

Service Manual

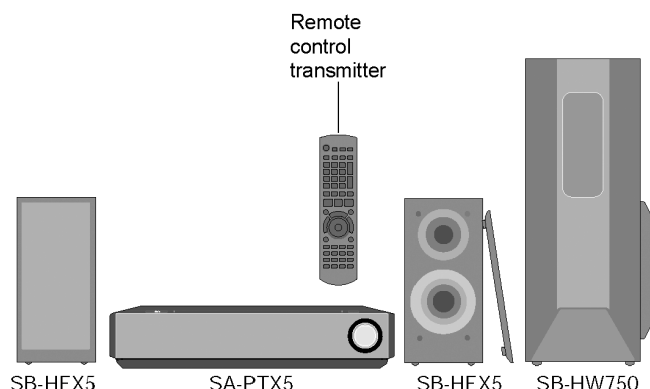
DVD Home Theater Sound System



SA-PTX5E
SA-PTX5EB
SA-PTX5EG

Colour

(K).....Black Type



Specifications

●GENERAL

Power Supply:

E/EG areas: AC 230 V, 50 Hz

EB area: AC 230 V - 240 V, 50 Hz

Power Consumption: Main unit 50 W

Power Consumption in Standby Mode:

Approx. 0.3 W

Dimensions (W×H×D): 325 mm×72 mm×330 mm

Mass: Main unit 3 kg

Operating Temperature Range: +5 °C to +35 °C

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

●AMPLIFIER SECTION

Dolby Virtual Speaker Mode (RMS)

Total Power Output: 140 W

At 1 kHz and total harmonic of 10%

●Front Ch: 45 W / Channel (6 Ω)

At 100 Hz and total harmonic of 10%

●Subwoofer Ch: 50 W / Channel (6 Ω)

Dolby Virtual Speaker Mode (DIN)

Total Power Output: 80 W

At 1 kHz and total harmonic of 1%

●Front Ch: 25 W / Channel (6 Ω)

At 100 Hz and total harmonic of 1%

●Subwoofer Ch: 30 W / Channel (6Ω)

●FM TUNER, TERMINALS SECTION

Preset Memory FM 30 stations

Frequency Modulation (FM)

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

Sensitivity 1.8 μV (IHF)

S/N 26 db 1.4 μV

Antenna terminals 75 Ω (unbalanced)

Digital Audio Input/Output

Optical digital input Optical terminal

Sampling frequency 32 kHz, 44.1 kHz, 48 kHz

Optical digital output Optical terminal

Phone Jack

Terminal Stereo, 3.5 mm jack

Music Port (Front)

Sensitivity 100 mV, 1.4kΩ

Terminal (Input) Stereo, 3.5 mm jack

USB Port

USB standard USB 2.0 full speed

Media file format support MP3 (*.mp3)

WMA (*.wma)

JPEG (*.jpg) (*.jpeg)

MPEG4 (*.asf)

Panasonic®

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USB device file system FAT12, FAT16, FAT32

USB Port power Max. 500 mA

●DISC SECTION

Discs played [8 cm or 12 cm]:

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

*1 Conforming to IEC62107

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

*3 Windows Media Audio Ver.9.0 L3

●Not compatible with Multiple Bit Rate (MBR)

*4 Exif Ver 2.1 JPEG Baseline files

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

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

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

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

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

Pick Up:

Wavelength:

●CD: 785 nm

●DVD: 662 nm

Laser power:

●CD: CLASS 1M

●DVD: CLASS 1

Audio output (Disc)

●Number of channels: 2.1 ch (FL, FR, SW)

●VIDEO SECTION

Video System: PAL 625/50, PAL 525/60, 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 (75 Ω)

●C output level: PAL; 0.3 Vp-p (75Ω)
NTSC; 0.286 Vp-p (75 Ω)

●Terminal: Scart jack (1 system)

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

●Y output level: 1 Vp-p (75 Ω)

●P_B output level: 0.7 Vp-p (75 Ω)

●P_R output level: 0.7 Vp-p (75 Ω)

●Terminal: Pin jack (Y: green, P_B: blue, P_R: red) (1 system)

RGB Video Output:

●R output level: 0.7 Vp-p (75 Ω)

●G output level: 0.7 Vp-p (75 Ω)

●B output level: 0.7 Vp-p (75 Ω)

●Terminal: Scart jack (1 system)

HDMI AV Output:

●Terminal: Type A connector (19-pin)

HDAVI Control: This unit supports "HDAVI Control 2" function.

Note:

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

Solder:

This model uses lead free solder (PbF).

Mechanism:

This model uses DL2 changer mechanism (DVD/CD changer mechanism).

System	SC-PTX5E	SC-PTX5EB	SC-PTX5EG
Main unit	SA-PTX5E	SA-PTX5EB	SA-PTX5EG
Front speakers	SB-HFX5E *1		
Subwoofer	SB-HW750P *2		

Refer to the respective original service manuals for *1, *2.

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Official DivX® Certified product.

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

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■ Built-in decoders

You can play discs with these symbols.



⚠ WARNING

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

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1 Safety Precautions

1.1. GENERAL GUIDELINES

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

1.1.1. LEAKAGE CURRENT COLD CHECK

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

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.

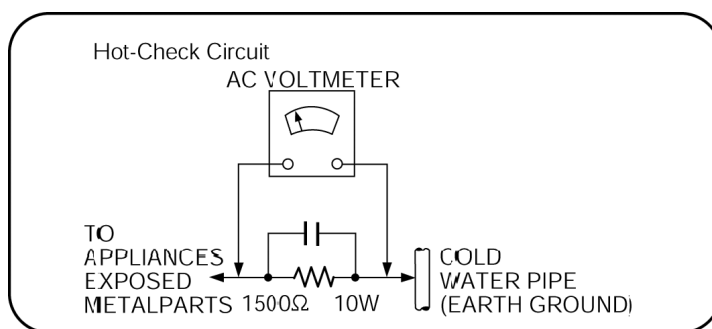


Figure 1

1.2. Before Repair and Adjustment

Disconnect AC power to discharge unit AC Capacitors as such C702, C718, C720, C725, C727, C728, C730, C737, C738 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 V~240 V, 50 Hz in NO SIGNAL mode volume minimal should be ~ 500 mA. (For EB only) Current consumption at AC 230 V, 50 Hz in NO SIGNAL mode volume minimal should be ~ 500 mA. (For E/EG)

1.3. Protection Circuitry

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

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

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

If this occurs, follow the procedure outlines below:

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

Note:

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

1.4. Safety Parts Information

Safety Parts List:

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

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

Table 1

Ref. No.	Part No.	Part Name & Description	Remarks
340	RAE2025Z-S	DT6.0J TRAVERSE UNIT	[M] $\triangle$
PC701	B3PAA0000529	PHOTO COUPLER	[M] $\triangle$
PC702	B3PAA0000529	PHOTO COUPLER	[M] $\triangle$
PC703	B3PAA0000529	PHOTO COUPLER	[M] $\triangle$
TH701	D4CAA5R10001	THERMISTOR	[M] $\triangle$
TH702	D4CAA5R10001	THERMISTOR	[M] $\triangle$
L703	ELF19H010A	LINE CHOKE COIL	[M] $\triangle$
L704	ELF15N035AN	LINE FILTER	[M] $\triangle$
T1	REXX0574	BROWN WIRE (SMPS-AC)	[M] $\triangle$
T2	REXX0575	BLUE WIRE (SMPS-AC)	[M] $\triangle$
T701	ETS35BC2LGAD	MAIN TRANSFORMER	[M] $\triangle$
T702	ETS19AB221AG	SUB TRANSFORMER	[M] $\triangle$
T751	G4D1A0000117	SWITCHING TRANSFORMER	[M] $\triangle$
F701	K5D402BNA005	FUSE	[M] $\triangle$
FP700	K5G202AA0002	FUSE PROTECTOR	[M] $\triangle$
Z701	ERZV10V511CS	ZENER	[M] $\triangle$
P702	K2AA2B000015	AC INLET	[M] $\triangle$
A2	K2CQ2CA00007	AC CORD	[M]EG/E $\triangle$
A2	K2CT3CA00004	AC CORD	[M]EB $\triangle$
RY701	K6B1AEA00003	POWER RELAY	[M] $\triangle$
C702	ECQU2A104MLC	0.1	[M] $\triangle$
C718	F1BAF1020020	1000P	[M] $\triangle$
C720	F1BAF1020020	1000P	[M] $\triangle$
C725	ECQU2A104MLC	0.1	[M] $\triangle$
C727	F1BAF471A013	470P	[M] $\triangle$
C728	F1BAF471A013	470P	[M] $\triangle$
C730	F1BAF1020020	1000P	[M] $\triangle$
C737	F1BAF1020020	1000P	[M] $\triangle$
C738	ECQU2A104MLC	0.1	[M] $\triangle$

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

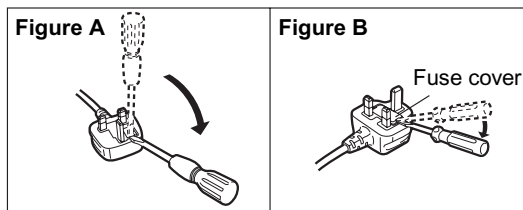
Remove the connector cover.

How to replace the fuse

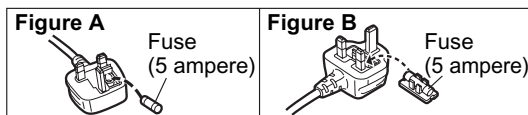
The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.

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

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

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

Caution:

Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient to damage an ES device).

3 Precaution of Laser Diode

CAUTION:

THIS PRODUCT UTILIZES A LASER.

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

CAUTION: This product utilizes a laser diode with the unit turned "on", invisible laser radiation is emitted from the pick-up lens.

Wave length: **662nm(DVD)/785nm(CD)**

Maximum output radiation power from pick-up: 100 μ W/VDE

Laser radiation from the pick-up unit is safety level, but be sure the followings:

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

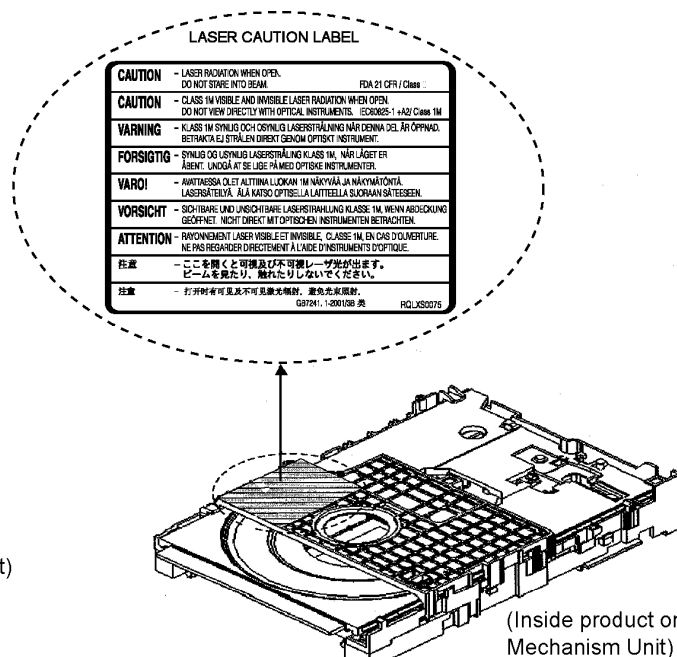
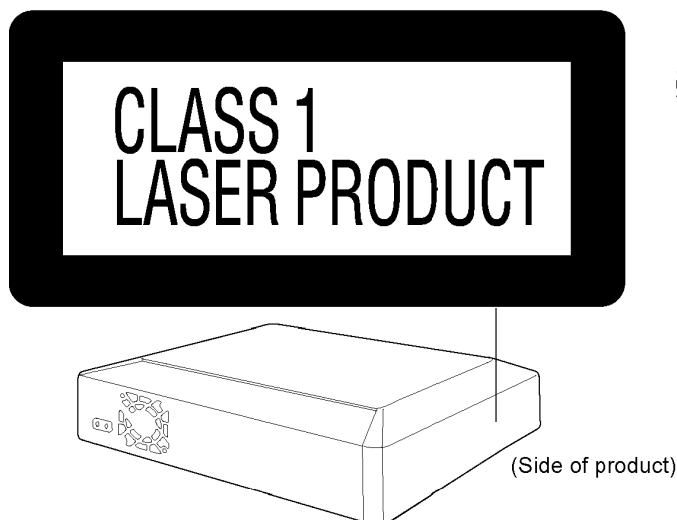
ACHTUNG: Dieses Produkt enthält eine Lasereinheit. Im eingeschalteten Zustand wird unsichtbare Laserstrahlung von der Lasereinheit abgestrahlt.

Wellenlänge: **662nm(DVD)/785nm(CD)**

Maximale Strahlungsleistung der Lasereinheit: 100 μ W/VDE

Die strahlung an der Lasereinheit ist ungefährlich, wenn folgende Punkte beachtet werden:

1. Die Lasereinheit nicht zerlegen, da die Strahlung an der freigelegten Lasereinheit gefährlich ist.
2. Den werksseitig justierten Einstellregler der Lasereinheit nicht verstellen.
3. Nicht mit optischen Instrumenten in die Fokussierlinse blicken.
4. Nicht über längere Zeit in die Fokussierlinse blicken.



4 About Lead Free Solder (PbF)

4.1. Service caution based on legal restrictions

4.1.1. General description about Lead Free Solder (PbF)

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

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

Definition of PCB Lead Free Solder being used

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

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

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

Recommended Lead Free Solder (Service Parts Route.)

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

Note

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

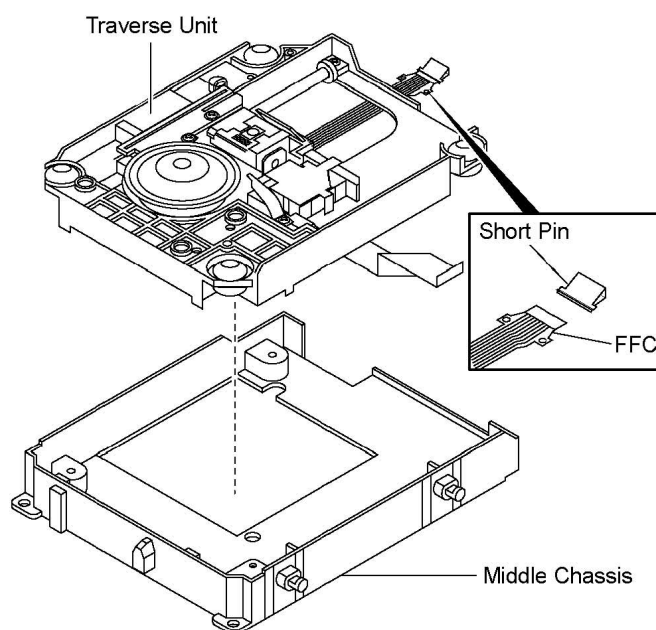
5 Handling Precautions for Traverse Unit

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

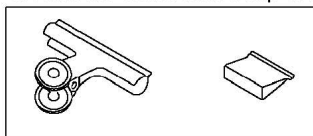
5.1. Cautions to Be Taken in Handling the Optical Pickup Unit

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

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



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



5.2. Grounding for electrostatic breakdown prevention

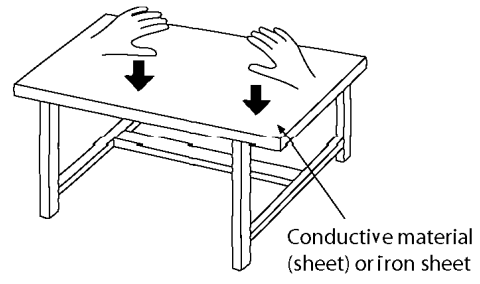
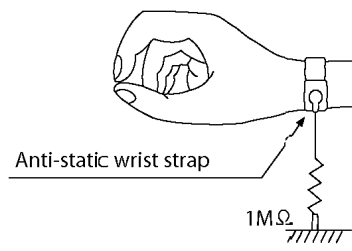
Some devices such as the DVD player use the optical pickup (laser diode) and the optical pickup will be damaged by static electricity in the working environment. Proceed servicing works under the working environment where grounding works is completed.

5.2.1. Worktable grounding

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

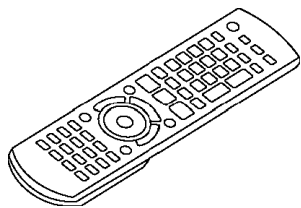
5.2.2. Human body grounding

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

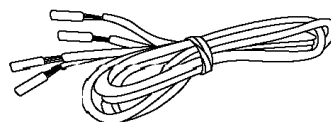


6 Accessories

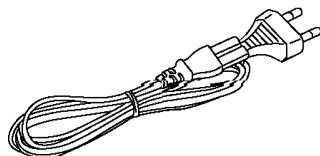
- Note: Refer to “Replacement Parts List” (Section 25) for the part number.



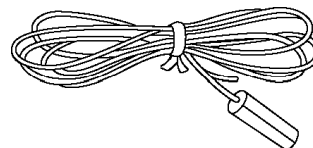
Remote control



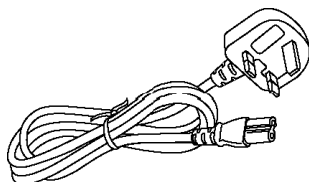
Speaker cord (4M)



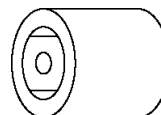
AC cord
(For E/EG)



Antenna wire



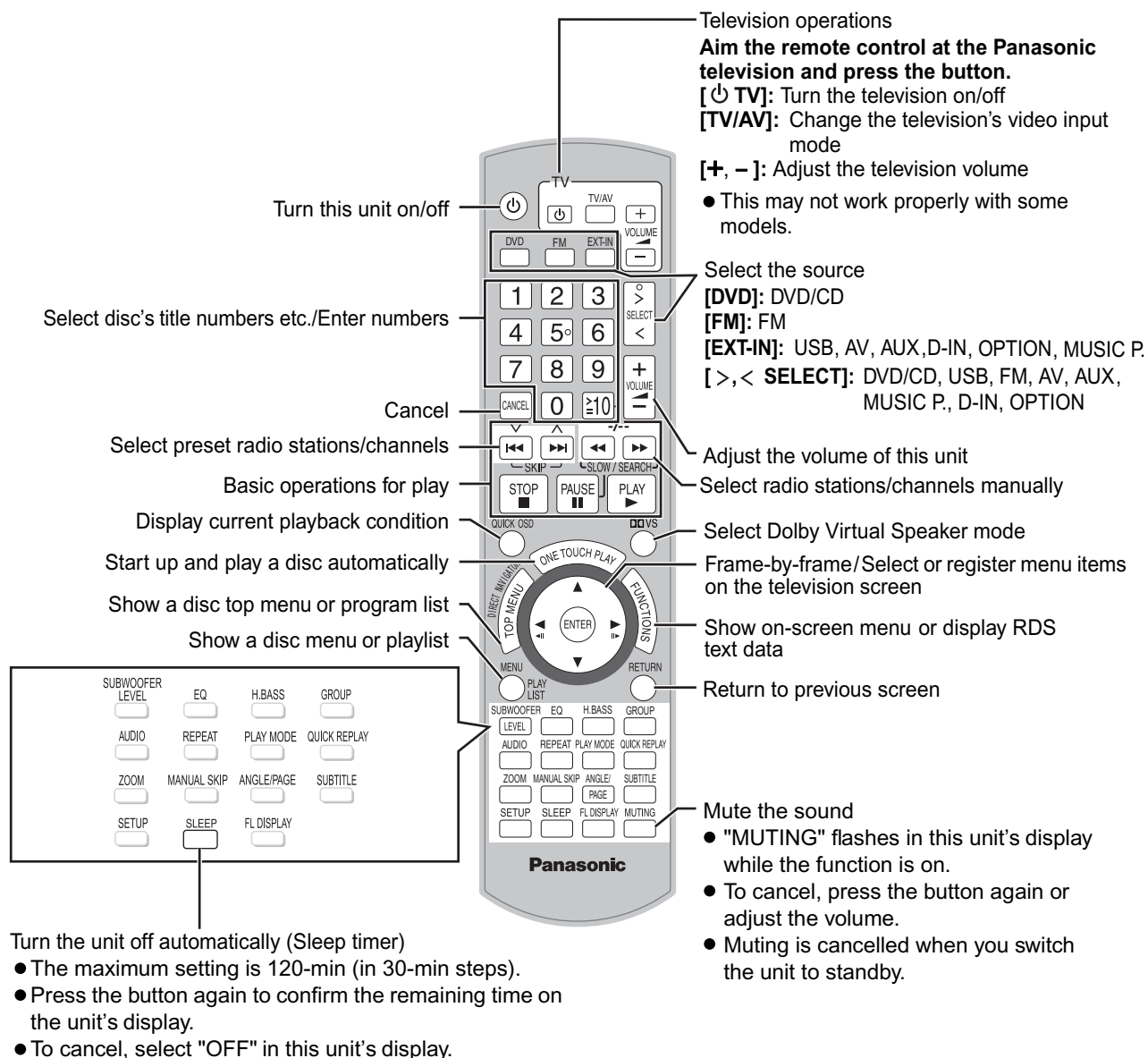
AC cord
(For EB only)



Din adaptor
(For EB only)

7 Operation Procedures

7.1. Remote Control Key Buttons Operations



Avoiding interference with other Panasonic equipment

Other Panasonic audio/video equipment may start functioning when you operate the unit using the supplied remote control.

You can operate this unit in another mode by setting the remote control operating mode to "REMOTE 2".

This unit and remote control must be set to the same mode.

- 1 Press and hold [▶▶] on this unit and [2] on the remote control until this unit's display shows "REMOTE 2".
 - 2 Press and hold [ENTER] and [2] on the remote control for at least 2 seconds.
- To change the mode back to "REMOTE 1", repeat both steps above by replacing [2] with [1].

7.2. Main Unit Key Buttons Operations

Standby/on switch [⏻/⏻]

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

AC supply indicator [AC IN]

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

⏮, ⏭ / ∇ TUNING ▲

Skip
Select the radio stations/channels

▲ OPEN/CLOSE

Open/Close the disc tray

■ / -TUNE MODE / —FM MODE

Stop playing/Select the tuning mode
Adjust the FM reception condition

▶ / MEMORY

Play discs
Memorize the receiving radio stations/channels

Dolby Virtual Speaker LED

■ VIRTUAL SPEAKER
Enjoy surround sound effect

Jog LED

Headphones
(not included)

Headphone plug type:
Ø3.5 mm stereo mini plug

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

MUSIC PORT

Connect an external device

USB terminal
Connect a USB device

SELECTOR

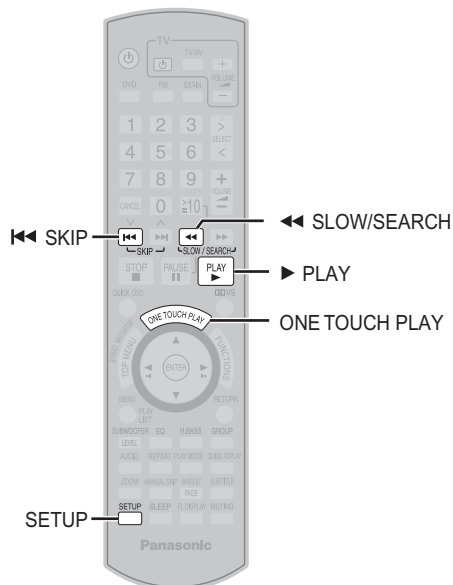
DVD/CD → USB → FM → AV →
AUX → MUSIC P. → D-IN → OPTION →
Return to DVD/CD

Display

Adjust the volume of this unit.

Remote control signal sensor

7.3. Using the VIERA Link "HDAVI Control™"



VIERA Link "HDAVI Control"

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

- 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 2" function. The TV with "HDAVI Control 2" function enables the following operation: VIERA Link Control only with TV's remote control (for "HDAVI Control 2"). "HDAVI Control 2" is the newest standard (current as of February, 2007) for Panasonic's HDAVI Control compatible equipment. This standard is compatible with Panasonic's conventional HDAVI equipment.

Preparation

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

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

One touch play

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

Press [ONE TOUCH PLAY].

Theater speakers will be automatically activated.

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

Note

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

Auto input switching

- When you switch the television input to:
 - TV tuner mode, the home theater system will automatically switch to "AUX"※ or "D-IN"※.
 - HDMI input mode for the home theater system, the home theater system will automatically switch to "DVD/CD" if it is in "AUX"※ or "D-IN"※ mode.
- When you start disc play, the television will automatically switch to the HDMI input mode for the home theater system.

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

Power off link

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

- This function works only when "DVD/CD", "USB", "AUX"※ or "D-IN"※ is selected as the source on the home theater system.
- When the television is turned on, the home theater system does not turn on automatically. (Power on link is not available.)

Note

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

※ For "AUX" or "D-IN" mode, power off link can be set to work with one or the other. To toggle the mode that this function works with, press [SETUP] while this unit is in "AUX" or "D-IN" mode.
– The default setting is "AUX".

Speaker control

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

Home Cinema

Theater speakers are active.

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

TV

Television speakers are active.

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

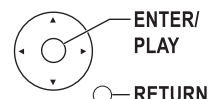
- When switching between the theater and television speakers, the TV screen may be blank for several seconds.

※ To toggle which input source this unit will automatically switch to, press [SETUP] while this unit is in "AUX" or "D-IN" mode.
– The default setting is "AUX".

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

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

- 1 Select the theater operation menu by using the television menu settings.
(For details, refer to the operating instructions of your television.)

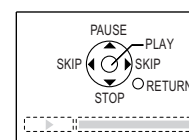


- The home theater system will automatically switch to "DVD/CD" if it is in "AUX"※ or "D-IN"※ mode.
- ※ To toggle the mode that this function works with, press [SETUP] while this unit is in "AUX" or "D-IN" mode.
– The default setting is "AUX".

- 2 Select the desired item.



- **"TOP MENU":** Shows a disc top menu or program list.
- **"MENU":** Shows a disc menu or play list.
- **"Control Panel":** The basic operations for discs are available.



Note

- Depending on the menu, some button operations cannot be performed from the TV's remote control.
- "Control Panel" can be selected directly by using a button on the TV's remote control (e.g. [OPTION]).
- You cannot input numbers with the numbered buttons on the TV's remote control ([0] to [9]). Use the home theater's remote control to select the playlist etc.

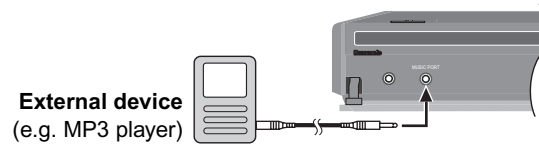
7.4. Using the Music Port

Preparation

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

1 Connect the external device (not included).

Plug type: Ø3.5 mm stereo mini plug

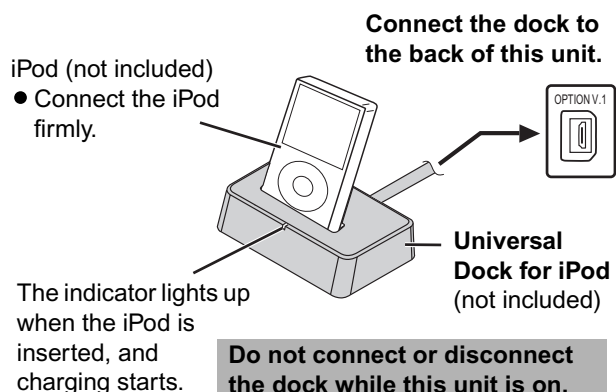


2 Press [EXT-IN] repeatedly to select "MUSIC P.".

- Adjust the volume on the external device to a normal listening level, and then adjust the volume of this unit.
- You can enjoy surround sound effect when you press [DOLBY VS] to turn on Dolby Virtual Speaker.

7.5. Using the iPod

Use an optional SH-PD10 Panasonic Universal Dock for iPod.



■ Charging the iPod

Charging time

iPod nano 2nd generation (aluminum)	Until iPod is fully charged
iPod 5th generation (video)	
iPod nano 1st generation	
iPod 4th generation (color display)	5 hours (fixed)
iPod 4th generation	
iPod mini	

Note

- AC mains lead must be connected with this unit.
- "OPTION *" will be shown on this unit's display during iPod charging in this unit standby mode. It will go off when charging is finished. For the above models under "fixed 5-hour charging", "OPTION *" continues to be displayed throughout this duration, even when your iPod is fully charged. You can turn off this display by removing the iPod from the dock.
- Compatibility depends on the software version of your iPod.
- For more information, refer to the operating instructions for iPod or SH-PD10.

■ Playing tracks from the iPod

Preparation

- Adjust the volume on the iPod to a normal listening level.
- Reduce the volume of this unit.
- Confirm the iPod connection.

1 Press [EXT-IN] repeatedly to select "OPTION".

The iPod turns on.

2 Press [▶ PLAY] to play the iPod.

- Adjust the volume of this unit.
- You can enjoy surround sound effect when you press [DOLBY VS] to turn on Dolby Virtual Speaker.

PAUSE STOP Alternatively, press [■] on this unit. (During play/pause)	To pause track
⏮ ⏭ Alternatively, press [⏮, ⏭] on this unit. (During play/pause)	To skip a track
⏮ ⏭ or press and hold ⏮ ⏭	To search the current track

When you select another source, or turn this unit off, the iPod turns off.

Note

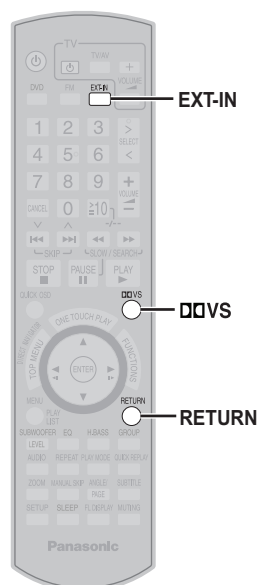
Image/video display through the home theater is not available.

Compatible iPod

Name	Memory size	Name	Memory size
iPod nano 2nd generation (aluminum)	2GB, 4GB, 8GB	iPod 4th generation (color display)	40GB, 60GB
iPod 5th generation (video)	60GB, 80GB	iPod 4th generation (color display)	20GB, 30GB
iPod 5th generation (video)	30GB	iPod 4th generation	40GB
iPod nano 1st generation	1GB, 2GB, 4GB	iPod 4th generation	20GB
		iPod mini	4GB, 6GB

- Compatibility depends on the software version of your iPod.

7.6. USB Connection and Operation



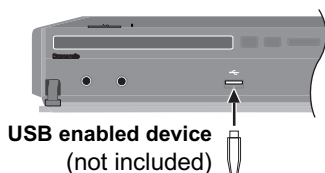
USB connection and operation

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

Preparation

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

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



- It is not recommended to use a USB extension cable. The USB device is not recognised by this unit.

2 Press [EXT-IN] repeatedly to select "USB".

- Adjust the volume of this unit.
- You can enjoy surround sound effect when you press [DQVS] to turn on Dolby Virtual Speaker.



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

To return to the previous screen, press [RETURN]. For other operating functions, they are similar to those described in "Playing Discs".

Compatible devices

Devices which are defined as USB mass storage class:

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

Supported Formats

	Format	Extension
Still pictures	JPG	".jpg", ".JPG" ".jpeg", ".JPEG"
Music	MP3 WMA	".mp3", ".MP3" ".wma", ".WMA"
Video	MPEG4*	".asf", ".ASF"

* For Panasonic D-Snap/DIGA

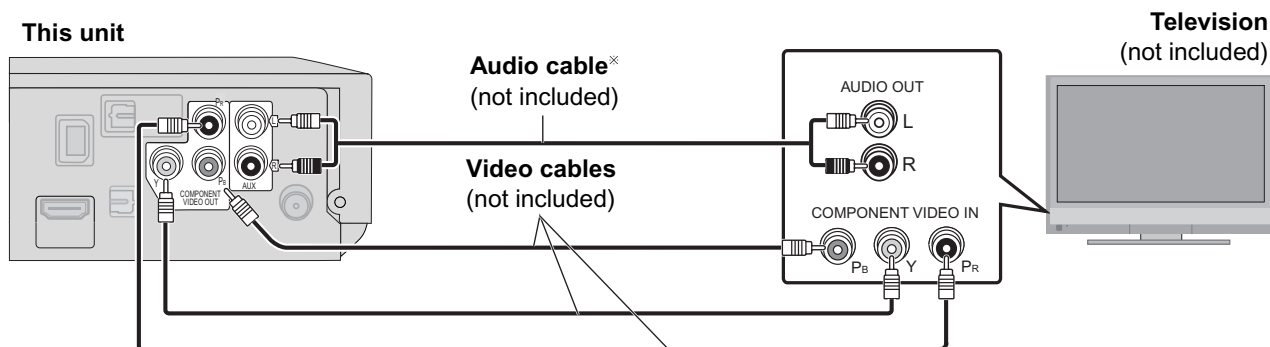
Note

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

7.7. Audio and Video Connection

7.7.1. Connecting to a Television with COMPONENT VIDEO IN Terminals

This connection provides a purer picture than the SCART (AV) terminal.



- Connect to terminals of the same colour.

Necessary Settings

- Select "Video/YPbPr" or "S-Video/YPbPr" from QUICK SETUP. If "RGB/No Output" is selected, the RGB signal is output from the SCART (AV) terminal, but no signal is output from the component video terminals.

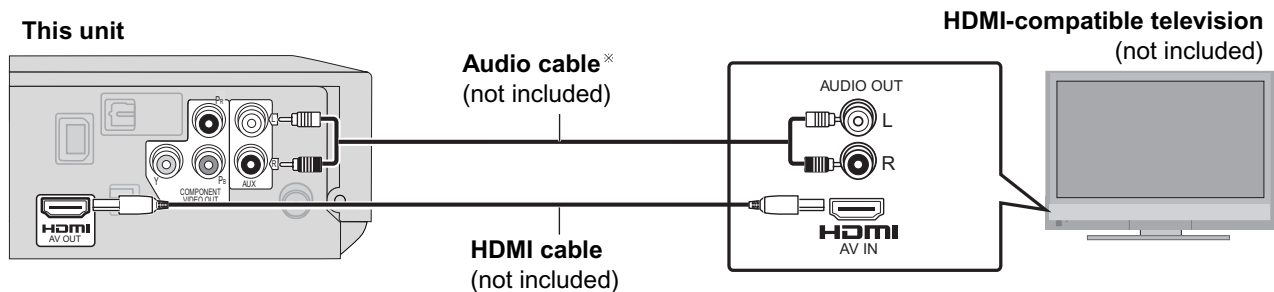
To enjoy progressive video

- Connect to a progressive output compatible television.
Set "Video Output Mode" to "480p" or "576p", and then follow the instructions on the menu screen.

All Panasonic televisions with 625 (576)/50i-50p, 525 (480)/60i-60p input terminals are progressive compatible. Consult the manufacturer if you have another brand of television.

7.7.2. Connecting to a Television with HDMI Terminal

This connection provides the best picture quality.



- Non-HDMI-compliant cables cannot be utilized.
- It is recommended that you use Panasonic's HDMI cable.
Recommended part number: RP-CDHG15 (1.5 m), RP-CDHG30 (3.0 m), RP-CDHG50 (5.0 m), etc.
- When the HDMI cable is connected, there will be no video output from the SCART (AV) and COMPONENT VIDEO OUT terminals of this unit.

Necessary Settings

- Set "Video Mode" to "On".
- Set "Video Output Mode".

VIERA Link "HDAVI Control"

If your Panasonic television is a VIERA Link compatible television, you can operate your television synchronising with home-theater operations or vice versa.

7.8. Disc Information

7.8.1. Disc Playability (Media)

Commercial discs

Disc	Logo	Indicated in these instructions by	Remarks
DVD-Video		DVD-V	High quality movie and music discs
DVD-Audio		DVD-A	High fidelity music discs ^{※1}
Video CD		VCD	Music discs with video Including SVCD (Conforming to IEC62107)
CD		CD	Music discs

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

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

- 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 [Section 7.8.2. File Extension Type Support (WMA/MP3/JPEG/MPEG4/DivX)].

※1 Some DVD-Audio discs contain DVD-Video content. To play DVD-Video content, select "Play as Data Disc".

※2 This unit can play CD-R/RW recorded with CD-DA or Video CD format.

WMA MP3 JPEG This unit also plays HighMAT discs.

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

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

※5 Discs recorded on DVD recorders or DVD video cameras using DVD-Video Format.

※6 Recorded using a format different from DVD-Video Format, therefore some functions cannot be used.

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

※8 Closing the session will also work.

Note about using a DualDisc

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

■ Discs that cannot be played

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

■ Video systems

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

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

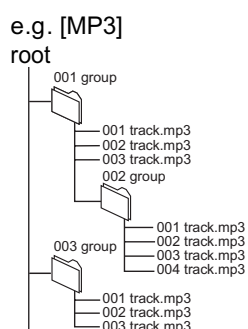
Format	Disc	Extension	Reference
WMA	CD-R/RW	".WMA" ".wma"	- Compatible compression rate: between 48 kbps and 320 kbps - You cannot play WMA files that are copy-protected. - This unit does not support Multiple Bit Rate (MBR: an encoding process for audio content that produces an audio file encoded at several different bit rates).
MP3	DVD-RAM DVD-R/RW CD-R/RW	".MP3" ".mp3"	- This unit does not support ID3 tags. - Sampling frequency and compression rate: – DVD-RAM, DVD-R/RW: 11.02, 12, 22.05, 24 kHz (8–160 kbps), 44.1 and 48 kHz (32–320 kbps) – CD-R/RW: 8, 11.02, 12, 16, 22.05, 24 kHz (8–160 kbps), 32, 44.1 and 48 kHz (32–320 kbps)
JPEG	DVD-RAM DVD-R/RW CD-R/RW	".JPG" ".jpg" ".JPEG" ".jpeg"	- JPEG files taken on a digital camera that conform to DCF Standard (Design rule for Camera File system) Version 1.0 are displayed. – Files that have been altered, edited or saved with computer picture editing software may not be displayed. - This unit cannot display moving pictures, MOTION JPEG and other such formats, still pictures other than JPEG (e.g. TIFF), or play pictures with attached audio.
MPEG4	DVD-RAM DVD-R/RW CD-R/RW	".ASF" ".asf"	- You can play MPEG4 data [conforming to SD VIDEO specifications (ASF standard)/MPEG4 (Simple Profile) video system/G.726 audio system] recorded with Panasonic SD multi cameras or DVD recorders with this unit. - The recording date may differ from that of the actual date.
DivX	DVD-RAM DVD-R/RW CD-R/RW	".DIVX" ".divx" ".AVI" ".avi"	- Plays all versions of DivX® video (including DivX®6) [DivX video system/MP3, Dolby Digital or MPEG audio system] with standard playback of DivX® media files. Functions added with DivX Ultra are not supported. - DivX files greater than 2 GB or have no index may not be played properly on this unit. - This unit supports all resolutions up to maximum of 720 x 480 (NTSC)/720 x 576 (PAL). - You can select up to 8 types of audio and subtitles on this unit.

- When there are more than 8 groups, the eighth group onwards will be displayed on one vertical line in the menu screen.
- There may be differences in the display order on the menu screen and computer screen.
- This unit cannot play files recorded using packet write.

Naming folders and files

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

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



DVD-RAM

- Discs must conform to UDF 2.0.

DVD-R/RW

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

CD-R/RW

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

Regarding DVD-Audio

Some 5.1 channel DVD-Audio will prevent down-mixing of all or part of their contents if this is the manufacturer's intention. When playing such discs, or such parts of the disc, unless the number of connected speakers is the same as the disc's channel specification, audio will not be output properly (e.g., part of the audio is missing, 5.1 channel sound cannot be selected and audio is played in two channels). Refer to the disc's jacket for more information.

8 Self-Diagnosis and Special Mode Setting

8.1. Service Mode Summary Table

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

Below is the summary for the various modes for checking:

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

Note:

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

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

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

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

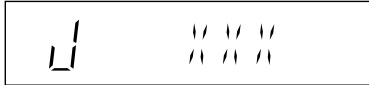
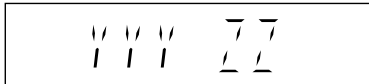
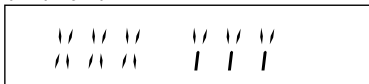
8.2. Service Mode Table

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

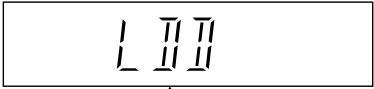
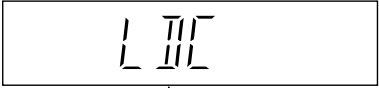
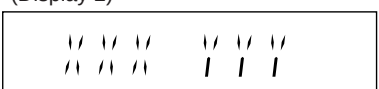
Special Note:

- Due to the limitations of the no. characters that can be shown on the FL Display, the "FL Display" button on the remote control unit can be used to show the two display pages. (Display 1 / Display 2).
- Refer to Section 7.1 for the section on "Remote Control Key Buttons Operations".

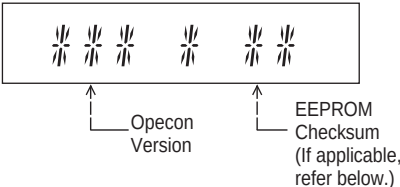
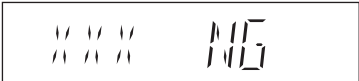
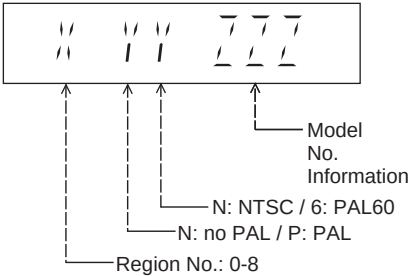
8.2.1. Service Mode Table 1

Item		FL Display	Key Operation
Mode Name	Description		Front Key
Jitter check	Jitter check. Jitter rate is measured and displayed. Measurement is repeatedly done in the cycle of one second. Read error counter starts from zero upon mode setting. When target block data failed to be read out, the counter advances by one increment. When the failure is caused by minor error, it may be corrected when retried to enable successful reading. In this case, the counter advances by one. When the error persists even after retry, the counter may jump by two or more. FL Display sequence: Display 1→2.	(Display 1)  Jitter check mode Jitter rate mode Jitter rate is shown in decimal notation to one place of decimal. Focus drive value is shown in hexadecimal notation. (Display 2)  Lead Error Counter Focus Drive Value	In STOP (no disc) mode, press [STOP] button on the main unit, and [5] button on the remote control unit. Press [POWER] button to exit. Press [FL Display] on remote control unit for next page (FL Display).
Error code check	Error code check The latest error code stored in the EEPROM IC is displayed. Note: Refer to "Section 8.3 DVD Self Diagnostic Function-Error Code" for more detailed information on the error codes.	 U / H / F Error code (play_err) is expressed in the following convention. Error code = 0 x DAXX is expressed: → DVDnn U12 Error code = 0 x DBXX is expressed: → DVDnn H12 Error code = 0 x DXXX is expressed: → DVDnn F123 Error code = 0 x 0000 is expressed: → DVDnn F--- * "xx" denotes the error code	In STOP (no disc) mode, press [STOP] button on the main unit, and [0] button on the remote control unit. * With pointing of cursor up and down on display. Cancelled automatically 5 seconds later. To exit, press [POWER] button on main unit or remote control.
Initial setting of laser drive current	Initial setting of laser drive current. Initial current value for the DVD laser and CD laser is separately saved in the EEPROM IC. FL Display sequence: Display 1→2.	(Display 1)  Laser current measurement mode The value denotes the current in decimal notation. (Display 2)  CD Laser DVD Laser The above example shows the initial current is XXXmA and YYYmA for CD laser and DVD laser respectively when the laser is switched on.	In STOP (no disc) mode, press [STOP] button on the main unit, and [PAUSE] button on the remote control unit. Cancelled automatically 5 seconds later. Press [FL Display] on remote control unit for next page (FL Display) on values of laser drive current.

8.2.2. Service Mode Table 2

Item		FL Display	Key Operation
Mode Name	Description		Front Key
DVD laser drive current measurement	DVD laser drive current measurement. DVD laser drive current is measured and the result is displayed together with the initial value stored in the EEPROM IC. After the measurement, DVD laser emission is kept on. It is turned off when POWER key is switched off. FL Display sequence: Display 1→2.	(Display 1)  The value denotes the current in decimal notation. (Display 2)  The above example shows the initial current is XXXmA and the measured value is YYYmA.	In STOP (no disc) mode, press [STOP] button on the main unit, and [FUNCTIONS] button on the remote control unit. Cancelled automatically 5 seconds later. Press [FL Display] on remote control unit for next page (FL Display) on values of dvd drive current.
ADSC internal RAM data check	ADSC internal RAM data check. ADSC internal RAM data is read out and displayed.	 The value is shown in hexadecimal notation. The above example shows the data in ADSC address FBOh is XXXXh.	In STOP (no disc) mode, press [STOP] button on the main unit, and [1] button on the remote control unit. To exit, press [POWER] button.
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)  The value denotes the current in decimal notation. (Display 2)  The above example shows the initial current is 0XXmA and the measured value is 0YYmA.	In STOP (no disc) mode, press [STOP] button on the main unit, and [3] button on the remote control unit. Cancelled automatically 5 seconds later. Press [FL Display] on remote control unit for next page. (FL Display)

8.2.3. Service Mode Table 3

Item		FL Display	Key Operation
Mode Name	Description		Front Key
Micro-processor firmware version display & EEPROM checksum display.	Micro-processor firmware version display & EEPROM checksum display. EEPROM checksum is only available due to existence of EEPROM IC. Note: Condition 1/2/3 shows the state of EEPROM IC. 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 [★] is displayed. (Display 3)  (Display 4) 	In STOP (no disc) mode, press [STOP] button on the main unit, and [7] button on the remote control unit. Cancelled automatically 5 seconds later. Press [FL Display] button on remote control unit for next page. (FL Display)
Initialization	Initialization. User settings are cancelled and player is initialized to factory setting. It is necessary when after replacement of Micro-processor (DV5 LSI) IC, FLASH ROM IC (IC8651), EEPROM IC (IC8611) & DVD Module P.C.B.		In STOP (no disc) mode, press [STOP] button on the main unit, and [≥10] button on the remote control unit. Cancelled automatically 5 seconds later.
Region display	Region code display, TV broadcasting system & the model no. information. Note: Refer to Figure 8.1 for "Video Design Information".		In STOP (no disc) mode, press [STOP] button on the main unit, and [6] button on the remote control unit. Cancelled automatically 5 seconds later.

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

NTSC (*A)

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

NTSC (*B)

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

PAL (*C)

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

NTSC (*D)

Source	Output
Screen Saver	NTSC
NTSC disc	NTSC
PAL disc	NTSC

Explanation of Display

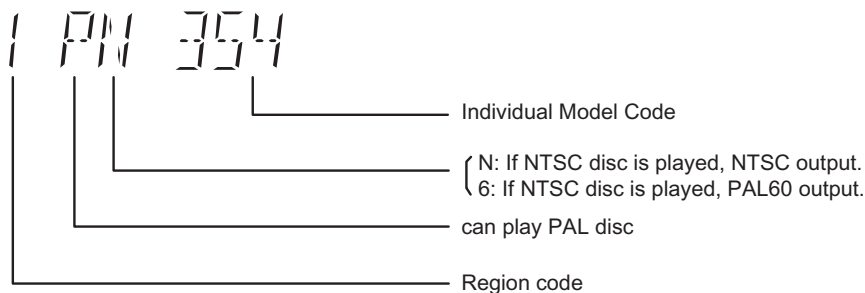
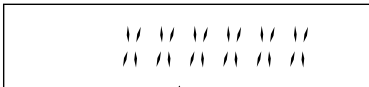


Figure 8.1

8.2.4. Service Mode Table 4

Mode Name	Item	FL Display	Key Operation
	Description		Front Key
DVD Module P.C.B. firmware version display	DVD Module P.C.B. firmware version is displayed on the FL Display. The firmware version can be updated using recovery disc. Note: It is necessary to check for firmware version before carrying out the version up using the disc.		In STOP (no disc) mode, press [STOP] button on the main unit, and [8] button on the remote control unit. Cancelled automatically 5 seconds later.
Communication error display	Displays frequency of communication errors between system control IC and mechanism control IC in the DVD Module P.C.B.		In STOP (no disc) mode, press [STOP] button on the main unit, and [MENU] button on the remote control unit. Cancelled automatically 5 seconds later.
ECC Error Check	ECC refers to Error Correction Code. It describes the error correction code that was carried out for the decoding of audio & video. FL Display sequence: Display 1→2.	(Display 1) (Display 2)	In STOP (no disc) mode, press [STOP] button on the main unit, and [TOP MENU] button on the remote control unit. Press [POWER] button to exit. Press [FL Display] on remote control unit for next page (FL Display).
CPPM/CRM Keys Check	CPPM/CRM refers to the Content Protection for Recordable Media and Pre-Recorded Media. It displays the existence of the keys as "1" or "0". OK: Existing of keys. NG: Non existing of keys.		In STOP (no disc) mode, press [STOP] button on the main unit, and [EQ] button on the remote control unit. Cancelled automatically 5 seconds later.
DVD Module P.C.B. Reset	To reset DVD Module P.C.B. This process is used when the DVD Module P.C.B. or FLASH ROM IC is replaced with a new one.		While in initialization mode, press & hold [STOP] button on the main unit, follow by [ENTER] button on the remote control unit. Cancelled automatically 5 seconds later.

