

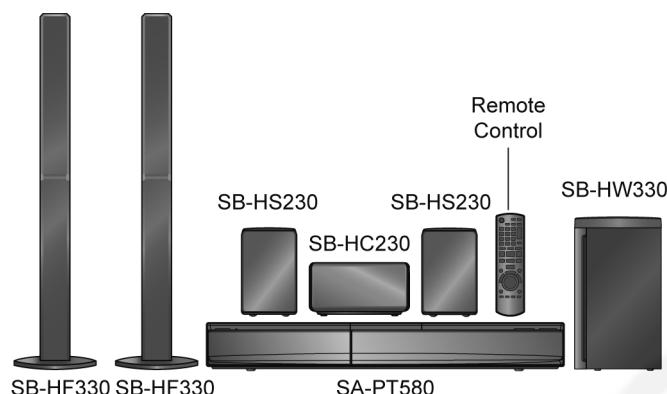
Service Manual

DVD Home Theater Sound System



Model No. **SA-PT580EB**
SA-PT580EG
SA-PT580EP

Product Color: (K)...Black Type
 (S)...Silver Type (EG/EP)



Note: Please refer to the original service manual for:

- DVD Mechanism Unit (DLS6E), Order No. PSG0909002AE
- Speaker system SB-BT330P-K/S, Order No. PSG1001008CE

⚠ 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.

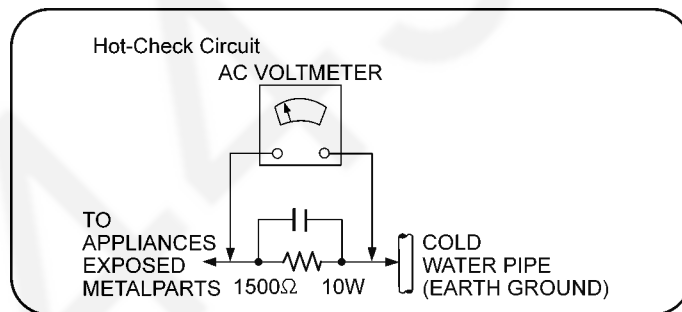


Figure 1

1.2. Before Repair and Adjustment

Disconnect AC power to discharge unit AC Capacitors as such (C5700, C5701, C5702, C5703, C5704, C5705, C5706) 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 230 - 240 V, 50 Hz in NO SIGNAL mode at volume minimal should be ~ 500 mA (EB only). Current consumption at AC 230 V, 50 Hz in NO SIGNAL mode at volume minimal should be ~ 500 mA (EG/EP only).

1.2.1. Caution for fuse replacement

CAUTION:

- i) Replace with the same type fuse:
(Manufacturer: LITTELFUSE, INC., Type: 215, F1, T4AH, 250V)

1.3. Protection Circuitry

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

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

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

If this occurs, follow the procedure outlines below:

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

Note:

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

1.4. Safety Parts Information

Safety Parts List:

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

These parts are marked by  in the Schematic Diagrams, 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
	7	REXX1030	1P BLACK WIRE (AC-SMPS)	
	8	REXX1031	1P RED WIRE (AC-SMPS)	
	20	RGRX1001B-C1	REAR PANEL	
	29	RXQX1029-K2	TOP CABINET ASS'Y	EB/EG/EP-K
	29	RXQX1029-S1	TOP CABINET ASSEMBLY	EG/EP-S
	401	RAEX1022Z-V	TRAVERSE UNIT	
	A2	K2CQ2CA00007	AC CORD	EG/EP-S
	A2	K2CZ3YY00005	AC CORD	EB-K
	A3	RQTX1108-D	O/I BOOK (Ge/Fr/iT)	EG-K
	A3	RQTX1109-H	O/I BOOK (Du/Sw/Da/Sp)	EG-K
	A3	RQTX1111-R	O/I BOOK (En)	EP-K
	A3	RQTX1112-B	O/I BOOK (En/Cz/Po/Hu)	EB-K
	PCB8	REPX0803A	SMPS P.C.B.	(RTL)
	PCB9	REPX0803A	AC INLET P.C.B.	(RTL)
	DZ5701	ERZV10V511CS	ZNR	
	L5702	ELF21N015A	LINE FILTER	
	L5703	ELF21N015A	LINE FILTER	
	T5701	ETS42BM1H6AC	TRANSFORMER	
	T5751	ETS19AB2A6AG	SUB TRANSFORMER	
	T6100	G4D1A0000142	SWITCHING TRANSFORMER	
	PC5702	B3PBA0000402	PHOTO COUPLER	
	PC5720	B3PBA0000402	PHOTO COUPLER	
	PC5799	B3PBA0000402	PHOTO COUPLER	
	F1	K5D402BNA005	FUSE	
	RY701	K6B1AEA00003	RELAY	
	TH5702	D4CAA5R10001	THERMISTOR	
	P5701	K2AA2B000011	AC INLET	
	C5700	F1BAF1020020	1000pF	
	C5701	F0CAF104A105	0.1uF	
	C5702	F0CAF104A105	0.1uF	
	C5703	F0CAF104A105	0.1uF	
	C5705	F1BAF1020020	1000pF	
	C5706	F1BAF471A013	470pF	

1.5. Caution for AC Cord (For EB 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

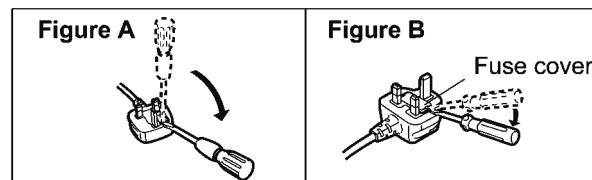
Remove the connector cover.

How to replace the fuse

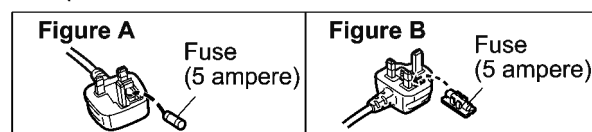
The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.

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)/790 nm (CD)

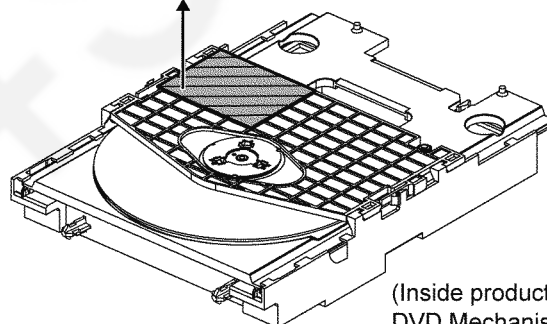
Maximum output radiation power from pickup: 100 μ W/VDE

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.



(Side of product)



(Inside product on
DVD Mechanism Unit (DLS6E))

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%

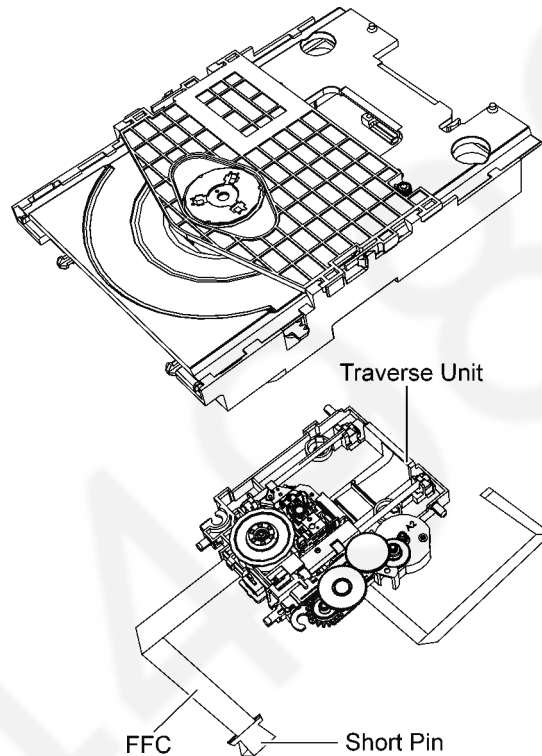
2.4. Handling Precautions for Traverse Unit

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

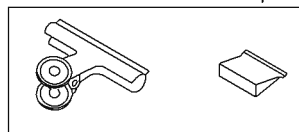
The laser diode in the optical pickup unit may be damaged due to electrostatic discharge generating from clothes or human body. Special care must be taken avoid caution to electrostatic discharge damage when servicing the laser diode.

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.



[Caution]

Ground the cable with a clip or a short pin.



Clip or Short Pin

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.

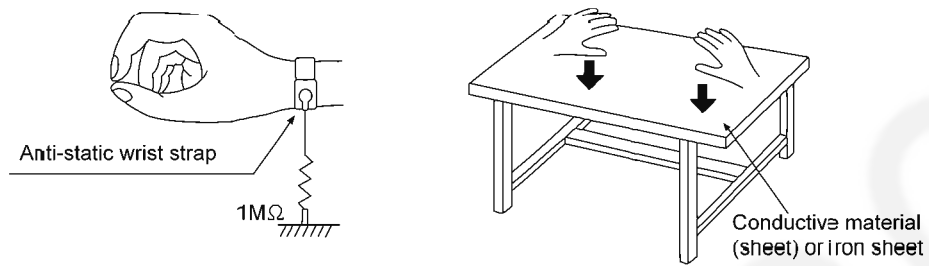


Figure 2

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 (DLS6E):**

1) This model uses DVD Mechanism Unit (DLS6E).

- **Micro-processor:**

1) The following components are supplied as an assembled part.

- Micro-processor IC, IC2300 (RFKWMPT480EB)

4 Specifications

Main unit SA-PT580EB/EG/EP

●GENERAL

Power supply: AC 220 V to 240 V, 50 Hz
Power consumption: 95 W
Power consumption in standby mode: approx. 0.38 W

Dimensions (W×H×D): 430 mm×54 mm×287 mm
Mass [Weight]: 2.8 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: 125 W per channel (3 Ω), 1 kHz, 10% THD
Surround Ch: 125 W per channel (3 Ω), 1 kHz, 10% THD
Center Ch: 250 W per channel (6 Ω), 1 kHz, 10% THD
Subwoofer Ch: 250 W per channel (6 Ω), 100 Hz, 10% THD
Total RMS Dolby Digital mode power: 1000 W

DIN Output Power: Dolby Digital Mode

Front Ch: 90 W per channel (3 Ω), 1 kHz, 1 % THD
Surround Ch: 90 W per channel (3 Ω), 1 kHz, 1 % THD
Center Ch: 115 W per channel (6 Ω), 1 kHz, 1 % THD
Subwoofer Ch: 115 W per channel (6 Ω), 100 Hz, 1 % THD
Total DIN Dolby Digital mode power: 590 W

●FM TUNER, TERMINALS SECTION

Preset Memory: FM 30 stations

Frequency Modulation (FM)

Frequency range: 87.0 MHz-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 (*.mp3)
JPEG(*.jpg,*.jpeg)
DivX(*.divx,*.avi)
MPEG4 (*.asf)

USB device file system

FAT 12, FAT16, FAT32

USB Port power

Max. 500 mA

Bit rate

Up to 4 Mbps (DivX)

●DISC SECTION

Discs played (8 cm or 12 cm):

(1) DVD (DVD-Video, DivX^{*5,6})

- (2) DVD-R (DVD-Video, DVD-VR, MP3^{*2, 5}, JPEG^{*4, 5}, MPEG4^{*5, 7}, Div X^{*5,6})
(3) DVD-R DL (DVD-Video, DVD-VR, DivX^{*5,6})
(4) DVD-RW (DVD-Video, DVD-VR, MP3^{*2, 5}, JPEG^{*4, 5}, MPEG4^{*5, 7}, DivX^{*5,6})
(5) +R/+RW (Video)
(6) +R DL (Video)
(7) 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 and picture contents and groups: 4000 audio and picture contents and 255 groups. (Excluding Root Folder)
^{*6} Plays DivX video.
^{*7} MPEG data recorded with Panasonic SD multi cameras or DVD video recorders
Conforming to SD VIDEO specification (ASF standard)/MPEG4(Simple Profile)video system/G.726 audio system .

Pick up

Wavelength (DVD/CD): 655/790 nm
Laser power: 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: SCART jack (1 system)

S-video output

Y output level 1 Vp-p(75Ω)
C output level PAL; 0.3 Vp-p(75Ω)
NTSC; 0.286 Vp-p (75Ω)
Terminal SCART jack (1 system)

RGB video output

R output level 0.7Vp-p(75 Ω)
G output level 0.7 Vp-p(75 Ω)
B output level 0.7Vp-p (75 Ω)
Terminal SCART jack (1 system)

HDMI AV output

Terminal 19-pin type A connector

HDAVI Control:

This unit supports "HDAVI Control 5" function.

Note:

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

Solder:

This model uses lead free solder (PbF).

System	SC-PT580EB/EG/EP-K	SC-PT580EG/EP-S
Main unit	SA-PT580EB/EG/EP-K	SA-PT580EG/EP-S
Speakers system	SB-BT330P-K ^{*1}	SB-BT330P-S ^{*1}

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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"Made for iPod" means that an electronic accessory has been designed to connect specifically to iPod and has been certified by the developer to meet Apple performance standards.

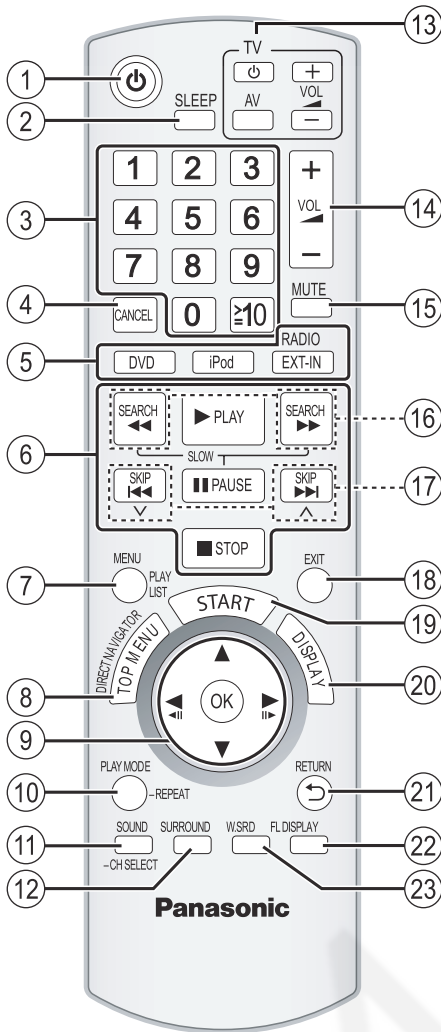
"Works with iPhone" means that an electronic accessory has been designed to connect specifically to iPhone and has been certified by the developer to meet Apple performance standards.

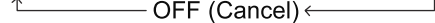
Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards. iPod is a trademark of Apple Inc., registered in the U.S. and other countries.

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5 Location of Controls and Components

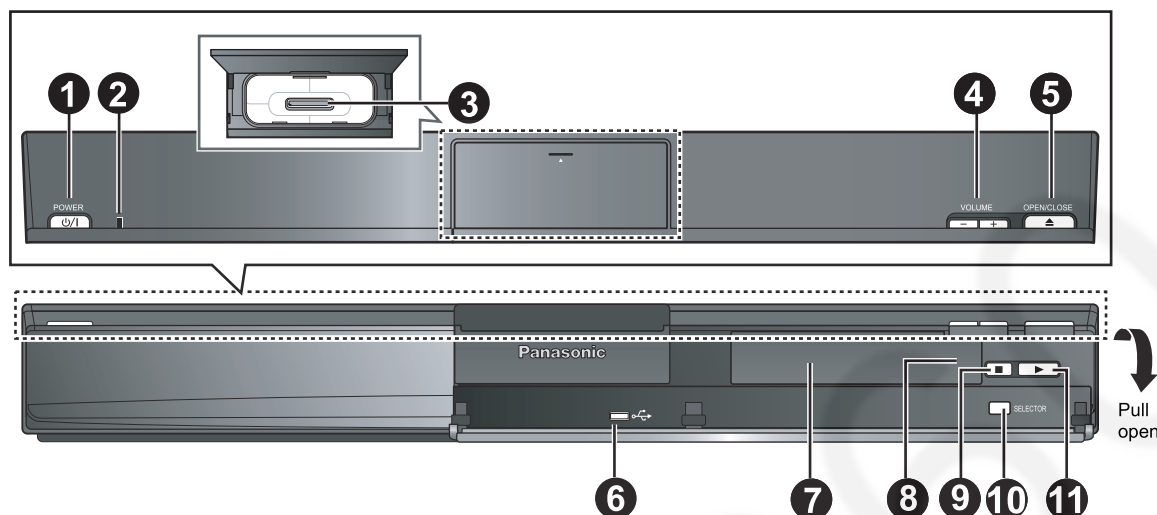
5.1. Remote Control Key Button Operations



- (1) Turn the main unit on/off
- (2) **Set the Sleep timer**
Press [SLEEP].
SLEEP 30→SLEEP 60→SLEEP 90→SLEEP120

• To confirm the remaining time, press the button again.
- (3) Select channels and title numbers etc. / Enter numbers
- (4) Cancel
- (5) **Source select**
[DVD]: Select disc as the source
[iPod]: Select iPod/iPhone as the source
[RADIO, EXT-IN]: Select the FM tuner or the external audio source.
FM → AUX → ARC → D-IN→USB

- (6) Basic operations for play
- (7) Show a disc menu or play list
- (8) Show a disc top menu or program list
- (9) Select or confirm menu items / Frame-by-frame
- (10) Select the play mode / Set the repeat mode
- (11) Select sound mode / Select speaker channel
- (12) Select surround sound effects
- (13) **TV operations**
Aim the remote control at the Panasonic TV and press the button.
[⏻]: Turn the TV on/off
[AV]: Change the TV's video input mode
[+, VOL, -]: 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) Select radio stations manually
- (17) Select preset radio stations
- (18) Exit the display
- (19) Show **START** menu
- (20) Display RDS text data.Show on screen manu.
- (21) Return to previous screen
- (22) Switch information on the main unit's display
- (23) Turn Whisper-mode Surround on/off

5.2. Main Unit Key Button Operations



- 1 Standby/on switch (POWER $\odot$ / I)**
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 Power indicator**
The indicator lights when this unit is turn on
- 3 Connect iPod/iPhone**
- 4 Adjust the volume of the this unit**
- 5 Open/Close the disc tray**
- 6 Connect USB Device**
- 7 Display "SRD" lights when sound is output to the serround speakers.**
- 8 Remote control signal sensor**
- 9 Stop playing**
- 10 Select the source**
DVD/CD → USB → FM → AUX → AV → ARC → D-IN → IPOD
- 11 Play disc**

5.3. Speaker Connection

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

Main unit (rear)

Connect to the terminals of the same color.

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

Speakers (rear)

Insert the wire fully, taking care not to insert beyond the wire insulation.

+: White
-: Blue line

- Be careful not to cross (short circuit) or reverse the polarity of the speaker wires as doing so may damage the speakers.

5.4. Using the VIERA Link “HDAVI Control™”

What is 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 5” function. “HDAVI Control 5” is the newest standard (current as of December, 2009) 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: Easy control only with VIERA 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 “AV”, “AUX”, “ARC” or “D-IN” to work with the linked operations.

Refer to TV audio setting in EASY SETUP or “TV AUDIO” in HDMI menu.

Confirm the audio connection to the SCART (AV) terminal (for “AV”), AUX terminal (for “AUX”), HDMI AV OUT terminal (for “ARC”) or DIGITAL AUDIO IN OPTICAL terminal (for “D-IN”)

Setting the STB audio for VIERA Link “HDAVI Control”

Select “D-IN” to work with the linked operations.

Refer to STB setting in “Making settings for digital audio input”.

Confirm the audio connection to the DIGITAL AUDIO IN OPTICAL terminal (for “D-IN”)

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

- | | |
|----|---|
| ※1 | “AV”, “AUX”, “ARC” or “D-IN” (DIGITAL IN) works depending on the TV audio setting (⇒ above, Setting the TV audio for VIERA Link “HDAVI Control”). |
| ※2 | “D-IN” (DIGITAL IN) works depending on the STB audio setting (⇒ above, Setting the STB audio for VIERA Link “HDAVI Control”). |

What you can do with “HDAVI Control”

Auto lip sync

(Available When using VIERA Link “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”, “AV”^{*1}, “AUX”^{*1}, “ARC”^{*1} or “D-IN”^{*1,2}.)

- 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.

(Remote control only)

During standby mode, press [1▶PLAY] Ⓞ to 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 [SKIP: ⏮] Ⓞ or [SEARCH6 ⏮] Ⓞ to go back to where playback started.

Auto input switching (Power on link)

When the following operations are performed, the TV will automatically switch the input channel and display the corresponding action. Additionally when the TV is off, the TV will automatically turn on.

– When play starts on the unit

– When an action that uses the display screen is performed (e.g., START menu)

- When you switch the TV input to TV tuner mode or the STB input channel, this unit will automatically switch to “AV”^{*1}, “AUX”^{*1}, “ARC”^{*1} or “D-IN”^{*1,2}.

(For “IPOD” mode, this works only in iPod/iPhone music mode, or when iPod/iPhone is not connected.)

- When this unit is in “DVD/CD” mode, the TV will automatically switch its input mode for this unit.

- The TV will automatically switch to TV tuner mode when:

– you press [EXIT].^{*3,4}

– you press [RETURN] to exit the START menu.^{*3,4}

– you select “AV”^{*1}, “AUX”^{*1}, “ARC”^{*1} or “DIGITAL IN”^{*1} from the START menu.

– playback stops (DVD-V [VCD]) or when this unit turns off.^{*4}

- ※3 This does not work during playback or resume mode when “DVD/CD” or “USB” is selected as the source. (For “IPOD” mode, this works only in iPod/iPhone music mode, or when iPod/iPhone is not connected.)

- ※4 Only after the TV automatically switched to the HDMI input mode for this unit.

Power off link

All connected equipment compatible with “HDAVI Control”, including this unit, automatically turn off when you switch the TV off.

To continue audio playback even when the TV is turned off, select “VIDEO”.

Note

When you press [⏻] Ⓞ, only this unit turns off. Other connected equipment compatible with VIERA Link “HDAVI Control” stays on.

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

Speaker Selection

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 for your TV.

Home Cinema

This unit's speakers are active.

- When you turn on this unit, this unit's speakers will be automatically activated.
- 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 "AV" *1, "AUX" *1, "ARC" *1 or "D-IN" *1.2 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 this 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.

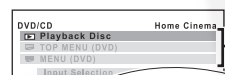
- The volume of this unit is set to "0".
 - This function works only when "DVD/CD", "USB", "AV" *1, "AUX" *1, "ARC" *1 or "D-IN" *1.2 is selected as the source on this unit.
- Audio output is 2-channel audio.

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

Easy control only with VIERA remote control (for "HDAVI Control 2 or later")

You can control the playback menus of this unit with the TV's remote control.

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

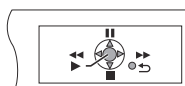


- The START menu can also be shown by using a button on the TV's remote control (e.g. **OPTION**).
 - When "DVD/CD" or "USB" is selected as the source, the TV's remote control works only during stop mode.
 - This does not work while iPod music playback screen is displayed on the TV.

- 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.

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.

5.5. Using of iPod/iPhone

Operating other devices

You can play an external device through your home theater system.

Using the iPod/iPhone

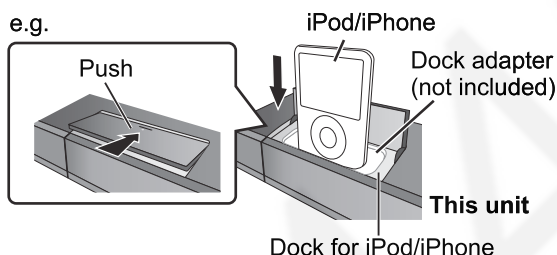
You can enjoy iPod/iPhone music through this unit's speakers or view iPod/iPhone videos/photos on the TV.

Preparation

- To view photos/videos from the iPod/iPhone
 - Ensure the video connection to the SCART (AV) terminal on this unit and select "VIDEO" from "VIDEO OUT – SCART" in VIDEO menu (⇒ 20).
 - Operate the iPod/iPhone menu to make the appropriate photo/video output settings for your TV. (Refer to operating instructions for your iPod/iPhone.)
- To display the picture, turn on the TV and select the appropriate video input mode.
- Before connecting/disconnecting the iPod/iPhone, turn this unit off or reduce the volume of this unit to its minimum.

1 Push Δ to open the Dock for iPod/iPhone lid.

2 Connect the iPod/iPhone (not included) firmly.
Attach the dock adapter which should be supplied with your iPod/iPhone to the dock for the stable use of the iPod/iPhone.
If you need an adapter, consult your iPod/iPhone dealer.



3 Press [iPod] ⑤ to select "IPOD".

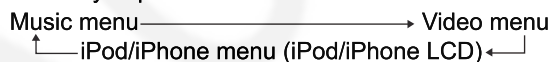
The iPod/iPhone automatically switches to this unit's display mode.

e.g.



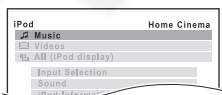
4 Press [FUNCTIONS] ② to select the menu.

Each time you press the button:



When using the START menu in "IPOD" mode

e.g.



Music: Shows the music menu.

Videos: Shows the video menu.

All (iPod display): Switches to iPod/iPhone menu.

iPod Information: Display iPod/iPhone details.

Enjoying music/videos

1 Press [FUNCTIONS] ② to select music or video menu on the TV.

2 Press [Δ , ∇] ⑨ to select an item and press [OK] ⑨.

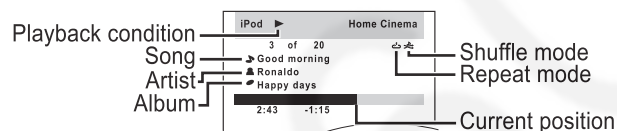
Press [$\leftarrow$, $\rightarrow$] ⑨ to skip page by page.

To return to the previous screen, press

[RETURN] ②.

Play starts from the selected song or video.

e.g. music playback screen



※ These icons will only appear for music mode.

: Song shuffle

: Repeat 1 song

: Album shuffle

: Repeat all

Basic controls (For music and videos only)

Button	Function
[1▶PLAY] ⑥	Play
[■STOP] ⑥, [PAUSE] ⑥	Pause
[SKIP: ◀◀, SKIP ▶▶] ⑥	Skip
(press and hold) [SKIP: ◀◀, SKIP ▶▶] ⑥	Search

Other methods of playback

Shuffle mode (For music playback only)

Press [PLAY MODE]: ⑩ several times.

SONGS, ALBUMS, OFF

Repeat mode

Press and hold [–REPEAT]: ⑩ and then press the button several times within a few seconds.

During the music/video playback: ONE, ALL, OFF

Note

- Music playback modes set on the iPod/iPhone will be maintained when connected to this unit. Changes made while the iPod/iPhone is connected to this unit will be kept on the iPod/iPhone after disconnecting it.
- If the video menu is accessed, the video shuffle playback mode on the iPod/iPhone is set to off when the iPod/iPhone is disconnected from the unit.

5.6. Disc Information

5.6.1. Disc Playability (Media)

Commercial discs

Type of media/Logo	Remarks	Indicated as
DVD-Video  	High quality movie and music discs	DVD-V
Video CD  	Music discs with video Including SVCD (Conforming to IEC62107)	VCD
CD 	Music discs	CD

Recorded discs

Type of media/Logo	Formats	Indicated as
DVD-R/RW  	- DVD-Video Format - Version 1.1 of the DVD Video Recording Format - MP3 format - JPEG format - DivX® format - MPEG4 format	DVD-V DVD-VR MP3 JPEG DivX MPEG4
DVD-R DL 	- DVD-Video Format - Version 1.2 of the DVD Video Recording Format - DivX® format	DVD-V DVD-VR DivX
+ R/+ RW/ + R DL	+VR (+R/+RW Video Recording) Format	DVD-V
CD-R/RW	- MP3 format - JPEG format - WMA format - DivX® format - MPEG4 format	MP3 JPEG WMA DivX MPEG4

- Before playback, finalise the disc on the device it was recorded on.
- 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 (⇒ right, Tips for making data discs).

Note about using a DualDisc

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

Discs that cannot be played

Blu-ray, HD DVD, AVCHD discs, DVD-RW version 1.0, DVD-Audio, DVD-ROM, CD-ROM, CDV, CD-G, SACD, Photo CD, DVD-RAM, 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.

Disc handling precautions

- Do not attach labels or stickers to discs. This may cause disc warping, rendering it unusable.
- Do not write on the label side with a ball-point pen or other writing instrument.
- Do not use record cleaning sprays, benzine, thinner, liquids which prevent static electricity, or any other solvent.
- Do not use scratch-proof protectors or covers.
- Do not use the following discs:
 - Discs with exposed adhesive from removed stickers or labels (rented discs, etc.).
 - Discs that are badly warped or cracked.
 - Irregularly shaped discs, such as heart shapes.

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

WMA (Extension: “.WMA”, “.wma”) Disc: CD-R/RW Compatible compression rate: between 48 kbps and 320 kbps You cannot play WMA files that are copy-protected.
MP3 (Extension: “.MP3”, “.mp3”) Disc: DVD-R/RW, CD-R/RW This unit does not support ID3 tags. Sampling frequency and compression rate: –DVD-R/RW: 11.02 kHz, 12 kHz, 22.05 kHz, 24 kHz (8 kbps to 160 kbps), 44.1 kHz and 48 kHz (32 kbps to 320 kbps) –CD-R/RW: 8 kHz, 11.02 kHz, 12 kHz, 16 kHz, 22.05 kHz, 24 kHz (8 kbps to 160 kbps), 32 kHz, 44.1 kHz and 48 kHz (32 kbps to 320 kbps)
JPEG (Extension: “.JPG”, “.jpg”, “.JPEG”, “.jpeg”) Disc: DVD-R/RW, CD-R/RW 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 (Extension: “.ASF”, “.asf”) Disc: DVD-R/RW, CD-R/RW The recording date may differ from that of the actual date.
DivX (Extension: “.DIVX”, “.divx”, “.AVI”, “.avi”) Disc: DVD-R/R DL/RW, CD-R/RW –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 720k 480 (NTSC)/720k 576 (PAL). –You can select up to 8 types of audio and subtitles on this unit.

6 Self-Diagnosis and Special Mode Setting

6.1. Cold-Start

Here is the procedure to carry out cold-start for initialize to shipping mode.

1. Unplug AC power cord
2. Press & hold [POWER] button
3. Plug AC power cord while [POWER] button being pressed
FL Display will show “_ _ _ _ _ _ _ _”
4. Release [POWER] button

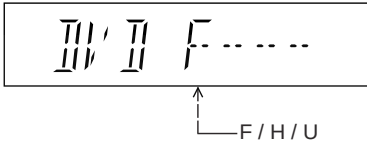
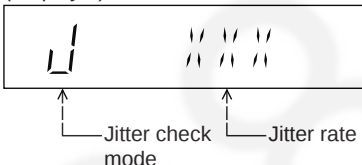
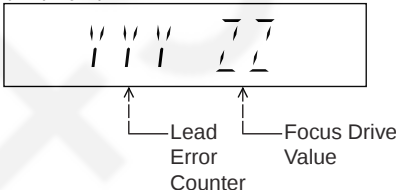
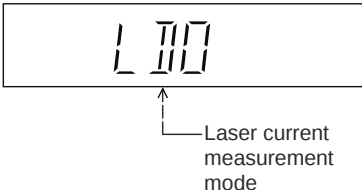
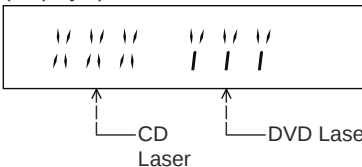
6.2. Service Mode Table

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

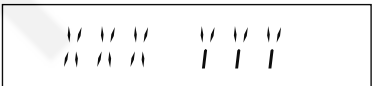
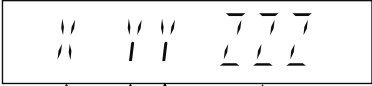
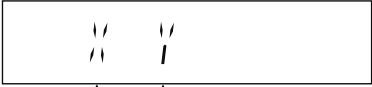
Special Note:

- 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”.

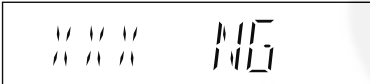
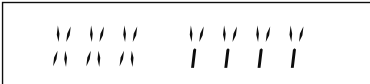
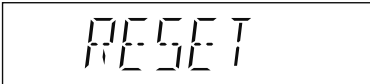
6.2.1. Service Mode Table 1 (For DVD)

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.	 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. 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 rate is shown in decimal notation to one place of decimal. Focus drive value is shown in hexadecimal notation. (Display 2) 	In STOP (with disc inside tray) mode, press [STOP] button on the main unit, and [5] button on the remote control unit. 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)  The value denotes the current in decimal notation. (Display 2)  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. Press [FL Display] on remote control unit for next page (FL Display) on values of laser drive current.

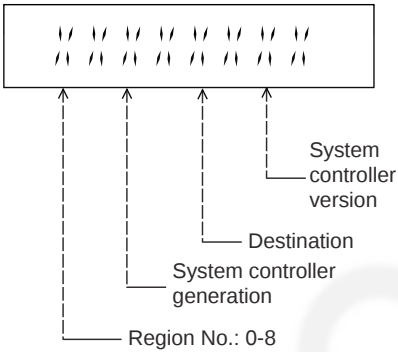
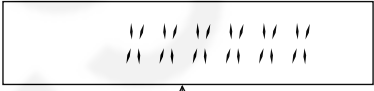
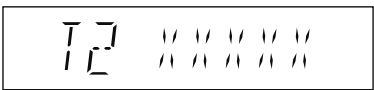
6.2.2. Service Mode Table 2 (For DVD)

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. 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. 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. Display is automatically clear after 5 seconds.
CPPM/CPRM Keys Check	CPPM/CPRM 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.

6.2.3. Service Mode Table 3 (For DVD)

Item		FL Display	Key Operation
Mode Name	Description		Front Key
Micro-processor firmware version display & EEPROM checksum display.	Micro-processor firmware version display & EEPROM checksum display. EEPROM checksum is only available due to existence of EEPROM IC. Note: Condition 1/2/3 shows the state of EEPROM IC. 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) & Main P.C.B.		In STOP (no disc) mode, press [STOP] button on the main unit, and [≧10] button on the remote control unit.
(DVD) Main P.C.B. Reset	To reset Main P.C.B. This process is used when the Main 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 for 3 seconds, follow by [ENTER] button on the remote control unit.

6.2.4. Service Mode Table 4 (For DVD)

Item		FL Display	Key Operation
Mode Name	Description		Front Key
(DVD) Main P.C.B. firmware version display	Main 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 5 seconds later. Press [FL Display] button for next page of FL Display.
Timer 1 reset	Timer 1 reset Laser operation timer of both DVD laser and CD laser is reset all at once.	 Time is shown in 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.

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, US Military	1	NTSC	NTSC (*A)	1PN	English	English (NA), Spanish (NA), Canadian, French
(S)	Japan	2	NTSC	NTSC (*A)	2PN	Japanese	Japanese, English
EP	Poland, E.Europe	2	PAL	PAL (*C)	2P6	English	English (EU), French, German, Spanish (EU), Polish, Russian, Czech, Hungarian
EB, EG	UK, Germany, W.Europe	2	PAL	PAL (*C)	2P6	English	English (EU), French, German, Italian, Spanish (EU), Polish, Swedish, Dutch
GC, GS, GW	Middle East, Africa, S.E.A, India	2	PAL	PAL (*C)	2P6	English	English (NA), French, German, Spanish (EU), Polish, Russian, Czech, Hungarian
GA, GD, GT, GJ	South East Asia, Korea, Taiwan	3	PAL NTSC	NTSC (*B)	3PN	English	English (NA), Traditional Chinese
GN	New Zealand, Australia	4	PAL	PAL (*C)	4P6	English	English (EU), French, German, Italian, Spanish (EU), Polish, Swedish, Dutch
PL	Central & S.America, Brazil	4	NTSC	NTSC (*D)	4PN	Spanish	English (NA), Spanish (Panama), French, Brazilian Portuguese
PB	Central & S.America, Brazil	4	NTSC	NTSC (*D)	4PN	Portuguese	English (NA), Spanish (Panama), French, Brazilian Portuguese
PN, PH, PU, PR	South/Central America, Argentina	4	NTSC	NTSC (*D)	4PN	English	English (NA), Spanish (Panama), French, Brazilian Portuguese
EE	CIS	5	SECAM	PAL (*C)	5P6	English	English (EU), French, German, Spanish (EU), Polish, Russian, Czech, Hungarian
GK	China	6	PAL	NTSC (*B)	6PN	Simplified Chinese	English (NA), Simplified Chinese

NTSC (*A)

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

NTSC (*B)

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

PAL (*C)

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

NTSC (*D)

Source	Output
Screen Saver	NTSC
NTSC disc	NTSC
PAL disc	NTSC

Explanation of Display

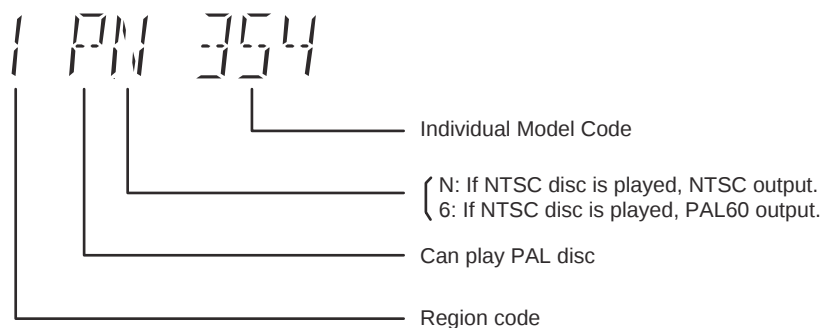
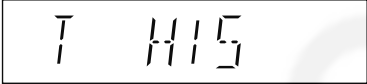


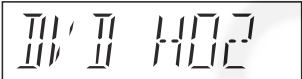
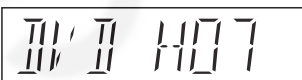
Figure 6.1 Video Design Information

6.3. Self-Diagnostic Mode

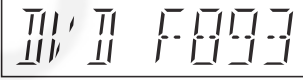
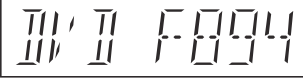
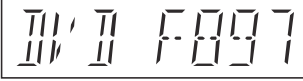
Item		FL Display	Key Operation
Mode Name	Description		Front Key
Self-Diagnostic Mode	To enter into self-diagnostic checking		Press & hold [STOP] on main unit, follow by [4] then [9] on remote control. (When no disc in mechanism)
Error code information	System will perform a check on any unusual/error code from the memory	Error code will display Example: 	In self-diagnostic mode, press [STOP] on remote control. To exist, press [⏻ / I] on main unit or remote control.
Delete Error Codes	System will clear all of the contents of unusual/error code from the memory		In self-diagnostic mode, press [CANCEL] on remote control. To exist, press [⏻ / I] on main unit or remote control.

6.4. Self Diagnostic Function-Error Code

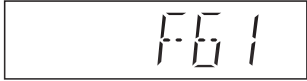
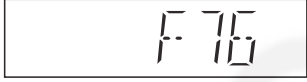
6.4.1. Mechanism Error Code Table

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 motor 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.)

6.4.2. 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 Error	It is generated at the equipment to which the TV set is connected 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 Main P.C.B. (IC8611).		Press [■STOP] on main unit for next error.
F895	Language area abnormal	Firmware version agreement check for factory preset setting failure prevention.		Press [■STOP] on main unit for next error.
F897	Initialization error	Incomplete initialization after writing of new firmware (Factory preset setting failure prevention)		Press [■STOP] on main unit for next error.
F899	The communication specification disagreement between micro-processor	Unsuitable combination of number of system com and panel com used. (Firmware)		Press [■STOP] on main unit for next error.

6.4.3. Power Supply & Digital Amplifier Error Code Table

Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
F61	The abnormalities in the D-Amp related problem (over-temperature/shutdown)	In normal operation, when DCDET2 goes to "L" (Low) (Not during POWER OFF condition), F61 appears on FL Display for 1 second and PCONT goes to "L" (Low). This is due to speaker output has DC voltage.		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.

6.5. Sales Demonstration Lock Function

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

6.5.1. Setting

• Prohibiting removal of disc

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

Note:

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

• Prohibiting operation of selector and disc

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

Note:

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

Main unit	▲OPEN/CLOSE, ■, ▶, SELECTOR
Remote controller unit	EXT-IN, REPEAT, RADIO, NUMERIC KEYS 0~9, ≥10, ◀◀, ▶▶, ◀◀, ▶▶, ■, ■, ▶ RETURN, FUNCTIONS, FL DISPLAY/SLEEP, MUTE

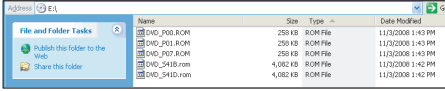
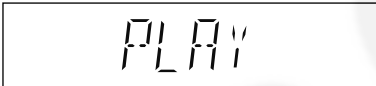
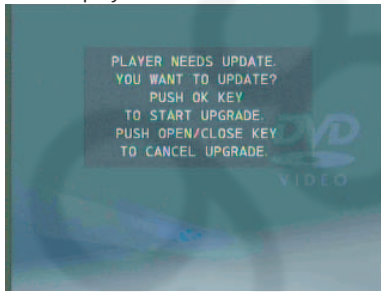
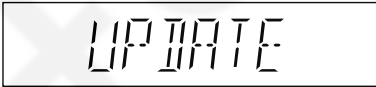
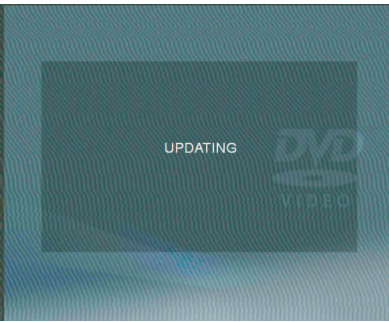
6.5.2. Cancellation

The lock can be cancelled by the same procedure as used in locking. ("UNLOCKED" is displayed on cancellation)

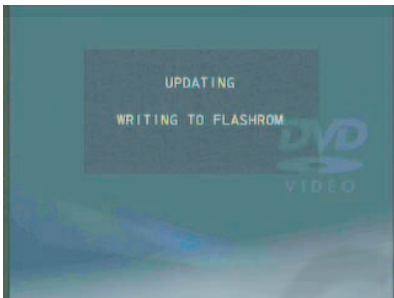
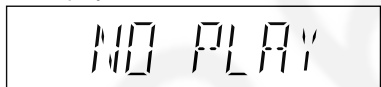
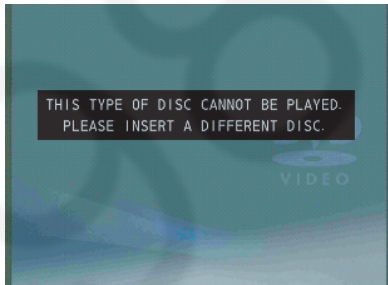
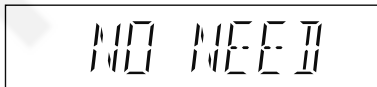
At normal Power ON/OFF the LOCKED condition is not cleared. However AC Power ON/OFF should clear LOCKED condition.

6.6. Firmware Version-Up Information

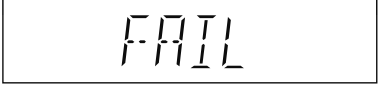
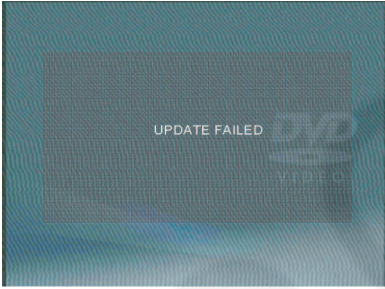
6.6.1. Process Flow (1/3)

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_S52B.ROM (Sample) - DVD_S52D.ROM (Sample) (supports chinese fonts OSD display) B) Opecon ROM file type: - DVD_P10.ROM (Single tray)	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: → FL Display 1.1: "PLAY" . → GUI Display 1.1: 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. - During updating of software, the following signal appear: → FL Display 1.2: "UPDATE" . (For Opecon): → GUI Display 1.2: UPDATING (For Syscon): → GUI Display 1.3.1: UPDATING READING FROM DISC	FL Display 1.1:  GUI Display 1.1:  FL Display 1.2:  GUI Display 1.2:  GUI Display 1.3.1: 	All panel keys and remote controller keys, including [POWER] key, are invalid during CD Update. Caution: Make sure the powersupply during CD update. If the power supply cable is unplugged during update stage, CD update will fail. The DVD model can't work, and can't be recovered by CD update again.

6.6.2. Process Flow (2/3)

Item			FL/ GUI Display	Remarks
Process		Description		
		➔ <i>GUI Display 1.3.2:</i> UPDATING WRITING TO FLASHROM	GUI Display 1.3.2: 	
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:</i> "NO PLAY" . ➔ <i>GUI Display 2 :</i> THIS TYPE OF DISC CANNOT BE PLAYER. 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:</i> "NO NEED" . ➔ <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)

6.6.3. Process Flow (3/3)

Item		FL/ GUI Display	Remarks
Process	Description		
3	Update software (Opecon) 1. Update Failed - If Opecon software update fail: ➔ <i>FL Display 3</i>: "FAIL" . ➔ <i>GUI Display 3</i>: "UPDATE FAIL"	FL Display 4:  GUI Display 4: 	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: ➔ <i>FL Display 3</i>: "GOOD" . ➔ <i>GUI Display 3</i>: COMPLETED PLEASE EJECT THE DISC ➔ Open the tray and take out the CD, the update procedure has been finished successfully. ➔ Power off, then remove AC Cord.	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 P.C.B.

Symptom	Checking items		Possible Fault(s)		Remarks
Set cannot ON	1	AC Cord	1	Faulty AC Cord, Loose connection	Refer to SMPS P.C.B. Fig. 1
	2	AC Inlet P5701	2	P5701 solder crack, dry joint, etc.	
	3	Fuse F1	3	F1 fuse open	
	4	Photocoupler PC5702, PC5799	4	PC5702/PC5799 solder crack, dry joint, short circuit, open circuit, etc	
	5	Switching IC IC5701	5	Faulty IC5701	
	6	Switching IC IC5799	6	Faulty IC5799	
Set can ON then F76	1	Transformer T5701	1a	Short circuit between Pin 14 and pin 16	
			1b	Short circuit between Pin 15 and pin 16	
			1c	Short circuit between Pin 16 and 17	
	2	Power P.C.B.	2a	Check connection between Power P.C.B (CN2916 & CN2917) and SMPS P.C.B (CN5802 & CN5803)	
			2b	L2902 Open (No input to IC2901)	
			2c	Faulty IC2901 (No output voltage at pin 10 & 11)	
			2d	Faulty Q2902 & Q2903 (Regulator)	
			2e	L2907 open (No DC +12v)	
			2f	L2908 open (No DC+5v)	
	3		3	Check cable connection between main (CN2004) and SMPS	
	4		4a	Faulty IC2302	
			4b	LB2301 Open	
	5	Photocoupler PC5720	5	PC5720 solder crack dry joint, short circuit, open circuit, etc	
Set can ON working normally for some time then F76	1	Rectifier D5802	1a	Improper contact between D5802 to heatsink	
			1b	Set trigger temperature protection	

7.2. Part Location

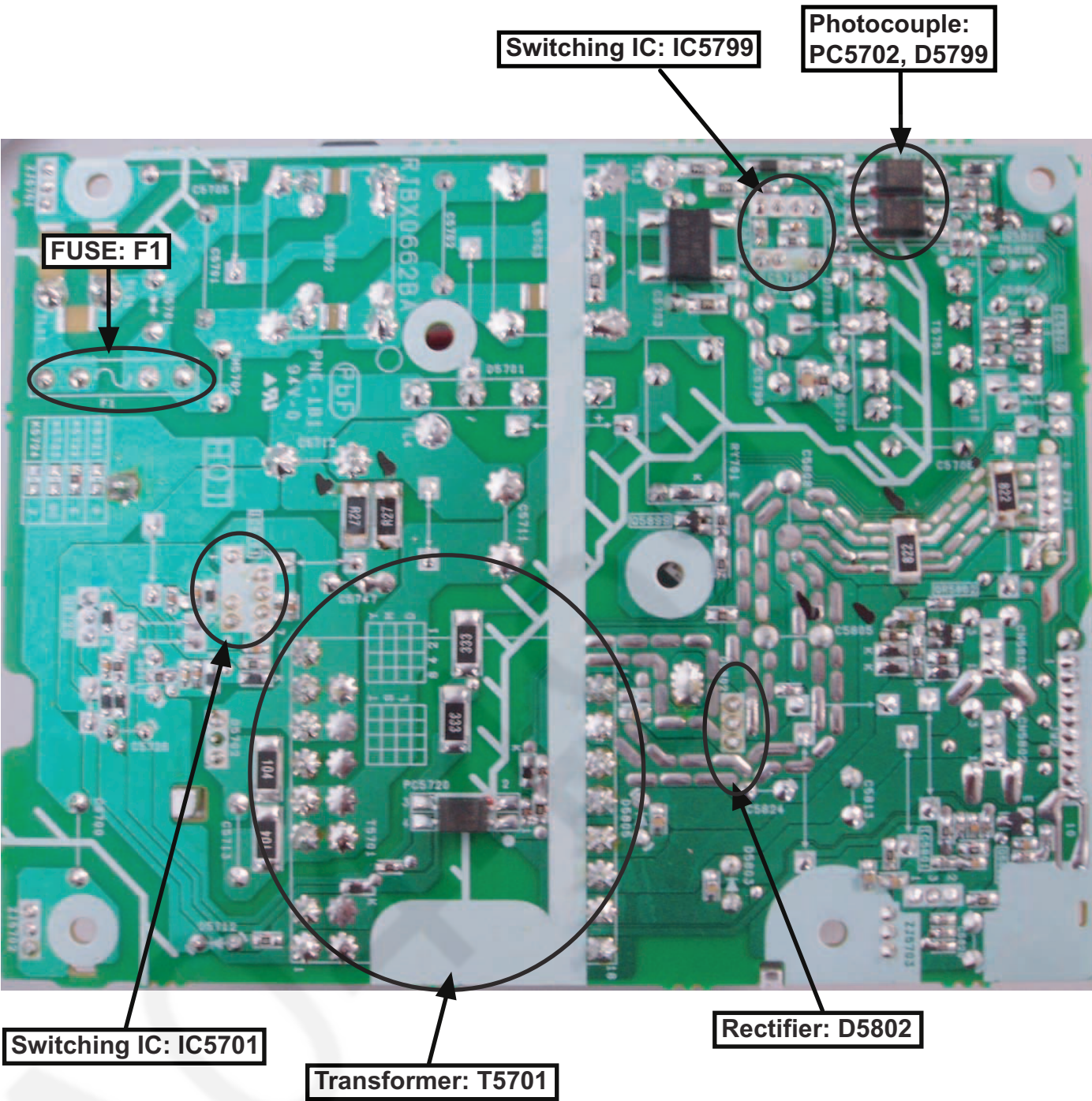


Figure 1. SMPS P.C.B.

7.3. Basic Troubleshooting Guide for Traverse Unit (Main 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)	LB8315, R8321, R8323, (Y) LB8316, R8325, R8327 (C)
	c) Check audio DAC circuitry * Compare the above with OK condition DVD Module P.C.B	IC8001 (Pin 62, 63, 64) R8402 *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 Main 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 Main to Traverse unit	FP8251
	b) Check motor driver circuitry on the voltages and control signals * Compare the above with OK condition Main 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 Main 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)

7.4. 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 Disassembly and Assembly Instructions

Caution Note:

- This section describes the disassembly and/or assembly procedures for all major printed circuit boards & main components for the unit. (You may refer to the section of “Main components and P.C.B Locations” as described in the service manual)
- Before carrying out the disassembly process, please ensure all the safety precautions & procedures are followed.
- During the disassembly and/or assembly process, please handle with care as there may be chassis components with sharp edges.
- Avoid touching heatsinks due to its high temperature after prolong use. (See caution as described below)

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

- During disassembly and assembly, please ensure proper service tools, equipments or jigs is being used.
- During replacement of component parts, please refer to the section of “Replacement Parts List” as described in the service manual.
- Select items from the following indexes when disassembly or replacement are required.
- Disassembly of Top Cabinet
- Disassembly of AC Inlet P.C.B.
- Disassembly of Rear Panel
- Disassembly of DVD Mechanism Unit (DLS6E)
- Disassembly of Front Panel Block Assembly
- Disassembly of FL P.C.B.
- Disassembly of Power Button P.C.B.
- Replacement of Cradle Lid
- Disassembly of iPod Cradle Assembly
- Disassembly of iPod/iPhone P.C.B.
- Disassembly of USB P.C.B.
- Replacement of DVD Lid Unit
- Disassembly of Front Shield Plate
- Disassembly of Main P.C.B.
- Disassembly of D-Amp P.C.B.
- Replacement of Digital Amplifier IC (IC5100/IC5200)
- Disassembly of Power P.C.B.
- Disassembly of SMPS P.C.B.
- Replacement of Switching Regulator IC (IC5701)
- Replacement of Rectifier Diode (D5702)
- Replacement of Regulator Diode (D5802)
- Replacement of Regulator Diode (D5803)
- Disassembly of Scart P.C.B.
- Disassembly of Fan

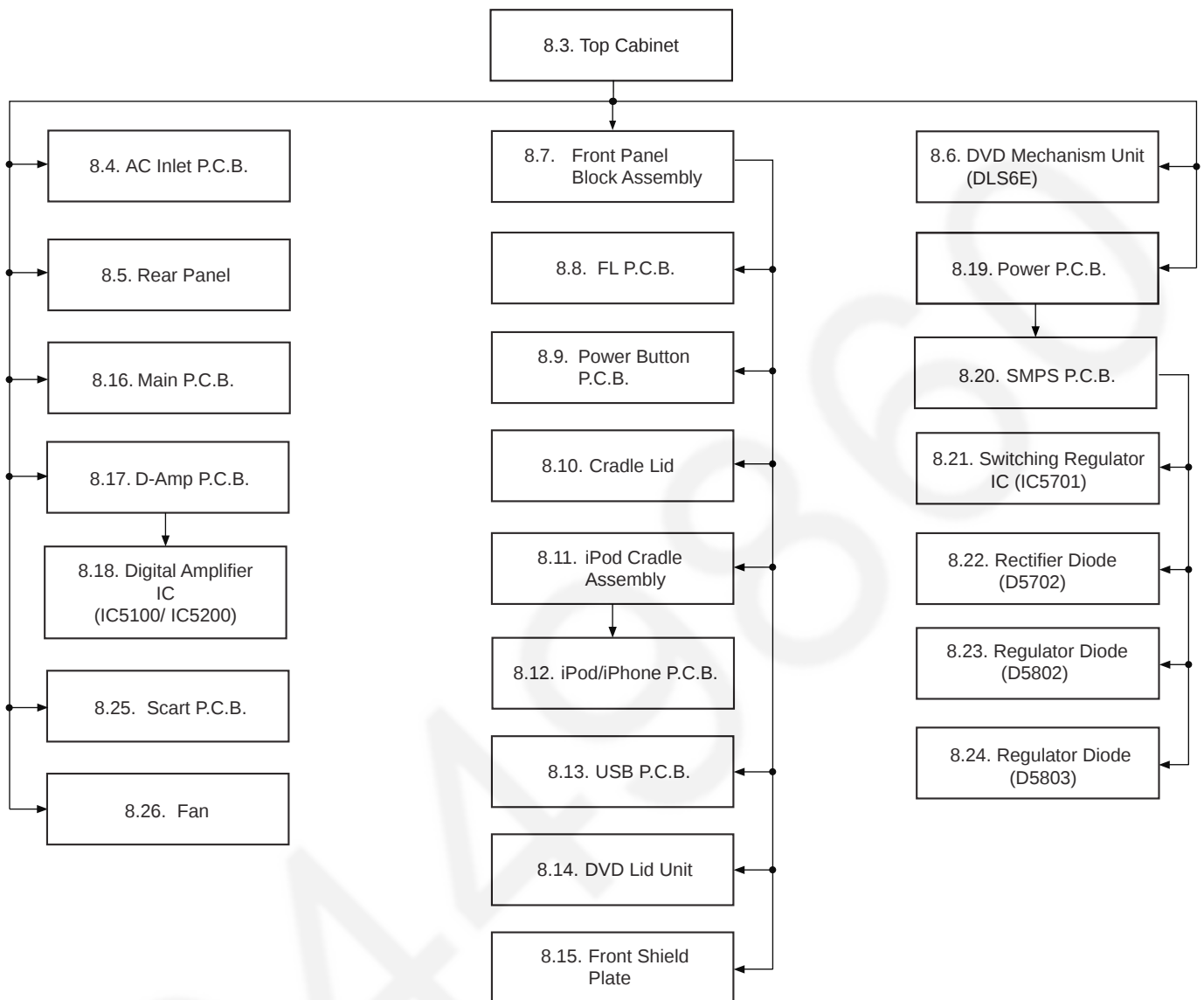
CAUTION NOTE:

Please use original screw and at correct locations.

