRESS LATCH ENABLE<br>X AUDIO DATA REQUEST<br>X CD ROM CHIP SELECT<br>X CHIP SELECT<br>X COMPOSITE SYNC<br>X DATA STROBE<br>X HORIZONTAL SYNC OUTPUT<br>XH INTERRUPT REQUEST<br>X' TAL OSCILLATOR INPUT<br>X INTERRUPT<br>X MEMORY WRITE ENABLE<br>X' TAL OSCILLATOR OUTPUT<br>X READ ENABLE<br>X SRAM CHIP ENABLE<br>X SRAM OUTPUT ENABLE<br>X SRAM WRITE ENABLE<br>X V-DEC CHIP SELECT<br>X V-DEC CONTROL BUS STROBE<br>X VERTICAL SYNC OUTPUT |

## 15 Voltage and Waveform Chart

## 15.1. DVD Module P.C.B.

|         |        |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|---------|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ref No. | IC3901 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| MODE    | 1      | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  |
| CD PLAY | -      | -   | -   | -   | 1.3 | 1.4 | 0   | 2.9 | 3.4 | 0   | 0   | 0.2 | 3.4 | 0   | 0   | 0   | 3.4 | 0   | 0   | 0   |
| Ref No. | IC3901 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| MODE    | 21     | 22  | 23  | 24  | 25  | 26  | 27  | 28  | 29  | 30  | 31  | 32  | 33  | 34  | 35  | 36  | 37  | 38  | 39  | 40  |
| CD PLAY | 3.4    | 0   | 0   | 0   | 3.4 | 1.3 | 0   | 3.4 | -   | -   | -   | -   | 1.6 | 3.4 | 0.9 | 0.1 | 0.1 | 0.9 | 0   | 3.4 |
| Ref No. | IC3901 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| MODE    | 41     | 42  | 43  | 44  | 45  | 46  | 47  | 48  | 49  | 50  | 51  | 52  | 53  | 54  | 55  | 56  | 57  | 58  | 59  | 60  |
| CD PLAY | 1.7    | 1.3 | 1.7 | 0   | 1.7 | 0   | 1.3 | 0   | 0   | 0   | 0   | 3.4 | 0   | 0   | 1.3 | 0   | 0   | 0   | 0   | 0   |
| Ref No. | IC3901 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| MODE    | 61     | 62  | 63  | 64  | 65  | 66  | 67  | 68  | 69  | 70  | 71  | 72  | 73  | 74  | 75  | 76  | 77  | 78  | 79  | 80  |
| CD PLAY | 0      | 0   | 0   | -   | -   | 0   | 0   | 0   | 0   | 3.4 | 0   | 0   | 0   | 0   | 1.3 | 0   | 0   | 0   | 0   | 0   |
| Ref No. | IC3901 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| MODE    | 81     | 82  | 83  | 84  | 85  | 86  | 87  | 88  | 89  | 90  | 91  | 92  | 93  | 94  | 95  | 96  | 97  | 98  | 99  | 100 |
| CD PLAY | 0      | 0   | 0   | 3.4 | 1.3 | 0   | 1.0 | 0.7 | 0.8 | 2.3 | 0   | 1.3 | 1.3 | 1.8 | 1.2 | -   | -   | -   | 0   | 3.4 |
| Ref No. | IC3901 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| MODE    | 101    | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 | 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 |
| CD PLAY | 0      | 1.3 | 0   | 0   | 0   | 3.4 | 3.4 | 3.4 | 1.3 | 0   | 1.8 | 0   | 3.3 | 3.2 | 3.4 | 1.3 | 1.6 | 0   | 0   | 3.4 |
| Ref No. | IC3901 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| MODE    | 121    | 122 | 123 | 124 | 125 | 126 | 127 | 128 |     |     |     |     |     |     |     |     |     |     |     |     |
| CD PLAY | 3.4    | 0   | 1.3 | 3.4 | 0   | 1.6 | -   | -   |     |     |     |     |     |     |     |     |     |     |     |     |
| Ref No. | IC3952 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| MODE    | 1      | 2   | 3   | 4   | 5   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| CD PLAY | 8.5    | 0   | 1.3 | 5.1 | 8.9 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 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 | 1.2    | 1.4 | 1.5 | 0   | 0   | 3.4 | 1.8 | 1.3 | 1.4 | 1.2 | 1.3 | 0   | 1.1 | 1   | 0   | 3.4 | 1.3 | 1.1 | 1.9 | 0.7 |
| Ref No. | IC8001 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| MODE    | 21     | 22  | 23  | 24  | 25  | 26  | 27  | 28  | 29  | 30  | 31  | 32  | 33  | 34  | 35  | 36  | 37  | 38  | 39  | 40  |
| CD PLAY | 0.6    | 0.4 | 2.3 | 0.5 | 1.4 | 2.6 | 2   | 0.8 | 1.8 | 0.7 | 3.4 | 0   | 3.4 | 0.7 | 1.1 | 1.5 | 1.6 | 1.8 | 1.4 | 2   |
| 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 | 1.8    | 0   | 0   | 1.3 | 0   | 3.4 | 3.4 | 3.4 | 3.4 | 1.7 | 0   | 3.4 | 2.8 | 2.8 | 3   | 3.4 | 3.2 | 3.2 | 0   | 3.2 |
| 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 | 0.1    | 0   | 0   | 0.8 | 0.1 | 1.9 | 1.6 | 0   | 3.2 | 3.2 | 0   | 3.2 | 3.2 | 0   | 0.1 | 0   | 0   | 0   | 0   | 0   |
| Ref No. | IC8001 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| MODE    | 81     | 82  | 83  | 84  | 85  | 86  | 87  | 88  | 89  | 90  | 91  | 92  | 93  | 94  | 95  | 96  | 97  | 98  | 99  | 100 |
| CD PLAY | 0      | 0   | 1.2 | 3.2 | 0.8 | 2.3 | 0   | 1.8 | 0   | 0.5 | 1.8 | 3.3 | 2.2 | 2.2 | 1.8 | 1.8 | 1.7 | 1.7 | 1.7 | 1.7 |

|         |        |     |      |     |     |        |     |     |     |     |        |     |     |     |     |       |     |     |     |     |
|---------|--------|-----|------|-----|-----|--------|-----|-----|-----|-----|--------|-----|-----|-----|-----|-------|-----|-----|-----|-----|
| Ref.No. | IC8421 |     |      |     |     |        |     |     |     |     |        |     |     |     |     |       |     |     |     |     |
| MODE    | 1      | 2   | 3    | 4   | 5   | 6      | 7   | 8   | 9   | 10  | 11     | 12  | 13  | 14  | 15  | 16    | 17  | 18  | 19  | 20  |
| CD PLAY | 0      | 3.3 | 2.9  | 3.3 | 1.6 | 0.9    | 1.7 | 1.7 | 5.2 | 0   | 0.9    | 0.1 | 0.1 | 0   | 2.5 | 2.5   | 5.2 | 0   | 2.5 | 2.5 |
| Ref.No. | IC8421 |     |      |     |     |        |     |     |     |     |        |     |     |     |     |       |     |     |     |     |
| MODE    | 21     | 22  | 23   | 24  | 25  | 26     | 27  | 28  |     |     |        |     |     |     |     |       |     |     |     |     |
| CD PLAY | 2.5    | 2.5 | 5.2  | 0   | 2.6 | 2.5    | 2.6 | 5.1 |     |     |        |     |     |     |     |       |     |     |     |     |
| Ref.No. | IC8601 |     |      |     |     |        |     |     |     |     |        |     |     |     |     |       |     |     |     |     |
| MODE    | 1      | 2   | 3    | 4   |     |        |     |     |     |     |        |     |     |     |     |       |     |     |     |     |
| CD PLAY | 1.2    | 3.3 | 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 | 3.3    | 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 | 1.1    | 1.0 | 1.8  | 1.0 | 1.7 | 2.3    | 1.3 | 1.8 | 1.2 | 0.1 | 3.3    | 3.3 | 3.3 | 3.3 | 1.6 | 1.6   | 0.6 | 1.2 | 1.5 | 1.  |
| Ref.No. | IC8651 |     |      |     |     |        |     |     |     |     |        |     |     |     |     |       |     |     |     |     |
| MODE    | 21     | 22  | 23   | 24  | 25  | 26     | 27  | 28  | 29  | 30  | 31     | 32  | 33  |     | 35  | 36    | 37  | 38  | 39  | 40  |
| CD PLAY | 1.8    | 1.8 | 2    | 1.9 | 0   | 2      | 0   | 2.5 | 1.7 | 1.1 | 0.8    | 1.6 | 1.0 | 1.6 | 2.3 | 1.4   | 3.3 | 1.7 | 1.1 | 1.4 |
| Ref.No. | IC8651 |     |      |     |     |        |     |     |     |     |        |     |     |     |     |       |     |     |     |     |
| MODE    | 41     | 42  | 43   | 44  | 45  | 46     | 47  | 48  |     |     |        |     |     |     |     |       |     |     |     |     |
| CD PLAY | 1.6    | 1.7 | 1.7  | 2   | 1.9 | 0      | 3.3 | 0.8 |     |     |        |     |     |     |     |       |     |     |     |     |
| Ref.No. | IC8691 |     |      |     |     | IC8695 |     |     |     |     | IC8701 |     |     |     |     |       |     |     |     |     |
| MODE    | 1      | 2   | 3    | 4   | 5   |        | 1   | 2   | 3   | 4   | 5      |     | 1   | 2   | 3   | 4     | 5   |     |     |     |
| CD PLAY | 3      | 3   | 0    | 4.6 | 5.1 |        | 2.7 | 2.7 | 0   | 4.2 | 5.1    |     | -   | 1.5 | 0   | 1.7   | 3.3 |     |     |     |
| Ref.No. | IC8901 |     |      |     |     |        |     |     |     |     |        |     |     |     |     |       |     |     |     |     |
| MODE    | 1      | 2   | 3    | 4   | 5   |        |     |     |     |     |        |     |     |     |     |       |     |     |     |     |
| CD PLAY | 3.3    | 3.3 | 0    | 3.4 | 3.4 |        |     |     |     |     |        |     |     |     |     |       |     |     |     |     |
| 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 | 0.1    | 2.7 | 1.8  | 2   | 1.7 | 1.7    | 1.6 | 1.5 | 1.1 | 0   | 2      | 1.1 | 1.5 | 1.7 | 1.8 | 1.8   | 2   | 1.9 | 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    | 1.7 | 1.3  | 2.2 | 1.7 | 1.0    | 1.6 | 0.8 | 1.1 | 0   | 2      | 1   | 0.9 | 1.8 | 1   | 1.7   | 2.3 | 1.3 | 1.8 | 3.3 |
| Ref.No. | IC9003 |     |      |     |     | IC9005 |     |     |     |     |        |     |     |     |     |       |     |     |     |     |
| MODE    | 1      | 2   | 3    | 4   | 5   | 6      |     | 1   | 2   | 3   | 4      | 5   | 6   | 7   | 8   |       |     |     |     |     |
| CD PLAY | 1.6    | 0.1 | 1.6  | 1.7 | 3.3 | 1.6    |     | 0.1 | 5.1 | 5.1 | 3.3    | 2.2 | 3.3 | 0.1 | 3.4 |       |     |     |     |     |
| Ref.No. | Q3901  |     |      |     |     | Q3902  |     |     |     |     | Q3903  |     |     |     |     | Q3941 |     |     |     |     |
| MODE    | E      | C   | B    |     | S   | D      | G   |     | S   | D   | G      |     | E   | C   | B   |       | E   | C   | B   |     |
| CD PLAY | 0.1    | 4.2 | -0.5 |     | 3.4 | 5.1    | 3.4 |     | 3.4 | 5.1 | 3.4    |     | 3.6 | 3.5 | 3.6 |       | 0   | 3.5 | 0   |     |
| Ref.No. | Q3943  |     |      |     |     | Q8321  |     |     |     |     | Q8325  |     |     |     |     | Q8331 |     |     |     |     |
| MODE    | E      | C   | B    |     | E   | C      | B   |     | E   | C   | B      |     | E   | C   | B   |       | E   | C   | B   |     |
| CD PLAY | 4      | 5.6 | 4.3  |     | 1.1 | 0      | 0.4 |     | 1.5 | 0   | 0.9    |     | 1.1 | 0   | 0.4 |       | 1.6 | 0   | 0.9 |     |
| Ref.No. | Q8341  |     |      |     |     | Q8551  |     |     |     |     | Q8552  |     |     |     |     | Q8561 |     |     |     |     |
| MODE    | E      | C   | B    |     | E   | C      | B   |     | E   | C   | B      |     | E   | C   | B   |       | E   | C   | B   |     |
| CD PLAY | 1.5    | 0   | 0.9  |     | 0.1 | 5.1    | 0.1 |     | 5.1 | 0   | 5.1    |     | 1.3 | 3.9 | 1.9 |       | 4.5 | 2.3 | 3.9 |     |
| Ref.No. | QR8111 |     |      |     |     | QR8420 |     |     |     |     | QR8571 |     |     |     |     |       |     |     |     |     |
| MODE    | 1      | 2   | 3    | 4   | 5   | 6      |     | E   | C   | B   |        | E   | C   | B   |     |       |     |     |     |     |
| CD PLAY | 0      | 0   | 1.3  | 0.1 | 0.1 | 4.8    |     | 0   | 4.3 | 0.1 |        | 3.4 | 3.3 | 0.1 |     |       |     |     |     |     |

SA-PT850GC/GCS/GS/GCT DVD MODULE P.C.B.

## 15.2. Main P.C.B.

| Ref No. | IC2001 |      |      |      |      |        |      |      |     |      |        |       |      |      |      |       |      |      |     |      |
|---------|--------|------|------|------|------|--------|------|------|-----|------|--------|-------|------|------|------|-------|------|------|-----|------|
| MODE    | 1      | 2    | 3    | 4    | 5    | 6      | 7    | 8    | 9   | 10   | 11     | 12    | 13   | 14   | 15   | 16    | 17   | 18   | 19  | 20   |
| CD PLAY | 0      | 5.1  | 0    | 5.1  | 1.2  | 0      | 0    | 0    | 0   | 0    | 5.1    | 5.1   | 2.5  | 0    | 2.5  | 5.1   | 5.1  | 5    | 3.3 | 0    |
| STANDBY | 0      | 5    | 5    | 5    | 2.2  | 0      | 0    | 0    | 0   | 0    | 5      | 5     | 2.4  | 0    | 2.3  | 5     | 5    | 5    | 3.3 | 0    |
| Ref No. | IC2001 |      |      |      |      |        |      |      |     |      |        |       |      |      |      |       |      |      |     |      |
| MODE    | 21     | 22   | 23   | 24   | 25   | 26     | 27   | 28   | 29  | 30   | 31     | 32    | 33   | 34   | 35   | 36    | 37   | 38   | 39  | 40   |
| CD PLAY | 0      | 0    | 0    | 0    | 0    | 0      | 0    | 0.1  | 4.1 | 2.8  | 5.1    | 2.3   | 5.1  | 5.1  | 5.1  | 5.1   | 5.1  | 5.1  | 0   | 5.1  |
| STANDBY | 0      | 0    | 0    | 0    | 0    | 5.1    | 0    | 4.6  | 4.2 | 2.7  | 0      | 2.2   | 5.1  | 5.1  | 5.1  | 5.1   | 5.1  | 5.1  | 0   | 5    |
| Ref No. | IC2001 |      |      |      |      |        |      |      |     |      |        |       |      |      |      |       |      |      |     |      |
| 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    | 5    | 0    | 0    | 0      | 5.1  | 0    | 0   | 0    | 0      | 0     | 0    | 0    | 0    | 5.1   | 0    | 0    | 0.4 | 0    |
| STANDBY | 0      | 5.1  | 5    | 4.9  | 0    | 0      | 5    | 0    | 0   | 0    | 0      | 0     | 0    | 0    | 0    | 0.1   | 0    | 0    | 0.4 | 0    |
| Ref No. | IC2001 |      |      |      |      |        |      |      |     |      |        |       |      |      |      |       |      |      |     |      |
| MODE    | 61     | 62   | 63   | 64   | 65   | 66     | 67   | 68   | 69  | 70   | 71     | 72    | 73   | 74   | 75   | 76    | 77   | 78   | 79  | 80   |
| CD PLAY | 5.1    | 5.1  | 5    | 0    | 0    | 0      | 0    | 5    | 5   | 0    | 5      | 5.1   | 0    | 5.1  | 0.2  | 0     | 0    | 0    | 2.7 | 5    |
| STANDBY | 5.1    | 5.1  | 5.1  | 0    | 0    | 0      | 0    | 5    | 5   | 0    | 5      | 5     | 0    | 5    | 5.3  | 0     | 0    | 4.9  | 2.7 | 5    |
| Ref No. | IC2001 |      |      |      |      |        |      |      |     |      |        |       |      |      |      |       |      |      |     |      |
| MODE    | 81     | 82   | 83   | 84   | 85   | 86     | 87   | 88   | 89  | 90   | 91     | 92    | 93   | 94   | 95   | 96    | 97   | 98   | 99  | 100  |
| CD PLAY | 2.5    | 0    | 0    | 0    | 3.9  | 2.2    | 1.8  | 0    | 0.5 | 0.4  | 5.1    | 2.4   | 0.8  | 2.1  | 1.3  | 0     | 0.9  | 5.1  | 5.1 | 5    |
| STANDBY | 2.5    | 0    | 0    | 0    | 3.9  | 2.2    | 1.9  | 0    | 0.8 | 0.4  | 5.1    | 2     | 0.8  | 2.1  | 1.3  | 0     | 0.9  | 5.1  | 5.1 | 5    |
| Ref No. | IC2003 |      |      |      |      |        |      |      |     |      |        |       |      |      |      |       |      |      |     |      |
| MODE    | 1      | 2    | 3    | 4    | 5    | 6      | 7    | 8    |     |      |        |       |      |      |      |       |      |      |     |      |
| CD PLAY | -      | 5.1  | 0    | 0    | 0    | 0      | 0    | -    |     |      |        |       |      |      |      |       |      |      |     |      |
| STANDBY | -      | 5.1  | 0    | 0    | 0    | 0      | 0    | -    |     |      |        |       |      |      |      |       |      |      |     |      |
| Ref No. | IC2101 |      |      |      |      |        |      |      |     |      |        |       |      |      |      |       |      |      |     |      |
| MODE    | 1      | 2    | 3    | 4    | 5    | 6      | 7    | 8    | 9   | 10   | 11     | 12    | 13   | 14   | 15   | 16    | 17   | 18   | 19  | 20   |
| CD PLAY | 0      | 0.3  | 0.3  | 0.3  | 0.3  | 0.3    | 0.3  | 0.3  | 0.3 | 0.3  | 0.3    | 0.3   | 0.3  | 0    | 0    | 0     | 0    | 0    | 0   | 0    |
| STANDBY | 0      | 0.3  | 0.3  | 0.3  | 0.3  | 0.3    | 0.3  | 0.3  | 0.3 | 0.3  | 0.3    | 0.3   | 0.3  | 0    | 0    | 0     | 0    | 0    | 0   | 0    |
| Ref No. | IC2101 |      |      |      |      |        |      |      |     |      |        |       |      |      |      |       |      |      |     |      |
| MODE    | 21     | 22   | 23   | 24   | 25   | 26     | 27   | 28   | 29  | 30   | 31     | 32    | 33   | 34   | 35   | 36    | 37   | 38   | 39  | 40   |
| CD PLAY | 0.3    | 0.7  | 0.7  | 0    | 0    | 0      | 6.1  | 0    | 0   | 0    | 0      | 0     | 0    | 0    | 0.7  | 0.7   | 0    | 0    | 0   | 0    |
| STANDBY | 0.3    | 0.7  | 0.7  | 0    | 0    | 0      | 6.1  | 0    | 0   | 0    | 0      | 0     | 0    | 0    | 0.8  | 0.7   | 0    | 0    | 0   | 0    |
| Ref No. | IC2101 |      |      |      |      |        |      |      |     |      |        |       |      |      |      |       |      |      |     |      |
| MODE    | 41     | 42   | 43   | 44   | 45   | 46     | 47   | 48   | 49  | 50   | 51     | 52    | 53   | 54   | 55   | 56    | 57   | 58   | 59  | 60   |
| CD PLAY | 0      | 0    | 0    | 0    | 0    | 0      | 0    | 0.1  | 0.1 | 1.4  | 0      | 0     | 0    | 0.7  | 0    | 0.7   | 0    | 0.3  | 0.3 | -1.1 |
| STANDBY | 0      | 0    | 0    | 0    | 0    | 0      | 0    | 0.1  | 0.1 | 1.4  | 0      | 0     | 0    | 0.7  | 0    | 0.8   | 0    | 0.3  | 0   | 0    |
| Ref No. | IC2101 |      |      |      |      |        |      |      |     |      |        |       |      |      |      |       |      |      |     |      |
| MODE    | 61     | 62   | 63   | 64   | 65   | 66     | 67   | 68   | 69  | 70   | 71     | 72    | 73   | 74   | 75   | 76    | 77   | 78   | 79  | 80   |
| CD PLAY | 0      | 5.1  | 0    | 5    | 0.3  | 0.3    | 0    | 0    | 0   | 0    | 0      | 0     | 0    | 0    | 0    | 0     | 0.1  | 0.1  | 0.2 | 0.1  |
| STANDBY | 0      | 5    | 0    | 5    | 0.3  | 0.3    | 0    | 0    | 0   | 0    | 0      | 0     | 0    | 0    | 0    | 0     | 0    | 0.1  | 0.1 | 0.1  |
| Ref No. | IC2101 |      |      |      |      |        |      |      |     |      |        |       |      |      |      |       |      |      |     |      |
| 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    | -6.8 | 6.9  | 0    | 0      | 0    | 0    | 0   | 0    | 0      | 0     | 0    | 0    | 0    | 0     | 0    | 0    | 0.3 | 0.3  |
| STANDBY | 0      | 0    | -6.8 | 6.9  | 0    | 0      | 0    | 0    | 0   | 0    | 0      | 0     | 0    | 0    | 0.1  | 0.1   | 0    | 0    | 0.2 | 0.2  |
| Ref No. | IC2102 |      |      |      |      |        |      |      |     |      | IC2751 |       |      |      |      |       |      |      |     |      |
| MODE    | 1      | 2    | 3    | 4    | 5    | 6      | 7    | 8    |     |      | 1      | 2     | 3    | 4    | 5    | 6     | 7    | 8    |     |      |
| CD PLAY | 0      | 0    | 0    | -6.8 | 0    | 0      | 0.2  | 6.9  |     |      | -5.3   | 1.2   | 0    | -6.8 | 0    | 2.5   | -5.3 | 5.1  |     |      |
| STANDBY | 0      | 0    | 0    | -6.8 | 0    | 0      | 0    | 7    |     |      | -5.3   | 1.2   | 0    | -6.8 | 0    | 2.5   | -5.3 | 5.1  |     |      |
| 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 | 4.9    | 0    | 2.1  | 4.8  | 1.6  | 0      | 1.6  | 2.1  | 0   | 0    | 0      | 2.1   | 4.8  | 2.1  | 4.9  | 2.2   | 2.2  | 0    | 2.2 | 2.2  |
| STANDBY | 4.9    | 0    | 2.1  | 4.8  | 1.5  | 0      | 1.5  | 2.1  | 0   | 1.5  | 0      | 2.1   | 4.8  | 2.1  | 4.9  | 2.2   | 2.2  | 0    | 2.2 | 2.2  |
| Ref No. | IC2801 |      |      |      |      |        |      |      |     |      | IC2900 |       |      |      |      |       |      |      |     |      |
| MODE    | 21     | 22   | 23   | 24   | 25   | 26     | 27   | 28   | 29  | 30   | 31     |       | 1    | 2    | 3    | 4     | 5    |      |     |      |
| CD PLAY | 0      | 1.3  | 1.3  | 0    | 1.3  | 1.3    | 0    | 1.4  | 1.6 | 0    | 2.2    |       | 16.8 | 5.3  | 0    | 1     | 16.3 |      |     |      |
| STANDBY | 0      | 1.3  | 1.3  | 0    | 1.3  | 1.3    | 0    | 1.4  | 1.6 | 0    | 2.2    |       | 16.9 | 8.9  | 0    | 1     | 16.3 |      |     |      |
| Ref No. | IC2901 |      |      |      |      | IC2903 |      |      |     |      |        |       |      |      |      |       |      |      |     |      |
| MODE    | 1      | 2    | 3    |      |      | 1      | 2    | 3    | 4   | 5    |        |       |      |      |      |       |      |      |     |      |
| CD PLAY | 0      | 0    | 5    |      |      | 16.8   | 8.9  | 0    | 1   | 16.2 |        |       |      |      |      |       |      |      |     |      |
| STANDBY | 0      | 0    | 0    |      |      | 16.9   | 5.3  | 0    | 1   | 16.4 |        |       |      |      |      |       |      |      |     |      |
| Ref No. | Q2003  |      |      |      |      | Q2006  |      |      |     |      | Q2007  |       |      |      |      | Q2008 |      |      |     |      |
| MODE    | E      | C    | B    |      |      | E      | C    | B    |     |      | E      | C     | B    |      |      | E     | C    | B    |     |      |
| CD PLAY | 0      | 5    | 0    |      |      | 0      | 0    | 4.2  |     |      | 5.6    | -4.6  | 5.5  |      |      | 0     | 5.5  | 0    |     |      |
| STANDBY | 0      | 5    | 0    |      |      | 0      | 5.1  | 0    |     |      | 4.4    | 4.3   | 0    |      |      | 0     | 0    | 4.4  |     |      |
| Ref No. | Q2096  |      |      |      |      | Q2097  |      |      |     |      | Q2101  |       |      |      |      |       |      |      |     |      |
| MODE    | E      | C    | B    |      |      | E      | C    | B    |     |      | 1      | 2     | 3    | 4    | 5    | 6     |      |      |     |      |
| CD PLAY | 0      | 0.1  | 0.6  |      |      | 0      | 5.2  | 0.1  |     |      | 0      | -4.6  | 0    | 0    | -4.6 | 0     |      |      |     |      |
| STANDBY | 0      | 0.1  | 0.6  |      |      | 0      | 5.3  | 0.1  |     |      | 0      | 0.7   | 0    | 0    | 0.7  | 0     |      |      |     |      |
| Ref No. | Q2102  |      |      |      |      | Q2103  |      |      |     |      |        |       |      |      |      | Q2201 |      |      |     |      |
| MODE    | 1      | 2    | 3    | 4    | 5    | 6      |      |      | 1   | 2    | 3      | 4     | 5    | 6    |      | E     | C    | B    |     |      |
| CD PLAY | 0      | -4.6 | 0    | 0    | -4.6 | 0      |      |      | 0   | -4.6 | 0      | 0     | -4.6 | 0    |      | 0     | -4.6 | 0    |     |      |
| STANDBY | 0      | 0.7  | 0    | 0    | 0.7  | 0      |      |      | 0   | 0.7  | 0      | 0     | 0.7  | 0    |      | 1.5   | 1.5  | 0    |     |      |
| Ref No. | Q2202  |      |      |      |      | Q2302  |      |      |     |      |        |       |      |      |      | Q2502 |      |      |     |      |
| MODE    | E      | C    | B    |      |      | 1      | 2    | 3    | 4   | 5    | 6      |       | 1    | 2    | 3    | 4     | 5    | 6    |     |      |
| CD PLAY | 0      | -4.6 | 0    |      |      | 0      | -4.6 | 0    | 0   | -4.6 | 0      |       | 0    | -4.6 | 0    | 0     | -4.6 | 0    |     |      |
| STANDBY | 1.5    | 1.5  | 0    |      |      | 0      | 0.7  | 0    | 0   | 0.7  | 0      |       | 0    | 0.7  | 0    | 0     | 0.7  | 0    |     |      |
| Ref No. | Q2801  |      |      |      |      | Q2900  |      |      |     |      | Q2901  |       |      |      |      | Q2902 |      |      |     |      |
| MODE    | E      | C    | B    |      |      | E      | C    | B    |     |      | E      | C     | B    |      |      | E     | C    | B    |     |      |
| CD PLAY | 0      | 4.8  | 0    |      |      | 0      | 16.7 | -0.6 |     |      | -6.9   | -10.9 | -7.4 |      |      | 0     | -7.4 | -0.6 |     |      |
| STANDBY | 0      | 4.6  | 2    |      |      | 0      | 16.8 | -0.6 |     |      | -6.9   | -11   | -7.5 |      |      | 0     |      |      |     |      |

## 15.3. 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   | 0   | 29.1 | 0   | -29.2 | -21.2 | 29.4 | 10.8 | -0.1 | -29.4 | -17.3 | -29.4 | -0.1 | 10.8 | 29.4  | -29.2 | -29.2 | 0    | 29.1 |
| STANDBY | 2.5    | 0   | 0   | 29.1 | 0   | -29.2 | -21.2 | 29.4 | 11   | -0.1 | -29.4 | -17.2 | -29.4 | -0.1 | 11   | 29.4  | -29.2 | -29.2 | 0    | 29.1 |
| Ref.No. | IC5000 |     |     |      |     |       |       |      |      |      |       |       |       |      |      |       |       |       |      |      |
| MODE    | 21     | 22  | 23  |      |     |       |       |      |      |      |       |       |       |      |      |       |       |       |      |      |
| CD PLAY | 0      | 0   | 2.6 |      |     |       |       |      |      |      |       |       |       |      |      |       |       |       |      |      |
| STANDBY | 0      | 0   | 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   | 0   | 27.9 | 0   | -29.2 | -28.3 | 29.4 | 0    | 0    | -29.4 | -29.4 | -29.4 | 0    | 0    | 29.4  | -29.2 | -29.2 | 0    | 27.9 |
| STANDBY | 2.5    | 0   | 0   | 29.1 | 0   | -29.2 | -21.3 | 29.4 | 11.1 | 0    | -29.4 | -17.1 | -29.4 | 0.1  | 11   | -29.4 | -29.2 | -29.2 | 29.1 | 0    |
| Ref.No. | IC5200 |     |     |      |     |       |       |      |      |      |       |       |       |      |      |       |       |       |      |      |
| MODE    | 21     | 22  | 23  |      |     |       |       |      |      |      |       |       |       |      |      |       |       |       |      |      |
| CD PLAY | 0      | 0   | 2.6 |      |     |       |       |      |      |      |       |       |       |      |      |       |       |       |      |      |
| STANDBY | 0      | 0   | 2.6 |      |     |       |       |      |      |      |       |       |       |      |      |       |       |       |      |      |
| Ref.No. | IC5300 |     |     |      |     |       |       |      |      |      |       |       |       |      |      |       |       |       |      |      |
| MODE    | 1      | 2   | 3   | 4    | 5   | 6     | 7     | 8    | 9    | 10   | 11    | 12    | 13    | 14   | 15   | 16    | 17    | 18    | 19   | 20   |
| CD PLAY | 2.54   | 0   | 0   | 29.1 | 0   | -29.2 | -21   | 29.4 | 10.8 | -0.1 | -29.4 | -17.3 | -29.4 | -0.1 | 10.8 | 29.4  | -29.2 | -29.2 | 0    | 29.1 |
| STANDBY | 2.5    | 0   | 0   | 29.1 | 0   | -29.1 | -21.2 | 29.4 | 11   | -0.1 | -29.4 | -17.2 | -29.4 | 0    | 11   | 29.4  | -29.2 | -29.2 | 0    | 29.1 |
| Ref.No. | IC5300 |     |     |      |     |       |       |      |      |      |       |       |       |      |      |       |       |       |      |      |
| MODE    | 21     | 22  | 23  |      |     |       |       |      |      |      |       |       |       |      |      |       |       |       |      |      |
| CD PLAY | 0      | 0   | 2.6 |      |     |       |       |      |      |      |       |       |       |      |      |       |       |       |      |      |
| STANDBY | 0      | 0   | 2.5 |      |     |       |       |      |      |      |       |       |       |      |      |       |       |       |      |      |
| Ref.No. | IC5500 |     |     |      |     |       |       |      |      |      |       |       |       |      |      |       |       |       |      |      |
| MODE    | 1      | 2   | 3   | 4    | 5   | 6     | 7     | 8    | 9    | 10   | 11    | 12    | 13    | 14   |      |       |       |       |      |      |
| CD PLAY | 0      | 5.3 | 4.8 | 0    | 2.5 | 2.5   | 0     | 2.6  | 2.6  | 2.6  | 2.5   | 0     | 5.3   | 5.3  |      |       |       |       |      |      |
| STANDBY | 0      | 5   | 4.6 | 0    | 2.4 | 2.4   | 0     | 2.5  | 2.5  | 2.5  | 2.4   | 0     | 5.1   | 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 | 2.6 | 0    | 2.6 | 0     | 0     | 0    | 0    | 0    | 0     | 0     | 5.3   | 5.3  |      |       |       |       |      |      |
| STANDBY | 2.5    | 2.7 | 2.6 | 0    | 2.7 | 0     | 0     | 0    | 0    | 0    | 0     | 0     | 5.2   | 5.2  |      |       |       |       |      |      |
| Ref.No. | Q5101  |     |     |      |     | Q5102 |       |      |      |      | Q5601 |       |       |      |      | Q5602 |       |       |      |      |
| MODE    | E      | C   | B   |      |     | E     | C     | B    |      |      | E     | C     | B     |      |      | E     | C     | B     |      |      |
| CD PLAY | 0      | 5   | 0   |      |     | 0     | 5     | 0    |      |      | 0.7   | 0     | 0     |      |      | 0.7   | 0     | 0     |      |      |
| STANDBY | 0      | 5   | 0   |      |     | 0     | 5     | 0    |      |      | 0.7   | 0     | 0     |      |      | 0.7   | 0     | 0     |      |      |
| Ref.No. | Q5604  |     |     |      |     | Q5640 |       |      |      |      | Q5641 |       |       |      |      | Q5642 |       |       |      |      |
| MODE    | E      | C   | B   |      |     | E     | C     | B    |      |      | E     | C     | B     |      |      | E     | C     | B     |      |      |
| CD PLAY | 0      | 0   | 0.7 |      |     | 7     | 16.9  | 7.6  |      |      | 0     | 5     | 0     |      |      | 0     | 0     | 0.7   |      |      |
| STANDBY | 0      | 0   | 0.7 |      |     | 7     | 16.9  | 7.6  |      |      | 0     | 5     | 0     |      |      | 0     | 0.1   | 0.7   |      |      |

SA-PT850GC/GCS/GS/GCT D-AMP P.C.B.

## 15.4. SMPS P.C.B.

| Ref.No. | IC5701 |       |       |       |        |       |       |      | IC5799 |       |       |       |       |       |       |  | IC5801 |       |       |  |
|---------|--------|-------|-------|-------|--------|-------|-------|------|--------|-------|-------|-------|-------|-------|-------|--|--------|-------|-------|--|
| MODE    | 1      | 2     | 3     | 4     | 5      | 6     | 7     |      | 1      | 2     | 3     | 4     | 5     | 6     | 7     |  | 1      | 2     | 3     |  |
| CD PLAY | 14     | -11.3 | -14.4 | -14.6 | -14.7  | -14.6 | -14.6 |      | -13.7  | -14.4 | -14.1 | -10.8 | 14.4  | -14.7 | -14.2 |  | -27.1  | -29.8 | -2    |  |
| STANDBY | 14.1   | -11.2 | -14.4 | -14.7 | -14.7  | -14.7 | -14.6 |      | -13.6  | -14.4 | -14.1 | -10.9 | 14.4  | -14.8 | -14.2 |  | -27.1  | -29.8 | -2    |  |
| Ref.No. | IC5780 |       |       |       |        |       |       |      |        |       |       |       |       |       |       |  |        |       |       |  |
| MODE    | 1      | 2     | 3     | 4     | 5      | 6     | 7     | 8    |        |       |       |       |       |       |       |  |        |       |       |  |
| CD PLAY | 20.4   | 0     | 0     | 0     | 14.8   | 5.1   | 20    | 21.3 |        |       |       |       |       |       |       |  |        |       |       |  |
| STANDBY | 20.4   | 0     | 0     | 0     | 14.8   | 5.1   | 20    | 21.3 |        |       |       |       |       |       |       |  |        |       |       |  |
| Ref.No. | Q5720  |       |       |       | Q5721  |       |       |      | Q5722  |       |       |       | Q5750 |       |       |  | Q5802  |       |       |  |
| MODE    | E      | C     | B     |       | E      | C     | B     |      | E      | C     | B     |       | E     | C     | B     |  | E      | C     | B     |  |
| CD PLAY | -14    | -13.4 | -14.2 |       | -11    | -11   | -11.2 |      | -14.8  | -2.6  | -14.8 |       | 0     | 0     | 0.7   |  | -22    | -2    | -22.2 |  |
| STANDBY | -14    | -13.4 | -14.3 |       | -11.1  | -11   | -11.2 |      | -14.8  | -2.6  | -14.8 |       | 0     | 0     | 0.7   |  | -22    | -2    | -22.2 |  |
| Ref.No. | Q5860  |       |       |       | Q5861  |       |       |      | Q5862  |       |       |       | Q5898 |       |       |  | Q5899  |       |       |  |
| MODE    | E      | C     | B     |       | E      | C     | B     |      | E      | C     | B     |       | E     | C     | B     |  | E      | C     | B     |  |
| CD PLAY | 1.3    | 0     | 0.7   |       | 0      | 0     | 0.7   |      | 0      | 5.1   | 0     |       | 0     | 3.3   | 0.5   |  | 3.6    | 4.5   | 4.2   |  |
| STANDBY | 1.3    | 0     | 0.7   |       | 0      | 0     | 0.7   |      | 0      | 5.1   | 0     |       | 0     | 3.3   | 0.5   |  | 3.6    | 4.5   | 4.2   |  |
| Ref.No. | QR5801 |       |       |       | QR5810 |       |       |      |        |       |       |       |       |       |       |  |        |       |       |  |
| MODE    | E      | C     | B     |       | E      | C     | B     |      |        |       |       |       |       |       |       |  |        |       |       |  |
| CD PLAY | 0      | 5.1   | -2.5  |       | 0      | 0.1   | 4.9   |      |        |       |       |       |       |       |       |  |        |       |       |  |
| STANDBY | 0      | 5.1   | -2.4  |       | 0      | 0.1   | 4.8   |      |        |       |       |       |       |       |       |  |        |       |       |  |

SA-PT850GC/GCS/GS/GCT SMPS P.C.B.

## 15.5. Panel & Tray Loading P.C.B.

| Ref No. | IC6106 |       |       |       |       |       |       |       | IC6107 |       |     |      |       |       |       |       |       |       |       |       |
|---------|--------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-----|------|-------|-------|-------|-------|-------|-------|-------|-------|
| MODE    | 1      | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 1      | 2     | 3   | 4    | 5     | 6     | 7     | 8     |       |       |       |       |
| CD PLAY | 0      | 0     | 0     | -6.9  | 0     | 0     | 0     | 7     | 0      | 0     | 0   | -6.1 | 0     | 0     | 0     | 6.9   |       |       |       |       |
| STANDBY | 0      | 0     | 0     | -7    | 0     | 0     | 0     | 7     | 0      | 0     | 0   | -6.9 | 0     | 0     | 0     | 7     |       |       |       |       |
| Ref No. | IC6901 |       |       |       |       |       |       |       |        |       |     |      |       |       |       |       |       |       |       |       |
| 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     | 2.9   | 2.2   | 1.8   | 4     | 2.3    | 2.2   | 2.2 | 0    | 5     | -24.4 | -22   | -24.4 | -24.4 | -19.6 | -19.8 | -15   |
| STANDBY | 0      | 0     | 0     | 0     | 2.9   | 2.1   | 1.9   | 4     | 2.2    | 2.2   | 2.2 | 0    | 5     | -24.4 | -24.4 | -22   | -24.4 | -14.9 | -19.6 | -12.5 |
| Ref No. | IC6901 |       |       |       |       |       |       |       |        |       |     |      |       |       |       |       |       |       |       |       |
| 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 | -24.3 | -17.2 | -14.8 | -24.4 | -24.4 | -24.4 | 14.8   | -24.8 | -15 | -22  | -22.3 | -22.2 | -22.2 | -22.2 | -22.2 | -22.2 | -22.2 | -22.2 |
| STANDBY | -24.3  | -24.3 | -24.3 | -17.2 | -14.9 | -24.3 | -24.3 | -24.3 | -17.2  | -24.8 | -15 | -15  | -22.2 | -22.2 | -22.2 | -22.2 | -22.2 | -22.2 | -22.2 | -22.2 |
| Ref No. | IC6901 |       |       |       |       |       |       |       |        |       |     |      |       |       |       |       |       |       |       |       |
| MODE    | 41     | 42    | 43    | 44    |       |       |       |       |        |       |     |      |       |       |       |       |       |       |       |       |
| CD PLAY | -22.2  | -22.2 | 5     | 0     |       |       |       |       |        |       |     |      |       |       |       |       |       |       |       |       |
| STANDBY | -22.2  | -22.2 | 5     | 0     |       |       |       |       |        |       |     |      |       |       |       |       |       |       |       |       |
| Ref No. | Q6102  |       |       |       | Q6105 |       |       |       | Q6110  |       |     |      | Q6111 |       |       |       | Q6201 |       |       |       |
| MODE    | E      | C     | B     |       | E     | C     | B     |       | E      | C     | B   |      | E     | C     | B     |       | E     | C     | B     |       |
| CD PLAY | 0      | 0     | 0.7   |       | 7     | 0     | 6.9   |       | 0      | 0.1   | 4.9 |      | 0     | 6.8   | 0.1   |       | 2.3   | 2.3   | 0     |       |
| STANDBY | 0      | 0     | 0.7   |       | 7     | 0     | 6.9   |       | 0      | 0.1   | 4.9 |      | 0     | 6.8   | 0.1   |       | 2.3   | 2.3   | 0     |       |
| Ref No. | Q6202  |       |       |       |       |       |       |       |        |       |     |      |       |       |       |       |       |       |       |       |
| MODE    | E      | C     | B     |       |       |       |       |       |        |       |     |      |       |       |       |       |       |       |       |       |
| CD PLAY | 4.8    | -     | 4.5   |       |       |       |       |       |        |       |     |      |       |       |       |       |       |       |       |       |
| STANDBY | 4.9    | -     | 4.5   |       |       |       |       |       |        |       |     |      |       |       |       |       |       |       |       |       |

SA-PT850GC/GCS/GS/GCT PANEL P.C.B.

| Ref No. | IC904 |     |     |     |   |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |
|---------|-------|-----|-----|-----|---|-----|-----|-----|-----|--|--|--|--|--|--|--|--|--|--|--|
| MODE    | 1     | 2   | 3   | 4   | 5 | 6   | 7   | 8   | 9   |  |  |  |  |  |  |  |  |  |  |  |
| CD PLAY | 5.1   | 7.5 | 0.6 | 7.5 | 0 | 7.5 | 0.6 | 2.8 | 5.1 |  |  |  |  |  |  |  |  |  |  |  |
| STANDBY | 5.1   | 7.6 | 0.6 | 7.6 | 0 | 7.6 | 0.6 | 2.8 | 5.1 |  |  |  |  |  |  |  |  |  |  |  |

SA-PT850GC/GCS/GS/GCT TRAY LOADING P.C.B.

