

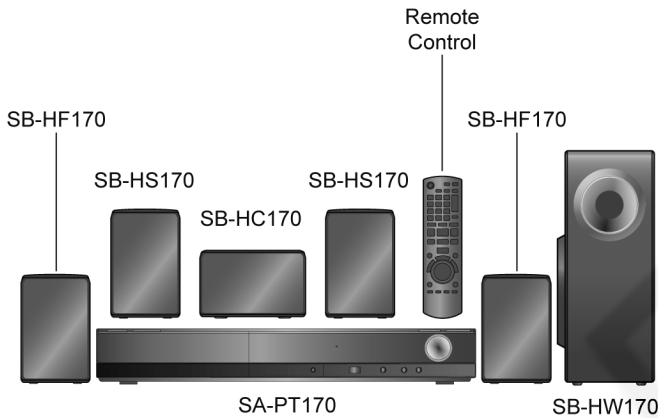
Service Manual

DVD Home Theater Sound System

Model No. **SA-PT170GA**
SA-PT170GC
SA-PT170GS



Product Color: (K)...Black Type



Notes: This model's DVD mechanism unit is DLS6. Please refer to the original service manual (Order No. MD0801003CE) for this mechanism

WARNING

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

IMPORTANT SAFETY NOTICE

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

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1 Safety Precautions

1.1. GENERAL GUIDELINES

1. 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 ∞

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.

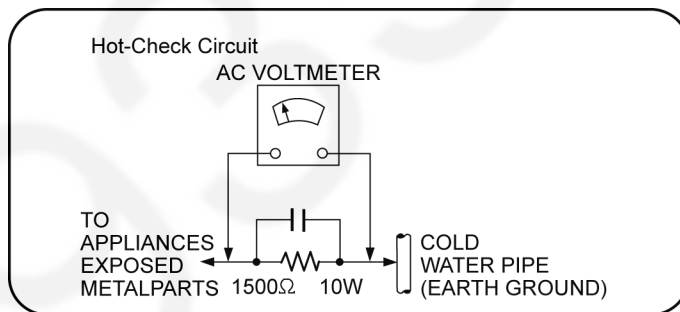


Figure 1

1.2. Before Use

Be sure to disconnect the mains cord before adjusting the voltage selector.

Use a minus (-) screwdriver to set the voltage selector (on the rear panel) to the voltage setting for the area in which the unit will be used. (If the power supply in your area is 117V or 120V, set the "117V or 120V" position.)

Note that this unit will be seriously damaged if this setting is not made correctly. (There is no voltage selector for some countries, the correct voltage is already set.)

1.3. Before Repair and Adjustment

Disconnect AC power to discharge unit AC Capacitors as such (C5700, C5701, C5702, C5706, C5707, C5708) through a 10Ω , 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 220-240 V, 50 Hz in NO SIGNAL mode volume minimal should be ~ 500 mA.

Current consumption at AC 110-127 V, 50/60 Hz in NO SIGNAL mode volume minimal should be ~ 600 mA.

1.4. Protection Circuitry

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

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

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

If this occurs, follow the procedure outlines below:

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

Note:

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

1.5. Safety Parts Information

Safety Parts List:

There are special components used in this equipment which are important for safety.

These parts are marked by  in the Schematic Diagrams, Exploded View & Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire or other hazards. Do not modify the original design without permission of manufacturer.

Safety	Ref. No.	Part No.	Part Name & Description	Remarks
	18	RGRX0071C-B2	REAR PANEL	GC/GS
	18	RGRX0071C-C	REAR PANEL	GA
	31	RKMX0141-1K3	TOP CABINET	
	50	REXX0728	BLACK WIRE (SMPS-AC)	
	51	REXX0730	RED WIRE (SMPS-AC)	
	55	REXX0643	BLU WIRE (VOLT SELECTOR-SMPS)	
	56	REXX0729	WHT WIRE(VOLT SELECTOR-SMPS)	
	301	RD-DDTX001-V	TRAVERSE UNIT	(RTL)
	A2	K2CQ2CA00007	AC CORD	
	A2	K2CZ3YY00005	AC CORD	GS
	A3	RQTX0242-B	O/I BOOK (En)	
	A3	RQTX0243-G	O/I BOOK (AR/PE)	GC/GS
	A3	RQTX0244-K	O/I BOOK(CN)	GA
	PCB7	REPX0729B	VOLTAGE SELECTOR P.C.B	(RTL)
	PCB8	REPX0729B	SMPS P.C.B	(RTL)
	PCB9	REPX0729B	AC INLET P.C.B	(RTL)
	DZ5701	ERZV10V511CS	ZNR	
	S5701	K0ABCA000007	AC VOLTAGE	
	L5702	ELF19H015A	LINE FILTER	
	L5703	ELF19H015A	LINE FILTER	
	T2900	G4D1A0000117	TRANSFORMER	
	T5701	ETS35BC2P6AC	MAIN TRANSFORMER	
	T5751	ETS19AB2A6AG	BACKUP TRANSFORMER	
	PC5702	B3PBA0000402	PHOTO COUPLER	
	PC5720	B3PBA0000402	PHOTO COUPLER	
	PC5799	B3PBA0000402	PHOTO COUPLER	
	RY5701	K6B1AEA00003	RELAY	
	F1	K5D402BK0007	FUSE	
	F2	K5G162B00016	FUSE	
	FP2901	K5H1022A0011	FUSE PROTECTOR	
	TH5702	D4CAA5R10001	THERMISTOR	
	P5701	K2AA2B000017	AC INLET	
	C5700	F1BAF1020020	1000pF	
	C5701	ECQU2A104MLC	0.1uF	
	C5702	ECQU2A104MLC	0.1uF	
	C5703	ECQU2A104MLC	0.1uF	
	C5706	F1BAF1020020	1000pF	
	C5707	F1BAF1020020	1000pF	
	C5708	F1BAF1020020	1000pF	

1.6. Caution for AC Cord (For GS only)

(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

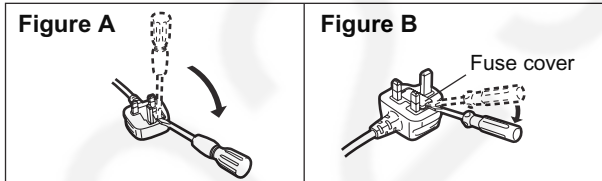
Remove the connector cover.

How to replace the fuse

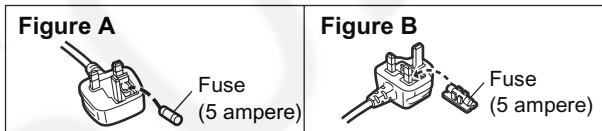
The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.

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 Warning

2.1. Prevention of Electrostatic Discharge (ESD) to Electrostatic 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 build up or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder 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).

2.2. Precaution of Laser Diode

CAUTION:

THIS PRODUCT UTILIZES A LASER.

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

Caution:

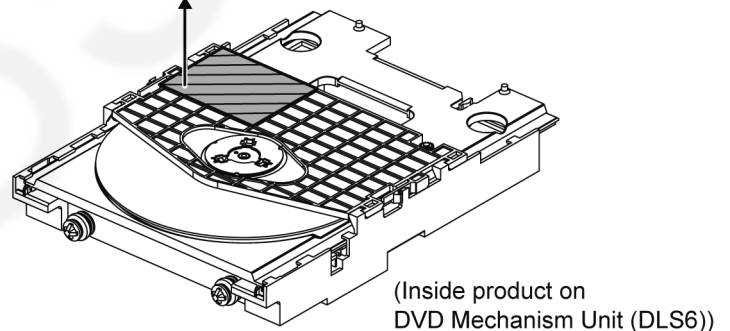
This product utilizes a laser diode with the unit turned "on", invisible laser radiation is emitted from the pickup lens.

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

Maximum output radiation power from pickup: 100 μ W/VDE

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

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



2.3. Service caution based on Legal restrictions

2.3.1. General description about Lead Free Solder (PbF)

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

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

Definition of PCB Lead Free Solder being used

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

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

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

Recommended Lead Free Solder (Service Parts Route.)

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

Note

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

2.4. Handling Precautions for Traverse Unit

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

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

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

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

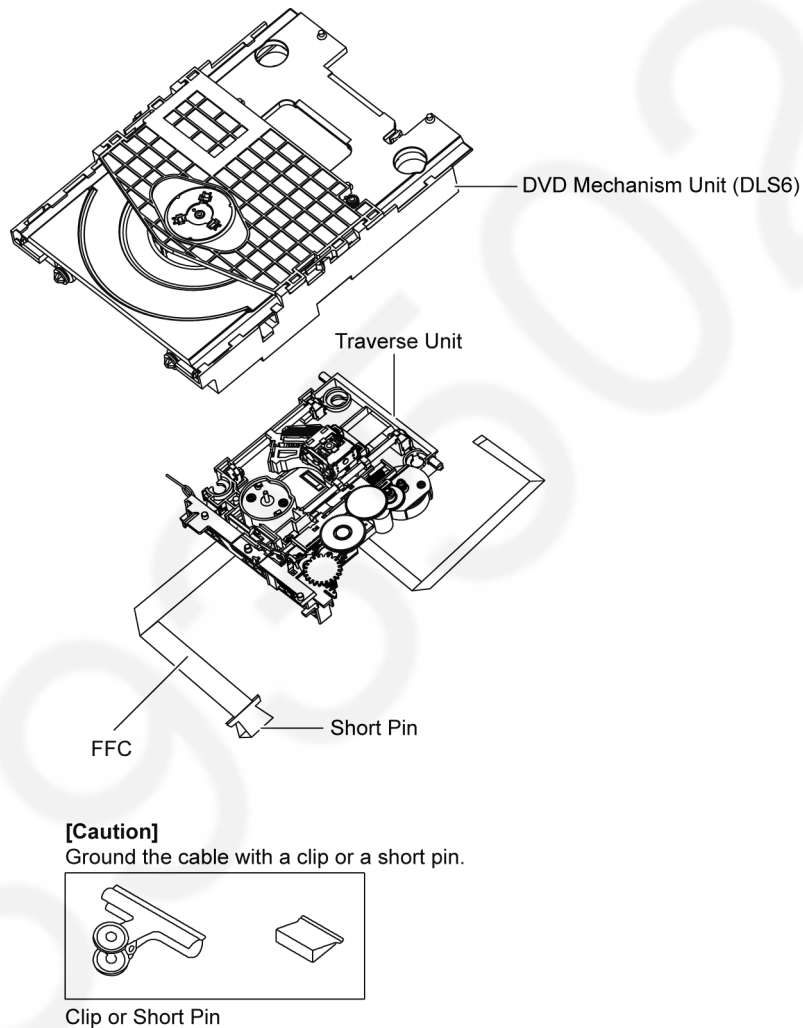


Figure 1

2.4.2. 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.

2.4.2.1. Worktable grounding

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

2.4.2.2. Human body grounding

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

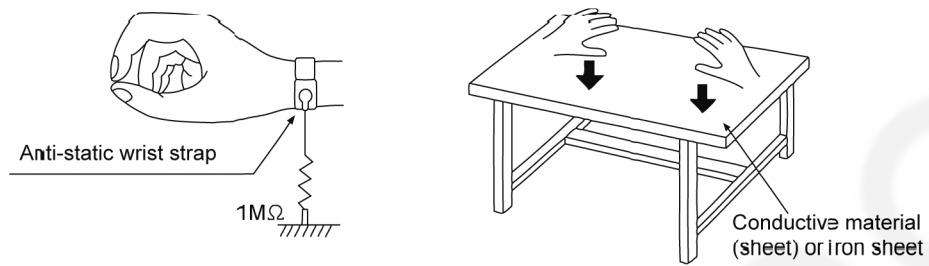


Figure 2

3 Service Navigation

3.1. Service Information

This service manual contains technical information which will allow service personnel's to understand and service this model. Please place orders using the parts list and not the drawing reference numbers.

If the circuit is changed or modified, this information will be followed by supplement service manual to be filed with original service manual.

- **DVD Mechanism Unit (DLS6):**

- 1) This model uses DVD Mechanism Unit (DLS6).
- 2) This service manual does not contain the following information on DLS6
 - * Schematic Diagram, Block Diagram and P.C.B. layout of DLS6 P.C.B.
 - * Parts List for individual parts of DVD Mechanism Unit (DLS6).
 - * Exploded View and Part List for individual parts of DLS6 mechanism.Please refer to original service manual (Order No. MD0801003CE)

- **Printed Circuit Boards:**

The following category are supplied as an assembled module.

- DVD Module P.C.B. [RFKBX0681A-M (GC/GS)], [RFKBX0681C-M (GA)].

- **Micro-processor & EEPROM:**

- 1) The following components are supplied as an assembled part.
 - Micro-processor IC, IC2001 (RFKWMPT470EB).
 - EEPROM IC, IC2003 (RFKWEPT470EB).

- **Speaker system**

- 1) For information, please refer to original service manual, SB-PT170EG-K/S (Order No. PSG0903020CE).

4 Specifications

Main unit SA-PT170GA/GC/GS

●GENERAL

Power supply:	AC 110 to 127V/AC 220 to 240V, 50/60 Hz This unit 90 W
Power consumption:	This unit 90 W
Power consumption in standby mode:	approx. 0.2 W
Dimensions (W×H×D):	430 mm×63 mm×325 mm
Mass:	This unit 3.14 kg
Operating temperature range:	0 °C to +40 °C
Operating humidity range:	35% to 80% RH (no condensation)

●AMPLIFIER SECTION

RMS Output Power: Dolby Digital Mode

Front Ch:	55 W per channel (5 Ω), 1 kHz, 10% THD
Surround Ch:	55 W per channel (5 Ω), 1 kHz, 10% THD
Center Ch:	55 W per channel (5 Ω), 1 kHz, 10% THD
Subwoofer Ch:	55 W per channel (5 Ω), 100 Hz, 10% THD
Total RMS Dolby Digital mode power:	330 W
PMPO output power:	2800 W

DIN Output Power: Dolby Digital Mode

Front Ch:	30 W per channel (5 Ω), 1 kHz, 1% THD
Surround Ch:	30 W per channel (5 Ω), 1 kHz, 1% THD
Center Ch:	30 W per channel (5 Ω), 1 kHz, 1% THD
Subwoofer Ch:	30 W per channel (5 Ω), 100 Hz, 1% THD
Total DIN Dolby Digital mode power:	180 W

●TUNER, TERMINALS SECTION

Preset Memory: FM 30 stations

Frequency Modulation (FM)

Frequency range:	87.50-108.00 MHz (50-kHz step)
Antenna terminals:	75 Ω (unbalanced)

Digital audio input

Optical digital input:	Optical terminal
Sampling frequency:	32 kHz, 44.1 kHz, 48 kHz

USB Port

USB standard:	USB 2.0 full speed
Media file format support:	MP3 (*.mp3) WMA (*.wma) JPEG (*.jpg) (*.jpeg) DivX (*.divx) (*.avi) MPEG4 (*.asf)
USB device file system:	FAT12, FAT16, FAT32
USB Port power:	Max. 500 mA
Bit rate:	Up to 4Mbps (Divx)

Mic jack

Sensitivity:	0.7 mV, 1.2 kΩ
Terminal:	Mono, 6.3mm jack (2 system)

Music Port (Front)

Sensitivity:	100 mV, 3.5 kΩ
Terminal:	Stereo, 3.5mm jack

●DISC SECTION

Discs played [8 cm or 12 cm]:

- (1) DVD (DVD-Video, DivX^{*5, 6})
 - (2) DVD-RAM (DVD-VR, MP3^{*2, 5}, JPEG^{*4, 5}, MPEG4^{*5, 7}, DivX^{*5, 6})
 - (3) DVD-R (DVD-Video, DVD-VR, MP3^{*2, 5}, JPEG^{*4, 5}, MPEG4^{*5, 7}, DivX^{*5, 6})
 - (4) DVD-R DL (DVD-Video, DVD-VR, DivX^{*5, 6})
 - (5) DVD-RW (DVD-Video, DVD-VR, MP3^{*2, 5}, JPEG^{*4, 5}, MPEG4^{*5, 7}, DivX^{*5, 6})
 - (6) +R/+RW (Video)
 - (7) +R DL (Video)
 - (8) CD, CD-R/RW (CD-DA, Video CD, SVCD^{*1}, MP3^{*2, 5}, WMA^{*3, 5}, JPEG^{*4, 5}, MPEG4^{*5, 7}, DivX^{*5, 6})
- *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 The total combined maximum number of recognizable audio, picture and video contents and groups: 4000 audio, picture and video contents and 255 groups. (Excluding Root Folder)
- *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 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.

Pick up

Wavelength (DVD/CD):	655/785 nm
Laser power (DVD/CD):	CLASS 1/CLASS 1M

Audio output (Disc)

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

●VIDEO SECTION

Video system: PAL625/50, PAL525/60, NTSC

Composite video output

Output level:	1 Vp-p (75 Ω)
Terminal:	Pin jack (1 system)

Component video output

Y output level:	1 Vp-p (75 Ω)
P _B output level:	0.7 Vp-p (75 Ω)
P _R output level:	0.7 Vp-p (75 Ω)
Terminal:	Pin jack (Y: green, P _B : blue, P _R : red) (1 system)

HDMI AV output

Terminal:	19pin type A connector
-----------	------------------------

HDAVI Control:

This unit supports "HDAVI Control 4" 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).

System	SC-PT170GA/GC/GS-K
Main unit	SA-PT170GA/GC/GS-K
Speaker system	SB-PT170EG-K

Refer to their respective original service manuals for *1.

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

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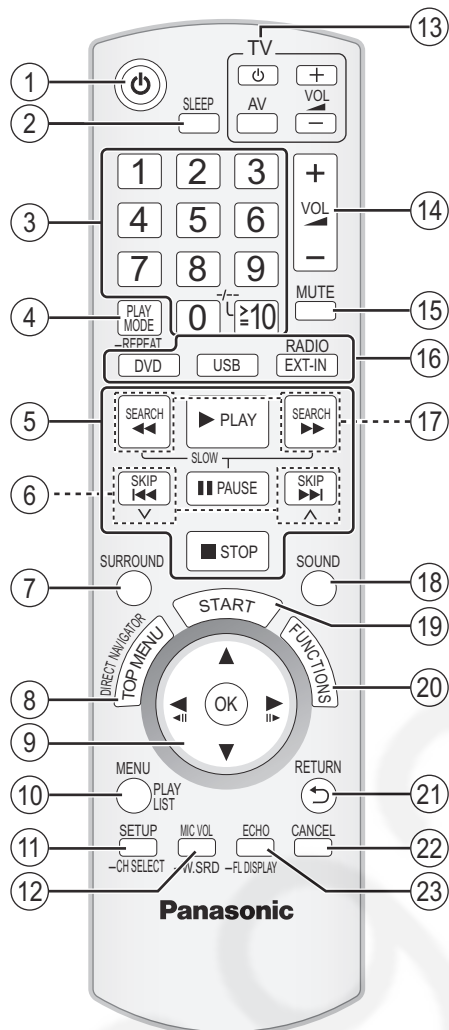
■ Built-in decoders

You can play discs with these symbols.



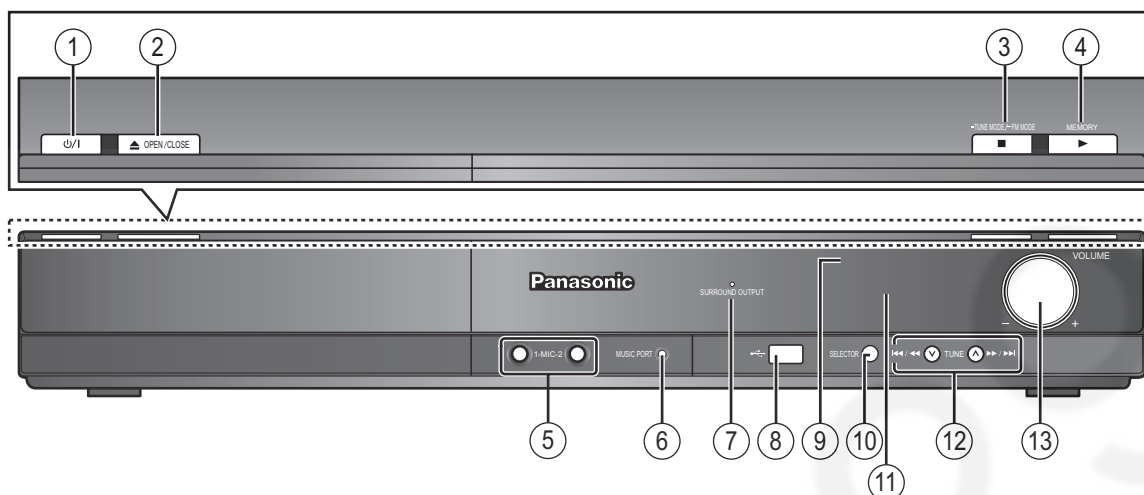
5 Location of Controls and Components

5.1. Remote Control Key Button Operations



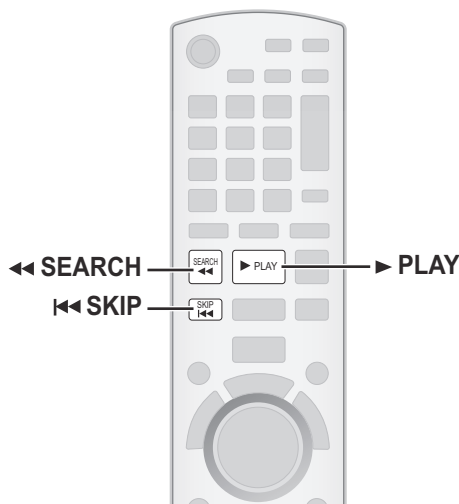
- ① Turn the main unit on/off
- ② **Set the Sleep timer**
Press [SLEEP].
SLEEP 30 → SLEEP 60 → SLEEP 90 → SLEEP 120
↑ OFF (Cancel) ↓
• To confirm the remaining time, press the button again.
- ③ Select channels and title numbers etc. / Enter numbers
- ④ Select the play mode / Set the repeat mode
- ⑤ Basic operations for play
- ⑥ Select preset radio stations
- ⑦ Select surround sound effects
- ⑧ Show a disc top menu or program list
- ⑨ Select or confirm menu items / Frame-by-frame
- ⑩ Show a disc menu or play list
- ⑪ Show setup menu or select speaker channel
- ⑫ Adjust the Microphone volume/ Turn Whisper-mode Surround on/off
- ⑬ **TV operations**
Aim the remote control at the Panasonic TV and press the button.
[TV]: Turn the TV on/off
[AV]: Change the TV's video input mode
[+ , -]: Adjust the TV volume
This may not work properly with some models.
- ⑭ Adjust the volume of the main unit
- ⑮ **Mute the sound**
• MUTE flashes on the main unit's display while the function is on.
• To cancel, press the button again or adjust the volume.
• Muting is cancelled when you switch the unit to standby.
- ⑯ **Source select**
[DVD]: Select disc as the source
[USB]: Select USB as the source
[RADIO], [EXT-IN]: Select FM tuner or external audio as the source
FM → AUX* → D-IN* → MUSIC P.
↑
• (TV) will appear beside AUX* or D-IN*, indicating the TV audio setting for VIERA Link HDAVI Control
- ⑰ Select radio stations manually
- ⑱ Select sound mode
- ⑲ Show START menu
- ⑳ Show on-screen menu
- ㉑ Return to previous screen
- ㉒ Cancel
- ㉓ Adjust the echo level / Switch information on the main unit's display

5.2. Main Unit Key Button Operations



- ① 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.
- ② Open/Close the disc tray
- ③ Stop playing / Select the tuning mode / Adjust the FM reception condition
- ④ Play discs / Memorize the receiving radio stations
- ⑤ Connect microphones
- ⑥ Connect external music device
- ⑦ The indicator lights when there is surround sound effect.
- ⑧ Connect USB device
- ⑨ Remote control signal sensor
- ⑩ Select the source
DVD/CD → USB → FM → AUX* → D-IN* → MUSIC P.
↑
- * (TV) will appear beside AUX or D-IN, indicating the TV audio setting for VIERA Link HDAVI Control
- ⑪ Display
- ⑫ Skip or slow-search play / Select the radio stations
- ⑬ Adjust the volume of the main unit

5.3. Using the VIERA Link “HDAVI Control”



VIERA Link “HDAVI Control”

VIERA Link “HDAVI Control” is a convenient function that offers linked operations of this unit, and a Panasonic TV (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.

- VIERA Link “HDAVI Control”, based on the control functions provided by HDMI which is an industry standard known as HDMI CEC (Consumer Electronics Control), is a unique function that we have developed and added. As such, its operation with other manufacturers’ equipment that supports HDMI CEC cannot be guaranteed.
- This unit supports “HDAVI Control 4” function.
“HDAVI Control 4” is the newest standard (current as of December, 2008) for Panasonic’s HDAVI Control compatible equipment. This standard is compatible with Panasonic’s conventional HDAVI equipment.
- Please refer to individual manuals for other manufacturers’ equipment supporting VIERA Link function.

The TV with “HDAVI Control 2 (or later)” function enables the following operation: VIERA Link Control only with TV’s remote control [for “HDAVI Control 2” (or later)]

Preparation

- Confirm that the HDMI connection has been made.
- Set “VIERA Link” to “ON”.
- To complete and activate the connection correctly, turn on all VIERA Link “HDAVI Control” compatible equipment and set the TV to the corresponding HDMI input mode for this unit.

Setting the TV audio for VIERA Link “HDAVI Control”

Select between “AUX” and “DIGITAL IN” to work with the linked operations. Confirm the audio connection to the AUX terminal (for “AUX”) or OPTICAL IN terminal (for “DIGITAL IN”)

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

* “AUX” or “D-IN” (“DIGITAL IN”) works depending on the “TV AUDIO” setting (⇒ above, Setting the TV audio for VIERA Link “HDAVI Control”).

Auto lip sync

(Available when using VIERALink “HDAVI Control” with “HDAVI Control 3 (or later)” compatible TV)
This function automatically provides synchronised audio and video output. (This works only when the source is “DVD/CD”, “USB”, “AUX” or “D-IN”.)

- When using “DVD/CD” or “USB” as the source, set “TIME DELAY” in VIDEO menu to “0 ms/AUTO”

One touch play

You can turn on this unit and the TV, and start playing the disc with a single press of a button.

During standby mode



(Remote control only)

Start disc playback.

This unit’s speakers will be automatically activated

Note

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

Auto input switching

- When you switch the TV input to TV tuner mode, this unit will automatically switch to “AUX”* or “D-IN”*.
- When this unit is in “DVD/CD” mode, the TV will automatically switch its input mode for this unit.
- When playback stops ([DVD-V] [VCD]) or when this unit turns off, the TV will automatically return to TV tuner mode.
- When you select “AUX”* or “DIGITAL IN”* from “Input Selection” in START menu, the TV will automatically switch to TV tuner mode.

Power off link

When the TV is turned off, this unit goes into standby mode automatically. To continue audio playback even when the TV is turned off, select “VIDEO”.

- When the TV is turned on, this unit does not turn on automatically. (Power on link is not available.)

Note

- When you press [⏻], only this unit turns off. Other connected equipment compatible with VIERA Link “HDAVI Control” stays on.
- If this unit is connected to a “HDAVI Control 4” compatible TV with the “Intelligent Auto Standby” setting activated on the TV, this unit will be automatically turned to standby under the following conditions:
e.g.,
–when changing the TV input from the one this unit is connected to
–when changing the speaker use from this unit’s speakers to the TV speakers

For details, refer also to the operating instructions for your TV.

Speaker control

You can select whether audio is output from this unit's speakers or the TV speakers by using the TV menu settings. For details, refer to the operating instructions of your TV.

Home Cinema

This unit's speakers are active.

- When this unit is in standby mode, changing the TV speakers to this unit's speakers in the TV menu will automatically turn this unit on and select "AUX" or "D-IN" as the source.
- The TV 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 display.)
- To cancel muting, you can also use this unit's remote control.
- If you turn off this unit, TV speakers will be automatically activated.

TV

TV speakers are active.

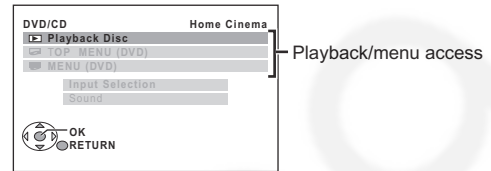
- The volume of this unit is set to "0".
 - This function works only when "DVD/CD", "USB", "AUX" or "D-IN" is selected as the source on this unit.
- Audio output is 2-channel audio.

When switching between this unit speakers and TV speakers, the TV screen may be blank for several seconds.

VIERA Link Control only with TV's remote control [for "HDAVI Control 2 (or later)"]

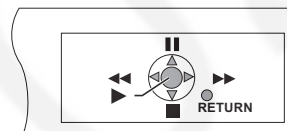
You can control the playback menus of this unit with the TV's remote control. When operating the TV's remote control, refer to the below illustration for operation buttons.

- 1 Select this unit's operation menu by using the TV menu settings. (For details, refer to the operating instructions of your TV.) The START menu will be shown. e.g. **[DVD-V]**



- The START menu can also be shown by using a button on the TV's remote control (e.g. [OPTION]).
 - When "DVD/CD" or "USB" is selected as the source, this works only during stop mode.
 - This does not work while iPod music playback screen is displayed on the TV.

- 2 Select the desired item on the START menu. When the on-screen control panel appears e.g. **[DVD-V]** (when "Playback Disc" is selected from the START menu.)



You can operate the playback with the indicated controls.

- The on-screen control panel can also be shown by using a button on the TV's remote control (e.g. [OPTION]).
 - This works only during "DVD/CD" or "USB" playback and resume modes or, while iPod music playback screen is displayed on the TV.

If the TV has automatically switched to the HDMI input mode for this unit

The TV will automatically switch to TV tuner mode when:

- you press [EXIT] button on the TV's remote control to exit VIERA Link Control.
- you press [EXIT] or [RETURN] button on the TV's remote control to exit the START menu.

(This does not work during playback or resume mode when "DVD/CD" or "USB" is selected as the source.)

Note

- Depending on the menu, some button operations cannot be performed from the TV's remote control.
- You cannot input numbers with the numbered buttons on the TV's remote control ([0] to [9]). Use this unit's remote control to select the play list etc.

5.4. USB Connection and Operations

Playing from an USB device

You can connect and play tracks or files from USB mass storage class devices.

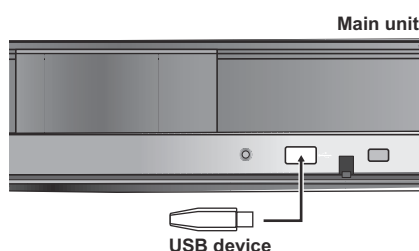
Devices which are defined as USB mass storage class:

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

Preparation

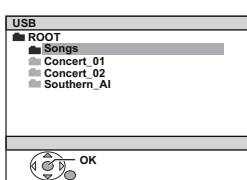
- Before connecting any USB mass storage device to the unit, ensure that the data stored therein has been backed up.
- It is not recommended to use a USB extension cable. The USB device connected using the cable will not be recognised by this unit.

Connect the USB device (not included).



1



Select "USB".
The menu screen appears.
e.g.


- If "PLAYBACK MENU" screen appears, select "AUDIO/PICTURE" or "VIDEO" by pressing [▼.▲] and then [OK].
- To display/exit the screen, press [MENU]

2

Select an item.

- Press [◀, ▶] to skip page by page.
- To return to the previous screen, press [RETURN].

Play starts from the selected content.

- For other operating functions, they are similar to those described in "Playing Discs".

Supported Formats

Still pictures	JPEG (Extension: ".jpg", ".JPG", ".jpeg", ".JPEG")
Music	MP3 (Extension: ".mp3", ".MP3") WMA (Extension: ".wma", ".WMA")
Video	MPEG4* (Extension: ".asf", ".ASF") DivX (Extension: ".divx", ".DIVX", ".avi", ".AVI")

* For Panasonic D-Snap/DIGA

NOTE

- Maximum: 255 folders (excluding Root folder), 4000 files, 28 characters for file/folder name.
- Only one memory card will be selected when connecting a multiport USB card reader. Typically the first memory card inserted.

5.5. Music Port Connection and Operations

Playing from MUSIC PORT

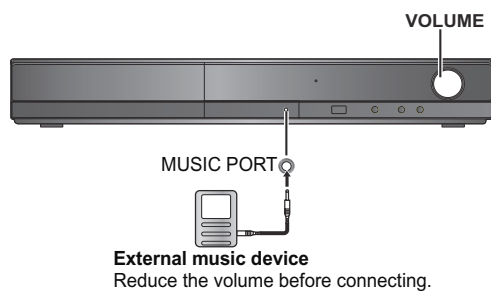
The MUSIC PORT allows you to connect and enjoy music from an external music device (e.g. MP3 player) through your home theater system.

Preparation

- To avoid distorted sound, make sure that any equalizer function of your external device is turned off.
- Reduce the volume of this unit and external music device.

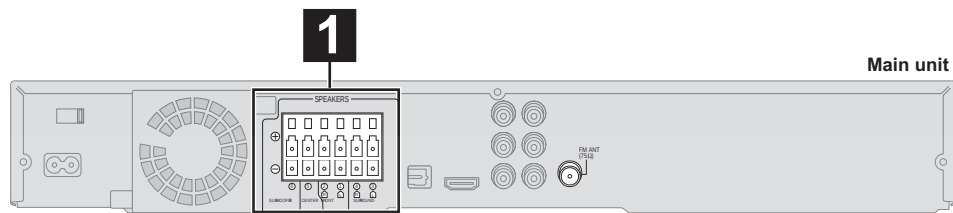
Connect the external music device (not included).

Plug type: $\varnothing$ 3.5 mm stereo mini plug



Adjust the volume on the external music device to a normal listening level, and then adjust the volume of this unit.

5.6. Speaker Connection



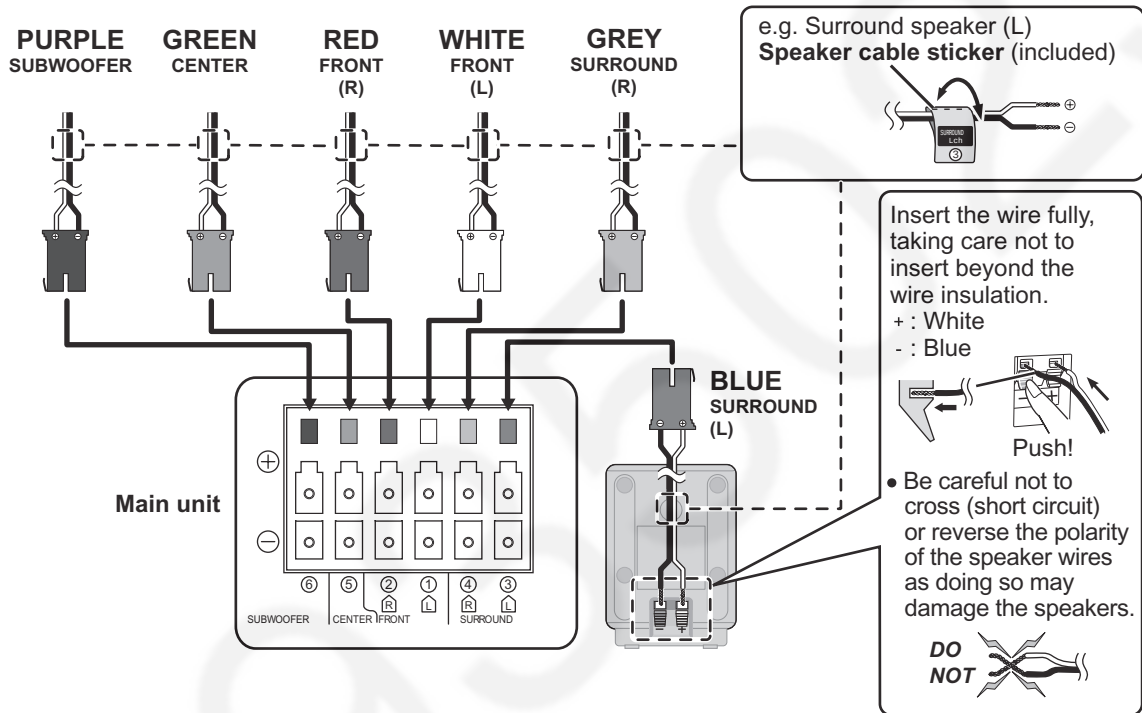
1 Speaker connections

Setup example

Pay attention to the type of speaker and the connector colour when you place the speakers.

Connect to the terminals of the same colour.

Use of the speaker cable stickers is convenient when making cable connections.



5.7. Disc Information

5.7.1. Disc Playability (Media)

Commercial discs

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

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

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

- It may not be possible to play all the above-mentioned discs in some cases due to the type of disc, the condition of the recording, the recording method, or how the files were created. [Refer to Section 5.7.2. File Extension Type Support (WMA/MP3/JPEG/MPEG4/DIVX)]

^{※1} This unit can play CD-R/RW recorded with CD-DA or Video CD format.

^{※2} Discs recorded on DVD recorders or DVD video cameras, etc. using Version 1.1 of the Video Recording Format (a unified video recording standard).

^{※3} Discs recorded on DVD recorders or DVD video cameras using Version 1.2 of the Video Recording Format (a unified video recording standard).

^{※4} Discs recorded on DVD recorders or DVD video cameras using DVD-Video Format.

^{※5} Recorded using a format different from DVD-Video Format, therefore some functions cannot be used.

^{※6} A process that allows play on compatible equipment. To play a disc that is indicated as "Necessary", the disc must first be finalized on the device it was recorded on.

^{※7} Closing the session will also work.

Note about using a DualDisc

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

■ Discs that cannot be played

Blu-ray, HD DVD, AVCHD discs, DVD-RW version 1.0, DVD-Audio, DVD-ROM, CD-ROM, CDV, CD-G, SACD, DivX Video Discs and 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 TV must match the system used on the disc.
- PAL discs cannot be correctly viewed on an NTSC TV.
- This unit can convert NTSC signals to PAL 60 for viewing on a PAL TV (OI 22, "NTSC DISC OUT" in "VIDEO" menu).

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

Format	Disc	Extension	Reference
WMA	CD-R/RW	“.WMA” “.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: an encoding process for audio content that produces an audio file encoded at several different bit rates).
MP3	DVD-RAM DVD-R/RW CD-R/RW	“.MP3” “.mp3”	- This unit does not support ID3 tags. - Sampling frequency and compression rate: - DVD-RAM, DVD-R/RW: 11.02, 12, 22.05, 24 kHz (8 to 160 kbps), 44.1 and 48 kHz (32 to 320 kbps) - CD-R/RW: 8, 11.02, 12, 16, 22.05, 24 kHz (8 to 160 kbps), 32, 44.1 and 48 kHz (32 to 320 kbps)
JPEG	DVD-RAM DVD-R/RW CD-R/RW	“.JPG” “.jpg” “.JPEG” “.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, still pictures other than JPEG (e.g. TIFF), or play pictures with attached audio.
MPEG4	DVD-RAM DVD-R/RW CD-R/RW	“.ASF” “.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 recorders with this unit. - The recording date may differ from that of the actual date.
DivX	DVD-RAM DVD-R/RW CD-R/RW	“.DIVX” “.divx” “.AVI” “.avi”	- Plays 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 8 types of audio and subtitles on this unit.

- 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.

6 Self-Diagnosis and Special Mode Setting

6.1. 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:

In order to enter the service mode, press [⏮] RETURN button on remote control.

Main unit buttons	Remote control unit buttons	Application	Note
[STOP]	[0]	Error code check.	(Refer to the section "6.2.1. 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 "6.2.2. Service Mode Table 2" for more information.)
	[3]	CD laser drive current check.	(Refer to the section "6.2.3. Service Mode Table 3" for more information.)
	[6]	Region display and mode.	
	[SOUND]	CPPM/CRM keys check.	
	[7]	Micro-processor firmware version check.	(Refer to the section "6.2.4. Service Mode Table 4" for more information.)
	[≥10]	Initialization of the player (factory setting is restored). Used after replacement of Micro-processor (DV5 LSI) IC, FLASH ROM IC (IC8651), EEPROM IC (IC8611) and DVD Module P.C.B.	
	[OK]	DVD Module P.C.B. reset.	
	[8]	DVD Module P.C.B. firmware version check.	(Refer to the section "6.2.4. Service Mode Table 4" for more information.)
	[▲]	Timer 1 check.	
	[▼]	Timer 1 reset.	
	[▶]	Timer 2 check.	
	[◀]	Timer 2 reset.	

Note:

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

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

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

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

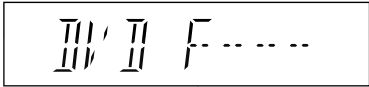
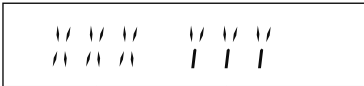
6.2. Service Mode Table

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

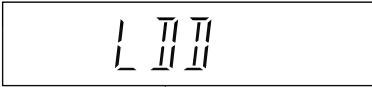
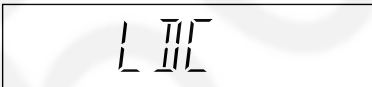
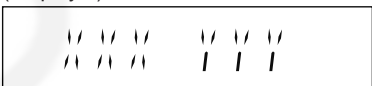
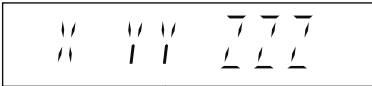
Special Note:

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

6.2.1. Service Mode Table 1

Item		FL Display	Key Operation
Mode Name	Description		Front Key
Error code check	Error code check The latest error code stored in the EEPROM IC is displayed. Note: Refer to "Section 6.5 DVD Self Diagnostic Function-Error Code" for more detailed information on the error codes.	 ↑ F / H / U Error code (play_err) is expressed in the following convention. Error code = 0 x DAXX is expressed: → DVDnn U12 Error code = 0 x DBXX is expressed: → DVDnn H12 Error code = 0 x DXXX is expressed: → DVDnn F123 Error code = 0 x 0000 is expressed: → DVDnn F--- * "xx" denotes the error code	In STOP (no disc) mode, press [STOP] button on the main unit, and [0] button on the remote control unit. *With pointing of cursor up and down on display. Cancelled automatically 5 seconds later. To exit, press [POWER] button on main unit or remote control.
Jitter check	Jitter check. Jitter rate is measured and displayed. Measurement is repeatedly done in the cycle of one second. Read error counter starts from zero upon mode setting. When target block data failed to be read out, the counter advances by one increment. When the failure is caused by minor error, it may be corrected when retried to enable successful reading. In this case, the counter advances by one. When the error persists even after retry, the counter may jump by two or more. FL Display sequence: Display 1→2.	(Display 1)  ↑ ↑ Jitter check Jitter rate mode Jitter rate is shown in decimal notation to one place of decimal. Focus drive value is shown in hexadecimal notation. (Display 2)  ↑ ↑ Lead Focus Drive Error Value Counter	In STOP (with disc inside tray) mode, press [STOP] button on the main unit, and [5] button on the remote control unit, after Display 1 appears, then press [PLAY]. Press [POWER] or [STOP] button to exit. Press [FL Display] on remote control unit for next page (FL Display).
Initial setting of laser drive current	Initial setting of laser drive current. Initial current value for the DVD laser and CD laser is separately saved in the EEPROM IC. FL Display sequence: Display 1→2.	(Display 1)  ↑ Laser current measurement mode The value denotes the current in decimal notation. (Display 2)  ↑ ↑ CD DVD Laser Laser The above example shows the initial current is XXXmA and YYYmA for CD laser and DVD laser respectively when the laser is switched on.	In STOP (no disc) mode, press [STOP] button on the main unit, and [PAUSE] button on the remote control unit. Cancelled automatically 5 seconds later. Press [FL Display] on remote control unit for next page (FL Display) on values of laser drive current.

6.2.2. Service Mode Table 2

Item		FL Display	Key Operation
Mode Name	Description		Front Key
DVD laser drive current measurement	DVD laser drive current measurement. DVD laser drive current is measured and the result is displayed together with the initial value stored in the EEPROM IC. After the measurement, DVD laser emission is kept on. It is turned off when POWER key is switched off. FL Display sequence: Display 1→2.	(Display 1)  DVD laser current measurement mode The value denotes the current in decimal notation. (Display 2)  DVD Laser Initial Value DVD Laser Value The above example shows the initial current is XXXmA and the measured value is YYYmA.	In STOP (no disc) mode, press [STOP] button on the main unit, and [FUNCTIONS] button on the remote control unit. Cancelled automatically 5 seconds later. Press [FL Display] on remote control unit for next page (FL Display) on values of dvd drive current.
CD laser drive current measurement	CD laser drive current measurement. CD laser drive current is measured and the result is displayed together with the initial value stored in the EEPROM IC. After the measurement, CD laser emission is kept on. It is turned off when POWER key is switched off. FL Display sequence: Display 1→2.	(Display 1)  CD laser current measurement mode The value denotes the current in decimal notation. (Display 2)  CD laser initial value CD laser value The above example shows the initial current is XXXmA and the measured value is YYYmA.	In STOP (no disc) mode, press [STOP] button on the main unit, and [3] button on the remote control unit. Cancelled automatically 5 seconds later. Press [FL Display] on remote control unit for next page. (FL Display)
Region display	Region code display, TV broadcasting system & the model no. information. Note: Refer to Figure 6.1 for "Video Design Information".	 Model No. Information N: NTSC / 6: PAL60 N: no PAL / P: PAL Region No.: 0-8	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.
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". OK: Existing of keys. NG: Non existing of keys.	 0: NG 0: NG 1: OK 1: OK	In STOP (no disc) mode, press [STOP] button on the main unit, and [SOUND] button on the remote control unit. Cancelled automatically 5 seconds later.

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

NTSC (*A)

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

NTSC (*B)

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

PAL (*C)

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

NTSC (*D)

Source	Output
Screen Saver	NTSC
NTSC disc	NTSC
PAL disc	NTSC

Explanation of Display

1 PN 354

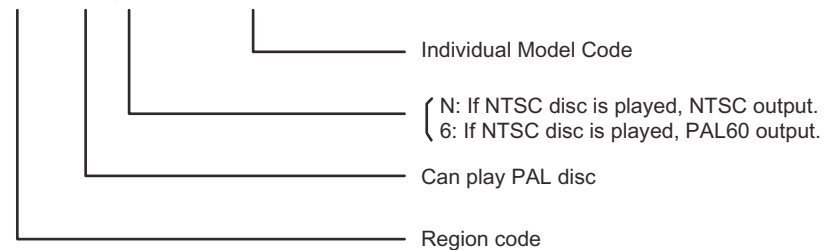
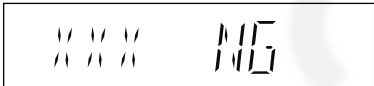
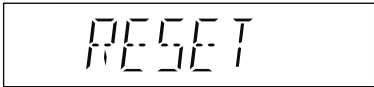
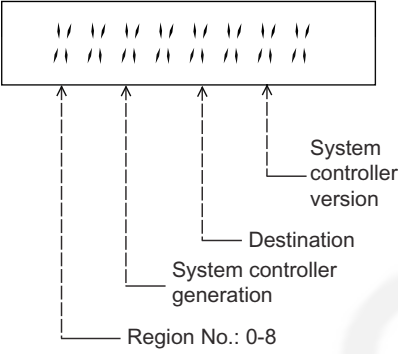


Figure 6.1 Video Design Information

6.2.3. Service Mode Table 3

Item		FL Display	Key Operation
Model Name	Description		Front Key
Micro-processor firmware version display & EEPROM checksum display.	Micro-processor firmware version display & EEPROM checksum display. EEPROM checksum is only available due to existence of EEPROM IC. Note: Condition 1/2/3 shows the state of EEPROM IC. FL Display sequence: Display 1→2→3.	(Display 1)  (Display 2)  (Condition 1)  If the version of the EEPROM does not match, [NG] is displayed. (Condition 2)  (a) If there is NO EEPROM header string OR (b) If there is no EEPROM (no data is received by Micro-processor), [NO] is displayed. (Condition 3)  If the EEPROM version matches, checksum [YYYY] is displayed. (Display 3)  ↑ Opecon Version ↑ EEPROM Checksum (If applicable, refer below.)	In STOP (no disc) mode, press [STOP] button on the main unit, and [7] button on the remote control unit. Cancelled automatically 5 seconds later. Press [FL Display] button on remote control unit for next page. (FL Display)
Initialization	Initialization. User settings are cancelled and player is initialized to factory setting. It is necessary when after replacement of Micro-processor (DV5 LSI) IC, FLASH ROM IC (IC8651), EEPROM IC (IC8611) & DVD Module P.C.B.		Press 'RETURN' button on remote control. In STOP (no disc) mode, press [STOP] button on the main unit, and [≥10] button on the remote control unit. Cancelled automatically 3 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 [OK] button on the remote control unit. Cancelled automatically 5 seconds later.

6.2.4. Service Mode Table 4

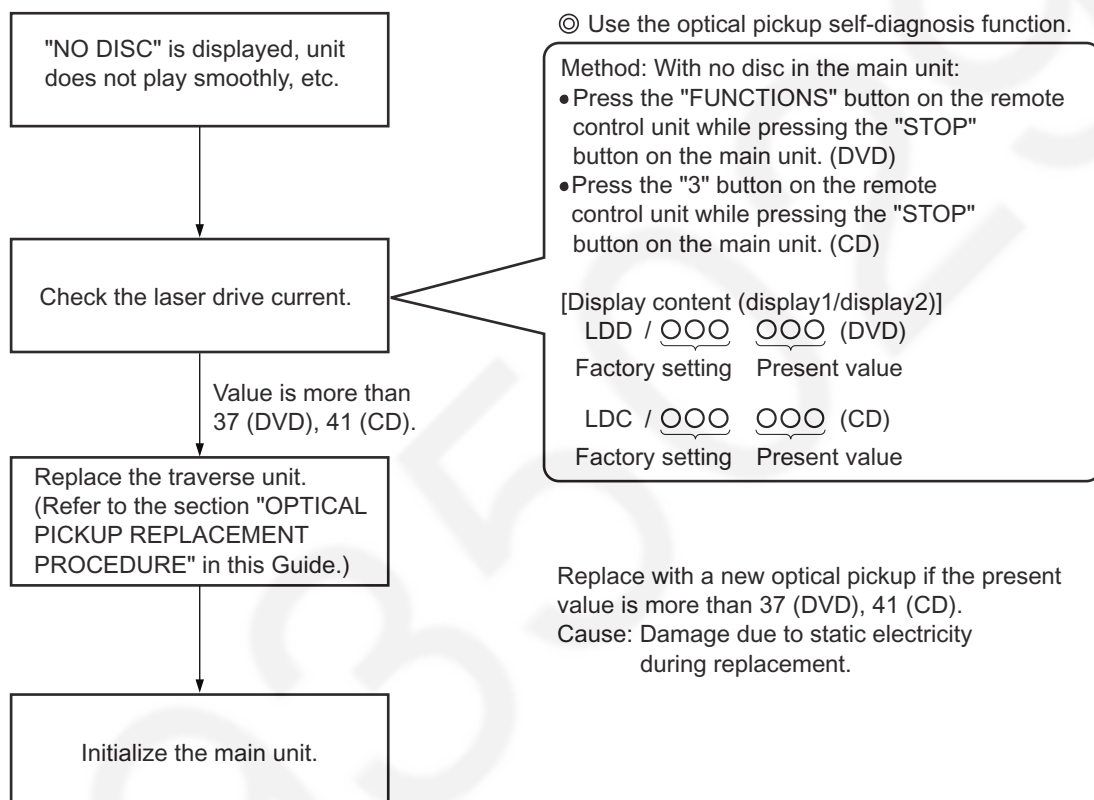
Item		FL Display	Key Operation
Mode Name	Description		Front Key
DVD Module P.C.B. firmware version display	DVD Module P.C.B. firmware version is displayed on the FL Display. The firmware version can be updated using recovery disc. Note: It is necessary to check for firmware version before carrying out 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.
Timer 1 check	Timer 1 check Laser operation timer is measured separately for DVD laser and CD laser. FL Display sequence: Display 1→2.	(Display 1)  DVD laser usage time Shown to the above is DVD laser usage time, and to the below is CD laser usage time. Time is shown in 5 digits of decimal notation in a unit of 10 hours. "00000" will follow "99999". (DVD laser) (Display 2)  CD laser usage time Time is shown in 6 digits of decimal notation in a unit of 10 hours. "000000" will follow "999999". (CD laser)	In STOP (no disc) mode, press [STOP] button on the main unit, and [▲] button on the remote control unit. Cancelled automatically 3 seconds later. Press [FL Display] button for next page of FL Display.
Timer 1 reset	Timer 1 reset Laser operation timer of both DVD laser and CD laser is reset all at once.	 Time is shown in 5 digits of decimal notation in a unit of 10 hours. It will clear to "00000" upon reset.	While displaying Timer 1 data, press [STOP] button on the main unit, and [▼] button on the remote control unit. Cancelled automatically 5 seconds later
Timer 2 check	Timer 2 check Spindle motor operation timer	 Time is shown in 5 digits of decimal notation in a unit of 1 hour. "00000" will follow "99999".	In STOP (no disc) mode, press [STOP] button on the main unit, and [▶] button on the remote control unit. Cancelled automatically 5 seconds later.
Timer 2 reset	Timer 2 reset Spindle motor operation timer	 Time is shown in 5 digits of decimal notation in a unit of 1 hour. It will be cleared to "00000" upon activating this.	While displaying Timer 2 data, press [STOP] button on the main unit, and [◀] button on the remote control unit. Cancelled automatically 5 seconds later.

6.2.5. Optical Pickup Self-Diagnosis

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

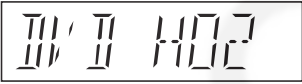
Note:

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

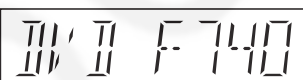
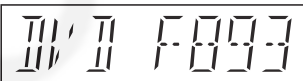
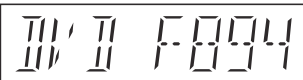
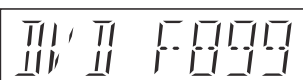


6.3. DVD Self Diagnostic Function-Error Code

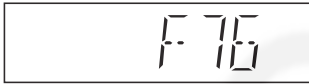
6.3.1. Mechanism Error Code Table

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.
U11	Focus servo error	Focus coil, FE signal error. Disc may be dirty.		Press [■STOP] on main unit for next error. (Unfinalized DVD-R is likely to become U11.)

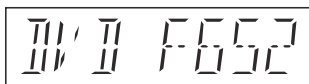
6.3.2. DVD Module Error Code Table

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, DV5.0 LSI IC (IC8651) error.		Press [■STOP] on main unit for next error.
F894	EEPROM IC abnormality error	When failing in the access to EEPROM IC located in the DVD Module P.C.B. (IC8611).		Press [■STOP] on main unit for next error.
F895	Language area abnormal	Firmware version agreement check for factory preset setting failure prevention.		Press [■STOP] on main unit for next error.
F897	Initialization error	Incomplete initialization after writing of new firmware (Factory preset setting failure prevention)		Press [■STOP] on main unit for next error.
F899	The communication specification disagreement between micro-processor	Unsuitable combination of number of system com and panel com used. (Frimware)		Press [■STOP] on main unit for next error.

6.3.3. Power Supply & Digital Amplifier Error Code Table

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

6.3.4. USB Error Code Table

Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
F650	USB device: Devices other than mass storage	Devices other than the mass storage class are connected.		Press [■ STOP] on main unit for next error.
F651	USB device: Non-Full Speed Device	The device that the transfer rate did not correspond to Full Speed was connected.		Press [■ STOP] on main unit for next error.
F652	USB device: Interface NG	The device in the interface (subclass) outside correspondence was connected. (correspondence interface) 001b: Reduced Block Commands (RBC) 010b: SFF-8020i. MMC-2 (ATAPI) 110b: SCSI transparent command set.		Press [■ STOP] on main unit for next error.
F655	USB device: Overcurrent detection	The overcurrent of 500mA or more was detected in VDD USB, and the USB device driver function was intercepted. (To intercept the current.)		Press [■ STOP] on main unit for next error.
—	USB is drawing too much power.	When the USB system detects a USB device that is taking too much current, it will display an "Over current Error" OSD/Screen. At this state the USB backend/system will not be usable temporarily, the corresponding "U*" error code will be send to Opecon, and "USB Overcurrent Error" displayed on the FL.	USB OVERCURRENT ERROR (scrolling)	Switch to DVD/CD mode, remove USB and turn off the unit.

6.4. 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.

6.4.1. Setting

• Prohibiting removal of disc

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

Note:

OPEN/CLOSE▲button is invalid and the main unit displays "LOCKED" while the lock function mode is entered.

• Prohibiting operation of selector and disc

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

Note:

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

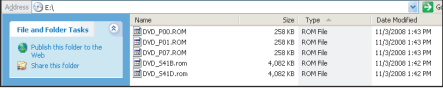
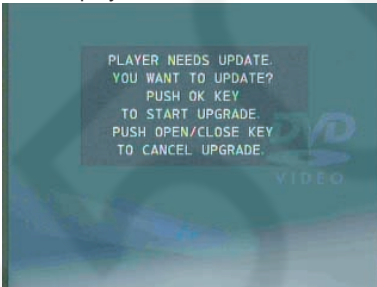
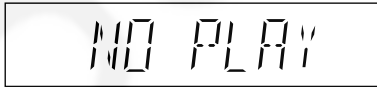
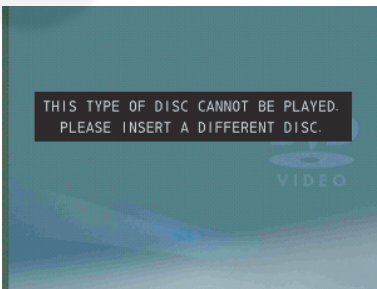
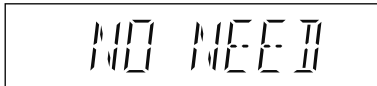
Main unit	▲OPEN/CLOSE, ■/-TUNE MODE/—FM MODE, SELECTOR, ⏮/⏪/∨, ∧/⏩/⏭
Remote controller unit	USB, FM/EXT-IN, NUMERIC KEYS 0~9, ≥10, ⏮, ⏩, ⏪, ⏫, ■, ■, RETURN, FUNCTIONS, FL DIS-PLAY/SLEEP, MUTING

6.4.2. 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.)

6.5. Firmware Version-Up Information

6.5.1. Process Flow (1/2)

Item		FL/ GUI Display	Remarks
Process	Description		
1	Collect ROM Files (Copy files into CD-R/RW) There are 2 files: A) Syscon ROM file type: - DVD_S41B.ROM (Sample) - DVD_S41D.ROM (Sample) (supports chinese fonts OSD display) B) Opecon ROM file type: - DVD_P00.ROM (Single tray) - DVD_P01.ROM (Changer)	Display 1: 	User can put both files into the same root directory. DVD MODEL will choose the right ROM files to update its firmware.
2	Load disc into unit (To update rate) Load the disc into the set (To be updated). Press [OK] in remote controller to start updating process after the following signal appear: → <i>FL Display 1: "PLAY"</i> . → <i>GUI Display 1 :</i> PLAYER NEED UPDATE. YOU WANT TO UPDATE? PUSH OK KEY TO START UPGRADE. PUSH OPEN/CLOSE KEY TO STAY UPGRADE. PUSH OPEN/CLOSE KEY TO CANCEL UPGRADE.	FL Display 1:  GUI Display 1: 	Press [OPEN/CLOSE] in remote controller to CANCEL update.
2-1	Check Correct ROM file type ROM files doesn't fit to the product type. If the ROM files doesn't fit for the product type, then CD update "STOP" and display as below: → <i>FL Display 2: "NO PLAY"</i> . → <i>GUI Display 2 :</i> THIS TYPE OF DISC CANNOT BE PLAYED. PLEASE INSERT A DIFFERENT DISC.	FL Display 2:  GUI Display 2: 	Update stop (Wrong ROM Type)
2-2	Check ROM version type Update not Necessary If the ROM files has the same (latest) version or an older version than the product: → <i>FL Display 3: "NO NEED"</i> . → <i>GUI Display 3:</i> THIS PLAYER DOES NOT REQUIRE THE UPDATE	FL Display 3:  GUI Display 3: 	Update stop (product has the latest firmware)

6.5.2. Process Flow (2/2)

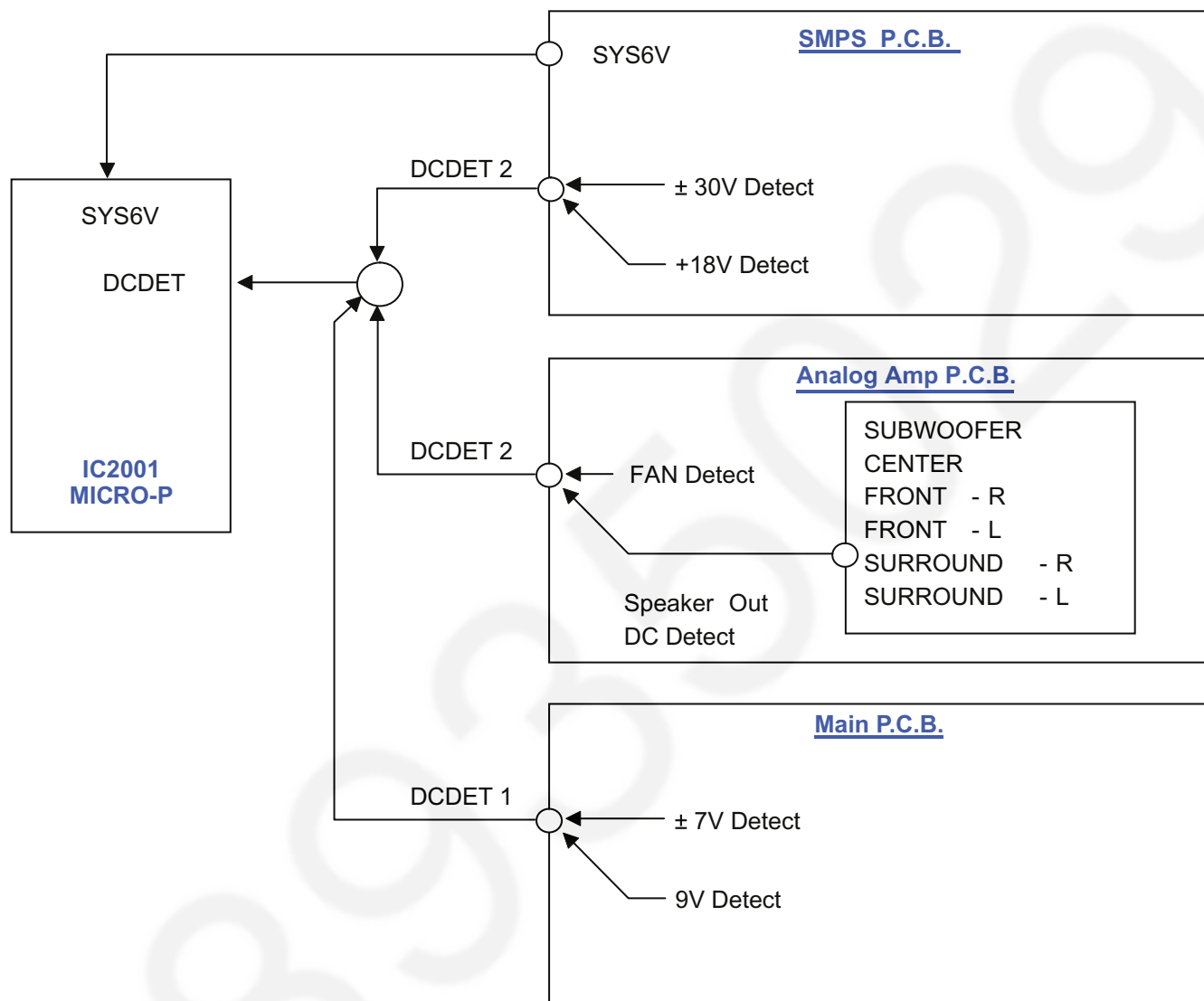
Item		FL/ GUI Display	Remarks
Process	Description		
3	Update software (Opecon)	1. Update Failed If Opecon software update fail: → FL Display 3: "FAIL" . → GUI Display 3:"UPDATE FAIL"	Update stop. The theater set can't work, and can't be recovered by CD update again.
	2. Update Completed If Opecon software update completes successfully: → FL Display 3: "GOOD" . → GUI Display 3: COMPLETED PLEASE EJECT THE DISC	FL Display 5:  GUI Display 5: 	The theater set will reboot automatically.