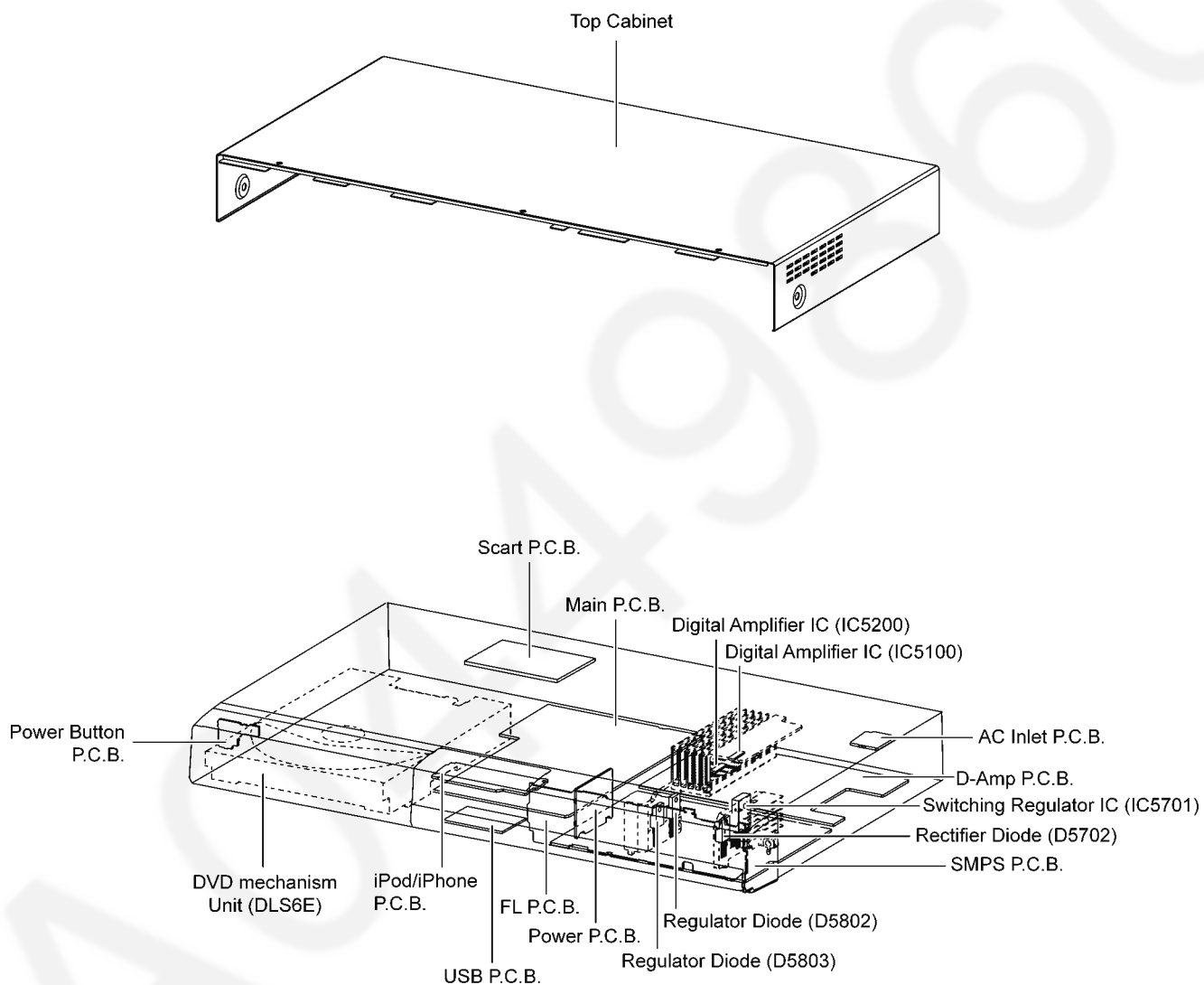
Below shown is part no. of different screw types used:

- | | |
|---------------------------------|----------------------|
| a :RHD3007-K2J(EB/EG/EP) | e :VHD1224-1 |
| a :RHD3007-1SJ(EG/EP) | f :RHDX301003 |
| b :RHD30119-S | g :RHDX261002 |
| c :RHDV30006 | |
| d :RHD26046 | |

8.1. Disassembly Flow Chart

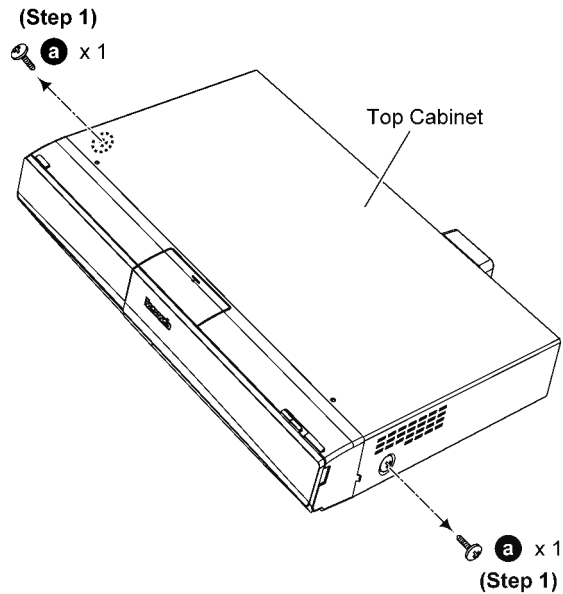


8.2. Main Components and P.C.B. Locations

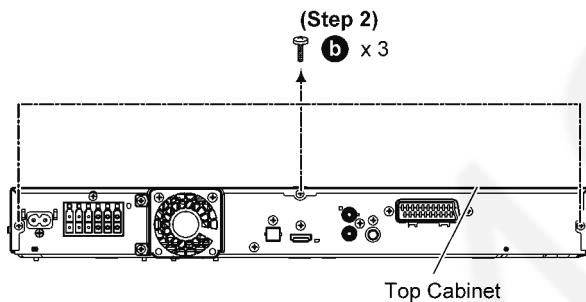


8.3. Disassembly of Top Cabinet

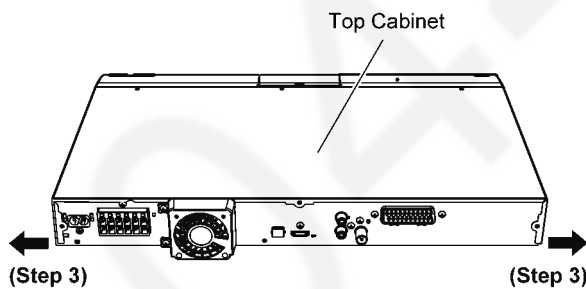
Step 1 Remove 2 screws.



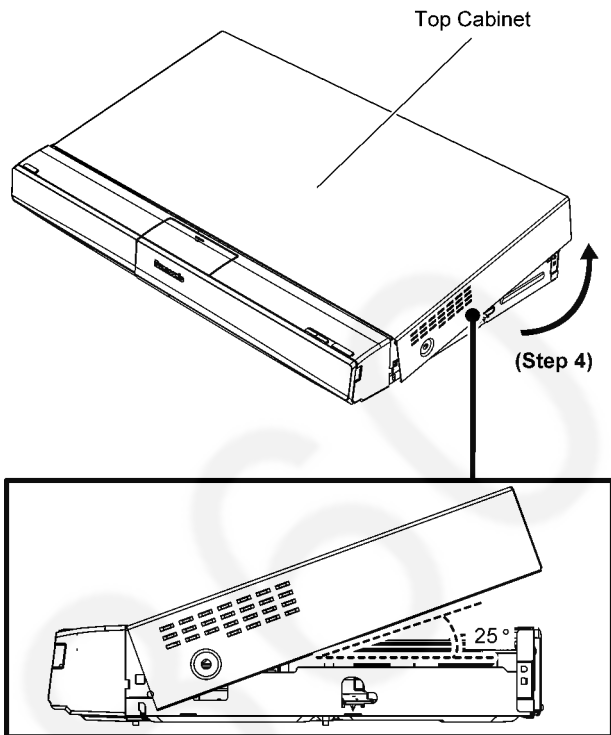
Step 2 Remove 3 screws.



Step 3 Slightly pull both side of Top Cabinet outwards.

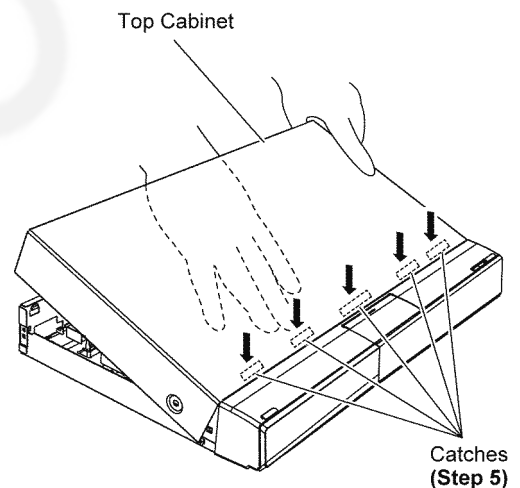


Step 4 Lift both side of Top Cabinet in an outward direction about 25°.

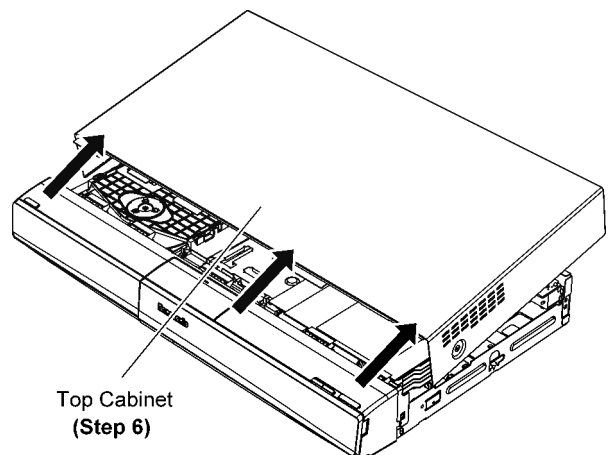


Step 5 Press down the catches one by one.

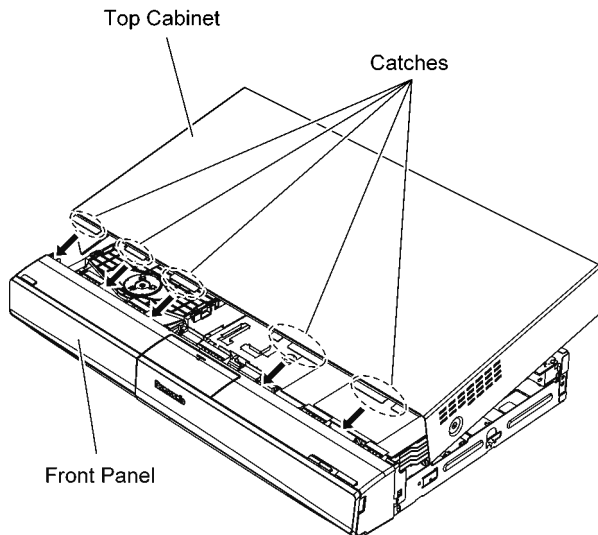
Caution: To avoid shocked by electricity & injured by high temperature. **DO NOT TOUCH** electrical components when insert hand under the Top Cabinet.



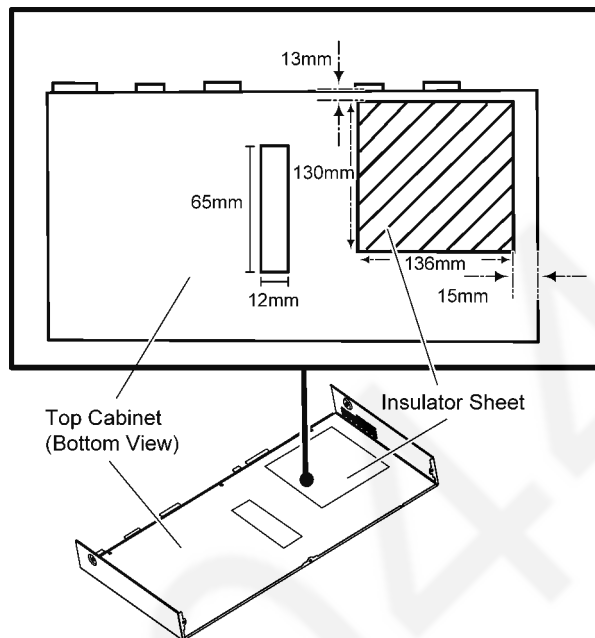
Step 6 Remove Top Cabinet as arrow shown.



Caution: During assembling, ensure that catches of Top Cabinet is insert into Front Panel properly.



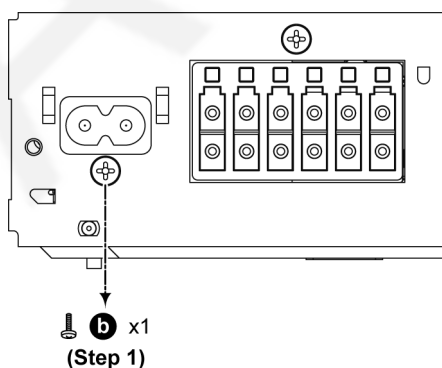
Caution: Replace the insulator sheet if broken & ensure it is pasted properly on the Top Cabinet.



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

• Refer to "Disassembly of Top Cabinet"

Step 1 Remove 1 screw.

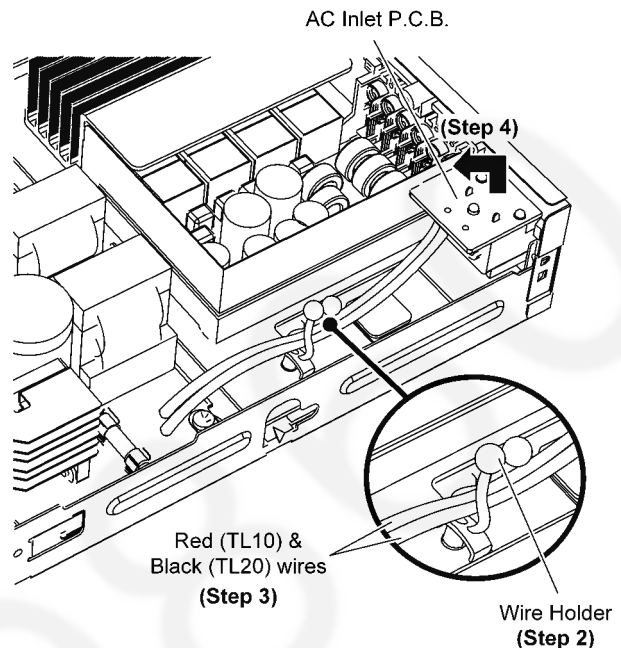


Step 2 Twist the Wire Holder.

Step 3 Release Red (TL10) & Black (TL20) wires from the Wire Holder.

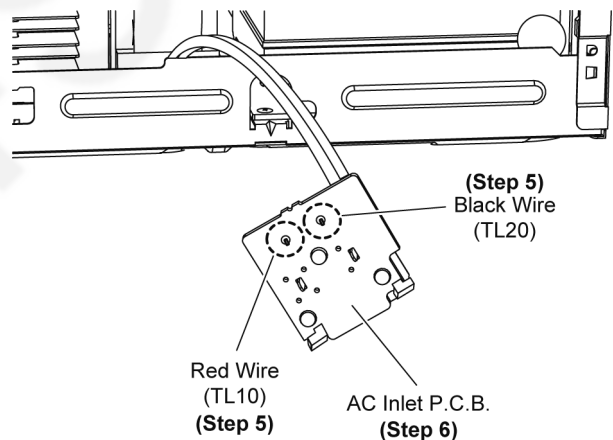
Caution: During assembling, ensure that Red (TL10) & Black (TL20) wires are dressed into Wire Holder.

Step 4 Lift up AC Inlet P.C.B. as arrow shown.



Step 5 Desolder Red (TL10) & Black (TL20) Wires on AC Inlet P.C.B..

Step 6 Remove AC Inlet P.C.B..

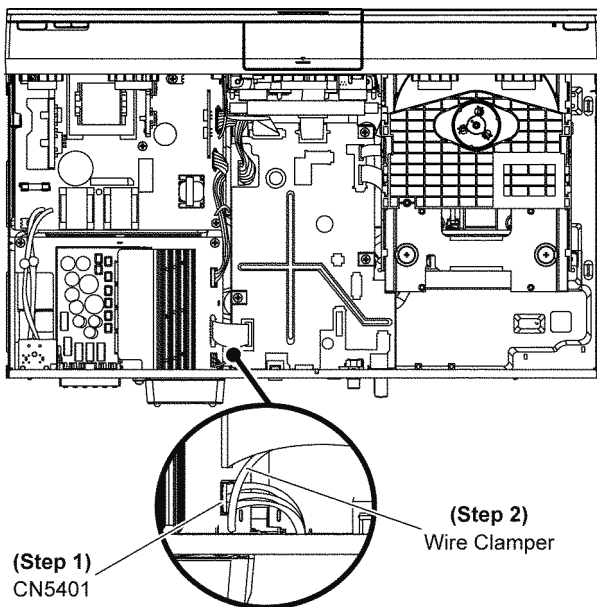


8.5. Disassembly of Rear Panel

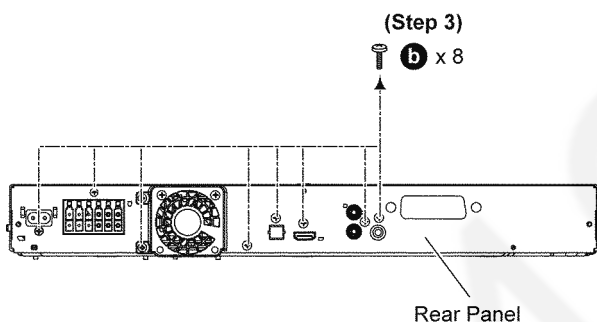
• Refer to "Disassembly of Scart P.C.B.."

Step 1 Twist the Wire Clamper.

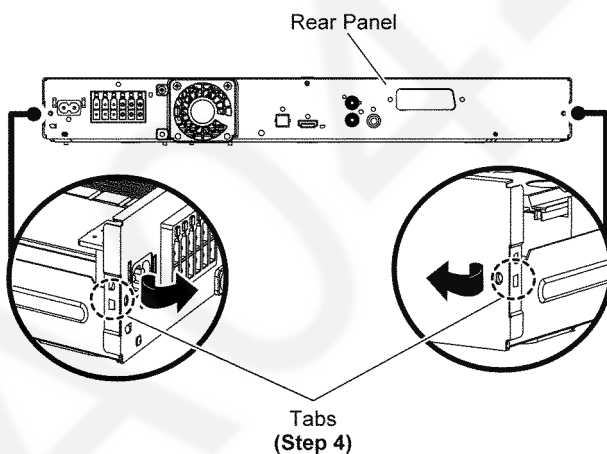
Step 2 Detach the fan unit connector (CN5401) on D-Amp P.C.B..



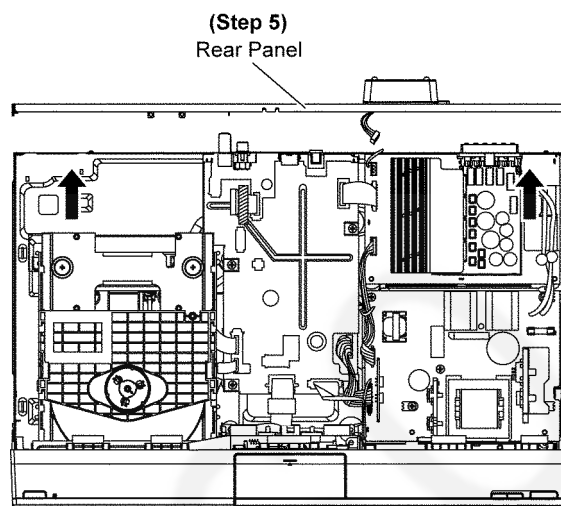
Step 3 Remove 8 screws.



Step 4 Release the tabs at both side of the Rear Panel in the direction of arrow.



Step 5 Remove Rear Panel.



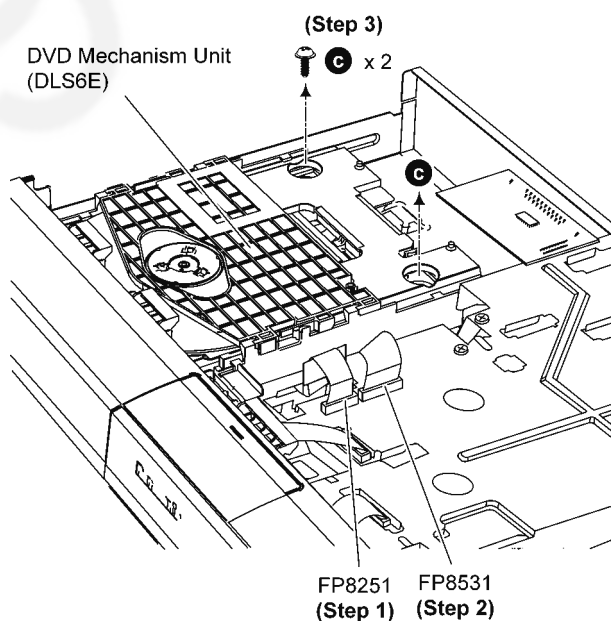
8.6. Disassembly of DVD Mechanism Unit (DLS6E)

• Refer to "Disassembly of Top Cabinet"

Step 1 Detach 7P FFC at the connector (FP8251) on Main P.C.B..

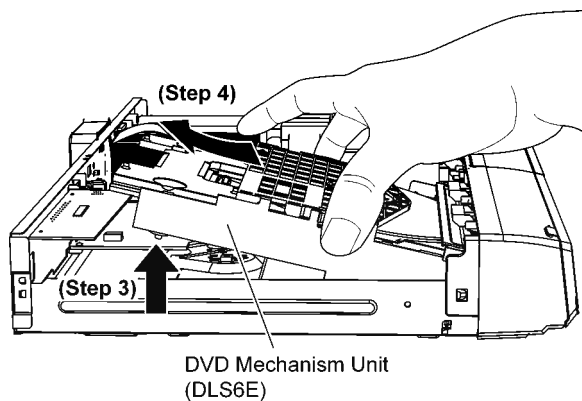
Step 2 Detach 24P PFC at the connector (FP8531) on Main P.C.B..

Step 3 Remove 2 screws.

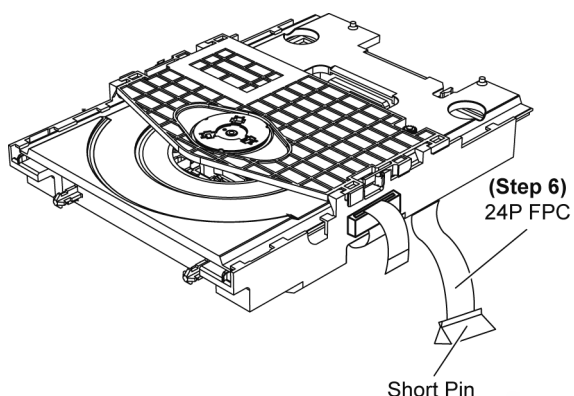


Step 4 Slightly lift up the DVD Mechanism Unit (DLS6E).

Step 5 Remove the DVD Mechanism Unit (DLS6E).



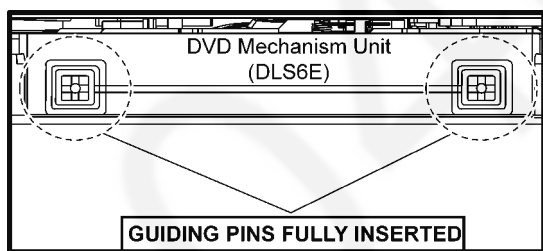
Step 6 Attach a short pin to the 24P FPC of the DVD Mechanism Unit (DLS6E).



• Assembly of DVD Mechanism Unit (DLS6E)

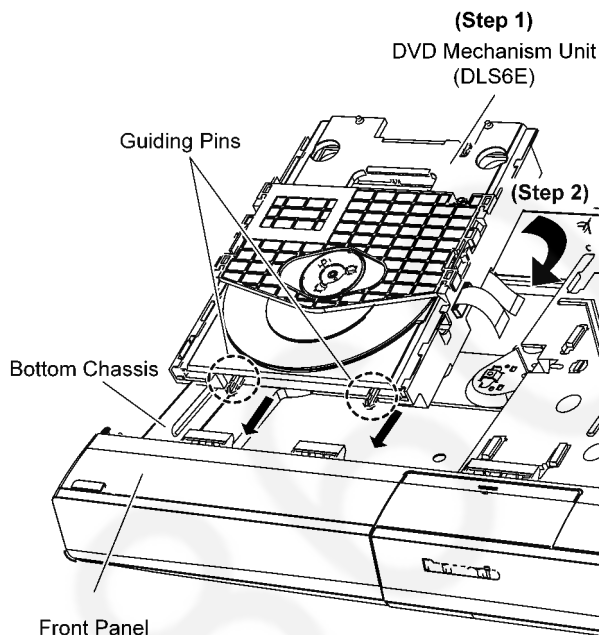
Step 1 Install the DVD Mechanism Unit (DLS6E).

Caution: Ensure that two guiding pins of DVD Mechanism Unit (DLS6E) are fully inserted into two slots of Front Panel.



Step 2 Place the DVD Mechanism Unit (DLS6E) onto the Bottom Chassis.

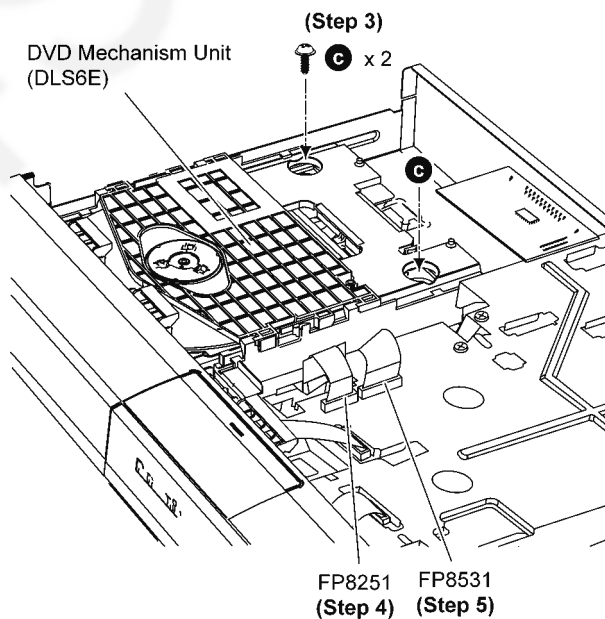
Caution: During assembling, ensure that DVD Mechanism Unit (DLS6E) is properly located and fully seated on Bottom Chassis before screwing.



Step 3 Fix 2 screws.

Step 4 Attach 7P FFC at the connector (FP8251) on Main P.C.B..

Step 5 Attach 24P FFC at the connector (FP8531) on Main P.C.B..



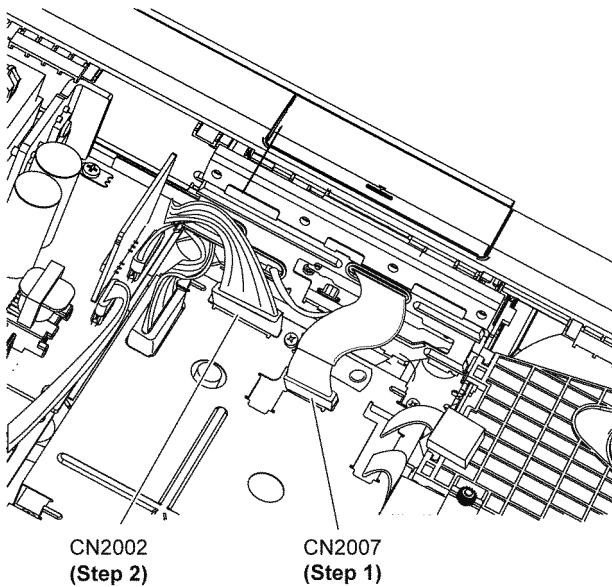
8.7. Disassembly of Front Panel Block Assembly

• Refer to "Disassembly of Top Cabinet"

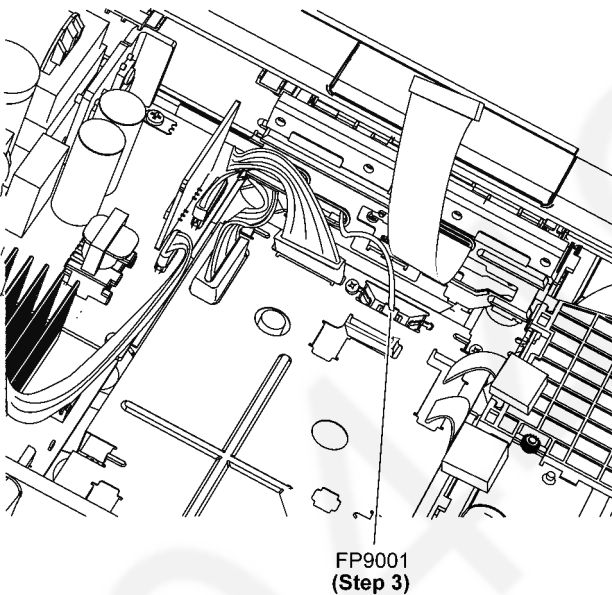
Step 1 Detach 15P FFC at the connector (CN2007) on Main P.C.B..

Step 2 Detach 22P FFC at the connector (CN2002) on Main P.C.B..

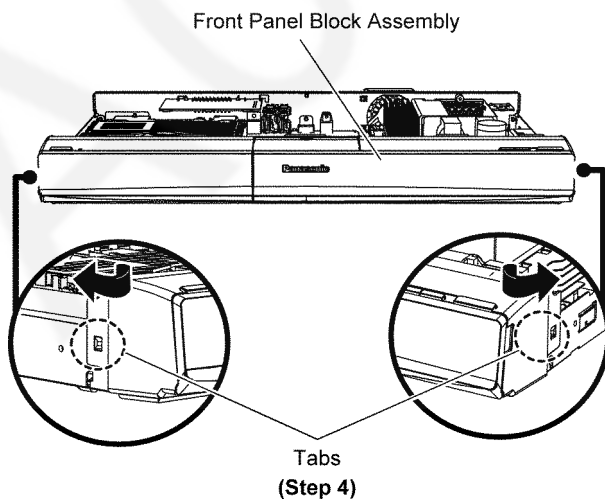
Caution: Do not exert strong force when releasing the tabs.



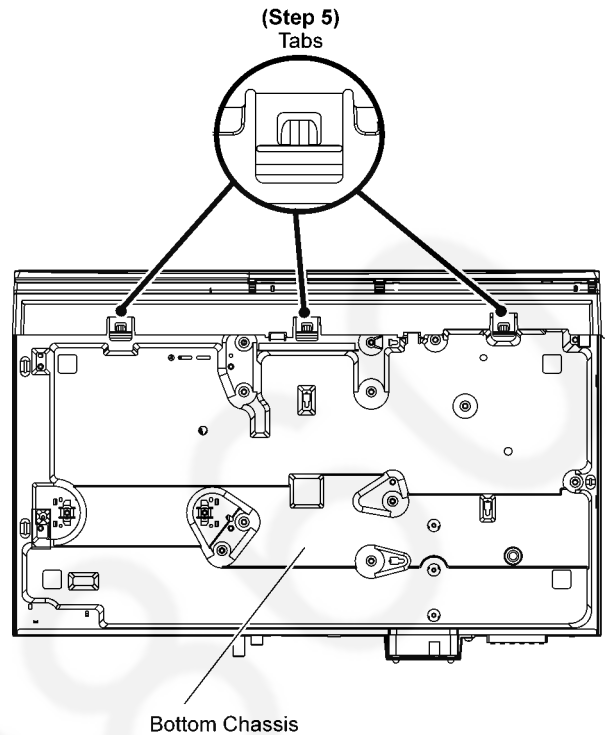
Step 3 Detach 5P wire at the connector (FP9001) on Main P.C.B..



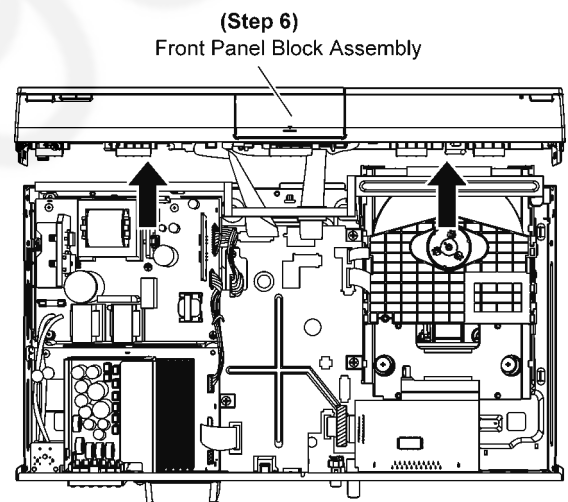
Step 4 Release the 2 tabs at each side of the Front Panel Block Assembly in the direction of arrow.



Step 5 Release the 3 tabs at the Bottom Chassis.



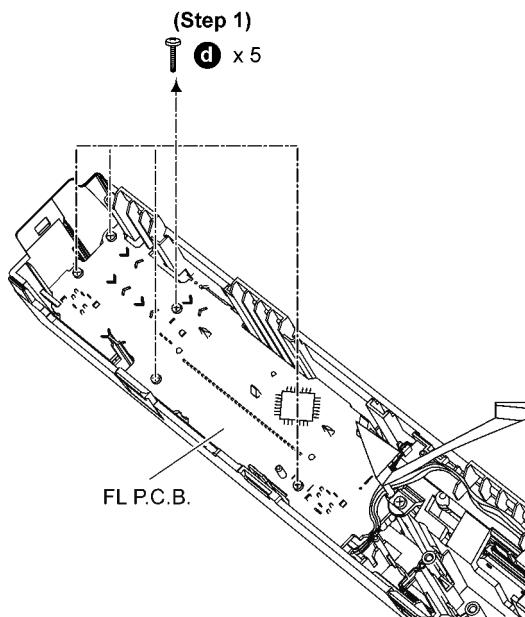
Step 6 Detach the Front Panel Block Assembly.



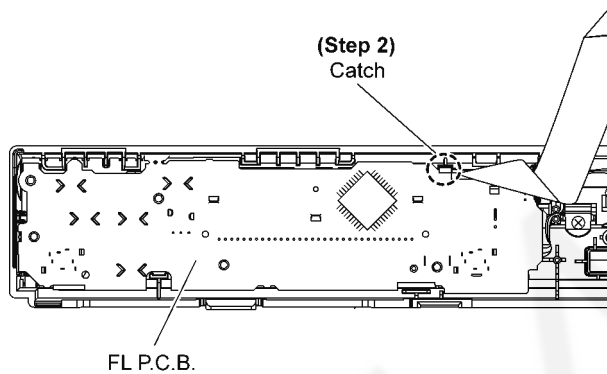
8.8. Disassembly of FL P.C.B.

• Refer to “Disassembly of Front Panel Block Assembly”

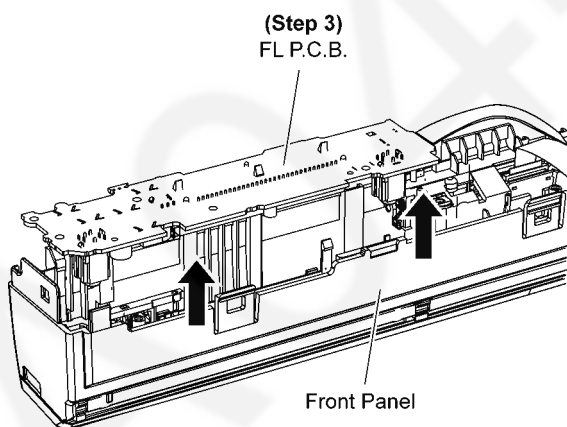
Step 1 Remove 5 screws.



Step 2 Release 1 catch.

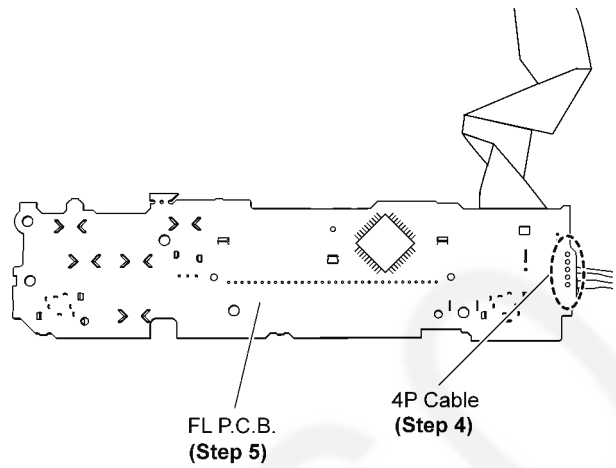


Step 3 Lift up FL P.C.B..



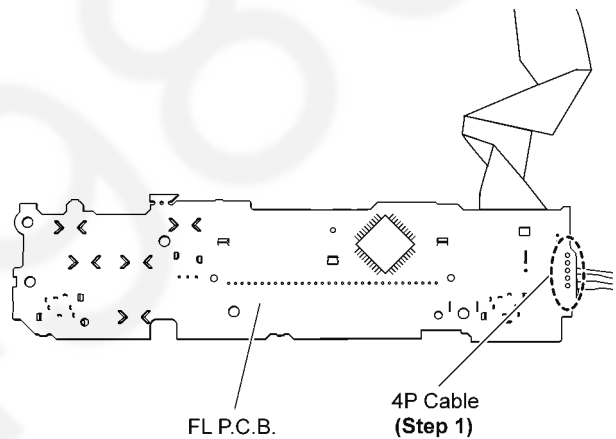
Step 4 Desolder 4P cable at the connector (CN6001) on FL P.C.B..

Step 5 Remove FL P.C.B..



• Assembly of FL P.C.B.

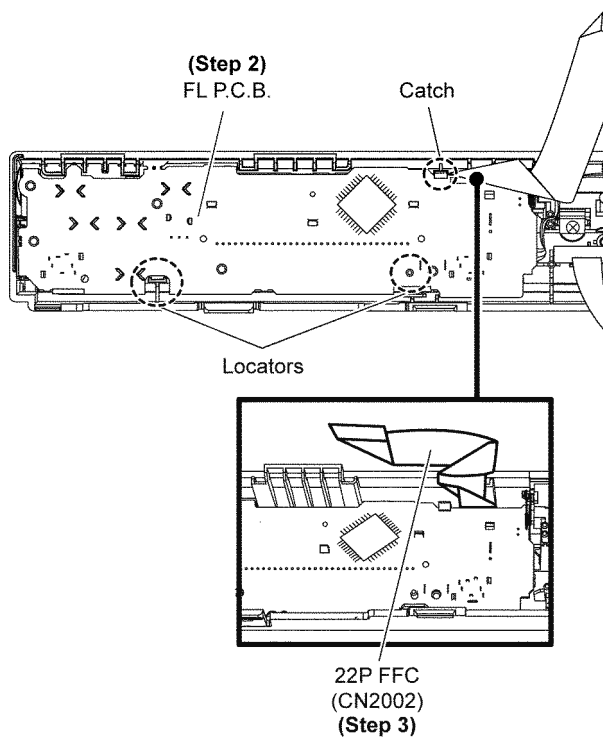
Step 1 Solder 4P cable to the connector (CN6001) on FL P.C.B..



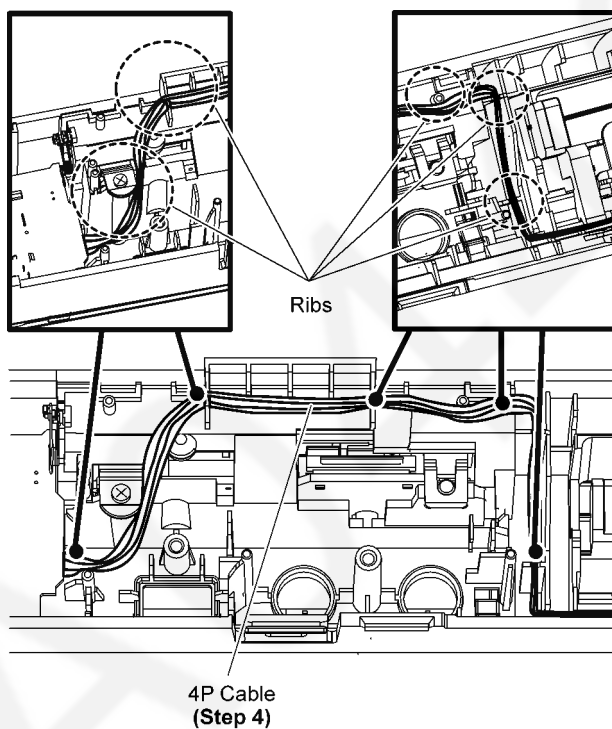
Step 2 Place FL P.C.B. onto Front Panel.

Caution: Ensure that it is properly located & fully caught.

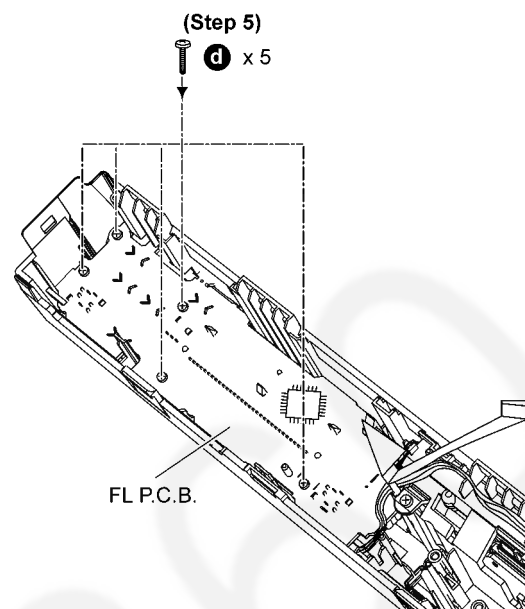
Step 3 Dress 22P FFC (CN2002) according to diagram shown.



Step 4 Dress 4P cable into Front Panel's ribs according to diagram shown.



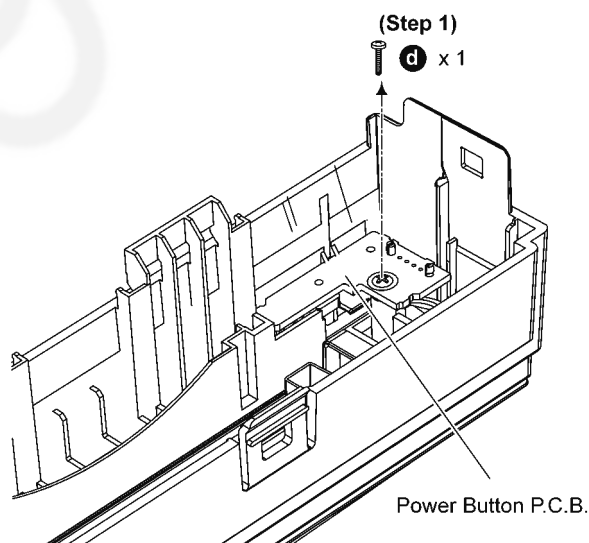
Step 5 Fix 5 screws.



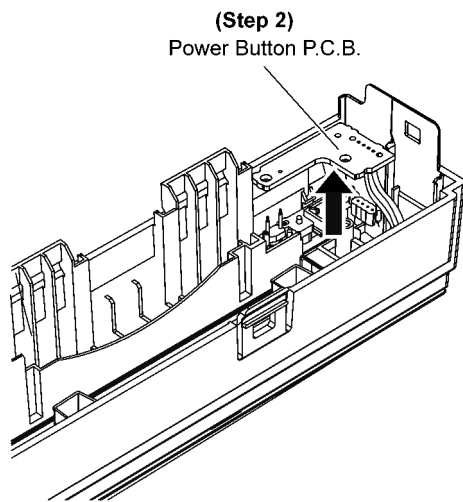
8.9. Disassembly of Power Button P.C.B.

• Refer to "Disassembly of Front Panel Block Assembly"

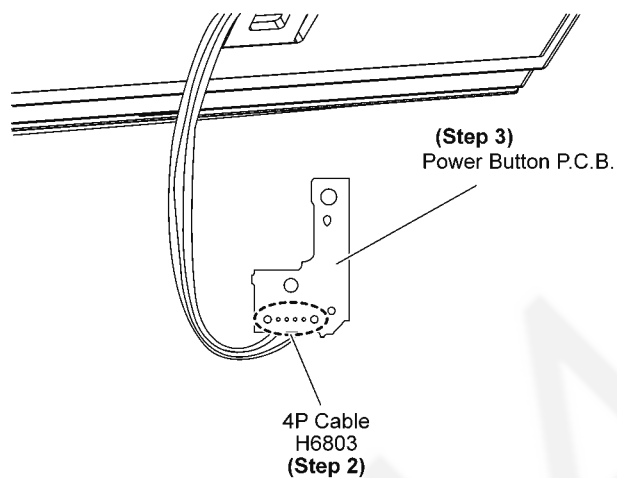
Step 1 Remove 1 screw.



Step 2 Lift up Power Button P.C.B..

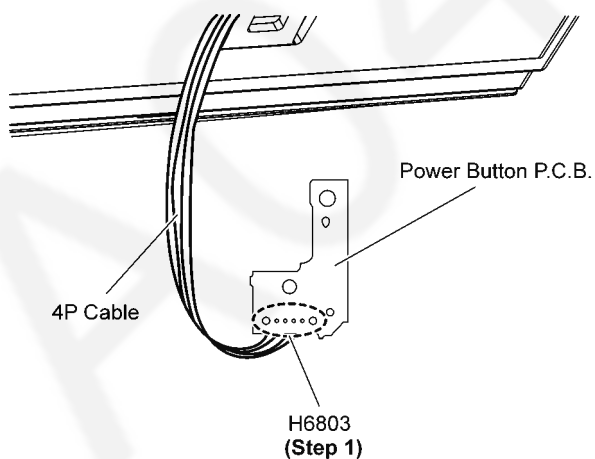


Step 3 Desolder 4P Cable (H6803) on Power Button P.C.B..
Step 4 Remove Power Button P.C.B..



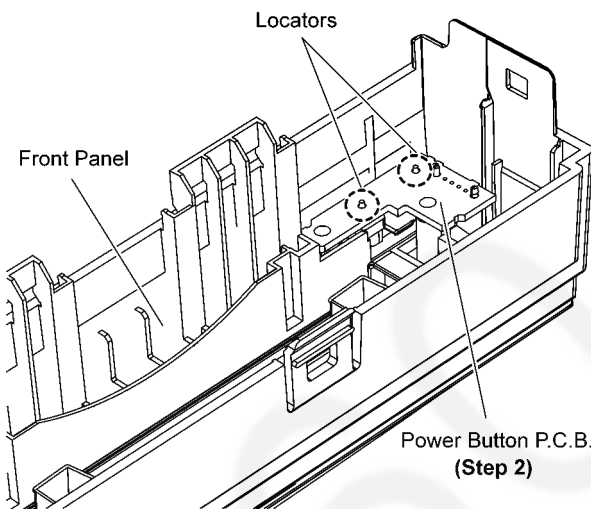
• Assembly of Power Button P.C.B.

Step 1 Solder 4P cable at (H6803) onto Power Button P.C.B..

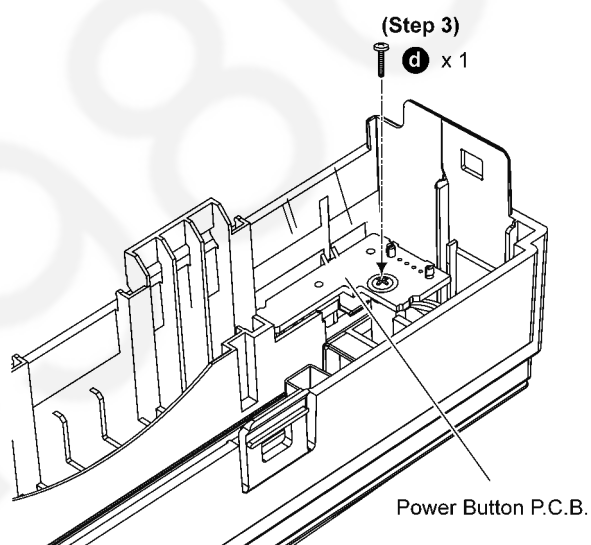


Step 2 Fix the Power Button P.C.B. onto the Front Panel.

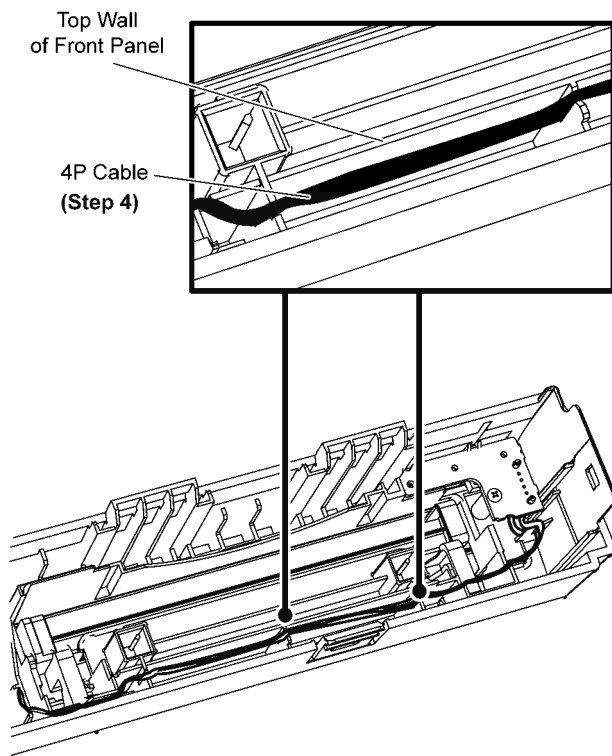
Caution: Ensure that it is properly located & fully caught.



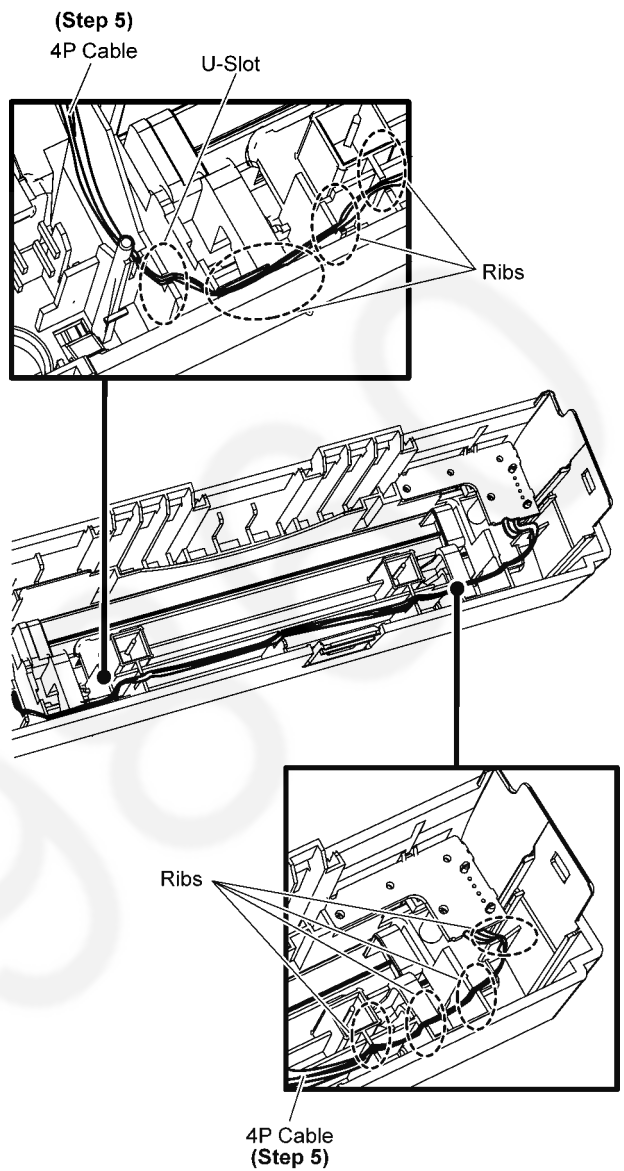
Step 3 Fix 1 screw.



Step 4 Dress 4P cable flatly against the Top Wall of Front Panel.



Step 5 Dress 4P cable into Front Panel's U-Slot & Ribs according to diagram shown.

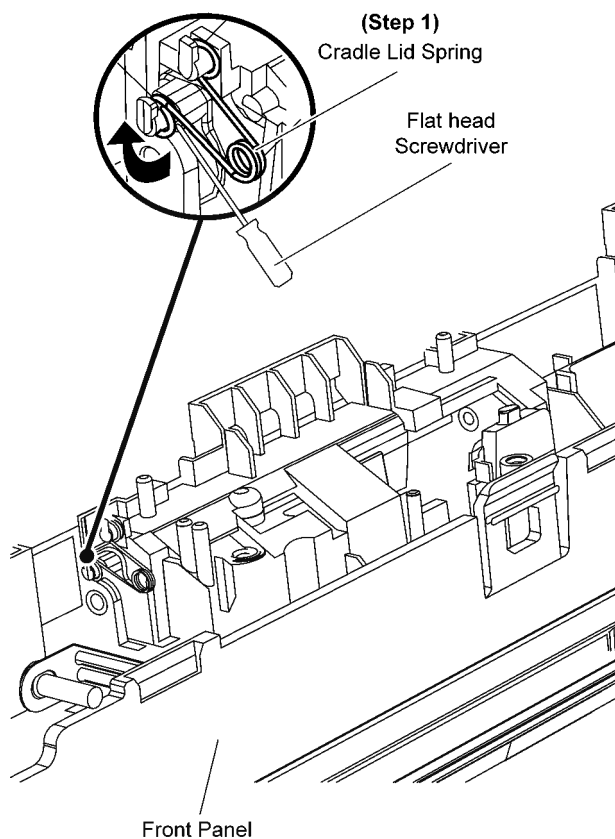


8.10. Replacement of Cradle Lid

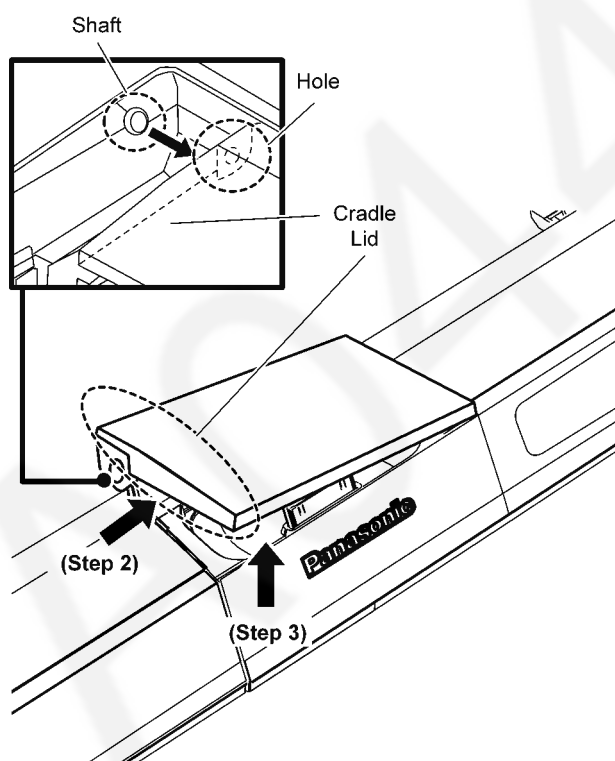
• Refer to "Disassembly of Front Panel Block Assembly"

8.10.1. Disassembly of Cradle Lid

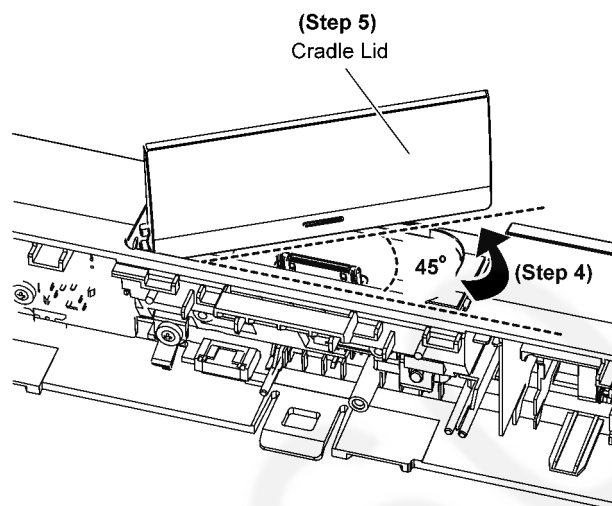
Step 1 Release the Cradle Lid Spring by using a Flat head Screwdriver in the direction of arrow.



Step 2 Slightly push the Cradle Lid inwards.
Step 3 Slightly lift up the Cradle Lid.

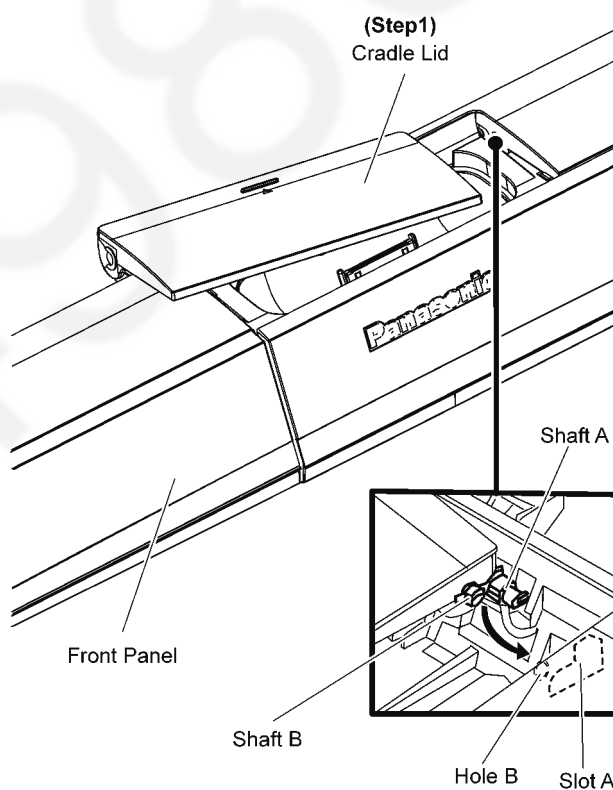


Step 4 Rotate the Cradle Lid about 45° according to the diagram shown.
Step 5 Remove Cradle Lid.

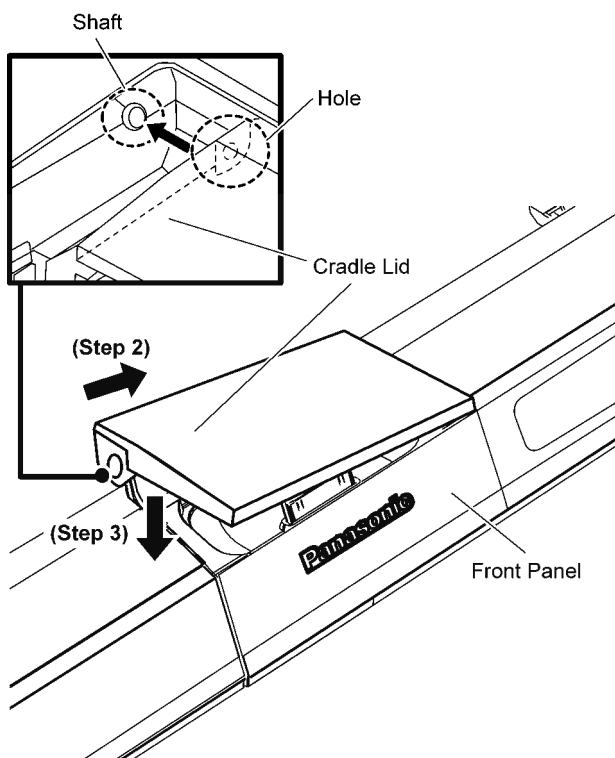


8.10.2. Assembly of Cradle Lid

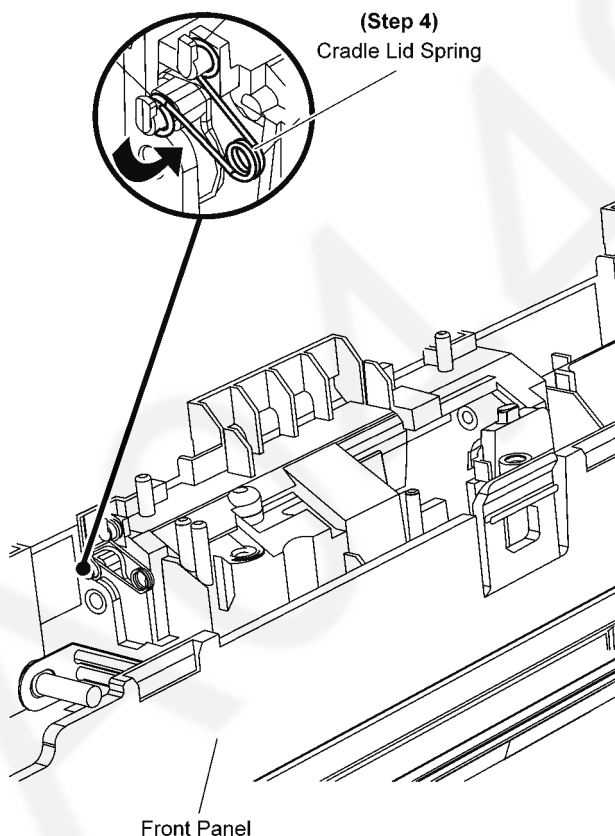
Step 1 Insert the Cradle Lid (Shaft A) into the Front Panel (Slot A & Hole B).



Step 2 Slightly push the Cradle Lid inwards.
Step 3 Press the Cradle Lid downward.



Step 4 Fix the Cradle Lid Spring onto Cradle Lid's Shaft A.