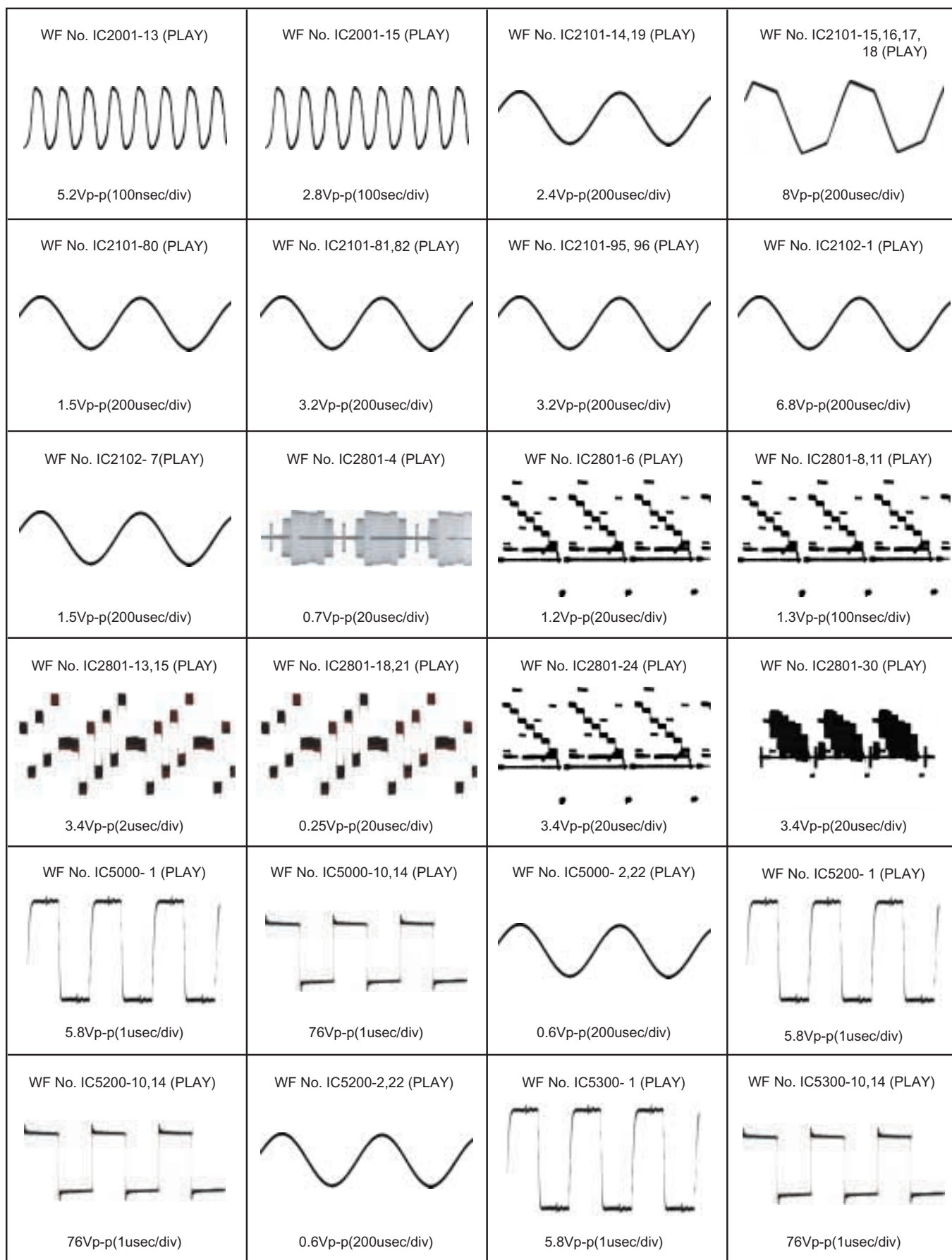
## 15.6. Mic P.C.B.

| Ref No. | IC7000 |     |     |      |       |     |     |     |       |     |     |     |     |     |     |    |  |  |  |  |
|---------|--------|-----|-----|------|-------|-----|-----|-----|-------|-----|-----|-----|-----|-----|-----|----|--|--|--|--|
| MODE    | 1      | 2   | 3   | 4    | 5     | 6   | 7   | 8   |       |     |     |     |     |     |     |    |  |  |  |  |
| CD PLAY | 0      | 0   | 0   | -6.9 | 0     | 0   | 0   | 6.9 |       |     |     |     |     |     |     |    |  |  |  |  |
| STANDBY | 0      | 0   | 0   | -6.9 | 0     | 0   | 0   | 7   |       |     |     |     |     |     |     |    |  |  |  |  |
| Ref No. | IC7100 |     |     |      |       |     |     |     |       |     |     |     |     |     |     |    |  |  |  |  |
| MODE    | 1      | 2   | 3   | 4    | 5     | 6   | 7   | 8   | 9     | 10  | 11  | 12  | 13  | 14  | 15  | 16 |  |  |  |  |
| CD PLAY | -      | 2.6 | 2.6 | 2.6  | 2.6   | 0.6 | 0.6 | 0   | 2.6   | 2.6 | 2.6 | 2.6 | 2.6 | 0.9 | 5.2 | -  |  |  |  |  |
| STANDBY | -      | 2.6 | 2.6 | 2.6  | 2.6   | 0.6 | 0.6 | 0   | 2.6   | 2.6 | 2.6 | 2.6 | 2.6 | 0.9 | 5.2 | -  |  |  |  |  |
| Ref No. | IC7200 |     |     |      |       |     |     |     |       |     |     |     |     |     |     |    |  |  |  |  |
| MODE    | 1      | 2   | 3   | 4    | 5     | 6   | 7   | 8   |       |     |     |     |     |     |     |    |  |  |  |  |
| CD PLAY | 6.6    | 0   | 0   | -6.9 | 0     | 0   | 0.1 | 6.9 |       |     |     |     |     |     |     |    |  |  |  |  |
| STANDBY | 6.6    | 0   | 0   | -6.9 | 0     | 0   | 0.1 | 7   |       |     |     |     |     |     |     |    |  |  |  |  |
| Ref No. | Q7100  |     |     |      | Q7101 |     |     |     | Q7102 |     |     |     |     |     |     |    |  |  |  |  |
| MODE    | E      | C   | B   |      | E     | C   | B   |     | E     | C   | B   |     |     |     |     |    |  |  |  |  |
| CD PLAY | 0      | 0   | 0   |      | 0     | 0   | 5   |     | 0     | 0   | 0   |     |     |     |     |    |  |  |  |  |
| STANDBY | 0      | 0   | 0   |      | 0     | 0   | 5   |     | 0     | 0   | 0   |     |     |     |     |    |  |  |  |  |

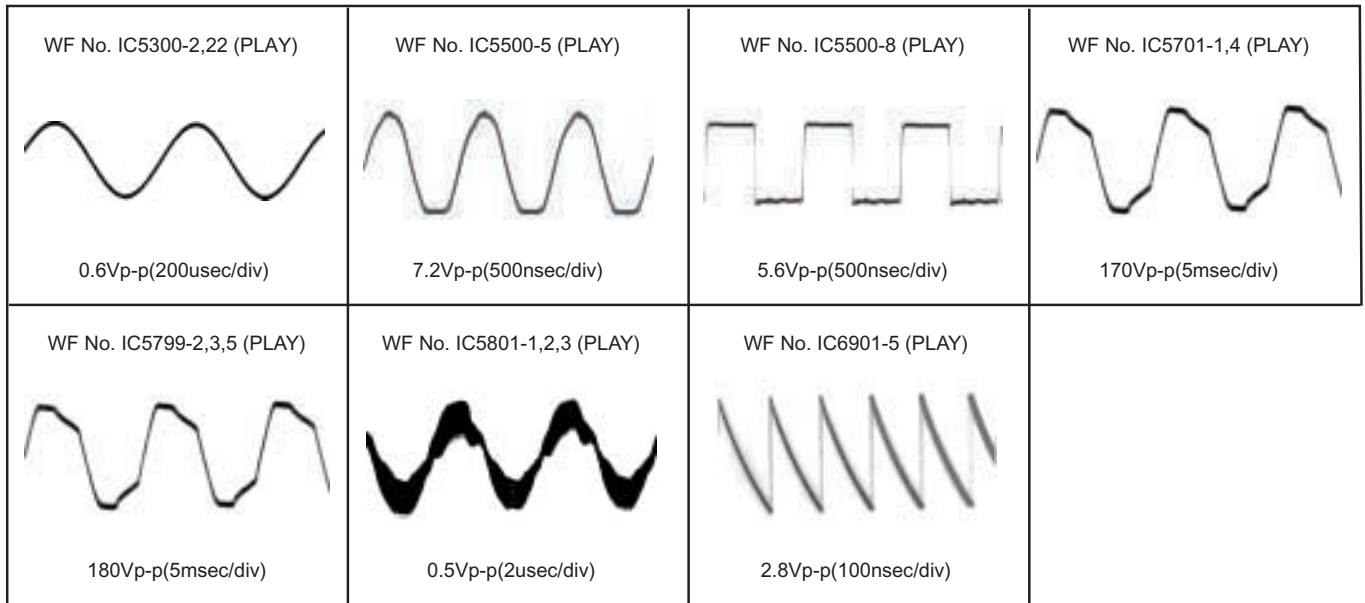
SA-PT850GC/GCS/GS/GCT MIC P.C.B.

## 15.7. Waveform Chart

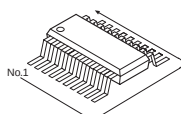
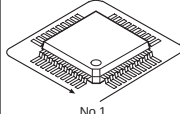
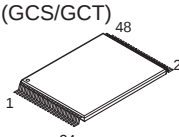
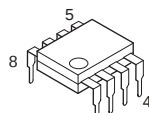
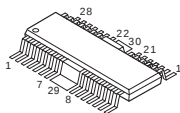
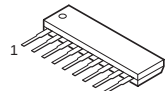
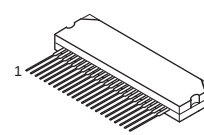
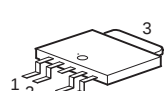
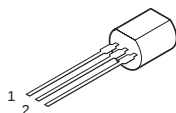
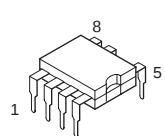
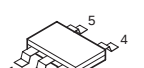
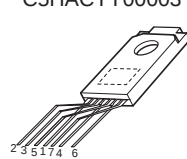
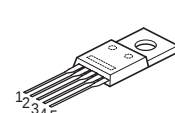
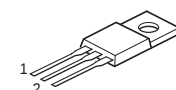
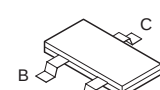
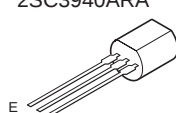
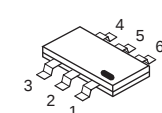
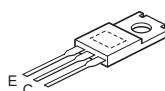
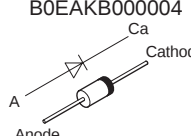
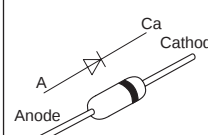
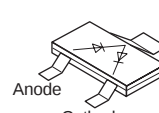
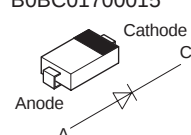
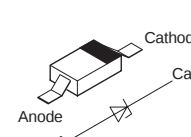
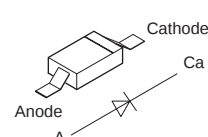
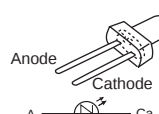
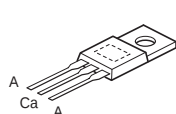
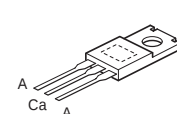
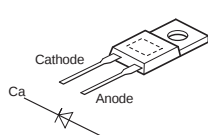
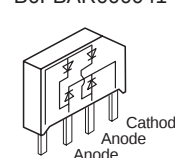
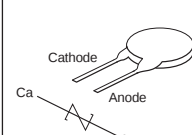
### 15.7.1. Waveform 1



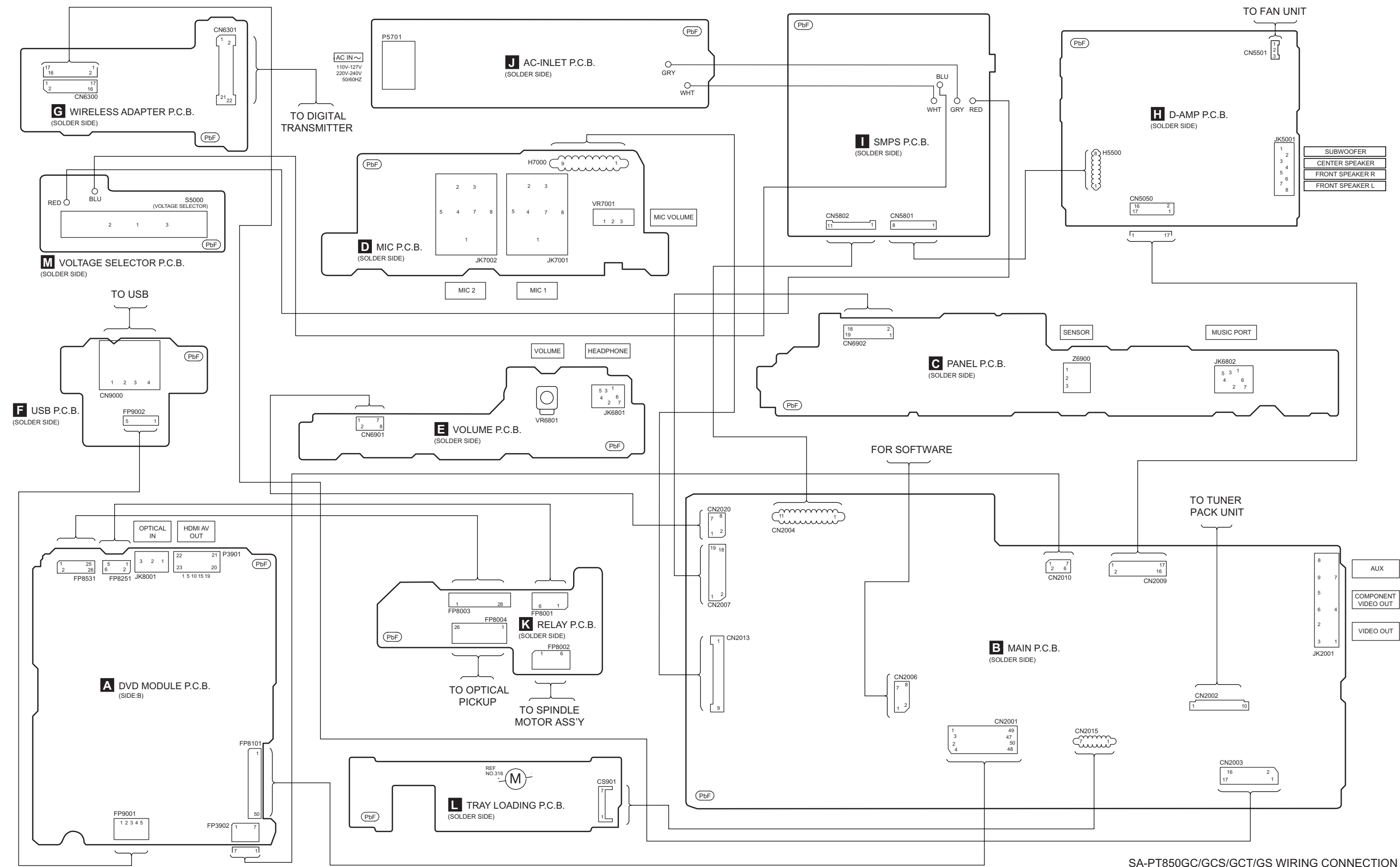
## 15.7.2. Waveform 2



# 16 Illustration of IC's, Transistors and Diodes

|                                                                                                                                                                                                                                                |                                                                                                                                                                    |                                                                                                                                                                                                         |                                                                                                                                              |                                                                                                                                |                                                                                                                              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
|  <p>C0ABBA000168 (8p)<br/>C0ABBB000230 (8p)<br/>C0ABBB000350 (8p)<br/>C0DBZYE00002 (8p)<br/>C0DBZYY00018 (8p)<br/>C0EBA0000029 (4p)<br/>C0FBBK000050 (28p)</p> | <p>C0JBAB000902 (14p)<br/>C0JBAB000908 (6p)<br/>C0JBAF000716 (14p)<br/>C0JBAZ001251 (20p)<br/>C1BB00001061 (16p)<br/>C3ABPG000145 (54p)<br/>C9ZB00000461 (32p)</p> |  <p>C0HBB0000057 (44p)<br/>C1AB00002735 (100p)<br/>C2CBYY000418 (100p)<br/>MN2DS0018MP (216P)<br/>MN864702A (128P)</p> | <p>RFKWMHB0E321 (GC/GS)<br/>RFKWMHB0F320 (GCS/GCT)</p>    |                                                                                                                                |                                                                                                                              |
| C0AABB000125                                                                                                                                                                                                                                   | C0GBG0000048                                                                                                                                                       | C0GAY0000013                                                                                                                                                                                            | C1BA00000487                                                                                                                                 | C0DBEHG00006                                                                                                                   | C0DABFC00002                                                                                                                 |
|                                                                                                                                                               |                                                                                   |                                                                                                                        |                                                             |                                             |                                           |
| MIP4110MSSCF                                                                                                                                                                                                                                   | C0CBCDC00063<br>C0EBE0000456<br>C0JBAA000501<br>C0JBAA000502<br>C0JBAB000907                                                                                       | C5HACY00003                                                                                                                                                                                             | C0DAAMH00012<br>C0DAAYY00042                                                                                                                 | C0DAGHG00002                                                                                                                   | B1BABK000001                                                                                                                 |
|                                                                                                                                                               |                                                                                   |                                                                                                                        |                                                             |                                             |                                           |
| B1AAKD000012<br>B1ACKD000006<br>2SC3940ARA                                                                                                                                                                                                     | B1ACD000018                                                                                                                                                        |                                                                                                                       | B1ABCF000011<br>B1ABCF000176<br>B1ABEB000002<br>B1ADCE000012<br>B1ADCF000001<br>B1ADGB000008<br>B1CFHA000002<br>B1GBCFLL0037<br>B1GBCFJN0033 | B1GDCFGA0018<br>B1GBCFJJ0051<br>UNR211H00L<br>UNR221200L<br>UNR511V00L<br>UNR521100L<br>2SD1819A0L<br>2SB1218ARL<br>2SD0601AHL | B1GFGCAA0001<br>XP0621400L                                                                                                   |
|                                                                                                                                                              |                                                                                  |                                                                                                                                                                                                         |                                                                                                                                              |                                                                                                                                |                                          |
| B1BACG000023<br>B1BCCG000002                                                                                                                                                                                                                   | B0EAKM000117<br>B0EAMM000057<br>B0JAME000029<br>B0EAKB000004                                                                                                       | MA2J72800L                                                                                                                                                                                              | B0ADCJ000020                                                                                                                                 | B0ACCK000005<br>B0BC01700015                                                                                                   | B0BC035A0007<br>B0BC3R400001<br>B0BC4R600016<br>B0BC6R100010<br>B0BC7R500001<br>B0JCAE000001<br>B0JCPD000025<br>ERJ6GEY0R00V |
|                                                                                                                                                             |                                                                                 |                                                                                                                      |                                                           |                                           |                                                                                                                              |
| MA2J11100L<br>MAZ82400HL                                                                                                                                                                                                                       |                                                                                 | B0BC01200019<br>B0BC010A0007<br>B0BC2R4A0006<br>B0BC3R700004<br>B0BC5R000009<br>B0BC5R600003                                                                                                            | B3AAA0000803                                                                                                                                 | B0ZAZ0000052                                                                                                                   | B0HBSM000043                                                                                                                 |
|                                                                                                                                                              |                                                                                                                                                                    |                                                                                                                                                                                                         |                                                           |                                           |                                         |
| B0HFRJ000012                                                                                                                                                                                                                                   | B0FBAR000041                                                                                                                                                       | ERZV10V511CS                                                                                                                                                                                            |                                                                                                                                              |                                                                                                                                |                                                                                                                              |
|                                                                                                                                                              |                                                                                 |                                                                                                                      |                                                                                                                                              |                                                                                                                                |                                                                                                                              |

# 17 Wiring Connection Diagram

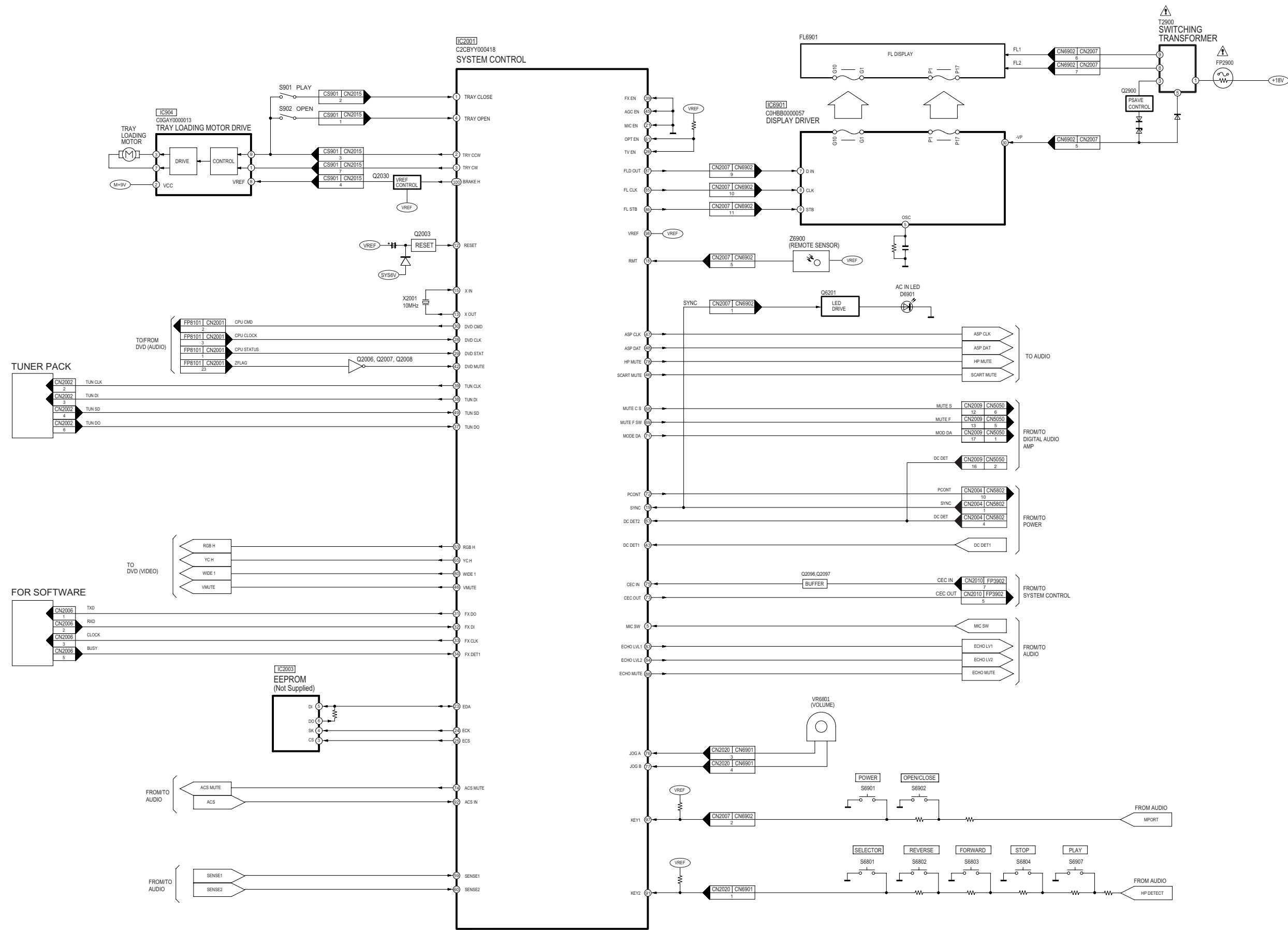


SA-PT850GC/GCS/GCT/GS WIRING CONNECTION



# 18 Block Diagram

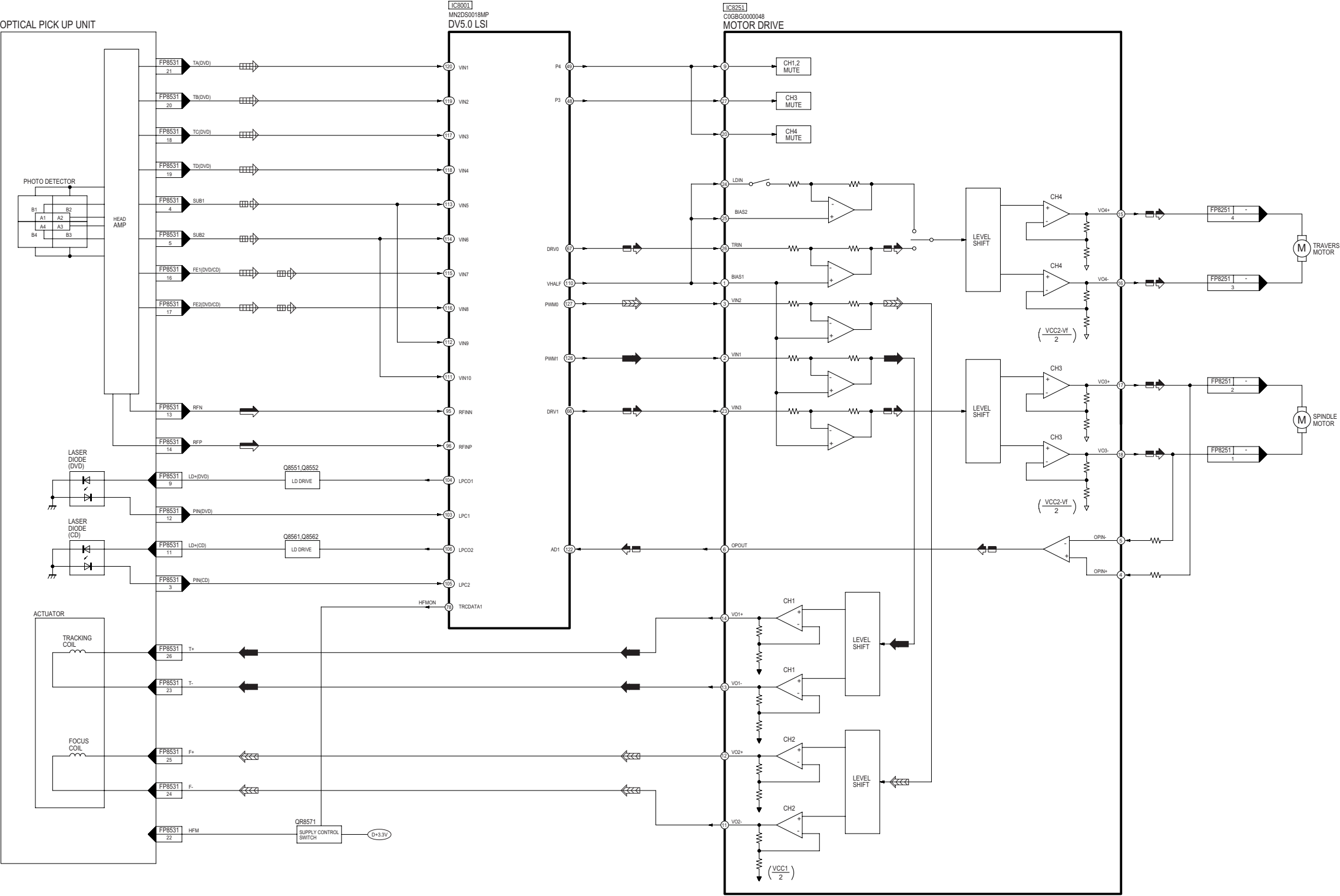
## 18.1. System Control



SA-PT850GC/GCS/GCT/GS SYSTEM CONTROL BLOCK DIAGRAM

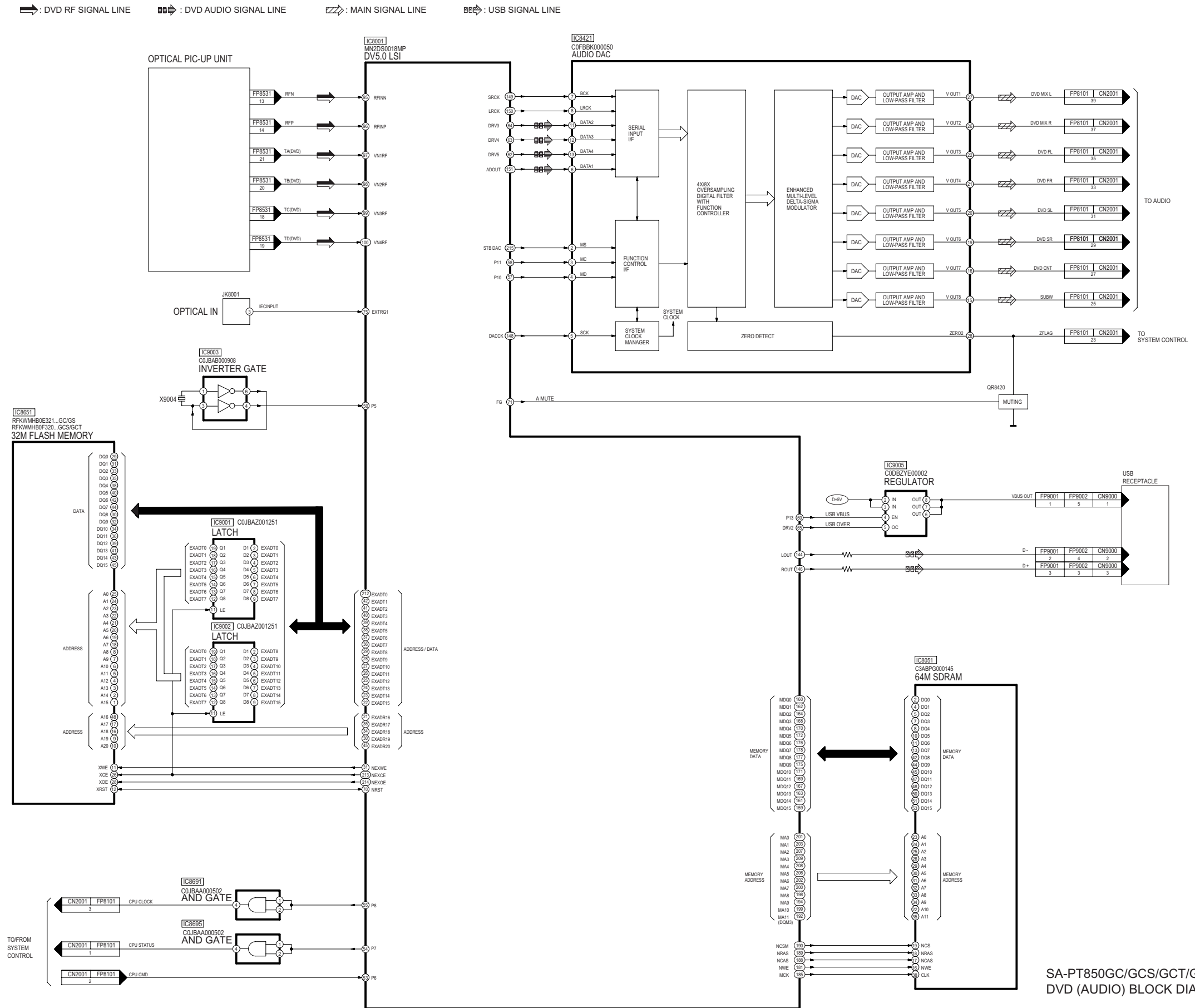
18.2. DVD (Servo)

□◀▶: CD HEAD SIGNAL LINE    ▶: DVD RF SIGNAL LINE    ▶: TRACKING ERROR SIGNAL LINE  
◻▶: DVD HEAD SIGNAL LINE    ▶: MOTOR DRIVE SIGNAL LINE    ◻▶: FOCUS ERROR SIGNAL LINE



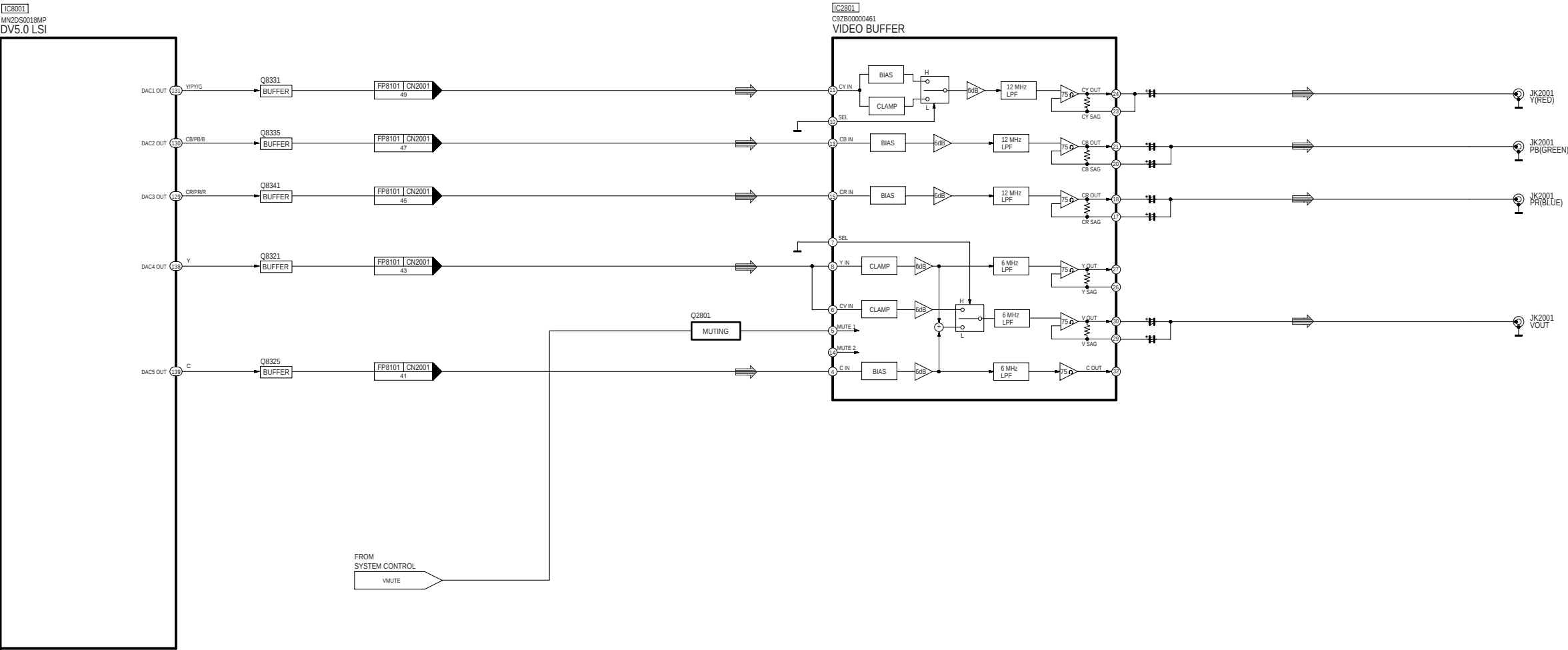
SA-PT850GC/GCS/GCT/GS DVD (SERVO) BLOCK DIAGRAM