7 Troubleshooting Guide

7.1. Troubleshooting Guide for F61 and/or F76

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

7.1.1. Block Diagram



7.1.2. Troubleshooting Guide

Symptom	Checking Items	Repair Items	Remarks
FL display blinking with abnormal segment when power ON the set or "F61"	Check the soldering of the SMPS P.C.B. Is there any solder crack at area (D5802, Q5841, R5842) Check all the VDD supply line $\pm 30V$ & +18V Is there any solderability at area of feedback circuit Check feedback circuit.	Touch-up the solder crack area/ Change the defective parts. (D5802, Q5841, R5842) (DCDET) (D5807) Touch-up the necessary areas IC5801, PC5720, D5725	SMPS P.C.B. Refer to Fig. 1
First Power ON Display immediate show "F61". • Check VCC to Power Amplifier IC (Pin 1) • Check Q5749, Q5750, Q5753, Q5754, Q5747, Q5748	• Check speaker output by using multi-meter • Check Power Amplifier IC (Pin 1)	Change the defective parts. • Power Amplifier IC IC5100/IC5200/IC5300 P/N = AN17831A • Replace necessary parts.	Analog AMP P.C.B Refer to Fig. 3
Power ON for a while then only trigger "F61". (Symptom always happen)	Check the fan connection & feedback loop: • If the fan not proper connected, "F61" will trigger when the volume increase. • If the fan is not working, check for fan circuit. Check the soldering of the SMPS P.C.B.: • Is there any solder crack at area (D5802, Q5841, Q5842) Check all the supply line VDD	Re-connect the Fan to CN5704 • Fan circuit: Q5740, Q5742, Q5741, Q5744, D5755, D5745 Touch-up the solder crack area/ Change the defective parts. • D5802, Q5841, R5842 (DCDET) • D5840, D5841, D5842, D5843 ($\pm 30V$ Detect) Feedback Circuit: IC5801, PC5720, D5725	Analog AMP P.C.B Refer to Fig. 4
Power ON for a while and then trigger "F76"	Check if there are supply voltages from SMPS P.C.B to Main P.C.B. at CN2016 & CN2017: • CN2016 - F + (Pin 1), -VP (Pin 3), F - (Pin 2) • CN2016 - +5V (Pin 7), av (Pin 8), +18V (Pin 11) • CN2017 - +7V (Pin 1)	Check and change the possible defective parts. • FP2901(Fuse Protector), T2900, D2901, D2906, D2908, D2909 • IC2903 (DC-DC Converter IC) & related regulator circuit components • IC2900 (DC-DC Converter IC) & related regulator circuit components	SMPS P.C.B. Refer to Fig. 2

7.1.3. Part Location

7.1.3.1. SMPS P.C.B.

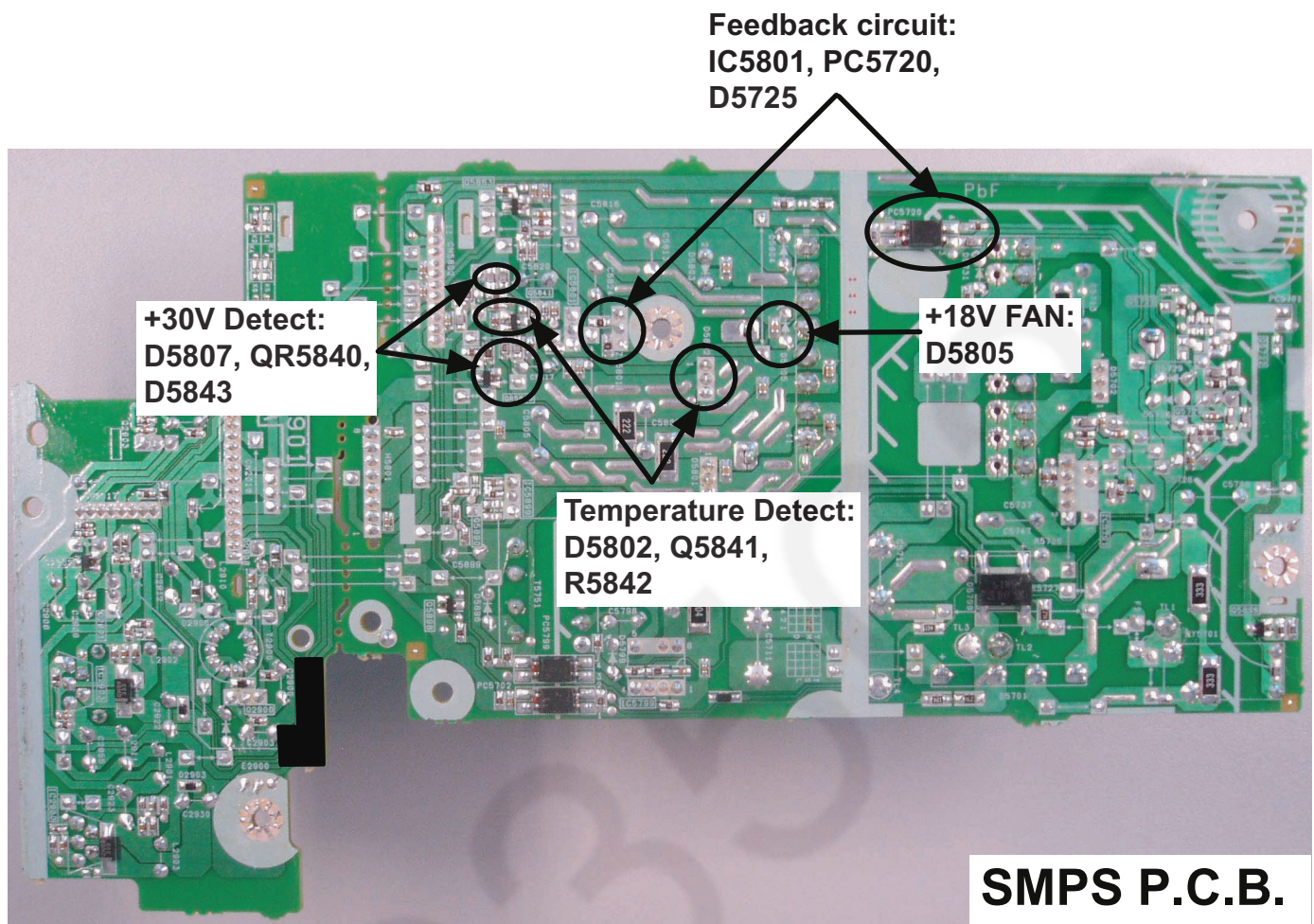


Fig.1 SMPS P.C.B.

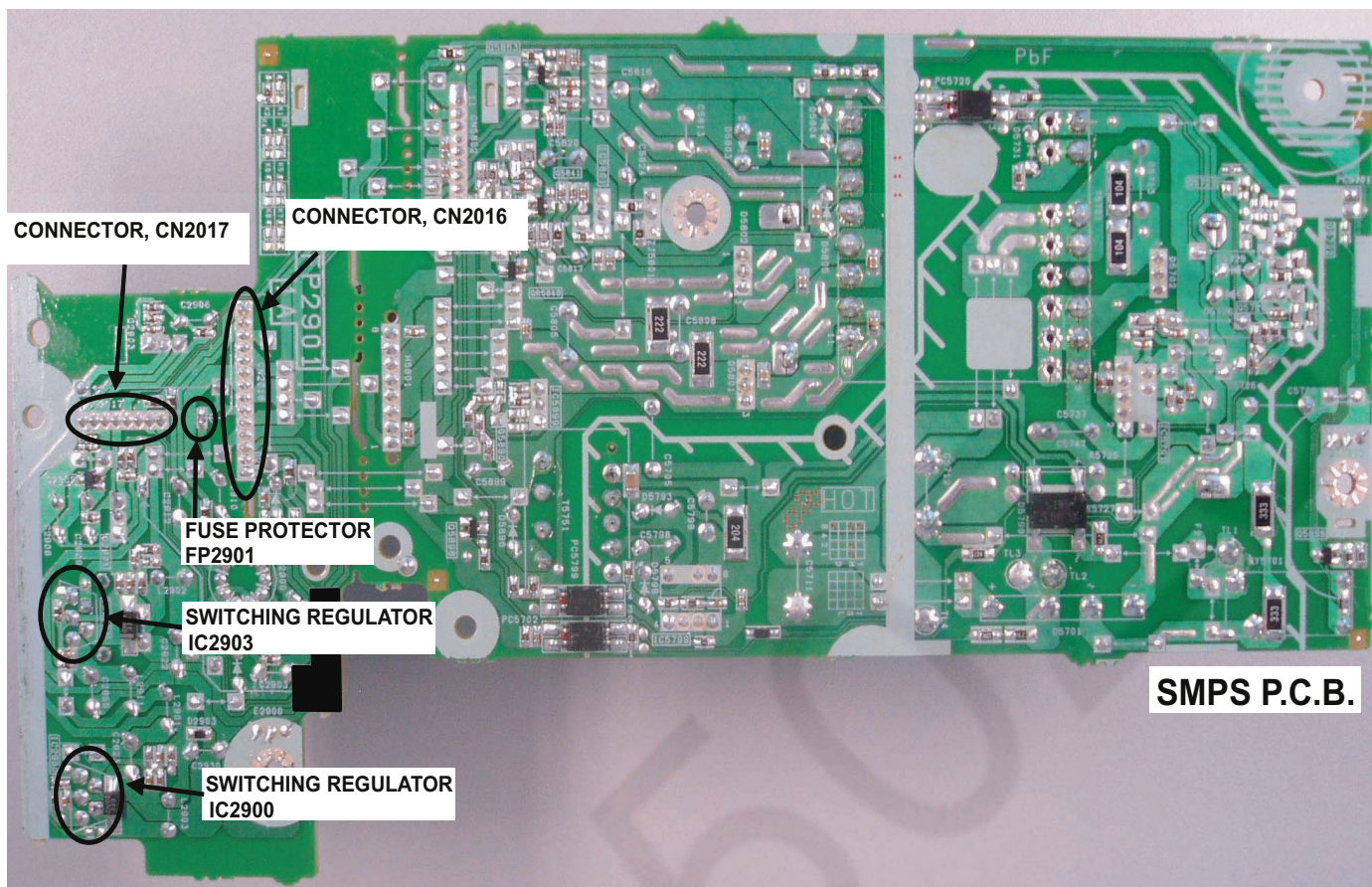


Fig. 2 SMPS P.C.B.

7.1.3.2. Analog Amp P.C.B.

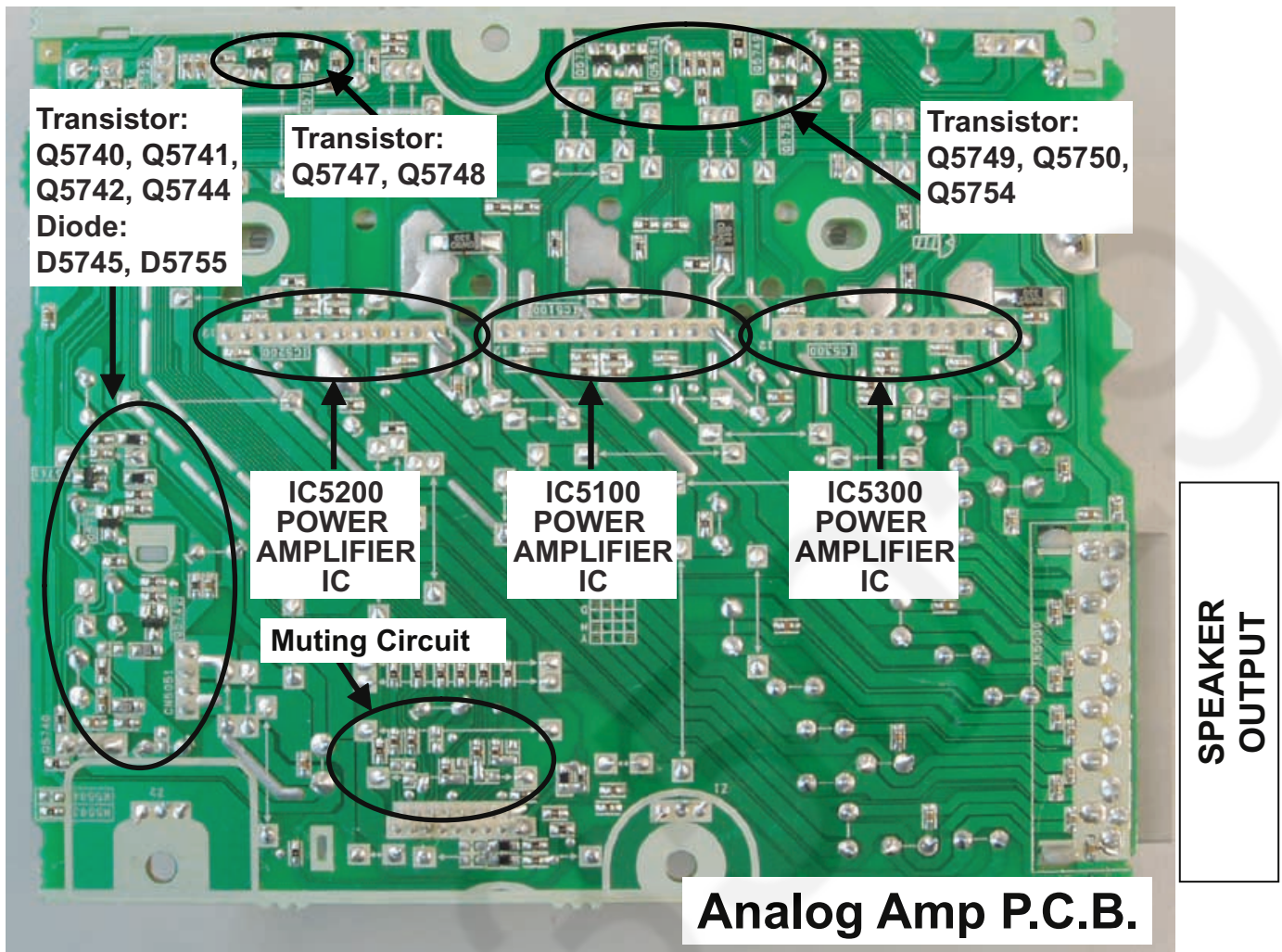


Fig. 3 Analog Amp P.C.B.

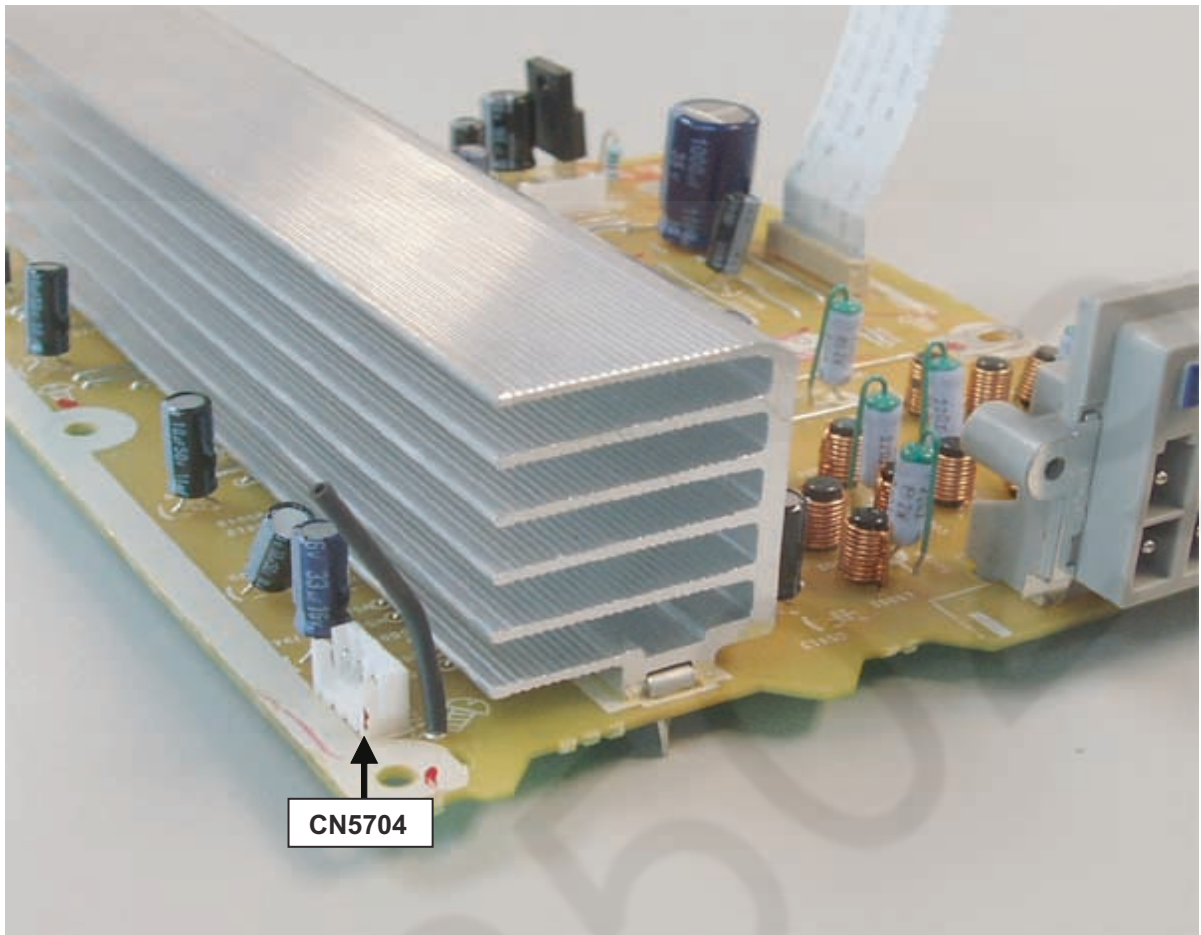


Fig. 4 Fan Connector

7.1.3.3. Power Amplifier IC Configuration

		PT170GA/GC/GS-K
IC5100	Pin (2)	Front Right
	Pin (12)	Front Left
IC5200	Pin (2)	Surround Right
	Pin (12)	Surround Left
IC5300	Pin (2)	Sub-Woofer +
	Pin (4)	Sub-Woofer -
	Pin (12)	Center +
	Pin (10)	Center -

Table 1 Power Amplifier IC Configuration

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

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

7.3. Basic Troubleshooting Guide for HDMI AV Output

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

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

8 Service Fixture & Tools

8.1. Service Tools and Equipment

Prepare service tools before process service position.

Service Tools		Remarks
Analog Amp P.C.B. (CN5500) - SMPS P.C.B. (H5801)	REXX0725 (8P cable)	(RTL)
Main P.C.B. (CN2009) - Analog Amp P.C.B. (CN5050)	REEX0815 (17P FFC)	(RTL)
Main P.C.B. (H2901) - SMPS P.C.B. (CN2016)	REXX0653-J (14P cable)	(RTL)
Main P.C.B. (CN2001) - DVD Module P.C.B. (FP8101)	REEX1009 (50P FFC)	(RTL)
Main P.C.B. (H2900) - SMPS P.C.B. (CN2017)	REXX0724 (8P FFC)	(RTL)

9 Disassembly and Assembly Instructions

“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. Do take note of the locators on each printed circuit board during reassembling procedures.
5. The Switch Regulator IC may have high temperature after prolonged use.
6. 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**

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

- Disassembly of Top Cabinet
- Disassembly of Rear Panel
- Disassembly of DVD Mechanism Unit (DLS6)
- Disassembly of Front Panel Assembly
- Disassembly of Panel, Power Button P.C.B.
- Disassembly of MPort / USB P.C.B.
- Disassembly of Mic P.C.B.
- Disassembly of DVD Lid
- Disassembly of AC Inlet P.C.B.
- Disassembly of Main P.C.B.
- Disassembly of Analog Amp P.C.B.
- Replacement of 2CH BTL Power Amplifier IC (IC5100)
- Replacement of 2CH BTL Power Amplifier IC (IC5200)
- Replacement of 2CH BTL Power Amplifier IC (IC5300)
- Disassembly of SMPS P.C.B & Voltage Selector P.C.B.
- Replacement of Switching Regulator IC (IC5701)
- Replacement of Regulator Diode (D5802)
- Disassembly of DVD Module P.C.B.
- Assembling and Disassembling of Traverse Unit

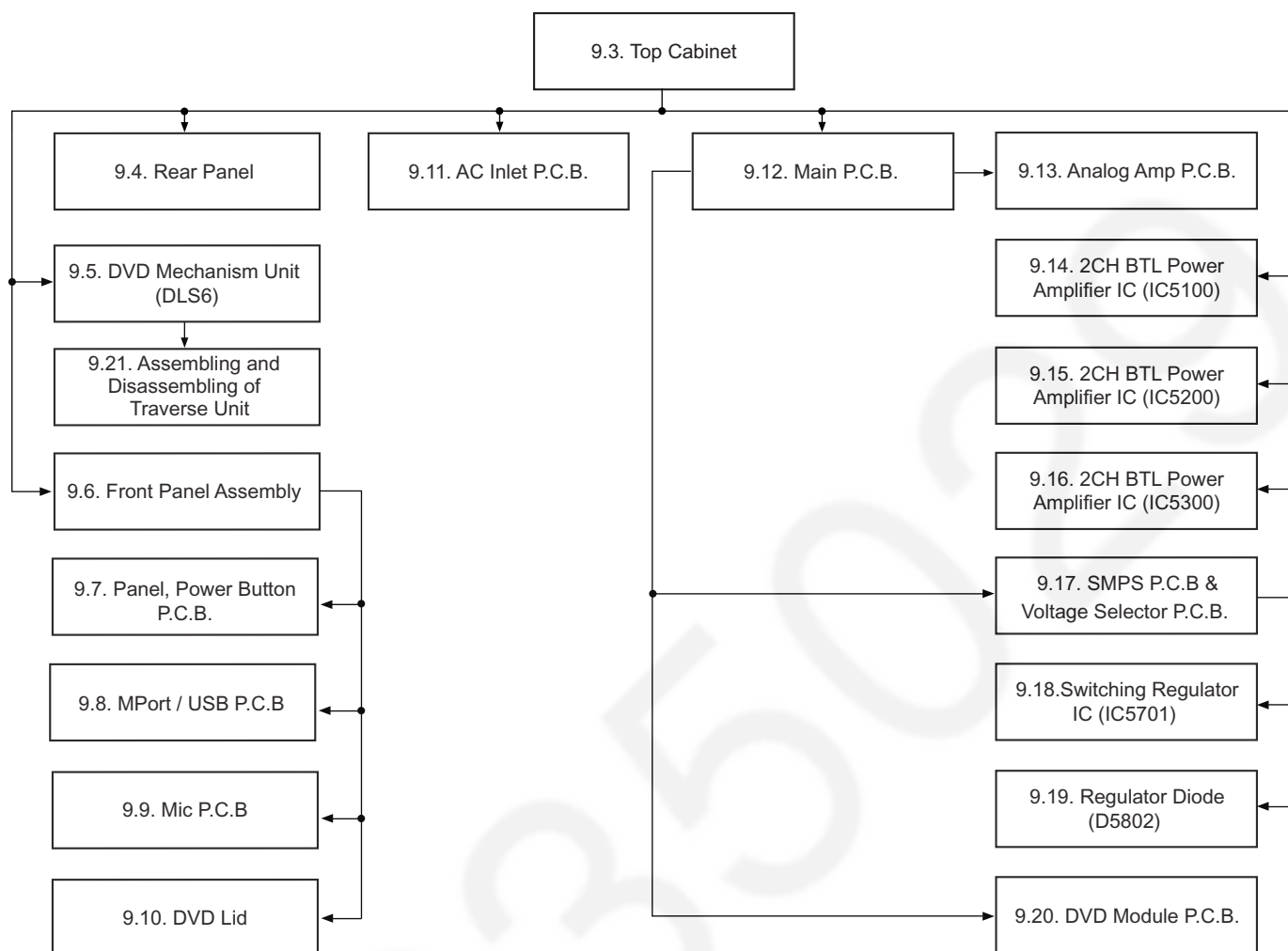
CAUTION NOTE:

Please use original screw and at correct locations.

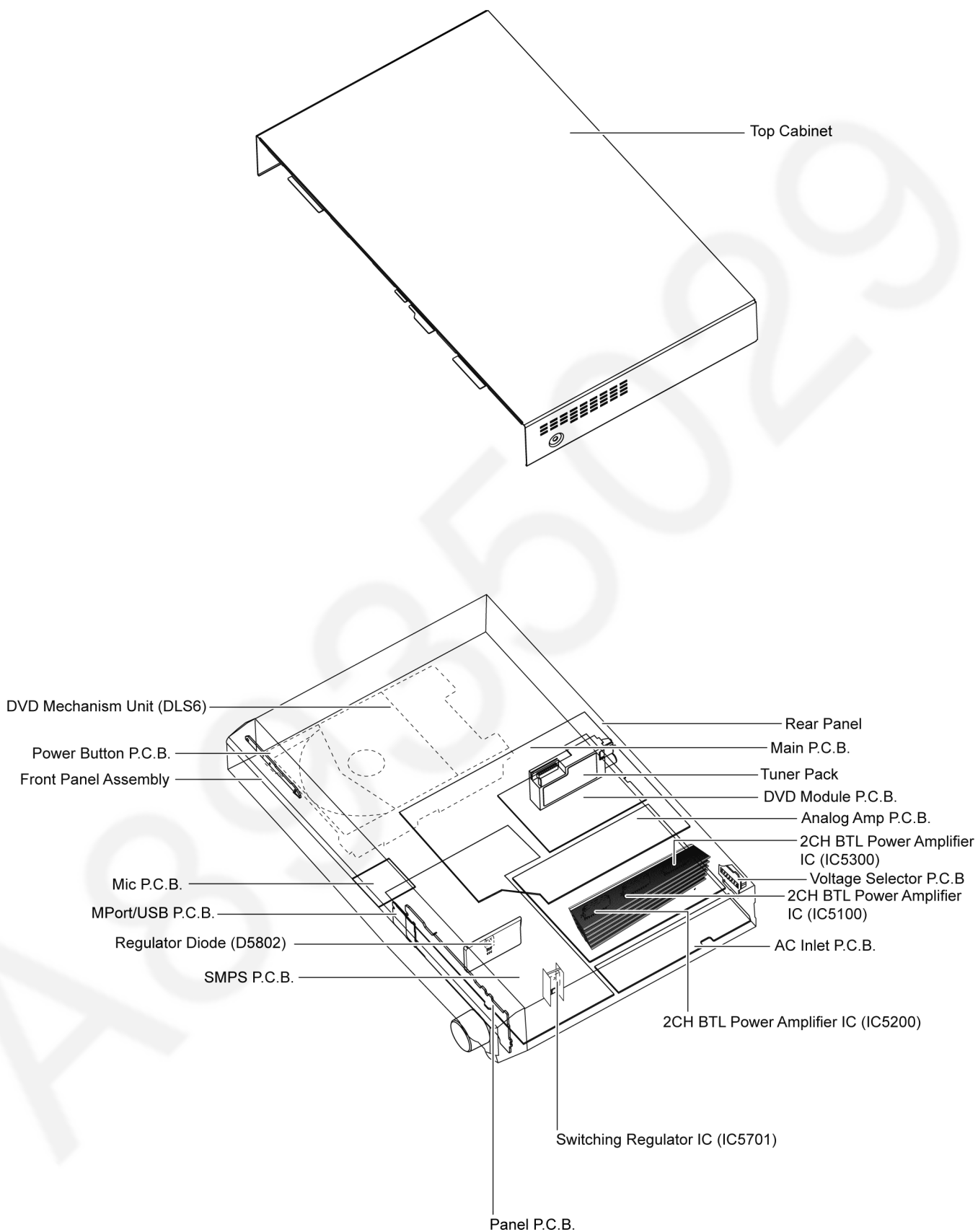
Below shown is part no. of different screw types used:

- | | |
|------------------------|-----------------------|
| a :RHD30007-K2J | g :RHD30090-1 |
| b :RHD30119-S | h :RHD30111-31 |
| c :XSN3+4FJ | i :XTB3+10JFJ |
| d :RHDX03001 | j :XTB3+8TFJ |
| e :RHD26046 | |
| f :RHD26403-1 | |

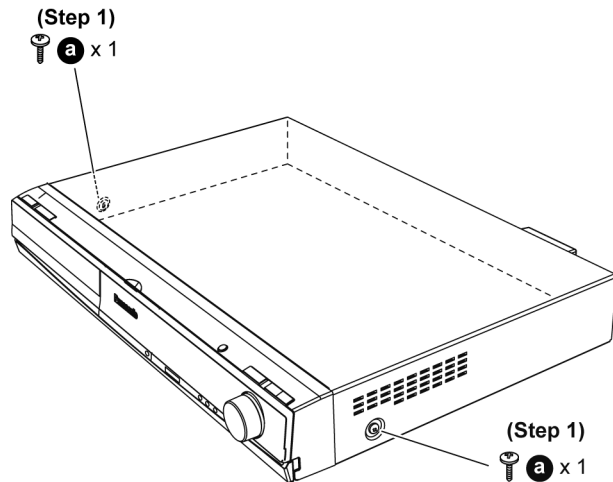
9.1. Disassembly Flow Chart



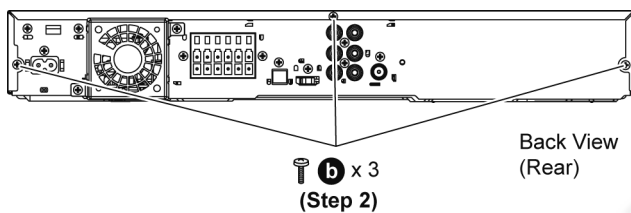
9.2. Main Components and P.C.B. Locations



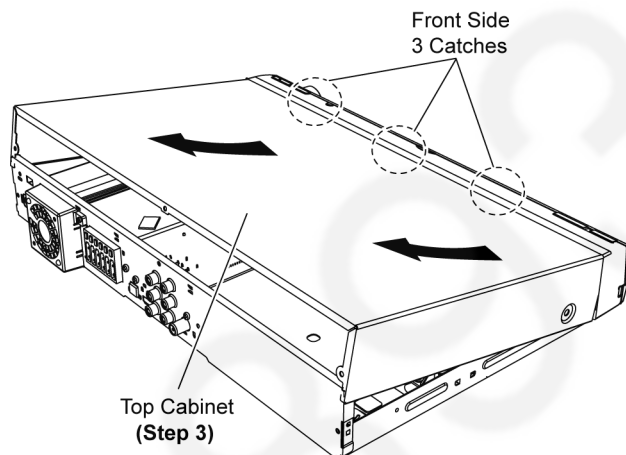
9.3. Disassembly of Top Cabinet



Step 1 Remove 2 screws at the sides of the top cabinet



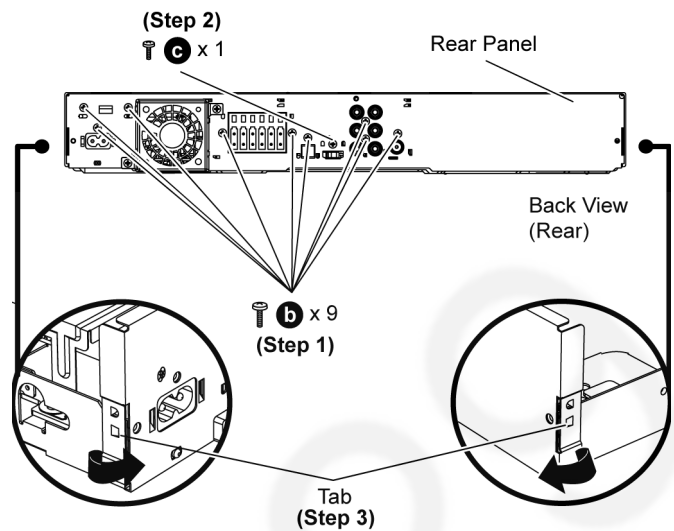
Step 2 Remove 3 screws at the rear of the top cabinet.



Step 3 Lift up the back part of the top cabinet and remove it in the direction of arrows.

9.4. Disassembly of Rear Panel

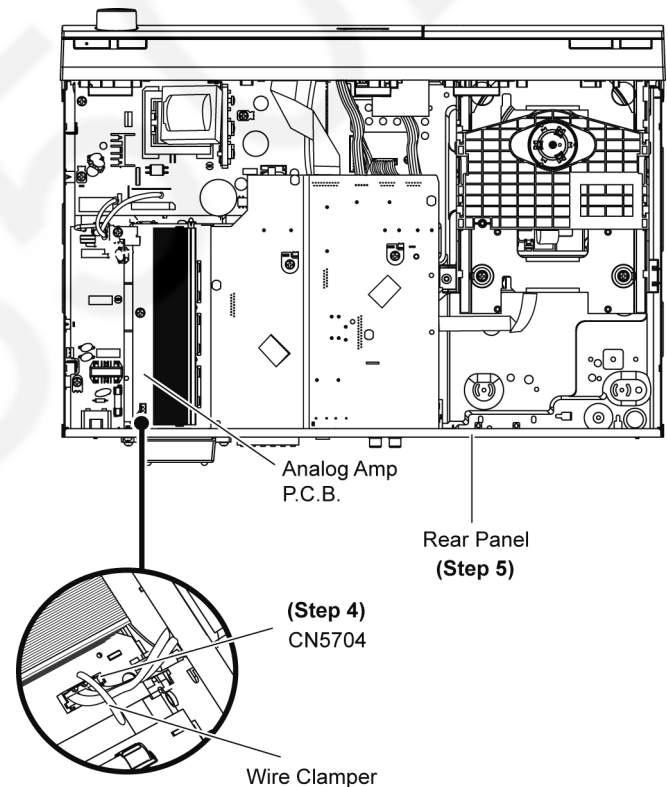
- Follow (Step 1) to (Step 3) of Item 9.3.



Step 1 Remove 9 screws at the rear panel.

Step 2 Remove 1 screw at the rear panel.

Step 3 Release the tab of each side of the rear panel in the direction of arrow.

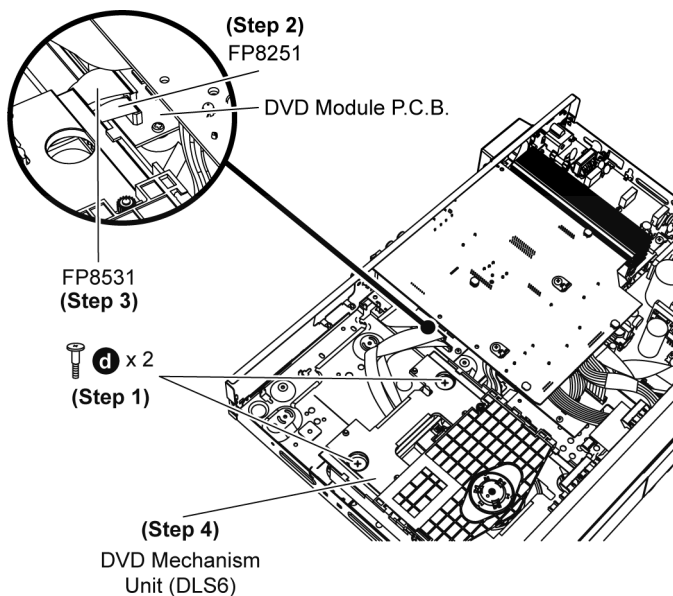


Step 4 Twist the wire clammer & detach the fan unit connector (CN5704) on Analog Amp P.C.B.

Step 5 Remove the rear panel.

9.5. Disassembly of DVD Mechanism Unit (DLS6)

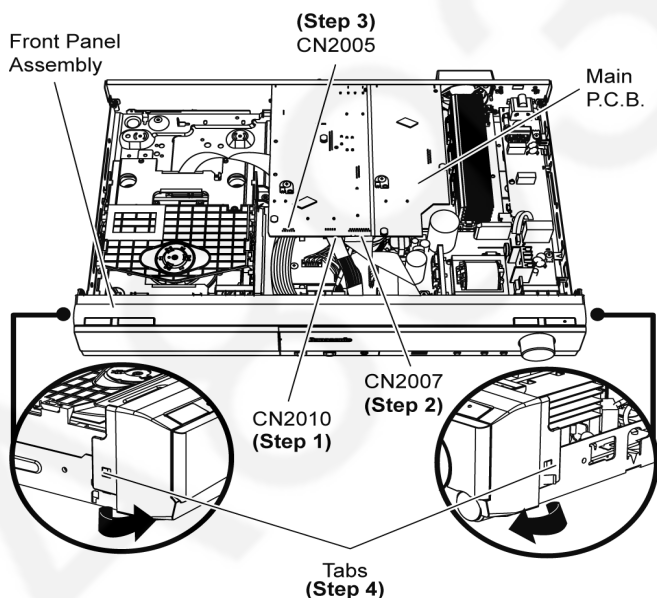
- Follow (Step 1) to (Step 3) of Item 9.3.



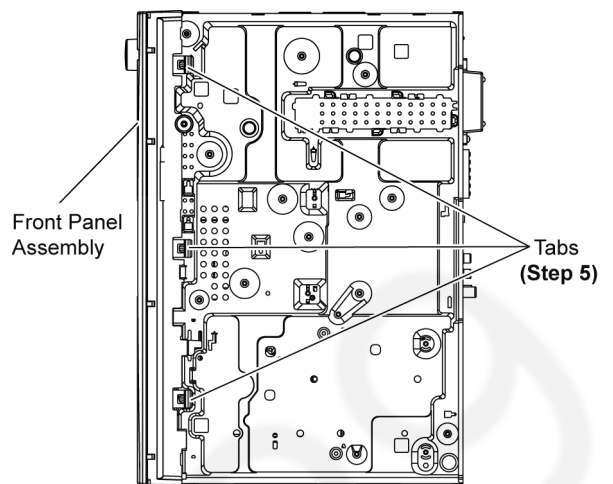
- Step 1** Remove 2 screws from DVD Mechanism Unit (DLS6).
Step 2 Detach 7P FFC at the connector (FP8251) on DVD Module P.C.B.
Step 3 Detach 26P FFC at the connector (FP8531) on DVD Module P.C.B.
Step 4 Remove the DVD Mechanism Unit (DLS6).

9.6. Disassembly of Front Panel Assembly

- Follow (Step 1) to (Step 3) of Item 9.3.

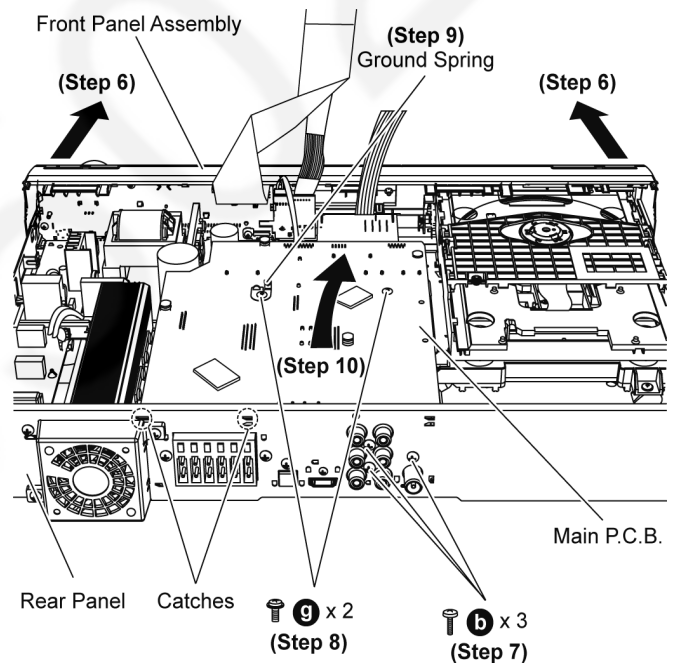


- Step 1** Detach 7P cable at the connector (CN2010) on Main P.C.B.
Step 2 Detach 19P FFC at the connector (CN2007) on Main P.C.B.
Step 3 Detach 10P wire at the connector (CN2005) on Main P.C.B.
Step 4 Release the tabs at each side of the front panel assembly in the direction of arrow.



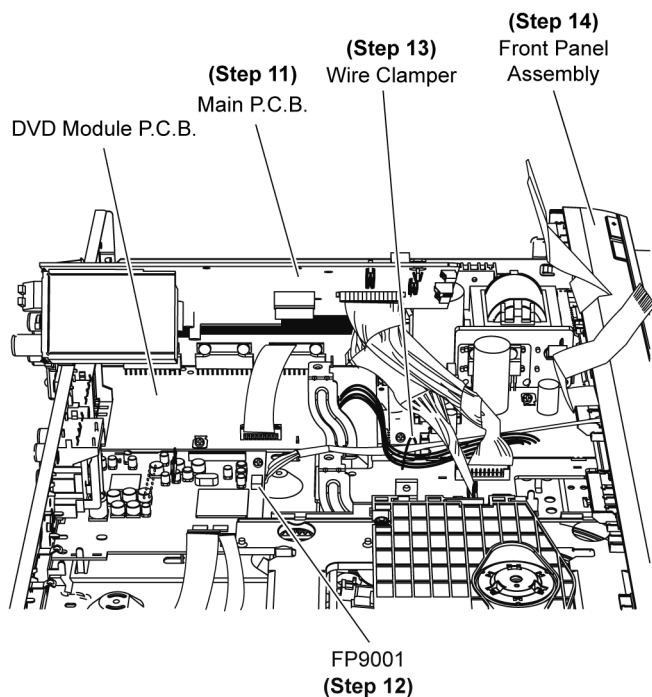
- Step 5** Release the tabs at the bottom of the front panel assembly.

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



- Step 6** Detach the front panel assembly slightly forward in the direction of arrows.
Step 7 Remove 3 screws at the rear panel.
Step 8 Remove 2 screws on the Main P.C.B.
Step 9 Remove 1 ground spring on the Main P.C.B.
Caution 1: Keep the 1 ground spring in safe place. Avoid denting it. Place it back during assembling.
Step 10 Detach Main P.C.B. from rear panel in the direction of arrow.

Caution 2: During detaching Main P.C.B from the rear panel, please be careful of 2 catches at the rear panel.



Step 11 Lift up the Main P.C.B. according to the diagram shown.

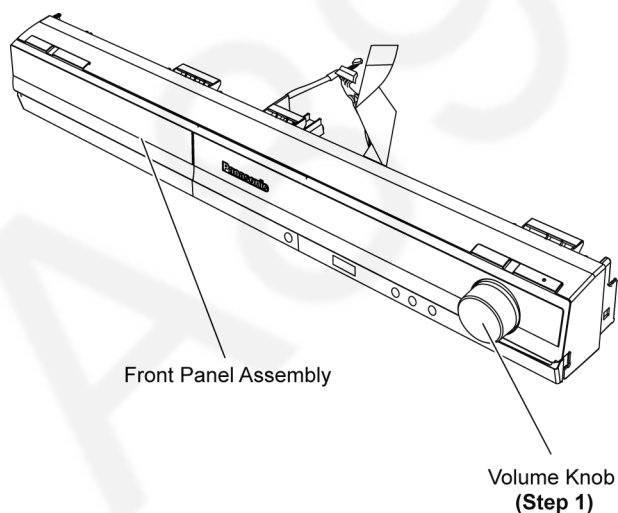
Step 12 Detach 5P cable at the connector (FP9001) on DVD Module P.C.B.

Step 13 Twist the wire clamper to release 5P cable.

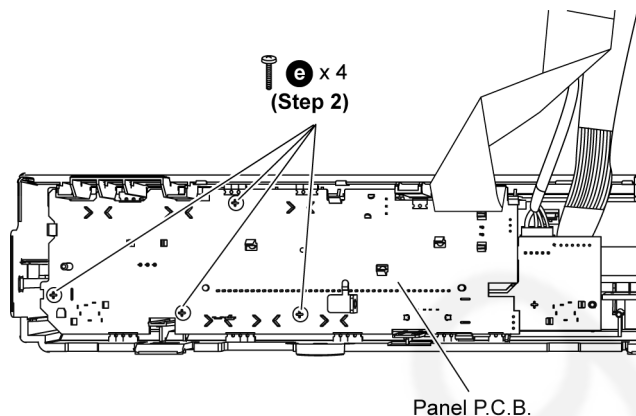
Step 14 Remove the front panel assembly.

9.7. Disassembly of Panel, Power Button P.C.B.

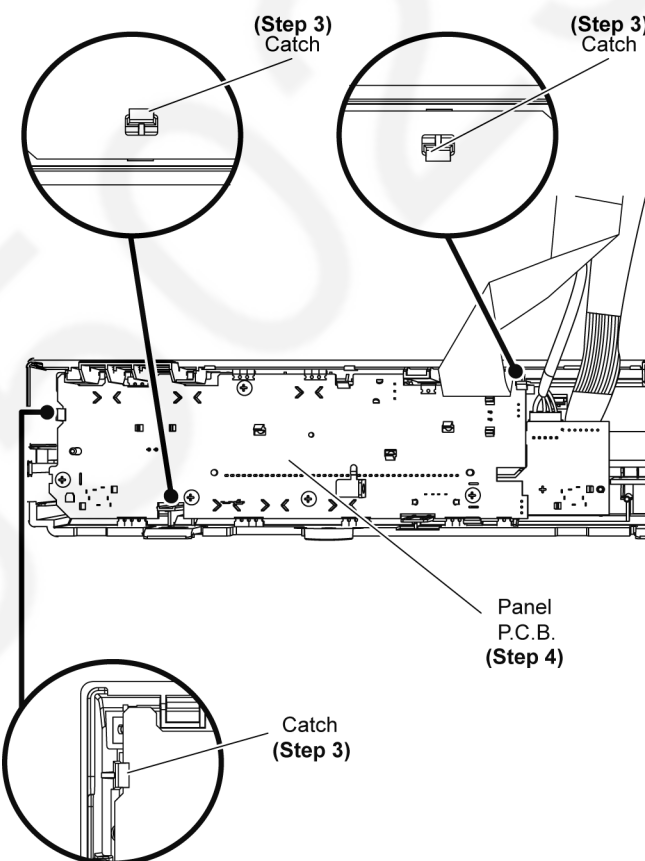
- Follow (Step 1) to (Step 3) of Item 9.3.
- Follow (Step 1) to (Step 13) of Item 9.6.



Step 1 Remove the volume knob.

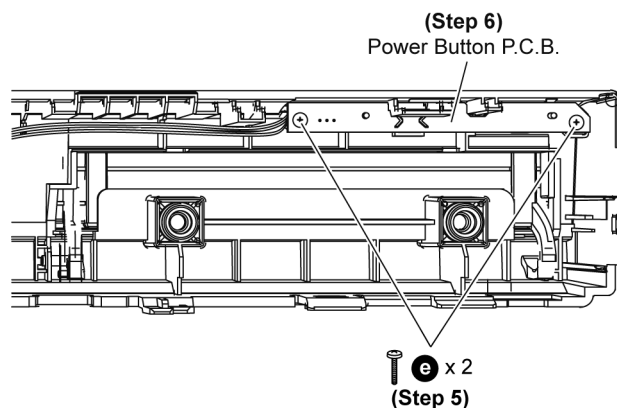


Step 2 Remove 4 screws on Panel P.C.B.



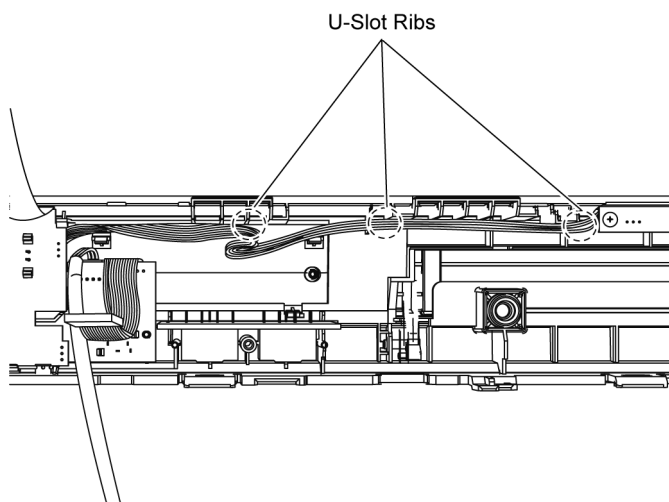
Step 3 Release 3 catches.

Step 4 Remove Panel P.C.B.



Step 5 Remove 2 screws on Power Button P.C.B.

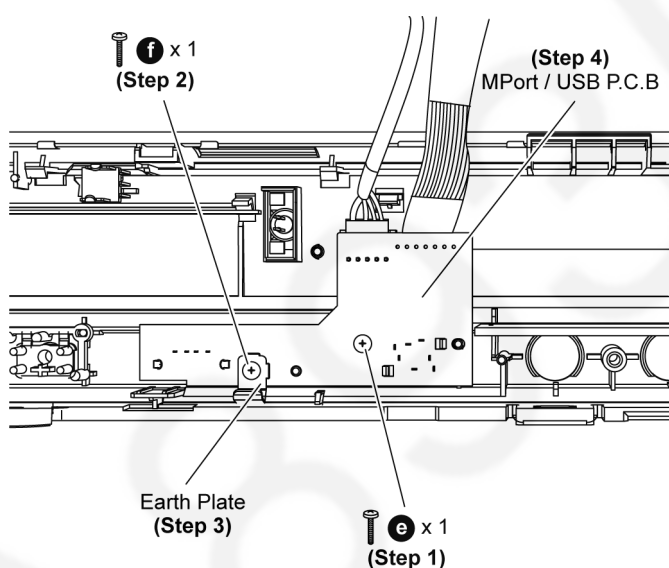
Step 6 Remove Power Button P.C.B.



Caution: During assembling, ensure the 3P wire that is solder to Power Button P.C.B at location (H6803) is properly inserted into the U-Slot Ribs.

9.8. Disassembly of MPort / USB P.C.B.

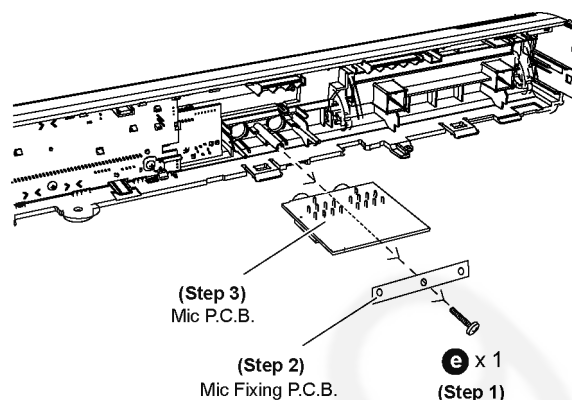
- Follow (Step 1) to (Step 3) of Item 9.3.
- Follow (Step 1) to (Step 14) of Item 9.6.
- Follow (Step 1) to (Step 4) of Item 9.7.



- Step 1** Remove 1 screw (without washer) on MPort/USB P.C.B.
Step 2 Remove 1 screw (with washer) on MPort/USB P.C.B.
Step 3 Remove Earth Plate on MPort/USB P.C.B.
Step 4 Remove MPort/USB P.C.B.

9.9. Disassembly of Mic P.C.B.

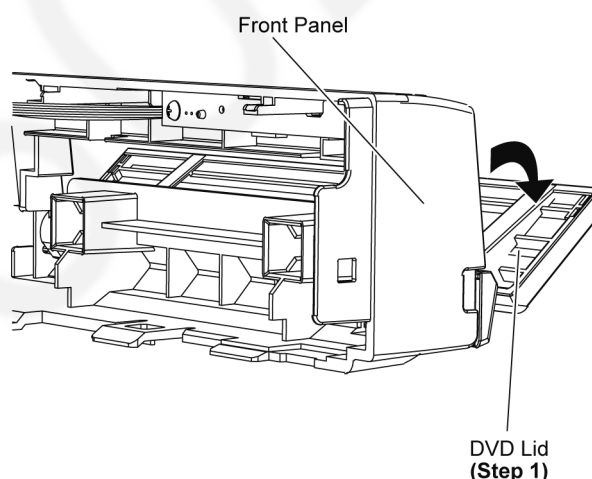
- Follow (Step 1) to (Step 3) of Item 9.3.
- Follow (Step 1) to (Step 14) of Item 9.6.
- Follow (Step 1) to (Step 4) of Item 9.7.



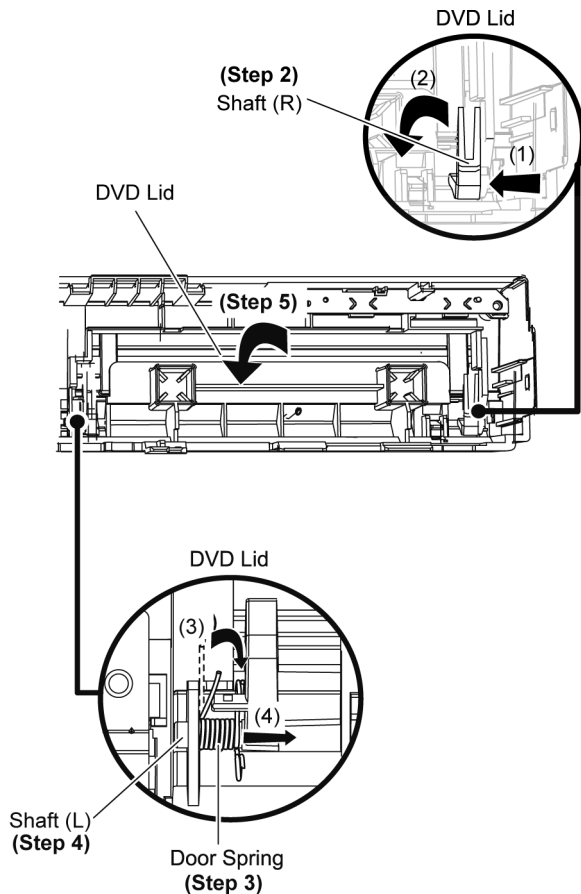
- Step 1** Remove 1 screw on Mic Fixing P.C.B.
Step 2 Remove Mic Fixing P.C.B.
Step 3 Remove Mic P.C.B.

9.10. Disassembly of DVD Lid

- Follow (Step 1) to (Step 3) of Item 9.3.
- Follow (Step 1) to (Step 14) of Item 9.6.



- Step 1** Open the DVD lid in the direction of arrow, until it is aligned parallel with the front panel assembly.



Step 2 Move the shaft (R) of the DVD lid in the direction of arrow (1) & (2).

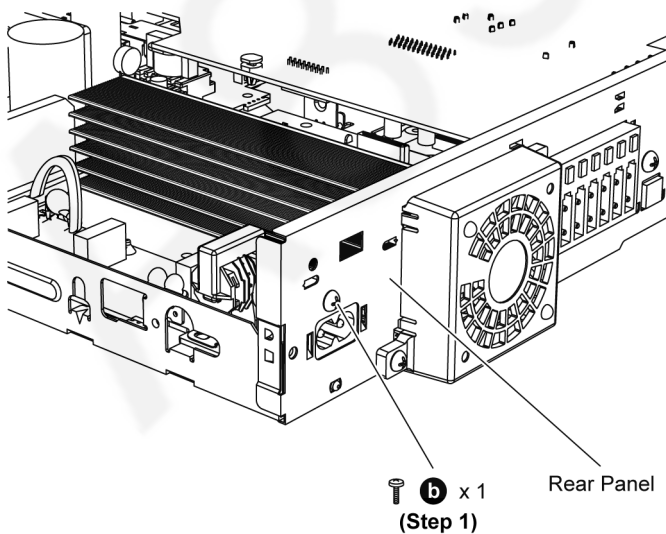
Step 3 Lift the door spring of shaft (L) in the direction of arrow (3).

Step 4 Move the shaft (L) of the DVD Lid in the direction of arrow (4).

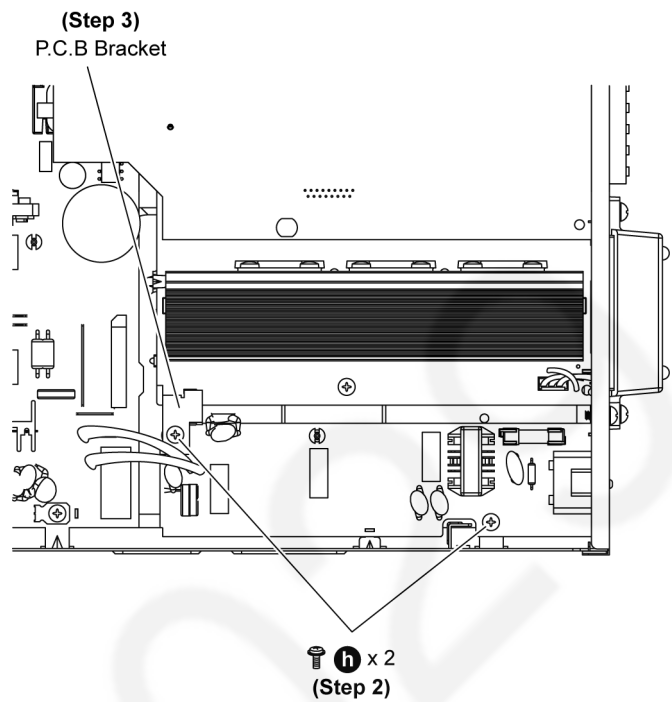
Step 5 Remove the DVD lid in the direction of arrow.

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

- Follow (Step 1) to (Step 3) of Item 9.3.



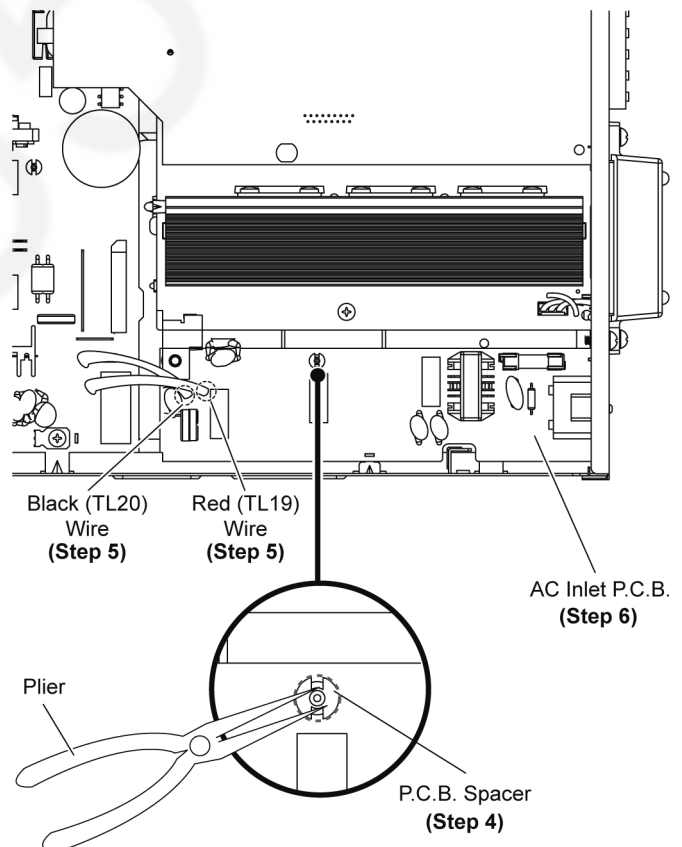
Step 1 Remove 1 screw at the rear panel.



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

Step 3 Remove the P.C.B. bracket.

Caution: Keep the AC Inlet shield plate unit in safe place. Avoid denting it. Place it back during assembling.