8.2.5. Service Mode Table 5

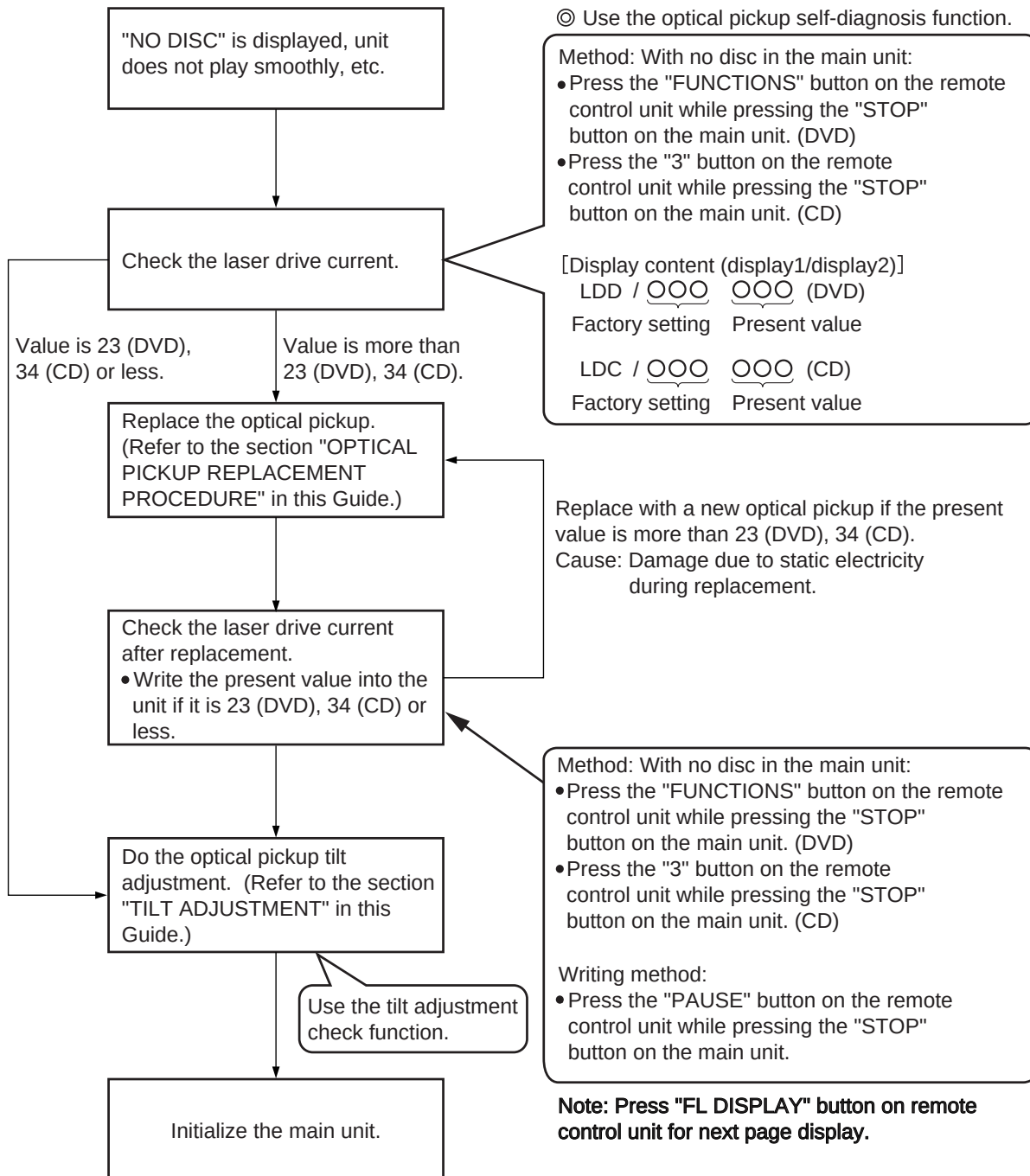
Mode Name	Item	FL Display	Key Operation
	Description		Front Key
Timer 1 check	Timer 1 check Laser operation timer is measured separately for DVD laser and CD laser. FL Display sequence: Display 1→2.	(Display 1)  Shown to the above is DVD laser usage time, and to the below is CD laser usage time. Time is shown in 5 digits of decimal notation in a unit of 10 hours. "00000" will follow "99999". (DVD laser) (Display 2)  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.

8.2.6. Optical Pick-up Self-Diagnosis

The optical pickup self-diagnosis function and tilt adjustment check function have been included in this unit. When repairing, use the following procedure for effective self-diagnosis and tilt adjustment. Be sure to use the self-diagnosis function before replacing the optical pickup when "NO DISC" is displayed. As a guideline, you should replace the optical pickup when the value of the laser drive current is more than 55.

Note:

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

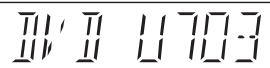
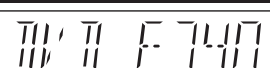
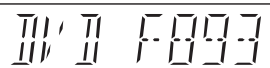
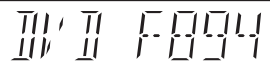
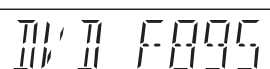
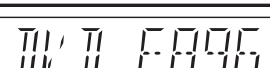
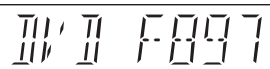
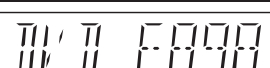
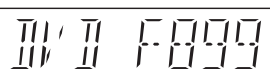


8.3. DVD Self Diagnostic Function-Error Code

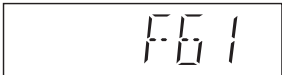
8.3.1. Mechanism Error Code Table

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

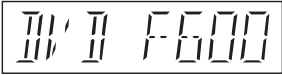
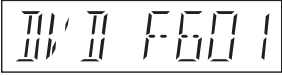
8.3.2. DVD Module Error Code Table

Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
U702	HDMI/DVI I2C communication error	The communication error of I2C when connecting it with HDMI/DVI. For instance, when EDID information to which information on the TV set side has been described cannot be read, it is generated.		Press [■ STOP] on main unit for next error.
U703	HDMI/DVI attestation error	When attestation (HDCP) with the TV side fails when connecting it with HDMI/DVI, it is generated.		Press [■ STOP] on main unit for next error.
U704	HDMI/DVI SRM Riborcerar	It is generated at the equipment to which the TV set is Riborced when connecting it with HDMI/DVI.		Press [■ STOP] on main unit for next error.
U705	HDMI/DVI SRM disk falsification check error	It is generated at the time of it is time when illegal the SRM data of the reproducing disk (verify error), when connecting it with HDMI/DVI.		Press [■ STOP] on main unit for next error.
F740	HDMI device key	I2C error when writing HDMI Key device into transmitter.		Press [■ STOP] on main unit for next error.
F893	FLASH ROM IC data falsification error	Firmware error, DV5 LSI IC (IC8651) error.		Press [■ STOP] on main unit for next error.
F894	EEPROM IC abnormality error	When failing in the access to EEPROM IC located in the DVD (HDMI) Module P.C.B. (IC8611)		Press [■ STOP] on main unit for next error.
F895	Language area abnormal	Firmware version agreement check for factory preset setting failure prevention.		Press [■ STOP] on main unit for next error.
F896	No existence model	Firmware version agreement check for factory preset setting failure prevention.		Press [■ STOP] on main unit for next error.
F897	Initialization error	Incomplete initialization after writing of new firmware (Factory preset setting failure prevention)		Press [■ STOP] on main unit for next error.
F898	Disagreement of hardware and software	Unsuitable combination of AV Decoder, SDRAM & FLASH ROM IC (firmware).		Press [■ STOP] on main unit for next error.
F899	The communication specification disagreement between micro-processor	Unsuitable combination of number of system com and panel com used. (Frimware)		Press [■ STOP] on main unit for next error.

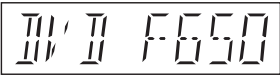
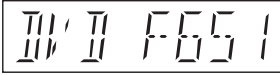
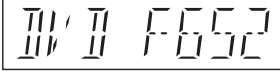
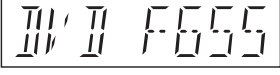
8.3.3. Power Supply Error Code Table

Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
F61	The abnormalities in an output or power supply circuit of POWER AMP	In normal operation, when DCDET2 goes to "L" (Low) (Not during POWER OFF condition), F61 appears on FL Display and PCONT goes to "L" (Low). This is due to speaker output has DC voltage or fan is not working.		Press [■ STOP] on main unit for next error.
F76	Abnormality in the output voltage of stabilized power supply	In normal operation when DCDET1 is detected "L" (Low) for two consecutive times, F76 is displayed on FL for 2 seconds and after that PCONT will be turned to "L" (Low). This is due to any of the DC voltages (+9V, +7V, -7V, +5V, +5.3V etc.) not available.		Press [■ STOP] on main unit for next error.

8.3.4. ECC Error Code Table

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

8.3.5. USB Error Code Table

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

8.4. Sales Demonstration Lock Function

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

8.4.1. Setting

• Prohibiting removal of disc

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

Note:

OPEN/CLOSE ▲ 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	▲, ■, SELECTOR, ►►► / ▲, ◀◀◀ / ▼
Remote controller unit	NUMERIC KEYS 0~9, ≥10, ■, ►►►, ►►►, ◀◀◀, ◀◀◀, CANCEL, QUICK OSD, SELECT, FUNCTIONS, REPEAT, TOP MENU/DIRECT NAVIGATOR, RETURN, SETUP, FL DISPLAY, SLEEP, MUTING, MENU/PLAY LIST, EXT-IN, FM, GROUP, REPEAT, QUICK REPLAY, MANUAL SKIP, SUBTITLE, ▲, ▼, ►, ◀

8.4.2. Cancellation

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

8.5. Service Precautions

8.5.1. Recovery after the DVD player is repaired

- When the FLASH ROM IC or DVD Module P.C.B. is replaced, carry out the recovery processing to optimize the drive.
Playback the recovery disk to process the recovery automatically.
- Recovery disc (Product number: RFKZD03R005) [SPG]
- Performing recovery process
 1. Load the recovery disc RFKZD03R005 on to the player and run it.
 2. Recovery is performed automatically. When it is finished, a message appears on the screen.
 3. Remove the recovery disc.
 4. Turn off the power.
 5. Initialize the player.

8.5.2. Firmware version-up of the DVD player

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

The recovery disc has also firmware version-up.

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

Note:

If the AC power supply is shut out during version-up due to a power failure, the version-up is improperly carried out.
In such a case, replace the FLASH ROM IC and carry out the version-up again.

8.5.3. DVD Module P.C.B. Reset

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

9 Assembling and Disassembling

“ATTENTION SERVICER”

Be careful when disassembling and servicing.

Some chassis components may have sharp edges.

Special Note:

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

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

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

- Disassembly of Top Panel
- Disassembly of Top Chassis Unit
- Disassembly of Front Panel
- Disassembly of Panel P.C.B.
- Disassembly of USB P.C.B.
- Disassembly of Surround Switch P.C.B.
- Disassembly of Power Switch P.C.B.
- Disassembly of Headphone P.C.B.
- Disassembly of Input-Output P.C.B.
- Disassembly of D-Port P.C.B.
- Disassembly of DVD Mechanism Unit
- Disassembly of Relay P.C.B.
- Disassembly of DVD Module P.C.B.
- Disassembly of Regulator P.C.B.
- Disassembly of DSP P.C.B.
- Disassembly of Rear Panel
- Disassembly of Main P.C.B.
- Replacement of Digital Amp IC (IC317)
- Disassembly of SMPS & AC-Inlet P.C.B.
- Replacement of Regulator IC (IC706)
- Replacement of Regulator Transistor/Diode (Q704/D700)
- Replacement of Regulator Diode (D702)
- Replacement of Regulator Diode (D704)

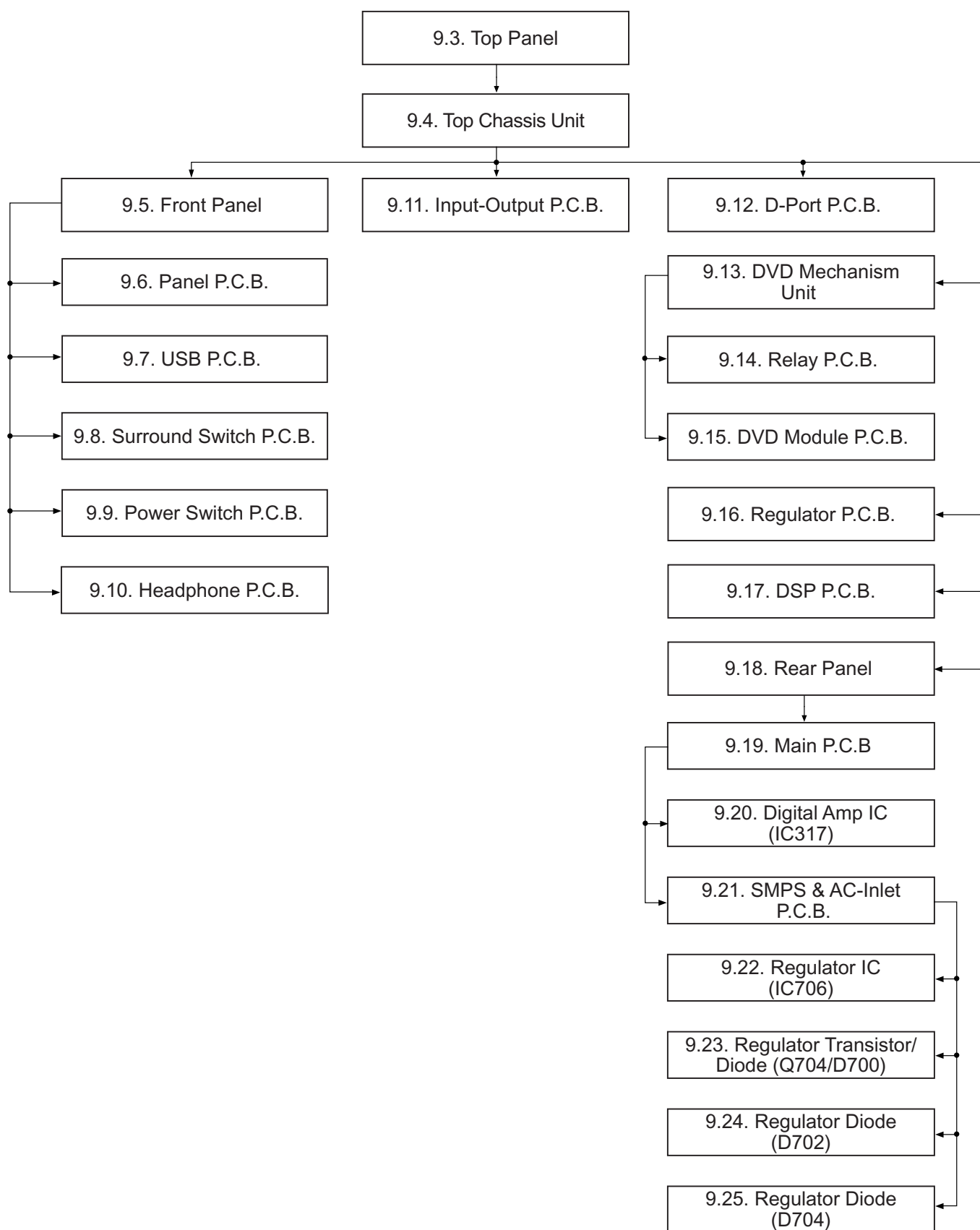
CAUTION NOTE:

Please use original screw and at correct locations.

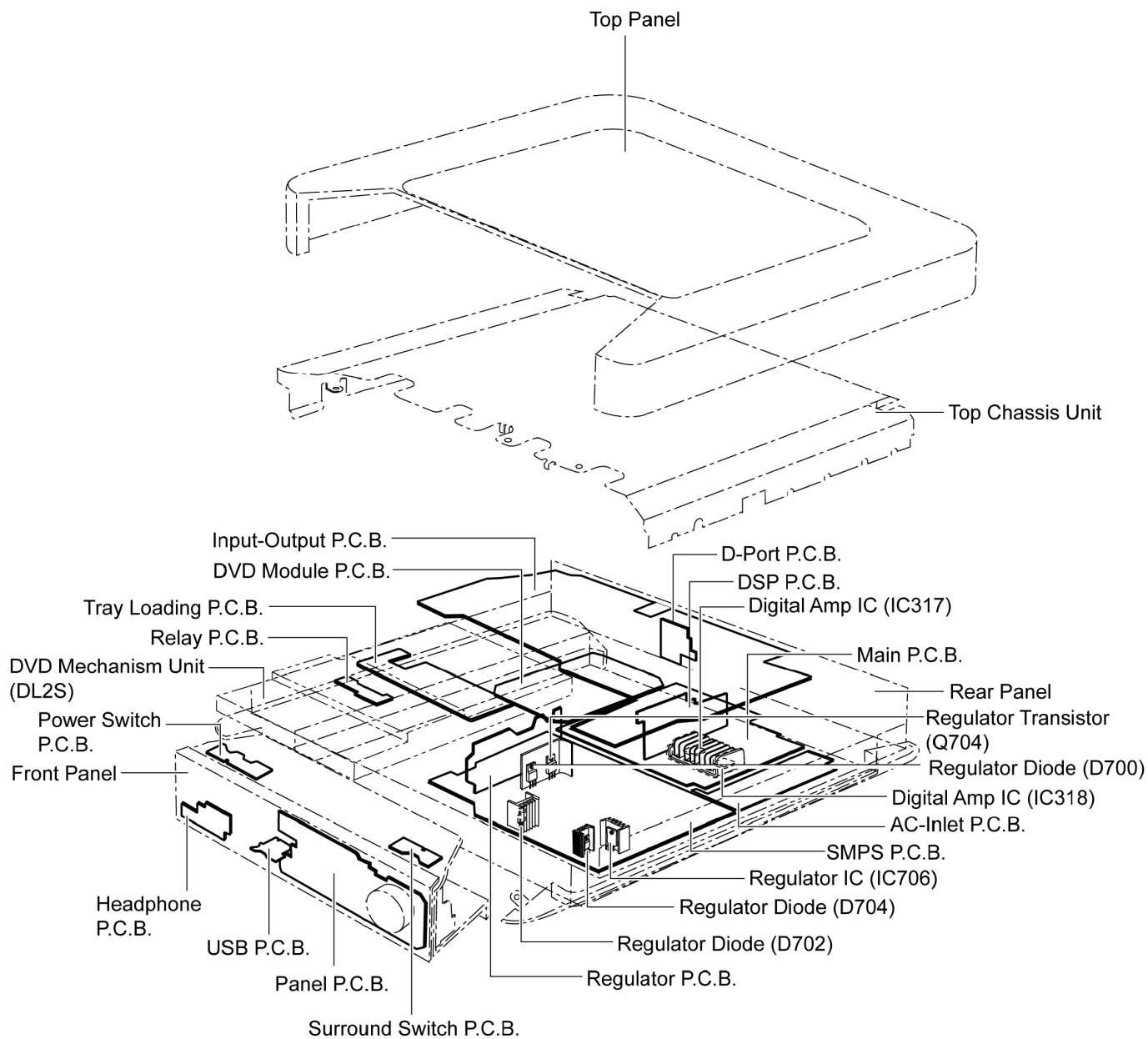
Below shown is the part no. of different screw types used:

- | | |
|----------------------|----------------------|
| a :RHD30119-S | g :RHDC0023 |
| b :RHD30090-1 | h :RHD30111-3 |
| c :RHD26046 | i :XTB3+10JFJ |
| d :XSB3+6FJ | j :XTN26+6GFJ |
| e :XTV2+6GFJ | k :XTB3+5FFJ |
| f :XTB3+6JFJ | |

9.1. Disassembly Flow Chart



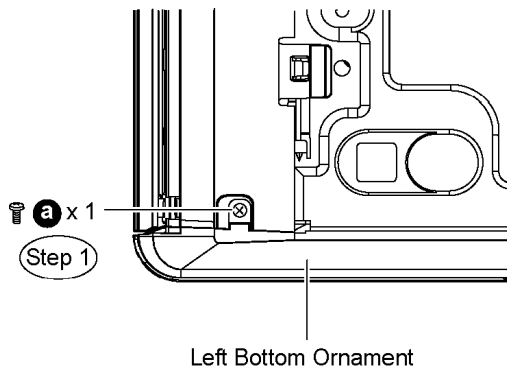
9.2. Main Components and P.C.B. Locations



9.3. Disassembly of Top Panel

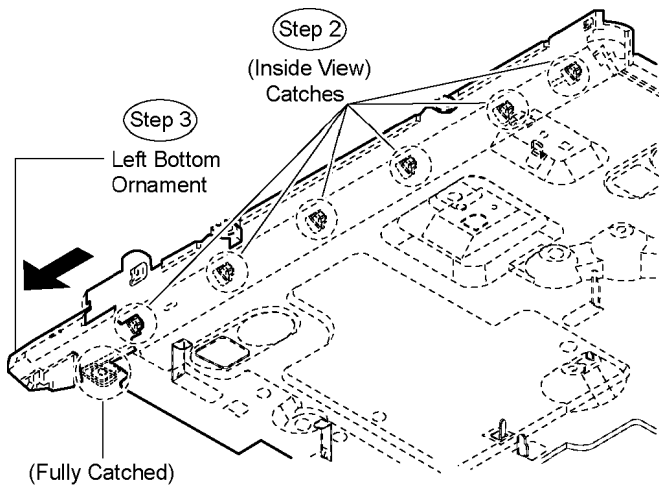
- Disassembly of Left Bottom Ornament.

Step 1 Remove 1 screw.



Step 2 Release the catches.

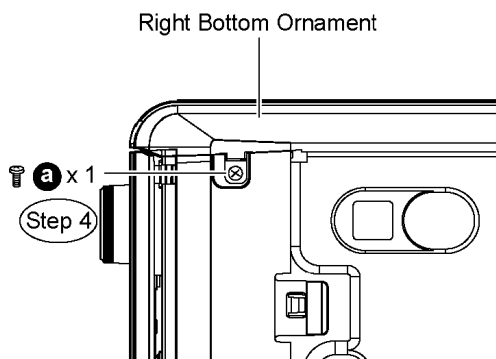
Step 3 Remove the left bottom ornament by pushing it in the direction of arrow.



Caution Note: Keep the left bottom ornament in safe place. Avoid denting it. Place it back during assembling.

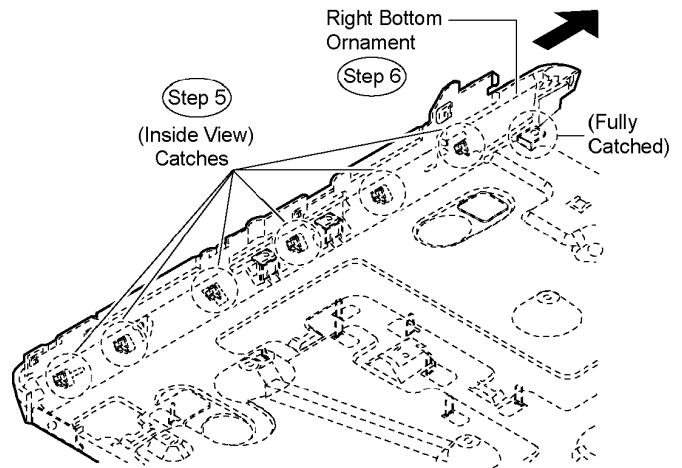
- Disassembly of Right Bottom Ornament.

Step 4 Remove 1 screw.



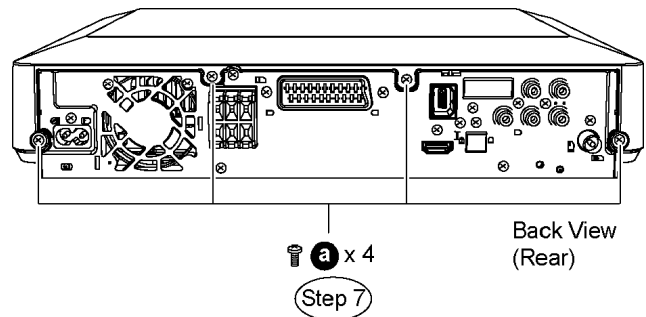
Step 5 Release the catches.

Step 6 Remove the right bottom ornament by pushing it in the direction of arrow.

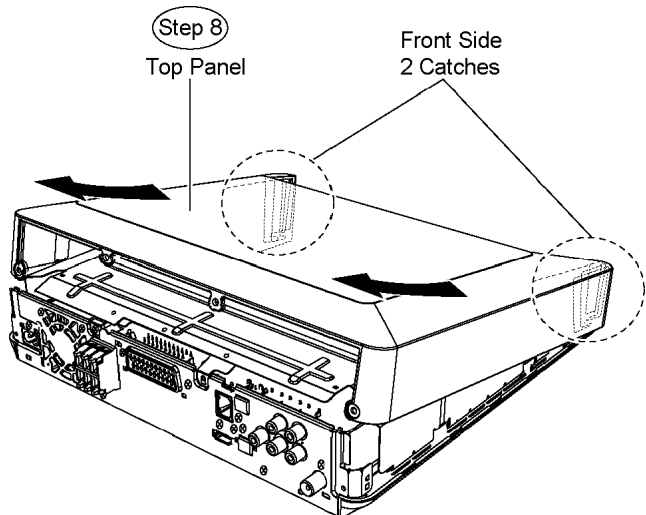


Caution Note: Keep the right bottom ornament in safe place. Avoid denting it. Place it back during assembling.

Step 7 Remove 4 screws.



Step 8 Lift up the back part of the top panel and remove it in the direction of arrows.

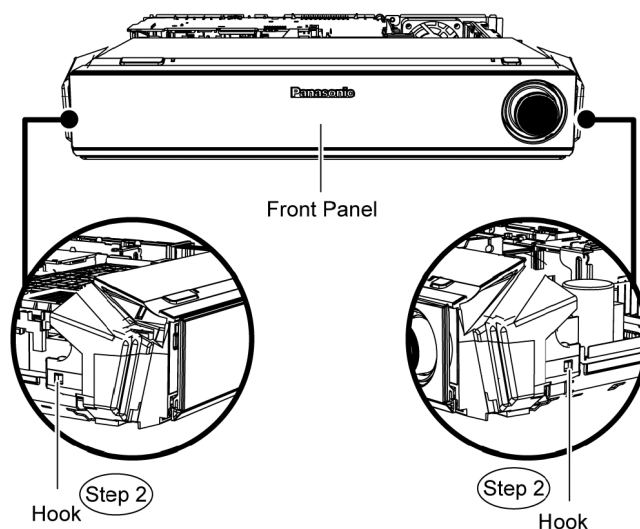
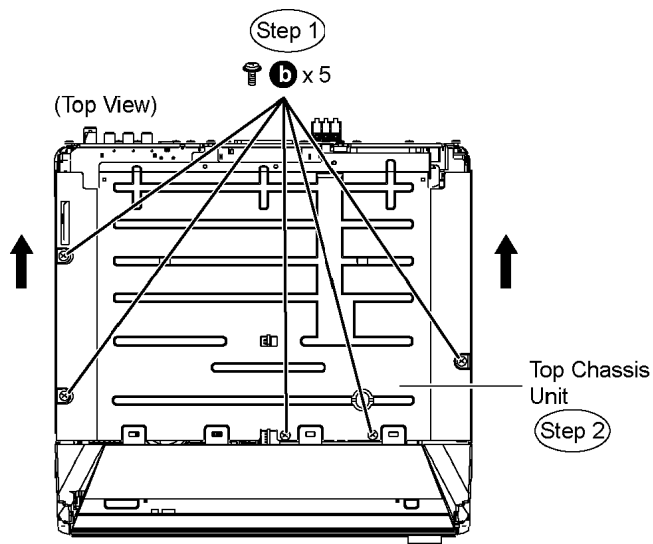


9.4. Disassembly of Top Chassis Unit

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

Step 1 Remove 5 screws.

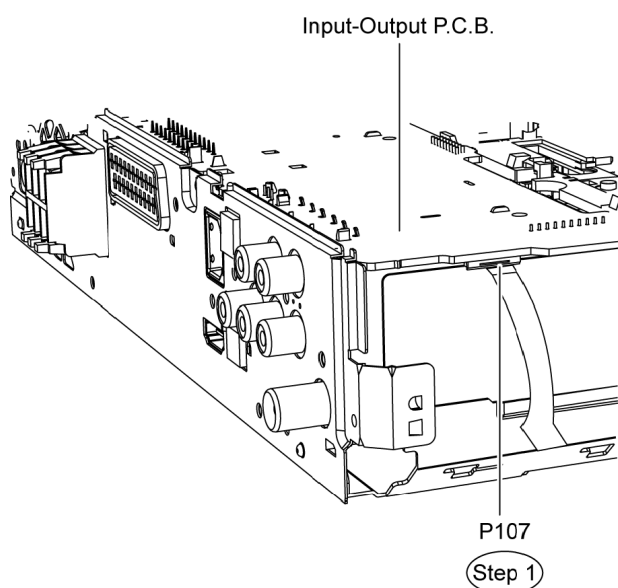
Step 2 Remove the top chassis unit in the direction of arrows.



9.5. Disassembly of Front Panel

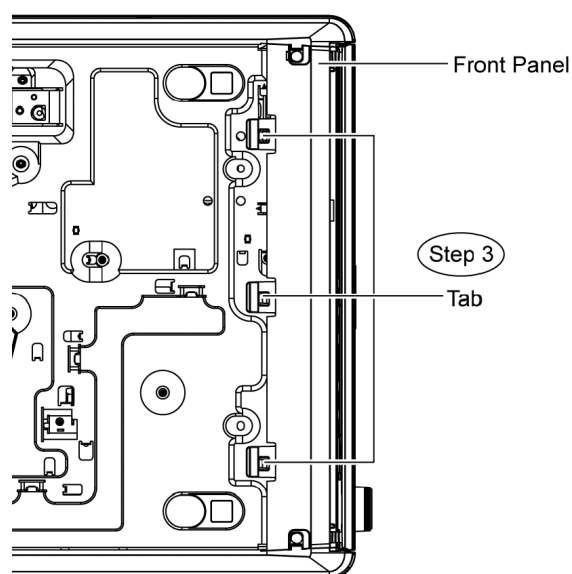
- Follow (Step 1) to (Step 8) of Item 9.3.
- Follow (Step 1) to (Step 2) of Item 9.4.

Step 1 Detach FFC cable at the connector (P107) on Input-Output P.C.B.



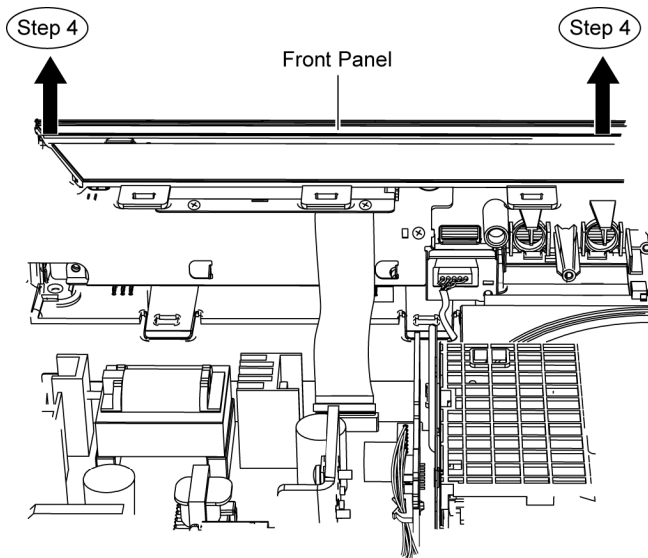
Step 2 Release the hook at each side of the front panel.

Step 3 Release the tabs at the bottom of the front panel.



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

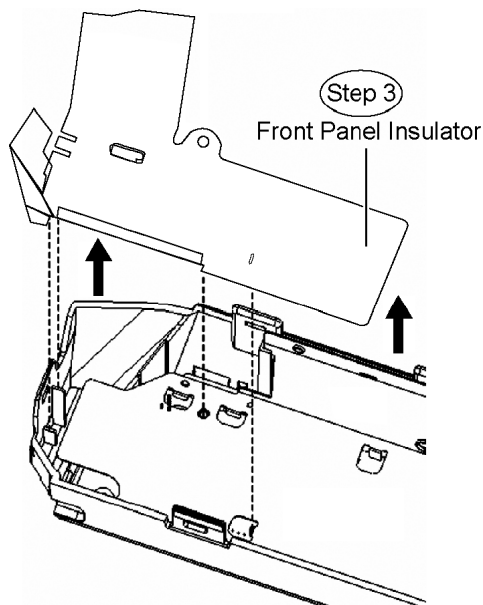
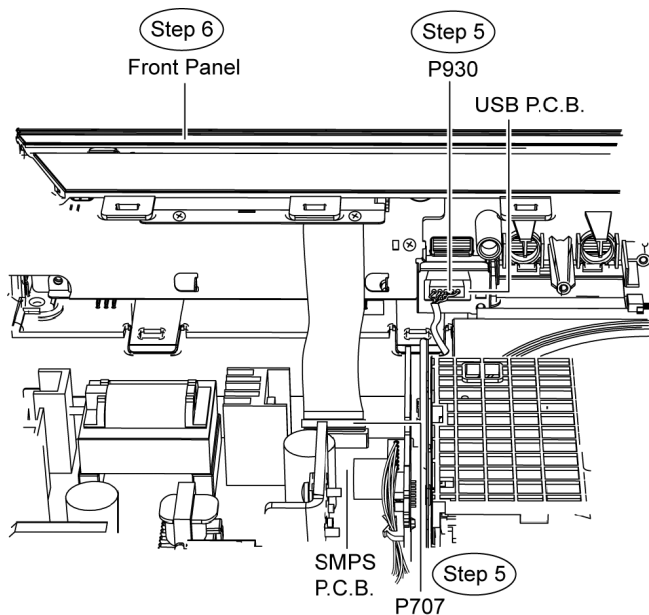
Step 4 Detach the front panel slightly forward in the direction of arrows.



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

Step 5 Detach FFC cables at the connectors (P707) on SMPS P.C.B. and (P930) on USB P.C.B.

Step 6 Remove the front panel.



Caution Note: Keep the front panel insulator in safe place. Avoid denting it. Place it back during assembling.

• Disassembly of Front Shield Ground

Step 4 Remove 1 screw.

Step 5 Remove the front shield ground.

Caution Note: Keep the front shield ground in safe place. Avoid denting it. Place it back during assembling.

• Disassembly of Front Panel Shield

Step 6 Remove 2 screws.

Step 7 Remove the front panel shield.

Caution Note: Keep the front panel shield in safe place. Avoid denting it. Place it back during assembling.

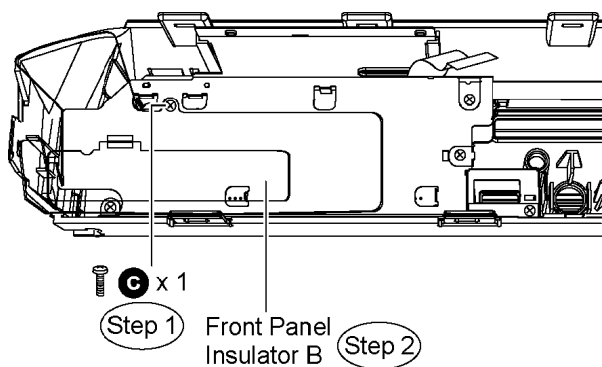
9.6. Disassembly of Panel P.C.B.

- Follow (Step 1) to (Step 8) of Item 9.3.
- Follow (Step 1) to (Step 2) of Item 9.4.
- Follow (Step 1) to (Step 6) of Item 9.5.

• Disassembly of Front Panel Insulators

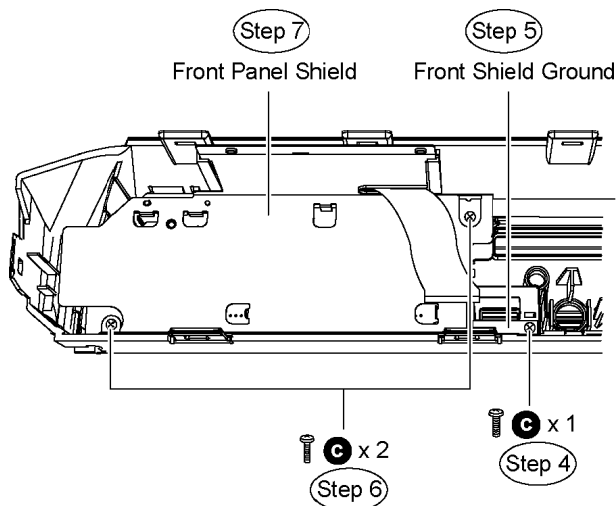
Step 1 Remove 1 screw.

Step 2 Remove the front panel insulator B in the direction of arrow.



Caution Note: Keep the front panel insulator B in safe place. Avoid denting it. Place it back during assembling.

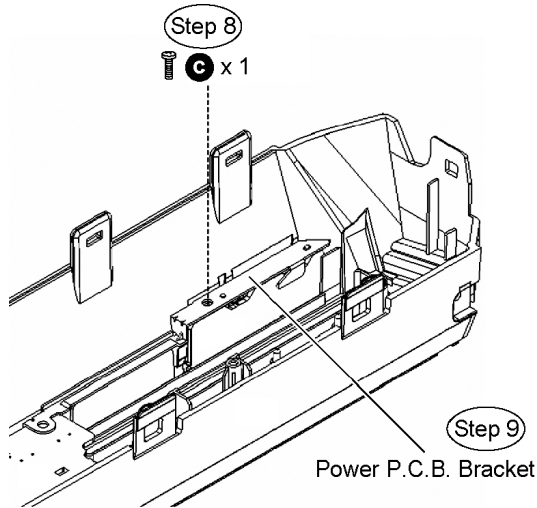
Step 3 Remove the front panel insulator in the direction of arrows.



• Disassembly of Power P.C.B. Bracket

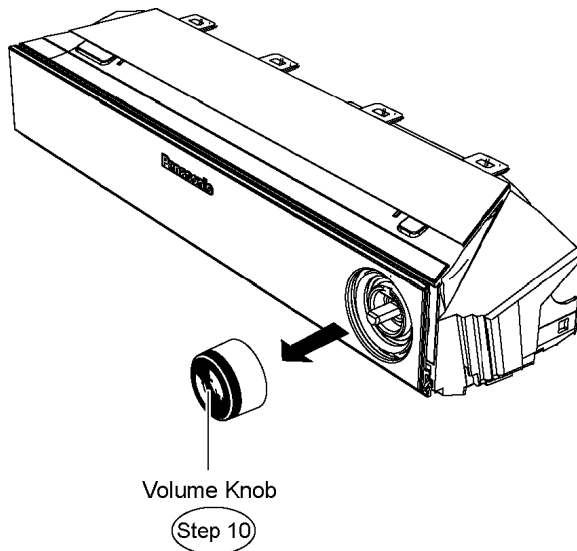
Step 8 Remove 1 screw.

Step 9 Remove the Power P.C.B. bracket.

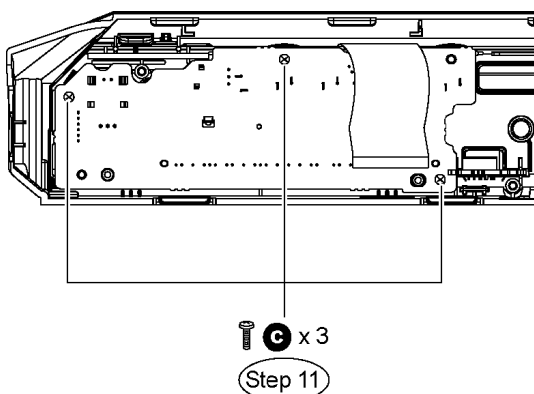


- Disassembly of Panel P.C.B.

Step 10 Remove the volume knob.



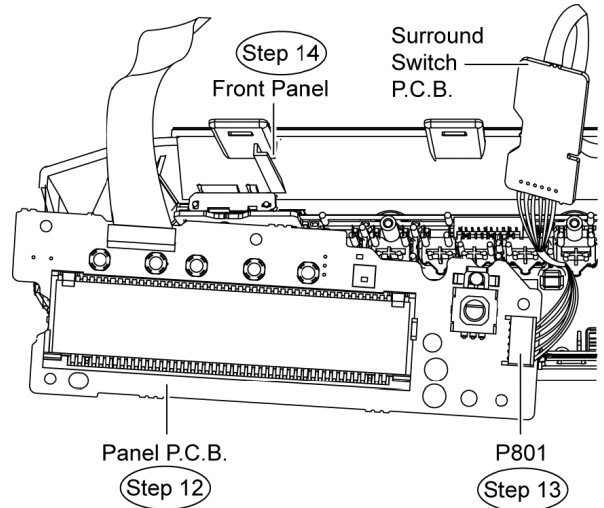
Step 11 Remove 3 screws.



Step 12 Detach Panel P.C.B. together with Surround Switch P.C.B. from the front panel.

Step 13 Flip Panel P.C.B. (with Surround Switch P.C.B.) vertically to detach cable at the connector (P801).

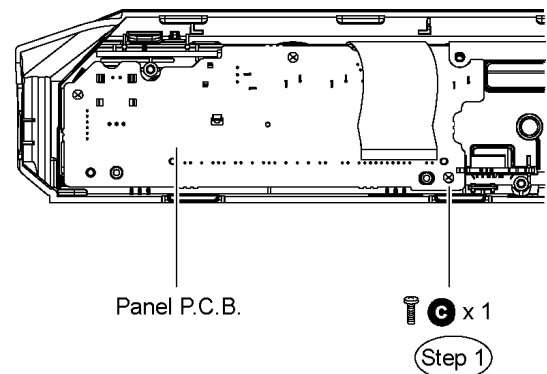
Step 14 Remove Panel P.C.B.



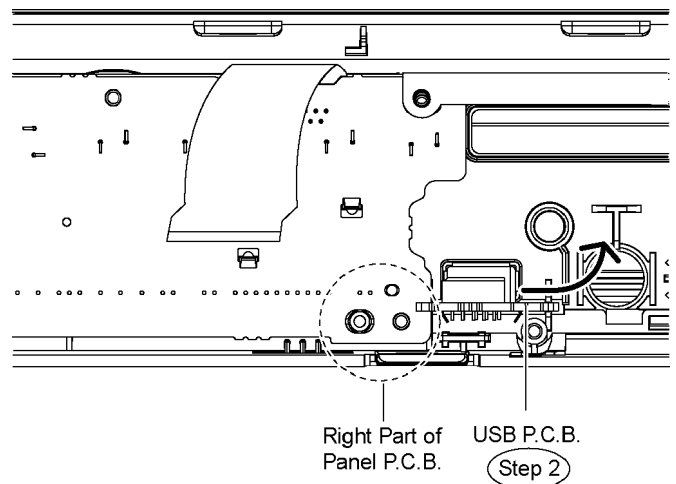
9.7. Disassembly of USB P.C.B.

- Follow (Step 1) to (Step 8) of Item 9.3.
- Follow (Step 1) to (Step 2) of Item 9.4.
- Follow (Step 1) to (Step 6) of Item 9.5.
- Follow (Step 1) to (Step 7) of Item 9.6.

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



Step 2 Lift up the right part of Panel P.C.B. to remove USB P.C.B. in the direction of arrow.

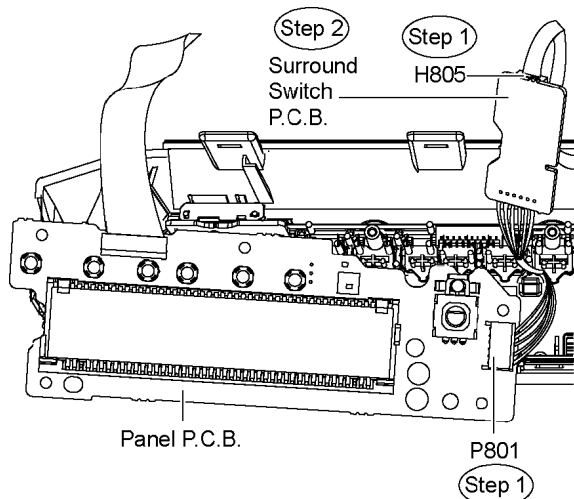


9.8. Disassembly of Surround Switch P.C.B.

- Follow (Step 1) to (Step 8) of Item 9.3.
- Follow (Step 1) to (Step 2) of Item 9.4.
- Follow (Step 1) to (Step 6) of Item 9.5.
- Follow (Step 1) to (Step 12) of Item 9.6.

Step 1 Flip Surround Switch P.C.B. (with Panel P.C.B.) vertically to detach cables at the connectors (P801 & H805).

Step 2 Remove Surround Switch P.C.B.



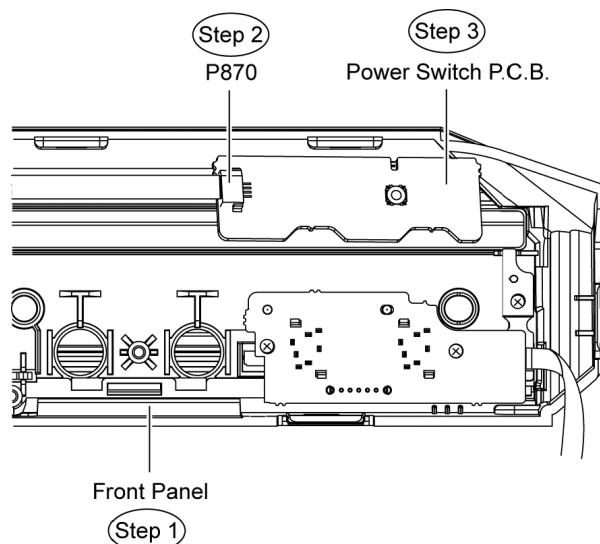
9.9. Disassembly of Power Switch P.C.B.

- Follow (Step 1) to (Step 8) of Item 9.3.
- Follow (Step 1) to (Step 2) of Item 9.4.
- Follow (Step 1) to (Step 6) of Item 9.5.
- Follow (Step 1) to (Step 9) of Item 9.6.

Step 1 Detach Power Switch P.C.B. from the front panel.

Step 2 Flip Power Switch P.C.B. vertically to detach cable at the connector (P870).

Step 3 Remove Power Switch P.C.B.

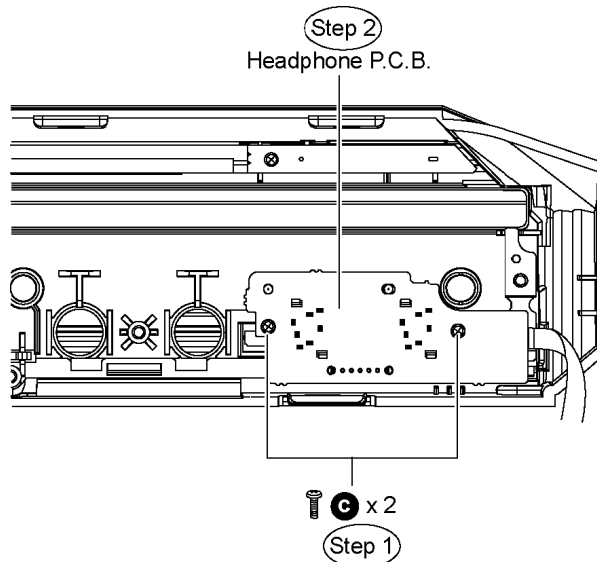


9.10. Disassembly of Headphone P.C.B.

- Follow (Step 1) to (Step 8) of Item 9.3.
- Follow (Step 1) to (Step 2) of Item 9.4.
- Follow (Step 1) to (Step 6) of Item 9.5.

Step 1 Remove 2 screws.

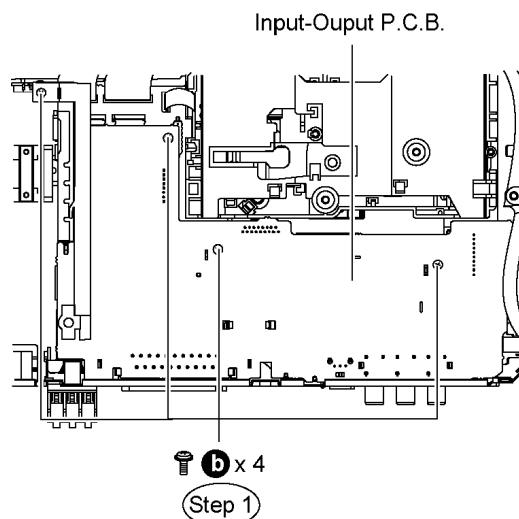
Step 2 Remove Headphone P.C.B.



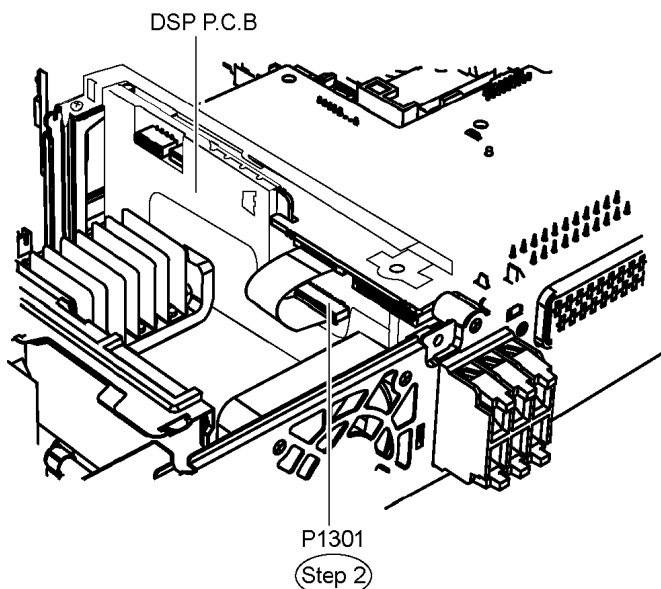
9.11. Disassembly of Input-Output P.C.B.

- Follow (Step 1) to (Step 8) of Item 9.3.
- Follow (Step 1) to (Step 2) of Item 9.4.

Step 1 Remove 4 screws from Input-Output P.C.B.

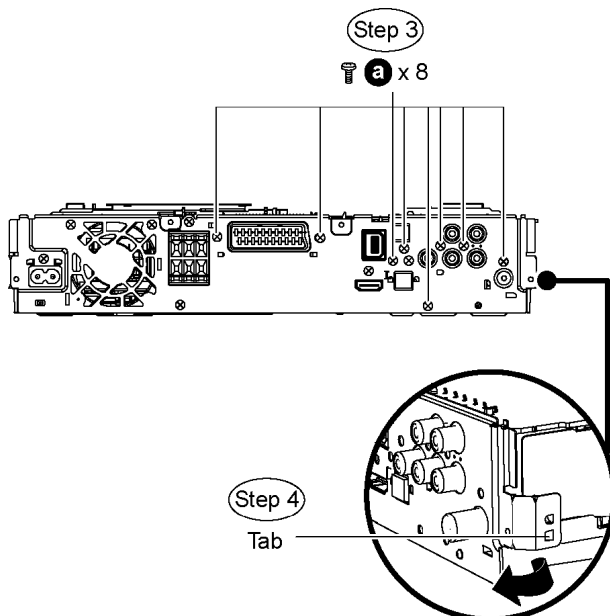


Step 2 Detach cable at the connector (P1301) on DSP P.C.B.



Step 3 Remove 8 screws from the rear panel.

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

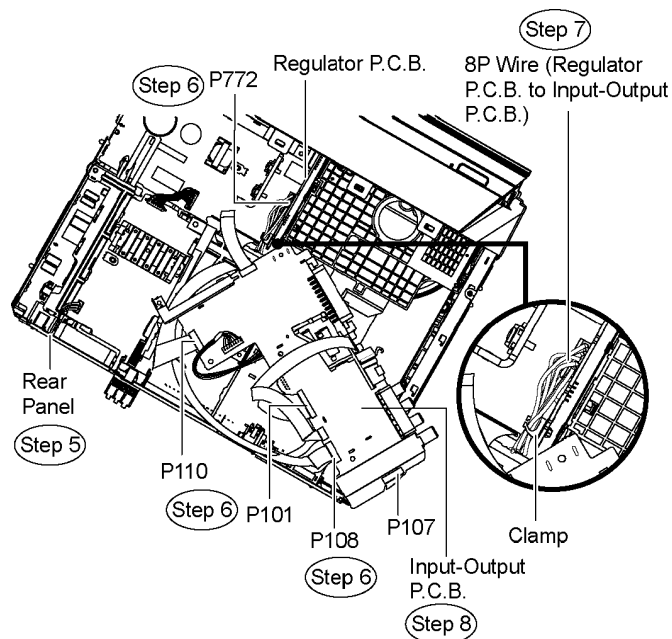


Step 5 Remove Input-Output P.C.B. from the rear panel and flip it to another side.