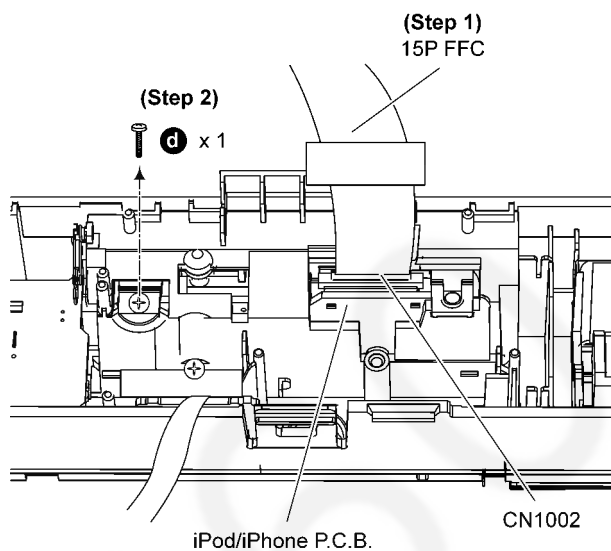


8.11. Disassembly of iPod Cradle Assembly

• Refer to "Disassembly of Front Panel Block Assembly"

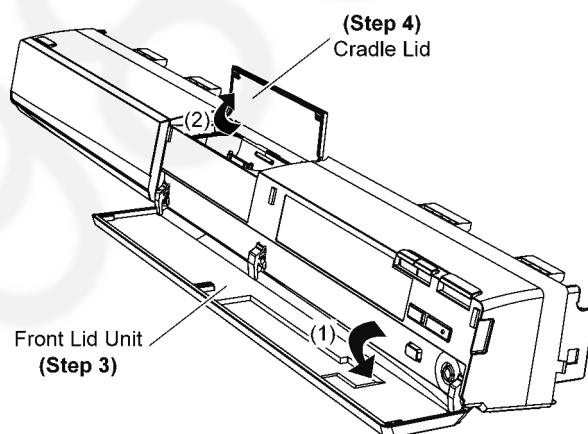
Step 1 Detach 15P FFC at the connector (CN1002) on iPod/iPhone P.C.B..

Step 2 Remove 1 screw.

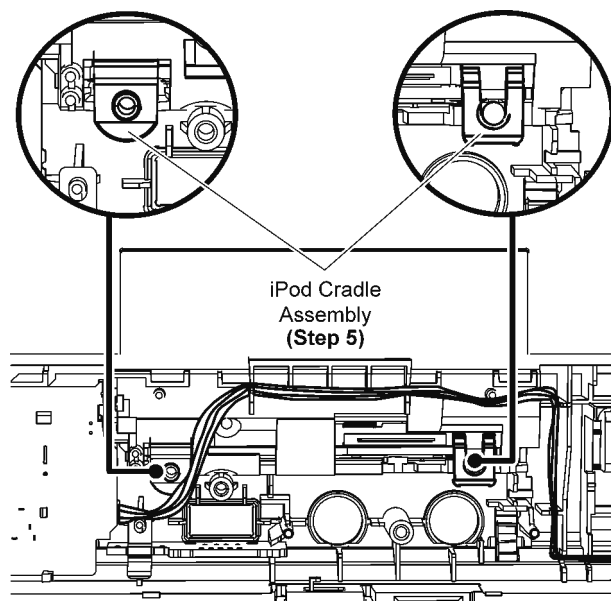


Step 3 Open the Front Lid Unit.

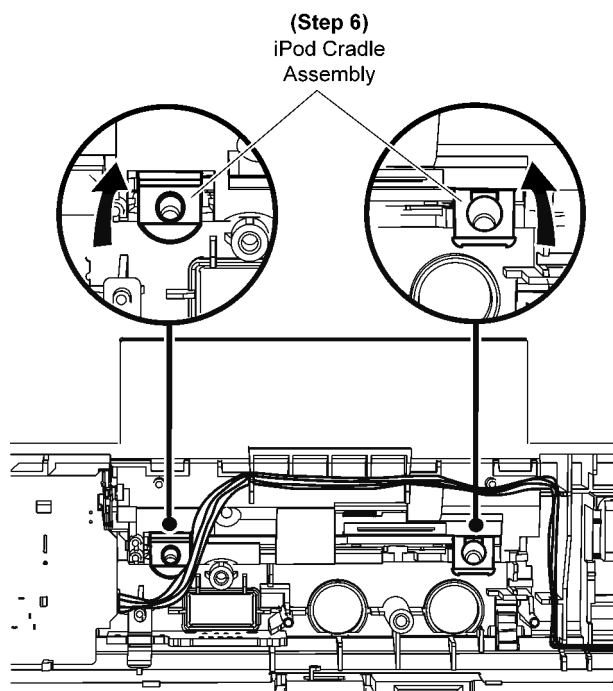
Step 4 Open the Cradle Lid.



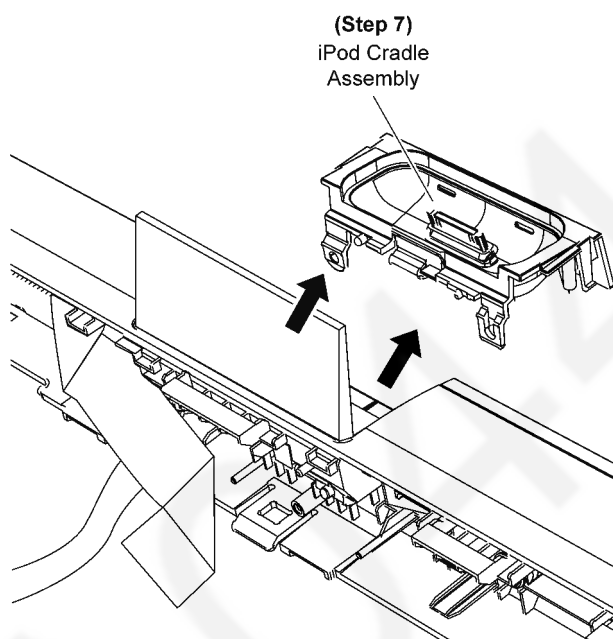
Step 5 Lift up iPod Cradle Assembly on both side.



Step 6 Press to release iPod Cradle Assembly from Front Panel as arrow shown.

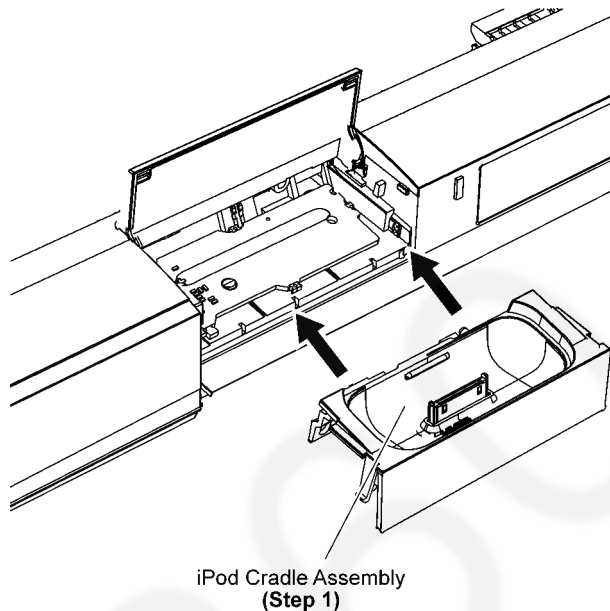


Step 7 Remove iPod Cradle Assembly.



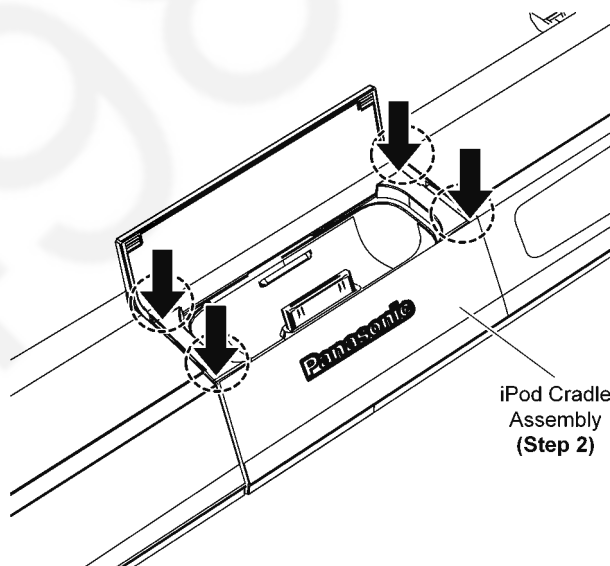
• **Assembly of iPod Cradle Assembly**

Step 1 Fix the iPod Cradle Assembly to Front Panel.



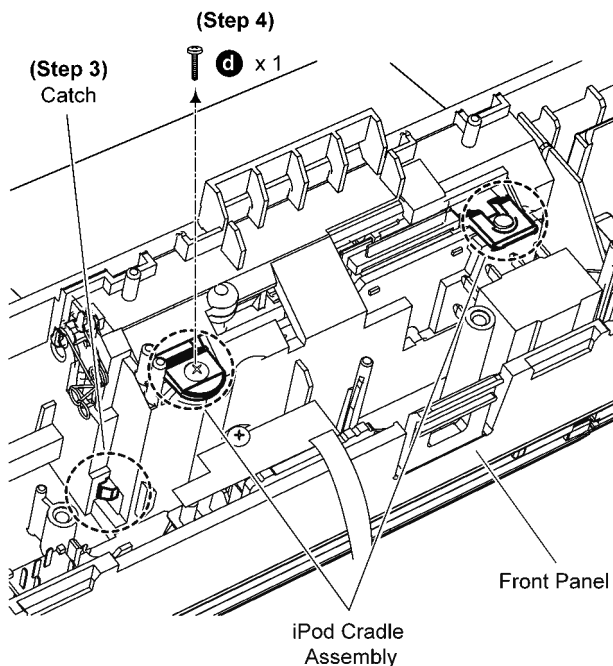
Step 2 Press the iPod Cradle Assembly downwards.

Note: A “click” sound can be heard when the iPod Cradle Assembly is fixed onto Front Panel properly.



Step 3 Press the catch on the iPod Cradle Assembly.

Step 4 Fix 1 screw.

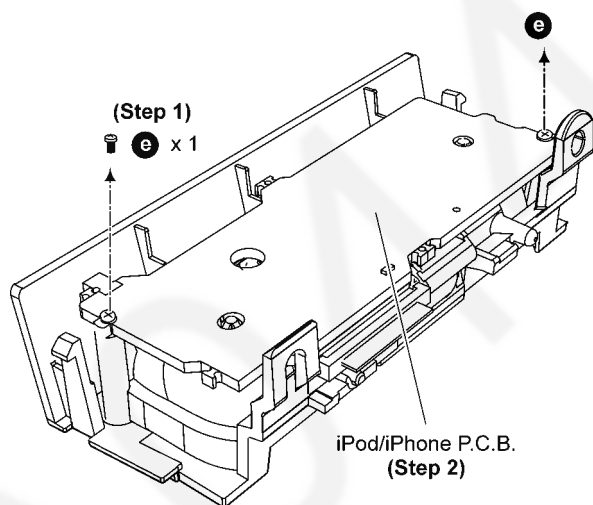


8.12. Disassembly of iPod/iPhone P.C.B.

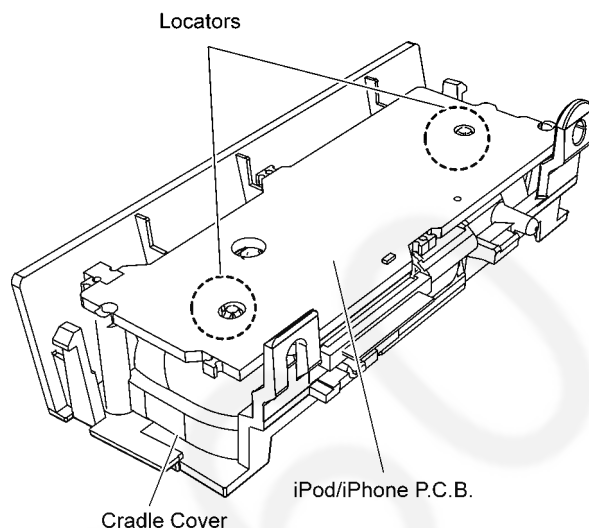
• Refer to “Disassembly of iPod Cradle Assembly”

Step 1 Remove 2 screws.

Step 2 Remove iPod/iPhone P.C.B..



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

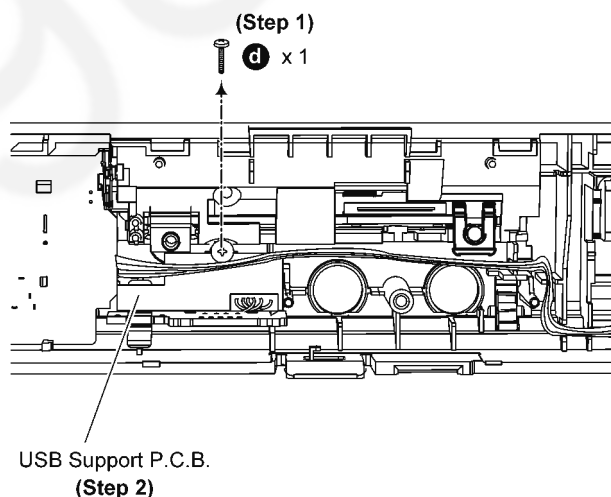


8.13. Disassembly of USB P.C.B.

• Refer to “Disassembly of Front Panel Block Assembly”

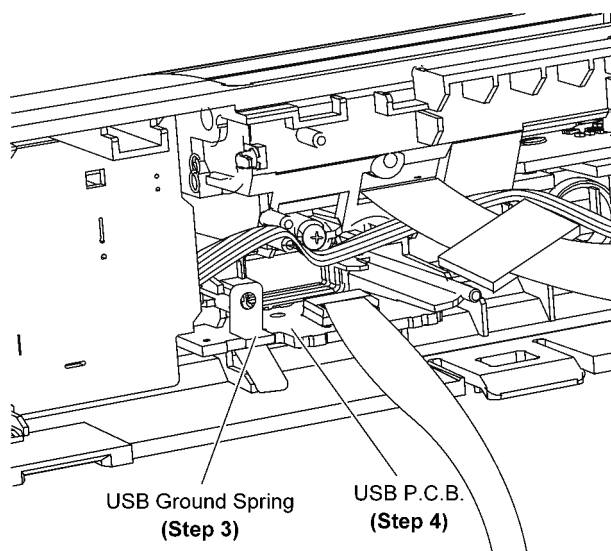
Step 1 Remove 1 screw.

Step 2 Remove USB Support P.C.B..



Step 3 Remove USB Ground Spring.

Step 4 Remove USB P.C.B..

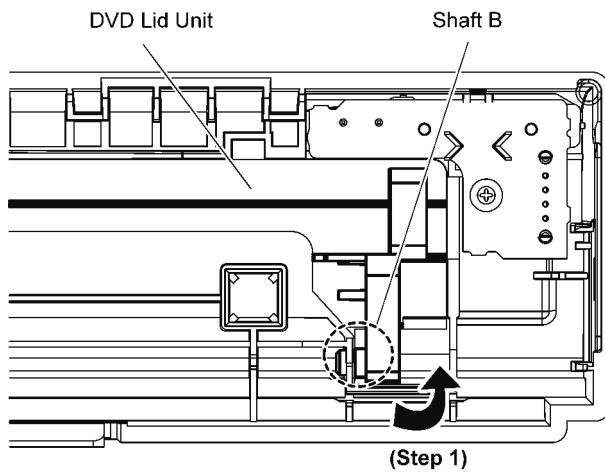


8.14. Replacement of DVD Lid Unit

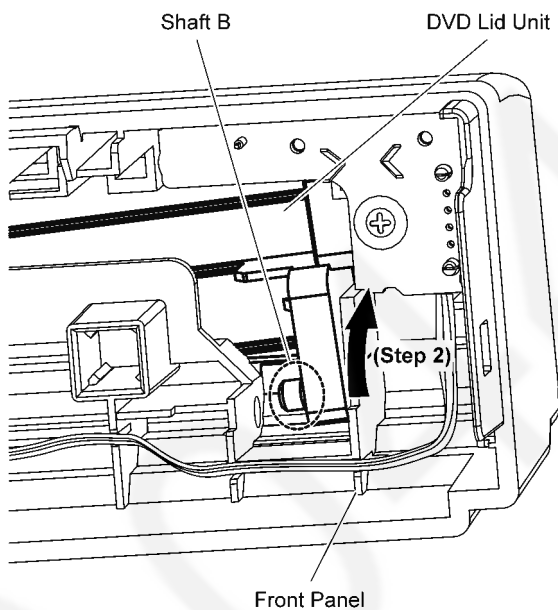
• Refer to “Disassembly of Front Panel Block Assembly”

8.14.1. Disassembly of DVD Lid Unit

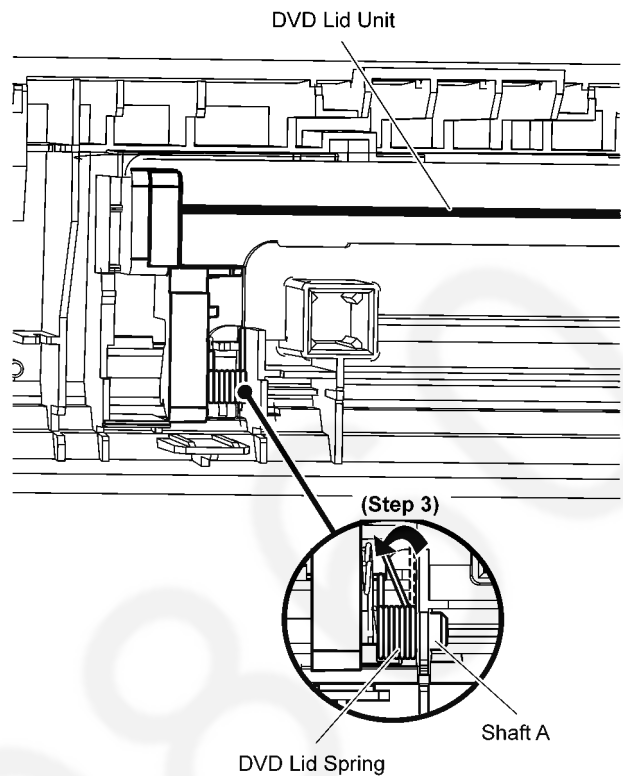
Step 1 Push backward the Shaft B of the DVD Lid Unit in the direction of arrow.



Step 2 Push forward the Shaft B of the DVD Lid Unit in the direction of arrow.

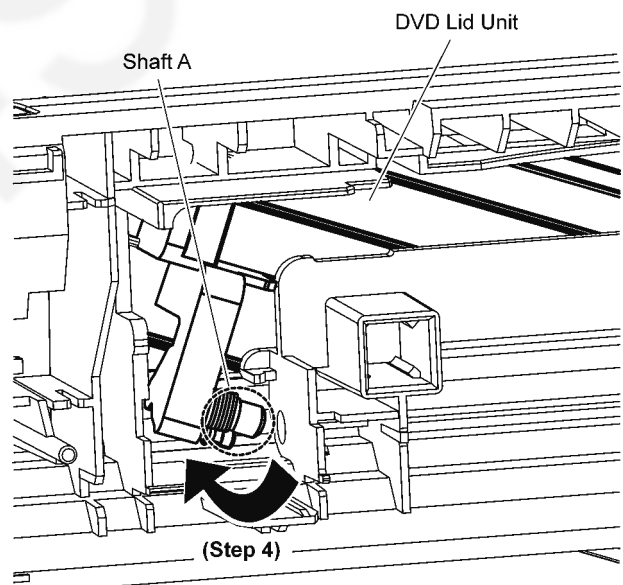


Step 3 Lift the DVD Lid Spring at Shaft A in the direction of arrow.

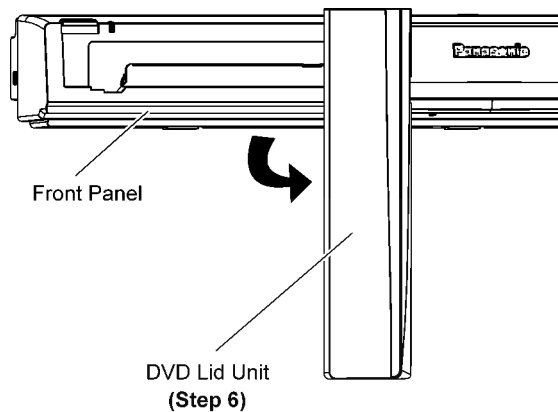


Step 4 Move the Shaft A of the DVD Lid Unit in the direction of arrow.

Step 5 Remove DVD Lid Unit.



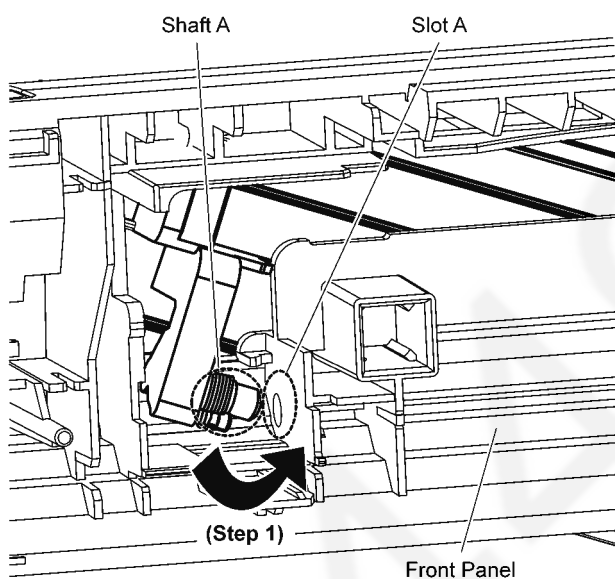
Step 6 Move the DVD Lid Unit to remove from Front Panel.



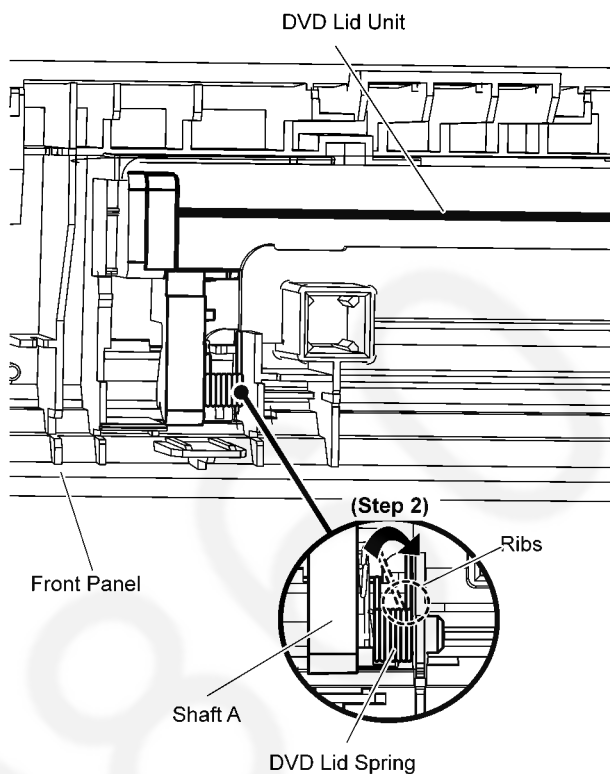
8.14.2. Assembly of DVD Lid Unit

Step 1 Insert the DVD Lid Unit into the Front Panel as arrow shown.

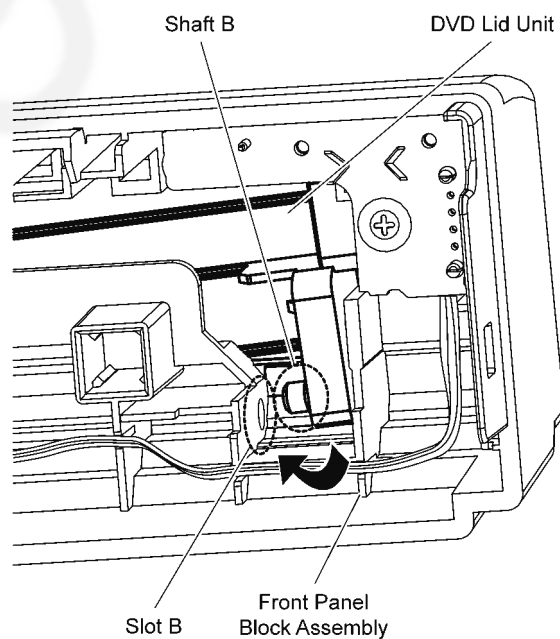
Caution: Ensure that Shaft A of DVD Lid Unit is fully inserted into Slot A of Front Panel.



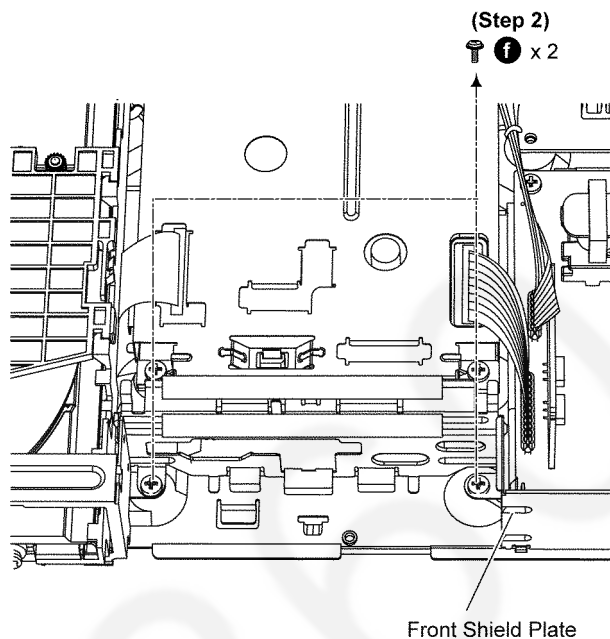
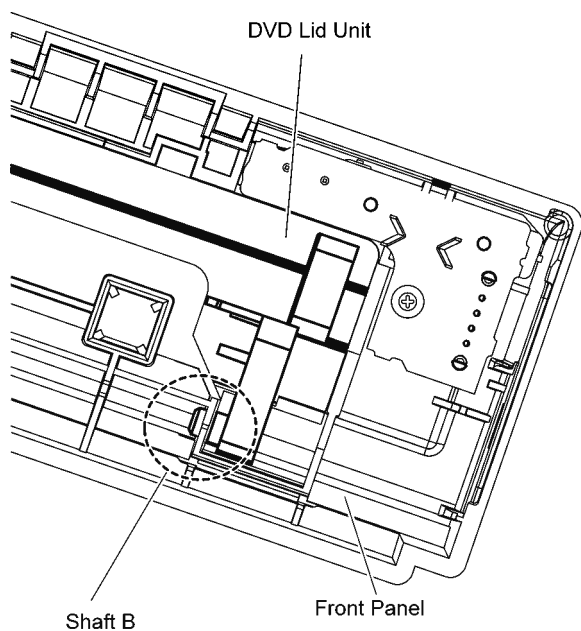
Step 2 Locate DVD Lid Spring in between ribs of Front Panel.



Step 3 Insert the DVD Lid Unit (Shaft B) into the Front Panel (Slot B) as arrow shown.



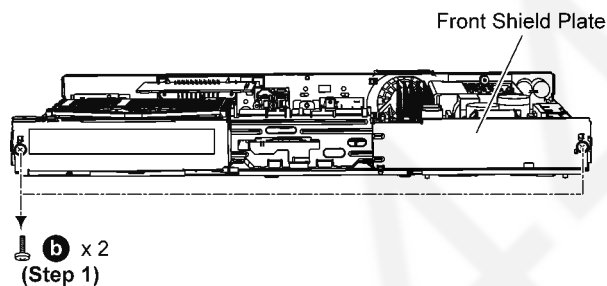
Caution: Ensure that the Shaft B of DVD Lid Unit is fully inserted into Shaft B of Front Panel.



8.15. Disassembly of Front Shield Plate

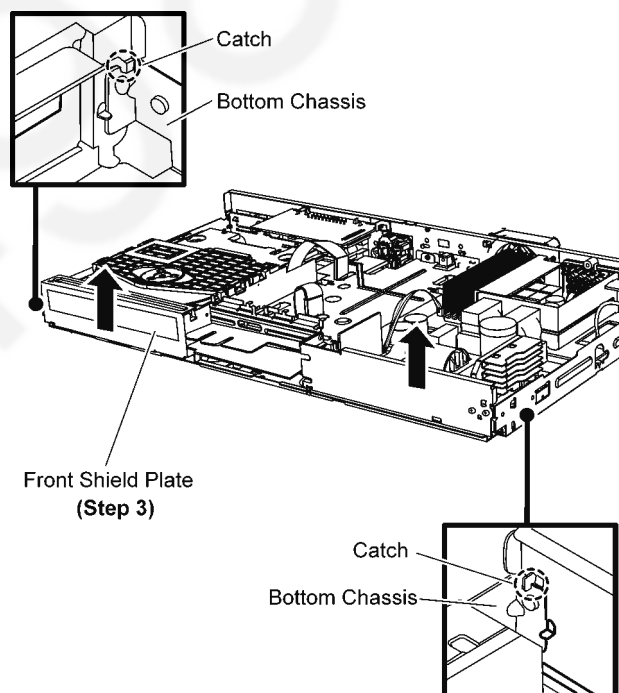
• Refer to “Disassembly of Front Panel Block Assembly”

Step 1 Remove 2 screws.

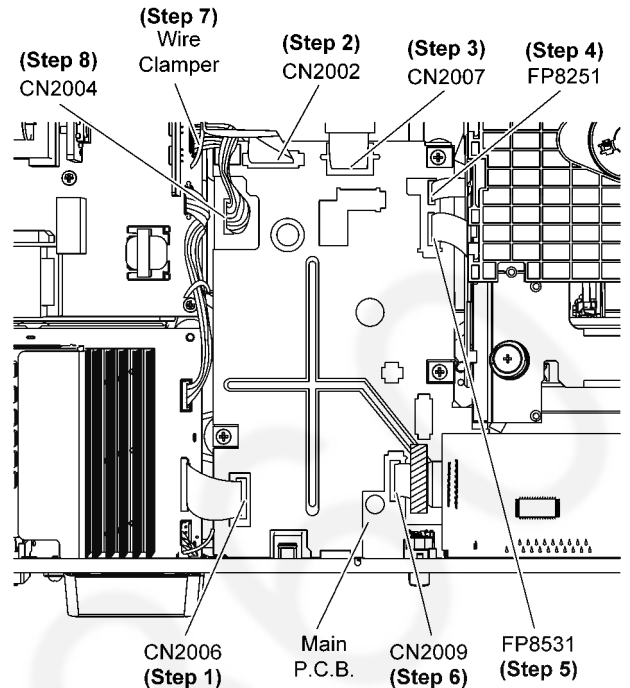
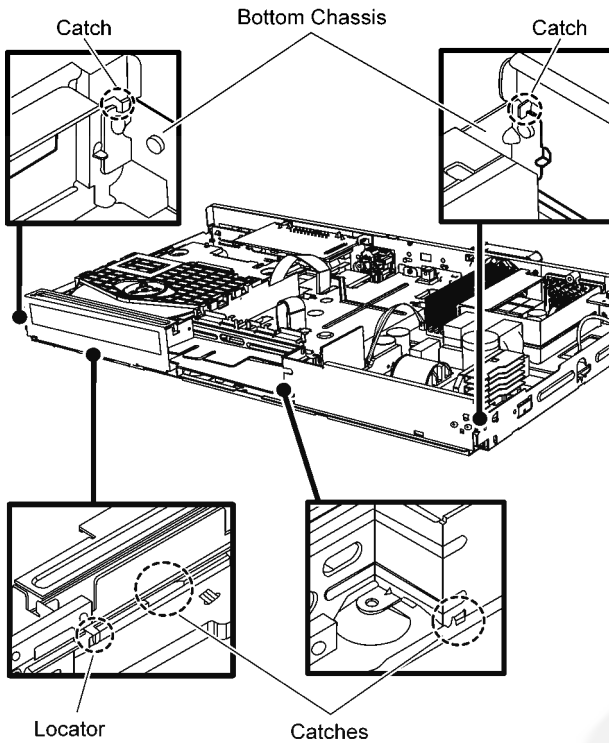


Step 2 Remove 2 screws.

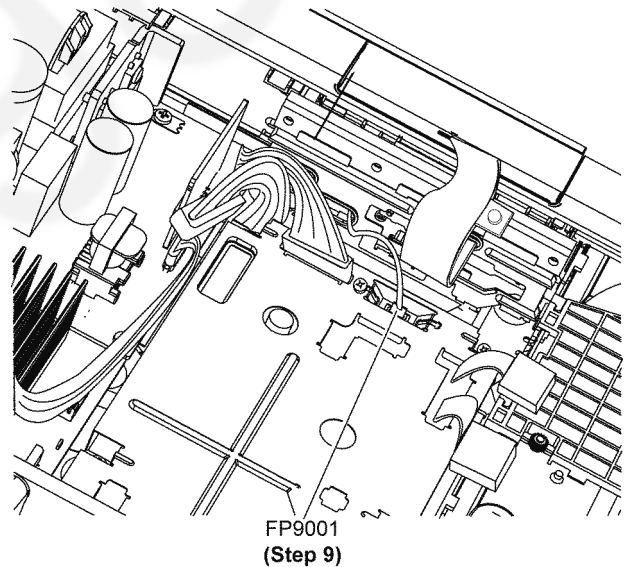
Note: Replace the Gaskets if broken.



Caution: During assembly, ensure that Front Shield Plate is properly located & fully caught onto Bottom Chassis.



Step 9 Detach 10P wire at the connector (FP9001) on Main P.C.B..



Step 10 Remove 4 screws.

8.16. Disassembly of Main P.C.B.

• Refer to "Disassembly of Top Cabinet"

Step 1 Detach 18P FFC at the connector (CN2006) on Main P.C.B..

Step 2 Detach 22P FFC at the connector (CN2002) on Main P.C.B..

Step 3 Detach 15P FFC at the connector (CN2007) on Main P.C.B..

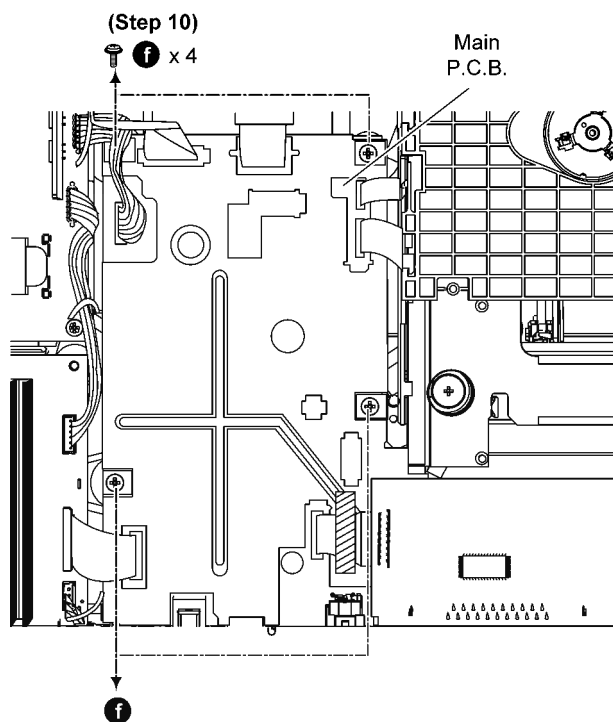
Step 4 Detach 7P FFC at the connector (FP8251) on Main P.C.B..

Step 5 Detach 24P FPC at the connector (FP8531) on Main P.C.B..

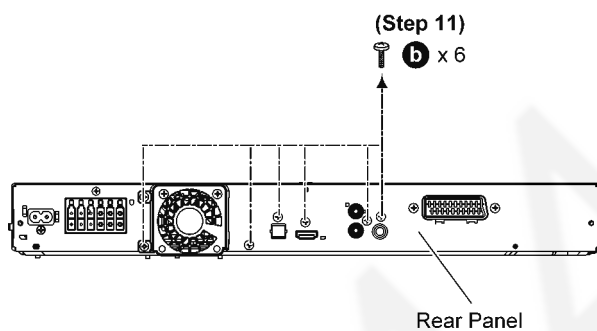
Step 6 Detach 28P FPC at the connector (CN2009) on Main P.C.B..

Step 7 Lift up the wire clamper.

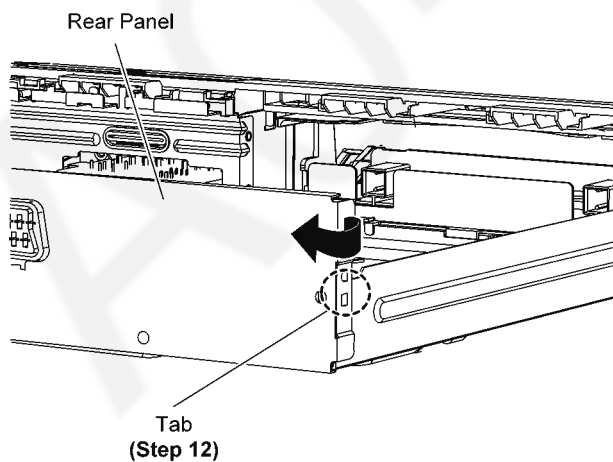
Step 8 Detach 10P Cable at the connector (CN2004) on Main P.C.B..



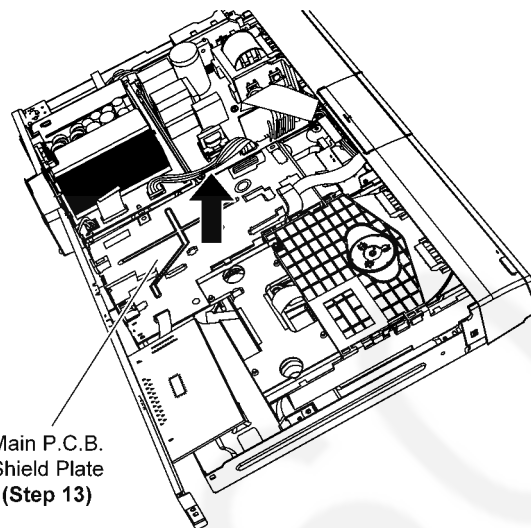
Step 11 Remove 6 screws.



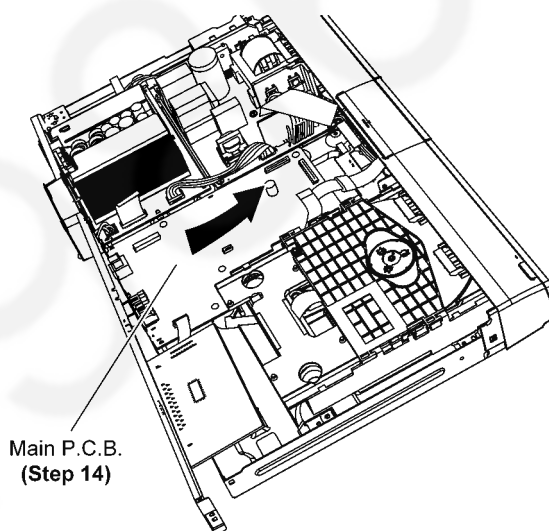
Step 12 Release the tab of the right side of the Rear Panel in the direction of arrow.



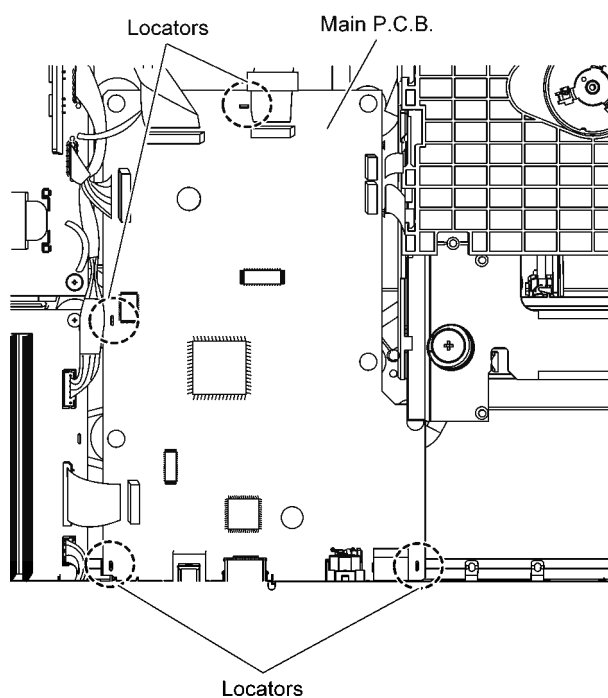
Step 13 Lift up to remove Main P.C.B. Shield Plate.



Step 14 Remove the Main P.C.B..



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



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

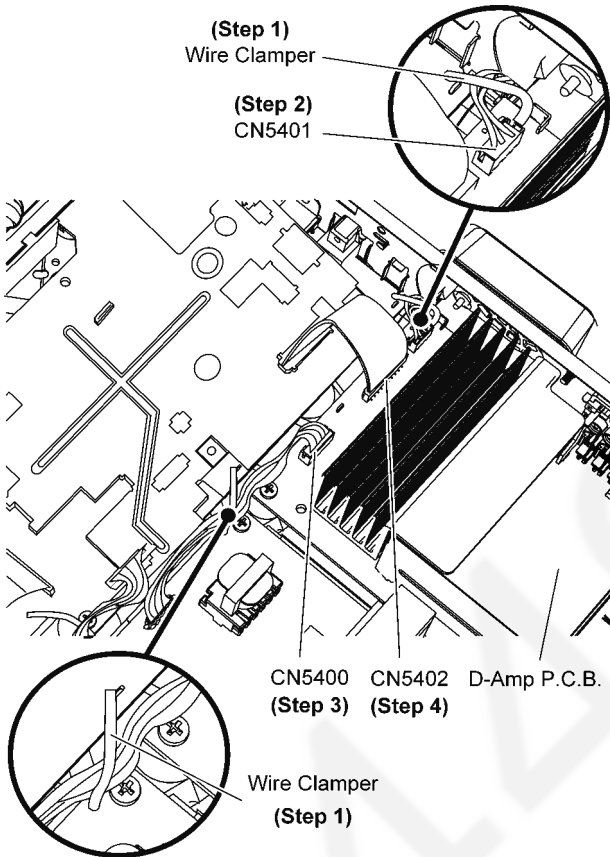
• Refer to “Disassembly of Ac Inlet P.C.B.”

Step 1 Lift Up 2 Wire Clampers.

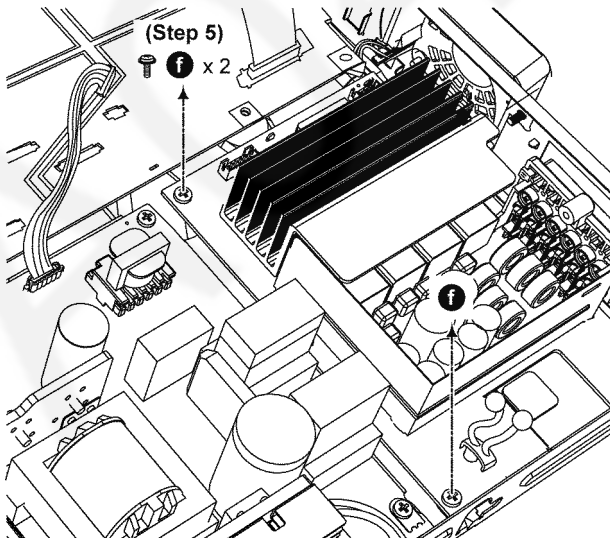
Step 2 Detach 3P Wire at the connector (CN5401) on D-Amp P.C.B..

Step 3 Detach 6P Cable at the connector (CN5400) on D-Amp P.C.B..

Step 4 Detach 18P cable at the connector (CN5402) on D-Amp P.C.B..

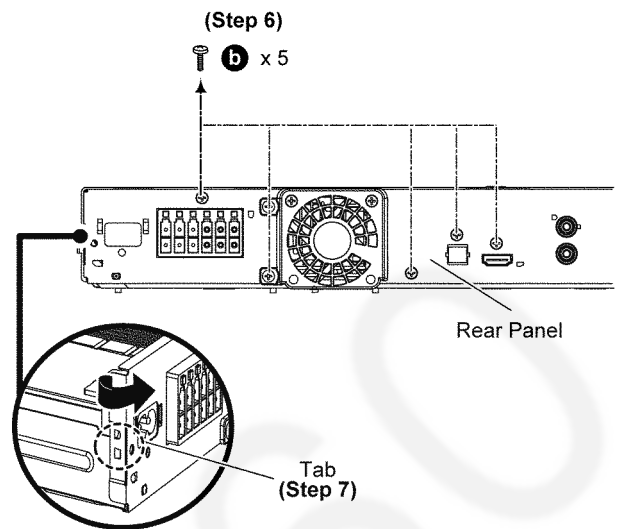


Step 5 Remove 2 screws on D-Amp P.C.B..

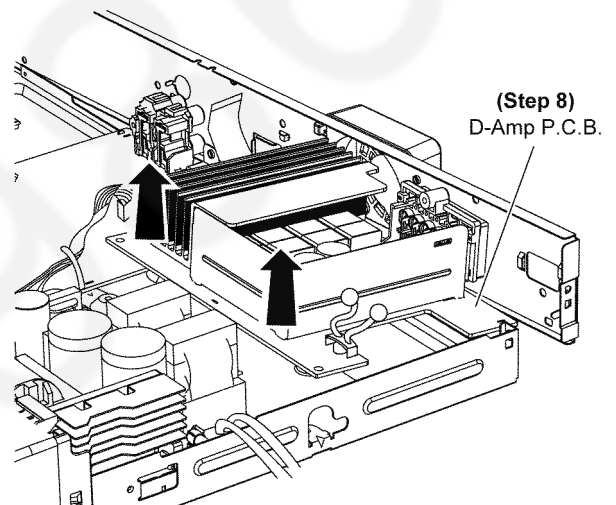


Step 6 Remove 5 screws.

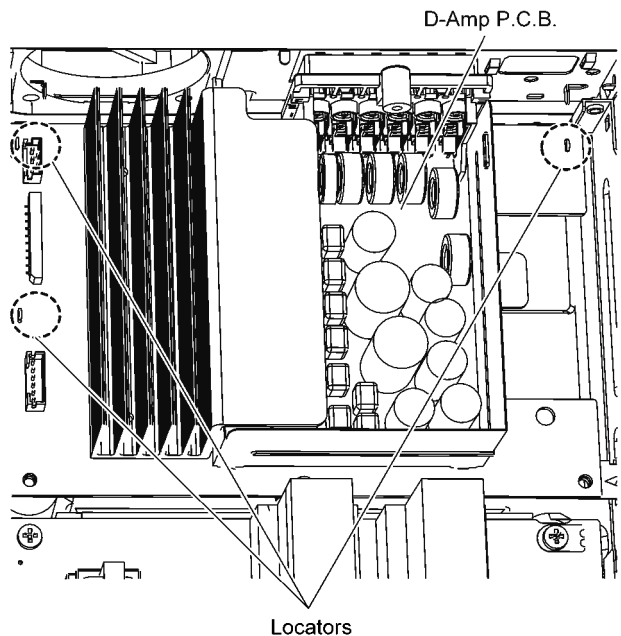
Step 7 Release the tab of the side of the Rear Panel in the direction of arrow.



Step 8 Slightly lift up to remove D-Amp P.C.B..



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



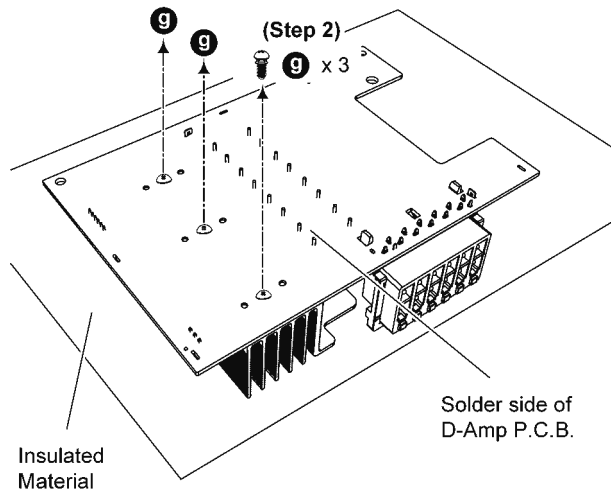
8.18. Replacement of Digital Amplifier IC (IC5100/IC5200)

• Refer to "Disassembly of D-Amp P.C.B."

8.18.1. Disassembly of Digital Amplifier IC (IC5100/IC5200)

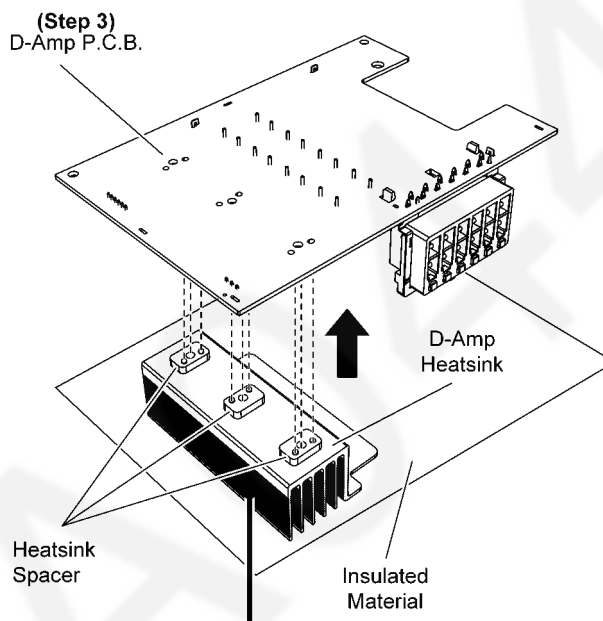
Step 1 Place the D-Amp P.C.B. on an insulated material.

Step 2 Remove 3 screws on Solder side of D-Amp P.C.B..



Step 3 Lift up the D-Amp P.C.B..

Caution: Keep the Heatsink Spacer in safe place. Place it back during assembling.



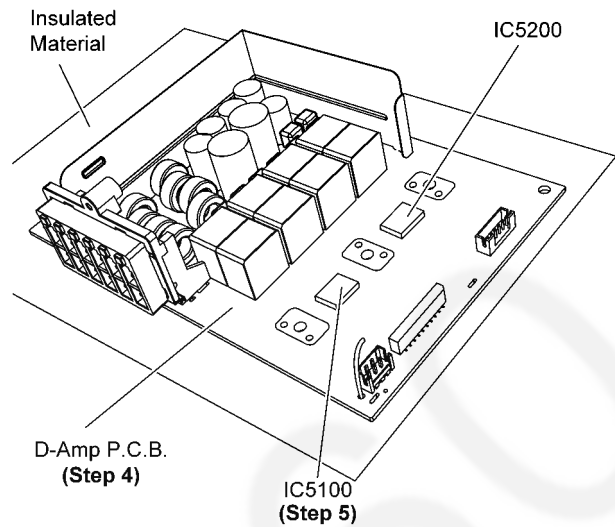
**CAUTION: HOT!!
PLEASE DO NOT
TOUCH THE HEAT SINK**

Step 4 Upset the D-Amp P.C.B..

Step 5 Desolder pins of Digital Amplifier IC (IC5100).

Step 6 Remove Digital Amplifier IC (IC5100).

Note: For disassembling of Digital Amplifier IC (IC5200), repeat the (Step 1) to (Step 6) of 8.18.1.



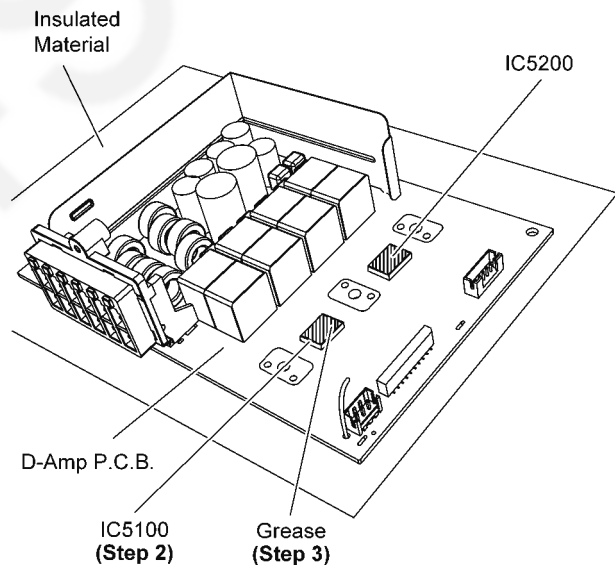
8.18.2. Assembly of Digital Amplifier IC (IC5100/IC5200)

Step 1 Mount the Digital Amplifier IC (IC5100) onto the D-Amp P.C.B..

Step 2 Solder pins of Digital Amplifier IC (IC5100).

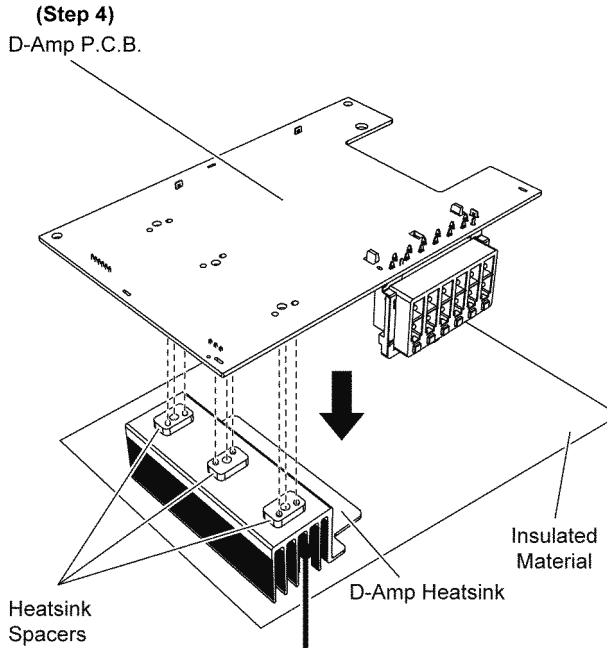
Caution: Ensure that the pins of Digital Amplifier IC (IC5100) is positioned correctly on D-Amp P.C.B. before soldering check solderability.

Step 3 Apply grease onto the top side of the Digital Amplifier IC (IC5100).



Step 4 Upset the D-Amp P.C.B..

Caution: During assembling, ensure that heatsink spacers is seated properly onto D-Amp Heatsink.



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

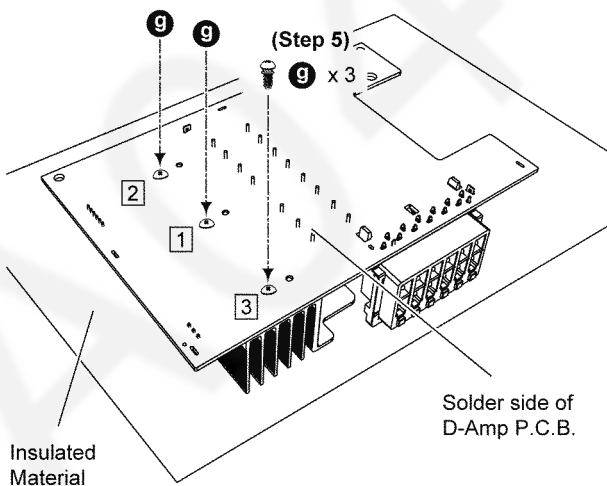
Step 5 Fix 3 screws.

Caution: During assembling, ensure that screwing sequence is strictly follow to the illustration shown.

Note: For assembling of Digital Amplifier IC (IC5200), repeat the (Step 1) to (Step 5) of 8.18.2.

Screwing Sequence:

1 → 2 → 3



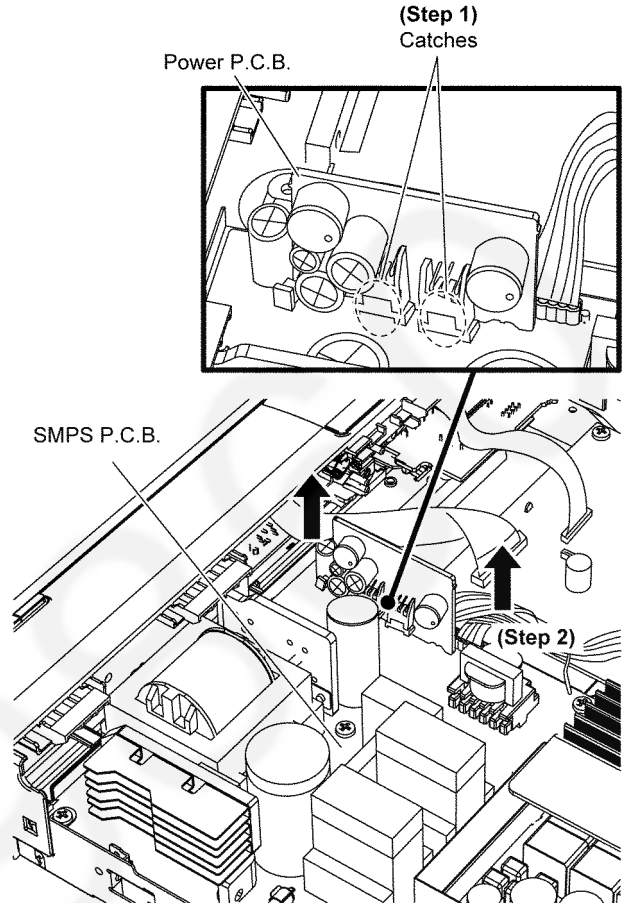
8.19. Disassembly of Power P.C.B.

• Refer to “Disassembly of Top Cabinet”

Step 1 Release 2 catches.

Step 2 Remove Power P.C.B. in the direction of arrow.

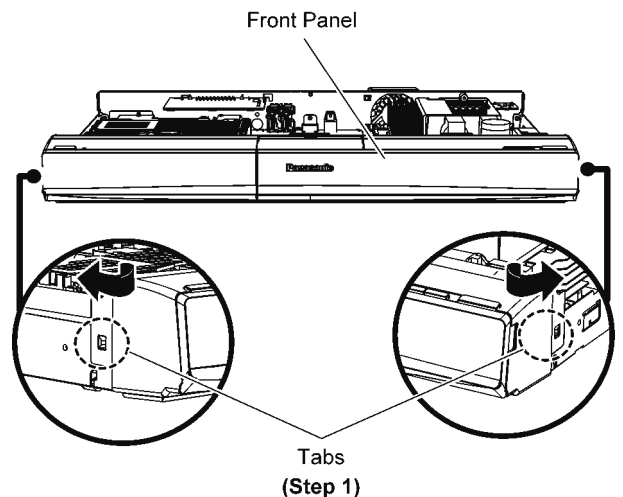
Caution: During assembling, ensure that Power P.C.B. is properly attached & fully connected to SMPS P.C.B..



8.20. Disassembly of SMPS P.C.B.

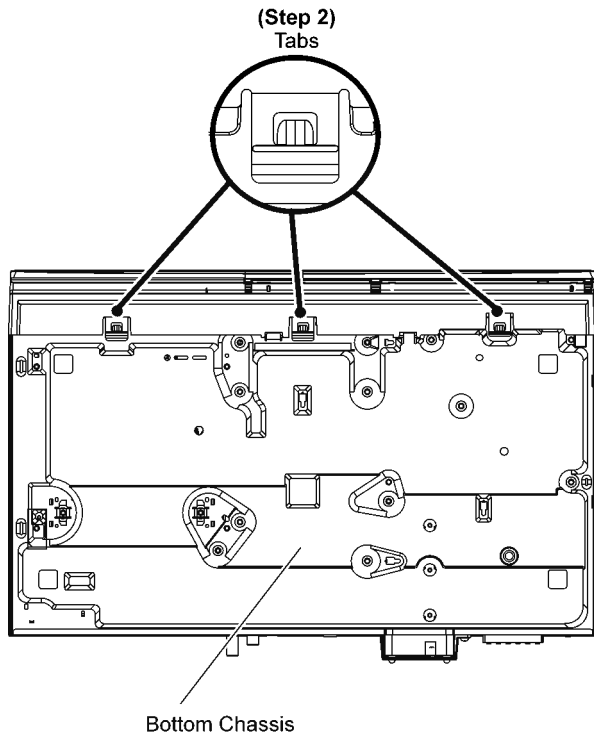
• Refer to “Disassembly of Power P.C.B.”