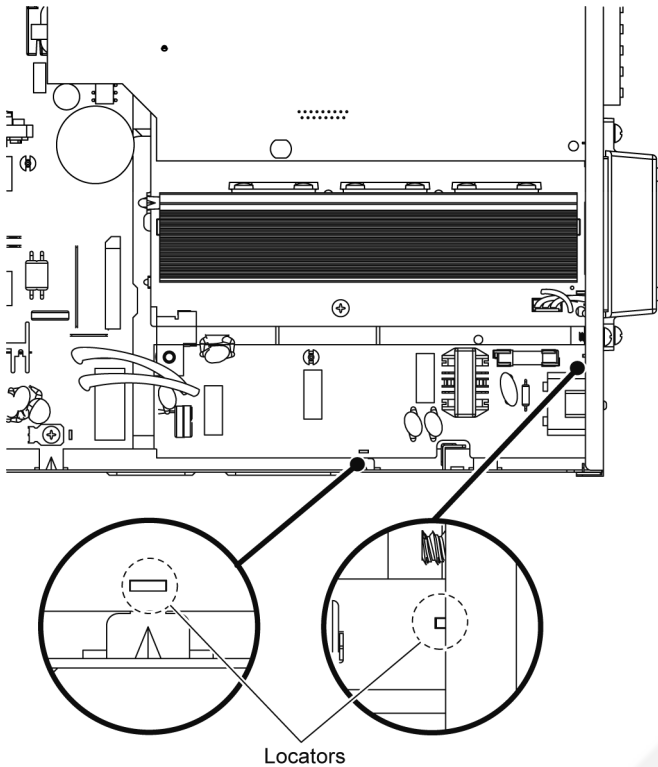


Caution: Keep the P.C.B. bracket in safe place. Avoid denting it. Place it back during assembling.

Step 4 Use plier to release the AC Inlet P.C.B. Spacer.

Step 5 Desolder Black (TL20) and Red (TL19) wire on AC Inlet P.C.B.

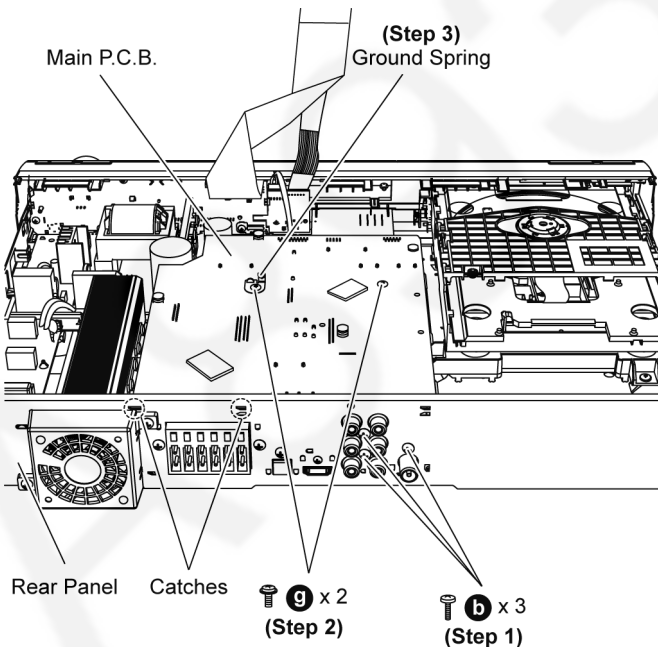
Step 6 Remove AC Inlet P.C.B.



Caution: During assembling of AC Inlet P.C.B., ensure the P.C.B. is seated properly at the locators.

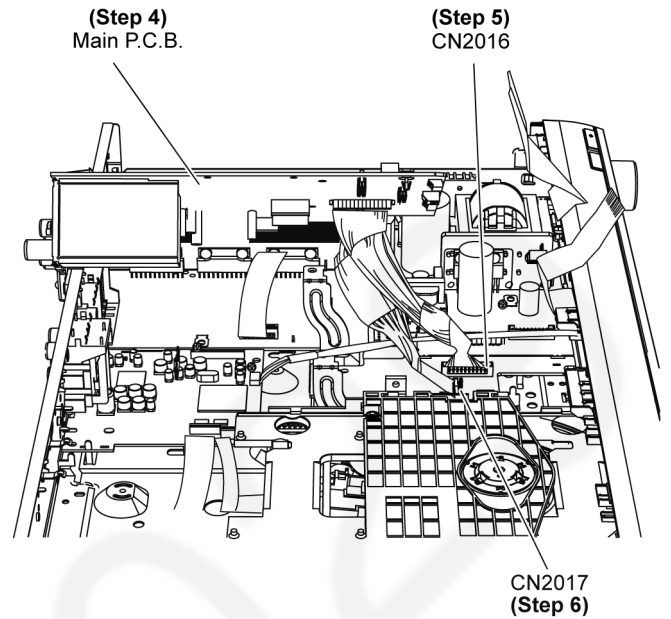
9.12. Disassembly of Main P.C.B.

- Follow (Step 1) to (Step 3) of Item 9.3.
- Follow (Step 1) to (Step 2) of Item 9.6.

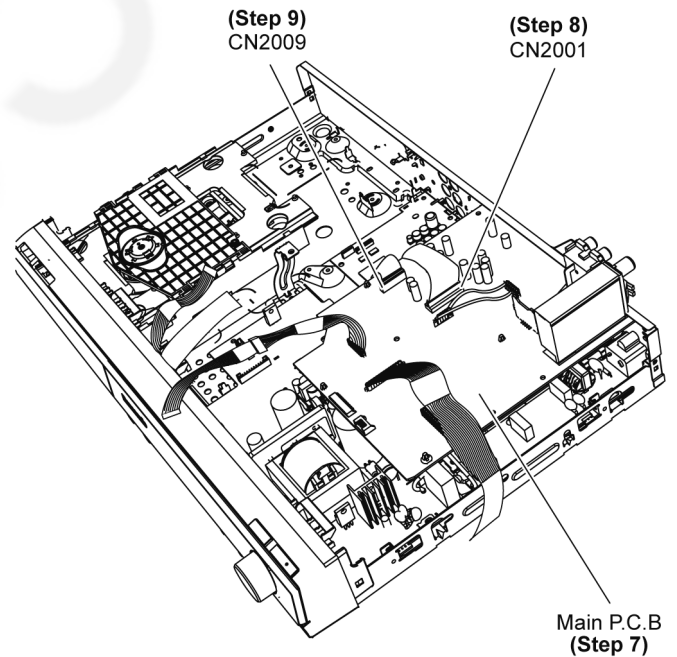


- Step 1** Remove 3 screws at the rear panel.
Step 2 Remove 2 screws on the main P.C.B.
Step 3 Remove 1 Ground Spring on the main P.C.B.

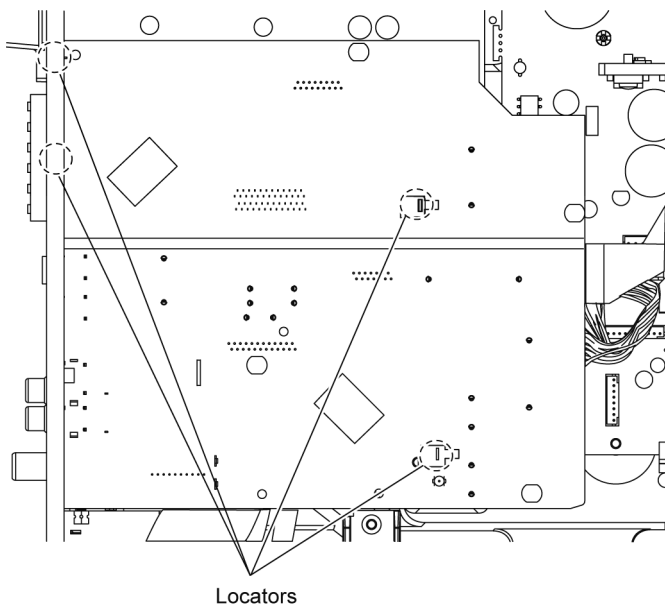
Caution: Keep the 1 ground spring in safe place. Avoid denting it. Place it back during assembling.



- Step 4** Slightly move the Main P.C.B up as diagram shown.
Step 5 Detach 14P cable at the connector (CN2016) on the SMPS P.C.B.
Step 6 Detach 8P cable at the connector (CN2017) on the SMPS P.C.B.



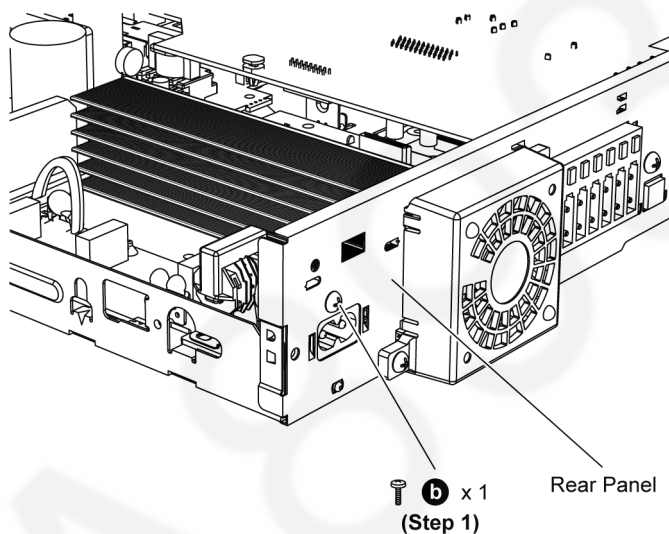
- Step 7** Lift up the Main P.C.B as diagram shown.
Step 8 Detach 50P FFC at the connector (CN2001) on the Main P.C.B.
Step 9 Detach 17P FFC at the connector (CN2009) on the Main P.C.B.
Step 10 Remove Main P.C.B.



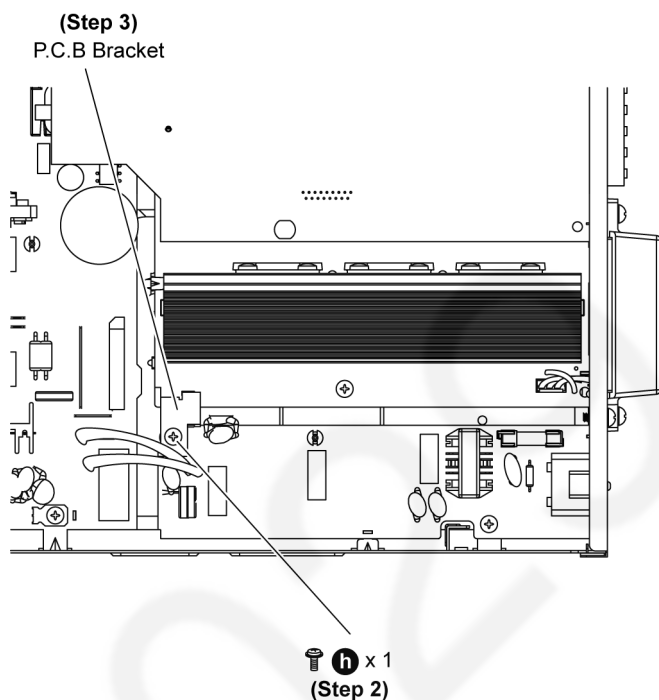
Caution: During assembling, ensure the P.C.B. is seated properly at the locators.

9.13. Disassembly of Analog Amp P.C.B.

- Follow (Step 1) to (Step 3) of Item 9.3.
- Follow (Step 1) to (Step 3) of Item 9.6.
- Follow (Step 8) to (Step 10) of Item 9.6.



Step 1 Remove 1 screw at the rear panel.

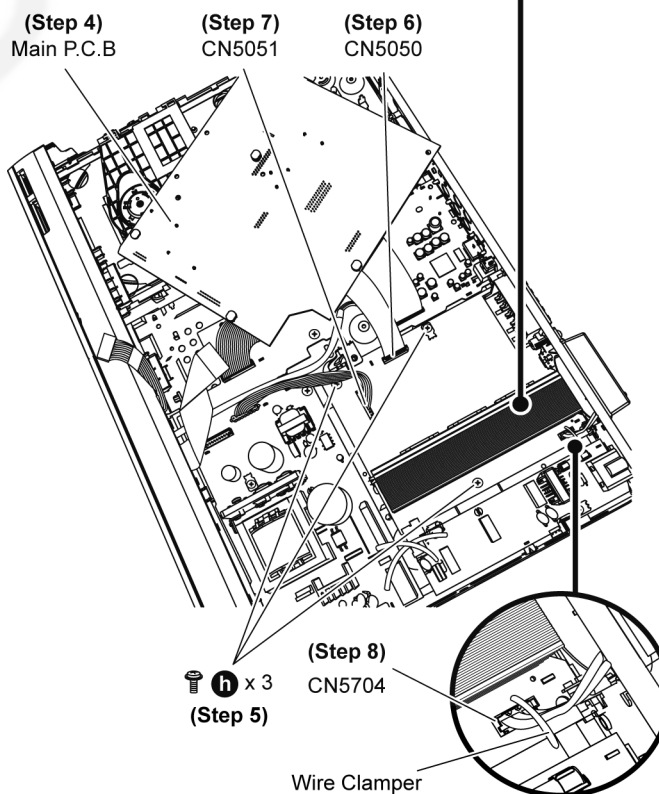


Step 2 Remove 1 screw at the P.C.B. bracket.

Step 3 Remove P.C.B. bracket.

Caution: Keep the P.C.B. bracket in safe place. Avoid denting it. Place it back during assembling.

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



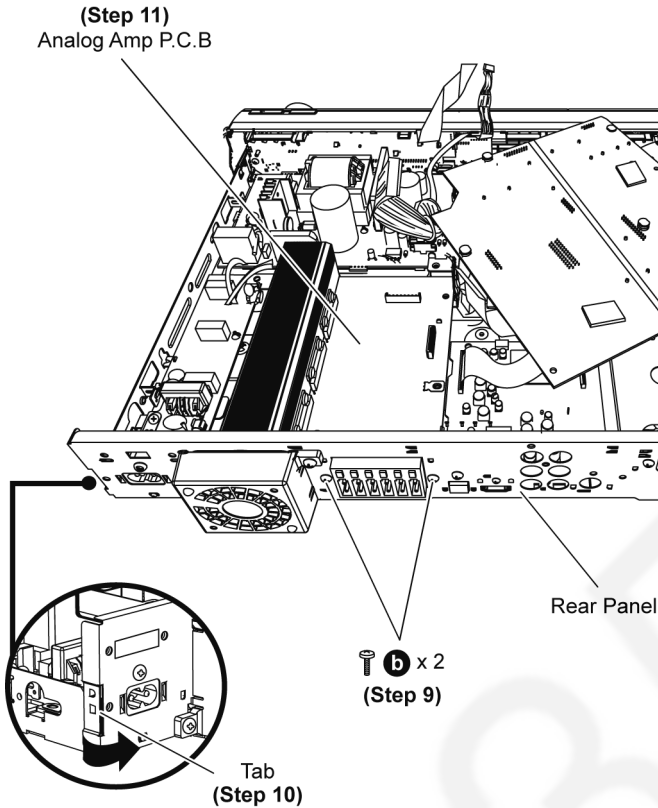
Step 4 Move aside Main P.C.B. and position it according to the diagram shown.

Step 5 Remove 3 screws on Analog Amp P.C.B.

Step 6 Detach 17P FFC at the connector (CN5050) on Analog Amp P.C.B.

Step 7 Detach 4P cable at the connector (CN5051) on Analog Amp P.C.B.

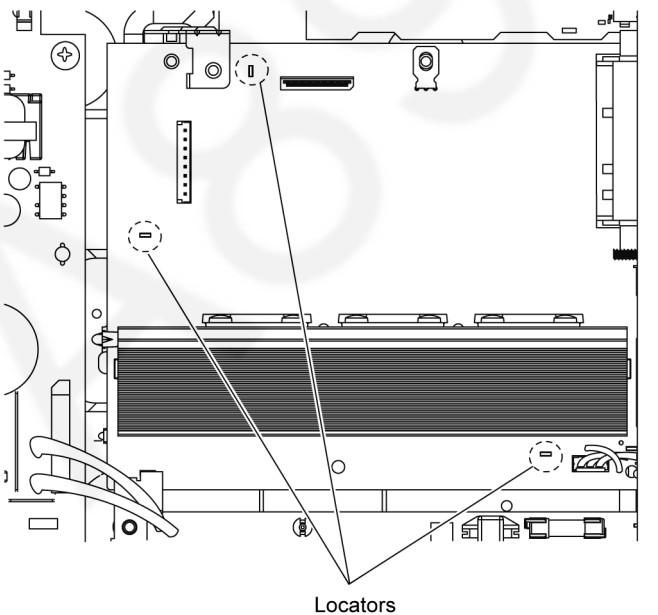
Step 8 Twist the wire clammer to detach 3P cable at the connector (CN5704) on Analog Amp P.C.B.



Step 9 Remove 2 screws at the rear panel.

Step 10 Release the tab of the rear panel in the direction of arrow.

Step 11 Remove Analog Amp P.C.B.

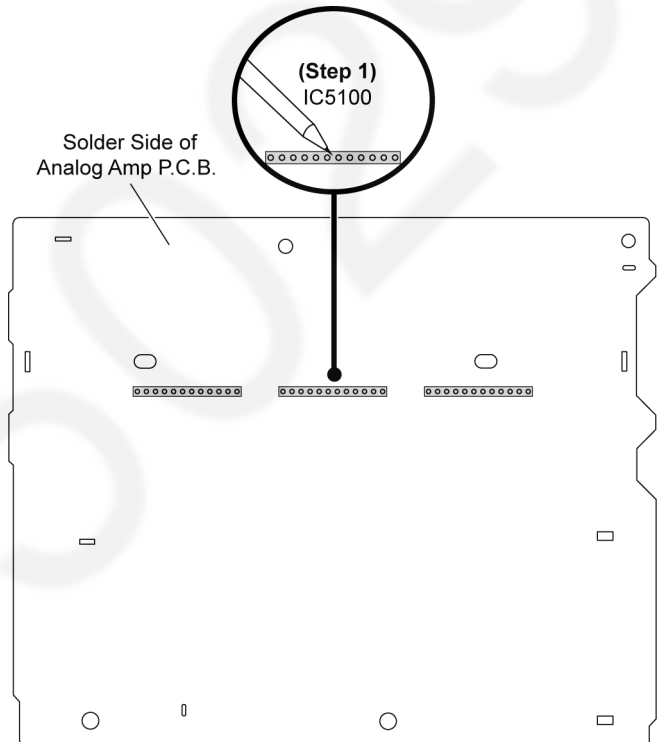


Caution: During assembling, ensure the P.C.B. is seated properly at the locators.

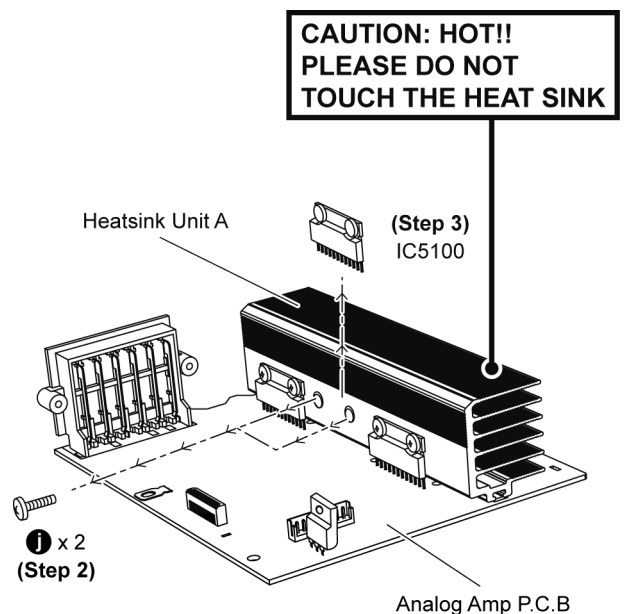
9.14. Replacement of 2CH BTL Power Amplifier IC (IC5100)

9.14.1. Disassembly of 2CH BTL Power Amplifier IC (IC5100)

- Follow (Step 1) to (Step 3) of Item 9.3.
- Follow (Step 1) to (Step 3) of Item 9.6.
- Follow (Step 8) to (Step 10) of Item 9.6.
- Follow (Step 1) to (Step 11) of Item 9.13.



Step 1 Desolder pins of the 2CH BTL Power Amplifier IC (IC5100) on the solder side of Analog Amp P.C.B.

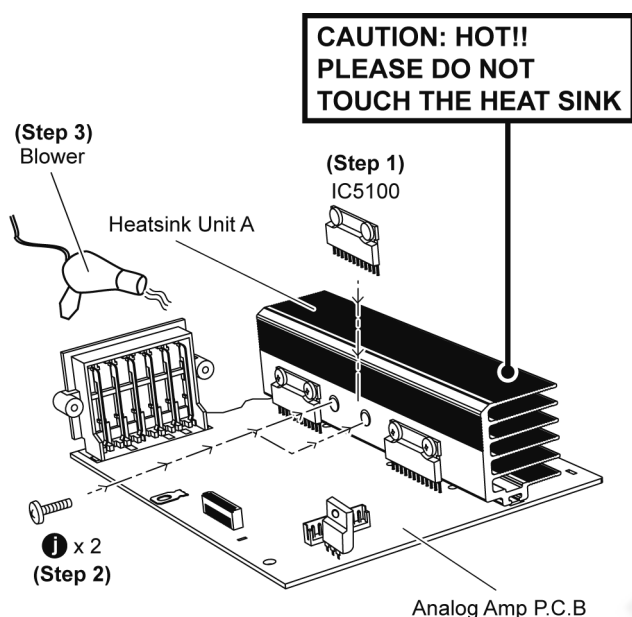


Step 2 Remove 2 screws on 2CH BTL Power Amplifier IC (IC5100).

Step 3 Remove 2CH BTL Power Amplifier IC (IC5100) from Analog Amp P.C.B.

Caution: During replacement of the part, avoid touching the heatsink. It may lead to injuries.

9.14.2. Assembly of 2CH BTL Power Amplifier IC (IC5100)

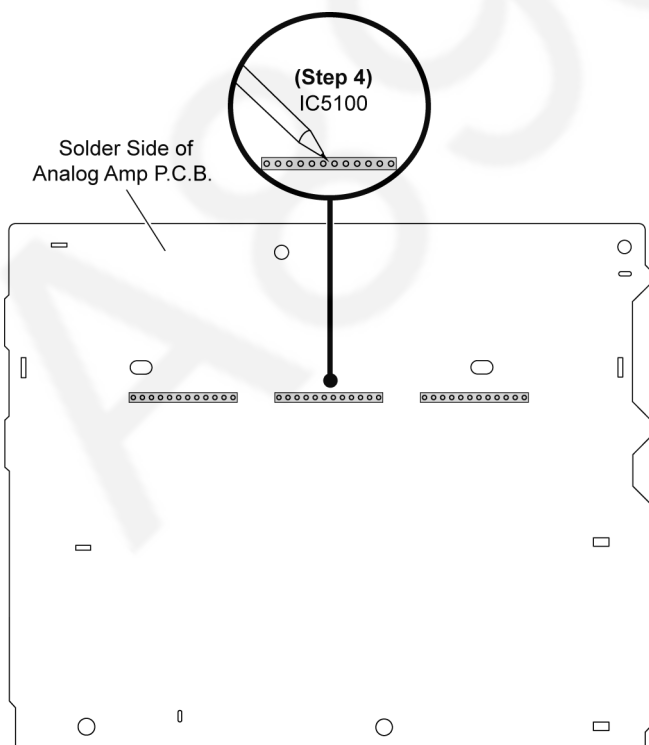


Step 1 Mount 2Ch BTL Power Amplifier IC (IC5100) on to Analog Amp P.C.B.

Caution: Ensure pins of the 2CH BTL Power Amplifier IC (IC5100) are properly seated and soldered on Analog Amp P.C.B.

Step 2 Screw the 2CH BTL Power Amplifier IC (IC5100) to heatsink unit A.

Step 3 Use a blower to remove the minute particles that might be caused after the process of the screwing 2CH BTL Power Amplifier IC (IC5100) to the heatsink unit A.

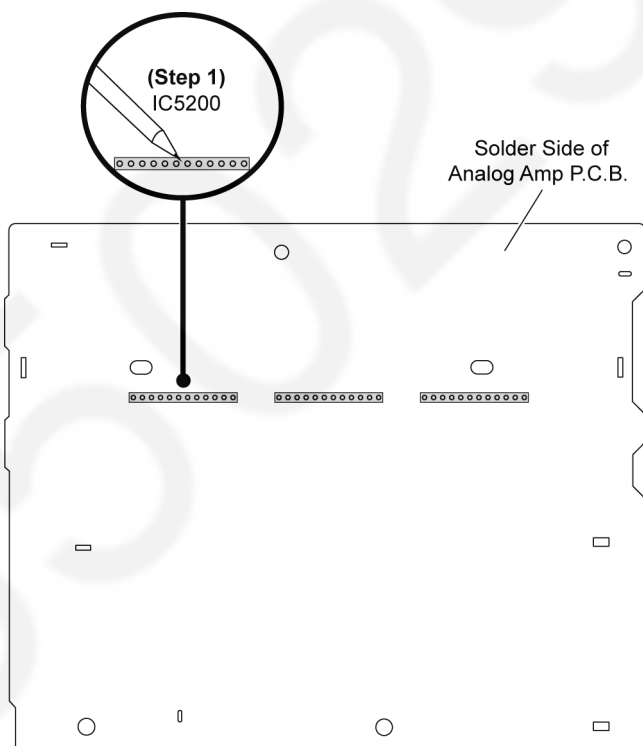


Step 4 Solder pins of the 2CH BTL Power Amplifier IC (IC5100) on the solder side of Analog Amp P.C.B.

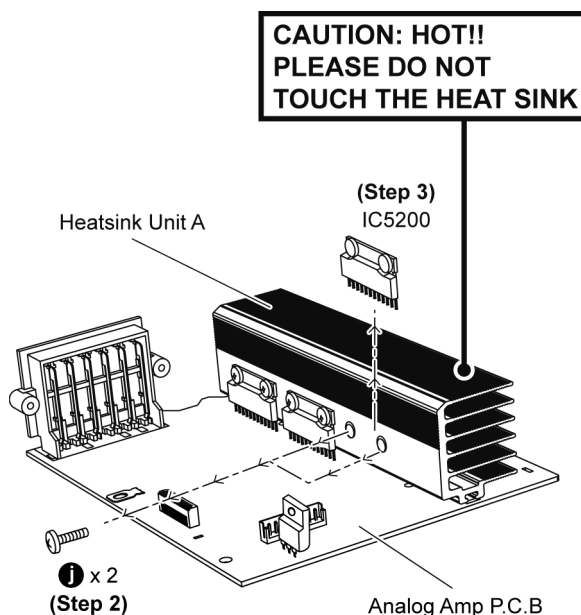
9.15. Replacement of 2CH BTL Power Amplifier IC (IC5200)

9.15.1. Disassembly of 2CH BTL Power Amplifier IC (IC5200)

- Follow (Step 1) to (Step 3) of Item 9.3.
- Follow (Step 1) to (Step 3) of Item 9.6.
- Follow (Step 8) to (Step 10) of Item 9.6.
- Follow (Step 2) to (Step 11) of Item 9.13.



Step 1 Desolder pins of the 2CH BTL Power Amplifier IC (IC5200) on the solder side of Analog Amp P.C.B.



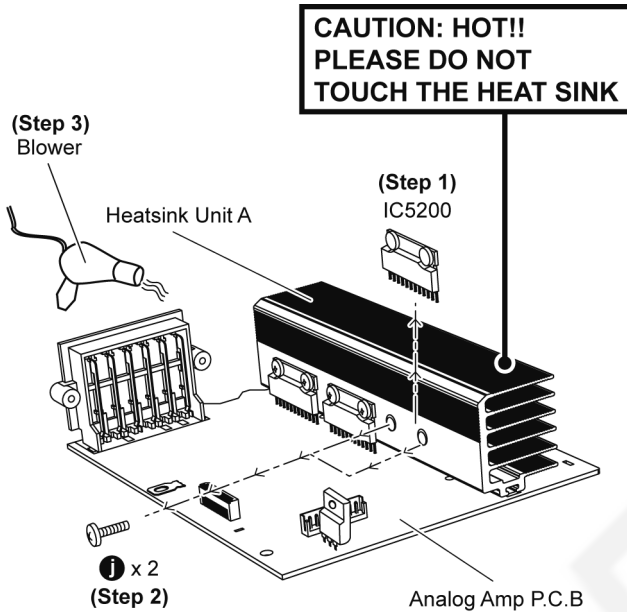
Step 2 Remove 2 screws on 2CH BTL Power Amplifier IC

(IC5200).

Step 3 Remove 2CH BTL Power Amplifier IC (IC5200) from Analog Amp P.C.B.

Caution: During replacement of the part, avoid touching the heatsink. It may lead to injuries.

9.15.2. Assembly of 2CH BTL Power Amplifier IC (IC5200)

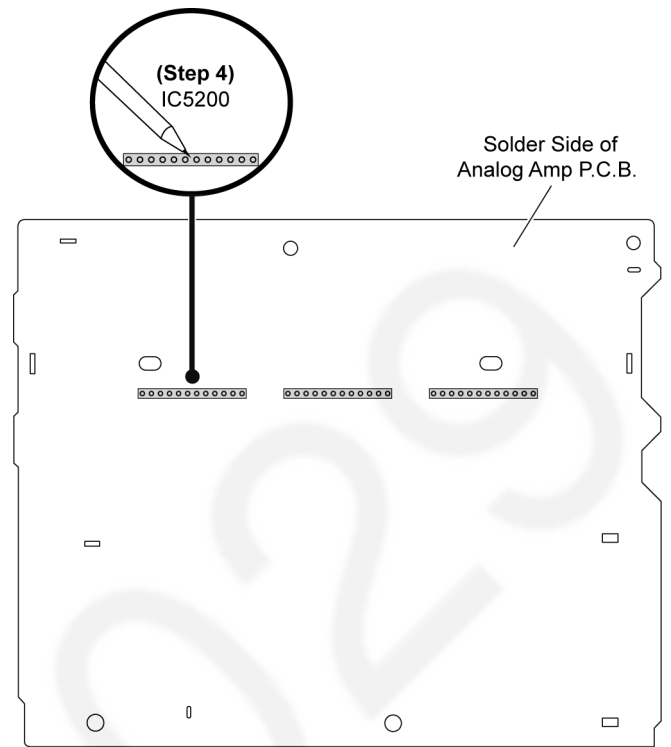


Step 1 Mount 2CH BTL Power Amplifier IC (IC5200) on Analog Amp P.C.B.

Caution: Ensure pins of the 2CH BTL Power Amplifier IC (IC5200) are properly seated and soldered on Analog Amp P.C.B.

Step 2 Screw the 2CH BTL Power Amplifier IC (IC5200) to heatsink unit A.

Step 3 Use a blower to remove the minute particles that might be caused after the process of the screwing 2CH BTL Power Amplifier IC (IC5200) to the heatsink unit A.



Step 4 Solder pins of the 2CH BTL Power Amplifier IC (IC5200) on the solder side of Analog Amp P.C.B.

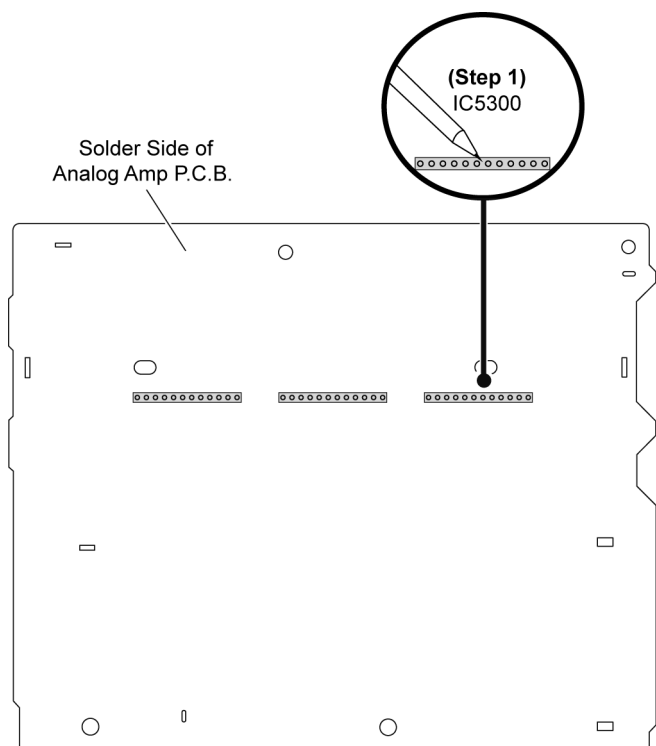
9.16. Replacement of 2CH BTL Power Amplifier IC (IC5300)

9.16.1. Disassembly of 2CH BTL Power Amplifier IC (IC5300)

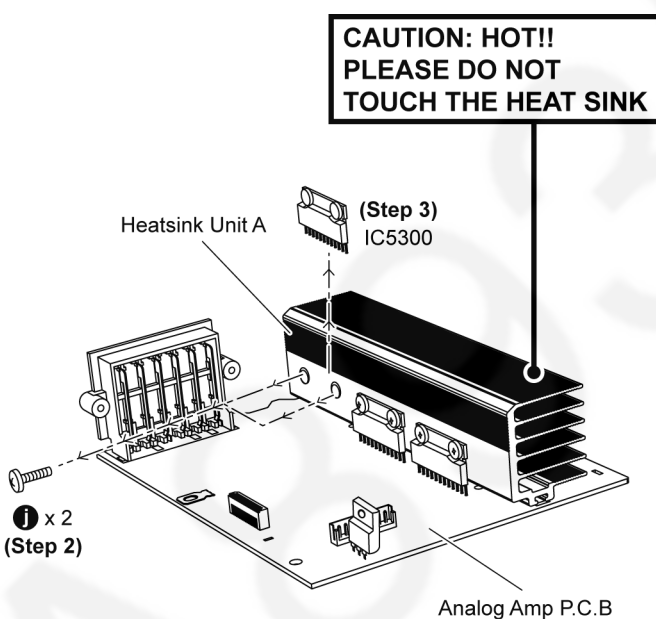
- Follow (Step 1) to (Step 3) of Item 9.3.
- Follow (Step 1) to (Step 3) of Item 9.6.
- Follow (Step 8) to (Step 9) of Item 9.6.
- Follow (Step 2) to (Step 11) of Item 9.13.

Caution: During replacement of the part, avoid touching the heatsink. It may lead to injuries.

9.16.2. Assembly of 2CH BTL Power Amplifier IC (IC5300)

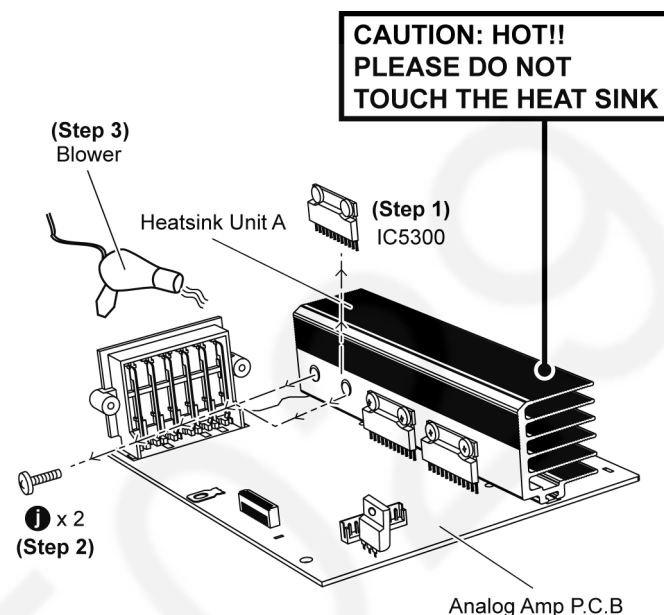


Step 1 Desolder pins of the 2CH BTL Power Amplifier IC (IC5300) on the solder side of Analog Amp P.C.B.



Step 2 Remove 2 screws on 2CH BTL Power Amplifier IC (IC5300).

Step 3 Remove 2CH BTL Power Amplifier IC (IC5300) from Analog Amp P.C.B.

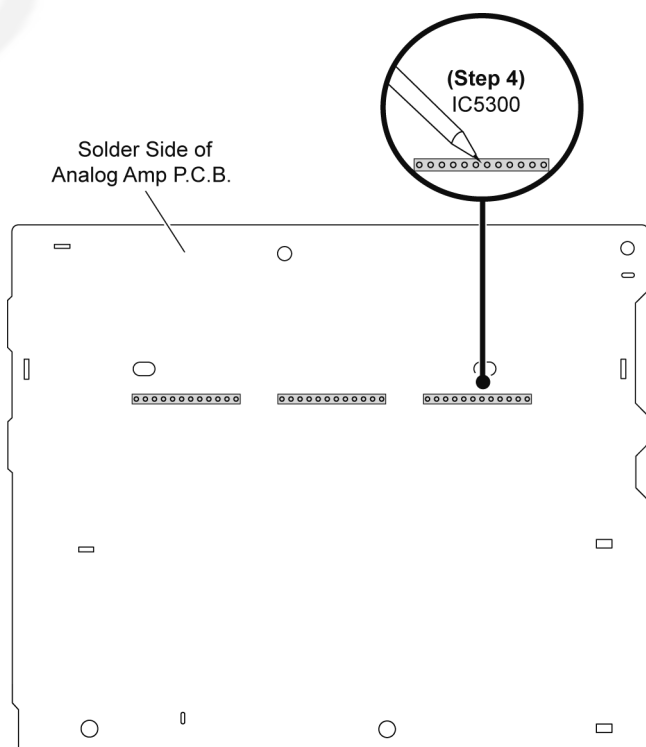


Step 1 Mount 2CH BTL Power Amplifier IC (IC5300) on Analog Amp P.C.B.

Caution: Ensure pins of the 2CH BTL Power Amplifier IC (IC5300) are properly seated and soldered on Analog Amp P.C.B.

Step 2 Screw the 2CH BTL Power Amplifier IC (IC5300) to heatsink unit A.

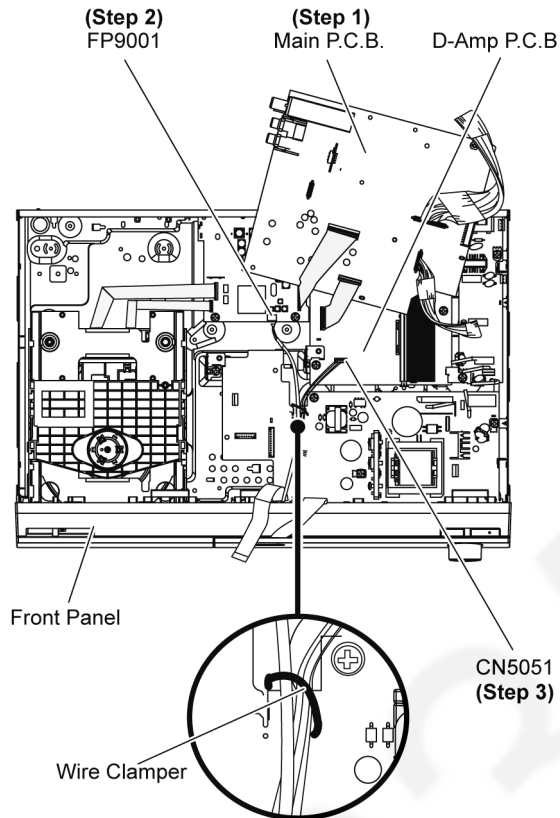
Step 3 Use a blower to remove the minute particles that might be caused after the process of the screwing 2CH BTL Power Amplifier IC (IC5300) to the heatsink unit A.



Step 4 Solder pins of the 2CH BTL Power Amplifier IC (IC5300) on the solder side of Analog Amp P.C.B.

9.17. Disassembly of SMPS P.C.B & Voltage Selector P.C.B.

- Follow (Step 1) to (Step 3) of Item 9.3.
- Follow (Step 1) to (Step 3) of Item 9.6.
- Follow (Step 7) to (Step 10) of Item 9.6.
- Follow (Step 4) to (Step 6) of Item 9.12.

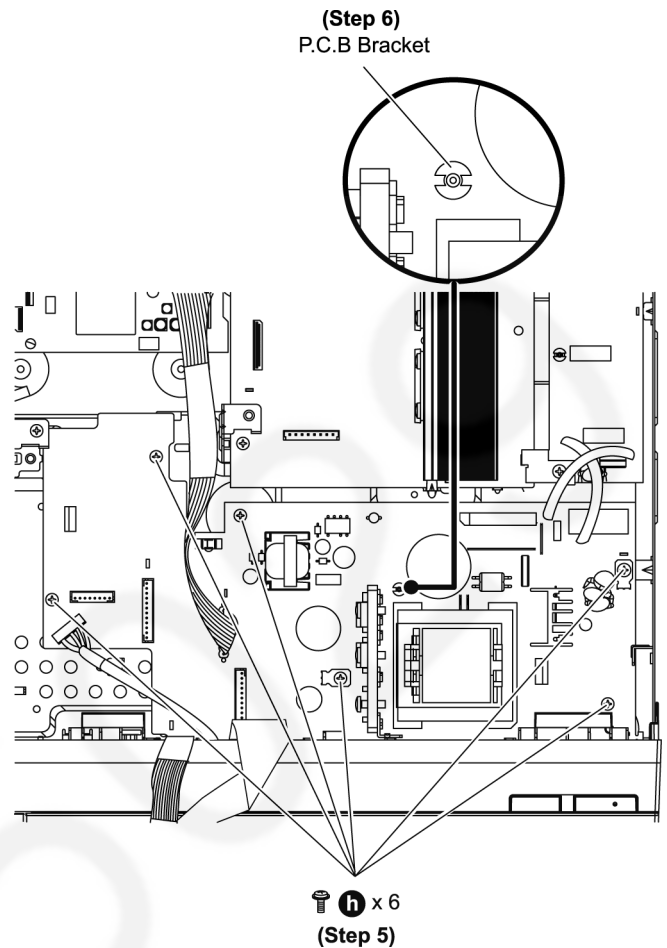


Step 1 Move aside Main P.C.B. and position it according to the diagram shown.

Step 2 Detach 5P cable at the connector (FP9001) on Main P.C.B.

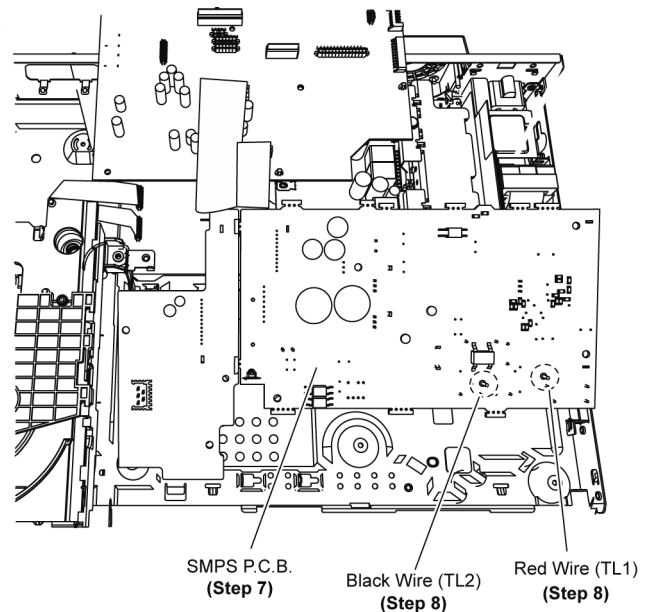
Step 3 Detach 4P cable at the connector (CN5051) on Main P.C.B.

Step 4 Twist the wire clamper to detach 5P & 4P cables.



Step 5 Remove 6 screws on SMPS P.C.B.

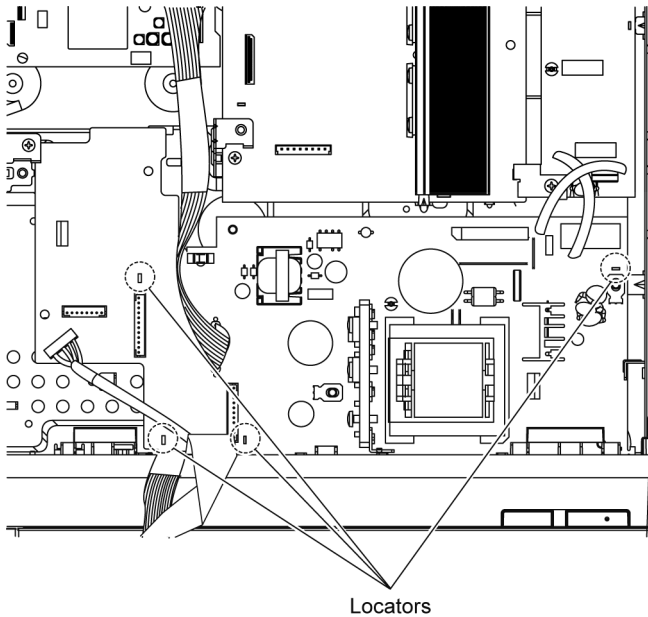
Step 6 Use a plier to release P.C.B. spacer.



Step 7 Flip and position SMPS P.C.B according to diagram show.

Step 8 Desolder Black (TL2) and Red (TL1) wire on SMPS P.C.B.

Step 9 Remove SMPS P.C.B.

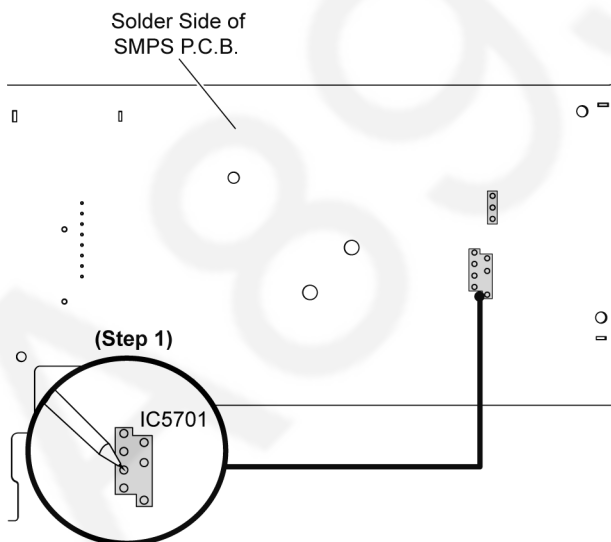


Caution: During assembling procedures, ensure the SMPS P.C.B. is seated properly at the locators.

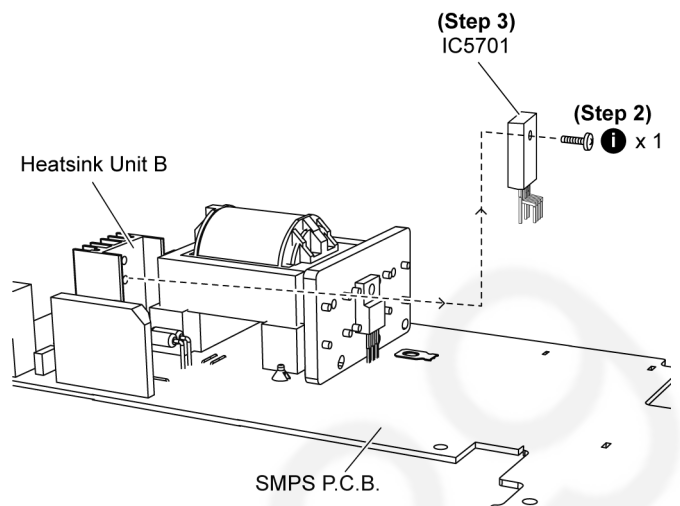
9.18. Replacement of Switching Regulator IC (IC5701)

9.18.1. Disassembly of Switching Regulator IC (IC5701)

- Follow (Step 1) to (Step 3) of Item 9.3.
- Follow (Step 1) to (Step 2) of Item 9.6.
- Follow (Step 7) to (Step 10) of Item 9.6.
- Follow (Step 4) to (Step 6) of Item 9.12.
- Follow (Step 1) to (Step 9) of Item 9.17.



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



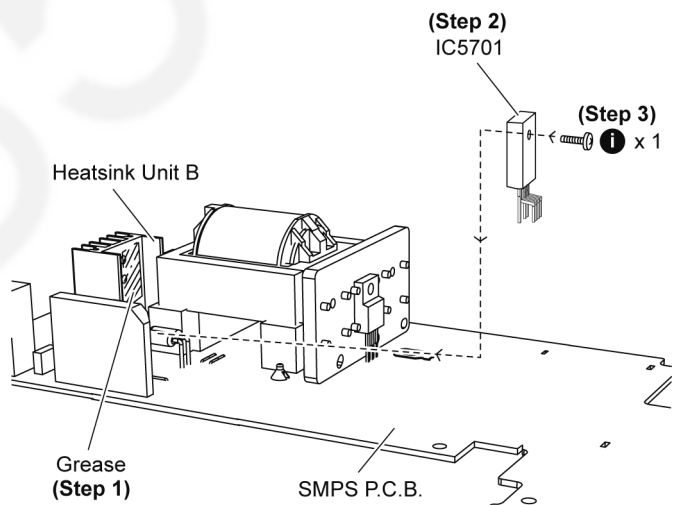
Step 2 Remove 1 screw from the Switching Regulator IC (IC5701).

Step 3 Remove the Switching Regulator IC (IC5701) from the heatsink unit B.

Caution: During replacement of the part, avoid touching the heatsink. It may lead to injury.

Note: Refer to the diagrams of SMPS P.C.B. (Item 18.5.) for location of the part.

9.18.2. Assembly of Switching Regulator IC (IC5701)



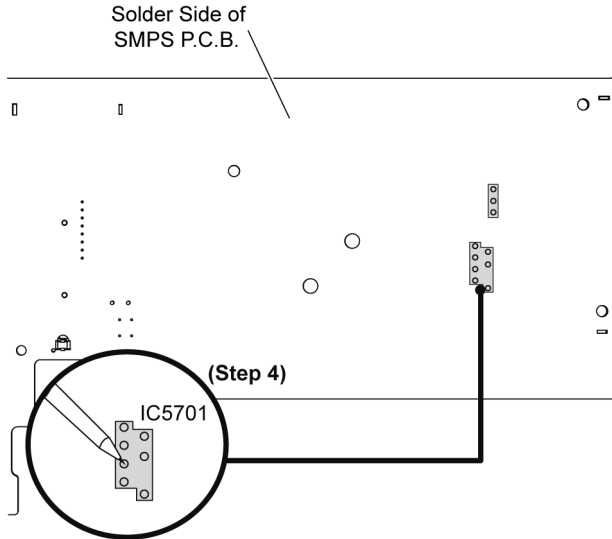
Step 1 Apply grease to the heatsink unit B.

Caution: Ensure pins of the Switching Regulator IC (IC5701) are properly seated and soldered on SMPS P.C.B.

Step 2 Mount the Switching Regulator IC (IC5701) to the SMPS P.C.B.

Step 3 Fix and screw the Switching Regulator IC (IC5701) to the heatsink unit B.

Caution: Ensure the Switching Regulator IC (IC5701) is tightly screwed to the heatsink unit B.

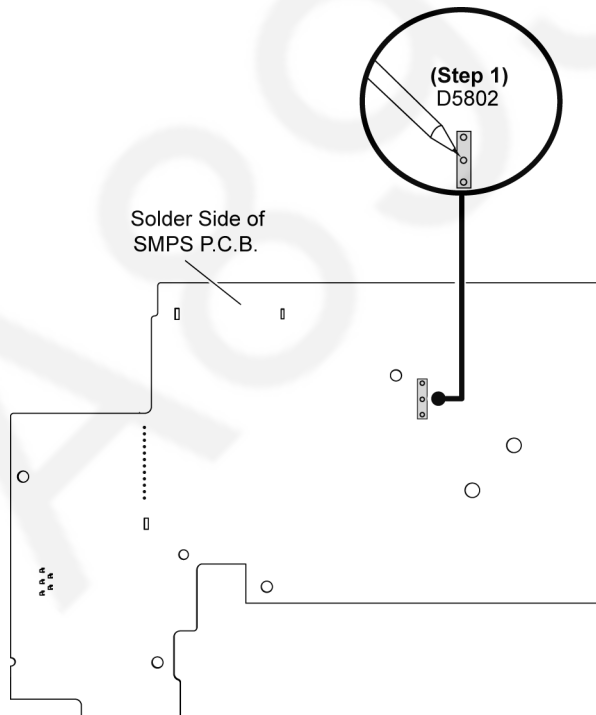


Step 4 Solder pins of the Switching Regulator IC (IC5701) on the solder side of SMPS P.C.B.

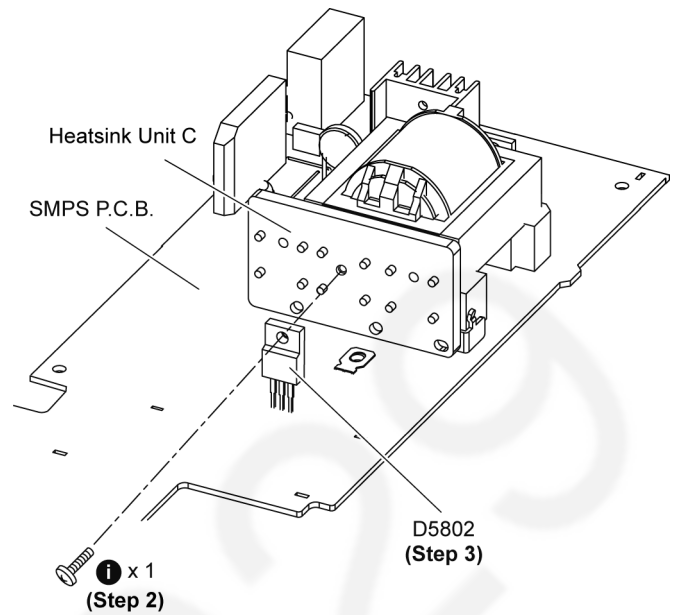
9.19. Replacement of Regulator Diode (D5802)

9.19.1. Disassembly of Regulator Diode (D5802)

- Follow (Step 1) to (Step 3) of Item 9.3.
- Follow (Step 1) to (Step 3) of Item 9.6.
- Follow (Step 7) to (Step 10) of Item 9.6.
- Follow (Step 4) to (Step 6) of Item 9.12.
- Follow (Step 1) to (Step 9) of Item 9.17.



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



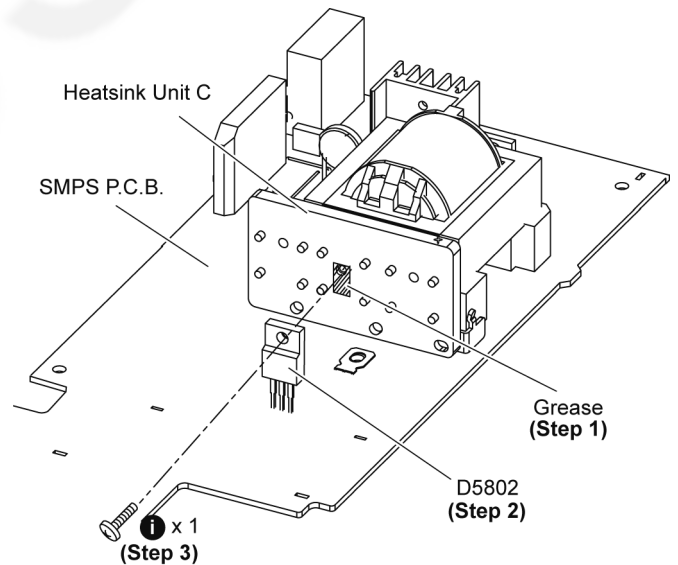
Step 2 Remove 1 screw from the Regulator Diode (D5802).

Step 3 Remove the Regulator Diode (D5802) from the SMPS P.C.B.

Caution: During replacement of the part, avoid touching the heatsink. It may lead to injury.

Note: Refer to the diagrams of SMPS P.C.B. (Item 18.5) for location of the electrical components.

9.19.2. Assembly of Regulator Diode (D5802)



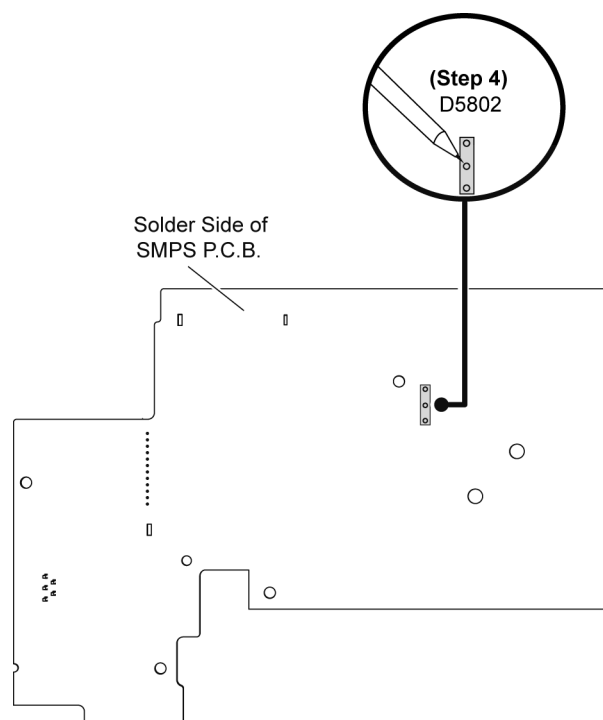
Step 1 Apply grease to the heatsink unit C.

Step 2 Mount the Regulator Diode (D5802) on SMPS P.C.B.

Caution: Ensure pins of the Regulator Diode (D5802) are properly seated and soldered on SMPS P.C.B.

Step 3 Fix and screw the Regulator Diode (D5802) to the heat-sink unit C.

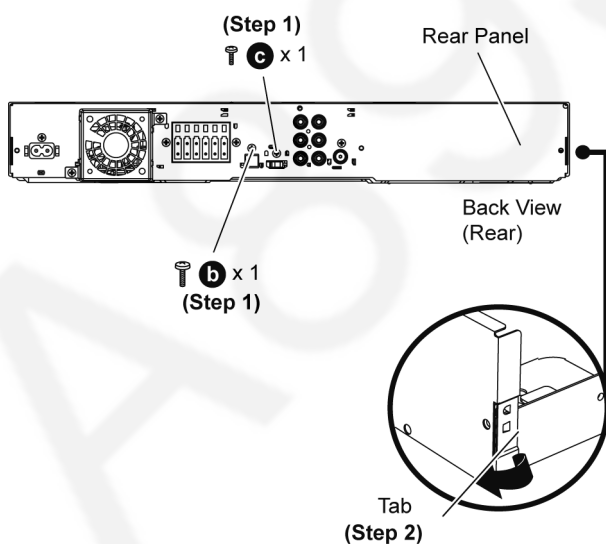
Caution: Ensure the Regulator Diode (D5802) is tightly screwed to the heatsink unit C.



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

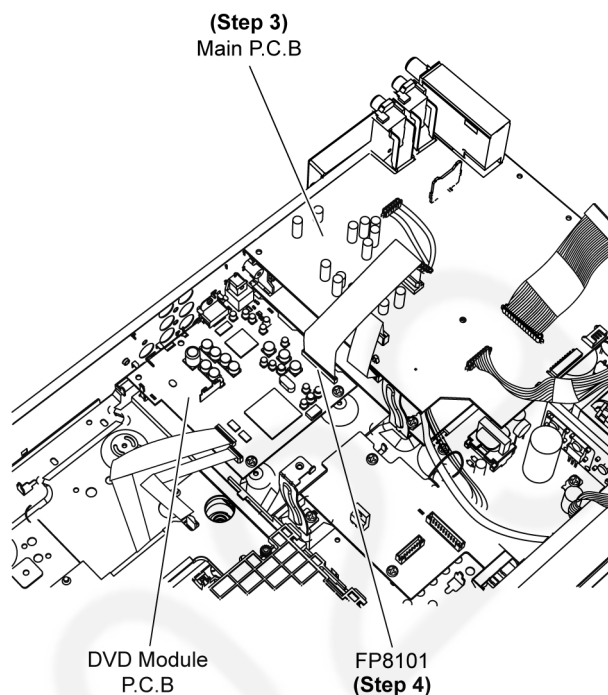
9.20. Disassembly of DVD Module P.C.B.

- Follow (Step 1) to (Step 3) of Item 9.3.
- Follow (Step 1) to (Step 2) of Item 9.6.
- Follow (Step 7) to (Step 10) of Item 9.6.
- Follow (Step 4) to (Step 6) of Item 9.12.



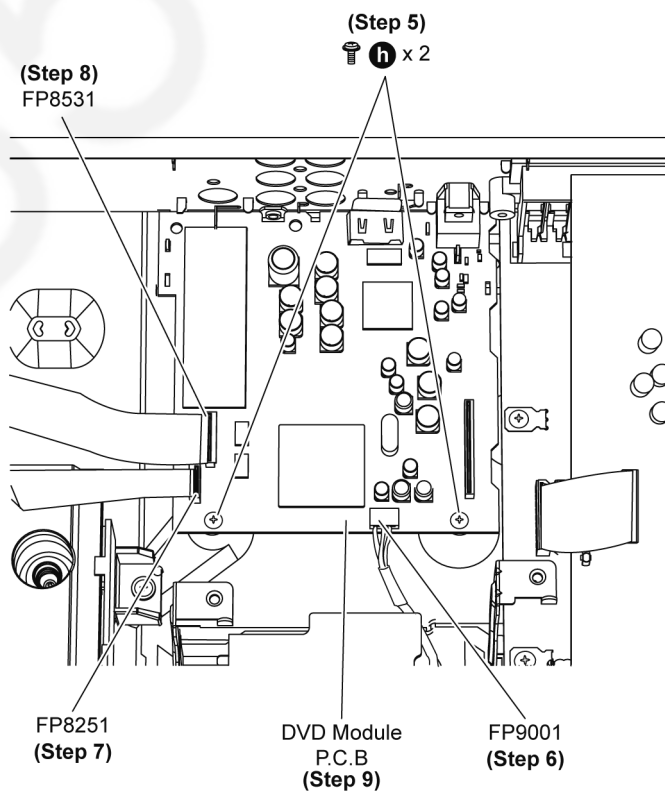
Step 1 Remove 2 screws at the rear panel.

Step 2 Release the tab of the rear panel in the direction of arrow.



Step 3 Flip the Main P.C.B. & position it according to the diagram shown.

Step 4 Remove 50P FFC at the connector (FP8101) on DVD Module P.C.B.



Step 5 Remove 2 screws on DVD Module P.C.B.

Step 6 Detach 5P cable at the connector (FP9001) on DVD Module P.C.B.