Step 6 Detach cables at the connectors (P101, P107, P108 & P110) on Input-Output P.C.B. and (P772) on Regulator P.C.B.

Step 7 Detach the 8P wire (Regulator P.C.B. to Input-Output P.C.B.) from the clamp.

Step 8 Remove Input-Output P.C.B.

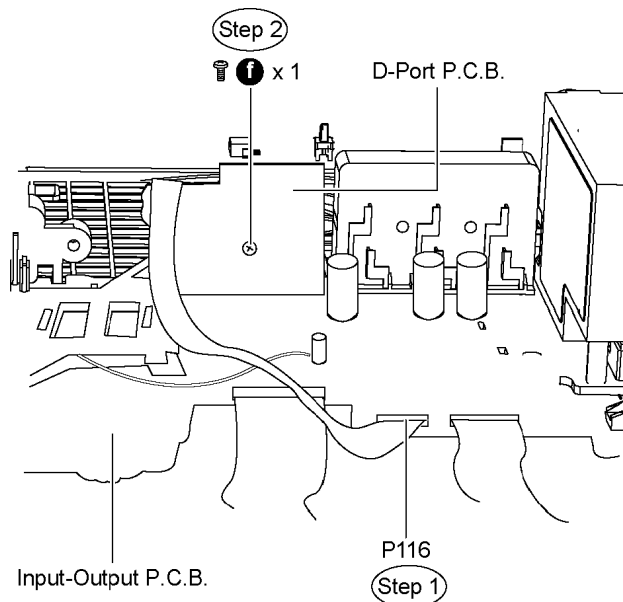


9.12. Disassembly of D-Port P.C.B.

- Follow (Step 1) to (Step 8) of Item 9.3.
- Follow (Step 1) to (Step 2) of Item 9.4.
- Follow (Step 1) to (Step 5) of Item 9.11.

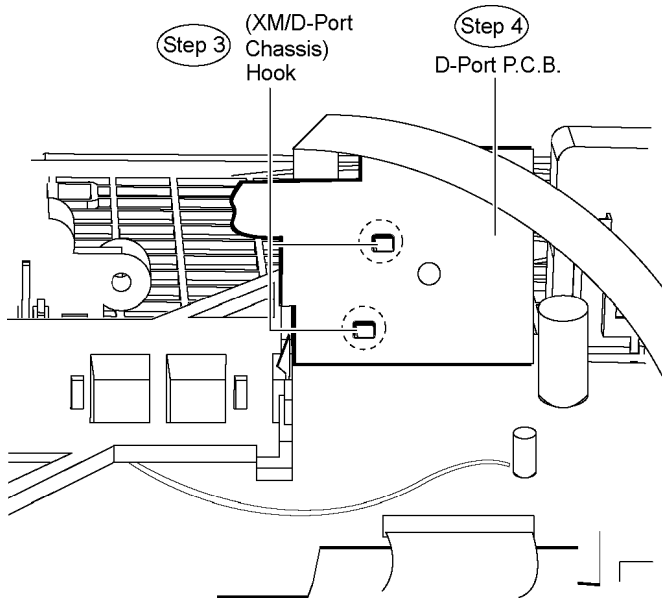
Step 1 Detach cable at the connector (P116) on Input-Output P.C.B.

Step 2 Remove 1 screw.



Step 3 Release the hooks of the XM/D-Port chassis.

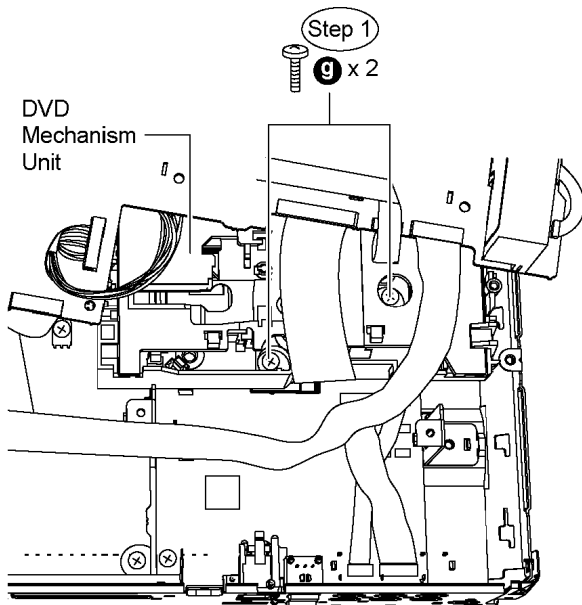
Step 4 Remove D-Port P.C.B.



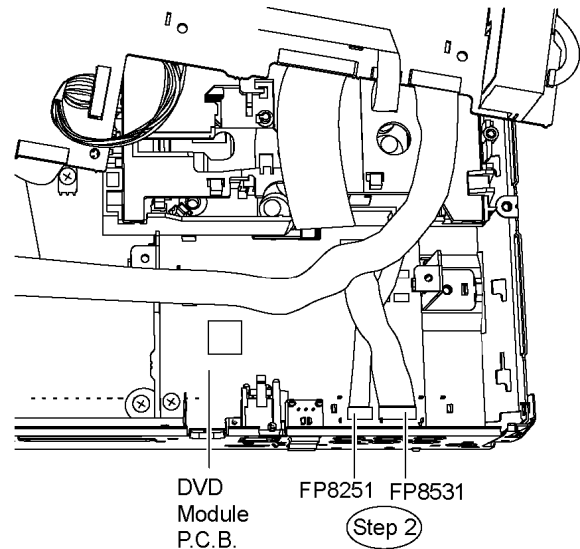
9.13. Disassembly of DVD Mechanism Unit

- Follow (Step 1) to (Step 8) of Item 9.3.
- Follow (Step 1) to (Step 2) of Item 9.4.
- Follow (Step 1) to (Step 4) of Item 9.5.
- Follow (Step 1) to (Step 5) of Item 9.11.

Step 1 Remove 2 screws from the DVD mechanism unit.



Step 2 Detach cables at the connectors (FP8251 & FP8531) on DVD Module P.C.B.

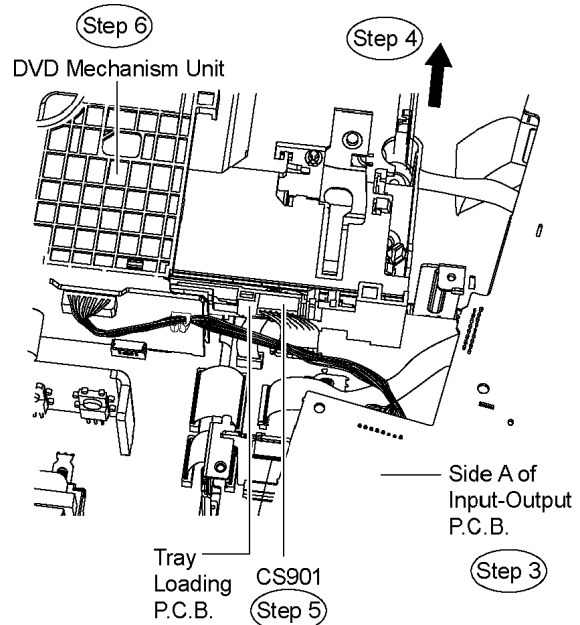


Step 3 Flip Input-Output P.C.B. to another side. (side A of Input-Output P.C.B.)

Step 4 Lift up and move aside the DVD mechanism unit in the direction of arrow.

Step 5 Detach cable at the connector (CS901) on Tray Loading P.C.B.

Step 6 Remove the DVD mechanism unit.



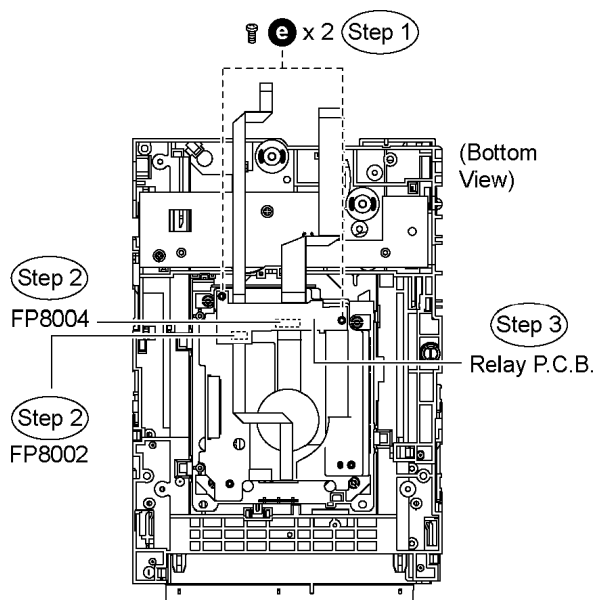
9.14. Disassembly of Relay P.C.B.

- Follow (Step 1) to (Step 8) of Item 9.3.
- Follow (Step 1) to (Step 2) of Item 9.4.
- Follow (Step 1) to (Step 4) of Item 9.5.
- Follow (Step 1) to (Step 5) of Item 9.11.
- Follow (Step 1) to (Step 6) of Item 9.13.

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

Step 2 Detach FFC cables at the connectors (FP8002 & FP8004) on Relay P.C.B.

Step 3 Remove Relay P.C.B.



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

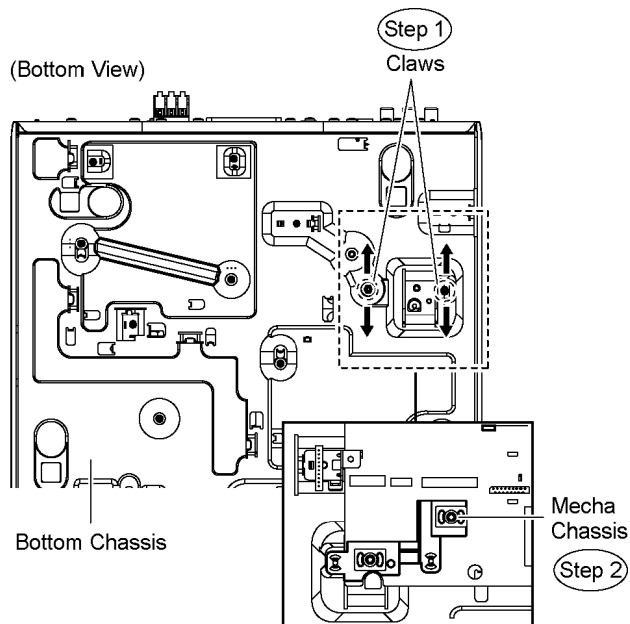
9.15. Disassembly of DVD Module P.C.B

- Follow (Step 1) to (Step 8) of Item 9.3.
- Follow (Step 1) to (Step 2) of Item 9.4.
- Follow (Step 1) to (Step 4) of Item 9.5.
- Follow (Step 1) to (Step 5) of Item 9.11.
- Follow (Step 1) to (Step 6) of Item 9.13.

- Disassembly of Mecha Chassis

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

Step 2 Remove the mecha chassis.



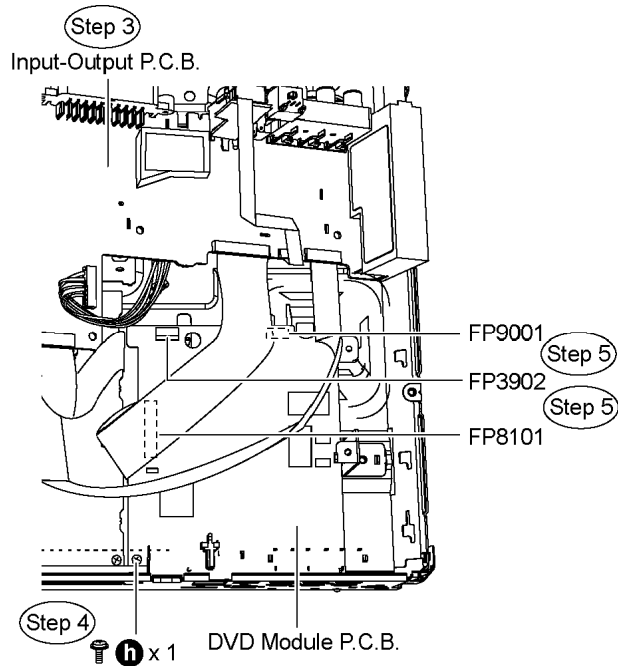
Caution Note: Keep the mecha chassis in safe place. Avoid denting it. Place it back during assembling.

- Disassembly of DVD Module P.C.B.

Step 3 Position Input-Output P.C.B. as diagram shown.

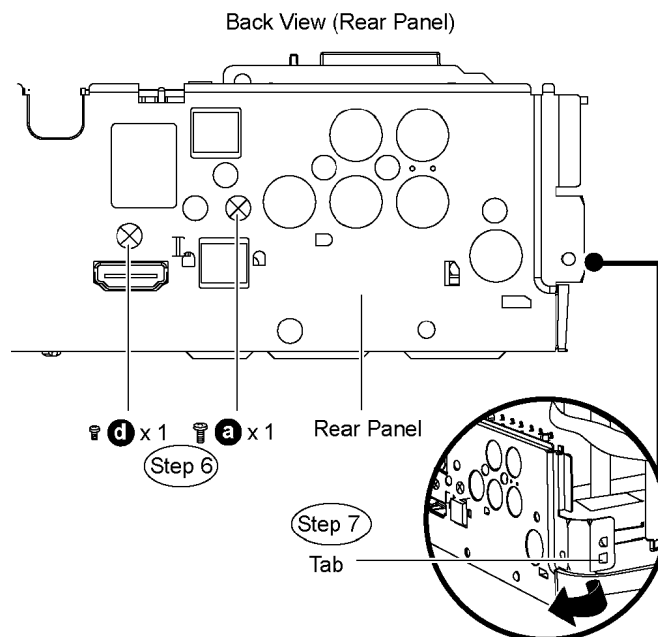
Step 4 Remove 1 screw from DVD Module P.C.B.

Step 5 Detach cables at the connectors (FP3902, FP8101 & FP9001) on DVD Module P.C.B.

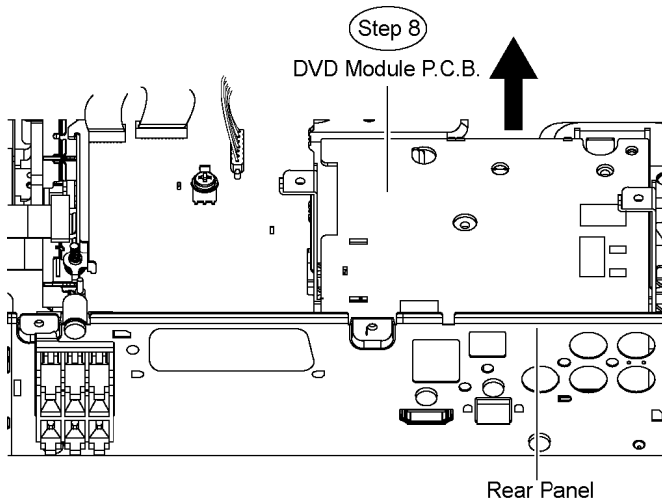


Step 6 Remove 2 screws from the rear panel.

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



Step 8 Remove DVD Module P.C.B. in the direction of arrow.



9.16. Disassembly of Regulator P.C.B.

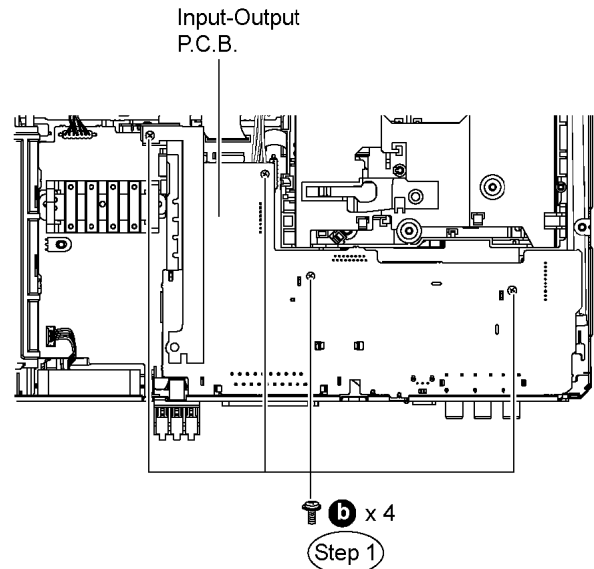
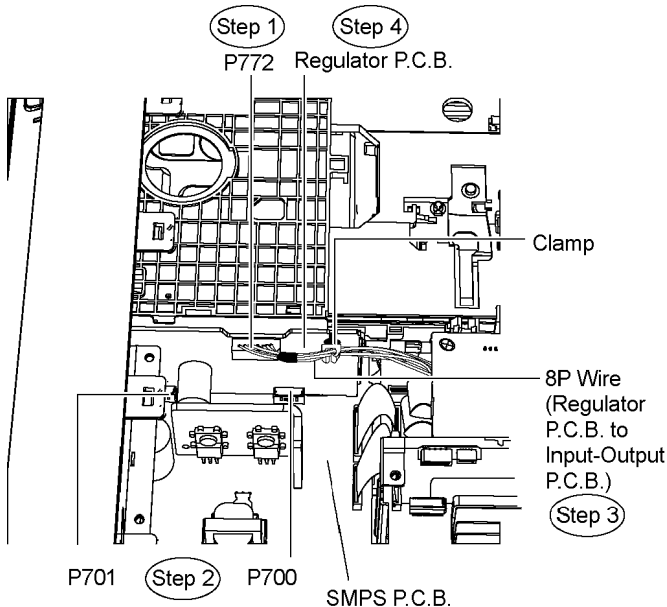
- Follow (Step 1) to (Step 8) of Item 9.3.
- Follow (Step 1) to (Step 2) of Item 9.4.

Step 1 Detach cable at the connector (P772) on Regulator P.C.B.

Step 2 Detach Regulator P.C.B. at the connectors (P700 & P701) on SMPS P.C.B.

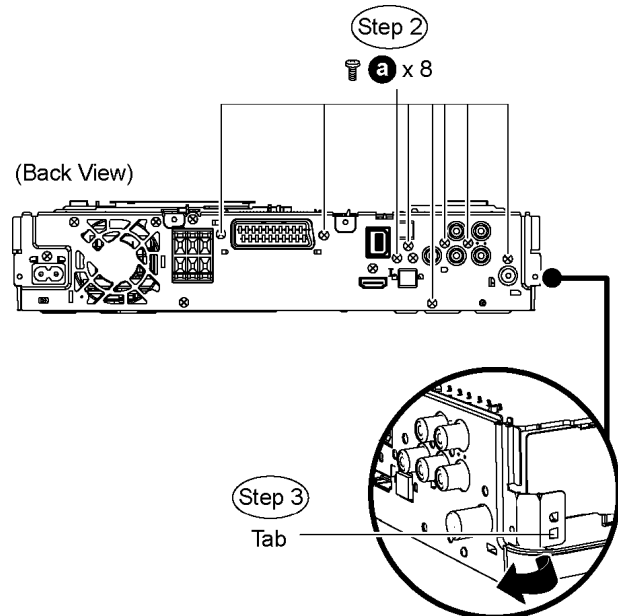
Step 3 Remove the 8P wire (Regulator P.C.B. to Input-Output P.C.B.) from the clamp.

Step 4 Remove Regulator P.C.B.



Step 2 Remove 8 screws from the rear panel.

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



Step 4 Remove Input-Output P.C.B. from the rear panel and move aside in the direction of arrow.

Step 5 Detach FFC cable at the connector (P1301) on DSP P.C.B.

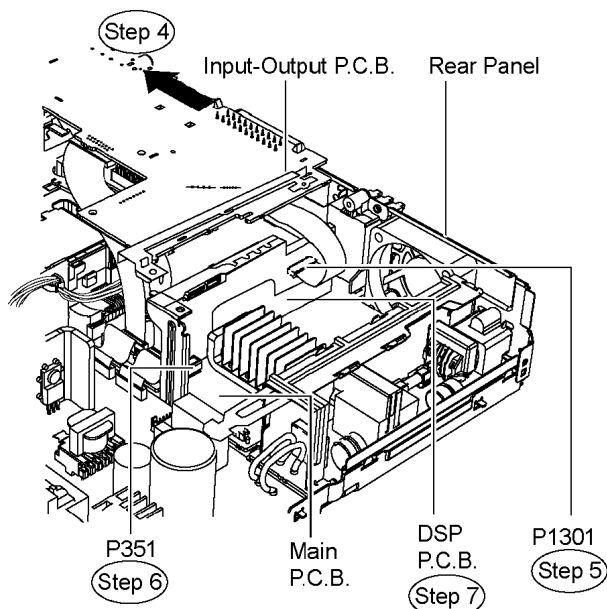
Step 6 Detach DSP P.C.B. at the connector (P351) on Main P.C.B.

Step 7 Remove DSP P.C.B.

9.17. Disassembly of DSP P.C.B.

- Follow (Step 1) to (Step 8) of Item 9.3.
- Follow (Step 1) to (Step 2) of Item 9.4.

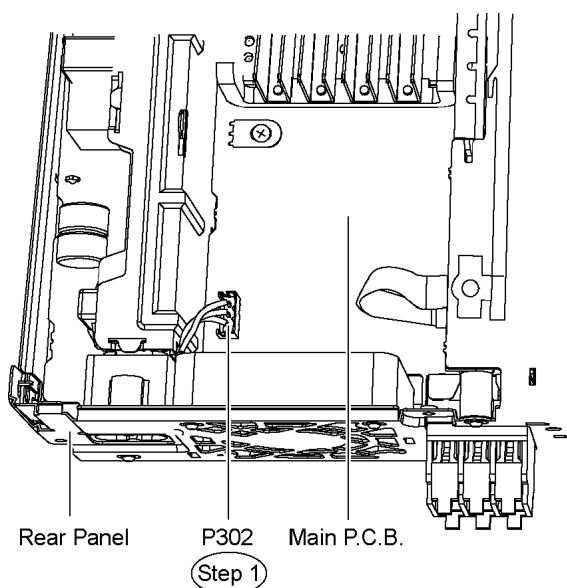
Step 1 Remove 4 screws from Input-Output P.C.B.



9.18. Disassembly of Rear Panel

- Follow (Step 1) to (Step 8) of Item 9.3.
- Follow (Step 1) to (Step 2) of Item 9.4.

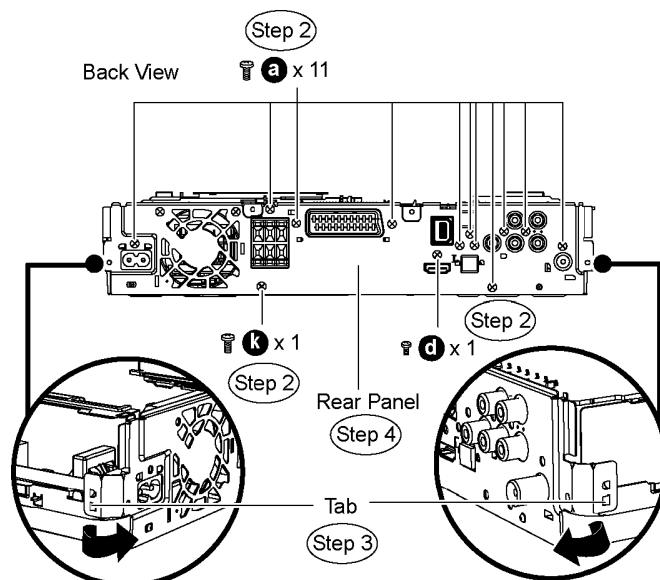
Step 1 Detach connector (P302) on Main P.C.B.



Step 2 Remove 13 screws from the rear panel.

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

Step 4 Remove the rear panel.



9.19. Disassembly of Main P.C.B

- Follow (Step 1) to (Step 8) of Item 9.3.
- Follow (Step 1) to (Step 2) of Item 9.4.
- Follow (Step 1) to (Step 5) of Item 9.11.
- Follow (Step 1) to (Step 4) of Item 9.18.

- Disassembly of I/O-Main P.C.B. Bracket

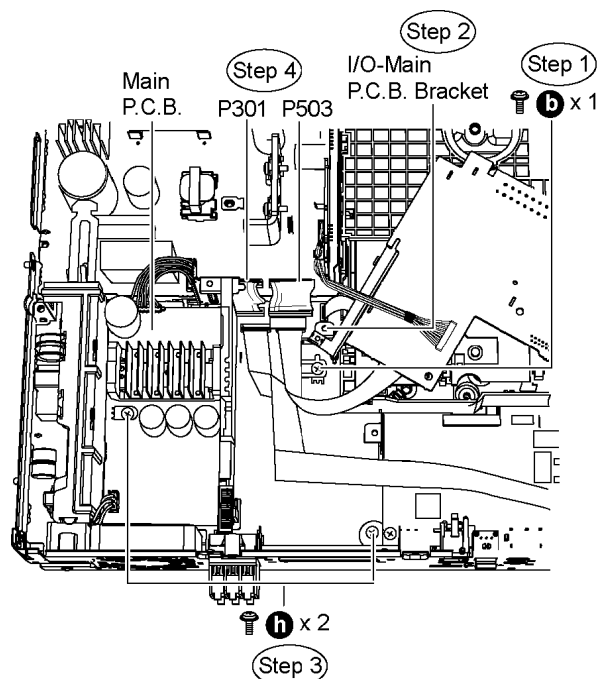
Step 1 Remove 1 screw.

Step 2 Remove the I/O-Main P.C.B. bracket.

- Disassembly of Main P.C.B.

Step 3 Remove 2 screws.

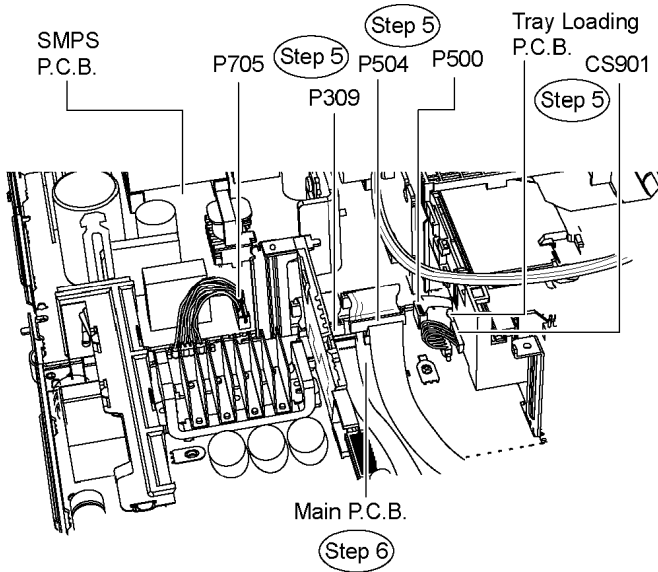
Step 4 Detach cables at the connectors (P301 & P503) on Main P.C.B.



Caution Note: Keep the I/O-Main P.C.B. bracket in safe place. Avoid denting it. Place it back during assembling.

Step 5 Detach cables at the connectors (P309, P500 & P504) on Main P.C.B., (CS901) on Tray Loading P.C.B. and (P705) on SMPS P.C.B.

Step 6 Remove Main P.C.B.



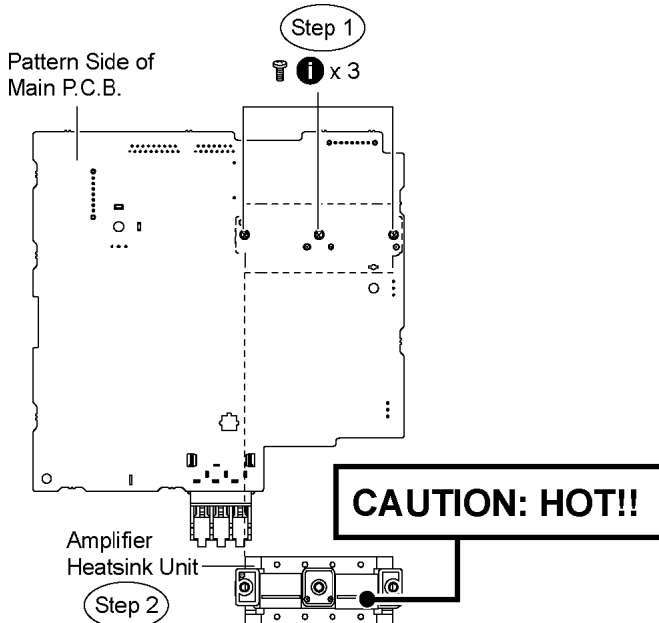
9.20. Replacement of Digital Amp IC (IC317)

- Follow (Step 1) to (Step 8) of Item 9.3.
- Follow (Step 1) to (Step 2) of Item 9.4.
- Follow (Step 1) to (Step 5) of Item 9.11.
- Follow (Step 1) to (Step 4) of Item 9.18.
- Follow (Step 1) to (Step 6) of Item 9.19.

- Disassembly of Amplifier Heatsink Unit

Step 1 Remove 3 screws on the reverse side of Main P.C.B.

Step 2 Remove the amplifier heatsink unit.



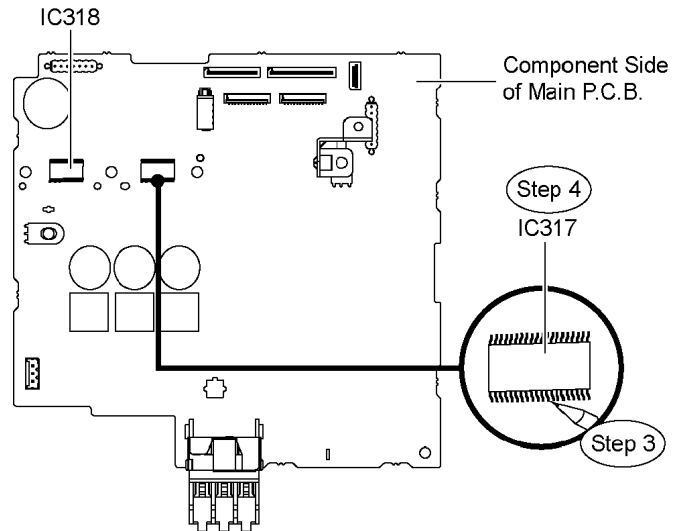
- Disassembly of Digital Amp IC (IC317)

Step 3 Desolder pins of the digital amp IC (IC317) on Main

P.C.B.

Step 4 Remove the digital amp IC (IC317) from Main P.C.B.

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



Note : For disassembly of digital amp IC (IC318), repeat the (Step 1) to (Step 4). Refer to the diagrams of Main P.C.B. (Section 9.19.) for location of the parts.

9.21. Disassembly of SMPS & AC-Inlet P.C.B.

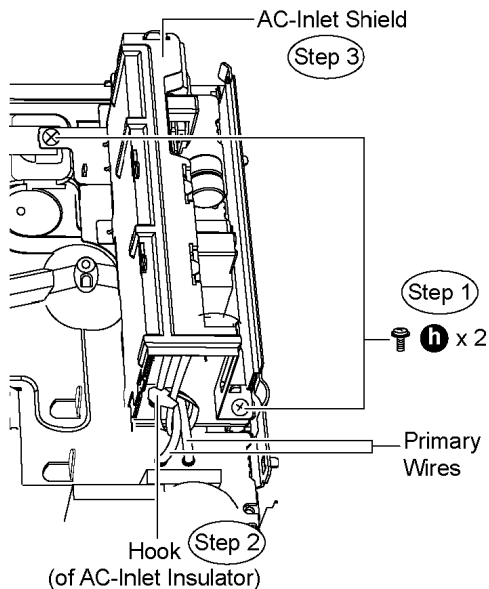
- Follow (Step 1) to (Step 8) of Item 9.3.
- Follow (Step 1) to (Step 2) of Item 9.4.
- Follow (Step 1) to (Step 4) of Item 9.5.
- Follow (Step 1) to (Step 5) of Item 9.11.
- Follow (Step 1) to (Step 4) of Item 9.13.
- Follow (Step 1) to (Step 4) of Item 9.18.
- Follow (Step 1) to (Step 6) of Item 9.19.

- Disassembly of AC Metal Shield

Step 1 Remove 2 screws.

Step 2 Remove the hooks the AC-Inlet insulator from the primary wires (brown & blue).

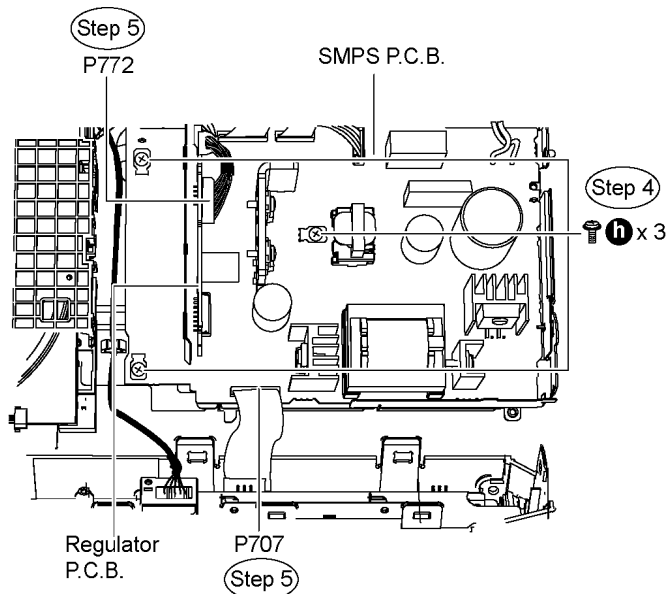
Step 3 Remove the AC metal shield.



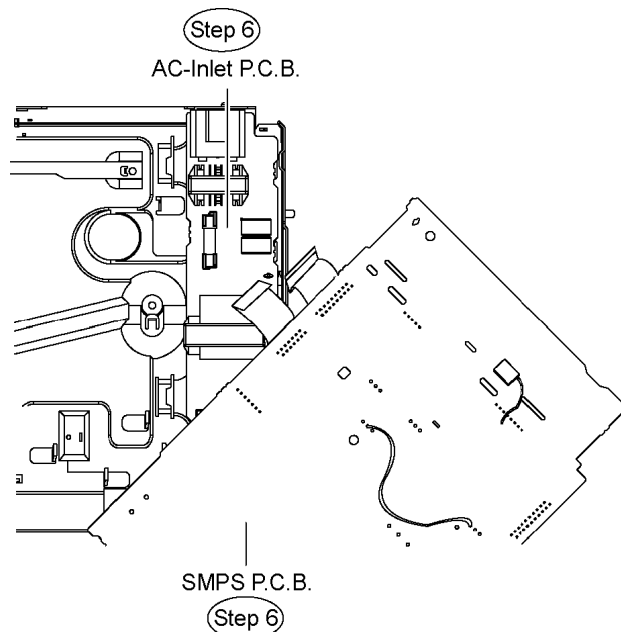
- Disassembly of SMPS & AC-Inlet P.C.B.

Step 4 Remove 3 screws from SMPS P.C.B.

Step 5 Detach cables at the connectors (P707) on SMPS P.C.B. and (P772) on Regulator P.C.B.



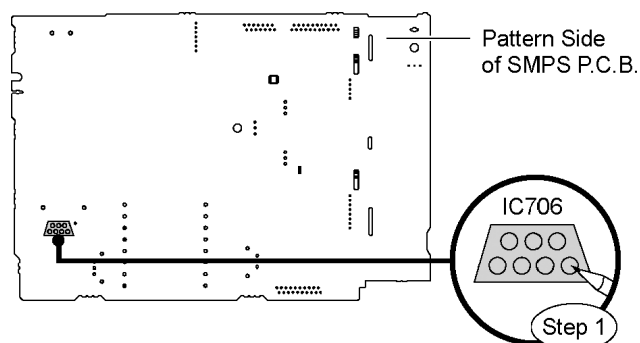
Step 6 Remove SMPS P.C.B. and AC-Inlet P.C.B.



9.22. Replacement of Regulator IC (IC706)

- Follow (Step 1) to (Step 8) of Item 9.3.
- Follow (Step 1) to (Step 2) of Item 9.4.
- Follow (Step 1) to (Step 4) of Item 9.5.
- Follow (Step 1) to (Step 5) of Item 9.11.
- Follow (Step 1) to (Step 4) of Item 9.13.
- Follow (Step 1) to (Step 4) of Item 9.18.
- Follow (Step 1) to (Step 6) of Item 9.19.
- Follow (Step 1) to (Step 6) of Item 9.21.

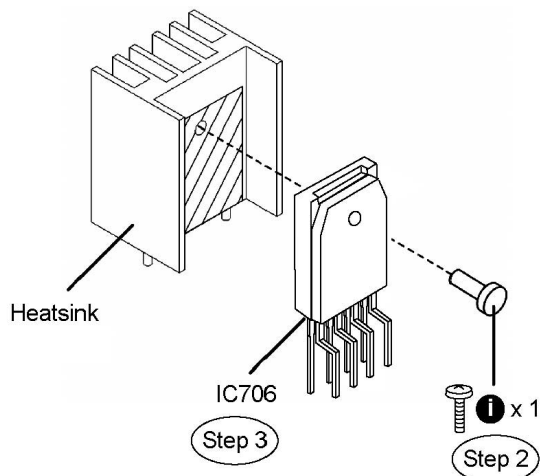
Step 1 Desolder pins of the regulator IC (IC706) on the reverse side of SMPS P.C.B.



Step 2 Remove 1 screw from the regulator IC (IC706).

Step 3 Remove the regulator IC (IC706) from the heatsink.

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

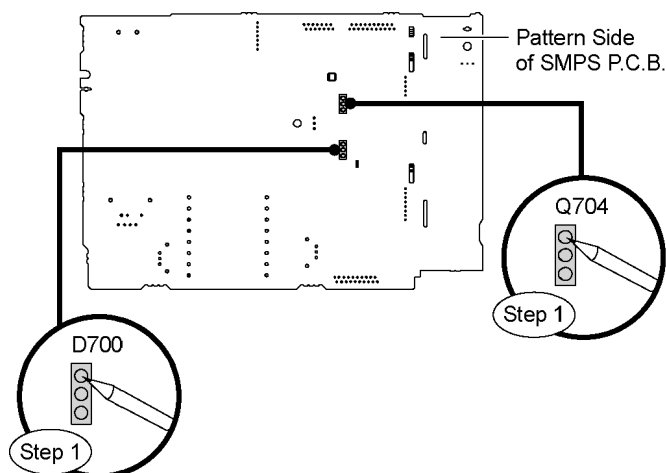


Note : Refer to the diagram of SMPS P.C.B. (Section 9.21.) for location of the part.

9.23. Replacement of Regulator Transistor/Diode (Q704/D700)

- Follow (Step 1) to (Step 8) of Item 9.3.
- Follow (Step 1) to (Step 2) of Item 9.4.
- Follow (Step 1) to (Step 4) of Item 9.5.
- Follow (Step 1) to (Step 5) of Item 9.11.
- Follow (Step 1) to (Step 4) of Item 9.13.
- Follow (Step 1) to (Step 4) of Item 9.18.
- Follow (Step 1) to (Step 6) of Item 9.19.
- Follow (Step 1) to (Step 6) of Item 9.21.

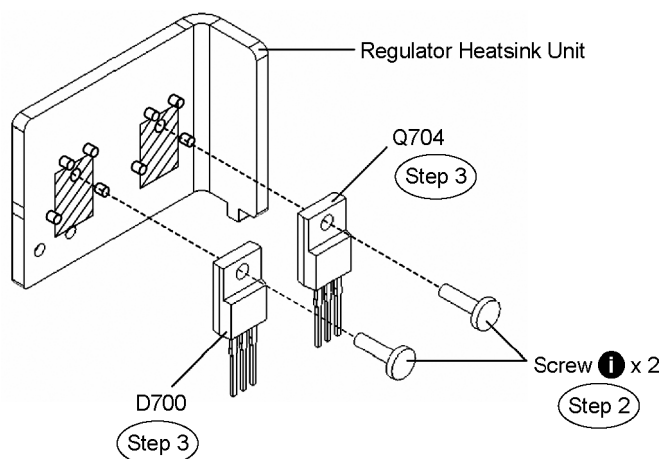
Step 1 Desolder pins of the regulator transistor/diode (Q704/D700) on the reverse side of SMPS P.C.B.



Step 2 Remove 1 screw from the regulator transistor/diode (Q704/D700).

Step 3 Remove the regulator transistor/diode (Q704/D700) from the regulator heatsink unit.

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

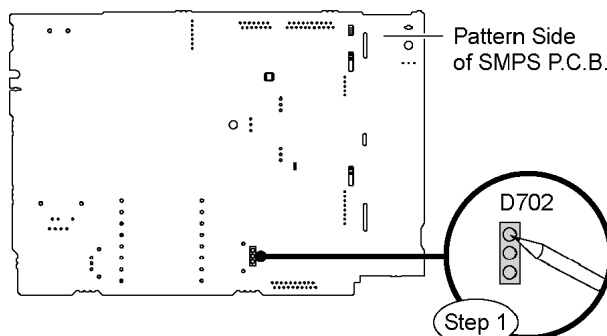


Note : Refer to the diagram of SMPS P.C.B. (Section 9.21.) for location of the part.

9.24. Replacement of Regulator Diode (D702)

- Follow (Step 1) to (Step 8) of Item 9.3.
- Follow (Step 1) to (Step 2) of Item 9.4.
- Follow (Step 1) to (Step 4) of Item 9.5.
- Follow (Step 1) to (Step 5) of Item 9.11.
- Follow (Step 1) to (Step 4) of Item 9.13.
- Follow (Step 1) to (Step 4) of Item 9.18.
- Follow (Step 1) to (Step 6) of Item 9.19.
- Follow (Step 1) to (Step 6) of Item 9.21.

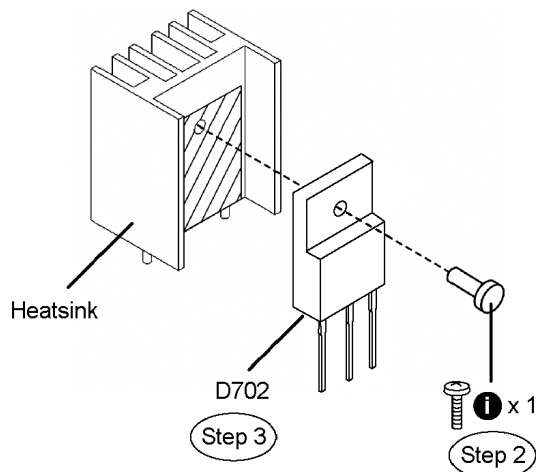
Step 1 Desolder pins of the regulator diode (D702) on the reverse side of SMPS P.C.B.



Step 2 Remove 1 screw from the regulator diode (D702).

Step 3 Remove the regulator diode (D702) from the heatsink.

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

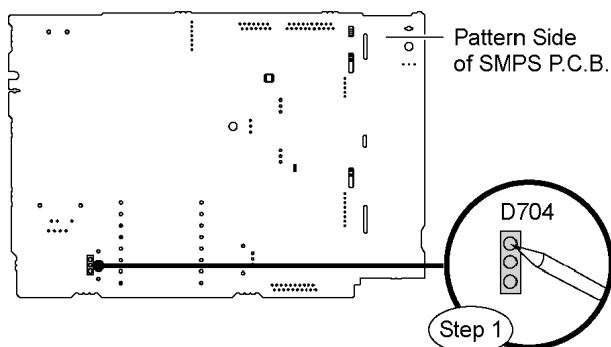


Note : Refer to the diagram of SMPS P.C.B. (Section 9.21.) for location of the part.

9.25. Replacement of Regulator Diode (D704)

- Follow (Step 1) to (Step 8) of Item 9.3.
- Follow (Step 1) to (Step 2) of Item 9.4.
- Follow (Step 1) to (Step 4) of Item 9.5.
- Follow (Step 1) to (Step 5) of Item 9.11.
- Follow (Step 1) to (Step 4) of Item 9.13.
- Follow (Step 1) to (Step 4) of Item 9.18.
- Follow (Step 1) to (Step 6) of Item 9.19.
- Follow (Step 1) to (Step 6) of Item 9.21.

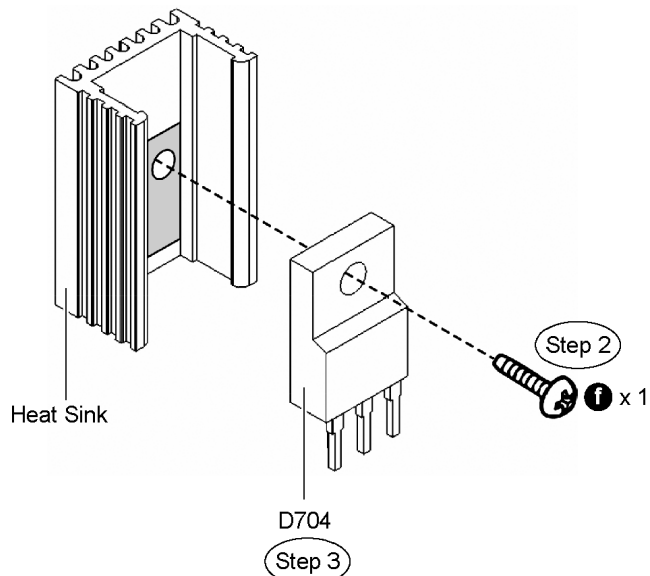
Step 1 Desolder pins of the regulator diode (D704) on the reverse side of SMPS P.C.B.



Step 2 Remove 1 screw from the regulator diode (D704).

Step 3 Remove the regulator diode (D704) from the heat sink.

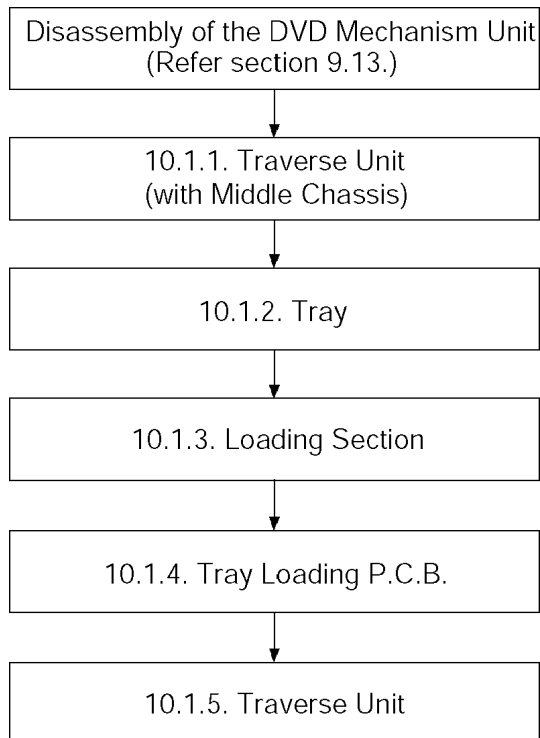
Caution: Handle the heat sink with caution due to its high temperature after prolonged use. Touching it may lead to injuries.



Note : Refer to the diagram of SMPS P.C.B. (Section 9.21.) for location of the part.

10 Assembly and Disassembly of DVD Mechanism Unit

10.1. Disassembly Procedure

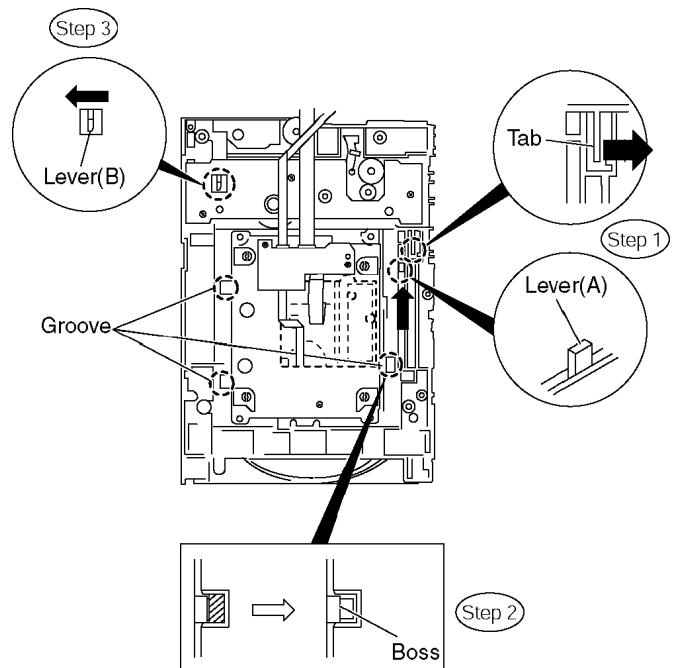


10.1.1. Disassembly of Traverse Unit (with Middle Chassis)

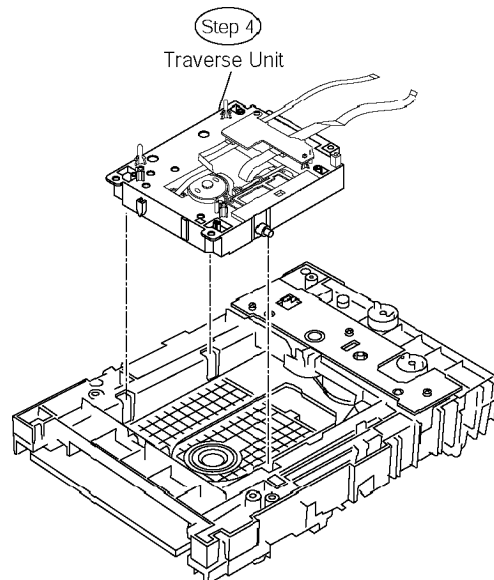
Step 1 Slide the lever (A) in the arrow direction (to the opposite side) till it stops.