Step 1 Release the 2 tabs at each side of the Front Panel in the direction of arrow.

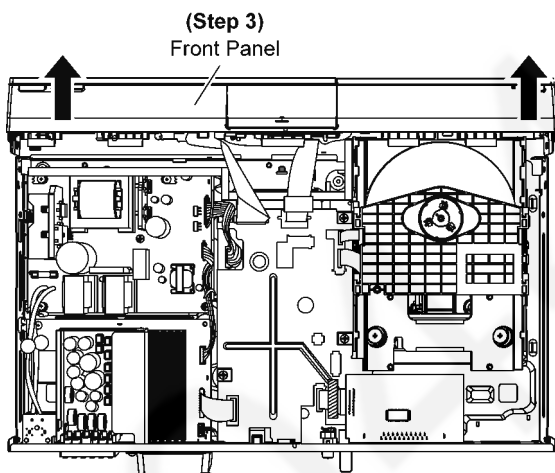


Step 2 Release the 3 tabs at the Bottom Chassis.

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



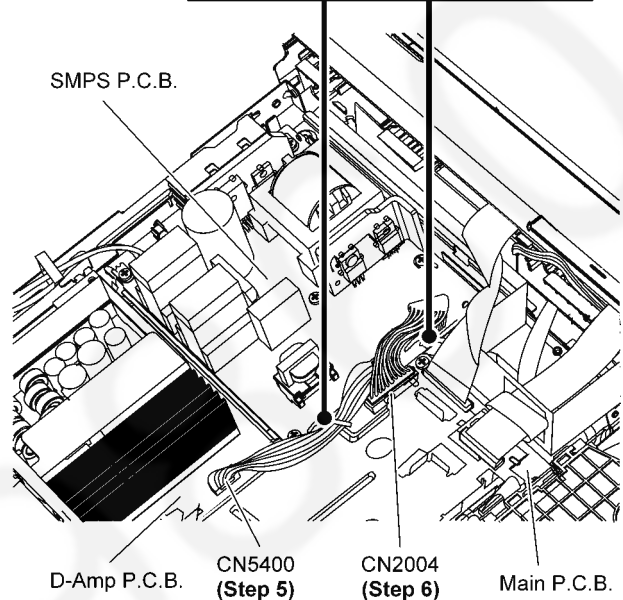
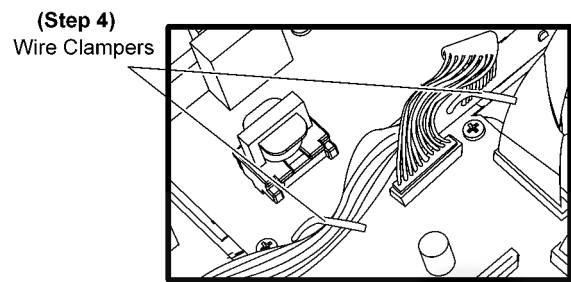
Step 3 Detach the Front Panel slightly forward.



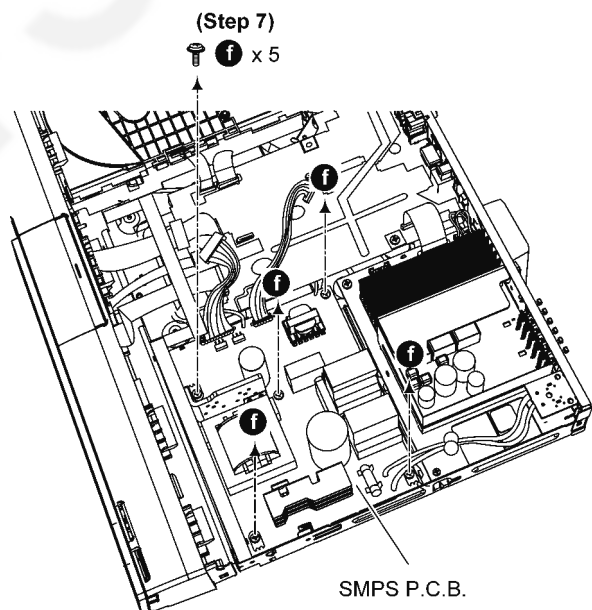
Step 4 Lift up the Wire Clampers.

Step 5 Detach 6P Cable wire at the connector (CN5400) on D-Amp P.C.B..

Step 6 Detach 10P Cable wire at the connector (CN2004) on Main P.C.B..

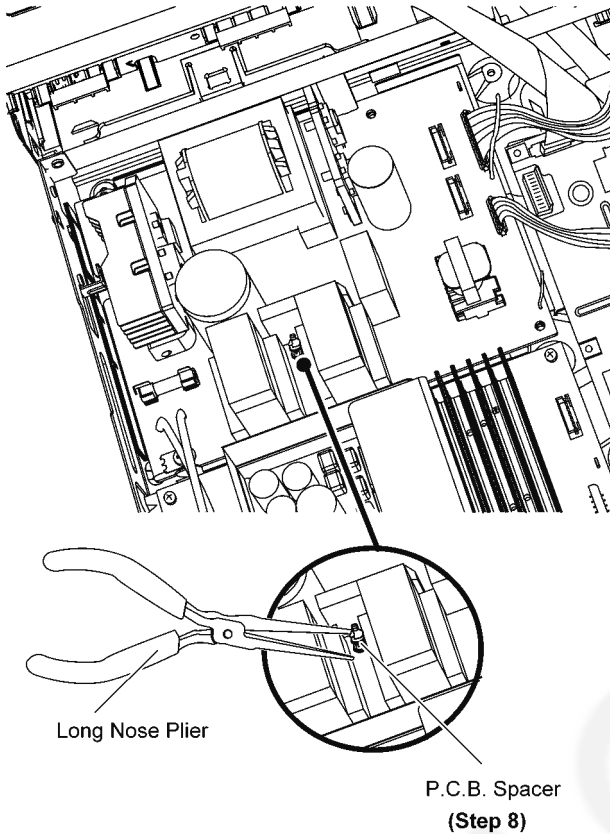


Step 7 Remove 5 screws on SMPS P.C.B..

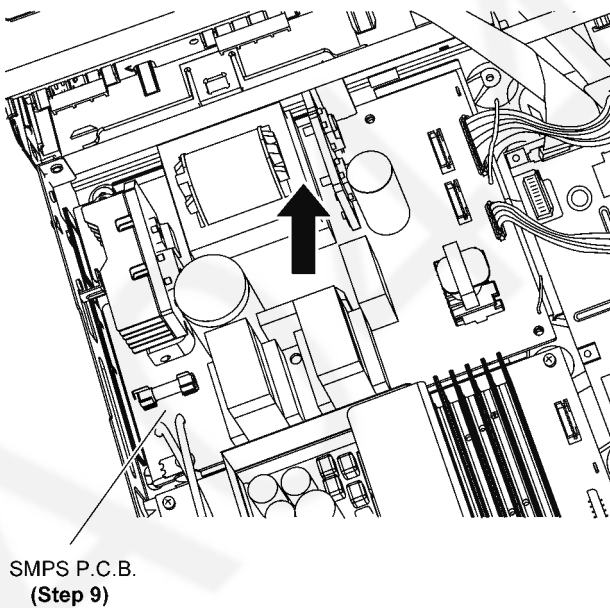


Step 8 Release P.C.B. Spacer by using long nose plier.

Caution: During releasing P.C.B. Spacer, avoid touching the transformer & surrounding parts as it may lead to electric shock or injuries due to high temperature.



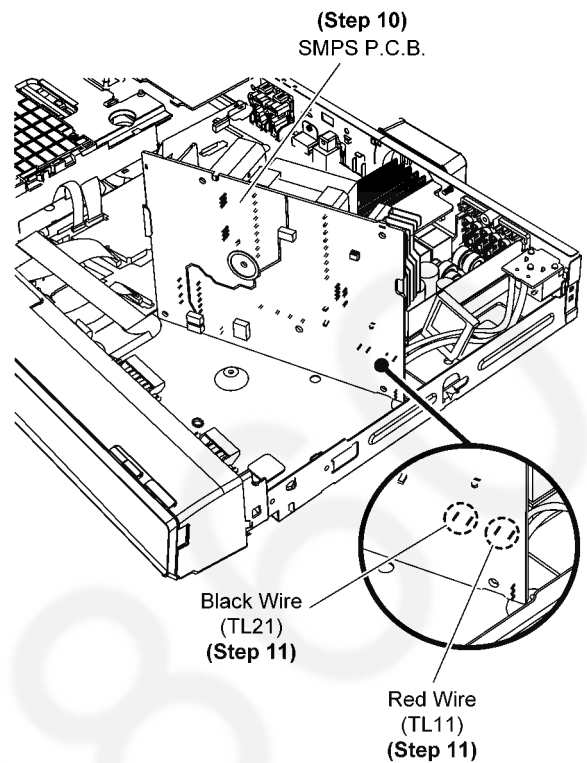
Step 9 Lift up SMPS P.C.B. in the direction of arrow.



Step 10 Upset the SMPS P.C.B. according to diagram shown.

Step 11 Desolder Black Wire (TL21) and Red Wire (TL11) on solder side of SMPS P.C.B..

Step 12 Remove SMPS P.C.B..

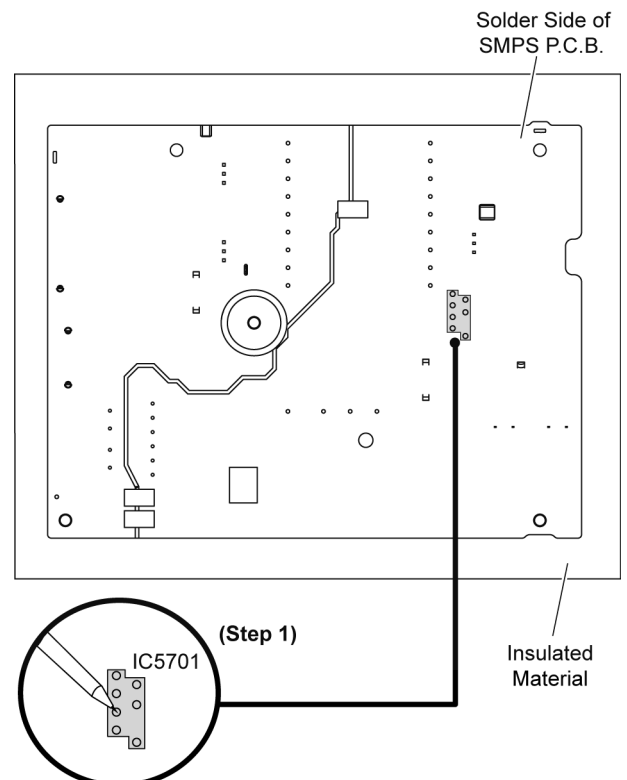


8.21. Replacement of Switching Regulator IC (IC5701)

• Refer to “Disassembly of SMPS P.C.B.”

8.21.1. Disassembly of Switching Regulator IC (IC5701)

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



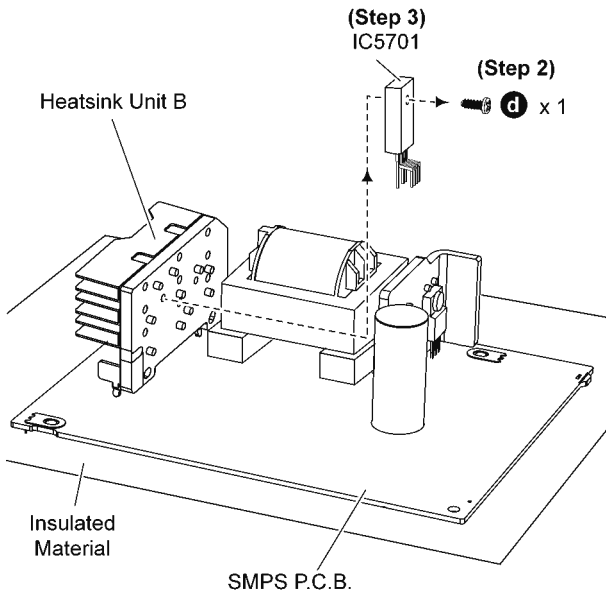
Step 2 Remove 1 screw from the Switching Regulator IC

(IC5701).

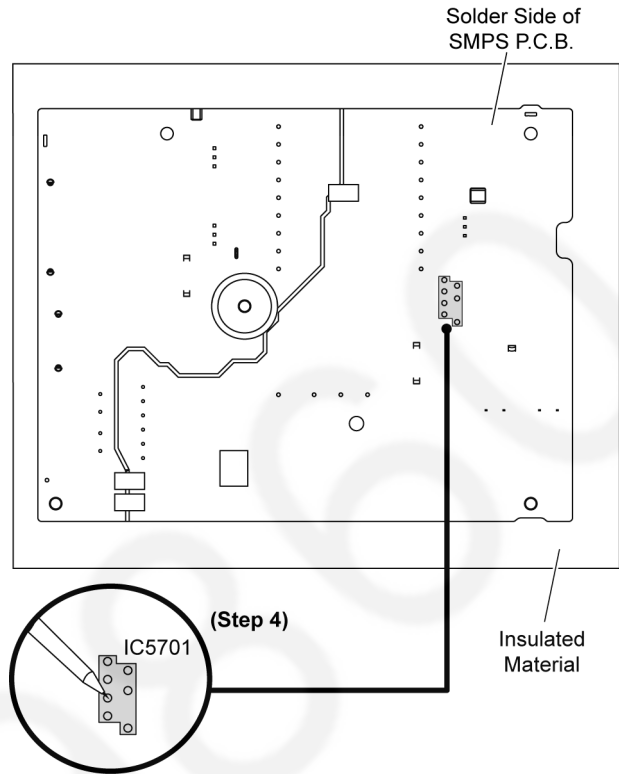
Step 3 Remove the Switching Regulator IC (IC5701).

Caution: Avoid touching the Heatsink Unit B due to its high temperature after prolonged use. Touching it may lead to injuries.

Note: Refer to the diagrams of SMPS P.C.B. (Item 18.4) for location of the part.



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



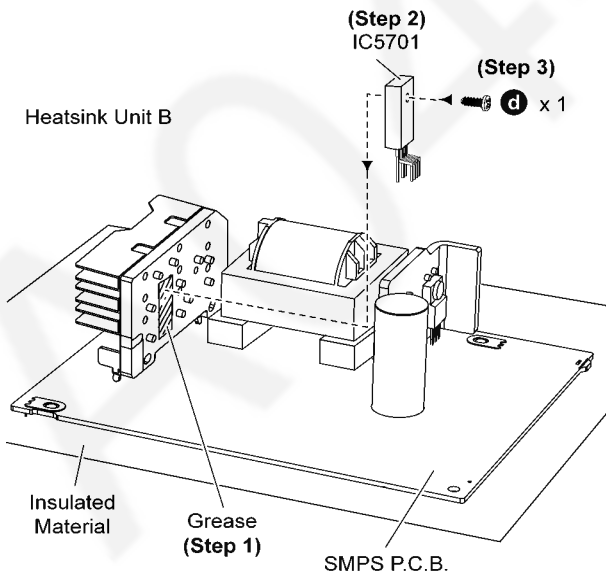
8.21.2. Assembly of Switching Regulator IC (IC5701)

Step 1 Apply grease to the Heatsink Unit B.

Step 2 Fix the Switching Regulator IC (IC5701) onto the SMPS P.C.B..

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

Step 3 Fix and screw the Switching Regulator IC (IC5701) to the Heatsink Unit B.



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

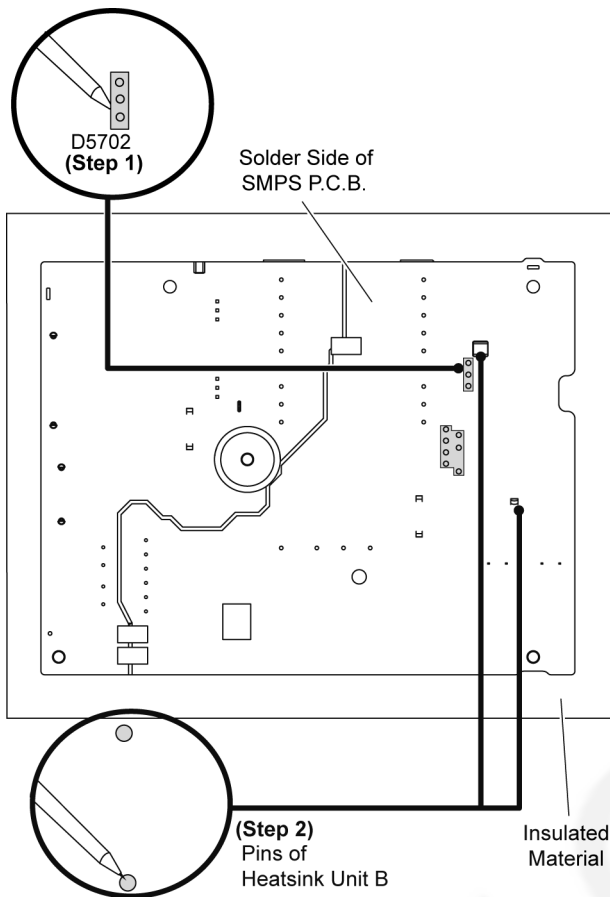
8.22. Replacement of Rectifier Diode (D5702)

• Refer to “Disassembly of SMPS P.C.B.”

8.22.1. Disassembly of Rectifier Diode (D5702)

Step 1 Desolder pins of the Rectifier Diode (D5702) on the solder side of SMPS P.C.B..

Step 2 Desolder pins of the Heatsink Unit B.



Step 3 Remove 1 screw from the Switching Regulator IC (IC5701).

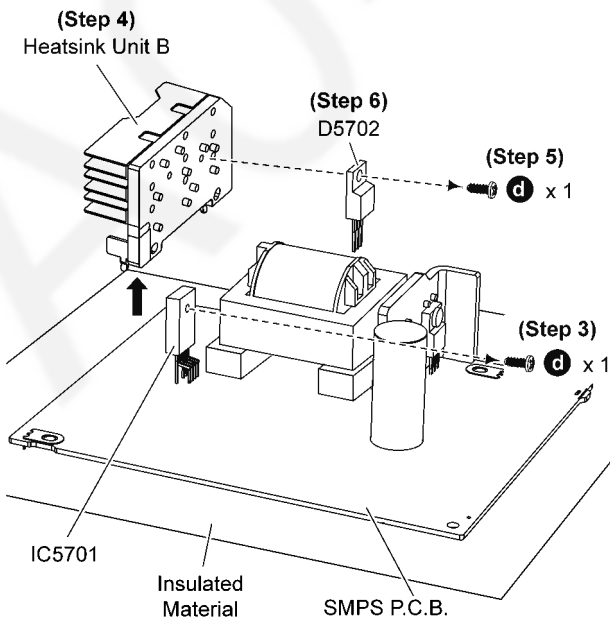
Step 4 Remove the Heatsink Unit B together with Rectifier Diode (D5702) in the direction of arrows.

Step 5 Remove 1 screw from the Rectifier Diode (D5702).

Step 6 Remove the Rectifier Diode (D5702) from the Heatsink Unit B.

Caution: Avoid touching the Heatsink Unit B due to its high temperature after prolonged use. Touching it may lead to injuries.

Note: Refer to the diagrams of SMPS P.C.B. (Item 18.4) for location of the part.



8.22.2. Assembly of Rectifier Diode (D5702)

Step 1 Apply grease to the Heatsink Unit B.

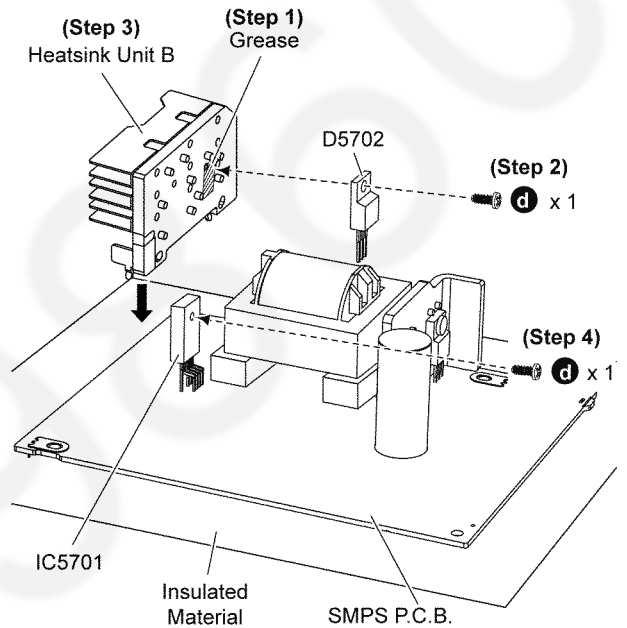
Step 2 Fix and screw the Rectifier Diode (D5702) to the Heatsink Unit B.

Caution: Ensure the Rectifier Diode (D5702) is tightly screwed to the Heatsink Unit B.

Step 3 Mount the Heatsink Unit B with Rectifier Diode (D5702) onto SMPS P.C.B..

Caution: Ensure the Heatsink Unit B with Rectifier Diode (D5702) are properly seated on SMPS P.C.B..

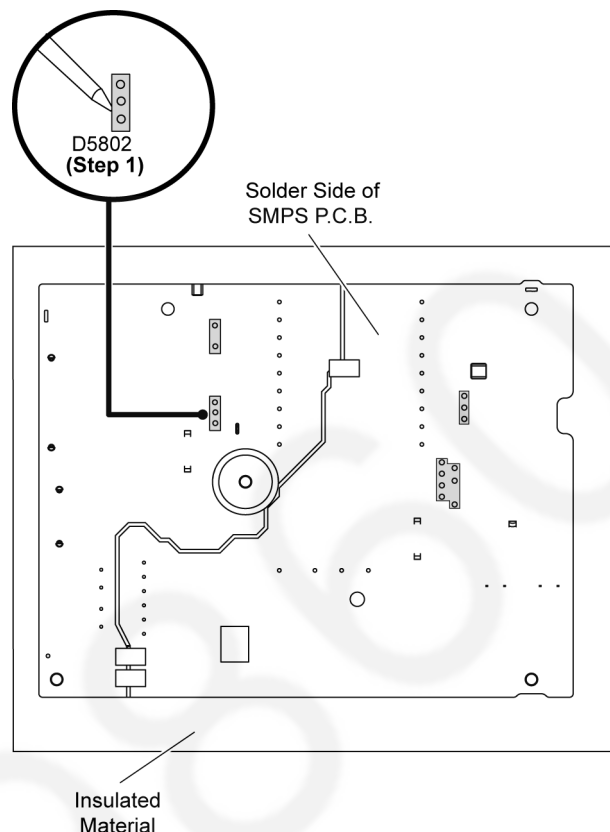
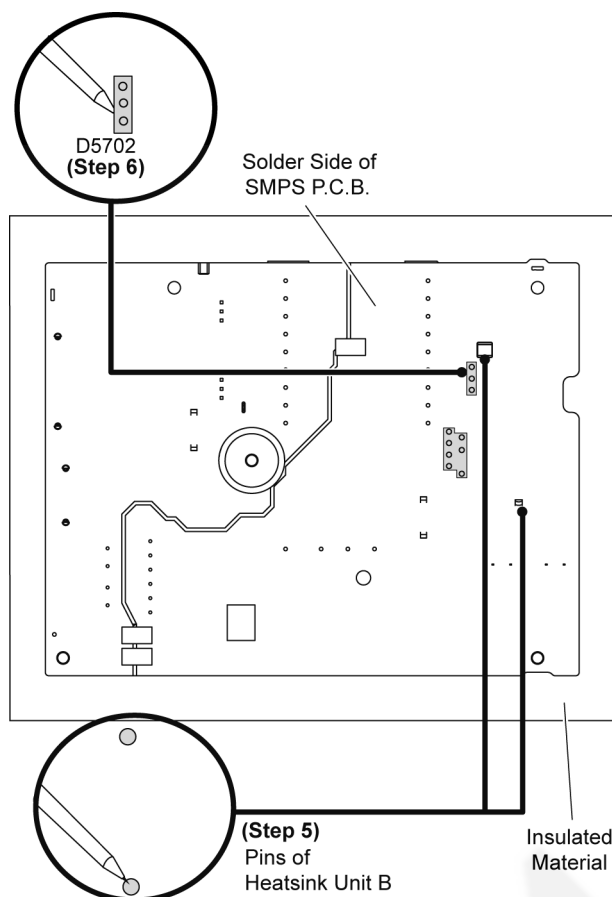
Step 4 Fix and screw the Switching Regulator IC (IC5701) to the Heatsink Unit B.



Step 5 Solder pins of the Heatsink Unit B on the solder side of SMPS P.C.B..

Step 6 Solder pins of the Rectifier Diode (D5702) on the solder side of SMPS P.C.B..

Caution: Ensure pins of the Rectifier Diode (D5702) are properly seated before soldered onto SMPS P.C.B..



8.23. Replacement of Regulator Diode (D5802)

• Refer to "Disassembly of SMPS P.C.B."

8.23.1. Disassembly of Regulator Diode (D5802)

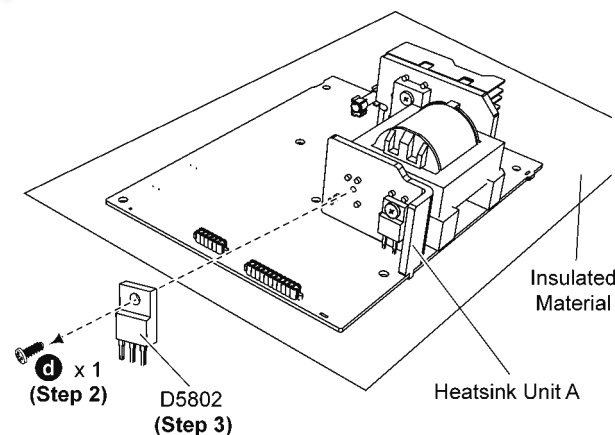
Step 1 Desolder pins of the Regulator Diode (D5802) on the solder side of SMPS P.C.B..

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

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

Caution: Avoid touching the Heatsink Unit A due to its high temperature after prolonged use. Touching it may lead to injuries.

Note: Refer to the diagrams of SMPS P.C.B. (Item 18.4) for location of the electrical components.



8.23.2. Assembly of Regulator Diode (D5802)

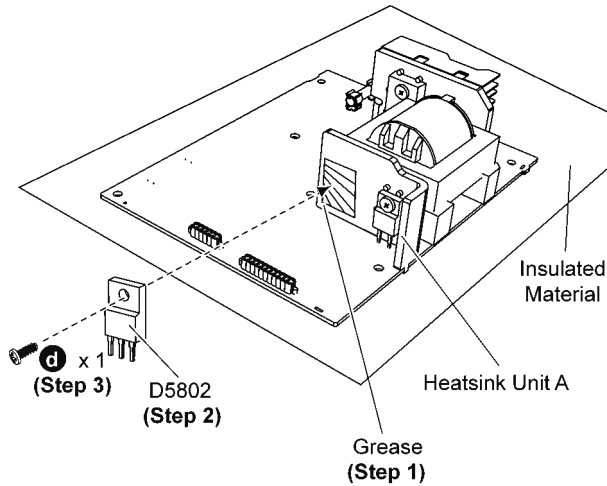
Step 1 Apply grease to the Heatsink Unit A.

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

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

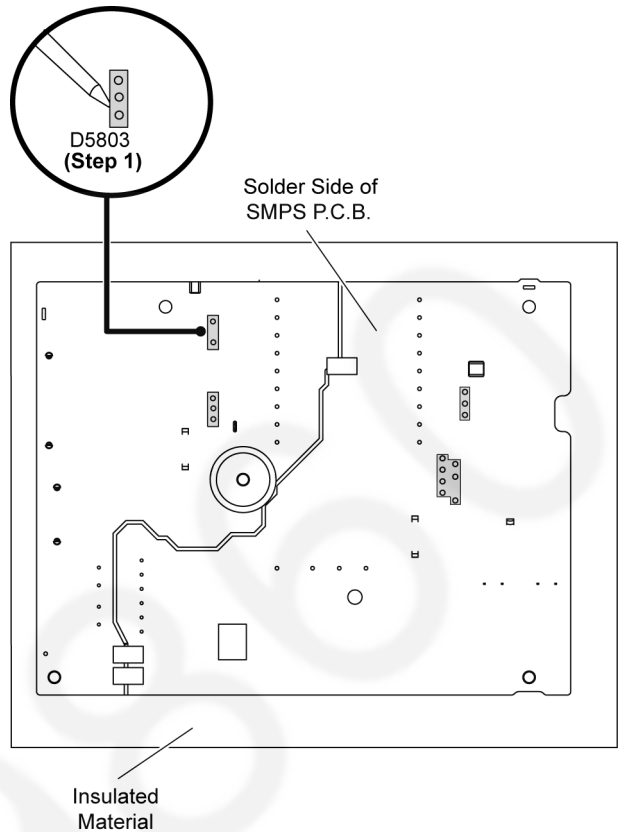
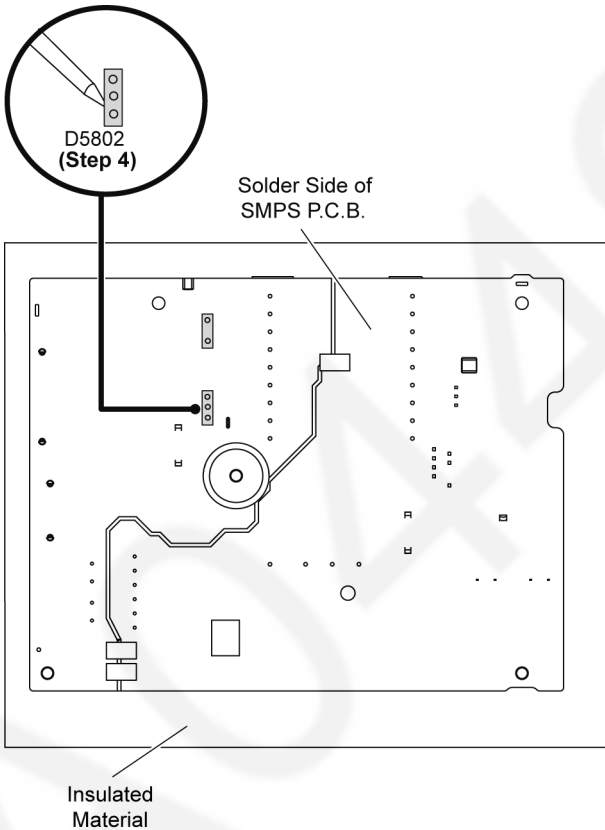
Step 3 Fix and screw the Regulator Diode (D5802) to the Heatsink Unit A.

Caution: Ensure the Regulator Diode (D5802) is tightly screwed to the Heatsink Unit A.



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

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

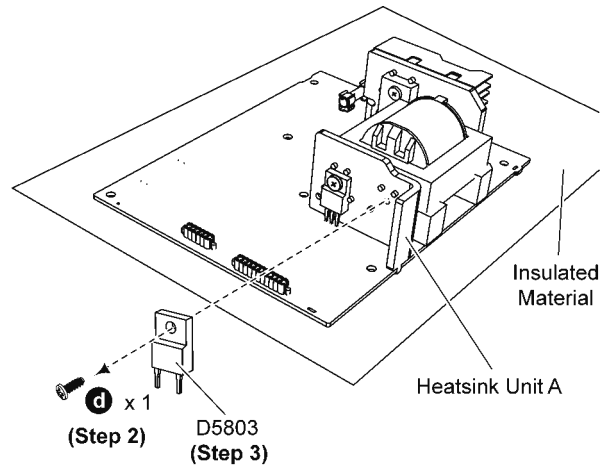


Step 2 Remove 1 screw from the Regulator Diode (D5803).

Step 3 Remove the Regulator Diode (D5803) from the SMPS P.C.B..

Caution: Avoid touching the Heatsink Unit A due to its high temperature after prolonged use. Touching it may lead to injuries.

Note: Refer to the diagrams of SMPS P.C.B. (Item 18.4) for location of the electrical components.



8.24. Replacement of Regulator Diode (D5803)

• Refer to “Disassembly of SMPS P.C.B.”

8.24.1. Disassembly of Regulator Diode (D5803)

Step 1 Desolder pins of the Regulator Diode (D5803) on the solder side of SMPS P.C.B..

8.24.2. Assembly of Regulator Diode (D5803)

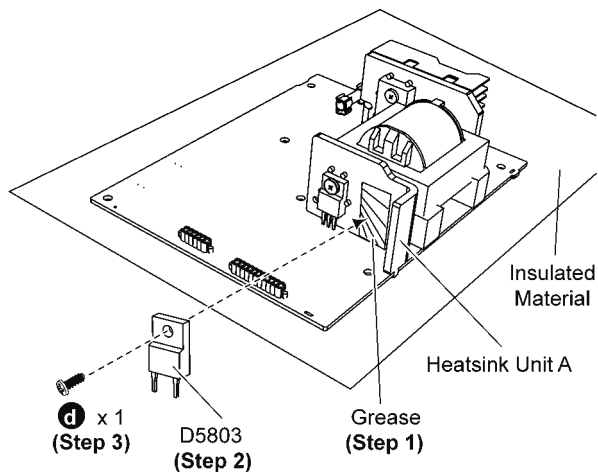
Step 1 Apply grease to the Heatsink Unit A.

Step 2 Mount the Regulator Diode (D5803) on SMPS P.C.B..

Caution: Ensure pins of the Regulator Diode (D5803) are properly seated on SMPS P.C.B..

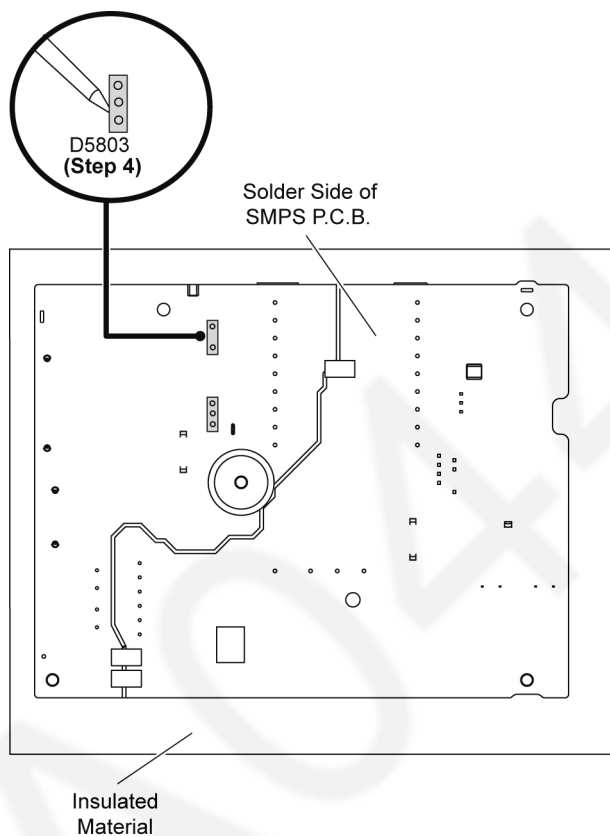
Step 3 Fix and screw the Regulator Diode (D5803) to the Heatsink Unit A.

Caution: Ensure the Regulator Diode (D5803) is tightly screwed to the Heatsink Unit A.



Step 4 Solder pins of the Regulator Diode (D5803) on the solder side of SMPS P.C.B..

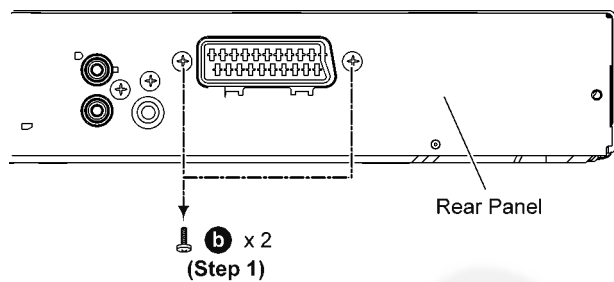
Caution: Ensure pins of the Regulator Diode (D5803) are properly seated before solder onto SMPS P.C.B..



8.25. Disassembly of Scart P.C.B.

• Refer to "Disassembly of Top Cabinet"

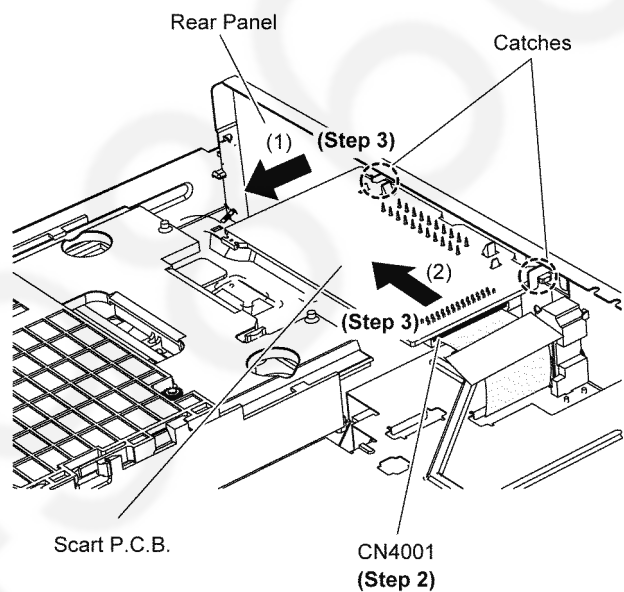
Step 1 Remove 2 screws.



Step 2 Detach 28P FFC at the connector (CN4001) on Scart P.C.B..

Step 3 Remove the Scart P.C.B. as arrow (1) and (2) shown.

Caution: During assembling, ensure that Scart P.C.B. is properly inserted & fully caught onto Rear Panel.

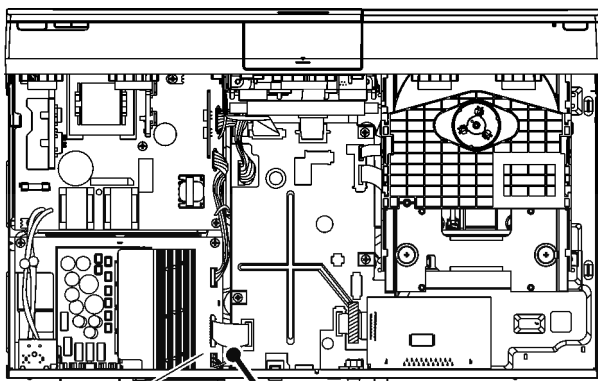


8.26. Disassembly of Fan

• Refer to "Disassembly of Top Cabinet"

Step 1 Lift up the Wire Clamper.

Step 2 Detach the fan unit connector (CN5401) on D-Amp P.C.B..



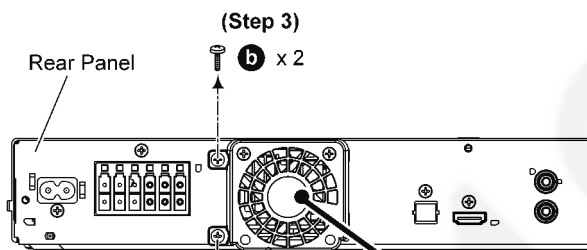
D-Amp P.C.B.

(Step 2)
CN5401

(Step 1)
Wire Clamper

Step 3 Remove 2 screws.

Step 4 Remove Fan Unit.



Rear Panel

(Step 3)

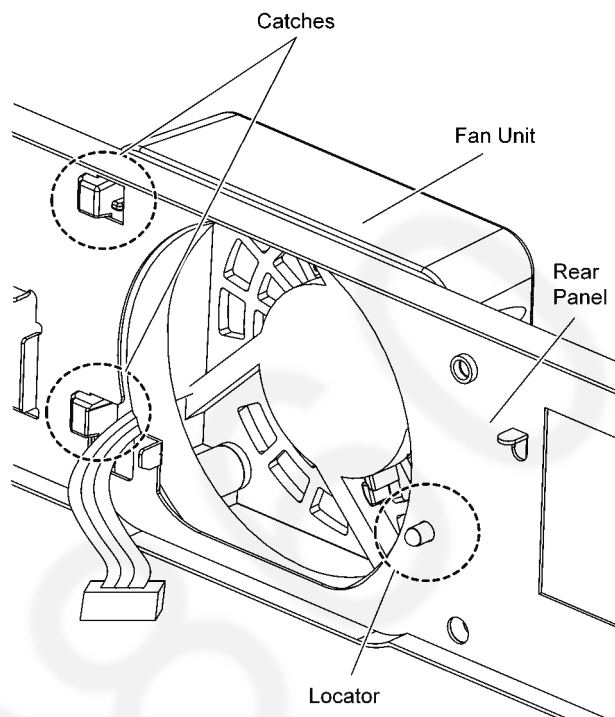
b x 2

b

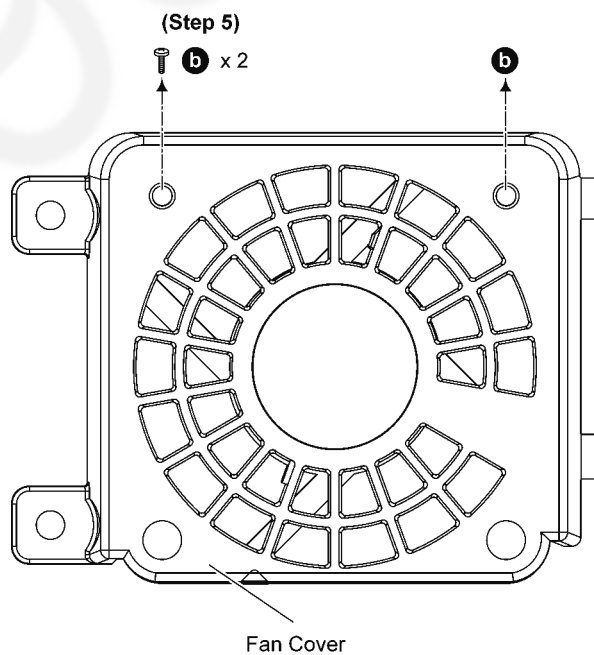
(Step 4)

Fan Unit

Caution: During assembling, ensure Fan Unit is properly located & fully caught onto Rear Panel.



Step 5 Remove 2 screws.



(Step 5)

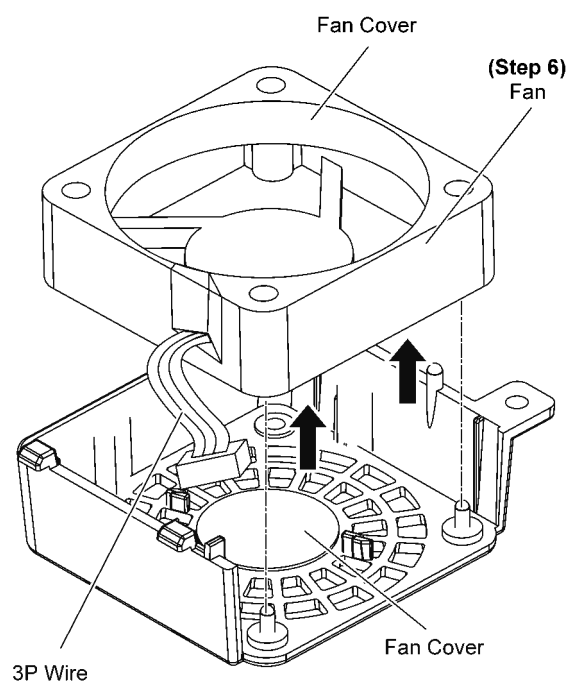
b x 2

b

Fan Cover

Step 6 Lift up to remove Fan.

Caution: During assembling, ensure that 3P Wire is positioned as diagram shown.

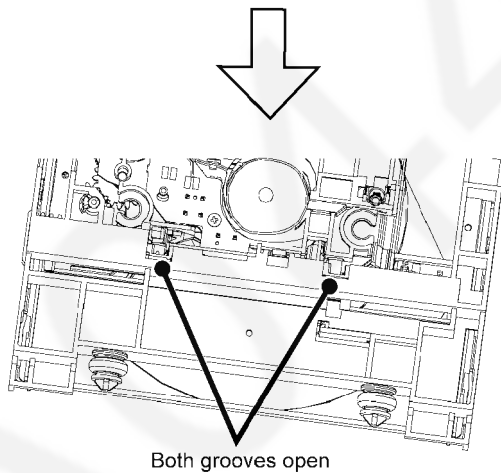
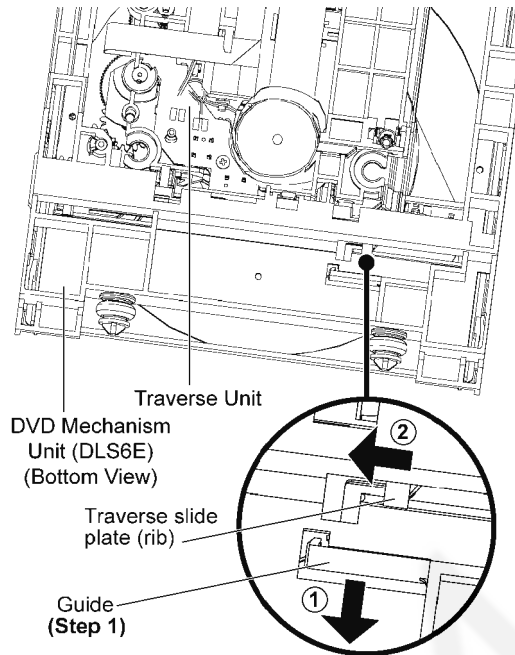


9 Assembling and Disassembling of Traverse Unit

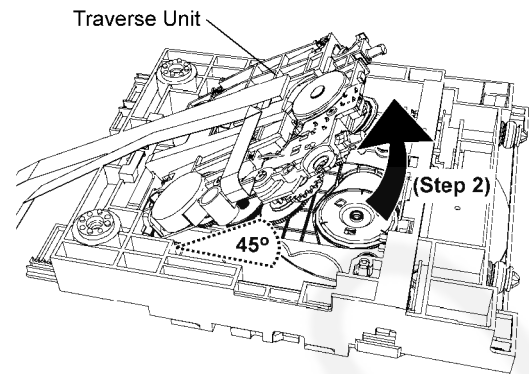
9.1. Disassembly of Traverse Unit

- Refer to “Disassembly of DVD Mechanism Unit (DLS6E)”

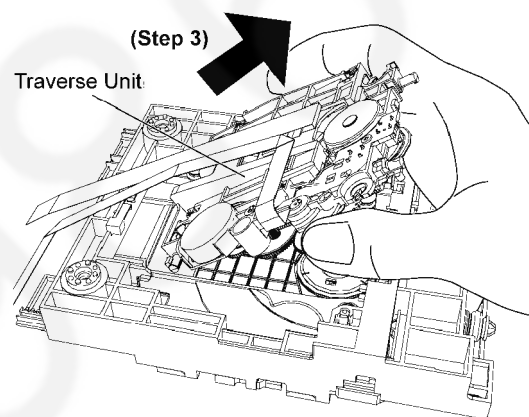
Step 1 Release the guide and slide the traverse slide plate (rib) as arrows shown.



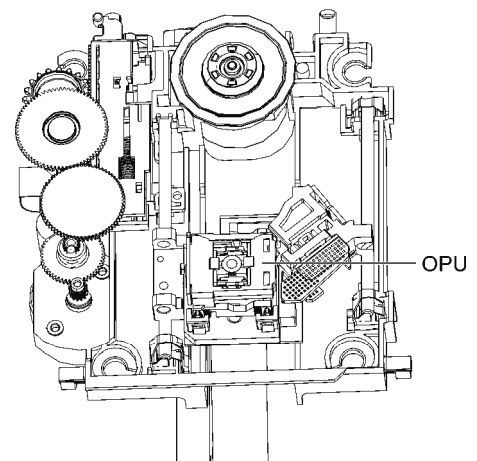
Step 2 Lift up the Traverse unit approximately 45° as shown.



Step 3 Slide out the Traverse unit as arrow shown.

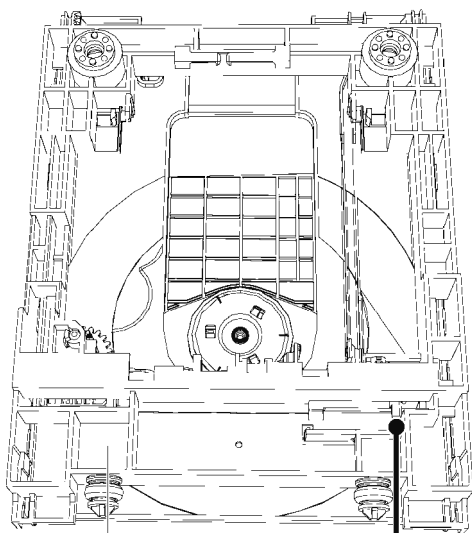


Caution: Do not touch the surface of the Traverse unit and place it so that the OPU is on top.



9.2. Assembly of Traverse Unit

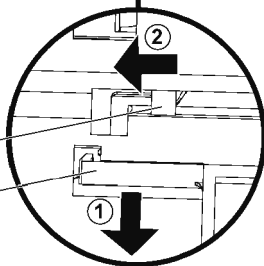
Step 1 Release the guide and slide the traverse slide plate (rib) as arrows shown.



DVD Mechanism Unit (DLS6E)
(Bottom View)

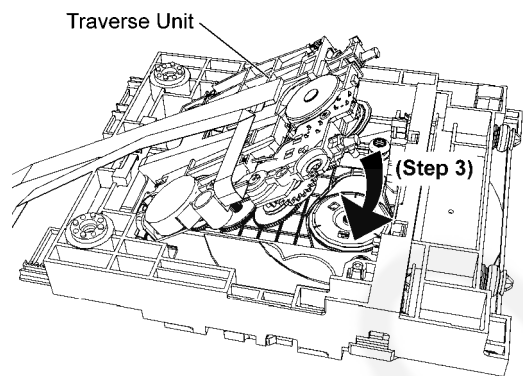
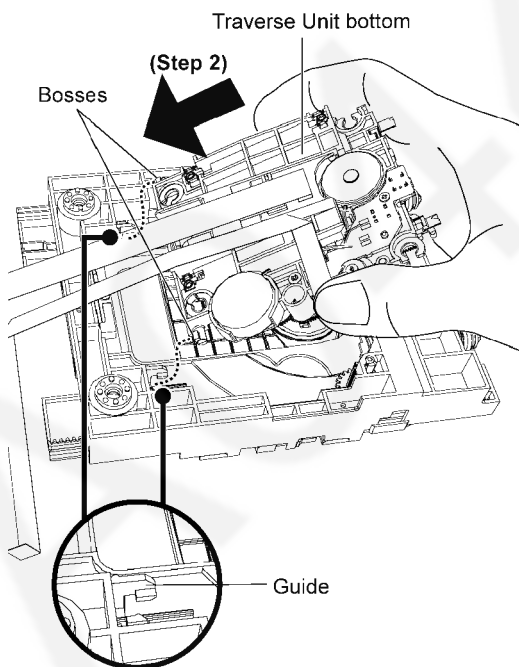
Traverse slide plate (rib)

Guide
(Step 1)



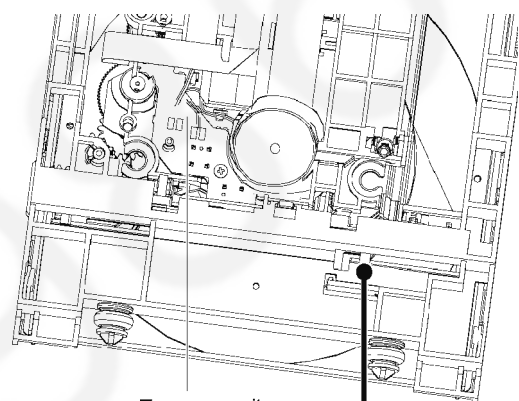
Step 2 Slot the traverse unit approximately 45° into the mecha chassis as arrow shown.

Note: Ensure the bosses fix exactly onto the guides.



(Step 3)

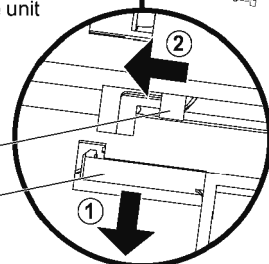
Step 4 Release the guide and slide the traverse slide plate (rib) in the direction of arrows shown to lock in the traverse unit.



Traverse unit

Traverse slide plate (rib)

Guide



Step 3 Place down the traverse unit as arrow shown.

10 Service Position

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

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

10.1.1. Checking & Repairing of Side B of Main P.C.B.

Step 1 Remove Top Cabinet.

Step 2 Detach 18P FFC at the connector (CN2006) on Main P.C.B..

Step 3 Detach 22P FFC at the connector (CN2002) on Main P.C.B..

Step 4 Detach 15P FFC at the connector (CN2007) on Main P.C.B..

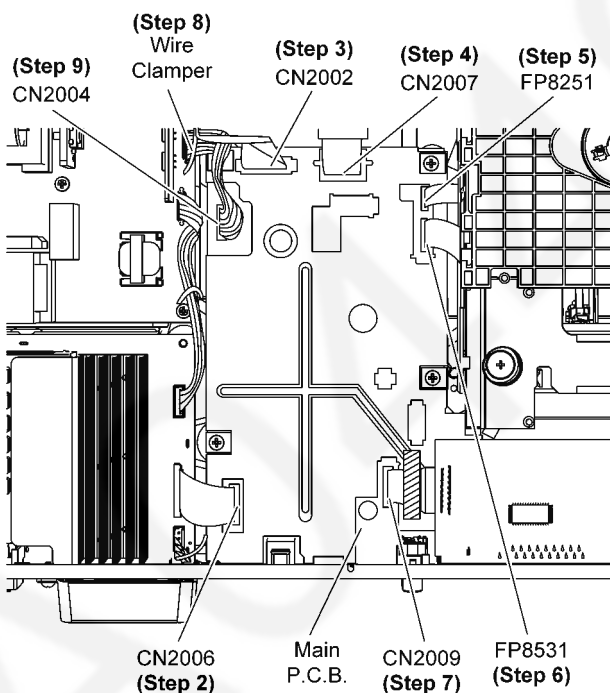
Step 5 Detach 7P FFC at the connector (FP8251) on Main P.C.B..

Step 6 Detach 24P FPC at the connector (FP8531) on Main P.C.B..

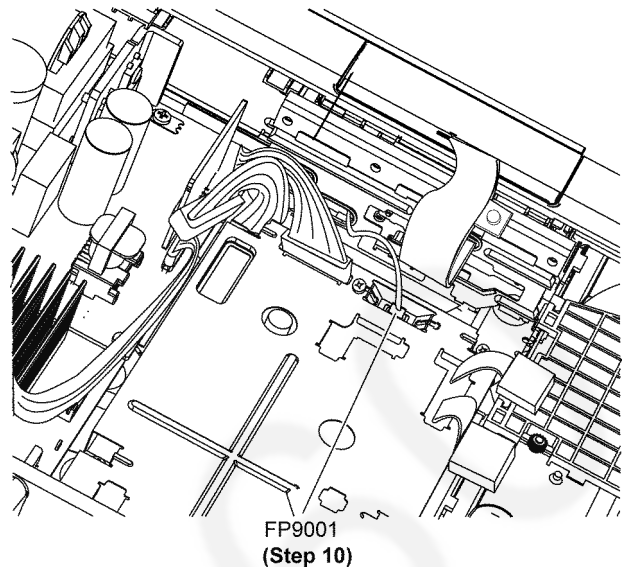
Step 7 Detach 28P FPC at the connector (CN2009) on Main P.C.B..

Step 8 Lift up the wire clamber.

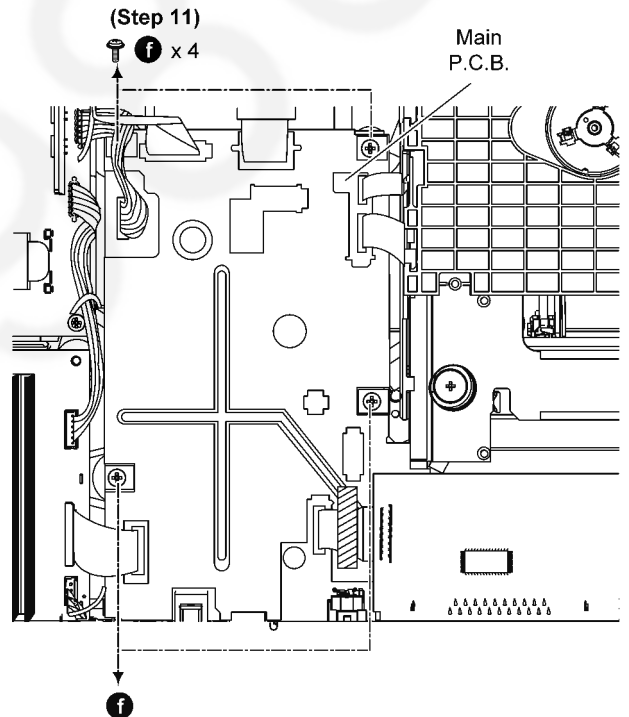
Step 9 Detach 10P Cable at the connector (CN2004) on Main P.C.B..



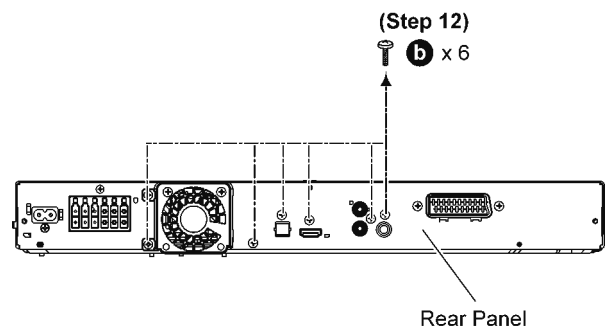
Step 10 Detach 10P wire at the connector (FP9001) on Main P.C.B..



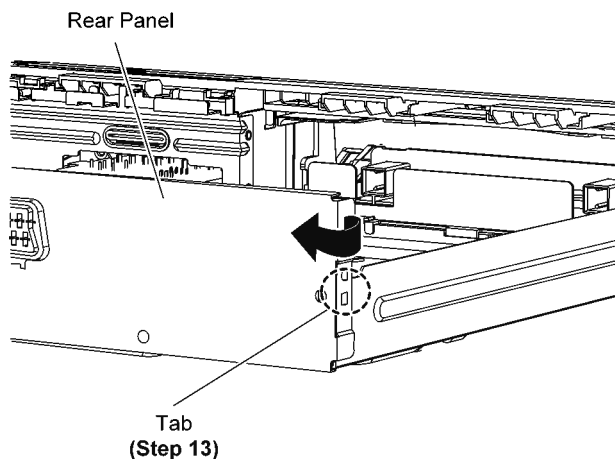
Step 11 Remove 4 screws on Main P.C.B..



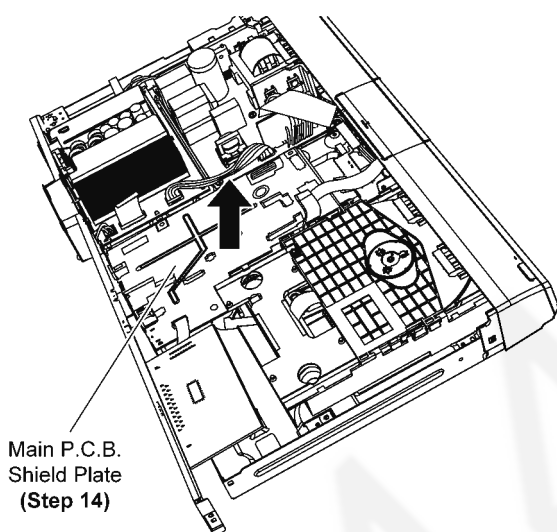
Step 12 Remove 6 screws.