### 18.3. DVD (Audio)



18.4. DVD (Video)

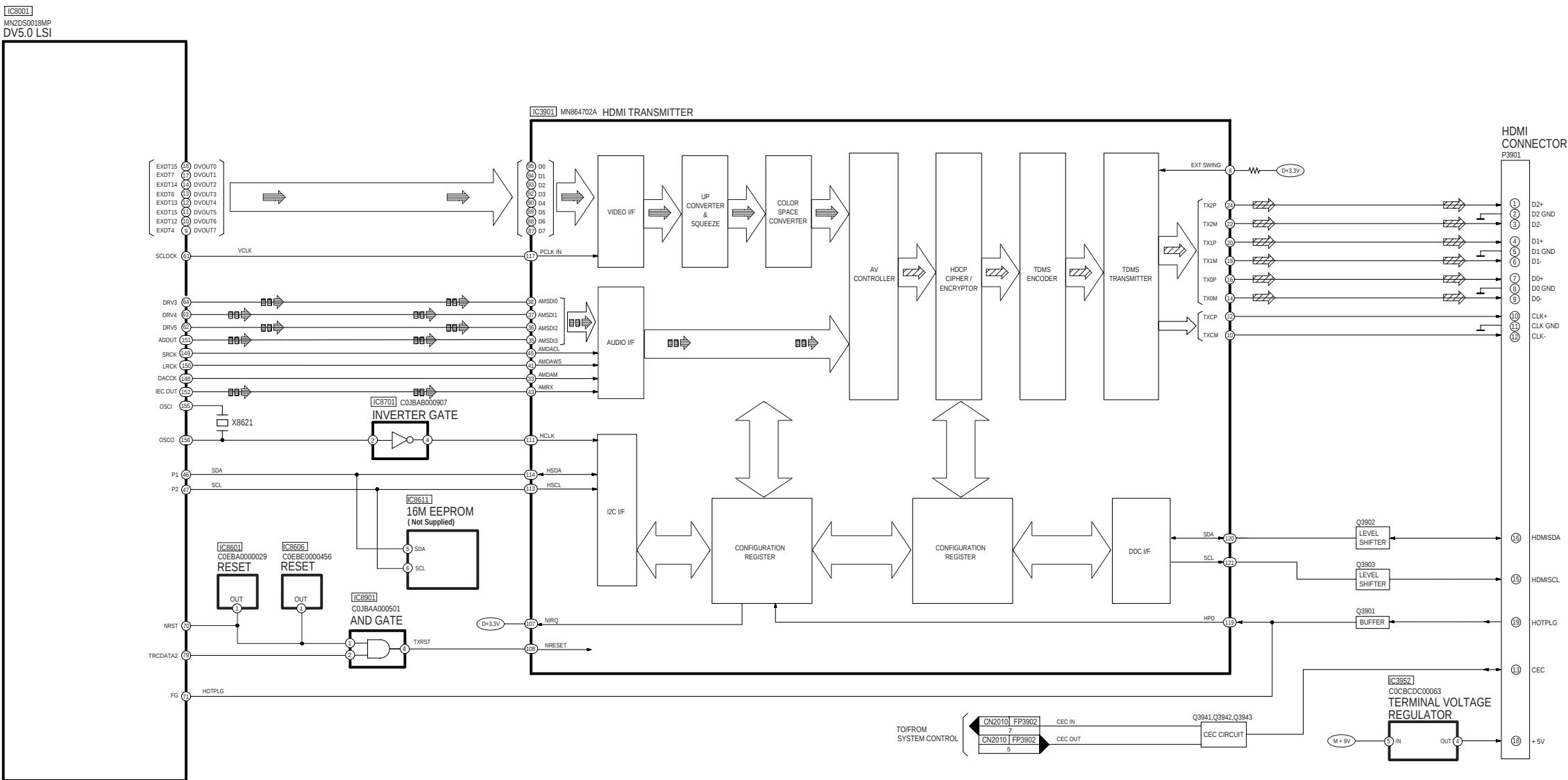
⇒ : DVD VIDEO SIGNAL LINE



SA-PT850GC/GCS/GCT/GS DVD (VIDEO) BLOCK DIAGRAM

# 18.5. DVD (HDMI)

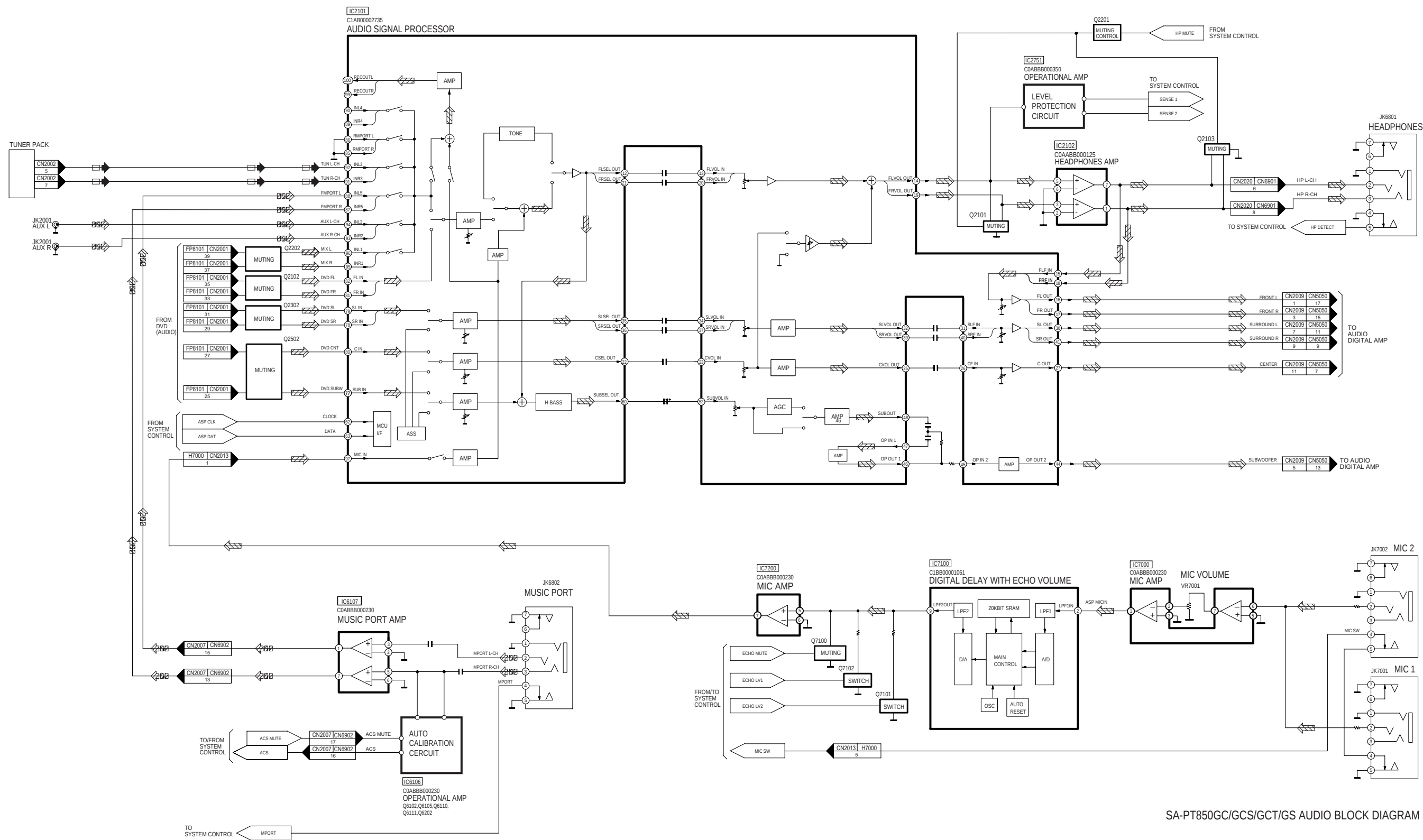
 : DVD AUDIO SIGNAL LINE   
  : DVD VIDEO SIGNAL LINE   
  : MAIN SIGNAL LINE



SA-PT850GC/GCS/GCT/GS DVD (HDMI) BLOCK DIAGRAM

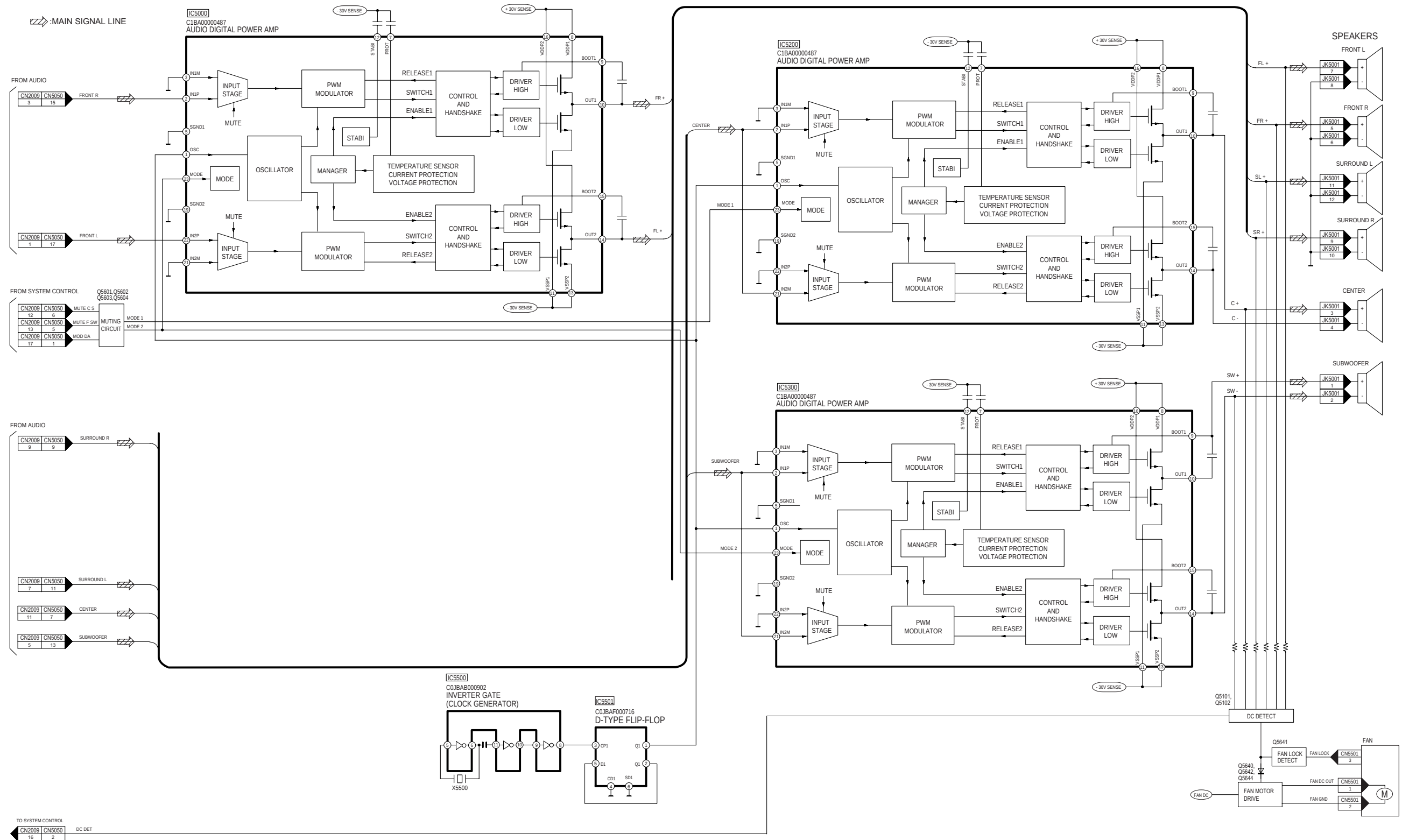
18.6. Audio

🔊:MAIN SIGNAL LINE    ◻▶:FM SIGNAL LINE    🎧:AUX/ MIC/ MUSIC PORT SIGNAL LINE



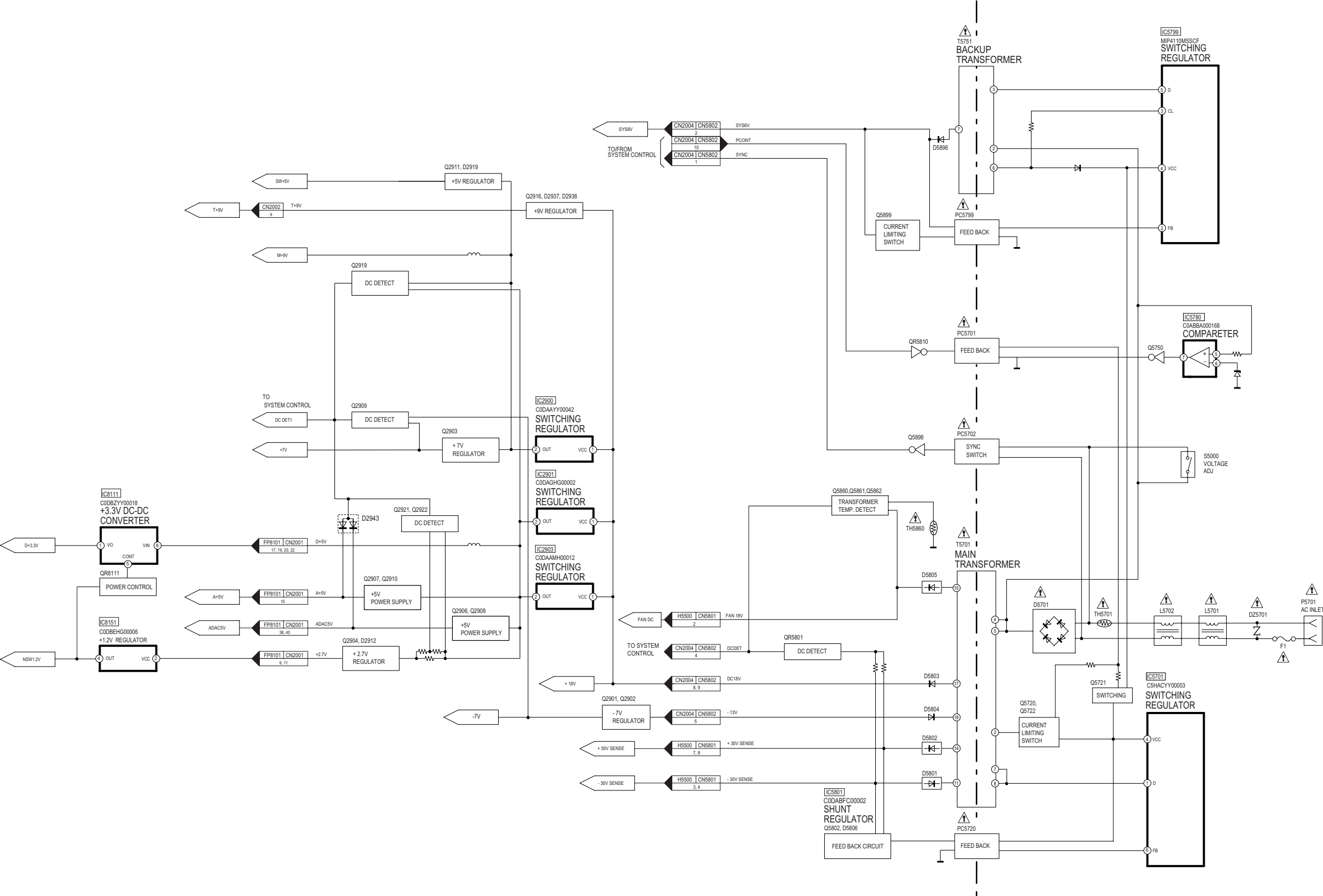
SA-PT850GC/GCS/GCT/GS AUDIO BLOCK DIAGRAM

## 18.7. Audio Digital Amp



SA-PT850GC/GCS/GCT/GS AUDIO DIGITAL AMP BLOCK DIAGRAM

18.8. Power



SA-PT850GC/GCS/GCT/GS POWER BLOCK DIAGRAM

## 19 Schematic Diagram Notes

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

### Notes:

|                |                                        |
|----------------|----------------------------------------|
| <b>S901:</b>   | Play switch.                           |
| <b>S902:</b>   | Open switch.                           |
| <b>S5000:</b>  | Voltage selector switch.               |
| <b>S6801:</b>  | Selector switch.                       |
| <b>S6802:</b>  | Reverse switch (◀◀ / ◀◀ / TUNING ∨).   |
| <b>S6803:</b>  | Forward switch (▶▶ / ▶▶ / TUNING ∧).   |
| <b>S6804:</b>  | Stop switch (■ / -TUNE MODE/-FM MODE). |
| <b>S6901:</b>  | Power switch (⏻/ AC IN).               |
| <b>S6902:</b>  | Open / close switch (▲ OPEN / CLOSE).  |
| <b>S6907:</b>  | Play switch (▶ / MEMORY).              |
| <b>VR6801:</b> | Volume jog.                            |
| <b>VR7001:</b> | Mic volume.                            |

- 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

- **Resistor**

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

- **Capacitor**

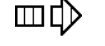
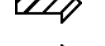
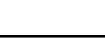
Unit of capacitance is μF, unless otherwise noted. F=Farad, pF=Pico-Farad

- **Coil**

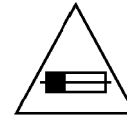
Unit of inductance is H, unless otherwise noted.

- Voltage and signal line

|                                                                                     |                           |
|-------------------------------------------------------------------------------------|---------------------------|
|  | : +B signal line          |
|  | : -B signal line          |
|  | : USB signal line         |
|  | : DVD RF signal line      |
|  | : Motor Drive 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          |
|  | : FM signal line                   |
|  | : AUX/ Mic/ Music Port signal line |

**CAUTION:** FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE F1 T8AH 250V FUSE



RISK OF FIRE-REPLACE FUSE AS MARKED.

### FUSE CAUTION



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

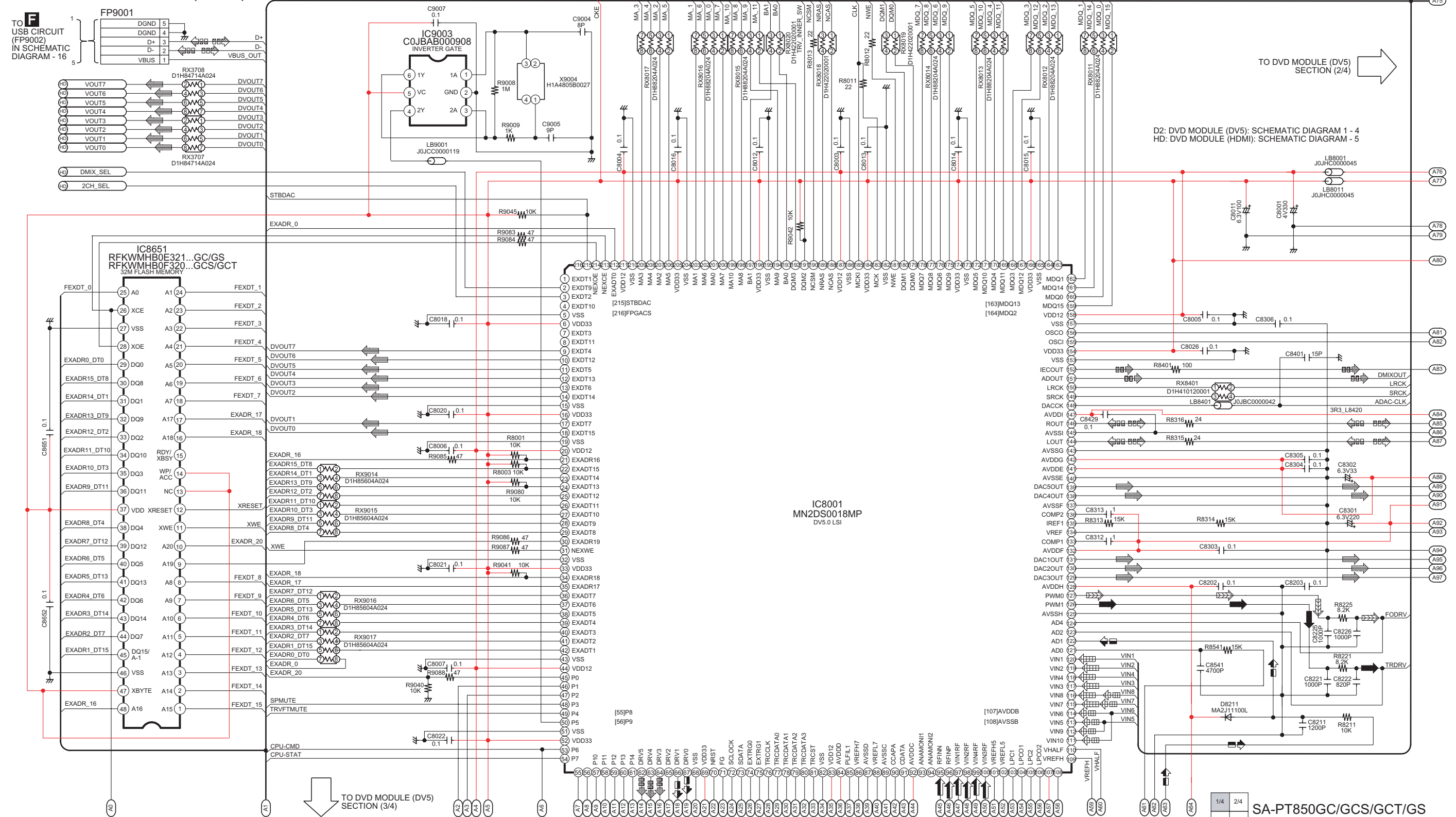


20 Schematic Diagram

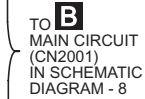
20.1. DVD Module (DV5/HDMI) Circuit

SCHEMATIC DIAGRAM - 1

A DVD MODULE (DV5) CIRCUIT



## A DVD MODULE (DV5) CIRCUIT









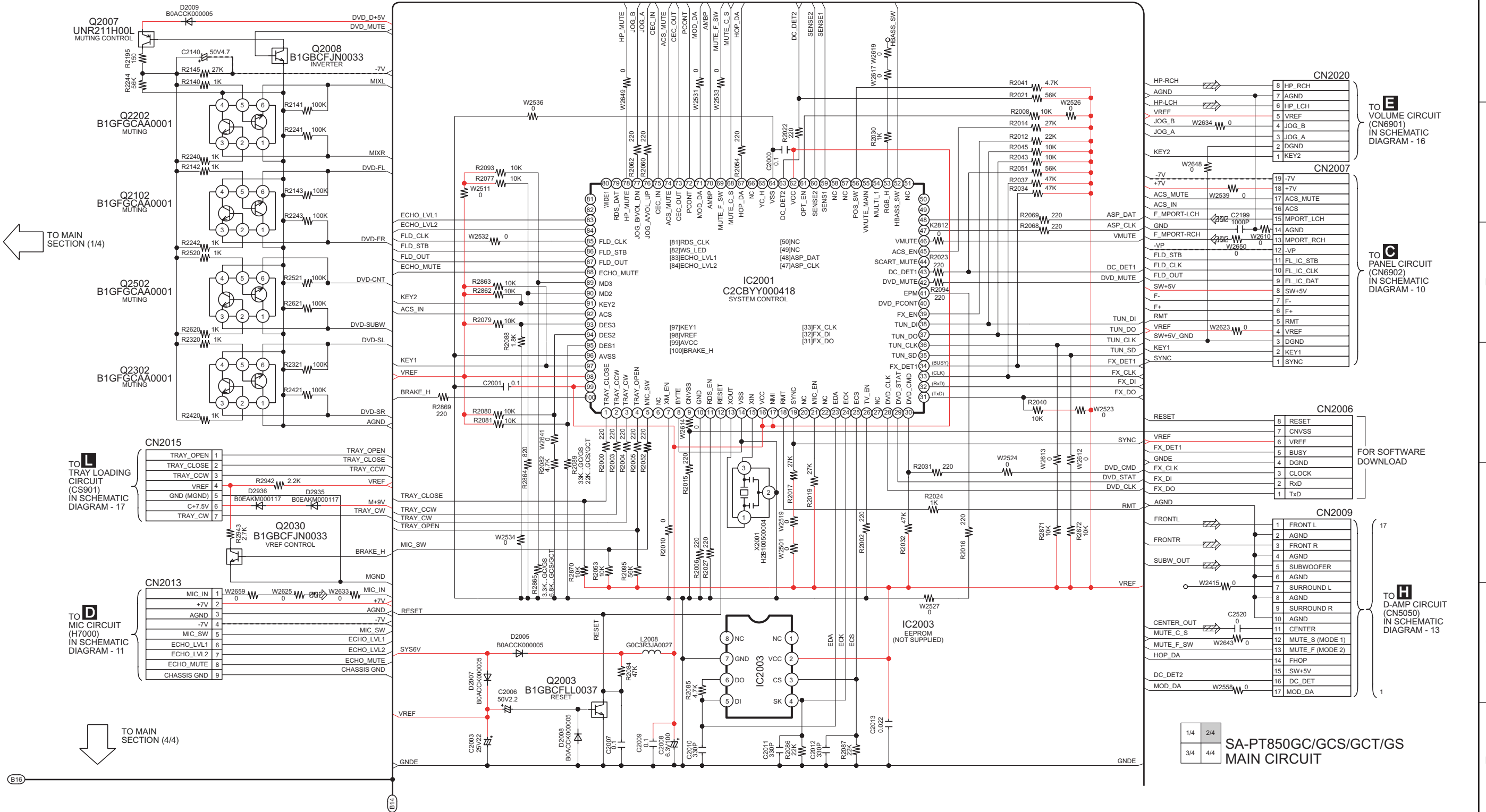
⇒:DVD VIDEO SIGNAL LINE



SCHEMATIC DIAGRAM - 7

**B** MAIN CIRCUIT

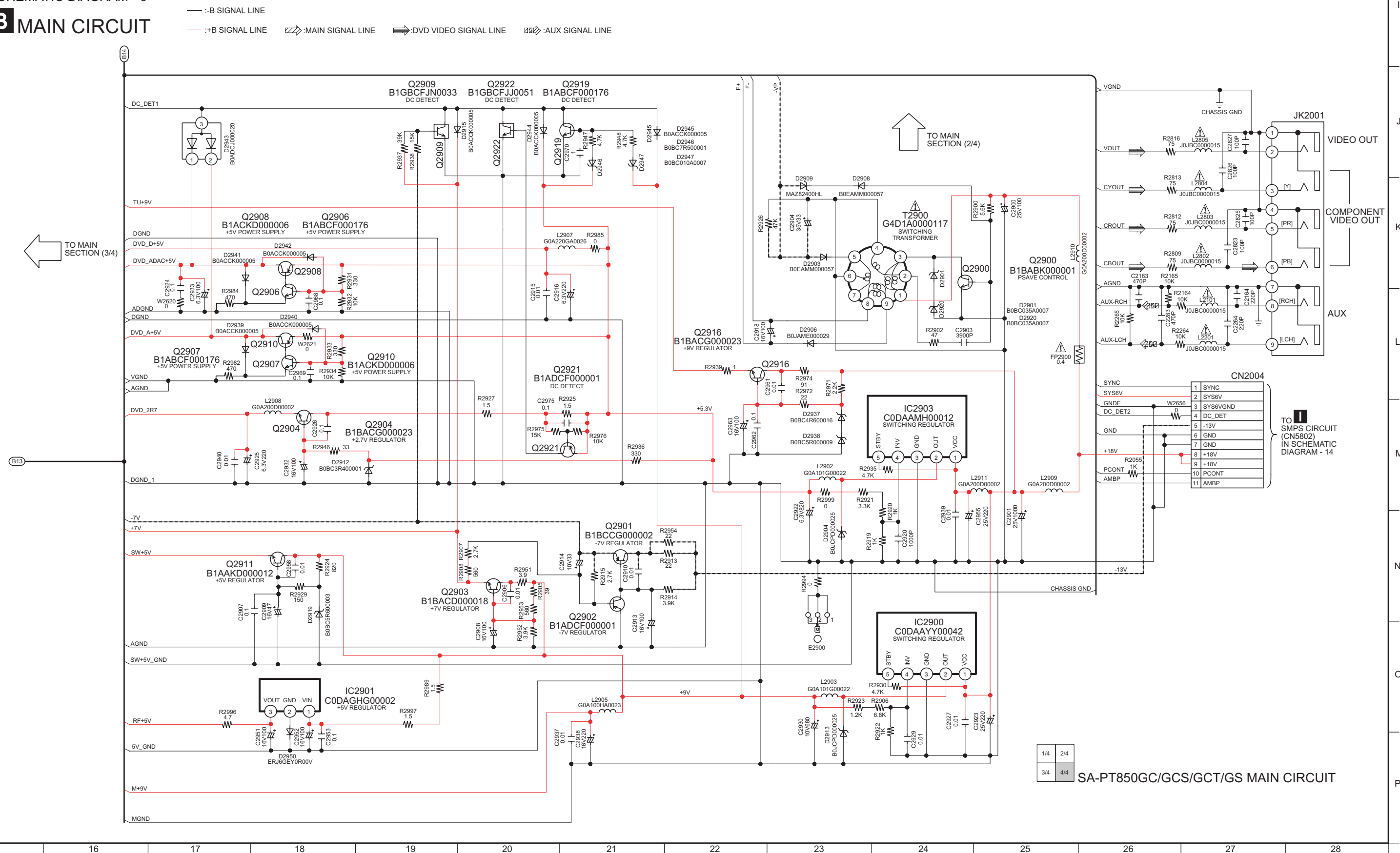
--- :B SIGNAL LINE  
--- :+B SIGNAL LINE  
--- :MAIN SIGNAL LINE  
--- :MIC / MUSIC PORT SIGNAL LINE





SCHEMATIC DIAGRAM - 9

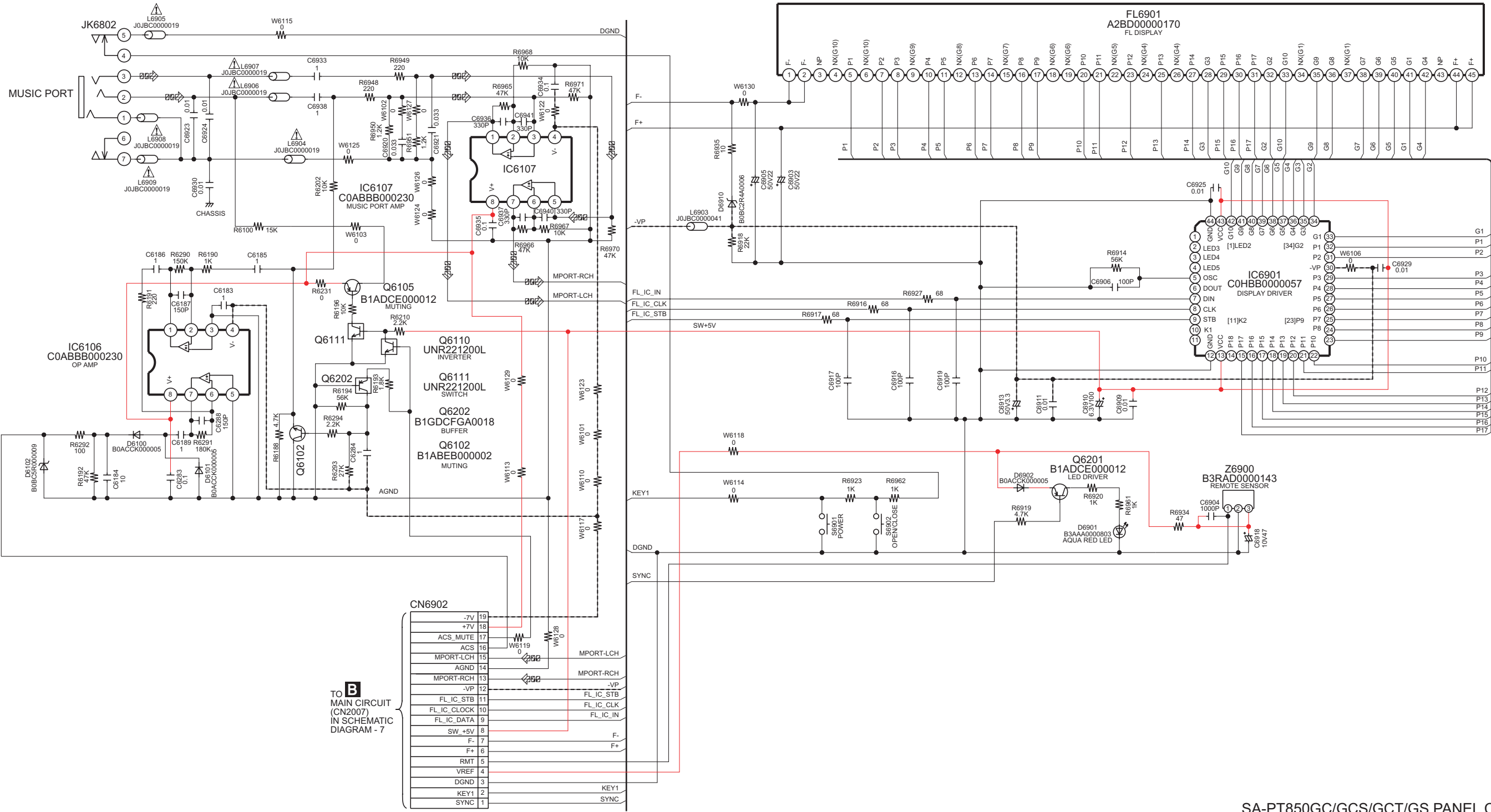
## B MAIN CIRCUIT



SCHEMATIC DIAGRAM - 10

C PANEL CIRCUIT

— :+B SIGNAL LINE    --- :-B SIGNAL LINE     :MUSIC PORT SIGNAL LINE

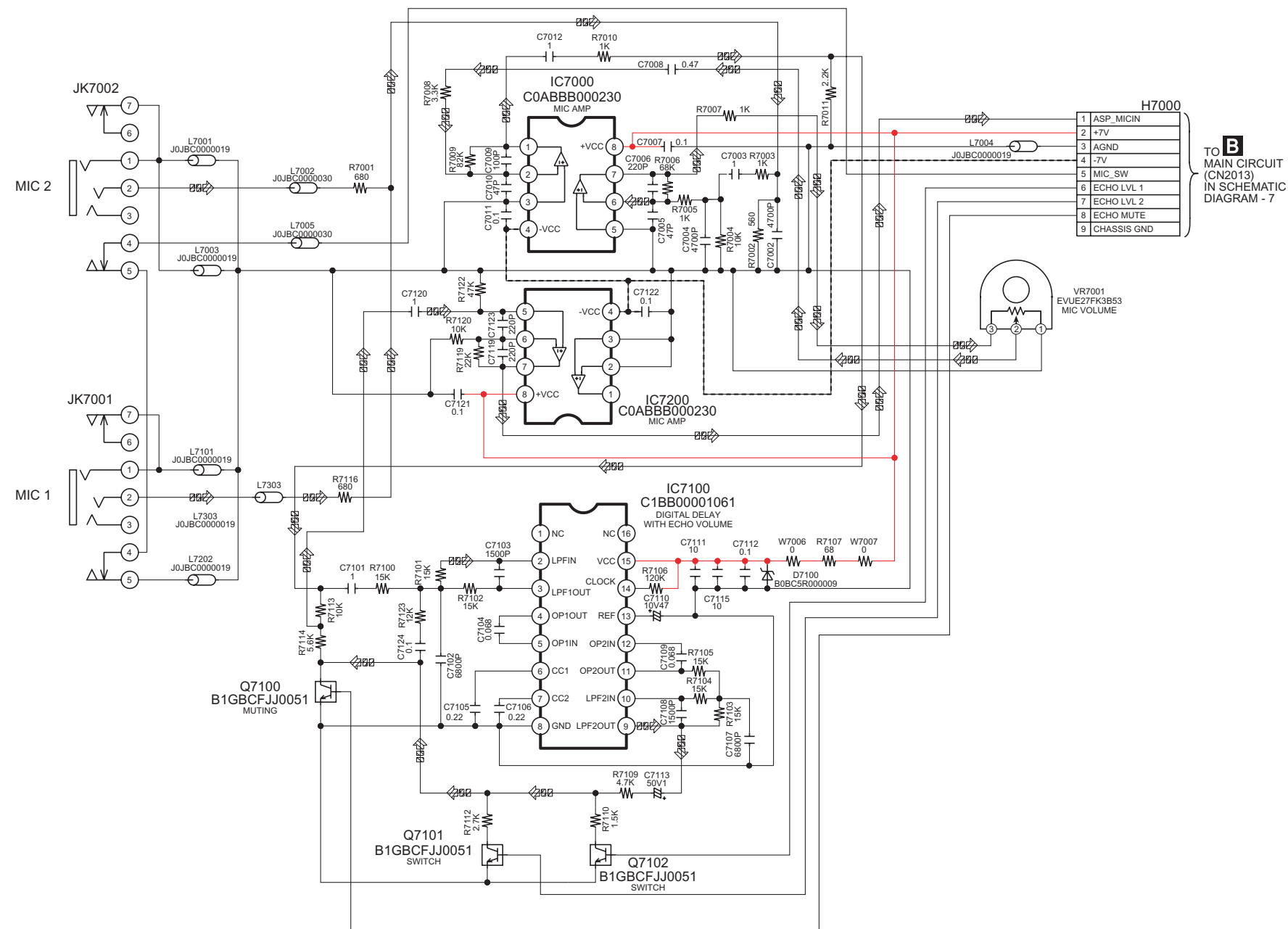


SA-PT850GC/GCS/GCT/GS PANEL CIRCUIT

SCHEMATIC DIAGRAM - 11

**D** MIC CIRCUIT

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



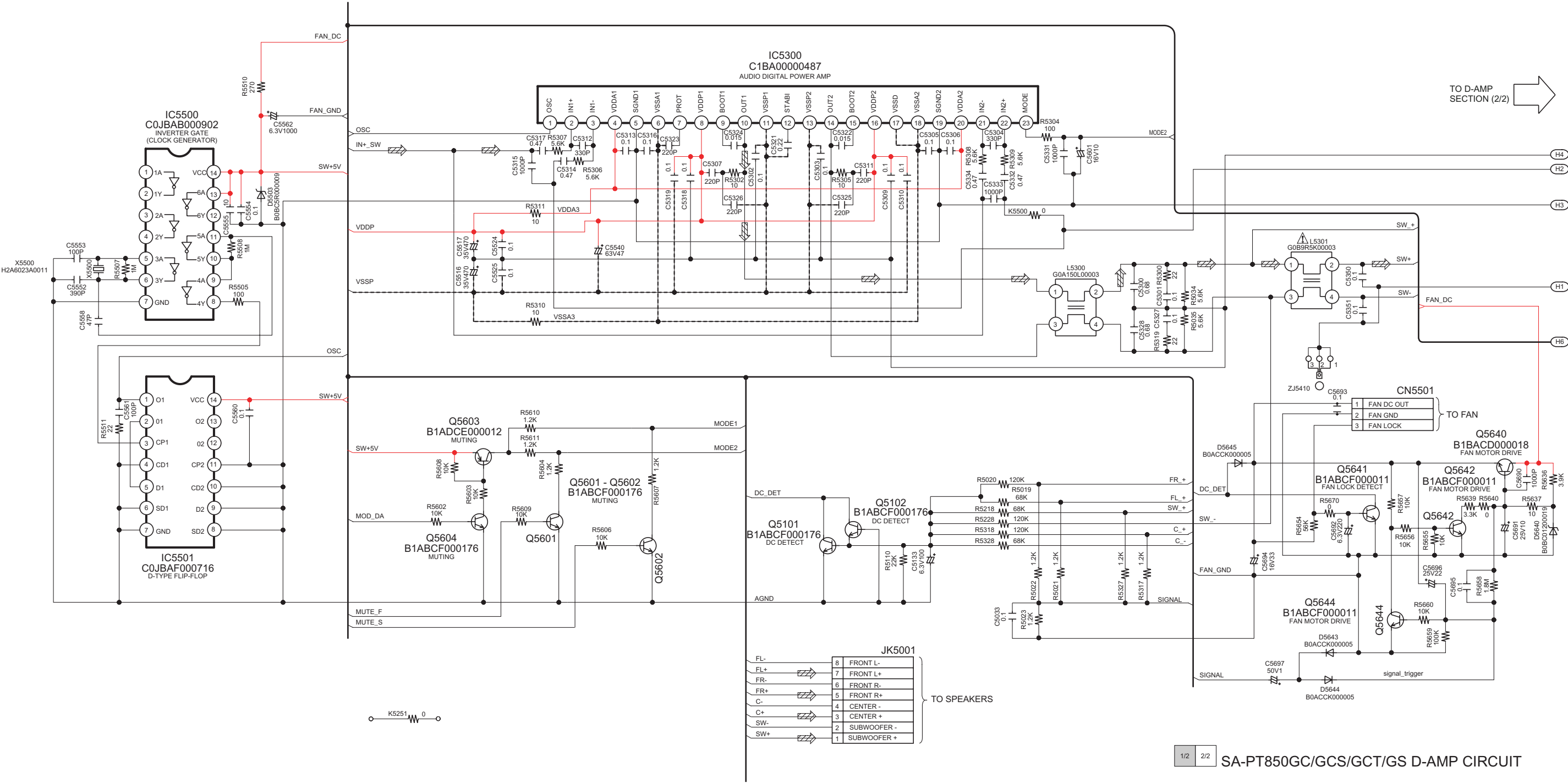
SA-PT850GC/GCS/GCT/GS MIC CIRCUIT

20.3. D-Amp & SMPS Circuit

SCHEMATIC DIAGRAM - 12

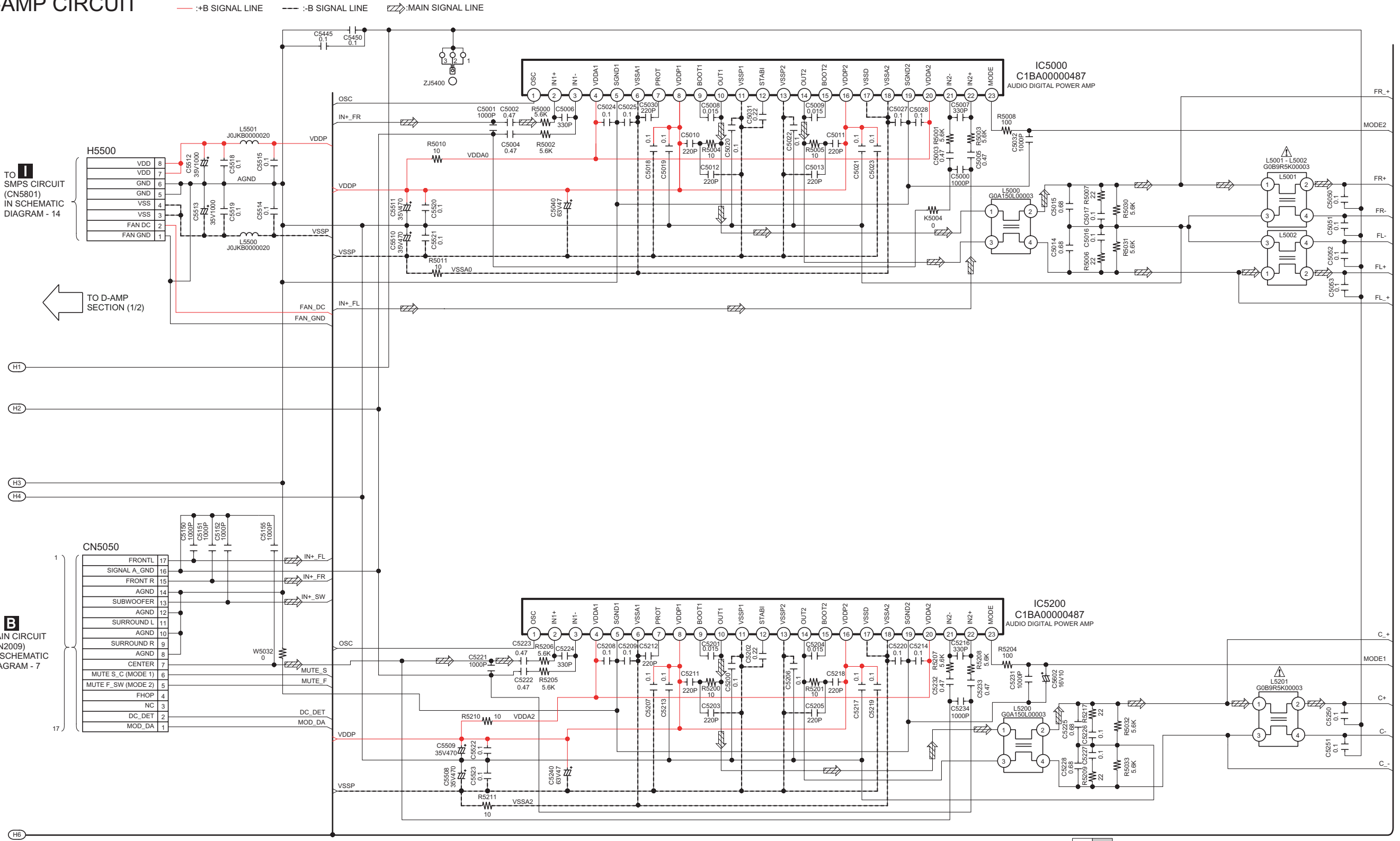
D-AMP CIRCUIT

—+B SIGNAL LINE    ---:B SIGNAL LINE    ≡≡≡:MAIN SIGNAL LINE



SCHEMATIC DIAGRAM - 13

**H** D-AMP CIRCUIT



SCHEMATIC DIAGRAM - 14

SMPS CIRCUIT

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

TO **H**  
D-AMP CIRCUIT  
(H5500)  
IN SCHEMATIC  
DIAGRAM - 13

TO **B**  
MAIN CIRCUIT  
(CN2004)  
IN SCHEMATIC  
DIAGRAM - 9

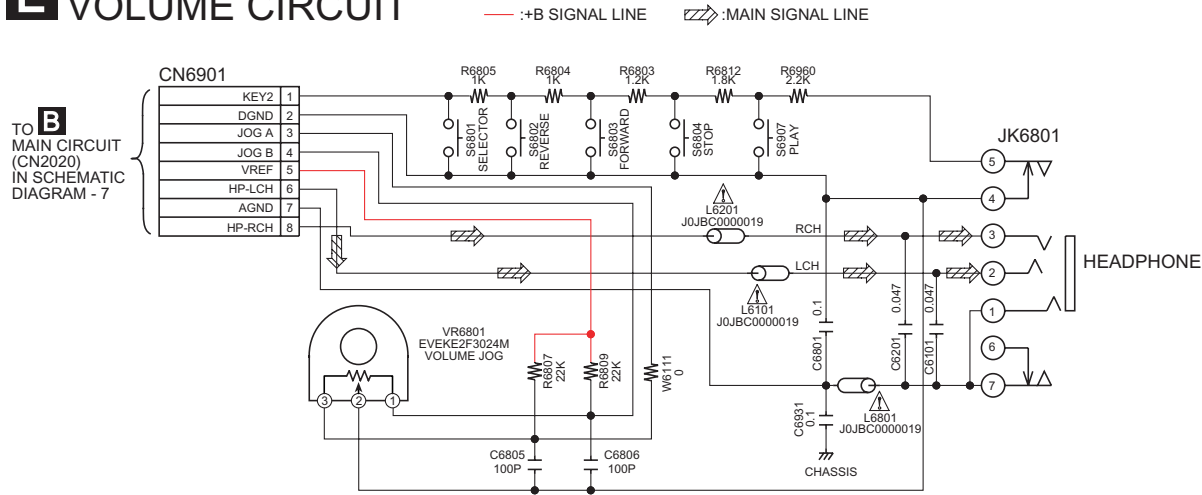
TO SMPS  
SECTION (2/2)



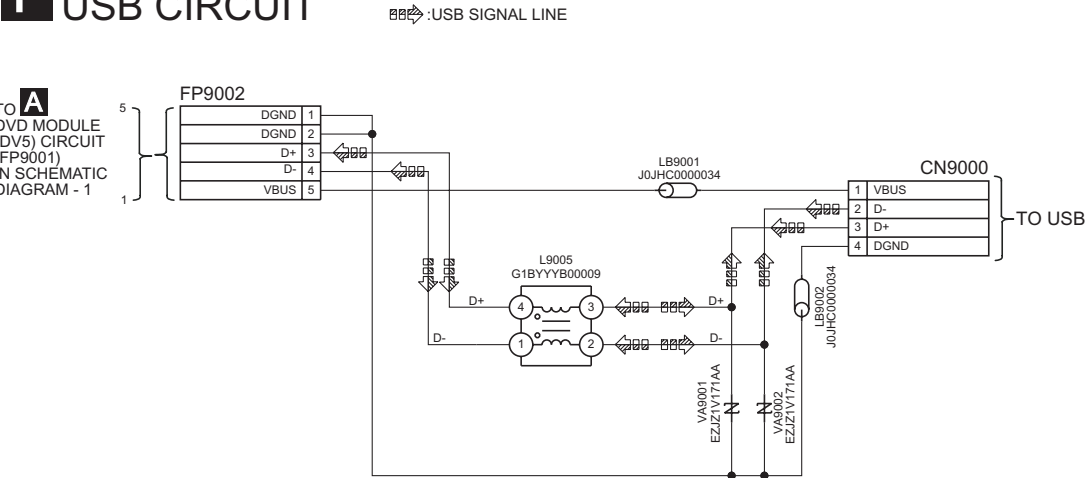
20.4. Volume, USB, Wireless Adapter & AC-Inlet Circuit