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

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

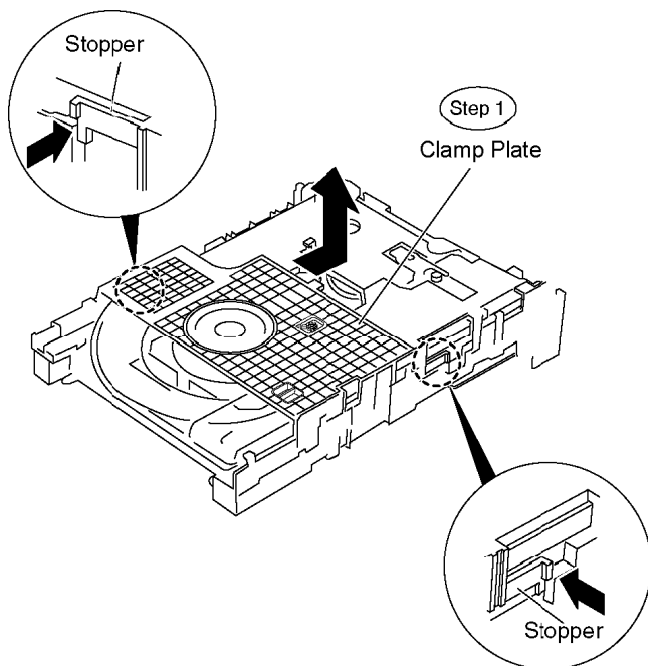


Step 4 Remove the traverse unit.



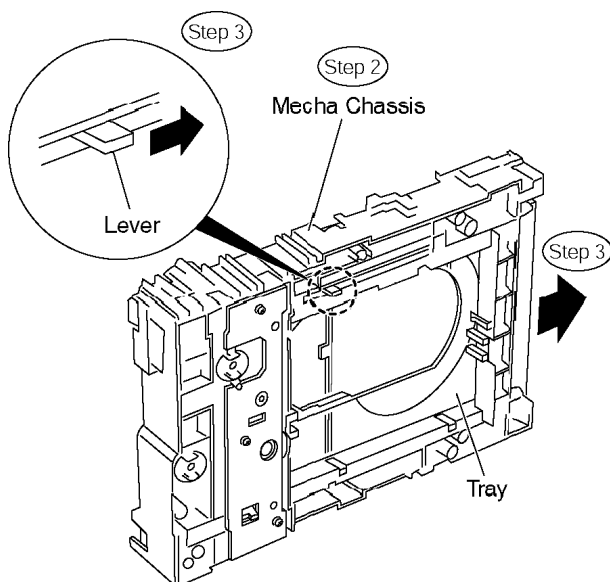
10.1.2. Disassembly of Tray

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

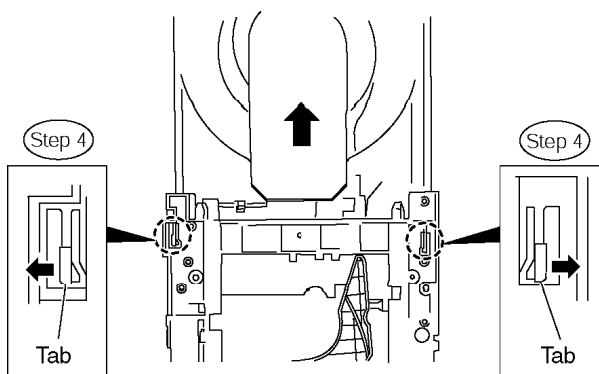


Step 2 Raise the mecha chassis vertically.

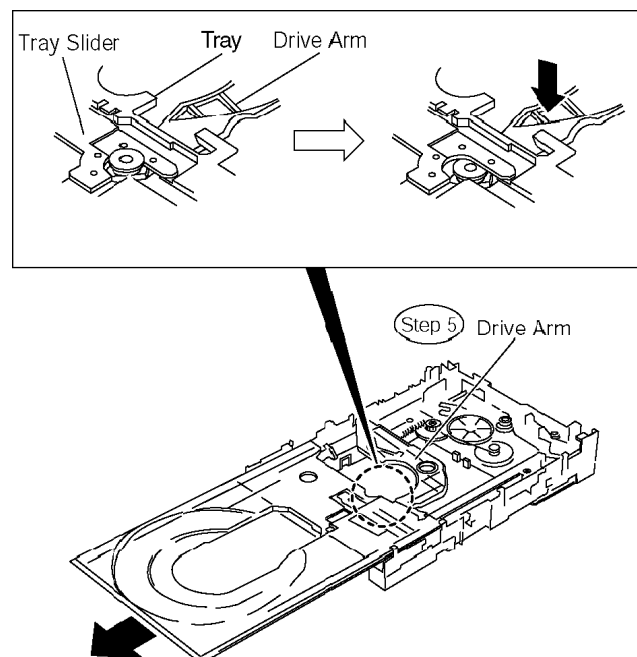
Step 3 Slide the lever in the arrow direction till it stops and pull the tray out.



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



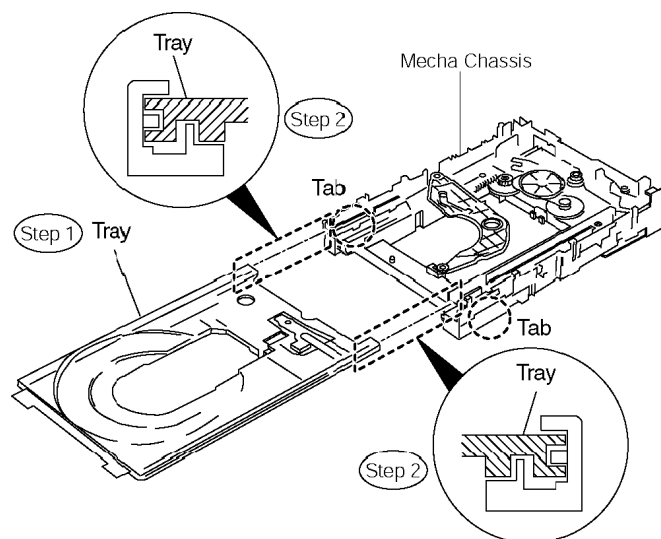
Step 5 Remove the drive arm concave phase from the tray slider and tray.



●(Assembly of the tray unit)

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

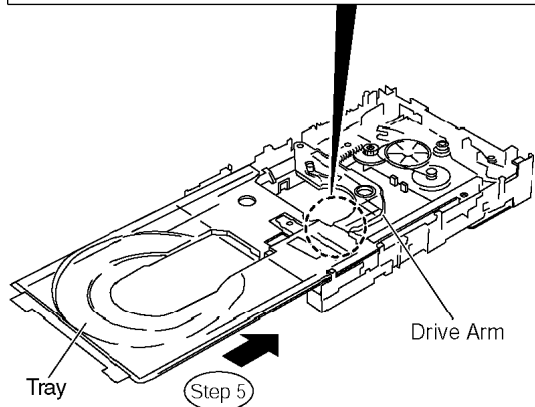
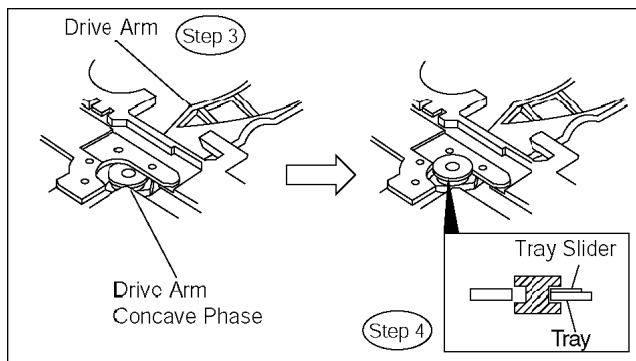
Step 2 Insert the tray to the point before the tab of the mecha chassis.



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

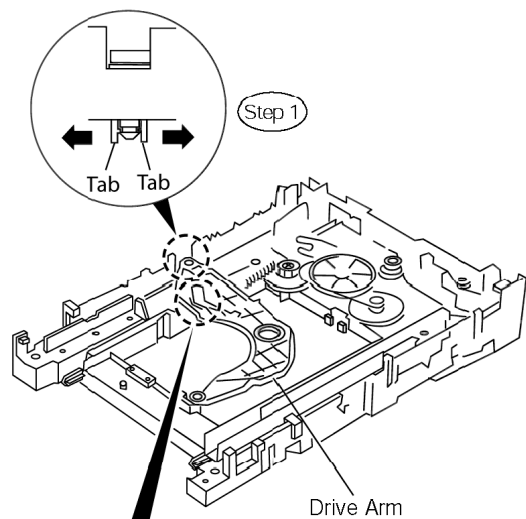
Step 4 Press in the tray.

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

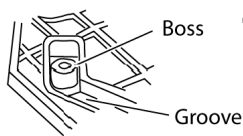


10.1.3. Disassembly of Loading Section

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



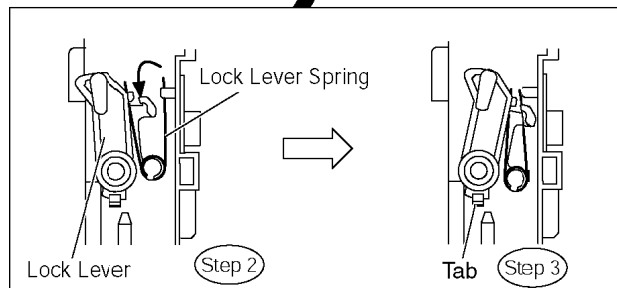
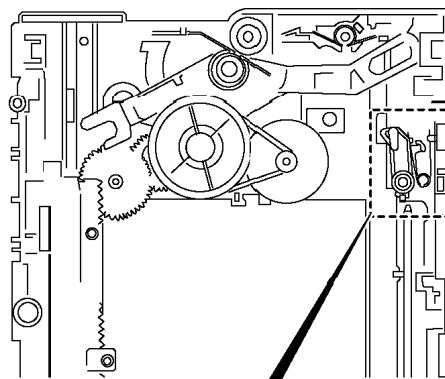
■ Important point in installing the drive rack



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

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

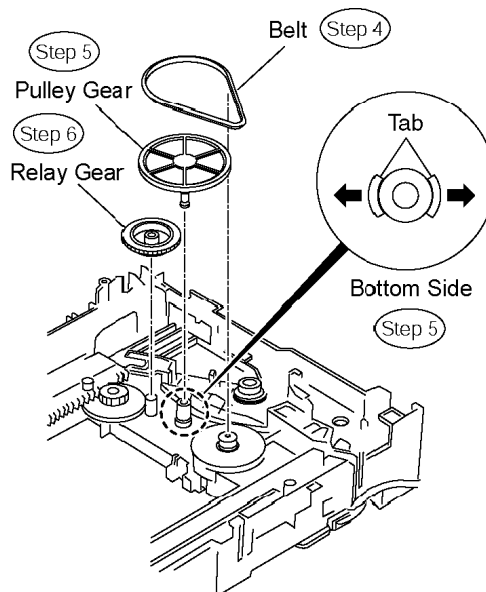
Step 3 Unlock the tab and remove the lock lever.



Step 4 Remove the belt.

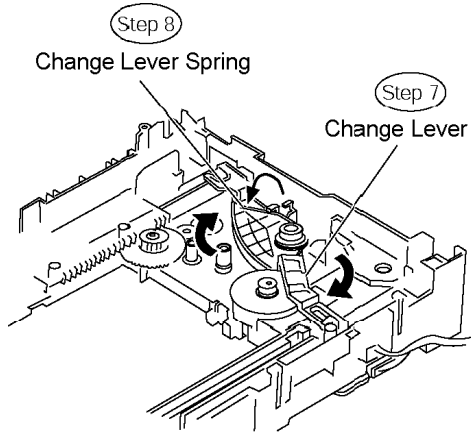
Step 5 Unlock the tab and remove the pulley gear.

Step 6 Remove the relay gear.

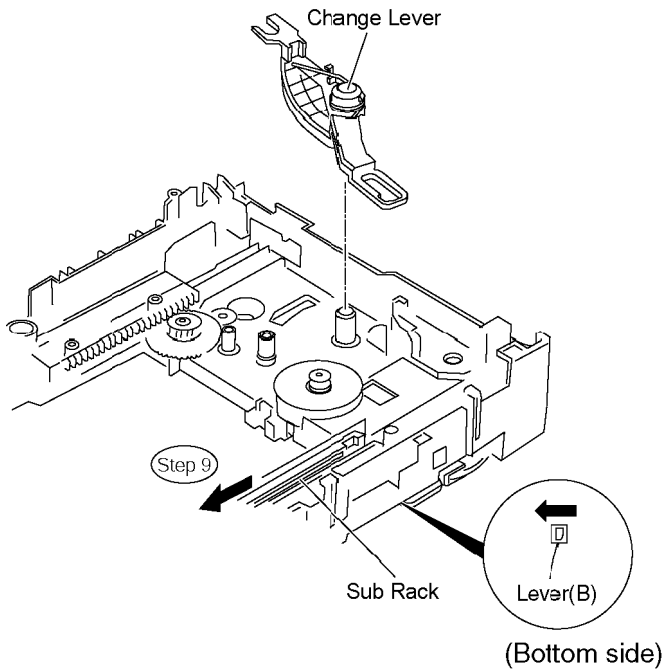


Step 7 Turn the change lever in the arrow direction till it stops.

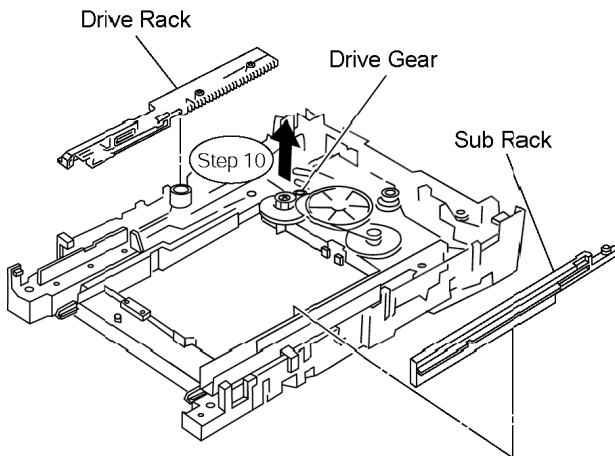
Step 8 Hook the change lever spring on the change lever project part temporarily.



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



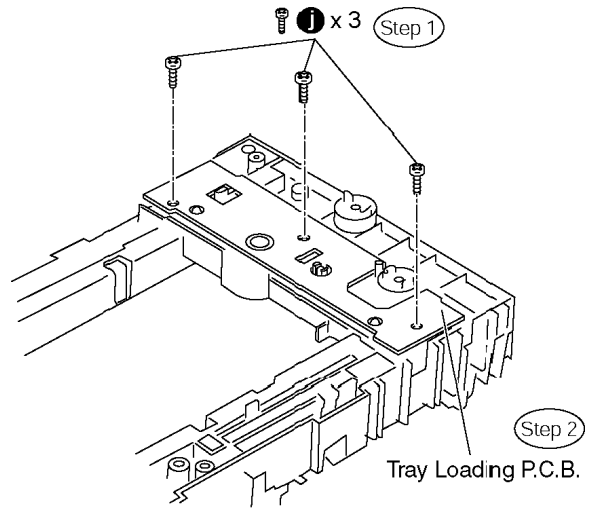
Step 10 Remove the drive rack, the sub rack and the drive gear in the direction of arrow.



10.1.4. Disassembly of Tray Loading P.C.B.

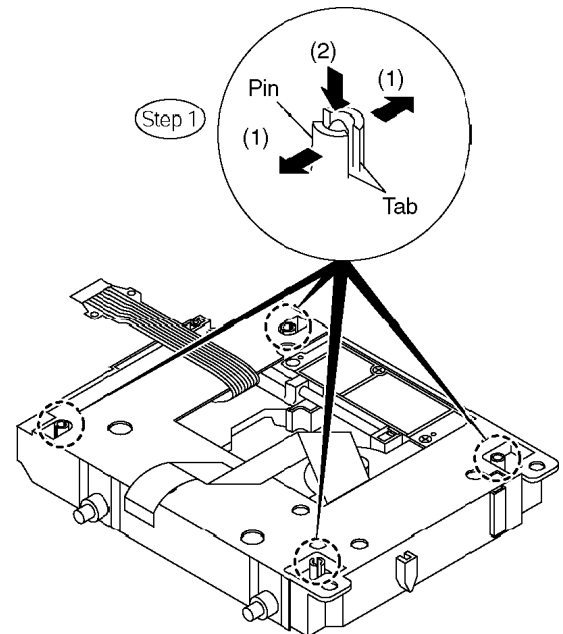
Step 1 Remove 3 screws

Step 2 Remove Tray Loading P.C.B.

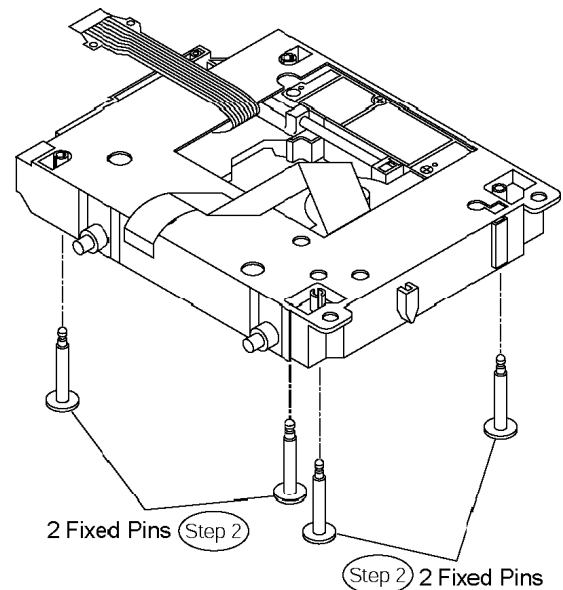


10.1.5. Disassembly of Traverse Unit

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

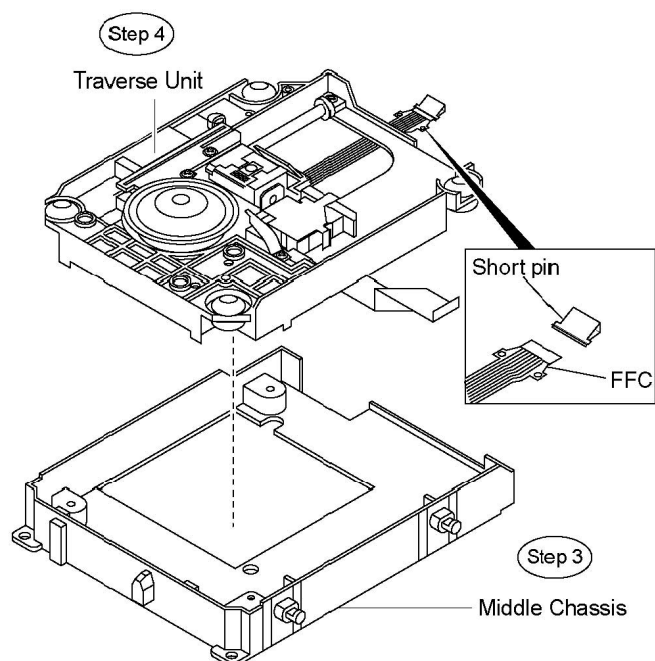


Step 2 Remove 4 fixed pins.



Step 3 Remove the middle chassis.

Step 4 Remove the traverse unit.



[Caution]

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

11 Service Fixture and Tools

Prepare service tools before proccess service position.

Service Tools		Remarks
DSP P.C.B. (P1301) - Input-Ouput P.C.B. (P105)	REXX0873 (26 pin FFC cable)	[M](RTL)
Main P.C.B. (P501) - Tray Loading P.C.B. (CS901)	REXX0678 (7 pin wire)	[M](RTL)
Main P.C.B. (P500) - DVD Module P.C.B. (FP3902)	REEX0874 (7 pin FFC cable)	[M](RTL)

12 Service Positions

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

Step 1 Remove the top panel.

Step 2 Remove the top chassis unit.

Step 3 Remove the front panel.

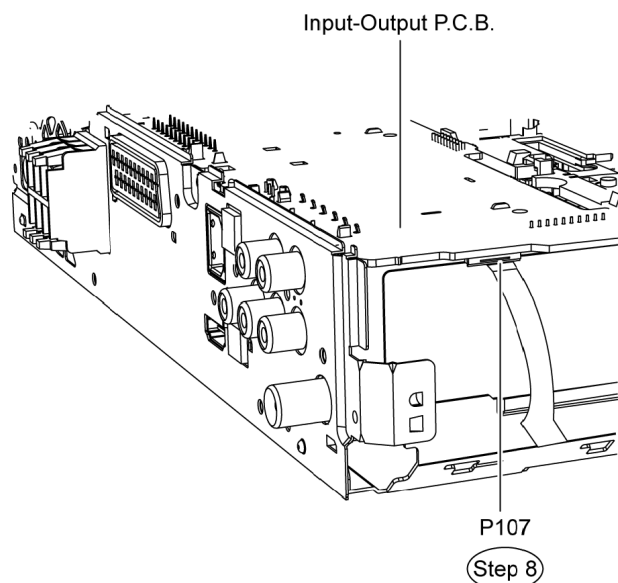
Step 4 Remove Panel P.C.B.

Step 5 Remove Surround Switch P.C.B.

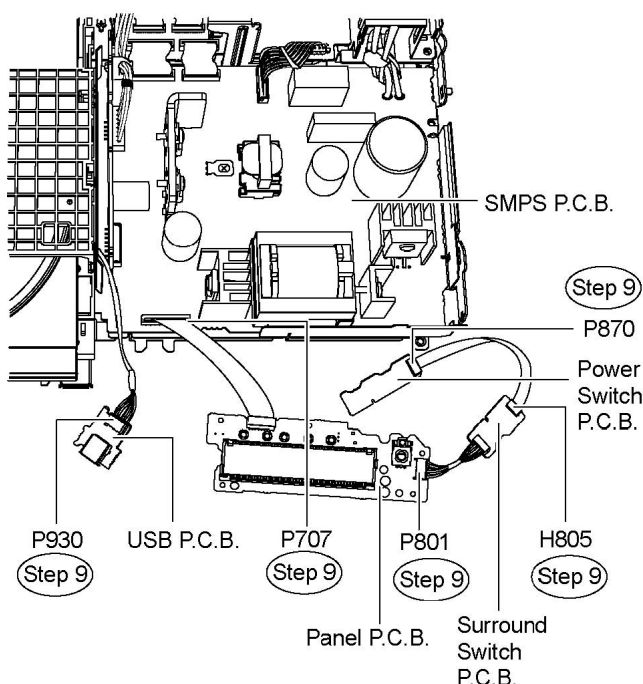
Step 6 Remove Power Switch P.C.B.

Step 7 Remove Headphone P.C.B.

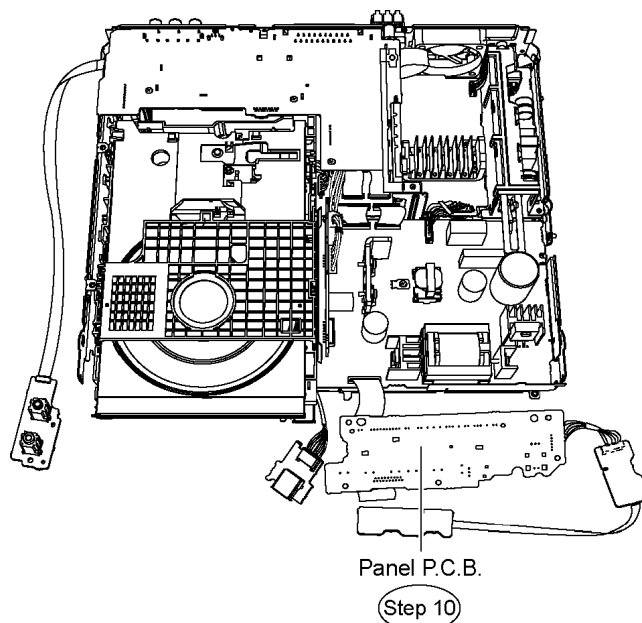
Step 8 Connect FFC cable at the connector (P107) on Input/Output P.C.B.



Step 9 Connect cables at the connectors (P707) on SMPS P.C.B., (P930) on USB P.C.B., (P801) on Panel P.C.B. (H805) on Surround Switch P.C.B. and (P870) on Power Switch P.C.B.



Step 10 Flip Panel P.C.B. to another side vertically and position it according to the diagram shown.

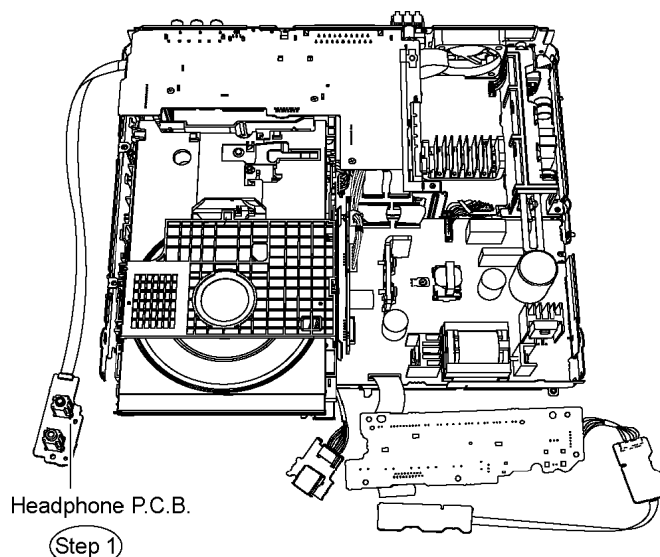


Note: Insulate Panel P.C.B. from other parts with insulating material (eg. plastic).

12.2. Checking & Repairing Headphone P.C.B.

- Follow (Step 1) to (Step 9) of Item 12.1.

Step 1 Position Headphone P.C.B. according to the diagram shown.



Note: Insulate Headphone P.C.B. from other parts with insulating material (eg. plastic).

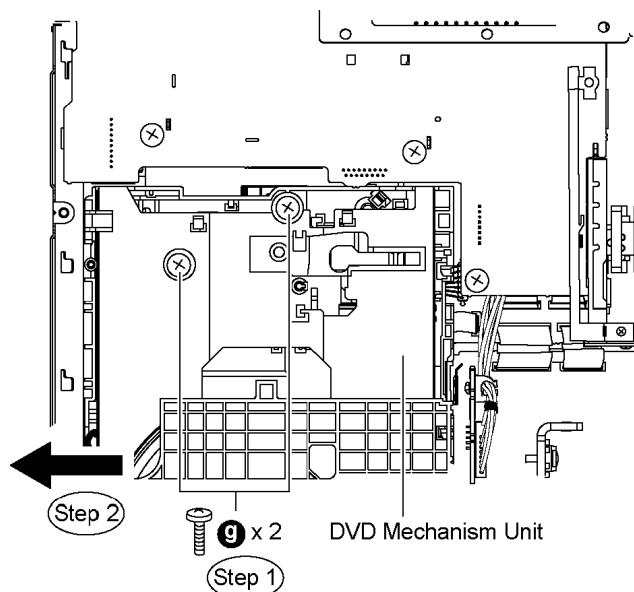
12.3. Checking & Repairing SMPS P.C.B.

- Follow (Step 1) to (Step 9) of Item 12.1.

Step 1 Remove 2 screws from the DVD mechanism unit.

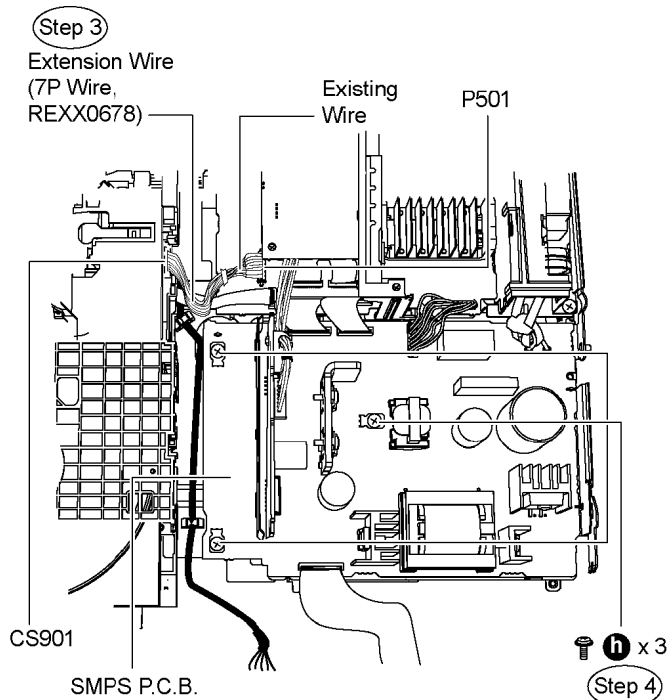
Step 2 Move aside DVD mechanism unit in the direction of

arrow.



Step 3 Attach original cable with extension cable REXX0678 (7P wire, from P501 to CS901).

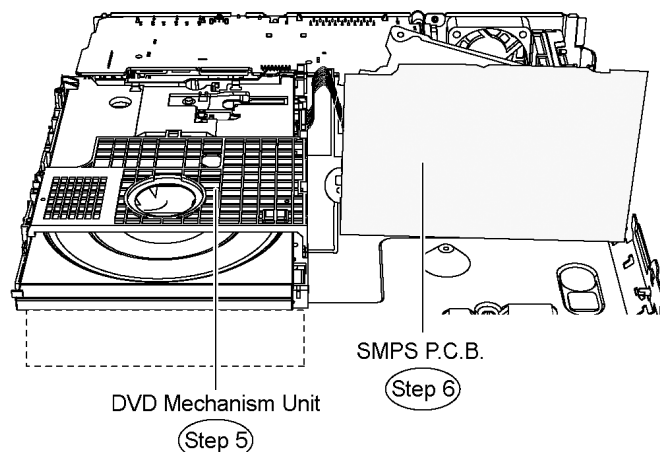
Step 4 Remove 3 screws from SMPS P.C.B.



Caution Note: Ensure the cable is attached properly.

Step 5 Place an object (eg. box) beneath the DVD mechanism unit to adjust its height.

Step 6 Flip SMPS P.C.B. vertically and position it according to the diagram shown.

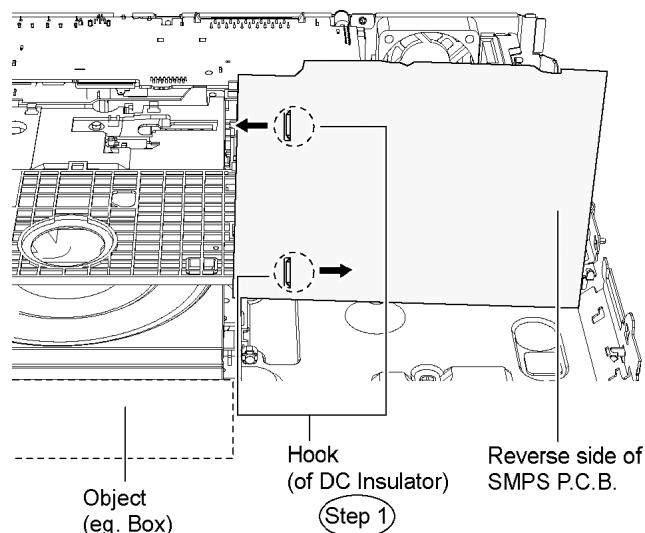


Note: Insulate SMPS P.C.B. from other parts with insulating material (eg. plastic).

12.4. Checking & Repairing Regulator P.C.B.

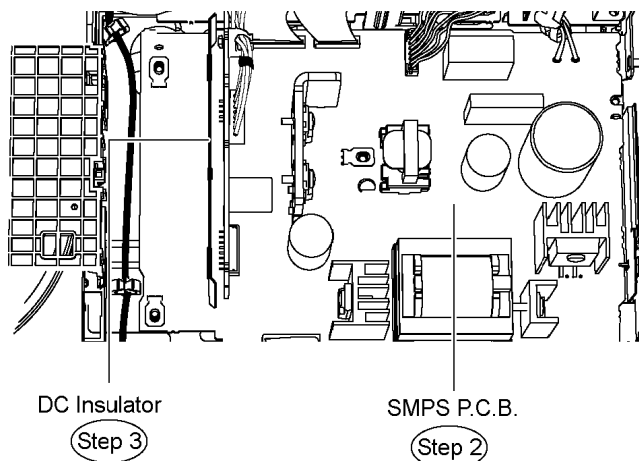
- Follow (Step 1) to (Step 6) of Item 12.3.

Step 1 Release the hooks of the DC insulator at the reverse side of SMPS P.C.B. in the direction of arrows.

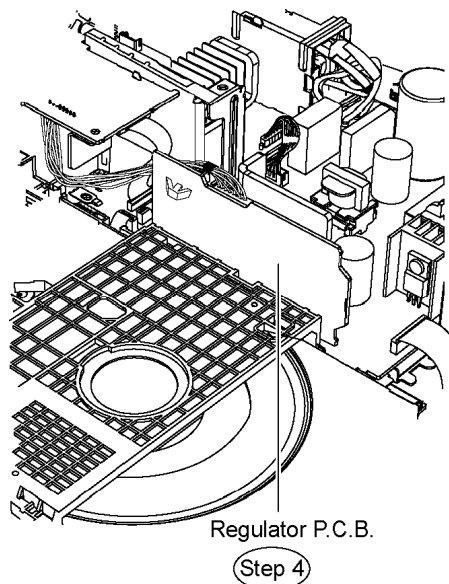


Step 2 Place SMPS P.C.B. to its original position.

Step 3 Remove the DC insulator.



Step 4 Regulator P.C.B. can be checked at its original position.



Note: Insulate Regulator P.C.B. from other parts with insulating material (eg. plastic).

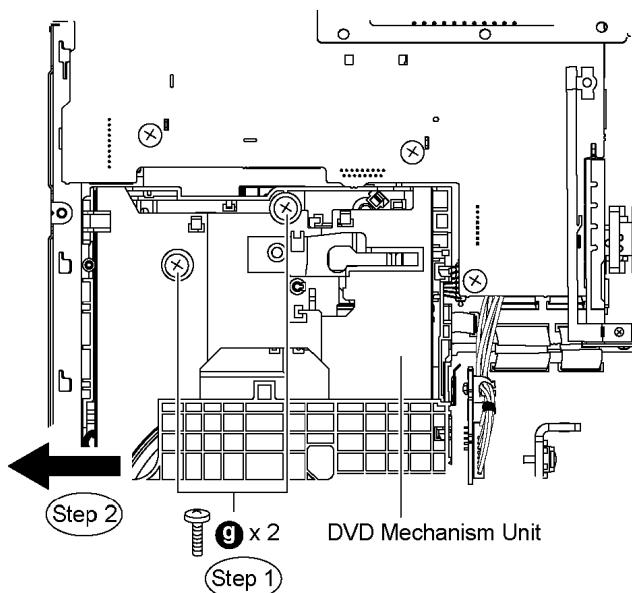
12.5. Checking & Repairing DVD Module P.C.B.

- Follow (Step 1) to (Step 9) of Item 12.1.

- Servicing Side A of DVD Module P.C.B.

Step 1 Remove 2 screws from the DVD mechanism unit.

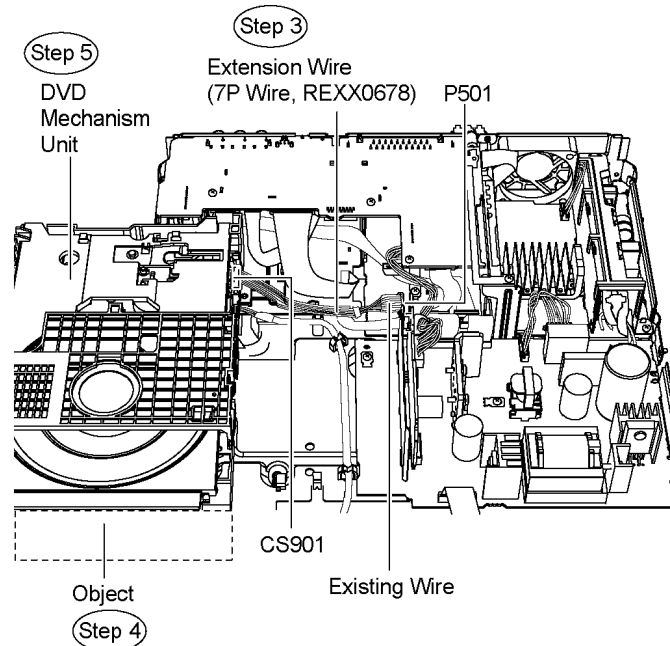
Step 2 Move aside DVD mechanism unit in the direction of arrow.



Step 3 Attach original cable with extension cable REXX0678 (7P wire, from P501 to CS901).

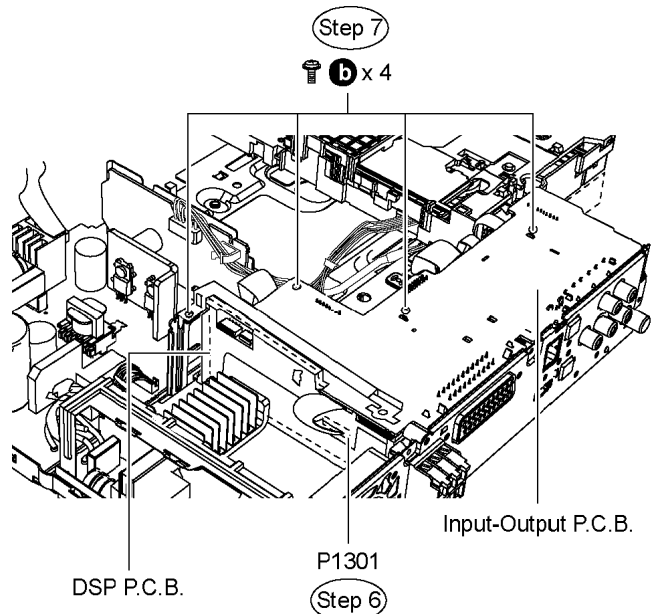
Step 4 Place an object (eg. box) beneath the DVD mechanism unit to adjust its height.

Step 5 Position the DVD mechanism unit according to the diagram shown.



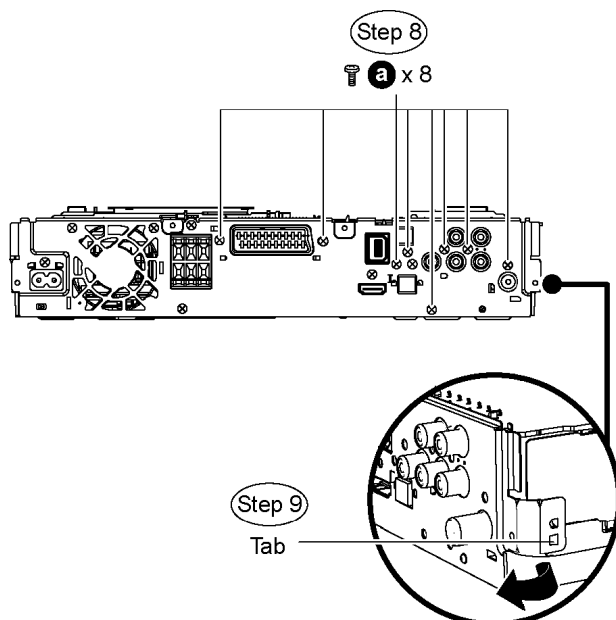
Step 6 Detach cable at the connector (P1301) on DSP P.C.B.

Step 7 Remove 4 screws from Input-Output P.C.B.



Step 8 Remove 8 screws from the rear panel.

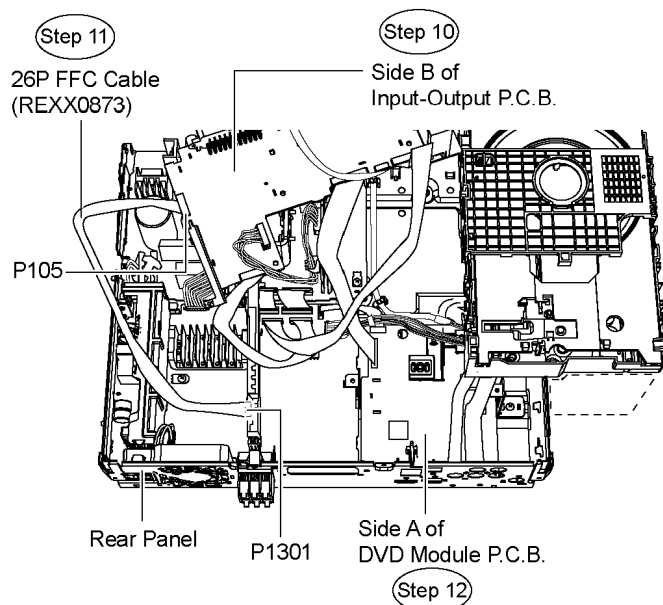
Step 9 Release the tab of the rear panel in the direction of arrow.



Step 10 Remove Input-Output P.C.B. from the rear panel and flip it to the side B.

Step 11 Replace original cable with extension cable REXX0873 (26P FFC cable, from P1301 to P105).

Step 12 Side A of DVD Module P.C.B. can be checked at its original position.

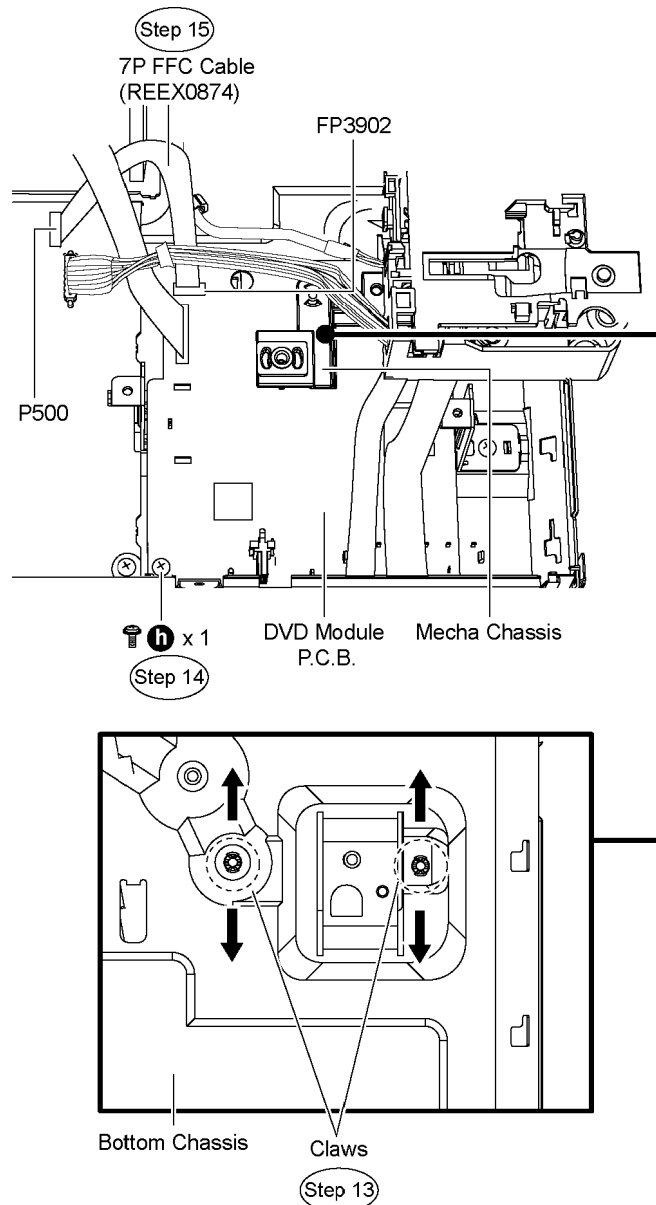


- Servicing Side B of DVD Module P.C.B.

Step 13 Remove the mecha chassis by releasing its claws at the bottom chassis in the direction of arrows.

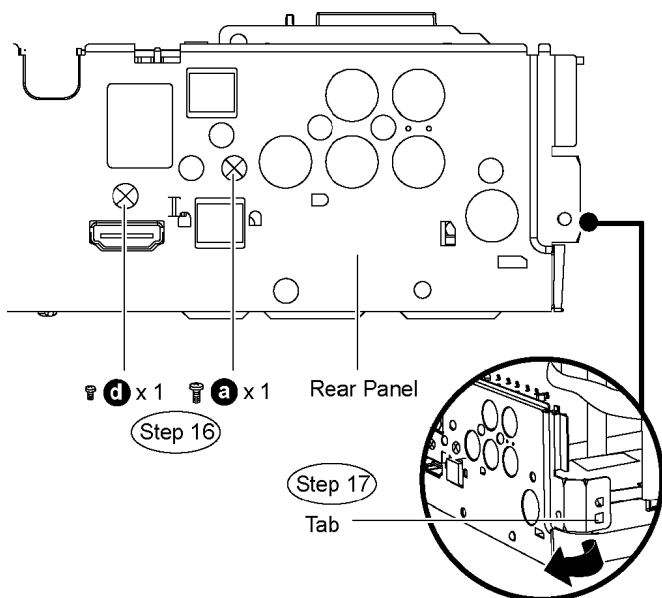
Step 14 Remove 1 screw from DVD Module P.C.B.

Step 15 Replace original cable with extension cable REXX0874 (7P FFC cable, from P500 to FP3902).

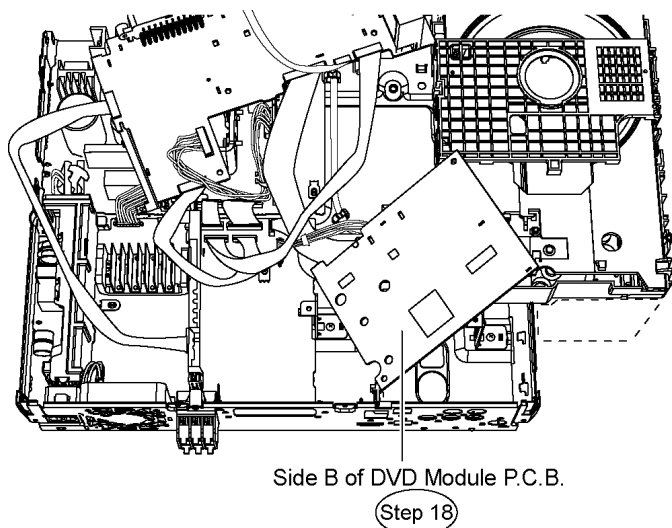


Step 16 Remove 2 screws from the rear panel.

Step 17 Release the tab of the rear panel in the direction of arrow.



Step 18 Flip DVD Module P.C.B. vertically to the side B and position it according to the diagram shown.

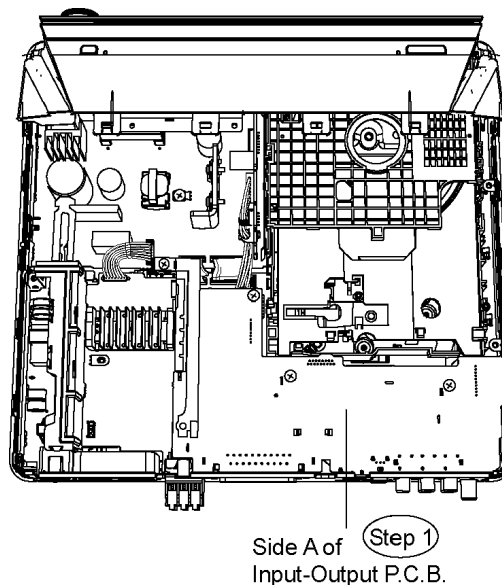


Note: Insulate DVD Module P.C.B. from other parts with insulating material (eg. plastic).

12.6. Checking & Repairing Input-Output P.C.B.

- Servicing Side A of Input-Output P.C.B.

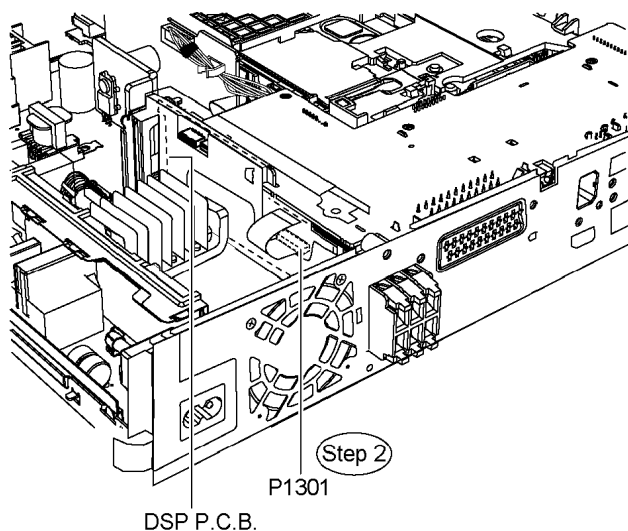
Step 1 Remove the top panel and top chassis unit to service the side A of Input-Output P.C.B.



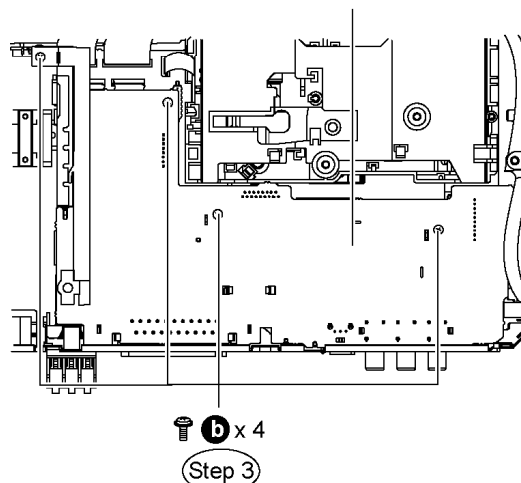
Note: Side A of Input-Output P.C.B. can be checked at its original position.

- Servicing Side B of Input-Output P.C.B.

Step 2 Detach cable at the connector (P1301) on DSP P.C.B.

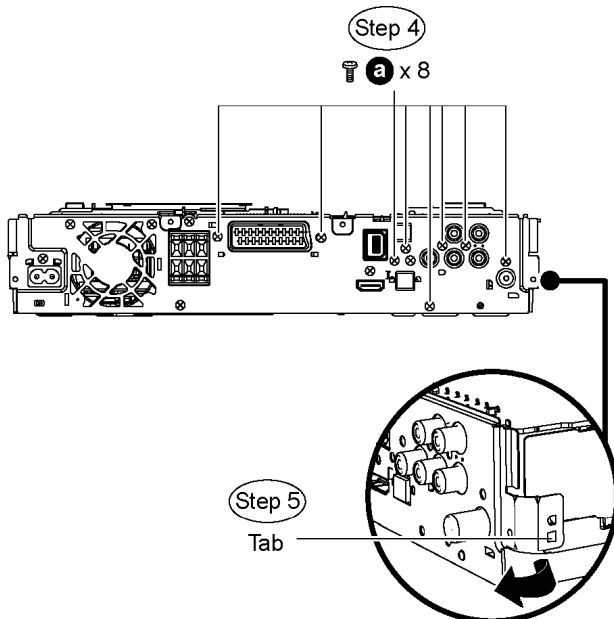


Step 3 Remove 4 screws from Input-Output P.C.B.