Step 13 Release the tab of the right side of the Rear Panel in the direction of arrow.



Step 14 Lift up to remove Main P.C.B. Shield Plate.



Step 15 Connect 18P FFC to the connector (CN2006) on Main P.C.B..

Step 16 Connect 22P FFC to the connector (CN2002) on Main P.C.B..

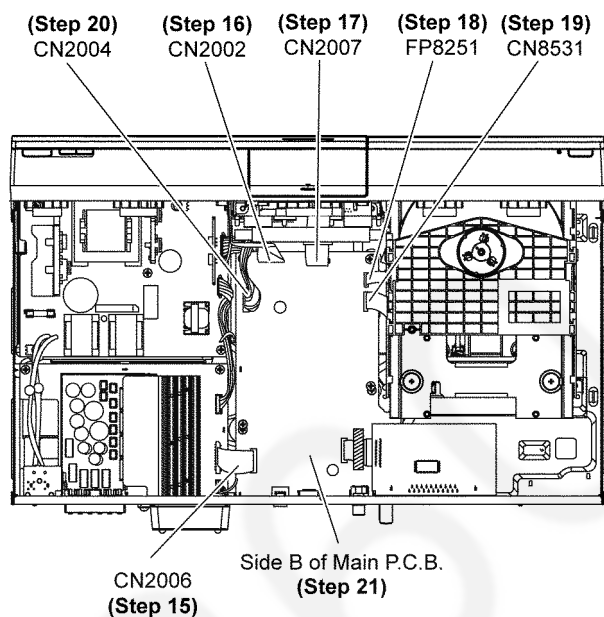
Step 17 Connect 15P FFC to the connector (CN2007) on Main P.C.B..

Step 18 Connect 7P FFC to the connector (FP8251) on Main P.C.B..

Step 19 Connect 24P FFC to the connector (FP8531) on Main P.C.B..

Step 20 Connect 10P Cable wire to the connector (CN2004) on Main P.C.B..

Step 21 Proceed to check and repair Side B of Main P.C.B..

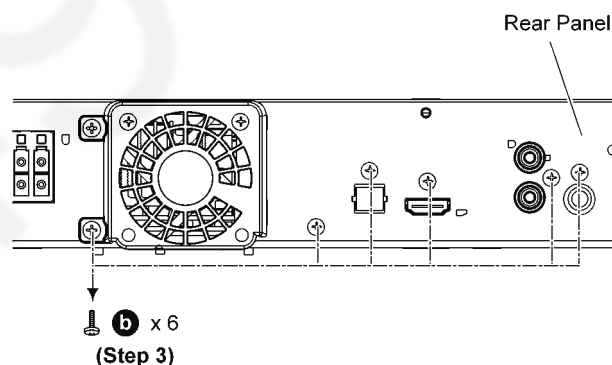


10.1.2. Checking & Repairing of Side A of Main P.C.B.

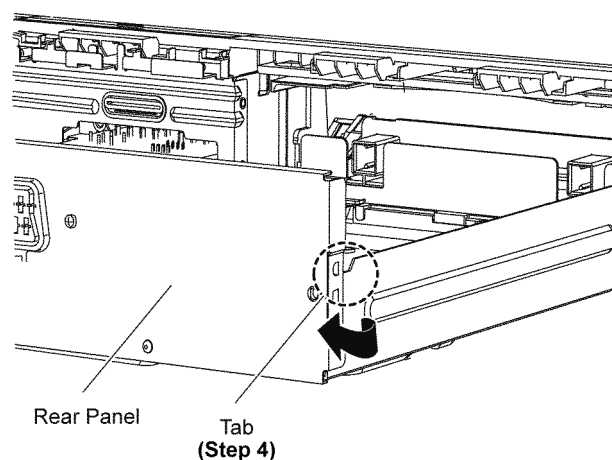
Step 1 Detach 28P FFC at the connector (CN2009) on Main P.C.B..

Step 2 Remove DVD Mechanism Unit (DLS6E).

Step 3 Remove 6 screws.

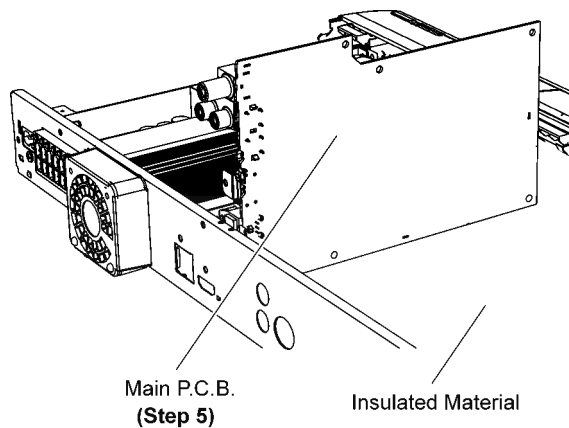


Step 4 Release tab at the right side of the Rear Panel in the direction of arrow.



Step 5 Lift up the Main P.C.B..

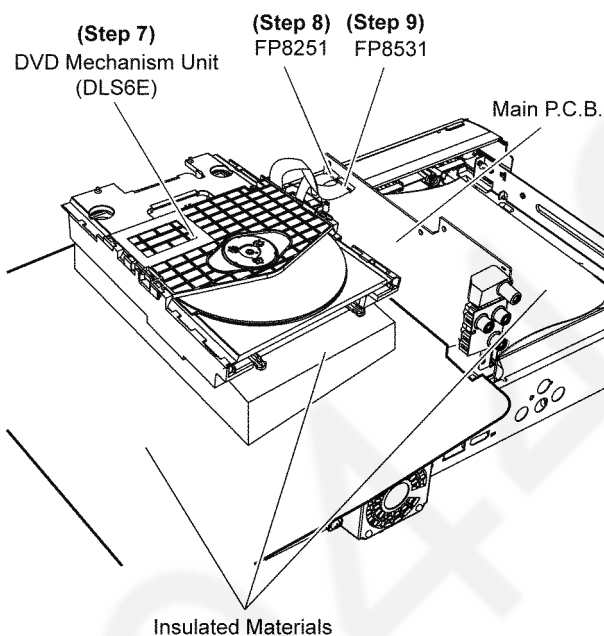
Step 6 Flip the Main P.C.B. according to diagram shown.



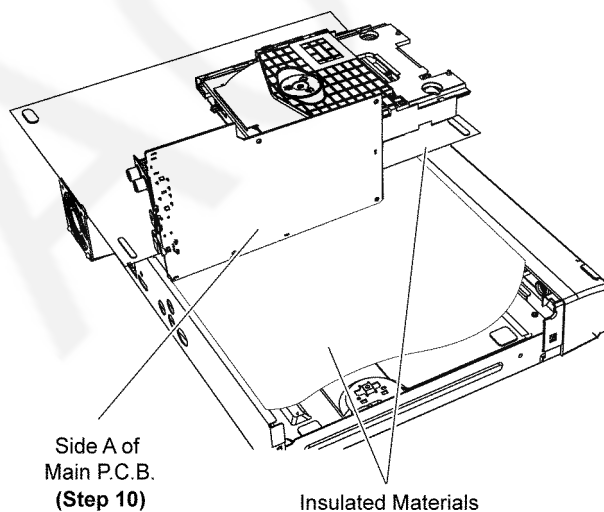
Step 7 Position DVD Mechanism Unit (DLS6E) according to diagram shown.

Step 8 Connect 7P FFC to the connector (FP8251) on Main P.C.B..

Step 9 Connect 24P FPC to the connector (FP8531) on Main P.C.B..



Step 10 Proceed to check and repair Side A of Main P.C.B..



10.2. Checking & Repairing D-Amp P.C.B.

10.2.1. Checking & Repairing of Side B of D-Amp P.C.B.

Step 1 Remove Top Cabinet.

Step 2 Remove D-Amp P.C.B..

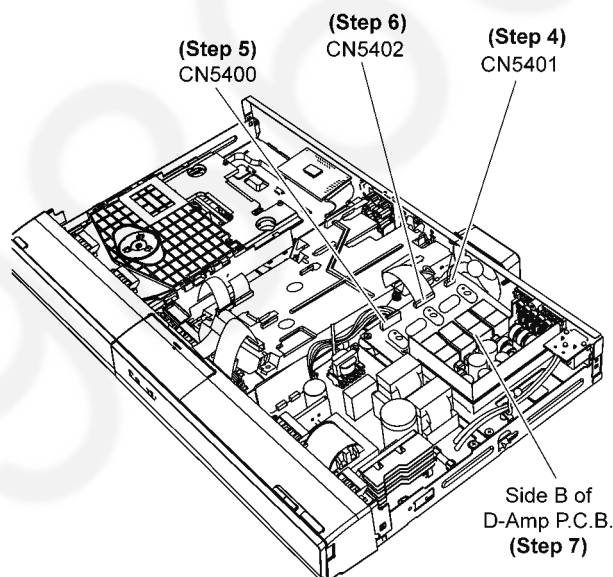
Step 3 Remove D-Amp Heatsink.

Step 4 Connect 3P wire at connector (CN5401) on D-Amp P.C.B..

Step 5 Connect 6P Cable wire at connector (CN5400) on D-Amp P.C.B..

Step 6 Connect 18P FFC at connector (CN5402) on D-Amp P.C.B..

Step 7 Proceed to check & repair Side B of D-Amp P.C.B..

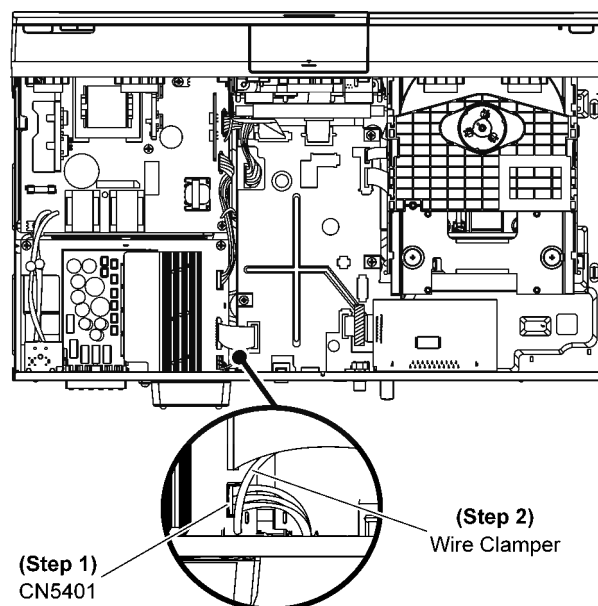


10.2.2. Checking & Repairing of Side A of D-Amp P.C.B.

Step 1 Remove Top Cabinet.

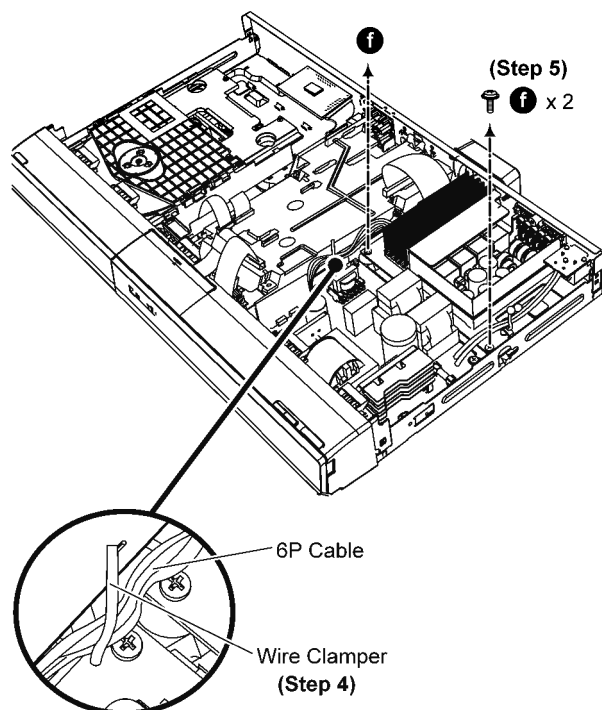
Step 2 Lift up the Wire Clamper.

Step 3 Detach the Fan Unit connector (CN5401) on D-Amp P.C.B..



Step 4 Twist the Wire Clamper to release 6P Cable.

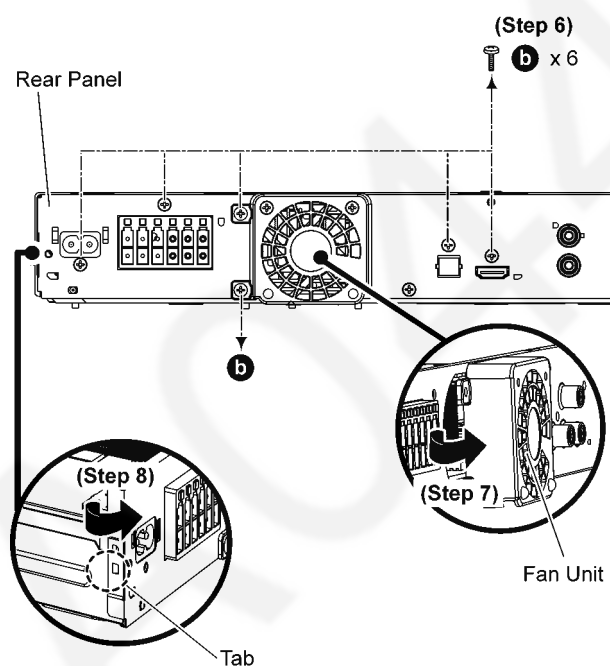
Step 5 Remove 2 screws.



Step 6 Remove 6 screws.

Step 7 Remove Fan Unit according to arrow shown.

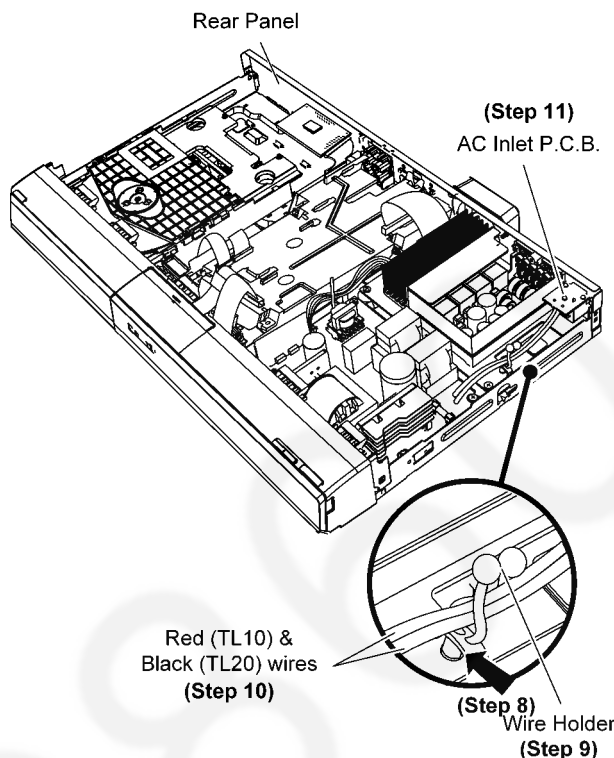
Step 8 Release tab at the side of the Rear Panel in the direction of arrow.



Step 9 Twist the Wire Holder.

Step 10 Release Red (TL10) & Black (TL20) wires from the Wire Holder.

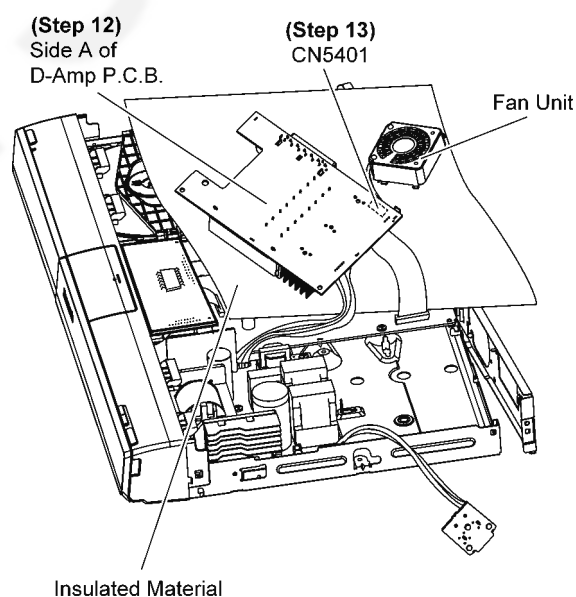
Step 11 Remove AC Inlet P.C.B..



Step 12 Flip the D-Amp P.C.B. and position it according to diagram shown.

Step 13 Connect Fan Unit to connector (CN5401) on D-Amp P.C.B..

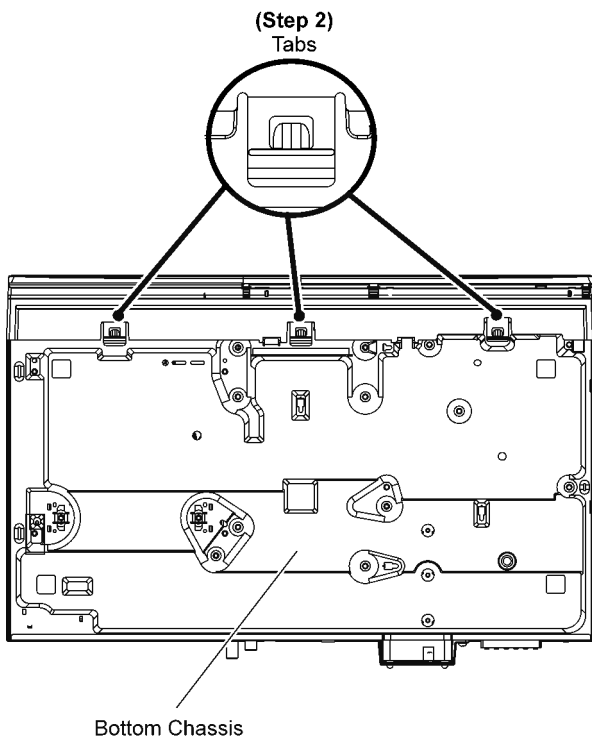
Step 14 Proceed to check and repair Side A of D-Amp P.C.B..



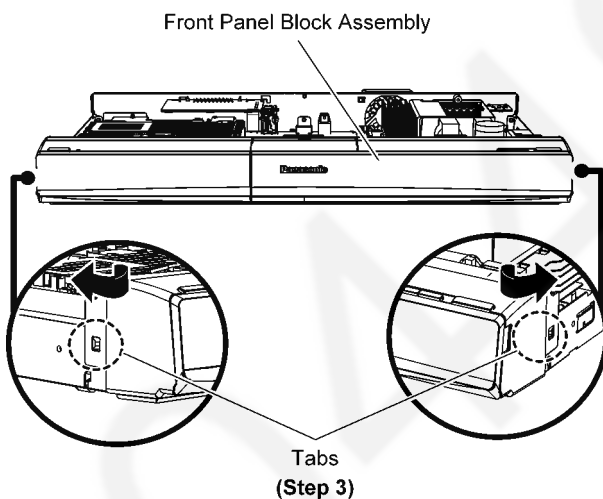
10.3. Checking & Repairing SMPS P.C.B.

Step 1 Remove Top Cabinet.

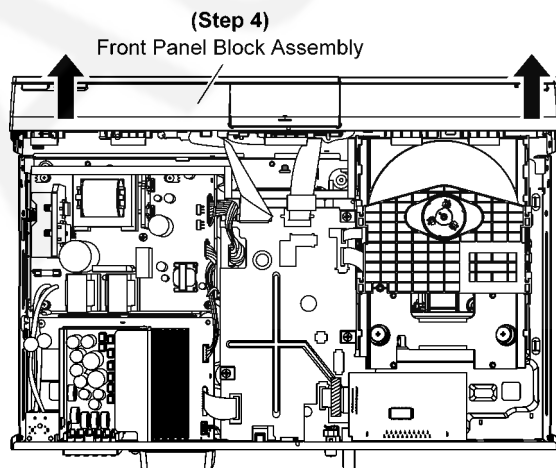
Step 2 Release the 3 tabs at the Bottom Chassis.



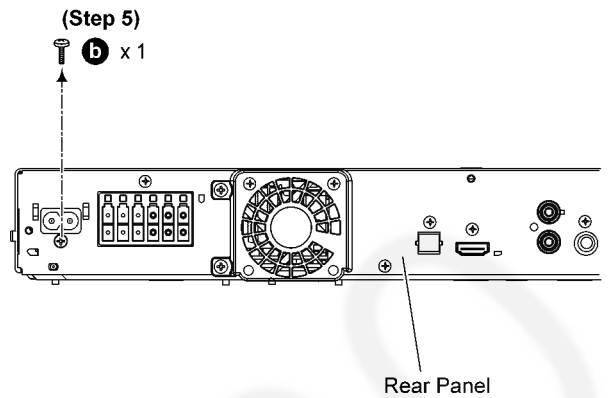
Step 3 Release the 2 tabs at each side of the Front Panel Block Assembly in the direction of arrow.



Step 4 Slightly move Front Panel Block Assembly forward according to diagram shown.



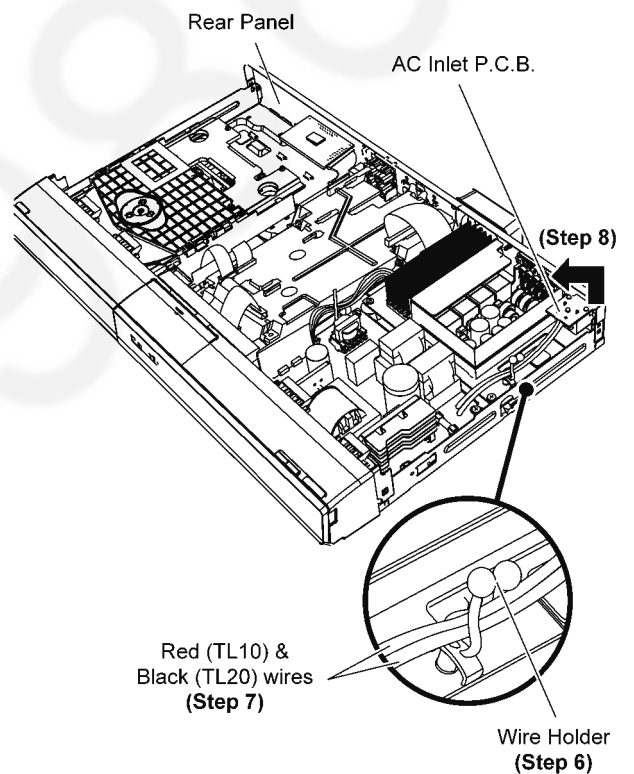
Step 5 Remove 1 screw.



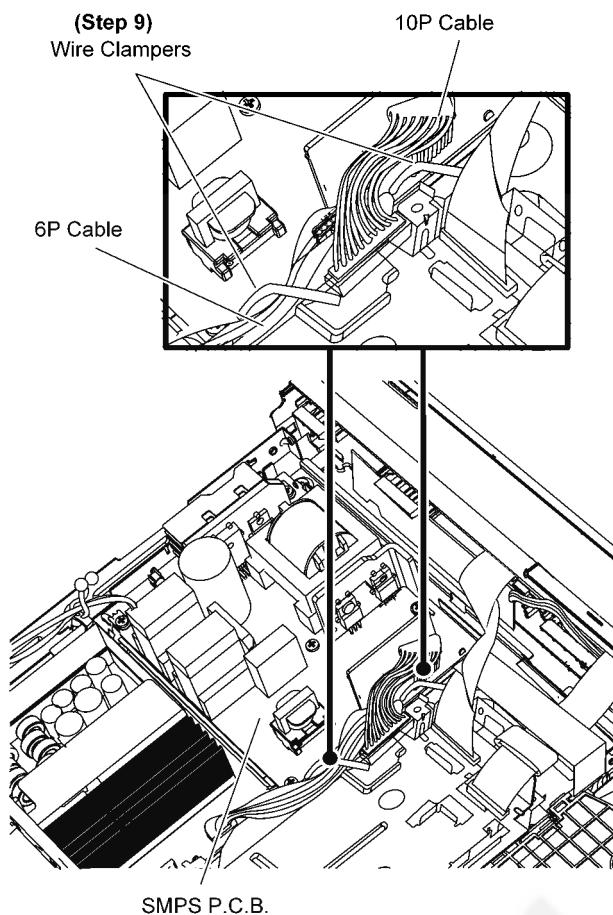
Step 6 Twist the Wire Holder.

Step 7 Release Red (TL10) & Black (TL20) wires from the Wire Holder.

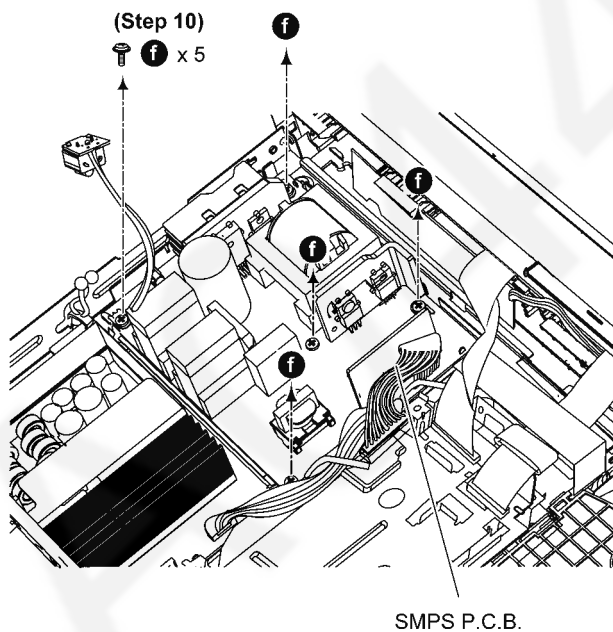
Step 8 Remove AC Inlet P.C.B. as arrow shown.



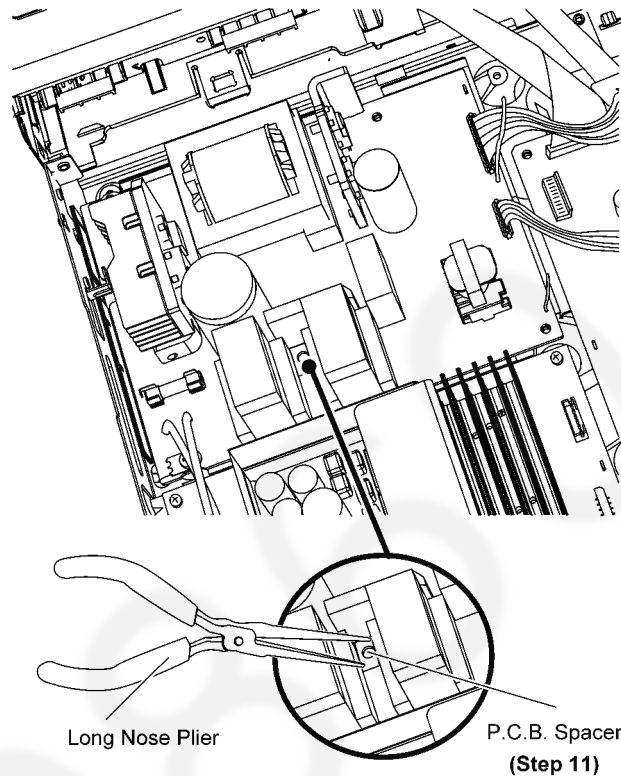
Step 9 Twist the Wire Clampers to release 6P (SMPS P.C.B. to D-Amp P.C.B.) & 10P (SMPS P.C.B. to Main P.C.B.) cables.



Step 10 Remove 5 screws on SMPS P.C.B..

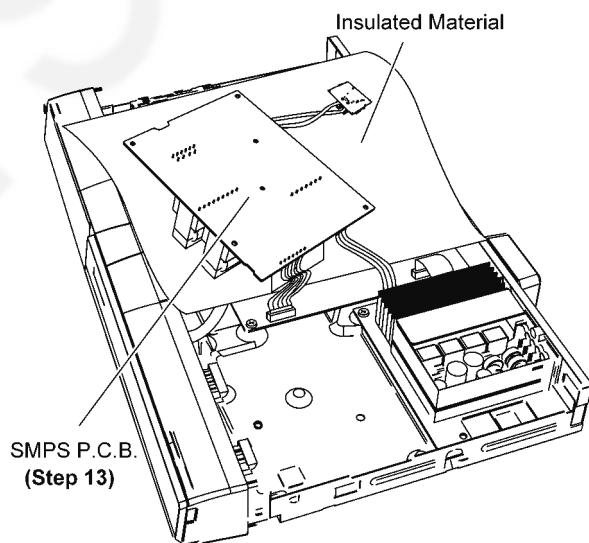


Caution: During releasing P.C.B. Spacer, ensure that long nose plier avoid touching the electrical components.
Step 11 Release P.C.B. Spacer by using long nose plier.



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

Step 13 Proceed to check and repair SMPS P.C.B..

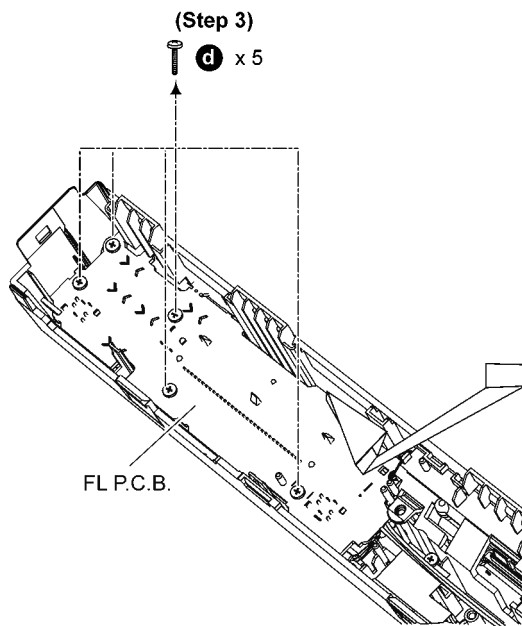


10.4. Checking & Repairing FL P.C.B.

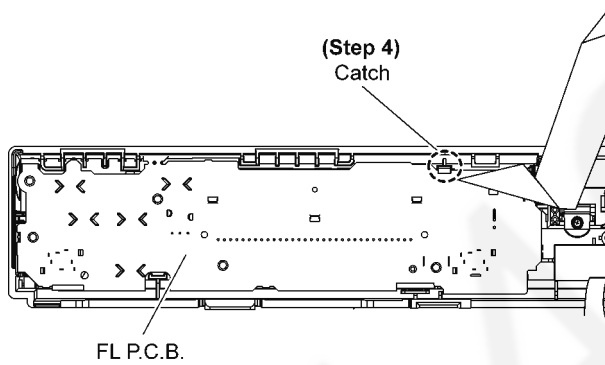
Step 1 Remove Top Cabinet.

Step 2 Remove Front Panel Block Assembly.

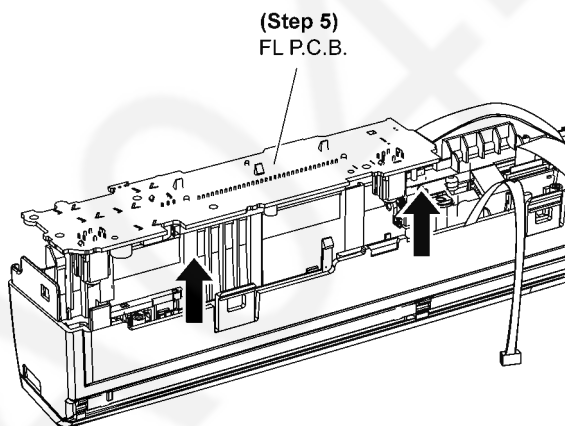
Step 3 Remove 5 screws.



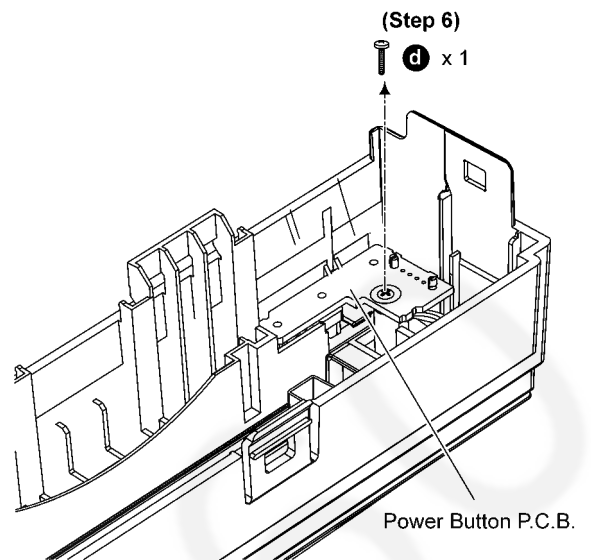
Step 4 Release 1 catch on FL P.C.B..



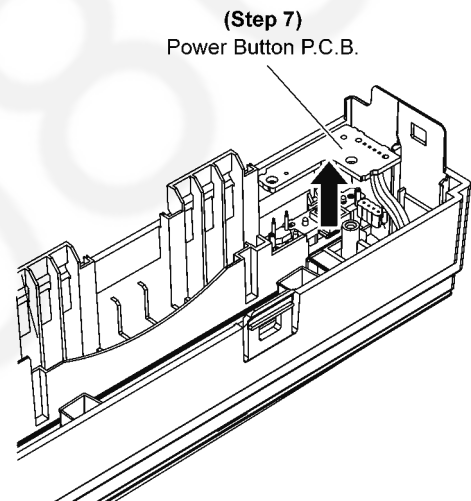
Step 5 Lift up FL P.C.B..



Step 6 Remove 1 screw.

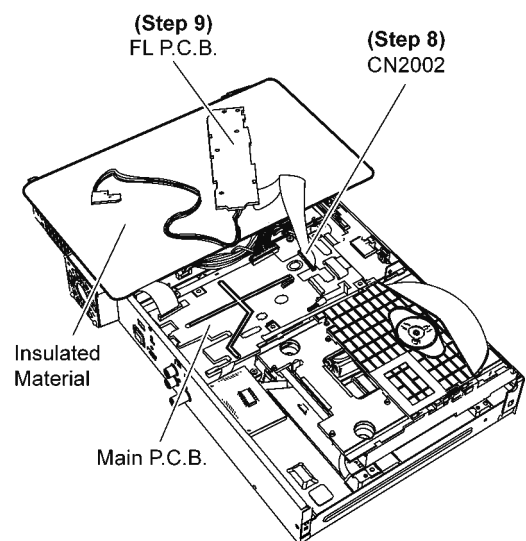


Step 7 Lift up Power Button P.C.B..



Step 8 Connect 22P FFC to the connector (CN2002) on Main P.C.B..

Step 9 Proceed to check and repair FL 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. Main P.C.B. (1/7)

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	1.5	1.5	0.8	0	0	0	0	0	0	0	0	3.2	3.2	3.2	3.2	3.2	1.5	0	3.2	0
STANDBY	1.5	1.5	0	0	0	0	0	0	0	0	0	3.0	0	3.0	3.0	3.0	1.4	0	2.9	0
REF NO.	IC2001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	0	0	0	1.4	1.5	0	0	3.1	0	0	0	0	0	0	0.6	1.6	1.6	1.2	3.3	1.7
STANDBY	0	0	0	1.4	1.4	0	0	3.0	0	0	0	0	0	0	0	1.5	1.5	0	3.0	1.5
REF NO.	IC2091																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	3.3	0	0	1.9	5.2	0	0	5.2												
STANDBY	3.3	0	0	1.9	5.0	0	0	5.2												
REF NO.	IC2111																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
CD PLAY	1.5	1.6	0	1.7	3.3	0	5.0	0	0	2.5	2.5	2.5	0	5.0	0	0				
STANDBY	1.5	1.6	0	1.7	0	0	5.2	0	0	2.6	2.6	2.6	0	5.0	0	0				
REF NO.	IC2131																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	0	0	0	6.9	0	0	0	6.9												
STANDBY	0	0	0	6.9	0	0	0	6.8												
REF NO.	IC2300																			
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	3.3	0	0	0	0	1.2	1.6	0	1.6	0	1.3	3.3	3.3	0	2.1	1.4
STANDBY	0	0	0	0	3.3	0	0	0	0	0.8	1.6	0	1.6	0	1.4	3.3	3.3	0	2.1	1.4
REF NO.	IC2300																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	2.2	3.3	0	3.3	3.3	3.3	1.4	2.9	3.3	3.3	0	3.2	3.2	3.3	0	0	3.3	3.3	0	3.3
STANDBY	2.2	3.3	0	3.3	3.3	3.3	1.4	2.9	3.3	3.3	0	3.2	3.2	0	0	0	3.3	3.3	0	3.3
REF NO.	IC2300																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	0	3.3	3.3	1.4	3.3	3.3	3.3	0	0	3.2	0	3.3	0	0	0	3.3	3.3	3.3	0	0
STANDBY	0	3.3	3.3	1.4	3.3	3.3	3.3	0	0	3.2	0	3.3	0	0	3.3	3.3	3.3	3.3	0	3.3
REF NO.	IC2300																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
CD PLAY	0	3.3	0.1	0	3.3	3.3	3.3	3.3	3.3	0	3.3	0	0	3.3	0	0	1.6	2.8	3.0	3.8
STANDBY	0	3.3	0.1	0	0	0	3.3	0	3.3	0	3.3	0	0	3.3	0	0	1.6	2.8	3.0	3.8
REF NO.	IC2300																			
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	3.3	3.3	0	3.3	2.3	0.3	0	3.3	1.9	1.8	1.4	0	0.8	0	0	3.3	3.3	0
STANDBY	0	0	3.3	0	0	3.3	3.3	0.4	0	3.3	1.9	1.8	1.4	0	0.8	0	0	3.2	3.2	0

SA-PT580EB/EG/EP MAIN P.C.B.

11.2. Main P.C.B. (2/7)

REF NO.	IC2301																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	0	0	0	0	0	1.1	0	3.3												
STANDBY	0	0	0	0	0	1.1	0	3.3												
REF NO.	IC2302																			
MODE	1	2	3																	
CD PLAY	3.3	0	5.2																	
STANDBY	3.3	0	5.2																	
REF NO.	IC2400																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	3.3	0	3.3	3.3	0	0	0	0	0	0	3.3	3.3	3.3	0	0	0	0	0	0
STANDBY	0	3.3	0	3.3	3.3	0	0	0	0	0	0	3.3	3.3	3.3	0	0	0	0	0	0
REF NO.	IC2600																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	0	0	0	-6.7	0	0	0	6.7												
STANDBY	0	0	0	-6.8	0	0	0	6.7												
REF NO.	IC2601																			
MODE	1	2	3	4	5															
CD PLAY	2.1	0	5.2	2.8	0															
STANDBY	2.1	0	5.2	2.8	0															
REF NO.	IC2602																			
MODE	1	2	3	4	5															
CD PLAY	5.0	0	0	3.6	0															
STANDBY	5.0	0	0	3.6	0															
REF NO.	IC2800																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
CD PLAY	0	0	2.5	0	0	0	-6.6	0	0	6.5	0.2	0	2.5	0	0	6.6				
STANDBY	0	0	2.5	0	0	0	-6.8	0	0	6.5	0.1	0	2.5	0	0	6.6				
REF NO.	IC2801																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	3.5	3.5	3.5	-7.0	3.5	3.5	3.5	6.9												
STANDBY	3.5	3.5	3.5	-7.0	3.5	3.5	3.5	6.9												
REF NO.	IC2802																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	3.5	3.5	3.5	-7.0	3.5	3.5	3.5	6.9												
STANDBY	3.5	3.5	3.5	-7.0	3.5	3.5	3.5	6.9												
REF NO.	IC2952																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	0.3	0	0	3.3	3.3	3.3	3.3	1.5	3.3	3.3	0	0.3	0.3	0.3	0	0.3	3.3	0	0
STANDBY	0	0.3	0	0	3.3	3.3	3.3	3.3	1.5	3.3	3.3	0	0.3	0.3	0.3	0	0.3	3.3	0	0

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11.3. Main P.C.B. (3/7)

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
STANDBY	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	0	0	3.4	1.3	0	3.4	0	0	0	0	1.7	3.4	0.9	0	0	0.9	0	3.4
STANDBY	3.4	0	0	0	3.4	1.3	0	3.4	0	0	0	0	1.7	3.4	0.9	0	0	0.9	0	3.4
REF NO.	IC3901																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	1.7	1.3	1.7	0	1.7	0	1.3	0.1	0.1	0.1	0.1	3.3	0.1	0.1	1.3	0.1	0.1	0.1	0.1	0.1
STANDBY	1.7	1.3	1.7	0	1.7	0	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	0	0	0	0	0	0	0	0	3.4	0.1	0	0	0	1.3	0.1	0.1	0.1	0	0.1
STANDBY	0	0	0	0	0	0	0	0	0	3.4	0.1	0	0	0	1.3	0.1	0.1	0.1	0	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	0	0	3.4	1.3	0	1.7	0	0.2	0.7	0	0.7	0.6	0.3	0.8	0	0	0	0	3.4
STANDBY	0	0	0	3.4	1.3	0	1.7	0	0.2	0.7	0	0.7	0.6	0.3	0.8	0	0	0	0	3.4
REF NO.	IC3901																			
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
CD PLAY	0	1.3	0	0	0	3.4	3.4	3.4	1.3	0	1.8	0	3.3	3.3	3.3	1.3	1.7	0	0	3.4
STANDBY	0	1.3	0	0	0	3.4	3.4	3.4	1.3	0	1.8	0	3.3	3.3	3.3	1.3	1.7	0	0	3.4
REF NO.	IC3901																			
MODE	121	122	123	124	125	126	127	128												
CD PLAY	3.4	0	1.3	3.4	0	0	0	0												
STANDBY	3.4	0	1.3	3.4	0	0	0	0												
REF NO.	IC3952																			
MODE	1	2	3	4	5															
CD PLAY	8.5	0	1.3	4.9	8.8															
STANDBY	8.5	0	1.3	4.9	8.8															
REF NO.	IC3953																			
MODE	1	2	3	4	5	6														
CD PLAY	1.6	0	0	3.4	3.4	1.6														
STANDBY	1.6	0	0	3.4	3.4	1.6														
REF NO.	IC8001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	0	0	3.3	0	3.4	0	3.3	2.1	0.9	0.9	1.7	1.0	1.2	0	3.4	1.2	1.2	0	1.2
STANDBY	0	0	0	3.3	0	3.4	0	3.3	2.1	0.9	0.9	1.7	1.0	1.2	0	3.4	1.2	1.2	0	1.2

SA-PT580EB/EG/EP MAIN P.C.B.

11.4. Main P.C.B. (4/7)

REF NO.	IC8001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	1.6	0.7	2.2	1.6	2.3	2.0	0.9	1.2	2.0	1.1	3.4	0	3.4	1.7	1.3	2.1	2.1	2.1	1.7	1.7
STANDBY	1.6	0.7	2.2	1.6	2.3	2.0	0.9	1.2	2.0	1.1	3.4	0	3.4	1.7	1.3	2.1	2.1	2.1	1.7	1.7
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	1.7	1.7	1.7	0	1.2	0	3.4	3.4	3.4	1.6	0	3.4	3.3	3.4	3.4	3.4	3.4	3.4	0.3	3.3
STANDBY	1.7	1.7	1.7	0	1.2	0	3.4	3.4	3.4	1.6	0	3.4	3.3	3.4	3.4	3.4	3.4	3.4	0.3	3.3
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	0	0	1.4	2.0	1.7	0	3.4	3.3	0	3.4	3.4	0	0.3	0	0	3.3	3.3	3.3
STANDBY	1.6	0	0	0	1.4	2.0	1.7	0	3.4	3.3	0	3.4	3.4	0	0.3	0	0	3.3	3.3	3.3
REF NO.	IC8001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
CD PLAY	0	0	1.2	3.3	0.9	2.4	0	1.9	0	0.5	1.7	3.3	1.4	1.4	1.8	1.8	1.7	1.7	1.6	1.6
STANDBY	0	0	1.2	3.3	0.9	2.4	0	1.9	0	0.5	1.7	3.3	1.4	1.4	1.8	1.8	1.7	1.7	1.6	1.6
REF NO.	IC8001																			
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
CD PLAY	0	0	0.2	0	0.2	2.4	3.3	0	2.1	1.6	2.3	2.3	2.3	2.2	2.2	0	0	0	0	1.7
STANDBY	0	0	0.2	0	0.2	2.4	3.3	0	2.1	1.6	2.3	2.3	2.3	2.2	2.2	0	0	0	0	1.7
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	2.1	1.6	1.7	0	1.7	1.7	3.3	0.8	0.8	0.4	3.2	2.3	0.9	1.0	2.3	0	0.4	0.7	0	3.2
STANDBY	2.1	1.6	1.7	0	1.7	1.7	3.3	0.8	0.8	0.4	3.2	2.3	0.9	1.0	2.3	0	0.4	0.7	0	3.2
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	3.2	0	0	0	0	3.2	1.5	1.6	1.6	0.8	1.6	0	3.2	1.4	1.5	0	1.2	3.1	3.2	3.2
STANDBY	3.2	0	0	0	0	3.2	1.5	1.6	1.6	0.8	1.6	0	3.2	1.4	1.5	0	1.2	3.1	3.2	3.2
REF NO.	IC8001																			
MODE	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
CD PLAY	3.1	3.1	3.1	3.0	0	3.2	3.1	3.2	3.2	3.2	3.2	3.2	0	3.2	3.0	3.0	3.1	3.1	3.0	3.0
STANDBY	3.1	3.1	3.1	3.0	0	3.2	3.1	3.2	3.2	3.2	3.2	3.2	0	3.2	3.0	3.0	3.1	3.1	3.0	3.0
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	3.2	0	1.5	3.2	1.5	0	1.2	3.3	3.1	3.0	3.2	0	1.9	0	0	3.2	1.7	0	0	1.4
STANDBY	3.2	0	1.5	3.2	1.5	0	1.2	3.3	3.1	3.0	3.2	0	1.9	0	0	3.2	1.7	0	0	1.4
REF NO.	IC8001																			
MODE	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216				
CD PLAY	0.1	1.6	0.5	0	3.1	1.7	0.5	1.5	1.4	0	0	0	3.2	2.6	0	0				
STANDBY	0.1	1.6	0.5	0	3.1	1.7	0.5	1.5	1.4	0	0	0	3.2	2.6	0	0				

SA-PT580EB/EG/EP MAIN P.C.B.

11.5. Main P.C.B. (5/7)

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
STANDBY	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
STANDBY	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						
STANDBY	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	5.2	0	5.2	0	0.9	3.4	1.2													
STANDBY	4.9	0	5.2	0	0.9	3.4	1.2													
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	1.5	1.6	1.6	2.2	2.2	2.1	0	4.8	3.1	0	2.2	2.6	2.3	2.6	4.1	4.2	5.5	2.8	0	3.3
STANDBY	1.7	1.7	1.7	2.0	3.6	3.6	0	5.2	0	0	2.6	2.6	2.6	2.6	4.2	4.2	3.9	3.9	0	3.4
REF NO.	IC8251																			
MODE	21	22	23	24	25	26	27	28	29	30										
CD PLAY	8.8	8.7	1.8	1.6	1.6	1.6	3.3	2.7	0	0										
STANDBY	9.0	8.9	1.7	1.7	1.7	1.7	0	0	0	0										
REF NO.	IC8422																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
CD PLAY	2.5	2.5	0	2.5	0	5.1	3.4	0	0.7	1.7	1.5	1.7	3.3	0	0	0				
STANDBY	2.4	2.4	0	0	0	5.2	3.4	0	0	1.7	1.5	1.7	0	0	0	0				
REF NO.	IC8601																			
MODE	1	2	3	4																
CD PLAY	3.3	1.2	0	0																
STANDBY	3.3	1.2	0	0																
REF NO.	IC8606																			
MODE	1	2	3	4	5															
CD PLAY	3.3	3.4	0	0	0															
STANDBY	3.3	3.4	0	0	0															
REF NO.	IC8611																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	0	0	0	0	3.3	3.3	0	3.4												
STANDBY	0	0	0	0	3.3	3.3	0	3.4												

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11.6. Main P.C.B. (6/7)

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	0.6	2.3	1.7	2.3	1.9	0.9	1.2	2.1	1.0	0.7	3.4	3.3	3.4	3.4	1.2	1.7	1.3	2.1	2.1	1.2
STANDBY	0.3	2.8	2.2	2.7	2.5	0.6	0.7	2.6	1.9	0.5	3.4	3.3	3.4	3.4	1.2	2.1	2.1	2.6	2.5	0.7
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	2.2	0.9	1.2	2.5	1.3	2.5	0	2.6	1.2	0.6	2.2	1.5	2.2	1.9	0.9	1.1	3.4	2.1	2.0	2.0
STANDBY	2.6	0.7	0.9	2.7	0.9	2.9	0	2.9	0.8	0.3	2.8	2.1	2.7	2.5	0.6	0.8	3.4	2.5	2.6	2.5
REF NO.	IC8651																			
MODE	41	42	43	44	45	46	47	48												
CD PLAY	1.1	2.2	1.0	1.3	2.5	0	3.4	1.5												
STANDBY	0.7	2.6	0.7	0.9	0.9	0	3.4	2.2												
REF NO.	IC8701																			
MODE	1	2	3	4	5															
CD PLAY	0	0	0	1.7	3.4															
STANDBY	0	0	0	1.7	3.4															
REF NO.	IC8901																			
MODE	1	2	3	4	5															
CD PLAY	3.3	3.3	0	3.4	3.4															
STANDBY	3.3	3.3	0	3.4	3.4															
REF NO.	IC9001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	1.2	2.5	1.4	1.1	2.1	1.2	2.1	2.1	0	2.5	2.1	2.1	1.2	2.2	1.1	1.3	2.5	1.3	3.4
STANDBY	0	0.9	2.7	0.9	0.7	2.6	0.7	0	2.6	0	2.9	2.6	2.5	0.7	2.6	0.7	0.8	2.7	0.9	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	3.2	0	0	0	0	3.2	3.2	0	0	0	0	3.4	3.2	0	0	0	0	3.3	3.3
STANDBY	0	3.2	0	0	0	0	3.2	3.2	0	0	0	0	3.4	3.2	0	0	0	0	3.3	3.3
REF NO.	IC9003																			
MODE	1	2	3	4	5	6														
CD PLAY	1.5	0	1.6	1.7	3.3	1.6														
STANDBY	1.5	0	1.6	1.7	3.3	1.6														
REF NO.	IC9006																			
MODE	1	2	3	4	5															
CD PLAY	5.2	0	0	3.3	0.1															
STANDBY	5.2	0	0	3.3	0.1															
REF NO.	Q2301 Q2302 Q2303 Q2304 Q2400																			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	6.9	0		0	1.7	0		3.2	1.5	3.1		0	0	4.4		9.0	9.0	0	
STANDBY	1.1	1.1	0		0	1.7	0		3.1	1.5	3.0		0	3.2	0		9.0	9.0	0	

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11.7. Main P.C.B. (7/7)

REF NO.	Q2501				Q2502				Q2503				Q2554							
MODE	E	C	B		E	C	B		E	C	B		1	2	3	4	5	6		
CD PLAY	0	9.0	7.5		-6.9	-10.0	-7.5		0	-7.5	0		0	0	0	0	0.6	3.3		
STANDBY	0	9.0	7.5		-6.9	-10.0	-7.5		0	0	0		0	0	0	0	0.6	3.3		
REF NO.	Q2555				Q2556				Q2557				Q2600				Q2601			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	7.1	17.9	7.5		0	0.1	3.3		0	7.5	0		0	3.2	0		0	0	0	
STANDBY	11.6	18.1	12.0		0	4.7	0		0	12.0	0		0	3.1	0		0	0	0	
REF NO.	Q2602				Q2603				Q2604				Q2709				Q2719			
MODE	E	C	B		S	D	G		S	D	G		E	C	B		E	C	B	
CD PLAY	0	0	0		0	1.1	0		0	1.2	0		0	0	7.0		0	0	0	
STANDBY	0	0	0		0	1.2	0		0	1.1	0		0	0	7.0		0	0	0	
REF NO.	Q2730				Q2800				Q2805				Q3901				Q3902			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		S	D	G	
CD PLAY	0	3.2	0		0	6.8	0		0	7.0	0		0	4.2	0.1		3.2	4.8	3.3	
STANDBY	0	3.2	0		0	6.8	0		0	7.0	0		0	4.3	0.1		3.2	4.8	3.2	
REF NO.	Q3903				Q3904				Q8321				Q8325				Q8331			
MODE	S	D	G		S	D	G		E	C	B		E	C	B		E	C	B	
CD PLAY	3.2	4.8	3.2		3.3	4.0	3.0		1.3	0	0.6		1.5	0	0.9		1.1	0	0.5	
STANDBY	3.2	4.8	3.2		3.3	4.1	3.0		1.1	0	0.5		1.5	0	0.9		1.1	0	0.5	
REF NO.	Q8335				Q8341				Q8551				Q8552				Q8561			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	1.5	0	0.9		1.5	0	0.8		0	5.1	0		5.0	0	5.0		1.9	3.3	2.5	
STANDBY	1.5	0	0.8		1.5	0	0.8		0	5.1	0		5.1	0	5.1		0	5.1	0	
REF NO.	Q8562				Q8563				Q8564				Q8565				QR2400			
MODE	E	C	B		S	D	G		S	D	G		E	C	B		E	C	B	
CD PLAY	4.0	1.8	3.4		0	0	5.0		0	0	5.0		0	4.4	0		0	0	2.9	
STANDBY	5.2	0	5.2		0	0	5.0		0	0	5.0		0	4.4	0		0	0	2.8	
REF NO.	QR2605				QR2606				QR2700				QR2701				QR8420			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	0	2.9		0	0	2.9		0	0	2.9		0	0	2.9		0	4.3	0	
STANDBY	0	0	2.8		0	0	2.9		0	0	2.8		0	0	2.9		0	0	3.3	
REF NO.	QR9030																			
MODE	E	C	B																	
CD PLAY	4.9	0	4.9																	
STANDBY	5.1	0	5.1																	

SA-PT580EB/EG/EP MAIN P.C.B.

11.8. FL P.C.B.

REF NO.	IC6001																			
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	1.9	0	1.4	2.9	2.1	0	0	0	3.3	-23.4	-23.4	-23.4	-21.2	-16.9	-16.9	-21.2
STANDBY	0	0	0	0	1.9	0	1.4	2.9	2.2	0	0	0	3.3	-23.4	-23.4	-23.4	-23.4	-14.8	-16.9	-21.2

REF NO.	IC6001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	-23.4	-23.4	-23.4	-17.0	-17.0	-23.4	-23.4	-17.0	-17.0	-23.8	-14.9	-23.6	-21.4	-21.4	-21.4	-21.4	-21.4	-21.4	-21.4	-21.4
STANDBY	-21.2	-23.4	-21.2	-14.8	-14.8	-21.2	-23.4	-14.8	-12.6	-23.9	-17.1	-23.6	-21.4	-21.4	-21.4	-21.4	-21.4	-21.4	-21.4	-21.4

REF NO.	IC6001																			
MODE	41	42	43	44																
CD PLAY	-21.4	-21.4	3.3	0																
STANDBY	-21.4	-21.4	3.3	0																

REF NO.	Q6100				Q6800															
MODE	E	C	B		E	C	B													
CD PLAY	0	0	9.0		0	0	5.0													
STANDBY	0	0	9.0		0	0	5.0													

SA-PT580EB/EG/EP FL P.C.B.

11.9. D-Amp P.C.B. (1/2)

REF NO.	IC5100																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	11.5	3.3	3.3	1.6	3.1	1.6	1.1	0	0	3.5	3.5	0	0	1.5	3.1	1.5	11.6	11.4	11.5	31.9
STANDBY	11.5	3.3	3.3	1.6	3.1	1.6	1.1	0	0	3.5	3.5	0	0	1.5	3.1	1.5	11.6	11.4	11.5	31.9
REF NO.	IC5100																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36				
CD PLAY	42.4	0	0	0	0	42.4	31.9	31.9	42.4	0	0	0	0	42.4	31.9	11.4				
STANDBY	42.4	0	0	0	0	42.4	31.9	31.9	42.4	0	0	0	0	42.4	31.9	11.4				
REF NO.	IC5200																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	11.5	3.2	3.3	1.6	3.2	1.6	1.1	0	0	3.2	0	0	3.2	1.6	3.2	1.6	11.6	11.5	11.5	31.8
STANDBY	11.5	3.2	3.3	1.6	3.2	1.6	1.1	0	0	3.2	0	0	3.2	1.6	3.2	1.6	11.6	11.5	11.5	31.8
REF NO.	IC5200																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36				
CD PLAY	42.4	0	0	0	0	42.4	31.9	31.7	42.4	0	0	0	0	42.4	31.8	11.5				
STANDBY	42.4	0	0	0	0	42.4	31.9	31.7	42.4	0	0	0	0	42.4	31.8	11.5				
REF NO.	IC5301																			
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	3.2	0	0	0.8	0.9	0	1.6	3.2	3.1	3.1	0	0	1.1	1.8	3.2	3.2	3.2	1.5	1.5
STANDBY	1.7	3.2	0	0	0.8	0.9	0	1.6	3.2	3.1	3.1	0	0	1.1	1.8	3.2	3.2	3.2	1.5	1.5
REF NO.	IC5301																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38		
CD PLAY	0	0	0	0	0.6	1.2	0	0	0	1.8	3.1	3.1	0	0	0	0	0	0		
STANDBY	0	0	0	0	0.6	1.2	0	0	0	1.8	3.1	3.1	0	0	0	0	0	0		
REF NO.	IC5400																			
MODE	1	2	3	4	5															
CD PLAY	13.1	18.0	0	11.6	1.1															
STANDBY	13.1	18.0	0	11.6	1.1															
REF NO.	IC5401																			
MODE	1	2	3	4	5															
CD PLAY	3.2	3.2	0	0	0															
STANDBY	3.2	3.2	0	0	0															
REF NO.	IC5402																			
MODE	1	2	3	4	5															
CD PLAY	3.2	3.2	0	3.2	3.2															
STANDBY	3.2	3.2	0	3.2	3.2															
REF NO.	IC5404																			
MODE	1	2	3	4	5	6														
CD PLAY	1.5	0	1.5	1.6	3.1	1.6														
STANDBY	1.5	0	1.5	1.6	3.1	1.6														

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11.10. D-Amp P.C.B. (2/2)

REF NO.	IC5405																		
MODE	1	2	3	4	5														
CD PLAY	3.2	3.2	0	3.2	3.1														
STANDBY	3.2	3.2	0	3.2	3.1														

REF NO.	Q5400				Q5401				Q5402				Q5403				Q5404		
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B
CD PLAY	1.3	18.0	12.0		18.0	12.0	0		0	2.9	0		0	2.9	0		0	7.5	0.7
STANDBY	1.3	18.0	12.0		18.0	12.0	0		0	2.9	0		0	2.9	0		0	7.5	0.7

REF NO.	Q5405				Q5408				Q5409				Q5412				Q5413		
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B
CD PLAY	0	3.7	0.1		0	0	0		0	0	0		0	3.3	0		42.4	42.3	0
STANDBY	0	3.7	0.1		0	0	0		0	0	0		0	3.3	0		42.4	42.3	0

REF NO.	Q5414				QR5400				QR5401										
MODE	E	C	B		E	C	B		E	C	B								
CD PLAY	0	0	0		0	0	5.0		12.0	0	5.0								
STANDBY	0	0	0		0	0	5.0		12.0	0	5.0								

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11.11. SMPS P.C.B.