SCHEMATIC DIAGRAM - 16

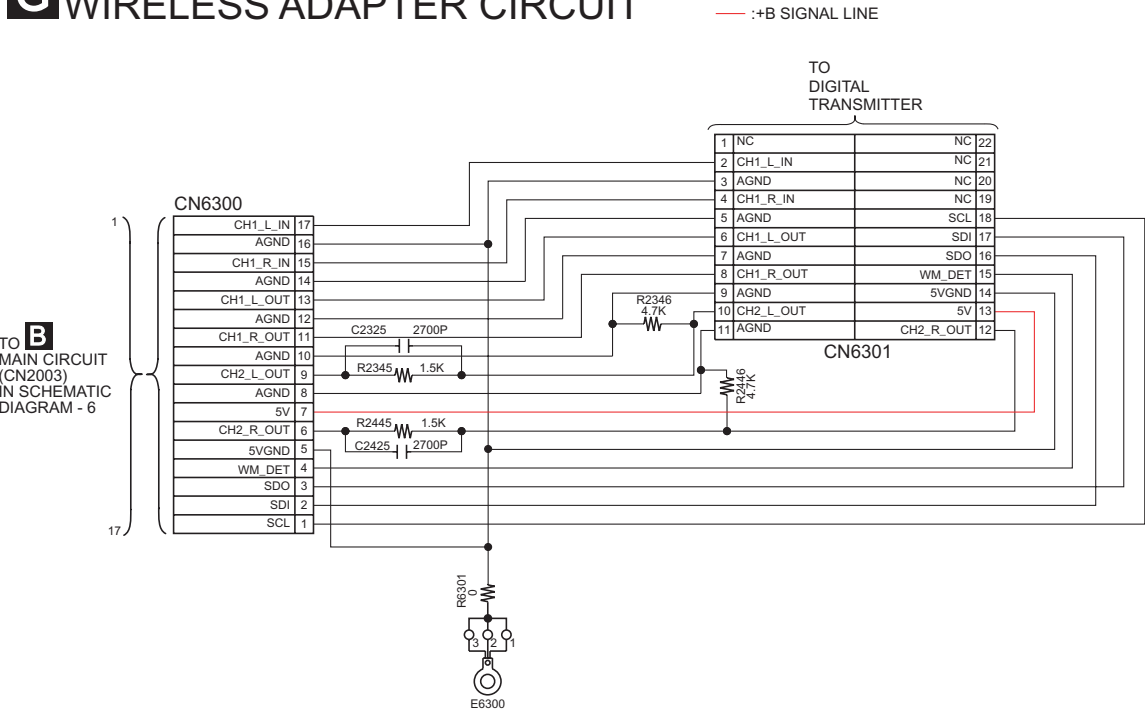
**E** VOLUME CIRCUIT



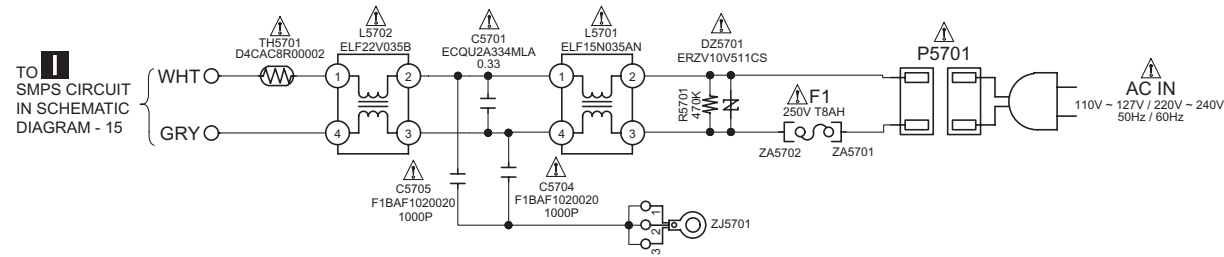
**F** USB CIRCUIT



**G** WIRELESS ADAPTER CIRCUIT



**J** AC-INLET CIRCUIT



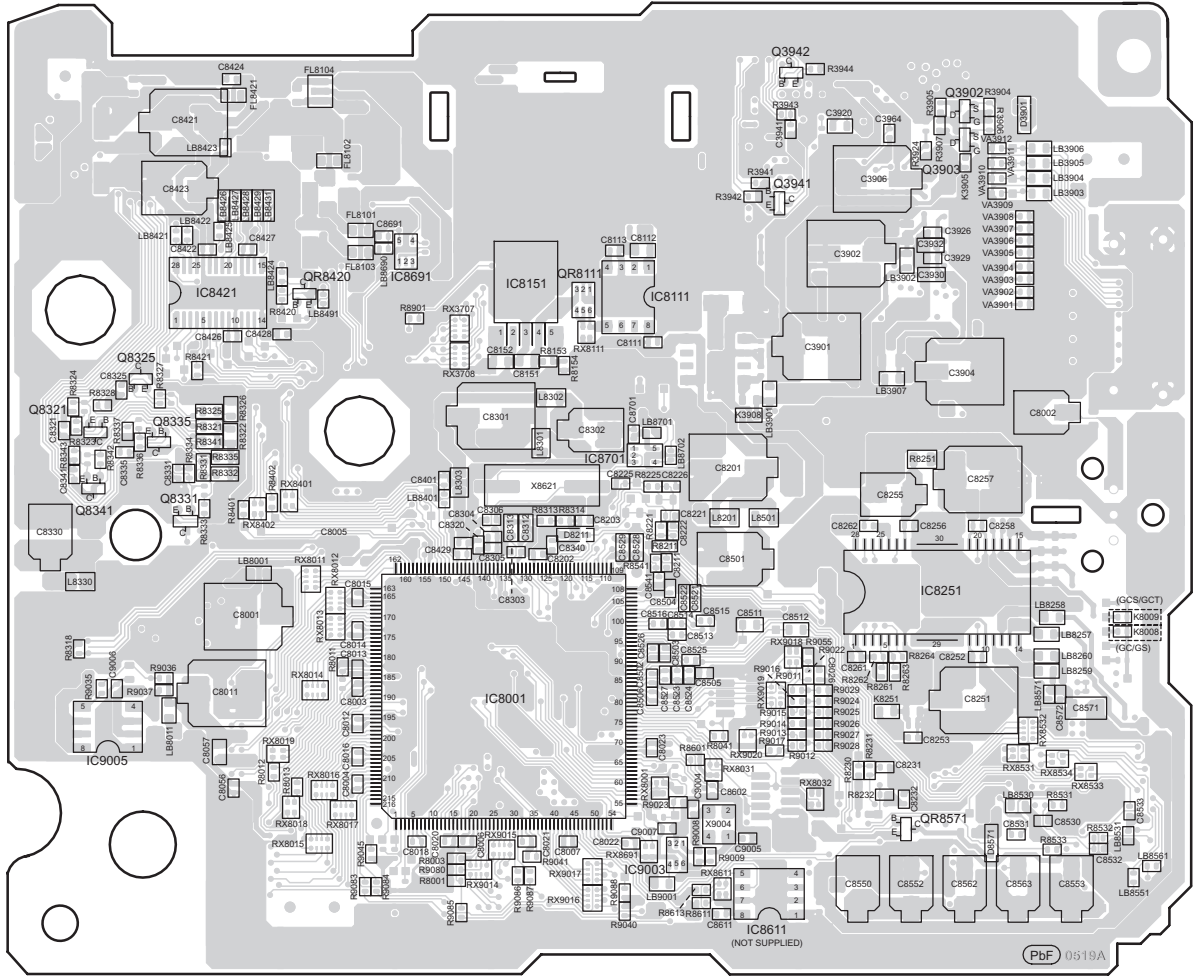




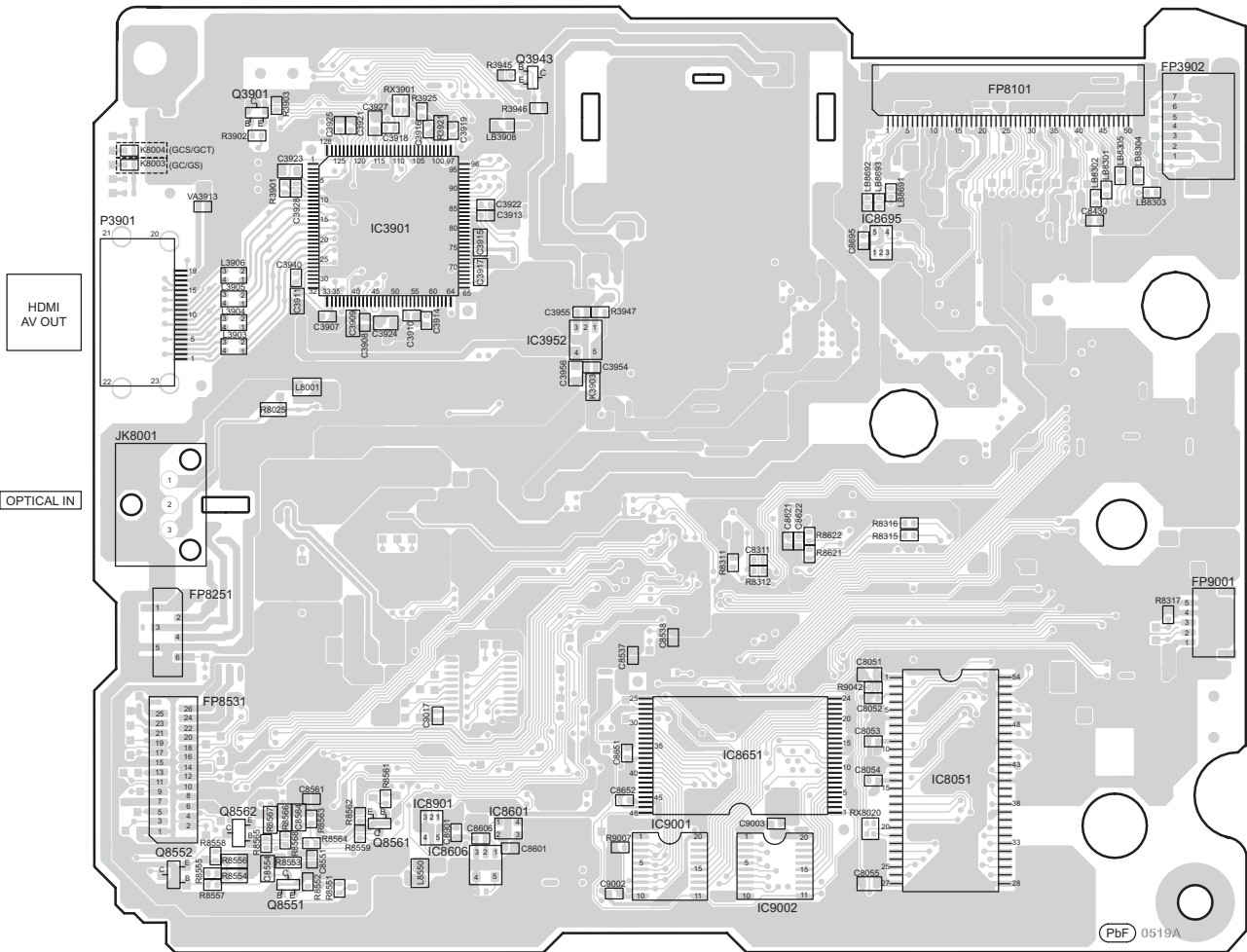
# 21 Printed Circuit Board

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

**A** DVD MODULE P.C.B (REPX0563D...GC/GS)  
(REPX0563E...GCS/GCT)

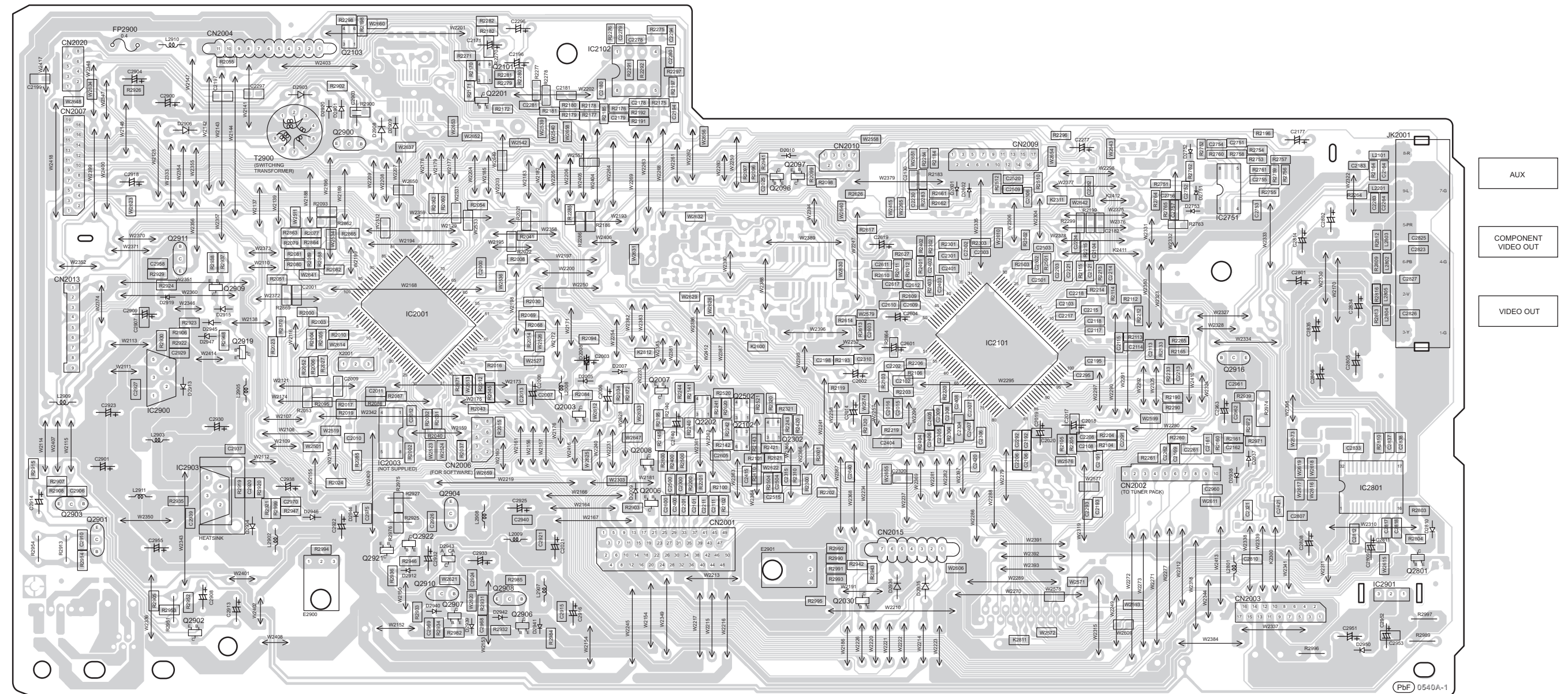


(SIDE A)



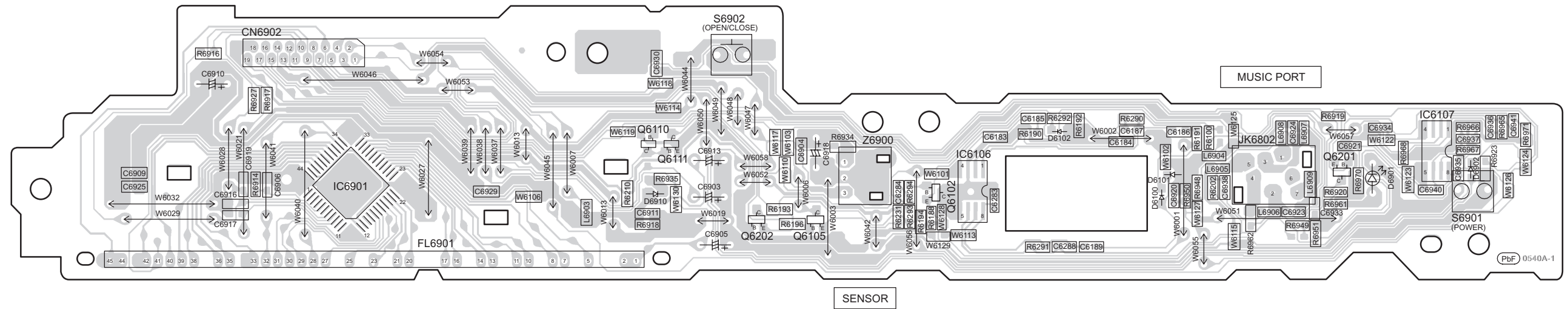
(SIDE B)

**B** MAIN P.C.B. (REPX0587C...GC/GS)  
(REPX0587D...GCS/GCT)

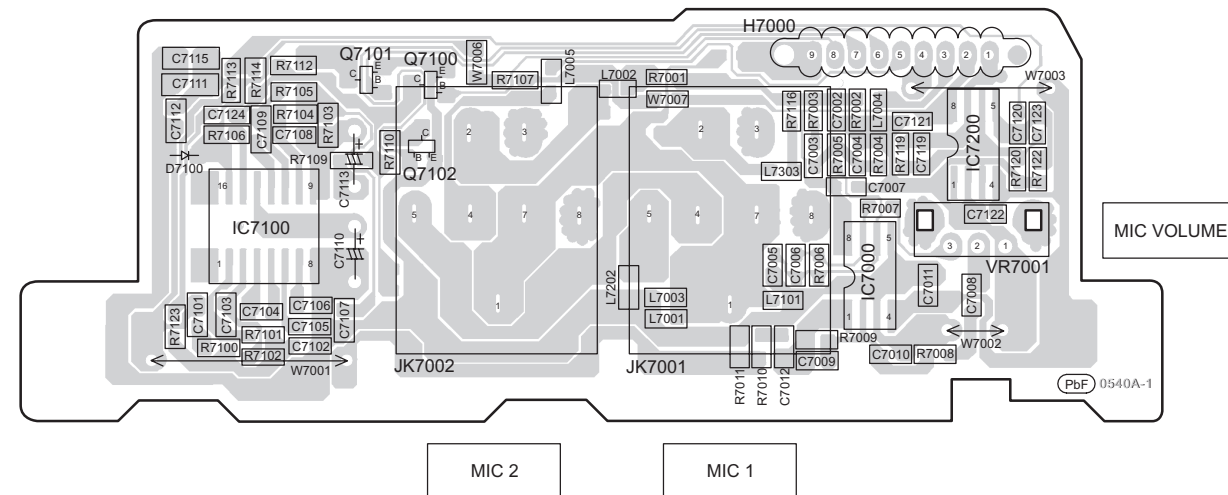
SA-PT850GC/GCS/GCT/GS  
MAIN P.C.B.

### 21.3. Panel & Mic P.C.B.

**C** PANEL P.C.B. (REPX0587C...GC/GS)  
(REPX0587D...GCS/GCT)

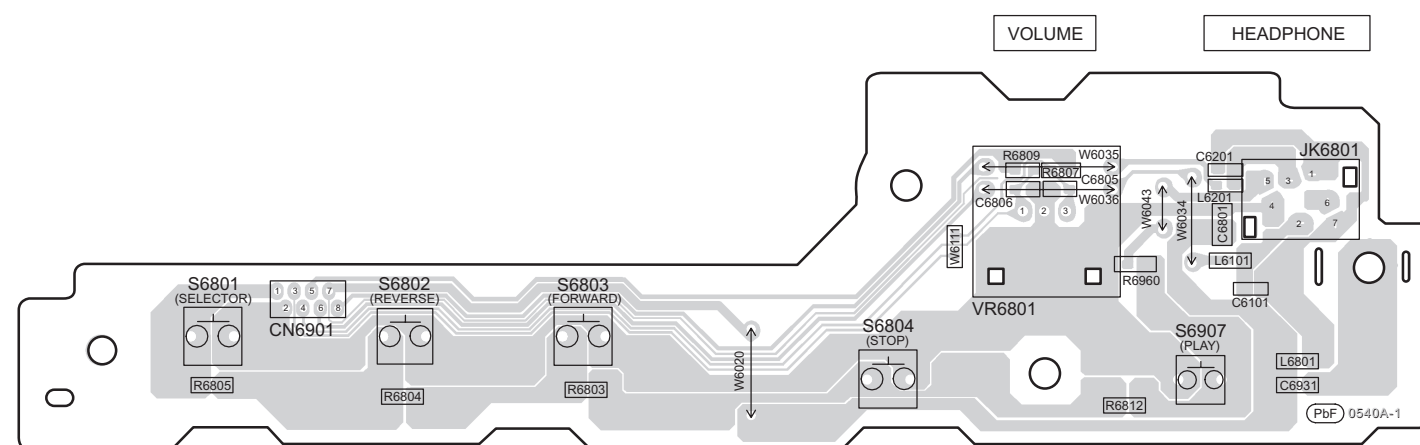


**D** MIC P.C.B. (REPX0587C...GC/GS)  
(REPX0587D...GCS/GCT)

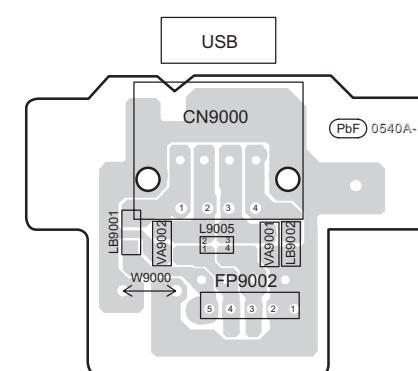


## 21.4. Volume, USB & Wireless Adapter P.C.B.

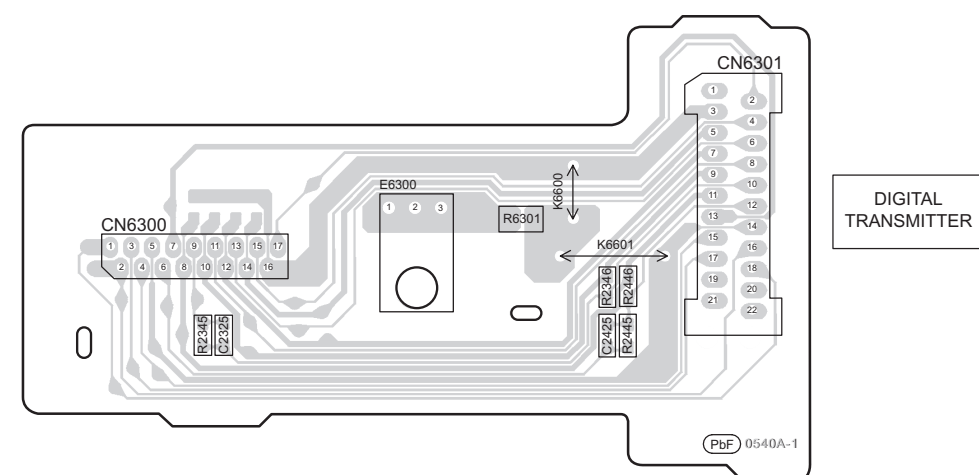
**E** VOLUME P.C.B. (REPX0587C...GC/GS)  
(REPX0587D...GCS/GCT)



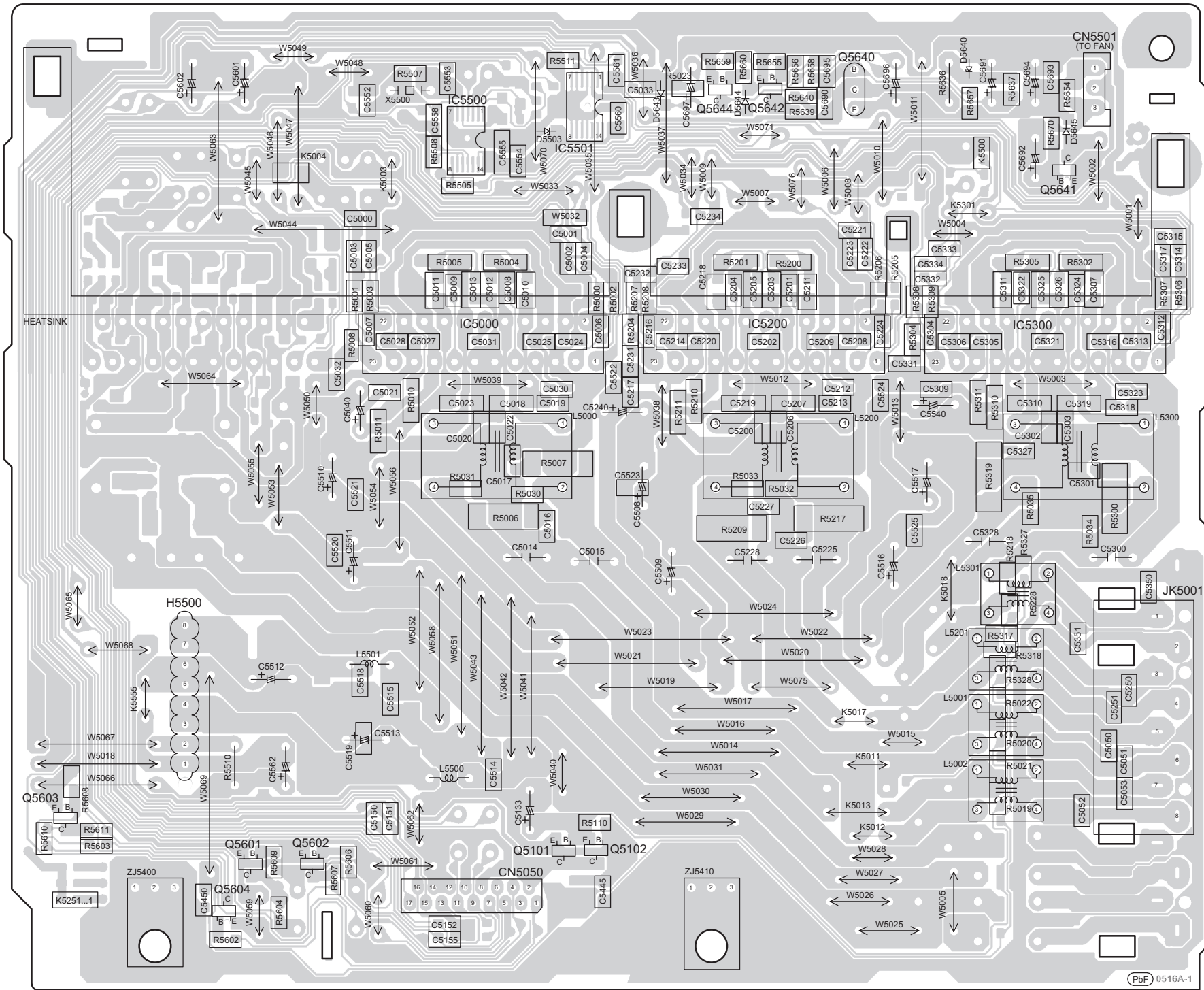
**F** USB P.C.B. (REPX0587C...GC/GS)  
(REPX0587D...GCS/GCT)



**G** WIRELESS ADAPTER P.C.B. (REPX0587C...GC/GS)  
(REPX0587D...GCS/GCT)



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

 D-AMP P.C.B. (REPX0560E)


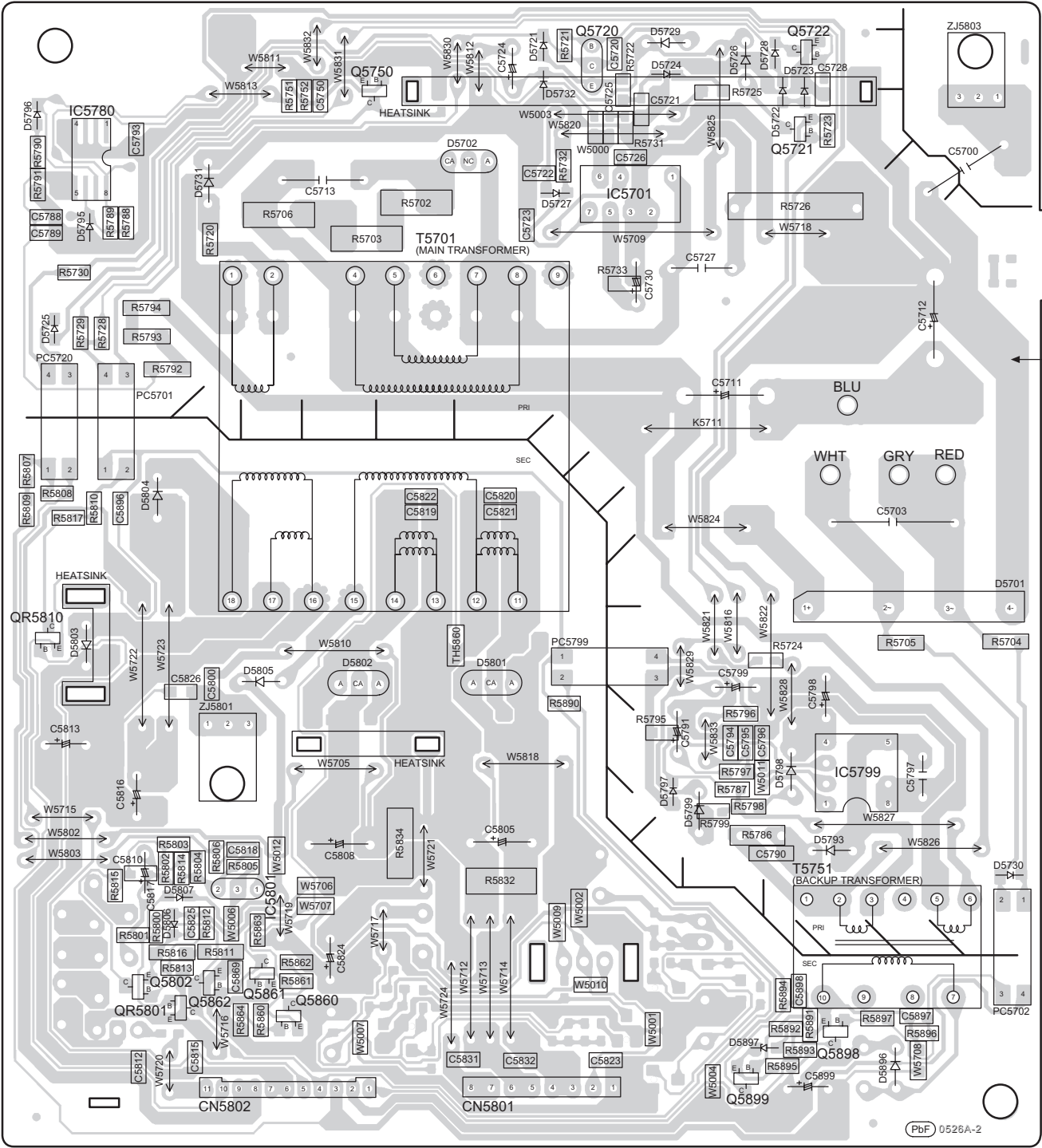
SUBWOOFER

CENTER  
SPEAKERFRONT  
SPEAKER RFRONT  
SPEAKER LSA-PT850GC/GCS/GCT/GS  
D-AMP P.C.B.

21.6. SMPS P.C.B.

H  
G  
F  
E  
D  
C  
B  
A

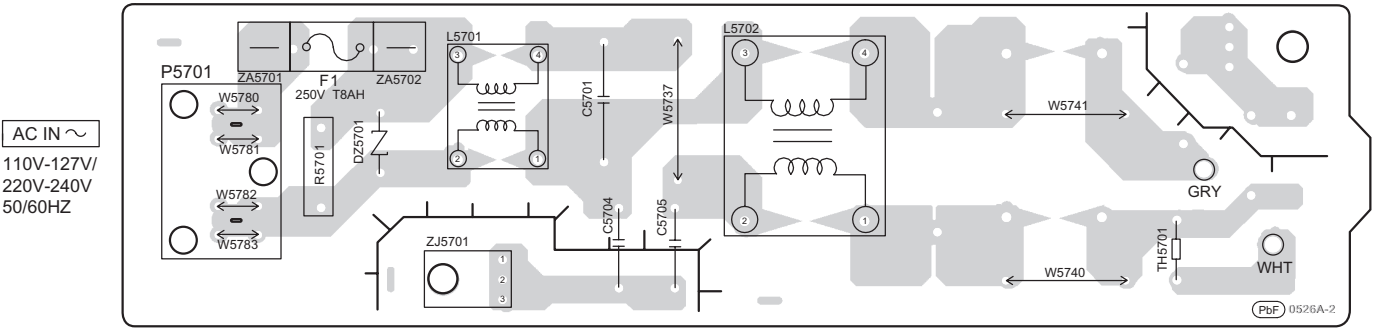
I SMPS P.C.B. (REPX0569B)



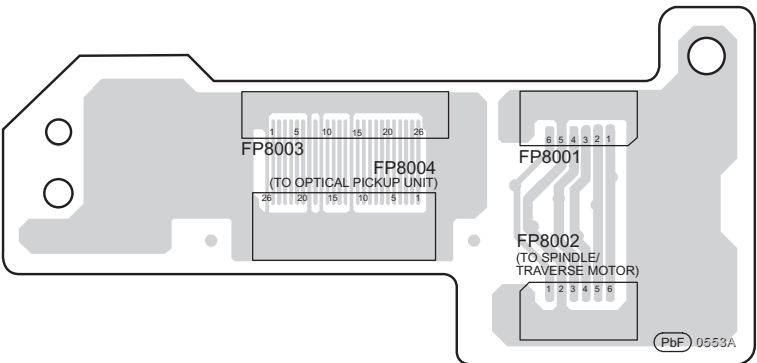
CAUTION  
RISK OF ELECTRIC SHOCK  
AC VOLTAGE LINE.  
PLEASE DO NOT TOUCH THIS P.C.B

21.7. AC-Inlet, Relay, Tray Loading & Voltage Selector P.C.B.

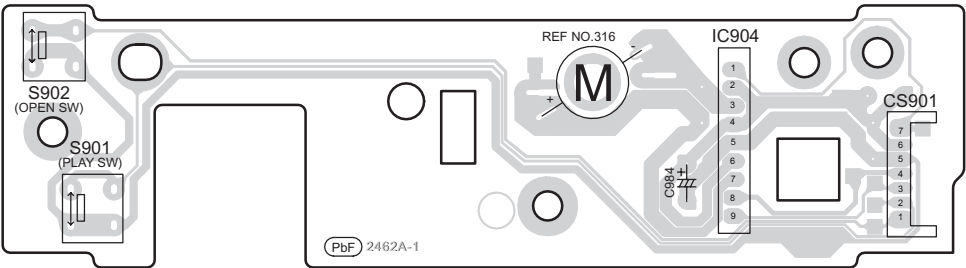
**J** AC-INLET P.C.B. (REPX0569B)



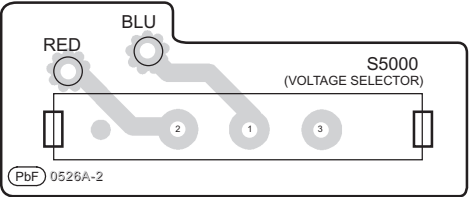
**K** RELAY P.C.B. (REPX0604A)



**L** TRAY LOADING P.C.B. (REP4238A)



**M** VOLTAGE SELECTOR P.C.B. (REPX0569B)





## 22 Basic Troubleshooting Guide

### 22.1. 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                                                                                                                                                                         | LB8301, R8321, R8322, LB8302, R8325, R8326                                                              |
|                                                                                             | c) Check audio DAC circuitry<br>* Compare the above with OK condition HDMI module P.C.B.                                                                                                       | IC8421<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, Q8561, Q8562                                                                              |
|                                                                                             | c) Check LSI IC connection to motor drive circuitry<br>*Compare the above with OK condition HDMI Module P.C.B.                                                                                 | IC8001 Pin 144, 145<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 HDMI Module to Traverse unit                                                                                                                                          | FP8251                                                                                                  |
|                                                                                             | b) Check motor driver circuitry on the voltages and control signals<br>*Compare the above with OK condition HDMI Module P.C.B.                                                                 | IC8251<br>*Check for solder short and/or component damaged                                              |
| 6) Cannot read the disc but spindle motor is spinning<br><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 HDMI Module P.C.B. | Q8551, Q8552, LB8531 (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                                                                |
| 9) Cannot read data from USB                                                                | a) Check USB connector & FFC<br>b) Check LSI O/P<br>c) Check IC supply (+5V)                                                                                                                   | FP9001<br>IC8001 Pin 144, 146<br>IC9005 Pin 2, 3                                                        |

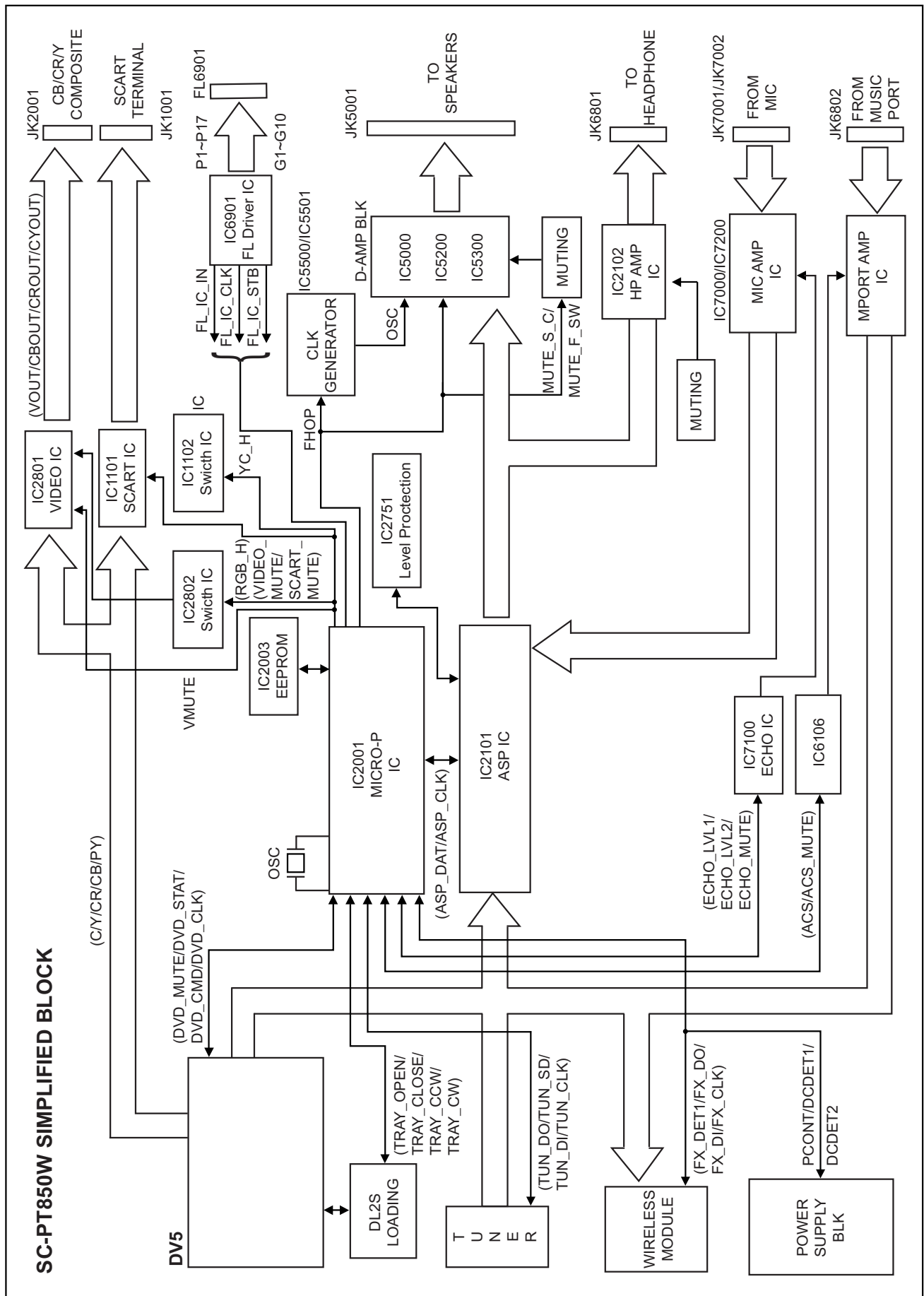
## 22.2. Basic Troubleshooting Guide for HDMI AV output

| Problems                                                        | Checking Points                                                                                                                                                       | Checking Components                                                                                            |
|-----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| 1) TV does not have any display. Set FL display shows U702/U703 | 1) Check setting of the set in Setup Menu whether the HDMI Video output is turned On                                                                                  | *This year HDMI always ON. No need check Setup Menu.<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) <ul style="list-style-type: none"> <li>- Data (Pin 72, 73, 76, 77, 80, 81)</li> <li>- Clock (Pin 10,12)</li> </ul>          | L3903, L3904, L3905,<br>L3906                                                                                  |
|                                                                 | 5) HDMI Transmitter communication lines to TV <ul style="list-style-type: none"> <li>- Data, SDA (Pin 120, IC8001)</li> <li>- Clock, SCL (Pin 121, IC8001)</li> </ul> | LB3905, R3905, Q3902, R3904<br>LB3904, R3907, Q3903, R3906                                                     |
|                                                                 | 6) HDMI Transmitter communications from LSI (IC8001)                                                                                                                  | RX3901                                                                                                         |
|                                                                 | 7) Local Port Slave Address setting resistor                                                                                                                          | R3921                                                                                                          |
|                                                                 | 8) HDMI Transmitter +3.3V Supply                                                                                                                                      | LB3901, IC3901 (Pin 26, 42, 47, 52, 70, 84, 100, 106, 115)                                                     |
|                                                                 | 9) HDMI Transmitter +1.2V Supply                                                                                                                                      | IC3901 (Pin 5, 26, 47, 42, 55, 75, 85, 102, 109, 116, 123), LB3908, IC8151 (Pin 2, 4)                          |
|                                                                 | 10) HDMI Up-Con +3.3V Supply                                                                                                                                          | LB3901                                                                                                         |
|                                                                 | 11) HDMI Pixel Clock Output from Up-Con to HDMI Transmitter                                                                                                           | R8902                                                                                                          |
|                                                                 | 12) Up-Con IC I2C Data and Clock Line                                                                                                                                 | RX3706                                                                                                         |
|                                                                 | 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                                                                                                 |

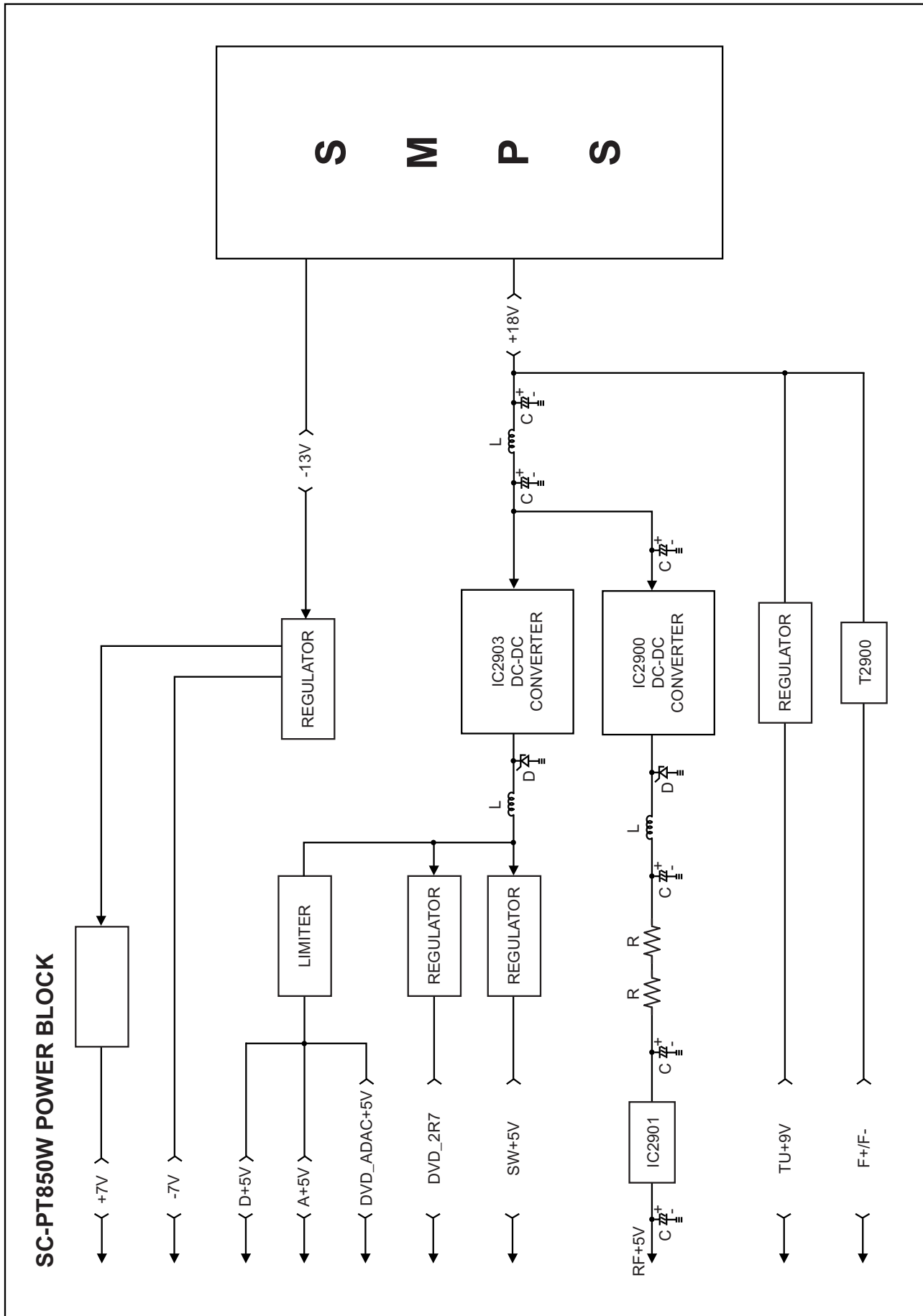
| Problems                                                                                  | Checking Points                                                                                                           | Checking Components                                                                                         |
|-------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| 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 Overall Block Diagram for PT850W