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

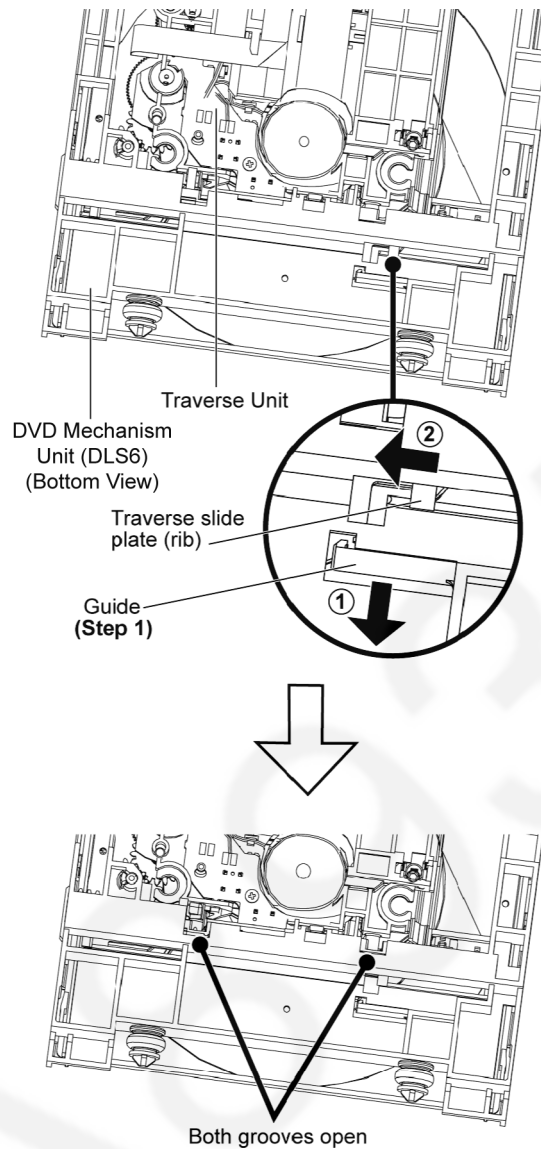
Step 8 Detach 25P FFC at the connector (FP8531) on DVD Module P.C.B.

Step 9 Remove DVD Module P.C.B.

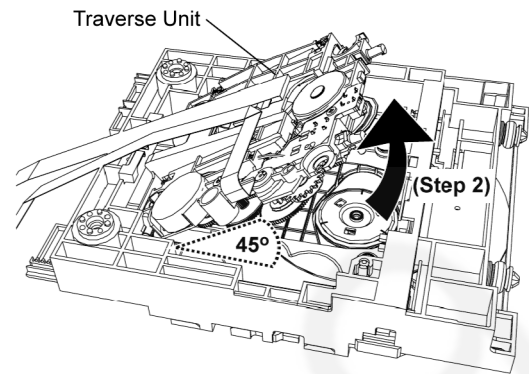
9.21. Assembling and Disassembling of Traverse Unit

9.21.1. Disassembling of Traverse Unit

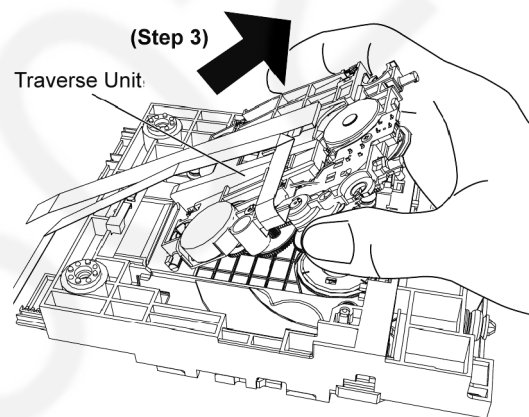
- Follow (Step 1) to (Step 3) of Item 9.3
- Follow (Step 1) to (Step 4) of Item 9.4



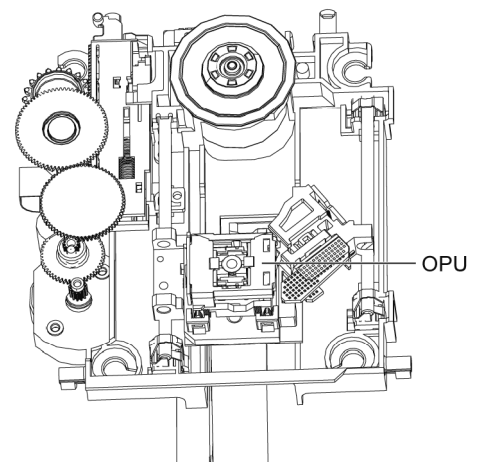
Step 1 Release the guide and slide the traverse slide plate (rib) as arrows shown.



Step 2 Lift up the Traverse unit approximately 45° as shown.



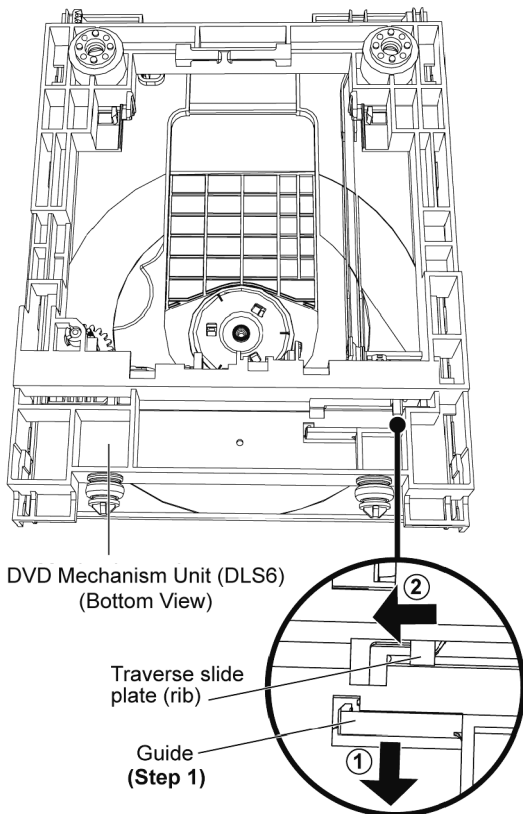
Step 3 Slide out the Traverse unit as arrow shown.



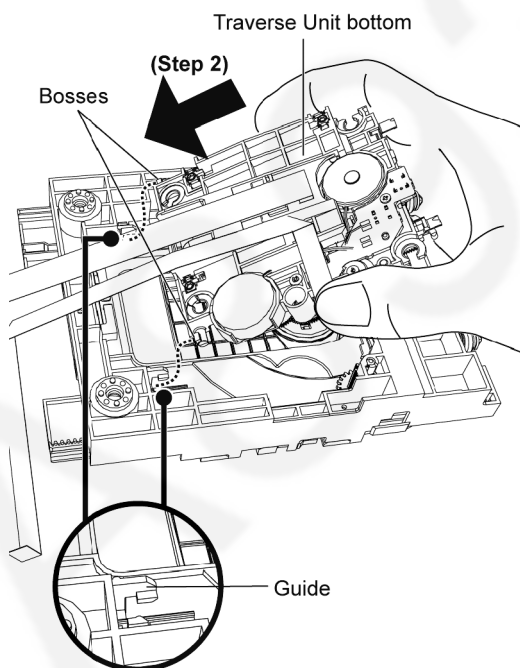
Caution: Do not touch the surface of the Traverse unit and place it so that the OPU is on top.

9.21.2. Assembling of Traverse Unit

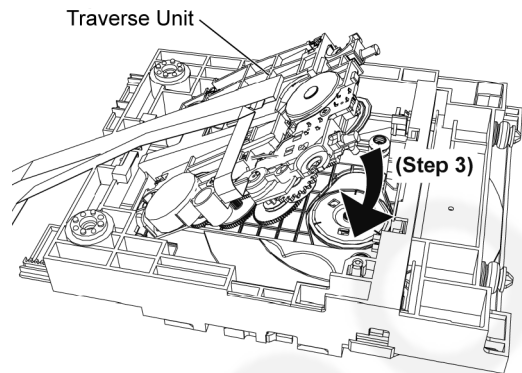
Note: Ensure the bosses fix exactly onto the guides.



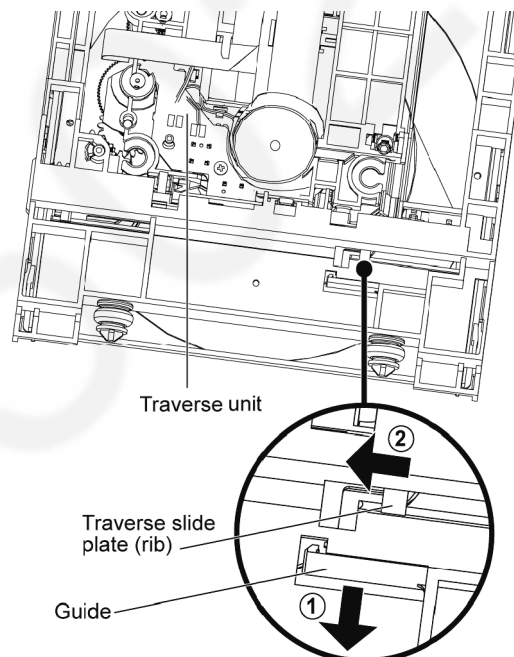
Step 1 Release the guide and slide the traverse slide plate (rib) as arrows shown.



Step 2 Slot the traverse unit approximately 45° into the mecha chassis as arrow shown.



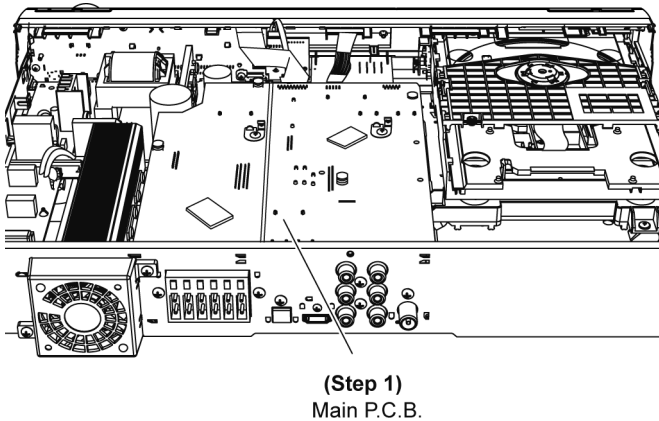
Step 3 Place down the traverse unit as arrow shown.



Step 4 Release the guide and slide the traverse slide plate (rib) in the direction of arrows shown to lock in the traverse unit.

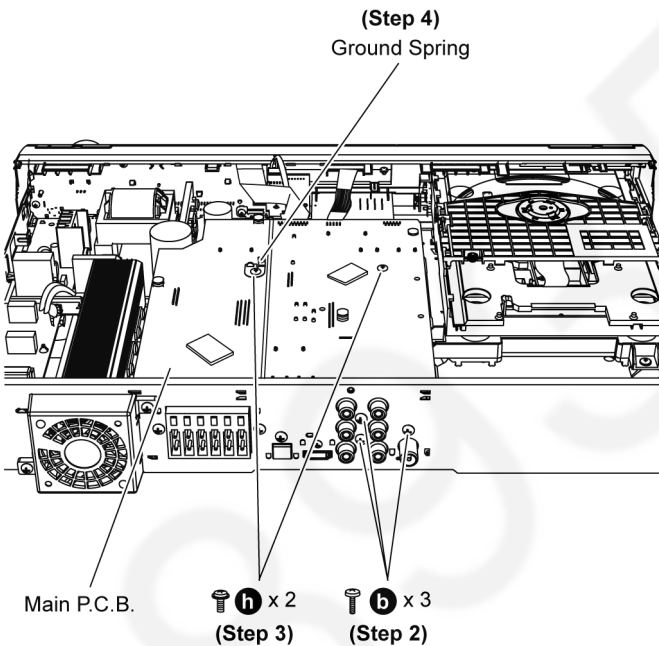
10 Service Position

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



Step 1 Remove the top cabinet to service Main P.C.B.

10.2. Checking & Analog Amp P.C.B.



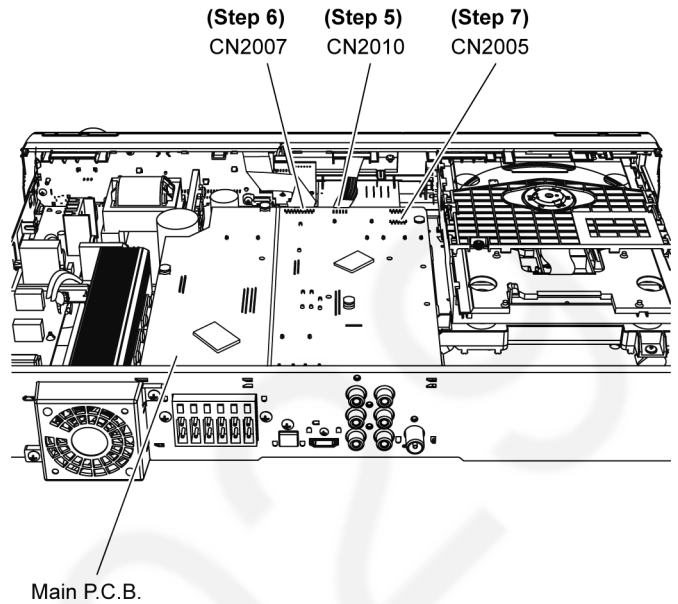
Step 1 Remove the top cabinet.

Step 2 Remove 3 screws at the rear panel.

Step 3 Remove 2 screws on Main P.C.B.

Step 4 Remove 1 ground spring on Main P.C.B.

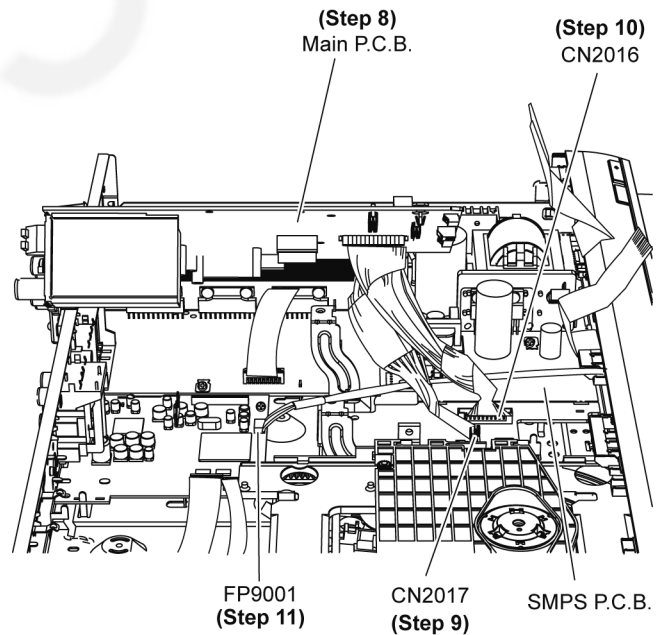
Caution: Keep the 1 ground spring in safe place. Avoid denting it. Place it back during assembling.



Step 5 Detach 7P cable at the connector (CN2010) on Main P.C.B.

Step 6 Detach 19P FFC at the connector (CN2007) on SMPS P.C.B.

Step 7 Detach 10P cable at the connector (CN2005) on Main P.C.B.

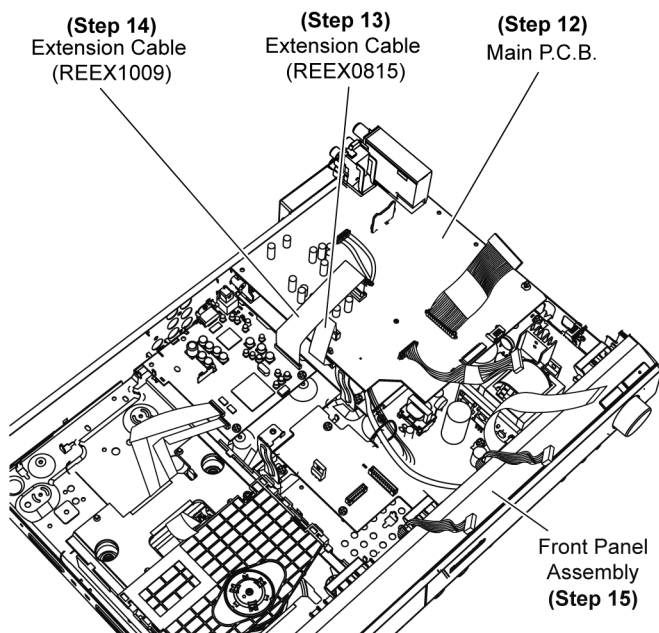


Step 8 Detach Main P.C.B. from the rear panel and position it according to the diagram shown.

Step 9 Detach 8P cable at the connector (CN2017) on SMPS P.C.B.

Step 10 Detach 14P cable at the connector (CN2016) on SMPS P.C.B.

Step 11 Detach 5P cable at the connector (FP9001) on DVD Module P.C.B.

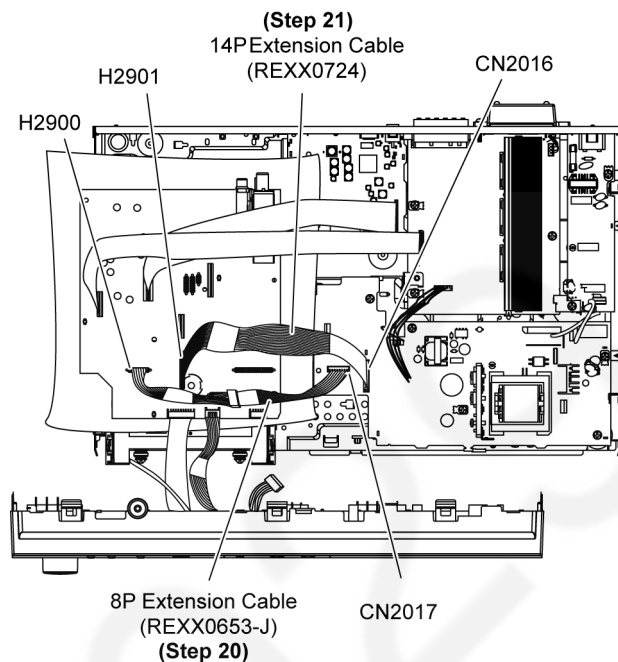


Step 12 Flip the Main P.C.B. and position it according to the diagram shown.

Step 13 Connect extension cable REEX0815 (17P FFC from CN2009 to CN5050).

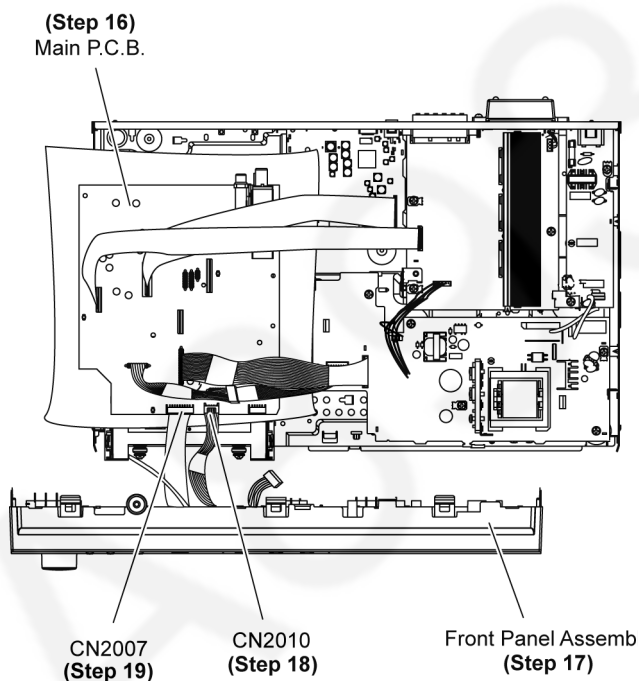
Step 14 Connect extension cable REEX1009 (50P FFC from FP8101 to CN2001).

Step 15 Remove the front panel assembly.



Step 20 Attach original cable with extension cable REXX0653-J (14P cable from H2901 to CN2016).

Step 21 Attach original cable with extension cable REXX0724 (8P cable from H2900 to CN2017).

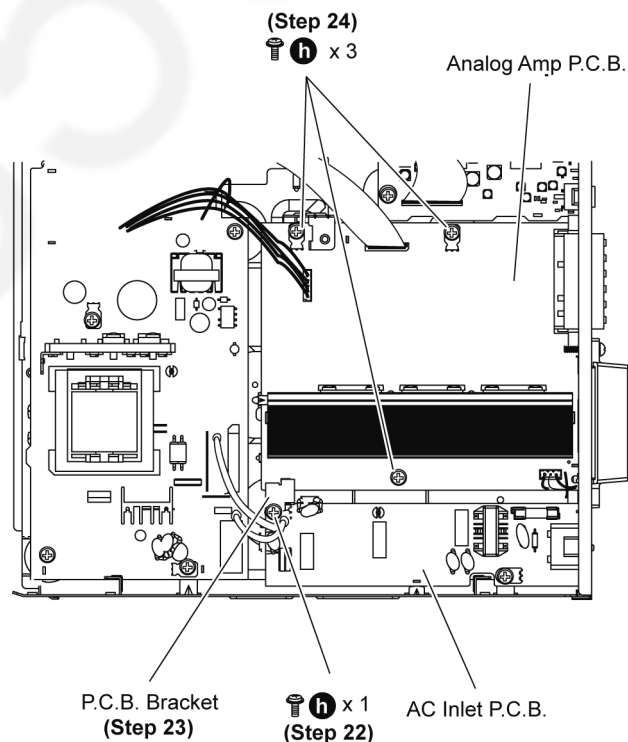


Step 16 Position Main P.C.B. according to the diagram shown.

Step 17 Turn the front panel assembly and position it according to diagram shown.

Step 18 Connect 7P cable at the connector (CN2010) on Main P.C.B.

Step 19 Connect 19P FFC at the connector (CN2007) on Main P.C.B.

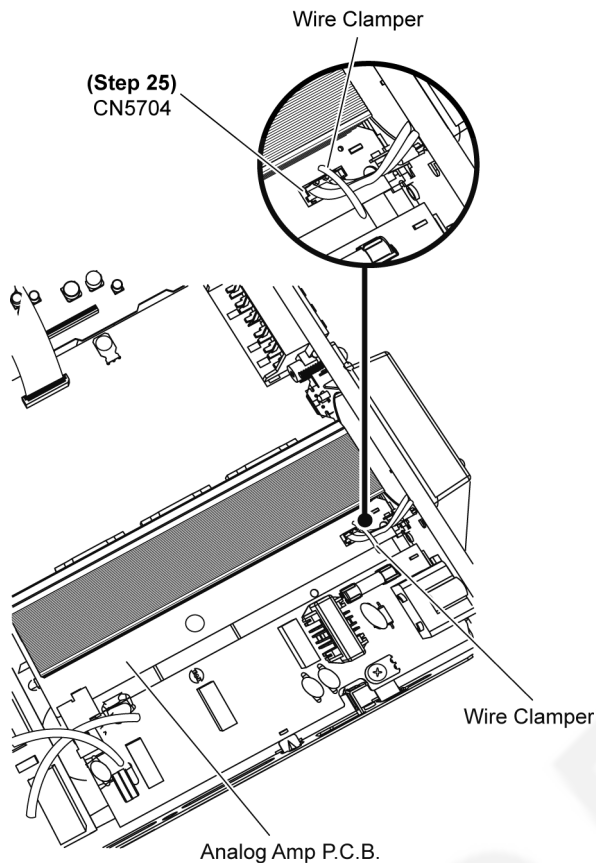


Step 22 Remove 1 screws on AC Inlet P.C.B.

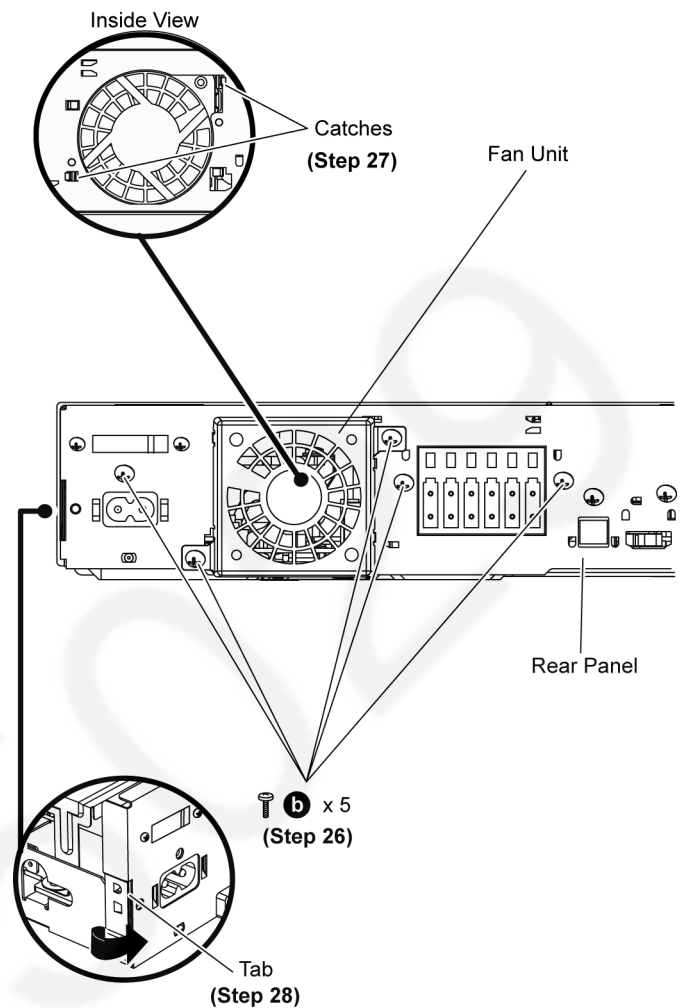
Step 23 Remove P.C.B bracket.

Step 24 Remove 3 screws on Analog Amp P.C.B.

Caution: Keep the P.C.B. bracket in safe place. Avoid denting it. Place it back during assembling.



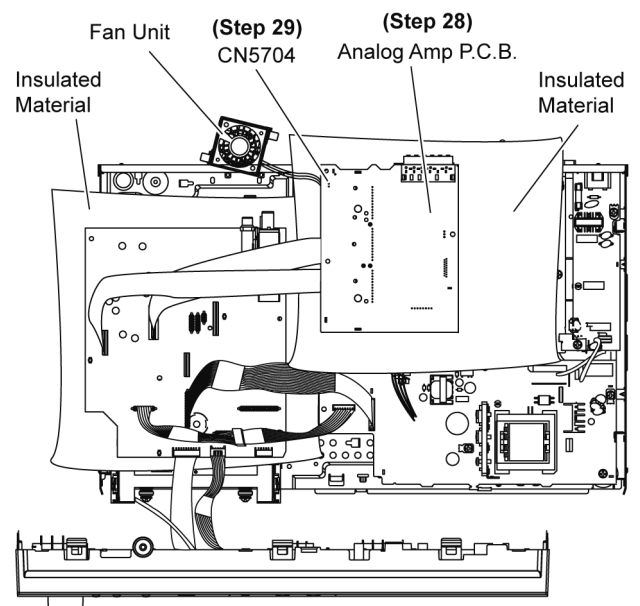
Step 25 Twist the wire clammer to detach 3P cable at the connector (CN5704) on Analog Amp P.C.B.



Step 26 Remove 5 screws at the rear panel.

Step 27 Release the catches and remove the fan unit.

Step 28 Release the tab of the rear panel in the direction of arrow.



Step 29 Detach Analog Amp P.C.B. from rear panel. Flip and position it according to diagram shown.

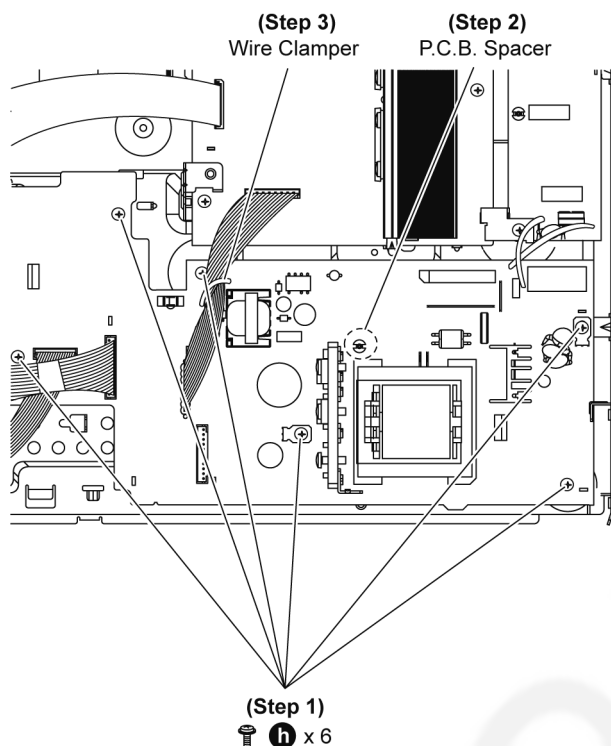
Step 30 Connect 3P cable of fan unit to the connector (CN5704) on Analog Amp P.C.B.

Step 31 Process to check and service Analog Amp P.C.B.

Note: Insulated material (box) is required to support Analog Amp P.C.B.

10.3. Checking & Servicing SMPS & AC Inlet P.C.B.

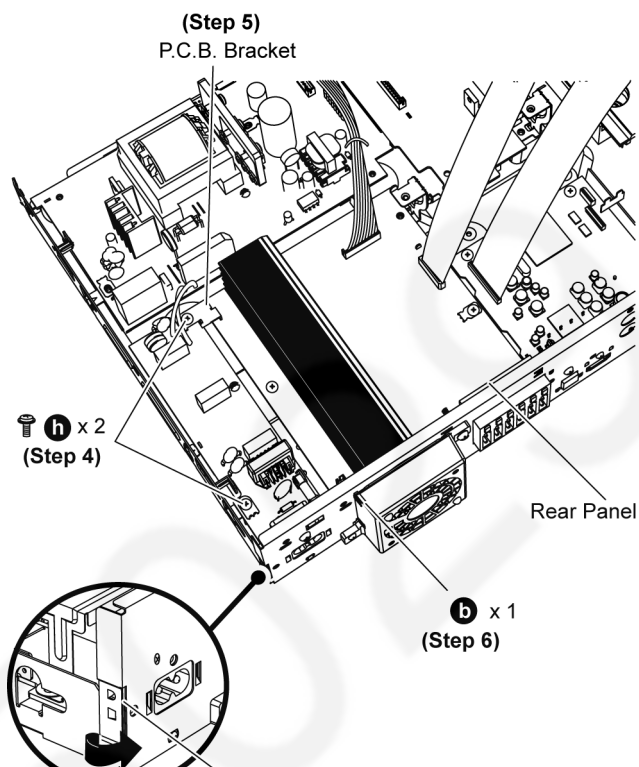
- Follow (Step 1) to (Step 23) of Item 10.2.



Step 1 Remove 6 screws on SMPS P.C.B.

Step 2 Release P.C.B Support of SMPS P.C.B.

Step 3 Twist the wire clammer to release 4P cable (from H5801 to CN5051).



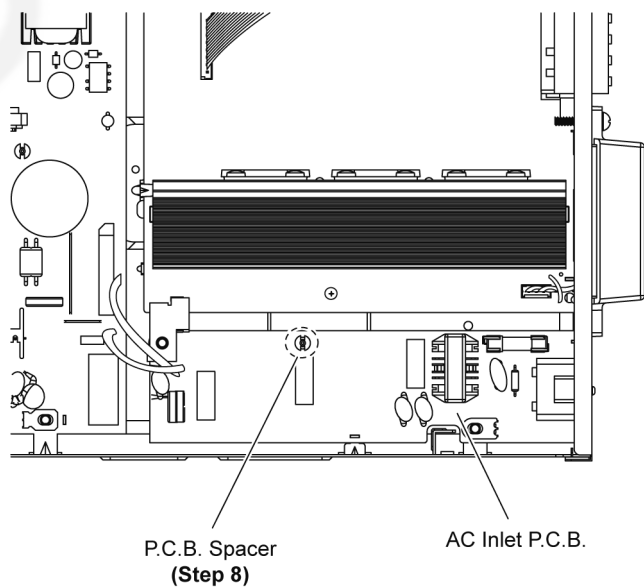
Step 4 Remove 2 screws on AC Inlet P.C.B.

Step 5 Remove P.C.B bracket on AC Inlet P.C.B.

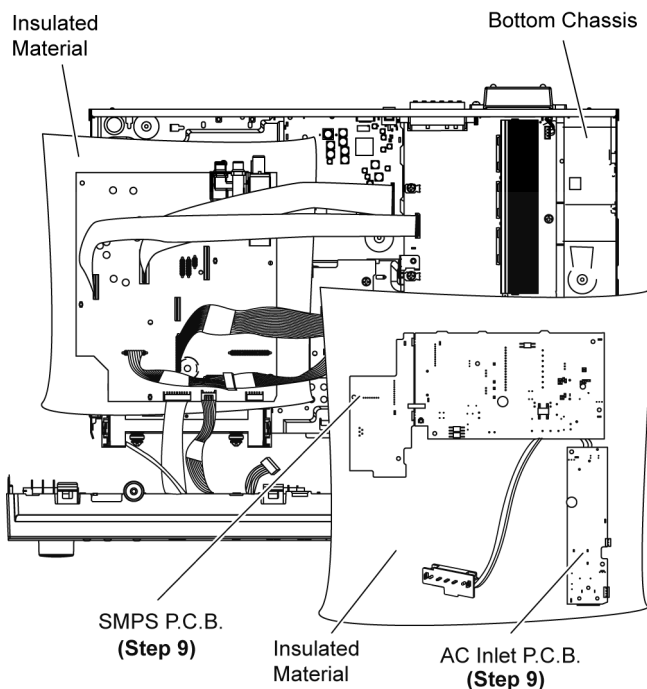
Step 6 Remove 1 screw at the rear panel.

Step 7 Release the tab of the rear panel in the direction of arrow.

Caution: Keep the P.C.B. bracket in safe place. Avoid denting it. Place it back during assembling.



Step 8 Release P.C.B. spacer.

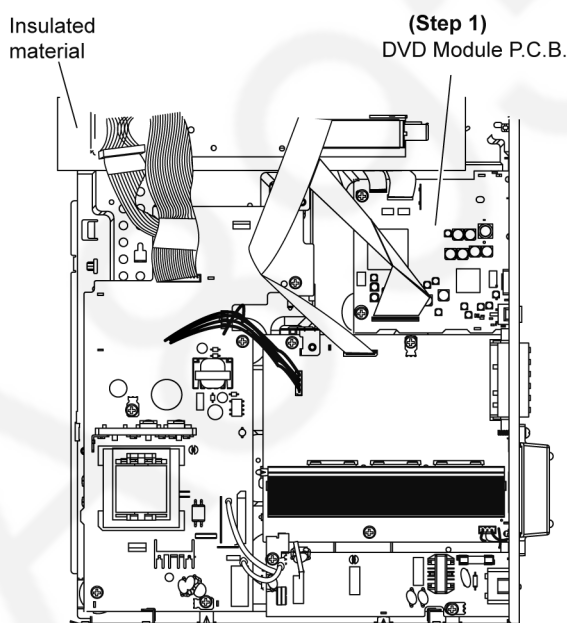


Step 9 Detach SMPS P.C.B. from bottom chassis and position it according to the diagram shown.

Step 10 Process to check and service SMPS P.C.B. and AC Inlet P.C.B.

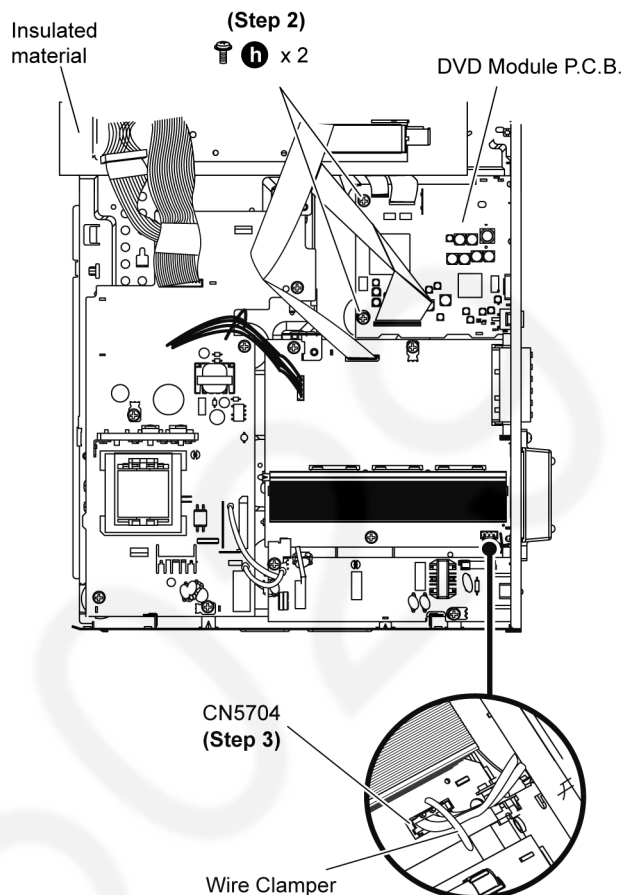
10.4. Checking & Servicing DVD Module P.C.B.

- **Checking & Servicing Side A of DVD Module P.C.B.**
- Follow (Step 1) to (Step 23) of Item 10.2.



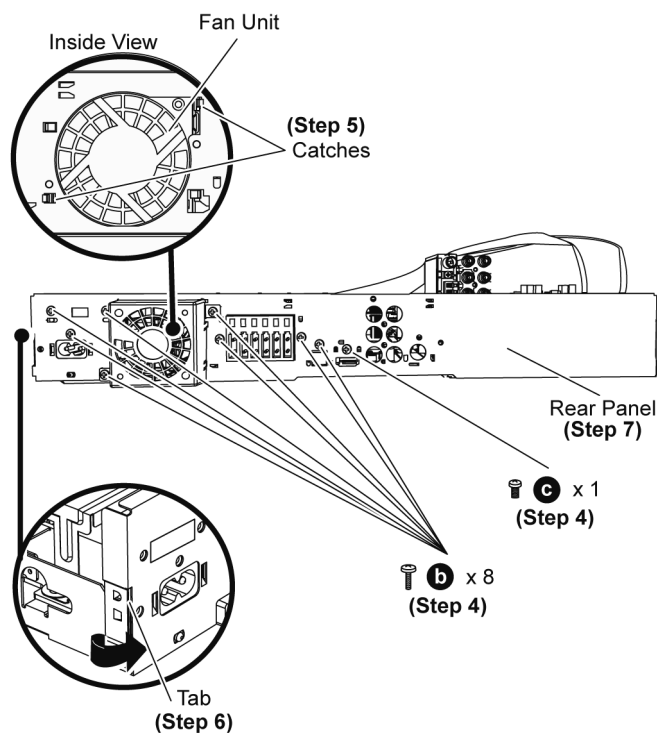
Step 1 Process to check and service side A of DVD Module P.C.B.

- **Checking & Servicing side B of DVD Module P.C.B.**



Step 2 Remove 2 screws on DVD Module P.C.B.

Step 3 Twist the wire clamper to remove 3P cable at the connector (CN5704).

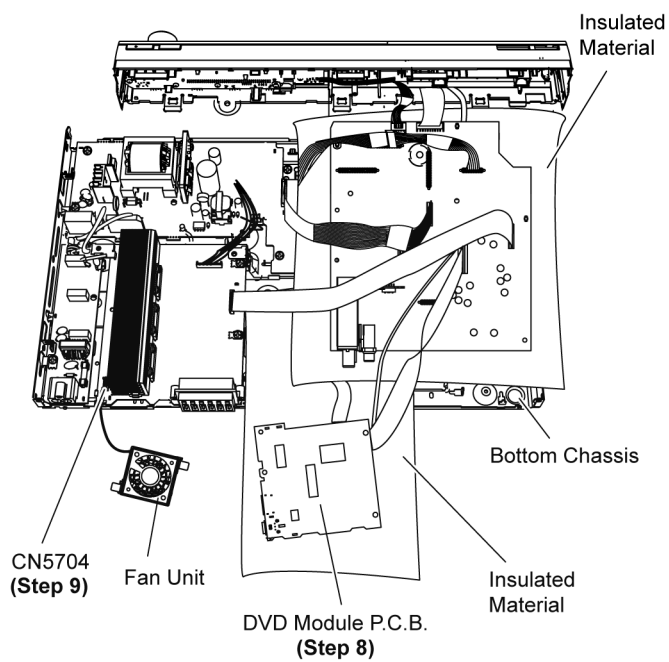


Step 4 Remove 9 screws at the rear panel.

Step 5 Release the catches and remove the fan unit.

Step 6 Release the tabs of the rear panel.

Step 7 Remove the rear panel.



Step 8 Detach the DVD Module P.C.B. from bottom chassis. Flip and position it according to diagram shown.

Step 9 Connect 3P cable to the connector (CN5704) on D-Amp P.C.B.

Step 10 Process to check and service side B of DVD Module P.C.B.

Caution: Insulated material is required to support DVD Module P.C.B.

11 Voltage & Waveform Chart

Note:

- Indication Voltage Values are in standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard.
Therefore, there may exist some errors in voltage values, depending on the internal impedance of the DC circuit tester.
- Circuit voltage and waveform described herein shall be regarded as reference information when probing defect point because it may differ from actual measuring value due to difference of Measuring instrument and its measuring condition and product itself.

11.1. DVD Module P.C.B. (1/4)

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	0	0	0	0	1.2	1.4	0.1	2.8	3.3	0.1	0.1	0.1	3.3	0.1	0.1	0.1	3.4	0.1	0.1	0.1
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	0.1	0.1	0.1	3.4	1.3	0.1	3.4	0	0	0	0	1.7	3.4	0.9	0.1	0.1	0.9	0.1	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	1.7	0.1	1.3	0.1	0.1	0.1	0.1	3.3	0.1	0.1	1.3	0.1	0.1	0.1	0.1	0.1
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	0.1	0.1	0.1	0	0	0.1	0.1	0.1	0.1	3.4	0.1	0.1	0.1	0.1	1.3	0.1	0.1	0.1	0.1	0.1
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	0.1	0.1	0.1	3.4	1.3	0.1	1.7	0.1	0.2	0.7	0.1	0.7	0.6	0.3	0.8	0.1	0.1	0.1	0.1	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	1.3	0.1	0.1	0.1	3.4	3.4	3.4	1.3	0.1	1.8	0.1	3.3	3.3	3.3	1.3	1.7	0.1	0.1	3.4
REF NO.	IC3901																			
MODE	121	122	123	124	125	126	127	128												
CD PLAY	3.4	0.1	1.3	3.4	0.1	1.4	0	0												
REF NO.	IC3952																			
MODE	1	2	3	4	5															
CD PLAY	8.5	0.1	1.4	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	0.1	0.1	0.1	3.4	0.1	3.4	0.1	0.1	1.7	0.1	0.2	0.7	0.7	0.6	0.1	3.4	0.4	0.8	0.1	1.3
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	1.5	1.3	2.0	1.7	2.5	2.6	2.6	1.8	0.9	1.1	3.4	0.1	3.4	2.4	1.3	1.3	1.8	2.6	2.6	1.4
REF NO.	IC8001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	1.9	2.7	0.1	1.3	0.1	3.3	3.3	3.4	3.4	1.7	0.1	3.4	1.9	2.8	3.0	3.4	3.4	3.4	0.6	3.4
REF NO.	IC8001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
CD PLAY	1.6	0.1	0.1	0.9	3.4	2.0	1.7	0.1	3.4	3.1	0.1	3.4	3.4	0.1	0.3	0.1	3.4	3.4	3.4	3.4

SA-PT170GA/GC/GS DVD MODULE P.C.B.

11.2. DVD Module P.C.B. (2/4)

REF NO.	IC8001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
CD PLAY	0.1	0.1	1.3	3.4	0.9	2.4	0.1	1.9	0.1	0.5	1.8	3.4	1.4	1.4	1.9	1.9	1.7	1.7	1.7	1.7
REF NO.	IC8001																			
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
CD PLAY	0	0	0.3	0.1	0.3	2.1	3.3	0.1	2.3	1.7	2.5	2.5	2.5	2.5	2.5	2.5	2.4	2.4	2.4	2.4
REF NO.	IC8001																			
MODE	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
CD PLAY	1.9	2.0	1.7	1.7	0.1	1.7	1.8	3.4	0.9	0.9	0.4	3.4	2.4	1.0	1.0	2.4	0	0.4	0.9	0
REF NO.	IC8001																			
MODE	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160
CD PLAY	3.4	3.4	0	0.1	0.1	0.1	3.4	1.6	1.7	1.7	0.9	1.7	0.1	3.4	1.5	1.6	1.5	1.3	2.9	3.1
REF NO.	IC8001																			
MODE	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
CD PLAY	2.9	2.8	3.1	2.8	0.1	3.4	2.8	3.1	3.1	2.9	2.9	3.2	0.1	3.4	2.8	3.1	3.1	2.8	2.7	2.7
REF NO.	IC8001																			
MODE	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200
CD PLAY	3.3	0.1	1.5	3.4	1.6	0.1	1.3	3.3	3.3	3.2	3.6	0.1	1.9	0.1	0.1	3.4	1.6	0.1	0.1	1.6
REF NO.	IC8001																			
MODE	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216				
CD PLAY	0.1	1.7	0.3	0.1	3.4	1.7	0.3	1.5	1.9	0.1	1.3	2.5	2.9	2.8	3.4	0				
REF NO.	IC8051																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	3.4	3.2	3.4	3.2	3.2	3.2	3.1	3.4	3.2	3.2	0.1	3.2	0.1	3.0	3.4	3.3	3.3	3.3	3.3	1.9
REF NO.	IC8051																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	1.6	0.1	0.2	0.5	0.6	1.5	3.4	0.1	0	1.9	1.7	1.6	0.1	0.1	0.1	0.1	3.4	1.6	2.9	0
REF NO.	IC8051																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54						
CD PLAY	0.1	3.2	3.4	3.2	3.2	0.1	3.2	3.2	3.4	3.2	3.1	0.1	3.1	0.1						
REF NO.	IC8111																			
MODE	1	2	3	4	5	6	7													
CD PLAY	5.1	1.9	5.1	0.1	1.0	3.4	1.3													
REF NO.	IC8251																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	1.7	1.7	1.7	2.3	2.3	2.2	0.1	5.1	3.4	0.1	2.4	2.8	2.5	2.7	4.2	4.3	5.4	3.1	0.1	3.4

SA-PT170GA/GC/GS DVD MODULE P.C.B.

11.3. DVD Module P.C.B. (3/4)

REF NO.	IC8251																			
MODE	21	22	23	24	25	26	27	28												
CD PLAY	8.9	8.8	1.8	1.7	1.7	1.7	3.4	3.4												
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	1.7	1.7	0.9	1.7	3.1	3.4	3.4	3.4	0.9	0.1	0.1	5.2	5.2	5.2	0	0	2.6	2.6	2.6	2.6
REF NO.	IC8421																			
MODE	21	22	23	24	25	26	27	28	29	30										
CD PLAY	2.6	2.6	0	2.6	2.6	2.6	0	5.2	5.2	5.2										
REF NO.	IC8422																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
CD PLAY	2.6	2.6	0	2.6	0	5.2	5.2	0	1.4	1.7	1.6	1.7	3.4	0	5.2	0				
REF NO.	IC8601																			
MODE	1	2	3	4																
CD PLAY	3.1	1.3	0.1	0.1																
REF NO.	IC8606																			
MODE	1	2	3	4	5															
CD PLAY	3.1	3.4	0.1	0.1	0															
REF NO.	IC8611																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	0.1	0.1	0.1	0.1	3.3	3.3	0.1	3.4												
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	1.3	2.0	1.8	2.5	2.6	2.6	1.8	0.9	1.1	0.1	3.4	3.1	3.4	3.4	1.5	3.4	1.3	1.3	1.9	2.6
REF NO.	IC8651																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	2.6	1.4	1.9	2.7	2.6	2.9	0.1	2.8	2.5	1.3	2.0	1.7	2.5	2.6	2.6	1.8	3.4	0.9	1.6	1.8
REF NO.	IC8651																			
MODE	41	42	43	44	45	46	47	48												
CD PLAY	2.6	2.5	1.3	1.9	2.7	0.1	3.4	1.5												
REF NO.	IC8691																			
MODE	1	2	3	4	5															
CD PLAY	3.0	3.0	0.1	4.6	0.1															
REF NO.	IC8695																			
MODE	1	2	3	4	5															
CD PLAY	0.1	2.8	2.8	5.2	4.3															

SA-PT170GA/GC/GS DVD MODULE P.C.B.

11.4. DVD Module P.C.B. (4/4)

REF NO.	IC8701																				
MODE	1	2	3	4	5																
CD PLAY	0	1.6	0.1	1.8	3.4																
REF NO.	IC8901																				
MODE	1	2	3	4	5																
CD PLAY	3.1	3.4	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	2.5	2.7	1.9	1.3	2.5	2.5	1.5	1.3	0.1	2.8	1.3	1.8	2.6	2.6	1.4	1.8	2.7	2.6	3.4	
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	0.9	1.8	2.6	2.6	2.5	1.7	2.0	1.3	0.1	2.9	1.3	2.0	1.8	2.5	2.6	2.5	1.8	0.9	3.2	
REF NO.	IC9003																				
MODE	1	2	3	4	5	6															
CD PLAY	1.6	0.1	1.7	1.7	3.4	1.7															
REF NO.	IC9005																				
MODE	1	2	3	4	5	6	7	8													
CD PLAY	0.1	5.2	5.2	0.1	3.4	2.4	1.7	1.7													
REF NO.	Q3901				Q3902				Q3903				Q3941				Q3942				
MODE	E	C	B		S	D	G		S	D	G		E	C	B		E	C	B		
CD PLAY	0.1	4.3	-1.3		3.4	5.1	3.4		3.4	5.1	3.4		3.2	4.0	3.2		0.1	3.7	0		
REF NO.	Q3943				Q8321				Q8325				Q8331				Q8335				
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B		
CD PLAY	3.6	5.1	4.1		1.0	0	0.4		1.5	0	0.9		1.1	0	0.4		1.5	0	0.9		
REF NO.	Q8341				Q8551				Q8552				Q8561				Q8562				
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	0.1	5.1		1.6	3.7	2.2		4.3	1.9	3.7		
REF NO.	Q8563				Q8564				Q8565				QR8420				QR9030				
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B		
CD PLAY	0.1	0.3	0.1		0.1	0.1	3.3		0.1	0.1	0.7		0	4.4	0.1		3.4	0.1	3.4		

SA-PT170GA/GC/GS DVD MODULE P.C.B.

SA-PT170GA/GC/GS DVD MODULE P.C.B.

11.5. Main P.C.B. (1/2)

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	0.1	5.1	0	0	2.6	4.2	1.8	0	0	0	0	5.1	2.7	0	0	5.2	5.2	5.3	3.2	5.2
STANDBY	0.1	5.1	0	0	2.6	4.1	2.0	0	0	0	0	5.1	2.7	0	0	5.1	5.1	5.2	3.2	5.2
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	5.1	5.2	5.2	5.2	4.6	4.2	1.8	0	5.4	5.1	5.1	5.1	0	5.2	5.2	5.2	5.1
STANDBY	0	0	0	5.1	5.2	5.2	5.1	4.6	4.2	1.8	0	5.4	5.1	5.1	5.1	0	5.2	5.2	5.2	5.1
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	5.2	5.2	5.2	5.0	5.2	5.0	0	0	5.2	0	0	0	0	5.2	5.2	5.2	5.2	0	0
STANDBY	0	5.2	5.2	5.2	5.0	5.2	5.0	0	0	5.2	0	0	0	0	5.1	5.2	5.2	5.1	0	5.2
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	0	5.2	0	0	0	5.2	0	0.1	0	5.2	0	0	0	5.2	0	0	0	0	0	5.4
STANDBY	0	5.2	0	0	5.0	5.1	0	0.1	0	5.2	0	0	0	5.2	0	0	0	0	0	5.4
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	5.2	0	5.4	0.1	0	0	0	0	0.4	4.8	4.0	0	0	0	5.2	0	3.6	5.2	5.2	0.2
STANDBY	5.2	0	5.4	0.1	0	0	0	0	0.4	4.8	4.0	0	0	0	5.2	0	3.6	5.2	5.2	0.2
REF NO.	IC2002																			
MODE	1	2	3	4	5															
CD PLAY	5.2	0	5.1	0	3.3															
STANDBY	5.2	0	5.1	0	3.3															
REF NO.	IC2003																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	0	0	0	0	0	0	0	5.2												
STANDBY	0	0	0	0	0	0	0	5.2												
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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	1.9	0	0	0	0	0	0	0	0	0	0.1
STANDBY	0	0	0	0	0	0	0	0.1	0.1	1.9	0	0	0	0	0	0	0	0	0	0.1

SA-PT170GA/GC/GS MAIN P.C.B.

11.6. Main P.C.B. (2/2)

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	5.2	0	5.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STANDBY	0	5.2	0	5.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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	0	6.8	6.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STANDBY	0	0	6.8	6.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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	5.0	0	0	2.2	4.8	0.1	0	1.6	2.2	0	1.5	0	2.2	4.8	2.2	5.0	2.2	2.2	0	2.2
STANDBY	5.0	0	0	2.2	4.8	0.2	0	1.6	2.2	0	1.6	0	2.2	4.8	2.2	5.0	2.2	2.2	0	2.2

REF NO.	IC2801																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32								
CD PLAY	2.2	0	1.3	1.3	0	1.5	1.5	0	1.8	1.6	0	2.3								
STANDBY	2.2	0	1.5	1.5	0	1.5	1.5	0	1.5	1.5	0	2.3								

REF NO.	Q2003				Q2004				Q2005				Q2006				Q2030			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	5.1	0		0	1.7	0		3.3	1.7	5.1		0	0	4.3		3.6	5.2	4.3	
STANDBY	0	5.1	0		0	1.7	0		3.3	1.7	5.1		0	5.2	0		3.6	5.2	4.3	

REF NO.	Q2096							Q2504				Q2505				Q2801				
MODE	1	2	3	4	5	6		E	C	B		E	C	B		E	C	B		
CD PLAY	0	0	0	0	0.6	5.2		0	0	4.6		4.8	0	0		0	4.8	0		
STANDBY	0	0	0	0	0.6	5.2		0	0	4.6		4.8	0	0		0	4.8	0		

REF NO.	Q2909				Q2919				Q2923				Q2924				Q2925			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	5.2	0.5		0	5.2	0		0	0	2.0		0	5.2	0		0	5.2	0	
STANDBY	0	5.2	0.5		0	5.2	0		0	0	2.0		0	5.2	0		0	5.2	0	

REF NO.	Q2926				Q2927				Q2929				Q2930								
MODE	E	C	B		E	C	B		E	C	B		E	C	B						
CD PLAY	5.2	-22.4	5.2		5.2	-22.4	5.2		5.2	5.2	4.5		0	0	5.1						
STANDBY	5.2	-22.4	5.2		5.2	-22.4	5.1		5.2	5.2	4.5		0	0	5.1						

SA-PT170GA/GC/GS MAIN P.C.B.

SA-PT170GA/GC/GS MAIN P.C.B.

11.7. Panel P.C.B.

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	3.0	1.3	1.9	4.2	2.6	1.3	1.3	0	5.0	-24.6	-24.6	-22.2	-22.2	-19.0	-19.8	-17.3
STANDBY	0	0	0	0	2.9	1.1	2.0	4.1	2.6	1.0	1.0	0	5.0	-24.6	-24.6	-24.6	-22.2	-15.0	-12.6	-15.0

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	-24.6	-24.6	-24.6	-19.8	-20.0	-24.6	-24.6	-24.6	-17.3	-25.1	-15.1	-15.1	-22.5	-22.4	-22.4	-22.4	-22.4	-22.4	-22.4	-22.4
STANDBY	-24.6	-24.6	-22.2	-15.0	-15.0	-22.2	-24.6	-22.2	-10.2	-25.1	-15.1	-15.1	-22.5	-22.4	-22.4	-22.4	-22.4	-22.4	-22.4	-22.4

REF NO.	IC6901																			
MODE	41	42	43	44																
CD PLAY	-22.4	-22.4	5.0	0																
STANDBY	-22.4	-22.4	5.0	0																

REF NO.	Q6910																			
MODE	E	C	B																	
CD PLAY	0	4.2	0																	
STANDBY	0	4.2	0																	

SA-PT170GA/GC/GS PANEL P.C.B.

11.8. Analog Amp P.C.B.

REF NO.	IC5100																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12						
CD PLAY	25.9	12.7	0	12.6	4.7	0	0	0	0	12.7	0	12.7						
STANDBY	26.0	12.8	0	12.7	4.7	0	0	0	3.0	12.8	0	12.8						

REF NO.	IC5200																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12						
CD PLAY	25.9	12.7	0	12.7	4.7	0	0	0	3.0	12.7	0	12.7						
STANDBY	26.0	12.7	0	12.7	4.7	0	0	0	3.0	12.8	0	12.7						

REF NO.	IC5300																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12						
CD PLAY	25.9	12.7	0	13.0	4.7	0	0	0	0	12.7	0	12.8						
STANDBY	25.6	12.7	0	12.7	4.6	0	0	0	3.0	12.7	0	12.8						

REF NO.	Q5740				Q5741				Q5742				Q5744				Q5747		
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B
CD PLAY	7.0	16.1	7.6		0	5.1	0		0	0.1	0.7		0	3.9	0		7.7	0	7.7
STANDBY	7.0	16.1	7.6		0	5.1	0		0	0.1	0.7		0	3.9	0		7.7	0	7.7

REF NO.	Q5748				Q5749				Q5750				Q5751				Q5752		
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B
CD PLAY	7.7	0	7.7		7.7	0	7.7		7.7	0	7.7		0	5.1	0		16.1	0	0
STANDBY	7.7	0	7.7		7.7	0	7.7		7.7	0	7.7		0	5.1	0		16.1	0	0

REF NO.	Q5753				Q5754														
MODE	E	C	B		E	C	B												
CD PLAY	7.7	0	7.7		7.7	0	7.7												
STANDBY	7.7	0	7.7		7.7	0	7.7												

SA-PT170GA/GC/GS ANALOG AMP P.C.B.

11.9. SMPS P.C.B.

REF NO.	IC2900																			
MODE	1	2	3	4	5															
CD PLAY	16.0	8.9	0	0	15.5															
STANDBY	16.0	8.9	0	0	15.5															
REF NO.	IC2903																			
MODE	1	2	3	4	5															
CD PLAY	16.0	5.3	0	1.0	15.5															
STANDBY	16.0	5.3	0	1.0	15.5															
REF NO.	IC5701																			
MODE	1	2	3	4	5	6	7													
CD PLAY	163	0	0	13.6	0.1	1.4	0.5													
STANDBY	163	0	0	13.5	0.1	1.4	0.5													
REF NO.	IC5799																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	-4.5	-9.7	-8.8	1.7	138.4	0	-9.8	-9.9												
STANDBY	-4.5	-9.6	-8.3	1.9	137	0	-9.7	-9.8												
REF NO.	IC5801																			
MODE	1	2	3																	
CD PLAY	13.9	2.5	0																	
STANDBY	13.9	2.5	0																	
REF NO.	IC5899																			
MODE	1	2	3																	
CD PLAY	4.8	2.4	0																	
STANDBY	4.8	2.4	0																	
REF NO.	Q2900				Q2901				Q2902				Q2903				Q5720			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	8.6	0		-6.7	-7.7	-7.4		0	-7.4	-0.6		6.9	8.9	7.6		5.9	6.7	5.9	
STANDBY	0	8.6	0		-6.7	-7.7	-7.4		0	-7.4	-0.6		6.9	8.9	7.6		5.9	6.6	5.8	
REF NO.	Q5841				Q5861				Q5863				Q5898				Q5899			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	5.1	0		0	1.1	0		0	0.8	0		0	3.5	0.4		0	0.2	0.8	
STANDBY	0	5.1	0		0	1.1	0		0	0.8	0		0	3.5	0.4		0	0.2	0.8	

SA-PT170GA/GC/GS SMPS P.C.B.