REF NO.	IC5701																		
MODE	1	2	3	4	5	6	7												
CD PLAY	19.5	-11.6	-11.6	-8.1	-11.6	-11.3	-11.5												
STANDBY	19.5	-11.6	-11.6	-8.1	-11.6	-11.3	-11.5												

REF NO.	IC5799																		
MODE	1	2	3	4	5	6	7	8											
CD PLAY	-14.0	-15.0	-14.6	-13.0	-15.1	0	-15.1	-15.1											
STANDBY	-14.0	-15.0	-14.6	-13.1	-15.1	0	-15.0	-15.0											

REF NO.	IC5801																		
MODE	1	2	3																
CD PLAY	18.3	2.5	0																
STANDBY	18.3	2.5	0																

REF NO.	IC5899																		
MODE	1	2	3	4															
CD PLAY	0	0	3.8	2.3															
STANDBY	0	0	3.8	2.3															

REF NO.	Q5720				Q5863				Q5898				Q5899				QR5862		
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B
CD PLAY	-10.3	-9.9	-10.2		0	0.6	0		0	1.9	0.4		0	0.1	0.7		0	3.1	0
STANDBY	-10.3	-9.9	-10.2		0	0.6	0		0	1.9	0.4		0	0.1	0.7		0	3.1	0

SA-PT580EB/EG/EP SMPS P.C.B.

11.12. Power P.C.B.

REF NO.	IC2901																			
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	2.5	2.0	1.0	1.6	0	0	16.4	11.2	14.9	14.3	16.5	16.5	0	15.8	1.6	1.0	2.0	2.4	2.5
STANDBY	1.7	2.5	2.0	1.0	1.6	0	0	16.4	11.2	14.9	14.3	16.5	16.5	0	15.8	1.6	1.0	2.0	2.4	2.5

REF NO.	Q2902							Q2903												
MODE	1	2	3	4	5	6		1	2	3	4	5	6							
CD PLAY	12.0	12.0	16.1	17.8	12.0	12.0		5.0	5.0	16.2	17.8	5.0	5.0							
STANDBY	12.0	12.0	16.1	17.8	12.0	12.0		5.0	5.0	16.2	17.8	5.0	5.0							

SA-PT580EB/EG/EP POWER P.C.B.

11.13. Scart P.C.B.

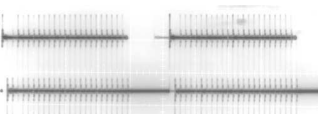
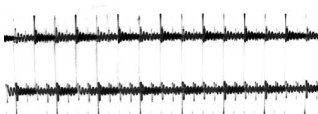
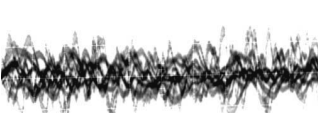
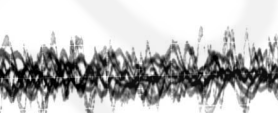
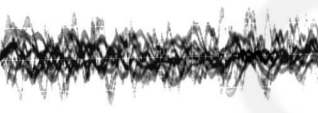
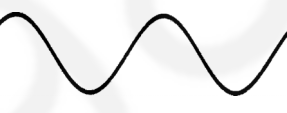
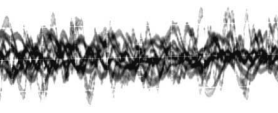
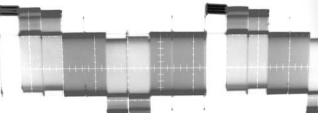
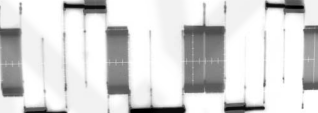
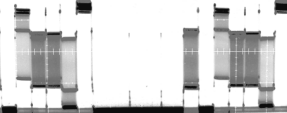
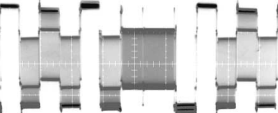
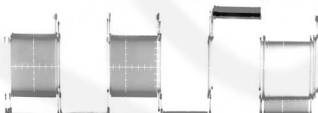
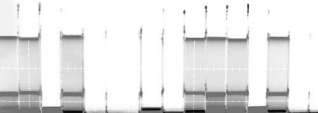
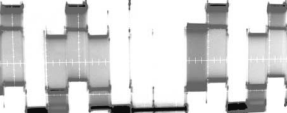
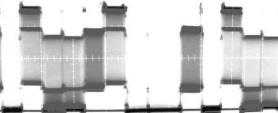
REF NO.	IC4001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	5.1	0	0	2.0	4.7	0	0	1.8	2.1	5.1	0	0	0	0	0	5.1	2.3	2.3	0	2.3
STANDBY	5.2	0	0	2.0	4.8	0	0	1.8	2.1	5.2	0	0	0	0	0	5.2	2.3	2.3	0	2.3

REF NO.	IC4001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32								
CD PLAY	2.3	0	2.3	2.3	0	1.6	1.6	0	1.6	1.6	0	2.0								
STANDBY	2.3	0	2.3	2.3	0	1.4	1.4	0	1.4	1.4	0	2.0								

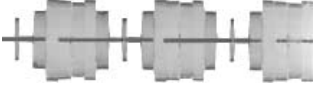
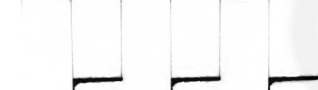
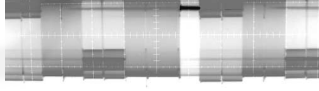
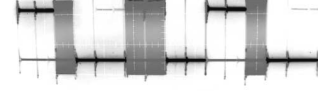
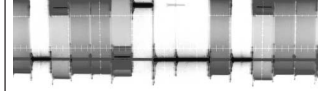
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MODE	E	C	B		E	C	B		E	C	B									
CD PLAY	0	4.7	0		0	5.1	0		5.1	0	5.1									
STANDBY	0	4.8	0		0	5.1	0		5.2	0	5.1									

SA-PT580EB/EG/EP SCART P.C.B.

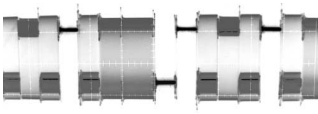
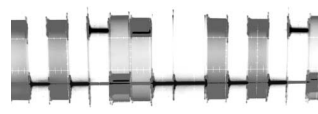
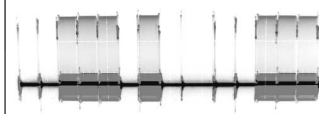
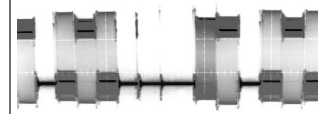
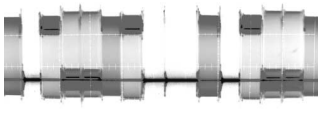
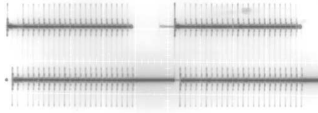
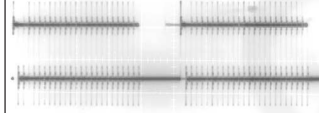
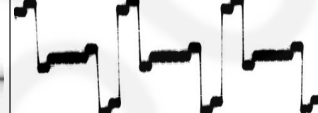
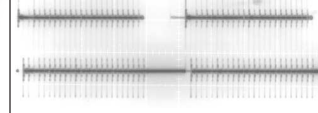
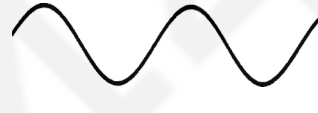
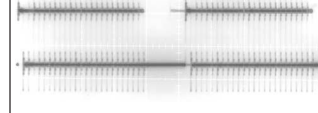
11.14. Waveform Table (1/3)

WF No. IC2001-3,4,5 (PLAY)  4Vp-p(2usec/div)	WF No. IC2001-34,35,38 (PLAY)  5Vp-p(500nsec/div)	WF No. IC2300-10,11 (PLAY)  3Vp-p(20usec/div)	WF No. IC2300-13 (PLAY)  3.4Vp-p(100nsec/div)
WF No. IC2300-15 (PLAY)  1.5Vp-p(100nsec/div)	WF No. IC2800-1 (TUNER)  0.1Vp-p(200usec/div)	WF No. IC2800-3 (TUNER)  0.15Vp-p(500usec/div)	WF No. IC2800-12 (TUNER)  0.1Vp-p(100usec/div)
WF No. IC2800-13 (PLAY)  1.5Vp-p(500usec/div)	WF No. IC2952-2 (PLAY)  0.1Vp-p(200usec/div)	WF No. IC2952-9,17 (PLAY)  0.6Vp-p(10usec/div)	WF No. IC2952-13,14 (PLAY)  0.1Vp-p(100usec/div)
WF No. IC3901-87 (PLAY)  3.6Vp-p(5usec/div)	WF No. IC3901-88 (PLAY)  3.8Vp-p(5usec/div)	WF No. IC3901-89 (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)

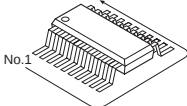
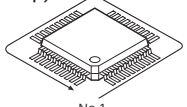
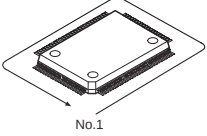
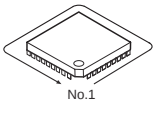
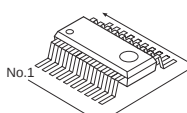
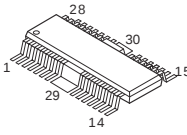
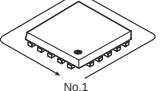
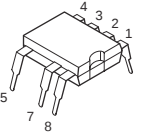
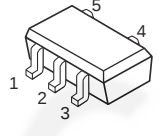
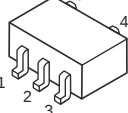
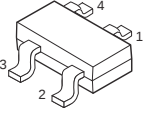
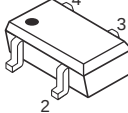
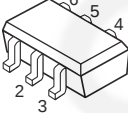
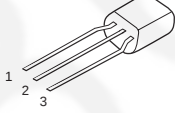
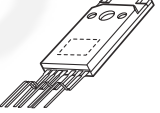
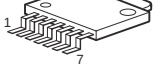
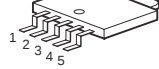
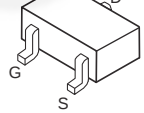
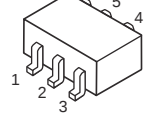
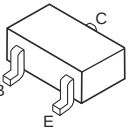
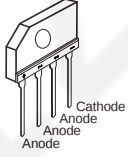
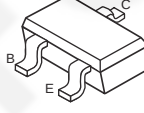
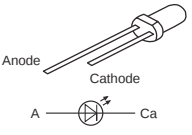
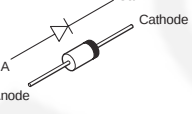
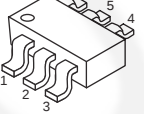
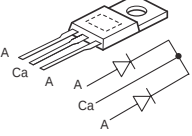
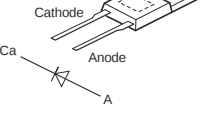
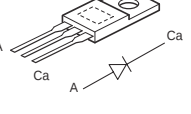
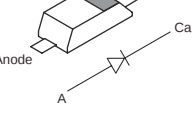
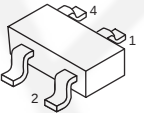
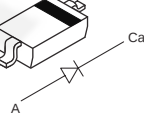
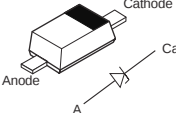
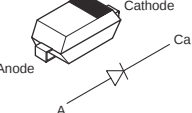
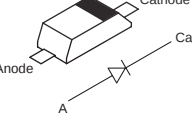
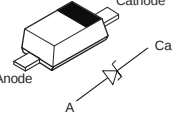
11.15. Waveform Table (2/3)

WF No. IC4001-4 (PLAY)  0.68Vp-p(10usec/div)	WF No. IC4001-8,11 (PLAY)  1Vp-p(20usec/div)	WF No. IC4001-13 (PLAY)  0.6Vp-p(20usec/div)	WF No. IC4001-15 (PLAY)  0.48Vp-p(20usec/div)
WF No. IC4001-18,21,24 (PLAY)  3.8Vp-p(5msec/div)	WF No. IC4001-30 (PLAY)  2Vp-p(20usec/div)	WF No. IC5100-4,6,14,16 (PLAY)  5.2Vp-p(1usec/div)	WF No. IC5100-22,25,30,33 (PLAY)  80Vp-p(1usec/div)
WF No. IC5200-4,14 (PLAY)  5.6Vp-p(1usec/div)	WF No. IC5200-6,16 (PLAY)  6.8Vp-p(1usec/div)	WF No. IC5200-22,25,30,33 (PLAY)  76Vp-p(1usec/div)	WF No. IC5301-24,25,26 (PLAY)  3.6Vp-p(500nsec/div)
WF No. IC5301-33,34,35,36,37,38 (PLAY)  6Vp-p(1usec/div)	WF No. IC5404-1,3 (PLAY)  5.6Vp-p(1usec/div)	WF No. IC5404-4,6 (PLAY)  7.2Vp-p(1usec/div)	WF No. IC6001-5 (PLAY)  1.5Vp-p(2usec/div)
WF No. IC6001-8 (PLAY)  3.2Vp-p(2usec/div)	WF No. IC8001-9 (PLAY)  6Vp-p(5usec/div)	WF No. IC8001-10 (PLAY)  6Vp-p(5usec/div)	WF No. IC8001-11 (PLAY)  6Vp-p(5usec/div)

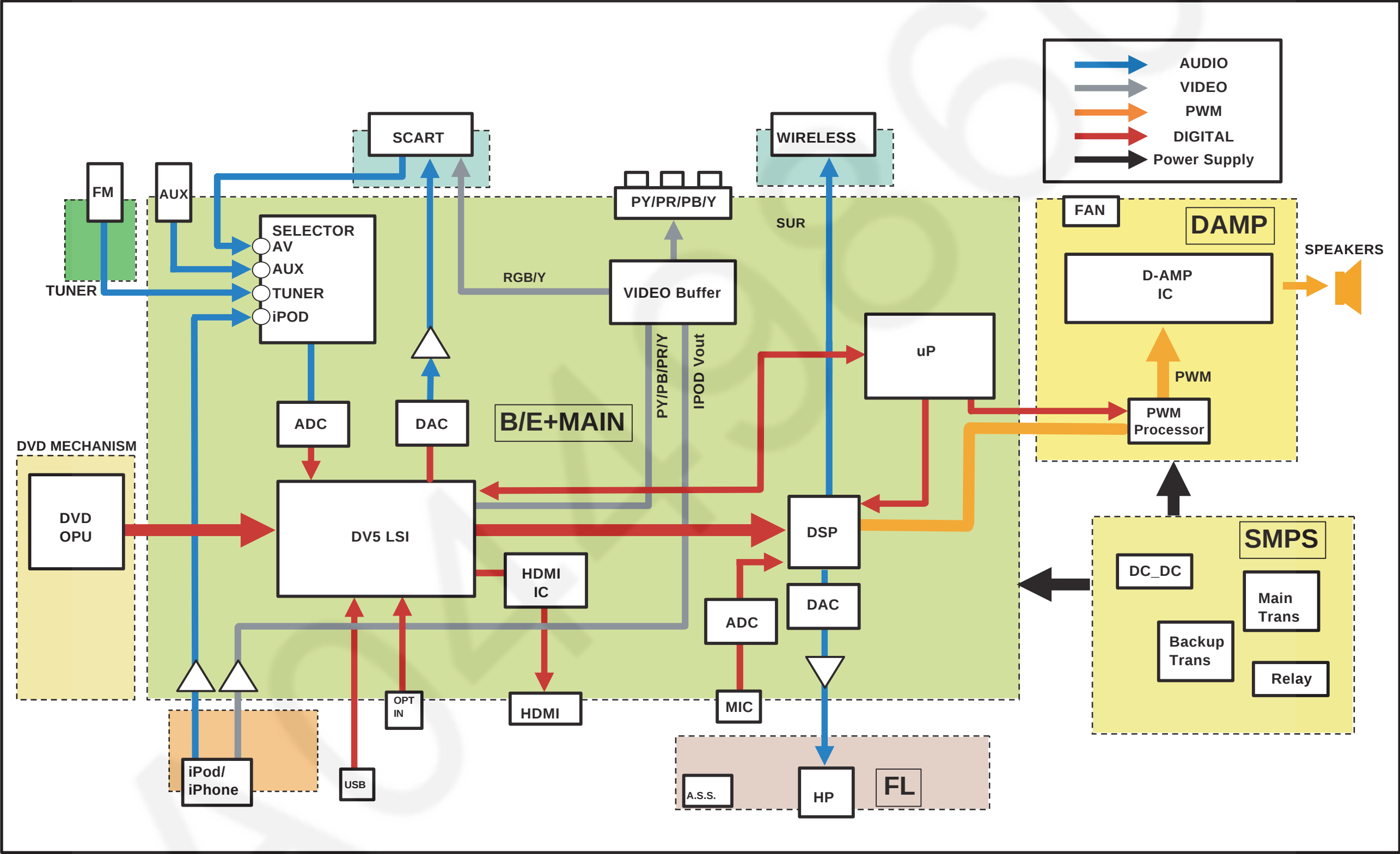
11.16. Waveform Table (3/3)

WF No. IC8001-12 (PLAY)  6Vp-p(5usec/div)	WF No. IC8001-13 (PLAY)  6Vp-p(5usec/div)	WF No. IC8001-14 (PLAY)  6Vp-p(5usec/div)	WF No. IC8001-17 (PLAY)  6Vp-p(5usec/div)
WF No. IC8001-18 (PLAY)  6Vp-p(5usec/div)	WF No. IC8001-59 (PLAY)  2Vp-p(2usec/div)	WF No. IC8001-62,63,64 (PLAY)  6Vp-p(1usec/div)	WF No. IC8001-129 (PLAY)  0.58Vp-p(20usec/div)
WF No. IC8001-130 (PLAY)  0.52Vp-p(20usec/div)	WF No. IC8001-131,138 (PLAY)  1.6Vp-p(20usec/div)	WF No. IC8001-139 (PLAY)  0.64Vp-p(20usec/div)	WF No. IC8001-151 (PLAY)  6Vp-p(2usec/div)
WF No. IC8001-152 (PLAY)  6Vp-p(2usec/div)	WF No. IC8422-1 (PLAY)  1.5Vp-p(500usec/div)	WF No. IC8422-2 (PLAY)  0.15Vp-p(500usec/div)	WF No. IC8422-9,10,11,12 (PLAY)  3.8Vp-p(1usec/div)
WF No. IC8701-2 (PLAY)  1.4Vp-p(20nsec/div)			

12 Illustration of ICs, Transistor and Diode

 RFKWMH52B3D1 (48p)	C0ABBB000179 (8p) C0ABBB000189 (8p) C0DBZYY00018 (8p) C3EBFY000006 (8p) REPX0844A (8p)(EG) REPX0844B (8p)(EB) REPX0844C (8p)(EP) C0FBAK000026 (16p)	C0JBAR000540 (16p) C0FBBK000071 (16p) C0JBZA001251 (20p) C0DBAYY00729 (20p) C9ZB00000584 (32p) C1AB00003260 (36p) C1AB00002461 (38p) C3ABPG000160 (54p)	C0HBB0000057 (44p) MN864702A (128p) MN2DS0018MP (216p)  No.1	RFKWMPT480EB (100p)  No.1	MF1341S2164 (20p)  No.1
C2HBCA000001 (40p)  No.1	C0GBG0000048 (30p)  28 30 15 14 29	VUEALLPT041 (20P)  No.1	MIP2F20MSSCF  4 3 2 1 5 7 8	 5 4 1 2 3 C0ABZA000080 C0JBAA000501 C0JBAB000907 C0DBZYY00311 C0EBE0000456	
C0CBCDC00063  5 4 1 2 3	C0EBA0000039  4 1 3 2	C0DBZMC00006  4 3 1 2	C0JBAB000837 C0JBAB000908 C0JBAB000986  6 5 4 1 2 3	C0DABFC00002  1 2 3	C5HACYY00003 (7p) 
C0DBFZG00001  1 7	C0DBEKG00004  1 2 3 4 5	C0CBABC00117  1 2 3	B1BABK000001 B1BAAJ000003  E C B	B1CFHA000002  D G S	B1HBECA00004  6 5 4 1 2 3
 C B E B1ABCF000011 B1ABDF000026 B1ADDF000012 B1GBCFJJ00040 B1GDCFEJ0008 B1GBCFLL0043	B0FBAR000043  Cathode Anode Anode	 C B E B1ABCF000176 B1ABEB000002 B1ABGC000001 B1ABMF000020	B1ADBL000010 B1ADCE000012 B1ADGB000008 B1ADNB000003 B1GBCFJJ00051 B1GBCFGG00030 B1GBCFNN00038 B1GDCFJJ00002 B1GBCFLL0043 B1GDCFGA0018	B3ABA0000187  Anode Cathode A Ca	
B0EAMM000057 B0HAMP000094 B0HAJM000005  A Ca Cathode Anode	B1CHPD000003  6 5 4 1 2 3	B0HBSM000054  A Ca A A Ca A	B0HFRJ000012  Cathode Ca Anode A	B0ZAZ0000052  A Ca A Ca	B0JCMD000010 MA2YF8000L  Cathode Anode A Ca
B0EDKT000009  4 1 3 2	B0JCCE000008  Ca A	 Cathode Anode A Ca	B0BC010A0269 B0BC011A0264 B0BC012A0267 B0BC012A0269 B0BC020A0267 B0BC024A0267 B0BC027A0264 B0BC030A0264 B0BC2R4A0263	B0BC3R3A0262 B0BC5R1A0262 B0BC5R1A0266 B0BC6R2A0266 B0BC6R8A0266 B0BC7R500001 B0BC7R5A0266 B0BC7R5A0268	B0JCPG000005 B0HCSP000001  Cathode Anode A Ca
B0ACCK000012 B0ACCK000005  Cathode Anode A Ca	B0JCAE000001  Cathode Anode A Ca				

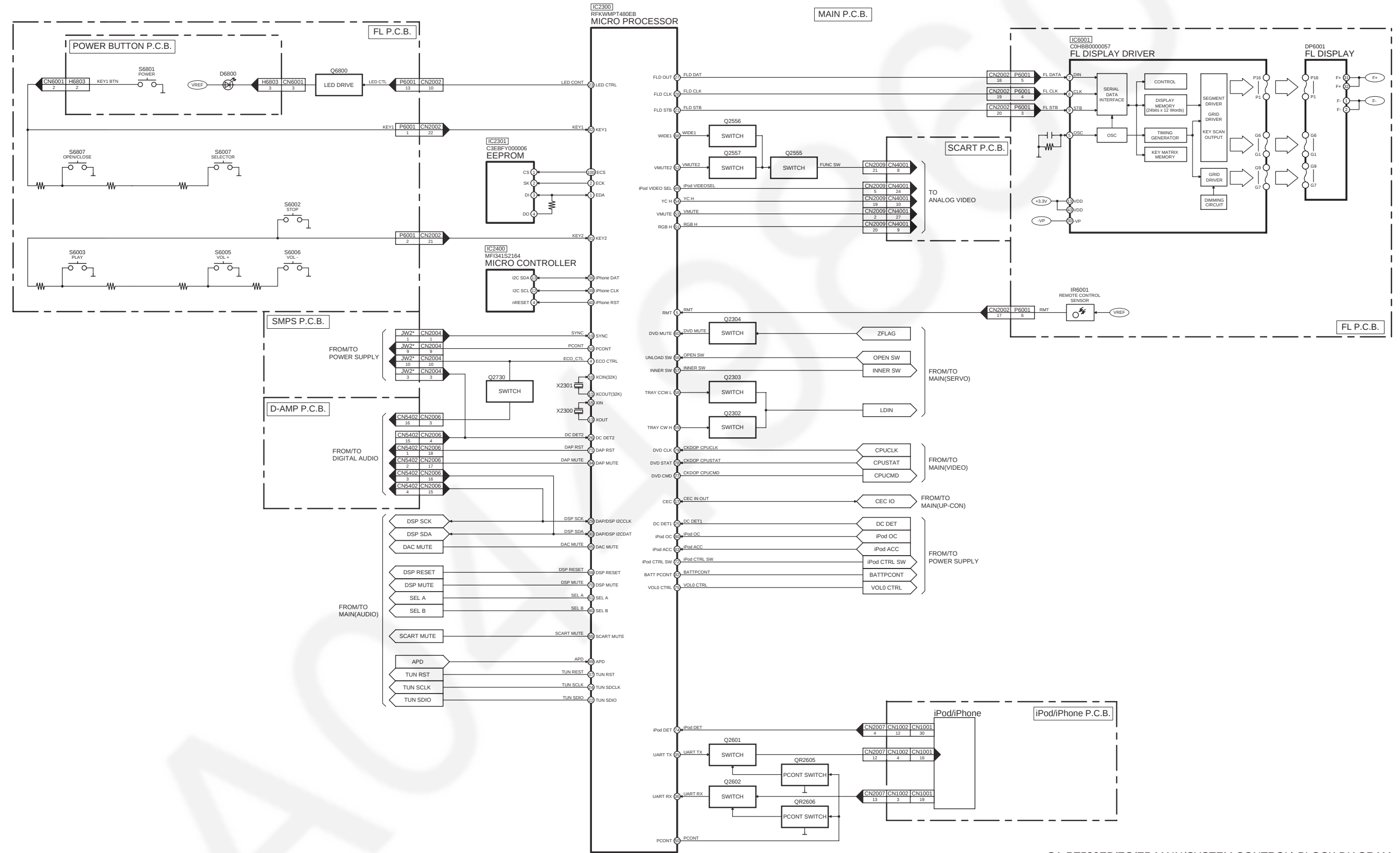
13 Overall Simplified Block Diagram



14.1. Main(Servo)



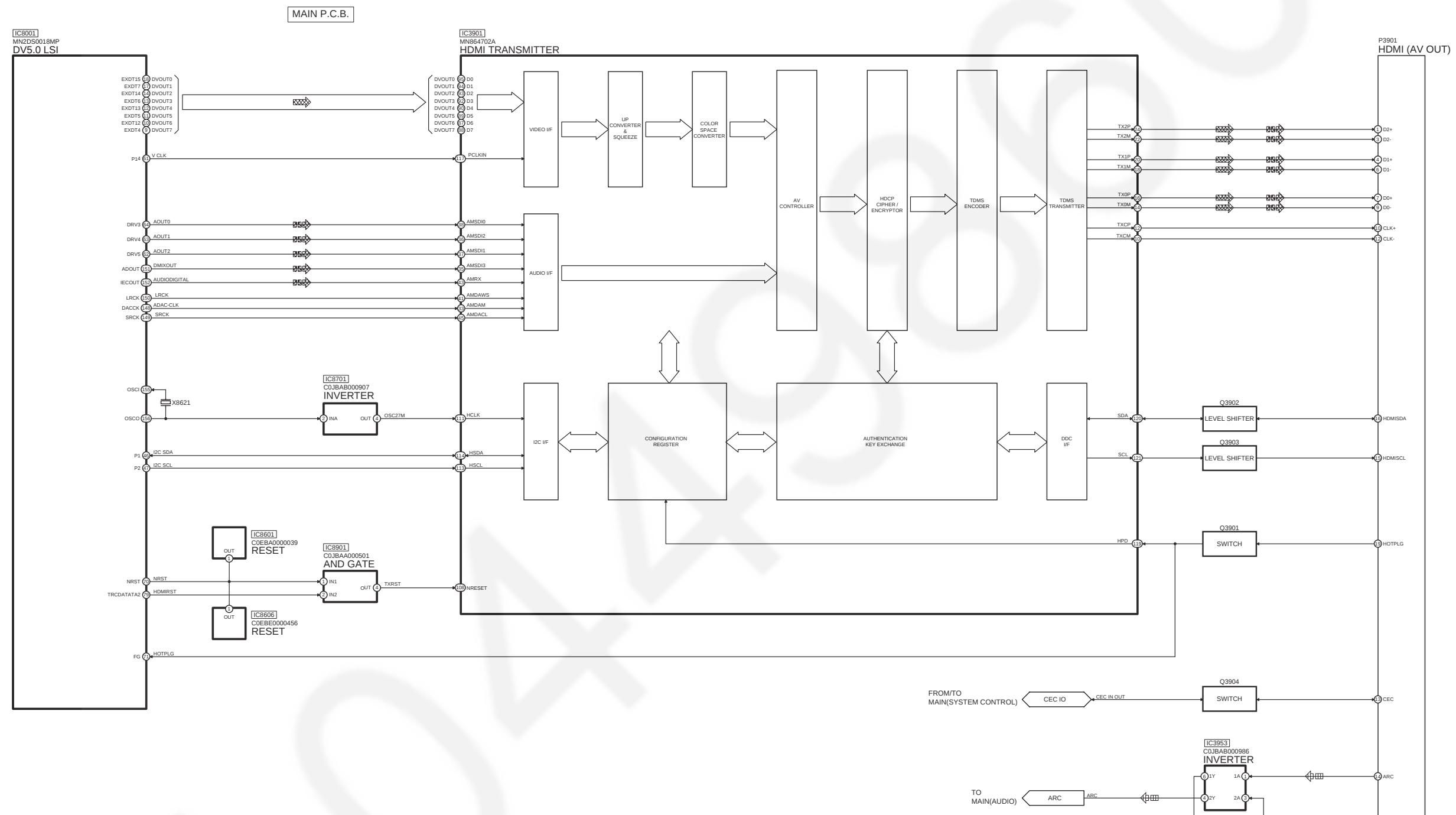
14.2. Main(System Control)



SA-PT580EB/EG/EP MAIN(SYSTEM CONTROL) BLOCK DIAGRAM

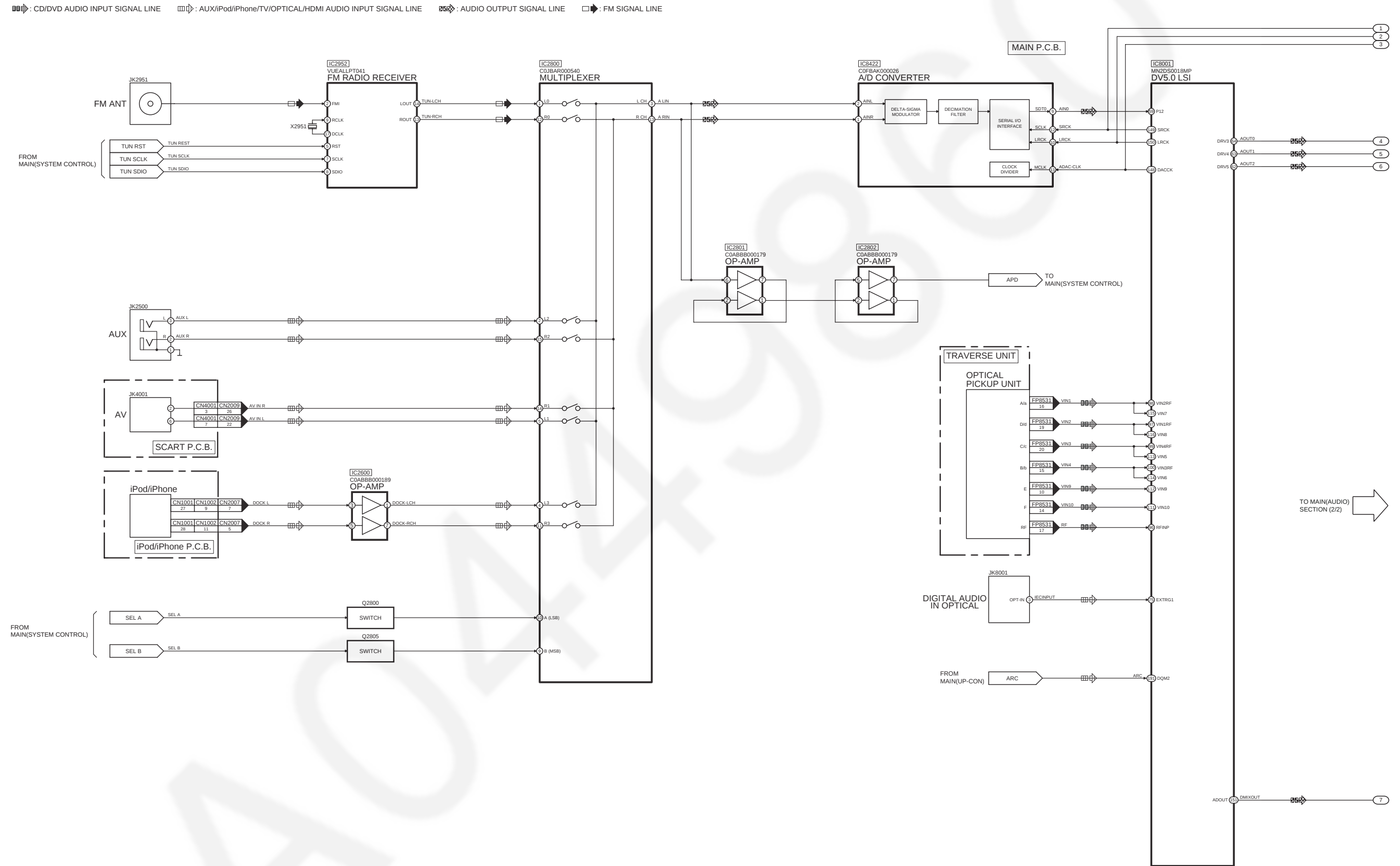
14.3. Main(UP-CON)

 : HDMI AUDIO INPUT SIGNAL LINE
 : AUDIO OUTPUT SIGNAL LINE
 : VIDEO OUTPUT SIGNAL LINE



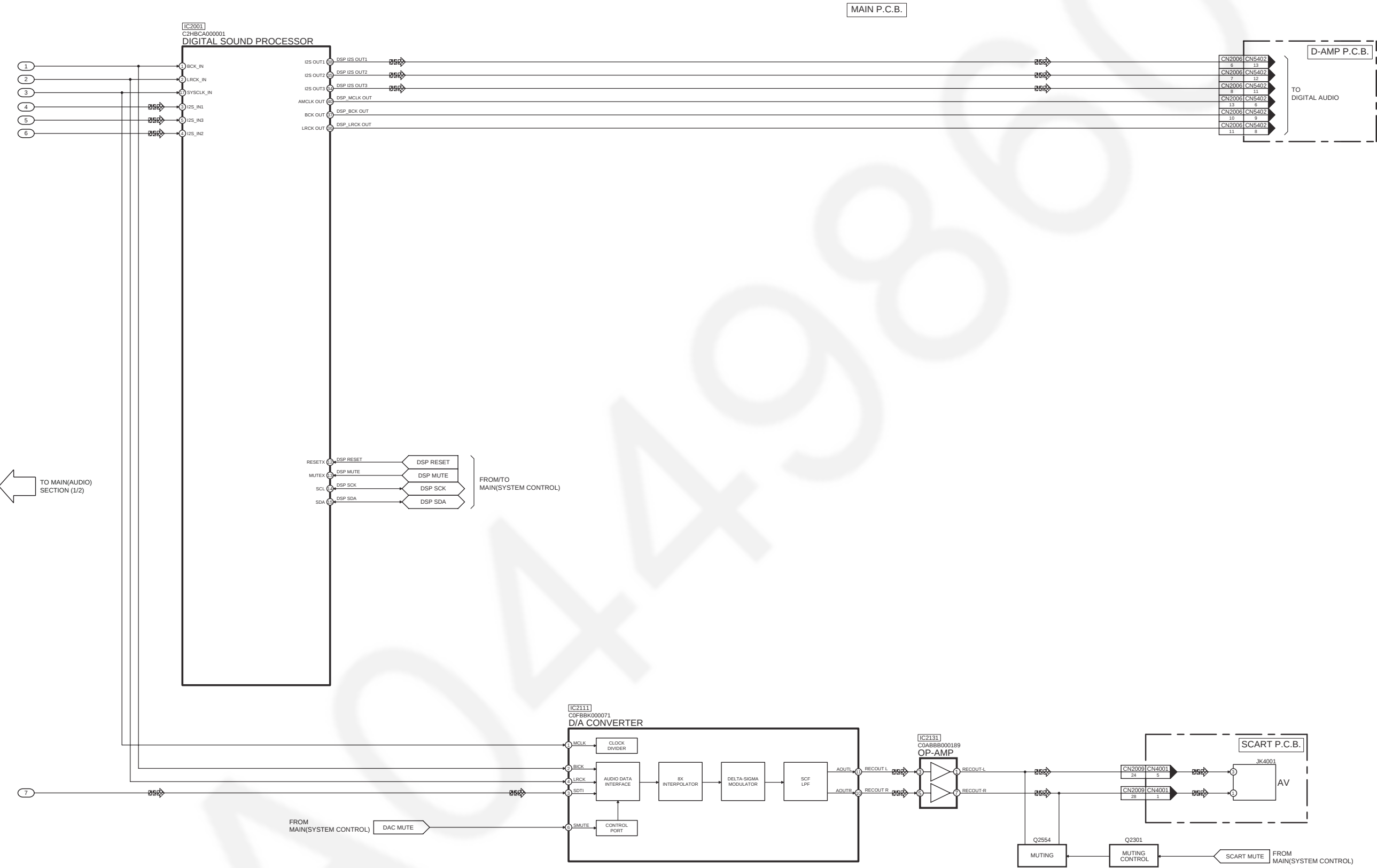
SA-PT580EB/EG/EP MAIN(UP-CON) BLOCK DIAGRAM

14.4. Main(Audio)



SA-PT580EB/EG/EP MAIN(AUDIO) (1/2) BLOCK DIAGRAM

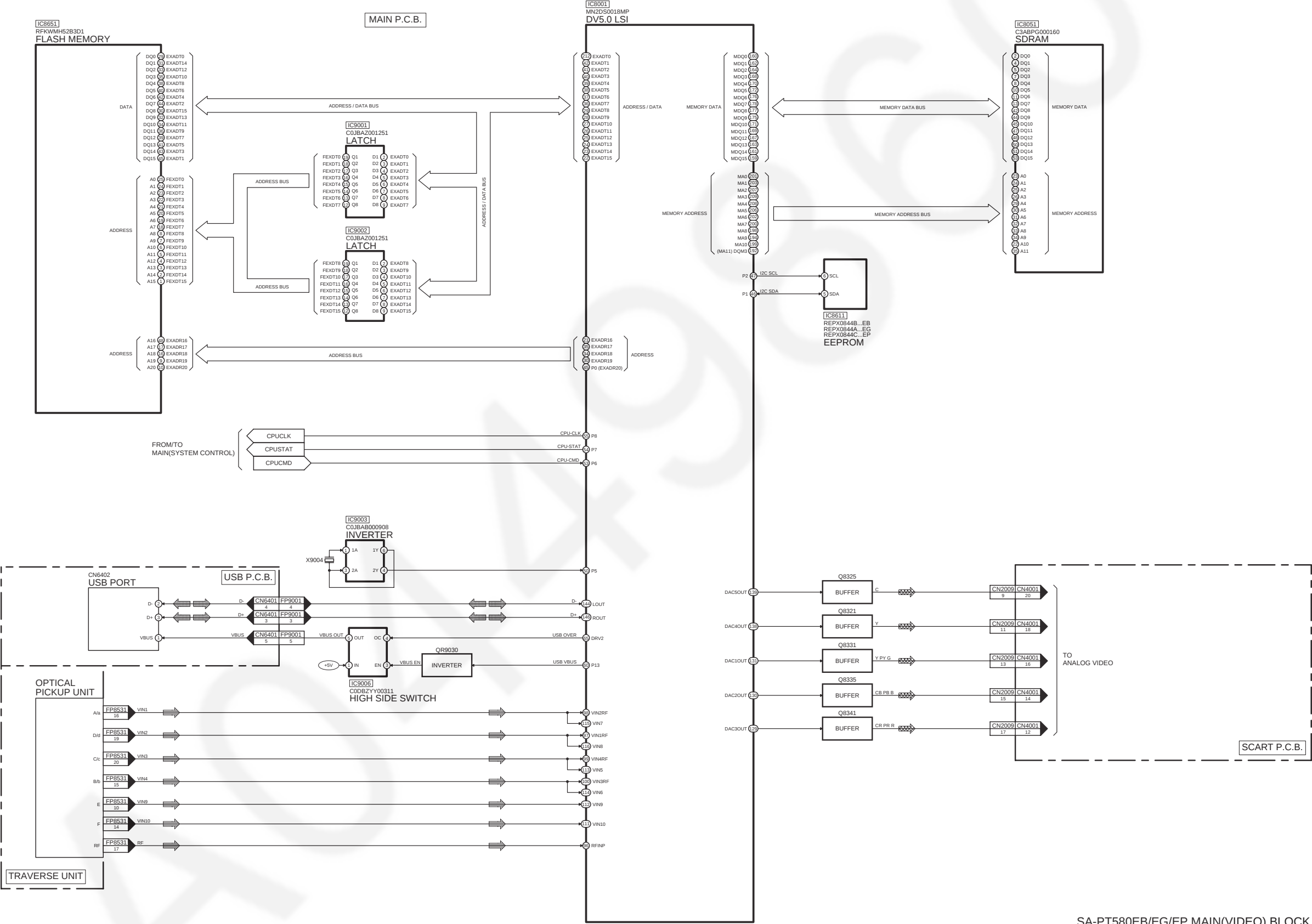
 : CD/DVD AUDIO INPUT SIGNAL LINE
  : AUX/iPod/iPhone/TV/OPTICAL/HDMI AUDIO INPUT SIGNAL LINE
  : AUDIO OUTPUT SIGNAL LINE
  : FM SIGNAL LINE



SA-PT580EB/EG/EP MAIN(AUDIO) (2/2) BLOCK DIAGRAM

14.5. Main(Video)

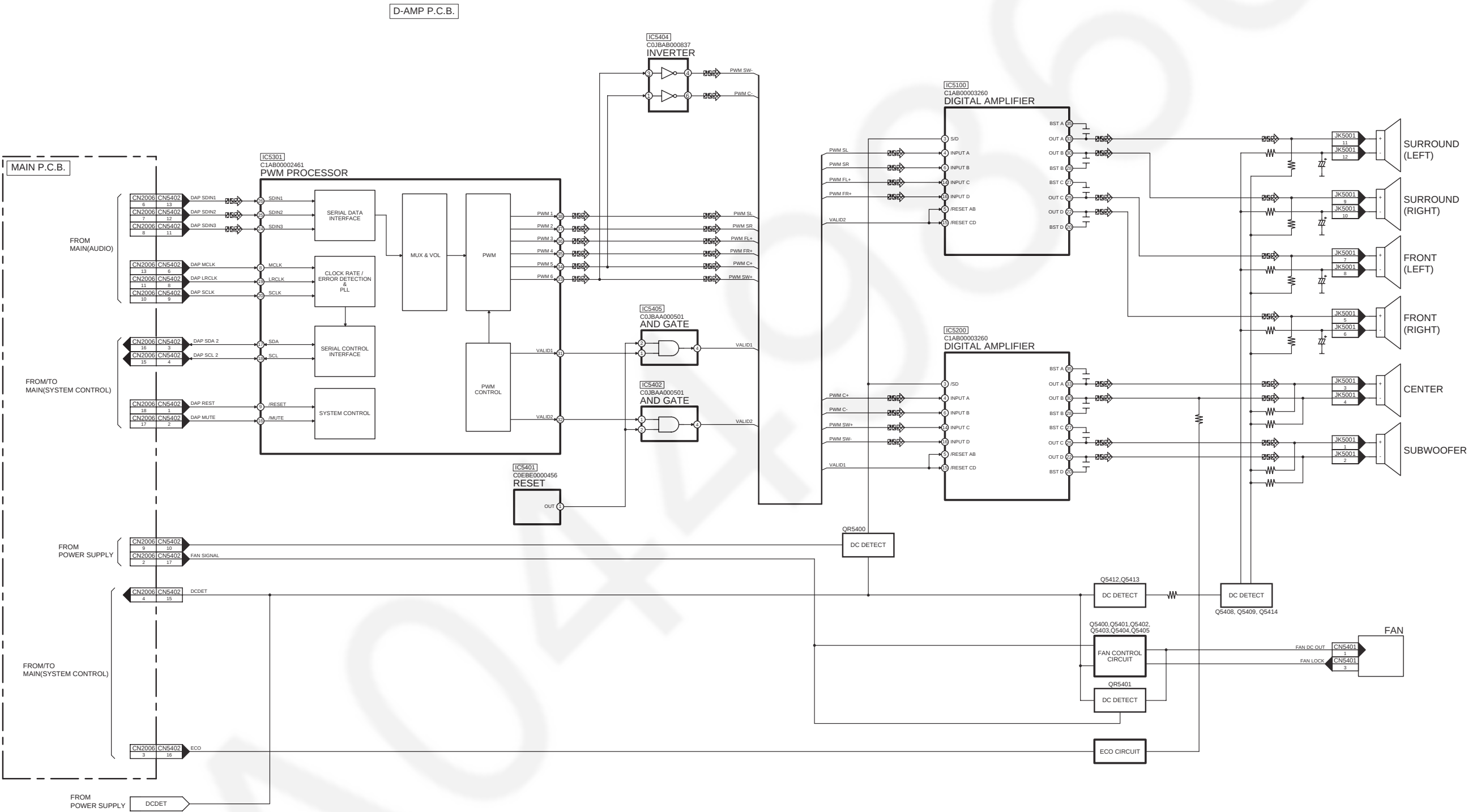
⇒ : CD/DVD VIDEO INPUT SIGNAL LINE ⇒ : VIDEO OUTPUT SIGNAL LINE ⇒ : USB SIGNAL LINE



SA-PT580EB/EG/EP MAIN(VIDEO) BLOCK DIAGRAM

14.6. Digital Audio

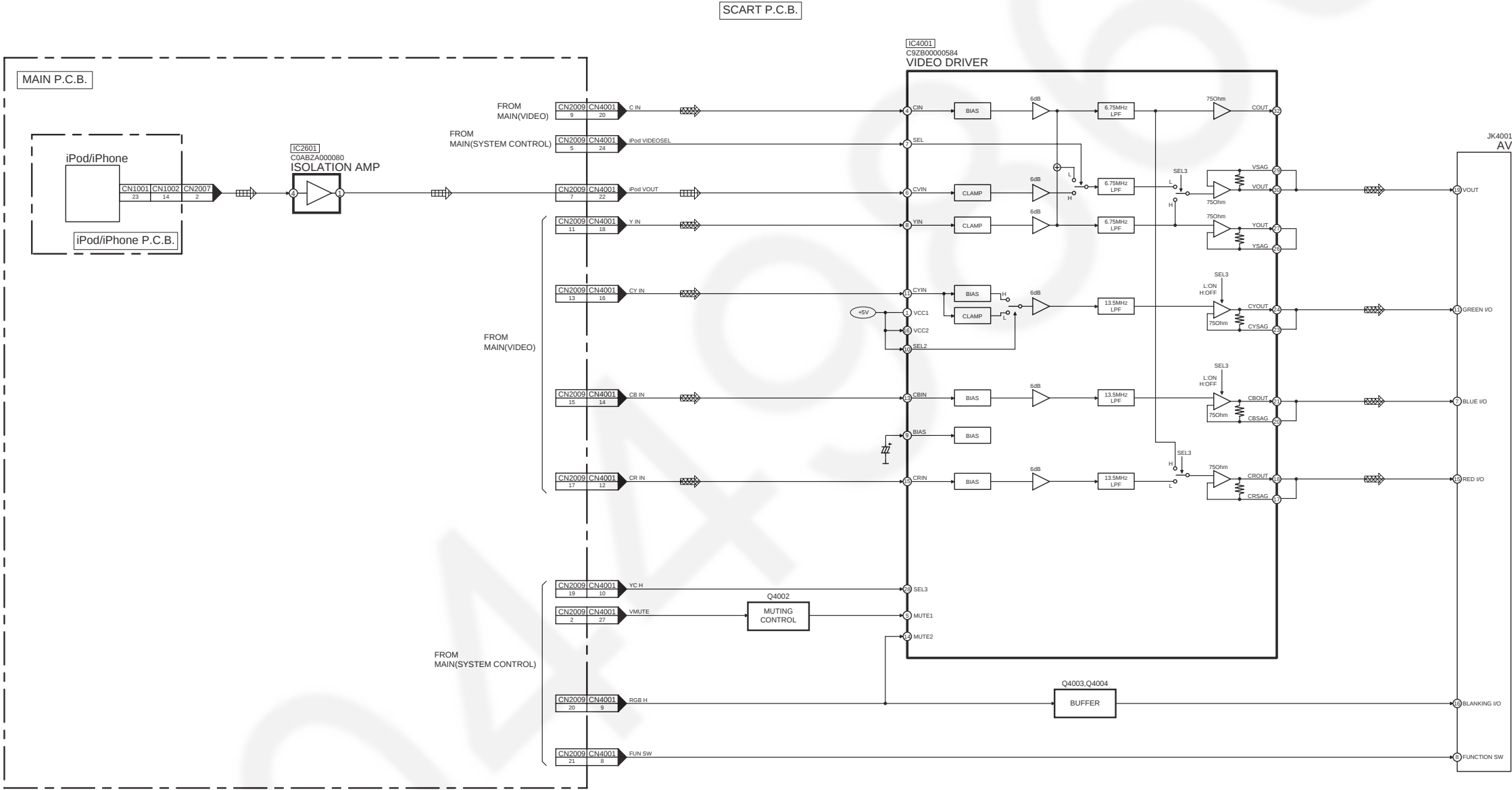
🔊 : AUDIO OUTPUT SIGNAL LINE



SA-PT580EB/EG/EP DIGITAL AUDIO BLOCK DIAGRAM

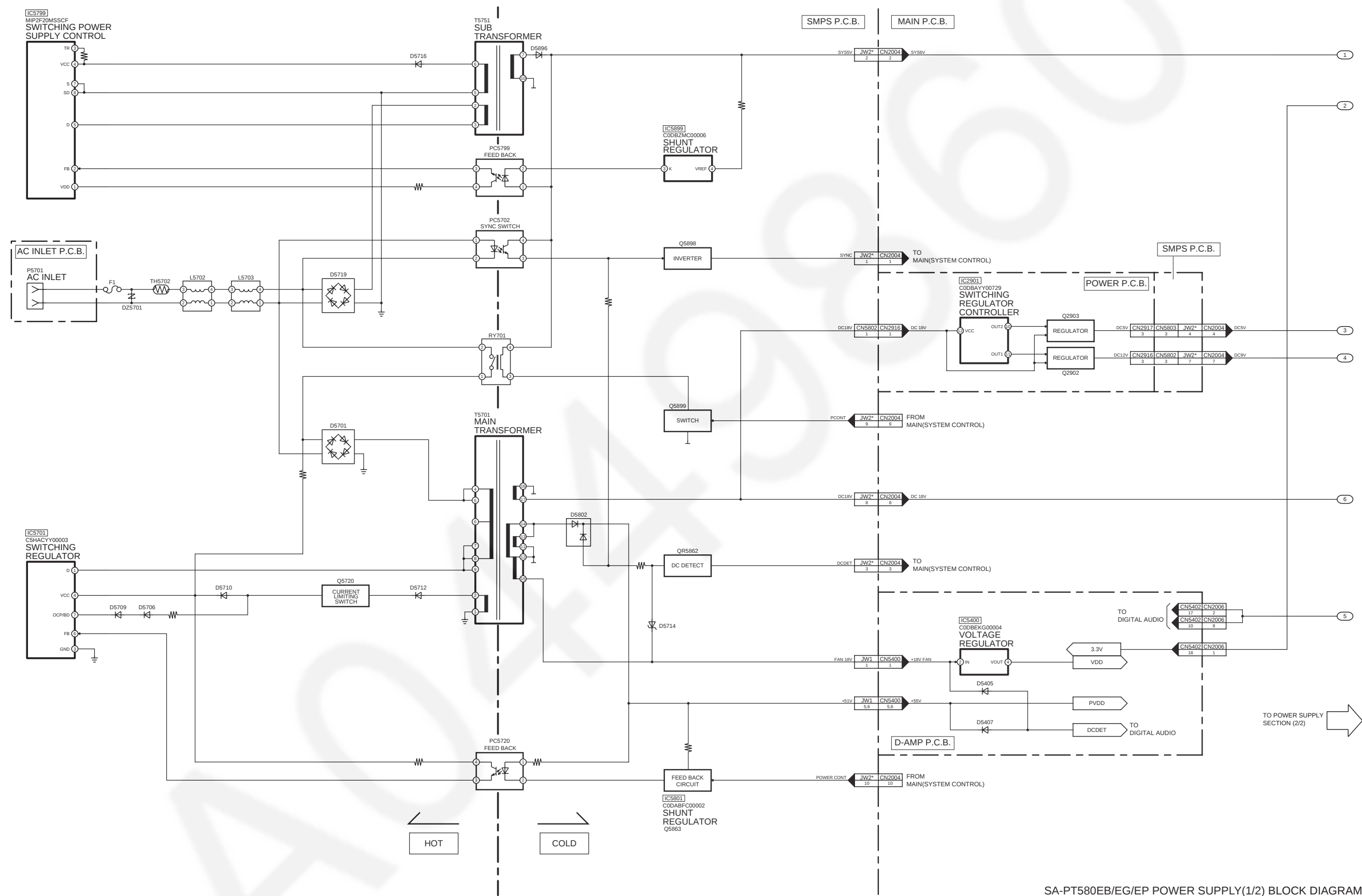
14.7. Analog Video

□ : iPod/iPhone VIDEO INPUT SIGNAL LINE ⊞ : VIDEO OUTPUT SIGNAL LINE



SA-PT580EB/EG/EP ANALOG VIDEO BLOCK DIAGRAM

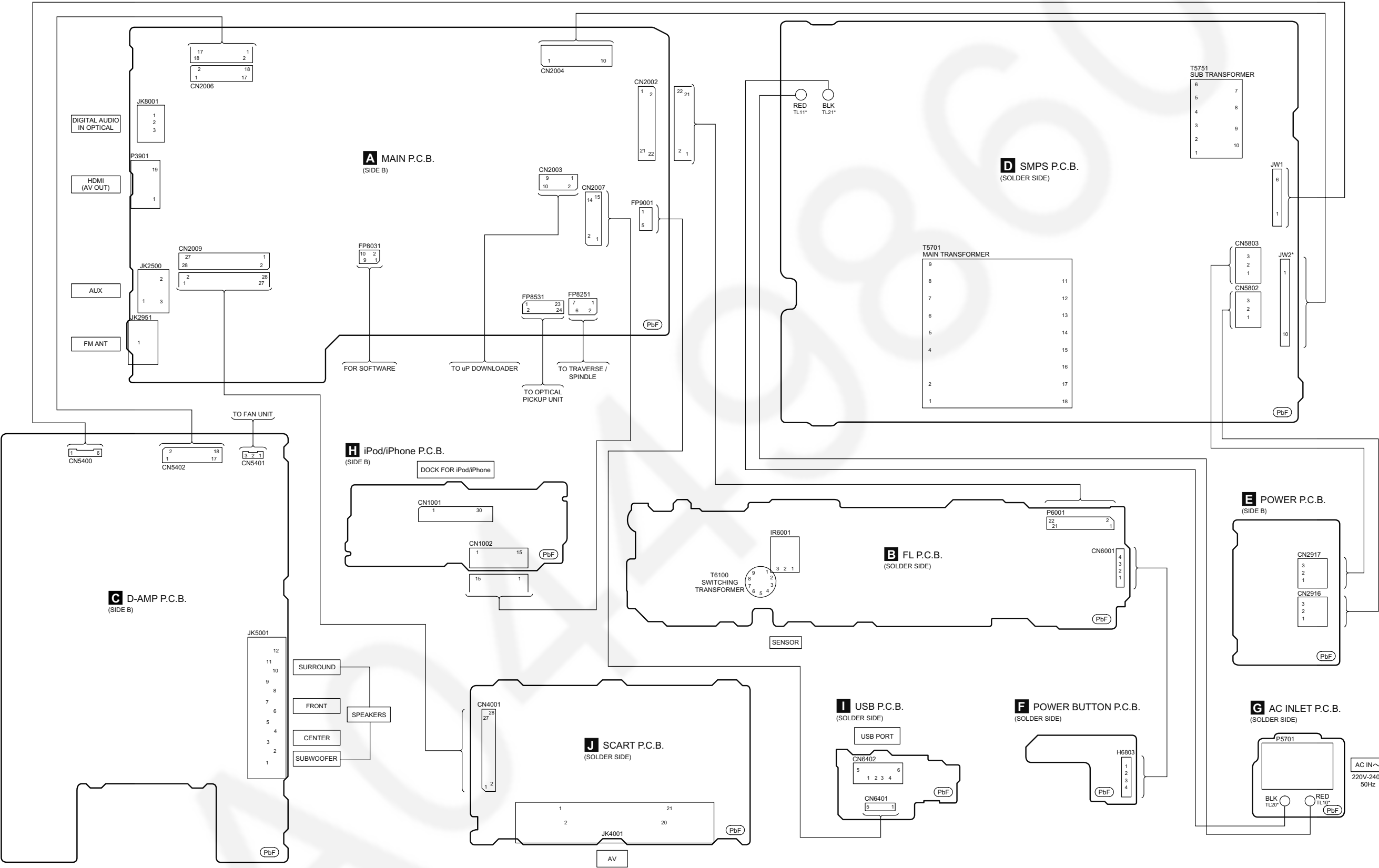
14.8. Power Supply



SA-PT580EB/EG/EP POWER SUPPLY(1/2) BLOCK DIAGRAM



15 Wiring Diagram



16 Schematic Diagram Notes

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

Notes:

S6002:	Stop switch (■).
S6003:	Play switch (▶).
S6005:	Vol (+) switch
S6006:	Vol (-) switch
S6007:	Selector Switch (+)
S6801:	Power switch (⏻/⏻).
S6807:	Open/Close switch (▲).

- 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, C5703, C5704, C5705, C5706

- **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
	: CD/DVD Audio input signal line
	: CD/DVD Video input signal line
	: Optical/HDMI/iPod/iPhone/AUX/TV Audio input signal line
	: iPod/iPhone Video input signal line
	: FM signal Line
	: USB signal Line

CAUTION:

FOR CONTINUED PROTECTION
AGAINST FIRE HAZARD,
REPLACE ONLY WITH SAME
TYPE F1 T4AH 250V FUSE



RISK OF FIRE-REPLACE FUSE AS MARKED.