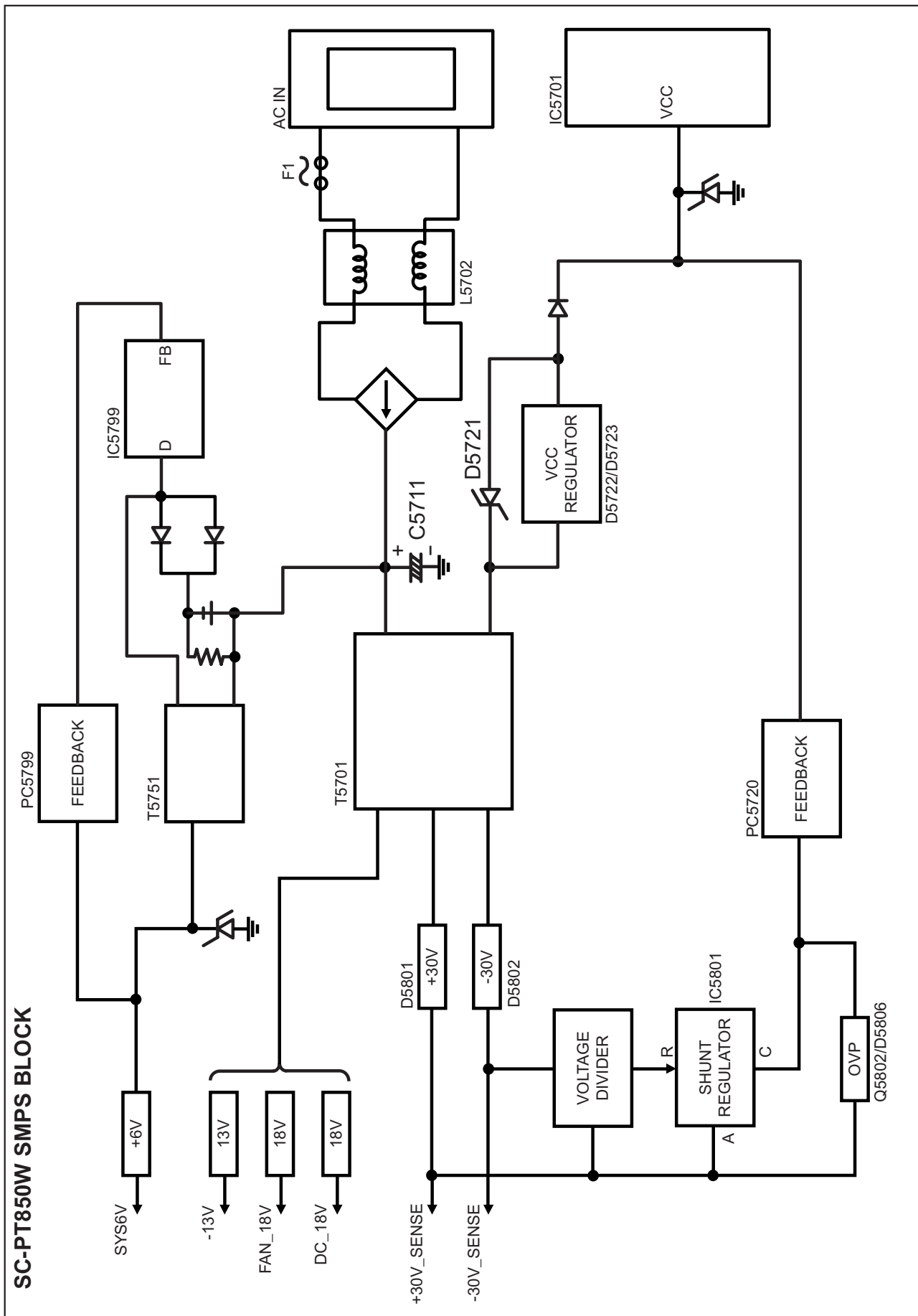
### 23.1. SC-PT850W Simplified Block



## 23.2. SC-PT850W Power Block



### 23.3. SC-PT850W SMPS Block



## 24 Terminal Function of ICs

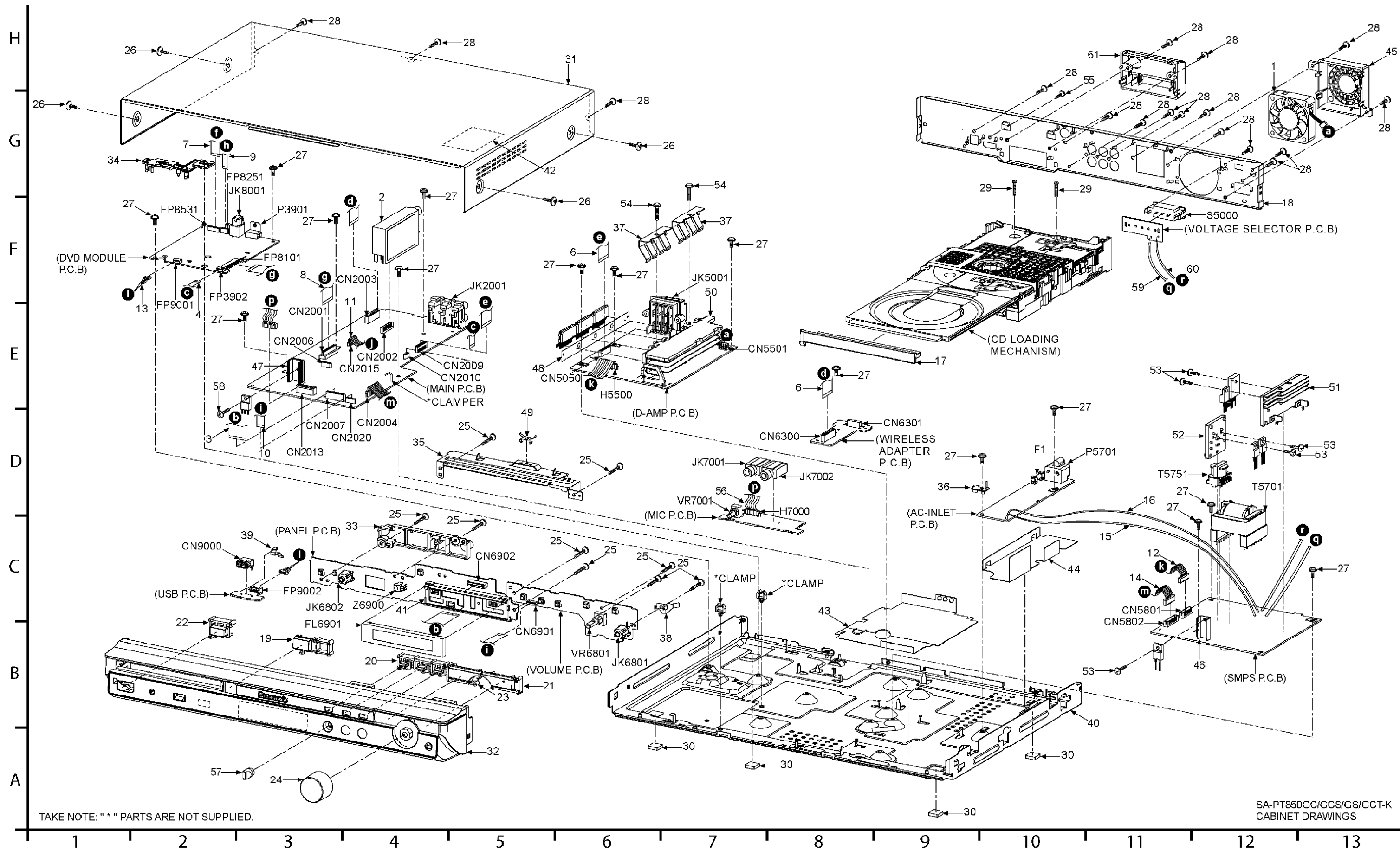
### 24.1. IC2001 (C2CBYY000418): System Control IC

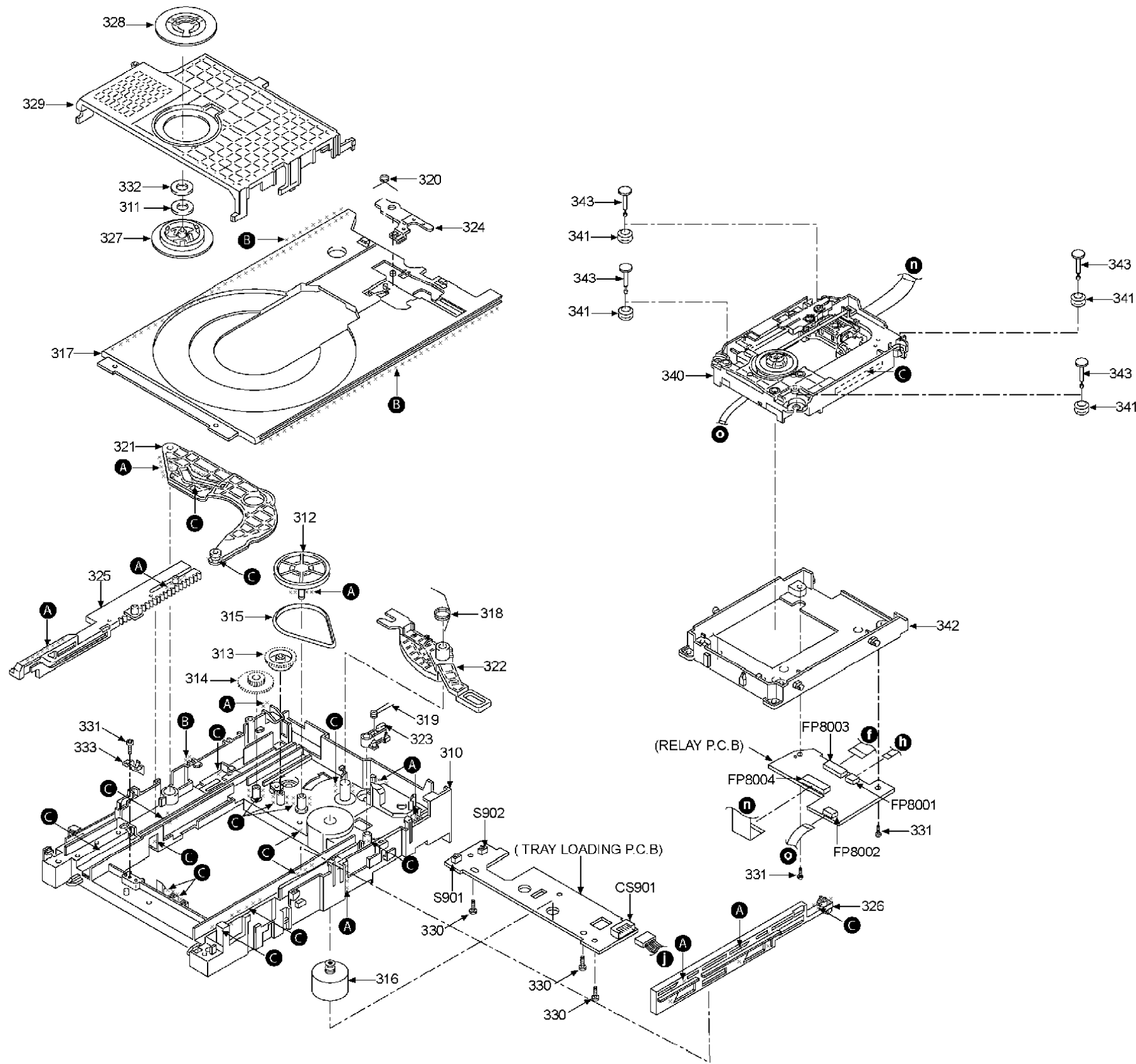
| Pin No. | Terminal Name | I/O | Function                                        |
|---------|---------------|-----|-------------------------------------------------|
| 1       | TRAY_CLOSE    | I   | LOADING MECHA CLOSE SW (L: SW ON)               |
| 2       | TRAY_CCW      | O   | Terminal for tray control 1                     |
| 3       | TRAY_CW       | O   | Terminal for tray control 2                     |
| 4       | TRAY_OPEN     | I   | LOADING MECHA OPEN SW (L: SW ON)                |
| 5       | MIC_SW        | I   | MIC Insertion Detect (if MIC_EN=1)              |
| 6       | NC            | -   | No Connection                                   |
| 7       | XM_EN         | I   | Wireless Data Input (Disable)                   |
| 8       | BYTE          | I   | VSS (GND)                                       |
| 9       | CNVSS         | -   | VSS (GND)                                       |
| 10      | GND           | -   | GND (0V)                                        |
| 11      | RDS_EN        | I   | RDS Enable (H=Enable, L=Disable)                |
| 12      | RESET         | I   | SYSTEM RESET INPUT                              |
| 13      | XOUT          | -   | MAIN CLOCK OUTPUT (10.0MHZ)                     |
| 14      | VSS           | -   | GND (0V)                                        |
| 15      | XIN           | -   | MAIN CLOCK INPUT (10 MHZ)                       |
| 16      | VCC           | -   | POWER SUPPLY (5V)                               |
| 17      | NMI           | I   | CONNECT TO VCC, EXTERNAL INTERRUPT I/P          |
| 18      | RMT           | I   | REMOCON INPUT                                   |
| 19      | SYNC          | I   | AC FAILURE DETECT INPUT                         |
| 20      | NC            | -   | No Connection                                   |
| 21      | MIC_EN        | I   | Microphone Enable (L=Disable, H=Enable)         |
| 22      | NC            | -   | No Connection                                   |
| 23      | EDA           | I/O | DATA signal for the EEPROM                      |
| 24      | ECK           | O   | CLOCK signal for the EEPROM                     |
| 25      | ECS           | O   | LAT signal for the EEPROM                       |
| 26      | TV_EN         | I   | Disable/Enable for TV Selector                  |
| 27      | NC            | -   | No Connection                                   |
| 28      | DVD_CLK       | I   | CLK signal for the DVD Module                   |
| 29      | DVD_STAT      | I   | STATUS signal from the DVD Module               |
| 30      | DVD_CMD       | O   | CMD signal for the DVD Module                   |
| 31      | FX_DO         | O   | Wireless Data Output                            |
| 32      | FX_DI         | I   | Wireless Data Input                             |
| 33      | FX_CLK        | O   | Wireless Clock                                  |
| 34      | FX_DET1       | O   | RF Change Direction (Wireless Module)           |
| 35      | TUN_SD        | I   | Tuner Station Detect                            |
| 36      | TUN_CLK       | O   | I2C Clock for Tuner                             |
| 37      | TUN_DO        | I   | Stereo Detect                                   |
| 38      | TUN_DI        | O   | I2C Data for Tuner                              |
| 39      | FX_EN         | I   | Wireless Enable                                 |
| 40      | DVD_PCONT     | O   | Control Signal for the Power for the DVD MODULE |
| 41      | EPM           | I   | [Flash Connector]                               |
| 42      | DVD_MUTE      | I   | Signal from DVD module control mute circuit     |
| 43      | DC_DET1       | I   | DC Detection circuit 1                          |
| 44      | SCART_MUTE    | O   | Line out for SCART terminal                     |
| 45      | ACS_EN        | I   | Wide Surround Enable                            |
| 46      | VMUTE         | O   | Video Mute Control                              |
| 47      | ASP_CLK       | O   | Clock signal for 6ch VOL ASP                    |
| 48      | ASP_DAT       | O   | Data signal for 6ch VOL ASP                     |
| 49      | NC            | -   | No Connection                                   |
| 50      | NC            | -   | No Connection                                   |
| 51      | NC            | -   | No Connection                                   |
| 52      | HBASS_SW      | O   | HBASS Control                                   |
| 53      | RGB_H         | O   | Mute signal 1 for video output                  |
| 54      | MULTI_1       | O   | Multi Room selector 1                           |

| Pin No. | Terminal Name | I/O | Function                                      |
|---------|---------------|-----|-----------------------------------------------|
| 55      | VMUTE_MAIN    | -   | No connection                                 |
| 56      | POS_SW        | I   | Position Sensor                               |
| 57      | NC            | -   | No Connection                                 |
| 58      | NC            | -   | No Connection                                 |
| 59      | SENS1         | I   | Digital Amp Output Sensor 1                   |
| 60      | SENSE2        | I   | Digital Amp Output Sensor 2                   |
| 61      | OPT_EN        | I   | Optical IN Enable (L=Disble, H=Enable)        |
| 62      | VCC           | -   | POWER SUPPLY 5.0V                             |
| 63      | DC_DET2       | I   | DC Detection Circuit 2                        |
| 64      | VSS           | -   | GND (0V)                                      |
| 65      | YC_H          | O   | Control signal for the video signal Mix       |
| 66      | NC            | -   | No Connection                                 |
| 67      | HOP_DA        | O   | Frequency Hop Control DA                      |
| 68      | MUTE_C_S      | O   | Center and Surround L & R Mute                |
| 69      | MUTE_F_SW     | O   | Front L & R Mute and SubWoofer Mute           |
| 70      | AMBP          | O   | AM Beat Proof for SMPS                        |
| 71      | MOD_DA        | O   | Digital Amp Standby Control                   |
| 72      | PCONT         | O   | System Power Control                          |
| 73      | CEC_OUT       | I   | Output Port for HDMI/CEC                      |
| 74      | ACS_MUTE      | O   | ACS Mute Control                              |
| 75      | CEC_IN        | I   | HDMI/CEC Input                                |
| 76      | JOG_A/VOL_UP  | I   | Signal A from Volume JOG / Volume Up Button   |
| 77      | JOG_B/VOL_DN  | I   | Signal B from Volume JOG / Volume Down Button |
| 78      | HP_MUTE       | O   | Head Phone Mute signal                        |
| 79      | RDS_DAT       | I   | Data signal from the RDS decoder              |
| 80      | WIDE1         | O   | Control Signal for the WIDE function          |
| 81      | RDS_CLK       | I   | Clock signal from the RDS decoder             |
| 82      | WS_LED        | O   | Wide Surround LED                             |
| 83      | ECHO_LVL1     | O   | Echo Level 1 Control                          |
| 84      | ECHO_LVL2     | O   | Echo Level 2 Control                          |
| 85      | FLD_CLK       | O   | Clock Signal for the FL Driver                |
| 86      | FLD_STB       | O   | FL Strobe                                     |
| 87      | FLD_OUT       | O   | FL Data Out                                   |
| 88      | ECHO_MUTE     | O   | Echo Mute                                     |
| 89      | MD3           | I   | Model Code 3                                  |
| 90      | MD2           | I   | Model Code 2                                  |
| 91      | KEY_2         | I   | Key 2 line input                              |
| 92      | ACS           | I   | Auto Calibration                              |
| 93      | DES3          | I   | DVD Region Setting                            |
| 94      | DES2          | I   | Model Selector                                |
| 95      | DES1          | I   | REGION Setting for Tuner                      |
| 96      | AVSS          | -   | Analog Power Supply Input                     |
| 97      | KEY1          | I   | Key 1 Line input                              |
| 98      | VREF          | -   | Reference Voltage Input                       |
| 99      | AVCC          | -   | Analog Power Supply Input                     |
| 100     | BRAKE_H       | O   | Terminal for tray control 3                   |

## 25 Exploded Views

## 25.1. Cabinet Parts Location

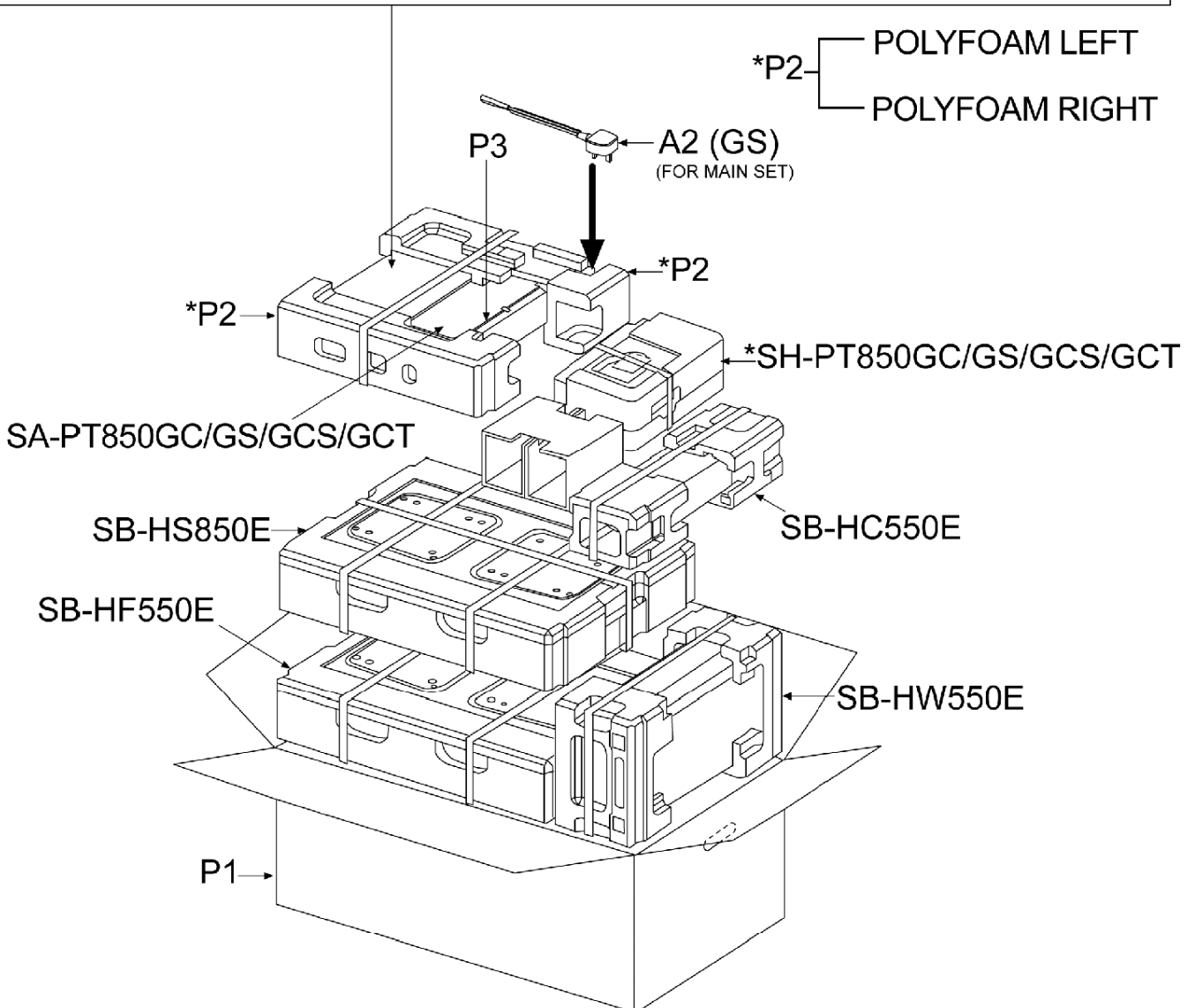
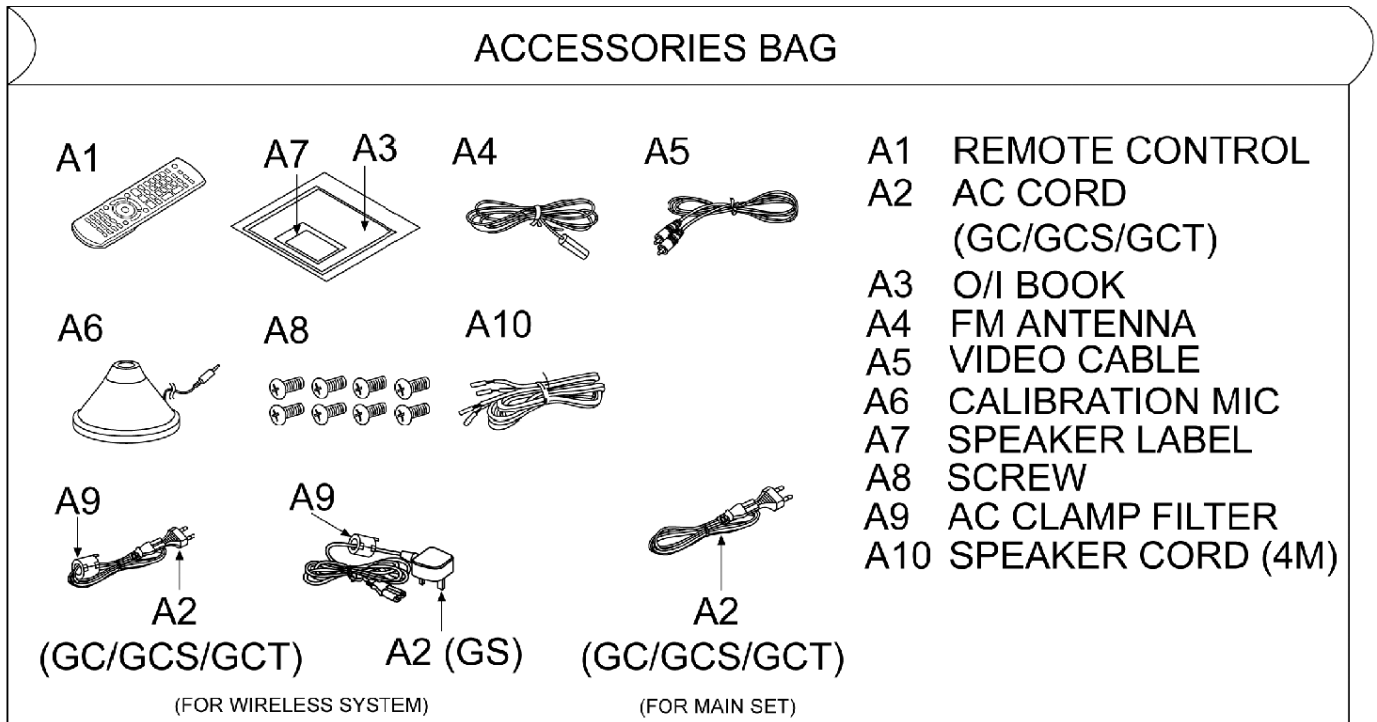




|   |         | PART NUMBER |
|---|---------|-------------|
| A | GREASE  | RFKXPG641   |
| B | HANARL  | VFK1784     |
| C | DRYSURF | RFKXGUD24   |

SA-PT850GC/GCS/GS/GCT-K  
CD LOADING MECHANISM DRAWINGS

## 25.2. Packaging



\*SH-PT850GC/GS/GCS/GCT, REFER TO ORIGINAL SERVICE MANUAL  
(ORDER NO. MD0705030CE)

SC-PT850WGC/GCS/GS/GCT-K  
PACKAGING DRAWINGS

## 26 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 manufacture's specified parts shown in the parts list.
- Warning: This product uses a laser diode. Refer to caution statements.
- Capacity values are in microfarads ( $\mu$ F) unless specified otherwise, P=Pico-farads (pF), F=Farads (F).
- 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 |                         |

## 26.1. Component Parts List

| Ref. No. | Part No.     | Part Name & Description      | Remarks  |
|----------|--------------|------------------------------|----------|
|          |              | CABINET AND CHASSIS          |          |
| 1        | L6FAJCC0007  | DC FAN MOTOR                 | [M]      |
| 2        | J3CBB000001  | TUNER PACK                   | [M]      |
| 3        | REEX0671     | 19P FFC (PANEL)              | [M]      |
| 4        | REEX0672     | 7P FFC (HDMI)                | [M]      |
| 6        | REEX0675     | 17P FFC (D-AMP)              | [M]      |
| 7        | REEX0676     | 26P FFC WIRE (MECHA)         | [M]      |
| 8        | REEX0677     | 50P FFC (HDMI)               | [M]      |
| 9        | REEX0678     | 6P FFC (MECHA)               | [M]      |
| 10       | REEX0758     | 8P FFC WIRE (VOLUME)         | [M]      |
| 11       | REXX0384     | 7P FLAT WIRE (DVD)           | [M]      |
| 12       | REXX0559     | 8P FLAT WIRE (D-AMP)         | [M]      |
| 13       | REXX0560-1   | USB SHIELD WIRE              | [M]      |
| 14       | REXX0561     | 11P FLAT WIRE (MAIN)         | [M]      |
| 15       | REXX0563-J   | WIRE (WHITE)                 | [M]      |
| 16       | REXX0564-J   | WIRE (GREY)                  | [M]      |
| 17       | RGKX0383-K   | DVD LID                      | [M]      |
| 18       | RGRX0060E-A1 | REAR PANEL                   | [M]GC/GS |
| 18       | RGRX0060E-B  | REAR PANEL                   | [M]GCS   |
| 18       | RGRX0060E-C1 | REAR PANEL                   | [M]GCT   |
| 19       | RGUX0692-K   | OPEN/CLOSE BUTTON            | [M]      |
| 20       | RGUX0693-K   | REV/FWD BUTTON               | [M]      |
| 21       | RGUX0694-K   | PLAY BUTTON                  | [M]      |
| 22       | RGUX0702-K   | POWER BUTTON                 | [M]      |
| 23       | RGUX0728-K   | STOP BUTTON                  | [M]      |
| 24       | RGWX0106-K   | VOLUME KNOB                  | [M]      |
| 25       | RHD26046     | SCREW                        | [M]      |
| 26       | RHD30007-K2J | SCREW                        | [M]      |
| 27       | RHD30111-3   | SCREW                        | [M]      |
| 28       | RHD30119-S   | SCREW                        | [M]      |
| 29       | RHDC0023     | SCREW                        | [M]      |
| 30       | RKA0059-K    | LEG RUBBER                   | [M]      |
| 31       | RKMX0107A-K3 | TOP CABINET                  | [M]      |
| 32       | RFGAPT850EK  | FRONT PANEL ASS'Y            | [M]      |
| 33       | RMAX0102     | MECHA HOLDER                 | [M]      |
| 34       | RMAX0103     | MECHA CHASSIS                | [M]      |
| 35       | RMAX0104     | PANEL ANGLE                  | [M]      |
| 36       | RMAX0109     | D-AMP PCB BRACKET            | [M]      |
| 37       | RMC0465      | TR SPRING                    | [M]      |
| 38       | RMCX0042     | EARTH SPRING                 | [M]      |
| 39       | RMCX0046     | USB EARTH SPRING             | [M]      |
| 40       | RMKX0125     | BOTTOM CHASSIS               | [M]      |
| 41       | RMNX0149     | FL HOLDER                    | [M]      |
| 42       | RMNX0207     | SMPS PCB INSULATOR           | [M]      |
| 43       | RMNX0208     | SMPS PCB INSULATOR           | [M]      |
| 44       | RMNX0209     | AC-IN PCB INSULATOR          | [M]      |
| 45       | RMQX0233-K   | FAN COVER                    | [M]      |
| 46       | RMY0285A     | SMALL HEATSINK               | [M]      |
| 47       | RMYY0191     | HEATSINK EXTRUSSION          | [M]      |
| 48       | RMZX0039     | SMALL IC INSULATOR           | [M]      |
| 49       | RSC0706      | EARTH PLATE                  | [M]      |
| 50       | RXXX0085-J   | HEATSINK UNIT A              | [M]      |
| 51       | RXXX0088     | HEATSINK UNIT B              | [M]      |
| 52       | RXXX0089     | HEATSINK UNIT C              | [M]      |
| 53       | XTB3+10JFJ   | SCREW                        | [M]      |
| 54       | XTW3+8TFJ    | SCREW                        | [M]      |
| 55       | XSN3+4FJ     | SCREW                        | [M]      |
| 56       | REXX0562     | 9P FLAT WIRE (MIC)           | [M]      |
| 57       | RGW0352A-K   | MIC KNOB                     | [M]      |
| 58       | XTB3+8JFJ    | SCREW                        | [M]      |
| 59       | REXX0565-J   | VOLTAGE SELECTOR WIRE (BLUE) | [M]      |
| 60       | REXX0566-J   | VOLTAGE SELECTOR WIRE (RED)  | [M]      |
| 61       | RMKX0127-K   | TRANSMITTER CHASSIS          | [M]      |
|          |              | TRAVERSE DECK                |          |
| 310      | RMK0591A     | MECHA CHASSIS                | [M]      |
| 311      | RHM0003-J    | MAGNET                       | [M]      |
| 312      | RDG0547      | PULLEY GEAR                  | [M]      |

| Ref. No. | Part No.     | Part Name & Description                           | Remarks           |
|----------|--------------|---------------------------------------------------|-------------------|
| 313      | RDG0548-1    | RELAY GEAR                                        | [M]               |
| 314      | RDG0549      | DRIVE GEAR                                        | [M]               |
| 315      | RDV0070      | BELT                                              | [M]               |
| 316      | REM0133      | MOTOR UNIT                                        | [M]               |
| 317      | RGQ0395-K1   | TRAY                                              | [M]               |
| 318      | RME0350      | CHANGE LEVER SPRING                               | [M]               |
| 319      | RME0351A     | LOCK LEVER SPRING                                 | [M]               |
| 320      | RME0353      | TRAY SLIDER SPRING                                | [M]               |
| 321      | RML0627-2    | DRIVE ARM                                         | [M]               |
| 322      | RML0628      | CHANGE LEVER                                      | [M]               |
| 323      | RML0629      | LOCK LEVER                                        | [M]               |
| 324      | RML0631      | TRAY SLIDER                                       | [M]               |
| 325      | RMM0247-3    | DRIVE RACK                                        | [M]               |
| 326      | RMM0248      | SUB RACK                                          | [M]               |
| 327      | RMR1446-X    | CLAMPER                                           | [M]               |
| 328      | RMR1447-X    | MAGNET HOLDER                                     | [M]               |
| 329      | RMR1468-K    | CLAMP PLATE                                       | [M]               |
| 330      | XTN26+6GFJ   | SCREW                                             | [M]               |
| 331      | XTV2+6GFJ    | PCB SCREW                                         | [M]               |
| 332      | XWG6FFJ      | WASHER                                            | [M]               |
| 333      | RMC0387      | SUPPORT SPRING                                    | [M]               |
| 340      | RAE2024Z-S   | TRAVERSE UNIT                                     | [M] △             |
| 341      | RMG0598A-K   | FLOATING RUBBER                                   | [M]               |
| 342      | RMR1596-X2   | MIDDLE CHASSIS                                    | [M]               |
| 343      | RMS0789      | FIXED PIN                                         | [M]               |
|          |              | PRINTED CIRCUIT BOARDS                            |                   |
|          | REPX0563D    | DVD MODULE P.C.B.                                 | [M] (RTL)GC/GS    |
|          | REPX0563E    | DVD MODULE P.C.B.                                 | [M] (RTL)GC/S/GCT |
|          | REPX0587C    | MAIN/PANEL/VOLUME/MIC/USB/WIRELESS ADAPTER P.C.B. | [M] (RTL)GC/GS    |
|          | REPX0587D    | MAIN/PANEL/VOLUME/MIC/USB/WIRELESS ADAPTER P.C.B. | [M] (RTL)GC/S/GCT |
|          | REPX0560E    | D-AMP P.C.B.                                      | [M] (RTL)         |
|          | REPX0569B    | SMPS/AC-INLET/VOLTAGE SELECTOR P.C.B.             | [M] (RTL)         |
|          | REPX0604A    | RELAY P.C.B.                                      | [M] (RTL)         |
|          | REP4238A     | TRAY LOADING P.C.B.                               | [M] (RTL)         |
|          |              | INTEGRATED CIRCUITS                               |                   |
| IC904    | C0GAY0000013 | IC TRAY LOADING MOTOR DRIVE                       | [M]               |
| IC2001   | C2CBYY000418 | IC SYSTEM CONTROL                                 | [M]               |
| IC2101   | C1AB00002735 | IC AUDIO SIGNAL PROCESSOR                         | [M]               |
| IC2102   | C0AABB000125 | IC HEADPHONE AMP                                  | [M]               |
| IC2751   | C0ABBB000350 | IC OP AMP                                         | [M]               |
| IC2801   | C9ZB00000461 | IC VIDEO BUFFER                                   | [M]               |
| IC2900   | C0DAAYY00042 | IC SWITCHING REGULATOR                            | [M]               |
| IC2901   | C0DAGHG00002 | IC +5V REGULATOR                                  | [M]               |
| IC2903   | C0DAAMH00012 | IC SWITCHING REGULATOR                            | [M]               |
| IC3901   | MN864702A    | IC HDMI TRANSMITTER                               | [M]               |
| IC3952   | C0CBCDC00063 | IC TERMINAL VOLTAGE REGULATOR                     | [M]               |
| IC5000   | C1BA00000487 | IC AUDIO DIGITAL POWER AMP                        | [M]               |
| IC5200   | C1BA00000487 | IC AUDIO DIGITAL POWER AMP                        | [M]               |
| IC5300   | C1BA00000487 | IC AUDIO DIGITAL POWER AMP                        | [M]               |
| IC5500   | C0JBAB000902 | IC INVERTER GATE (CLOCK GENERATOR)                | [M]               |
| IC5501   | C0JBAF000716 | IC D-TYPE FLIP-FLOP                               | [M]               |
| IC5701   | C5HACYY00003 | IC SWITCHING REGULATOR                            | [M]               |
| IC5780   | C0ABBA000168 | IC OP AMP                                         | [M]               |
| IC5799   | MIP4110MSSCF | IC SWITCHING REGULATOR                            | [M]               |
| IC5801   | C0DABFC00002 | IC SHUNT REGULATOR                                | [M]               |
| IC6106   | C0ABBB000230 | IC OP AMP                                         | [M]               |
| IC6107   | C0ABBB000230 | IC XM AUDIO AMP                                   | [M]               |
| IC6901   | C0HBB0000057 | IC DISPLAY DRIVER                                 | [M]               |
| IC7000   | C0ABBB000230 | IC MIC AMP                                        | [M]               |