11.10. Mic P.C.B.

REF NO.	IC7000															
MODE	1	2	3	4	5	6	7	8								
CD PLAY	0	0	0	-6.7	0	0	0	6.8								
STANDBY	0	0	0	-6.7	0	0	0	6.8								

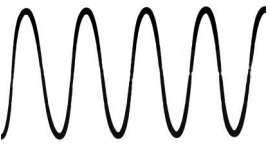
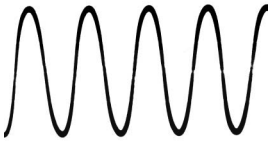
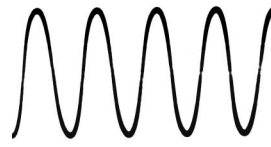
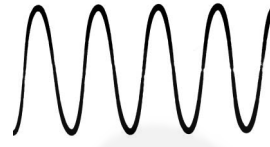
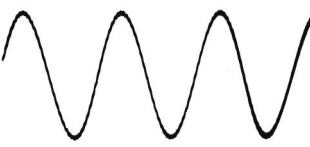
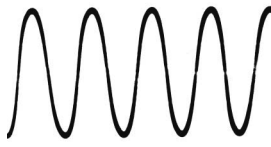
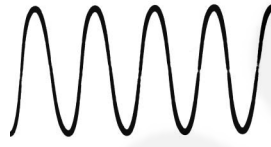
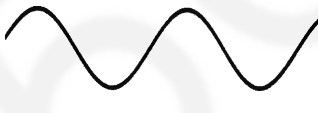
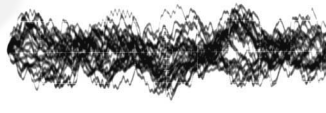
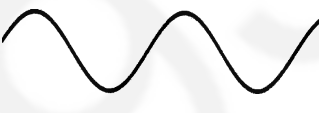
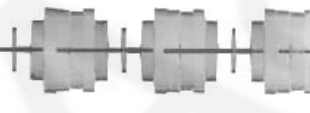
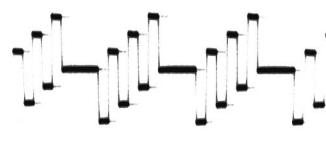
REF NO.	IC7100															
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
CD PLAY	5.2	2.6	0	0	2.7	2.6	0.6	0.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
STANDBY	5.2	2.6	0	0	2.7	2.6	0.6	0.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6

REF NO.	Q7001			Q7002			Q7003			Q7100			Q7101		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
CD PLAY	0	0	5.1	0	0	5.1	0	0	3.4	0	0	5.1	0	0	0
STANDBY	0	0	5.1	0	0	5.1	0	0	3.4	0	0	5.1	0	0	0

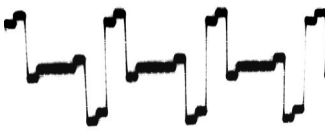
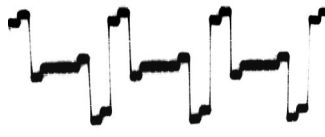
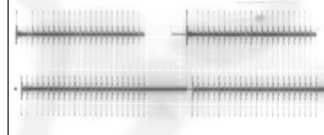
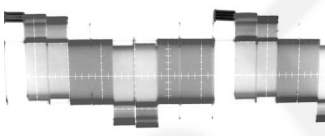
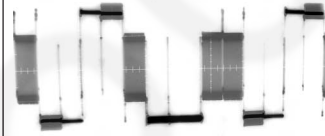
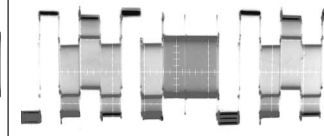
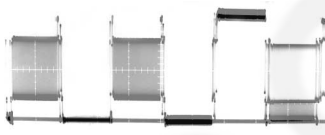
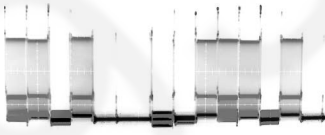
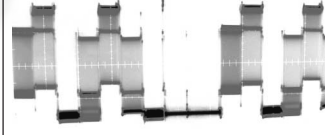
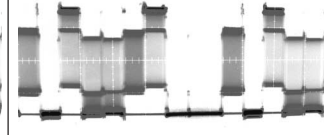
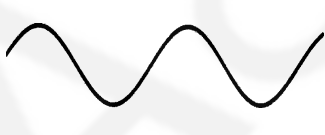
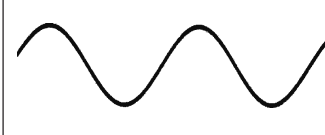
REF NO.	Q7102															
MODE	E	C	B													
CD PLAY	0	0	0													
STANDBY	0	0	0													

SA-PT170GA/GC/GS MIC P.C.B.

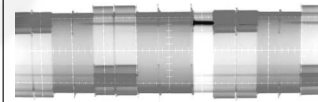
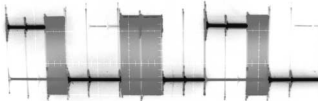
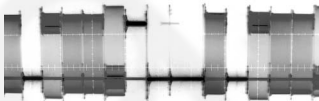
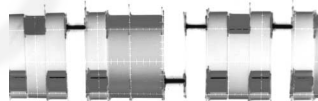
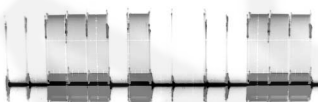
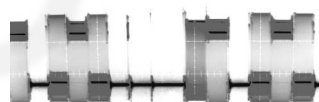
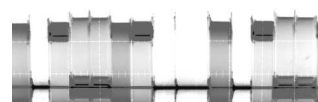
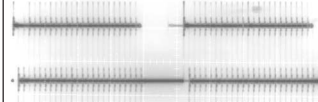
11.11. Waveform Table (1/4)

WF No. IC2001-13 (PLAY)  5Vp-p(50nsec/div)	WF No. IC2101-14 (PLAY)  0.32Vp-p(1msec/div)	WF No. IC2101-15,16,17 (PLAY)  1.08Vp-p(1msec/div)	WF No. IC2101-18 (PLAY)  1.12Vp-p(1msec/div)
WF No. IC2101-19 (PLAY)  0.34Vp-p(2msec/div)	WF No. IC2101-27,30,41 (PLAY)  0.8Vp-p(1msec/div)	WF No. IC2101-44 (PLAY)  10.8Vp-p(5msec/div)	WF No. IC2101-77 (PLAY)  0.8Vp-p(2msec/div)
WF No. IC2101-78,79 (PLAY)  1.6Vp-p(200usec/div)	WF No. IC2101-80 (PLAY)  1.8Vp-p(200usec/div)	WF No. IC2101-81,82 (PLAY)  2.8Vp-p(200usec/div)	WF No. IC2101-91,92 (PLAY)  1.5Vp-p(500usec/div)
WF No. IC2101-95 (PLAY)  2.8Vp-p(200usec/div)	WF No. IC2101-96 (PLAY)  0.4Vp-p(200usec/div)	WF No. IC2101-99 (PLAY)  6.8Vp-p(200usec/div)	WF No. IC2101-100 (PLAY)  1Vp-p(200usec/div)
WF No. IC2801-4 (PLAY)  0.7Vp-p(20usec/div)	WF No. IC2801-8 (PLAY)  1.1Vp-p(20usec/div)	WF No. IC2801-11 (PLAY)  1.05Vp-p(20usec/div)	WF No. IC2801-13 (PLAY)  0.48Vp-p(50usec/div)

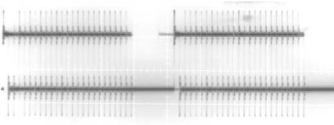
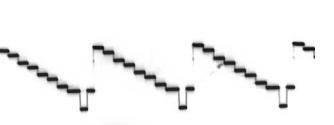
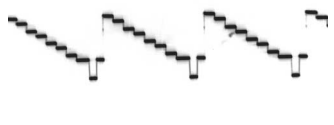
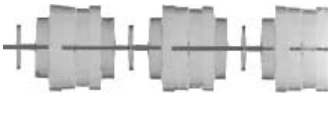
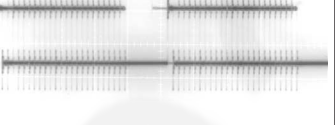
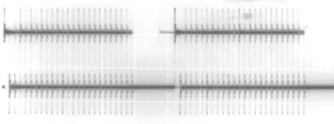
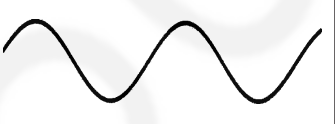
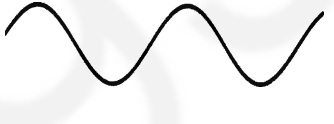
11.12. Waveform Table (2/4)

WF No. IC2801-15 (PLAY)  0.46Vp-p(50usec/div)	WF No. IC2801-18 (PLAY)  0.95Vp-p(50usec/div)	WF No. IC2801-21 (PLAY)  0.9Vp-p(50usec/div)	WF No. IC2801-24 (PLAY)  2.1Vp-p(50usec/div)
WF No. IC2801-27 (PLAY)  2.2Vp-p(50usec/div)	WF No. IC2801-30 (PLAY)  2.1Vp-p(50usec/div)	WF No. IC2801-32 (PLAY)  1.25Vp-p(20usec/div)	WF No. IC3901-35,36,37,38 (PLAY)  4.8Vp-p(2usec/div)
WF No. IC3901-43 (PLAY)  4.4Vp-p(500nsec/div)	WF No. IC3901-87 (PLAY)  3.6Vp-p(5usec/div)	WF No. IC3901-88,89 (PLAY)  3.8Vp-p(5usec/div)	WF No. IC3901-90 (PLAY)  3.6Vp-p(5usec/div)
WF No. IC3901-92 (PLAY)  3.6Vp-p(2usec/div)	WF No. IC3901-93 (PLAY)  3.6Vp-p(5usec/div)	WF No. IC3901-94 (PLAY)  3.8Vp-p(5usec/div)	WF No. IC3901-95 (PLAY)  3.8Vp-p(5usec/div)
WF No. IC5100-2,4 (PLAY)  0.1Vp-p(500usec/div)	WF No. IC5100-6,8 (PLAY)  2.1Vp-p(200usec/div)	WF No. IC5100-10,12 (PLAY)  0.25Vp-p(200usec/div)	WF No. IC5200-2,4 (PLAY)  0.1Vp-p(500usec/div)

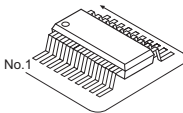
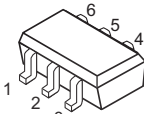
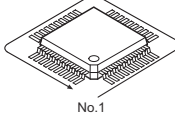
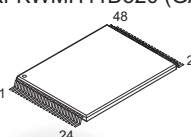
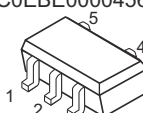
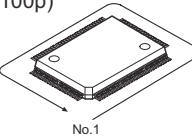
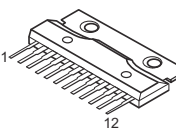
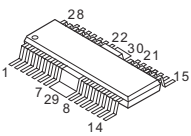
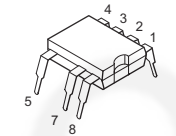
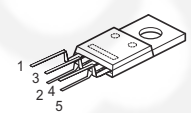
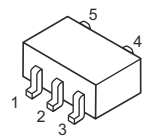
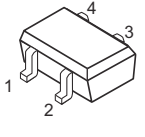
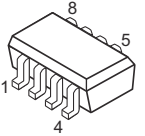
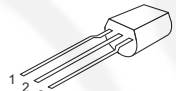
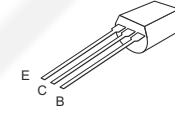
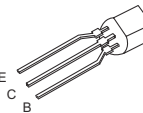
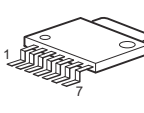
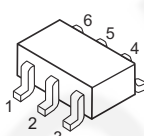
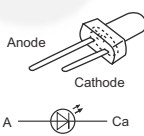
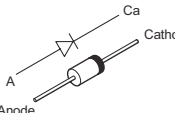
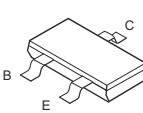
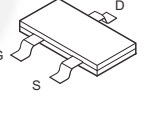
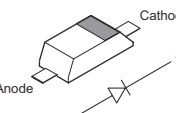
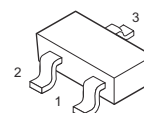
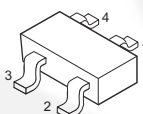
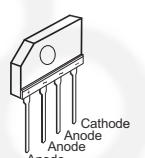
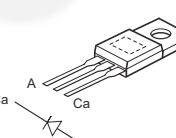
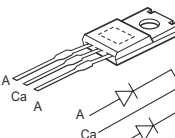
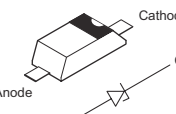
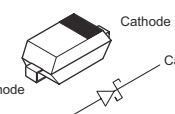
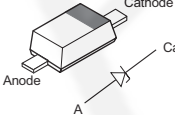
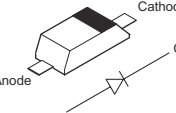
11.13. Waveform Table (3/4)

WF No. IC5200-6,8 (PLAY)  2.1Vp-p(200usec/div)	WF No. IC5200-10,12 (PLAY)  0.25Vp-p(200usec/div)	WF No. IC5300-2,4 (PLAY)  0.1Vp-p(500usec/div)	WF No. IC5300-6,8 (PLAY)  2.1Vp-p(200usec/div)
WF No. IC5300-10,12 (PLAY)  0.25Vp-p(200usec/div)	WF No. IC5701-1 (PLAY)  300Vp-p(2usec/div)	WF No. IC5701-4 (PLAY)  0.62Vp-p(5msec/div)	WF No. IC5701-5,6 (PLAY)  0.25Vp-p(5usec/div)
WF No. IC5701-7 (PLAY)  3.2Vp-p(2usec/div)	WF No. IC5799-1,2,3,4 (PLAY)  130Vp-p(2usec/div)	WF No. IC6901-5 (PLAY)  2.15Vp-p(2usec/div)	WF No. IC8001-9 (PLAY)  6.4Vp-p(5usec/div)
WF No. IC8001-10 (PLAY)  6.4Vp-p(5usec/div)	WF No. IC8001-11 (PLAY)  6Vp-p(5usec/div)	WF No. IC8001-12 (PLAY)  6Vp-p(5usec/div)	WF No. IC8001-13 (PLAY)  6.4Vp-p(5usec/div)
WF No. IC8001-14 (PLAY)  6.4Vp-p(5usec/div)	WF No. IC8001-17 (PLAY)  6Vp-p(5usec/div)	WF No. IC8001-18 (PLAY)  6.4Vp-p(5usec/div)	WF No. IC8001-59 (PLAY)  2.4Vp-p(2usec/div)

11.14. Waveform Table (4/4)

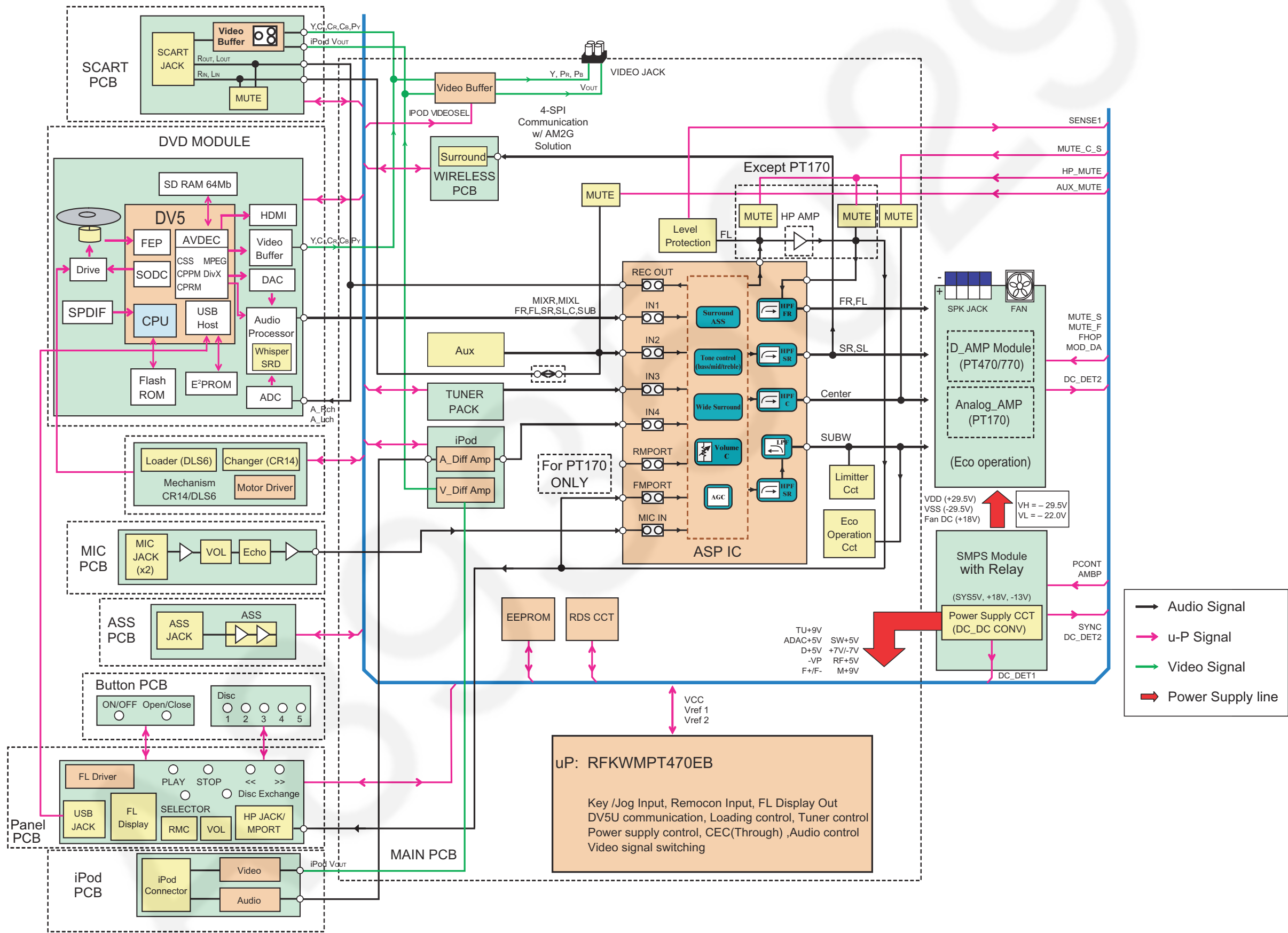
WF No. IC8001-62,63,64 (PLAY)  5.6Vp-p(20usec/div)	WF No. IC8001-129 (PLAY)  0.72Vp-p(20usec/div)	WF No. IC8001-130 (PLAY)  0.72Vp-p(20usec/div)	WF No. IC8001-131 (PLAY)  0.42Vp-p(20usec/div)
WF No. IC8001-138 (PLAY)  1.05Vp-p(20usec/div)	WF No. IC8001-139 (PLAY)  0.9Vp-p(20usec/div)	WF No. IC8001-151 (PLAY)  6Vp-p(2usec/div)	WF No. IC8001-152 (PLAY)  6.4Vp-p(500nsec/div)
WF No. IC8421-3,9,10,11 (PLAY)  4.8Vp-p(2usec/div)	WF No. IC8421-17 (PLAY)  0.092Vp-p(2msec/div)	WF No. IC8421-18,19,20,21,22 (PLAY)  0.76Vp-p(500usec/div)	WF No. IC8421-24 (PLAY)  2.3Vp-p(500usec/div)
WF No. IC8421-25 (PLAY)  0.24Vp-p(500usec/div)	WF No. IC8422-1 (PLAY)  1.5Vp-p(500usec/div)	WF No. IC8422-2 (PLAY)  0.15Vp-p(500usec/div)	WF No. IC8422-9 (PLAY)  7.6Vp-p(2usec/div)

12 Illustration of ICs, Transistor and Diode

	C0DBZYY00266 (8p) C0FBAK000026 (16p) C0JBAA001251 (20p) C0FBBY000060 (30p) C0ABBB000189 (8p) C1AB00002773 (16p) C3ABPG000160 (54p) C9ZB00000461 (32p)	C0JBAB000908 (6p) 		C0HBB0000057 (44p) MN2DS0018MP (216p) MN864702A (128p)	RFKWMH41B322 (GC/GS) RFKWMH41D320 (GA) 
C0JBAA000501 C0JBAA000502 C0JBAB000907 C0CBCBC00140 C0EBE0000456 	C1AB00002735 (100p) RFKWMPT470EB (100p) 	AN17831A 	C0GBG0000048 (28P) 	MIP2F20MSSCF 	C0DAAMH00012 C0DAAMH00015 C0DAAYY00042 
C0CBCDC00063 	C0EBA0000039 	 RFKXB0681A-M (GC/GS) RFKXB0681C-M (GA) RFKWEPT470EB	C0DABFC00002 (3p) C0DAEMZ00001 (3p) B1ABCF000011 (3p) 	2SC3940ARA B1ACKD000005 	
2SB0621AHA 	C0DBFZG00001 	B1HBECA00004 	B1BABK000001 	B3ABA0000795 	B0EAKM000117 B0EAMM000057 B0HAMP000094 B0JAME000029 
B1ABCF000176 B1ABGC000005 	B1ADCE000012 B1ADCF000001 B1ADGB000008 B1GDCFGA0018 B1GDCFJJ0047 B1GBCFJJ0051 B1GBCFJN0033 B1GBCFLL0037	UNR221400L UNR521100L 2SB1218ARL 2SD0601AHL 2SD1819A0L	B1CFHA000002 	MA2J11100L MA2J72800L MA2YF8000L 	B1GDCFJJ0002 
B0EDKT000009 	B0EBNR000015 	B0ZAZ0000052 	B0HBSM000054 B1BACG000023 	B0BC010A0007 B0BC2R4A0006 	B0JCPD000025 
	MAZ80510ML MAZ80620ML MAZ80750ML MAZ81100ML MAZ81200ML MAZ81300HL MAZ81800ML MAZ82400HL MAZ83000ML MAZ83600ML	B0ACCK000005 			

13 Overall Simplified Block Diagram

Overall Block Diagram

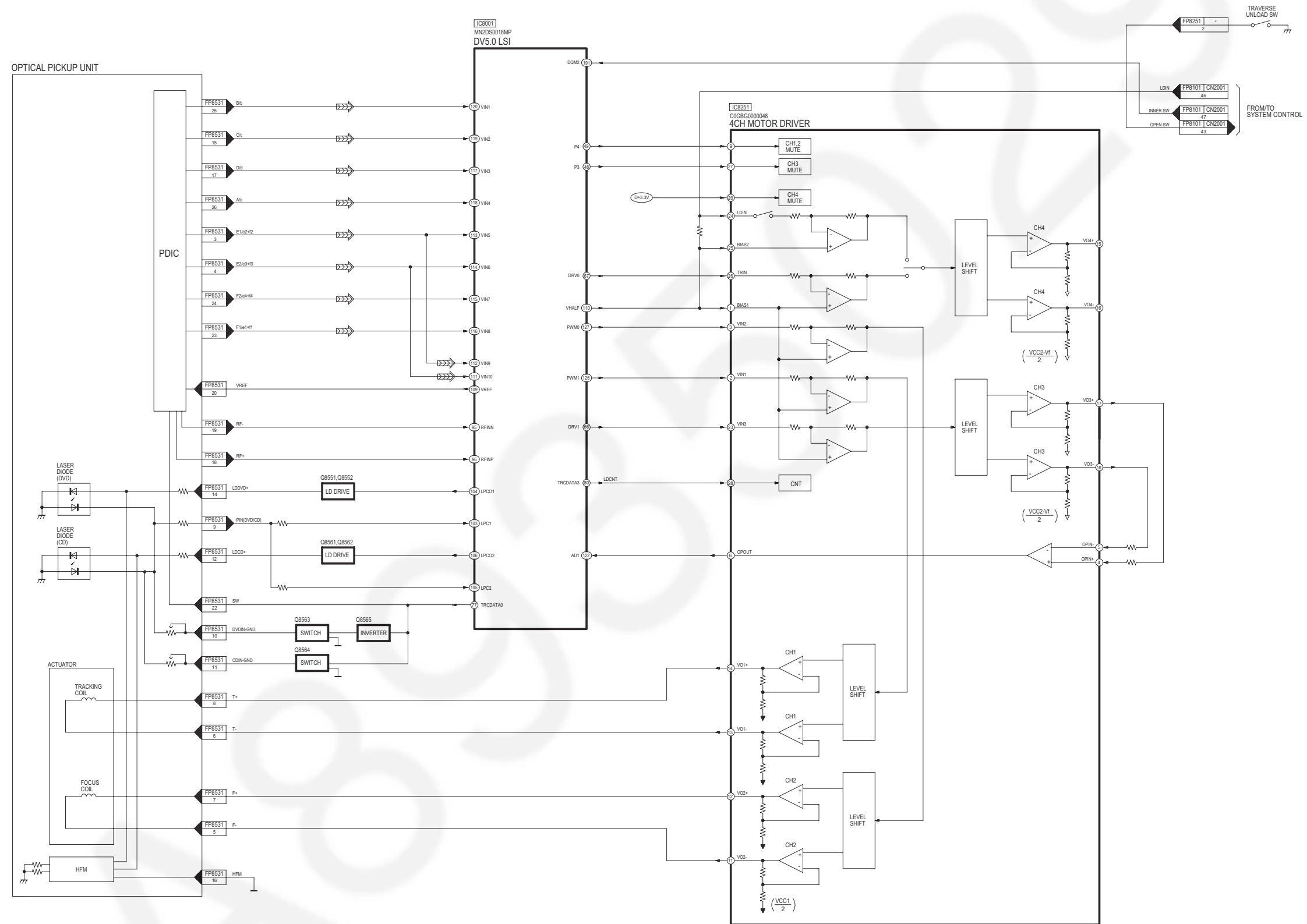


14.1. System Control



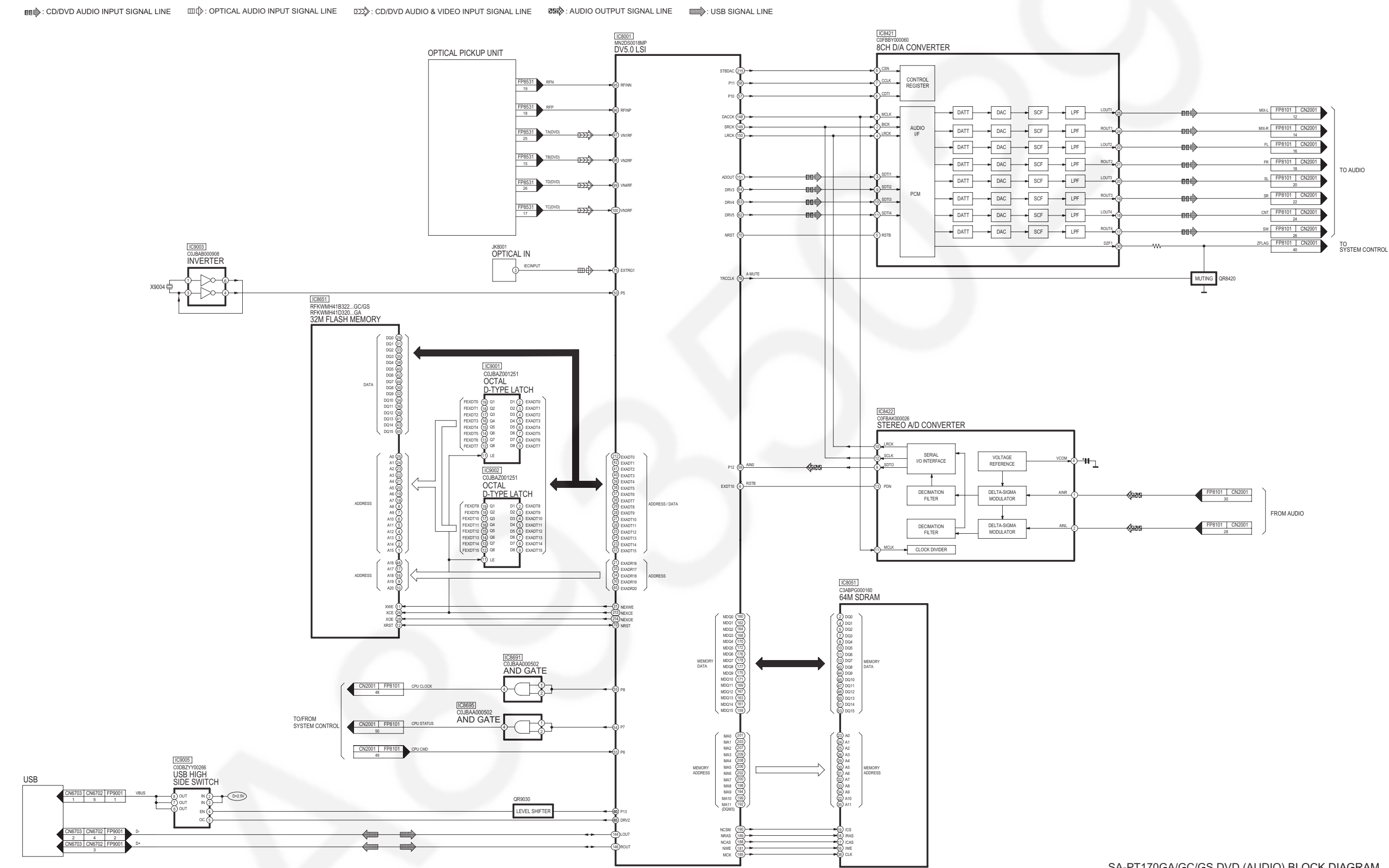
14.2. DVD (SERVO)

➡➡➡ : CD/DVD AUDIO & VIDEO INPUT SIGNAL LINE



SA-PT170GA/GC/GS DVD (SERVO) BLOCK DIAGRAM

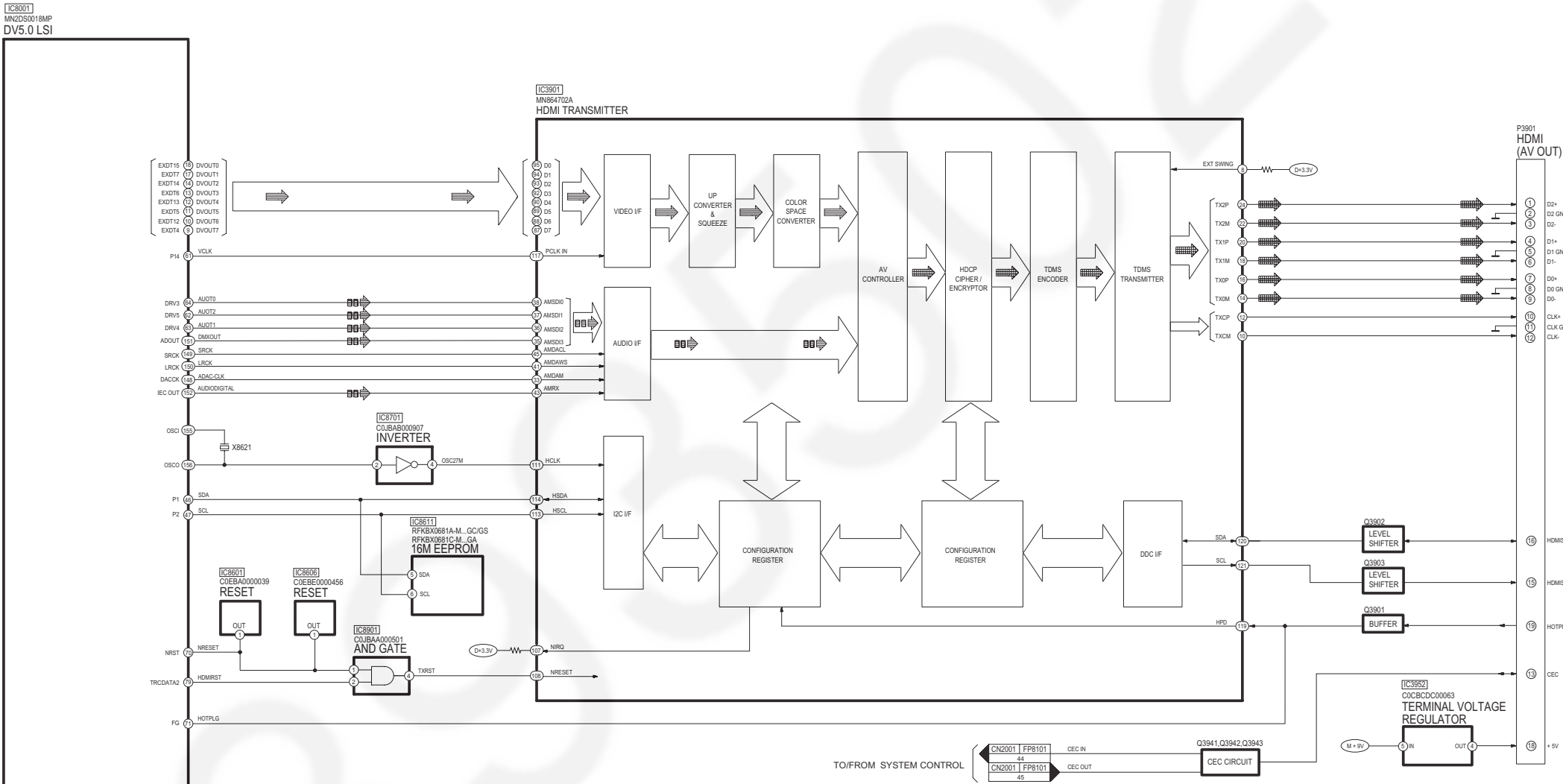
14.3. DVD (Audio)



SA-PT170GA/GC/GS DVD (AUDIO) BLOCK DIAGRAM

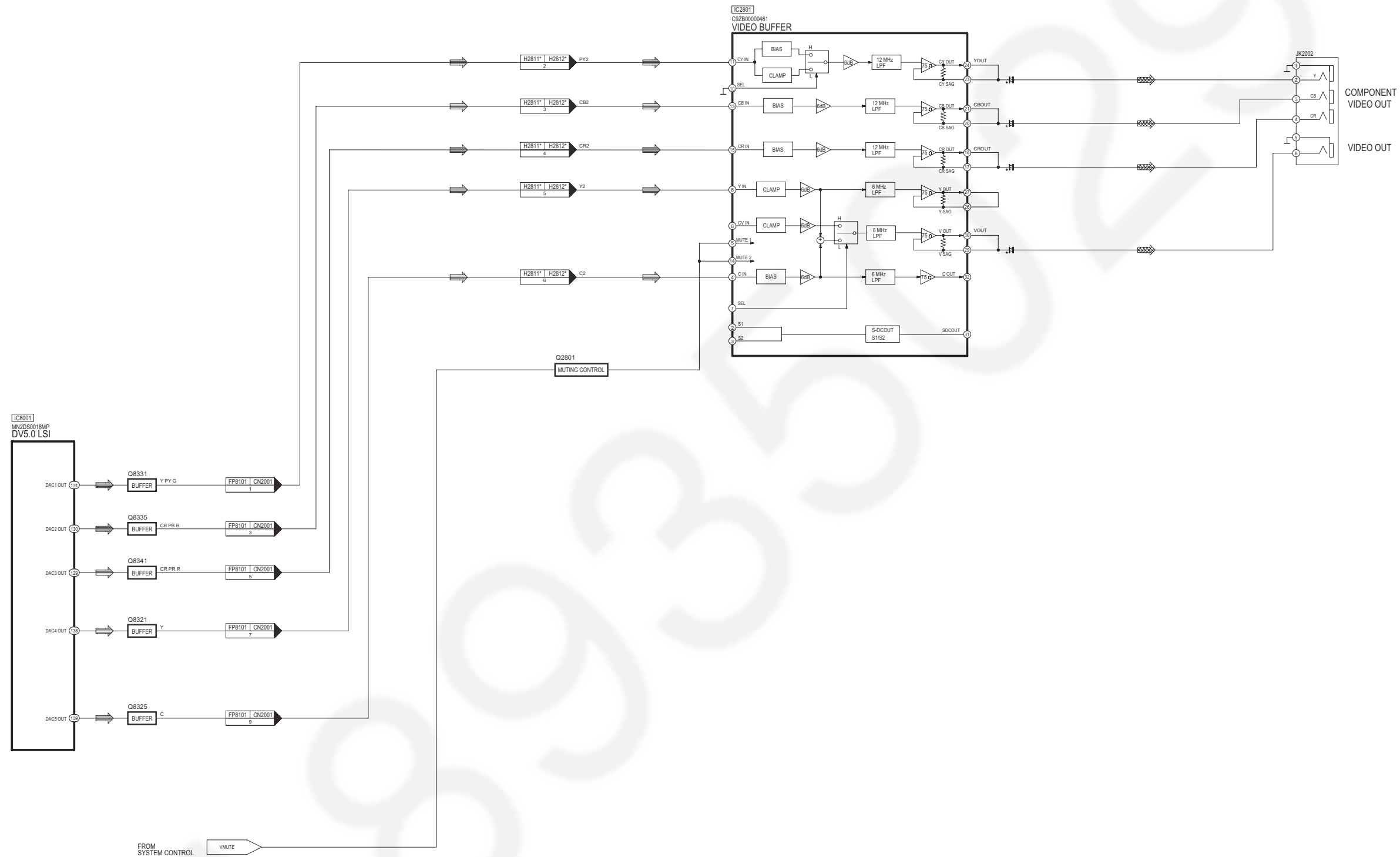
14.4. DVD (HDMI)

⬅️ : CD/DVD AUDIO INPUT SIGNAL LINE ➡️ : CD/DVD VIDEO INPUT SIGNAL LINE ➡️ : AUDIO & VIDEO OUTPUT SIGNAL LINE



SA-PT170GA/GC/GS DVD (HDMI) BLOCK DIAGRAM

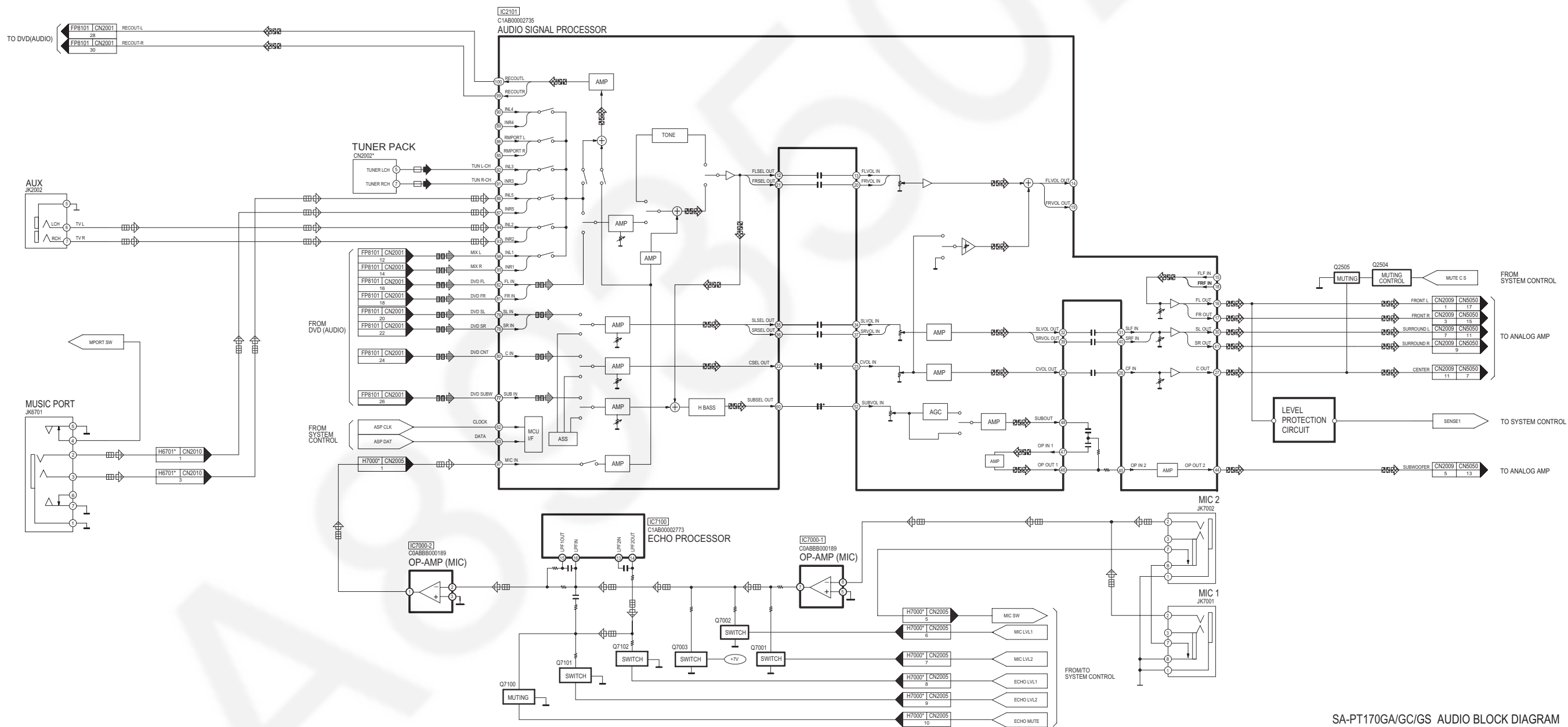
14.5. Video



SA-PT170GA/GC/GS VIDEO BLOCK DIAGRAM

14.6. Audio

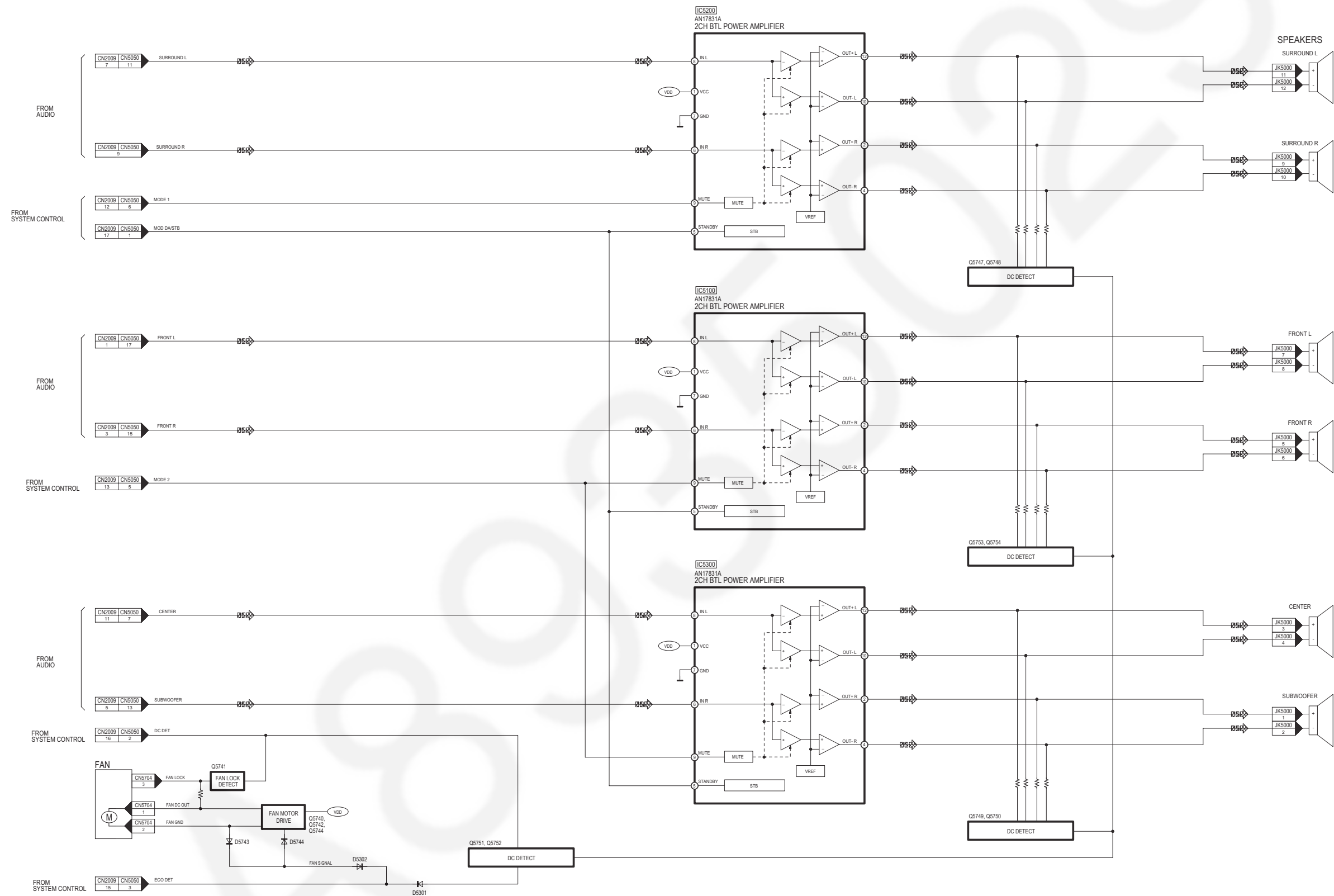
 : CD/DVD AUDIO INPUT SIGNAL LINE
  : TV/MUSIC PORT/MIC/AUX AUDIO INPUT SIGNAL LINE
  : AUDIO OUTPUT SIGNAL LINE
  : FM SIGNAL LINE



SA-PT170GA/GC/GS AUDIO BLOCK DIAGRAM

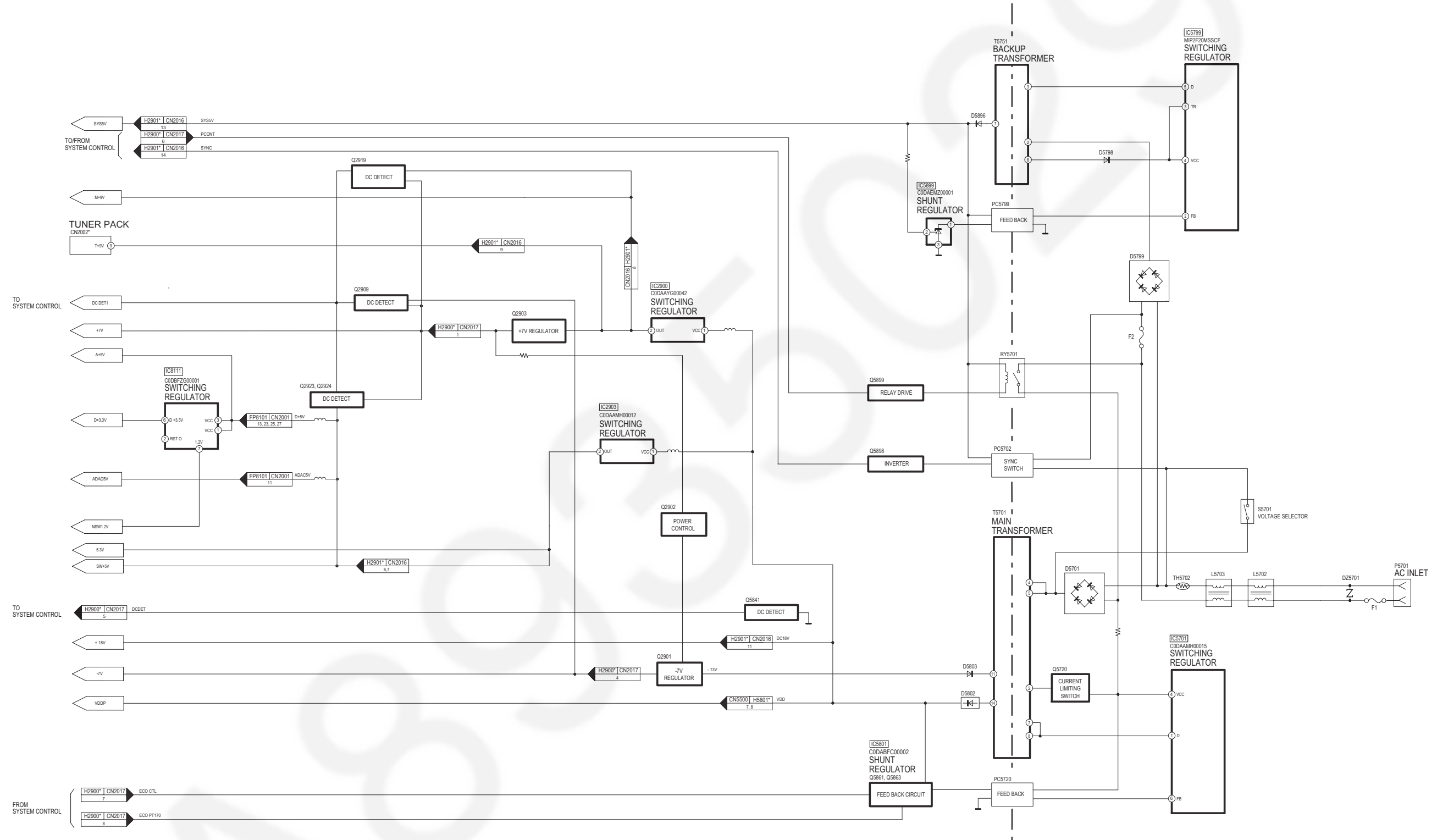
14.7. Analog Audio Amp

⬢ : AUDIO OUTPUT SIGNAL LINE



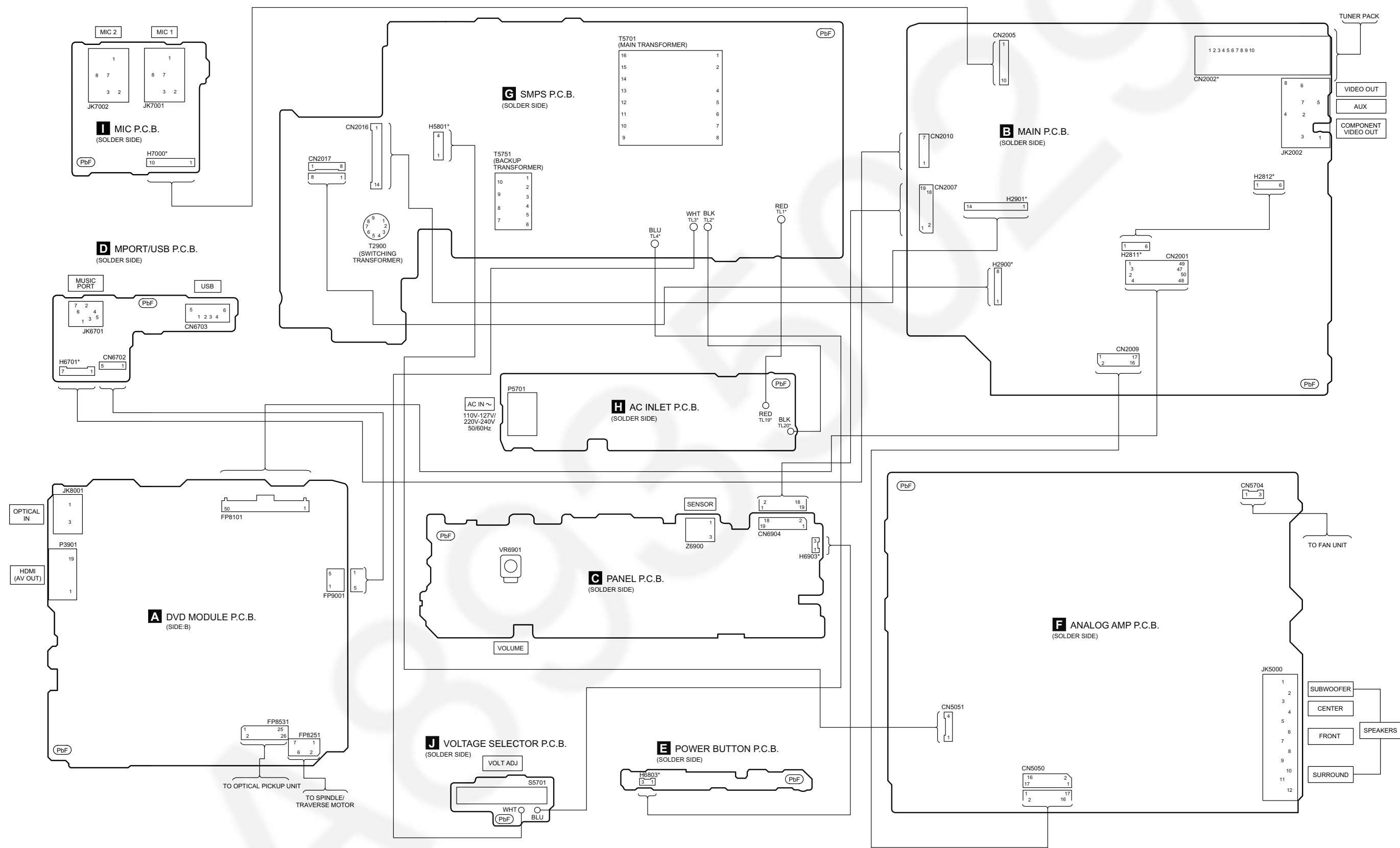
SA-PT170GA/GC/GS ANALOG AMP BLOCK DIAGRAM

14.8. Power



SA-PT170GA/GC/GS POWER BLOCK DIAGRAM

15 Wiring Diagram



NOTE: " * " REF IS FOR INDICATION ONLY.

SA-PT170GA/GC/GS WIRING CONNECTION

16 Schematic Diagram Notes

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

Notes:

S5701:	Vol ADJ Switch.
S6801:	Power switch (⏻/⏻).
S6807:	Open/Close switch (⏻).
S6901:	Memory switch (▶).
S6902:	Tune ^/Forward switch (▶▶▶/▶▶▶).
S6903:	Tune ∇/Backward switch (◀◀◀/◀◀◀).
S6904:	-Tune mode/—FM mode switch (■).
S6907:	Selector switch.
VR6901:	Volume jog.

- Important safety notice:

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

- In case of AC rated voltage Capacitors, the part no. and values will be indicated in the Schematic Diagram.
AC rated voltage capacitors:
C5700, C5701, C5702, C5706, C5707, C5708

• Resistor

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

• Capacitor

Unit of capacitance is μ F, unless otherwise noted. F=Farads, pF=pico-Farad.

• Coil

Unit of inductance is H, unless otherwise noted.

• *

Ref is for indication only.

- Voltage and signal line

	: +B signal line
	: -B signal line
	: Audio output signal line
	: Video output signal line
	: Audio & Video output signal line
	: CD/DVD Audio input signal line
	: CD/DVD Video input signal line
	: CD/DVD Audio & Video input signal line
	: Optical/TV/Music Port/AUX Audio input signal line
	: FM signal Line
	: USB signal line

CAUTION:

FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE F1 T4AL 250V FUSE



RISK OF FIRE-REPLACE FUSE AS MARKED.

CAUTION:

FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE F2 T1.6AL 250V FUSE



RISK OF FIRE-REPLACE FUSE AS MARKED.