FUSE CAUTION

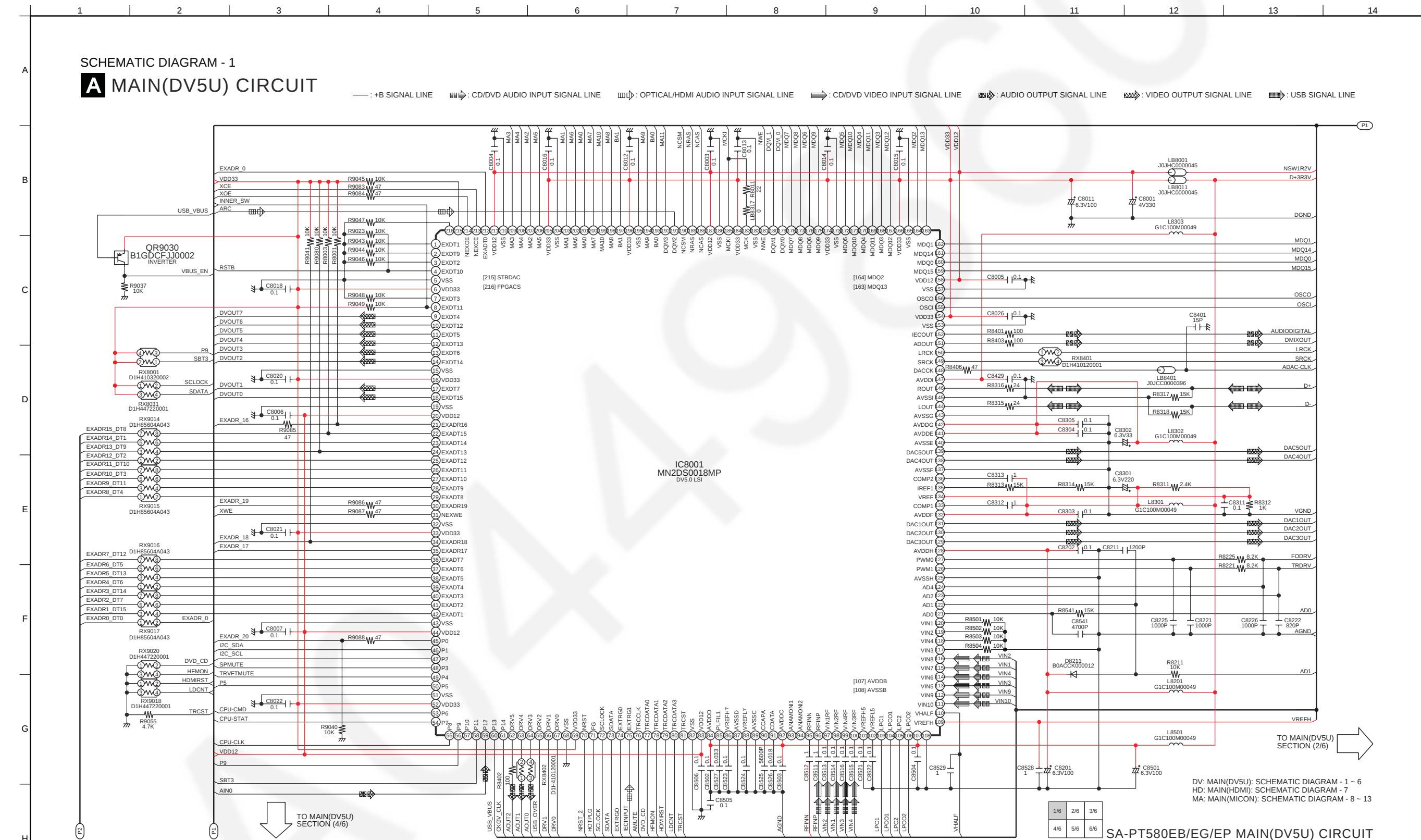


These symbols located near the fuse indicates that the fuse used is a fast operating type. For continued protection against fire hazard, replace with the same type fuse. For rating, refer to the marking adjacent to the symbol.

A0449860

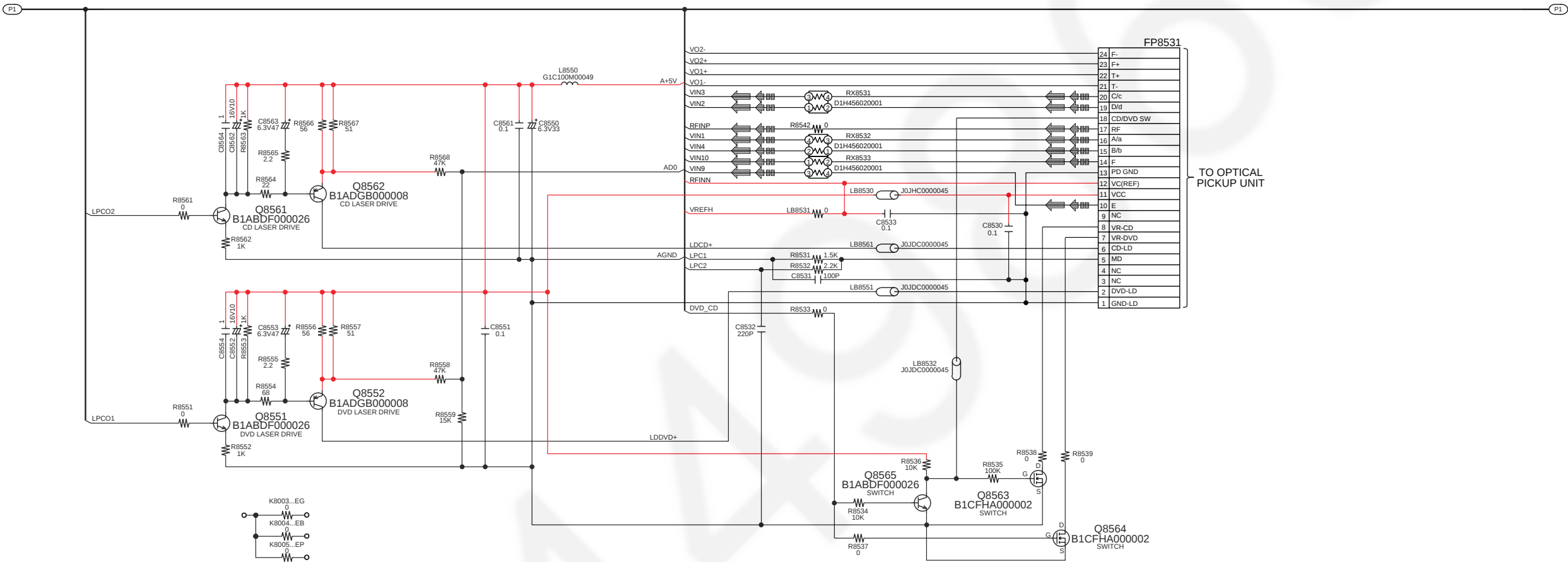
17 Schematic Diagram

17.1. Main Circuit



SCHEMATIC DIAGRAM - 2
A MAIN(DV5U) CIRCUIT

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



TO MAIN(DV5U)
SECTION (1/6)

TO MAIN(DV5U)
SECTION (3/6)

TO MAIN(DV5U)
SECTION (5/6)

DV: MAIN(DV5U): SCHEMATIC DIAGRAM - 1 ~ 6
HD: MAIN(HDMI): SCHEMATIC DIAGRAM - 7
MA: MAIN(MICON): SCHEMATIC DIAGRAM - 8 ~ 13

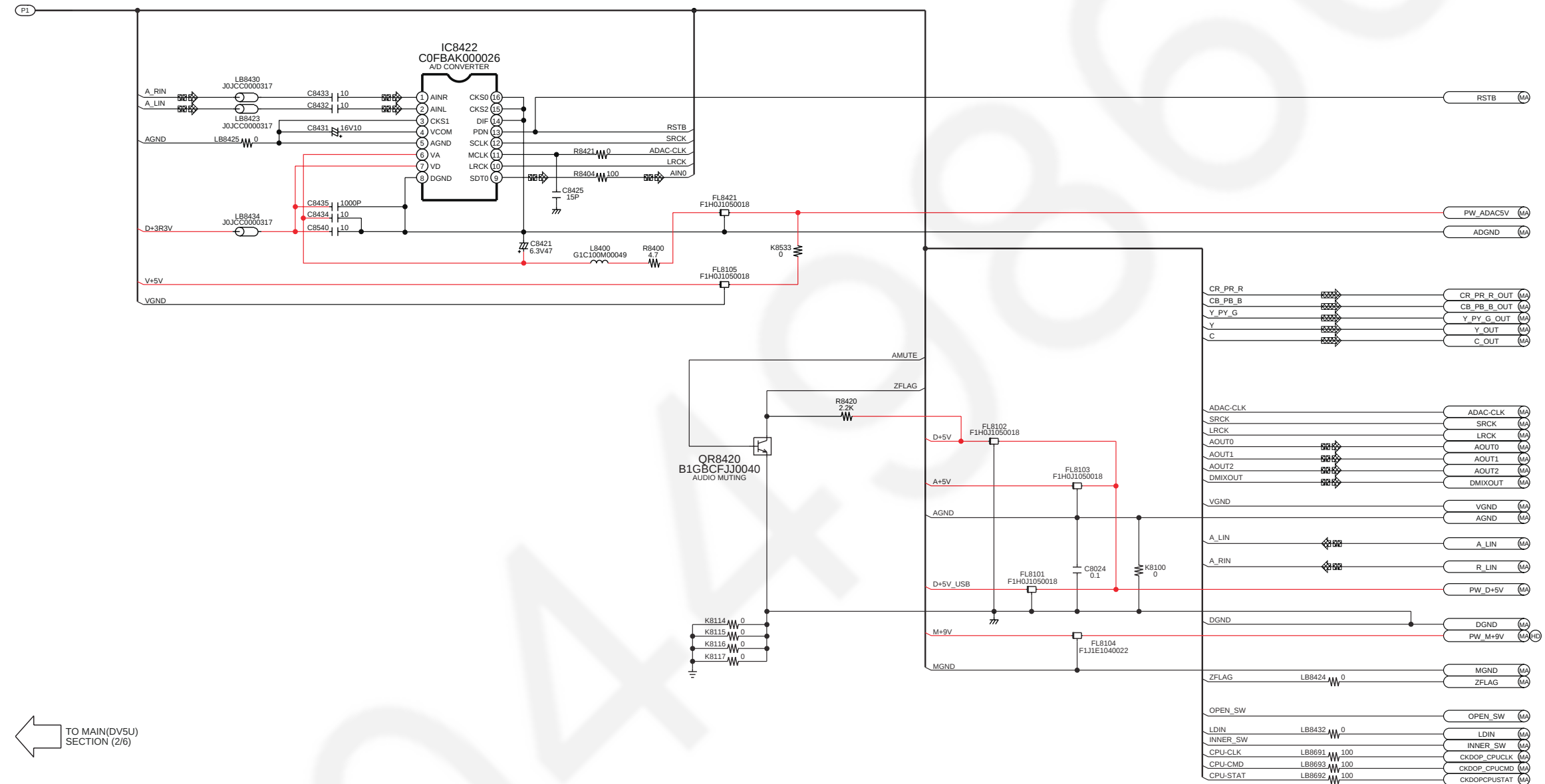
1/6	2/6	3/6
4/6	5/6	6/6

SA-PT580EB/EG/EP MAIN(DV5U) CIRCUIT

SCHEMATIC DIAGRAM - 3

A MAIN(DV5U) CIRCUIT

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



TO MAIN(DV5U)
SECTION (2/6)

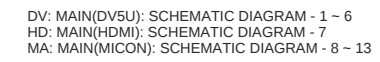
TO MAIN(DV5U)
SECTION (6/6)

DV: MAIN(DV5U): SCHEMATIC DIAGRAM - 1 ~ 6
HD: MAIN(HDMI): SCHEMATIC DIAGRAM - 7
MA: MAIN(MICON): SCHEMATIC DIAGRAM - 8 ~ 13

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

SA-PT580EB/EG/EP MAIN(DV5U) CIRCUIT

A MAIN(DV5U) CIRCUIT



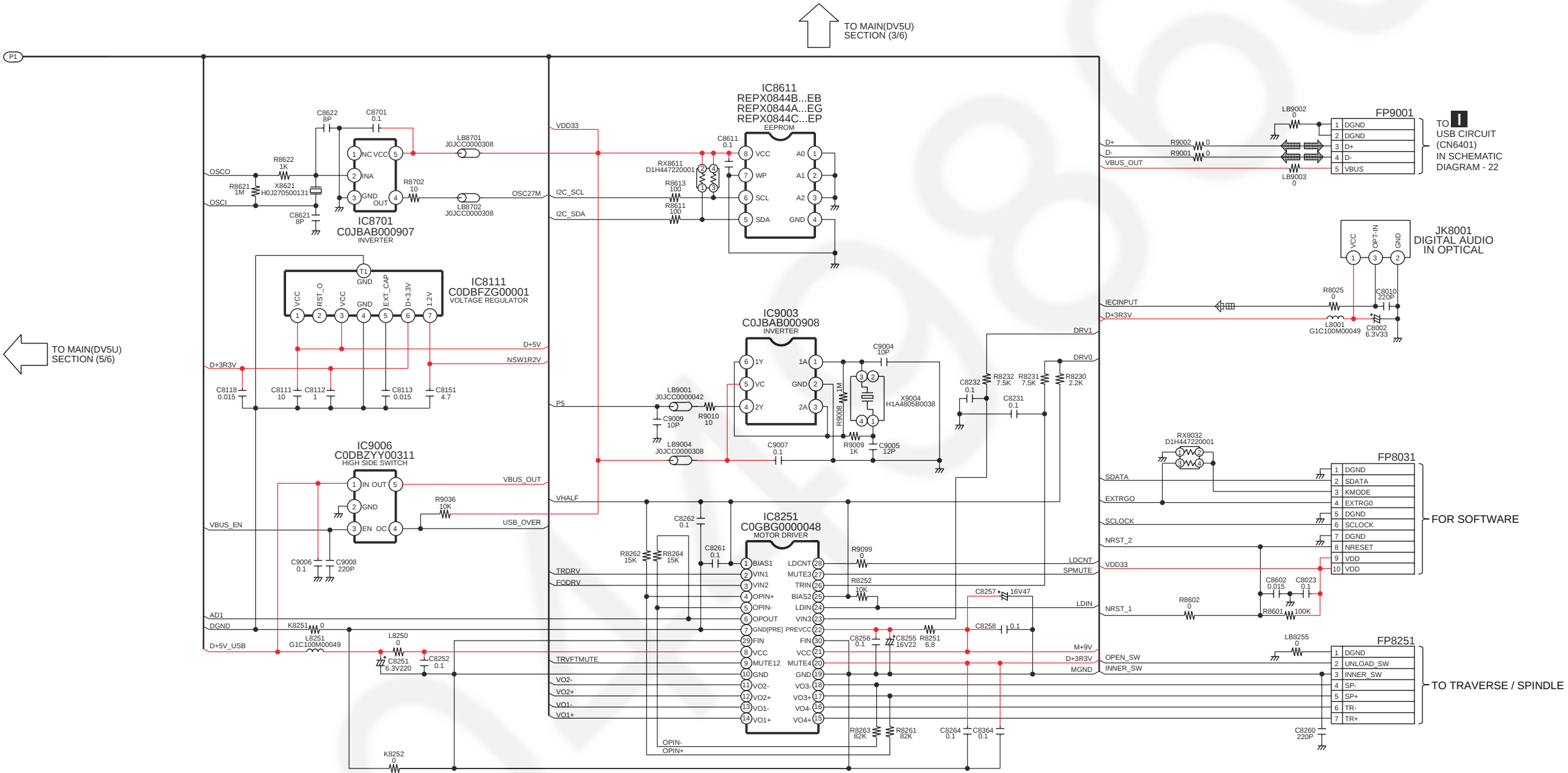
$\frac{1}{6}$	$\frac{2}{6}$	$\frac{3}{6}$
$\frac{4}{6}$	$\frac{5}{6}$	$\frac{6}{6}$

SA-PT580EB/EG/EP MAIN(DV5U) CIRCUIT

SCHEMATIC DIAGRAM - 6

A MAIN(DV5U) CIRCUIT

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



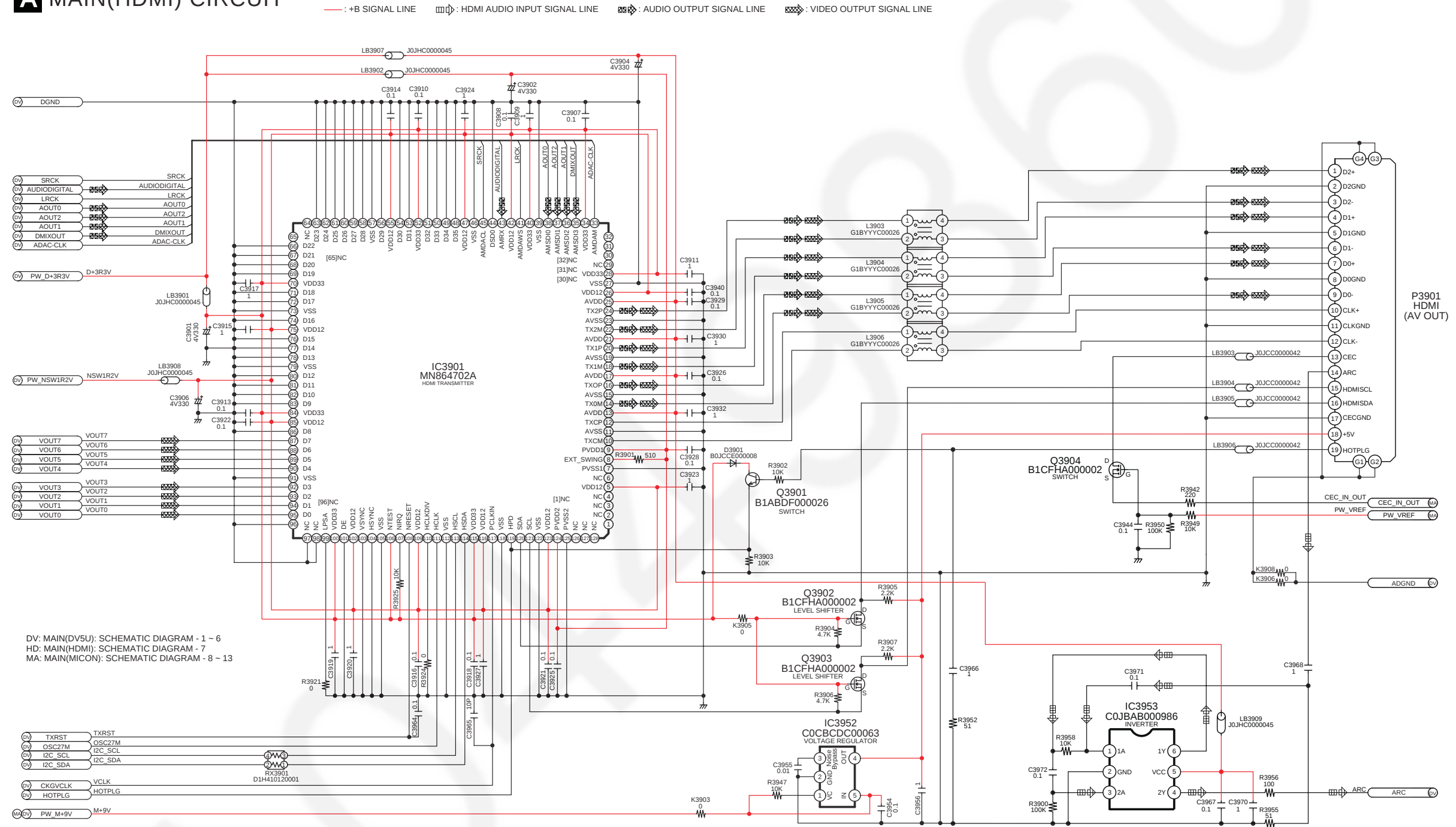
DV: MAIN(DV5U): SCHEMATIC DIAGRAM - 1 ~ 6
HD: MAIN(HDMI): SCHEMATIC DIAGRAM - 7
MA: MAIN(MICON): SCHEMATIC DIAGRAM - 8 ~ 13

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

SA-PT580EB/EG/EP MAIN(DV5U) CIRCUIT

SCHEMATIC DIAGRAM - 7

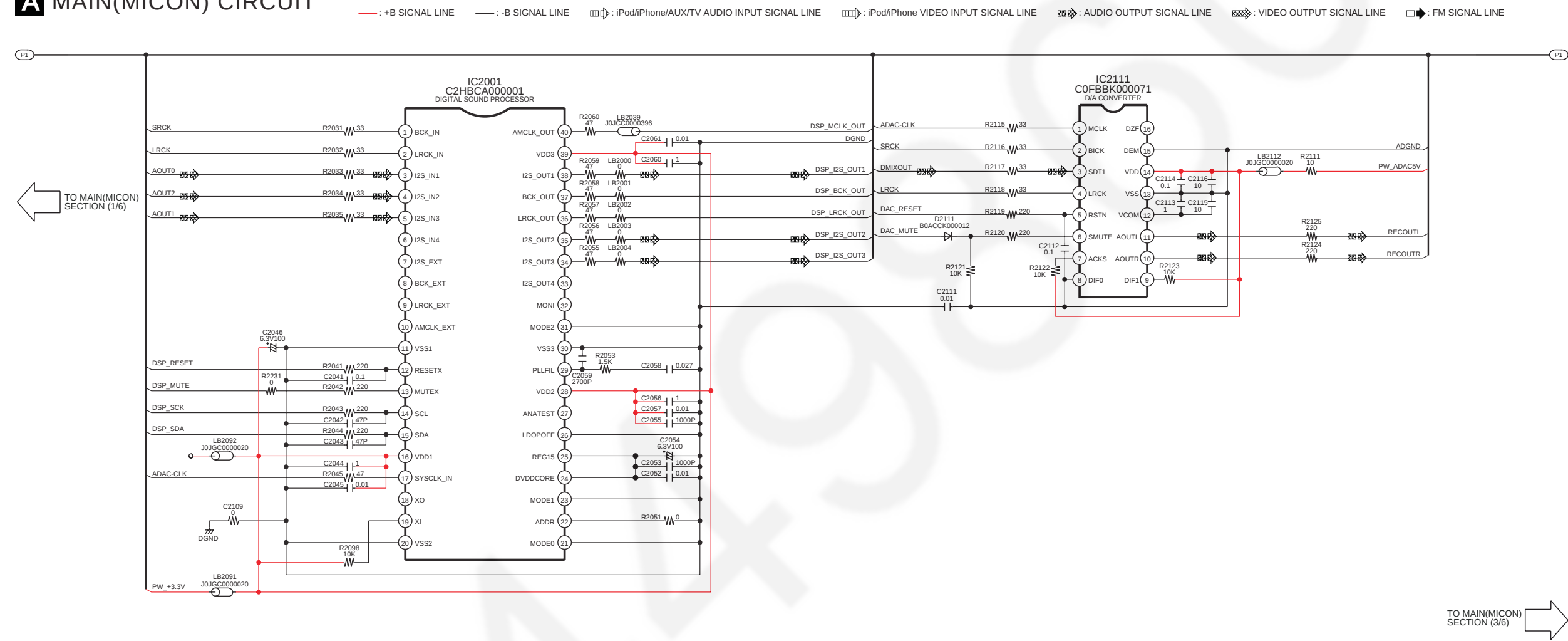
MAIN(HDMI) CIRCUIT



SA-PT580EB/EG/EP MAIN(HDMI) CIRCUIT

SCHEMATIC DIAGRAM - 9

A MAIN(MICON) CIRCUIT



DV: MAIN(DV5U): SCHEMATIC DIAGRAM - 1 ~ 6
HD: MAIN(HDMI): SCHEMATIC DIAGRAM - 7
MA: MAIN(MICON): SCHEMATIC DIAGRAM - 8 ~ 13

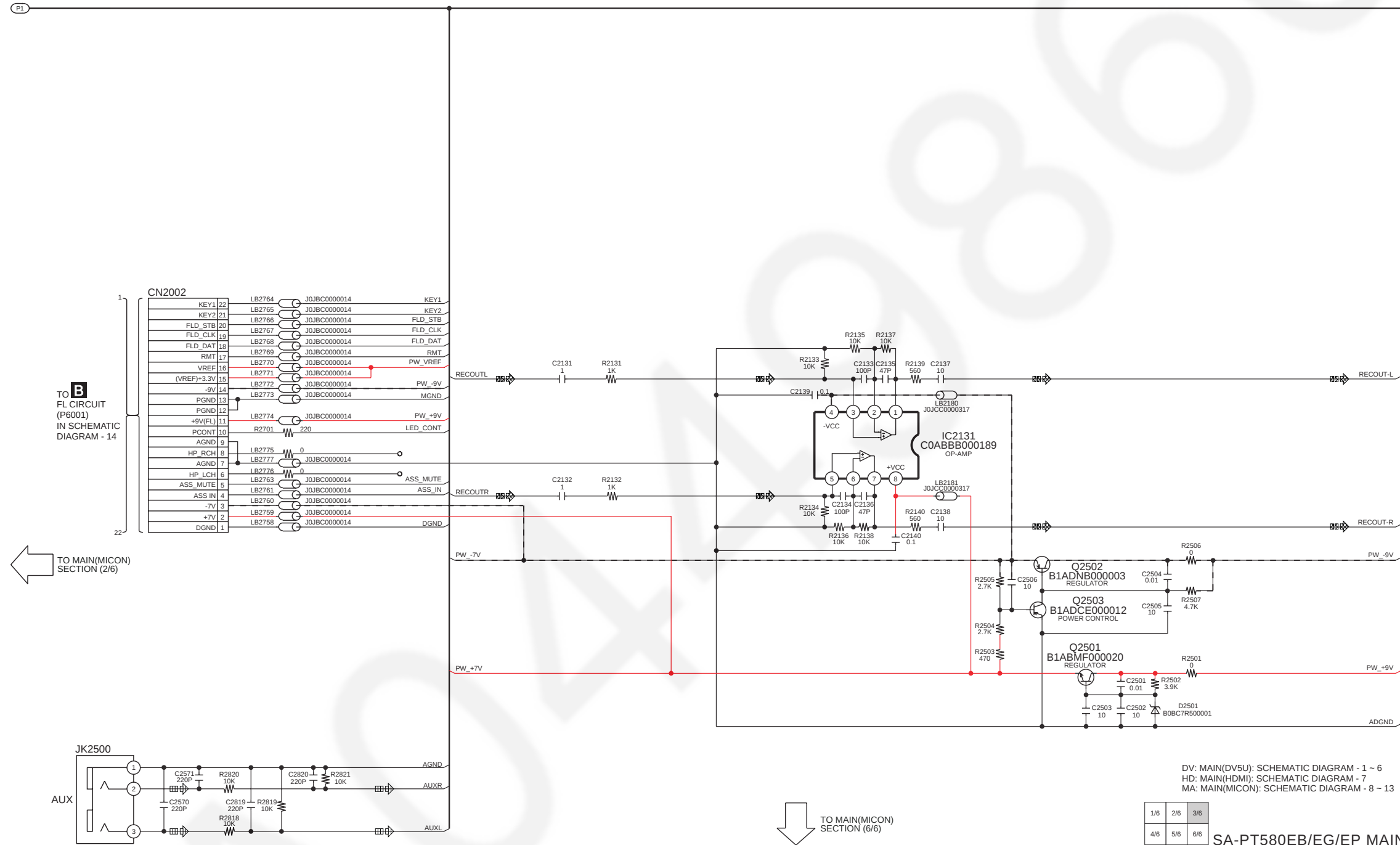
1/6	2/6	3/6
4/6	5/6	6/6

SA-PT580EB/EG/EP MAIN(MICON) CIRCUIT

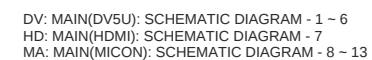
SCHEMATIC DIAGRAM - 10

A MAIN(MICON) CIRCUIT

— : +B SIGNAL LINE — : -B SIGNAL LINE : iPod/iPhone/AUX/TV AUDIO INPUT SIGNAL LINE : iPod/iPhone VIDEO INPUT SIGNAL LINE : AUDIO OUTPUT SIGNAL LINE : VIDEO OUTPUT SIGNAL LINE : FM SIGNAL LINE



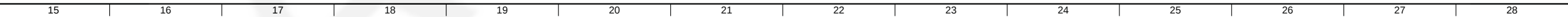
A MAIN(MICON) CIRCUIT



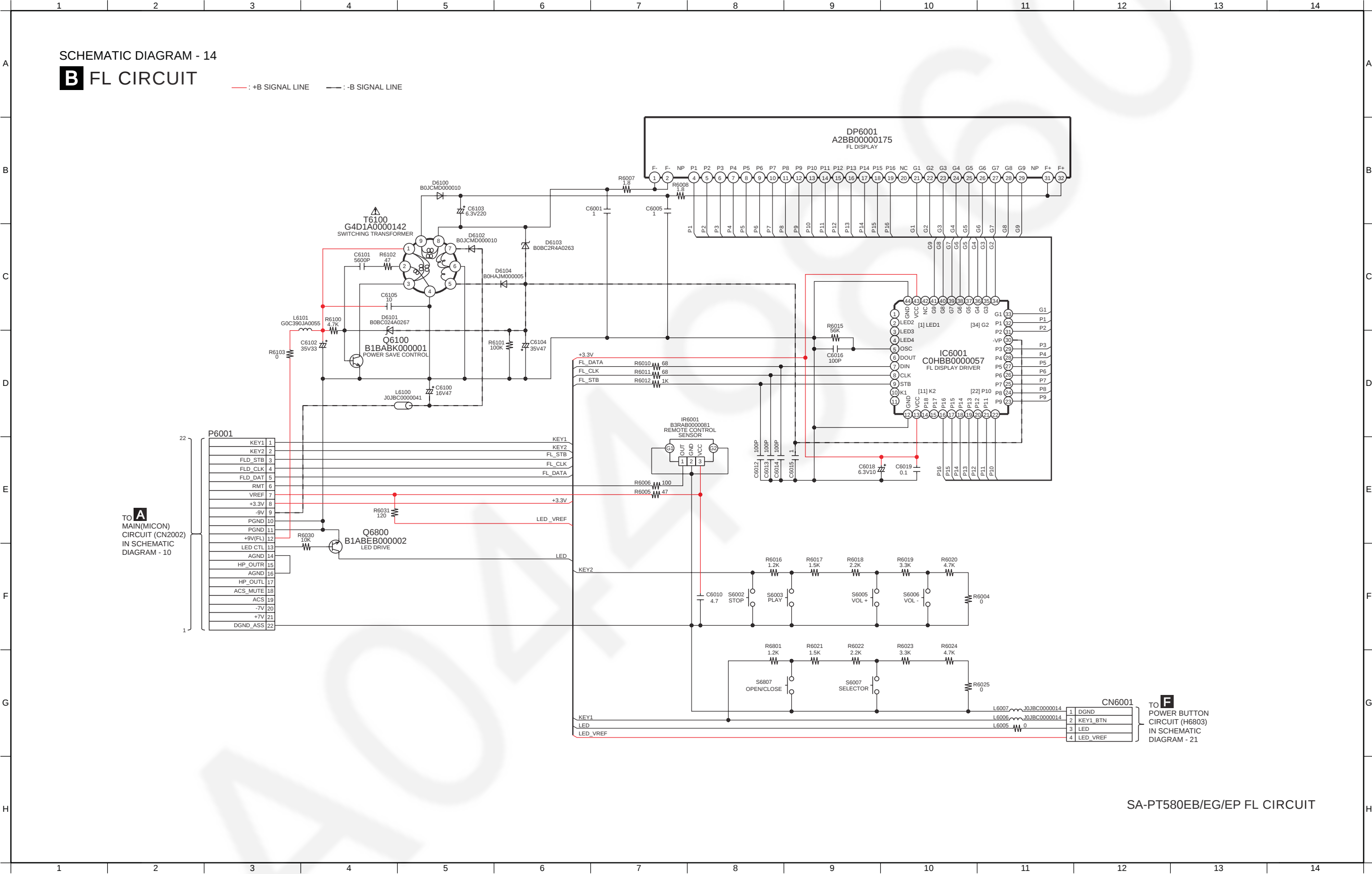
$\frac{1}{6}$	$\frac{2}{6}$	$\frac{3}{6}$
$\frac{4}{6}$	$\frac{5}{6}$	$\frac{6}{6}$

SA-PT580EB/EG/EP MAIN(MICON) CIRCUIT

A MAIN(MICON) CIRCUIT



17.2. FL Circuit

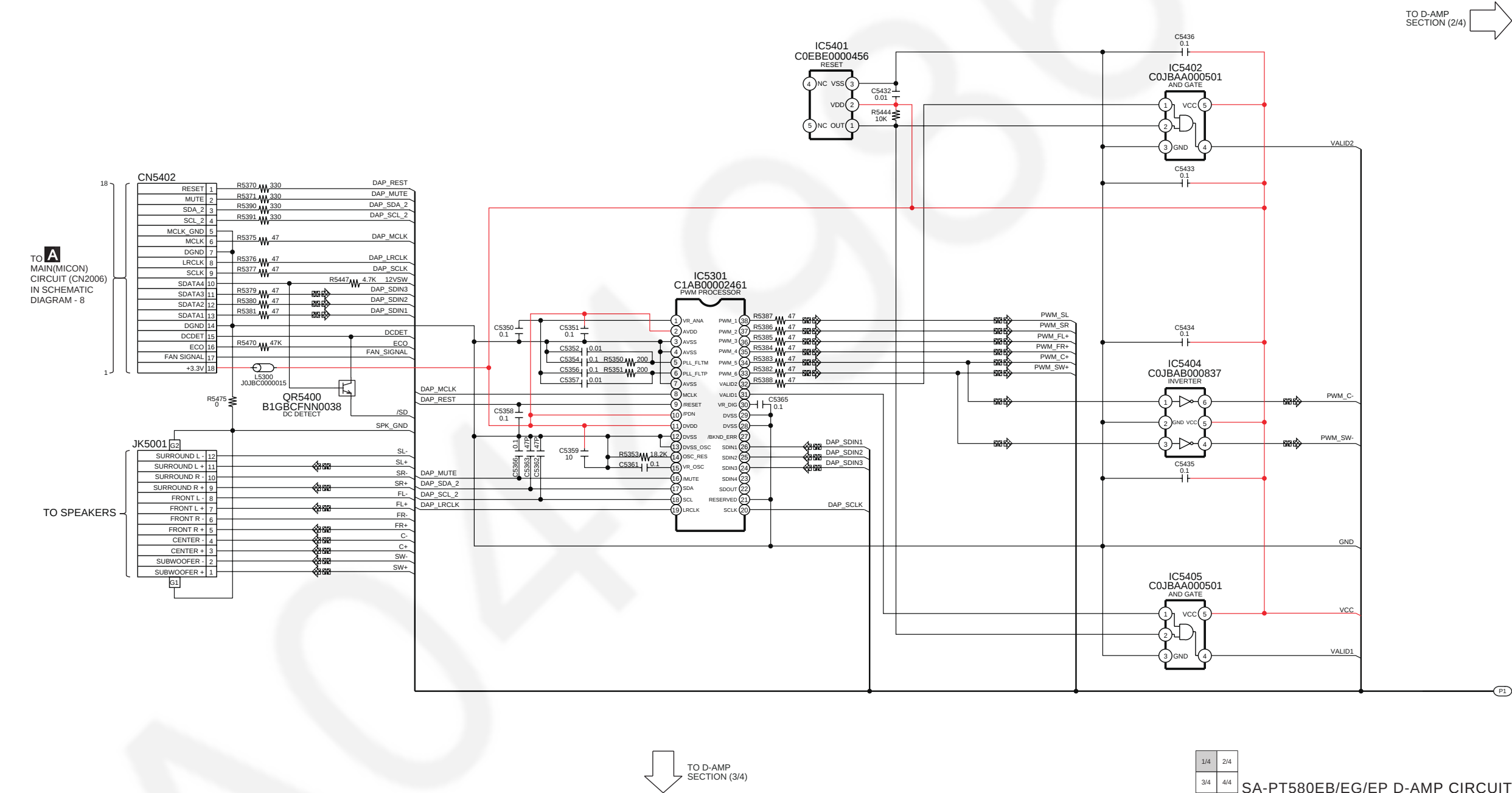


17.3. D-Amp Circuit

SCHEMATIC DIAGRAM - 15

C D-AMP CIRCUIT

—: +B SIGNAL LINE : AUDIO OUTPUT SIGNAL LINE



TO D-AMP SECTION (3/4)

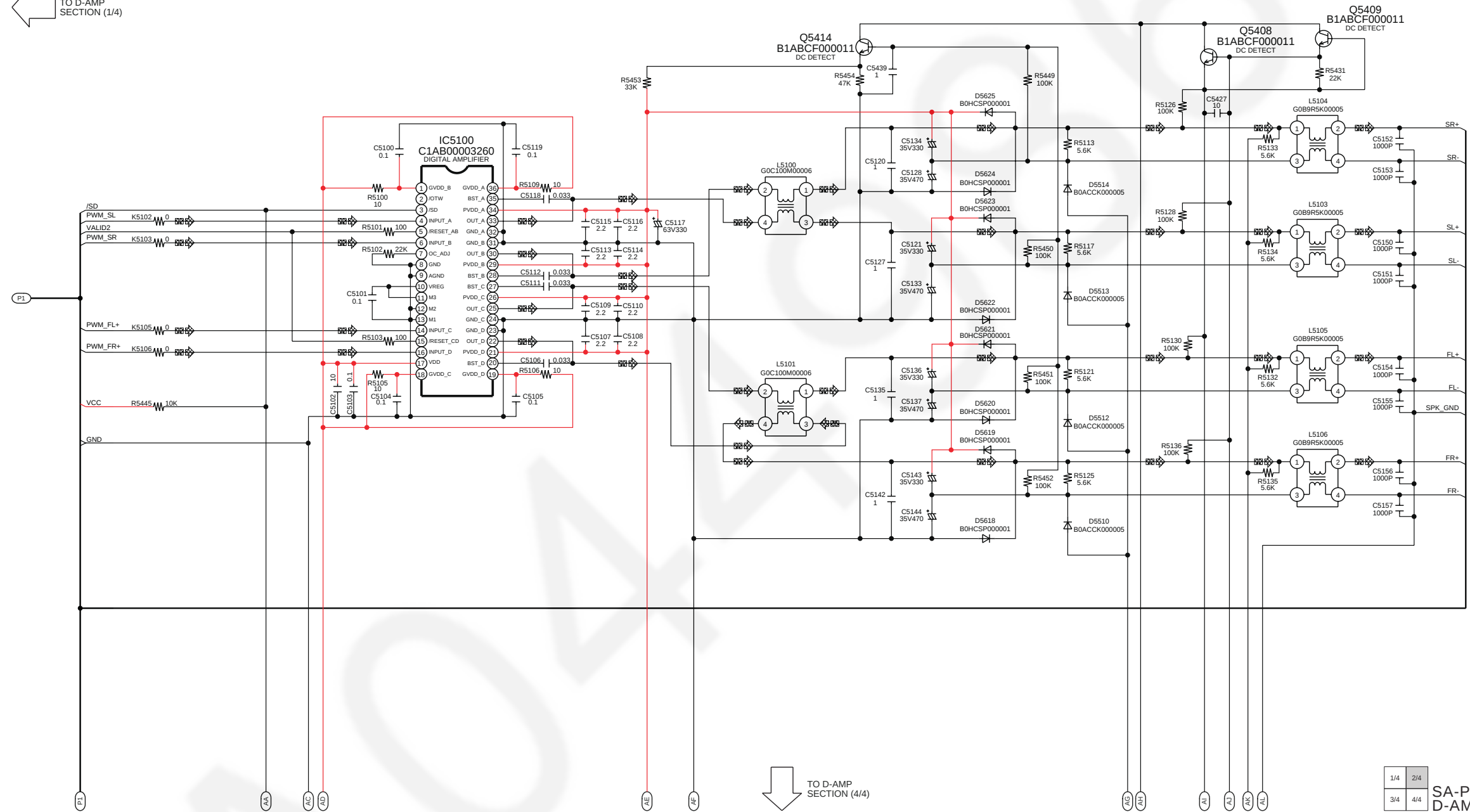
SA-PT580EB/EG/EP D-AMP CIRCUIT

SCHEMATIC DIAGRAM - 16

C D-AMP CIRCUIT

— : +B SIGNAL LINE  : AUDIO OUTPUT SIGNAL LINE

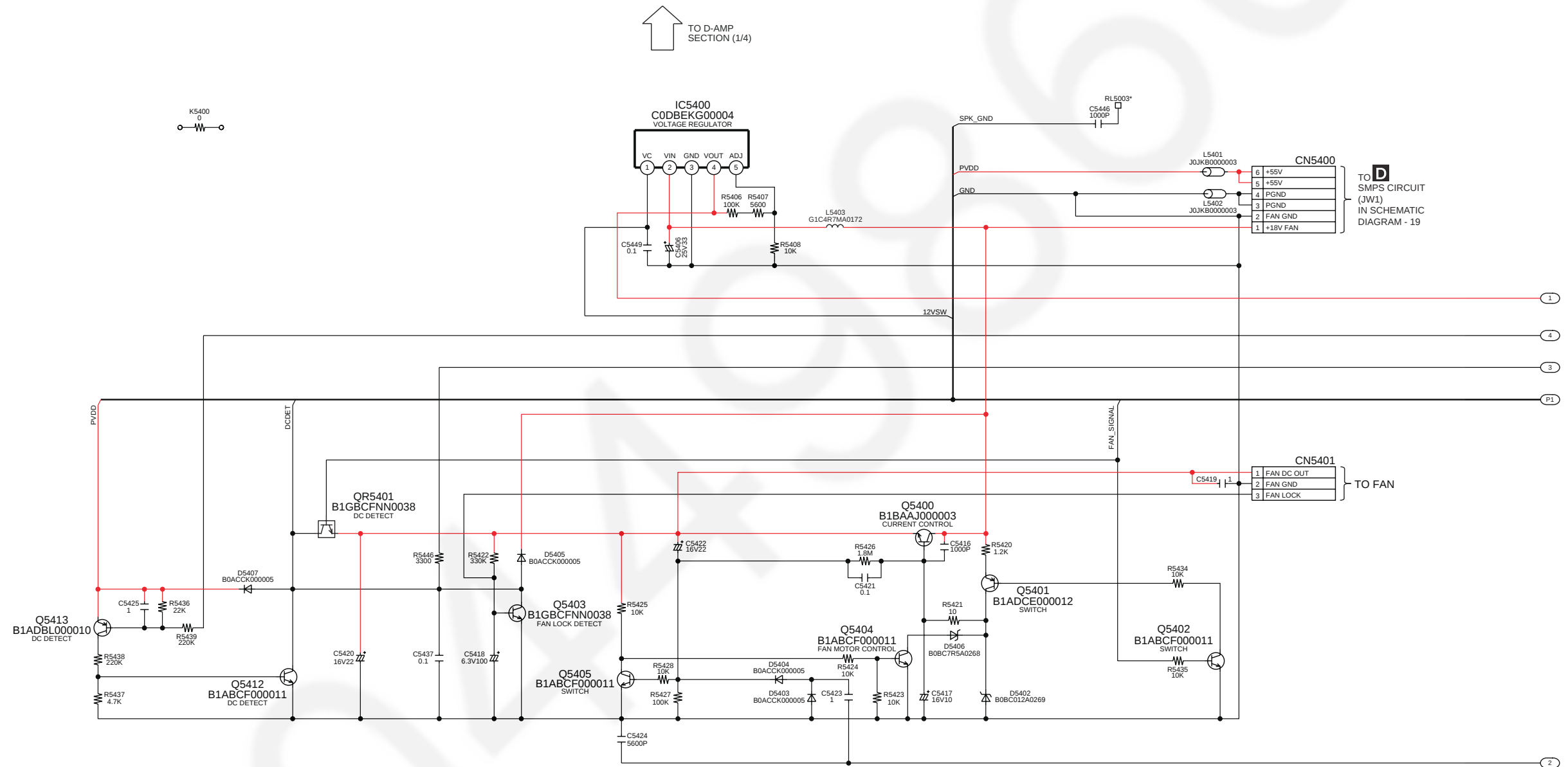
← TO D-AMP
SECTION (1/4)



↓ TO D-AMP
SECTION (4/4)

C D-AMP CIRCUIT

— : +B SIGNAL LINE  : AUDIO OUTPUT SIGNAL LINE



TO D-AMP
SECTION (4/4)

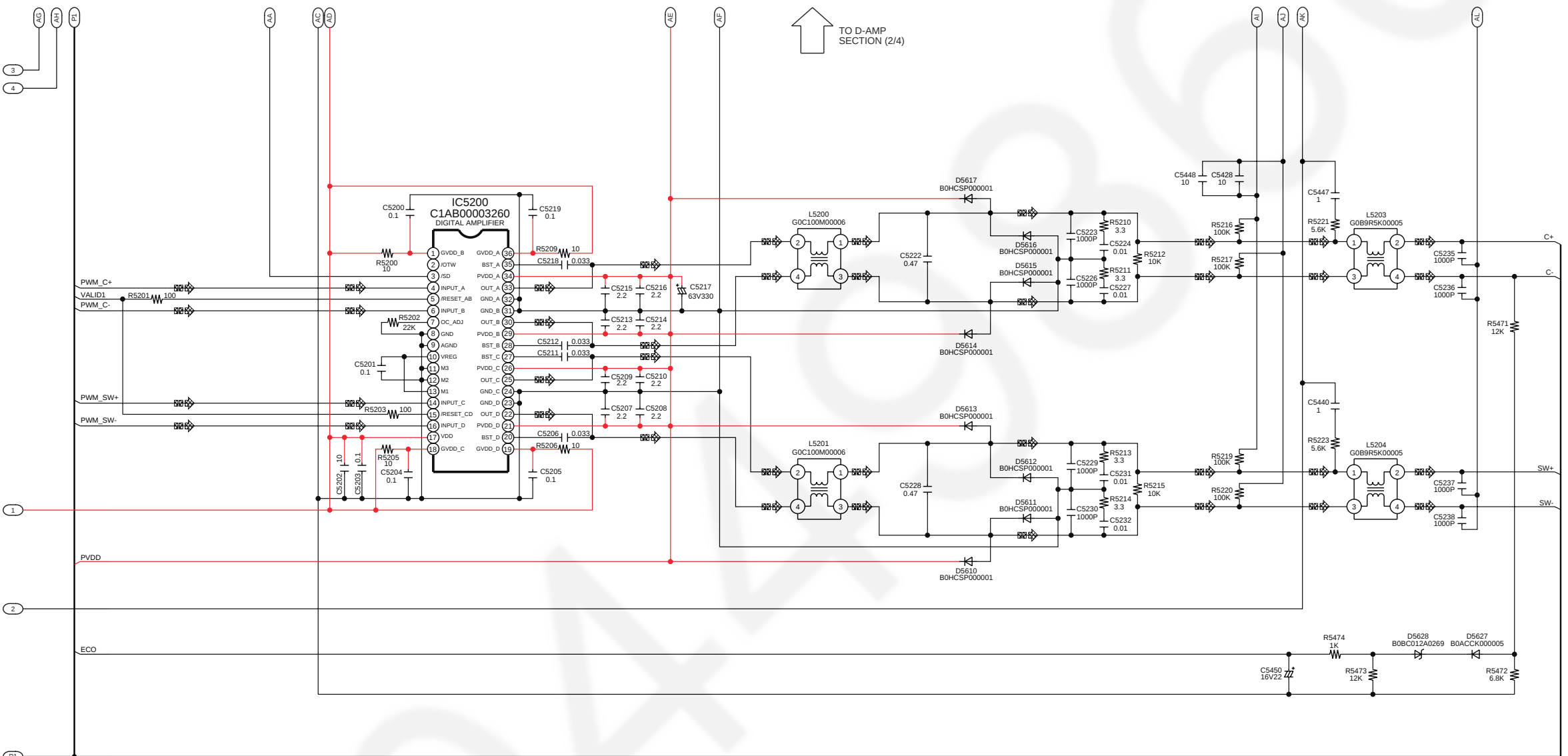
1/4	2
3/4	4

SA-PT580EB/EG/EP D-AMP CIRCUIT

SCHEMATIC DIAGRAM - 18

C D-AMP CIRCUIT

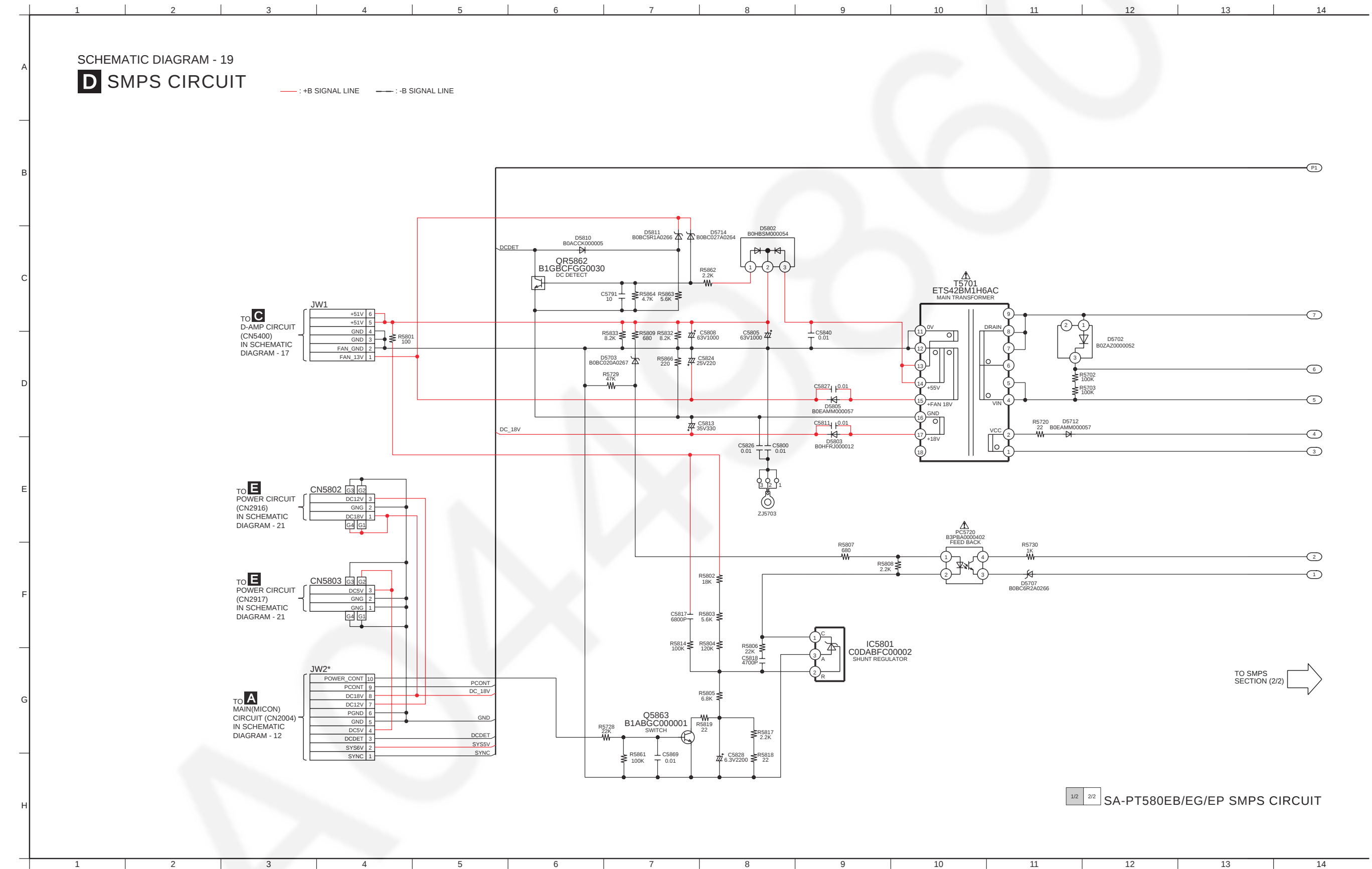
— : +B SIGNAL LINE  : AUDIO OUTPUT SIGNAL LINE



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

SA-PT580EB/EG/EP D-AMP CIRCUIT

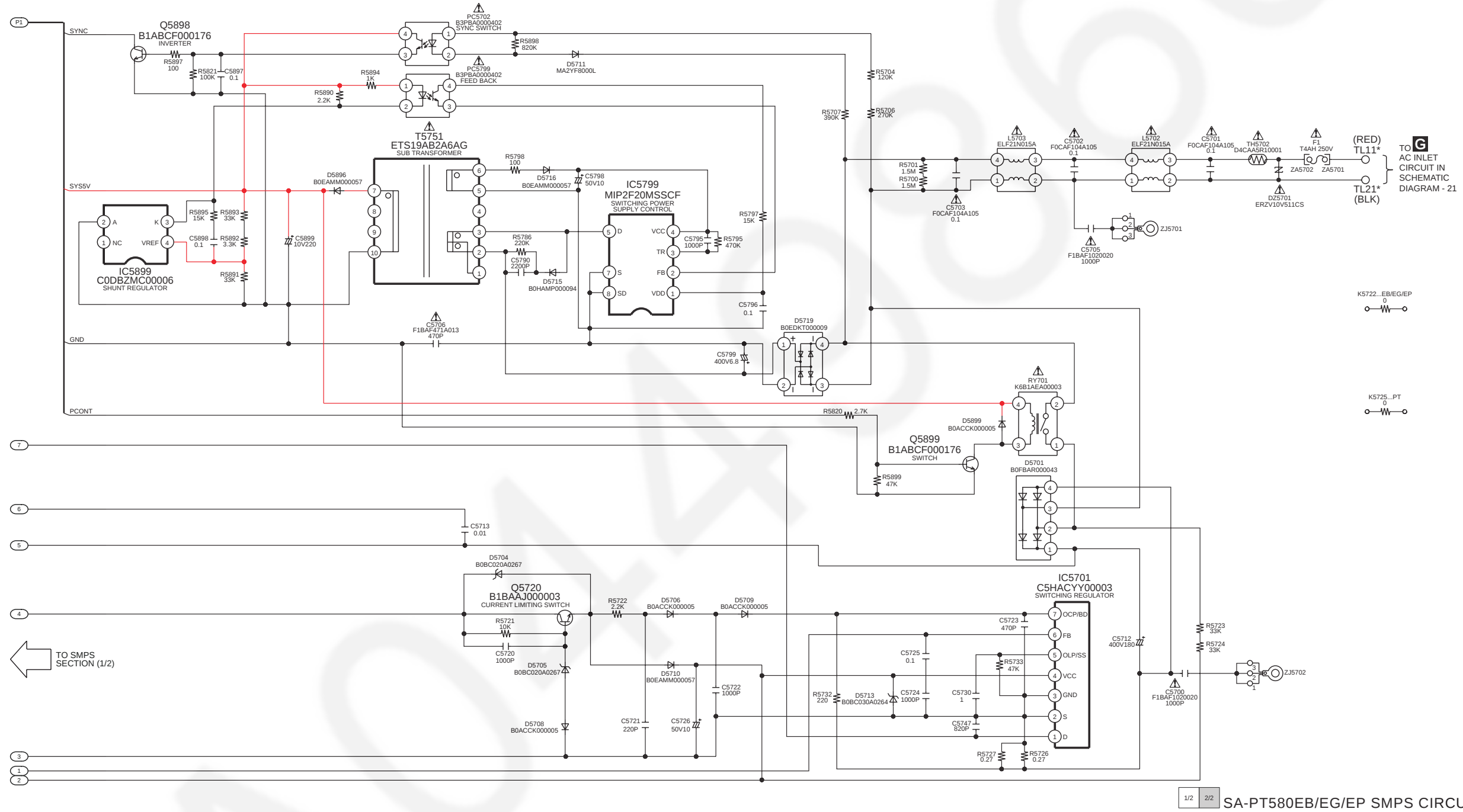
17.4. SMPS Circuit



SCHEMATIC DIAGRAM - 20

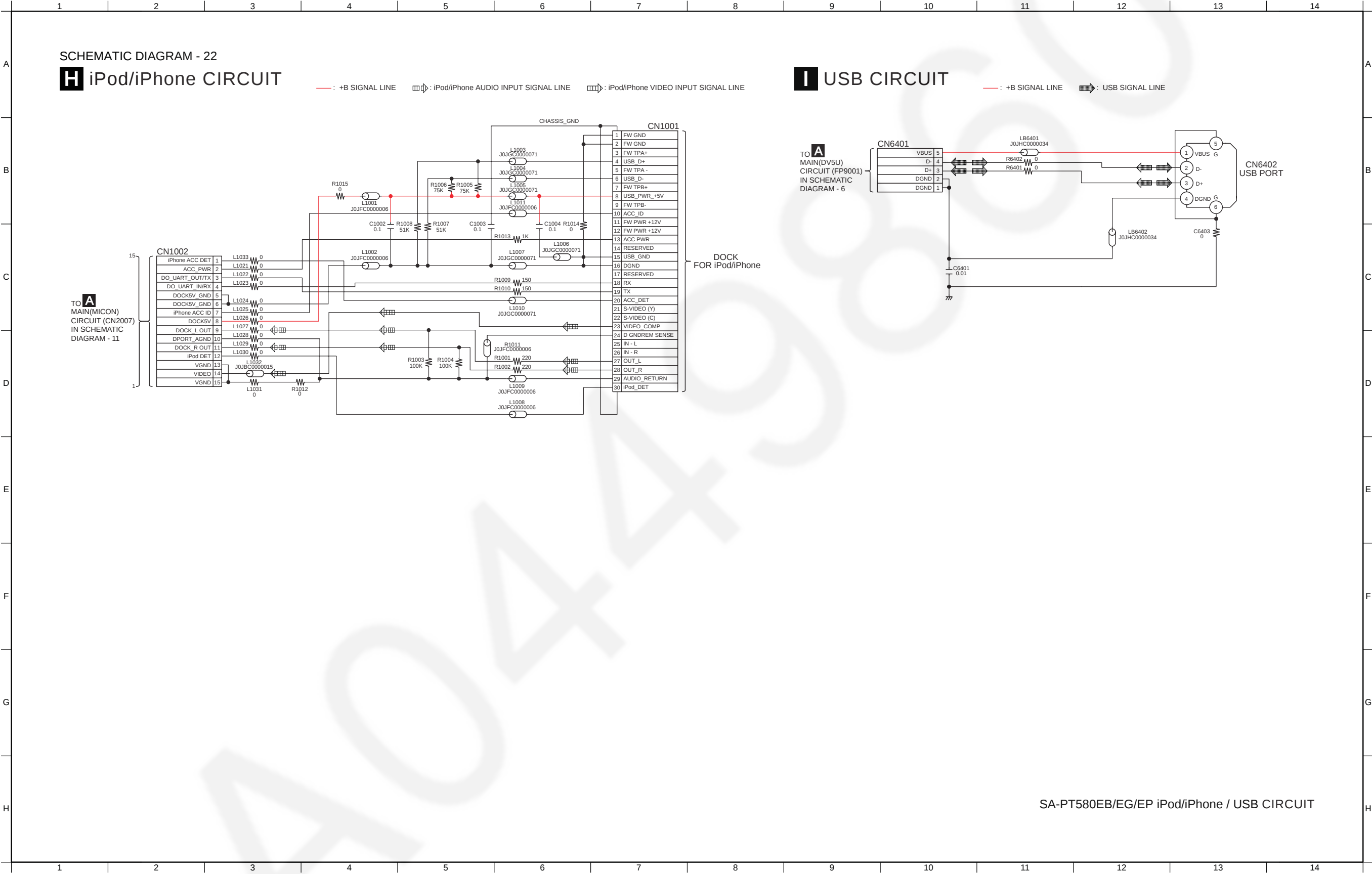
D SMPS CIRCUIT

— : +B SIGNAL LINE — : -B SIGNAL LINE



1/2 2/2 SA-PT580EB/EG/EP SMPS CIRCUIT

17.6. iPod/iPhone & USB Circuit



18 Printed Circuit Board

18.1. Main P.C.B.

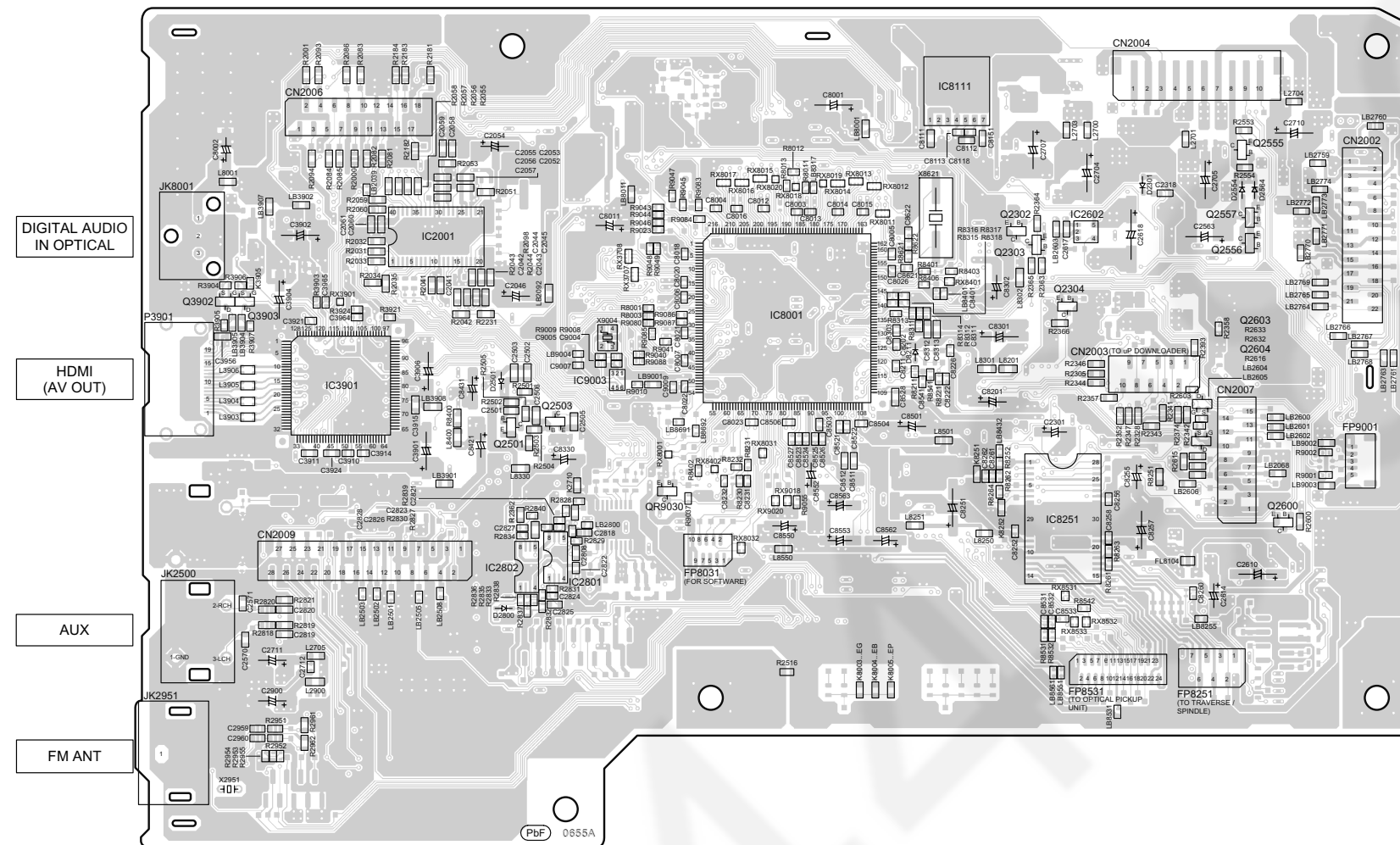
A MAIN P.C.B. (REPX0844A...EG)
(REPX0844B...EB)
(REPX0844C...EP)



(SIDE A)

SA-PT580EB/EG/EP
MAIN P.C.B.