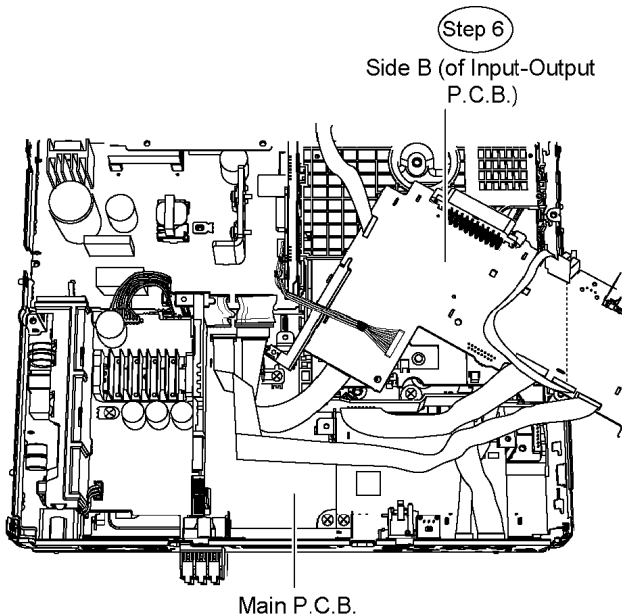


Step 4 Remove 8 screws from the rear panel.

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

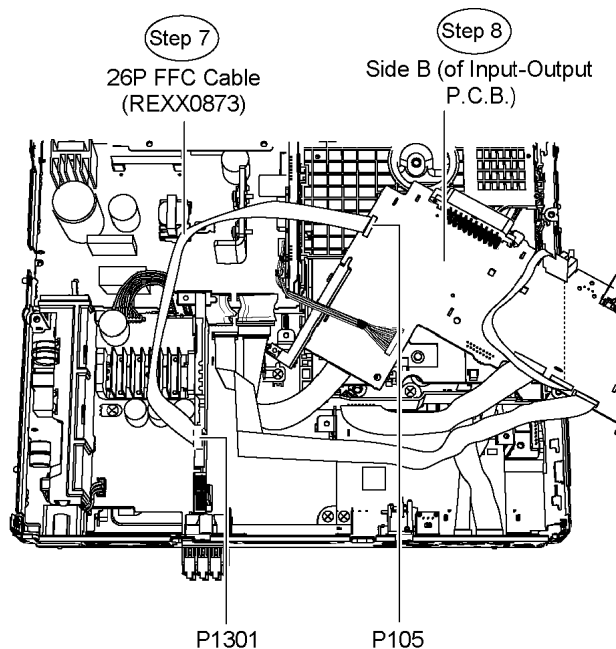


Step 6 Remove Input-Output P.C.B. from the rear panel and flip it to the side B.



Step 7 Replace original cable with extension cable REXX0873 (26P FFC cable, from P1301 to P105).

Step 8 Position side B of Input-Output P.C.B. according to the diagram shown.

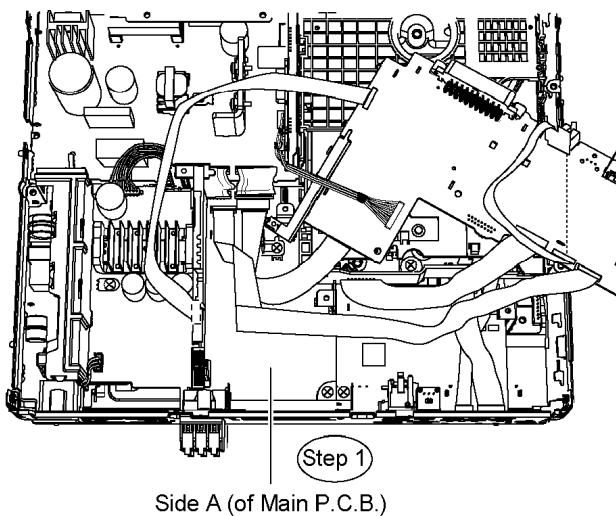


Note: Insulate Input-Output P.C.B. from other parts with insulating material (eg. plastic).

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

- Servicing Side A of Main P.C.B.

Step 1 Follow (Step 1) to (Step 8) of "Checking & Repairing Input-Output P.C.B." in order to service the side A of Main P.C.B.



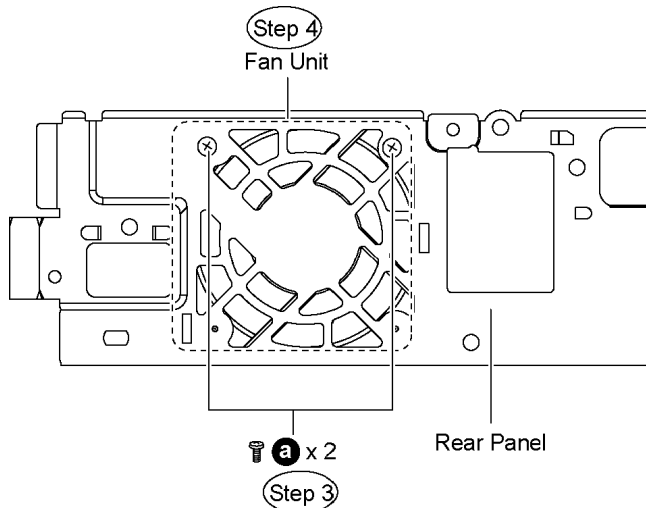
Note: Side A of Main P.C.B. can be checked at its original position.

- Servicing Side B of Main P.C.B.

Step 2 Remove the rear panel.

Step 3 Remove 2 screws from the rear panel.

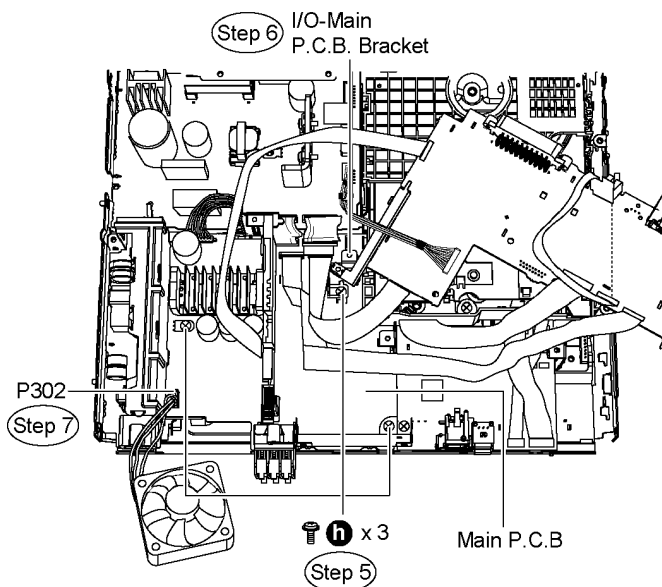
Step 4 Remove the fan unit.



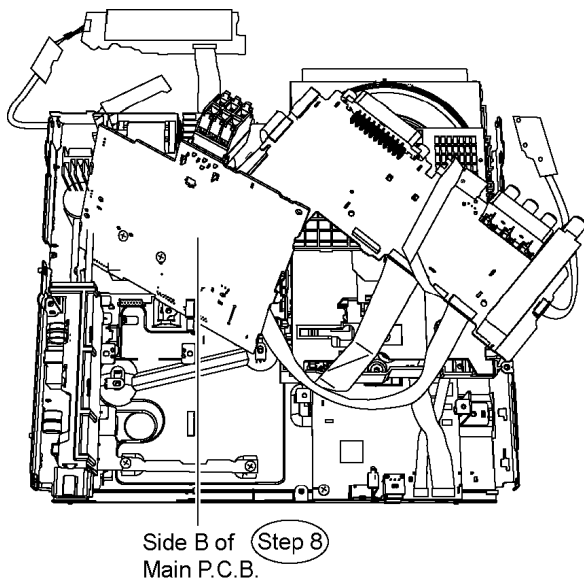
Step 5 Remove 3 screws from Main P.C.B.

Step 6 Remove the I/O-Main P.C.B. bracket.

Step 7 Connect cable at the connector (P302) on Main P.C.B.



Step 8 Flip Main P.C.B. to the side B vertically and position it according to the diagram shown.



Note: Insulate Main P.C.B. from other parts with insulating material (eg. plastic).

12.8. Checking & Repairing DSP P.C.B.

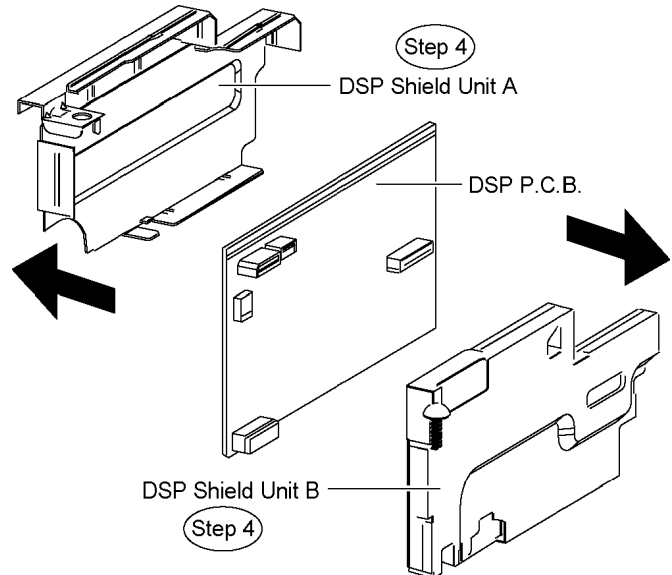
- Servicing Side A of DSP P.C.B.

Step 1 Remove the top panel.

Step 2 Remove the top chassis unit.

Step 3 Disassemble DSP P.C.B.

Step 4 Remove DSP shield A & B units from DSP P.C.B.

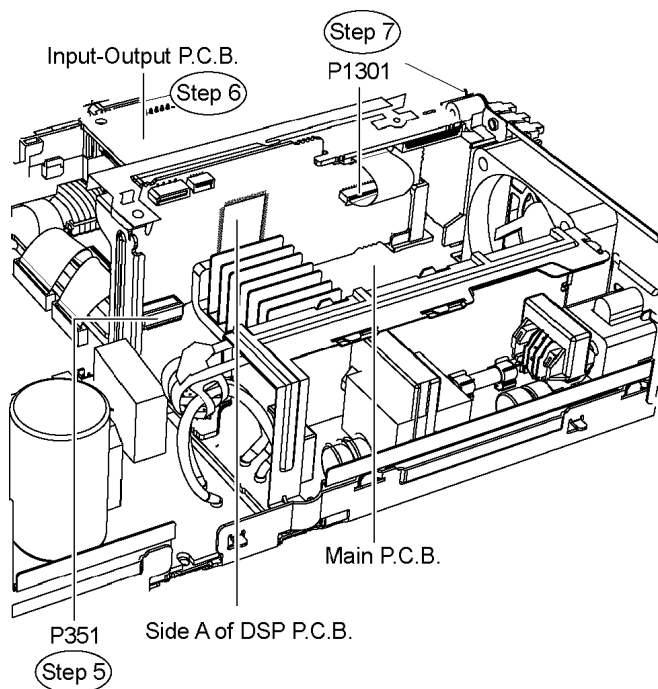


Caution Note: Keep the DSP shield A & B units in safe place. Avoid denting them. Place them back during assembling.

Step 5 Connect DSP P.C.B. at the connectors (P351) on Main P.C.B.

Step 6 Position back Input-Output P.C.B. according to the diagram shown.

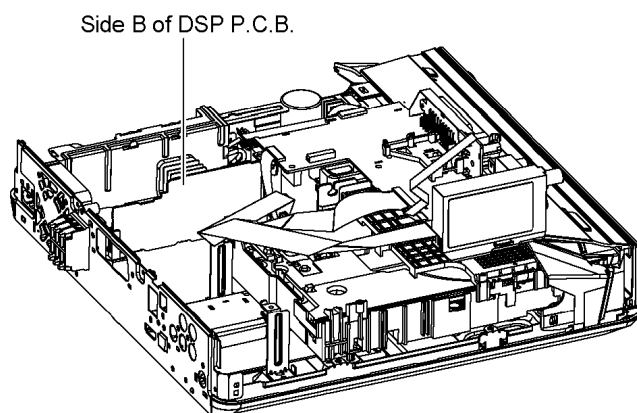
Step 7 Connect the cable at the connector (P1301) on DSP P.C.B.



Note: Side A of DSP P.C.B. can be checked at its original position.

- Servicing Side B of DSP P.C.B.
- Follow (Step 1) to (Step 7) of Item 12.6.

Note: Side B of DSP P.C.B. can be checked at the service position of Main P.C.B.



Note: Insulate DSP P.C.B. from other parts with insulating material (eg. plastic).

13 Measurements and Adjustments

13.1. Service Tools and Equipment

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

13.2. Important points in adjustment

13.2.1. Important points in optical adjustment

- Before starting optical adjustment, be sure to take anti-static measures.
- Optical pickup tilt adjustment is needed after replacement of the following components.

1. Optical pickup unit
2. Spindle motor unit
3. Optical pickup peripheral parts

Notes

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

13.2.2. Important points in electrical adjustment

- Follow the adjustment procedures described in this manual.

13.3. Storing and handling of test discs

- Surface precision is vital for DVD test discs. Be sure to store and handle them carefully.

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

13.4. Optical adjustment

13.4.1. Optical pickup tilt adjustment

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

13.4.1.1. Adjustment procedure

1. While pressing STOP button on the main unit, press "5" on the remote control unit.
2. Confirm that "J_xxx/yyy_zz" (Display 1/Display 2) is shown on the front display.

For your information:

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

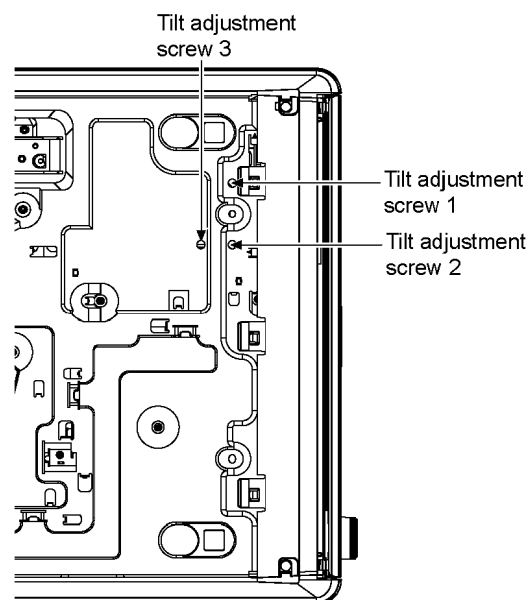
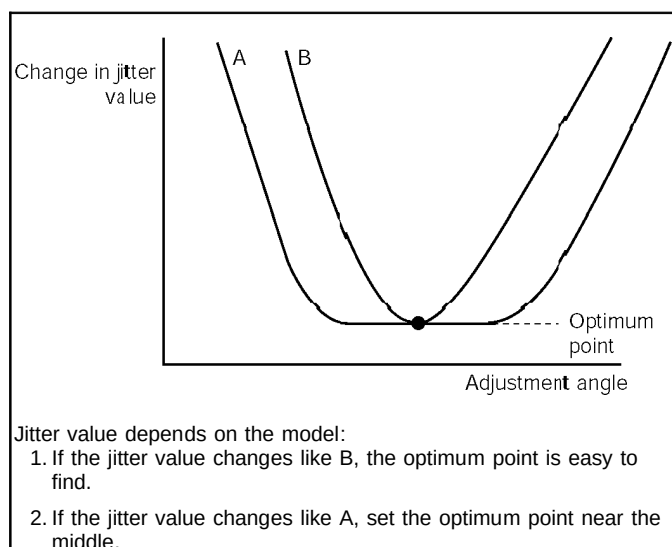
Note:

Jitter value appears on the front display.

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

13.4.1.2. Important points

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

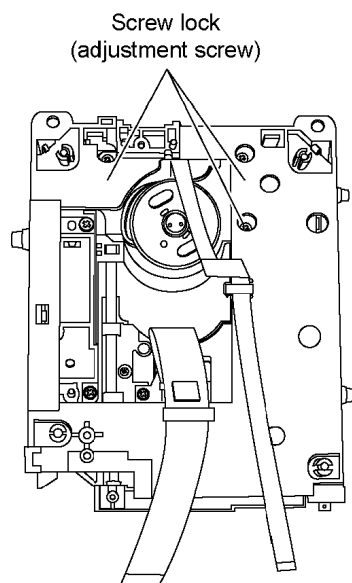


13.4.1.3. Check after adjustment

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

13.4.1.4. Procedure for screw lock

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



14 Abbreviations

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

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

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

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

15 Voltage and Waveform Chart

15.1. DVD Module P.C.B.

Ref No.	IC3901																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	-	-	-	-	1.2	0.8	0	2.9	3.3	0	0	0	3.3	0	0	0	3.3	0	0	0
Ref No.	IC3901																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	3.3	0	0	0	3.3	1.2	0	3.3	-	-	-	1.6	3.3	0.9	0	0	0.9	0	3.3	
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	1.2	1.7	0	1.6	0	1.2	0	0	0	0	3.3	5	3	5	7	0	-	-	0
Ref No.	IC3901																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
CD PLAY	0	-	0	0	-	0	0	0	0	3.3	0	0	0	0	0	0	0	0	0	0
Ref No.	IC3901																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
CD PLAY	0	0	3.3	1.2	0	1.1	0.7	0.8	2.3	0	1.4	1.4	1.7	1.2	-	-	-	-	0	3.3
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	1.2	0	0	0	3.3	3.3	3.3	1.2	0	1.4	0	3.3	3.2	3.3	1.2	1.5	0	0	3.3
Ref No.	IC3901																			
MODE	121	122	123	124	125	126	127	128												
CD PLAY	3.3	0	1.2	3.3	0	0.7	0	0												
Ref No.	IC3952																			
MODE	1	2	3	4	5															
CD PLAY	8.5	0	1.3	5.1	8.9															
Ref No.	IC8001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	0	0	0.1	0	3.3	0.1	0.1	0.9	0.6	0.7	2.3	1.4	1.3	0	3.3	1.7	1.1	0	1.2
Ref No.	IC8001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	0.8	1.2	0	1.6	1.4	1.2	1.6	1.7	1.8	1.1	3.3	0	3.3	1.6	0.7	1.4	1.7	1.8	1.5	1.6
Ref No.	IC8001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	2	1.9	0	1.2	0	3.2	3.3	3.3	3.3	0.8	0	3.3	3.2	2.7	3	0.1	3.3	2.9	3.3	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	0.9	0.1	1.9	1.7	0	3.3	3.3	0	3.3	3.3	0	2.9	3.3	0	0	0	0
Ref No.	IC8001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
CD PLAY	0	0	1.2	3.3	0.9	2.3	0.1	1.9	0.1	0.2	1.8	3.3	0.8	0.8	1.8	1.8	1.7	1.7	1.7	1.7
Ref No.	IC8001																			
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
CD PLAY	0	0	0.4	0	0.2	1.9	3.3	0.1	2.2	1.7	2.6	2.6	2.6	2.6	2.6	2.7	2.4	2.5	2.5	2.5
Ref No.	IC8001																			
MODE	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
CD PLAY	1.8	2	1.7	1.7	0.1	1.7	1.7	3.3	0.9	0.9	0.5	3.3	2.4	1	1	2.4	0.1	0.4	0.9	0.1
Ref No.	IC8001																			
MODE	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160
CD PLAY	3.3	3.3	0.1	0.1	0	0.1	3.3	1.6	1.7	1.7	0.9	1.7	0	3.3	1.4	1.4	0	1.2	2.9	2.8
Ref No.	IC8001																			
MODE	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
CD PLAY	2.6	2.9	2.6	2.8	0	3.1	2.9	3	2.9	3.2	3	3	0	3.3	3.1	2.9	2.9	2.8	2.6	2.6
Ref No.	IC8001																			
MODE	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200
CD PLAY	3.3	0	1.6	3.3	1.6	0	1.2	3.2	3.2	3.1	3.3	0	1.7	0	0	3.3	1.6	0	0	1.5
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	0.2	0	3.3	1.6	0.2	1.6	1.4	0	1.2	2.2	2	2.5	3.3	3.3				

Ref No.	IC8051																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	3.3	2.9	3.3	3.1	3.0	0.1	3.1	3.3	3.3	3	3	0	2.9	3.3	2.6	3.3	3.2	3.2	3.1	1.8
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	0.1	0.2	0.2	1.4	3.3	0	1.6	1.6	1.7	1.6	0.1	0.1	0.1	-	3.3	1.6	2.6	-
Ref No.	IC8051																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54						
CD PLAY	0	2.9	3.3	3.1	3	0	2.9	3.2	3.3	2.8	2.8	0	3.0	0						
Ref No.	IC8111										IC8151									
MODE	1	2	3	4	5	6	7	8			1	2	3	4	5					
CD PLAY	3.2	-	0	-	4.6	-	-	5			2.5	2.5	0	1.3	0.8					
Ref No.	IC8251																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	1.7	1.7	1.7	2.2	2.2	1.8	0	5.1	3.3	0	2.4	2.8	2.6	2.6	4.1	4.3	4.8	3.7	0	3.3
Ref No.	IC8251																			
MODE	21	22	23	24	25	26	27	28	29	30										
CD PLAY	8.9	8.8	1.7	1.7	1.7	1.7	3.3	5.1	0	0										
Ref No.	IC8421																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	3.3	2.9	3.3	1.6	0.9	1.7	1.7	5.2	0	0.9	0.1	0.1	0	2.5	2.5	5.2	0	2.5	2.5
Ref No.	IC8421																			
MODE	21	22	23	24	25	26	27	28												
CD PLAY	2.5	2.5	5.2	0	2.5	2.5	2.6	5.1												
Ref No.	IC8601										IC8606									
MODE	1	2	3	4				1	2	3	4	5			1	2	3	4	5	
CD PLAY	1.2	3.3	0	0				3.3	3.3	0	0	-			0	0	0	0	0	3.3
Ref No.	IC8651																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	1.2	1.1	1.7	1.4	1.2	1.7	1.6	1.9	1.1	0	3.3	3.3	3.3	3.3	0.7	1.6	0.7	1.5	1.9	1.9
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	1.5	1.7	2	1.9	2.3	2	0	2.5	2.2	1.2	1	1.5	1.4	1.2	1.6	1.6	3.3	1.8	1.3	1.8
Ref No.	IC8651																			
MODE	41	42	43	44	45	46	47	48												
CD PLAY	1.8	1.5	1.6	2.1	1.8	0	3.3	0.8												
Ref No.	IC8701										IC8901									
MODE	1	2	3	4	5			1	2	3	4	5								
CD PLAY	-	1.5	0	1.7	3.3			3.3	3.3	0	3.4	3.4								
Ref No.	IC9001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0.1	2.7	1.8	2	1.7	1.7	1.6	1.5	1.1	0	2	1.1	1.5	1.7	1.8	1.8	2	1.9	2.3	3.3
Ref No.	IC9002																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0.1	1.7	1.3	2.2	1.7	1.0	1.6	0.8	1.1	0	2	1	0.9	1.8	1	1.7	2.3	1.3	1.8	3.3
Ref No.	IC9003										IC9005									
MODE	1	2	3	4	5	6			1	2	3	4	5	6	7	8				
CD PLAY	1.5	0	1.6	1.7	3.3	1.6			0	4.9	4.9	3.3	3.3	1.4	1.4	1.4				
Ref No.	Q3901					Q3902					Q3903					Q3941				
MODE	E	C	B			E	C	B			E	C	B			E	C	B		
CD PLAY	0.1	4.2	-0.5			3.4	5.1	3.4			3.4	5.1	3.4			3.6	3.5	3.6	0	3.5
Ref No.	Q3943					Q8321					Q8325					Q8331				
MODE	E	C	B			E	C	B			E	C	B			E	C	B		
CD PLAY	4	5.6	4.3			1.1	0	0.4			1.5	0	0.9			1.1	0	0.4	1.6	0
Ref No.	Q8341					Q8551					Q8552					Q8561				
MODE	E	C	B			E	C	B			E	C	B			E	C	B		
CD PLAY	1.5	0	0.9			0.1	5.1	0.1			5.1	0	5.1			1.3	3.9	1.9	4.5	2.3
Ref No.	QR8111										QR8420					QR8571				
MODE	1	2	3	4	5	6			E	C	B			E	C	B				
CD PLAY	0	0	1.3	0.1	0.1	4.8			0	4.3	0.1			3.4	3.3	0.1				

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15.2. DSP P.C.B.

Ref No.	IC1300																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
CD PLAY	2.4	0	5	3.3	0	1.6	1.6	1.6	1.2	0	0	0	2.4	2.4						
STANDBY	2.4	0	5	3.3	0	1.7	1.6	1.6	1.2	0	0	0	2.4	2.4						
Ref No.	IC1301																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
CD PLAY	2.4	0	5	3.3	0	1.6	1.6	1.6	1.2	0	0	0	2.4	2.4						
STANDBY	2.4	0	5	3.3	0	1.7	1.6	1.6	1.2	0	0	0	2.4	2.4						
Ref No.	IC1302																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
CD PLAY	2.4	0	5	3.3	0	1.6	1.6	1.6	1.2	0	0	0	2.4	2.4						
STANDBY	2.4	0	5	3.3	0	1.7	1.6	1.6	1.2	0	0	0	2.4	2.4						
Ref No.	IC1303																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
CD PLAY	2.4	0	5	3.3	0	1.6	1.6	1.6	1.2	0	0	0	2.4	2.4						
STANDBY	2.4	0	5	3.3	0	1.7	1.6	1.6	1.2	0	0	0	2.4	2.4						
Ref No.	IC1305																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	0	0	0	0.2	0	0	1.2	0	0	3.3	3.3	3.3	3.3	1.8	1.6	1.6	0	0	0
STANDBY	0	0	0	0	0	0	0	0	0	0	3.3	3.3	3.3	3.3	1.6	1.6	1.6	0	0	0
Ref No.	IC1305																			
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	0	3.2	3.3	0	3.3	1.2	2.4	1.2	2.6	1.4	2.4	1.5	2.3	3.3	1.8	2.3	1.6
STANDBY	0	0	0	0	3.2	3.3	0	3.3	2.3	2.4	2.4	2.6	2.4	2.4	2.5	2.3	3.3	2.5	2.3	2.6
Ref No.	IC1305																			
MODE	41	42	43	44	45	46	47	48												
CD PLAY	2.4	1.6	0.2	2.5	0.1	0	3.3	1.2												
STANDBY	2.4	0	0	0.3	0.1	0	3.3	1.2												
Ref No.	IC1306																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	1.7	1.6	1.6	1.7	0	1.7	1.2	1.7	3.3	1.7	1.7	0	3.3	0	1.2	0	0	3.3	1.2
STANDBY	0	1.7	1.4	1.4	1.7	0	1.7	1.2	1.7	3.3	1.7	1.7	0	3.3	0	1.2	0	0	3.3	1.2
Ref No.	IC1306																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	0	0	0.5	0.5	1.2	0	3.3	3.3	3.3	0	3.3	3.3	1.2	3.3	3.3	0	3.3	3.3	2.7	0
STANDBY	0	0	0.5	0.6	1.2	0	3.3	3.3	3.3	0	3.3	3.3	1.2	3.3	3.3	0	3.3	3.3	2.7	0
Ref No.	IC1306																			
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	2.5	1.2	1.6	1.6	0	1.6	1.2	3.3	1.2	1.2	1.2	0	0.1	0.2	1.2	2.4	2.4	3.3
STANDBY	0	0	0.5	0.6	3.3	0	0	3.3	3.3	3.3	3.3	0	1.2	0	0.1	0.2	1.2	2.4	2.4	3.3
Ref No.	IC1306																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
CD PLAY	2.3	0	2.4	2.6	1.2	2.5	2.7	3.3	0	1.7	3.3	0	3.3	0	0	0	1.2	0	1.2	1.1
STANDBY	2.3	0	2.4	2.6	1.2	3.3	3.3	3.3	0	1.7	3.3	0	3.3	0	0	0	1.2	0	1.2	0
Ref No.	IC1306																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
CD PLAY	3.3	0	0.8	1.3	1.2	3	0	0	0	1.2	0	3.2	0.2	3.2	0	3.3	0	3.3	0	3.3
STANDBY	3.3	0	0.9	1.3	1.2	3	0	0.1	0.1	1.2	0	3.3	0.2	3.2	0	3.3	0	3.3	0	3.3
Ref No.	IC1306																			
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
CD PLAY	3.3	1.2	0	3.3	3.3	3.3	0	3.3	0	3.4	0	3.4	0	0	0	0	0	0	0	0
STANDBY	3.3	1.2	0	3.3	3.3	3.3	0	3.3	0	3.4	0	3.4	0	0	0	0	0	0	0	0
Ref No.	IC1306																			
MODE	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
CD PLAY	0	0	3.3	0	3.3	0	0	3.3	0	0	0	0	0	0	0	3.3	0	0	0	0
STANDBY	0	0	3.3	0	3.3	0	0	3.3	0	0	0	0	0	0	0	3.3	0	0	0	0
Ref No.	IC1306																			
MODE	141	142	143	144																
CD PLAY	0	3.3	3.3	0																
STANDBY	0	3.3	3.3	0																

Ref No.	IC1307																			
MODE	1	2	3	4	5															
CD PLAY	3.9	3.9	0	1.2	0.7															
STANDBY	3.9	3.9	0	1.2	0.7															
Ref No.	IC1308																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	3.3	2.3	1.2	0	1.3	1.3	3.3	2.5	2.6	0	1.7	1.2	3.3	2.7	3.3	3.2	3.3	0	3.2	0.1
STANDBY	3.3	2.3	2.4	0	2.5	2.6	3.3	2.5	2.6	0	2.5	0.3	3.3	2.7	3.3	3.2	3.3	0	3.3	0.2
Ref No.	IC1308																			
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	3	3.3	0	1.2	0.8	1	1.1	0	0	-	3.3	1.7	2.7	-	3.3	2.4	2.6
STANDBY	0	0	0	3	3.3	0	1.2	0.8	1	1.1	0	0	-	3.3	1.7	2.7	-	3.3	2.4	2.6
Ref No.	IC1308										IC1310									
MODE	41	42	43	44	45	46	47	48	49	50		1	2	3	4	5				
CD PLAY	0	2.4	2.3	3.3	2.3	2.3	0	0.2	0.1	0		3.3	0	0	0	3.3				
STANDBY	0	2.4	2.3	3.3	2.3	2.4	0	0.2	0.1	0		3.3	0	0	0	3.3				
Ref No.	IC1311																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
CD PLAY	0	3.2	0	0	1.6	1.2	1.6	1.6	-	-	4.7	0	2.3	2.2	2.2	0				
STANDBY	0	3.2	0	0	1.6	1.2	1.6	1.6	-	-	4.7	0	2.3	2.3	2.2	0				
Ref No.	IC1312					IC1314														
MODE	1	2	3	4	5		1	2	3											
CD PLAY	-	3.3	0	0	3.3		3.9	0	3.3											
STANDBY	-	3.3	0	0	3.3		3.9	0	3.3											
Ref No.	Q1300					Q1305														
MODE	E	C	B			E	C	B												
CD PLAY	3.3	3.3	2.6			0	0.5	0												
STANDBY	3.3	3.3	2.6			0	0.5	0												
Ref No.	QR1305																			
MODE	E	C	B																	
CD PLAY	0	3.2	0.2																	
STANDBY	0	3.2	0.2																	

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15.3. Main P.C.B.

Ref No.	IC313																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	1.8	3.3	0	0	0.8	0.9	0	1.6	3.2	3.2	3.3	0	0	1	1.8	-0.1	3.2	3.2	1.6	1.6
STANDBY	1.8	3.3	0	0	0.8	0.9	0	1.6	3.2	3.2	3.3	0	0	1	1.9	0	3.2	3.2	1.6	1.6
Ref No.	IC313																			
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	0	3.1	0	0	1.8	0	3.2	0	1.6	0	0	1.6	1.6		
STANDBY	0	0	0	0	0	0	3.1	0	0	1.8	0	3.2	0	1.6	0	0	1.6	1.6		
Ref No.	IC315					IC316														
MODE	1	2	3	4	5		1	2	3											
CD PLAY	3.2	3.3	0	3.3	3.3		23.1	0	12											
STANDBY	3.2	3.3	0	3.3	3.3		23.1	0	12											
Ref No.	IC317																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	12	-	0	0	3.4	0	3.3	0	-	0	0	3.3	0	3.3	0	-	3.3	0	0	0
STANDBY	12	-	0	0	3.4	0	3.3	0	-	0	0	3.3	0	3.3	0	-	3.3	0	0	0
Ref No.	IC317																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	-	12	12	14.5	0	30	30	14.5	0	0	14.5	30	14.5	14.5	30	14.5	0	0	14.5	30
STANDBY	-	12	12	14.5	0	30	30	14.5	0	0	14.5	30	14.5	14.5	30	14.5	0	0	14.5	30
Ref No.	IC317																			
MODE	41	42	43	44																
CD PLAY	30	0	14.5	-																
STANDBY	30	0	14.5	-																
Ref No.	IC318																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	12	-	0	0	3.4	0	3.3	0	-	0	0	3.3	0	3.3	0	-	3.3	0	0	0
STANDBY	12	-	0	0	3.4	0	3.3	0	-	0	0	3.3	0	3.3	0	-	3.3	0	0	0
Ref No.	IC318																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	-	12	12	14.5	0	30	30	14.5	0	0	14.5	30	14.5	14.5	30	14.5	0	0	14.5	30
STANDBY	-	12	12	14.5	0	30	30	14.5	0	0	14.5	30	14.5	14.5	30	14.5	0	0	14.5	30
Ref No.	IC318																			
MODE	41	42	43	44																
CD PLAY	30	0	14.5	-																
STANDBY	30	0	14.5	-																
Ref No.	IC319																			
MODE	1	2	3	4	5															
CD PLAY	4.6	3.3	0	-	1.7															
STANDBY	4.3	3.3	0	-	1.7															
Ref No.	IC501																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	3.3	3.3	3.2	0	3.2	-0.1	3.2	3.2	3.2	-0.1	-0.1	-0.1	-0.1	3.2	-0.1	3.2	3.2	3.2	3.2	-0.1
STANDBY	3.3	3.3	3.2	0	3.2	0	3.2	3.2	3.2	0	0	0	0	0	0	3.2	3.2	3.2	3.2	0
Ref No.	IC501																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	0	1.5	3.2	3.2	-0.1	-0.1	-0.1	-0.1	-0.1	3.3	3.3	3.2	3.3	3.2	0.7	-0.1	-0.1	-0.1	-0.1	0
STANDBY	0	1.5	3.2	3.2	0	0	0	0	0	3.2	3.2	3.2	3.2	3.2	0.8	0	0	0	0	0
Ref No.	IC501																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	-0.1	-0.1	-0.1	3.2	1.2	3.2	3.3	3.2	0	3.3	-0.1	0.8	1.1	0.3	0.3	1.1	1.6	3.2	3.2	0.7
STANDBY	0	0	0	3.2	1.3	3.2	3.3	3.2	0	3.3	0	0.8	1.1	0.3	0.3	1.1	1.6	3.2	3.2	0.7
Ref No.	IC501																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
CD PLAY	3.2	0	3.2	-0.1	3.3	3.2	-0.1	3.2	2.6	1.4	0	3.2	3.2	3.2	3.2	-	-0.1	-0.1	3.2	3.2
STANDBY	0	0	3.2	0	3.2	3.2	0	3.2	2.6	1.4	0	3.2	3.2	3.2	3.2	-	0	0	3.2	3.2
Ref No.	IC501																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
CD PLAY	0	3.2	3.2	1.1	2.7	3	3.9	-0.1	3.2	3.2	3.4	3.2	3.2	1.1	1.1	2.4	-0.1	-0.1	3.2	3.2
STANDBY	0	3.2	3.2	1.1	2.7	3	0	0	3.2	3.2	3.4	3.2	3.2	1.1	1.1	2.4	0	0	3.2	3.2
Ref No.	IC502					IC503					IC504									
MODE	1	2	3	4	5	6	7	8		1	2	3		1	2	3	4	5		
CD PLAY	-	3.3	-0.1	-0.1	-0.1	-0.1	-0.1	-		5.4	-0.1	3.3		3.3	3.3	0	0	0		
STANDBY	-	3.3	0	0	0	0	0	-		5.4	0	3.3		3.3	3.3	0	0	0		
Ref No.	IC505					IC506														
MODE	1	2	3	4	5	6		1	2	3	4	5	6							
CD PLAY	1.6	0	1.6	3.3	3.3	1.6		1.6	0	0.9	3.3	3.3	1.6							
STANDBY	1.6	0	1.6	3.3	3.3	1.6		1.6	0	0.9	3.3	3.3	1.6							

Ref No.	Q306				Q307				Q308				Q309				Q310			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	3.2	0		24.6	0	-		12.2	-	12.2		12.2	-	12.2		12.2	-	12.2	
STANDBY	0	3.2	0		24.6	0	-		12.2	-	12.2		12.2	-	12.2		12.2	-	12.2	
Ref No.	Q311				Q312				Q313				Q314				Q315			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	12.2	-	12.2		0	3.7	0		0	0	0.6		6.8	9.3	7.4		0	3.2	0	
STANDBY	12.2	-	12.2		0	3.7	0		0	0	0.6		6.8	9.3	7.4		0	3.2	0	
Ref No.	Q500				Q501				Q502				Q503							
MODE	E	C	B		E	C	B		E	C	B		1	2	3	4	5	6		
CD PLAY	0	0	0.5		0	3.2	0		3.2	3.2	2.6		6.4	3.2	3.2	0	0	0		
STANDBY	0	0	0.5		0	3.2	0		3.2	3.2	2.6		0	2.6	3.3	3.2	0.6	0		
Ref No.	QR300				QR500				QR501											
MODE	E	C	B		E	C	B		1	2	3	4	5	6						
CD PLAY	0	3.2	0		0	0	3.2		5.3	3.2	0	0	0	0						
STANDBY	0	3.2	0		0	0	3.2		5.3	3.2	0	0	0	0						
Ref No.	QR502								QR503				QR504							
MODE	1	2	3	4	5	6			E	C	B		E	C	B					
CD PLAY	5.3	3.2	0	0	0	0			0	0	3		5.4	0	5.4					
STANDBY	5.3	3.2	0	0	0	0			0	0	3		5.4	5.4	0					
Ref No.	QR506				QR507				QR508											
MODE	E	C	B		E	C	B		E	C	B									
CD PLAY	0	0	3		0	0	3		0	0	3									
STANDBY	0	0	3		0	0	3		0	0	3									

SA-PTX5E/EB/EG MAIN P.C.B.

15.4. Input-output P.C.B.

Ref No.	IC100			IC103																				
MODE	1	2	3		1	2	3																	
CD PLAY	11.9	-0.1	9		1.6	5	-0.1																	
STANDBY	11.9	0	9		1.6	5	0																	
Ref No.	IC105																							
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20				
CD PLAY	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9				
STANDBY	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9				
Ref No.	IC105																							
MODE	21	22	23	24	25	26	27	28	29	30	31	32												
CD PLAY	5.9	5.9	5.9	5.9	5.9	5.9	11.9	5.9	-0.1	-0.1	-0.1	-0.1												
STANDBY	5.9	5.9	5.9	5.9	5.9	5.9	11.9	5.9	-0.1	-0.1	-0.1	-0.1												
Ref No.	IC108																							
MODE	1	2	3	4	5																			
CD PLAY	-0.1	5.4	-0.1	-0.1	-																			
STANDBY	-0.1	5.4	-0.1	-0.1	-																			
Ref No.	IC200																							
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20				
CD PLAY	4.9	-0.1	-0.1	2.1	4.1	0	-0.1	1.4	2.1	4.9	0	-0.1	0	-0.1	0	4.9	2.4	2.3	-0.1	3				
STANDBY	4.9	-0.1	-0.1	2.1	4.1	0	-0.1	1.4	2.1	4.9	0	-0.1	0	-0.1	0	4.9	2.4	2.3	-0.1	3				
Ref No.	IC200																							
MODE	21	22	23	24	25	26	27	28	29	30	31	32												
CD PLAY	3	-0.1	3	3	-0.1	1.2	1.2	-0.1	1.3	1.3	0	2.2												
STANDBY	2.6	-0.1	2.6	2.6	-0.1	1.2	1.2	-0.1	1.3	1.3	-0.1	2.2												
Ref No.	IC201																							
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20				
CD PLAY	4.9	-0.1	-0.1	1.8	4.5	1.4	-0.1	1.4	1.9	-0.1	1.4	-0.1	1.8	4.7	1.8	4.8	1.9	1.9	-0.1	1.9				
STANDBY	4.9	-0.1	-0.1	1.9	4.5	1.4	-0.1	1.4	1.9	-0.1	1.4	-0.1	1.9	4.7	1.8	4.8	1.9	1.9	-0.1	1.9				
Ref No.	IC201																							
MODE	21	22	23	24	25	26	27	28	29	30	31	32												
CD PLAY	1.9	-0.1	1.2	1.2	-0.1	1.2	1.2	-0.1	1.2	1.2	-0.1	1.9												
STANDBY	1.9	-0.1	1.2	1.2	-0.1	1.2	1.2	-0.1	1.3	1.3	-0.1	2												
Ref No.	IC203									IC205														
MODE	1	2	3	4	5	6				1	2	3	4	5	6	7	8							
CD PLAY	0	2.4	4.9	2.4	-0.1	2.4				5.9	5.9	5.9	-0.1	5.9	5.9	5.9	11.9							
STANDBY	0	2.4	4.9	2.4	-0.1	2.4				5.9	5.9	5.9	-0.1	5.9	5.9	5.9	11.9							
Ref No.	IC250																							
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16								
CD PLAY	-0.1	-0.1	1.6	1.6	3.1	-0.1	-0.1	1.6	-0.1	-0.1	-0.1	3.1	1.2	1.5	-	1.5								
STANDBY	0	0	1.6	1.6	3.1	0	0	1.6	0	0	0	3.1	1.2	1.5	-	1.5								
Ref No.	IC280									IC310														
MODE	1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8							
CD PLAY	5.9	5.9	5.9	-0.1	5.9	5.9	5.9	11.9		5.9	5.9	5.9	-0.1	5.9	5.9	5.9	11.9							
STANDBY	5.9	5.9	5.9	-0.1	5.9	5.9	5.9	11.9		5.9	5.9	5.9	0	5.9	5.9	5.9	11.9							
Ref No.	IC903																							
MODE	1	2	3	4	5																			
CD PLAY	3.9	3.9	0	1.2	0.7																			
STANDBY	3.9	3.9	0	1.2	0.7																			
Ref No.	Q201						Q202						Q203						Q204					
MODE	1	2	3	4	5	6					E	C	B			E	C	B						
CD PLAY	4.9	4.9	4.9	-0.1	-0.1	-0.1					10.8	11.9	11.5			-0.1	-0.1	-1.6						
STANDBY	4.9	4.9	4.9	-0.1	-0.1	-0.1					10.9	11.9	11.5			-0.1	-0.1	6.7						
Ref No.	Q205			Q206			Q207			Q208			Q301											
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B						
CD PLAY	-0.1	-0.1	-1.9	-0.1	-0.1	-2.2	-0.1	-0.1	-2.2	-0.1	-0.1	-2.2	-0.1	-0.1	-2.2	-0.1	-0.1	-2.2						
STANDBY	-0.1	-0.1	0.6	-0.1	-0.1	0.6	-0.1	-0.1	0.6	-0.1	-0.1	0.6	-0.1	-0.1	0.6	-0.1	-0.1	0.6						
Ref No.	Q302			Q303			Q304			Q305			Q316											
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B						
CD PLAY	-0.1	-0.1	-1.9	-0.1	-0.1	-2	-0.1	-0.1	-2.1	-0.1	-0.1	-2.1	1.1	-0.1	1.1	3.2	-0.1	3.2						
STANDBY	-0.1	-0.1	0.6	-0.1	-0.1	0.6	-0.1	-0.1	0.6	-0.1	-0.1	0.6	1.2	-0.1	1.2	3.2	-0.1	3.2						
Ref No.	Q317																							
MODE	E	C	B																					
CD PLAY	0.8	-0.1	0.8																					
STANDBY	0.8	-0.1	0.8																					
Ref No.	QR102			QR200			QR201			QR202			QR203											
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B						
CD PLAY	-0.1	3.2	-0.1	4.9	-1.5	4.9	-0.1	4.5	-0.1	-0.1	4.9	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	3.1					
STANDBY	-0.1	3.2	-0.1	4.9	4.8	0	-0.1	4.5	-0.1	-0.1	0	2.7	-0.1	0	2.7	-0.1	0	3.1						
Ref No.	QR204			QR205			QR206			QR207			QR210											
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B						
CD PLAY	-0.1	11.5	-0.1	10.8	10.8	0	-0.1	4.2	-0.1	-0.1	-1.8	-0.1	-0.1	-1.8	-0.1	-0.1	4.7	-0.1						
STANDBY	-0.1	11.5	-0.1	10.9	10.9	0	-0.1	4.2	-0.1	-0.1	1.8	1.8	-0.1	-0.1	-0.1	-0.1	4.7	-0.1						
Ref No.	QR211			QR304			QR305			QR306														
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B									
CD PLAY	-0.1	0	4.2	-0.1	-1.3	-0.1	-0.1	6.2	-0.1	-0.1	-0.1	0.8	-0.1	-0.1	-0.1									
STANDBY	-0.1	0	4.2	2.7	2.6	0	-0.1	3.2	-0.1	-0.1	-0.1	0.8	-0.1	-0.1	-0.1									

SA-PTX5E/EB/EG INPUT-OUTPUT P.C.B.

15.5. Panel, Regulator, Headphone & Tray loading P.C.B.

Ref No.	IC800																			
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	1.1	0.1	0.1	3.3	1.1	1.1	0	3.3	-24.8	-24.8	-22.6	-22.6	-15.8	-	22.6
STANDBY	0	0	0	0	1.9	1.1	0.1	0.1	3.3	1.2	1.1	0	3.3	-24.6	-24.6	-24.6	-24.6	-15.	7	-13.4
Ref No.	IC800																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	-24.8	-24.8	-24.8	-18	-18	-24.8	-24.8	-22.6	-24.8	-25.5	-15.9	-16	-23.2	-23	-23	-23	-23	-23	-23.1	-23.1
STANDBY	-24.6	-24.6	-22.3	-15.6	-15.6	-22.3	-24.6	-20.1	-11.2	-25	-18	-15.8	-23	-22.9	-22.9	-22.9	-22.9	-22.9	-22.9	-22.9
Ref No.	IC800																			
MODE	41	42	43	44																
CD PLAY	-23	-23	3.3	0																
STANDBY	-22.9	-22.8	3.3	0																
Ref No.	Q801																			
MODE	E	C	B																	
CD PLAY	-0.1	2.8	-0.1																	
STANDBY	-0.1	2.8	-0.1																	

SA-PTX5E/EB/EG PANEL P.C.B.

Ref No.	IC772					IC773					IC774				
MODE	1	2	3	4	5	1	2	3	4	5	1	2	3		
CD PLAY	15.3	6	-0.1	1.2	6.6	15.2	4.1	-0.1	1.2	6.6	6	-0.1	3.2		
STANDBY	15.4	6	-0.1	1.2	6.6	15.4	4.1	-0.1	1.2	6.6	6	-0.1	3.2		
Ref No.	IC902					QR700					QR701				
MODE	1	2	3	4	5										
CD PLAY	3.9	3.9	0	1.2	0.7										
STANDBY	3.9	3.9	0	1.2	0.7										
Ref No.	QR700					QR701					QR702				
MODE	E	C	B			E	C	B			E	C	B		
CD PLAY	0	3.3	0			0	3.3	0			0	3.3	0		
STANDBY	0	3.3	0			0	3.3	0			0	3.3	0		

SA-PTX5E/EB/EG REGULATOR P.C.B.

Ref No.	IC901															
MODE	1	2	3	4	5	6	7	8								
CD PLAY	4.5	4.5	4.5	-0.1	4.5	4.5	4.5	9								
STANDBY	4.5	4.5	4.5	0	4.5	4.5	4.5	9								

SA-PTX5E/EB/EG HEADPHONE P.C.B.

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

SA-PTX5E/EB/EG TRAY LOADING P.C.B.

15.6. SMPS P.C.B.

Ref No.	IC700				IC701				IC703											
MODE	1	2	3		1	2	3		1	2	3	4	5	6	7	8				
CD PLAY	6	0	5		7	21.1	0		12.9	7.5	9.3	21.6	153.5	-	7.2	7.2				
STANDBY	6	0	5		7	21.1	0		13	7.7	9.4	21.8	154.5	-	7.3	7.3				
Ref No.	IC704				IC706				IC707											
MODE	1	2	3		1	2	3	4	5	6	7		1	2	3					
CD PLAY	4.3	0	2.5		160.7	0	0	17.3	0.1	1.4	0.4		12	0	15					
STANDBY	4.3	0	2.5		163.6	0	0	17.3	0.1	1.4	0.4		12	0	15					
Ref No.	Q702				Q703				Q704				Q706				Q710			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	-0.5	-0.2	-0.7		0	0.1	0.8		15.3	9.2	14.6		8.5	14.6	9.1		0	15	0.4	
STANDBY	-0.5	-0.3	-0.7		0	0	0.8		15.4	9.2	14.8		8.6	14.8	9.1		0	15	0.4	
Ref No.	Q712				Q713				Q802											
MODE	E	C	B		E	C	B		E	C	B									
CD PLAY	5	4.9	0		0	0	3.3		6.2	6.2	5.6									
STANDBY	5	4.9	0		0	0	3.3		6.2	6.2	5.6									
Ref No.	QR711				QR712				QR713				QR714							
MODE	E	C	B		E	C	B		E	C	B		E	C	B					
CD PLAY	0	3.3	0		0	3.3	0		8.5	14.6	9.1		0	3.3	0					
STANDBY	0	3.3	0		0	3.3	0		8.6	14.8	9.1		0	3.3	0					

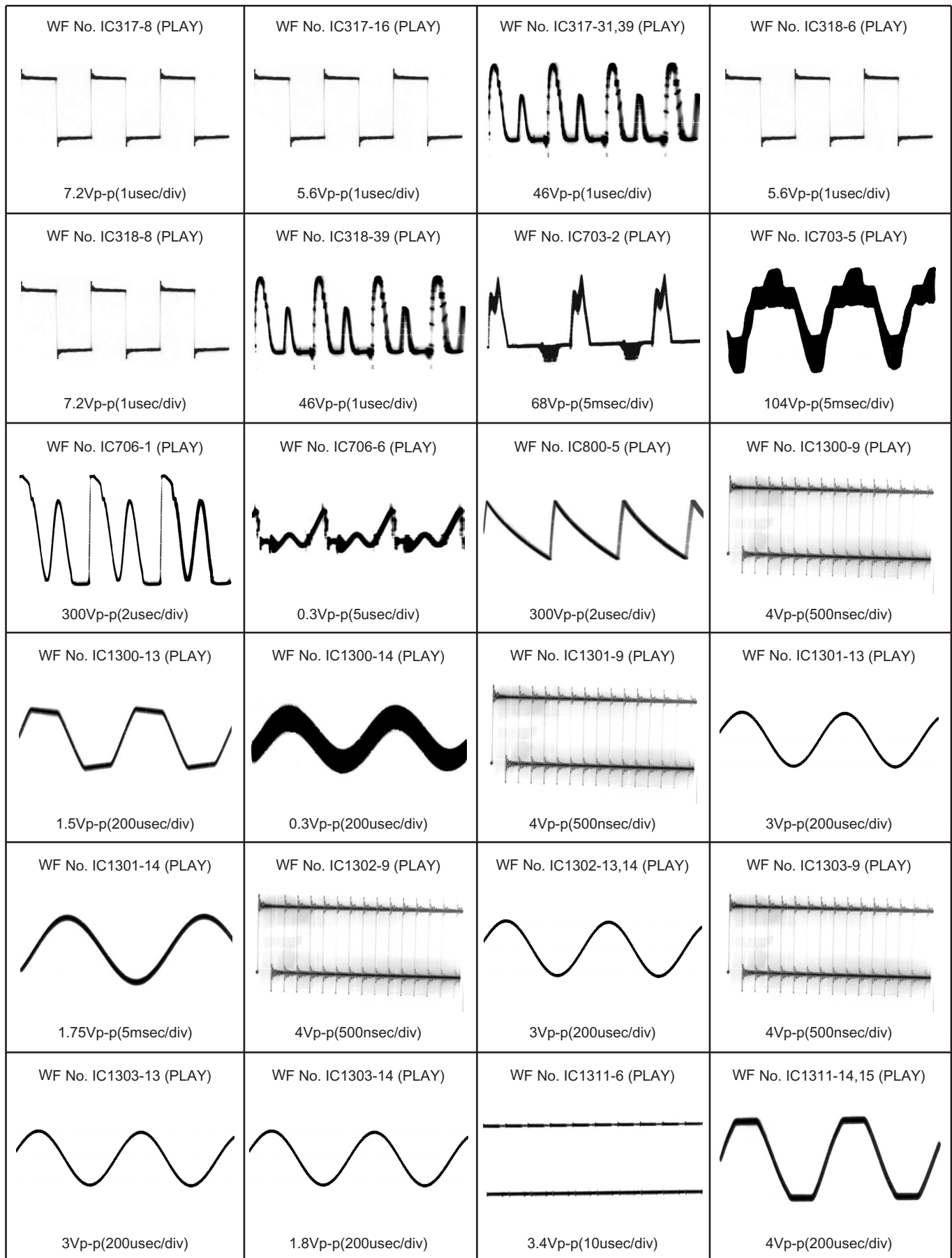
SA-PTX5E/EB/EG SMPS P.C.B.