| Ref. No. | Part No.     | Part Name & Description           | Remarks       |
|----------|--------------|-----------------------------------|---------------|
| IC7100   | C1BB00001061 | IC DIGITAL DELAY WITH ECHO VOLUME | [M]           |
| IC7200   | C0ABB000230  | IC MIC AMP                        | [M]           |
| IC8001   | MN2DS0018MP  | IC DV5.0 LSI                      | [M]           |
| IC8051   | C3ABPG000145 | IC 64M SDRAM                      | [M]           |
| IC8111   | C0DBZY00018  | IC +3.3V DC-DC CONVERTER          | [M]           |
| IC8151   | C0DBEHG00006 | IC +1.2V REGULATOR                | [M]           |
| IC8251   | C0GBG0000048 | IC MOTOR DRIVE                    | [M]           |
| IC8421   | C0FBBK000050 | IC AUDIO DAC                      | [M]           |
| IC8601   | C0EBA0000029 | IC RESET                          | [M]           |
| IC8606   | C0EBE0000456 | IC RESET                          | [M]           |
| IC8651   | RFKWMHB0E321 | IC 32M FLASH MEMORY               | [SPG]GC /GS   |
| IC8651   | RFKWMHB0F320 | IC 32M FLASH MEMORY               | [SPG]GC S/GCT |
| IC8691   | C0JBAA000502 | IC AND GATE                       | [M]           |
| IC8695   | C0JBAA000502 | IC AND GATE                       | [M]           |
| IC8701   | C0JBAB000907 | IC INVERTER GATE                  | [M]           |
| IC8901   | C0JBAA000501 | IC AND GATE                       | [M]           |
| IC9001   | C0JBAZ001251 | IC LATCH                          | [M]           |
| IC9002   | C0JBAZ001251 | IC LATCH                          | [M]           |
| IC9003   | C0JBAB000908 | IC INVERTER GATE                  | [M]           |
| IC9005   | C0DBZY00002  | IC REGULATOR                      | [M]           |
|          |              | TRANSISTORS                       |               |
| Q2003    | B1GBCFLL0037 | TRANSISTOR                        | [M]           |
| Q2006    | B1GBCFJN0033 | TRANSISTOR                        | [M]           |
| Q2007    | UNR211H00L   | TRANSISTOR                        | [M]           |
| Q2008    | B1GBCFJN0033 | TRANSISTOR                        | [M]           |
| Q2030    | B1GBCFJN0033 | TRANSISTOR                        | [M]           |
| Q2096    | 2SD0601AHL   | TRANSISTOR                        | [M]           |
| Q2097    | 2SD0601AHL   | TRANSISTOR                        | [M]           |
| Q2101    | B1GFGCAA0001 | TRANSISTOR                        | [M]           |
| Q2102    | B1GFGCAA0001 | TRANSISTOR                        | [M]           |
| Q2103    | B1GFGCAA0001 | TRANSISTOR                        | [M]           |
| Q2201    | B1GDCFGA0018 | TRANSISTOR                        | [M]           |
| Q2202    | B1GFGCAA0001 | TRANSISTOR                        | [M]           |
| Q2302    | B1GFGCAA0001 | TRANSISTOR                        | [M]           |
| Q2502    | B1GFGCAA0001 | TRANSISTOR                        | [M]           |
| Q2801    | B1GBCFJN0033 | TRANSISTOR                        | [M]           |
| Q2900    | B1BABK000001 | TRANSISTOR                        | [M]           |
| Q2901    | B1BCCG000002 | TRANSISTOR                        | [M]           |
| Q2902    | B1ADCF000001 | TRANSISTOR                        | [M]           |
| Q2903    | B1BACD000018 | TRANSISTOR                        | [M]           |
| Q2904    | B1BACG000023 | TRANSISTOR                        | [M]           |
| Q2906    | B1ABCF000176 | TRANSISTOR                        | [M]           |
| Q2907    | B1ABCF000176 | TRANSISTOR                        | [M]           |
| Q2908    | B1ACKD000006 | TRANSISTOR                        | [M]           |
| Q2909    | B1GBCFJN0033 | TRANSISTOR                        | [M]           |
| Q2910    | B1ACKD000006 | TRANSISTOR                        | [M]           |
| Q2911    | B1AAKD000012 | TRANSISTOR                        | [M]           |
| Q2916    | B1BACG000023 | TRANSISTOR                        | [M]           |
| Q2919    | B1ABCF000176 | TRANSISTOR                        | [M]           |
| Q2921    | B1ADCF000001 | TRANSISTOR                        | [M]           |
| Q2922    | B1GBCFJJ0051 | TRANSISTOR                        | [M]           |
| Q3901    | 2SD1819A0L   | TRANSISTOR                        | [M]           |
| Q3902    | B1CFHA000002 | TRANSISTOR                        | [M]           |
| Q3903    | B1CFHA000002 | TRANSISTOR                        | [M]           |
| Q3941    | 2SD1819A0L   | TRANSISTOR                        | [M]           |
| Q3942    | 2SD1819A0L   | TRANSISTOR                        | [M]           |
| Q3943    | 2SD1819A0L   | TRANSISTOR                        | [M]           |
| Q5101    | B1ABCF000176 | TRANSISTOR                        | [M]           |
| Q5102    | B1ABCF000176 | TRANSISTOR                        | [M]           |
| Q5601    | B1ABCF000176 | TRANSISTOR                        | [M]           |
| Q5602    | B1ABCF000176 | TRANSISTOR                        | [M]           |
| Q5603    | B1ADCE000012 | TRANSISTOR                        | [M]           |
| Q5604    | B1ABCF000176 | TRANSISTOR                        | [M]           |
| Q5640    | B1BACD000018 | TRANSISTOR                        | [M]           |
| Q5641    | B1ABCF000011 | TRANSISTOR                        | [M]           |
| Q5642    | B1ABCF000011 | TRANSISTOR                        | [M]           |
| Q5644    | B1ABCF000011 | TRANSISTOR                        | [M]           |
| Q5720    | 2SC3940ARA   | TRANSISTOR                        | [M]           |
| Q5721    | B1ADCF000001 | TRANSISTOR                        | [M]           |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| Q5722    | B1ABCF000176 | TRANSISTOR              | [M]     |
| Q5750    | B1ABCF000176 | TRANSISTOR              | [M]     |
| Q5802    | B1ABCF000176 | TRANSISTOR              | [M]     |
| Q5860    | B1ADCF000001 | TRANSISTOR              | [M]     |
| Q5861    | B1ABCF000176 | TRANSISTOR              | [M]     |
| Q5862    | B1ABCF000176 | TRANSISTOR              | [M]     |
| Q5898    | B1ABCF000176 | TRANSISTOR              | [M]     |
| Q5899    | B1ABCF000176 | TRANSISTOR              | [M]     |
| Q6102    | B1ABEB000002 | TRANSISTOR              | [M]     |
| Q6105    | B1ADCE000012 | TRANSISTOR              | [M]     |
| Q6110    | UNR221200L   | TRANSISTOR              | [M]     |
| Q6111    | UNR221200L   | TRANSISTOR              | [M]     |
| Q6201    | B1ADCE000012 | TRANSISTOR              | [M]     |
| Q6202    | B1GDCFGA0018 | TRANSISTOR              | [M]     |
| Q7100    | B1GBCFJJ0051 | TRANSISTOR              | [M]     |
| Q7101    | B1GBCFJJ0051 | TRANSISTOR              | [M]     |
| Q7102    | B1GBCFJJ0051 | TRANSISTOR              | [M]     |
| Q8321    | 2SB1218ARL   | TRANSISTOR              | [M]     |
| Q8325    | 2SB1218ARL   | TRANSISTOR              | [M]     |
| Q8331    | 2SB1218ARL   | TRANSISTOR              | [M]     |
| Q8335    | 2SB1218ARL   | TRANSISTOR              | [M]     |
| Q8341    | 2SB1218ARL   | TRANSISTOR              | [M]     |
| Q8551    | 2SD1819A0L   | TRANSISTOR              | [M]     |
| Q8552    | B1ADGB000008 | TRANSISTOR              | [M]     |
| Q8561    | 2SD1819A0L   | TRANSISTOR              | [M]     |
| Q8562    | B1ADGB000008 | TRANSISTOR              | [M]     |
| QR5801   | B1GBCFJN0033 | TRANSISTOR              | [M]     |
| QR5810   | B1GBCFLL0037 | TRANSISTOR              | [M]     |
| QR8111   | XP0621400L   | CHIP TRANSISTOR         | [M]     |
| QR8420   | UNR521100L   | CHIP TRANSISTOR         | [M]     |
| QR8571   | UNR511V00L   | CHIP TRANSISTOR         | [M]     |
| PC5701   | B3PBA0000402 | PHOTO COUPLER           | [M] △   |
| PC5702   | B3PBA0000402 | PHOTO COUPLER           | [M] △   |
| PC5720   | B3PBA0000402 | PHOTO COUPLER           | [M] △   |
| PC5799   | B3PBA0000402 | PHOTO COUPLER           | [M] △   |
|          |              | DIODES                  |         |
| D2005    | B0ACCK000005 | DIODE                   | [M]     |
| D2007    | B0ACCK000005 | DIODE                   | [M]     |
| D2008    | B0ACCK000005 | DIODE                   | [M]     |
| D2009    | B0ACCK000005 | DIODE                   | [M]     |
| D2010    | B0ACCK000005 | DIODE                   | [M]     |
| D2601    | B0ACCK000005 | DIODE                   | [M]     |
| D2602    | B0ACCK000005 | DIODE                   | [M]     |
| D2751    | B0BC5R000009 | DIODE                   | [M]     |
| D2752    | B0ACCK000005 | DIODE                   | [M]     |
| D2753    | B0ACCK000005 | DIODE                   | [M]     |
| D2810    | B0JCAE000001 | DIODE                   | [M]     |
| D2901    | B0BC035A0007 | DIODE                   | [M]     |
| D2903    | B0EAMM000057 | DIODE                   | [M]     |
| D2904    | B0JCPD000025 | DIODE                   | [M]     |
| D2906    | B0JAME000029 | DIODE                   | [M]     |
| D2908    | B0EAMM000057 | DIODE                   | [M]     |
| D2909    | MAZ82400HL   | DIODE                   | [M]     |
| D2912    | B0BC3R400001 | DIODE                   | [M]     |
| D2913    | B0JCPD000025 | DIODE                   | [M]     |
| D2915    | B0ACCK000005 | DIODE                   | [M]     |
| D2919    | B0BC5R600003 | DIODE                   | [M]     |
| D2920    | B0BC035A0007 | DIODE                   | [M]     |
| D2935    | B0EAKM000117 | DIODE                   | [M]     |
| D2936    | B0EAKM000117 | DIODE                   | [M]     |
| D2937    | B0BC4R600016 | DIODE                   | [M]     |
| D2938    | B0BC5R000009 | DIODE                   | [M]     |
| D2939    | B0ACCK000005 | DIODE                   | [M]     |
| D2940    | B0ACCK000005 | DIODE                   | [M]     |
| D2941    | B0ACCK000005 | DIODE                   | [M]     |
| D2942    | B0ACCK000005 | DIODE                   | [M]     |
| D2943    | B0ADCJ000020 | DIODE                   | [M]     |
| D2944    | B0ACCK000005 | DIODE                   | [M]     |
| D2945    | B0ACCK000005 | DIODE                   | [M]     |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| D2946    | B0BC7R500001 | DIODE                   | [M]     |
| D2947    | B0BC010A0007 | DIODE                   | [M]     |
| D2950    | ERJ6GEY0R00V | DIODE                   | [M]     |
| D3901    | MA2J72800L   | DIODE                   | [M]     |
| D5503    | B0BC5R000009 | DIODE                   | [M]     |
| D5640    | B0BC01200019 | DIODE                   | [M]     |
| D5643    | B0ACCK000005 | DIODE                   | [M]     |
| D5644    | B0ACCK000005 | DIODE                   | [M]     |
| D5645    | B0ACCK000005 | DIODE                   | [M]     |
| D5701    | B0FBAR000041 | DIODE                   | [M] △   |
| D5702    | B0ZAZ0000052 | DIODE                   | [M]     |
| D5721    | B0BC010A0007 | DIODE                   | [M]     |
| D5722    | B0BC01700015 | DIODE                   | [M]     |
| D5723    | B0ACCK000005 | DIODE                   | [M]     |
| D5724    | B0ACCK000005 | DIODE                   | [M]     |
| D5725    | B0BC6R100010 | DIODE                   | [M]     |
| D5726    | B0EAKM000117 | DIODE                   | [M]     |
| D5727    | B0ACCK000005 | DIODE                   | [M]     |
| D5728    | B0ACCK000005 | DIODE                   | [M]     |
| D5729    | B0EAMM000057 | DIODE                   | [M]     |
| D5730    | B0ACCK000005 | DIODE                   | [M]     |
| D5731    | B0EAMM000057 | DIODE                   | [M]     |
| D5732    | B0BC035A0007 | DIODE                   | [M]     |
| D5793    | B0EAKB000004 | DIODE                   | [M]     |
| D5795    | B0BC5R000009 | DIODE                   | [M]     |
| D5796    | B0ACCK000005 | DIODE                   | [M]     |
| D5797    | MA2J72800L   | DIODE                   | [M]     |
| D5798    | B0EAMM000057 | DIODE                   | [M]     |
| D5799    | B0EAMM000057 | DIODE                   | [M]     |
| D5801    | B0HBSM000043 | DIODE                   | [M]     |
| D5802    | B0HBSM000043 | DIODE                   | [M]     |
| D5803    | B0HFRJ000012 | DIODE                   | [M]     |
| D5804    | B0EAMM000057 | DIODE                   | [M]     |
| D5805    | B0EAMM000057 | DIODE                   | [M]     |
| D5806    | B0BC7R500001 | DIODE                   | [M]     |
| D5807    | B0ACCK000005 | DIODE                   | [M]     |
| D5896    | B0EAMM000057 | DIODE                   | [M]     |
| D5897    | B0BC3R700004 | DIODE                   | [M]     |
| D6100    | B0ACCK000005 | DIODE                   | [M]     |
| D6101    | B0ACCK000005 | DIODE                   | [M]     |
| D6102    | B0BC5R000009 | DIODE                   | [M]     |
| D6901    | B3AAA0000803 | DIODE                   | [M]     |
| D6902    | B0ACCK000005 | DIODE                   | [M]     |
| D6910    | B0BC2R4A0006 | DIODE                   | [M]     |
| D7100    | B0BC5R000009 | DIODE                   | [M]     |
| D8211    | MA2J11100L   | DIODE                   | [M]     |
| D8571    | MA2J72800L   | DIODE                   | [M]     |
| DZ5701   | ERZV10V511CS | ZENER                   | [M] △   |
|          |              | VARIABLE RESISTORS      |         |
| VR6801   | EVEKE2F3024M | VR VOLUME JOG           | [M]     |
| VR7001   | EVUE27FK3B53 | VR MIC VOLUME           | [M]     |
| VA3901   | EZAEG2A50AX  | ESD SUPPRESSOR          | [M]     |
| VA3902   | EZAEG2A50AX  | ESD SUPPRESSOR          | [M]     |
| VA3903   | EZAEG2A50AX  | ESD SUPPRESSOR          | [M]     |
| VA3904   | EZAEG2A50AX  | ESD SUPPRESSOR          | [M]     |
| VA3905   | EZAEG2A50AX  | ESD SUPPRESSOR          | [M]     |
| VA3906   | EZAEG2A50AX  | ESD SUPPRESSOR          | [M]     |
| VA3907   | EZAEG2A50AX  | ESD SUPPRESSOR          | [M]     |
| VA3908   | EZAEG2A50AX  | ESD SUPPRESSOR          | [M]     |
| VA3909   | EZJZ0V800AA  | VARISTOR                | [M]     |
| VA3910   | EZJZ0V800AA  | VARISTOR                | [M]     |
| VA3911   | EZJZ0V800AA  | VARISTOR                | [M]     |
| VA3912   | EZJZ0V800AA  | VARISTOR                | [M]     |
| VA3913   | EZJZ0V800AA  | VARISTOR                | [M]     |
| VA9001   | EZJZ1V171AA  | CHIP VARISTOR           | [M]     |
| VA9002   | EZJZ1V171AA  | CHIP VARISTOR           | [M]     |
|          |              | SWITCHES                |         |

| Ref. No. | Part No.     | Part Name & Description              | Remarks |
|----------|--------------|--------------------------------------|---------|
| S901     | RSH1A044-1A  | SW PLAY                              | [M]     |
| S902     | RSH1A044-1A  | SW OPEN                              | [M]     |
| S5000    | K0ABCA000006 | SW VOLTAGE SELECTOR                  | [M]     |
| S6801    | EVQ21405R    | SW SELECTOR                          | [M]     |
| S6802    | EVQ21405R    | SW REVERSE                           | [M]     |
| S6803    | EVQ21405R    | SW FORWARD                           | [M]     |
| S6804    | EVQ21405R    | SW STOP                              | [M]     |
| S6901    | EVQ21405R    | SW POWER                             | [M]     |
| S6902    | EVQ21405R    | SW OPEN/CLOSE                        | [M]     |
| S6907    | EVQ21405R    | SW PLAY                              | [M]     |
|          |              | CONNECTORS                           |         |
| CN2001   | K1MY50AA0029 | 50P CONNECTOR                        | [M]     |
| CN2002   | K1KA10AA0031 | 50P CONNECTOR                        | [M]     |
| CN2003   | K1MN17AA0004 | 17P CONNECTOR                        | [M]     |
| CN2004   | K1YZ11000002 | 11P CABLE HOLDER                     | [M]     |
| CN2006   | K1MN08AA0003 | 8P CONNECTOR                         | [M]     |
| CN2007   | K1MN19AA0004 | 19P CONNECTOR                        | [M]     |
| CN2009   | K1MN17AA0004 | 17P CONNECTOR                        | [M]     |
| CN2010   | K1MN07AA0003 | 7P CONNECTOR                         | [M]     |
| CN2013   | K1KA09A00150 | 9P CONNECTOR                         | [M]     |
| CN2015   | K1YZ07000001 | 7P WIRE HOLDER                       | [M]     |
| CN2020   | K1MN08AA0003 | 8P CONNECTOR                         | [M]     |
| CN5050   | K1MN17AA0004 | 17P CONNECTOR                        | [M]     |
| CN5501   | K1KA03AA0301 | 3P CONNECTOR                         | [M]     |
| CN5801   | K1KA08AA0180 | 8P CONNECTOR                         | [M]     |
| CN5802   | K1KA11AA0194 | 11P CONNECTOR                        | [M]     |
| CN6300   | K1MN17AA0004 | 17P CONNECTOR                        | [M]     |
| CN6301   | K1MY22A00003 | 22P CONNECTOR (FOR TRANSMITTER CARD) | [M]     |
| CN6901   | K1MN08AA0003 | 8P CONNECTOR                         | [M]     |
| CN6902   | K1MN19AA0004 | 19P CONNECTOR                        | [M]     |
| CN9000   | K1FY104B0011 | 4P CONNECTOR                         | [M]     |
| CS901    | K1KA07BA0061 | 7P CONNECTOR                         | [M]     |
| FP3902   | K1MN07BA0148 | 7P CONNECTOR                         | [M]     |
| FP8001   | K1MN06BA0147 | 6P CONNECTOR                         | [M]     |
| FP8002   | K1MN06BA0148 | 6P CONNECTOR                         | [M]     |
| FP8003   | K1MY26BA0053 | 26P CONNECTOR                        | [M]     |
| FP8004   | K1MY26BA0030 | 26P FFC CONNECTOR                    | [M]     |
| FP8101   | K1MN50BA0173 | 50P CONNECTOR                        | [M]     |
| FP8251   | K1MN06AA0076 | 6P CONNECTOR                         | [M]     |
| FP8531   | K1MY26AA0021 | 26P CONNECTOR                        | [M]     |
| FP9001   | K1KA05BA0014 | 5P CONNECTOR                         | [M]     |
| FP9002   | K1KA05BA0061 | 5P CONNECTOR                         | [M]     |
|          |              | THERMISTORS                          |         |
| TH5701   | D4CAC8R00002 | THERMISTOR                           | [M] △   |
| TH5860   | D4CC11040013 | THERMISTOR                           | [M] △   |
|          |              | COILS & TRANSFORMERS                 |         |
| L2008    | G0C3R3JA0027 | COIL                                 | [M]     |
| L2009    | G0C220JA0055 | COIL                                 | [M]     |
| L2101    | J0JBC0000015 | CHIP INDUCTOR                        | [M] △   |
| L2201    | J0JBC0000015 | CHIP INDUCTOR                        | [M] △   |
| L2801    | G0C220JA0055 | COIL                                 | [M]     |
| L2802    | J0JBC0000015 | CHIP INDUCTOR                        | [M] △   |
| L2803    | J0JBC0000015 | CHIP INDUCTOR                        | [M] △   |
| L2804    | J0JBC0000015 | CHIP INDUCTOR                        | [M] △   |
| L2805    | J0JBC0000015 | CHIP INDUCTOR                        | [M] △   |
| L2902    | G0A101G00022 | COIL                                 | [M]     |
| L2903    | G0A101G00022 | COIL                                 | [M]     |
| L2905    | G0A100HA0023 | INDUCTOR                             | [M]     |
| L2907    | G0A220GA0026 | INDUCTOR                             | [M]     |
| L2908    | G0A200D00002 | COIL                                 | [M]     |
| L2909    | G0A200D00002 | COIL                                 | [M]     |
| L2910    | G0A200D00002 | COIL                                 | [M]     |
| L2911    | G0A200D00002 | COIL                                 | [M]     |
| L3903    | J0MAB0000170 | FILTER                               | [M]     |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| L3904    | J0MAB0000170 | FILTER                  | [M]     |
| L3905    | J0MAB0000170 | FILTER                  | [M]     |
| L3906    | J0MAB0000170 | FILTER                  | [M]     |
| L5000    | G0A150L00003 | LINE CHOKE COIL         | [M]     |
| L5001    | G0B9R5K00003 | LINE CHOKE COIL         | [M] △   |
| L5002    | G0B9R5K00003 | LINE CHOKE COIL         | [M] △   |
| L5200    | G0A150L00003 | LINE CHOKE COIL         | [M]     |
| L5201    | G0B9R5K00003 | LINE CHOKE COIL         | [M] △   |
| L5300    | G0A150L00003 | LINE CHOKE COIL         | [M]     |
| L5301    | G0B9R5K00003 | LINE CHOKE COIL         | [M] △   |
| L5500    | J0JKB0000020 | EMI BEAD CORE           | [M]     |
| L5501    | J0JKB0000020 | EMI BEAD CORE           | [M]     |
| L5701    | ELF15N035AN  | LINE FILTER             | [M] △   |
| L5702    | ELF22V035B   | COIL                    | [M] △   |
| L6101    | J0JBC0000019 | CHIP INDUCTOR           | [M] △   |
| L6201    | J0JBC0000019 | CHIP INDUCTOR           | [M] △   |
| L6801    | J0JBC0000019 | CHIP INDUCTOR           | [M] △   |
| L6903    | J0JBC0000041 | CHIP INDUCTOR           | [M]     |
| L6904    | J0JBC0000019 | CHIP INDUCTOR           | [M] △   |
| L6905    | J0JBC0000019 | CHIP INDUCTOR           | [M] △   |
| L6906    | J0JBC0000019 | CHIP INDUCTOR           | [M] △   |
| L6907    | J0JBC0000019 | CHIP INDUCTOR           | [M] △   |
| L6908    | J0JBC0000019 | CHIP INDUCTOR           | [M] △   |
| L6909    | J0JBC0000019 | CHIP INDUCTOR           | [M] △   |
| L7001    | J0JBC0000019 | CHIP INDUCTOR           | [M]     |
| L7002    | J0JBC0000030 | CHIP BEEZ               | [M]     |
| L7003    | J0JBC0000019 | CHIP INDUCTOR           | [M]     |
| L7004    | J0JBC0000019 | CHIP INDUCTOR           | [M]     |
| L7005    | J0JBC0000030 | CHIP BEEZ               | [M]     |
| L7101    | J0JBC0000019 | CHIP INDUCTOR           | [M]     |
| L7202    | J0JBC0000019 | CHIP INDUCTOR           | [M]     |
| L7303    | J0JBC0000019 | CHIP INDUCTOR           | [M]     |
| L8001    | G1C100K00019 | CHIP COIL               | [M]     |
| L8201    | G1C100K00019 | CHIP COIL               | [M]     |
| L8301    | G1C100K00019 | CHIP COIL               | [M]     |
| L8302    | G1C100K00019 | CHIP COIL               | [M]     |
| L8303    | G1C100K00019 | CHIP COIL               | [M]     |
| L8330    | G1C100K00019 | CHIP COIL               | [M]     |
| L8501    | G1C100K00019 | CHIP COIL               | [M]     |
| L8550    | G1C100KA0055 | CHIP INDUCTOR           | [M]     |
| L9005    | G1BYYYB00009 | MODE CHOKE COIL         | [M]     |
|          |              |                         |         |
|          |              | CHIP INDUCTORS          |         |
|          |              |                         |         |
| LB3901   | J0JHC0000045 | CHIP INDUCTOR           | [M]     |
| LB3902   | J0JHC0000045 | CHIP INDUCTOR           | [M]     |
| LB3903   | J0JCC0000119 | CHIP INDUCTOR           | [M]     |
| LB3904   | J0JCC0000119 | CHIP INDUCTOR           | [M]     |
| LB3905   | J0JCC0000119 | CHIP INDUCTOR           | [M]     |
| LB3906   | J0JCC0000119 | CHIP INDUCTOR           | [M]     |
| LB3907   | J0JHC0000045 | CHIP INDUCTOR           | [M]     |
| LB3908   | J0JHC0000045 | CHIP INDUCTOR           | [M]     |
| LB8001   | J0JHC0000045 | CHIP INDUCTOR           | [M]     |
| LB8011   | J0JHC0000045 | CHIP INDUCTOR           | [M]     |
| LB8257   | ERJ3GEY0R00V | CHIP RESISTOR           | [M]     |
| LB8258   | ERJ3GEY0R00V | CHIP RESISTOR           | [M]     |
| LB8259   | ERJ3GEY0R00V | CHIP RESISTOR           | [M]     |
| LB8260   | ERJ3GEY0R00V | CHIP RESISTOR           | [M]     |
| LB8301   | J0JBC0000042 | CHIP BEAD               | [M]     |
| LB8302   | J0JBC0000042 | CHIP BEAD               | [M]     |
| LB8303   | J0JBC0000042 | CHIP BEAD               | [M]     |
| LB8304   | J0JBC0000042 | CHIP BEAD               | [M]     |
| LB8305   | J0JBC0000042 | CHIP BEAD               | [M]     |
| LB8401   | J0JBC0000042 | CHIP BEAD               | [M]     |
| LB8421   | ERJ2GE0R00X  | CHIP RESISTOR           | [M]     |
| LB8422   | ERJ2GE0R00X  | CHIP RESISTOR           | [M]     |
| LB8423   | ERJ2GE0R00X  | CHIP RESISTOR           | [M]     |
| LB8424   | ERJ2GE0R00X  | CHIP RESISTOR           | [M]     |
| LB8425   | ERJ2GE0R00X  | CHIP RESISTOR           | [M]     |
| LB8426   | ERJ2GE0R00X  | CHIP RESISTOR           | [M]     |
| LB8427   | ERJ2GE0R00X  | CHIP RESISTOR           | [M]     |
| LB8428   | ERJ2GE0R00X  | CHIP RESISTOR           | [M]     |
| LB8429   | ERJ2GE0R00X  | CHIP RESISTOR           | [M]     |

| Ref. No. | Part No.     | Part Name & Description  | Remarks |
|----------|--------------|--------------------------|---------|
| LB8431   | ERJ2GE0R00X  | CHIP RESISTOR            | [M]     |
| LB8491   | ERJ2GE0R00X  | CHIP RESISTOR            | [M]     |
| LB8530   | J0JHC0000045 | CHIP INDUCTOR            | [M]     |
| LB8531   | ERJ2GE0R00X  | CHIP RESISTOR            | [M]     |
| LB8551   | J0JBC0000042 | CHIP BEAD                | [M]     |
| LB8561   | J0JBC0000042 | CHIP BEAD                | [M]     |
| LB8571   | J0JBC0000042 | CHIP BEAD                | [M]     |
| LB8690   | J0JBC0000044 | HIGH LOSS INDUCTOR       | [M]     |
| LB8691   | ERJ2GEJ101X  | CHIP RESISTOR            | [M]     |
| LB8692   | ERJ2GEJ101X  | CHIP RESISTOR            | [M]     |
| LB8693   | ERJ2GEJ101X  | CHIP RESISTOR            | [M]     |
| LB8701   | J0JBC0000044 | HIGH LOSS INDUCTOR       | [M]     |
| LB8702   | J0JBC0000044 | HIGH LOSS INDUCTOR       | [M]     |
| LB9001   | J0JCC0000119 | CHIP INDUCTOR            | [M]     |
| LB9001   | J0JHC0000034 | CHIP FERRITE BEAD        | [M]     |
| LB9002   | J0JHC0000034 | CHIP FERRITE BEAD        | [M]     |
|          |              |                          |         |
|          |              | TRANSFORMERS             |         |
|          |              |                          |         |
| T2900    | G4D1A0000117 | SWITCHING TRANSFORMER    | [M] △   |
| T5701    | ETS42BN1A6AD | MAIN TRANSFORMER         | [M] △   |
| T5751    | ETS19AB236AG | BACK-UP TRANSFORMER      | [M] △   |
|          |              |                          |         |
|          |              | COMPONENT COMBINATION    |         |
|          |              |                          |         |
| Z6900    | B3RAD0000143 | CRYSTAL                  | [M]     |
|          |              |                          |         |
|          |              | FUSE HOLDERS             |         |
|          |              |                          |         |
| ZA5701   | EYF52BCY     | FUSE HOLDER              | [M]     |
| ZA5702   | EYF52BCY     | FUSE HOLDER              | [M]     |
|          |              |                          |         |
|          |              | TERMINALS                |         |
|          |              |                          |         |
| ZJ5400   | K4CZ01000027 | TERMINAL                 | [M]     |
| ZJ5410   | K4CZ01000027 | TERMINAL                 | [M]     |
| ZJ5701   | K4CZ01000027 | TERMINAL                 | [M]     |
| ZJ5801   | K4CZ01000027 | TERMINAL                 | [M]     |
| ZJ5803   | K4CZ01000027 | TERMINAL                 | [M]     |
|          |              |                          |         |
|          |              | OSCILLATORS              |         |
|          |              |                          |         |
| X2001    | H2B100500004 | CERAMIC RESONATOR        | [M]     |
| X5500    | H2A6023A0011 | CERAMIC RESONATOR        | [M]     |
| X8621    | H0J270500085 | CRYSTAL                  | [M]     |
| X9004    | H1A4805B0027 | CRYSTAL                  | [M]     |
|          |              |                          |         |
|          |              | DISPLAY TUBE             |         |
|          |              |                          |         |
| FL6901   | A2BD00000170 | FL DISPLAY               | [M]     |
| FL8101   | F1H0J1050018 | INDUCTOR                 | [M]     |
| FL8102   | F1H0J1050018 | INDUCTOR                 | [M]     |
| FL8103   | F1H0J1050018 | INDUCTOR                 | [M]     |
| FL8104   | F1J1E1040022 | INDUCTOR                 | [M]     |
| FL8421   | F1H0J1050018 | INDUCTOR                 | [M]     |
|          |              |                          |         |
|          |              | FUSE                     |         |
|          |              |                          |         |
| F1       | K5D802BNA005 | FUSE                     | [M] △   |
|          |              |                          |         |
|          |              | FUSE PROTECTOR           |         |
|          |              |                          |         |
| FP2900   | K5G401A00008 | FUSE PROTECTOR           | [M] △   |
|          |              |                          |         |
|          |              | HOLDERS                  |         |
|          |              |                          |         |
| H5500    | K1YF08000003 | 8P WIRE HOLDER           | [M]     |
| H7000    | K1YZ09000002 | 9P WIRE HOLDER           | [M]     |
|          |              |                          |         |
|          |              | JACKS                    |         |
|          |              |                          |         |
| JK2001   | K2HA306B0070 | JACK COMPONENT VIDEO OUT | [M]     |
| JK5001   | K4AC08B00013 | JACK SPEAKER             | [M]     |

| Ref. No. | Part No.     | Part Name & Description | Remarks      |
|----------|--------------|-------------------------|--------------|
| JK6801   | K2HC103A0024 | JACK HEADPHONE          | [M]          |
| JK6802   | K2HC103A0024 | JACK MUSIC PORT         | [M]          |
| JK7001   | K2HB102J0038 | JACK MIC 1              | [M]          |
| JK7002   | K2HB102J0038 | JACK MIC 2              | [M]          |
| JK8001   | B3RAB0000056 | JACK OPTICAL IN         | [M]          |
|          |              |                         |              |
| P3901    | K1FY119E0002 | JACK HDMI CONNECTOR     | [M]          |
| P5701    | K2AA2B000015 | JACK AC INLET           | [M] △        |
|          |              |                         |              |
|          |              | EARTH TERMINALS         |              |
|          |              |                         |              |
| E2900    | K4CZ01000027 | TERMINAL                | [M]          |
| E2901    | K4CZ01000027 | TERMINAL                | [M]          |
| E6300    | K4CZ01000027 | TERMINAL                | [M]          |
|          |              |                         |              |
|          |              | PACKING MATERIALS       |              |
|          |              |                         |              |
| P1       | RP6X1699     | PACKING CASE            | [M] GC       |
| P1       | RP6X1700     | PACKING CASE            | [M] GS       |
| P1       | RP6X1701     | PACKING CASE            | [M] GCS      |
| P1       | RP6X1702     | PACKING CASE            | [M] GCT      |
| P2       | RPNX0460     | POLYFOAM                | [M]          |
| P3       | RPF0058-1J   | MIRAMAT                 | [M]          |
|          |              |                         |              |
|          |              | ACCESSORIES             |              |
|          |              |                         |              |
| A1       | N2QAYB000096 | REMOTE CONTROL          | [M]          |
| A1-1     | RKK-HTR0051K | R/C BATTERY COVER       | [M]          |
| A2       | K2CP2YY00001 | AC CORD                 | [M] △<br>GCT |
| A2       | K2CQ2CA00002 | AC CORD                 | [M] △<br>GCS |
| A2       | K2CQ2CA00007 | AC CORD                 | [M] △<br>GC  |
| A2       | K2CT3CA00004 | AC CORD                 | [M] △<br>GS  |
| A3       | RQTX0038-3B  | O/I BOOK (EN)           | [M]          |
| A3       | RQTX0039-1G  | O/I BOOK (AR/PE)        | [M]          |
| A3       | RQTX0040-K   | O/I BOOK (CN)           | [M]          |
| A4       | RSA0007-M    | ANTENNA WIRE            | [M]          |
| A5       | K2KA2BA00001 | VIDEO CABLE             | [M]          |
| A6       | L0CBAB000125 | CALIBRATION MIC         | [M]          |
| A7       | RQCXA0013-1  | SPEAKER LABEL SHEET     | [M]          |
| A8       | XSN5+12FJ    | SCREW                   | [M]          |
| A9       | J0KG00000037 | AC CLAMP FILTER         | [M] △        |
| A10      | REEX0449B-2  | SPEAKER CORD (4M)       | [M]          |
|          |              |                         |              |
|          |              | RESISTORS               |              |
|          |              |                         |              |
| R2000    | ERJ3GEYJ221V | 220 1/16W               | [M]          |
| R2002    | ERJ3GEYJ221V | 220 1/16W               | [M]          |
| R2003    | ERJ3GEYJ221V | 220 1/16W               | [M]          |
| R2004    | ERJ3GEYJ221V | 220 1/16W               | [M]          |
| R2005    | ERJ3GEYJ221V | 220 1/16W               | [M]          |
| R2006    | ERJ3GEYJ221V | 220 1/16W               | [M]          |
| R2008    | ERJ3GEYJ103V | 10K 1/16W               | [M]          |
| R2010    | ERJ3GEY0R00V | 0 1/16W                 | [M]          |
| R2012    | ERJ3GEYJ223V | 22K 1/16W               | [M]          |
| R2014    | ERJ3GEYJ273V | 27K 1/16W               | [M]          |
| R2015    | ERJ3GEYJ221V | 220 1/16W               | [M]          |
| R2016    | ERJ3GEYJ221V | 220 1/16W               | [M]          |
| R2017    | ERJ3GEYJ273V | 27K 1/16W               | [M]          |
| R2019    | ERJ3GEYJ273V | 27K 1/16W               | [M]          |
| R2021    | ERJ3GEYJ563V | 56K 1/16W               | [M]          |
| R2022    | ERJ3GEYJ221V | 220 1/16W               | [M]          |
| R2023    | ERJ3GEYJ221V | 220 1/16W               | [M]          |
| R2024    | ERJ3GEYJ102V | 1K 1/16W                | [M]          |
| R2027    | ERJ3GEYJ221V | 220 1/16W               | [M]          |
| R2030    | ERJ3GEYJ102V | 1K 1/16W                | [M]          |
| R2031    | ERJ3GEYJ221V | 220 1/16W               | [M]          |
| R2032    | ERJ3GEYJ473V | 47K 1/16W               | [M]          |
| R2034    | ERJ3GEYJ473V | 47K 1/16W               | [M]          |
| R2037    | ERJ3GEYJ473V | 47K 1/16W               | [M]          |
| R2040    | ERJ3GEYJ103V | 10K 1/16W               | [M]          |

| Ref. No. | Part No.     | Part Name & Description | Remarks         |
|----------|--------------|-------------------------|-----------------|
| R2041    | ERJ3GEYJ472V | 4.7K 1/16W              | [M]             |
| R2043    | ERJ3GEYJ103V | 10K 1/16W               | [M]             |
| R2045    | ERJ3GEYJ103V | 10K 1/16W               | [M]             |
| R2051    | ERJ3GEYJ563V | 56K 1/16W               | [M]             |
| R2052    | ERJ3GEYJ221V | 220 1/16W               | [M]             |
| R2053    | ERJ3GEYJ103V | 10K 1/16W               | [M]             |
| R2054    | ERJ3GEYJ221V | 220 1/16W               | [M]             |
| R2055    | ERJ3GEYJ102V | 1K 1/16W                | [M]             |
| R2060    | ERJ3GEYJ221V | 220 1/16W               | [M]             |
| R2062    | ERJ3GEYJ221V | 220 1/16W               | [M]             |
| R2068    | ERJ3GEYJ221V | 220 1/16W               | [M]             |
| R2069    | ERJ3GEYJ221V | 220 1/16W               | [M]             |
| R2077    | ERJ3GEYJ103V | 10K 1/16W               | [M]             |
| R2079    | ERJ3GEYJ103V | 10K 1/16W               | [M]             |
| R2080    | ERJ3GEYJ103V | 10K 1/16W               | [M]             |
| R2081    | ERJ3GEYJ103V | 10K 1/16W               | [M]             |
| R2082    | ERJ3GEYJ472V | 4.7K 1/16W              | [M]             |
| R2084    | ERJ3GEYJ473V | 47K 1/16W               | [M]             |
| R2085    | ERJ3GEYJ472V | 4.7K 1/16W              | [M]             |
| R2086    | ERJ3GEYJ223V | 22K 1/16W               | [M]             |
| R2087    | ERJ3GEYJ223V | 22K 1/16W               | [M]             |
| R2088    | ERJ3GEYJ182V | 1.8K 1/16W              | [M]             |
| R2089    | ERJ3GEYJ223V | 22K 1/16W               | [M] GCS/<br>GCT |
| R2089    | ERJ3GEYJ333V | 33K 1/16W               | [M] GC/G<br>S   |
| R2093    | ERJ3GEYJ103V | 10K 1/16W               | [M]             |
| R2094    | ERJ3GEYJ221V | 220 1/16W               | [M]             |
| R2095    | ERJ3GEYJ563V | 56K 1/16W               | [M]             |
| R2096    | ERJ3GEYJ473V | 47K 1/16W               | [M]             |
| R2097    | ERJ3GEYJ472V | 4.7K 1/16W              | [M]             |
| R2098    | ERJ3GEYJ225V | 2.2M 1/16W              | [M]             |
| R2099    | ERJ3GEYJ104V | 100K 1/16W              | [M]             |
| R2100    | ERJ3GEYJ332V | 3.3K 1/16W              | [M]             |
| R2101    | ERJ3GEYJ103V | 10K 1/16W               | [M]             |
| R2102    | ERJ3GEYJ332V | 3.3K 1/16W              | [M]             |
| R2103    | ERJ3GEYJ273V | 27K 1/16W               | [M]             |
| R2104    | ERJ3GEYJ272V | 2.7K 1/16W              | [M]             |
| R2105    | ERJ3GEYJ152V | 1.5K 1/16W              | [M]             |
| R2106    | ERJ3GEYJ563V | 56K 1/16W               | [M]             |
| R2112    | ERJ3GEYJ472V | 4.7K 1/16W              | [M]             |
| R2113    | ERJ3GEY0R00V | 0 1/16W                 | [M]             |
| R2114    | ERJ3GEYJ562V | 5.6K 1/16W              | [M]             |
| R2115    | ERJ3GEYJ272V | 2.7K 1/16W              | [M]             |
| R2119    | ERJ3GEYJ392V | 3.9K 1/16W              | [M]             |
| R2120    | ERJ3GEYJ102V | 1K 1/16W                | [M]             |
| R2133    | ERJ3GEYJ103V | 10K 1/16W               | [M]             |
| R2140    | ERJ3GEYJ102V | 1K 1/16W                | [M]             |
| R2141    | ERJ3GEYJ104V | 100K 1/16W              | [M]             |
| R2142    | ERJ3GEYJ102V | 1K 1/16W                | [M]             |
| R2143    | ERJ3GEYJ104V | 100K 1/16W              | [M]             |
| R2145    | ERJ3GEYJ273V | 27K 1/16W               | [M]             |
| R2160    | ERJ3GEYJ102V | 1K 1/16W                | [M]             |
| R2161    | ERJ3GEYJ473V | 47K 1/16W               | [M]             |
| R2164    | ERJ3GEYJ103V | 10K 1/16W               | [M]             |
| R2165    | ERJ3GEYJ103V | 10K 1/16W               | [M]             |
| R2170    | ERJ3GEYJ222V | 2.2K 1/16W              | [M]             |
| R2171    | ERJ3GEYJ273V | 27K 1/16W               | [M]             |
| R2172    | ERJ3GEYJ182V | 1.8K 1/16W              | [M]             |
| R2175    | ERJ3GEYJ122V | 1.2K 1/16W              | [M]             |
| R2176    | ERJ3GEYJ223V | 22K 1/16W               | [M]             |
| R2177    | ERJ3GEYJ220V | 22 1/16W                | [M]             |
| R2178    | ERJ3GEYJ220V | 22 1/16W                | [M]             |
| R2179    | ERJ3GEYJ220V | 22 1/16W                | [M]             |
| R2180    | ERJ3GEYJ220V | 22 1/16W                | [M]             |
| R2181    | ERJ3GEYJ472V | 4.7K 1/16W              | [M]             |
| R2182    | ERJ3GEYJ100V | 10 1/16W                | [M]             |
| R2183    | ERJ3GEYJ102V | 1K 1/16W                | [M]             |
| R2184    | ERJ3GEYJ472V | 4.7K 1/16W              | [M]             |
| R2185    | ERJ3GEYJ122V | 1.2K 1/16W              | [M]             |
| R2186    | ERJ3GEYJ152V | 1.5K 1/16W              | [M]             |
| R2190    | ERJ3GEYJ103V | 10K 1/16W               | [M]             |
| R2191    | ERJ3GEYJ392V | 3.9K 1/16W              | [M]             |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| R2192    | ERJ3GEYJ332V | 3.3K 1/16W              | [M]     |
| R2193    | ERJ3GEYJ152V | 1.5K 1/16W              | [M]     |
| R2195    | ERJ3GEYJ151V | 150 1/16W               | [M]     |
| R2196    | ERJ3GEYJ222V | 2.2K 1/16W              | [M]     |
| R2197    | ERJ3GEYJ104V | 100K 1/16W              | [M]     |
| R2198    | ERJ3GEYJ222V | 2.2K 1/16W              | [M]     |
| R2199    | ERJ3GEY0R00V | 0 1/16W                 | [M]     |
| R2200    | ERJ3GEYJ332V | 3.3K 1/16W              | [M]     |
| R2201    | ERJ3GEYJ103V | 10K 1/16W               | [M]     |
| R2202    | ERJ3GEYJ332V | 3.3K 1/16W              | [M]     |
| R2203    | ERJ3GEYJ273V | 27K 1/16W               | [M]     |
| R2204    | ERJ3GEYJ272V | 2.7K 1/16W              | [M]     |
| R2205    | ERJ3GEYJ152V | 1.5K 1/16W              | [M]     |
| R2206    | ERJ3GEYJ563V | 56K 1/16W               | [M]     |
| R2212    | ERJ3GEYJ472V | 4.7K 1/16W              | [M]     |
| R2213    | ERJ3GEY0R00V | 0 1/16W                 | [M]     |
| R2214    | ERJ3GEYJ562V | 5.6K 1/16W              | [M]     |
| R2215    | ERJ3GEYJ272V | 2.7K 1/16W              | [M]     |
| R2219    | ERJ3GEYJ392V | 3.9K 1/16W              | [M]     |
| R2220    | ERJ3GEYJ102V | 1K 1/16W                | [M]     |
| R2233    | ERJ3GEYJ103V | 10K 1/16W               | [M]     |
| R2240    | ERJ3GEYJ102V | 1K 1/16W                | [M]     |
| R2241    | ERJ3GEYJ104V | 100K 1/16W              | [M]     |
| R2242    | ERJ3GEYJ102V | 1K 1/16W                | [M]     |
| R2243    | ERJ3GEYJ104V | 100K 1/16W              | [M]     |
| R2244    | ERJ3GEYJ563V | 56K 1/16W               | [M]     |
| R2260    | ERJ3GEYJ102V | 1K 1/16W                | [M]     |
| R2261    | ERJ3GEYJ473V | 47K 1/16W               | [M]     |
| R2264    | ERJ3GEYJ103V | 10K 1/16W               | [M]     |
| R2265    | ERJ3GEYJ103V | 10K 1/16W               | [M]     |
| R2270    | ERJ3GEYJ222V | 2.2K 1/16W              | [M]     |
| R2271    | ERJ3GEYJ563V | 56K 1/16W               | [M]     |
| R2275    | ERJ3GEYJ122V | 1.2K 1/16W              | [M]     |
| R2276    | ERJ3GEYJ223V | 22K 1/16W               | [M]     |
| R2277    | ERJ3GEYJ220V | 22 1/16W                | [M]     |
| R2278    | ERJ3GEYJ220V | 22 1/16W                | [M]     |
| R2279    | ERJ3GEYJ220V | 22 1/16W                | [M]     |
| R2280    | ERJ3GEYJ220V | 22 1/16W                | [M]     |
| R2281    | ERJ3GEYJ472V | 4.7K 1/16W              | [M]     |
| R2282    | ERJ3GEYJ100V | 10 1/16W                | [M]     |
| R2283    | ERJ3GEYJ102V | 1K 1/16W                | [M]     |
| R2284    | ERJ3GEYJ472V | 4.7K 1/16W              | [M]     |
| R2285    | ERJ3GEYJ122V | 1.2K 1/16W              | [M]     |
| R2286    | ERJ3GEYJ152V | 1.5K 1/16W              | [M]     |
| R2290    | ERJ3GEYJ103V | 10K 1/16W               | [M]     |
| R2291    | ERJ3GEYJ392V | 3.9K 1/16W              | [M]     |
| R2292    | ERJ3GEYJ332V | 3.3K 1/16W              | [M]     |
| R2296    | ERJ3GEYJ222V | 2.2K 1/16W              | [M]     |
| R2297    | ERJ3GEYJ104V | 100K 1/16W              | [M]     |
| R2298    | ERJ3GEYJ222V | 2.2K 1/16W              | [M]     |
| R2299    | ERJ3GEY0R00V | 0 1/16W                 | [M]     |
| R2300    | ERJ3GEYJ123V | 12K 1/16W               | [M]     |
| R2301    | ERJ3GEYJ822V | 8.2K 1/16W              | [M]     |
| R2302    | ERJ3GEYJ332V | 3.3K 1/16W              | [M]     |
| R2303    | ERJ3GEYJ822V | 8.2K 1/16W              | [M]     |
| R2304    | ERJ3GEYJ123V | 12K 1/16W               | [M]     |
| R2310    | ERJ3GEYJ103V | 10K 1/16W               | [M]     |
| R2320    | ERJ3GEYJ102V | 1K 1/16W                | [M]     |
| R2321    | ERJ3GEYJ104V | 100K 1/16W              | [M]     |
| R2345    | ERJ3GEYJ152V | 1.5K 1/16W              | [M]     |
| R2346    | ERJ3GEYJ472V | 4.7K 1/16W              | [M]     |
| R2400    | ERJ3GEYJ123V | 12K 1/16W               | [M]     |
| R2401    | ERJ3GEYJ822V | 8.2K 1/16W              | [M]     |
| R2402    | ERJ3GEYJ332V | 3.3K 1/16W              | [M]     |
| R2403    | ERJ3GEYJ822V | 8.2K 1/16W              | [M]     |
| R2404    | ERJ3GEYJ123V | 12K 1/16W               | [M]     |
| R2410    | ERJ3GEYJ103V | 10K 1/16W               | [M]     |
| R2420    | ERJ3GEYJ102V | 1K 1/16W                | [M]     |
| R2421    | ERJ3GEYJ104V | 100K 1/16W              | [M]     |
| R2445    | ERJ3GEYJ152V | 1.5K 1/16W              | [M]     |
| R2446    | ERJ3GEYJ472V | 4.7K 1/16W              | [M]     |
| R2500    | ERJ3GEYJ123V | 12K 1/16W               | [M]     |
| R2501    | ERJ3GEYJ822V | 8.2K 1/16W              | [M]     |