A MAIN P.C.B. (REPX0844A...EG)
(REPX0844B...EB)
(REPX0844C...EP)

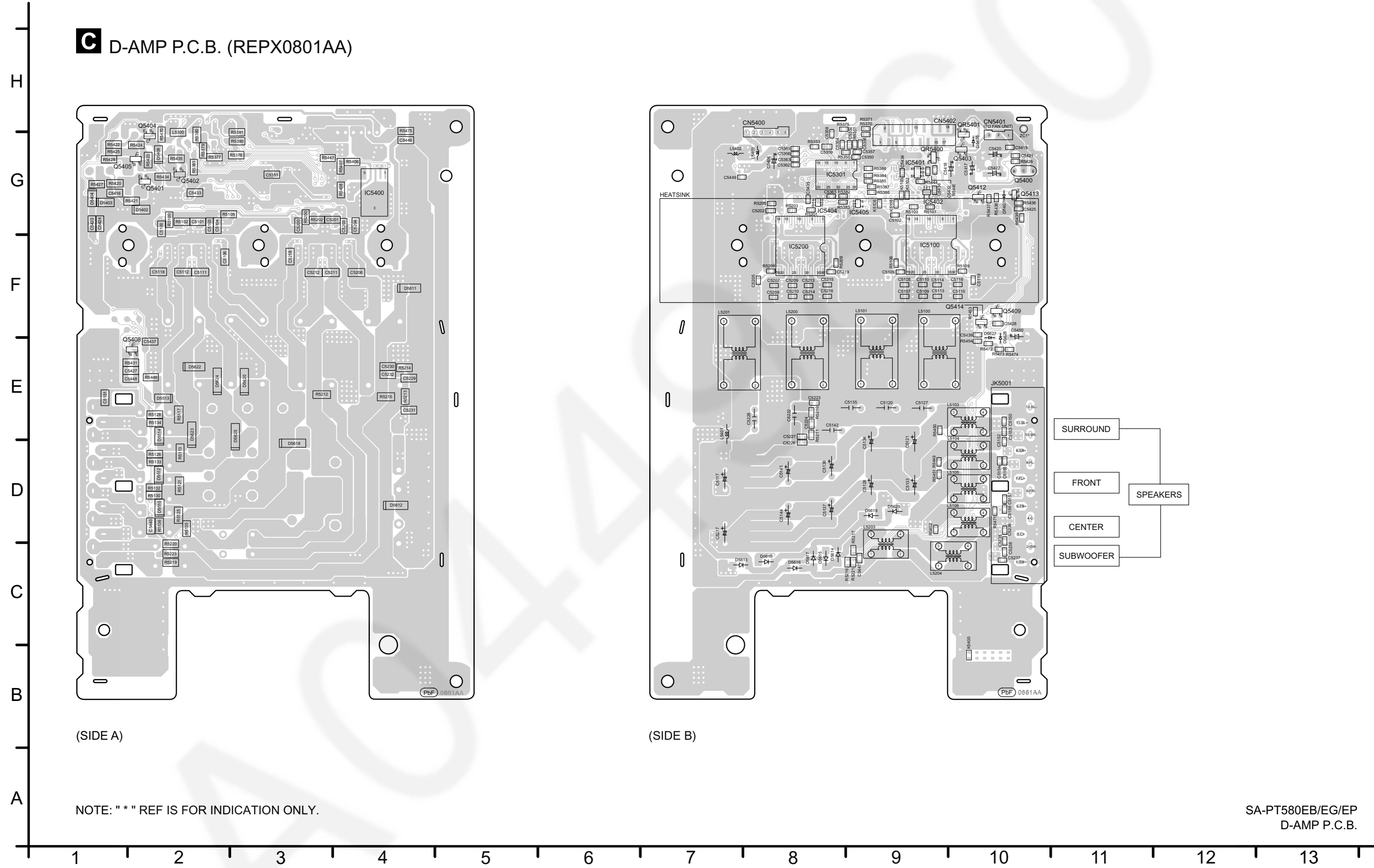


(SIDE B)

SA-PT580EB/EG/EP
MAIN P.C.B.

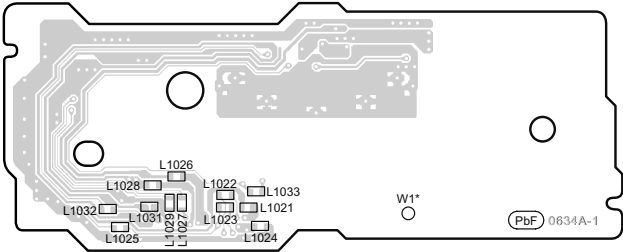
18.3. D-Amp P.C.B.

C D-AMP P.C.B. (REPX0801AA)

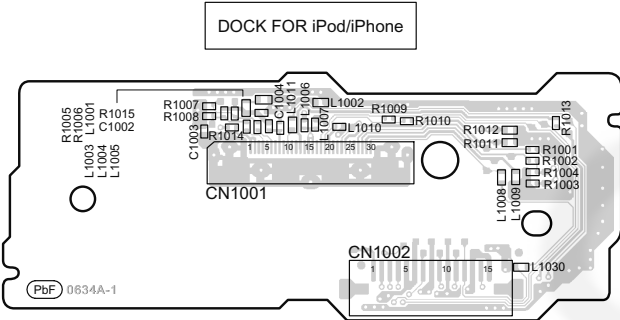


18.5. iPod/iPhone, USB & Scart P.C.B.

H iPod/iPhone P.C.B. (REPX0790A)

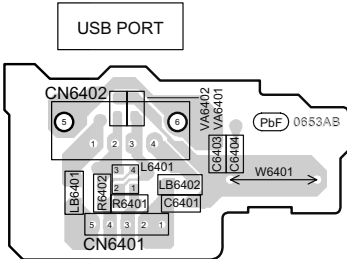


(SIDE A)

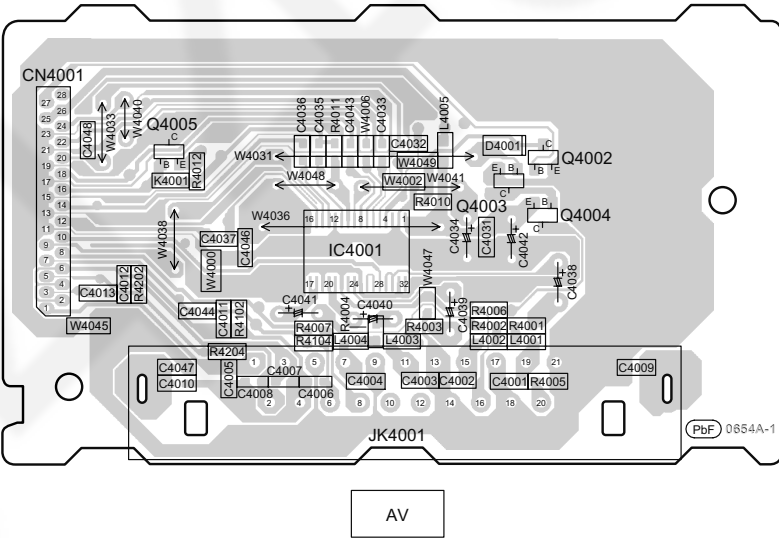


(SIDE B)

I USB P.C.B. (REPX0792AB)



J SCART P.C.B. (REPX0789A)



A0449860

19 Terminal Function of ICs

19.1. IC2300 (RFKWMPT480EB): IC MICROPROCESSOR

Pin No.	TERMINAL NAME	I/O	Description
1	EDA	O	EEPROM IC Data Signal
2	ECK	O	EEPROM IC Clock Signal
3	ASS_MUTE	O	Bypass Auto Speaker Circuit
4	ECO_CTRL	O	Control Voltage Supply of D-AMP (For Echo Mode)
5	RMT	I	Remote Control Signal
6	ECHO_LVL1	-	No Connection
7	ECHO_LVL2	-	No Connection
8	BYTE	I	External data bus width select input
9	CNVSS	I	Micon Programming-Processor / Single Chip Mode
10	XCIN(32K)	I	Clock In (32KHz)
11	XCOUT(32K)	O	Clock Out (32KHz)
12	RESET	I	Microp Reset Signal
13	XOUT	I	Clock In
14	VSS	-	GND
15	XIN	O	Clock Out
16	VCC	-	VCC +3.3V
17	CEC	I	CEC IN/OUT PORT
18	ECHO_MUTE	-	No Connection
19	SYNC	I	AC Sync Signal
20	FX_INT	-	Not in use
21	FLD_STB	O	FL Display Strobe Signal
22	TUN_SDIO	O	Tuner I2C Data
23	LED_CTRL	O	Power On LED control
24	TUN_SDCLK	O	Tuner I2C Clock
25	DC_DET1	I	Power Supply Failure Detection (F76)
26	DC_DET2	I	D-Amp and Fan Failure Detection (F61)
27	FLD_OUT	O	FL Display Data Out Signal
28	FLD_CLK	O	FL Display Clock Signal
29	DAP/DSP_I2CCLK	I/O	I2C Clock to DSP / DAP
30	DAP/DSP_I2CDAT	I/O	I2C Data to DSP / DAP
31	DBG_TX	O	UART TX for Debug
32	DBG_RX	I	UART RX for Debug
33	SCLK	I	Clock Signal (For Flash Writing)
34	DAP_MUTE	O	DAP Master mute
35	UART_TX	I/O	iPod UART Transmitter Data
36	UART_RX	I	iPod UART Receiver Data
37	TUN_RST	I/O	Tuner Reset Signal
38	iPhone_DAT	I	I2C Data to iPod IC (Software I2C control)
39	iPhone_CLK	I	I2C Clock to iPod IC (Software I2C control)
40	iPhone_RST	O	Reset Signal to iPhone
41	EPM	L	For Downloading Purpose (with pull down)
42	TUN_GPIO	I	Tuner General Purpose IO
43	FX_DET	H	Wireless Detection
44	FX_DI	-	Not in use
45	FX_SCS	-	Not in use
46	CE	I	For Downloading Purpose (with pull up)
47	FX_DO	-	Not in use
48	FX_CLK	-	Not in Use
49	iPod_VIDEO_SEL	O	Selection of Composite Output from iPod or Back End

50	PCONT	O	System Power Control
51	RGB_H	O	Blanking signal for SCART
52	VMUTE2	O	SCART Function Switch Control
53	VMUTE	I/O	Video Mute Control
54	YC_H	O	To Select Luminance or Composite Out
55	SCART_MUTE	O	Mute control of SCART Audio
56	UNLOAD_SW	I	DLS6E Unload Switch Signal
57	INNER_SW	I	DLS6E Inner Switch
58	TRAY_CCW_L	O	DLS6E Tray Close Signal
59	TRAY_CW_H	O	DLS6E Tray Open Signal
60	DVD_MUTE	I	Mute Signal from DVD Module (Reverse logic of ZFLAG)
61	SEL_A	O	Analog Input Selector Control A
62	VCC	-	+3.3V System Supply
63	FX_BUNDLE_CS	I	Chip Select for Wireless Bundled model for Smart Setup
64	VSS	-	System Ground
65	HP_MUTE	O	Mute Signal for Headphone
66	NRST	I	DAC Reset signal (from DV)
67	VCOMP_MUTE	O	Control Signal to Mute Component Output
68	WIDE1	I/O	Signal to control SCART 16:9 or 4:3
69	DSP_RESET	O	DSP Reset Signal
70	DSP_MUTE	O	DSP Mute Signal
71	DAP_RST	O	DAP Reset
72	iPod_CTRL_SW	O	iPod Control Switch
73	WL_OFF_SW	-	Not in use
74	iPod_DET	I	iPod Insertion Detection
75	VOL0_CTRL	O	Volume Control
76	ADC_RESET	-	No Connection
77	DVD_CMD	O	DVD Command
78	DVD_STAT	I	DVD Status
79	DVD_CLK	I	DVD Clock
80	iPod_OC	I	iPod Overcurrent Protection
81	DAC_MUTE1	-	Not in use
82	BATT_PCONT	I/O	iPod Charging Power Control
83	iPod_ACC	I	iPod Authorisation IC
84	DAC_RESET	O	DAC R[16]CReset Signal
85	DAC_MUTE	O	DAC Mute Signal (For SCART Audio Out Muting)
86	MIC_SW	I	MIC Plug in Detection
87	MD3	I	DVD Panel Code Digit 3
88	MD2	I	DVD Panel Code Digit 2
89	APD	I	Detect Auto Power Down Level
90	SEL_B	O	Analog Input Selector Control B
91	KEY2	I	Keyline 2: 1st key is OPEN/CLOSE During STOP mode, act as KI1 After wake up, act as AN5
92	KEY1	I	Keyline 1: 1st key is POWER During STOP mode, act as KI0 After wake up, act as AN4
93	ASS_INPUT	-	Not in use
94	DAC_RESET1	-	Not in use
95	DES2	I	Model Selector
96	AVSS	-	Analog GND
97	DES1	I	Series Selector
98	VREF	-	Voltage Reference +3.3V
99	AVCC	-	Analog +3.3V Supply
100	ECS	O	EEPROM IC Chip Select

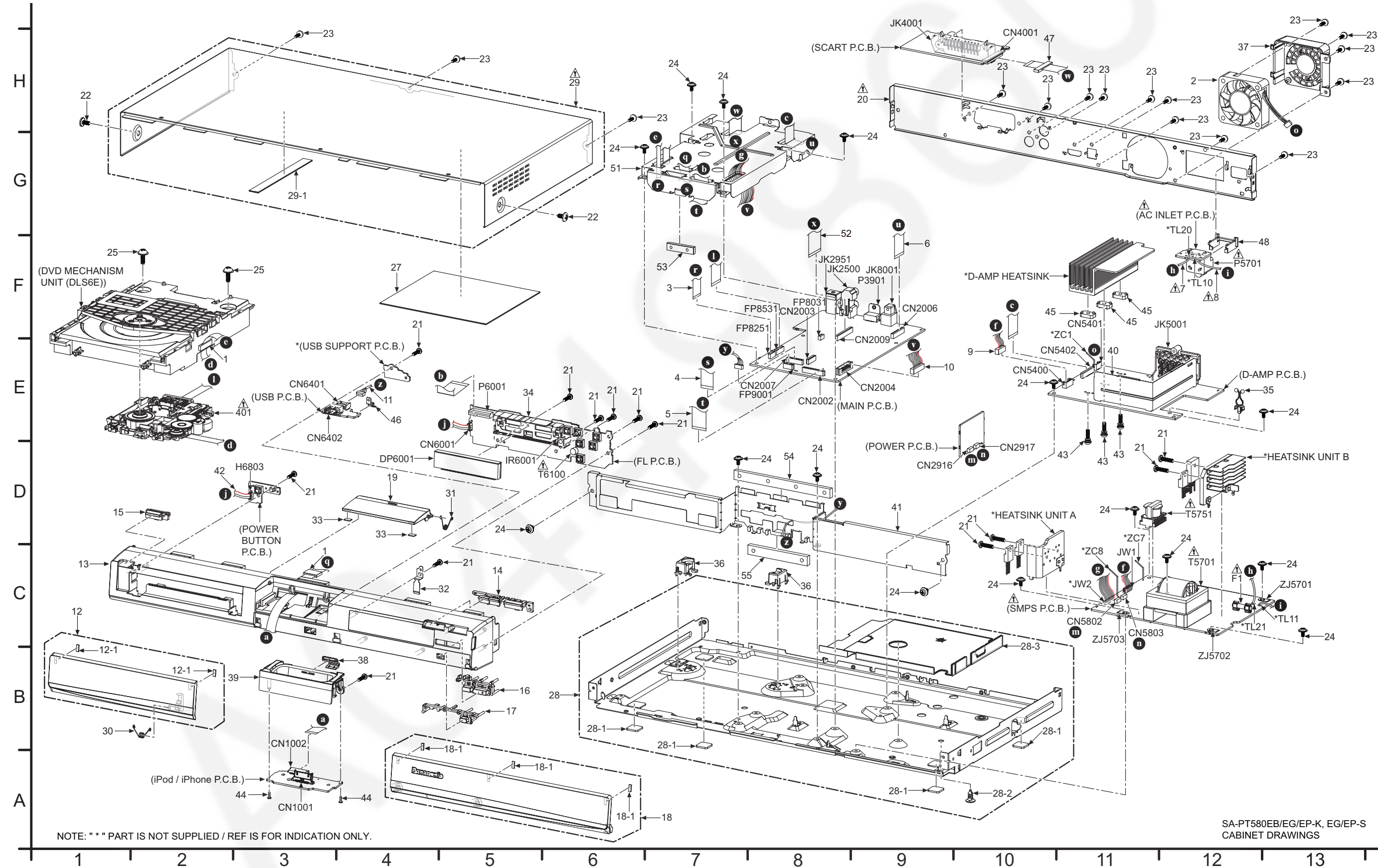
19.2. IC6001 (C0HBB0000057): IC FL Driver

Pin No.	Terminal Name	I/O	Function
1	LED1	-	NC
2	LED2	-	NC
3	LED3	-	NC
4	LED4	-	NC
5	OSC	I	Oscillator Input
6	DOUT	-	Data Output
7	DIN	I	Data Input
8	CLK	I	Clock Input
9	STB	I	Serial Interface Strobe
10	K1	-	Key Data Input 1 (No Connection)
11	K2	-	Key Data Input 2 (No Connection)
12	GND	-	GND
13	VCC	-	Power Supply (+5V)
14	P18	O	Segment Output 18
15	P17	O	Segment Output 17
16	P16	O	Segment Output 16
17	P15	O	Segment Output 15
18	P14	O	Segment Output 14
19	P13	O	Segment Output 13
20	P12	O	Segment Output 12
21	P11	O	Segment Output 11
22	P10	O	Segment Output 10
23	P9	O	Segment Output 9
24	P8	O	Segment Output 8
25	P7	O	Segment Output 7
26	P6	O	Segment Output 6
27	P5	O	Segment Output 5
28	P4	O	Segment Output 4
29	P3	O	Segment Output 3
30	-VP	-	Voltage Supply
31	P2	O	Segment Output 2
32	P1	O	Segment Output 1
33	G1	O	Grid Segment Output 1
34	G2	O	Grid Segment Output 2
35	G3	O	Grid Segment Output 3
36	G4	O	Grid Segment Output 4
37	G5	O	Grid Segment 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	NC	O	Grid Segment Output 10
43	VCC	-	Voltage Supply (+5V)
44	GND	-	GND

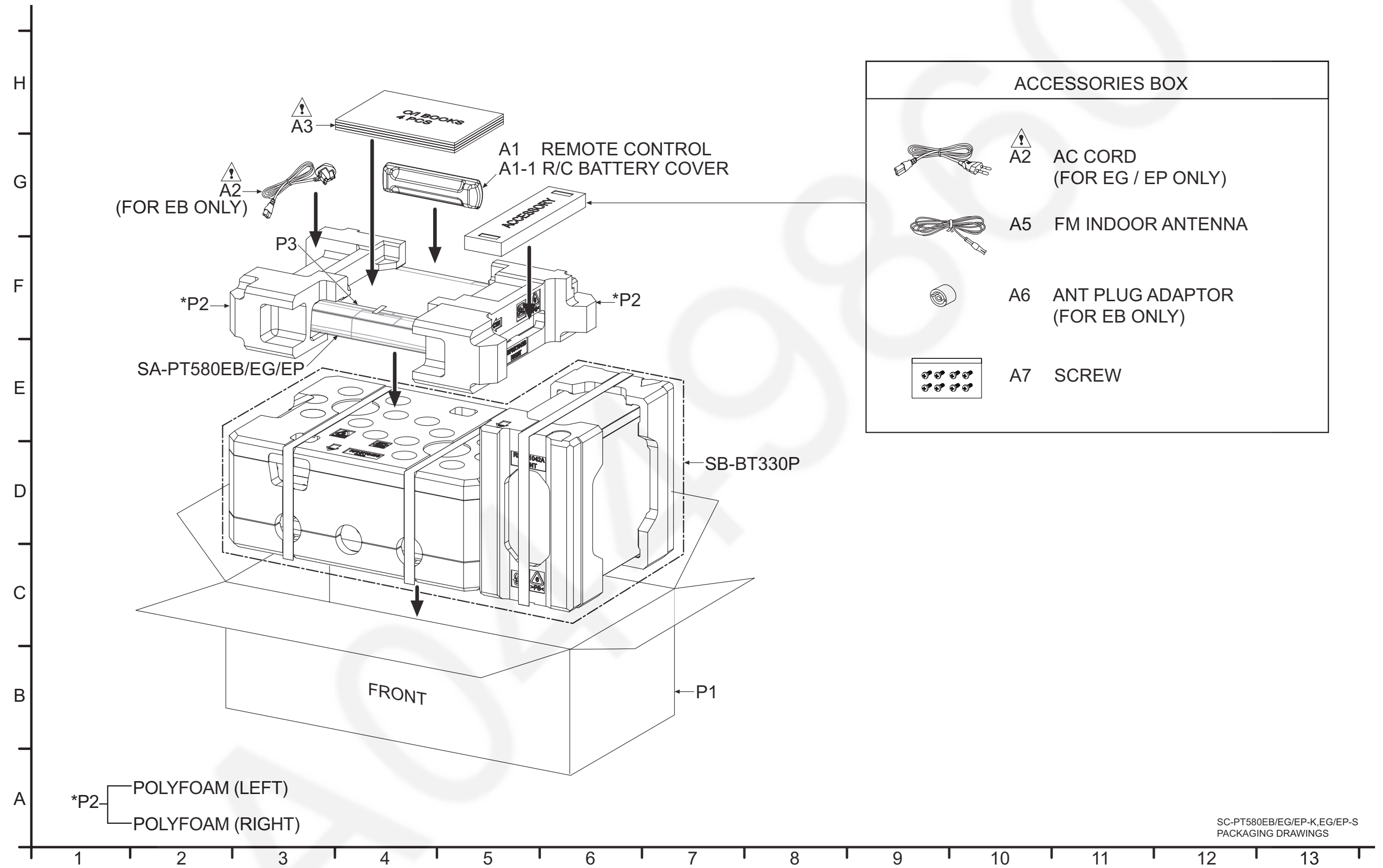
20 Exploded View and Replacement Parts List

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	J0KD00000018	FERRITE CORE	2	
	2	L6FAJCCCH0007	FAN UNIT	1	
	3	REEX1113	7P FFC (MECHA-MAIN)	1	
	4	REEX1114	15P FFC (iPod MAIN)	1	
	5	REEX1115	22P FFC (FL-MAIN)	1	
	6	REEX1116	18P FFC (MAIN-DAMP)	1	
	7	REXX1030	1P BLACK WIRE (AC-SMPS)	1	
	8	REXX1031	1P RED WIRE (AC-SMPS)	1	
	9	REXX1036	6P CABLE WIRE (SMPS-DAMP)	1	
	10	REXX1037	10P CABLE WIRE (SMPS-MAIN)	1	
	11	REXX1027	5P WIRE (USB-MAIN)	1	
	12	RYQX1020-K	DVD LID UNIT	1	EB/EG/EP-K
	12	RYQX1020-S	DVD LID UNIT	1	EG/EP-S
	12-1	RMX0302	DAMPER RUBBER	2	
	13	RFKGPT480EGK	FRONT PANEL ASS'Y	1	EB/EG/EP-K
	13	RFKGPT480EGS	FRONT PANEL ASS'Y	1	EG/EP-S
	14	RGUX1001-K	OPEN CLOSE BUT-TON	1	EB/EG/EP-K
	14	RGUX1001-S	OPEN CLOSE BUT-TON	1	EG/EP-S

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	15	RGUX1003-K	POWER BUTTON	1	EB/EG/EP-K
	15	RGUX1003-S	POWER BUTTON	1	EG/EP-S
	16	RGUX1005-K	PLAY STOP BUTTON	1	EB/EG/EP-K
	16	RGUX1005-S	PLAY STOP BUTTON	1	EG/EP-S
	17	RGUX1006-K1	SELECTOR BUTTTON	1	EB/EG/EP-K
	17	RGUX1006-S1	SELECTOR BUTTON	1	EG/EP-S
	18	RYQX1021A-K	FRONT LID UNIT	1	EB/EG/EP-K
	18	RYQX1021A-S	FRONT LID UNIT	1	EG/EP-S
	18-1	RMX0302	DAMPER RUBBER	3	
	19	RGKX1003-K	CRADLE LID	1	EB/EG/EP-K
	19	RGKX1003-S	CRADLE LID	1	EG/EP-S
	20	RGRX1001B-C1	REAR PANEL	1	
	21	RHD26046	SCREW	13	
	22	RHD30007-K2J	SCREW	2	EB/EG/EP-K
	22	RHD30007-1SJ	SCREW	2	EG/EP-S
	23	RHD30119-S	SCREW	16	
	24	RHD301003	SCREW	15	
	25	RHDV30006	SCREW	2	
	27	RXQX1026	TOP CABINET INSULATOR SHEET	1	
	28	RXQX1011-1	BOTTOM CHASSIS ASS'Y	1	
	28-1	RKAX0028-K	LEG CUSHION	4	
	28-2	RMNX1026	PCB SUPPORT	1	
	28-3	RXQX1013	SMPS BOTTOM PC SHEET UNIT	1	
	29	RXQX1029-K2	TOP CABINET ASS'Y	1	EB/EG/EP-K

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
⚠	29	RXQX1029-S1	TOP CABINET ASSEMBLY	1	EG/EP-S
	29-1	RKAX1008	MECHA RUBBER	1	
	30	RMBX1004	DVD LID SPRING	1	
	31	RMXX1002	CRADLE LID SPRING	1	
	32	RMXX1003	FRONT LID SPRING PLATE	1	
	33	RMGX1002	CRADLE LID DAMPER	2	
	34	RMNX0329	FL HOLDER	1	
	35	RMNX1025	WIRE HOLDER	1	
	36	RMQX0382-1	MECHA HOLDER	2	
	37	RMQX1006-K	FAN COVER	1	
	38	RMVX1003-K	CRADLE KEY	1	EB/EG/EP-K
	38	RMVX1003-S	CRADLE KEY	1	EG/EP-S
	39	RMVX1004A-K	CRADLE COVER	1	EB/EG/EP-K
	39	RMVX1004A-S	CRADLE COVER	1	EG/EP-S
	40	RSCX1014-1	D-AMP PCB SHIELD	1	
	41	RSCX1013	FRONT SHIELD PLATE	1	
	42	RWJ1104390XX	4P CABLE WIRE (POWER-BTN-FL)	1	
	43	RHD261002	SCREW	3	
	44	VHD1224-1	ADJ SPRING HOLDER SCREW	2	
	45	RMZX1011	HEAT SINK SPACER	3	
	46	RMXX1007	USB GROUND SPRING	1	
	47	J0KD00000015	FERRITE CORE	1	
	48	RMN0941	AC INLET HOLDER	1	
	51	RSCX1016	MAIN PCB SHIELD PLATE	1	
	52	REEX1145	28P FFC (SCART-MAIN)	1	
	53	RMQX1030	GASKET	1	
	54	RMQX1025	GASKET (TOP)	1	
	55	RMQX1037-L	GASKET (BOTTOM)	1	
			TRAVERSE DECK		
⚠	401	RAEX1022Z-V	TRAVERSE UNIT	1	
			PACKING MATERIALS		
	P1	RPGX3117	PACKING CASE	1	EG-K
	P1	RPGX3118	PACKING CASE	1	EB-K
	P1	RPGX3119	PACKING CASE	1	EP-K
	P1	RPGX3266	PACKING CASE	1	EG-S
	P1	RPGX3267	PACKING CASE	1	EP-S
	P2	RPNX1043	POLYFOAM	1	
	P3	RPFX1012	MIRAMAT SHEET	1	
			ACCESSORIES	1	
	A1	N2QAYB000515	REMOTE CONTROL	1	
	A1-1	RKK-PT470EBK	R/C BATTERY COVER	1	
⚠	A2	K2CQ2CA00007	AC CORD	1	EG/EP-S
⚠	A2	K2CZ3YY00005	AC CORD	1	EB-K
⚠	A3	RQTX1108-D	O/I BOOK (Ge/Fr/It)	1	EG-K
⚠	A3	RQTX1109-H	O/I BOOK (Du/Sw/Da/Sp)	1	EG-K
⚠	A3	RQTX1111-R	O/I BOOK (En)	1	EP-K
⚠	A3	RQTX1112-B	O/I BOOK (En/Cz/Po/Hu)	1	EB-K
	A5	RSAX0002	FM INDOOR ANTENNA	1	
	A6	K1YZ02000013	ANTENNA ADAPTER	1	EB-K
	A7	XTN5+10FFJK	SCREW	8	

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	REPX0789A	SCART P.C.B.	1	(RTL)
	PCB2	REPX0790A	iPod/iPhone P.C.B.	1	(RTL)
	PCB3	REPX0792AA	FL P.C.B.	1	(RTL)
	PCB4	REPX0792AB	USB P.C.B.	1	(RTL)
	PCB5	REPX0792AD	POWER BUTTON P.C.B.	1	(RTL)
	PCB6	REPX0801AA	D-AMP P.C.B.	1	(RTL)
	PCB7	REPX0801AB	POWER P.C.B.	1	(RTL)
	Δ PCB8	REPX0803A	SMPS P.C.B.	1	(RTL)
	Δ PCB9	REPX0803A	AC INLET P.C.B.	1	(RTL)
	PCB10	REPX0844B	MAIN P.C.B.	1	EB-K
		REPX0844A	MAIN P.C.B.	1	EG-K/S
		REPX0844C	MAIN P.C.B.	1	EP-K/S
			INTEGRATED CIRCUITS		
	IC2001	C2HBAC000001	IC	1	
	IC2091	C0DBZY000018	IC	1	
	IC2111	C0FBBK000071	IC	1	
	IC2131	C0ABBB000189	IC	1	
	IC2300	RFKWMPT480EB	IC	1	
	IC2301	C3EBFY000006	IC	1	
	IC2302	C0CBABC00117	IC	1	
	IC2400	MF134182164	IC	1	
	IC2600	C0ABBB000189	IC	1	
	IC2601	C0ABZA000080	IC	1	
	IC2602	C0DBZY000311	IC	1	
	IC2800	C0JBAR000540	IC	1	
	IC2801	C0ABBB000179	IC	1	
	IC2802	C0ABBB000179	IC	1	
	IC2901	C0DBAYY00729	IC	1	
	IC2952	VUEALLPT041	IC	1	[SPG]
	IC3901	MN864702A	IC	1	
	IC3952	C0CBCDC00063	IC	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	IC3953	C0JBAB000986	IC	1	
	IC4001	C9ZB00000584	IC	1	
	IC5100	C1AB00003260	IC	1	
	IC5200	C1AB00003260	IC	1	
	IC5301	C1AB00002461	IC	1	
	IC5400	C0DBEKG00004	IC	1	
	IC5401	C0EBE0000456	IC	1	
	IC5402	C0JBAA000501	IC	1	
	IC5404	C0JBAB000837	IC	1	
	IC5405	C0JBAA000501	IC	1	
	IC5701	C5HACY000003	IC	1	
	IC5799	MIP2F20MSSCF	IC	1	
	IC5801	C0DABFC00002	IC	1	
	IC5899	C0DBZMC00006	IC	1	
	IC6001	C0HBB0000057	IC	1	
	IC8001	MN2DS0018MP	IC	1	
	IC8051	C3ABPG000160	IC	1	
	IC8111	C0DBFZG00001	IC	1	
	IC8251	C0GBG0000048	IC	1	
	IC8422	C0FBAK000026	IC	1	
	IC8601	C0EBA0000039	IC	1	
	IC8606	C0EBE0000456	IC	1	
	IC8611	REPX0844B	IC	1	EB-K
	IC8611	REPX0844A	IC	1	EG-K/S
	IC8611	REPX0844C	IC	1	EP-K/S
	IC8651	RFKWMH52B3D1	IC	1	[SPG]
	IC8701	C0JBAB000907	IC	1	
	IC8901	C0JBAA000501	IC	1	
	IC9001	C0JBAZ001251	IC	1	
	IC9002	C0JBAZ001251	IC	1	
	IC9003	C0JBAB000908	IC	1	
	IC9006	C0DBZY000311	IC	1	
			TRANSISTORS		
	Q2301	B1GDCFGA0018	TRANSISTOR	1	
	Q2302	B1ABCF000176	TRANSISTOR	1	
	Q2303	B1ADCE000012	TRANSISTOR	1	
	Q2304	B1GBCFJJ0051	TRANSISTOR	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	Q2400	B1ADNB000003	TRANSISTOR	1	
	Q2501	B1ABMF000020	TRANSISTOR	1	
	Q2502	B1ADNB000003	TRANSISTOR	1	
	Q2503	B1ADCE000012	TRANSISTOR	1	
	Q2554	B1HBECA00004	TRANSISTOR	1	
	Q2555	B1ABCF000176	TRANSISTOR	1	
	Q2556	B1GBCFLL0043	TRANSISTOR	1	
	Q2557	B1GBCFLL0043	TRANSISTOR	1	
	Q2600	B1GBCFJJ0051	TRANSISTOR	1	
	Q2601	B1ADCE000012	TRANSISTOR	1	
	Q2602	B1ADCE000012	TRANSISTOR	1	
	Q2603	B1CFHA000002	TRANSISTOR	1	
	Q2604	B1CFHA000002	TRANSISTOR	1	
	Q2709	B1ABCF000176	TRANSISTOR	1	
	Q2719	B1GBCFJJ0051	TRANSISTOR	1	
	Q2730	B1ABCF000176	TRANSISTOR	1	
	Q2800	B1GBCFJJ0051	TRANSISTOR	1	
	Q2805	B1GBCFJJ0051	TRANSISTOR	1	
	Q2902	B1CHPD000003	TRANSISTOR	1	
	Q2903	B1CHPD000003	TRANSISTOR	1	
	Q3901	B1ABDF000026	TRANSISTOR	1	
	Q3902	B1CFHA000002	TRANSISTOR	1	
	Q3903	B1CFHA000002	TRANSISTOR	1	
	Q3904	B1CFHA000002	TRANSISTOR	1	
	Q4002	B1GBCFLL0043	TRANSISTOR	1	
	Q4003	B1GBCFLL0043	TRANSISTOR	1	
	Q4004	B1GDCFEJ0008	TRANSISTOR	1	
	Q5400	B1BAAJ000003	TRANSISTOR	1	
	Q5401	B1ADCE000012	TRANSISTOR	1	
	Q5402	B1ABCF000011	TRANSISTOR	1	
	Q5403	B1GBCFNN0038	TRANSISTOR	1	
	Q5404	B1ABCF000011	TRANSISTOR	1	
	Q5405	B1ABCF000011	TRANSISTOR	1	
	Q5408	B1ABCF000011	TRANSISTOR	1	
	Q5409	B1ABCF000011	TRANSISTOR	1	
	Q5412	B1ABCF000011	TRANSISTOR	1	
	Q5413	B1ADBL000010	TRANSISTOR	1	
	Q5414	B1ABCF000011	TRANSISTOR	1	
	Q5720	B1BAAJ000003	TRANSISTOR	1	
	Q5863	B1ABGC000001	TRANSISTOR	1	
	Q5898	B1ABCF000176	TRANSISTOR	1	
	Q5899	B1ABCF000176	TRANSISTOR	1	
	Q6100	B1BARK000001	TRANSISTOR	1	
	Q6800	B1ABEB000002	TRANSISTOR	1	
	Q8321	B1ADDF000012	TRANSISTOR	1	
	Q8325	B1ADDF000012	TRANSISTOR	1	
	Q8331	B1ADDF000012	TRANSISTOR	1	
	Q8335	B1ADDF000012	TRANSISTOR	1	
	Q8341	B1ADDF000012	TRANSISTOR	1	
	Q8551	B1ABDF000026	TRANSISTOR	1	
	Q8552	B1ADGB000008	TRANSISTOR	1	
	Q8561	B1ABDF000026	TRANSISTOR	1	
	Q8562	B1ADGB000008	TRANSISTOR	1	
	Q8563	B1CFHA000002	TRANSISTOR	1	
	Q8564	B1CFHA000002	TRANSISTOR	1	
	Q8565	B1ABDF000026	TRANSISTOR	1	
	QR2400	B1GBCFJJ0051	TRANSISTOR	1	
	QR2605	B1GBCFJJ0051	TRANSISTOR	1	
	QR2606	B1GBCFJJ0051	TRANSISTOR	1	
	QR2700	B1GBCFJJ0051	TRANSISTOR	1	
	QR2701	B1GBCFJJ0051	TRANSISTOR	1	
	QR5400	B1GBCFNN0038	TRANSISTOR	1	
	QR5401	B1GBCFNN0038	TRANSISTOR	1	
	QR5862	B1GBCFGG0030	TRANSISTOR	1	
	QR8420	B1GBCFJJ0040	TRANSISTOR	1	
	QR9030	B1GDCFJJ0002	TRANSISTOR	1	
			DIODES		
	D2111	B0ACCK000012	DIODE	1	
	D2301	B0BC3R3A0262	DIODE	1	
	D2501	B0BC7R500001	DIODE	1	
	D2554	B0BC7R5A0266	DIODE	1	
	D2564	B0BC012A0267	DIODE	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	D2744	B0ACCK000012	DIODE	1	
	D2745	B0ACCK000012	DIODE	1	
	D2746	B0BC6R8A0266	DIODE	1	
	D2747	B0BC011A0264	DIODE	1	
	D2748	B0BC010A0269	DIODE	1	
	D2750	B0BC5R1A0262	DIODE	1	
	D2800	B0ACCK000005	DIODE	1	
	D2911	B0JCPG000005	DIODE	1	
	D2912	B0JCPG000005	DIODE	1	
	D3901	B0JCCB000008	DIODE	1	
	D4001	B0JCAE000001	DIODE	1	
	D5402	B0BC012A0269	DIODE	1	
	D5403	B0ACCK000005	DIODE	1	
	D5404	B0ACCK000005	DIODE	1	
	D5405	B0ACCK000005	DIODE	1	
	D5406	B0BC7R5A0268	DIODE	1	
	D5407	B0ACCK000005	DIODE	1	
	D5510	B0ACCK000005	DIODE	1	
	D5512	B0ACCK000005	DIODE	1	
	D5513	B0ACCK000005	DIODE	1	
	D5514	B0ACCK000005	DIODE	1	
	D5610	B0HCSP000001	DIODE	1	
	D5611	B0HCSP000001	DIODE	1	
	D5612	B0HCSP000001	DIODE	1	
	D5613	B0HCSP000001	DIODE	1	
	D5614	B0HCSP000001	DIODE	1	
	D5615	B0HCSP000001	DIODE	1	
	D5616	B0HCSP000001	DIODE	1	
	D5617	B0HCSP000001	DIODE	1	
	D5618	B0HCSP000001	DIODE	1	
	D5619	B0HCSP000001	DIODE	1	
	D5620	B0HCSP000001	DIODE	1	
	D5621	B0HCSP000001	DIODE	1	
	D5622	B0HCSP000001	DIODE	1	
	D5623	B0HCSP000001	DIODE	1	
	D5624	B0HCSP000001	DIODE	1	
	D5625	B0HCSP000001	DIODE	1	
	D5627	B0ACCK000005	DIODE	1	
	D5628	B0BC012A0269	DIODE	1	
	D5701	B0FBAR000043	DIODE	1	
	D5702	B0ZAZ0000052	DIODE	1	
	D5703	B0BC020A0267	DIODE	1	
	D5704	B0BC020A0267	DIODE	1	
	D5705	B0BC020A0267	DIODE	1	
	D5706	B0ACCK000005	DIODE	1	
	D5707	B0BC6R2A0266	DIODE	1	
	D5708	B0ACCK000005	DIODE	1	
	D5709	B0ACCK000005	DIODE	1	
	D5710	B0EAMM000057	DIODE	1	
	D5711	MA2YF8000L	DIODE	1	
	D5712	B0EAMM000057	DIODE	1	
	D5713	B0BC030A0264	DIODE	1	
	D5714	B0BC027A0264	DIODE	1	
	D5715	B0HAMP000094	DIODE	1	
	D5716	B0EAMM000057	DIODE	1	
	D5719	B0EDKT000009	DIODE	1	
	D5802	B0HBSM000054	DIODE	1	
	D5803	B0HFRJ000012	DIODE	1	
	D5805	B0EAMM000057	DIODE	1	
	D5810	B0ACCK000005	DIODE	1	
	D5811	B0BC5R1A0266	DIODE	1	
	D5896	B0EAMM000057	DIODE	1	
	D5899	B0ACCK000005	DIODE	1	
	D6100	B0JCMD000010	DIODE	1	
	D6101	B0BC024A0267	DIODE	1	
	D6102	B0JCMD000010	DIODE	1	
	D6103	B0BC2R4A0263	DIODE	1	
	D6104	B0HAJM000005	DIODE	1	
	D6800	B3ABA0000187	DIODE	1	
	D8211	B0ACCK000012	DIODE	1	
⚠	DZ5701	ERZV10V511CS	ZNR	1	
			VARISTOR		

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	VA2951	EZAEG2A50AX	ESD SUPPRESSOR	1	
			SWITCHES		
	S6002	EVQ21405R	SW	1	
	S6003	EVQ21405R	SW	1	
	S6005	EVQ21405R	SW	1	
	S6006	EVQ21405R	SW	1	
	S6007	EVQ21405R	SW	1	
	S6801	EVQ21405R	SW	1	
	S6807	EVQ21405R	SW	1	
			CONNECTORS		
	CN1001	MFI514S0117	30P CONNECTOR	1	
	CN1002	K1MN15BA0139	15P CONNECTOR	1	
	CN2002	K1MN22AA0076	22P CONNECTOR	1	
	CN2003	K1MN10AA0076	10P CONNECTOR	1	
	CN2004	K1KA10A00430	10P CONNECTOR	1	
	CN2006	K1MN18A00061	18P CONNECTOR	1	
	CN2007	K1MN15AA0046	15P CONNECTOR	1	
	CN2009	K1MN28AA0076	28P CONNECTOR	1	
	CN2916	K1KA03BA0116	3P CONNECTOR	1	
	CN2917	K1KA03BA0116	3P CONNECTOR	1	
	CN4001	K1MN28BA0005	28P CONNECTOR	1	
	CN5400	K1KA06A00452	6P CONNECTOR	1	
	CN5401	K1KA03AA0301	3P CONNECTOR	1	
	CN5402	K1MN18AA0046	18P CONNECTOR	1	
	CN5802	K1KA03AA0292	3P CONNECTOR	1	
	CN5803	K1KA03AA0292	3P CONNECTOR	1	
	CN6001	K1YZ04000002	4P CABLE HOLDER	1	
	CN6401	K1KA05BA0061	5P CONNECTOR	1	
	CN6402	K1FY104B0011	USB CONNECTOR	1	
	FP8031	K1MY10AA0021	10P CONNECTOR	1	
	FP8251	K1MN07AA0076	7P CONNECTOR	1	
	FP8531	K1MN24A00062	24P CONNECTOR	1	
	FP9001	K1KA05AA0051	5P CONNECTOR	1	
	P3901	K1FY119E0014	HDMI CONNECTOR	1	
	P6001	K1MN22AA0004	22P CONNECTOR	1	
			COILS AND INDUC-TORS		
	L1001	J0JFC0000006	INDUCTOR	1	
	L1002	J0JFC0000006	INDUCTOR	1	
	L1003	J0JGC0000071	INDUCTOR	1	
	L1004	J0JGC0000071	INDUCTOR	1	
	L1005	J0JGC0000071	INDUCTOR	1	
	L1006	J0JGC0000071	INDUCTOR	1	
	L1007	J0JGC0000071	INDUCTOR	1	
	L1008	J0JFC0000006	INDUCTOR	1	
	L1009	J0JFC0000006	INDUCTOR	1	
	L1010	J0JGC0000071	INDUCTOR	1	
	L1011	J0JFC0000006	INDUCTOR	1	
	L1032	J0JBC0000015	INDUCTOR	1	
	L2001	G1C4R7MA0172	INDUCTOR	1	
	L2700	J0JHC0000107	INDUCTOR	1	
	L2701	J0JHC0000107	INDUCTOR	1	
	L2703	J0JHC0000107	INDUCTOR	1	
	L2704	J0JHC0000107	INDUCTOR	1	
	L2705	J0JHC0000107	INDUCTOR	1	
	L2900	G1C100M00049	INDUCTOR	1	
	L2902	G0A200D00002	CHOKE COIL	1	
	L2903	G0A330ZA0045	CHOKE COIL	1	
	L2904	G0A330ZA0045	CHOKE COIL	1	
	L2907	J0JHC0000107	INDUCTOR	1	
	L2908	J0JHC0000107	INDUCTOR	1	
	L2951	G1CR18JA0020	INDUCTOR	1	
	L3903	G1BYYC00026	COMMON MODE EMI FILTER	1	
	L3904	G1BYYC00026	COMMON MODE EMI FILTER	1	
	L3905	G1BYYC00026	COMMON MODE EMI FILTER	1	
	L3906	G1BYYC00026	COMMON MODE EMI FILTER	1	
	L4001	J0JBC0000015	INDUCTOR	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	L4002	J0JBC0000015	INDUCTOR	1	
	L4003	J0JBC0000015	INDUCTOR	1	
	L4004	J0JBC0000015	INDUCTOR	1	
	L4005	G1C100K00019	INDUCTOR	1	
	L5100	G0C100M00006	INDUCTOR	1	
	L5101	G0C100M00006	INDUCTOR	1	
	L5103	G0B9R5K00005	LINE FILTER	1	
	L5104	G0B9R5K00005	LINE FILTER	1	
	L5105	G0B9R5K00005	LINE FILTER	1	
	L5106	G0B9R5K00005	LINE FILTER	1	
	L5200	G0C100M00006	INDUCTOR	1	
	L5201	G0C100M00006	INDUCTOR	1	
	L5203	G0B9R5K00005	LINE FILTER	1	
	L5204	G0B9R5K00005	LINE FILTER	1	
	L5300	J0JBC0000015	INDUCTOR	1	
	L5401	J0JKB0000003	INDUCTOR	1	
	L5402	J0JKB0000003	INDUCTOR	1	
	L5403	G1C4R7MA0172	INDUCTOR	1	
⚠	L5702	ELF21N015A	LINE FILTER	1	
⚠	L5703	ELF21N015A	LINE FILTER	1	
	L6006	J0JBC0000014	INDUCTOR	1	
	L6007	J0JBC0000014	INDUCTOR	1	
	L6100	J0JBC0000041	INDUCTOR	1	
	L6101	G0C390JA0055	INDUCTOR	1	
	L8001	G1C100M00049	INDUCTOR	1	
	L8201	G1C100M00049	INDUCTOR	1	
	L8251	G1C100M00049	INDUCTOR	1	
	L8301	G1C100M00049	INDUCTOR	1	
	L8302	G1C100M00049	INDUCTOR	1	
	L8303	G1C100M00049	INDUCTOR	1	
	L8330	G1C100M00049	INDUCTOR	1	
	L8400	G1C100M00049	INDUCTOR	1	
	L8501	G1C100M00049	INDUCTOR	1	
	L8550	G1C100M00049	INDUCTOR	1	
	LB2039	J0JCC0000396	INDUCTOR	1	
	LB2091	J0JGC0000020	INDUCTOR	1	
	LB2092	J0JGC0000020	INDUCTOR	1	
	LB2112	J0JGC0000020	INDUCTOR	1	
	LB2180	J0JCC0000317	INDUCTOR	1	
	LB2181	J0JCC0000317	INDUCTOR	1	
	LB2300	J0JBC0000015	INDUCTOR	1	
	LB2301	J0JBC0000015	INDUCTOR	1	
	LB2302	J0JGC0000021	INDUCTOR	1	
	LB2400	J0JGC0000021	INDUCTOR	1	
	LB2500	J0JBC0000042	INDUCTOR	1	
	LB2501	J0JBC0000042	INDUCTOR	1	
	LB2502	J0JBC0000042	INDUCTOR	1	
	LB2503	J0JBC0000042	INDUCTOR	1	
	LB2504	J0JBC0000042	INDUCTOR	1	
	LB2505	J0JBC0000042	INDUCTOR	1	
	LB2508	J0JBC0000042	INDUCTOR	1	
	LB2614	J0JCC0000317	INDUCTOR	1	
	LB2615	J0JCC0000317	INDUCTOR	1	
	LB2758	J0JBC0000014	INDUCTOR	1	
	LB2759	J0JBC0000014	INDUCTOR	1	
	LB2760	J0JBC0000014	INDUCTOR	1	
	LB2761	J0JBC0000014	INDUCTOR	1	
	LB2763	J0JBC0000014	INDUCTOR	1	
	LB2764	J0JBC0000014	INDUCTOR	1	
	LB2765	J0JBC0000014	INDUCTOR	1	
	LB2766	J0JBC0000014	INDUCTOR	1	
	LB2767	J0JBC0000014	INDUCTOR	1	
	LB2768	J0JBC0000014	INDUCTOR	1	
	LB2769	J0JBC0000014	INDUCTOR	1	
	LB2770	J0JBC0000014	INDUCTOR	1	
	LB2771	J0JBC0000014	INDUCTOR	1	
	LB2772	J0JBC0000014	INDUCTOR	1	
	LB2773	J0JBC0000014	INDUCTOR	1	
	LB2774	J0JBC0000014	INDUCTOR	1	
	LB2777	J0JBC0000014	INDUCTOR	1	
	LB2800	J0JCC0000317	INDUCTOR	1	
	LB2801	J0JCC0000317	INDUCTOR	1	
	LB2802	J0JCC0000317	INDUCTOR	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	LB2803	J0JCC0000317	INDUCTOR	1	
	LB2804	J0JCC0000317	INDUCTOR	1	
	LB2805	J0JCC0000317	INDUCTOR	1	
	LB2806	J0JCC0000317	INDUCTOR	1	
	LB2807	J0JCC0000317	INDUCTOR	1	
	LB2808	J0JCC0000317	INDUCTOR	1	
	LB2809	J0JCC0000317	INDUCTOR	1	
	LB2951	J0JBC0000032	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	
	LB3909	J0JHC0000045	INDUCTOR	1	
	LB6401	J0JHC0000034	INDUCTOR	1	
	LB6402	J0JHC0000034	INDUCTOR	1	
	LB8001	J0JHC0000045	INDUCTOR	1	
	LB8011	J0JHC0000045	INDUCTOR	1	
	LB8401	J0JCC0000396	INDUCTOR	1	
	LB8423	J0JCC0000317	INDUCTOR	1	
	LB8430	J0JCC0000317	INDUCTOR	1	
	LB8434	J0JCC0000317	INDUCTOR	1	
	LB8530	J0JHC0000045	INDUCTOR	1	
	LB8532	J0JDC0000045	INDUCTOR	1	
	LB8551	J0JDC0000045	INDUCTOR	1	
	LB8561	J0JDC0000045	INDUCTOR	1	
	LB8701	J0JCC0000308	INDUCTOR	1	
	LB8702	J0JCC0000308	INDUCTOR	1	
	LB8901	J0JCC0000308	INDUCTOR	1	
	LB8902	J0JCC0000317	INDUCTOR	1	
	LB9001	J0JCC0000042	INDUCTOR	1	
	LB9004	J0JCC0000308	INDUCTOR	1	
			TRANSFORMERS		
⚠	T5701	ETS42BM1H6AC	TRANSFORMER	1	
⚠	T5751	ETS19AB2A6AG	SUB TRANSFORMER	1	
⚠	T6100	G4D1A0000142	SWITCHING TRANSFORMER	1	
			PHOTO COUPLERS		
⚠	PC5702	B3PBA0000402	PHOTO COUPLER	1	
⚠	PC5720	B3PBA0000402	PHOTO COUPLER	1	
⚠	PC5799	B3PBA0000402	PHOTO COUPLER	1	
			EARTH TERMINALS		
	ZJ5701	K4CZ01000027	TERMINAL	1	
	ZJ5702	K4CZ01000027	TERMINAL	1	
	ZJ5703	K4CZ01000027	TERMINAL	1	
			COMPONENT COMBINATION		
	IR6001	B3RAB0000081	REMOTE CONTROL SENSOR	1	
			OSCILLATORS		
	X2300	H2D500400006	CRYSTAL OSCILLATOR	1	
	X2301	H0J327200115	CRYSTAL OSCILLATOR	1	
	X2951	H0A327200097	CRYSTAL OSCILLATOR	1	
	X8621	H0J270500131	CRYSTAL OSCILLATOR	1	
	X9004	H1A4805B0038	CRYSTAL OSCILLATOR	1	
			FUSE		
⚠	F1	K5D402BNA005	FUSE	1	
			RELAY	1	
⚠	RY701	K6B1AEA00003	RELAY	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
			FL DISPLAY		
	DP6001	A2BB00000175	LCD DISPLAY	1	
			FUSE HOLDERS		
	ZA5701	K3GE1ZZ00001	FUSE HOLDER	1	
	ZA5702	K3GE1ZZ00001	FUSE HOLDER	1	
			CABLE HOLDERS		
	H6803	K1YZ040000002	4P CABLE HOLDER	1	
	JW1	K1YZ060000002	6P CABLE HOLDER	1	
			THERMISTOR		
⚠	TH5702	D4CAA5R10001	THERMISTOR	1	
			JACKS		
	JK2500	K2HA2YYA00005	JK AUX	1	
	JK2951	K4ZZ01000276	JK FM ANT	1	
	JK4001	K1FB121B0012	JK AV	1	
	JK5001	K4AZ12A00005	JK SPEAKER	1	
	JK8001	B3RAB0000056	JK OPTICAL IN	1	
⚠	P5701	K2AA2B000011	AC INLET	1	
			CHIP JUMPERS		
	K2700	D0GBR00JA008	0 1/16W	1	
	K2701	D0GBR00JA008	0 1/16W	1	
	K2702	D0GBR00JA008	0 1/16W	1	
	K2703	D0GBR00JA008	0 1/16W	1	
	K2704	D0GBR00JA008	0 1/16W	1	
	K2705	D0GBR00JA008	0 1/16W	1	
	K2710	D0GBR00JA008	0 1/16W	1	
	K2711	D0GBR00JA008	0 1/16W	1	
	K2712	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	
	K4001	D0GBR00JA008	0 1/16W	1	
	K5102	D0GBR00JA008	0 1/16W	1	
	K5103	D0GBR00JA008	0 1/16W	1	
	K5105	D0GBR00JA008	0 1/16W	1	
	K5106	D0GBR00JA008	0 1/16W	1	
	K5400	D0GBR00JA008	0 1/16W	1	
	K5722	D0GBR00JA008	0 1/16W	1	
	K5725	D0GBR00JA008	0 1/16W	1	
	K8003	D0GBR00JA008	0 1/16W	1	EG-K/S
	K8004	D0GBR00JA008	0 1/16W	1	EB-K
	K8005	D0GBR00JA008	0 1/16W	1	EP-K/S
	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	
	K8533	D0GBR00JA008	0 1/16W	1	
	L1021	D0GBR00JA008	0 1/16W	1	
	L1022	D0GBR00JA008	0 1/16W	1	
	L1023	D0GBR00JA008	0 1/16W	1	
	L1024	D0GBR00JA008	0 1/16W	1	
	L1025	D0GBR00JA008	0 1/16W	1	
	L1026	D0GBR00JA008	0 1/16W	1	
	L1027	D0GBR00JA008	0 1/16W	1	
	L1028	D0GBR00JA008	0 1/16W	1	
	L1029	D0GBR00JA008	0 1/16W	1	
	L1030	D0GBR00JA008	0 1/16W	1	
	L1031	D0GBR00JA008	0 1/16W	1	
	L1033	D0GBR00JA008	0 1/16W	1	
	L6005	D0GBR00JA008	0 1/16W	1	
	L6803	D0GBR00JA008	0 1/16W	1	
	L6804	D0GBR00JA008	0 1/16W	1	
	L6805	D0GBR00JA008	0 1/16W	1	
	L6806	D0GBR00JA008	0 1/16W	1	

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
	C8432	F1J1A106A043	10uF 10V	1	
	C8433	F1J1A106A043	10uF 10V	1	
	C8434	F1J1A106A043	10uF 10V	1	
	C8435	F1G1E1020001	1000pF 25V	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	
	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	
	C8540	F1J1A106A043	10uF 10V	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	
	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	F1G1H8R00009	8.0pF 50V	1	
	C8622	F1G1H8R00009	8.0pF 50V	1	
	C8651	F1G1C104A083	0.1uF 16V	1	
	C8652	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	
	FL8105	F1H0J1050018	1uF 6.3V	1	
	FL8421	F1H0J1050018	1uF 6.3V	1	

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