15.7. Waveform Chart

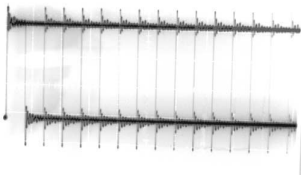
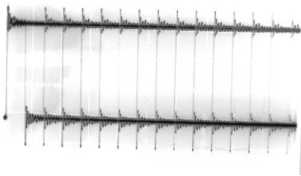
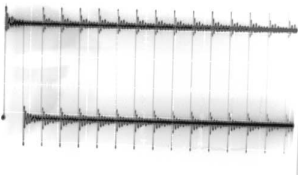
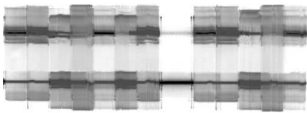
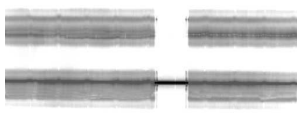
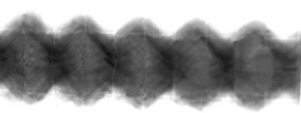
15.7.1. Waveform 1



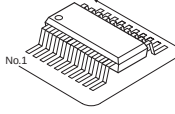
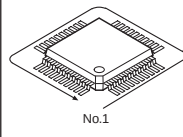
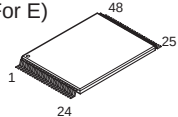
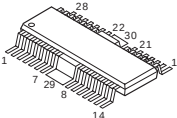
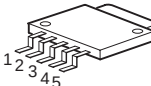
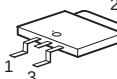
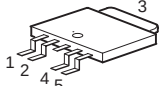
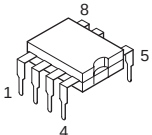
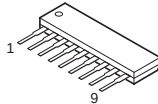
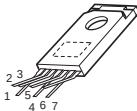
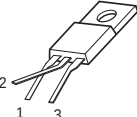
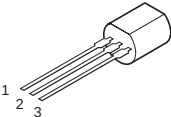
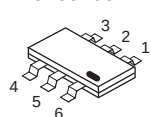
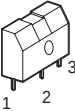
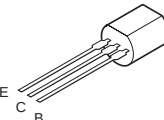
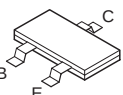
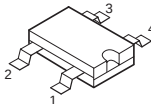
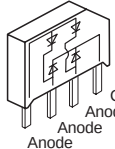
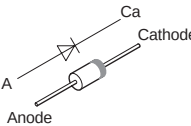
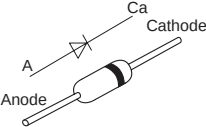
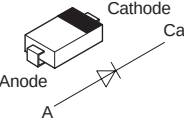
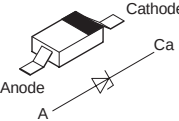
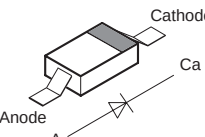
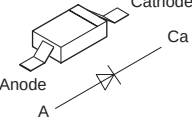
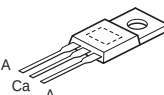
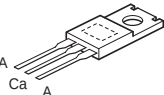
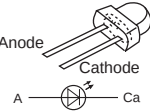
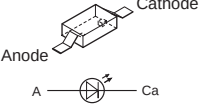
15.7.2. Waveform 2



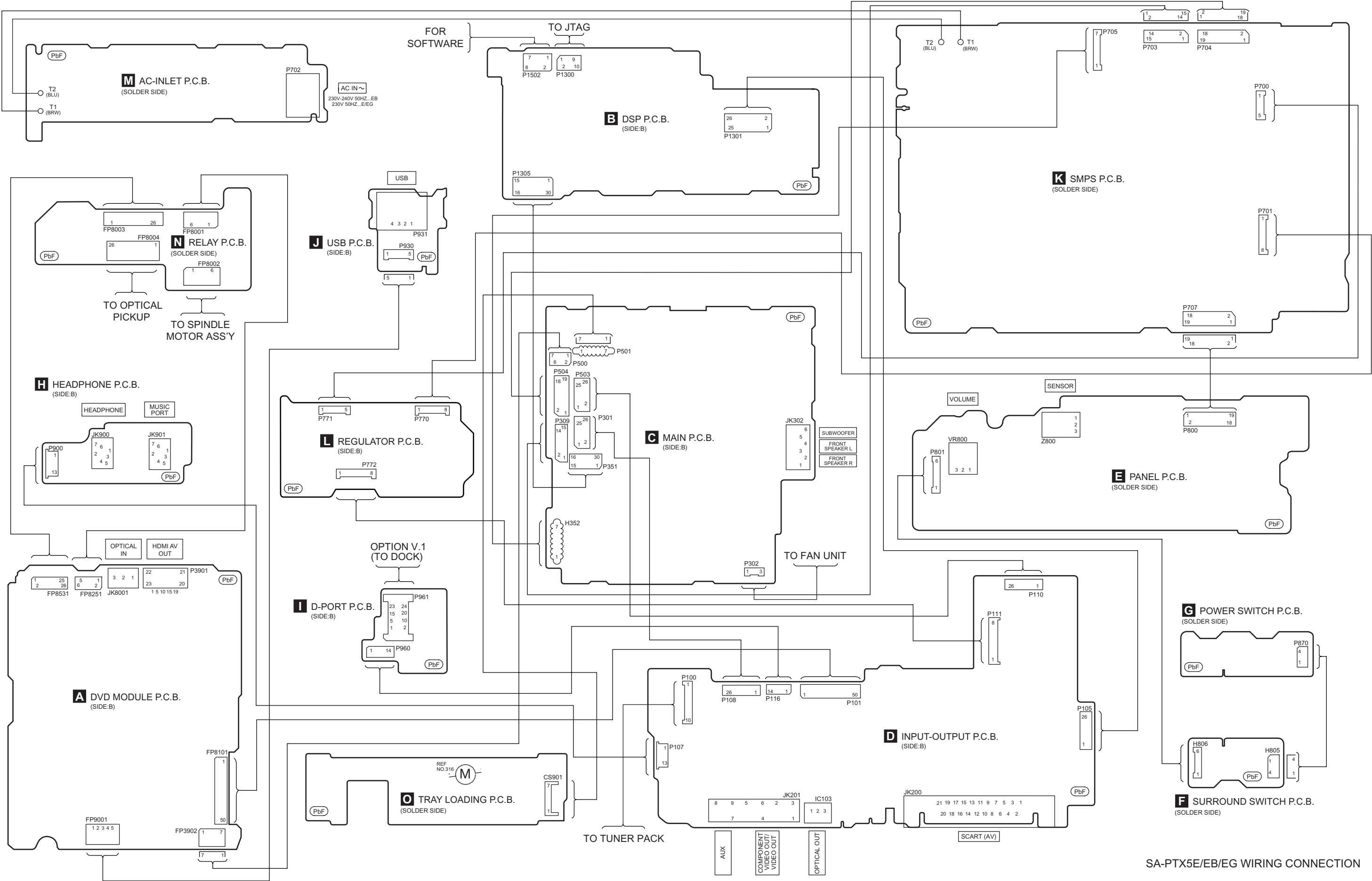
15.7.3. Waveform 3

WF No. IC3901-35 (PLAY)  4.8Vp-p(500nsec/div)	WF No. IC3901-38 (PLAY)  4Vp-p(500nsec/div)	WF No. IC3901-43 (PLAY)  3.6Vp-p(500nsec/div)	WF No. IC3901-45 (PLAY)  3.6Vp-p(100nsec/div)
WF No. IC3901-87,88,89 (PLAY)  7.2Vp-p(5usec/div)	WF No. IC3901-92,93,94 (PLAY)  7.2Vp-p(5usec/div)	WF No. IC3901-95 (PLAY)  0.6Vp-p(10usec/div)	WF No. IC8421-15 (PLAY)  2.4Vp-p(5msec/div)
WF No. IC8421-16,19,20,21,22 (PLAY)  4Vp-p(200usec/div)	WF No. IC8421-26 (PLAY)  5Vp-p(200usec/div)	WF No. IC8421-27 (PLAY)  0.6Vp-p(200usec/div)	

16 Illustration of IC's, Transistors and Diodes

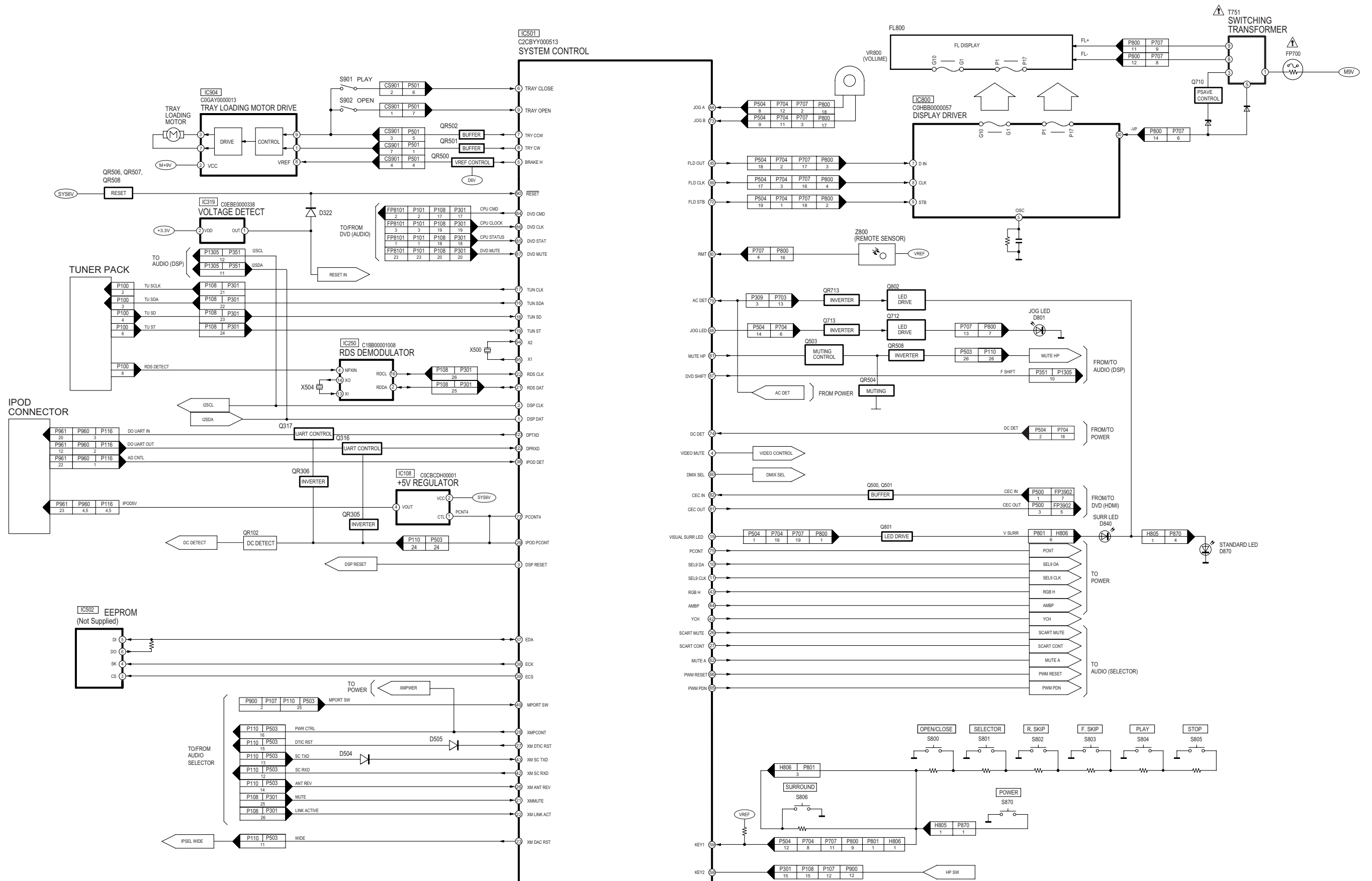
 No.1	C0ABBB000403 (8p) C1BB00001008 (16p) C0DBZY00002 (8p) C0DBZY00018 (8p) C0EBA0000029 (4p) C0FBAY000032 (14p) C0FBBK000049 (16p) C0FBBK000050 (28p)	C0JBAB000837 (6p) C0JBAZ001251 (20p) C1AB00002460 (44p) C1AB00002461 (38p) C1AB00002750 (32p) C3ABPG000145 (54p) C3ABMG000228 (50p) C9ZB00000461 (32p)	C1AB00001731 (6p) C0JBAB0000908 (6p)	 No.1	C0HBB0000057 (44p) C2HBZY000024 (144p) C2CBYY000513 (100p) MN864702A (128p) MN2DS0018MA (216p)					
C3FBMD000197 RFKWMHB0D322 (For EB/EG) RFKWMHB0E322 (For E)	 1 24 25 48	C0AABB000085	 1 28 22 30 21 15 14	C0GBG0000048	 1 2 3 4 5	C0CBCDH00001 C0DBAMH00009	C0CBAHG00011 C0CBABG00027 C0DBGYY00269	 1 2 3	C0DBEHG00006	 1 2 4 5 3
MIP2F20MSSCF	 1 8 5 4	C0CBADG00023 C0CBCDC00063 C0EBE0000338 C0EBE0000456 C0JBAB000907 C0JBAA000501	 1 9	C0GAY0000013	 1 2 3 4 5 6 7	C5HACYY00003	 1 2 3	C0EAS0000032	B3ZAZ0000017	 1 2 3 4 5
C0DAEMZ00001	 1 2 3	B1BACG000023 B1BCCG000002	 1 2 3 4 5 6	B1GFAFNN0001 XP0621400L XN0460100L	 1 2 3	B1BABK000001	 1 2 3	C0EAS0000032	2SC3940ARA B1GBCFJN0033 B1GBCFJJ0051 2SD1819A0L 2SB1218ARL 2SD0601AHL	
B1ABCF000011 B1ABCF000176 B1ABGC000001 B1ABGC000005	 B C E	B1ADCE000012 B1ADBL000010 B1ADCF000001 B1ADGB000008 B1CFHA000002 UNR211H00L UNR511V00L UNR521100L 2SB0709AHL	 1 2 3 4	B0EDKT000009	 Anode Anode Cathode Cathode	B0EBNR000028	 A Cathode Anode	B0EAKB000004 B0EAKM000117 B0HAJM000005 B0JAJG000005 B0JAMD000005		
MA2J72800L	 A Cathode Anode	 Anode Cathode A	B0ACCK000005 B0BC01700015 B0JCAE000001 B0JCMD000010 B0BC9R000008 B0BC6R100010	B0ACCK000005 B0BC01700015 B0JCAE000001 B0JCMD000010 B0BC9R000008 B0BC6R100010	 Anode Cathode A	B0BC8R100004 B0BC010A0007 B0BC2R4A0006 B0BC5R000009 B0BC01200019 B0BC01400019	 Anode Cathode A	B0JCPC000004		
 Anode Cathode A	MAZ81100HL MAZ80300LL MAZ82700LL MAZ83000ML MA2J11100L	B0ZAZ0000052 B0HBSM000052	 A Ca A	B0ZAZ0000052 B0HBSM000052	 A Ca A	B0HBSM000043	 Anode Cathode A	B3AEA0000058	B3AAB0000037 B3ABB0000306	 Anode Cathode A

17 Wiring Connection Diagram



18 Block Diagram

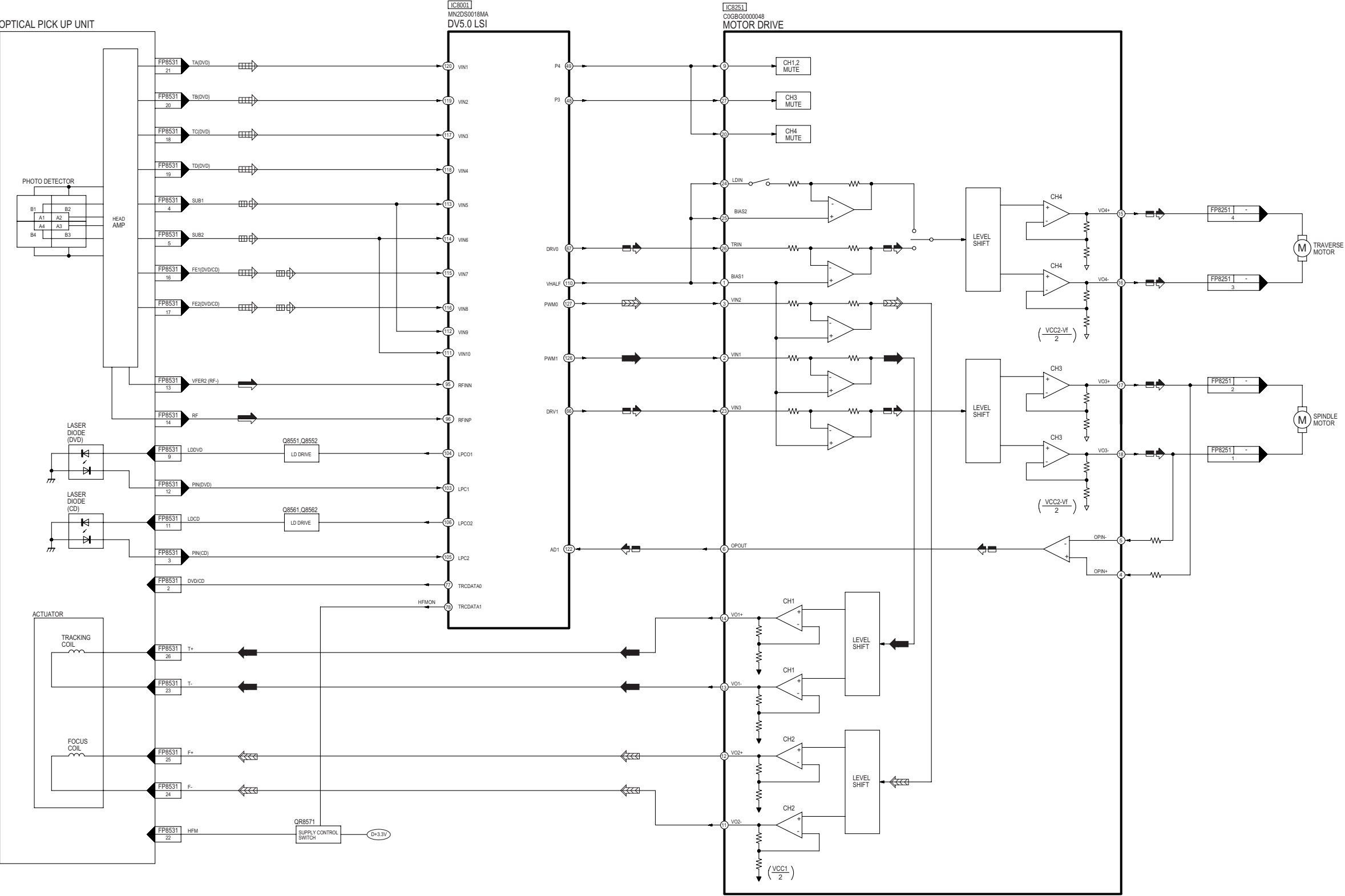
18.1. System Control



SA-PTX5E/EB/EG SYSTEM CONTROL BLOCK DIAGRAM

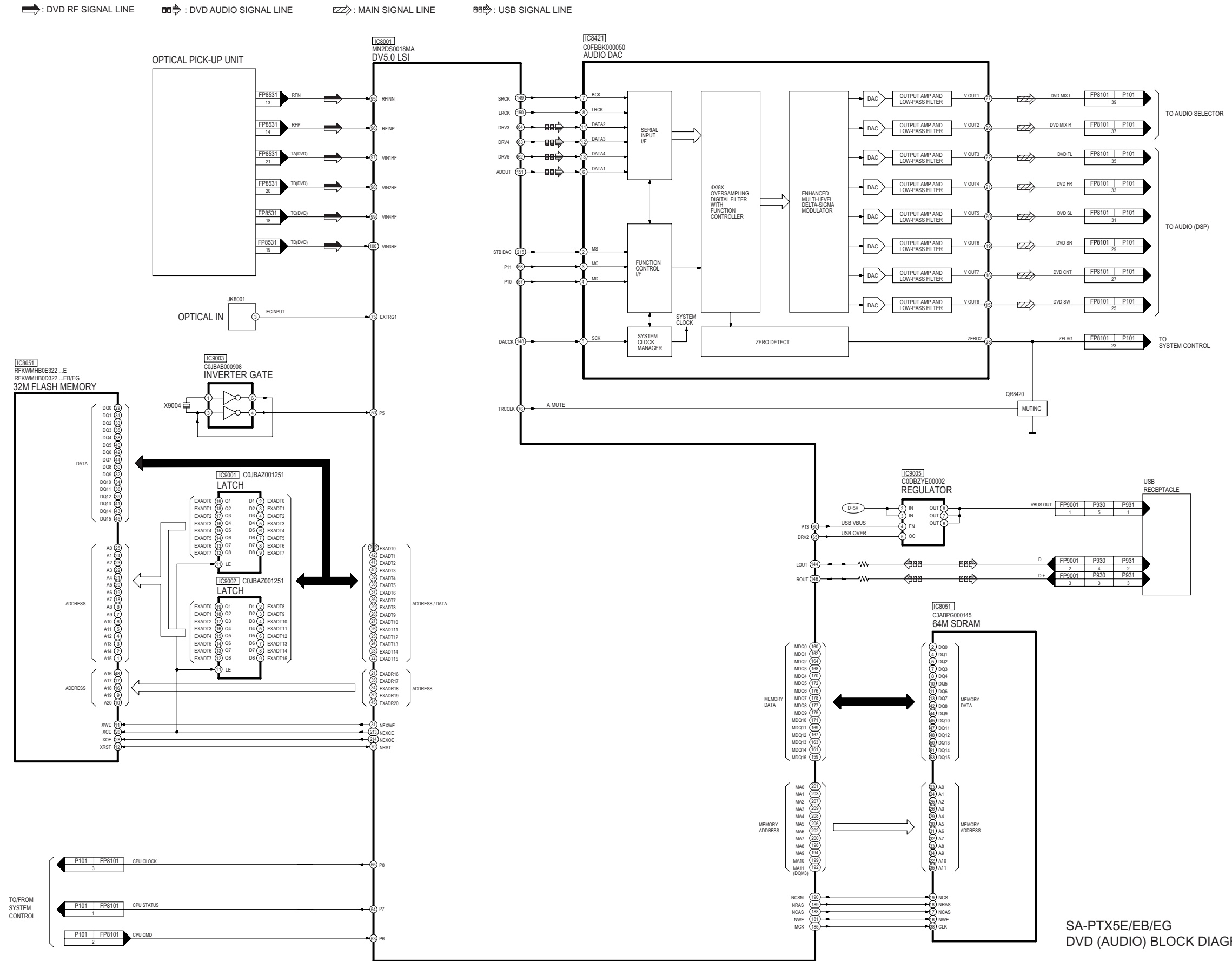
18.2. DVD (Servo)

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



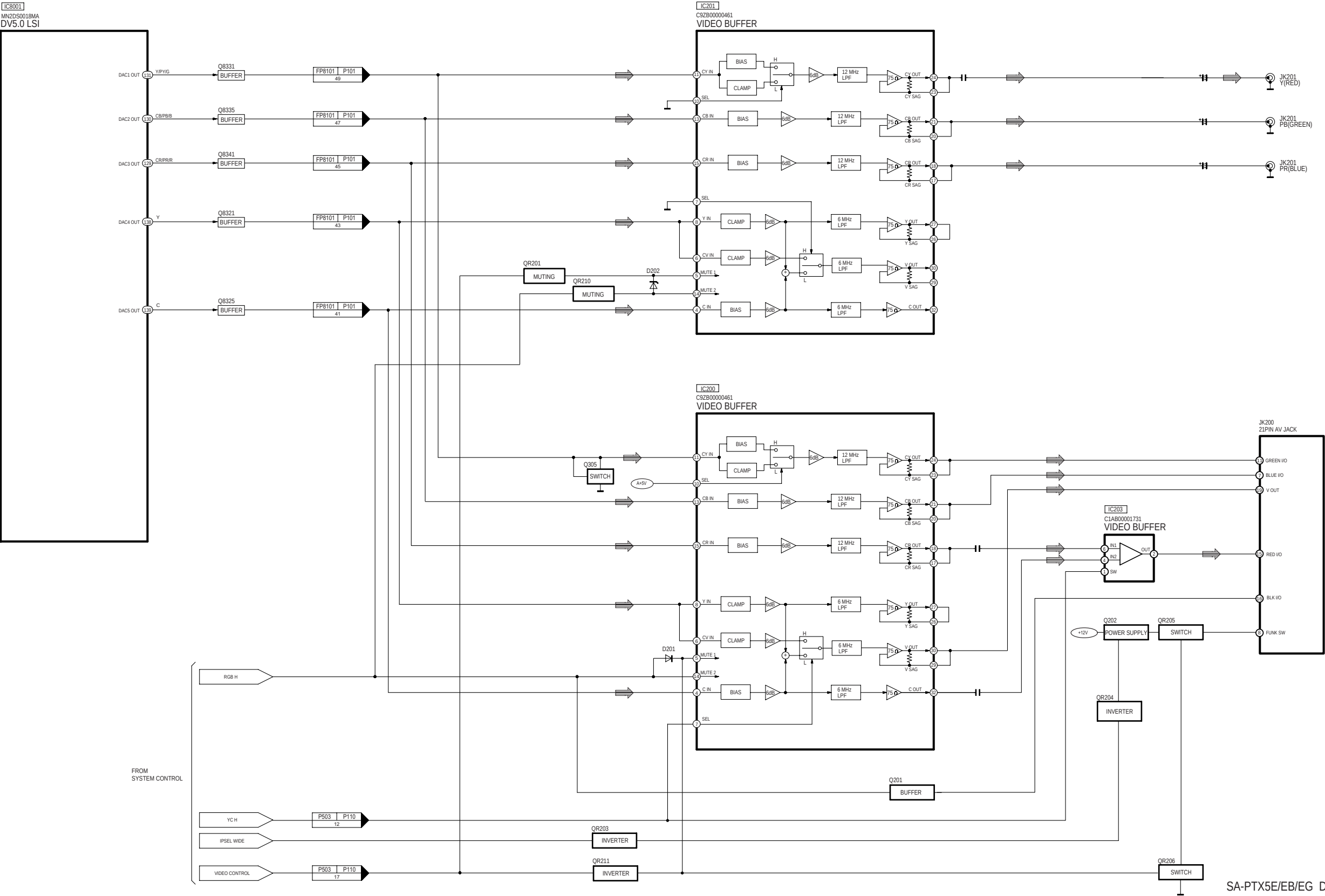
SA-PTX5E/EB/EG DVD (SERVO) BLOCK DIAGRAM

18.3. DVD (Audio)



18.4. DVD (Video)

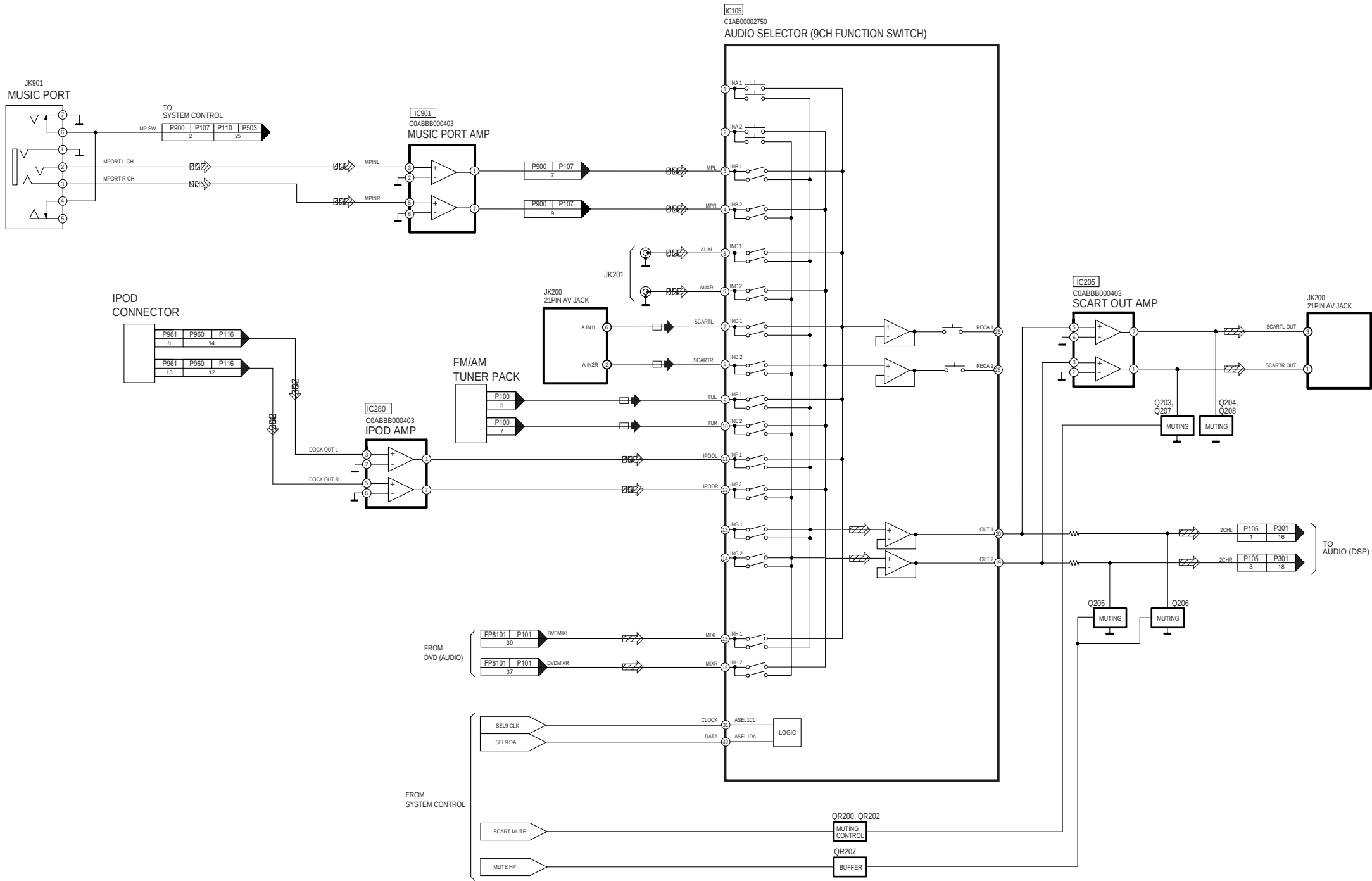
⇒ : DVD VIDEO SIGNAL LINE



SA-PTX5E/EB/EG DVD (VIDEO) BLOCK DIAGRAM

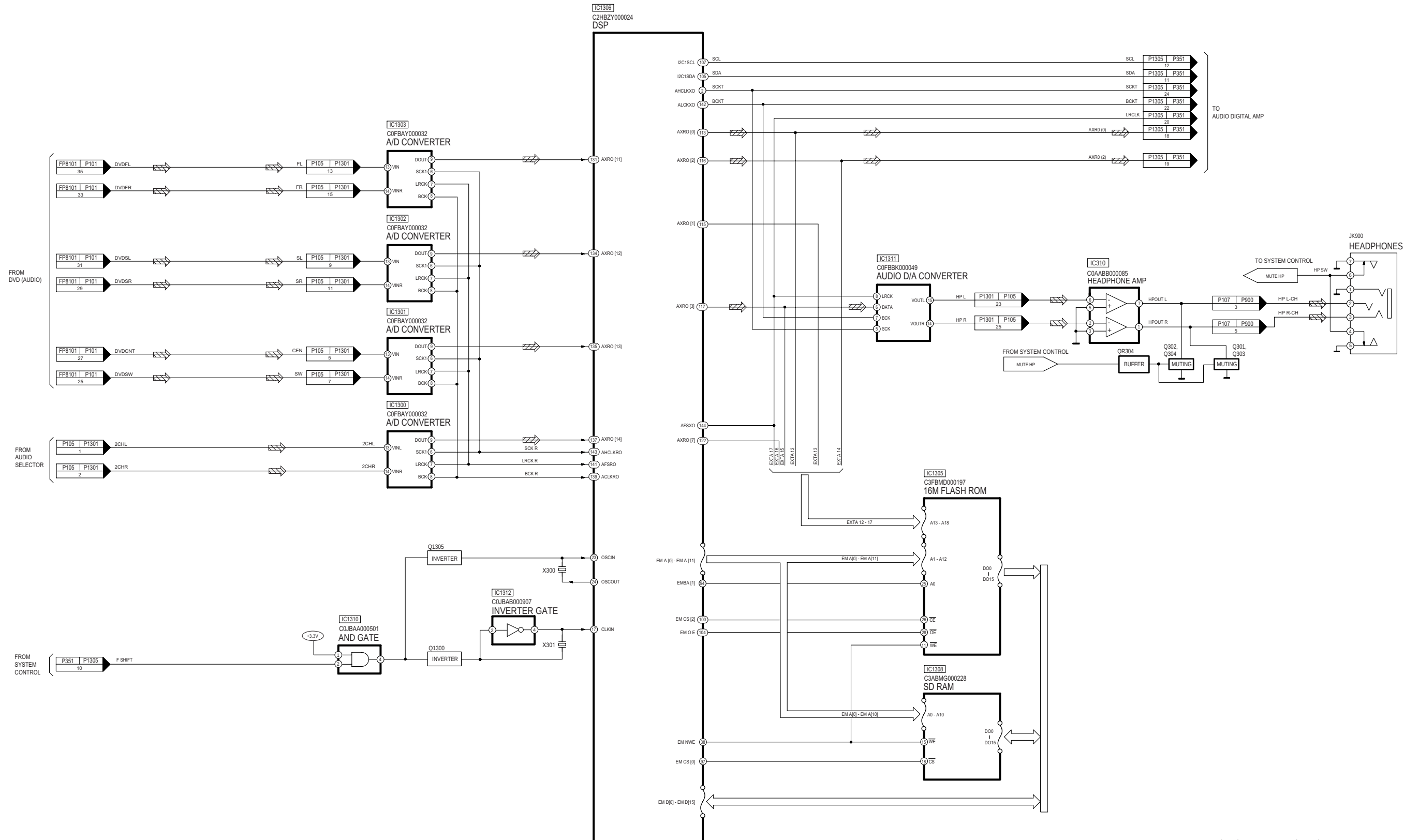
18.6. Audio Selector

▨▨▨▨ : MAIN SIGNAL LINE □▶ : FM / XM SIGNAL LINE ▨▨▨▨ : AUX / MUSIC PORT / IPOD SIGNAL LINE



SA-PTX5E/EB/EG AUDIO SELECTOR BLOCK DIAGRAM

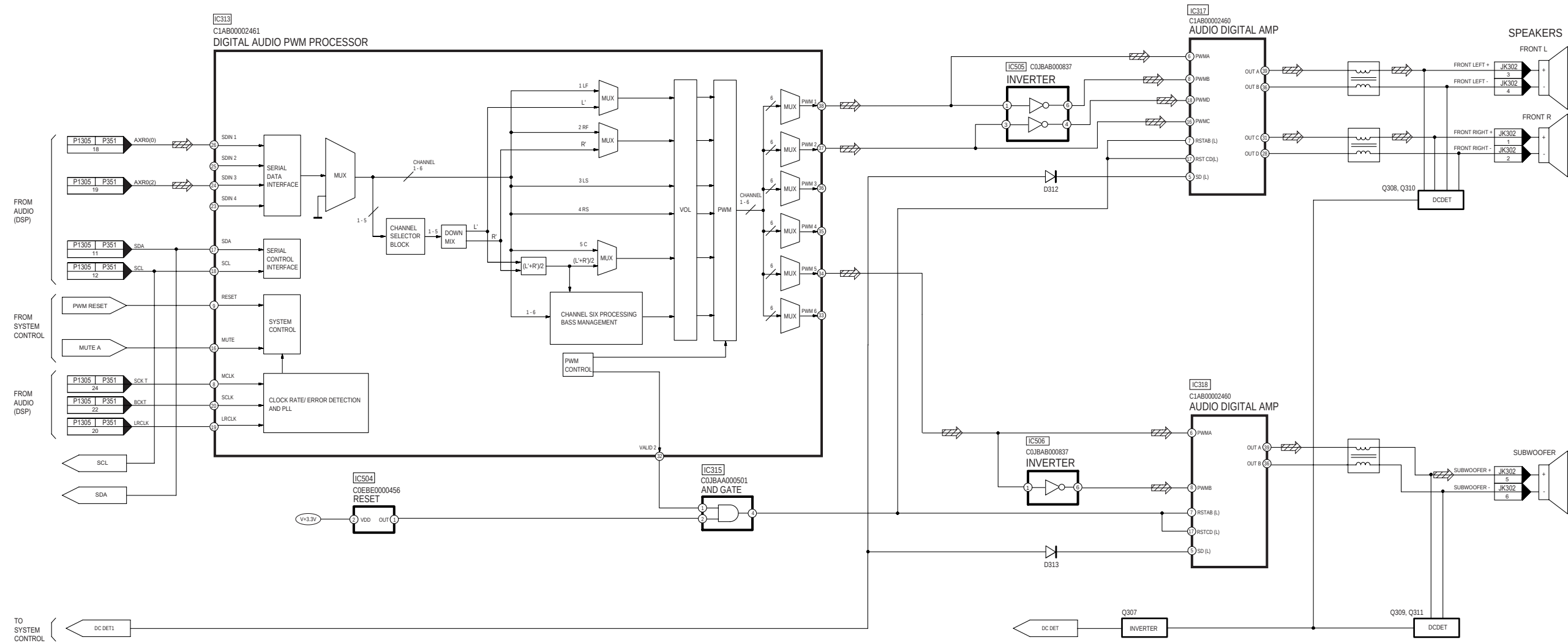
18.7. Audio (DSP)

 :MAIN SIGNAL LINE


SA-PTX5E/EB/EG AUDIO (DSP) BLOCK DIAGRAM

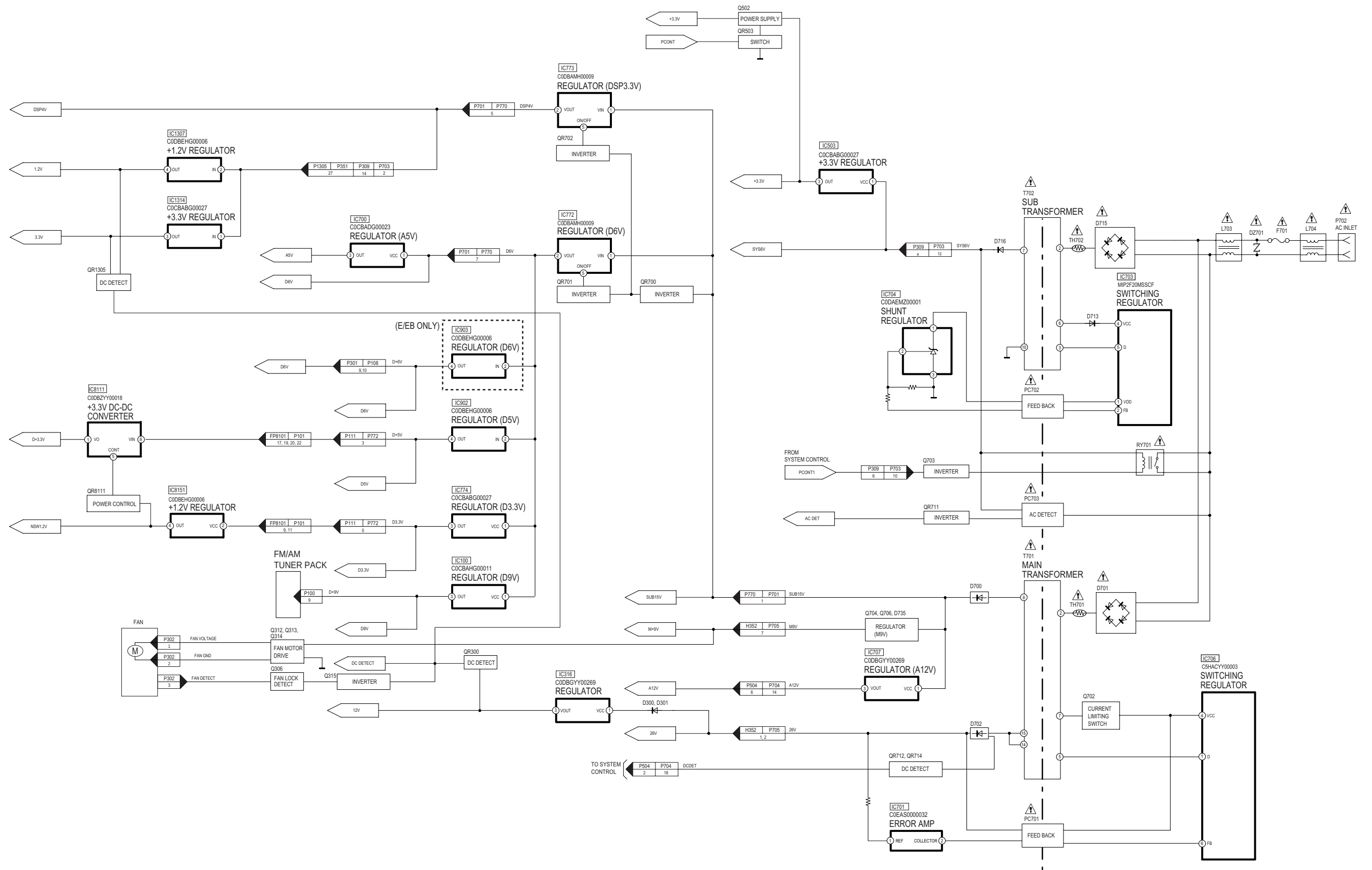
18.8. Audio Digital Amp

 : MAIN SIGNAL LINE



SA-PTX5E/EB/EG AUDIO DIGITAL AMP BLOCK DIAGRAM

18.9. Power



SA-PTX5E/EB/EG POWER BLOCK DIAGRAM

19 Schematic Diagram Notes

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

Notes:

- S800:** Open/close switch (OPEN/CLOSE ).
- S801:** Selector switch.
- S802:** Reverse switch ( /  TUNING).
- S803:** Forward switch ( / TUNING ).
- S804:** Play/memory switch ( / MEMORY).
- S805:** Stop/-Tune Mode/—FM Mode switch ( / -TUNE MODE/—FM MODE).
- S806:** Surround switch ( VIRTUAL SPEAKER).
- S870:** Power switch ( / AC IN).
- S901:** Play switch.
- S902:** Open switch.
- VR800:** VR volume jog.

- Important safety notice:

Components identified by  mark have special characteristics important for safety.

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

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

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

AC rated voltage capacitor:

C702, C718, C720, C725, C727, C728, C730, C737, C738

• 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=Farad, pF=Pico-Farad

• Coil

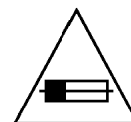
Unit of inductance is H, unless otherwise noted.

- Voltage and signal line

-  : +B signal line
-  : -B signal line
-  : USB signal line
-  : DVD RF signal line
-  : Motor Drive signal line
-  : DVD Audio signal line
-  : DVD Video signal line

-  : CD Head signal line
-  : DVD Head signal line
-  : Main signal line
-  : Tracking Error signal line
-  : Focus Error signal line
-  : FM signal line
-  : AUX/Ipod/Music Port signal line

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE F701 T4AH 250V FUSE



RISK OF FIRE-REPLACE FUSE AS MARKED.

FUSE CAUTION



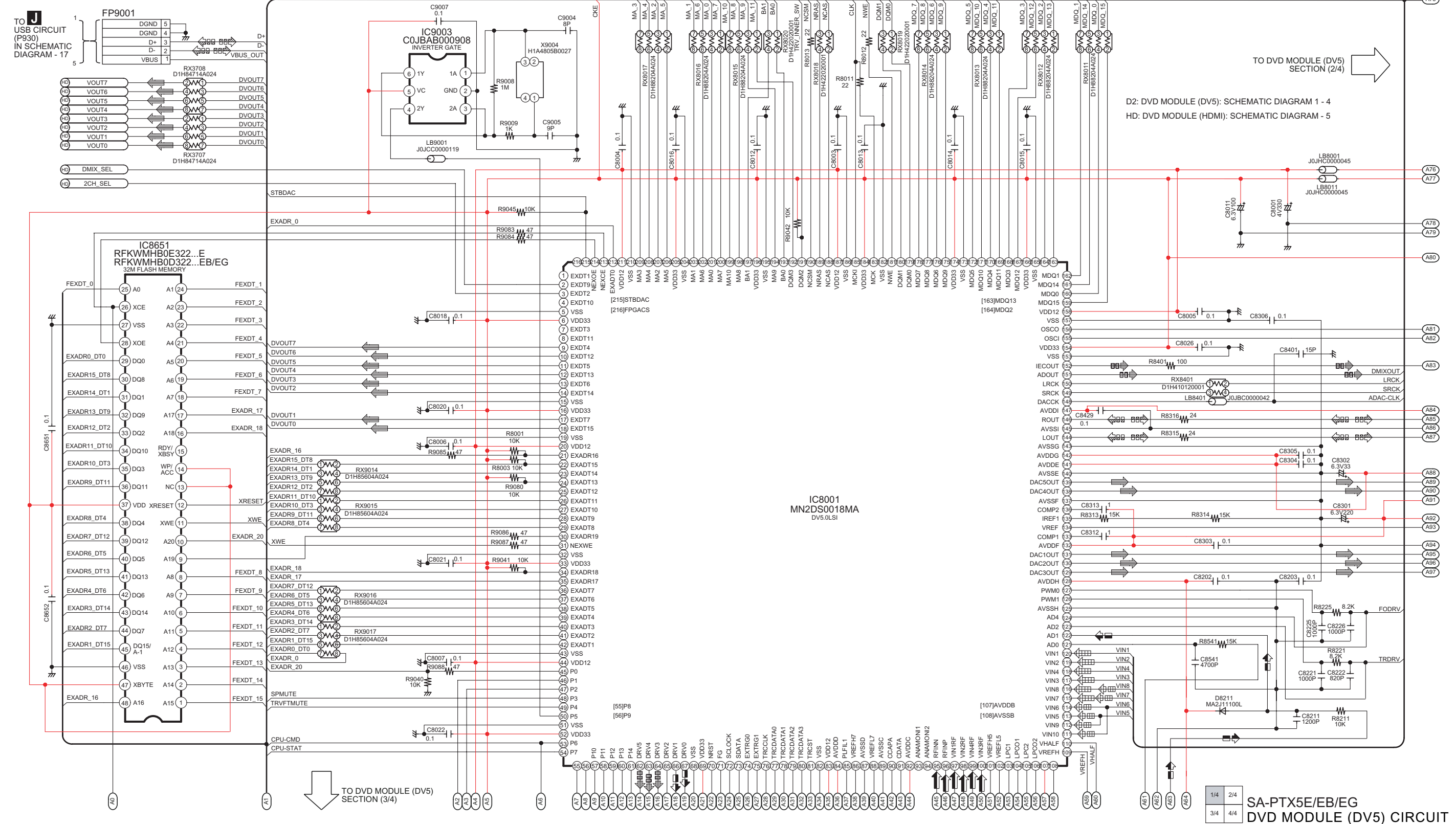
These symbols located near the fuse indicates that the fuse used is a fast operating type. For continued protection against fire hazard, replace with the same type fuse. For fuse rating, refer to the marking adjacent to the symbol.