| Ref. No. | Part No.     | Part Name & Description | Remarks    |
|----------|--------------|-------------------------|------------|
| R2502    | ERJ3GEYJ562V | 5.6K 1/16W              | [M]        |
| R2503    | ERJ3GEYJ822V | 8.2K 1/16W              | [M]        |
| R2504    | ERJ3GEYJ103V | 10K 1/16W               | [M]        |
| R2510    | ERJ3GEYJ272V | 2.7K 1/16W              | [M]        |
| R2512    | ERJ3GEYJ222V | 2.2K 1/16W              | [M]        |
| R2520    | ERJ3GEYJ102V | 1K 1/16W                | [M]        |
| R2521    | ERJ3GEYJ104V | 100K 1/16W              | [M]        |
| R2600    | ERJ3GEYJ102V | 1K 1/16W                | [M]        |
| R2601    | ERJ3GEYJ123V | 12K 1/16W               | [M]        |
| R2609    | ERJ3GEYJ122V | 1.2K 1/16W              | [M]        |
| R2610    | ERJ3GEYJ153V | 15K 1/16W               | [M]        |
| R2611    | ERJ3GEYJ273V | 27K 1/16W               | [M]        |
| R2612    | ERJ3GEYJ563V | 56K 1/16W               | [M]        |
| R2613    | ERJ3GEYJ682V | 6.8K 1/16W              | [M]        |
| R2614    | ERJ3GEYJ273V | 27K 1/16W               | [M]        |
| R2617    | ERJ3GEYJ332V | 3.3K 1/16W              | [M]        |
| R2620    | ERJ3GEYJ102V | 1K 1/16W                | [M]        |
| R2621    | ERJ3GEYJ104V | 100K 1/16W              | [M]        |
| R2626    | ERJ3GEYJ392V | 3.9K 1/16W              | [M]        |
| R2627    | ERJ3GEYJ473V | 47K 1/16W               | [M]        |
| R2661    | ERJ3GEYJ680V | 68 1/16W                | [M]        |
| R2662    | ERJ3GEYJ680V | 68 1/16W                | [M]        |
| R2664    | ERJ3GEY0R00V | 0 1/16W                 | [M]        |
| R2751    | ERJ3GEYJ471V | 470 1/16W               | [M]        |
| R2752    | ERJ3GEYJ103V | 10K 1/16W               | [M]        |
| R2753    | ERJ3GEYJ472V | 4.7K 1/16W              | [M]        |
| R2754    | ERJ3GEYJ102V | 1K 1/16W                | [M]        |
| R2755    | ERJ3GEYJ472V | 4.7K 1/16W              | [M]        |
| R2756    | ERJ3GEYJ101V | 100 1/16W               | [M]        |
| R2757    | ERJ3GEYJ473V | 47K 1/16W               | [M]        |
| R2758    | ERJ3GEYJ223V | 22K 1/16W               | [M]        |
| R2759    | ERJ3GEYJ223V | 22K 1/16W               | [M]        |
| R2760    | ERJ3GEYJ824V | 820K 1/16W              | [M]        |
| R2761    | ERJ3GEYJ824V | 820K 1/16W              | [M]        |
| R2762    | ERJ3GEYJ103V | 10K 1/16W               | [M]        |
| R2763    | ERJ3GEYJ103V | 10K 1/16W               | [M]        |
| R2764    | ERJ3GEYJ474V | 470K 1/16W              | [M]        |
| R2765    | ERJ3GEYJ474V | 470K 1/16W              | [M]        |
| R2803    | ERJ3GEYJ102V | 1K 1/16W                | [M]        |
| R2804    | ERJ3GEYJ102V | 1K 1/16W                | [M]        |
| R2809    | ERJ3GEYJ750V | 75 1/16W                | [M]        |
| R2810    | ERJ3GEY0R00V | 0 1/16W                 | [M]        |
| R2812    | ERJ3GEYJ750V | 75 1/16W                | [M]        |
| R2813    | ERJ3GEYJ750V | 75 1/16W                | [M]        |
| R2816    | ERJ3GEYJ750V | 75 1/16W                | [M]        |
| R2862    | ERJ3GEYJ103V | 10K 1/16W               | [M]        |
| R2863    | ERJ3GEYJ103V | 10K 1/16W               | [M]        |
| R2864    | ERJ3GEYJ821V | 820 1/16W               | [M]        |
| R2865    | ERJ3GEYJ332V | 3.3K 1/16W              | [M]GC/GS   |
| R2865    | ERJ3GEYJ682V | 6.8K 1/16W              | [M]GCS/GCT |
| R2869    | ERJ3GEYJ221V | 220 1/16W               | [M]        |
| R2870    | ERJ3GEYJ103V | 10K 1/16W               | [M]        |
| R2871    | ERJ3GEYJ103V | 10K 1/16W               | [M]        |
| R2872    | ERJ3GEYJ103V | 10K 1/16W               | [M]        |
| R2900    | ERJ3GEYJ562V | 5.6K 1/16W              | [M]        |
| R2902    | ERJ3GEYJ470V | 47 1/16W                | [M]        |
| R2903    | ERJ3GEYJ182V | 1.8K 1/16W              | [M]        |
| R2905    | ERJ3GEYJ390V | 39 1/16W                | [M]        |
| R2906    | ERJ3GEYF682V | 6.8K 1/16W              | [M]        |
| R2907    | ERJ3GEYJ272V | 2.7K 1/16W              | [M]        |
| R2908    | ERJ3GEYJ561V | 560 1/16W               | [M]        |
| R2913    | ER62SJ220E   | 22 1/32W                | [M]        |
| R2914    | ERJ3GEYJ392V | 3.9K 1/16W              | [M]        |
| R2915    | ERJ3GEYJ272V | 2.7K 1/16W              | [M]        |
| R2919    | ERJ3GEYF102V | 1K 1/16W                | [M]        |
| R2920    | ERJ3GEYF102V | 1K 1/16W                | [M]        |
| R2921    | ERJ3GEYF332V | 3.3K 1/16W              | [M]        |
| R2922    | ERJ3GEYF102V | 1K 1/16W                | [M]        |
| R2923    | ERJ3GEYF122V | 1.2K 1/16W              | [M]        |
| R2924    | ERJ3GEYJ821V | 820 1/16W               | [M]        |
| R2925    | ERX2SJ1R5E   | 1.5 1/32W               | [M]        |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| R2926    | ERJ3GEYJ473V | 47K 1/16W               | [M]     |
| R2927    | ERX2SJ1R5E   | 1.5 1/32W               | [M]     |
| R2929    | ERJ3GEYJ151V | 150 1/16W               | [M]     |
| R2930    | ERJ3GEYJ472V | 4.7K 1/16W              | [M]     |
| R2931    | ERJ3GEYJ331V | 330 1/16W               | [M]     |
| R2932    | ERJ3GEYJ103V | 10K 1/16W               | [M]     |
| R2933    | ERJ3GEYJ331V | 330 1/16W               | [M]     |
| R2934    | ERJ3GEYJ103V | 10K 1/16W               | [M]     |
| R2935    | ERJ3GEYJ472V | 4.7K 1/16W              | [M]     |
| R2936    | ERJ3GEYJ331V | 330 1/16W               | [M]     |
| R2937    | ERJ3GEYJ393V | 39K 1/16W               | [M]     |
| R2938    | ERJ3GEYJ153V | 15K 1/16W               | [M]     |
| R2939    | ERJ3GEYJ1R0V | 1 1/16W                 | [M]     |
| R2941    | ERJ3GEYJ223V | 22K 1/16W               | [M]     |
| R2942    | ERJ3GEYJ222V | 2.2K 1/16W              | [M]     |
| R2943    | ERJ3GEYJ272V | 2.7K 1/16W              | [M]     |
| R2946    | ERJ3GEYJ330V | 33 1/16W                | [M]     |
| R2947    | ERJ3GEYJ472V | 4.7K 1/16W              | [M]     |
| R2948    | ERJ3GEYJ472V | 4.7K 1/16W              | [M]     |
| R2951    | ERDS1FVJ3R9T | 3.9 1/2W                | [M]     |
| R2952    | ERJ3GEYJ392V | 3.9K 1/16W              | [M]     |
| R2953    | ERJ3GEYJ561V | 560 1/16W               | [M]     |
| R2954    | ERG2SJ220E   | 22 1/32W                | [M]     |
| R2971    | ERJ3GEYJ222V | 2.2K 1/16W              | [M]     |
| R2972    | ERJ3GEYJ220V | 22 1/16W                | [M]     |
| R2974    | ERG2SJ910E   | 91 1/32W                | [M]     |
| R2975    | ERJ3GEYJ153V | 15K 1/16W               | [M]     |
| R2976    | ERJ3GEYJ103V | 10K 1/16W               | [M]     |
| R2982    | ERJ3GEYJ471V | 470 1/16W               | [M]     |
| R2984    | ERJ3GEYJ471V | 470 1/16W               | [M]     |
| R2985    | ERJ6GEY0R00V | 0 1/10W                 | [M]     |
| R2989    | ERX2SJ1R5E   | 1.5 1/32W               | [M]     |
| R2990    | ERJ3GEY0R00V | 0 1/16W                 | [M]     |
| R2991    | ERJ3GEY0R00V | 0 1/16W                 | [M]     |
| R2992    | ERJ3GEY0R00V | 0 1/16W                 | [M]     |
| R2993    | ERJ3GEY0R00V | 0 1/16W                 | [M]     |
| R2994    | ERJ3GEY0R00V | 0 1/16W                 | [M]     |
| R2995    | ERJ3GEY0R00V | 0 1/16W                 | [M]     |
| R2996    | ERDS1FVJ4R7T | 4.7 1/2W                | [M]     |
| R2997    | ERX2SJ1R5E   | 1.5 1/32W               | [M]     |
| R2999    | ERJ3GEY0R00V | 0 1/16W                 | [M]     |
| R3901    | ERJ2GEJ511X  | 510 1/32W               | [M]     |
| R3902    | ERJ2GEJ103X  | 10K 1/32W               | [M]     |
| R3903    | ERJ2GEJ103X  | 10K 1/32W               | [M]     |
| R3904    | ERJ2GEJ472X  | 4.7K 1/32W              | [M]     |
| R3905    | ERJ2GEJ202X  | 2K 1/32W                | [M]     |
| R3906    | ERJ2GEJ472X  | 4.7K 1/32W              | [M]     |
| R3907    | ERJ2GEJ222X  | 2.2K 1/32W              | [M]     |
| R3921    | ERJ2GE0R00X  | 0 1/32W                 | [M]     |
| R3924    | ERJ2GE0R00X  | 0 1/32W                 | [M]     |
| R3925    | ERJ2GEJ103X  | 10K 1/32W               | [M]     |
| R3941    | ERJ2GEJ273X  | 27K 1/32W               | [M]     |
| R3942    | ERJ2GEJ224X  | 220K 1/32W              | [M]     |
| R3943    | ERJ2GEJ104X  | 100K 1/32W              | [M]     |
| R3944    | ERJ2GEJ221X  | 220 1/32W               | [M]     |
| R3945    | ERJ2GEJ103X  | 10K 1/32W               | [M]     |
| R3946    | ERJ2GEJ272X  | 2.7K 1/32W              | [M]     |
| R3947    | ERJ2GEJ103X  | 10K 1/32W               | [M]     |
| R5000    | ERJ3GEYJ562V | 5.6K 1/16W              | [M]     |
| R5001    | ERJ3GEYJ562V | 5.6K 1/16W              | [M]     |
| R5002    | ERJ3GEYJ562V | 5.6K 1/16W              | [M]     |
| R5003    | ERJ3GEYJ562V | 5.6K 1/16W              | [M]     |
| R5004    | ERJ8GEYJ100V | 10 1/8W                 | [M]     |
| R5005    | ERJ8GEYJ100V | 10 1/8W                 | [M]     |
| R5006    | ERJ1TYJ220U  | 22 1W                   | [M]     |
| R5007    | ERJ1TYJ220U  | 22 1W                   | [M]     |
| R5008    | ERJ3GEYJ101V | 100 1/16W               | [M]     |
| R5010    | ERJ8GEYJ100V | 10 1/8W                 | [M]     |
| R5011    | ERJ8GEYJ100V | 10 1/8W                 | [M]     |
| R5019    | ERJ3GEYJ683V | 68K 1/16W               | [M]     |
| R5020    | ERJ3GEYJ124V | 120K 1/16W              | [M]     |
| R5021    | ERJ3GEYJ122V | 1.2K 1/16W              | [M]     |
| R5022    | ERJ3GEYJ122V | 1.2K 1/16W              | [M]     |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| R5023    | ERJ3GEYJ122V | 1.2K 1/16W              | [M]     |
| R5030    | ERJ3GEYJ562V | 5.6K 1/16W              | [M]     |
| R5031    | ERJ3GEYJ562V | 5.6K 1/16W              | [M]     |
| R5032    | ERJ3GEYJ562V | 5.6K 1/16W              | [M]     |
| R5033    | ERJ3GEYJ562V | 5.6K 1/16W              | [M]     |
| R5034    | ERJ3GEYJ562V | 5.6K 1/16W              | [M]     |
| R5035    | ERJ3GEYJ562V | 5.6K 1/16W              | [M]     |
| R5110    | ERJ3GEYJ223V | 22K 1/16W               | [M]     |
| R5200    | ERJ8GEYJ100V | 10 1/8W                 | [M]     |
| R5201    | ERJ8GEYJ100V | 10 1/8W                 | [M]     |
| R5204    | ERJ3GEYJ101V | 100 1/16W               | [M]     |
| R5205    | ERJ3GEYJ562V | 5.6K 1/16W              | [M]     |
| R5206    | ERJ3GEYJ562V | 5.6K 1/16W              | [M]     |
| R5207    | ERJ3GEYJ562V | 5.6K 1/16W              | [M]     |
| R5208    | ERJ3GEYJ562V | 5.6K 1/16W              | [M]     |
| R5209    | ERJ1TYJ220U  | 22 1W                   | [M]     |
| R5210    | ERJ8GEYJ100V | 10 1/8W                 | [M]     |
| R5211    | ERJ8GEYJ100V | 10 1/8W                 | [M]     |
| R5217    | ERJ1TYJ220U  | 22 1W                   | [M]     |
| R5218    | ERJ3GEYJ683V | 68K 1/16W               | [M]     |
| R5228    | ERJ3GEYJ124V | 120K 1/16W              | [M]     |
| R5300    | ERJ1TYJ220U  | 22 1W                   | [M]     |
| R5302    | ERJ8GEYJ100V | 10 1/8W                 | [M]     |
| R5304    | ERJ3GEYJ101V | 100 1/16W               | [M]     |
| R5305    | ERJ8GEYJ100V | 10 1/8W                 | [M]     |
| R5306    | ERJ3GEYJ562V | 5.6K 1/16W              | [M]     |
| R5307    | ERJ3GEYJ562V | 5.6K 1/16W              | [M]     |
| R5308    | ERJ3GEYJ562V | 5.6K 1/16W              | [M]     |
| R5309    | ERJ3GEYJ562V | 5.6K 1/16W              | [M]     |
| R5310    | ERJ8GEYJ100V | 10 1/8W                 | [M]     |
| R5311    | ERJ8GEYJ100V | 10 1/8W                 | [M]     |
| R5317    | ERJ3GEYJ122V | 1.2K 1/16W              | [M]     |
| R5318    | ERJ3GEYJ124V | 120K 1/16W              | [M]     |
| R5319    | ERJ1TYJ220U  | 22 1W                   | [M]     |
| R5327    | ERJ3GEYJ122V | 1.2K 1/16W              | [M]     |
| R5328    | ERJ3GEYJ683V | 68K 1/16W               | [M]     |
| R5505    | ERJ3GEYJ101V | 100 1/16W               | [M]     |
| R5507    | ERJ3GEYJ105V | 1M 1/16W                | [M]     |
| R5508    | ERJ3GEYJ105V | 1M 1/16W                | [M]     |
| R5510    | ERG2SJ271E   | 270 1/32W               | [M]     |
| R5511    | ERJ3GEYJ220V | 22 1/16W                | [M]     |
| R5602    | ERJ3GEYJ103V | 10K 1/16W               | [M]     |
| R5603    | ERJ3GEYJ103V | 10K 1/16W               | [M]     |
| R5604    | ERJ3GEYJ122V | 1.2K 1/16W              | [M]     |
| R5606    | ERJ3GEYJ103V | 10K 1/16W               | [M]     |
| R5607    | ERJ3GEYJ122V | 1.2K 1/16W              | [M]     |
| R5608    | ERJ3GEYJ103V | 10K 1/16W               | [M]     |
| R5609    | ERJ3GEYJ103V | 10K 1/16W               | [M]     |
| R5610    | ERJ3GEYJ122V | 1.2K 1/16W              | [M]     |
| R5611    | ERJ3GEYJ122V | 1.2K 1/16W              | [M]     |
| R5636    | ERDS1FVJ392T | 3.9K 1/2W               | [M]     |
| R5637    | ERJ3GEYJ100V | 10 1/16W                | [M]     |
| R5639    | ERJ3GEYJ332V | 3.3K 1/16W              | [M]     |
| R5640    | ERJ3GEY0R00V | 0 1/16W                 | [M]     |
| R5654    | ERJ3GEYJ563V | 56K 1/16W               | [M]     |
| R5655    | ERJ3GEYJ103V | 10K 1/16W               | [M]     |
| R5656    | ERJ3GEYJ103V | 10K 1/16W               | [M]     |
| R5657    | ERJ3GEYJ103V | 10K 1/16W               | [M]     |
| R5658    | ERJ3GEYJ185V | 1.8M 1/16W              | [M]     |
| R5659    | ERJ3GEYJ104V | 100K 1/16W              | [M]     |
| R5660    | ERJ3GEYJ103V | 10K 1/16W               | [M]     |
| R5670    | ERJ3GEY0R00V | 0 1/16W                 | [M]     |
| R5701    | ERDS1TJ474B  | 470K 1/2W               | [M]     |
| R5702    | ERJ1TYJ683U  | 68K 1/8W                | [M]     |
| R5703    | ERJ1TYJ683U  | 68K 1/8W                | [M]     |
| R5704    | ERJ8GEYJ394V | 390K 1/8W               | [M]     |
| R5705    | ERJ8GEYJ394V | 390K 1/8W               | [M]     |
| R5706    | ERJ1TYJ683U  | 68K 1/8W                | [M]     |
| R5720    | ERJ6GEYJ220V | 22 1/10W                | [M]     |
| R5721    | ERJ6GEYJ103V | 10K 1/10W               | [M]     |
| R5722    | ERJ6GEYJ102V | 1K 1/10W                | [M]     |
| R5723    | ERJ3GEYJ102V | 1K 1/16W                | [M]     |
| R5724    | ERJ6GEYJ121V | 120 1/10W               | [M]     |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| R5725    | ERJ3GEY0R00V | 0 1/16W                 | [M]     |
| R5726    | ERX2LJ82MP   | 0.82 1/32W              | [M]     |
| R5728    | ERJ3GEYJ104V | 100K 1/16W              | [M]     |
| R5729    | ERJ6GEYJ103V | 10K 1/10W               | [M]     |
| R5730    | ERJ6GEYJ102V | 1K 1/10W                | [M]     |
| R5731    | ERJ3GEY0R00V | 0 1/16W                 | [M]     |
| R5732    | ERJ6GEYJ101V | 100 1/10W               | [M]     |
| R5733    | ERJ3GEYJ473V | 47K 1/16W               | [M]     |
| R5751    | ERJ3GEYJ223V | 22K 1/16W               | [M]     |
| R5752    | ERJ3GEYJ222V | 2.2K 1/16W              | [M]     |
| R5786    | ERG2SJ683E   | 68K 1/32W               | [M]     |
| R5787    | ERJ3GEYJ753V | 75K 1/16W               | [M]     |
| R5788    | ERJ3GEYJ223V | 22K 1/16W               | [M]     |
| R5789    | ERJ3GEYJ223V | 22K 1/16W               | [M]     |
| R5790    | ERJ3RBD333V  | 33K 1/16W               | [M]     |
| R5791    | ERJ3GEYF563V | 56K 1/16W               | [M]     |
| R5792    | ERJ8GEYJ394V | 390K 1/8W               | [M]     |
| R5793    | ERJ8GEYJ394V | 390K 1/8W               | [M]     |
| R5794    | ERJ8GEYJ394V | 390K 1/8W               | [M]     |
| R5795    | ERJ6GEYJ433V | 43K 1/10W               | [M]     |
| R5796    | ERJ6GEYJ222V | 2.2K 1/10W              | [M]     |
| R5797    | ERJ6GEYJ472V | 4.7K 1/10W              | [M]     |
| R5798    | ERJ6GEYJ100V | 10 1/10W                | [M]     |
| R5799    | ERJ6GEYJ100V | 10 1/10W                | [M]     |
| R5800    | ERJ6GEYJ103V | 10K 1/10W               | [M]     |
| R5801    | ERJ3GEYJ123V | 12K 1/16W               | [M]     |
| R5802    | ERJ3RBD272V  | 2.7K 1/16W              | [M]     |
| R5803    | ERJ3GEYJ271V | 270 1/16W               | [M]     |
| R5804    | ERJ6RBD473V  | 47K 1/10W               | [M]     |
| R5805    | ERJ3RBD222V  | 2.2K 1/16W              | [M]     |
| R5806    | ERJ3GEYJ153V | 15K 1/16W               | [M]     |
| R5807    | ERJ6GEYJ331V | 330 1/10W               | [M]     |
| R5808    | ERJ6GEYJ222V | 2.2K 1/10W              | [M]     |
| R5809    | ERJ6GEYJ331V | 330 1/10W               | [M]     |
| R5810    | ERJ3GEYJ331V | 330 1/16W               | [M]     |
| R5811    | ERJ8GEYJ152V | 1.5K 1/8W               | [M]     |
| R5812    | ERJ3RBD822V  | 8.2K 1/16W              | [M]     |
| R5813    | ERJ3RBD243V  | 24K 1/16W               | [M]     |
| R5814    | ERJ3GEYJ822V | 8.2K 1/16W              | [M]     |
| R5815    | ERJ3GEYJ272V | 2.7K 1/16W              | [M]     |
| R5816    | ERJ8GEYJ152V | 1.5K 1/8W               | [M]     |
| R5817    | ERJ3GEYJ331V | 330 1/16W               | [M]     |
| R5832    | ERJ1TYJ222U  | 2.2K 1/8W               | [M]     |
| R5834    | ERJ1TYJ222U  | 2.2K 1/8W               | [M]     |
| R5860    | ERJ6GEYF103V | 10K 1/10W               | [M]     |
| R5861    | ERJ6GEYF302V | 3K 1/10W                | [M]     |
| R5862    | ERJ6GEYF103V | 10K 1/10W               | [M]     |
| R5863    | ERJ6GEYF103V | 10K 1/10W               | [M]     |
| R5864    | ERJ6GEYF103V | 10K 1/10W               | [M]     |
| R5890    | ERJ3GEYJ222V | 2.2K 1/16W              | [M]     |
| R5891    | ERJ3RBD472V  | 4.7K 1/16W              | [M]     |
| R5892    | ERJ3RBD561V  | 560 1/16W               | [M]     |
| R5893    | ERJ3RBD122V  | 1.2K 1/16W              | [M]     |
| R5894    | ERJ3GEYJ331V | 330 1/16W               | [M]     |
| R5895    | ERJ3GEYJ681V | 680 1/16W               | [M]     |
| R5896    | ERJ3GEYJ104V | 100K 1/16W              | [M]     |
| R5897    | ERJ3GEYJ101V | 100 1/16W               | [M]     |
| R6100    | ERJ3GEYJ153V | 15K 1/16W               | [M]     |
| R6188    | ERJ3GEYJ472V | 4.7K 1/16W              | [M]     |
| R6190    | ERJ3GEYJ102V | 1K 1/16W                | [M]     |
| R6191    | ERJ3GEYJ221V | 220 1/16W               | [M]     |
| R6192    | ERJ3GEYJ473V | 47K 1/16W               | [M]     |
| R6193    | ERJ3GEYJ182V | 1.8K 1/16W              | [M]     |
| R6194    | ERJ3GEYJ563V | 56K 1/16W               | [M]     |
| R6196    | ERJ3GEYJ103V | 10K 1/16W               | [M]     |
| R6202    | ERJ3GEYJ103V | 10K 1/16W               | [M]     |
| R6210    | ERJ3GEYJ222V | 2.2K 1/16W              | [M]     |
| R6231    | ERJ3GEY0R00V | 0 1/16W                 | [M]     |
| R6290    | ERJ3GEYJ154V | 150K 1/16W              | [M]     |
| R6291    | ERJ3GEYJ184V | 180K 1/16W              | [M]     |
| R6292    | ERJ3GEYJ101V | 100 1/16W               | [M]     |
| R6293    | ERJ3GEYJ273V | 27K 1/16W               | [M]     |
| R6294    | ERJ3GEYJ222V | 2.2K 1/16W              | [M]     |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| R6301    | ERJ3GEY0R00V | 0 1/16W                 | [M]     |
| R6803    | ERJ3GEYJ122V | 1.2K 1/16W              | [M]     |
| R6804    | ERJ3GEYJ102V | 1K 1/16W                | [M]     |
| R6805    | ERJ3GEYJ102V | 1K 1/16W                | [M]     |
| R6807    | ERJ3GEYJ223V | 22K 1/16W               | [M]     |
| R6809    | ERJ3GEYJ223V | 22K 1/16W               | [M]     |
| R6812    | ERJ3GEYJ182V | 1.8K 1/16W              | [M]     |
| R6914    | ERJ3GEYJ563V | 56K 1/16W               | [M]     |
| R6916    | ERJ3GEYJ680V | 68 1/16W                | [M]     |
| R6917    | ERJ3GEYJ680V | 68 1/16W                | [M]     |
| R6918    | ERJ3GEYJ223V | 22K 1/16W               | [M]     |
| R6919    | ERJ3GEYJ472V | 4.7K 1/16W              | [M]     |
| R6920    | ERJ3GEYJ102V | 1K 1/16W                | [M]     |
| R6923    | ERJ3GEYJ102V | 1K 1/16W                | [M]     |
| R6927    | ERJ3GEYJ680V | 68 1/16W                | [M]     |
| R6934    | ERJ3GEYJ470V | 47 1/16W                | [M]     |
| R6935    | ERJ3GEYJ100V | 10 1/16W                | [M]     |
| R6948    | ERJ3GEYJ221V | 220 1/16W               | [M]     |
| R6949    | ERJ3GEYJ221V | 220 1/16W               | [M]     |
| R6950    | ERJ3GEYJ122V | 1.2K 1/16W              | [M]     |
| R6951    | ERJ3GEYJ122V | 1.2K 1/16W              | [M]     |
| R6960    | ERJ3GEYJ222V | 2.2K 1/16W              | [M]     |
| R6961    | ERJ3GEYJ102V | 1K 1/16W                | [M]     |
| R6962    | ERJ3GEYJ102V | 1K 1/16W                | [M]     |
| R6965    | ERJ3GEYJ473V | 47K 1/16W               | [M]     |
| R6966    | ERJ3GEYJ473V | 47K 1/16W               | [M]     |
| R6967    | ERJ3GEYJ103V | 10K 1/16W               | [M]     |
| R6968    | ERJ3GEYJ103V | 10K 1/16W               | [M]     |
| R6970    | ERJ3GEYJ473V | 47K 1/16W               | [M]     |
| R6971    | ERJ3GEYJ473V | 47K 1/16W               | [M]     |
| R7001    | ERJ3GEYJ681V | 680 1/16W               | [M]     |
| R7002    | ERJ3GEYJ561V | 560 1/16W               | [M]     |
| R7003    | ERJ3GEYJ102V | 1K 1/16W                | [M]     |
| R7004    | ERJ3GEYJ103V | 10K 1/16W               | [M]     |
| R7005    | ERJ3GEYJ102V | 1K 1/16W                | [M]     |
| R7006    | ERJ3GEYJ683V | 68K 1/16W               | [M]     |
| R7007    | ERJ3GEYJ102V | 1K 1/16W                | [M]     |
| R7008    | ERJ3GEYJ332V | 3.3K 1/16W              | [M]     |
| R7009    | ERJ3GEYJ823V | 82K 1/16W               | [M]     |
| R7010    | ERJ3GEYJ102V | 1K 1/16W                | [M]     |
| R7011    | ERJ3GEYJ222V | 2.2K 1/16W              | [M]     |
| R7100    | ERJ3GEYJ153V | 15K 1/16W               | [M]     |
| R7101    | ERJ3GEYJ153V | 15K 1/16W               | [M]     |
| R7102    | ERJ3GEYJ153V | 15K 1/16W               | [M]     |
| R7103    | ERJ3GEYJ153V | 15K 1/16W               | [M]     |
| R7104    | ERJ3GEYJ153V | 15K 1/16W               | [M]     |
| R7105    | ERJ3GEYJ153V | 15K 1/16W               | [M]     |
| R7106    | ERJ3GEYJ124V | 120K 1/16W              | [M]     |
| R7107    | ERJ3GEYJ680V | 68 1/16W                | [M]     |
| R7109    | ERJ3GEYJ472V | 4.7K 1/16W              | [M]     |
| R7110    | ERJ3GEYJ152V | 1.5K 1/16W              | [M]     |
| R7112    | ERJ3GEYJ272V | 2.7K 1/16W              | [M]     |
| R7113    | ERJ3GEYJ103V | 10K 1/16W               | [M]     |
| R7114    | ERJ3GEYJ562V | 5.6K 1/16W              | [M]     |
| R7116    | ERJ3GEYJ681V | 680 1/16W               | [M]     |
| R7119    | ERJ3GEYJ223V | 22K 1/16W               | [M]     |
| R7120    | ERJ3GEYJ103V | 10K 1/16W               | [M]     |
| R7122    | ERJ3GEYJ473V | 47K 1/16W               | [M]     |
| R7123    | ERJ3GEYJ123V | 12K 1/16W               | [M]     |
| R8001    | ERJ2GEJ103X  | 10K 1/32W               | [M]     |
| R8003    | ERJ2GEJ103X  | 10K 1/32W               | [M]     |
| R8011    | ERJ2GEJ220X  | 22 1/32W                | [M]     |
| R8012    | ERJ2GEJ220X  | 22 1/32W                | [M]     |
| R8013    | ERJ2GEJ220X  | 22 1/32W                | [M]     |
| R8025    | ERJ3GEY0R00V | 0 1/16W                 | [M]     |
| R8041    | ERJ2GEJ330X  | 33 1/32W                | [M]     |
| R8153    | ERJ2RHD621X  | 620 1/32W               | [M]     |
| R8154    | ERJ2RHD102X  | 1K 1/32W                | [M]     |
| R8211    | ERJ2GEJ103X  | 10K 1/32W               | [M]     |
| R8221    | ERJ2GEJ822X  | 8.2K 1/32W              | [M]     |
| R8225    | ERJ2GEJ822X  | 8.2K 1/32W              | [M]     |
| R8230    | ERJ2GEJ222X  | 2.2K 1/32W              | [M]     |
| R8231    | ERJ2GEJ223X  | 22K 1/32W               | [M]     |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| R8232    | ERJ2GEJ752X  | 7.5K 1/32W              | [M]     |
| R8251    | ERJ6GEYJ6R8V | 6.8 1/10W               | [M]     |
| R8261    | ERJ2GEJ823X  | 82K 1/32W               | [M]     |
| R8262    | ERJ2GEJ153X  | 15K 1/32W               | [M]     |
| R8263    | ERJ2GEJ823X  | 82K 1/32W               | [M]     |
| R8264    | ERJ2GEJ153X  | 15K 1/32W               | [M]     |
| R8311    | ERJ2RHD242X  | 2.4K 1/32W              | [M]     |
| R8312    | ERJ2RHD102X  | 1K 1/32W                | [M]     |
| R8313    | ERJ2RHD153X  | 15K 1/32W               | [M]     |
| R8314    | ERJ2RHD153X  | 15K 1/32W               | [M]     |
| R8315    | ERJ2RKD240X  | 24 1/32W                | [M]     |
| R8316    | ERJ2RKD240X  | 24 1/32W                | [M]     |
| R8317    | ERJ2GEJ153X  | 15K 1/32W               | [M]     |
| R8318    | ERJ2GEJ153X  | 15K 1/32W               | [M]     |
| R8321    | ERJ3RBD201V  | 200 1/16W               | [M]     |
| R8322    | ERJ3GEY0R00V | 0 1/16W                 | [M]     |
| R8323    | ERJ2GEJ330X  | 33 1/32W                | [M]     |
| R8324    | ERJ2GEJ102X  | 1K 1/32W                | [M]     |
| R8325    | ERJ3RBD201V  | 200 1/16W               | [M]     |
| R8326    | ERJ3GEY0R00V | 0 1/16W                 | [M]     |
| R8327    | ERJ2GEJ330X  | 33 1/32W                | [M]     |
| R8328    | ERJ2GEJ102X  | 1K 1/32W                | [M]     |
| R8331    | ERJ3RBD201V  | 200 1/16W               | [M]     |
| R8332    | ERJ3GEY0R00V | 0 1/16W                 | [M]     |
| R8333    | ERJ2GEJ330X  | 33 1/32W                | [M]     |
| R8334    | ERJ2GEJ102X  | 1K 1/32W                | [M]     |
| R8335    | ERJ3RBD201V  | 200 1/16W               | [M]     |
| R8336    | ERJ2GEJ330X  | 33 1/32W                | [M]     |
| R8337    | ERJ2GEJ102X  | 1K 1/32W                | [M]     |
| R8341    | ERJ3RBD201V  | 200 1/16W               | [M]     |
| R8342    | ERJ2GEJ330X  | 33 1/32W                | [M]     |
| R8343    | ERJ2GEJ102X  | 1K 1/32W                | [M]     |
| R8401    | ERJ2GEJ101X  | 100 1/32W               | [M]     |
| R8402    | ERJ2GEJ100X  | 10 1/32W                | [M]     |
| R8420    | ERJ2GEJ222X  | 2.2K 1/32W              | [M]     |
| R8421    | ERJ2GE0R00X  | 0 1/32W                 | [M]     |
| R8531    | ERJ2GEJ152X  | 1.5K 1/32W              | [M]     |
| R8532    | ERJ2GEJ222X  | 2.2K 1/32W              | [M]     |
| R8533    | ERJ2GE0R00X  | 0 1/32W                 | [M]     |
| R8541    | ERJ2GEJ153X  | 15K 1/32W               | [M]     |
| R8551    | ERJ2GE0R00X  | 0 1/32W                 | [M]     |
| R8552    | ERJ2GEJ102X  | 1K 1/32W                | [M]     |
| R8553    | ERJ2GEJ102X  | 1K 1/32W                | [M]     |
| R8554    | ERJ2GEJ680X  | 68 1/32W                | [M]     |
| R8555    | ERJ2GEJ2R2X  | 2.2 1/32W               | [M]     |
| R8556    | ERJ3GEYJ560V | 56 1/16W                | [M]     |
| R8557    | ERJ3GEYJ510V | 51 1/16W                | [M]     |
| R8558    | ERJ2GEJ473X  | 47K 1/32W               | [M]     |
| R8559    | ERJ2GEJ153X  | 15K 1/32W               | [M]     |
| R8561    | ERJ2GE0R00X  | 0 1/32W                 | [M]     |
| R8562    | ERJ2GEJ102X  | 1K 1/32W                | [M]     |
| R8563    | ERJ2GEJ102X  | 1K 1/32W                | [M]     |
| R8564    | ERJ2GEJ220X  | 22 1/32W                | [M]     |
| R8565    | ERJ2GEJ2R2X  | 2.2 1/32W               | [M]     |
| R8566    | ERJ3GEYJ560V | 56 1/16W                | [M]     |
| R8567    | ERJ3GEYJ510V | 51 1/16W                | [M]     |
| R8568    | ERJ2GEJ473X  | 47K 1/32W               | [M]     |
| R8601    | ERJ2GEJ104X  | 100K 1/32W              | [M]     |
| R8611    | ERJ2GEJ101X  | 100 1/32W               | [M]     |
| R8613    | ERJ2GEJ101X  | 100 1/32W               | [M]     |
| R8621    | ERJ2GEJ105X  | 1M 1/32W                | [M]     |
| R8622    | ERJ2RHD102X  | 1K 1/32W                | [M]     |
| R8901    | ERJ2GEJ470X  | 47 1/32W                | [M]     |
| R9007    | ERJ2GEJ103X  | 10K 1/32W               | [M]     |
| R9008    | ERJ2GEJ105X  | 1M 1/32W                | [M]     |
| R9009    | ERJ2GEJ102X  | 1K 1/32W                | [M]     |
| R9011    | ERJ2GE0R00X  | 0 1/32W                 | [M]     |
| R9012    | ERJ2GE0R00X  | 0 1/32W                 | [M]     |
| R9013    | ERJ2GE0R00X  | 0 1/32W                 | [M]     |
| R9014    | ERJ2GE0R00X  | 0 1/32W                 | [M]     |
| R9015    | ERJ2GE0R00X  | 0 1/32W                 | [M]     |
| R9016    | ERJ2GE0R00X  | 0 1/32W                 | [M]     |
| R9017    | ERJ2GE0R00X  | 0 1/32W                 | [M]     |

| Ref. No. | Part No.     | Part Name & Description | Remarks    |
|----------|--------------|-------------------------|------------|
| R9022    | ERJ2GE0R00X  | 0 1/32W                 | [M]        |
| R9023    | ERJ2GE0R00X  | 0 1/32W                 | [M]        |
| R9024    | ERJ2GEJ103X  | 10K 1/32W               | [M]        |
| R9025    | ERJ2GEJ103X  | 10K 1/32W               | [M]        |
| R9026    | ERJ2GEJ103X  | 10K 1/32W               | [M]        |
| R9027    | ERJ2GEJ103X  | 10K 1/32W               | [M]        |
| R9028    | ERJ2GEJ103X  | 10K 1/32W               | [M]        |
| R9029    | ERJ2GEJ103X  | 10K 1/32W               | [M]        |
| R9035    | ERJ2GE0R00X  | 0 1/32W                 | [M]        |
| R9036    | ERJ2GEJ103X  | 10K 1/32W               | [M]        |
| R9037    | ERJ2GEJ103X  | 10K 1/32W               | [M]        |
| R9040    | ERJ2GEJ103X  | 10K 1/32W               | [M]        |
| R9041    | ERJ2GEJ103X  | 10K 1/32W               | [M]        |
| R9042    | ERJ2GEJ103X  | 10K 1/32W               | [M]        |
| R9045    | ERJ2GEJ103X  | 10K 1/32W               | [M]        |
| R9055    | ERJ2GEJ103X  | 10K 1/32W               | [M]        |
| R9080    | ERJ2GEJ103X  | 10K 1/32W               | [M]        |
| R9083    | ERJ2GEJ470X  | 47 1/32W                | [M]        |
| R9084    | ERJ2GEJ470X  | 47 1/32W                | [M]        |
| R9085    | ERJ2GEJ470X  | 47 1/32W                | [M]        |
| R9086    | ERJ2GEJ470X  | 47 1/32W                | [M]        |
| R9087    | ERJ2GEJ470X  | 47 1/32W                | [M]        |
| R9088    | ERJ2GEJ470X  | 47 1/32W                | [M]        |
|          |              |                         |            |
| RX3707   | D1H84714A024 | CHIP RESISTOR           | [M]        |
| RX3708   | D1H84714A024 | CHIP RESISTOR           | [M]        |
| RX3901   | D1H410120001 | CHIP RESISTOR           | [M]        |
| RX8001   | D1H410320002 | CHIP RESISTOR           | [M]        |
| RX8011   | D1H88204A024 | CHIP RESISTOR           | [M]        |
| RX8012   | D1H88204A024 | CHIP RESISTOR           | [M]        |
| RX8013   | D1H88204A024 | CHIP RESISTOR           | [M]        |
| RX8014   | D1H88204A024 | CHIP RESISTOR           | [M]        |
| RX8015   | D1H88204A024 | CHIP RESISTOR           | [M]        |
| RX8016   | D1H88204A024 | CHIP RESISTOR           | [M]        |
| RX8017   | D1H88204A024 | 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   | D1H85604A024 | CHIP RESISTOR           | [M]        |
| RX8533   | D1H456020001 | CHIP RESISTOR           | [M]        |
| RX8534   | D1H456020001 | CHIP RESISTOR           | [M]        |
| RX8611   | D1H447220001 | CHIP RESISTOR           | [M]        |
| RX8691   | D1H410320002 | CHIP RESISTOR           | [M]        |
| RX9014   | D1H85604A024 | CHIP RESISTOR           | [M]        |
| RX9015   | D1H85604A024 | CHIP RESISTOR           | [M]        |
| RX9016   | D1H85604A024 | CHIP RESISTOR           | [M]        |
| RX9017   | D1H85604A024 | CHIP RESISTOR           | [M]        |
| RX9018   | D1H447220001 | CHIP RESISTOR           | [M]        |
| RX9019   | D1H8R0040009 | CHIP RESISTOR           | [M]        |
| RX9020   | D1H447220001 | CHIP RESISTOR           | [M]        |
|          |              |                         |            |
| K2311    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]        |
| K2600    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]        |
| K2811    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]        |
| K2812    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]        |
| K3903    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]        |
| K3905    | ERJ2GE0R00X  | CHIP RESISTOR           | [M]        |
| K3908    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]        |
| K5004    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]        |
| K5251    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]        |
| K5500    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]        |
| K8003    | ERJ2GE0R00X  | CHIP RESISTOR           | [M]GC/GS   |
| K8004    | ERJ2GE0R00X  | CHIP RESISTOR           | [M]GCS/GCT |
| K8008    | ERJ2GE0R00X  | CHIP RESISTOR           | [M]GC/GS   |