FUSE CAUTION



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

17.1. DVD Module Circuit

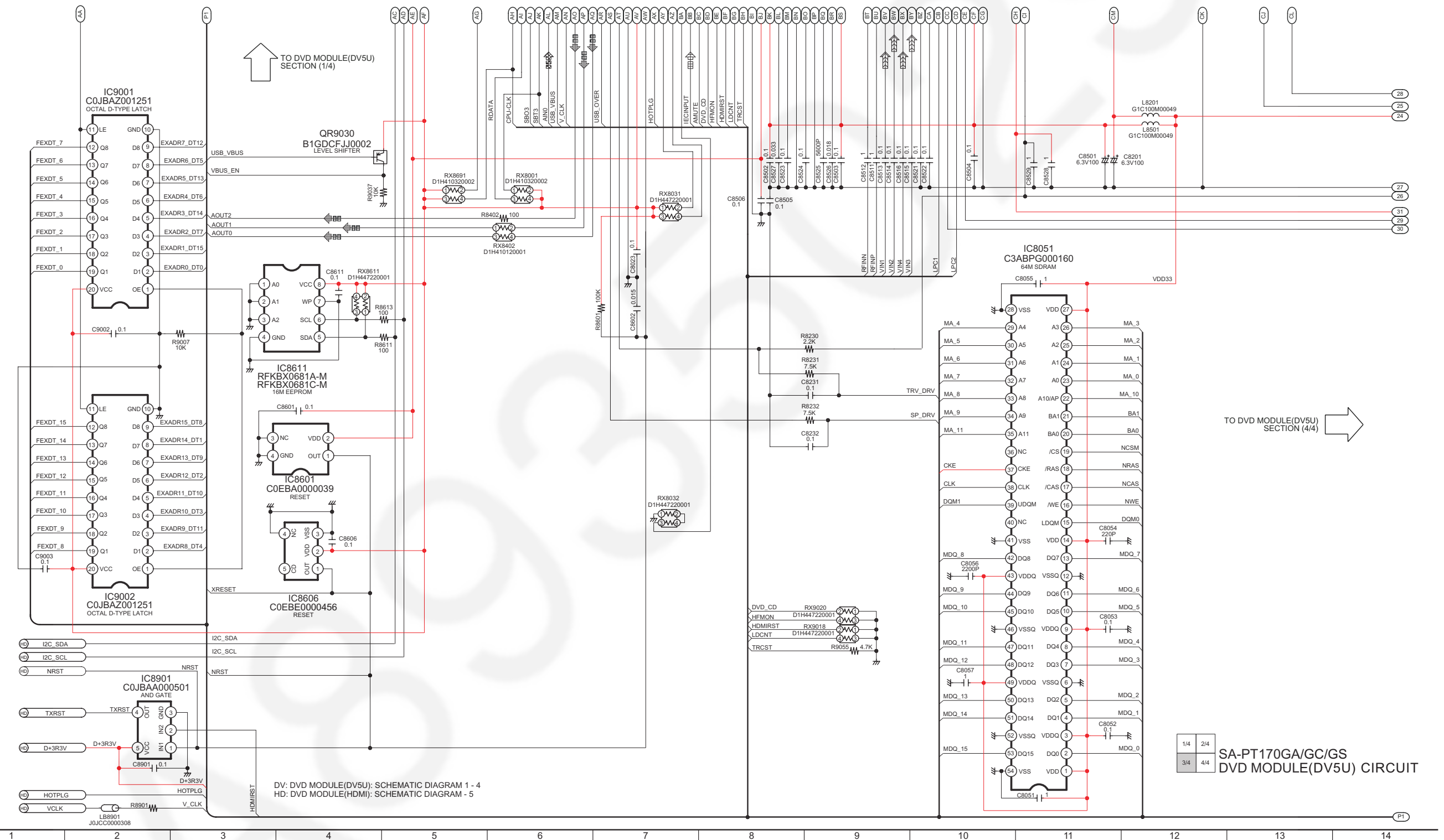




SCHEMATIC DIAGRAM - 3

A DVD MODULE(DV5U) CIRCUIT

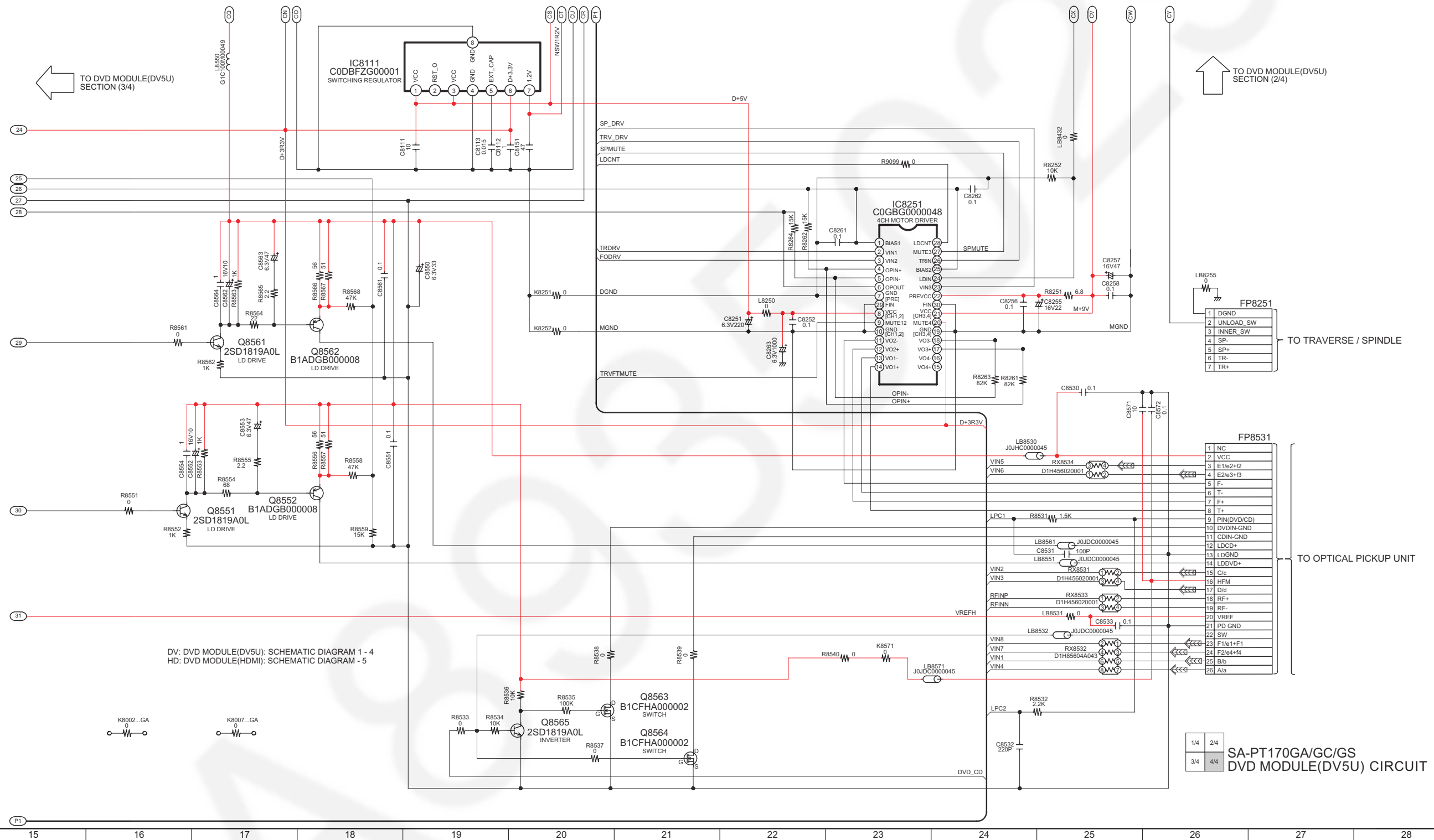
— : +B SIGNAL LINE
 : CD/DVD AUDIO INPUT SIGNAL LINE
 : CD/DVD VIDEO INPUT SIGNAL LINE
 : AUDIO OUTPUT SIGNAL LINE
 : OPTICAL AUDIO INPUT SIGNAL LINE
 : CD/DVD AUDIO & VIDEO INPUT SIGNAL LINE
 : USB SIGNAL LINE



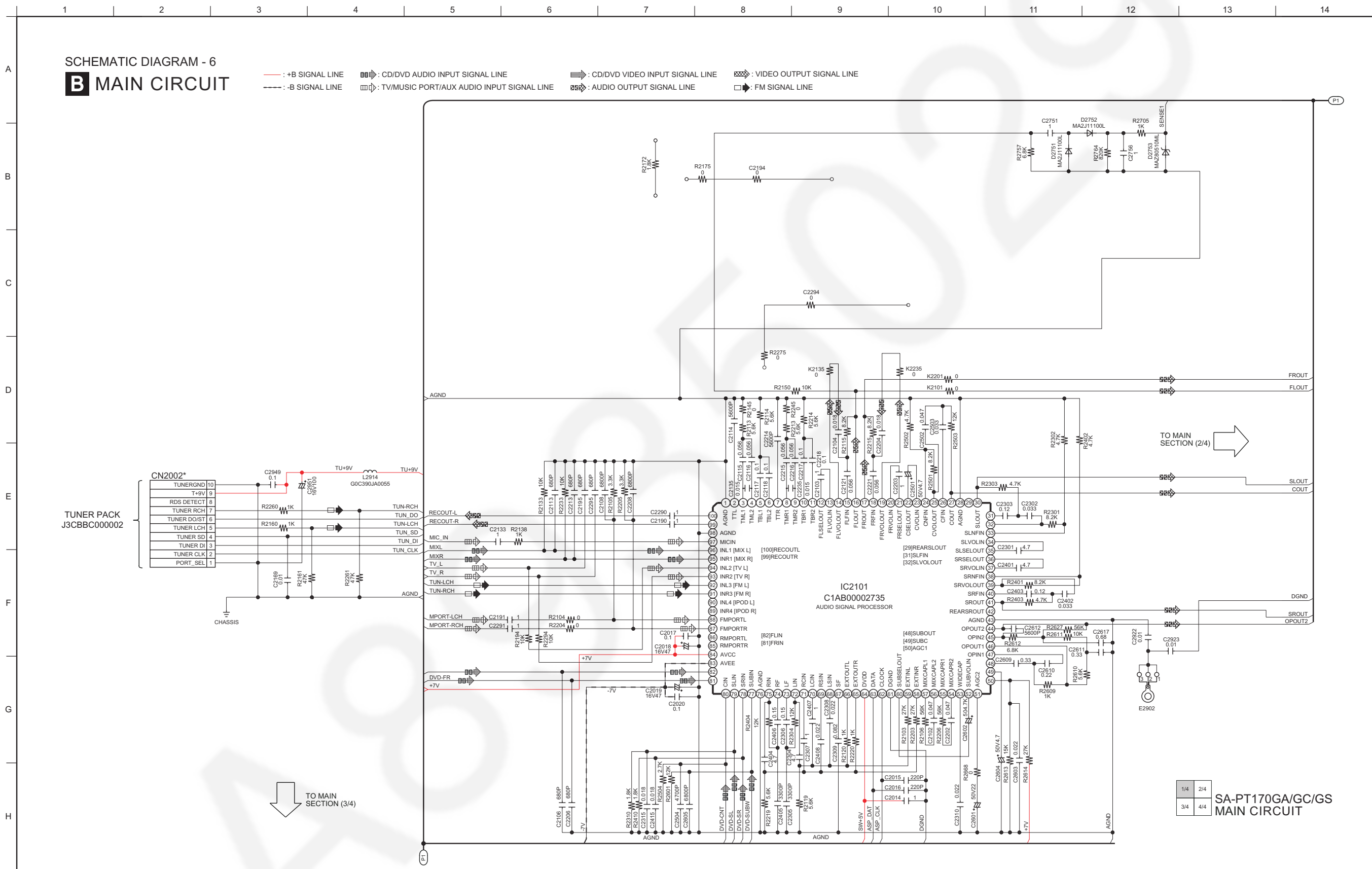
SCHEMATIC DIAGRAM - 4

A DVD MODULE(DV5U) CIRCUIT

— : +B SIGNAL LINE : CD/DVD AUDIO INPUT SIGNAL LINE : CD/DVD VIDEO INPUT SIGNAL LINE : AUDIO OUTPUT SIGNAL LINE
 : OPTICAL AUDIO INPUT SIGNAL LINE : CD/DVD AUDIO & VIDEO INPUT SIGNAL LINE : USB SIGNAL LINE



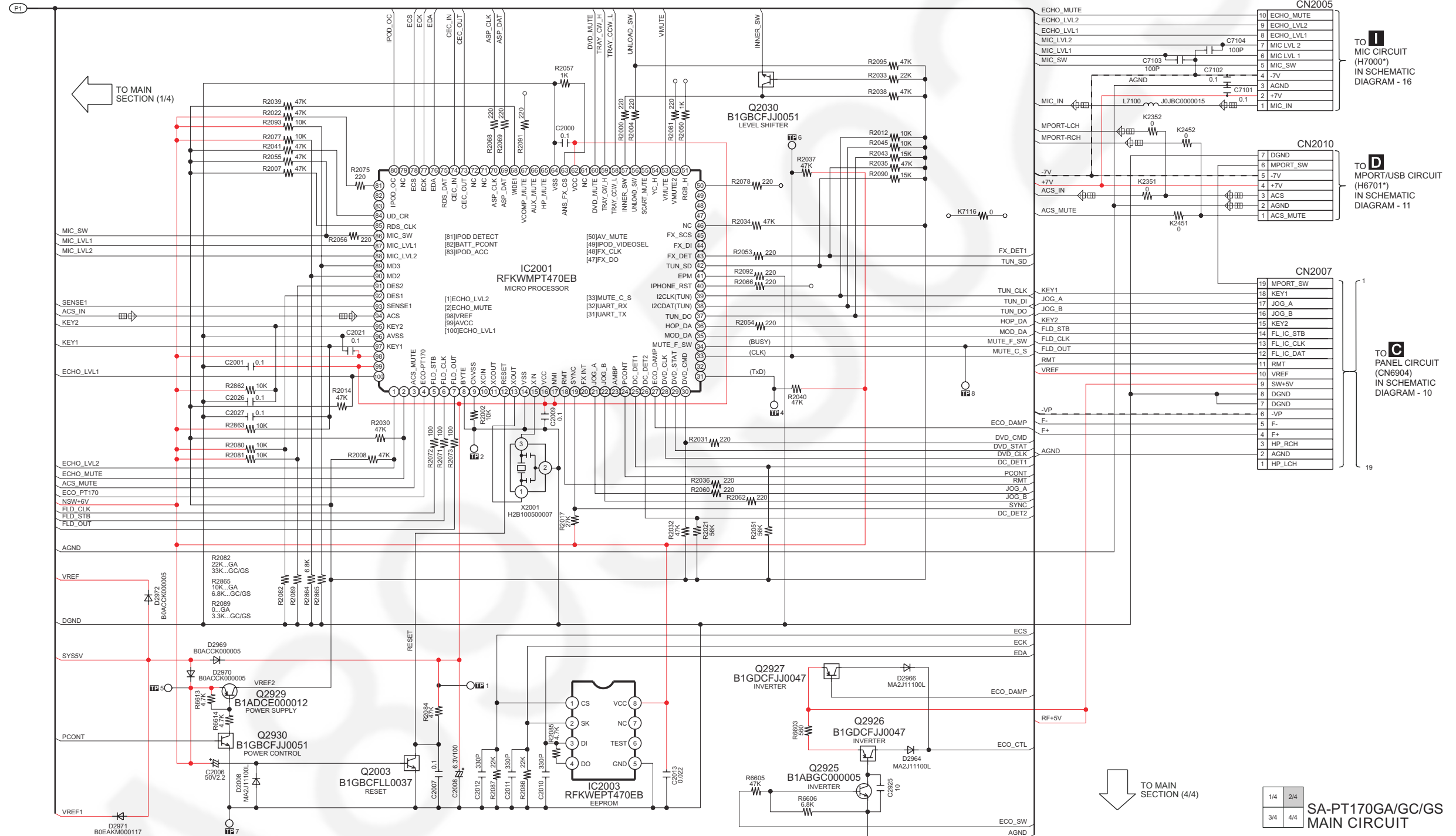
17.2. Main Circuit



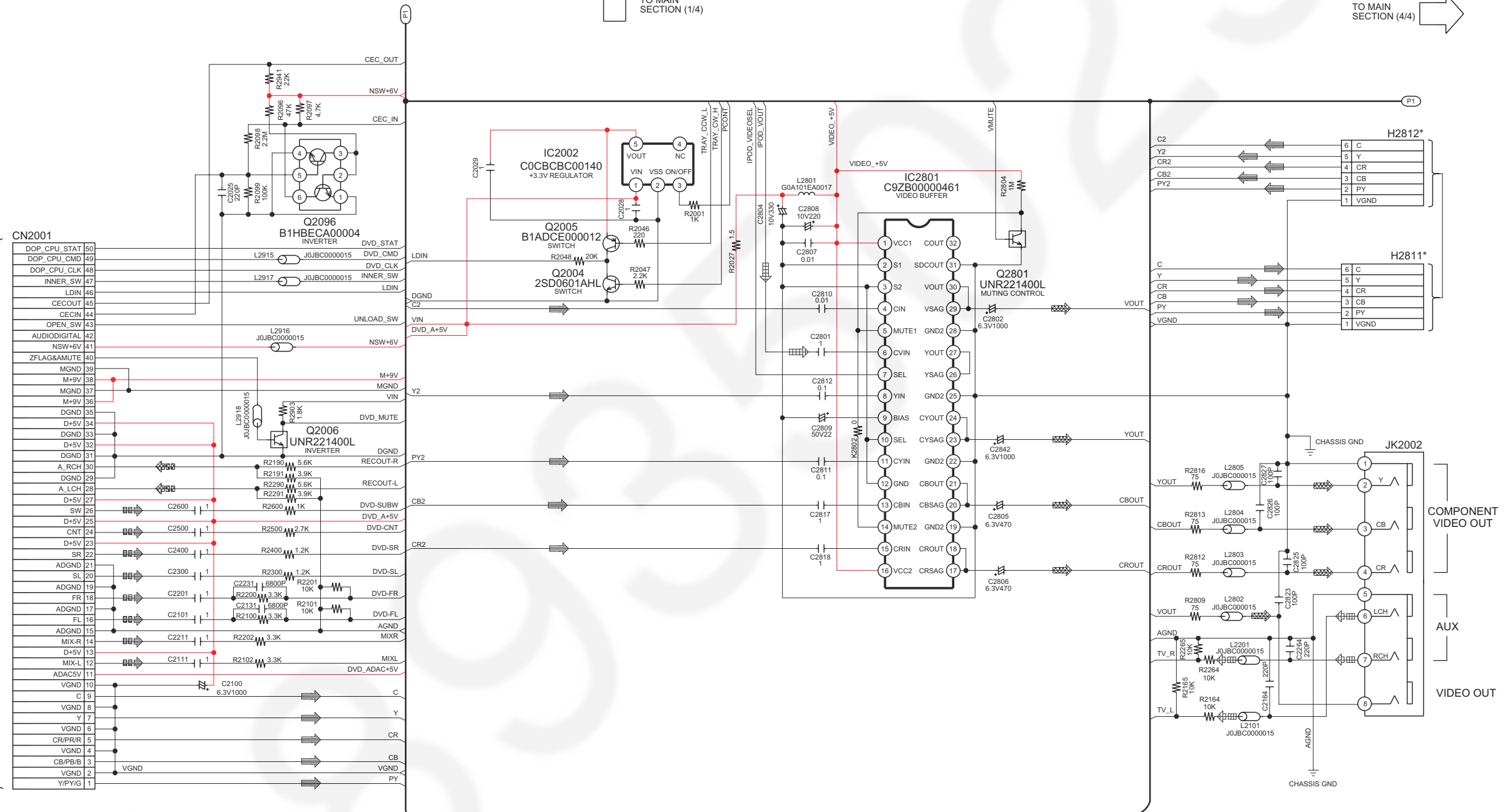
SCHEMATIC DIAGRAM - 7

B MAIN CIRCUIT

— : +B SIGNAL LINE
--- : -B SIGNAL LINE
⬇ : CD/DVD AUDIO INPUT SIGNAL LINE
⬆ : TV/MUSIC PORT/AUX AUDIO INPUT SIGNAL LINE
⬇ : CD/DVD VIDEO INPUT SIGNAL LINE
⬆ : AUDIO OUTPUT SIGNAL LINE
⬇ : VIDEO OUTPUT SIGNAL LINE
⬆ : FM SIGNAL LINE



B MAIN CIRCUIT



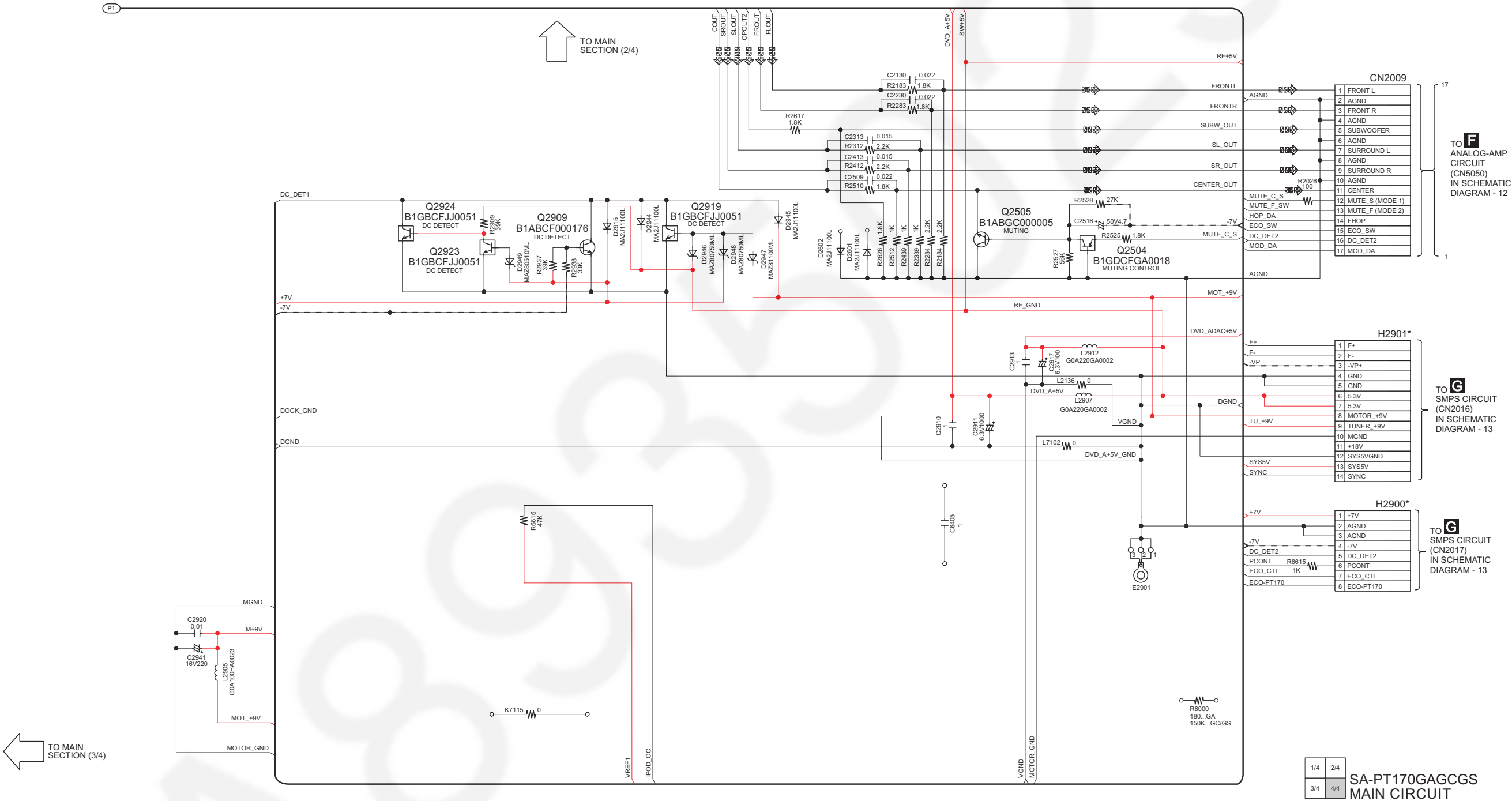
1/4	2/4
3/4	4/4

SA-PT170GA/GC/GS
MAIN CIRCUIT

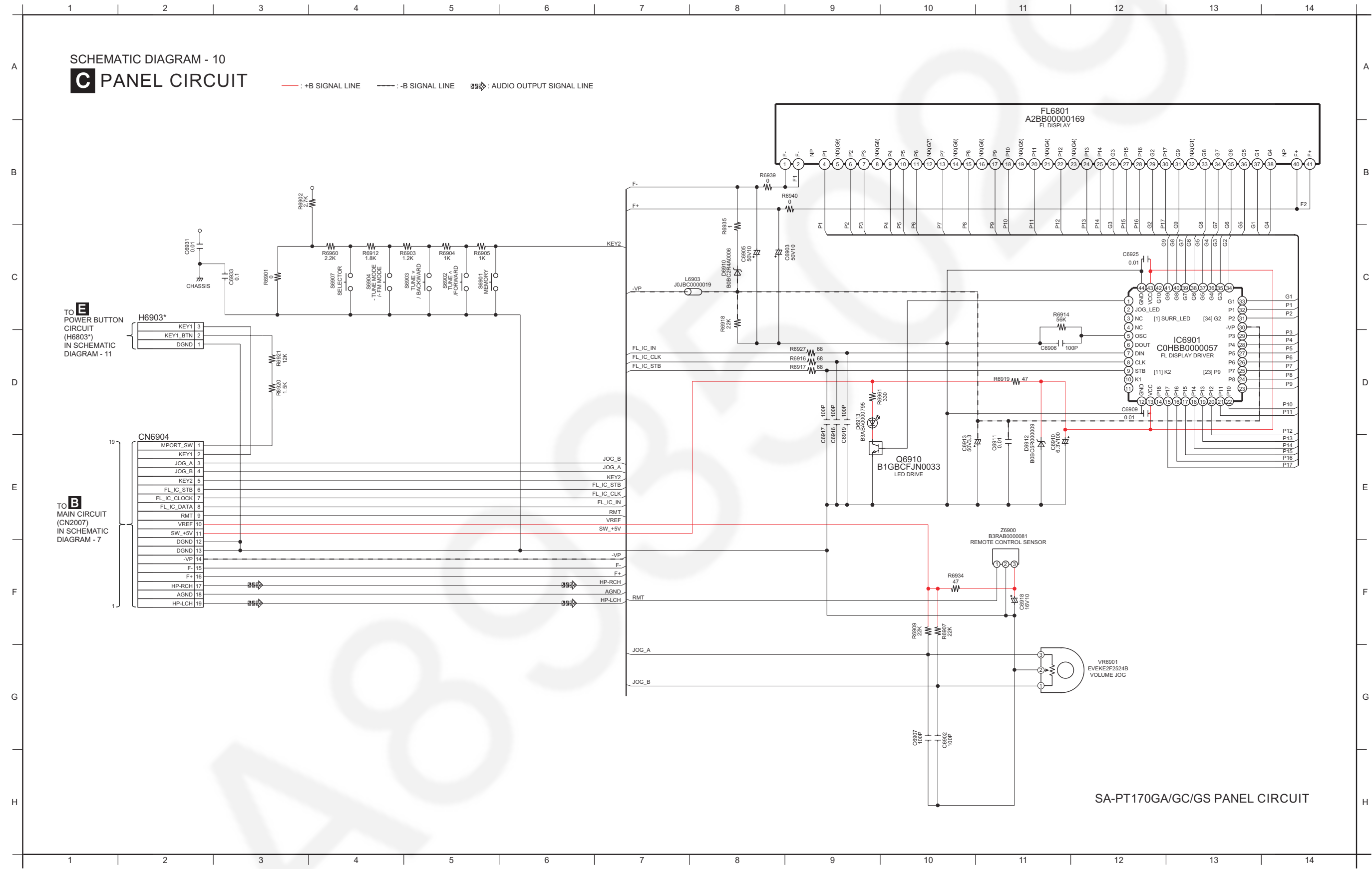
SCHEMATIC DIAGRAM - 9

B MAIN CIRCUIT

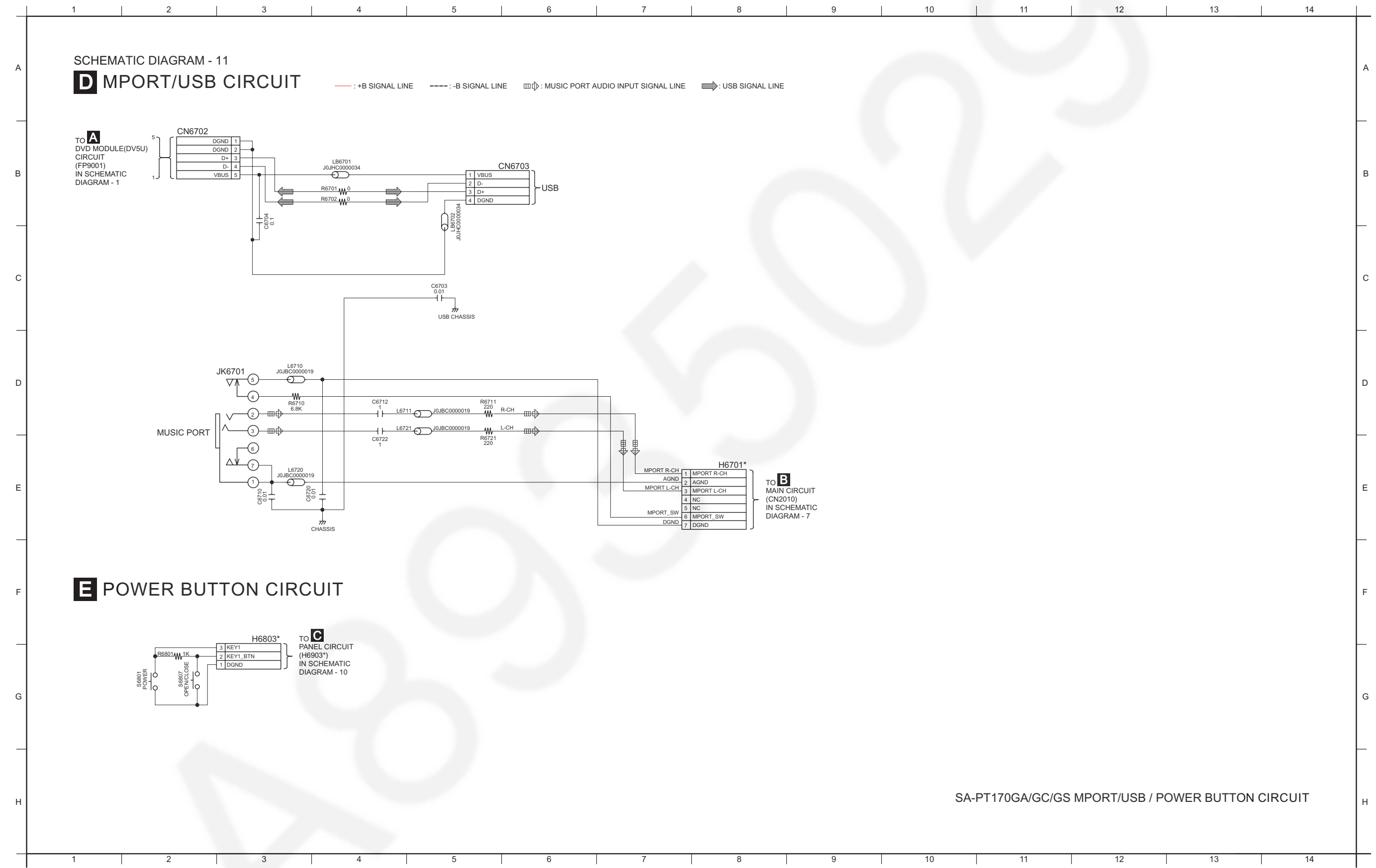
— : +B SIGNAL LINE : CD/DVD AUDIO INPUT SIGNAL LINE : CD/DVD VIDEO INPUT SIGNAL LINE : VIDEO OUTPUT SIGNAL LINE
- - - : -B SIGNAL LINE : TV/MUSIC PORT/AUX AUDIO INPUT SIGNAL LINE : AUDIO OUTPUT SIGNAL LINE : FM SIGNAL LINE



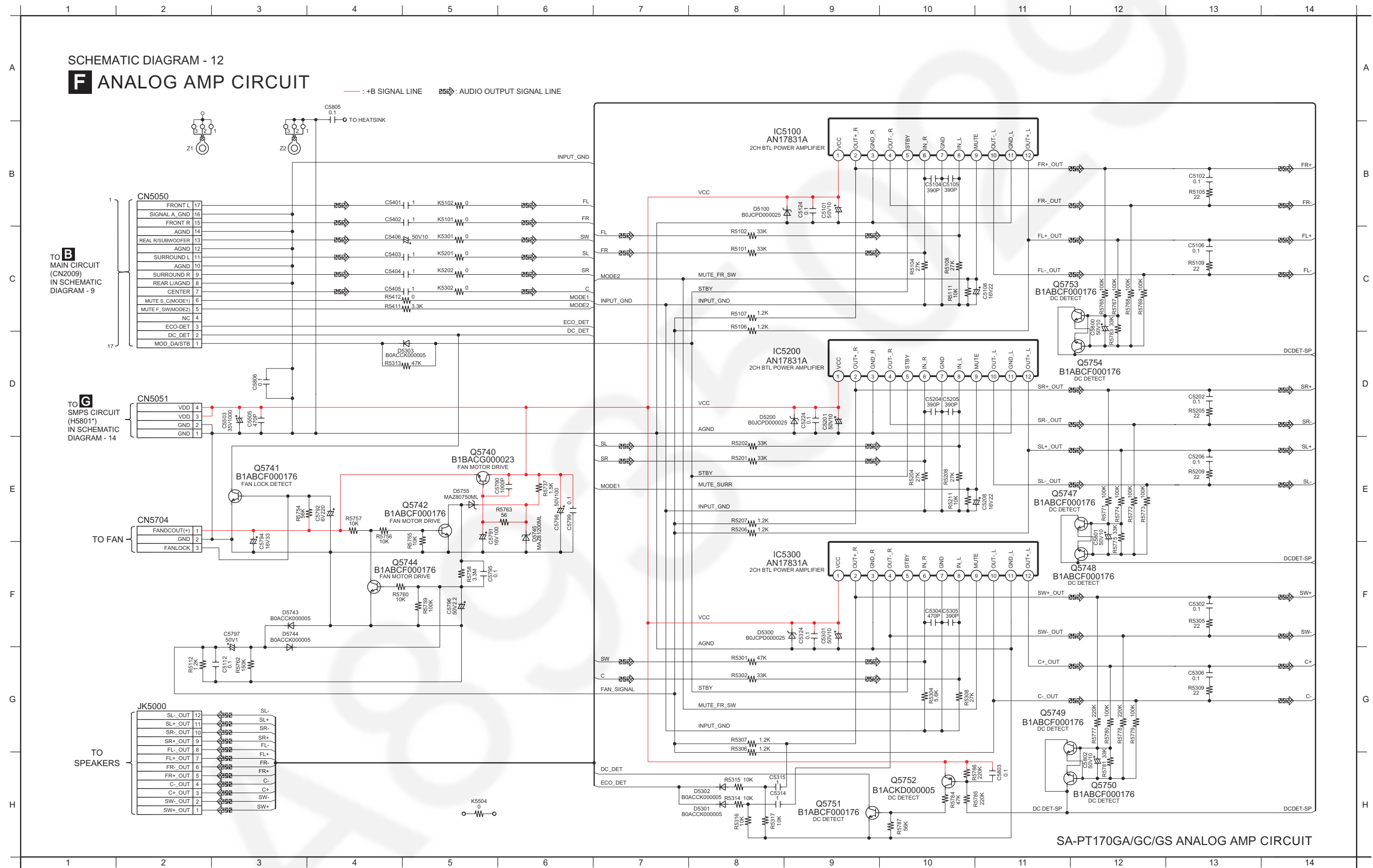
17.3. Panel Circuit



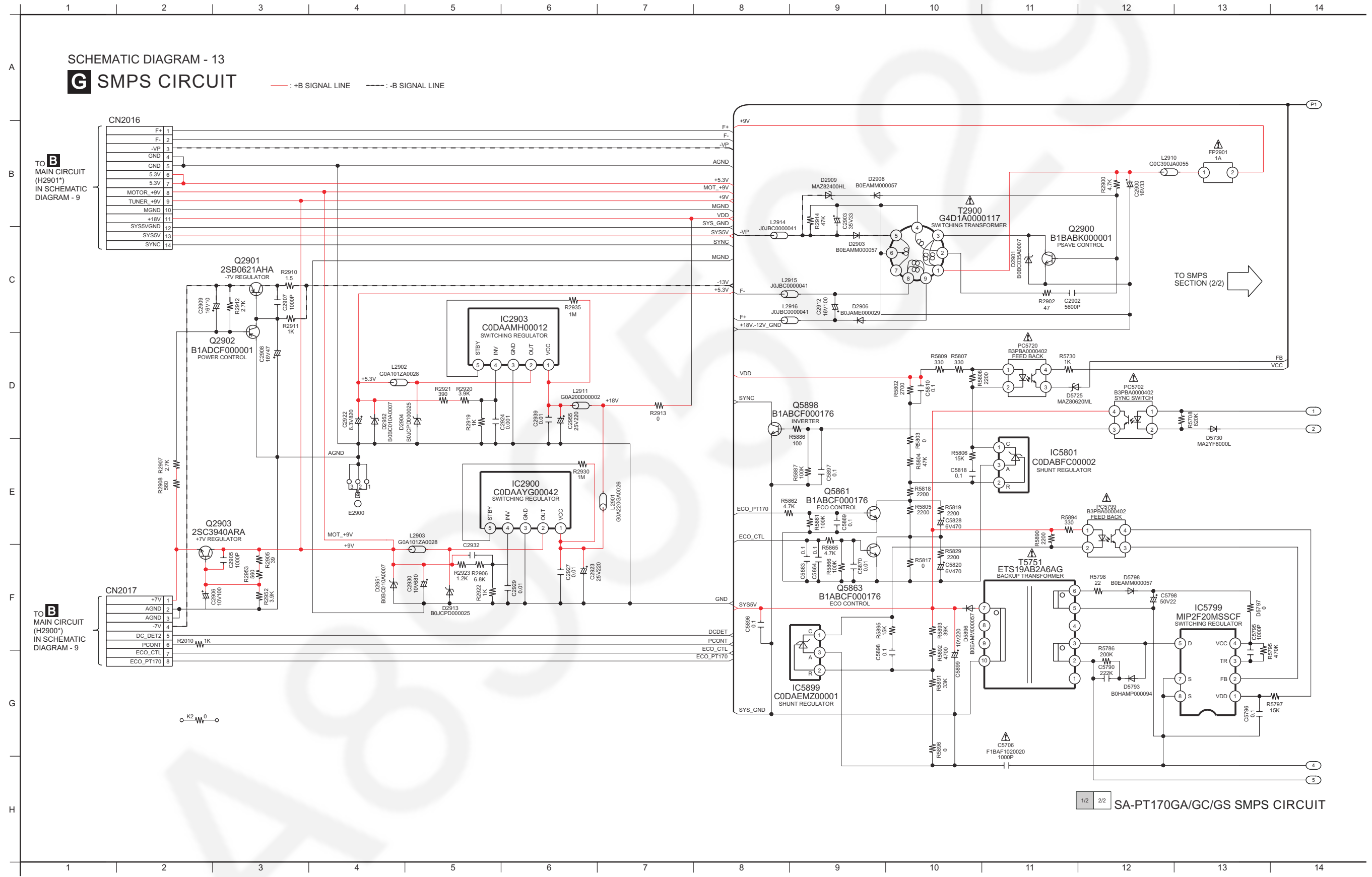
17.4. MPort/USB & Power Button Circuit



17.5. Analog Amp Circuit



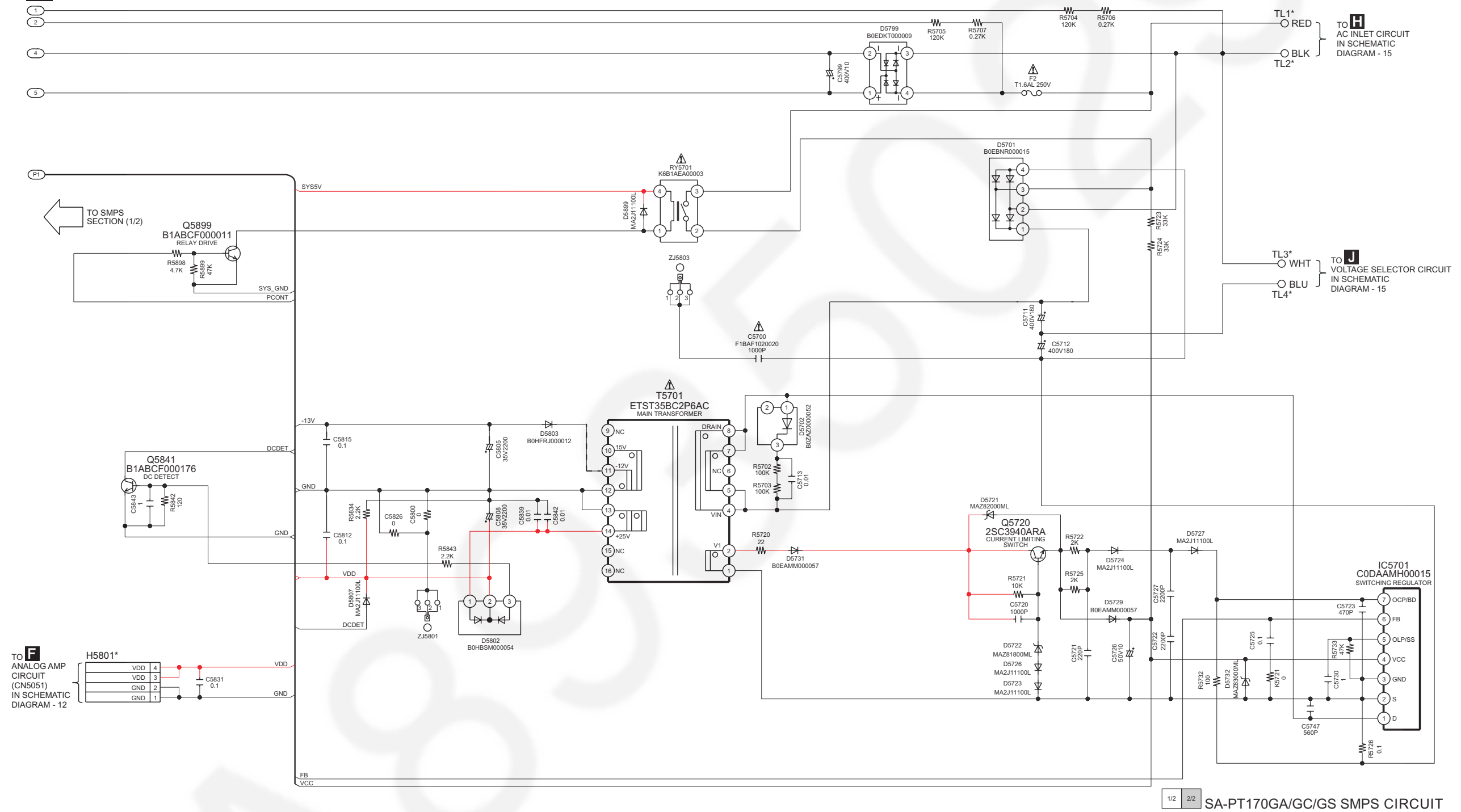
17.6. SMPS Circuit



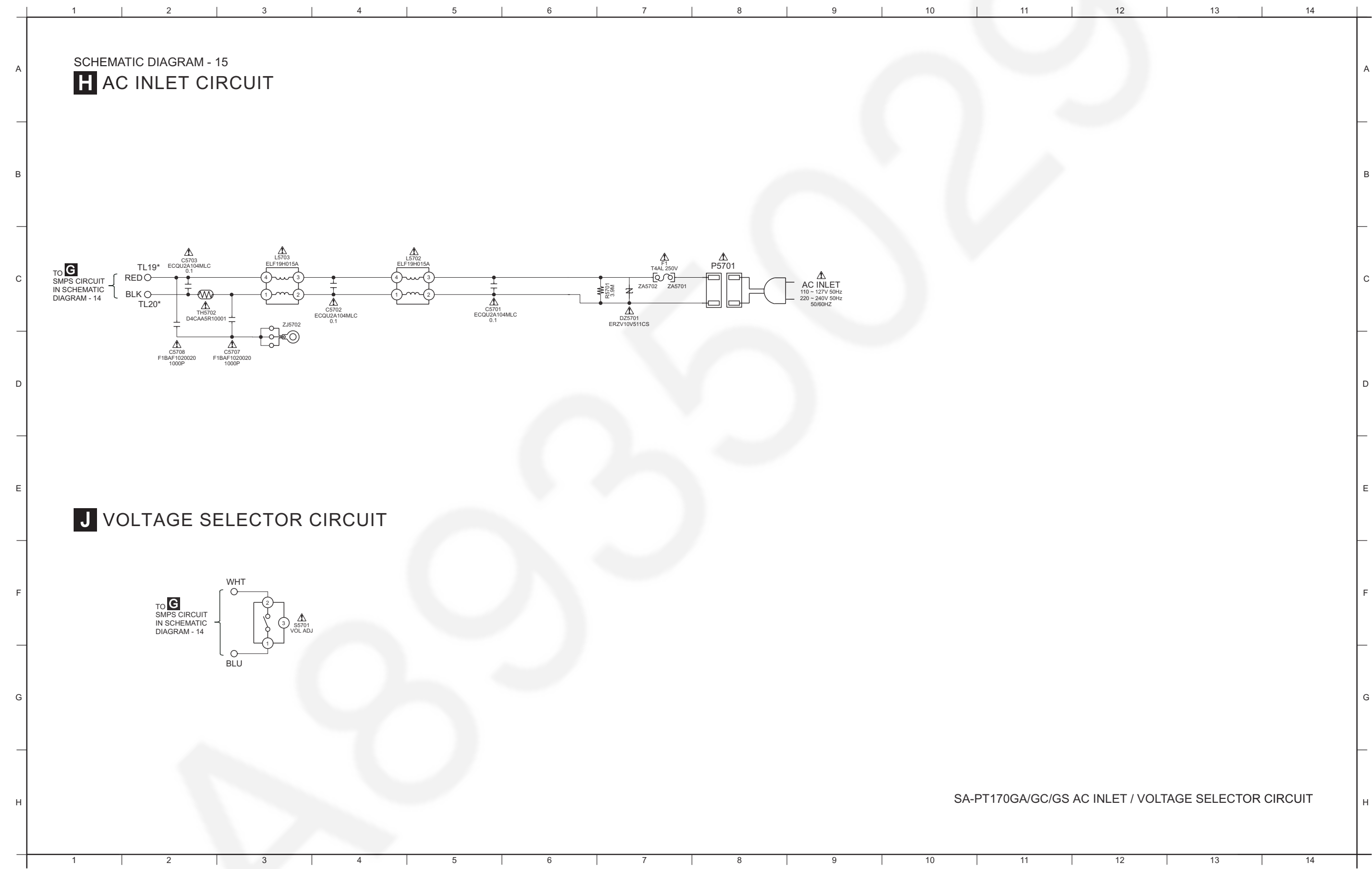
SCHEMATIC DIAGRAM - 14

G SMPS CIRCUIT

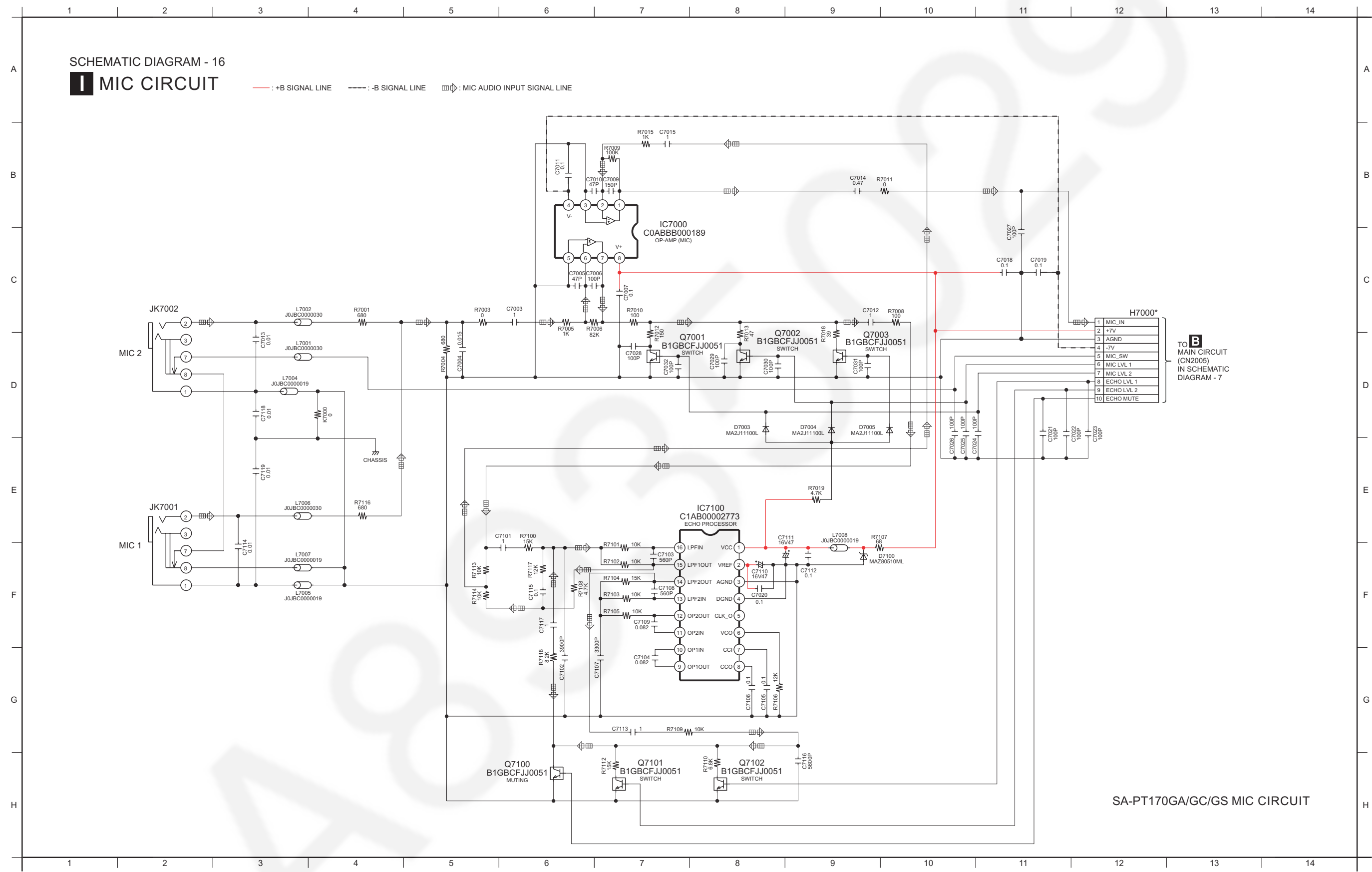
— : +B SIGNAL LINE --- : -B SIGNAL LINE



17.7. AC Inlet & Voltage Selector Circuit



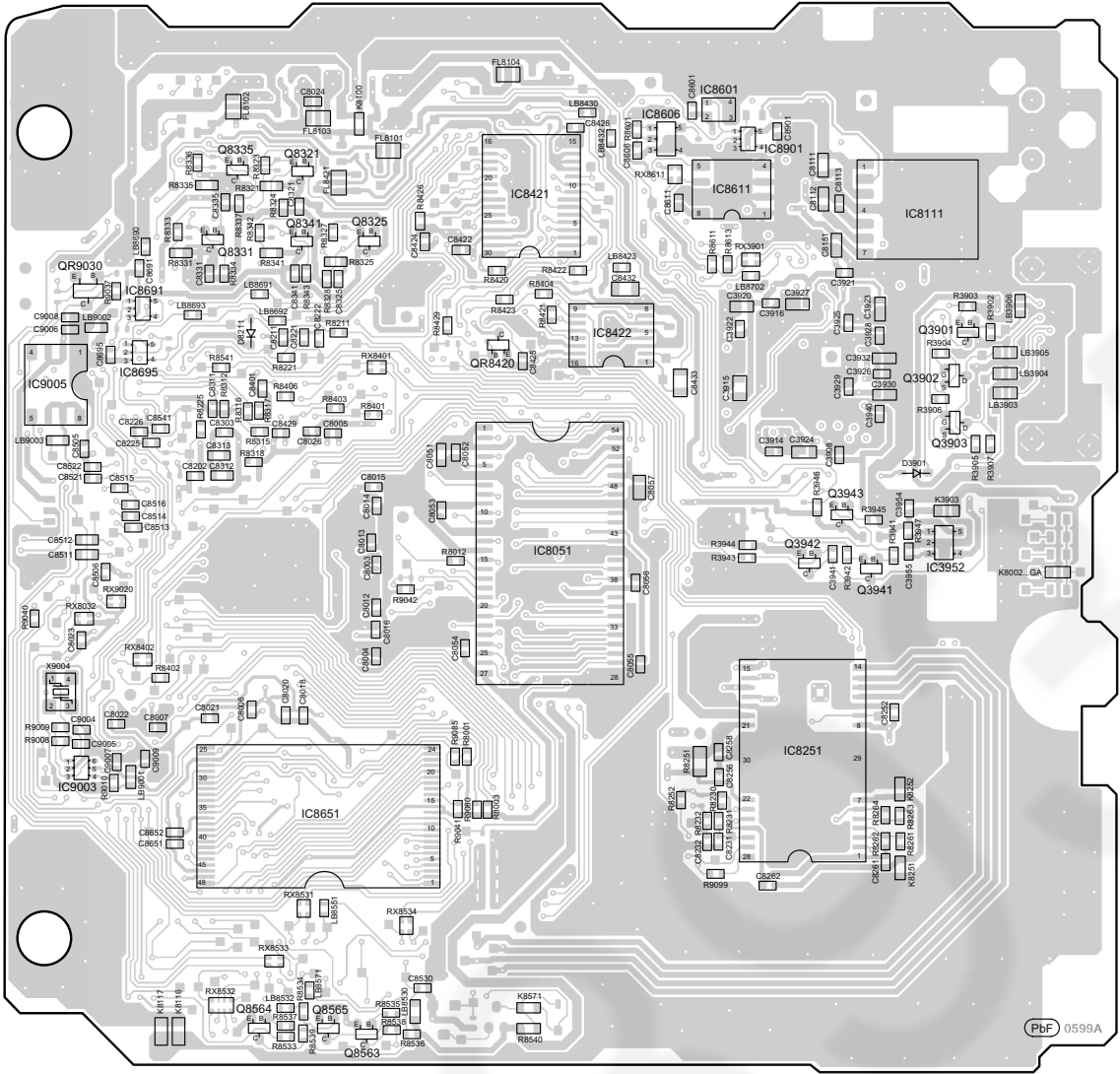
17.8. Mic Circuit



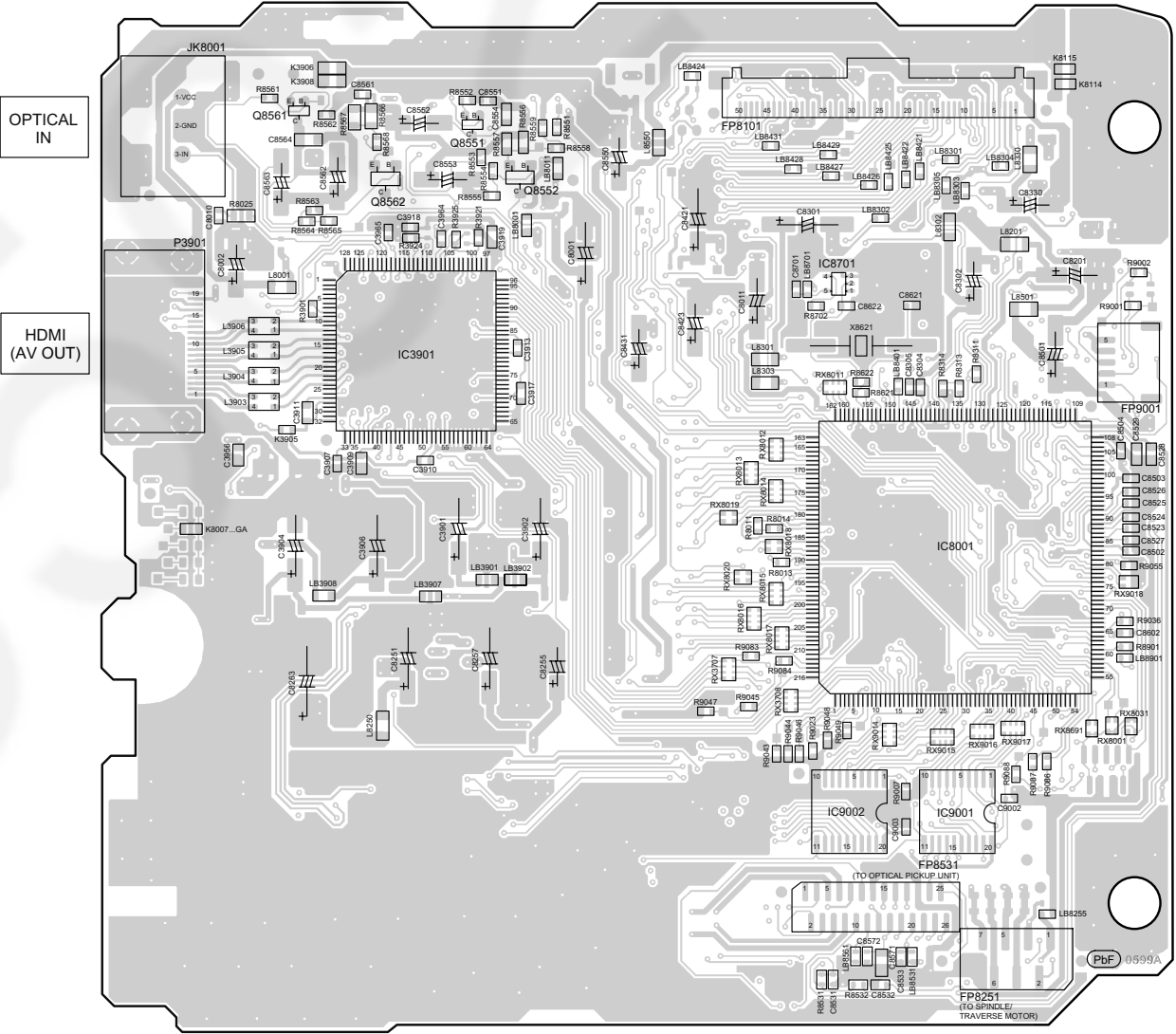
18 Printed Circuit Board

18.1. DVD Module P.C.B.

A DVD MODULE P.C.B. (RFK BX0681A-M...GC/GS)
(RFK BX0681C-M...GA)



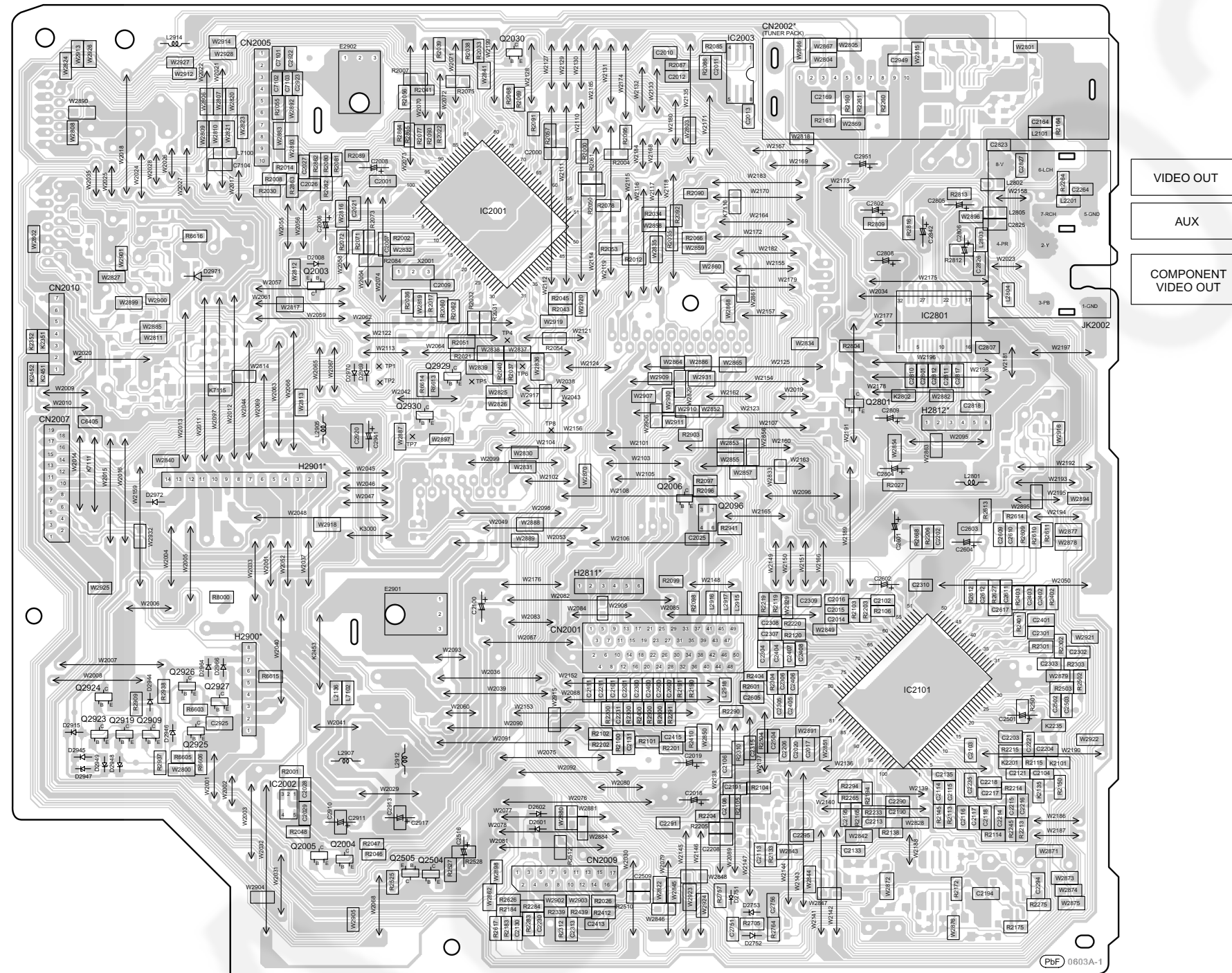
(SIDE A)



(SIDE B)

A vertical number line with tick marks labeled A, B, C, D, E, F, G, and H from bottom to top.

B MAIN P.C.B. (REPX0694E...GC/GS)
(REPX0694F...GA)

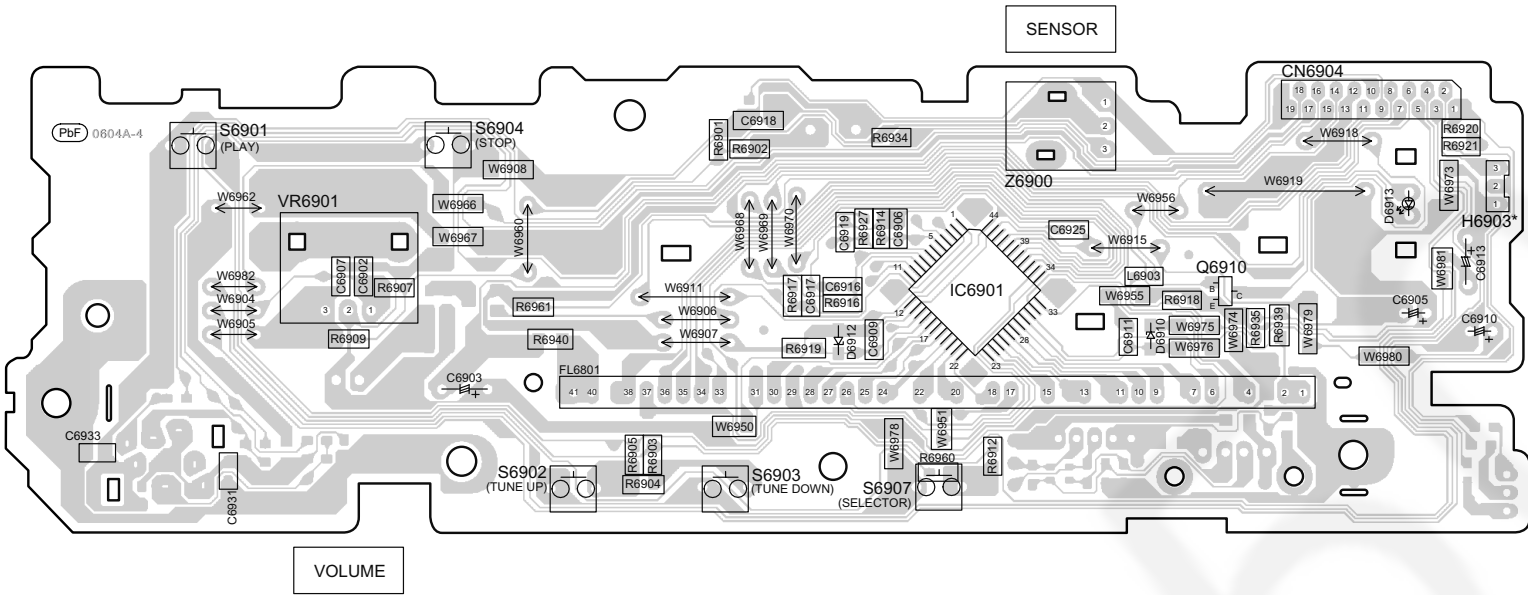


NOTE: " * " REF IS FOR INDICATION ONLY.

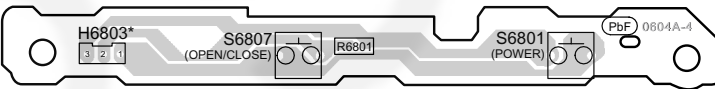
SA-PT170GA/GC/GS
MAIN P.C.B.

18.3. Panel, MPort/USB, Power Button & AC Inlet P.C.B.

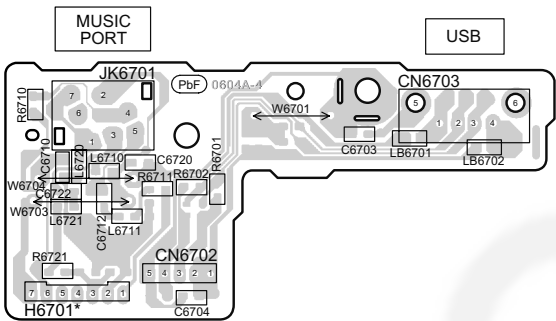
C PANEL P.C.B. (REPX0710C)



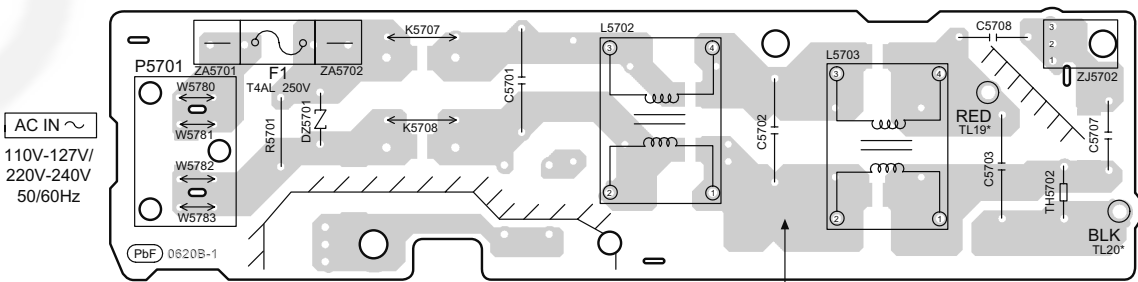
E POWER BUTTON P.C.B. (REPX0710C)



D MPORT/USB P.C.B. (REPX0710C)



H AC INLET P.C.B. (REPX0729B)



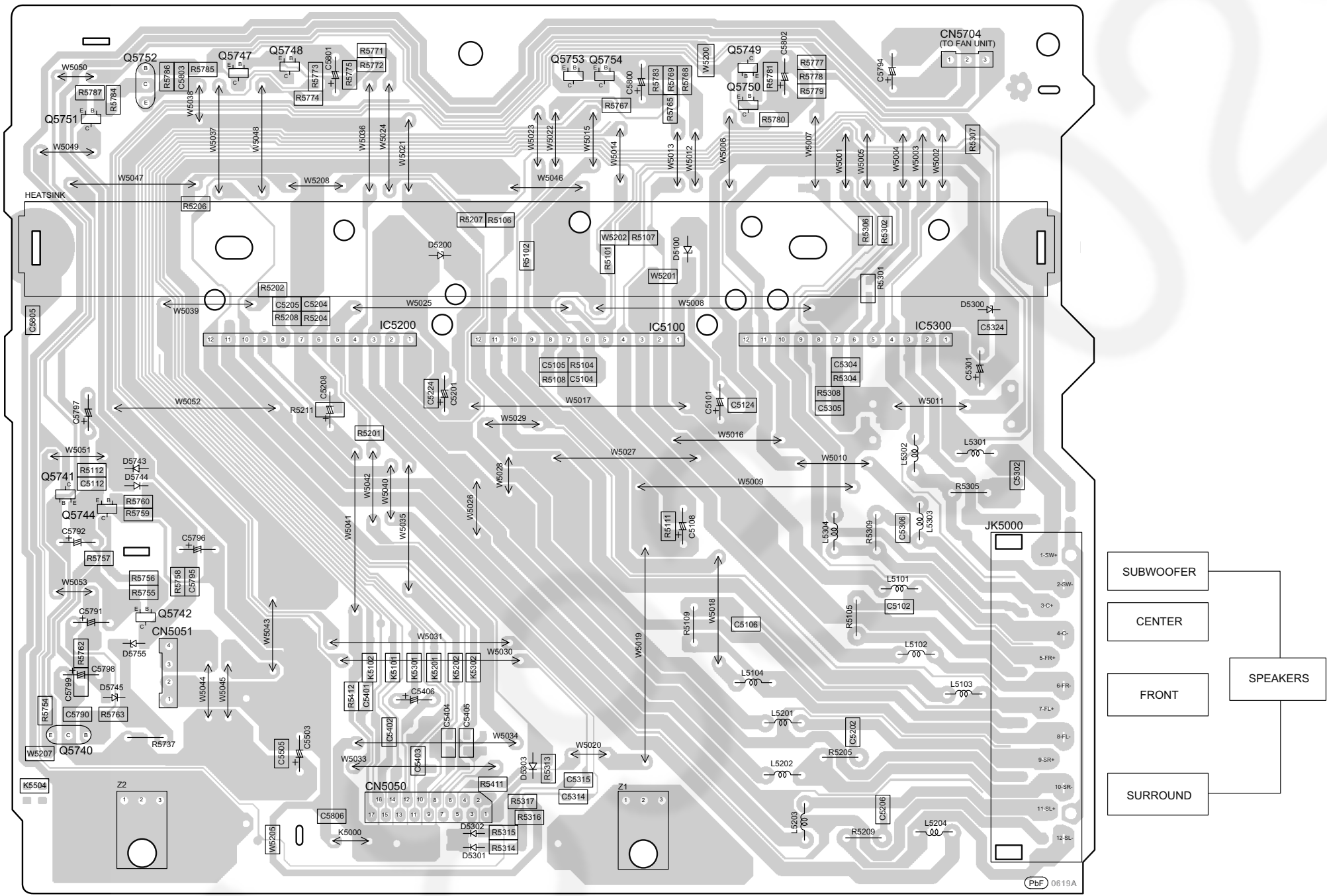
CAUTION
RISK OF ELECTRIC SHOCK
AC VOLTAGE LINE.
PLEASE DO NOT TOUCH THIS P.C.B.