20 Schematic Diagram

20.1. DVD Module Circuit

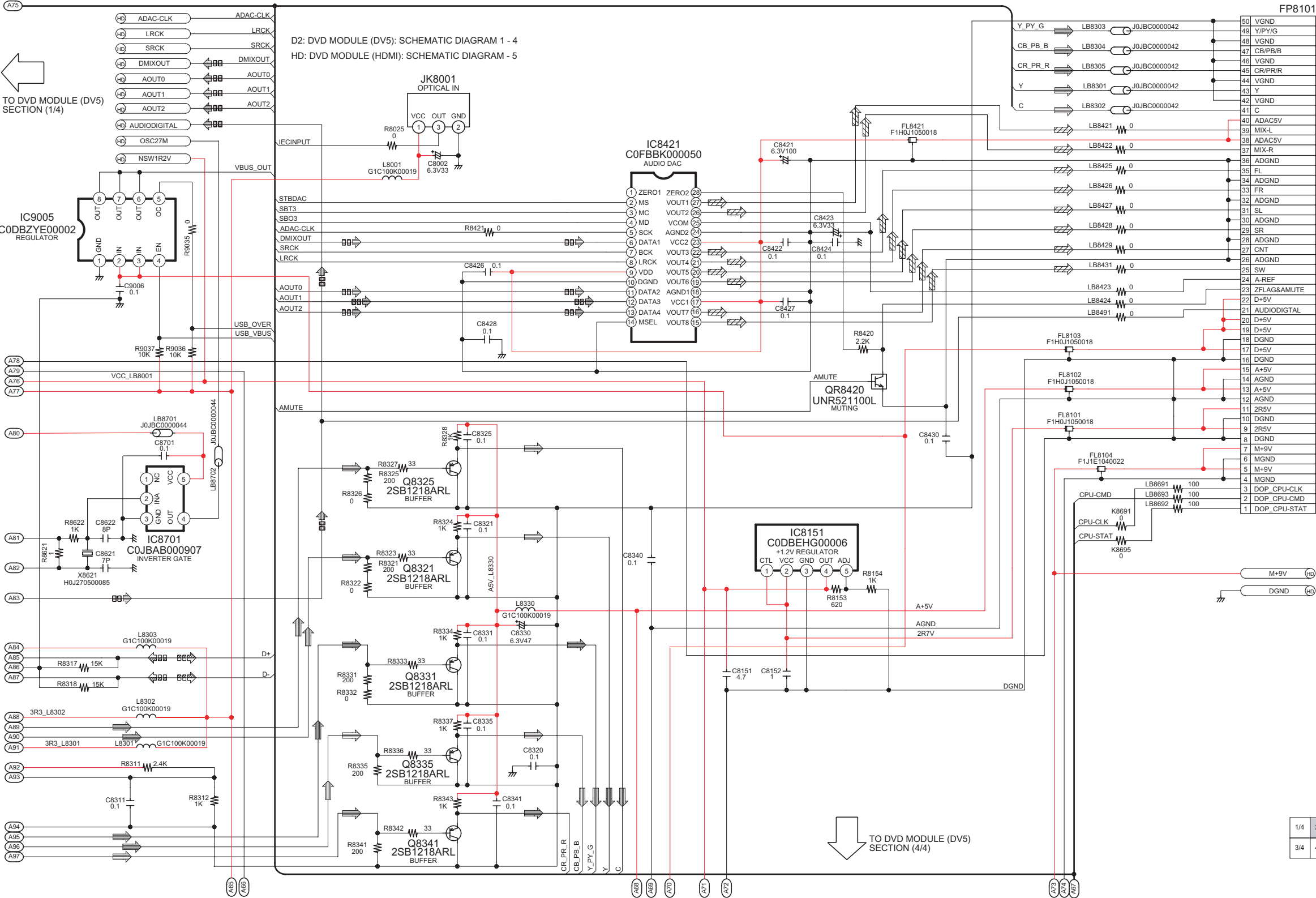
SCHEMATIC DIAGRAM - 1

A DVD MODULE (DV5) CIRCUIT



SCHEMATIC DIAGRAM - 2

A DVD MODULE (DV5) CIRCUIT



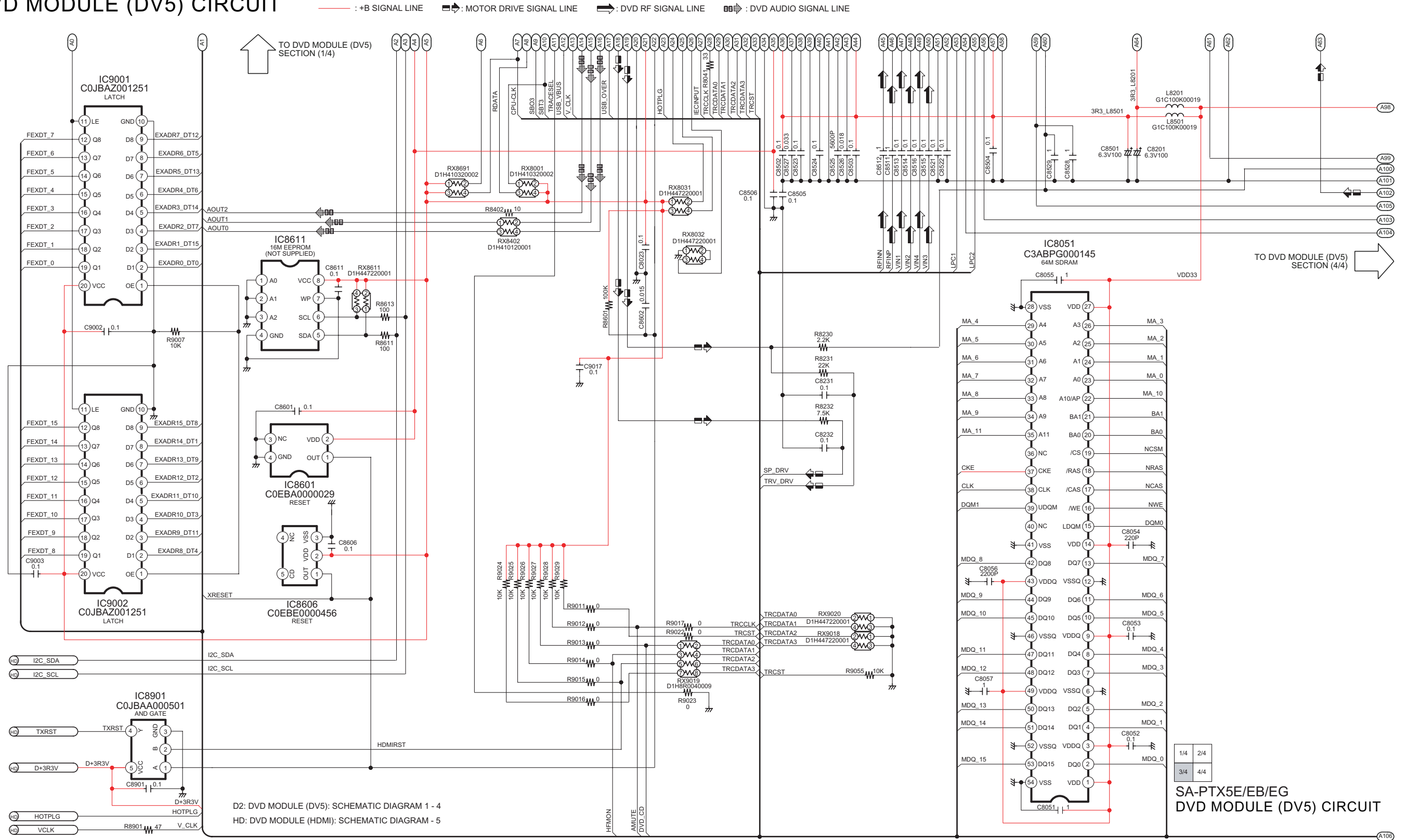
D TO INPUT-OUTPUT CIRCUIT (P101) IN SCHEMATIC DIAGRAM - 13

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

SA-PTX5E/EB/EG
DVD MODULE (DV5) CIRCUIT

SCHEMATIC DIAGRAM - 3

A DVD MODULE (DV5) CIRCUIT





B DSP CIRCUIT

— : +B SIGNAL LINE  : MAIN SIGNAL LINE

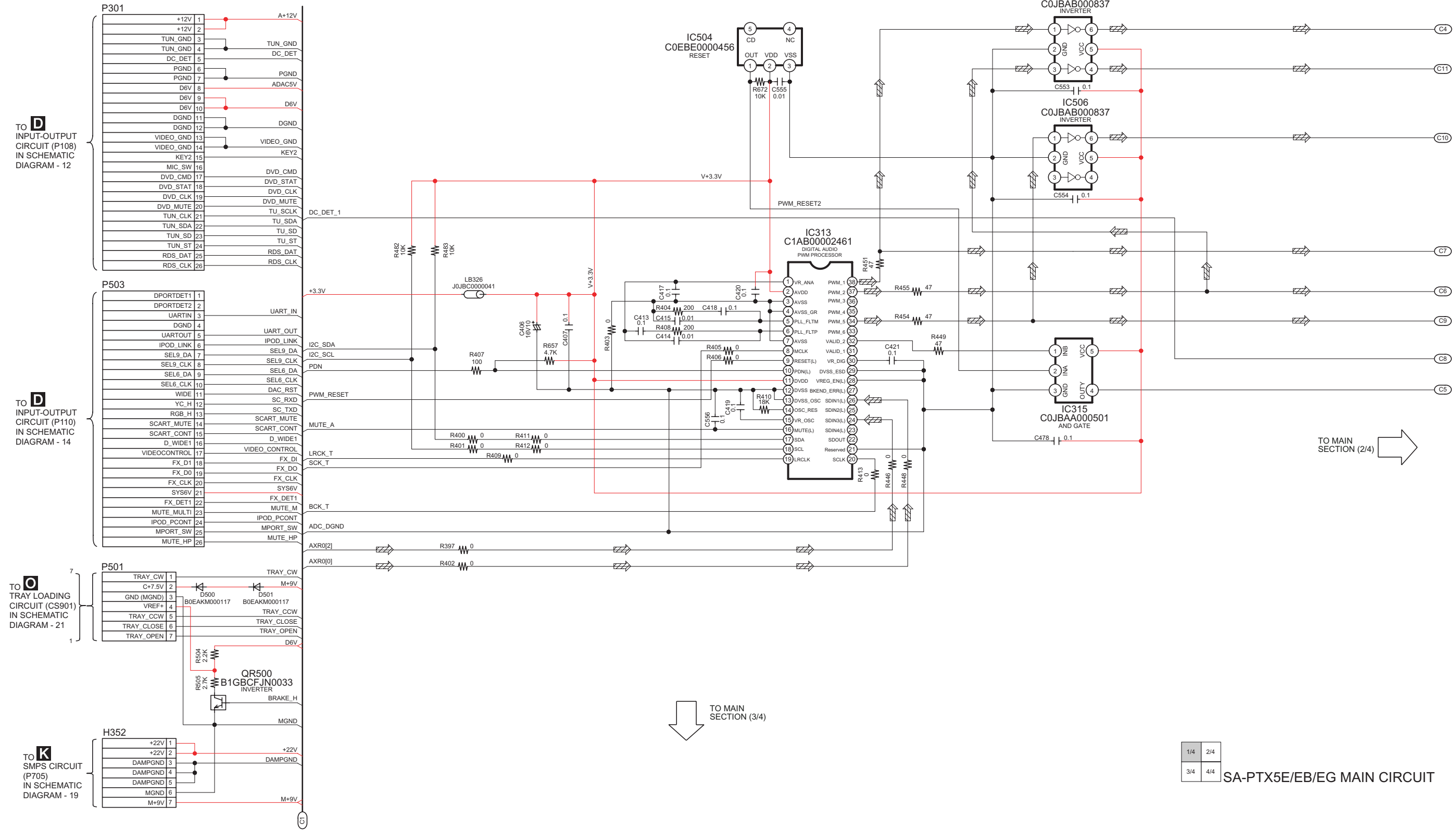


20.3. Main Circuit

SCHEMATIC DIAGRAM - 8

C MAIN CIRCUIT

— : +B SIGNAL LINE  : MAIN SIGNAL LINE



— : +B SIGNAL LINE  : MAIN SIGNAL LINE



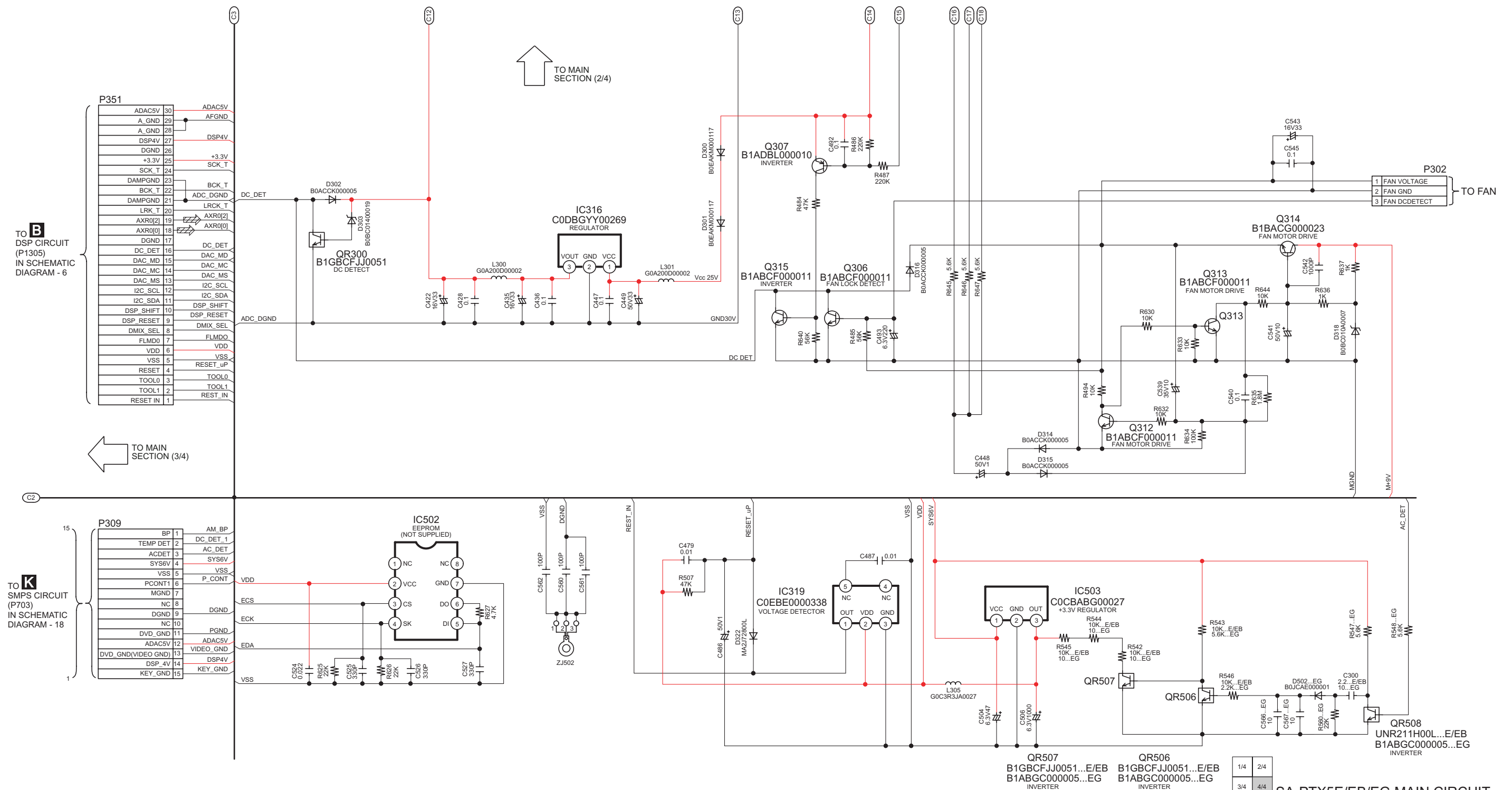
— : +B SIGNAL LINE



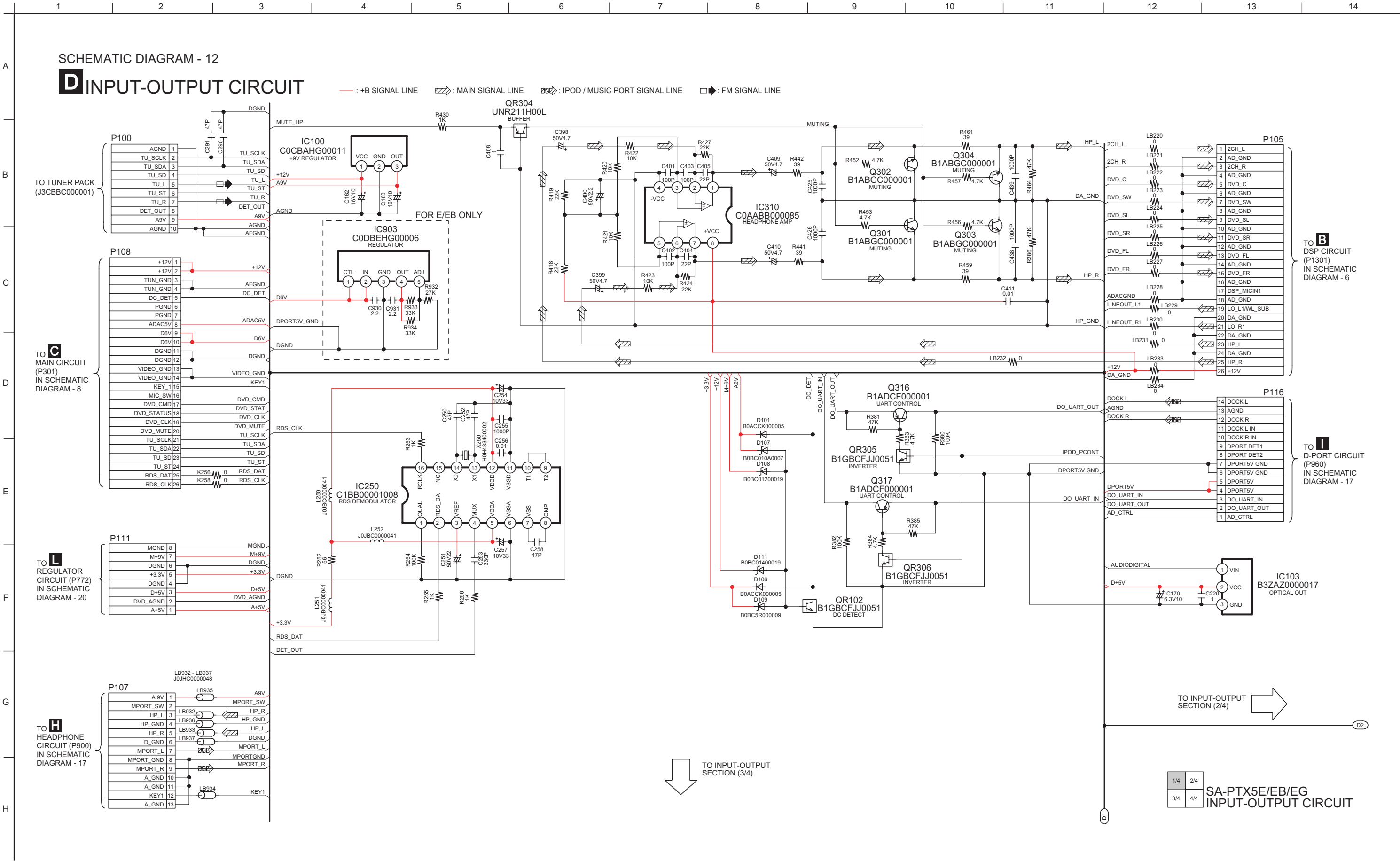
SCHEMATIC DIAGRAM - 11

C MAIN CIRCUIT

— : +B SIGNAL LINE : MAIN SIGNAL LINE



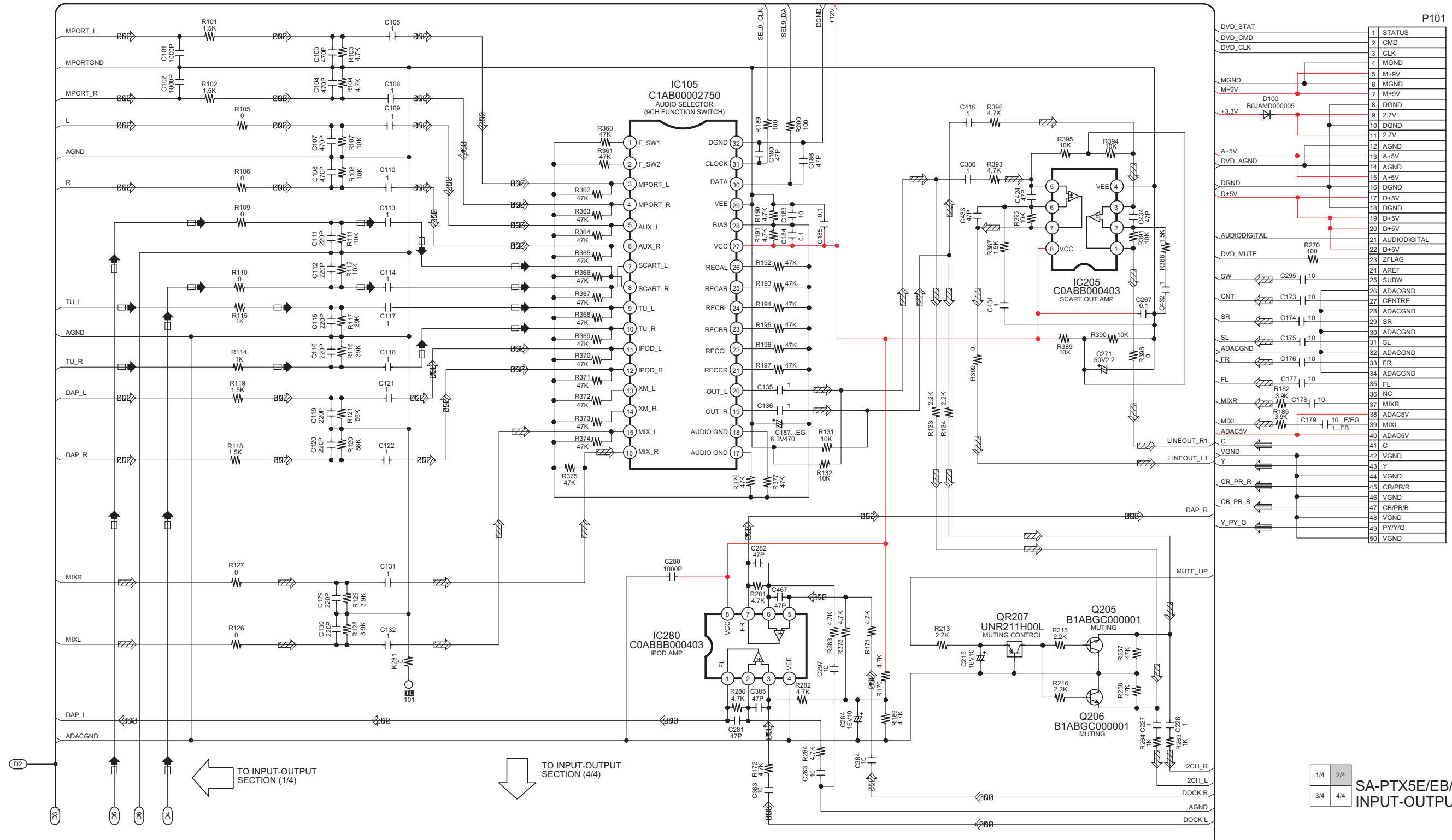
20.4. Input-output Circuit



SCHEMATIC DIAGRAM - 13

INPUT-OUTPUT CIRCUIT

— : +B SIGNAL LINE  : MAIN SIGNAL LINE  : DVD VIDEO SIGNAL LINE  : IPOD / MUSIC PORT / AUX SIGNAL LINE  : FM SIGNAL LINE



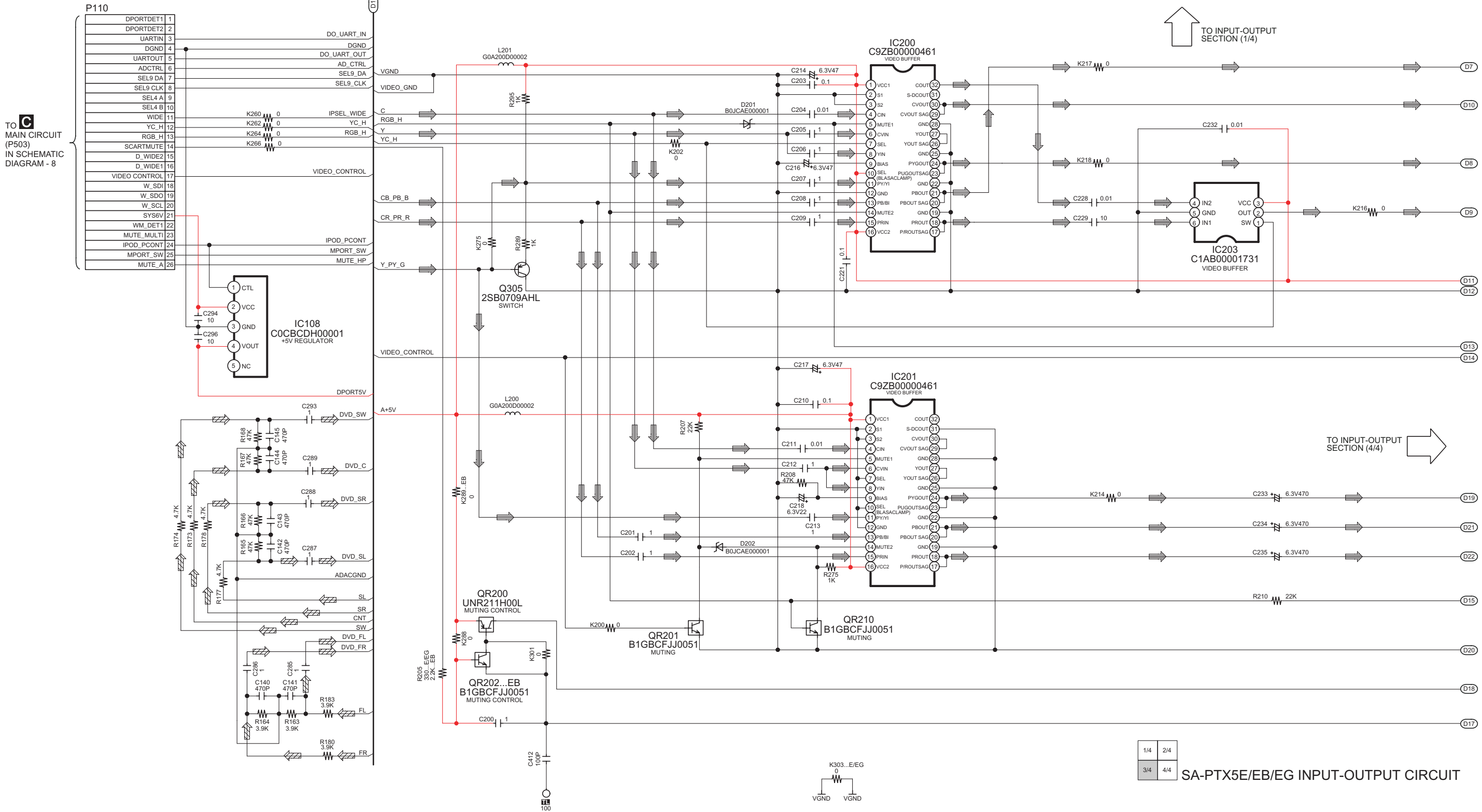
TO **A**
DVD MODULE
(DV5) CIRCUIT
(FP8101)
IN SCHEMATIC
DIAGRAM - 2

1/4 2/4
3/4 4/4
SA-PTX5E/EB/EG
INPUT-OUTPUT CIRCUIT

SCHEMATIC DIAGRAM - 14

D INPUT-OUTPUT CIRCUIT

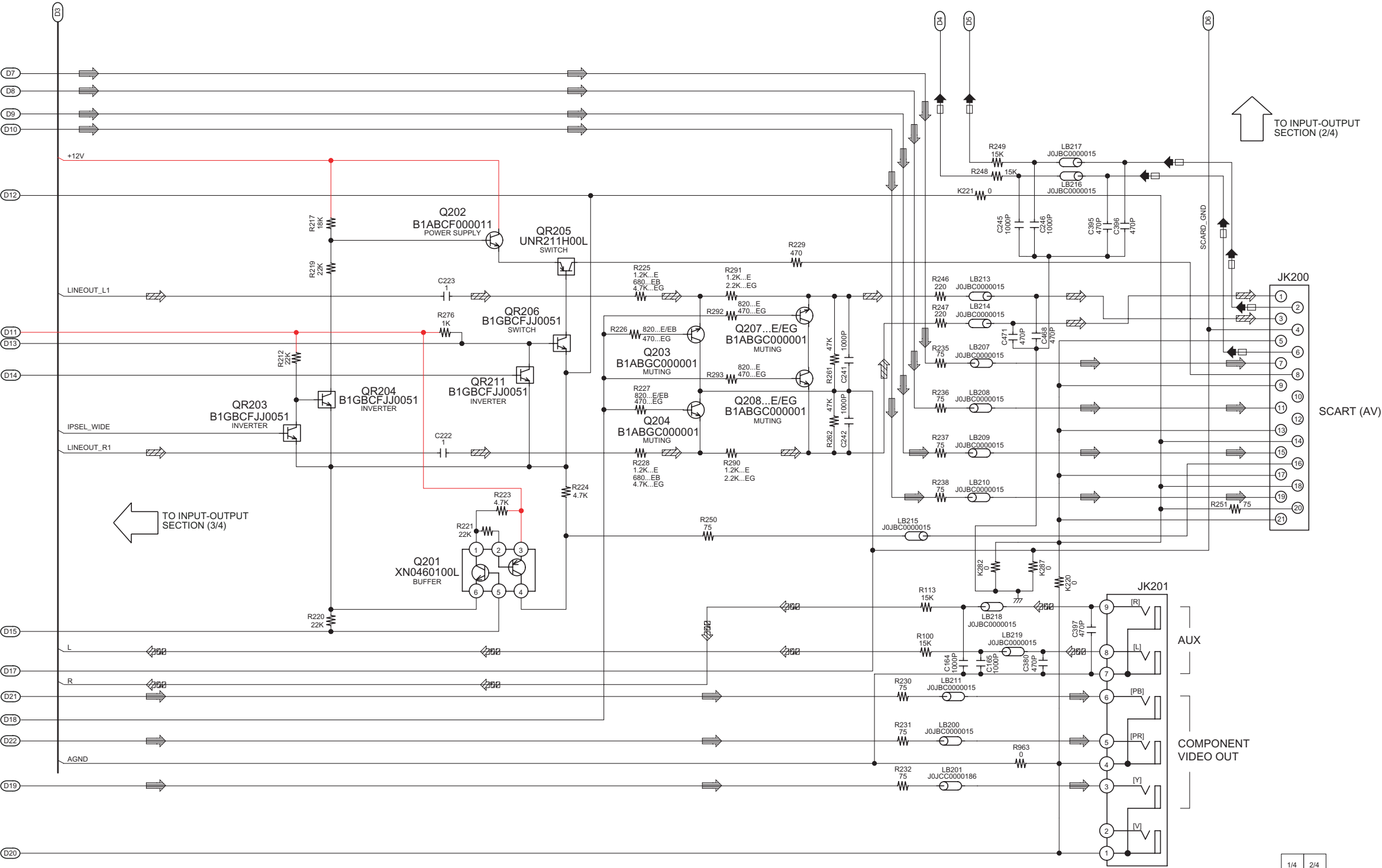
— : +B SIGNAL LINE ⚡ : MAIN SIGNAL LINE ⇨ : DVD VIDEO SIGNAL LINE



SCHEMATIC DIAGRAM - 15

D INPUT-OUTPUT CIRCUIT

— : +B SIGNAL LINE  : MAIN SIGNAL LINE  : DVD VIDEO SIGNAL LINE  : AUX SIGNAL LINE  : FM SIGNAL LINE



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

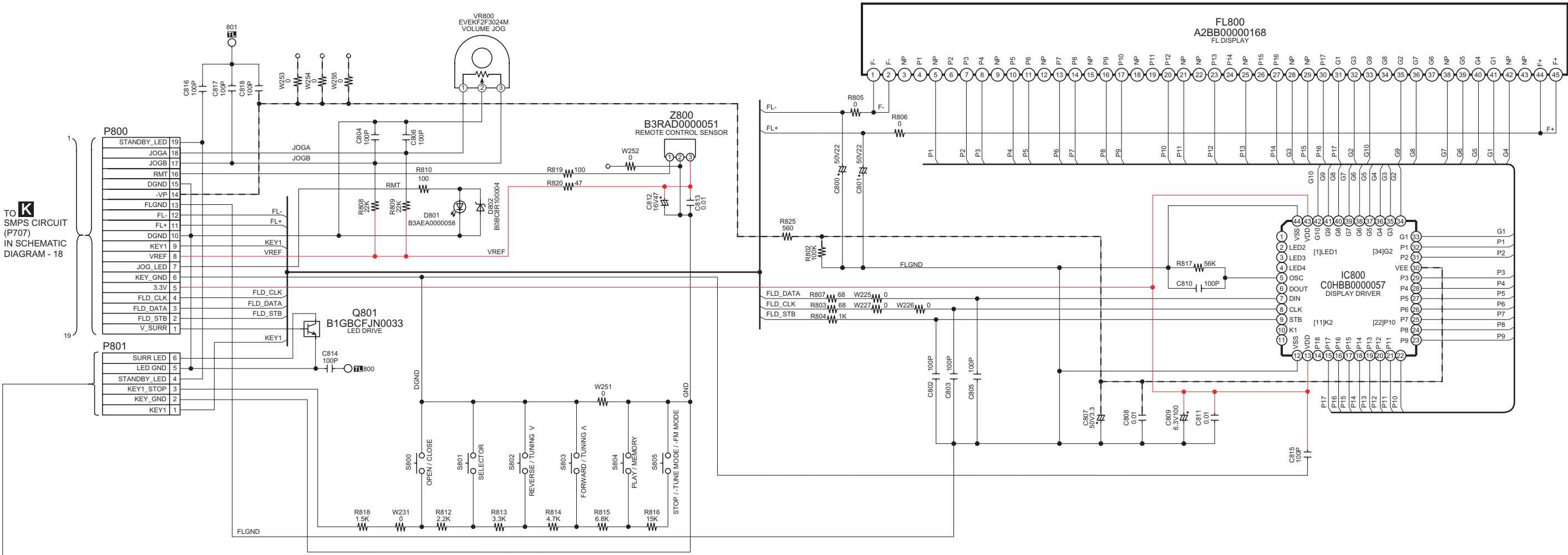
SA-PTX5E/EB/EG INPUT-OUTPUT CIRCUIT

20.5. Panel, Surround switch & Power switch Circuit

SCHEMATIC DIAGRAM - 16

E PANEL CIRCUIT

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



F SURROUND SWITCH CIRCUIT

G POWER SWITCH CIRCUIT



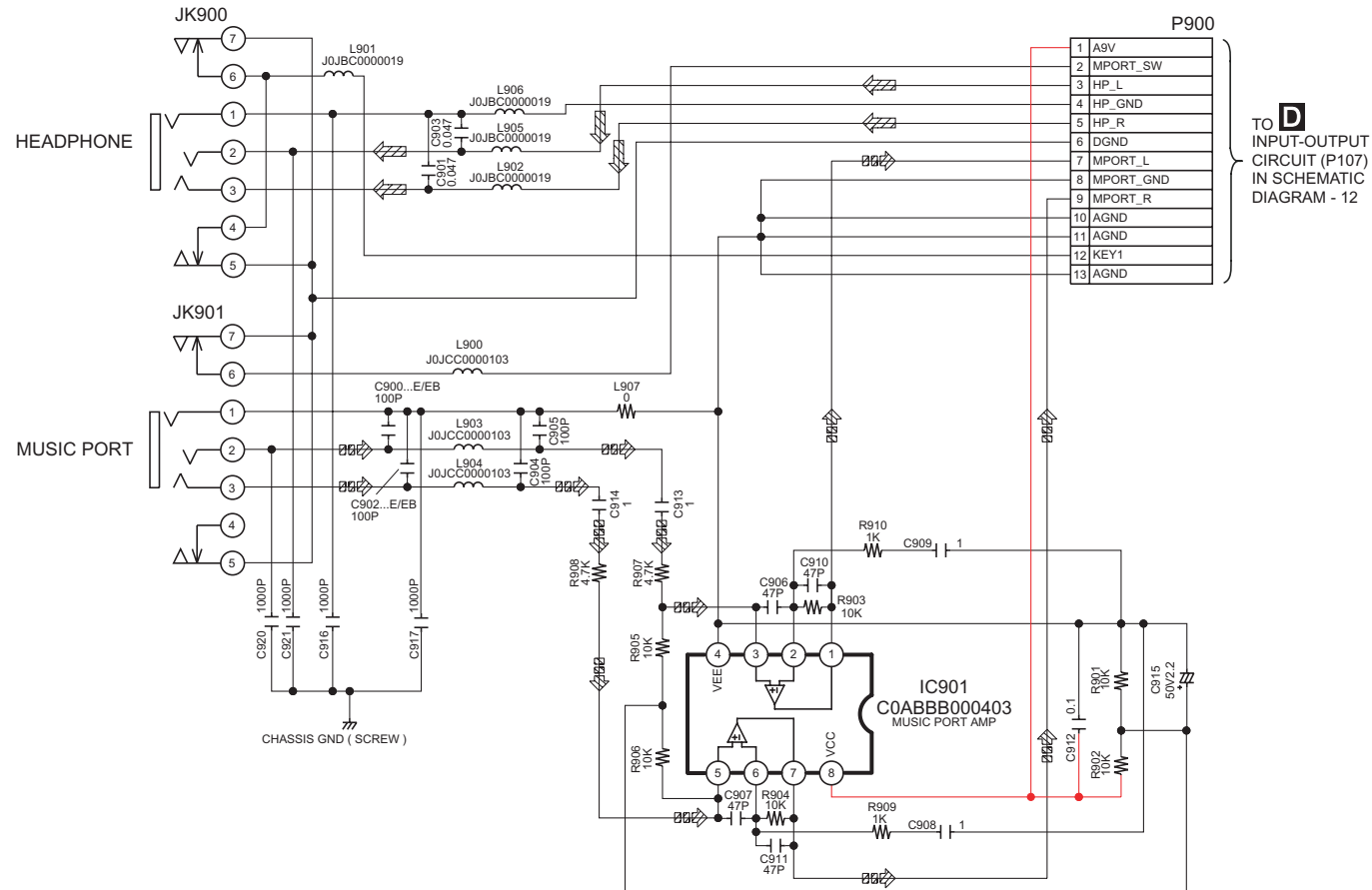
SA-PTX5E/EB/EG PANEL / SURROUND SWITCH / POWER SWITCH CIRCUIT

20.6. Headphone, D-port & USB Circuit

SCHEMATIC DIAGRAM - 17

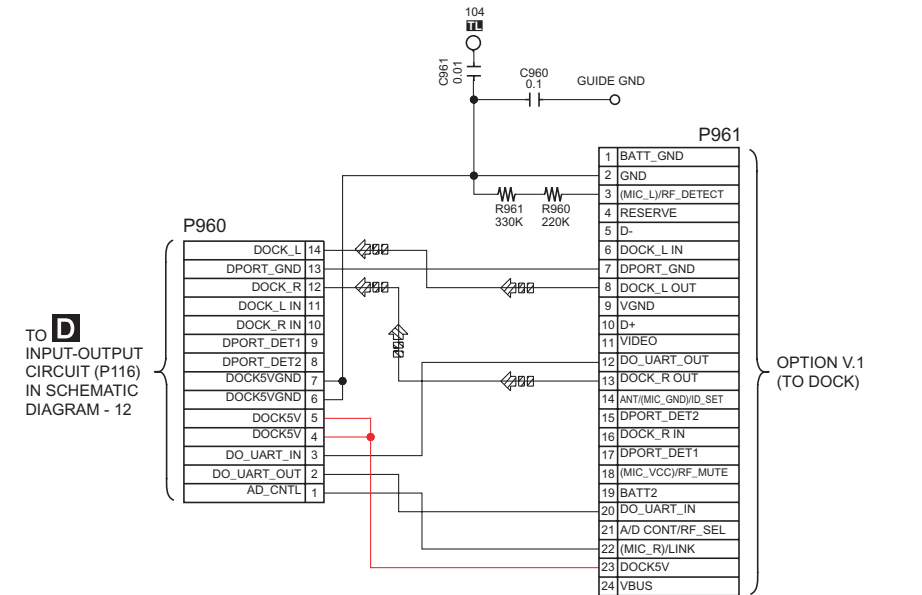
H HEADPHONE CIRCUIT

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



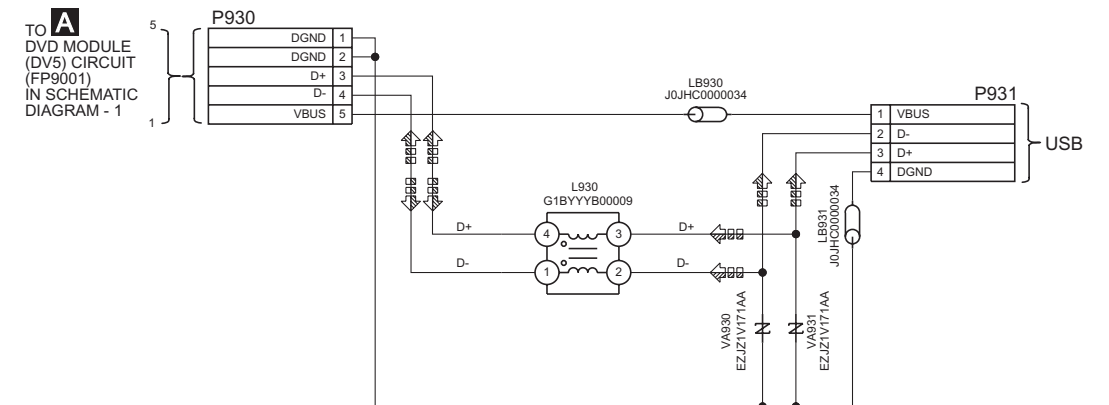
I D-PORT CIRCUIT

— : +B SIGNAL LINE  : IPOD SIGNAL LINE



J USB CIRCUIT

 : USB SIGNAL LINE



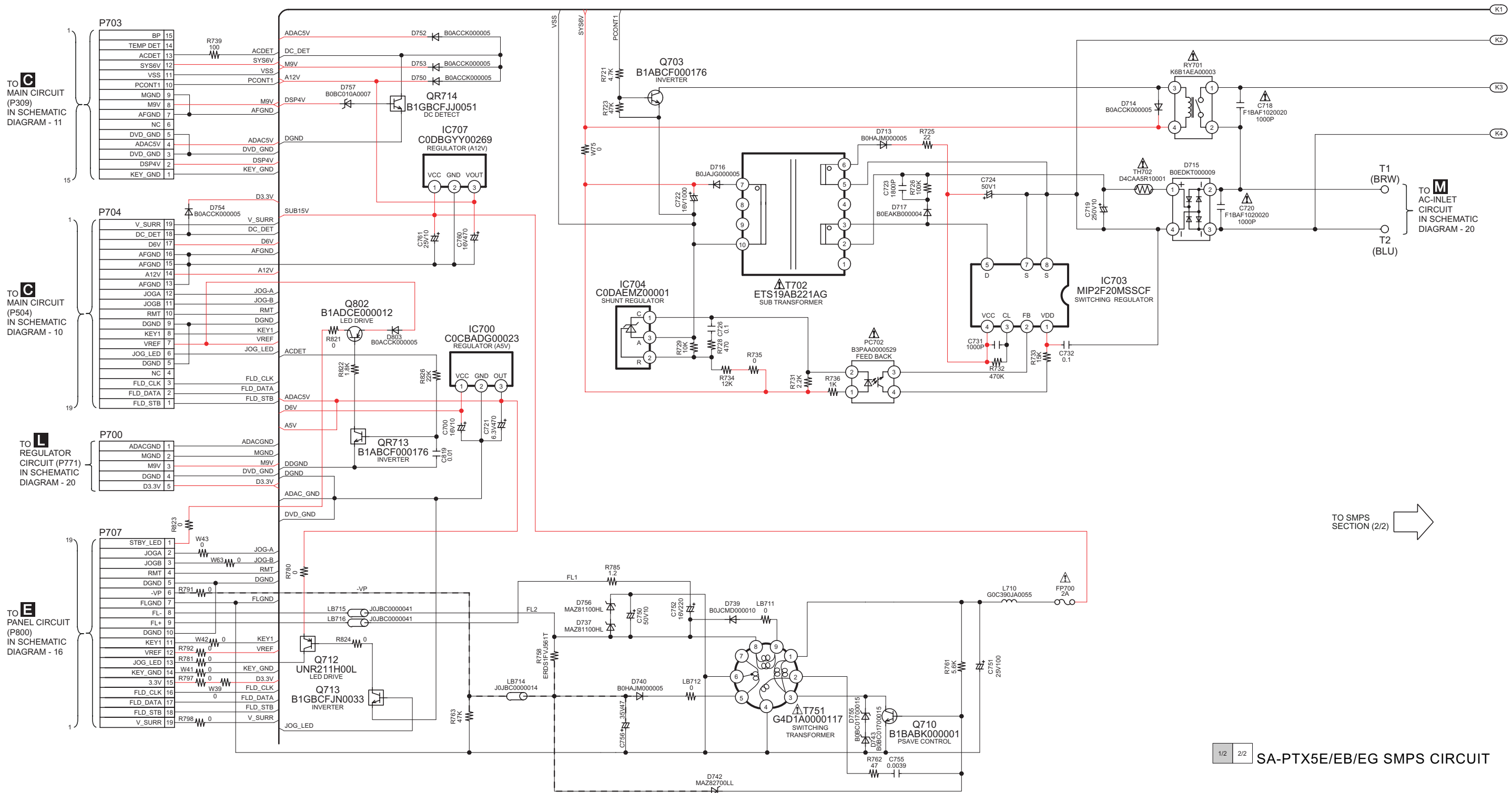
SA-PTX5E/EB/EG HEADPHONE / D-PORT / USB CIRCUIT

20.7. SMPS Circuit

SCHEMATIC DIAGRAM - 18

K SMPS CIRCUIT

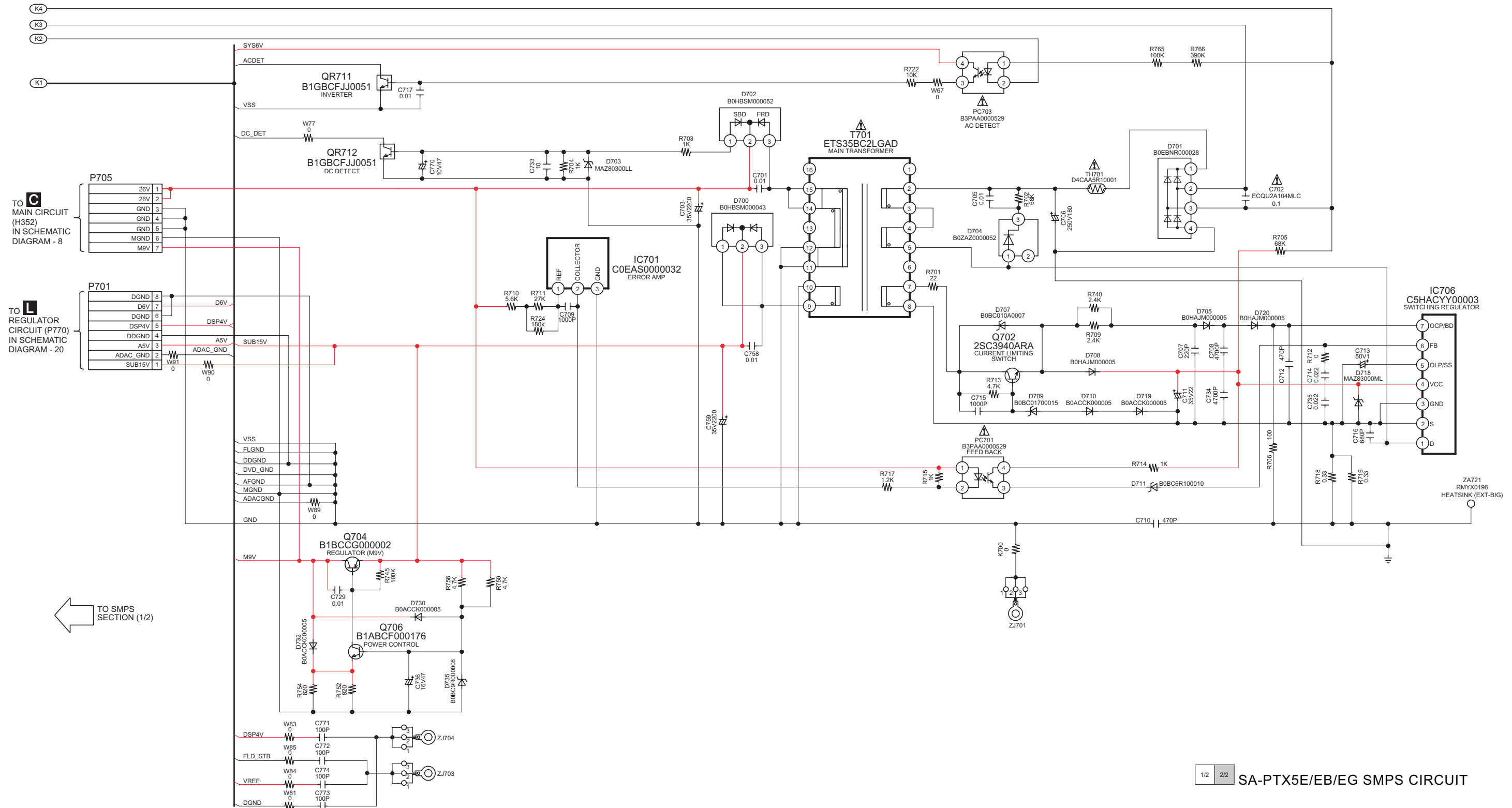
— : +B SIGNAL LINE - - - : -B SIGNAL LINE