| Ref. No. | Part No.     | Part Name & Description | Remarks     |
|----------|--------------|-------------------------|-------------|
| K8009    | ERJ2GE0R00X  | CHIP RESISTOR           | [M] GCS/GCT |
| K8251    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]         |
| W2265    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]         |
| W2303    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]         |
| W2415    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]         |
| W2501    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]         |
| W2511    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]         |
| W2519    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]         |
| W2523    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]         |
| W2524    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]         |
| W2526    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]         |
| W2527    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]         |
| W2531    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]         |
| W2532    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]         |
| W2533    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]         |
| W2534    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]         |
| W2536    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]         |
| W2539    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]         |
| W2540    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]         |
| W2542    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]         |
| W2557    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]         |
| W2558    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]         |
| W2571    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]         |
| W2572    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]         |
| W2573    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]         |
| W2574    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]         |
| W2576    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]         |
| W2577    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]         |
| W2578    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]         |
| W2579    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]         |
| W2593    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]         |
| W2599    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]         |
| W2606    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]         |
| W2609    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]         |
| W2610    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]         |
| W2611    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]         |
| W2612    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]         |
| W2613    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]         |
| W2614    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]         |
| W2615    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]         |
| W2616    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]         |
| W2617    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]         |
| W2618    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]         |
| W2619    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]         |
| W2620    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]         |
| W2621    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]         |
| W2622    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]         |
| W2623    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]         |
| W2625    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]         |
| W2626    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]         |
| W2629    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]         |
| W2630    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]         |
| W2631    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]         |
| W2632    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]         |
| W2633    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]         |
| W2634    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]         |
| W2637    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]         |
| W2640    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]         |
| W2641    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]         |
| W2642    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]         |
| W2643    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]         |
| W2647    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]         |
| W2648    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]         |
| W2649    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]         |
| W2650    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]         |
| W2651    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]         |
| W2652    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]         |
| W2653    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]         |
| W2654    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]         |
| W2655    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]         |
| W2656    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]         |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| W2658    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]     |
| W2659    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]     |
| W2660    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]     |
| W5000    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]     |
| W5001    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]     |
| W5002    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]     |
| W5004    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]     |
| W5006    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]     |
| W5007    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]     |
| W5009    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]     |
| W5010    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]     |
| W5011    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]     |
| W5012    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]     |
| W5032    | ERJ8GEY0R00V | CHIP RESISTOR           | [M]     |
| W5706    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]     |
| W5707    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]     |
| W5708    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]     |
| W6101    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]     |
| W6102    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]     |
| W6103    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]     |
| W6106    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]     |
| W6110    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]     |
| W6111    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]     |
| W6113    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]     |
| W6114    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]     |
| W6115    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]     |
| W6117    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]     |
| W6118    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]     |
| W6119    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]     |
| W6122    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]     |
| W6123    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]     |
| W6124    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]     |
| W6125    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]     |
| W6126    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]     |
| W6127    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]     |
| W6128    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]     |
| W6129    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]     |
| W6130    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]     |
| W7006    | ERJ6GEY0R00V | CHIP RESISTOR           | [M]     |
| W7007    | ERJ3GEY0R00V | CHIP RESISTOR           | [M]     |
|          |              | CAPACITORS              |         |
| C984     | ECA1EAK100XE | 10 25V                  | [M]     |
| C2000    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C2001    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C2003    | ECEA1EKS220B | 22 25V                  | [M]     |
| C2006    | ECEA1HKS2R2B | 2.2 50V                 | [M]     |
| C2007    | ECJ1VB1C104K | 0.1 16V                 | [M]     |
| C2008    | ECEA0JKS101B | 100 6.3V                | [M]     |
| C2009    | ECJ1VB1C104K | 0.1 16V                 | [M]     |
| C2010    | ECJ1VB1H331K | 330P 50V                | [M]     |
| C2011    | ECJ1VB1H331K | 330P 50V                | [M]     |
| C2012    | ECJ1VB1H331K | 330P 50V                | [M]     |
| C2013    | ECJ1VB1H223K | 0.022 50V               | [M]     |
| C2014    | ECEA1HKA100B | 10 50V                  | [M]     |
| C2015    | ECJ1VB1H221K | 220P 50V                | [M]     |
| C2016    | ECJ1VB1H221K | 220P 50V                | [M]     |
| C2017    | ECJ1VB1H103K | 0.01 50V                | [M]     |
| C2018    | ECEA1AKA470B | 47 10V                  | [M]     |
| C2019    | ECEA1AKA470B | 47 10V                  | [M]     |
| C2020    | ECJ1VB1H103K | 0.01 50V                | [M]     |
| C2021    | ECA1AM221B   | 220 10V                 | [M]     |
| C2025    | ECJ1VB1H221K | 220P 50V                | [M]     |
| C2101    | ECJ1VB1A105K | 1 10V                   | [M]     |
| C2102    | ECJ1VB1C473K | 0.047 16V               | [M]     |
| C2103    | ECJ1VB1A105K | 1 10V                   | [M]     |
| C2104    | ECJ1VB1C393K | 0.039 16V               | [M]     |
| C2106    | ECJ1VB1H681K | 680P 50V                | [M]     |
| C2108    | ECJ1VB1H222K | 2200P 50V               | [M]     |
| C2111    | ECJ1VB1A105K | 1 10V                   | [M]     |
| C2113    | ECJ1VB1H681K | 680P 50V                | [M]     |
| C2114    | ECJ1VB1H562K | 5600P 50V               | [M]     |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| C2115    | ECJ1VB1H331K | 330P 50V                | [M]     |
| C2117    | ECJ1VB1C104K | 0.1 16V                 | [M]     |
| C2118    | ECJ1VB1C104K | 0.1 16V                 | [M]     |
| C2121    | ECJ1VB1C104K | 0.1 16V                 | [M]     |
| C2130    | ECJ1VB1H333K | 0.033 50V               | [M]     |
| C2140    | ECEA1HKA4R7B | 4.7 50V                 | [M]     |
| C2161    | ERJ3GEY0R00V | 0 1/16W                 | [M]     |
| C2162    | ECJ1VB1H681K | 680P 50V                | [M]     |
| C2164    | ECJ1VB1H221K | 220P 50V                | [M]     |
| C2169    | ECJ1VB1H103K | 0.01 50V                | [M]     |
| C2171    | ECEA1EKS4R7B | 4.7 25V                 | [M]     |
| C2177    | ECEA1HKS010B | 1 50V                   | [M]     |
| C2178    | ECJ1VC1H101J | 100P 50V                | [M]     |
| C2179    | ECJ1VC1H151J | 150P 50V                | [M]     |
| C2180    | ECJ1VB1C104K | 0.1 16V                 | [M]     |
| C2181    | ECJ1VB1H102K | 1000P 50V               | [M]     |
| C2182    | ECJ1VB1C105K | 1 16V                   | [M]     |
| C2183    | ECJ1VB1H471K | 470P 50V                | [M]     |
| C2191    | ECJ1VB1C105K | 1 16V                   | [M]     |
| C2192    | ERJ3GEY0R00V | 0 1/16W                 | [M]     |
| C2193    | ECJ1VB1C105K | 1 16V                   | [M]     |
| C2194    | ECJ1VB1C105K | 1 16V                   | [M]     |
| C2195    | ECJ1VB1C105K | 1 16V                   | [M]     |
| C2196    | ECEA1CKA101B | 100 16V                 | [M]     |
| C2197    | ERJ3GEY0R00V | 0 1/16W                 | [M]     |
| C2198    | ECJ1VB1C105K | 1 16V                   | [M]     |
| C2199    | ECJ1VB1H102K | 1000P 50V               | [M]     |
| C2201    | ECJ1VB1A105K | 1 10V                   | [M]     |
| C2202    | ECJ1VB1C473K | 0.047 16V               | [M]     |
| C2203    | ECJ1VB1A105K | 1 10V                   | [M]     |
| C2204    | ECJ1VB1C393K | 0.039 16V               | [M]     |
| C2206    | ECJ1VB1H681K | 680P 50V                | [M]     |
| C2208    | ECJ1VB1H222K | 2200P 50V               | [M]     |
| C2211    | ECJ1VB1A105K | 1 10V                   | [M]     |
| C2213    | ECJ1VB1H681K | 680P 50V                | [M]     |
| C2214    | ECJ1VB1H562K | 5600P 50V               | [M]     |
| C2215    | ECJ1VB1H331K | 330P 50V                | [M]     |
| C2217    | ECJ1VB1C104K | 0.1 16V                 | [M]     |
| C2218    | ECJ1VB1C104K | 0.1 16V                 | [M]     |
| C2221    | ECJ1VB1C104K | 0.1 16V                 | [M]     |
| C2230    | ECJ1VB1H333K | 0.033 50V               | [M]     |
| C2261    | ERJ3GEY0R00V | 0 1/16W                 | [M]     |
| C2262    | ECJ1VB1H681K | 680P 50V                | [M]     |
| C2264    | ECJ1VB1H221K | 220P 50V                | [M]     |
| C2277    | ECEA1HKS010B | 1 50V                   | [M]     |
| C2278    | ECJ1VC1H101J | 100P 50V                | [M]     |
| C2279    | ECJ1VC1H151J | 150P 50V                | [M]     |
| C2280    | ECJ1VB1C104K | 0.1 16V                 | [M]     |
| C2281    | ECJ1VB1H102K | 1000P 50V               | [M]     |
| C2282    | ECJ1VB1C105K | 1 16V                   | [M]     |
| C2283    | ECJ1VB1H471K | 470P 50V                | [M]     |
| C2291    | ECJ1VB1C105K | 1 16V                   | [M]     |
| C2292    | ERJ3GEY0R00V | 0 1/16W                 | [M]     |
| C2293    | ECJ1VB1C105K | 1 16V                   | [M]     |
| C2294    | ECJ1VB1C105K | 1 16V                   | [M]     |
| C2295    | ECJ1VB1C105K | 1 16V                   | [M]     |
| C2296    | ECEA1CKA101B | 100 16V                 | [M]     |
| C2297    | ERJ3GEY0R00V | 0 1/16W                 | [M]     |
| C2300    | ECJ1VB1A105K | 1 10V                   | [M]     |
| C2301    | ECJ2YB0J475K | 4.7 6.3V                | [M]     |
| C2302    | ECJ1VB1C473K | 0.047 16V               | [M]     |
| C2303    | ECJ1VB1C683K | 0.068 16V               | [M]     |
| C2304    | ECJ3YB1C106K | 1 16V                   | [M]     |
| C2305    | ECJ1VB1H332K | 3300P 50V               | [M]     |
| C2306    | ECJ1VB1A154K | 0.15 10V                | [M]     |
| C2307    | ECJ1VB1C105K | 1 16V                   | [M]     |
| C2308    | ECJ1VB1H223K | 0.022 50V               | [M]     |
| C2309    | ECJ1VB1C823K | 0.082 16V               | [M]     |
| C2310    | ECJ1VB1H223K | 0.022 50V               | [M]     |
| C2315    | ECJ1VB1H681K | 680P 50V                | [M]     |
| C2320    | ERJ3GEY0R00V | 0 1/16W                 | [M]     |
| C2321    | ECJ1VB1C105K | 1 16V                   | [M]     |
| C2325    | ECJ1VB1H272K | 2700P 50V               | [M]     |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| C2400    | ECJ1VB1A105K | 1 10V                   | [M]     |
| C2401    | ECJ2YB0J475K | 4.7 6.3V                | [M]     |
| C2402    | ECJ1VB1C473K | 0.047 16V               | [M]     |
| C2403    | ECJ1VB1C683K | 0.068 16V               | [M]     |
| C2404    | ECJ3YB1C106K | 10 16V                  | [M]     |
| C2405    | ECJ1VB1H332K | 3300P 50V               | [M]     |
| C2406    | ECJ1VB1A154K | 0.15 10V                | [M]     |
| C2407    | ECJ1VB1C105K | 1 16V                   | [M]     |
| C2408    | ECJ1VB1H223K | 0.022 50V               | [M]     |
| C2415    | ECJ1VB1H681K | 680P 50V                | [M]     |
| C2420    | ERJ3GEY0R00V | 0 1/16W                 | [M]     |
| C2421    | ECJ1VB1C105K | 1 16V                   | [M]     |
| C2425    | ECJ1VB1H272K | 2700P 50V               | [M]     |
| C2500    | ECJ1VB1A105K | 1 10V                   | [M]     |
| C2501    | ECJ2YB0J475K | 4.7 6.3V                | [M]     |
| C2502    | ECJ1VB1C473K | 0.047 16V               | [M]     |
| C2503    | ECJ1VB1C473K | 0.047 16V               | [M]     |
| C2504    | ECJ1VB1H681K | 680P 50V                | [M]     |
| C2506    | ECJ1VB1C105K | 1 16V                   | [M]     |
| C2509    | ECJ1VB1H103K | 0.01 50V                | [M]     |
| C2515    | ERJ3GEY0R00V | 0 1/16W                 | [M]     |
| C2520    | ERJ3GEY0R00V | 0 1/16W                 | [M]     |
| C2600    | ECJ1VB1A105K | 1 10V                   | [M]     |
| C2601    | ECEA1HKA220B | 22 50V                  | [M]     |
| C2602    | ECEA1EKS4R7B | 4.7 25V                 | [M]     |
| C2603    | ECJ1VB1H223K | 0.022 50V               | [M]     |
| C2604    | ECEA1HKA100B | 10 50V                  | [M]     |
| C2605    | ECJ1VB1H682K | 6800P 50V               | [M]     |
| C2609    | ECJ1VB1A334K | 0.33 10V                | [M]     |
| C2610    | ECJ1VB1A474K | 0.47 10V                | [M]     |
| C2611    | ECJ1VB1A224K | 0.22 10V                | [M]     |
| C2612    | ECJ1VB1H562K | 5600P 50V               | [M]     |
| C2617    | ECJ1VB1A184K | 0.18 10V                | [M]     |
| C2619    | ECEA1HKA100B | 10 50V                  | [M]     |
| C2640    | ERJ3GEY0R00V | 0 1/16W                 | [M]     |
| C2751    | ECJ1VB1A105K | 1 10V                   | [M]     |
| C2752    | ECJ1VB1H103K | 0.01 50V                | [M]     |
| C2753    | ECJ1VB1H103K | 0.01 50V                | [M]     |
| C2754    | ECJ1VC1H101J | 100P 50V                | [M]     |
| C2755    | ECJ1VC1H101J | 100P 50V                | [M]     |
| C2756    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C2757    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C2801    | ECA0JM102B   | 1000 6.3V               | [M]     |
| C2802    | ECEA0JKS101B | 100 6.3V                | [M]     |
| C2805    | ECEA0JKS101B | 100 6.3V                | [M]     |
| C2806    | ECEA0JKS101B | 100 6.3V                | [M]     |
| C2807    | ECJ1VB1H103K | 0.01 50V                | [M]     |
| C2808    | ECA1AM221B   | 220 10V                 | [M]     |
| C2809    | ECEA1EKS220B | 22 25V                  | [M]     |
| C2810    | ECJ1VB1H103K | 0.01 50V                | [M]     |
| C2811    | ECJ1VB1C104K | 0.1 16V                 | [M]     |
| C2812    | ECJ1VB1C104K | 0.1 16V                 | [M]     |
| C2814    | ECEA1EKS220B | 22 25V                  | [M]     |
| C2817    | ECJ1VB1A105K | 1 10V                   | [M]     |
| C2818    | ECJ1VB1A105K | 1 10V                   | [M]     |
| C2823    | ECJ1VC1H101J | 100P 50V                | [M]     |
| C2825    | ECJ1VC1H101J | 100P 50V                | [M]     |
| C2826    | ECJ1VC1H101J | 100P 50V                | [M]     |
| C2827    | ECJ1VC1H101J | 100P 50V                | [M]     |
| C2833    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C2834    | ECEA1EKS220B | 22 25V                  | [M]     |
| C2835    | ECEA1EKS220B | 22 25V                  | [M]     |
| C2837    | ECJ1VB1C104K | 0.1 16V                 | [M]     |
| C2838    | ECJ1VB1C104K | 0.1 16V                 | [M]     |
| C2900    | ECA1EM101B   | 100 25V                 | [M]     |
| C2901    | ECA1EM102B   | 1000 25V                | [M]     |
| C2903    | ECQB1H392KF3 | 3900P 50V               | [M]     |
| C2904    | F2A1V330A379 | 33 35V                  | [M]     |
| C2906    | ECJ1VB1H103K | 0.01 50V                | [M]     |
| C2907    | ECJ1VB1C104K | 0.1 16V                 | [M]     |
| C2908    | ECEA1CKA101B | 100 16V                 | [M]     |
| C2909    | ECA1CM470B   | 47 16V                  | [M]     |
| C2910    | ECJ1VB1H103K | 0.01 50V                | [M]     |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| C2913    | ECEA1CKA101B | 100 16V                 | [M]     |
| C2914    | ECEA1AKA330B | 33 10V                  | [M]     |
| C2915    | ECJ1VB1H103K | 0.01 50V                | [M]     |
| C2916    | ECA0JAK221XB | 220 6.3V                | [M]     |
| C2918    | ECEA1CKS101B | 100 16V                 | [M]     |
| C2920    | ECJ1VB1H102K | 1000P 50V               | [M]     |
| C2921    | ECJ1VB1C104K | 0.1 16V                 | [M]     |
| C2922    | EEUFC0J821B  | 820 6.3V                | [M]     |
| C2923    | ECA1EM221B   | 220 25V                 | [M]     |
| C2924    | ECJ1VB1C104K | 0.1 16V                 | [M]     |
| C2925    | ECA0JAK221XB | 220 6.3V                | [M]     |
| C2926    | ECJ1VB1C104K | 0.1 16V                 | [M]     |
| C2927    | ECJ1VB1H103K | 0.01 50V                | [M]     |
| C2929    | ECJ1VB1H103K | 0.01 50V                | [M]     |
| C2930    | EEUFM1A681B  | 680 10V                 | [M]     |
| C2932    | ECEA1CKA101B | 100 16V                 | [M]     |
| C2933    | ECA0JM101B   | 100 6.3V                | [M]     |
| C2937    | ECJ1VB1H103K | 0.01 50V                | [M]     |
| C2938    | ECA1CM221B   | 220 16V                 | [M]     |
| C2939    | ECJ1VB1H103K | 0.01 50V                | [M]     |
| C2940    | ECJ1VB1H103K | 0.01 50V                | [M]     |
| C2951    | ECEA1CKA101B | 100 16V                 | [M]     |
| C2952    | ECEA1CKA101B | 100 16V                 | [M]     |
| C2953    | ECJ1VB1C104K | 0.1 16V                 | [M]     |
| C2955    | ECA1EM221B   | 220 25V                 | [M]     |
| C2958    | ECJ1VB1H103K | 0.01 50V                | [M]     |
| C2960    | ECJ1VB1C105K | 1 16V                   | [M]     |
| C2961    | ECJ1VB1H103K | 0.01 50V                | [M]     |
| C2962    | ECJ1VB1C104K | 0.1 16V                 | [M]     |
| C2963    | ECEA1CKA101B | 100 16V                 | [M]     |
| C2968    | ECJ1VB1C104K | 0.1 16V                 | [M]     |
| C2969    | ECJ1VB1C104K | 0.1 16V                 | [M]     |
| C2970    | ECJ1VB1C105K | 1 16V                   | [M]     |
| C2975    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C3901    | EEE0GA331WP  | 330 4V                  | [M]     |
| C3902    | EEE0GA331WP  | 330 4V                  | [M]     |
| C3904    | EEE0GA331WP  | 330 4V                  | [M]     |
| C3906    | EEE0GA331WP  | 330 4V                  | [M]     |
| C3907    | ECJ0EB1A104K | 0.1 10V                 | [M]     |
| C3908    | ECJ0EB1A104K | 0.1 10V                 | [M]     |
| C3909    | ECJ1VB0J105K | 1 6.3V                  | [M]     |
| C3910    | ECJ0EB1A104K | 0.1 10V                 | [M]     |
| C3911    | ECJ1VB0J105K | 1 6.3V                  | [M]     |
| C3913    | ECJ0EB1A104K | 0.1 10V                 | [M]     |
| C3914    | ECJ0EB1A104K | 0.1 10V                 | [M]     |
| C3915    | ECJ1VB0J105K | 1 6.3V                  | [M]     |
| C3916    | ECJ0EB1A104K | 0.1 10V                 | [M]     |
| C3917    | ECJ1VB0J105K | 1 6.3V                  | [M]     |
| C3918    | ECJ0EB1A104K | 0.1 10V                 | [M]     |
| C3919    | ECJ1VB0J105K | 1 6.3V                  | [M]     |
| C3920    | ECJ1VB0J105K | 1 6.3V                  | [M]     |
| C3921    | ECJ0EB1A104K | 0.1 10V                 | [M]     |
| C3922    | ECJ0EB1A104K | 0.1 10V                 | [M]     |
| C3923    | ECJ1VB0J105K | 1 6.3V                  | [M]     |
| C3924    | ECJ1VB0J105K | 1 6.3V                  | [M]     |
| C3925    | ECJ0EB1A104K | 0.1 10V                 | [M]     |
| C3926    | ECJ0EB1A104K | 0.1 10V                 | [M]     |
| C3927    | ECJ1VB0J105K | 1 6.3V                  | [M]     |
| C3928    | ECJ0EB1A104K | 0.1 10V                 | [M]     |
| C3929    | ECJ0EB1A104K | 0.1 10V                 | [M]     |
| C3930    | ECJ1VB0J105K | 1 6.3V                  | [M]     |
| C3932    | ECJ1VB0J105K | 1 6.3V                  | [M]     |
| C3940    | ECJ0EB1A104K | 0.1 10V                 | [M]     |
| C3941    | ECJ0EC1H221J | 220P 50V                | [M]     |
| C3954    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C3955    | ECJ0EB1C103K | 0.01 16V                | [M]     |
| C3956    | ECJ1VB0J105K | 1 6.3V                  | [M]     |
| C3964    | ECJ0EB1A104K | 0.1 10V                 | [M]     |
| C5000    | ECJ1VB1H102K | 1000P 50V               | [M]     |
| C5001    | ECJ1VB1H102K | 1000P 50V               | [M]     |
| C5002    | ECJ1VB1A474K | 0.47 10V                | [M]     |
| C5003    | ECJ1VB1A474K | 0.47 10V                | [M]     |
| C5004    | ECJ1VB1A474K | 0.47 10V                | [M]     |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| C5005    | ECJ1VB1A474K | 0.47 10V                | [M]     |
| C5006    | ECJ1VB1H331K | 330P 50V                | [M]     |
| C5007    | ECJ1VB1H331K | 330P 50V                | [M]     |
| C5008    | ECJ1VB1H153K | 0.015 50V               | [M]     |
| C5009    | ECJ1VB1H153K | 0.015 50V               | [M]     |
| C5010    | ECJ2VC2A221J | 220P 100V               | [M]     |
| C5011    | ECJ2VC2A221J | 220P 100V               | [M]     |
| C5012    | ECJ2VC2A221J | 220P 100V               | [M]     |
| C5013    | ECJ2VC2A221J | 220P 100V               | [M]     |
| C5014    | ECQV1H684JL3 | 0.68 50V                | [M]     |
| C5015    | ECQV1H684JL3 | 0.68 50V                | [M]     |
| C5016    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5017    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5018    | ECJ3YB2A104K | 0.1 100V                | [M]     |
| C5019    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5020    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5021    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5022    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5023    | ECJ3YB2A104K | 0.1 100V                | [M]     |
| C5024    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5025    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5027    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5028    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5030    | ECJ1VC1H221J | 220P 50V                | [M]     |
| C5031    | ECJ1VB1C224K | 0.22 16V                | [M]     |
| C5032    | ECJ1VB1H102K | 1000P 50V               | [M]     |
| C5033    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5040    | F2A1J470A050 | 47 63V                  | [M]     |
| C5050    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5051    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5052    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5053    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5133    | ECA0JAK101XB | 100 6.3V                | [M]     |
| C5150    | ECJ1VB1H102K | 1000P 50V               | [M]     |
| C5151    | ECJ1VB1H102K | 1000P 50V               | [M]     |
| C5152    | ECJ1VB1H102K | 1000P 50V               | [M]     |
| C5155    | ECJ1VB1H102K | 1000P 50V               | [M]     |
| C5200    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5201    | ECJ1VB1H153K | 0.015 50V               | [M]     |
| C5202    | ECJ1VB1C224K | 0.22 16V                | [M]     |
| C5203    | ECJ2VC2A221J | 220P 100V               | [M]     |
| C5204    | ECJ1VB1H153K | 0.015 50V               | [M]     |
| C5205    | ECJ2VC2A221J | 220P 100V               | [M]     |
| C5206    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5207    | ECJ3YB2A104K | 0.1 100V                | [M]     |
| C5208    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5209    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5211    | ECJ2VC2A221J | 220P 100V               | [M]     |
| C5212    | ECJ1VC1H221J | 220P 50V                | [M]     |
| C5213    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5214    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5216    | ECJ1VB1H331K | 330P 50V                | [M]     |
| C5217    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5218    | ECJ2VC2A221J | 220P 100V               | [M]     |
| C5219    | ECJ3YB2A104K | 0.1 100V                | [M]     |
| C5220    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5221    | ECJ1VB1H102K | 1000P 50V               | [M]     |
| C5222    | ECJ1VB1A474K | 0.47 10V                | [M]     |
| C5223    | ECJ1VB1A474K | 0.47 10V                | [M]     |
| C5224    | ECJ1VB1H331K | 330P 50V                | [M]     |
| C5225    | ECQV1H684JL3 | 0.68 50V                | [M]     |
| C5226    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5227    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5228    | ECQV1H684JL3 | 0.68 50V                | [M]     |
| C5231    | ECJ1VB1H102K | 1000P 50V               | [M]     |
| C5232    | ECJ1VB1A474K | 0.47 10V                | [M]     |
| C5233    | ECJ1VB1A474K | 0.47 10V                | [M]     |
| C5234    | ECJ1VB1H102K | 1000P 50V               | [M]     |
| C5240    | F2A1J470A050 | 47 63V                  | [M]     |
| C5250    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5251    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5300    | ECQV1H684JL3 | 0.68 50V                | [M]     |
| C5301    | ECJ1VB1H104K | 0.1 50V                 | [M]     |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| C5302    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5303    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5304    | ECJ1VB1H331K | 330P 50V                | [M]     |
| C5305    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5306    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5307    | ECJ2VC2A221J | 220P 100V               | [M]     |
| C5309    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5310    | ECJ3YB2A104K | 0.1 100V                | [M]     |
| C5311    | ECJ2VC2A221J | 220P 100V               | [M]     |
| C5312    | ECJ1VB1H331K | 330P 50V                | [M]     |
| C5313    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5314    | ECJ1VB1A474K | 0.47 10V                | [M]     |
| C5315    | ECJ1VB1H102K | 1000P 50V               | [M]     |
| C5316    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5317    | ECJ1VB1A474K | 0.47 10V                | [M]     |
| C5318    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5319    | ECJ3YB2A104K | 0.1 100V                | [M]     |
| C5321    | ECJ1VB1C224K | 0.22 16V                | [M]     |
| C5322    | ECJ1VB1H153K | 0.015 50V               | [M]     |
| C5323    | ECJ1VC1H221J | 220P 50V                | [M]     |
| C5324    | ECJ1VB1H153K | 0.015 50V               | [M]     |
| C5325    | ECJ2VC2A221J | 220P 100V               | [M]     |
| C5326    | ECJ2VC2A221J | 220P 100V               | [M]     |
| C5327    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5328    | ECQV1H684JL3 | 0.68 50V                | [M]     |
| C5331    | ECJ1VB1H102K | 1000P 50V               | [M]     |
| C5332    | ECJ1VB1A474K | 0.47 10V                | [M]     |
| C5333    | ECJ1VB1H102K | 1000P 50V               | [M]     |
| C5334    | ECJ1VB1A474K | 0.47 10V                | [M]     |
| C5350    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5351    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5445    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5450    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5508    | F2A1V4710036 | 470 35V                 | [M]     |
| C5509    | F2A1V4710036 | 470 35V                 | [M]     |
| C5510    | F2A1V4710036 | 470 35V                 | [M]     |
| C5511    | F2A1V4710036 | 470 35V                 | [M]     |
| C5512    | F2A1V1020084 | 1000 35V                | [M]     |
| C5513    | F2A1V1020084 | 1000 35V                | [M]     |
| C5514    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5515    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5516    | F2A1V4710036 | 470 35V                 | [M]     |
| C5517    | F2A1V4710036 | 470 35V                 | [M]     |
| C5518    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5519    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5520    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5521    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5522    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5523    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5524    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5525    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5540    | F2A1J470A050 | 47 63V                  | [M]     |
| C5552    | ECJ1VB1H391K | 390P 50V                | [M]     |
| C5553    | ECJ1VC1H101J | 100P 50V                | [M]     |
| C5554    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5555    | ECJ3YB1C106K | 10 16V                  | [M]     |
| C5558    | ECJ1VC1H470J | 47P 50V                 | [M]     |
| C5560    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5561    | ECJ1VC1H101J | 100P 50V                | [M]     |
| C5562    | ECA0JM102B   | 1000 6.3V               | [M]     |
| C5601    | ECA1CAK100XB | 10 16V                  | [M]     |
| C5602    | ECA1CAK100XB | 10 16V                  | [M]     |
| C5690    | ECJ1VB1H102K | 1000P 50V               | [M]     |
| C5691    | ECA1EAK100XB | 10 25V                  | [M]     |
| C5692    | ECA0JAK221XB | 220 6.3V                | [M]     |
| C5693    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5694    | ECA1CAK330XB | 33 16V                  | [M]     |
| C5695    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5696    | ECEA1EKS220B | 22 25V                  | [M]     |
| C5697    | ECA1HAK010XB | 1 50V                   | [M]     |
| C5700    | F1BAF1020020 | 1000P                   | [M] △   |
| C5701    | ECQU2A334MLA | 0.33                    | [M] △   |
| C5703    | ECQU2A104MLC | 0.1                     | [M] △   |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| C5704    | F1BAF1020020 | 1000P                   | [M] △   |
| C5705    | F1BAF1020020 | 1000P                   | [M] △   |
| C5711    | F2B2G331A073 | 330 400V                | [M]     |
| C5712    | F2B2G331A073 | 330 400V                | [M]     |
| C5713    | ECQP6103JUB  | 0.01 630V               | [M]     |
| C5720    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5721    | ECJ1VB1H221K | 220P 50V                | [M]     |
| C5722    | ECJ1VB1H102K | 1000P 50V               | [M]     |
| C5723    | ECJ1VB1H471K | 470P 50V                | [M]     |
| C5724    | F2A1H5600009 | 56 50V                  | [M]     |
| C5725    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5726    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5727    | F1A3A471A035 | 470P 1000V              | [M]     |
| C5728    | ECJ1VB1H102K | 1000P 50V               | [M]     |
| C5730    | ECEA1HKS010B | 1 50V                   | [M]     |
| C5750    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5788    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5789    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5790    | ECJ3YB2J222K | 2J00P 250V              | [M]     |
| C5791    | ECEA1HKA2R2B | 2.2 50V                 | [M]     |
| C5793    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5794    | ECJ1VC1H220J | 22P 50V                 | [M]     |
| C5795    | ECJ2VC1H102J | 1000P 50V               | [M]     |
| C5796    | ECJ2FB1H104K | 0.1 50V                 | [M]     |
| C5797    | ECCN3A470KGE | 47P 1000V               | [M]     |
| C5798    | F2A1H5600009 | 56 50V                  | [M]     |
| C5799    | F2A1H5600009 | 56 50V                  | [M]     |
| C5800    | F1J2E1030004 | 0.01 250V               | [M]     |
| C5805    | F2A1V222A061 | 2200 35V                | [M]     |
| C5808    | F2A1V222A061 | 2200 35V                | [M]     |
| C5810    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5812    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5813    | F2A1V102B074 | 1000 35V                | [M]     |
| C5815    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5816    | F2A1V4710036 | 470 35V                 | [M]     |
| C5817    | F2A2AR22A358 | 0.22 100V               | [M]     |
| C5818    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5819    | F1J2E1030004 | 0.01 250V               | [M]     |
| C5820    | F1J2E1030004 | 0.01 250V               | [M]     |
| C5821    | F1J2E1030004 | 0.01 250V               | [M]     |
| C5822    | F1J2E1030004 | 0.01 250V               | [M]     |
| C5823    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5824    | F2A1V4710036 | 470 35V                 | [M]     |
| C5825    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5826    | F1J2E1030004 | 0.01 250V               | [M]     |
| C5831    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5832    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5869    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5896    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5897    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5898    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C5899    | F2A1C221A104 | 220 16V                 | [M]     |
| C6101    | ECJ1VB1H473K | 0.047 50V               | [M]     |
| C6183    | ECJ1VB1C105K | 1 16V                   | [M]     |
| C6184    | ECJ2FB0J106K | 10 6.3V                 | [M]     |
| C6185    | ECJ1VB1C105K | 1 16V                   | [M]     |
| C6186    | ECJ1VB1C105K | 1 16V                   | [M]     |
| C6187    | ECJ1VC1H151J | 150P 50V                | [M]     |
| C6189    | ECJ1VB1C105K | 1 16V                   | [M]     |
| C6201    | ECJ1VB1H473K | 0.047 50V               | [M]     |
| C6283    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C6284    | ECJ1VB1C105K | 1 16V                   | [M]     |
| C6288    | ECJ1VC1H151J | 150P 50V                | [M]     |
| C6801    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C6805    | ECJ1VC1H101K | 100P 50V                | [M]     |
| C6806    | ECJ1VC1H101K | 100P 50V                | [M]     |
| C6903    | ECEA1HKA220B | 22 50V                  | [M]     |
| C6904    | ECJ1VB1H102K | 1000P 50V               | [M]     |
| C6905    | ECEA1HKA220B | 22 50V                  | [M]     |
| C6906    | ECJ1VC1H101K | 100P 50V                | [M]     |
| C6909    | ECJ1VB1H103K | 0.01 50V                | [M]     |
| C6910    | ECEA0JKS101B | 100 6.3V                | [M]     |
| C6911    | ECJ1VB1H103K | 0.01 50V                | [M]     |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| C6913    | ECEA1HKS3R3B | 3.3 50V                 | [M]     |
| C6916    | ECJ1VC1H101K | 100P 50V                | [M]     |
| C6917    | ECJ1VC1H101K | 100P 50V                | [M]     |
| C6918    | ECEA1AKA470B | 47 10V                  | [M]     |
| C6919    | ECJ1VC1H101K | 100P 50V                | [M]     |
| C6920    | ECJ1VB1H333K | 0.033 50V               | [M]     |
| C6921    | ECJ1VB1H333K | 0.033 50V               | [M]     |
| C6923    | ECJ1VB1H103K | 0.01 50V                | [M]     |
| C6924    | ECJ1VB1H103K | 0.01 50V                | [M]     |
| C6925    | ECJ1VB1H103K | 0.01 50V                | [M]     |
| C6929    | ECJ1VB1H103K | 0.01 50V                | [M]     |
| C6930    | ECJ1VB1H103K | 0.01 50V                | [M]     |
| C6931    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C6933    | ECJ1VB1C105K | 1 16V                   | [M]     |
| C6934    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C6935    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C6936    | ECJ1VB1H331K | 330P 50V                | [M]     |
| C6937    | ECJ1VB1H331K | 330P 50V                | [M]     |
| C6938    | ECJ1VB1C105K | 1 16V                   | [M]     |
| C6940    | ECJ1VB1H331K | 330P 50V                | [M]     |
| C6941    | ECJ1VB1H331K | 330P 50V                | [M]     |
| C7002    | ECJ1VB1H472K | 4700P 50V               | [M]     |
| C7003    | ECJ1VB1C105K | 1 16V                   | [M]     |
| C7004    | ECJ1VB1H472K | 4700P 50V               | [M]     |
| C7005    | ECJ1VC1H470J | 47P 50V                 | [M]     |
| C7006    | ECJ1VB1H221K | 220P 50V                | [M]     |
| C7007    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C7008    | ECJ1VB1A474K | 0.47 10V                | [M]     |
| C7009    | ECJ1VC1H101J | 100P 50V                | [M]     |
| C7010    | ECJ1VC1H470J | 47P 50V                 | [M]     |
| C7011    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C7012    | ECJ1VB1C105K | 1 16V                   | [M]     |
| C7101    | ECJ1VB1C105K | 1 16V                   | [M]     |
| C7102    | ECJ1VB1H682K | 6800P 50V               | [M]     |
| C7103    | ECJ1VB1H152K | 1500P 50V               | [M]     |
| C7104    | ECJ1VB1C683K | 0.068 16V               | [M]     |
| C7105    | ECJ1VB1C224K | 0.22 16V                | [M]     |
| C7106    | ECJ1VB1C224K | 0.22 16V                | [M]     |
| C7107    | ECJ1VB1H682K | 6800P 50V               | [M]     |
| C7108    | ECJ1VB1H152K | 1500P 50V               | [M]     |
| C7109    | ECJ1VB1C683K | 0.068 16V               | [M]     |
| C7110    | ECEA1AKA470B | 47 10V                  | [M]     |
| C7111    | ECJ3YB1C106K | 10 16V                  | [M]     |
| C7112    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C7113    | ECEA1HKA010B | 1 50V                   | [M]     |
| C7115    | ECJ3YB1C106K | 10 16V                  | [M]     |
| C7119    | ECJ1VB1H221K | 220P 50V                | [M]     |
| C7120    | ECJ1VB1C105K | 1 16V                   | [M]     |
| C7121    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C7122    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C7123    | ECJ1VB1H221K | 220P 50V                | [M]     |
| C7124    | ECJ1VB1H104K | 0.1 50V                 | [M]     |
| C8001    | EEE0GA331WP  | 330 4V                  | [M]     |
| C8002    | F2G0J330A031 | 33 6.3V                 | [M]     |
| C8003    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8004    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8005    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8006    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8007    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8011    | F2G0J101A066 | 100 6.3V                | [M]     |
| C8012    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8013    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8014    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8015    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8016    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8018    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8020    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8021    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8022    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8023    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8026    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8051    | ECJ1VB0J105K | 1 6.3V                  | [M]     |
| C8052    | ECJ0EB1A104K | 0.1 10V                 | [M]     |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| C8053    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8054    | ECJ0EC1H221J | 220P 50V                | [M]     |
| C8055    | ECJ1VB0J105K | 1 6.3V                  | [M]     |
| C8056    | ECJ0EB1E222K | 2200P 25V               | [M]     |
| C8057    | ECJ1VB0J105K | 1 6.3V                  | [M]     |
| C8111    | ECJ0EB1A104K | 0.1 10V                 | [M]     |
| C8112    | ECJ1VB0J105K | 1 6.3V                  | [M]     |
| C8113    | ECJ0EB1E471K | 470P 25V                | [M]     |
| C8151    | ECJ1VB0J475K | 4.7 6.3V                | [M]     |
| C8152    | ECJ1VB1C105K | 1 16V                   | [M]     |
| C8201    | F2G0J101A066 | 100 6.3V                | [M]     |
| C8202    | ECJ0EB1A104K | 0.1 10V                 | [M]     |
| C8203    | ECJ0EB1A104K | 0.1 10V                 | [M]     |
| C8211    | ECJ0EB1E122K | 1200P 25V               | [M]     |
| C8221    | ECJ0EB1E102K | 1000P 25V               | [M]     |
| C8222    | ECJ0EB1E821K | 820P 25V                | [M]     |
| C8225    | ECJ0EB1E102K | 1000P 25V               | [M]     |
| C8226    | ECJ0EB1E102K | 1000P 25V               | [M]     |
| C8231    | ECJ0EB1A104K | 0.1 10V                 | [M]     |
| C8232    | ECJ0EB1A104K | 0.1 10V                 | [M]     |
| C8251    | F2G0J221A065 | 220 6.3V                | [M]     |
| C8252    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8253    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8255    | F2G1C220A037 | 22 16V                  | [M]     |
| C8256    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8257    | F2G1C470A076 | 47 16V                  | [M]     |
| C8258    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8261    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8262    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8301    | F2G0J221A031 | 220 6.3V                | [M]     |
| C8302    | F2G0J330A031 | 33 6.3V                 | [M]     |
| C8303    | ECJ0EB1A104K | 0.1 10V                 | [M]     |
| C8304    | ECJ0EB1A104K | 0.1 10V                 | [M]     |
| C8305    | ECJ0EB1A104K | 0.1 10V                 | [M]     |
| C8306    | ECJ0EB1A104K | 0.1 10V                 | [M]     |
| C8311    | ECJ0EB1A104K | 0.1 10V                 | [M]     |
| C8312    | ECJ1VB0J105K | 1 6.3V                  | [M]     |
| C8313    | ECJ1VB0J105K | 1 6.3V                  | [M]     |
| C8320    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8321    | ECJ0EB1A104K | 0.1 10V                 | [M]     |
| C8325    | ECJ0EB1A104K | 0.1 10V                 | [M]     |
| C8330    | F2G0J470A031 | 47 6.3V                 | [M]     |
| C8331    | ECJ0EB1A104K | 0.1 10V                 | [M]     |
| C8335    | ECJ0EB1A104K | 0.1 10V                 | [M]     |
| C8340    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8341    | ECJ0EB1A104K | 0.1 10V                 | [M]     |
| C8401    | ECJ0EC1H150J | 15P 50V                 | [M]     |
| C8421    | F2G0J101A083 | 100 6.3V                | [M]     |
| C8422    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8423    | F2G0J330A083 | 33 6.3V                 | [M]     |
| C8424    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8426    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8427    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8428    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8429    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8430    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8501    | F2G0J101A031 | 100 6.3V                | [M]     |
| C8502    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8503    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8504    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8505    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8506    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8511    | ECJ1VB0J105K | 1 6.3V                  | [M]     |
| C8512    | ECJ1VB0J105K | 1 6.3V                  | [M]     |
| C8513    | ECJ0EB1A104K | 0.1 10V                 | [M]     |
| C8514    | ECJ0EB1A104K | 0.1 10V                 | [M]     |
| C8515    | ECJ0EB1A104K | 0.1 10V                 | [M]     |
| C8516    | ECJ0EB1A104K | 0.1 10V                 | [M]     |
| C8521    | ECJ0EB1A104K | 0.1 10V                 | [M]     |
| C8522    | ECJ0EB1A104K | 0.1 10V                 | [M]     |
| C8523    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8524    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8525    | ECJ0EB1C562K | 5600P 16V               | [M]     |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| C8526    | ECJ0EB1C183K | 0.018 16V               | [M]     |
| C8527    | ECJ0EB1A333K | 0.033 10V               | [M]     |
| C8528    | ECJ1VB0J105K | 1 6.3V                  | [M]     |
| C8529    | ECJ1VB0J105K | 1 6.3V                  | [M]     |
| C8530    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8531    | ECJ0EC1H101J | 100P 50V                | [M]     |
| C8532    | ECJ0EC1H221J | 220P 50V                | [M]     |
| C8533    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8537    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8538    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8541    | ECJ0EB1E472K | 4700P 25V               | [M]     |
| C8550    | F2G0J330A031 | 33 6.3V                 | [M]     |
| C8551    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8552    | F2G1C100A072 | 10 16V                  | [M]     |
| C8553    | F2G0J470A031 | 47 6.3V                 | [M]     |
| C8554    | ECJ1VB0J105K | 1 6.3V                  | [M]     |
| C8561    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8562    | F2G1C100A072 | 10 16V                  | [M]     |
| C8563    | F2G0J470A031 | 47 6.3V                 | [M]     |
| C8564    | ECJ1VB0J105K | 1 6.3V                  | [M]     |
| C8571    | ECJ3YB1A106M | 10 10V                  | [M]     |
| C8572    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8601    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8602    | ECJ0EB1C153K | 0.015 16V               | [M]     |
| C8606    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8611    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8621    | ECJ0EC1H070D | 7P 50V                  | [M]     |
| C8622    | ECJ0EC1H080D | 8P 50V                  | [M]     |
| C8651    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8652    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8691    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8695    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C8701    | ECJ0EB1A104K | 0.1 10V                 | [M]     |
| C8901    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C9002    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C9003    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C9004    | ECJ0EC1H080D | 8P 50V                  | [M]     |
| C9005    | ECJ0EC1H090D | 9P 50V                  | [M]     |
| C9006    | ECJ0EB1A104K | 0.1 10V                 | [M]     |
| C9007    | ECJ0EF1C104Z | 0.1 16V                 | [M]     |
| C9017    | ECJ0EB1A104K | 0.1 10V                 | [M]     |