NOTE: " * " REF IS FOR INDICATION ONLY.

SA-PT170GA/GC/GS
PANEL/MPORT/USB/POWER BUTTON/AC INLET P.C.B.

18.4. Analog Amp P.C.B.

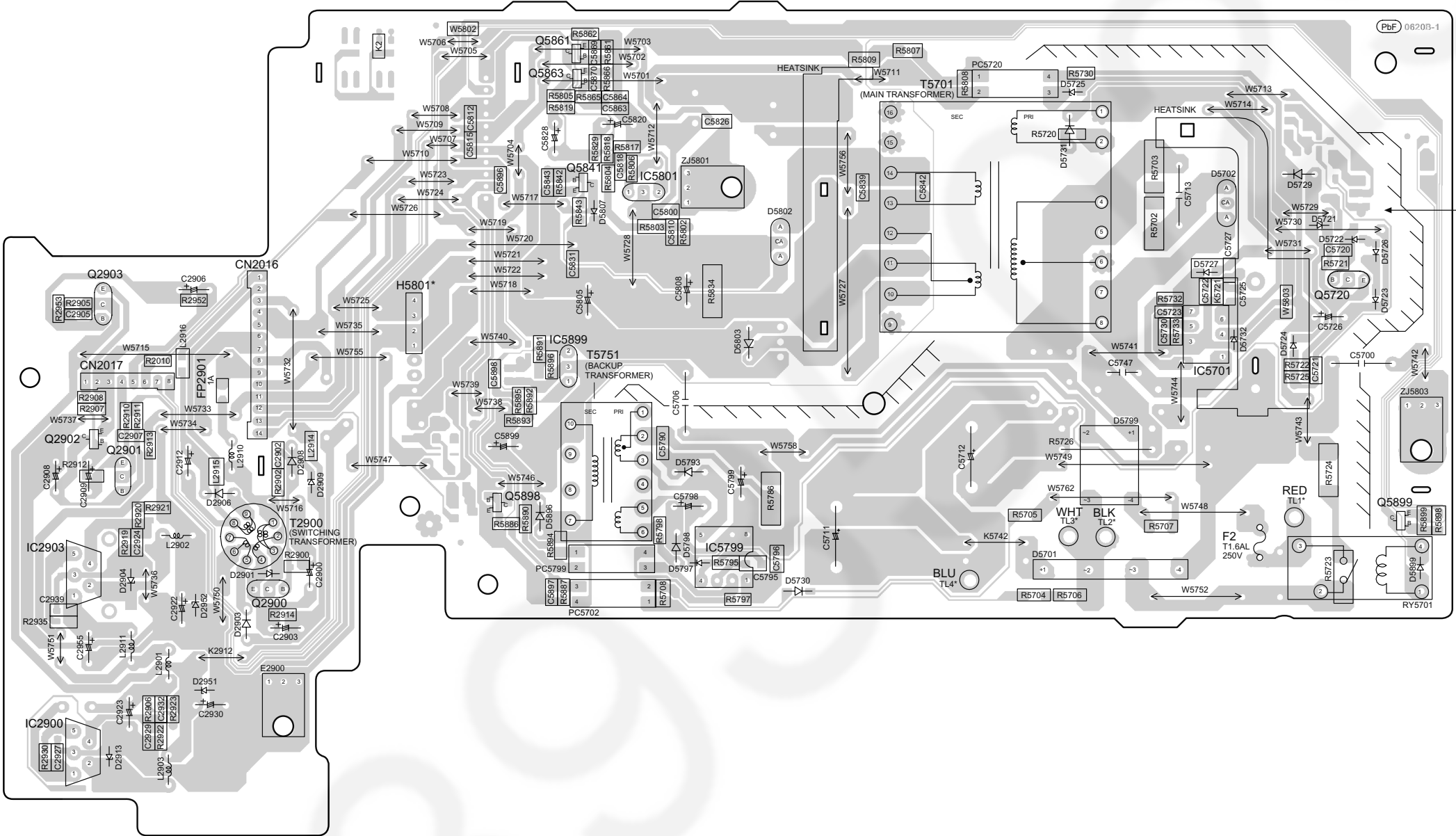
F ANALOG AMP P.C.B. (REPX0716B)



SA-PT170GA/GC/GS
ANALOG AMP P.C.B.

18.5. SMPS P.C.B.

G SMPS P.C.B. (REPX0729B)



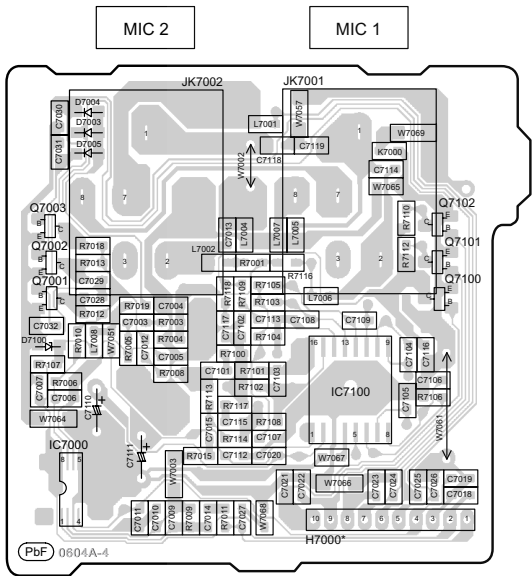
CAUTION
RISK OF ELECTRIC SHOCK
AC VOLTAGE LINE.
PLEASE DO NOT TOUCH THIS P.C.B.

NOTE: " * " REF IS FOR INDICATION ONLY.

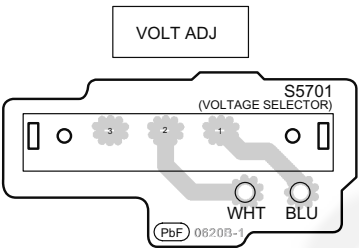
SA-PT170GA/GC/GS
SMPS P.C.B.

18.6. Mic, Voltage Selector P.C.B.

I MIC P.C.B. (REPX0710C)



J VOLTAGE SELECTOR P.C.B. (REPX0729B)



NOTE: " * " REF IS FOR INDICATION ONLY.

SA-PT170GA/GC/GS
MIC/VOLTAGE SELECTOR P.C.B.

19 Terminal Function of ICs

19.1. IC2001 (RFKWMPT470EB): IC MICRO PROCESSOR

Pin No.	Terminal Name	I/O	Function
1	ECHO_LVL2	O	Echo Level Control 2
2	ECHO_MUTE	O	Bypass Echo Circuit
3	ACS_MUTE	O	Bypass Auto Speaker Circuit
4	ECO_PT170	O	ECO Control Signal
5	FLD_STB	O	FL Display Strobe Signal
6	FLD_CLK	O	FL Display Clock Signal
7	FLD_OUT	O	FL Display Data Out Signal
8	BYTE	I	External data bus width select input
9	CNVSS	I	Micon Programming-Processor / Single Chip Mode
10	XCIN	-	No Connection
11	XCOU	-	No Connection
12	RESET	I	Microp Reset Signal
13	XOUT	-	Clock In
14	VSS	-	GND
15	XIN	-	Clock Out
16	VCC	-	GND +5V
17	NMI	I	Non Maskable Interrupt
18	RMT	I	Remote Control Signal
19	SYNC	I	AC Sync Signal
20	FX_INT	-	NC
21	JOG_B	I	Volume Jog B signal
22	JOG_A	I	Volume Jog A signal
23	AMBP	-	No Connection
24	PCONT	O	System Power Control
25	DC_DET1	I	Power Supply Failure Detection (F76)
26	DC_DET2	I	D-Amp and Fan Failure Detection (F61)
27	ECO_DAMP	O	D-AMP Low-High Power Supply for Eco Operation
28	DVD_CLK	O	DVD Clock
29	DVD_STAT	I	DVD Status
30	DVD_CMD	O	DVD Command
31	UART_TX	O	Not in use
32	UART_RX	I	No Connection
33	MUTE_C_S	O	Mute Signal for Center and Surround Speakers
34	MUTE_F_SW	O	Mute Signal for Front and Subwoofer Speakers
35	MOD_DA	O	Control Digital Amp to Stand by / Operate
36	HOP_DA	O	Beatproof (Frequency Hoping) of Digital Amplifier
37	TUN_DO	I	Tuner Stereo Detect
38	I2CDAT (TUN)	O	I2C Data for Tuner
39	I2CLK (TUN)	O	I2C Clock for Tuner
40	iPhone_RST	-	No Connection
41	EPM	O	For Downloading Purpose
42	TUN_SD	I	Station Detection of Tuner
43	FX_DET	O	NC
44	FX_DI	I	NC
45	FX_SCS	O	NC
46	NC	-	No Connection
47	FX_DO	-	No Connection
48	FX_CLK	-	No Connection
49	IPOD_VIDEO_SEL	-	No Connection
50	AV_MUTE	-	NC

Pin No.	Terminal Name	I/O	Function
51	RGB_H	-	NC
52	VMUTE2	-	NC
53	VMUTE	-	NC
54	YC_H	-	NC
55	SCART_MUTE	-	NC
56	UNLOAD_SW	I	DLS6 Unload Switch Signal
57	INNER_SW	-	Inner Switch for CR14 changer
58	TRAY_CCW_L	O	DLS6 Tray Close Signal
59	TRAY_CW_H	O	DLS6 Tray Open Signal
60	DVD_MUTE	I	DVD Mute Signal
61	NC	-	No Connection
62	VCC	-	5V
63	ANS_FX_CS	I	No Connection
64	VSS	-	Ground
65	HP_MUTE	O	Headphone Mute
66	AUX MUTE	-	NC
67	VCOMP_MUTE	-	NC
68	WIDE1	-	NC
69	ASP_DAT	O	ASP Audio Signal
70	ASP_CLK	O	ASP Clock Signal
71	NC	-	No Connection
72	NC	-	No Connection
73	CEC_OUT	O	CEC Out Data
74	CEC_IN	I	CEC In Data
75	RDS_DAT	-	NC
76	EDA	O	EEPROM IC Data Signal
77	ECK	O	EEPROM IC Clock Signal
78	ECS	O	EEPROM IC Chip Select
79	NC	-	No Connection
80	IPOD_OC	-	Connect to VREF
81	IPOD_DET	-	Not in use
82	BATT_PCONT	-	No Connection
83	IPOD_ACC	-	No Connection
84	UD_CR	-	No Connection
85	RDS_CLK	-	NC
86	MIC_SW	-	Microphone Detection
87	MIC_LVL1	-	Microphone Level Control
88	MIC_LVL2	-	Microphone Level Control Out
89	MD3	I	DVD Panel Code Digit 3
90	MD2	I	DVD Panel Code Digit 2
91	DES2	I	Model Selector
92	DES1	I	Series Selector
93	SENSE1	I	Digital Amp Protection Input Signal
94	ACS	I	Auto Speaker Setup Signal
95	KEY2	I	Key Input 2
96	AVSS	-	GND
97	KEY1	I	Key Input 1
98	VREF	-	Voltage Reference +5V
99	AVCC	-	+5V
100	ECHO_LVL1	O	Echo Level Control

19.2. IC6901(C0HBB0000057): IC FL Driver

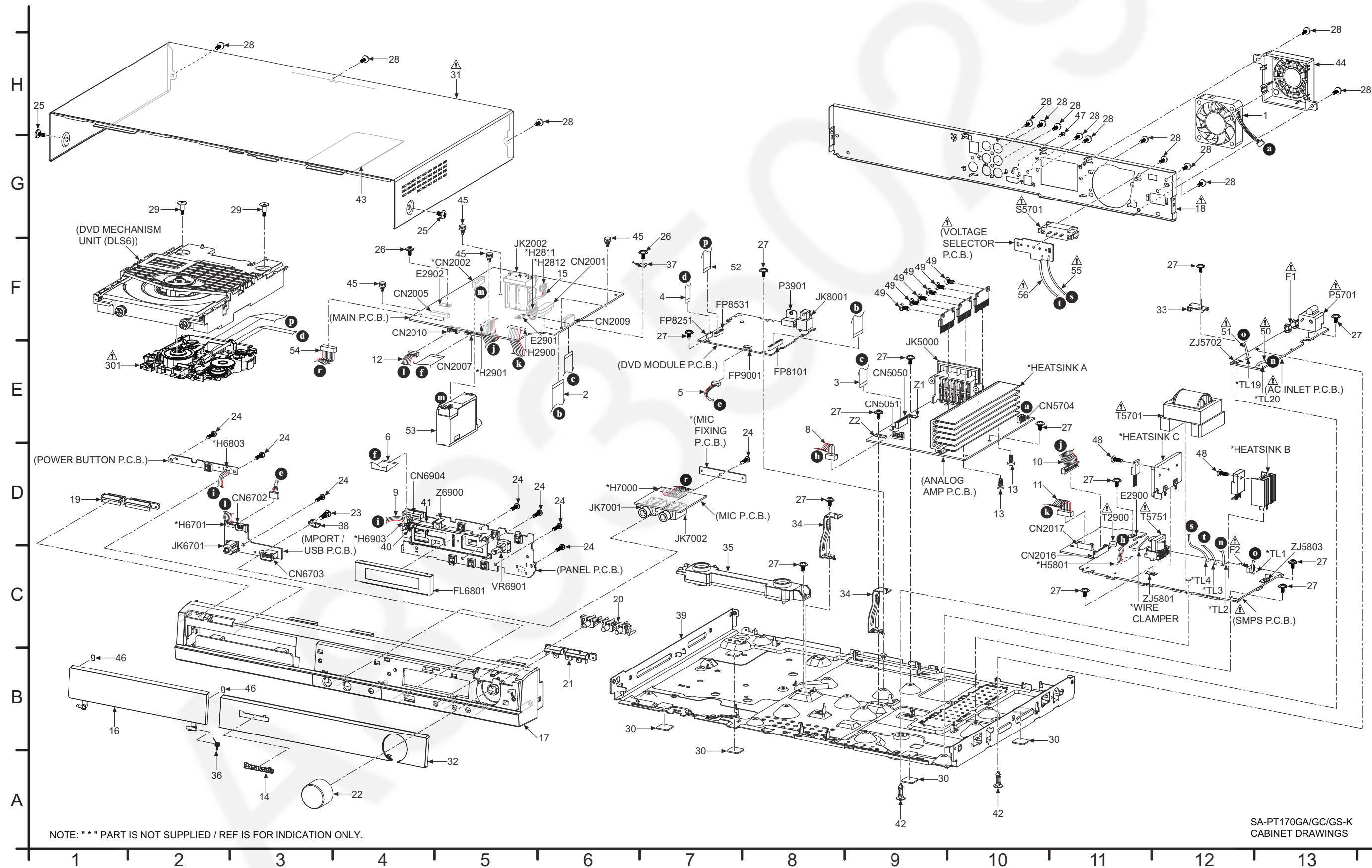
Pin No.	Terminal Name	I/O	Function
1	SURR_LED	O	Led Drive Output
2	JOG_LED	-	NC
3	NC	-	NC
4	NC	-	NC
5	OSC	I	Oscillator Input
6	DOUT	-	Data Output
7	DIN	I	Data Input
8	CLK	I	Clock Input

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

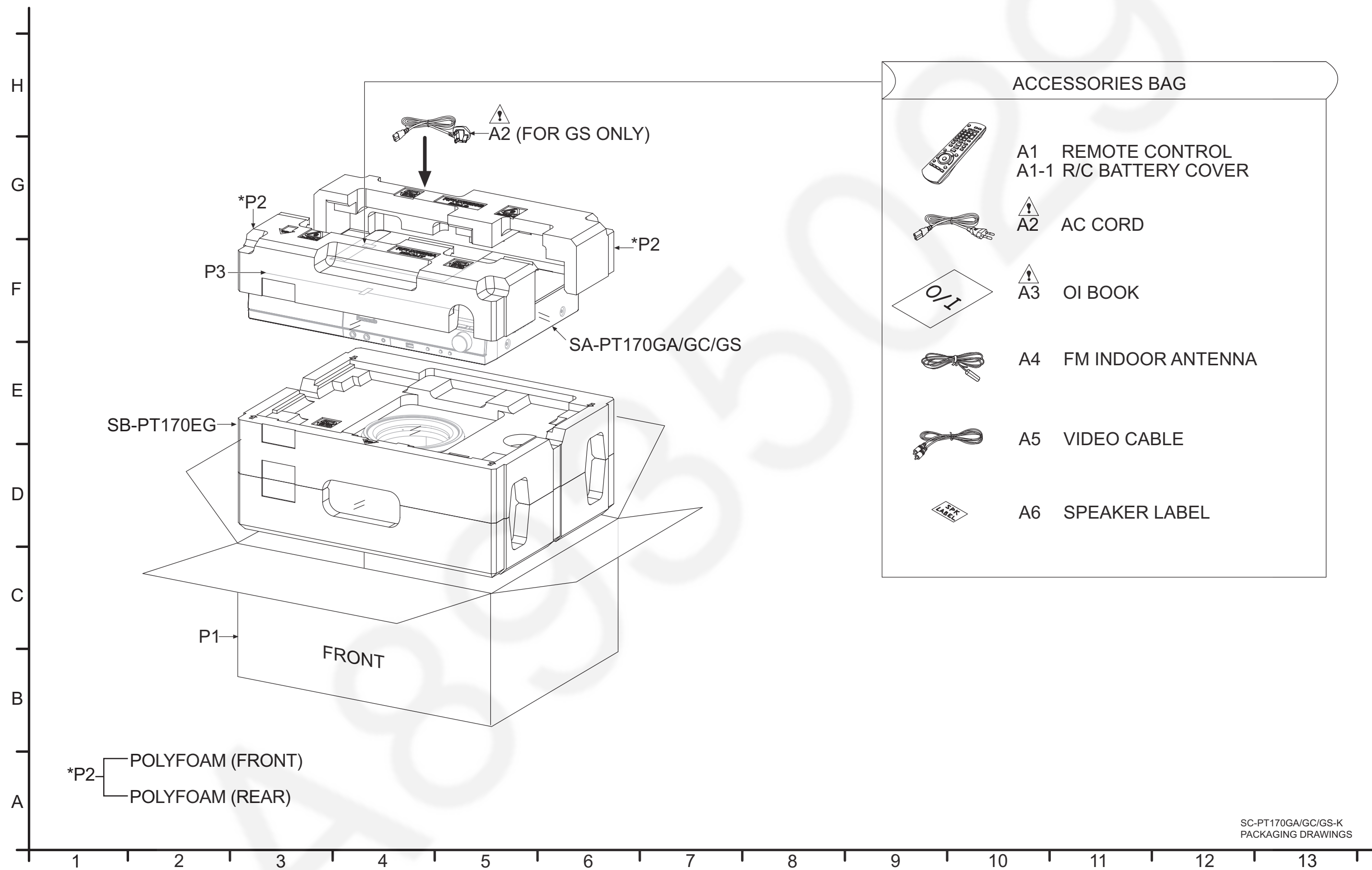
20 Exploded View and Replacement Parts List

20.1. Exploded View and Mechanical Replacement Part List

20.1.1. Cabinet Parts Location



20.1.2. Packaging



20.1.3. Mechanical Replacement Part List

Important Safety Notice

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

RTL (Retention Time Limited)

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

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

Note:

- When replacing any of these components, be sure to use only manufacturer's specified parts shown in the replacement part list.
- The parenthesized indications on the Remarks column specify the destination & product color (Refer to the cover page for the information).
- Parts without these indications shall be used for all areas.
- This product uses a laser diode. Refer to "Precaution of Laser Diode".
- All parts mentioned are supplied by PAVCSG unless indicated likewise.
- Parts mentioned [SPG] in the Remarks column are supplied by PAVC-CSG.
- Reference for O/I book languages are as follows:

Ar:	Arabic	Du:	Dutch	It:	Italian	Sp:	Spanish
Cf:	Canadian French	En:	English	Ko:	Korean	S:	Swedish
Cz:	Czech	Fr:	French	Po:	Polish	Co:	Traditional Chinese
Da:	Danish	Ge:	German	Ru:	Russian	Cn:	Simplified Chinese
Pe:	Persian	Ur:	Ukraine	Pr:	Portuguese		

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
			CABINET AND CHASSIS		
	1	L6FAJCCH0007	FAN UNIT	1	
	2	REEX0814	50P FFC (MN-DVD)	1	
	3	REEX0815	17P FFC (MN-ANALOG AMP)	1	
	4	REEX0817	7P FFC (OPU-DVD)	1	
	5	REXX0636-J	5 WIRE (DVD-USB)	1	
	6	REEX0954	19P FFC (MN-PAN)	1	
	8	REXX0731	4P WIRE (ANALOG AMP-SMPS)	1	
	9	REXX0718	3P WIRE (PWR-PAN)	1	
	10	REXX0723	14P WIRE (MN-SMPS)	1	
	11	REXX0724	8P WIRE (SMPS-MN)	1	
	12	REXX0753	7P WIRE (MAIN-MPORT)	1	
	13	RHD30092-1	SCREW	2	
	14	RGB0164-S	PANASONIC BADGE	1	
	15	REXX0770-1	6P WIRE (MN-MN)	1	
	16	RGKX0524-K	DVD LID	1	
	17	RGPX0369A-K	FRONT PANEL	1	
	18	RGRX0071C-B2	REAR PANEL	1	GC/GS
	18	RGRX0071C-C	REAR PANEL	1	GA
	19	RGUX0786-K	POWER BUTTON	1	
	20	RGUX0813-K	OPERATION BUTTON	1	
	21	RGUX0789-K	PLAY STOP BUTTON	1	
	22	RGWX0076-2KJ	VOLUME KNOB	1	
	23	RHD26043-1	SCREW	1	
	24	RHD26046	SCREW	8	
	25	RHD30007-K2J	SCREW	2	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	26	RHD30090-1	SCREW	2	
	27	RHD30111-31	SCREW	13	
	28	RHD30119-S	SCREW	14	
	29	RHD30301	SCREW	2	
	30	RKA0059-K	LEG FELT	4	
	31	RKMX0141-1K3	TOP CABINET	1	
	32	RKWX0293-Q1	FL WINDOW	1	
	33	RMAX0118-1	PCB BRACKET	1	
	34	RMAX0131	MAIN PCB BRACKET B	2	
	35	RMAX0132	MECHA CHASSIS	1	
	36	RMBX0075-1	DOOR SPRING	1	
	37	RMX0065	MAIN PCB GROUND SPRING	1	
	38	RMX0063	USB EARTH SPRING	1	
	39	RMKX0155A	BOTTOM CHASSIS	1	
	40	RMNX0151	LED HOLDER	1	
	41	RMNX0260	FL HOLDER	1	
	42	RMNX0298	PCB SPACER	2	
	43	RMNX0306	SMPS PCB INSULATOR	1	
	44	RMQX0233-K	FAN COVER	1	
	45	RMX0502A-W	PCB SUPPORT	4	
	46	RMX0302	DAMPER RUBBER	2	
	47	XSN3+4FJ	SCREW	1	
	48	XTB3+10JFJ	SCREW	2	
	49	XTB3+8JFJ	SCREW	6	
	50	REXX0728	BLACK WIRE (SMPS-AC)	1	
	51	REXX0730	RED WIRE (SMPS-AC)	1	
	52	REEX0816	26P FFC (OPU-DVD)	1	
	53	J3CBBB000002	TUNER PACK	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	54	REXX0722	10P WIRE (MIC-MAIN)	1	
⚠	55	REXX0643	BLU WIRE (VOLT SELECTOR-SMPS)	1	
⚠	56	REXX0729	WHT WIRE(VOLT SELECTOR-SMPS)	1	
			TRAVERSE DECK		
⚠	301	RD-DDTX001-V	TRAVERSE UNIT	1	(RTL)
			PACKING MATERI-ALS		
	P1	RPGX2155	PACKING CASE	1	GC
	P1	RPGX2156	PACKING CASE	1	GS
	P1	RPGX2157	PACKING CASE	1	GA
	P2	RPNX0620	POLYFOAM	1	
	P3	RPF0058-1J	MIRAMAT	1	
			ACCESSORIES		
	A1	N2QAYB000364	REMOTE CONTROL	1	
	A1-1	RKK-PT470EBK	R/C BATTERY COVER	1	
⚠	A2	K2CQ2CA00007	AC CORD	1	
⚠	A2	K2CZ3YY00005	AC CORD	1	GS
⚠	A3	RQTX0242-B	O/I BOOK (En)	1	
⚠	A3	RQTX0243-G	O/I BOOK (AR/PE)	1	GC/GS
⚠	A3	RQTX0244-K	O/I BOOK(CN)	1	GA
	A4	RSA0007-M	FM INDOOR ANTENNA	1	
	A5	K2KA2BA00001	VIDEO CABLE	1	
	A6	RQCA0968	SPEAKER LABEL	1	

20.2. Electrical Replacement Part List

Important Safety Notice

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

RTL (Retention Time Limited)

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

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

Note:

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

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
			PRINTED CIRCUIT BOARDS		
	PCB1	RFKXB0681A-M	DVD MODULE P.C.B	1	(RTL) GC/GS
	PCB1	RFKXB0681C-M	DVD MODULE P.C.B	1	(RTL) GA
	PCB2	REPX0694E	MAIN P.C.B	1	(RTL) GC/GS
	PCB2	REPX0694F	MAIN P.C.B	1	(RTL) GA
	PCB3	REPX0710C	PANEL P.C.B	1	(RTL)
	PCB4	REPX0710C	AUTO SPEAKER SETUP P.C.B	1	(RTL)
	PCB5	REPX0710C	POWER BUTTON P.C.B	1	(RTL)
	PCB6	REPX0716B	ANALOG AMP P.C.B	1	(RTL)
Δ	PCB7	REPX0729B	VOLTAGE SELECTOR P.C.B	1	(RTL)
Δ	PCB8	REPX0729B	SMPS P.C.B	1	(RTL)
Δ	PCB9	REPX0729B	AC INLET P.C.B	1	(RTL)
	PCB10	REPX0710C	MIC P.C.B	1	(RTL)
			INTEGRATED CIRCUITS		
	IC2001	RFKWMPT470EB	IC	1	
	IC2002	C0CBCBC00140	IC	1	
	IC2003	RFKWEPT470EB	IC	1	
	IC2101	C1AB00002735	IC	1	
	IC2801	C9ZB00000461	IC	1	
	IC2900	C0DAAYY00042	IC	1	
	IC2903	C0DAAMH00012	IC	1	
	IC3901	MN864702A	IC	1	
	IC3952	C0CBCDC00063	IC	1	
	IC5100	AN17831A	IC	1	
	IC5200	AN17831A	IC	1	
	IC5300	AN17831A	IC	1	
	IC5701	C0DAAMH00015	IC	1	
	IC5799	MIP2F20MSSCF	IC	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	IC5801	C0DABFC00002	IC	1	
	IC5899	C0DAEMZ00001	IC	1	
	IC6901	C0HBB0000057	IC	1	
	IC7000	C0ABBB000189	IC	1	
	IC7100	C1AB00002773	IC	1	
	IC8001	MN2DS0018MP	IC	1	
	IC8051	C3ABPG000160	IC	1	
	IC8111	C0DBFZG00001	IC	1	
	IC8251	C0GBG0000048	IC	1	
	IC8421	C0FBBY000060	IC	1	
	IC8422	C0FBAK000026	IC	1	
	IC8601	C0EBA0000039	IC	1	
	IC8606	C0EBE0000456	IC	1	
	IC8611	RFKXB0681A-M	IC	1	GC/GS
	IC8611	RFKXB0681C-M	IC	1	GA
	IC8651	RFKWMH41B322	IC	1	[SPG] GC/GS
	IC8651	RFKWMH41D320	IC	1	[SPG] GA
	IC8691	C0JBAA000502	IC	1	
	IC8695	C0JBAA000502	IC	1	
	IC8701	C0JBAB000907	IC	1	
	IC8901	C0JBAA000501	IC	1	
	IC9001	C0JBAZ001251	IC	1	
	IC9002	C0JBAZ001251	IC	1	
	IC9003	C0JBAB000908	IC	1	
	IC9005	C0DBZYY00266	IC	1	
			TRANSISTORS		
	Q2003	B1GBCFLL0037	TRANSISTOR	1	
	Q2004	2SD0601AHL	TRANSISTOR	1	
	Q2005	B1ADCE000012	TRANSISTOR	1	
	Q2006	UNR221400L	TRANSISTOR	1	
	Q2030	B1GBCFJJ0051	TRANSISTOR	1	
	Q2096	B1HBECA00004	TRANSISTOR	1	
	Q2504	B1GDCFGA0018	TRANSISTOR	1	
	Q2505	B1ABGC000005	TRANSISTOR	1	
	Q2801	UNR221400L	TRANSISTOR	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	Q2900	B1BABK000001	TRANSISTOR	1	
	Q2901	2SB0621AHA	TRANSISTOR	1	
	Q2902	B1ADCF000001	TRANSISTOR	1	
	Q2903	2SC3940ARA	TRANSISTOR	1	
	Q2909	B1ABCF000176	TRANSISTOR	1	
	Q2919	B1GBCFJJ0051	TRANSISTOR	1	
	Q2923	B1GBCFJJ0051	TRANSISTOR	1	
	Q2924	B1GBCFJJ0051	TRANSISTOR	1	
	Q2925	B1ABGC000005	TRANSISTOR	1	
	Q2926	B1GDCFJJ0047	TRANSISTOR	1	
	Q2927	B1GDCFJJ0047	TRANSISTOR	1	
	Q2929	B1ADCE000012	TRANSISTOR	1	
	Q2930	B1GBCFJJ0051	TRANSISTOR	1	
	Q3901	2SD1819A0L	TRANSISTOR	1	
	Q3902	B1CFHA000002	TRANSISTOR	1	
	Q3903	B1CFHA000002	TRANSISTOR	1	
	Q3941	2SD1819A0L	TRANSISTOR	1	
	Q3942	2SD1819A0L	TRANSISTOR	1	
	Q3943	2SD1819A0L	TRANSISTOR	1	
	Q5720	2SC3940ARA	TRANSISTOR	1	
	Q5740	B1BACG000023	TRANSISTOR	1	
	Q5741	B1ABCF000176	TRANSISTOR	1	
	Q5742	B1ABCF000176	TRANSISTOR	1	
	Q5744	B1ABCF000176	TRANSISTOR	1	
	Q5747	B1ABCF000176	TRANSISTOR	1	
	Q5748	B1ABCF000176	TRANSISTOR	1	
	Q5749	B1ABCF000176	TRANSISTOR	1	
	Q5750	B1ABCF000176	TRANSISTOR	1	
	Q5751	B1ABCF000176	TRANSISTOR	1	
	Q5752	B1ACKD000005	TRANSISTOR	1	
	Q5753	B1ABCF000176	TRANSISTOR	1	
	Q5754	B1ABCF000176	TRANSISTOR	1	
	Q5841	B1ABCF000176	TRANSISTOR	1	
	Q5861	B1ABCF000176	TRANSISTOR	1	
	Q5863	B1ABCF000176	TRANSISTOR	1	
	Q5898	B1ABCF000176	TRANSISTOR	1	
	Q5899	B1ABCF000011	TRANSISTOR	1	
	Q6910	B1GBCFJN0033	TRANSISTOR	1	
	Q7001	B1GBCFJJ0051	TRANSISTOR	1	
	Q7002	B1GBCFJJ0051	TRANSISTOR	1	
	Q7003	B1GBCFJJ0051	TRANSISTOR	1	
	Q7100	B1GBCFJJ0051	TRANSISTOR	1	
	Q7101	B1GBCFJJ0051	TRANSISTOR	1	
	Q7102	B1GBCFJJ0051	TRANSISTOR	1	
	Q8321	2SB1218ARL	TRANSISTOR	1	
	Q8325	2SB1218ARL	TRANSISTOR	1	
	Q8331	2SB1218ARL	TRANSISTOR	1	
	Q8335	2SB1218ARL	TRANSISTOR	1	
	Q8341	2SB1218ARL	TRANSISTOR	1	
	Q8551	2SD1819A0L	TRANSISTOR	1	
	Q8552	B1ADGB000008	TRANSISTOR	1	
	Q8561	2SD1819A0L	TRANSISTOR	1	
	Q8562	B1ADGB000008	TRANSISTOR	1	
	Q8563	B1CFHA000002	TRANSISTOR	1	
	Q8564	B1CFHA000002	TRANSISTOR	1	
	Q8565	2SD1819A0L	TRANSISTOR	1	
	QR8420	UNR521100L	TRANSISTOR	1	
	QR9030	B1GDCFJJ0002	TRANSISTOR	1	
			DIODES		
	D2008	MA2J11100L	DIODE	1	
	D2601	MA2J11100L	DIODE	1	
	D2602	MA2J11100L	DIODE	1	
	D2751	MA2J11100L	DIODE	1	
	D2752	MA2J11100L	DIODE	1	
	D2753	MAZ80510ML	DIODE	1	
	D2901	MAZ83600ML	DIODE	1	
	D2903	B0EAMM000057	DIODE	1	
	D2904	B0JCPD000025	DIODE	1	
	D2906	B0JAME000029	DIODE	1	
	D2908	B0EAMM000057	DIODE	1	
	D2909	MAZ82400HL	DIODE	1	
	D2913	B0JCPD000025	DIODE	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	D2915	MA2J11100L	DIODE	1	
	D2944	MA2J11100L	DIODE	1	
	D2945	MA2J11100L	DIODE	1	
	D2946	MAZ80750ML	DIODE	1	
	D2947	MAZ81100ML	DIODE	1	
	D2948	MAZ80750ML	DIODE	1	
	D2949	MAZ80510ML	DIODE	1	
	D2951	MAZ81100ML	DIODE	1	
	D2952	B0BC010A0007	DIODE	1	
	D2964	MA2J11100L	DIODE	1	
	D2966	MA2J11100L	DIODE	1	
	D2969	B0ACCK000005	DIODE	1	
	D2970	B0ACCK000005	DIODE	1	
	D2971	B0EAKM000117	DIODE	1	
	D2972	B0ACCK000005	DIODE	1	
	D3901	MA2J72800L	DIODE	1	
	D5100	B0JCPD000025	DIODE	1	
	D5200	B0JCPD000025	DIODE	1	
	D5300	B0JCPD000025	DIODE	1	
	D5301	B0ACCK000005	DIODE	1	
	D5302	B0ACCK000005	DIODE	1	
	D5303	B0ACCK000005	DIODE	1	
	D5701	B0EBNR000015	DIODE	1	
	D5702	B0ZAZ0000052	DIODE	1	
	D5721	MAZ81300HL	DIODE	1	
	D5722	MAZ81800ML	DIODE	1	
	D5723	MA2J11100L	DIODE	1	
	D5724	MA2J11100L	DIODE	1	
	D5725	MAZ80620ML	DIODE	1	
	D5726	MA2J11100L	DIODE	1	
	D5727	MA2J11100L	DIODE	1	
	D5729	B0EAMM000057	DIODE	1	
	D5730	MA2YF8000L	DIODE	1	
	D5731	B0EAMM000057	DIODE	1	
	D5732	MAZ83000ML	DIODE	1	
	D5743	B0ACCK000005	DIODE	1	
	D5744	B0ACCK000005	DIODE	1	
	D5745	MAZ81200ML	DIODE	1	
	D5755	MAZ80750ML	DIODE	1	
	D5793	B0HAMP000094	DIODE	1	
	D5798	B0EAMM000057	DIODE	1	
	D5799	B0EDKT000009	DIODE	1	
	D5802	B0HBSM000054	DIODE	1	
	D5803	B0EAMM000057	DIODE	1	
	D5807	MA2J11100L	DIODE	1	
	D5896	B0EAMM000057	DIODE	1	
	D5899	B0ACCK000005	DIODE	1	
	D6910	B0BC2R4A0006	DIODE	1	
	D6912	MAZ80510ML	DIODE	1	
	D6913	B3ABA0000795	DIODE	1	
	D7003	MA2J11100L	DIODE	1	
	D7004	MA2J11100L	DIODE	1	
	D7005	MA2J11100L	DIODE	1	
	D7100	MAZ80510ML	DIODE	1	
	D8211	MA2J11100L	DIODE	1	
⚠	DZ5701	ERZV10V511CS	ZNR	1	
			VARIABLE RESISTORS		
	VR6901	EVEKE2F2524B	VOLUME JOG	1	
			SWITCHES		
⚠	S5701	K0ABCA000007	AC VOLTAGE	1	
	S6801	EVQ21405R	SW POWER	1	
	S6807	EVQ21405R	SW OPEN/CLOSE	1	
	S6901	EVQ21405R	SW MEMORY	1	
	S6902	EVQ21405R	SW TUNE FORWARD	1	
	S6903	EVQ21405R	SW TUNE BACKWARD	1	
	S6904	EVQ21405R	SW -TUNE MODE/-FM MODE	1	
	S6907	EVQ21405R	SW SELECTOR	1	
			CONNECTORS		

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	CN2001	K1MY50AA0029	50P CONNECTOR	1	
	CN2005	K1KA10AA0194	10P CONNECTOR	1	
	CN2007	K1MN19BA0005	19P CONNECTOR	1	
	CN2009	K1MN17AA0004	17P CONNECTOR	1	
	CN2010	K1KA07BA0061	7P CONNECTOR	1	
	CN2016	K1KA14AA0194	14P CONNECTOR	1	
	CN2017	K1KA08A00330	8P CONNECTOR	1	
	CN5050	K1MN17AA0004	17P CONNECTOR	1	
	CN5051	K1KA04AA0180	8P CONNECTOR	1	
	CN5704	K1KA03AA0301	3P CONNECTOR	1	
	CN6702	K1KA05BA0061	5P CONNECTOR	1	
	CN6703	K1FY104A0007	USB CONNECTOR	1	
	CN6904	K1MN19AA0004	19P CONNECTOR	1	
	FP8101	K1MN50AA0082	50P CONNECTOR	1	
	FP8251	K1MN07AA0076	7P CONNECTOR	1	
	FP8531	K1MY26AA0021	26P CONNECTOR	1	
	FP9001	K1KA05BA0014	5P CONNECTOR	1	
	P3901	K1FY119E0002	HDMI CONNECTOR	1	
			COILS AND INDUC-TORS		
	L2101	J0JBC0000015	INDUCTOR	1	
	L2201	J0JBC0000015	INDUCTOR	1	
	L2801	G0A101EA0017	CHOKE COIL	1	
	L2802	J0JBC0000015	INDUCTOR	1	
	L2803	J0JBC0000015	INDUCTOR	1	
	L2804	J0JBC0000015	INDUCTOR	1	
	L2805	J0JBC0000015	INDUCTOR	1	
	L2901	G0A220GA0026	CHOKE COIL	1	
	L2902	G0A101ZA0028	CHOKE COIL	1	
	L2903	G0A101ZA0028	CHOKE COIL	1	
	L2905	G0A100HA0023	CHOKE COIL	1	
	L2907	G0A220GA0002	CHOKE COIL	1	
	L2910	G0C390JA0055	INDUCTOR	1	
	L2911	G0A200D00002	CHOKE COIL	1	
	L2912	G0A220GA0002	CHOKE COIL	1	
	L2914	G0C390JA0055	INDUCTOR	1	
	L2914	J0JBC0000041	INDUCTOR	1	
	L2915	J0JBC0000015	INDUCTOR	1	
	L2915	J0JBC0000041	INDUCTOR	1	
	L2916	J0JBC0000015	INDUCTOR	1	
	L2916	J0JBC0000041	INDUCTOR	1	
	L2917	J0JBC0000015	INDUCTOR	1	
	L2918	J0JBC0000015	INDUCTOR	1	
	L3903	G1BYYC000026	COMMON MODE EMI FILTER	1	
	L3904	G1BYYC000026	COMMON MODE EMI FILTER	1	
	L3905	G1BYYC000026	COMMON MODE EMI FILTER	1	
	L3906	G1BYYC000026	COMMON MODE EMI FILTER	1	
⚠	L5702	ELF19H015A	LINE FILTER	1	
⚠	L5703	ELF19H015A	LINE FILTER	1	
	L6710	J0JBC0000019	INDUCTOR	1	
	L6711	J0JBC0000019	INDUCTOR	1	
	L6720	J0JBC0000019	INDUCTOR	1	
	L6721	J0JBC0000019	INDUCTOR	1	
	L6903	J0JBC0000019	INDUCTOR	1	
	L7001	J0JBC0000030	INDUCTOR	1	
	L7002	J0JBC0000030	INDUCTOR	1	
	L7004	J0JBC0000019	INDUCTOR	1	
	L7005	J0JBC0000019	INDUCTOR	1	
	L7006	J0JBC0000030	INDUCTOR	1	
	L7007	J0JBC0000019	INDUCTOR	1	
	L7008	J0JBC0000019	INDUCTOR	1	
	L7100	J0JBC0000015	INDUCTOR	1	
	L8001	G1C100M00049	INDUCTOR	1	
	L8201	G1C100M00049	INDUCTOR	1	
	L8301	G1C100M00049	INDUCTOR	1	
	L8302	G1C100M00049	INDUCTOR	1	
	L8303	G1C100M00049	INDUCTOR	1	
	L8330	G1C100M00049	INDUCTOR	1	
	L8501	G1C100M00049	INDUCTOR	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	L8550	G1C100M00049	INDUCTOR	1	
	LB3901	J0JHC0000045	INDUCTOR	1	
	LB3902	J0JHC0000045	INDUCTOR	1	
	LB3903	J0JCC0000042	INDUCTOR	1	
	LB3904	J0JCC0000042	INDUCTOR	1	
	LB3905	J0JCC0000042	INDUCTOR	1	
	LB3906	J0JCC0000042	INDUCTOR	1	
	LB3907	J0JHC0000045	INDUCTOR	1	
	LB3908	J0JHC0000045	INDUCTOR	1	
	LB6701	J0JHC0000034	INDUCTOR	1	
	LB6702	J0JHC0000034	INDUCTOR	1	
	LB8001	J0JHC0000045	INDUCTOR	1	
	LB8011	J0JHC0000045	INDUCTOR	1	
	LB8401	J0JCC0000308	INDUCTOR	1	
	LB8530	J0JHC0000045	INDUCTOR	1	
	LB8532	J0JDC0000045	INDUCTOR	1	
	LB8551	J0JDC0000045	INDUCTOR	1	
	LB8561	J0JDC0000045	INDUCTOR	1	
	LB8571	J0JDC0000045	INDUCTOR	1	
	LB8701	J0JCC0000308	INDUCTOR	1	
	LB8702	J0JCC0000308	INDUCTOR	1	
	LB8901	J0JCC0000308	INDUCTOR	1	
	LB9001	J0JCC0000042	INDUCTOR	1	
			TRANSFORMERS		
⚠	T2900	G4D1A0000117	TRANSFORMER	1	
⚠	T5701	ETS35BC2P6AC	MAIN TRANSFORMER	1	
⚠	T5751	ETS19AB2A6AG	BACKUP TRANS-FORMER	1	
			COMPONENT COMBI-NATION		
	Z1	K4CZ01000027	TERMINAL	1	
	Z2	K4CZ01000027	TERMINAL	1	
	Z6900	B3RAB0000081	REMOTE SENSOR	1	
	ZA5701	K3GE1ZZ00001	FUSE HOLDER	1	
	ZA5702	K3GE1ZZ00001	FUSE HOLDER	1	
	ZJ5702	K4CZ01000027	TERMINAL	1	
	ZJ5801	K4CZ01000027	TERMINAL	1	
	ZJ5803	K4CZ01000027	TERMINAL	1	
			PHOTO COUPLERS		
⚠	PC5702	B3PBA0000402	PHOTO COUPLER	1	
⚠	PC5720	B3PBA0000402	PHOTO COUPLER	1	
⚠	PC5799	B3PBA0000402	PHOTO COUPLER	1	
			OSCILLATORS		
	X2001	H2B100500007	CRYSTAL OSCILLA-TOR	1	
	X8621	H0J270500131	CRYSTAL OSCILLA-TOR	1	
	X9004	H1A4805B0027	CRYSTAL OSCILLA-TOR	1	
			FL DISPLAY		
	FL6801	A2BB00000169	LCD DISPLAY	1	
			RELAY	1	
⚠	RY5701	K6B1AEA00003	RELAY	1	
			FUSES		
⚠	F1	K5D402BK0007	FUSE	1	
⚠	F2	K5G162B00016	FUSE	1	
			FUSE PROTECTOR		
⚠	FP2901	K5H1022A0011	FUSE PROTECTOR	1	
			THERMISTOR		
⚠	TH5702	D4CAA5R10001	THERMISTOR	1	
			JACKS		
	JK2002	K2HA6YYG0002	JK AUX	1	
	JK5000	K4AL12B00002	JK SPEAKER	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	JK6701	K2HC103A0031	JK HEADPHONE	1	
	JK7001	K2HC1YYA0022	JK MIC 1	1	
	JK7002	K2HC1YYA0022	JK MIC 2	1	
	JK8001	B3RAB0000056	JK OPTICAL IN	1	
⚠	P5701	K2AA2B000017	AC INLET	1	
			EARTH TERMINALS		
	E2900	K4CZ01000027	TERMINAL	1	
	E2901	K4CZ01000027	TERMINAL	1	
	E2902	K4CZ01000027	TERMINAL	1	
			CHIP JUMPERS		
	D5797	D0GBR00JA008	0 1/16W	1	
	K2	D0GBR00JA008	0 1/16W	1	
	K2101	D0GBR00JA008	0 1/16W	1	
	K2135	D0GBR00JA008	0 1/16W	1	
	K2201	D0GBR00JA008	0 1/16W	1	
	K2235	D0GBR00JA008	0 1/16W	1	
	K2351	D0GBR00JA008	0 1/16W	1	
	K2352	D0GBR00JA008	0 1/16W	1	
	K2451	D0GBR00JA008	0 1/16W	1	
	K2452	D0GBR00JA008	0 1/16W	1	
	K2802	D0GBR00JA008	0 1/16W	1	
	K3903	D0GBR00JA008	0 1/16W	1	
	K3905	ERJ2GE0R00X	0 1/16W	1	
	K3906	D0GBR00JA008	0 1/16W	1	
	K3908	D0GBR00JA008	0 1/16W	1	
	K5101	D0GBR00JA008	0 1/16W	1	
	K5102	D0GBR00JA008	0 1/16W	1	
	K5201	D0GBR00JA008	0 1/16W	1	
	K5202	D0GBR00JA008	0 1/16W	1	
	K5301	D0GBR00JA008	0 1/16W	1	
	K5302	D0GBR00JA008	0 1/16W	1	
	K5504	D0GBR00JA008	0 1/16W	1	
	K5721	D0GBR00JA008	0 1/16W	1	
	K7000	D0GBR00JA008	0 1/16W	1	
	K7115	D0GBR00JA008	0 1/16W	1	
	K7116	D0GBR00JA008	0 1/16W	1	
	K8002	D0GBR00JA008	0 1/16W	1	GA
	K8007	D0GBR00JA008	0 1/16W	1	GA
	K8100	D0GBR00JA008	0 1/16W	1	
	K8114	D0GBR00JA008	0 1/16W	1	
	K8115	D0GBR00JA008	0 1/16W	1	
	K8116	D0GBR00JA008	0 1/16W	1	
	K8117	D0GBR00JA008	0 1/16W	1	
	K8251	D0GBR00JA008	0 1/16W	1	
	K8252	D0GBR00JA008	0 1/16W	1	
	K8571	D0GBR00JA008	0 1/16W	1	
	L2136	D0GBR00JA008	0 1/16W	1	
	L7102	D0GBR00JA008	0 1/16W	1	
	L8250	D0GBR00JA008	0 1/16W	1	
	LB8255	ERJ2GE0R00X	0 1/16W	1	
	LB8301	ERJ2GE0R00X	0 1/16W	1	
	LB8302	ERJ2GE0R00X	0 1/16W	1	
	LB8303	ERJ2GE0R00X	0 1/16W	1	
	LB8304	ERJ2GE0R00X	0 1/16W	1	
	LB8305	ERJ2GE0R00X	0 1/16W	1	
	LB8421	ERJ2GE0R00X	0 1/16W	1	
	LB8422	ERJ2GE0R00X	0 1/16W	1	
	LB8423	ERJ2GE0R00X	0 1/16W	1	
	LB8424	ERJ2GE0R00X	0 1/16W	1	
	LB8425	ERJ2GE0R00X	0 1/16W	1	
	LB8426	ERJ2GE0R00X	0 1/16W	1	
	LB8427	ERJ2GE0R00X	0 1/16W	1	
	LB8428	ERJ2GE0R00X	0 1/16W	1	
	LB8429	ERJ2GE0R00X	0 1/16W	1	
	LB8430	ERJ2GE0R00X	0 1/16W	1	
	LB8431	ERJ2GE0R00X	0 1/16W	1	
	LB8432	ERJ2GE0R00X	0 1/16W	1	
	LB8531	ERJ2GE0R00X	0 1/16W	1	
	LB8690	ERJ2GE0R00X	0 1/16W	1	
	LB9002	D0GBR00JA008	0 1/16W	1	
	LB9003	D0GBR00JA008	0 1/16W	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	R	D0GBR00JA008	0 1/16W	1	
	W2800	D0GDR00JA017	0 1/10W	1	
	W2801	D0GBR00JA008	0 1/16W	1	
	W2802	D0GDR00JA017	0 1/10W	1	
	W2803	D0GDR00JA017	0 1/10W	1	
	W2804	D0GDR00JA017	0 1/10W	1	
	W2805	D0GBR00JA008	0 1/16W	1	
	W2806	D0GDR00JA017	0 1/10W	1	
	W2807	D0GDR00JA017	0 1/10W	1	
	W2808	D0GBR00JA008	0 1/16W	1	
	W2809	D0GDR00JA017	0 1/10W	1	
	W2810	D0GDR00JA017	0 1/10W	1	
	W2811	D0GDR00JA017	0 1/10W	1	
	W2812	D0GDR00JA017	0 1/10W	1	
	W2813	D0GDR00JA017	0 1/10W	1	
	W2814	D0GBR00JA008	0 1/16W	1	
	W2815	D0GBR00JA008	0 1/16W	1	
	W2816	D0GDR00JA017	0 1/10W	1	
	W2817	D0GDR00JA017	0 1/10W	1	
	W2818	D0GBR00JA008	0 1/16W	1	
	W2819	D0GBR00JA008	0 1/16W	1	
	W2820	D0GDR00JA017	0 1/10W	1	
	W2821	D0GDR00JA017	0 1/10W	1	
	W2822	D0GDR00JA017	0 1/10W	1	
	W2823	D0GBR00JA008	0 1/16W	1	
	W2824	D0GDR00JA017	0 1/10W	1	
	W2825	D0GDR00JA017	0 1/10W	1	
	W2826	D0GBR00JA008	0 1/16W	1	
	W2827	D0GDR00JA017	0 1/10W	1	
	W2828	D0GDR00JA017	0 1/10W	1	
	W2829	D0GDR00JA017	0 1/10W	1	
	W2830	D0GDR00JA017	0 1/10W	1	
	W2831	D0GDR00JA017	0 1/10W	1	
	W2832	D0GBR00JA008	0 1/16W	1	
	W2833	D0GBR00JA008	0 1/16W	1	
	W2834	D0GDR00JA017	0 1/10W	1	
	W2835	D0GDR00JA017	0 1/10W	1	
	W2836	D0GDR00JA017	0 1/10W	1	
	W2837	D0GDR00JA017	0 1/10W	1	
	W2838	D0GDR00JA017	0 1/10W	1	
	W2839	D0GDR00JA017	0 1/10W	1	
	W2840	D0GDR00JA017	0 1/10W	1	
	W2841	D0GDR00JA017	0 1/10W	1	
	W2842	D0GDR00JA017	0 1/10W	1	
	W2843	D0GDR00JA017	0 1/10W	1	
	W2844	D0GDR00JA017	0 1/10W	1	
	W2845	D0GDR00JA017	0 1/10W	1	
	W2846	D0GBR00JA008	0 1/16W	1	
	W2847	D0GBR00JA008	0 1/16W	1	
	W2848	D0GDR00JA017	0 1/10W	1	
	W2849	D0GBR00JA008	0 1/16W	1	
	W2850	D0GDR00JA017	0 1/10W	1	
	W2851	D0GBR00JA008	0 1/16W	1	
	W2852	D0GBR00JA008	0 1/16W	1	
	W2853	D0GDR00JA017	0 1/10W	1	
	W2854	D0GDR00JA017	0 1/10W	1	
	W2855	D0GDR00JA017	0 1/10W	1	
	W2856	D0GDR00JA017	0 1/10W	1	
	W2857	D0GDR00JA017	0 1/10W	1	
	W2858	D0GBR00JA008	0 1/16W	1	
	W2859	D0GBR00JA008	0 1/16W	1	
	W2860	D0GBR00JA008	0 1/16W	1	
	W2861	D0GDR00JA017	0 1/10W	1	
	W2862	D0GDR00JA017	0 1/10W	1	
	W2863	D0GBR00JA008	0 1/16W	1	
	W2864	D0GBR00JA008	0 1/16W	1	
	W2865	D0GDR00JA017	0 1/10W	1	
	W2866	D0GBR00JA008	0 1/16W	1	
	W2867	D0GDR00JA017	0 1/10W	1	
	W2868	D0GDR00JA017	0 1/10W	1	
	W2869	D0GBR00JA008	0 1/16W	1	
	W2870	D0GBR00JA008	0 1/16W	1	
	W2871	D0GDR00JA017	0 1/10W	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	W2872	D0GDR00JA017	0 1/10W	1	
	W2873	D0GDR00JA017	0 1/10W	1	
	W2874	D0GDR00JA017	0 1/10W	1	
	W2875	D0GDR00JA017	0 1/10W	1	
	W2876	D0GBR00JA008	0 1/16W	1	
	W2877	D0GDR00JA017	0 1/10W	1	
	W2878	D0GDR00JA017	0 1/10W	1	
	W2879	D0GBR00JA008	0 1/16W	1	
	W2880	D0GBR00JA008	0 1/16W	1	
	W2881	D0GBR00JA008	0 1/16W	1	
	W2882	D0GBR00JA008	0 1/16W	1	
	W2883	D0GDR00JA017	0 1/10W	1	
	W2884	D0GBR00JA008	0 1/16W	1	
	W2885	D0GDR00JA017	0 1/10W	1	
	W2886	D0GDR00JA017	0 1/10W	1	
	W2887	D0GDR00JA017	0 1/10W	1	
	W2888	D0GDR00JA017	0 1/10W	1	
	W2889	D0GDR00JA017	0 1/10W	1	
	W2890	D0GDR00JA017	0 1/10W	1	
	W2891	D0GBR00JA008	0 1/16W	1	
	W2892	D0GDR00JA017	0 1/10W	1	
	W2893	D0GDR00JA017	0 1/10W	1	
	W2894	D0GBR00JA008	0 1/16W	1	
	W2895	D0GBR00JA008	0 1/16W	1	
	W2896	D0GBR00JA008	0 1/16W	1	
	W2897	D0GBR00JA008	0 1/16W	1	
	W2898	D0GBR00JA008	0 1/16W	1	
	W2899	D0GDR00JA017	0 1/10W	1	
	W2900	D0GBR00JA008	0 1/16W	1	
	W2901	D0GBR00JA008	0 1/16W	1	
	W2902	D0GBR00JA008	0 1/16W	1	
	W2903	D0GBR00JA008	0 1/16W	1	
	W2904	D0GBR00JA008	0 1/16W	1	
	W2905	D0GBR00JA008	0 1/16W	1	
	W2906	D0GBR00JA008	0 1/16W	1	
	W2907	D0GBR00JA008	0 1/16W	1	
	W2908	D0GBR00JA008	0 1/16W	1	
	W2909	D0GBR00JA008	0 1/16W	1	
	W2910	D0GBR00JA008	0 1/16W	1	
	W2911	D0GBR00JA008	0 1/16W	1	
	W2912	D0GBR00JA008	0 1/16W	1	
	W2913	D0GDR00JA017	0 1/10W	1	
	W2914	D0GDR00JA017	0 1/10W	1	
	W2915	D0GBR00JA008	0 1/16W	1	
	W2916	D0GBR00JA008	0 1/16W	1	
	W2917	D0GBR00JA008	0 1/16W	1	
	W2918	D0GDR00JA017	0 1/10W	1	
	W2919	D0GDR00JA017	0 1/10W	1	
	W2920	D0GBR00JA008	0 1/16W	1	
	W2921	D0GDR00JA017	0 1/10W	1	
	W2922	D0GDR00JA017	0 1/10W	1	
	W2923	D0GDR00JA017	0 1/10W	1	
	W2924	D0GBR00JA008	0 1/16W	1	
	W2925	D0GBR00JA008	0 1/16W	1	
	W2926	D0GDR00JA017	0 1/10W	1	
	W2927	D0GDR00JA017	0 1/10W	1	
	W2928	D0GDR00JA017	0 1/10W	1	
	W2929	D0GBR00JA008	0 1/16W	1	
	W2930	D0GBR00JA008	0 1/16W	1	
	W2931	D0GDR00JA017	0 1/10W	1	
	W2932	D0GBR00JA008	0 1/16W	1	
	W5200	D0GDR00JA017	0 1/10W	1	
	W5201	D0GBR00JA008	0 1/16W	1	
	W5202	D0GBR00JA008	0 1/16W	1	
	W5205	D0GBR00JA008	0 1/16W	1	
	W5207	D0GBR00JA008	0 1/16W	1	
	W5802	D0GDR00JA017	0 1/10W	1	
	W5803	ERJ8GEY0R00V	0 1/4W	1	
	W6908	ERJ8GEY0R00V	0 1/4W	1	
	W6950	D0GDR00JA017	0 1/10W	1	
	W6951	D0GDR00JA017	0 1/10W	1	
	W6955	ERJ8GEY0R00V	0 1/4W	1	
	W6966	ERJ8GEY0R00V	0 1/4W	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	W6967	ERJ8GEY0R00V	0 1/4W	1	
	W6973	ERJ8GEY0R00V	0 1/4W	1	
	W6974	D0GDR00JA017	0 1/10W	1	
	W6975	ERJ8GEY0R00V	0 1/4W	1	
	W6976	ERJ8GEY0R00V	0 1/4W	1	
	W6978	ERJ8GEY0R00V	0 1/4W	1	
	W6979	ERJ8GEY0R00V	0 1/4W	1	
	W6980	ERJ8GEY0R00V	0 1/4W	1	
	W6981	D0GDR00JA017	0 1/10W	1	
	W7003	ERJ8GEY0R00V	0 1/4W	1	
	W7051	D0GBR00JA008	0 1/16W	1	
	W7057	ERJ8GEY0R00V	0 1/4W	1	
	W7064	ERJ8GEY0R00V	0 1/4W	1	
	W7065	D0GBR00JA008	0 1/16W	1	
	W7066	ERJ8GEY0R00V	0 1/4W	1	
	W7067	D0GBR00JA008	0 1/16W	1	
	W7068	D0GBR00JA008	0 1/16W	1	
	W7069	ERJ8GEY0R00V	0 1/4W	1	
			RESISTORS		
	LB8691	D0GA101JA023	100 1/16W	1	
	LB8692	D0GA101JA023	100 1/16W	1	
	LB8693	D0GA101JA023	100 1/16W	1	
	R2000	D0GB221JA007	220 1/10W	1	
	R2001	D0GB102JA008	1K 1/16W	1	
	R2002	D0GB103JA008	10K 1/16W	1	
	R2004	D0GB221JA007	220 1/10W	1	
	R2007	D0GB473JA008	47K 1/16W	1	
	R2008	D0GB473JA008	47K 1/16W	1	
	R2010	D0GB102JA008	1K 1/16W	1	
	R2012	D0GB103JA008	10K 1/16W	1	
	R2014	D0GB473JA008	47K 1/16W	1	
	R2017	D0GB273JA008	27K 1/16W	1	
	R2021	D0GB563JA008	56K 1/16W	1	
	R2022	D0GB473JA008	47K 1/16W	1	
	R2026	D0GB101JA008	100 1/16W	1	
	R2027	D0GB1R5JA040	1.5 1/10W	1	
	R2030	ERJ6GEYJ473V	47K 1/8W	1	
	R2031	D0GB221JA007	220 1/10W	1	
	R2032	D0GB473JA008	47K 1/16W	1	
	R2033	D0GB223JA008	22K 1/16W	1	
	R2034	D0GB473JA008	47K 1/16W	1	
	R2035	D0GB473JA008	47K 1/16W	1	
	R2036	D0GB221JA007	220 1/10W	1	
	R2037	D0GB473JA008	47K 1/16W	1	
	R2038	D0GB473JA008	47K 1/16W	1	
	R2039	D0GB473JA008	47K 1/16W	1	
	R2040	D0GB473JA008	47K 1/16W	1	
	R2041	D0GB473JA008	47K 1/16W	1	
	R2043	D0GB153JA008	15K 1/16W	1	
	R2045	D0GB103JA008	10K 1/16W	1	
	R2046	D0GB222JA008	2.2K 1/16W	1	
	R2047	D0GB222JA008	2.2K 1/16W	1	
	R2048	ERJ3GEYJ203V	20K 1/10W	1	
	R2050	D0GB102JA008	1K 1/16W	1	
	R2051	D0GB563JA017	56K 1/10W	1	
	R2053	D0GB221JA007	220 1/10W	1	
	R2054	ERJ6GEYJ221V	220 1/8W	1	
	R2055	D0GB473JA008	47K 1/16W	1	
	R2056	D0GB221JA007	220 1/10W	1	
	R2057	D0GB102JA008	1K 1/16W	1	
	R2060	D0GB221JA007	220 1/10W	1	
	R2061	D0GB221JA007	220 1/10W	1	
	R2062	D0GB221JA007	220 1/10W	1	
	R2066	D0GB221JA007	220 1/10W	1	
	R2068	D0GB221JA007	220 1/10W	1	
	R2069	D0GB221JA007	220 1/10W	1	
	R2071	D0GB101JA008	100 1/16W	1	
	R2072	D0GB101JA008	100 1/16W	1	
	R2073	D0GB101JA008	100 1/16W	1	
	R2075	D0GB221JA007	220 1/10W	1	
	R2077	D0GB103JA008	10K 1/16W	1	
	R2078	D0GB221JA007	220 1/10W	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	R2080	D0GB103JA008	10K 1/16W	1	
	R2081	D0GB103JA008	10K 1/16W	1	
	R2082	D0GB223JA008	22K 1/16W	1	GA
	R2082	D0GB333JA008	33K 1/16W	1	GC/GS
	R2084	D0GB473JA008	47K 1/16W	1	
	R2085	D0GB472JA008	4.7K 1/16W	1	
	R2086	D0GB223JA008	22K 1/16W	1	
	R2087	D0GB223JA008	22K 1/16W	1	
	R2089	D0GB332JA008	3.3K 1/16W	1	GC/GS
	R2089	D0GBR00JA008	0 1/16W	1	GA
	R2090	D0GB153JA008	15K 1/16W	1	
	R2091	D0GB221JA007	220 1/10W	1	
	R2092	D0GB221JA007	220 1/10W	1	
	R2093	D0GB103JA008	10K 1/16W	1	
	R2095	D0GB473JA008	47K 1/16W	1	
	R2096	D0GB473JA008	47K 1/16W	1	
	R2097	D0GB472JA008	4.7K 1/16W	1	
	R2098	D0GB225JA008	2.2M 1/16W	1	
	R2099	D0GB104JA008	100K 1/16W	1	
	R2100	D0GB332JA008	3.3K 1/16W	1	
	R2101	D0GB103JA008	10K 1/16W	1	
	R2102	D0GB332JA008	3.3K 1/16W	1	
	R2103	D0GB273JA008	27K 1/16W	1	
	R2104	D0GBR00JA008	0 1/16W	1	
	R2105	D0GB332JA008	3.3K 1/16W	1	
	R2106	D0GB563JA008	56K 1/16W	1	
	R2113	D0GB562JA008	5.6K 1/16W	1	
	R2114	D0GB562JA008	5.6K 1/16W	1	
	R2115	D0GB822JA008	8.2K 1/16W	1	
	R2119	D0GB562JA008	5.6K 1/16W	1	
	R2120	D0GB102JA008	1K 1/16W	1	
	R2133	D0GB103JA008	10K 1/16W	1	
	R2138	D0GB102JA008	1K 1/16W	1	
	R2145	D0GBR00JA008	0 1/16W	1	
	R2150	D0GB103JA008	10K 1/16W	1	
	R2160	D0GB102JA008	1K 1/16W	1	
	R2161	D0GB473JA008	47K 1/16W	1	
	R2164	D0GB103JA008	10K 1/16W	1	
	R2165	D0GB103JA008	10K 1/16W	1	
	R2172	D0GB182JA008	1.8K 1/16W	1	
	R2175	D0GBR00JA008	0 1/16W	1	
	R2183	D0GB182JA008	1.8K 1/16W	1	
	R2184	D0GB222JA008	2.2K 1/16W	1	
	R2190	D0GB562JA008	5.6K 1/16W	1	
	R2191	D0GB392JA008	3.9K 1/16W	1	
	R2194	D0GB103JA008	10K 1/16W	1	
	R2200	D0GB332JA008	3.3K 1/16W	1	
	R2201	D0GB103JA008	10K 1/16W	1	
	R2202	D0GB332JA008	3.3K 1/16W	1	
	R2203	D0GB273JA008	27K 1/16W	1	
	R2204	D0GBR00JA008	0 1/16W	1	
	R2205	D0GB332JA008	3.3K 1/16W	1	
	R2206	D0GB563JA008	56K 1/16W	1	
	R2213	D0GB562JA008	5.6K 1/16W	1	
	R2214	D0GB562JA008	5.6K 1/16W	1	
	R2215	D0GB822JA008	8.2K 1/16W	1	
	R2219	D0GB562JA008	5.6K 1/16W	1	
	R2220	D0GB102JA008	1K 1/16W	1	
	R2233	D0GB103JA008	10K 1/16W	1	
	R2245	D0GBR00JA008	0 1/16W	1	
	R2260	D0GB102JA008	1K 1/16W	1	
	R2261	D0GB473JA008	47K 1/16W	1	
	R2264	D0GB103JA008	10K 1/16W	1	
	R2265	D0GB103JA008	10K 1/16W	1	
	R2275	D0GBR00JA008	0 1/16W	1	
	R2283	D0GB182JA008	1.8K 1/16W	1	
	R2284	D0GB222JA008	2.2K 1/16W	1	
	R2290	D0GB562JA008	5.6K 1/16W	1	
	R2291	D0GB392JA008	3.9K 1/16W	1	
	R2294	D0GB103JA008	10K 1/16W	1	
	R2300	D0GB122JA008	1.2K 1/16W	1	
	R2301	D0GB822JA008	8.2K 1/16W	1	
	R2302	D0GB472JA008	4.7K 1/16W	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	R2303	D0GB472JA008	4.7K 1/16W	1	
	R2304	D0GB123JA008	12K 1/16W	1	
	R2310	D0GB182JA008	1.8K 1/16W	1	
	R2312	D0GB222JA008	2.2K 1/16W	1	
	R2339	D0GB102JA008	1K 1/16W	1	
	R2400	D0GB122JA008	1.2K 1/16W	1	
	R2401	D0GB822JA008	8.2K 1/16W	1	
	R2402	D0GB472JA008	4.7K 1/16W	1	
	R2403	D0GB472JA008	4.7K 1/16W	1	
	R2404	D0GB123JA008	12K 1/16W	1	
	R2410	D0GB182JA008	1.8K 1/16W	1	
	R2412	D0GB222JA008	2.2K 1/16W	1	
	R2439	D0GB102JA008	1K 1/16W	1	
	R2500	D0GB272JA008	2.7K 1/16W	1	
	R2501	D0GB822JA008	8.2K 1/16W	1	
	R2502	D0GB472JA008	4.7K 1/16W	1	
	R2503	D0GB123JA008	12K 1/16W	1	
	R2504	D0GB272JA008	2.7K 1/16W	1	
	R2510	D0GB182JA008	1.8K 1/16W	1	
	R2512	D0GB102JA008	1K 1/16W	1	
	R2525	D0GB182JA008	1.8K 1/16W	1	
	R2527	D0GB563JA008	56K 1/16W	1	
	R2528	D0GB273JA008	27K 1/16W	1	
	R2600	D0GB102JA008	1K 1/16W	1	
	R2601	D0GB123JA008	12K 1/16W	1	
	R2609	D0GB102JA008	1K 1/16W	1	
	R2610	D0GB562JA008	5.6K 1/16W	1	
	R2611	D0GB103JA008	10K 1/16W	1	
	R2612	D0GB682JA008	6.8K 1/16W	1	
	R2613	D0GB153JA008	15K 1/16W	1	
	R2614	D0GB273JA008	27K 1/16W	1	
	R2617	D0GB182JA008	1.8K 1/16W	1	
	R2626	D0GB182JA008	1.8K 1/16W	1	
	R2627	D0GB563JA008	56K 1/16W	1	
	R2668	D0GBR00JA008	0 1/16W	1	
	R2705	D0GB102JA008	1K 1/16W	1	
	R2757	D0GB682JA008	6.8K 1/16W	1	
	R2764	D0GB824JA008	820K 1/16W	1	
	R2804	D0GB102JA008	1K 1/16W	1	
	R2809	D0GB750JA008	75 1/16W	1	
	R2812	D0GB750JA008	75 1/16W	1	
	R2813	D0GB750JA008	75 1/16W	1	
	R2816	D0GB750JA008	75 1/16W	1	
	R2862	D0GB103JA008	10K 1/16W	1	
	R2863	D0GB103JA008	10K 1/16W	1	
	R2864	D0GB682JA008	6.8K 1/16W	1	
	R2865	D0GB103JA008	10K 1/16W	1	GA
	R2865	D0GB682JA008	6.8K 1/16W	1	GC/GS
	R2900	D0GB472JA008	4.7K 1/16W	1	
	R2902	D0GB470JA008	47 1/16W	1	
	R2903	D0GB182JA008	1.8K 1/16W	1	
	R2905	D0GB390JA008	39 1/16W	1	
	R2906	ERJ3RBD682V	6.8K 1/16W	1	
	R2907	D0GB272JA008	2.7K 1/16W	1	
	R2908	D0GB561JA008	560 1/16W	1	
	R2909	D0GB393JA008	39K 1/16W	1	
	R2910	D0GB1R5JA040	1.5 1/10W	1	
	R2911	D0GB102JA008	1K 1/16W	1	
	R2912	D0GB272JA008	2.7K 1/16W	1	
	R2913	D0GBR00JA008	0 1/16W	1	
	R2914	D0GB473JA008	47K 1/16W	1	
	R2919	D0GB102JA008	1K 1/16W	1	
	R2920	D0GB392JA008	3.9K 1/16W	1	
	R2921	D0GB391JA008	390 1/16W	1	
	R2922	D0HB102ZA002	1K 1/16W	1	
	R2923	ERJ3RBD122V	1.2K 1/16W	1	
	R2930	D0GB472JA008	4.7K 1/16W	1	
	R2935	D0GB472JA008	4.7K 1/16W	1	
	R2937	D0GB393JA008	39K 1/16W	1	
	R2938	D0GB333JA008	33K 1/16W	1	
	R2941	D0GB223JA008	22K 1/16W	1	
	R2952	D0GB392JA008	3.9K 1/16W	1	
	R2953	D0GB561JA008	560 1/16W	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	R3901	ERJ2GEJ511X	510 1/16W	1	
	R3902	D0GA103JA023	10K 1/16W	1	
	R3903	D0GA103JA023	10K 1/16W	1	
	R3904	D0GA472JA023	4.7K 1/16W	1	
	R3905	ERJ2GEJ202X	2.0K 1/16W	1	
	R3906	D0GA472JA023	4.7K 1/16W	1	
	R3907	D0GA222JA023	2.2K 1/16W	1	
	R3921	ERJ2GE0R00X	0 1/16W	1	
	R3924	ERJ2GE0R00X	0 1/16W	1	
	R3925	D0GA103JA023	10K 1/16W	1	
	R3941	D0GA273JA023	27K 1/16W	1	
	R3942	ERJ2GEJ224X	220K 1/16W	1	
	R3943	D0GA104JA023	100K 1/16W	1	
	R3944	D0GA221JA023	220 1/16W	1	
	R3945	D0GA103JA023	10K 1/16W	1	
	R3946	ERJ2GEJ272X	2.7K 1/16W	1	
	R3947	D0GA103JA023	10K 1/16W	1	
	R5101	D0GB333JA008	33K 1/16W	1	
	R5102	D0GB333JA008	33K 1/16W	1	
	R5104	D0GB273JA008	27K 1/16W	1	
	R5105	ERG2SJ220E	22 2W	1	
	R5106	D0GB122JA008	1.2K 1/16W	1	
	R5107	D0GB122JA008	1.2K 1/16W	1	
	R5108	D0GB273JA008	27K 1/16W	1	
	R5109	ERG2SJ220E	22 2W	1	
	R5111	D0GB103JA008	10K 1/16W	1	
	R5112	D0GB122JA008	1.2K 1/16W	1	
	R5201	D0GB333JA008	33K 1/16W	1	
	R5202	D0GB333JA008	33K 1/16W	1	
	R5204	D0GB273JA008	27K 1/16W	1	
	R5205	ERG2SJ220E	22 2W	1	
	R5206	D0GB122JA008	1.2K 1/16W	1	
	R5207	D0GB122JA008	1.2K 1/16W	1	
	R5208	D0GB273JA008	27K 1/16W	1	
	R5209	ERG2SJ220E	22 2W	1	
	R5211	D0GB103JA008	10K 1/16W	1	
	R5301	D0GB473JA008	47K 1/16W	1	
	R5302	D0GB333JA008	33K 1/16W	1	
	R5304	D0GB562JA008	5.6K 1/16W	1	
	R5305	ERG2SJ220E	22 2W	1	
	R5306	D0GB122JA008	1.2K 1/16W	1	
	R5307	D0GB122JA008	1.2K 1/16W	1	
	R5308	D0GB273JA008	27K 1/16W	1	
	R5309	ERG2SJ220E	22 2W	1	
	R5313	D0GB473JA008	47K 1/16W	1	
	R5314	D0GB103JA008	10K 1/16W	1	
	R5315	D0GB103JA008	10K 1/16W	1	
	R5316	D0GB103JA008	10K 1/16W	1	
	R5317	D0GB103JA008	10K 1/16W	1	
	R5411	D0GB332JA008	3.3K 1/16W	1	
	R5412	D0GBR00JA008	0 1/16W	1	
	R5701	ERDS1TJ395B	3.9M 1/2W	1	
	R5702	ERJ1TYJ104U	100K 1W	1	
	R5703	ERJ1TYJ104U	100K 1W	1	
	R5704	D0GF184JA017	180K 1/10W	1	
	R5705	D0GF184JA017	180K 1/10W	1	
	R5706	ERJ8GEYJ224V	220K 1/4W	1	
	R5707	ERJ8GEYJ224V	220K 1/4W	1	
	R5708	ERJ6GEYJ824V	820K 1/8W	1	
	R5720	D0GD220JA017	22 1/10W	1	
	R5721	D0GD103JA017	10K 1/10W	1	
	R5722	ERJ3GEYJ202V	2.0K 1/10W	1	
	R5723	ERJ1TYJ333U	33K 1W	1	
	R5724	ERJ1TYJ333U	33K 1W	1	
	R5725	ERJ3GEYJ202V	2.0K 1/10W	1	
	R5726	ERX2SJR27P	27 2W	1	
	R5730	D0GB102JA008	1K 1/16W	1	
	R5732	D0GB101JA008	100 1/16W	1	
	R5733	D0GB473JA008	47K 1/16W	1	
	R5737	D0AF152JA039	1.5K 1/2W	1	
	R5754	D0GB563JA008	56K 1/16W	1	
	R5755	D0GB103JA008	10K 1/16W	1	
	R5756	D0GB103JA008	10K 1/16W	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	R5757	D0GB103JA008	10K 1/16W	1	
	R5758	ERJ3GEYJ335V	3.3M 1/10W	1	
	R5759	D0GB104JA008	100K 1/16W	1	
	R5760	D0GB103JA008	10K 1/16W	1	
	R5762	D0GB154JA008	150K 1/16W	1	
	R5763	D0GB560JA008	56 1/16W	1	
	R5765	D0GB104JA008	100K 1/16W	1	
	R5767	D0GB104JA008	100K 1/16W	1	
	R5768	D0GB104JA008	100K 1/16W	1	
	R5769	D0GB104JA008	100K 1/16W	1	
	R5771	D0GB104JA008	100K 1/16W	1	
	R5772	D0GB104JA008	100K 1/16W	1	
	R5773	D0GB104JA008	100K 1/16W	1	
	R5774	D0GB104JA008	100K 1/16W	1	
	R5775	D0GB333JA008	33K 1/16W	1	
	R5777	D0GB224JA008	220K 1/16W	1	
	R5778	D0GB224JA008	220K 1/16W	1	
	R5779	D0GB104JA008	100K 1/16W	1	
	R5780	D0GB104JA008	100K 1/16W	1	
	R5781	D0GB333JA008	33K 1/16W	1	
	R5783	D0GB333JA008	33K 1/16W	1	
	R5784	D0GB473JA008	47K 1/16W	1	
	R5785	D0GB224JA008	220K 1/16W	1	
	R5786	D0GB224JA008	220K 1/16W	1	
	R5786	ERJ1TYJ204U	200K 1W	1	
	R5787	D0GB563JA008	56K 1/16W	1	
	R5795	ERJ6GEYJ474V	470K 1/8W	1	
	R5797	D0GB153JA008	15K 1/16W	1	
	R5798	D0GB220JA008	22 1/16W	1	
	R5802	D0HB183ZA002	18K 1/16W	1	
	R5803	ERJ3RBD331V	330 1/16W	1	
	R5804	ERJ3RBD272V	2.7K 1/16W	1	
	R5805	ERJ3RBD471V	470 1/16W	1	
	R5806	D0GB153JA008	15K 1/16W	1	
	R5807	ERJ6GEYJ331V	330 1/8W	1	
	R5808	D0GD222JA017	2.2K 1/10W	1	
	R5809	ERJ6GEYJ331V	330 1/8W	1	
	R5817	ERJ3RBD122V	1.2K 1/16W	1	
	R5818	ERJ3RBD222V	2.2K 1/16W	1	
	R5819	D0GB220JA008	22 1/16W	1	
	R5829	D0GB220JA008	22 1/16W	1	
	R5834	ERJ1TYJ222U	2.2K 1W	1	
	R5842	D0GB331JA008	330 1/16W	1	
	R5843	D0GD222JA017	2.2K 1/10W	1	
	R5861	D0GB104JA008	100K 1/16W	1	
	R5862	D0GB472JA008	4.7K 1/16W	1	
	R5865	D0GB472JA008	4.7K 1/16W	1	
	R5866	D0GB104JA008	100K 1/16W	1	
	R5886	D0GB101JA008	100 1/16W	1	
	R5887	D0GB104JA008	100K 1/16W	1	
	R5890	D0GB222JA008	2.2K 1/16W	1	
	R5891	ERJ3RBD333V	33K 1/16W	1	
	R5892	ERJ3RBD472V	4.7K 1/16W	1	
	R5893	ERJ3RBD393V	39K 1/16W	1	
	R5894	D0GB331JA008	330 1/16W	1	
	R5895	D0GB153JA008	15K 1/16W	1	
	R5896	D0GBR00JA008	0 1/16W	1	
	R5898	D0GD472JA017	4.7K 1/10W	1	
	R5899	ERJ6GEYJ473V	47K 1/8W	1	
	R6603	D0GB561JA008	560 1/16W	1	
	R6605	D0GB473JA008	47K 1/16W	1	
	R6606	D0GB682JA008	6.8K 1/16W	1	
	R6613	D0GB472JA008	4.7K 1/16W	1	
	R6614	D0GB472JA008	4.7K 1/16W	1	
	R6615	D0GB102JA008	1K 1/16W	1	
	R6616	D0GB473JA008	47K 1/16W	1	
	R6701	D0GBR00JA008	0 1/16W	1	
	R6702	D0GBR00JA008	0 1/16W	1	
	R6710	D0GB682JA008	6.8K 1/16W	1	
	R6711	D0GB221JA007	220 1/10W	1	
	R6721	D0GB221JA007	220 1/10W	1	
	R6801	D0GB102JA008	1K 1/16W	1	
	R6901	D0GBR00JA008	0 1/16W	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	R6902	D0GB272JA008	2.7K 1/16W	1	
	R6903	D0GB122JA008	1.2K 1/16W	1	
	R6904	D0GB102JA008	1K 1/16W	1	
	R6905	D0GB102JA008	1K 1/16W	1	
	R6907	D0GB223JA008	22K 1/16W	1	
	R6909	D0GB223JA008	22K 1/16W	1	
	R6912	D0GB182JA008	1.8K 1/16W	1	
	R6914	D0GB563JA008	56K 1/16W	1	
	R6916	D0GB680JA008	68 1/16W	1	
	R6917	D0GB680JA008	68 1/16W	1	
	R6918	D0GB223JA008	22K 1/16W	1	
	R6919	D0GD220JA017	22 1/10W	1	
	R6920	D0GB152JA008	1.5K 1/16W	1	
	R6921	D0GB123JA008	12K 1/16W	1	
	R6927	D0GB680JA008	68 1/16W	1	
	R6934	D0GB470JA008	47 1/16W	1	
	R6935	D0GB1R0JA008	1.0 1/16W	1	
	R6939	D0GDR00JA017	0 1/10W	1	
	R6940	D0GDR00JA017	0 1/10W	1	
	R6960	D0GB222JA008	2.2K 1/16W	1	
	R6961	D0GB331JA008	330 1/16W	1	
	R7001	D0GB681JA008	680 1/16W	1	
	R7003	D0GBR00JA008	0 1/16W	1	
	R7004	D0GB681JA008	680 1/16W	1	
	R7005	D0GB102JA008	1K 1/16W	1	
	R7006	D0GB823JA008	82K 1/16W	1	
	R7008	D0GB101JA008	100 1/16W	1	
	R7009	D0GB104JA008	100K 1/16W	1	
	R7010	D0GB101JA008	100 1/16W	1	
	R7011	D0GBR00JA008	0 1/16W	1	
	R7012	D0GB151JA008	150 1/16W	1	
	R7013	D0GB470JA008	47 1/16W	1	
	R7015	D0GB102JA008	1K 1/16W	1	
	R7018	D0GB390JA008	39 1/16W	1	
	R7019	D0GB472JA008	4.7K 1/16W	1	
	R7100	D0GB153JA008	15K 1/16W	1	
	R7101	D0GB103JA008	10K 1/16W	1	
	R7102	D0GB103JA008	10K 1/16W	1	
	R7103	D0GB103JA008	10K 1/16W	1	
	R7104	D0GB153JA008	15K 1/16W	1	
	R7105	D0GB103JA008	10K 1/16W	1	
	R7106	D0GB123JA008	12K 1/16W	1	
	R7107	D0GB680JA008	68 1/16W	1	
	R7108	D0GB472JA008	4.7K 1/16W	1	
	R7109	D0GB103JA008	10K 1/16W	1	
	R7110	D0GB682JA008	6.8K 1/16W	1	
	R7112	D0GB153JA008	15K 1/16W	1	
	R7113	D0GB103JA008	10K 1/16W	1	
	R7114	D0GB103JA008	10K 1/16W	1	
	R7116	D0GB681JA008	680 1/16W	1	
	R7117	D0GB123JA008	12K 1/16W	1	
	R7118	D0GB822JA008	8.2K 1/16W	1	
	R8000	D0GB154JA008	150K 1/16W	1	GC/GS
	R8000	D0GB181JA008	180 1/16W	1	GA
	R8001	D0GA103JA023	10K 1/16W	1	
	R8003	D0GA103JA023	10K 1/16W	1	
	R8011	D0GA220JA023	22 1/16W	1	
	R8012	D0GA220JA023	22 1/16W	1	
	R8013	D0GA220JA023	22 1/16W	1	
	R8014	ERJ2GE0R00X	0 1/16W	1	
	R8025	D0GBR00JA008	0 1/16W	1	
	R8211	D0GA103JA023	10K 1/16W	1	
	R8221	D0GA822JA023	8.2K 1/16W	1	
	R8225	D0GA822JA023	8.2K 1/16W	1	
	R8230	D0GA222JA023	2.2K 1/16W	1	
	R8231	D0GA752JA023	7.5K 1/16W	1	
	R8232	D0GA752JA023	7.5K 1/16W	1	
	R8251	D0GD6R8JA017	6.8 1/10W	1	
	R8252	D0GA103JA023	10K 1/16W	1	
	R8261	D0GA823JA023	82K 1/16W	1	
	R8262	D0GA153JA023	15K 1/16W	1	
	R8263	D0GA823JA023	82K 1/16W	1	
	R8264	D0GA153JA023	15K 1/16W	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	R8311	ERJ2RHD242X	2.4K 1/16W	1	
	R8312	ERJ2RHD102X	1K 1/16W	1	
	R8313	ERJ2RHD153X	15K 1/16W	1	
	R8314	ERJ2RHD153X	15K 1/16W	1	
	R8315	ERJ2RKD240X	24 1/16W	1	
	R8316	ERJ2RKD240X	24 1/16W	1	
	R8317	D0GA153JA023	15K 1/16W	1	
	R8318	D0GA153JA023	15K 1/16W	1	
	R8321	ERJ3RBD201V	200 1/16W	1	
	R8323	D0GA330JA023	33 1/16W	1	
	R8324	D0GA102JA023	1K 1/16W	1	
	R8325	ERJ3RBD201V	200 1/16W	1	
	R8327	D0GA330JA023	33 1/16W	1	
	R8328	D0GA102JA023	1K 1/16W	1	
	R8331	ERJ3RBD201V	200 1/16W	1	
	R8333	D0GA330JA023	33 1/16W	1	
	R8334	D0GA102JA023	1K 1/16W	1	
	R8335	ERJ3RBD201V	200 1/16W	1	
	R8336	D0GA330JA023	33 1/16W	1	
	R8337	D0GA102JA023	1K 1/16W	1	
	R8341	ERJ3RBD201V	200 1/16W	1	
	R8342	D0GA330JA023	33 1/16W	1	
	R8343	D0GA102JA023	1K 1/16W	1	
	R8401	D0GA101JA023	100 1/16W	1	
	R8402	D0GA101JA023	100 1/16W	1	
	R8403	D0GA101JA023	100 1/16W	1	
	R8404	D0GA101JA023	100 1/16W	1	
	R8406	ERJ2GEJ100X	10 1/16W	1	
	R8420	D0GA222JA023	2.2K 1/16W	1	
	R8421	ERJ2GEJ100X	10 1/16W	1	
	R8422	ERJ2GE0R00X	0 1/16W	1	
	R8423	ERJ2GE0R00X	0 1/16W	1	
	R8426	ERJ2GE0R00X	0 1/16W	1	
	R8429	ERJ2GE0R00X	0 1/16W	1	
	R8531	D0GA152JA023	1.5K 1/16W	1	
	R8532	D0GA222JA023	2.2K 1/16W	1	
	R8533	ERJ2GE0R00X	0 1/16W	1	
	R8534	D0GA103JA023	10K 1/16W	1	
	R8535	D0GA104JA023	100K 1/16W	1	
	R8536	D0GA103JA023	10K 1/16W	1	
	R8537	ERJ2GE0R00X	0 1/16W	1	
	R8538	ERJ2GE0R00X	0 1/16W	1	
	R8539	ERJ2GE0R00X	0 1/16W	1	
	R8540	D0GBR00JA008	0 1/16W	1	
	R8541	D0GA153JA023	15K 1/16W	1	
	R8551	ERJ2GE0R00X	0 1/16W	1	
	R8552	D0GA102JA023	1K 1/16W	1	
	R8553	D0GA102JA023	1K 1/16W	1	
	R8554	ERJ2GEJ680X	68 1/16W	1	
	R8555	D0GA2R2JA023	2.2 1/16W	1	
	R8556	D0GB560JA008	56 1/16W	1	
	R8557	D0GB510JA008	51 1/16W	1	
	R8558	D0GA473JA023	47K 1/16W	1	
	R8559	D0GA153JA023	15K 1/16W	1	
	R8561	ERJ2GE0R00X	0 1/16W	1	
	R8562	D0GA102JA023	1K 1/16W	1	
	R8563	D0GA102JA023	1K 1/16W	1	
	R8564	D0GA220JA023	22 1/16W	1	
	R8565	D0GA2R2JA023	2.2 1/16W	1	
	R8566	D0GB560JA008	56 1/16W	1	
	R8567	D0GB510JA008	51 1/16W	1	
	R8568	D0GA473JA023	47K 1/16W	1	
	R8601	D0GA105JA023	1M 1/16W	1	
	R8611	D0GA101JA023	100 1/16W	1	
	R8613	D0GA101JA023	100 1/16W	1	
	R8621	D0GA105JA023	1M 1/16W	1	
	R8622	ERJ2RHD102X	1K 1/16W	1	
	R8702	ERJ2GEJ100X	10 1/16W	1	
	R8901	ERJ2GEJ100X	10 1/16W	1	
	R9001	ERJ2GE0R00X	0 1/16W	1	
	R9002	ERJ2GE0R00X	0 1/16W	1	
	R9007	D0GA103JA023	10K 1/16W	1	
	R9008	D0GA105JA023	1M 1/16W	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	R9009	D0GA102JA023	1K 1/16W	1	
	R9010	ERJ2GEJ100X	10 1/16W	1	
	R9023	D0GA103JA023	10K 1/16W	1	
	R9036	D0GA103JA023	10K 1/16W	1	
	R9037	D0GA103JA023	10K 1/16W	1	
	R9040	D0GA103JA023	10K 1/16W	1	
	R9041	D0GA103JA023	10K 1/16W	1	
	R9042	D0GA103JA023	10K 1/16W	1	
	R9043	D0GA103JA023	10K 1/16W	1	
	R9044	D0GA103JA023	10K 1/16W	1	
	R9045	D0GA103JA023	10K 1/16W	1	
	R9046	D0GA103JA023	10K 1/16W	1	
	R9047	D0GA103JA023	10K 1/16W	1	
	R9048	D0GA103JA023	10K 1/16W	1	
	R9049	D0GA103JA023	10K 1/16W	1	
	R9055	D0GA472JA023	4.7K 1/16W	1	
	R9080	D0GA103JA023	10K 1/16W	1	
	R9083	D0GA470JA023	47 1/16W	1	
	R9084	D0GA470JA023	47 1/16W	1	
	R9085	D0GA470JA023	47 1/16W	1	
	R9086	D0GA470JA023	47 1/16W	1	
	R9087	D0GA470JA023	47 1/16W	1	
	R9088	D0GA470JA023	47 1/16W	1	
	R9099	ERJ2GE0R00X	0 1/16W	1	
	RX3707	D1H84714A043	RESISTOR NETWORK	1	
	RX3708	D1H84714A043	RESISTOR NETWORK	1	
	RX3901	D1H410120001	RESISTOR NETWORK	1	
	RX8001	D1H410320002	RESISTOR NETWORK	1	
	RX8011	D1H88204A043	RESISTOR NETWORK	1	
	RX8012	D1H88204A043	RESISTOR NETWORK	1	
	RX8013	D1H88204A043	RESISTOR NETWORK	1	
	RX8014	D1H88204A043	RESISTOR NETWORK	1	
	RX8015	D1H88204A043	RESISTOR NETWORK	1	
	RX8016	D1H88204A043	RESISTOR NETWORK	1	
	RX8017	D1H88204A043	RESISTOR NETWORK	1	
	RX8018	D1H422020001	RESISTOR NETWORK	1	
	RX8019	D1H422020001	RESISTOR NETWORK	1	
	RX8020	D1H422020001	RESISTOR NETWORK	1	
	RX8031	D1H447220001	RESISTOR NETWORK	1	
	RX8032	D1H447220001	RESISTOR NETWORK	1	
	RX8401	D1H410120001	RESISTOR NETWORK	1	
	RX8402	D1H410120001	RESISTOR NETWORK	1	
	RX8531	D1H456020001	RESISTOR NETWORK	1	
	RX8532	D1H85604A043	RESISTOR NETWORK	1	
	RX8533	D1H456020001	RESISTOR NETWORK	1	
	RX8534	D1H456020001	RESISTOR NETWORK	1	
	RX8611	D1H447220001	RESISTOR NETWORK	1	
	RX8691	D1H410320002	RESISTOR NETWORK	1	
	RX9014	D1H85604A043	RESISTOR NETWORK	1	
	RX9015	D1H85604A043	RESISTOR NETWORK	1	
	RX9016	D1H85604A043	RESISTOR NETWORK	1	
	RX9017	D1H85604A043	RESISTOR NETWORK	1	
	RX9018	D1H447220001	RESISTOR NETWORK	1	
	RX9020	D1H447220001	RESISTOR NETWORK	1	
			CAPACITORS		
	C2000	F1H1H104A013	0.1uF 50V	1	
	C2001	F1J1H104A459	0.1uF 50V	1	
	C2006	ECA1HM2R2B	2.2uF 50V	1	
	C2007	F1H1H104A013	0.1uF 50V	1	
	C2008	ECEA0JKS101B	100uF 6.3V	1	
	C2009	F1H1H104A013	0.1uF 50V	1	
	C2010	F1H1H331A013	330pF 50V	1	
	C2011	F1H1H331A013	330pF 50V	1	
	C2012	F1H1H331A013	330pF 50V	1	
	C2013	F1H1H223A219	0.022uF 50V	1	
	C2014	F1H1C105A097	1uF 16V	1	
	C2015	ECJ1VB1H221K	220pF 50V	1	
	C2016	ECJ1VB1H221K	220pF 50V	1	
	C2017	F1H1C104A042	0.1uF 16V	1	
	C2018	F2A1C470A180	47uF 16V	1	
	C2019	F2A1C470A180	47uF 16V	1	
	C2020	F1H1H104A013	0.1uF 50V	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	C2021	F1H1H104A013	0.1uF 50V	1	
	C2025	ECJ1VB1H221K	220pF 50V	1	
	C2026	F1H1H104A013	0.1uF 50V	1	
	C2027	F1H1H104A013	0.1uF 50V	1	
	C2028	F1H1C105A097	1uF 16V	1	
	C2029	F1H1C105A097	1uF 16V	1	
	C2100	F2A0J102A016	1000uF 6.3V	1	
	C2101	F1H1C105A097	1uF 16V	1	
	C2102	F1H1C473A088	0.047uF 16V	1	
	C2103	F1H1C105A097	1uF 16V	1	
	C2104	F1H1C183A001	0.018uF 16V	1	
	C2106	ECJ1VB1H681K	680pF 50V	1	
	C2108	F1H1H682A219	6800pF 50V	1	
	C2111	F1H1C105A097	1uF 16V	1	
	C2113	ECJ1VB1H681K	680pF 50V	1	
	C2114	F1H1H562A219	5600pF 50V	1	
	C2115	F1H1C563A055	0.056uF 16V	1	
	C2116	F1H1C563A055	0.056uF 16V	1	
	C2117	F1H1H104A013	0.1uF 50V	1	
	C2118	F1H1H104A013	0.1uF 50V	1	
	C2121	F1H1C563A055	0.056uF 16V	1	
	C2130	F1H1H223A219	0.022uF 50V	1	
	C2131	F1H1H682A219	6800pF 50V	1	
	C2133	F1H1C105A097	1uF 16V	1	
	C2135	F1H1H153A219	0.015uF 50V	1	
	C2164	ECJ1VB1H221K	220pF 50V	1	
	C2169	F1H1H103A219	0.01uF 50V	1	
	C2190	F1H1C105A097	1uF 16V	1	
	C2191	F1H1C105A097	1uF 16V	1	
	C2194	D0GBR00JA008	0 1/16W	1	
	C2195	ECJ1VB1H681K	680pF 50V	1	
	C2201	F1H1C105A097	1uF 16V	1	
	C2202	F1H1C473A088	0.047uF 16V	1	
	C2203	F1H1C105A097	1uF 16V	1	
	C2204	F1H1C183A001	0.018uF 16V	1	
	C2206	ECJ1VB1H681K	680pF 50V	1	
	C2208	F1H1H682A219	6800pF 50V	1	
	C2211	F1H1C105A097	1uF 16V	1	
	C2213	ECJ1VB1H681K	680pF 50V	1	
	C2214	F1H1H562A219	5600pF 50V	1	
	C2215	F1H1C563A055	0.056uF 16V	1	
	C2216	F1H1C563A055	0.056uF 16V	1	
	C2217	F1H1H104A013	0.1uF 50V	1	
	C2218	F1H1H104A013	0.1uF 50V	1	
	C2221	F1H1C563A055	0.056uF 16V	1	
	C2230	F1H1H223A219	0.022uF 50V	1	
	C2231	F1H1H682A219	6800pF 50V	1	
	C2235	F1H1H153A219	0.015uF 50V	1	
	C2264	ECJ1VB1H221K	220pF 50V	1	
	C2290	F1H1C105A097	1uF 16V	1	
	C2291	F1H1C105A097	1uF 16V	1	
	C2294	D0GBR00JA008	0 1/16W	1	
	C2295	ECJ1VB1H681K	680pF 50V	1	
	C2300	F1H1C105A097	1uF 16V	1	
	C2301	F1J0J4750004	4.7uF 6.3V	1	
	C2302	F1H1C3330001	0.033uF 16V	1	
	C2303	F1H1A124A012	0.12uF 10V	1	
	C2304	F1J0J4750004	4.7uF 6.3V	1	
	C2305	F1H1H332A013	3300pF 50V	1	
	C2306	F1H1A154A037	0.15uF 10V	1	
	C2307	F1H1C105A097	1uF 16V	1	
	C2308	F1H1H223A219	0.022uF 50V	1	
	C2309	ECJ1VB1C823K	0.082uF 16V	1	
	C2310	F1H1H223A219	0.022uF 50V	1	
	C2313	F1H1H153A219	0.015uF 50V	1	
	C2315	F1H1C183A001	0.018uF 16V	1	
	C2400	F1H1C105A097	1uF 16V	1	
	C2401	F1J0J4750004	4.7uF 6.3V	1	
	C2402	F1H1C3330001	0.033uF 16V	1	
	C2403	F1H1A124A012	0.12uF 10V	1	
	C2404	F1J0J4750004	4.7uF 6.3V	1	
	C2405	F1H1H332A013	3300pF 50V	1	
	C2406	F1H1A154A037	0.15uF 10V	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	C2407	F1H1C105A097	1uF 16V	1	
	C2408	F1H1H223A219	0.022uF 50V	1	
	C2413	F1H1H153A219	0.015uF 50V	1	
	C2415	F1H1C183A001	0.018uF 16V	1	
	C2500	F1H1C105A097	1uF 16V	1	
	C2501	ECA1HM4R7B	4.7uF 50V	1	
	C2502	F1H1H473A783	0.047uF 50V	1	
	C2503	F1H1C3330001	0.033uF 16V	1	
	C2504	F1H1H472A219	4700pF 50V	1	
	C2509	F1H1H223A219	0.022uF 50V	1	
	C2516	ECA1HM4R7B	4.7uF 50V	1	
	C2600	F1H1C105A097	1uF 16V	1	
	C2601	F2A1H220A182	22uF 50V	1	
	C2602	ECA1HM4R7B	4.7uF 50V	1	
	C2603	F1H1H223A219	0.022uF 50V	1	
	C2604	ECA1HM4R7B	4.7uF 50V	1	
	C2605	F1H1H682A219	6800pF 50V	1	
	C2609	ECJ1VB1A334K	0.33uF 10V	1	
	C2610	F1H1A224A007	0.22uF 10V	1	
	C2611	ECJ1VB1A334K	0.33uF 10V	1	
	C2612	F1H1H562A219	5600pF 50V	1	
	C2617	ECJ1VB1A684K	0.68uF 10V	1	
	C2751	F1H1C105A097	1uF 16V	1	
	C2756	F1H1C105A097	1uF 16V	1	
	C2801	F1H1C105A097	1uF 16V	1	
	C2802	F2A0J102A016	1000uF 6.3V	1	
	C2804	ECA1AM331B	330uF 10V	1	
	C2805	F2A0J471A016	470uF 6.3V	1	
	C2806	F2A0J471A016	470uF 6.3V	1	
	C2807	F1H1H103A219	0.01uF 50V	1	
	C2808	F2A1A2210063	220uF 10V	1	
	C2809	F2A1H220A182	22uF 50V	1	
	C2810	F1H1H103A219	0.01uF 50V	1	
	C2811	F1H1H104A013	0.1uF 50V	1	
	C2812	F1H1H104A013	0.1uF 50V	1	
	C2817	F1H1C105A097	1uF 16V	1	
	C2818	F1H1C105A097	1uF 16V	1	
	C2823	F1H1H101A230	100pF 50V	1	
	C2825	F1H1H101A230	100pF 50V	1	
	C2826	F1H1H101A230	100pF 50V	1	
	C2827	F1H1H101A230	100pF 50V	1	
	C2842	F2A0J102A016	1000uF 6.3V	1	
	C2900	ECA1CM330B	33uF 16V	1	
	C2902	F1H1H562A219	5600pF 50V	1	
	C2903	F2A1V330A379	33uF 35V	1	
	C2905	F1H1H102A219	1000pF 50V	1	
	C2906	F2A1A101A206	100uF 10V	1	
	C2907	F1H1H102A219	1000pF 50V	1	
	C2908	F2A1C470A234	47uF 16V	1	
	C2909	F2A1C100A234	10uF 16V	1	
	C2910	F1H1C105A097	1uF 16V	1	
	C2911	F2A0J102A551	1000uF 6.3V	1	
	C2912	F2A1C101A155	100uF 16V	1	
	C2913	F1H1C105A097	1uF 16V	1	
	C2917	F2A0J101A181	100uF 6.3V	1	
	C2920	F1H1H103A219	0.01uF 50V	1	
	C2922	EEUFC0J821B	820uF 6.3V	1	
	C2922	F1H1H103A219	0.01uF 50V	1	
	C2923	F1H1H103A219	0.01uF 50V	1	
	C2923	F2A1E2210045	220uF 25V	1	
	C2924	F1H1H102A219	1000pF 50V	1	
	C2925	F1J0J106A020	10uF 6.3V	1	
	C2927	F1H1H103A219	0.01uF 50V	1	
	C2929	F1H1H103A219	0.01uF 50V	1	
	C2930	EEUFM1A681B	680uF 10V	1	
	C2932	F1H1H104A013	0.1uF 50V	1	
	C2939	F1H1H103A219	0.01uF 50V	1	
	C2941	F2A1C221A019	220uF 16V	1	
	C2949	F1H1H104A013	0.1uF 50V	1	
	C2951	F2A1C101A208	100uF 16V	1	
	C2955	F2A1E2210045	220uF 25V	1	
	C3901	EEE0GA331WP	330uF 4V	1	
	C3902	EEE0GA331WP	330uF 4V	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	C3904	EEE0GA331WP	330uF 4V	1	
	C3906	EEE0GA331WP	330uF 4V	1	
	C3907	F1G1A1040006	0.1uF 10V	1	
	C3908	F1G1A1040006	0.1uF 10V	1	
	C3909	F1H0J1050013	1uF 6.3V	1	
	C3910	F1G1A1040006	0.1uF 10V	1	
	C3911	F1H0J1050013	1uF 6.3V	1	
	C3913	F1G1A1040006	0.1uF 10V	1	
	C3914	F1G1A1040006	0.1uF 10V	1	
	C3915	F1H0J1050013	1uF 6.3V	1	
	C3916	F1G1A1040006	0.1uF 10V	1	
	C3917	F1H0J1050013	1uF 6.3V	1	
	C3918	F1G1A1040006	0.1uF 10V	1	
	C3919	F1H0J1050013	1uF 6.3V	1	
	C3920	F1H0J1050013	1uF 6.3V	1	
	C3921	F1G1A1040006	0.1uF 10V	1	
	C3922	F1G1A1040006	0.1uF 10V	1	
	C3923	F1H0J1050013	1uF 6.3V	1	
	C3924	F1H0J1050013	1uF 6.3V	1	
	C3925	F1G1A1040006	0.1uF 10V	1	
	C3926	F1G1A1040006	0.1uF 10V	1	
	C3927	F1H0J1050013	1uF 6.3V	1	
	C3928	F1G1A1040006	0.1uF 10V	1	
	C3929	F1G1A1040006	0.1uF 10V	1	
	C3930	F1H0J1050013	1uF 6.3V	1	
	C3932	F1H0J1050013	1uF 6.3V	1	
	C3940	F1G1A1040006	0.1uF 10V	1	
	C3941	F1G1H221A444	220pF 50V	1	
	C3954	F1G1C104A083	0.1uF 16V	1	
	C3955	F1G1C1030007	0.01uF 16V	1	
	C3956	F1H0J1050013	1uF 6.3V	1	
	C3964	F1G1A1040006	0.1uF 10V	1	
	C3965	F1G1H100A565	10pF 50V	1	
	C5101	F2A1H100A182	10uF 50V	1	
	C5102	F1H1C104A042	0.1uF 16V	1	
	C5104	ECJ1VC1H391J	390pF 50V	1	
	C5105	ECJ1VC1H391J	390pF 50V	1	
	C5106	F1H1C104A042	0.1uF 16V	1	
	C5108	ECA1CM220B	22uF 16V	1	
	C5112	F1H1C104A042	0.1uF 16V	1	
	C5124	F1H1C104A042	0.1uF 16V	1	
	C5201	F2A1H100A182	10uF 50V	1	
	C5202	F1H1C104A042	0.1uF 16V	1	
	C5204	ECJ1VC1H391J	390pF 50V	1	
	C5205	ECJ1VC1H391J	390pF 50V	1	
	C5206	F1H1C104A042	0.1uF 16V	1	
	C5208	ECA1CM220B	22uF 16V	1	
	C5224	F1H1C104A042	0.1uF 16V	1	
	C5301	F2A1H100A182	10uF 50V	1	
	C5302	F1H1C104A042	0.1uF 16V	1	
	C5304	ECJ1VC1H471J	470pF 50V	1	
	C5305	ECJ1VC1H391J	390pF 50V	1	
	C5306	F1H1C104A042	0.1uF 16V	1	
	C5314	F1H0J1050013	1uF 6.3V	1	
	C5315	F1H0J1050013	1uF 6.3V	1	
	C5324	F1H1C104A042	0.1uF 16V	1	
	C5401	F1H0J1050013	1uF 6.3V	1	
	C5402	F1H0J1050013	1uF 6.3V	1	
	C5403	F1H0J1050013	1uF 6.3V	1	
	C5404	F1H0J1050013	1uF 6.3V	1	
	C5405	F1H0J1050013	1uF 6.3V	1	
	C5406	F2A1H100A182	10uF 50V	1	
	C5503	ECA1VM102B	1000uF 35V	1	
	C5505	F1H1H471A219	470pF 50V	1	
⚠	C5700	F1BAF1020020	1000pF	1	
⚠	C5701	ECQU2A104MLC	0.1uF	1	
⚠	C5702	ECQU2A104MLC	0.1uF	1	
⚠	C5703	ECQU2A104MLC	0.1uF	1	
⚠	C5706	F1BAF1020020	1000pF	1	
⚠	C5707	F1BAF1020020	1000pF	1	
⚠	C5708	F1BAF1020020	1000pF	1	
	C5711	F2B2G1810011	180uF 400V	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	C5712	F2B2G1810011	180uF 400V	1	
	C5713	F0C2J1030005	0.01uF 630V	1	
	C5720	F1H1H102A219	1000pF 50V	1	
	C5721	ECJ1VB1H221K	220pF 50V	1	
	C5722	F1H1H222A219	2200pF 50V	1	
	C5723	F1H1H471A219	470pF 50V	1	
	C5725	F1H1H104A013	0.1uF 50V	1	
	C5726	F2A1H1000077	10uF 50V	1	
	C5727	F1H1H222A219	2200pF 50V	1	
	C5730	F1H1E105A116	1uF 25V	1	
	C5747	F1B3D561A011	560pF 2000V	1	
	C5790	F1H1H102A219	1000pF 50V	1	
	C5790	F1K2J2220002	2200pF 630V	1	
	C5791	F2A1C101A180	100uF 16V	1	
	C5792	F2A0J221A181	220uF 6.3V	1	
	C5794	ECA1CM330B	33uF 16V	1	
	C5795	ECJ2VC1H102J	1000pF 50V	1	
	C5795	F1H1C104A042	0.1uF 16V	1	
	C5796	ECA1HM2R2B	2.2uF 50V	1	
	C5796	F1J1H104A717	0.1uF 50V	1	
	C5797	F2A1H1R0A213	1.0uF 50V	1	
	C5798	F2A1H100A182	10uF 50V	1	
	C5798	F2A1H1010039	100uF 50V	1	
	C5799	F1H1C104A042	0.1uF 16V	1	
	C5799	F2B2G6R80001	6.8uF 400V	1	
	C5800	F1J2E1030004	0.01uF 250V	1	
	C5800	F2A1H100A182	10uF 50V	1	
	C5801	F2A1H100A182	10uF 50V	1	
	C5802	F2A1H100A182	10uF 50V	1	
	C5803	F1H1C104A042	0.1uF 16V	1	
	C5805	F1H1C104A042	0.1uF 16V	1	
	C5805	F2A1E3310051	330uF 25V	1	
	C5806	F1H1C104A042	0.1uF 16V	1	
	C5808	F2A1V1020084	1000uF 35V	1	
	C5810	F1H1H104A013	0.1uF 50V	1	
	C5812	F1H1H104A013	0.1uF 50V	1	
	C5815	F1H1H104A013	0.1uF 50V	1	
	C5818	F1H1H104A013	0.1uF 50V	1	
	C5820	F2A0J222A247	2200uF 6.3V	1	
	C5826	F1J2E1030004	0.01uF 250V	1	
	C5828	F2A0J471A247	470uF 6.3V	1	
	C5831	F1H1H104A013	0.1uF 50V	1	
	C5839	F1J2E1030004	0.01uF 250V	1	
	C5842	F1J2E1030004	0.01uF 250V	1	
	C5843	F1H1E105A116	1uF 25V	1	
	C5863	F1H1H104A013	0.1uF 50V	1	
	C5864	F1H1H104A013	0.1uF 50V	1	
	C5869	F1H1H103A219	0.01uF 50V	1	
	C5870	F1H1H103A219	0.01uF 50V	1	
	C5896	F1H1H104A013	0.1uF 50V	1	
	C5897	F1H1H104A013	0.1uF 50V	1	
	C5898	F1H1H104A013	0.1uF 50V	1	
	C5899	F2A1A2210063	220uF 10V	1	
	C6405	F1H1C105A097	1uF 16V	1	
	C6703	F1H1H104A013	0.1uF 50V	1	
	C6704	F1H1H104A013	0.1uF 50V	1	
	C6710	F1H1H103A219	0.01uF 50V	1	
	C6712	F1H1C105A097	1uF 16V	1	
	C6720	F1H1H103A219	0.01uF 50V	1	
	C6722	F1H1C105A097	1uF 16V	1	
	C6902	F1H1H101A720	100pF 50V	1	
	C6903	F2A1H100A214	10uF 50V	1	
	C6905	ECEA1HKS100I	10uF 50V	1	
	C6906	F1H1H101A720	100pF 50V	1	
	C6907	F1H1H101A720	100pF 50V	1	
	C6909	F1H1H103A219	0.01uF 50V	1	
	C6910	ECEA0JKS101I	100uF 6.3V	1	
	C6911	F1H1H103A219	0.01uF 50V	1	
	C6913	ECEA1HKS3R3B	3.3uF 50V	1	
	C6916	F1H1H101A720	100pF 50V	1	
	C6917	F1H1H101A720	100pF 50V	1	
	C6918	F1K1C106A062	10uF 16V	1	
	C6919	F1H1H101A720	100pF 50V	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	C6925	F1H1H103A219	0.01uF 50V	1	
	C6931	F1H1H103A219	0.01uF 50V	1	
	C6933	F1H1H104A013	0.1uF 50V	1	
	C7003	F1H1C105A097	1uF 16V	1	
	C7004	F1H1C153A001	0.015uF 16V	1	
	C7005	F1H1H470A004	47pF 50V	1	
	C7006	F1H1H101A720	100pF 50V	1	
	C7007	F1H1H104A013	0.1uF 50V	1	
	C7009	ECJ1VC1H151J	150pF 50V	1	
	C7010	F1H1H470A004	47pF 50V	1	
	C7011	F1H1H104A013	0.1uF 50V	1	
	C7012	F1H1A105A025	1uF 10V	1	
	C7013	F1H1H103A219	0.01uF 50V	1	
	C7014	ECJ1VB1C474K	0.47uF 16V	1	
	C7015	F1H1C105A097	1uF 16V	1	
	C7018	F1H1H104A013	0.1uF 50V	1	
	C7019	F1H1H104A013	0.1uF 50V	1	
	C7020	F1H1H104A013	0.1uF 50V	1	
	C7021	F1H1H101A720	100pF 50V	1	
	C7022	F1H1H101A720	100pF 50V	1	
	C7023	F1H1H101A720	100pF 50V	1	
	C7024	F1H1H101A720	100pF 50V	1	
	C7025	F1H1H101A720	100pF 50V	1	
	C7026	F1H1H101A720	100pF 50V	1	
	C7027	F1H1H101A720	100pF 50V	1	
	C7028	F1H1H101A720	100pF 50V	1	
	C7029	F1H1H101A720	100pF 50V	1	
	C7030	F1H1H101A720	100pF 50V	1	
	C7031	F1H1H101A720	100pF 50V	1	
	C7032	F1H1H101A720	100pF 50V	1	
	C7101	F1H1C105A097	1uF 16V	1	
	C7101	F1H1H104A013	0.1uF 50V	1	
	C7102	F1H1H104A013	0.1uF 50V	1	
	C7102	F1H1H392A013	3900pF 50V	1	
	C7103	F1H1H101A720	100pF 50V	1	
	C7103	F1H1H561A013	560pF 50V	1	
	C7104	ECJ1VB1C823K	0.082uF 16V	1	
	C7104	F1H1H101A720	100pF 50V	1	
	C7105	F1H1H104A013	0.1uF 50V	1	
	C7106	F1H1H104A013	0.1uF 50V	1	
	C7107	F1H1H332A013	3300pF 50V	1	
	C7108	F1H1H561A013	560pF 50V	1	
	C7109	ECJ1VB1C823K	0.082uF 16V	1	
	C7110	F2A1C470A016	47uF 16V	1	
	C7111	F2A1C470A016	47uF 16V	1	
	C7112	F1H1H104A013	0.1uF 50V	1	
	C7113	F1H1C105A097	1uF 16V	1	
	C7114	F1H1H103A219	0.01uF 50V	1	
	C7115	F1H1C104A042	0.1uF 16V	1	
	C7116	F1H1H562A219	5600pF 50V	1	
	C7117	F1H1C105A097	1uF 16V	1	
	C7118	F1H1H103A219	0.01uF 50V	1	
	C7119	F1H1H103A219	0.01uF 50V	1	
	C8001	EEE0GA331WP	330uF 4V	1	
	C8002	F2G0J330A031	33uF 6.3V	1	
	C8003	F1G1C104A083	0.1uF 16V	1	
	C8004	F1G1C104A083	0.1uF 16V	1	
	C8005	F1G1C104A083	0.1uF 16V	1	
	C8006	F1G1C104A083	0.1uF 16V	1	
	C8007	F1G1C104A083	0.1uF 16V	1	
	C8010	F1G1H221A444	220pF 50V	1	
	C8011	F2G0J101A031	100uF 6.3V	1	
	C8012	F1G1C104A083	0.1uF 16V	1	
	C8013	F1G1C104A083	0.1uF 16V	1	
	C8014	F1G1C104A083	0.1uF 16V	1	
	C8015	F1G1C104A083	0.1uF 16V	1	
	C8016	F1G1C104A083	0.1uF 16V	1	
	C8018	F1G1C104A083	0.1uF 16V	1	
	C8020	F1G1C104A083	0.1uF 16V	1	
	C8021	F1G1C104A083	0.1uF 16V	1	
	C8022	F1G1C104A083	0.1uF 16V	1	
	C8023	F1G1C104A083	0.1uF 16V	1	
	C8024	F1G1C104A083	0.1uF 16V	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	C8026	F1G1C104A083	0.1uF 16V	1	
	C8051	F1H0J1050013	1uF 6.3V	1	
	C8052	F1G1A1040006	0.1uF 10V	1	
	C8053	F1G1C104A083	0.1uF 16V	1	
	C8054	F1G1H221A444	220pF 50V	1	
	C8055	F1H0J1050013	1uF 6.3V	1	
	C8056	F1G1E2220001	2200pF 25V	1	
	C8057	F1H0J1050013	1uF 6.3V	1	
	C8111	F1J1A106A043	10uF 10V	1	
	C8112	F1H0J1050013	1uF 6.3V	1	
	C8113	F1G1C153A039	0.015uF 16V	1	
	C8151	F1H0J4750005	4.7uF 6.3V	1	
	C8201	F2G0J101A031	100uF 6.3V	1	
	C8202	F1G1A1040006	0.1uF 10V	1	
	C8211	F1G1E1220001	1200pF 25V	1	
	C8221	F1G1E1020001	1000pF 25V	1	
	C8222	F1G1E8210002	820pF 25V	1	
	C8225	F1G1E1020001	1000pF 25V	1	
	C8226	F1G1E1020001	1000pF 25V	1	
	C8231	F1G1A1040006	0.1uF 10V	1	
	C8232	F1G1A1040006	0.1uF 10V	1	
	C8251	F2G0J221A031	220uF 6.3V	1	
	C8252	F1G1C104A083	0.1uF 16V	1	
	C8255	F2G1C220A037	22uF 16V	1	
	C8256	F1G1C104A083	0.1uF 16V	1	
	C8257	F2G1C470A076	47uF 16V	1	
	C8258	F1G1C104A083	0.1uF 16V	1	
	C8261	F1G1C104A083	0.1uF 16V	1	
	C8262	F1G1C104A083	0.1uF 16V	1	
	C8263	F2G0J1020022	1000uF 6.3V	1	
	C8301	F2G0J221A031	220uF 6.3V	1	
	C8302	F2G0J330A031	33uF 6.3V	1	
	C8303	F1G1A1040006	0.1uF 10V	1	
	C8304	F1G1A1040006	0.1uF 10V	1	
	C8305	F1G1A1040006	0.1uF 10V	1	
	C8311	F1G1A1040006	0.1uF 10V	1	
	C8312	F1H0J1050013	1uF 6.3V	1	
	C8313	F1H0J1050013	1uF 6.3V	1	
	C8321	F1G1A1040006	0.1uF 10V	1	
	C8325	F1G1A1040006	0.1uF 10V	1	
	C8330	F2G0J470A031	47uF 6.3V	1	
	C8331	F1G1A1040006	0.1uF 10V	1	
	C8335	F1G1A1040006	0.1uF 10V	1	
	C8341	F1G1A1040006	0.1uF 10V	1	
	C8401	F1G1H150A565	15pF 50V	1	
	C8421	F2G0J221A031	220uF 6.3V	1	
	C8422	F1G1C104A083	0.1uF 16V	1	
	C8423	F2G0J330A031	33uF 6.3V	1	
	C8424	F1G1C104A083	0.1uF 16V	1	
	C8425	F1G1H150A565	15pF 50V	1	
	C8426	F1G1C104A083	0.1uF 16V	1	
	C8429	F1G1C104A083	0.1uF 16V	1	
	C8431	F2G1C100A072	10uF 16V	1	
	C8432	F1J1A106A043	10uF 10V	1	
	C8433	F1J1A106A043	10uF 10V	1	
	C8501	F2G0J101A031	100uF 6.3V	1	
	C8502	F1G1C104A083	0.1uF 16V	1	
	C8503	F1G1C104A083	0.1uF 16V	1	
	C8504	F1G1C104A083	0.1uF 16V	1	
	C8505	F1G1C104A083	0.1uF 16V	1	
	C8506	F1G1C104A083	0.1uF 16V	1	
	C8511	F1H0J1050013	1uF 6.3V	1	
	C8512	F1H0J1050013	1uF 6.3V	1	
	C8513	F1G1A1040006	0.1uF 10V	1	
	C8514	F1G1A1040006	0.1uF 10V	1	
	C8515	F1G1A1040006	0.1uF 10V	1	
	C8516	F1G1A1040006	0.1uF 10V	1	
	C8521	F1G1A1040006	0.1uF 10V	1	
	C8522	F1G1A1040006	0.1uF 10V	1	
	C8523	F1G1C104A083	0.1uF 16V	1	
	C8524	F1G1C104A083	0.1uF 16V	1	
	C8525	F1G1C562A039	5600pF 16V	1	
	C8526	F1G1C183A039	0.018uF 16V	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	C8527	F1G1A333A013	0.033uF 10V	1	
	C8528	F1H0J1050013	1uF 6.3V	1	
	C8529	F1H0J1050013	1uF 6.3V	1	
	C8530	F1G1C104A083	0.1uF 16V	1	
	C8531	F1G1H101A566	100pF 50V	1	
	C8532	F1G1H221A444	220pF 50V	1	
	C8533	F1G1C104A083	0.1uF 16V	1	
	C8541	F1G1E4720002	4700pF 25V	1	
	C8550	F2G0J330A031	33uF 6.3V	1	
	C8551	F1G1C104A083	0.1uF 16V	1	
	C8552	F2G1C100A072	10uF 16V	1	
	C8553	F2G0J470A031	47uF 6.3V	1	
	C8554	F1H0J1050013	1uF 6.3V	1	
	C8561	F1G1C104A083	0.1uF 16V	1	
	C8562	F2G1C100A072	10uF 16V	1	
	C8563	F2G0J470A031	47uF 6.3V	1	
	C8564	F1H0J1050013	1uF 6.3V	1	
	C8571	F1J1A106A043	10uF 10V	1	
	C8572	F1G1C104A083	0.1uF 16V	1	
	C8601	F1G1C104A083	0.1uF 16V	1	
	C8602	F1G1C153A039	0.015uF 16V	1	
	C8606	F1G1C104A083	0.1uF 16V	1	
	C8611	F1G1C104A083	0.1uF 16V	1	
	C8621	F1G1H100A565	10pF 50V	1	
	C8622	F1G1H100A565	10pF 50V	1	
	C8651	F1G1C104A083	0.1uF 16V	1	
	C8652	F1G1C104A083	0.1uF 16V	1	
	C8691	F1G1C104A083	0.1uF 16V	1	
	C8695	F1G1C104A083	0.1uF 16V	1	
	C8701	F1G1A1040006	0.1uF 10V	1	
	C8901	F1G1C104A083	0.1uF 16V	1	
	C9002	F1G1C104A083	0.1uF 16V	1	
	C9003	F1G1C104A083	0.1uF 16V	1	
	C9004	F1G1H100A565	10pF 50V	1	
	C9005	F1G1H120A565	12pF 50V	1	
	C9006	F1G1A1040006	0.1uF 10V	1	
	C9007	F1G1C104A083	0.1uF 16V	1	
	C9008	F1G1H221A444	220pF 50V	1	
	C9009	F1G1H100A565	10pF 50V	1	
	FL8101	F1H0J1050018	1uF 6.3V	1	
	FL8102	F1H0J1050018	1uF 6.3V	1	
	FL8103	F1H0J1050018	1uF 6.3V	1	
	FL8104	F1J1E1040022	0.1uF 25V	1	
	FL8421	F1H0J1050018	1uF 6.3V	1	