SCHEMATIC DIAGRAM - 19

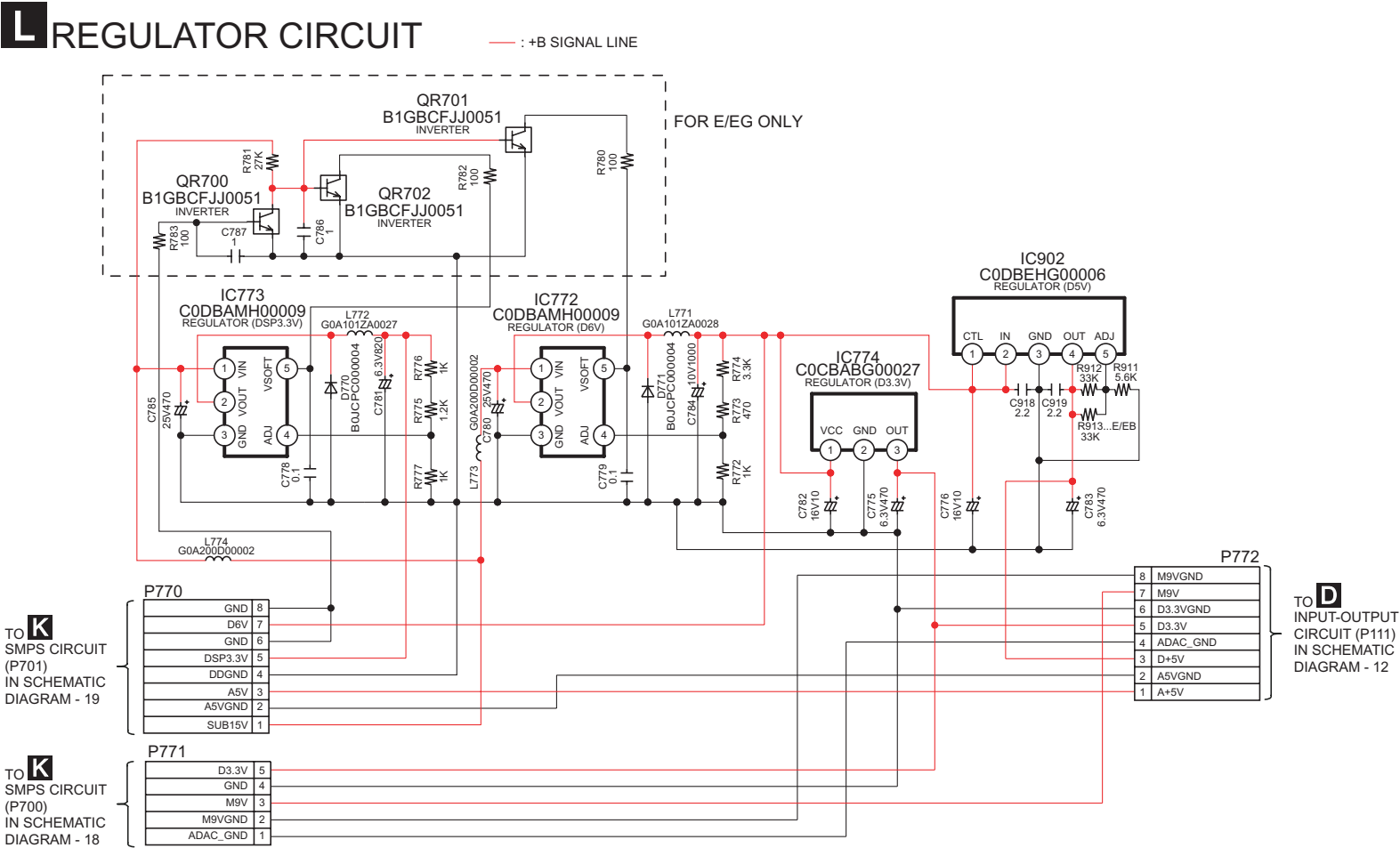
K SMPS CIRCUIT

— : +B SIGNAL LINE

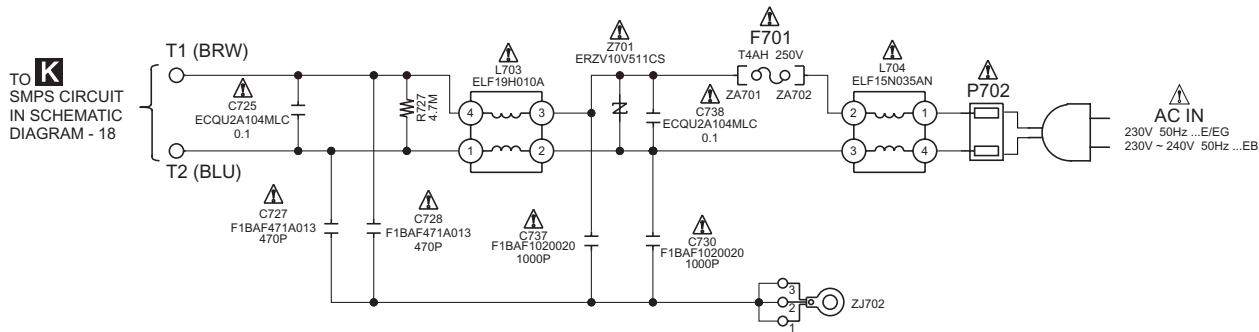


20.8. Regulator & AC-inlet Circuit

SCHEMATIC DIAGRAM - 20



M AC-INLET CIRCUIT



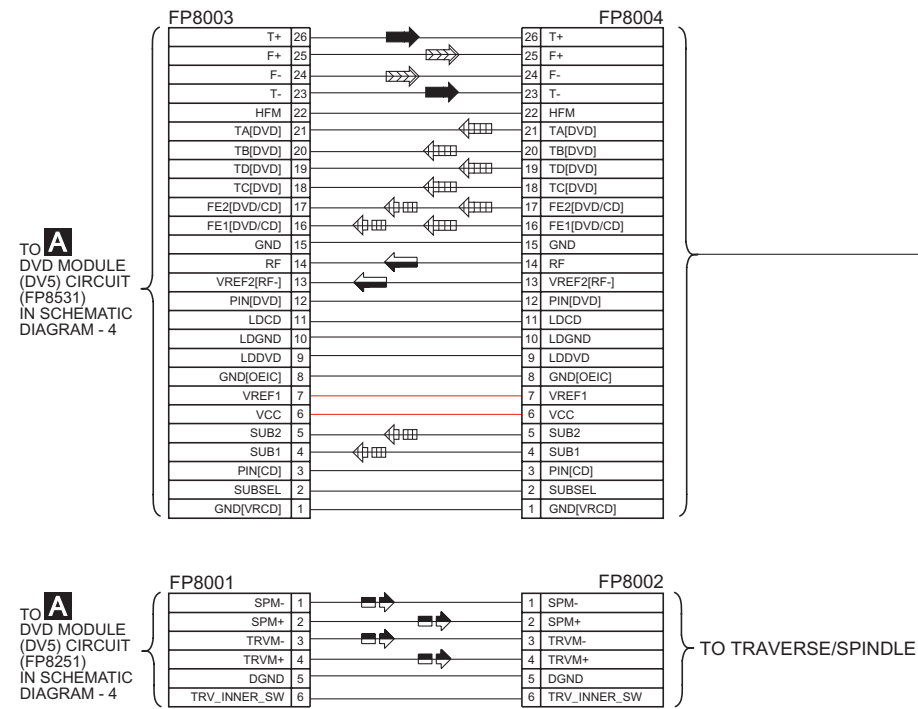
SA-PTX5E/EB/EG REGULATOR / AC-INLET CIRCUIT

20.9. Relay, Tray loading & Optical pickup unit Circuit

SCHEMATIC DIAGRAM - 21

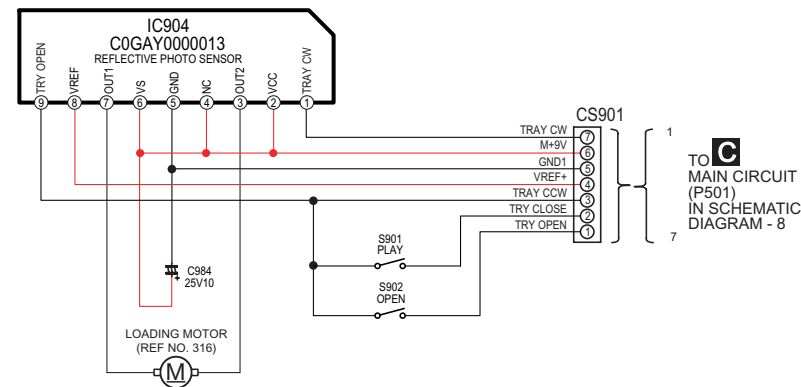
RELAY CIRCUIT

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

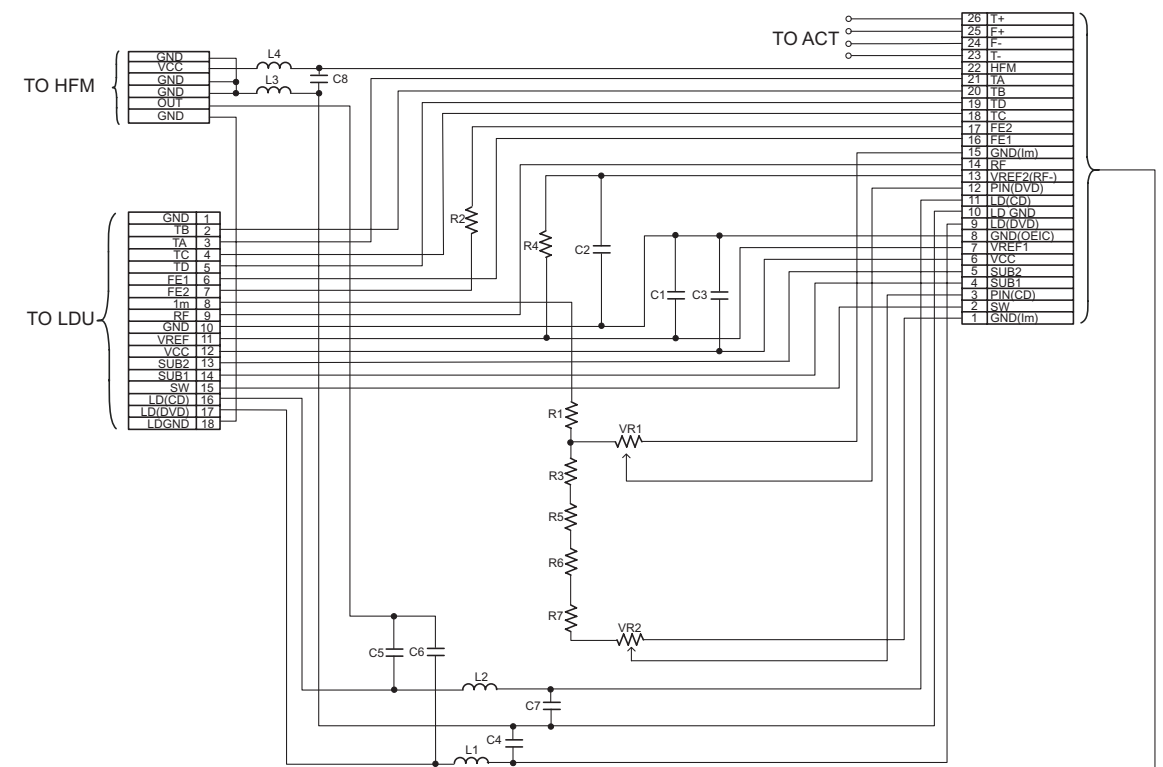


TRAY LOADING CIRCUIT

— : +B SIGNAL LINE



OPTICAL PICKUP UNIT CIRCUIT (FOR REFERENCE ONLY)

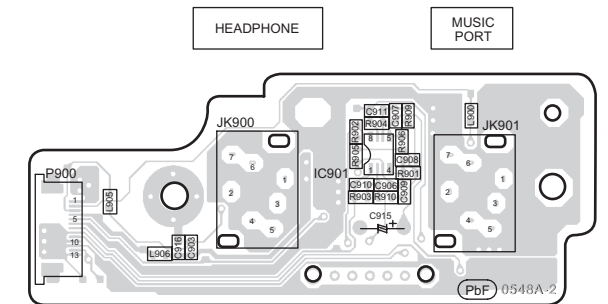


SA-PTX5E/EB/EG RELAY / TRAY LOADING / OPTICAL PICKUP UNIT CIRCUIT

B DSP P.C.B. (REPX0617A)



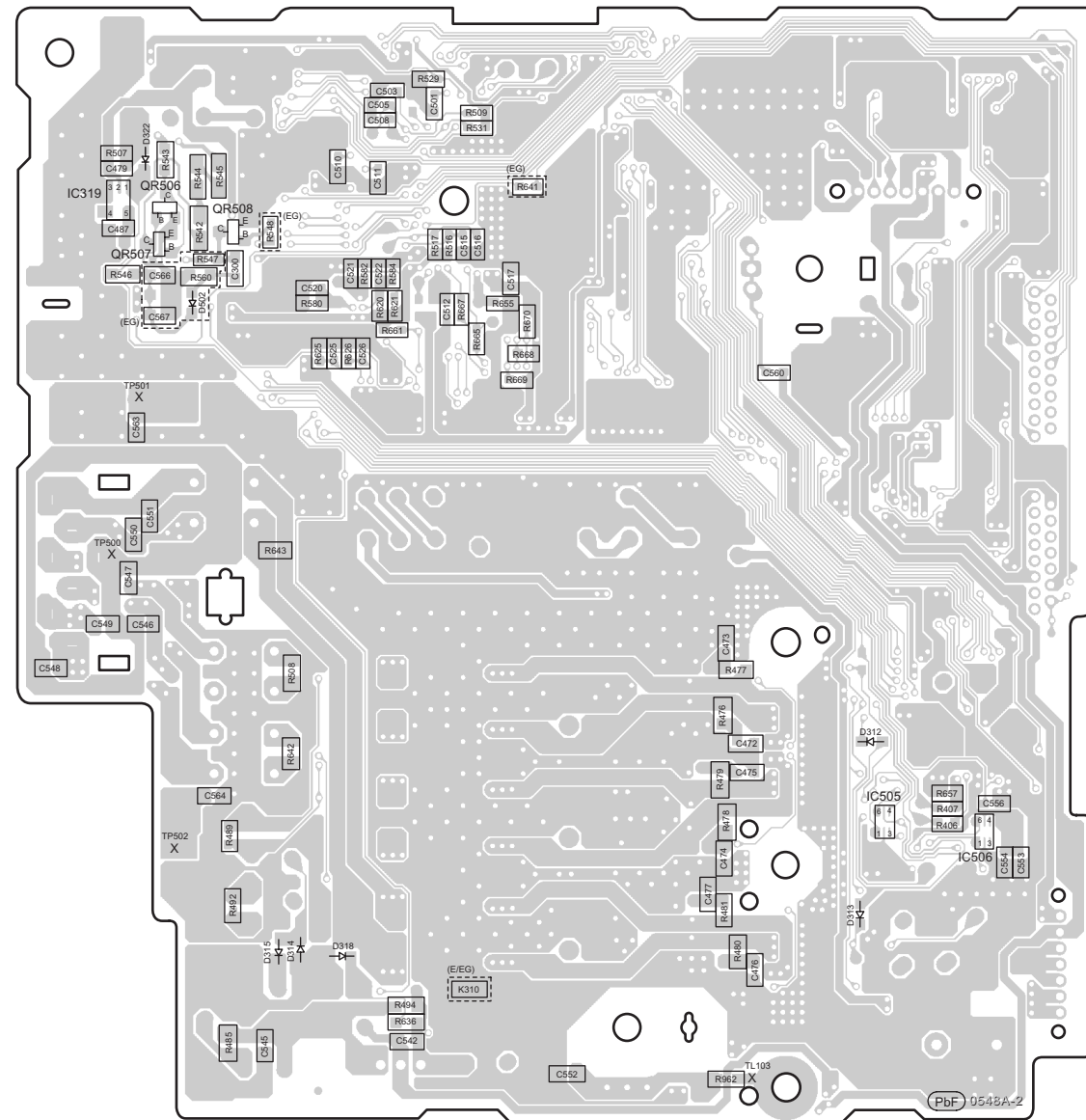
(SIDE A)



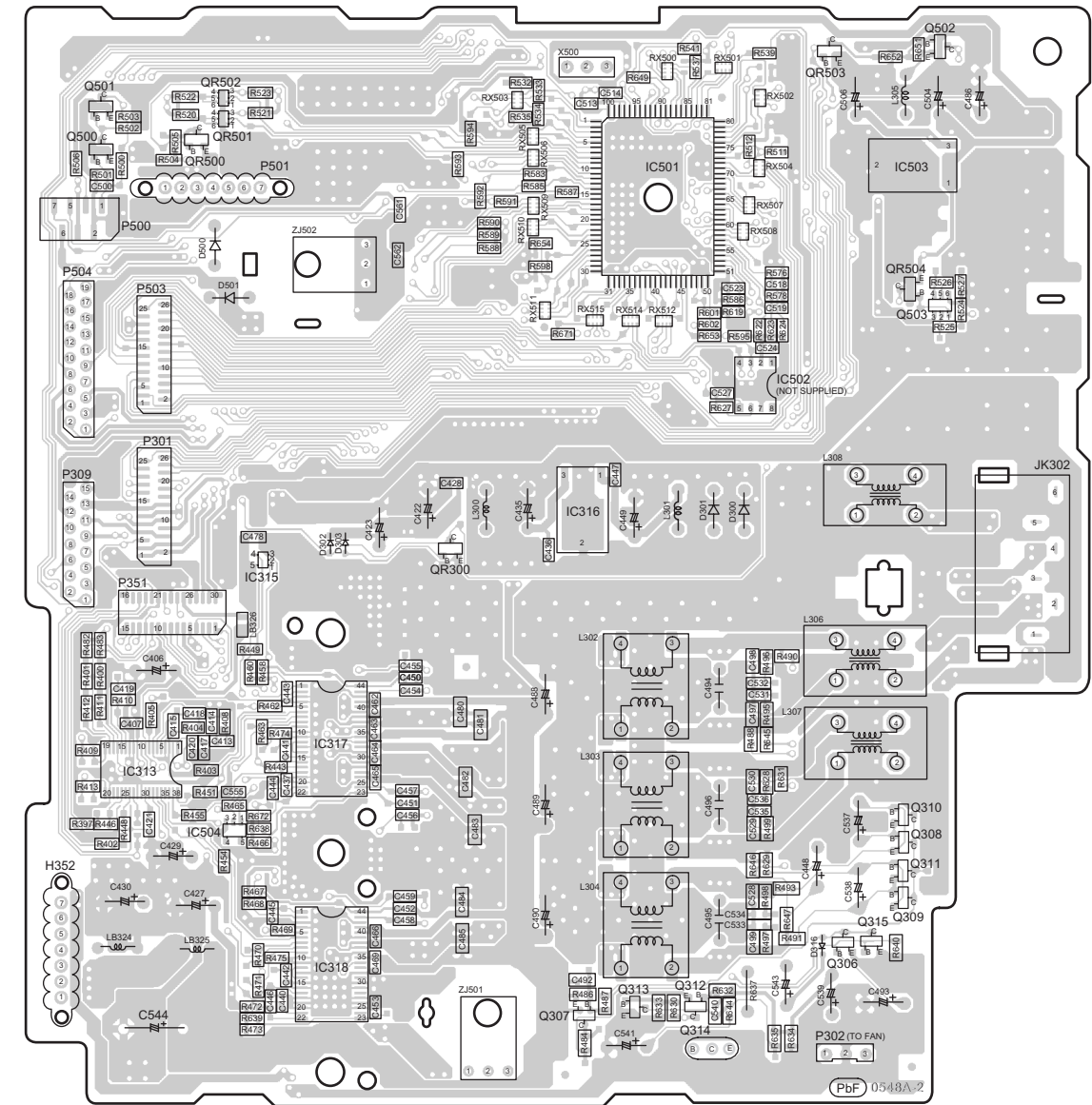
(SIDE B)

21.3. Main P.C.B.

C MAIN P.C.B. (REPX0616B...E)
(REPX0616E...EB)
(REPX0616A...EG)



(SIDE A)



(SIDE B)

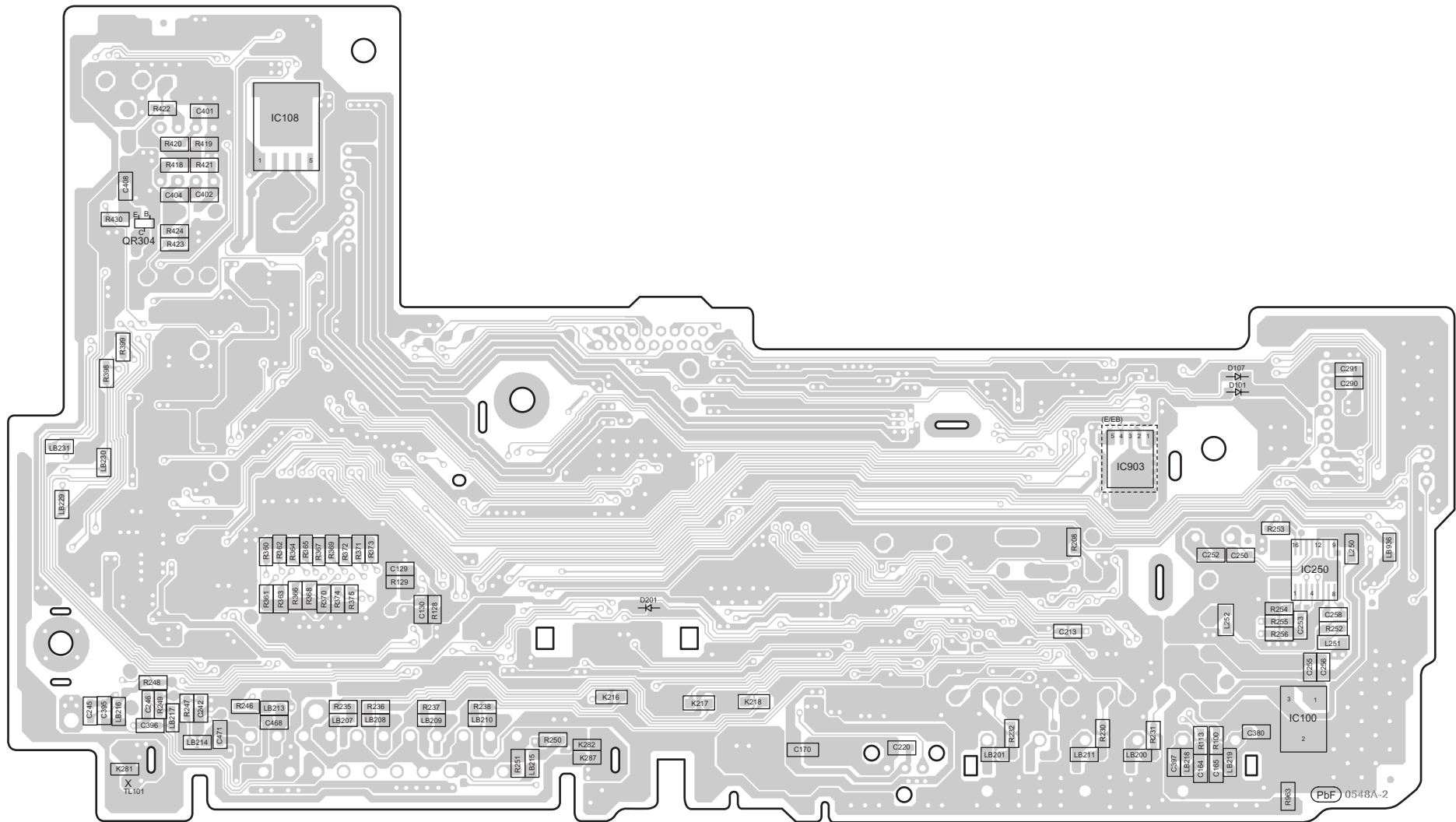
SUBWOOFER

FRONT
SPEAKER L

FRONT
SPEAKER R

21.4. Input-Output P.C.B.

D INPUT-OUTPUT P.C.B. (REPX0616B...E)
(REPX0616E...EB)
(REPX0616A...EG)



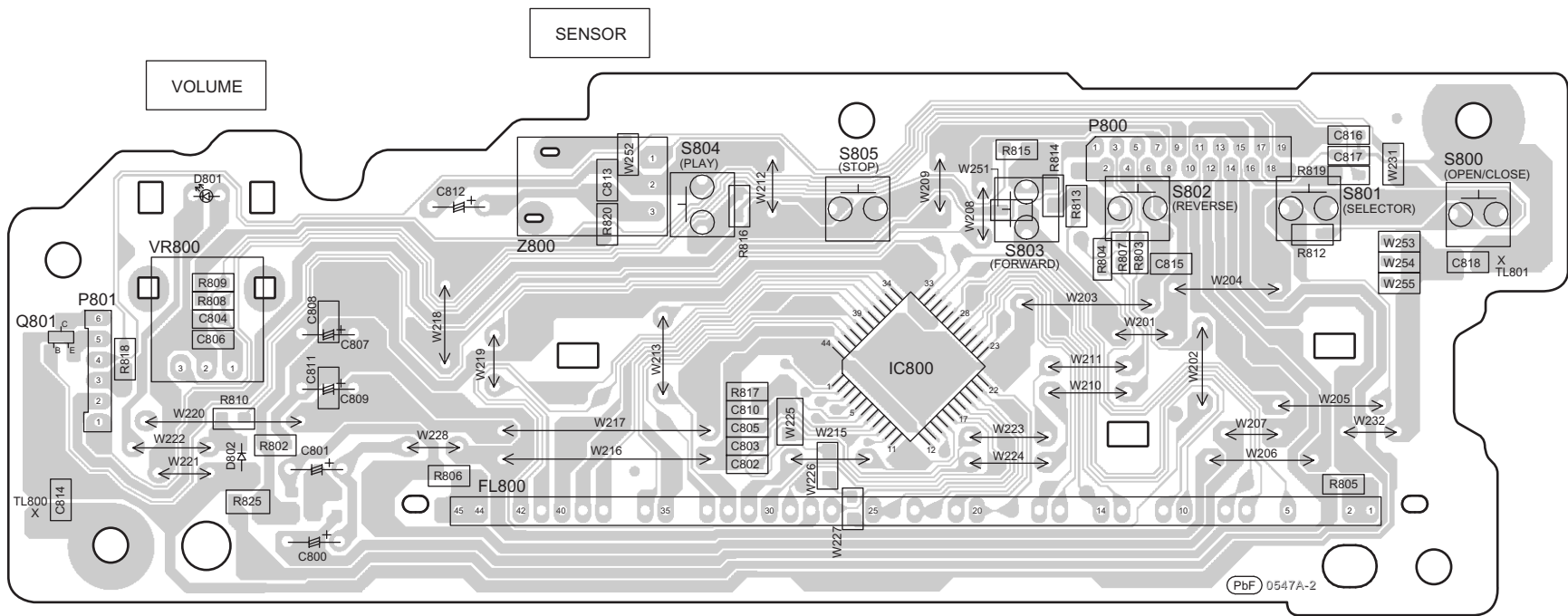
(SIDE A)

(SIDE B)

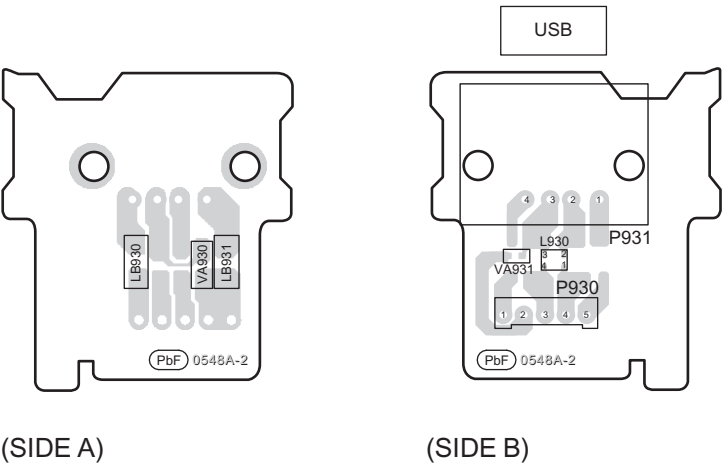
SA-PTX5E/EB/EG
INPUT-OUTPUT P.C.B.

21.5. Panel, Surround Switch, Power Switch & USB P.C.B.

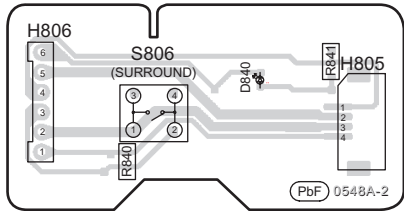
E PANEL P.C.B. (REPX0615A)



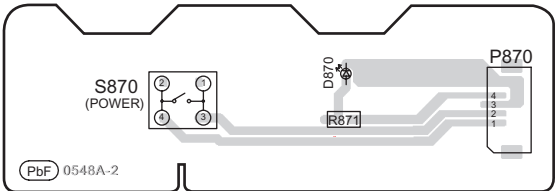
J USB P.C.B. (REPX0616B...E)
(REPX0616E...EB)
(REPX0616A...EG)



F SURROUND SWITCH P.C.B. (REPX0616B...E)
(REPX0616E...EB)
(REPX0616A...EG)



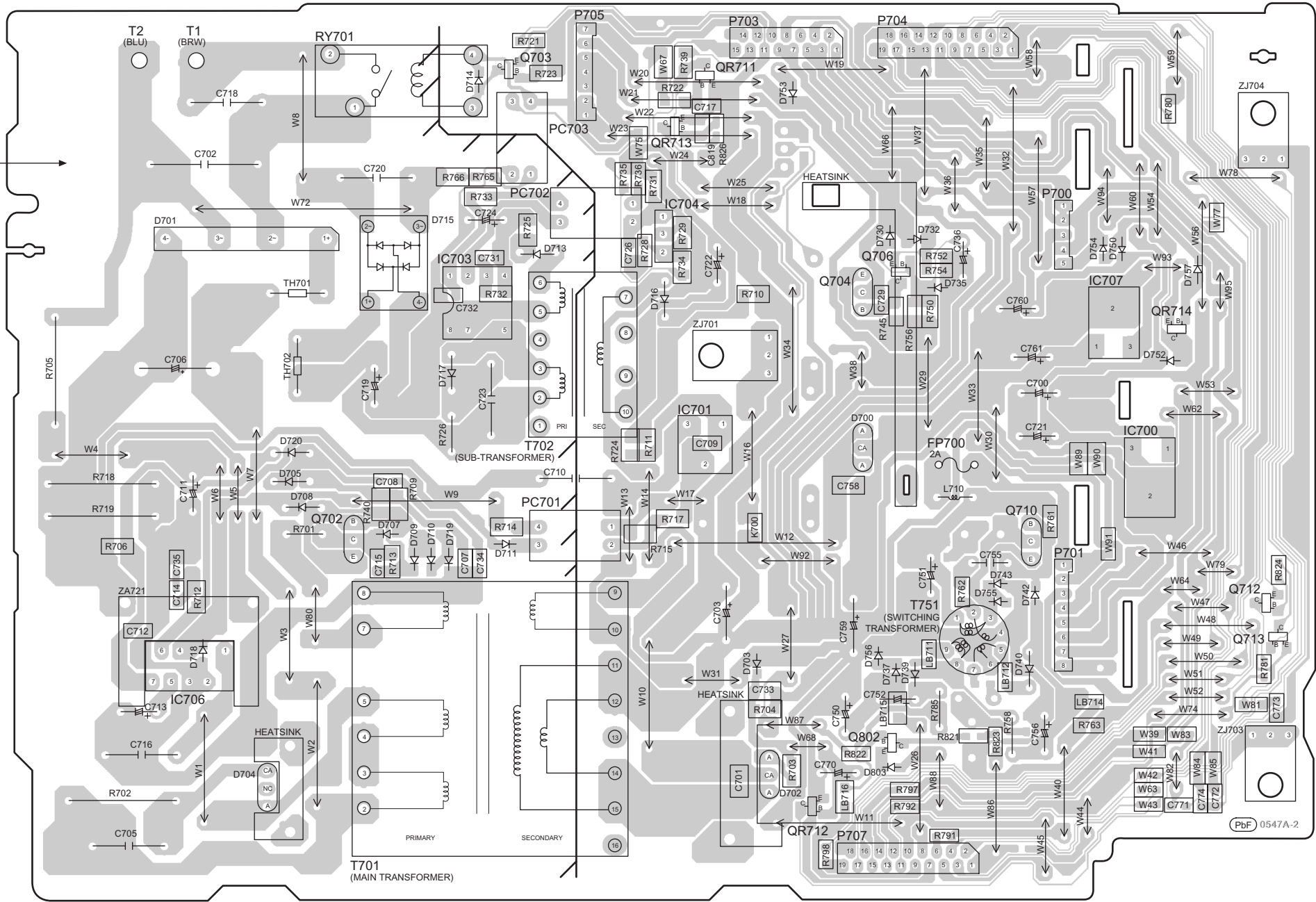
G POWER SWITCH P.C.B. (REPX0616B...E)
(REPX0616E...EB)
(REPX0616A...EG)



21.6. SMPS P.C.B.

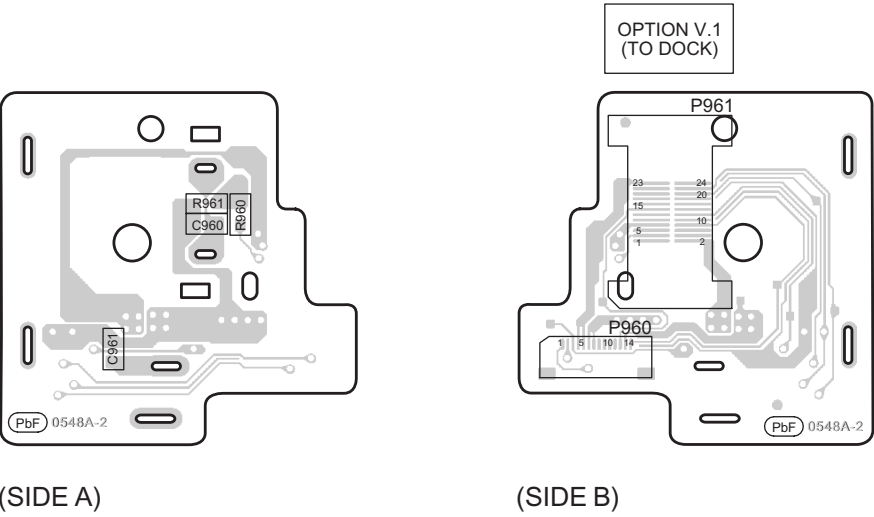
K SMPS P.C.B. (REPX0615A)

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

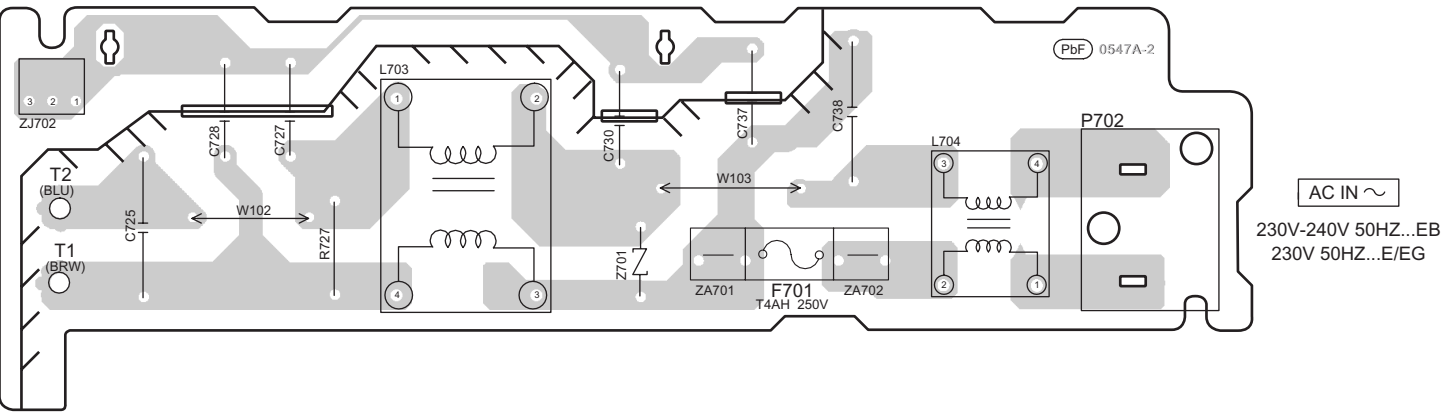


21.7. D-Port, Regulator & AC-Inlet P.C.B.

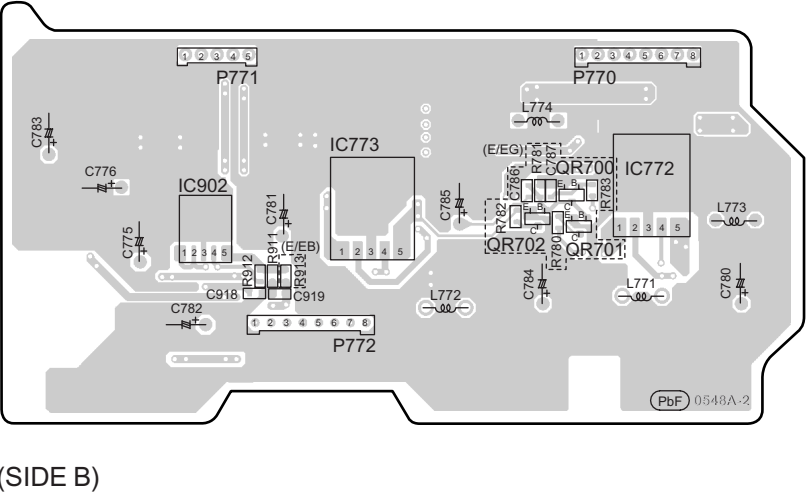
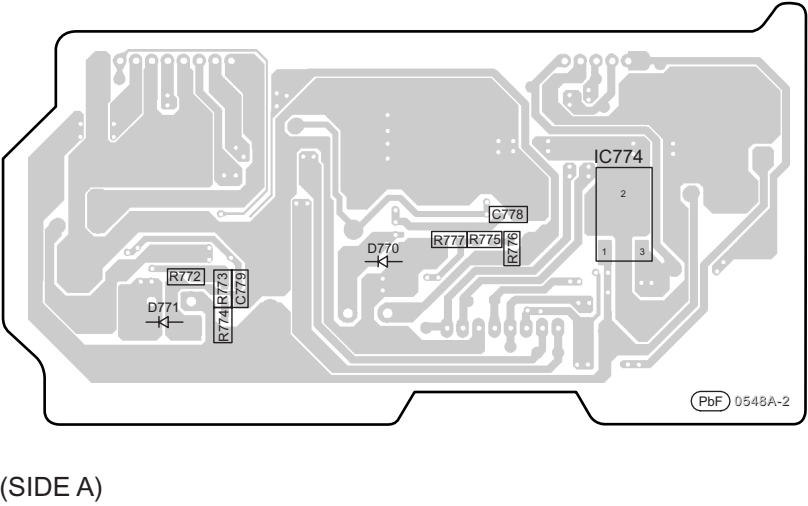
I D-PORT P.C.B. (REPX0616B...E)
(REPX0616E...EB)
(REPX0616A...EG)



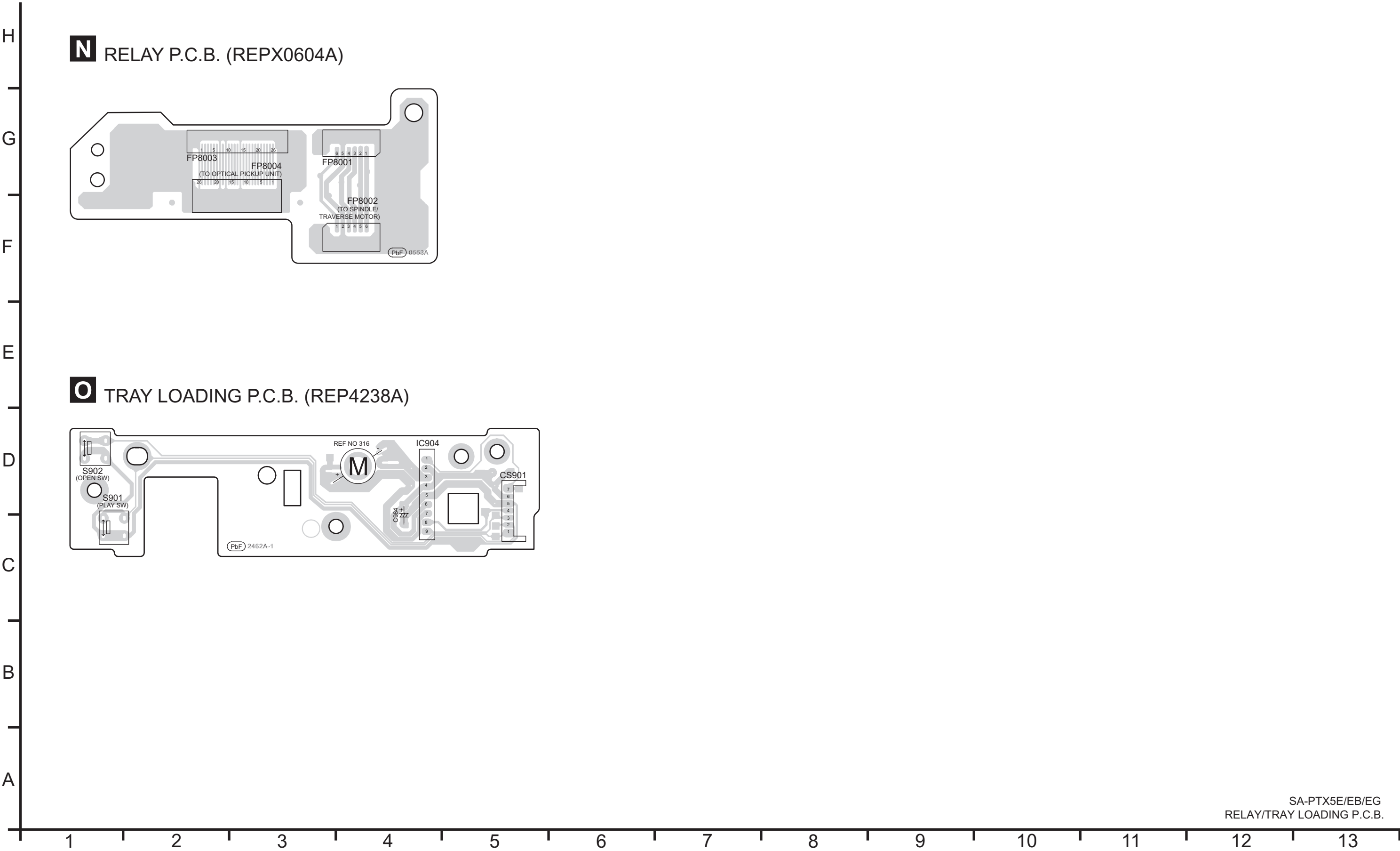
M AC-INLET P.C.B. (REPX0615A)



L REGULATOR P.C.B. (REPX0616B...E)
(REPX0616E...EB)
(REPX0616A...EG)



21.8. Relay & Tray Loading P.C.B.



22 Basic Troubleshooting Guide

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

Problems	Checking Points	Checking Components
1) Distorted picture or abnormal sound is heard during the initialization	a) Check SDRAM address, data bus, CLK and other control signals waveform	IC8051
	b) Check video signals	LB8301, R8321, R8322, LB8302, R8325, R8326
	c) Check audio DAC circuitry * Compare the above with OK condition HDMI module P.C.B.	IC8421 *Check for solder short and/or component missing/damaged
2) No TOC / Long TOC	a) Check motor driver circuitry (+5V)	IC8251 Pin 8, 21
	b) Check laser drive circuitry (Voltages & current)	Q8551, Q8552, Q8561, Q8562
	c) Check LSI IC connection to motor drive circuitry *Compare the above with OK condition HDMI Module P.C.B.	IC8001 Pin 144, 145 * 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 HDMI Module to Traverse unit	FP8251
	b) Check motor driver circuitry on the voltages and control signals *Compare the above with OK condition HDMI Module P.C.B.	IC8251 *Check for solder short and/or component damaged
6) Cannot read the disc but spindle motor is spinning - Cannot read CD/DVD	a) Check laser drive circuitry (voltages and current) - Check CD Laser Drive - Check DVD Laser Drive * Check voltages and LD current and compare with OK condition HDMI Module P.C.B.	Q8551, Q8552, LB8531 (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
9) Cannot read data from USB	a) Check USB connector & FFC b) Check LSI O/P c) Check IC supply (+5V)	FP9001 IC8001 Pin 144, 146 IC9005 Pin 2, 3

22.2. Basic Troubleshooting Guide for HDMI AV output

Problems	Checking Points	Checking Components
1) TV does not have any display. Set FL display shows U702/U703	1) Check setting of the set in Setup Menu whether the HDMI Video output is turned On	*This year HDMI always ON. No need check Setup Menu. 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 (Pin 72, 73, 76, 77, 80, 81) - Clock (Pin 10,12)	L3903, L3904, L3905, L3906
	5) HDMI Transmitter communication lines to TV - Data, SDA (Pin 120, IC8001) - Clock, SCL (Pin 121, IC8001)	LB3905, R3905, Q3902, R3904 LB3904, R3907, Q3903, R3906
	6) HDMI Transmitter communications from LSI (IC8001)	RX3901
	7) Local Port Slave Address setting resistor	R3921
	8) HDMI Transmitter +3.3V Supply	LB3901, IC3901 (Pin 26, 42, 47, 52, 70, 84, 100, 106, 115)
	9) HDMI Transmitter +1.2V Supply	IC3901 (Pin 5, 26, 47, 42, 55, 75, 85, 102, 109, 116, 123), LB3908, IC8151 (Pin 2, 4)
	10) HDMI Up-Con +3.3V Supply	LB3901
	11) HDMI Pixel Clock Output from Up-Con to HDMI Transmitter	R8902
	12) Up-Con IC I2C Data and Clock Line	RX3706
	13) Hot-Plug Signal	LB3906, R3902, R3903, Q3901, D3901
	14) TDMS Output swing amplitude control resistor	R3901
	15) Host Interface External Input Clock from LSI (IC8001) to Up-Con IC (IC3901) – OSC27M	LB8702
	16) Video Data Lines from LSI (IC8001) to Up-Con (IC3901)	RX3707, RX3708

Problems	Checking Points	Checking Components
2) When switching the video output mode from 480P to 720p/1080i, TV display becomes blank	1) Supply for Up-Con (IC3901) - Pin 9, 124 2) GND for Up-Con - Pin 7, 125 3) Check for capacitor short to GND	LB3902 C3902, C3928, C3925
3) Color Problem. TV screen is White/Blue/Purple	1) Check digital video data line from LSI (IC8001) to Up-Converter (IC3901), VOUT0-VOUT7.	RX3707, RX3708
4) HDMI got no audio output	1) Audio data lines 2) Check setting of the set in Setup Menu whether the HDMI Audio output is turned ON	R8402, RX8402 * Check for solder short and/or component missing/damaged as well as signal condition.

23 Terminal Function of ICs

23.1. IC501 (C2CBYY000513): IC System Control

Pin No.	Terminal Name	I/O	Function
1	DSP_CLK	O	DSP Clock Signal
2	DSP_DA	I/O	DSP Data Signal
3	DSP_RESET	O	DSP Reset Signal
4	VIDEO_MUTE	O	Video Muting
5	BRAKE_H	O	Terminal for Tray Control 3
6	TRAY_CLOSE	I	Loading Mecha Close Switch (L:SW On)
7	TRAY_CCW	O	Terminal for Tray Control 1 (Anti-Clockwise Direction)
8	TRAY_CW	O	Terminal for Tray Control 2 (Clockwise Direction)
9	TRAY_OPEN	I	Loading Mecha OPN Switch (L:SW On)
10	SEL9_DA	O	Selector Data
11	SEL9_CLK	O	Selector Clock
12	SEL6_DA	O	Selector Data
13	SEL6_CLK	O	Selector Clock
14	MIC_SW	I	MIC Switch
15	VISUAL_SURR_LED	O	LED Driver
16	TUN_SDA	O	Tuner Serial Data
17	TUN_CLK	O	Tuner Clock Signal
18	TUN_SD	I	Tuner Station Detect
19	TUN_ST	I	Tuner Stereo
20	EVSS1	-	VSS (GND)
21	RDS_DAT	I	RDS Decoder Data Signal
22	RDS_CLK	I	RDS Clock Signal
23	WIDE	O	Wide Function Signal
24	RDS_EN	I	RDS Enable Signal
25	MIC_EN	I	MIC Enable Signal
26	SCART_MUTE	O	Scart Muting
27	SCART_CONT	O	Scart Control Signal
28	D_WIDE1	O	Wide Function Signal
29	IPOD_PCONT	O	iPod Power Control Signal
30	EVDD1	-	Reference Voltage Supply
31	FX_DO	I/O	Wireless Data Output
32	FX_DI	I/O	Wireless Data Input
33	FX_CLK	I	Wireless Clock Signal
34	FX_DET1	I	Wireless Detect Signal 2
35	FX_DET2	I	Wireless Detect Signal 1
36	MUTE_MROOM	O	Muting Multi-Room Signal
37	EDA	I/O	Data Signal for EEPROM IC
38	ECK	O	Clock Signal for EEPROM IC
39	ECS	O	EEPROM IC Chip Select
40	DVD_2CHSEL	I	DVD 2 Channel Select
41	FX_EN	I	Wireless Enable Signal
42	YC_H	O	Control Signal for Video Mixing
43	RGB_H	O	Mute Signal for Video Output
44	JOG_A	I	Volume Jog Signal A
45	FLD_OUT	O	FL Display Data Output
46	IPOD_LINK	I	iPod Link Signal
47	AVREF1	-	Reference Voltage Supply
48	IPOD_EN	I	iPod Enable Signal
49	MPORT_SW	I	Music Port Switch
50	AVREF0	-	Reference Voltage Supply
51	AVSS	-	VSS (GND)
52	DES3	I	DVD Region Setting
53	DES2	I	Model Selector
54	DES1	I	Region Setting for Tuner
55	MD3	I	Model Code 3
56	MD2	I	Model Code 2

Pin No.	Terminal Name	I/O	Function
57	MD1	I	Model Code 1
58	KEY2	I	Key 2 Line Input
59	KEY1	I	Key 1 Line Input
60	DSP_DMIX_SEL	I	DSP Mixing Select Signal
61	MUTE_HP	O	Headphone Muting Control Signal
62	MUTE_A	O	Audio Muting Control Signal
63	DAC_MS	O	DAC Mode Select
64	AMBP	O	AM Beatproof Control
65	PWM_PDN	O	Pulse Width Modulation Power-Down (Digital-Amp IC)
66	PWM_RESET	O	Pulse Width Modulation Reset (Digital-Amp IC)
67	DSP_FSHIFT	I	DSP Frequency Shift Signal
68	JOG_LED	O	Jog LED Drive
69	FLD_CLK	O	FL Driver Clock Signal
70	FLD_STB	O	FL Driver Strobe Signal
71	IPOD_RX	I	iPod Receive Signal
72	IPOD_TX	O	iPod Transmit Signal
73	JOG_B	I	Volume Jog Signal B
74	DC_DET1	I	DC Detect Signal 1
75	PCONT	O	System Power Control
76	DC_DET2	I	DC Detect Signal 2
77	DAC_MD	O	DAC Mode Data
78	DAC_MC	O	DAC Mode Clock
79	AC_DET	I	AC Detect Signal
80	RMT	I	Remote Control Input
81	CEC_OUT	I	CEC Out
82	CEC_IN	I	CEC In
83	FLMDO_CTRL	O	FL Driver Control Signal
84	DVD_CMD	O	Command Signal for DVD Module
85	DVD_STAT	I	Status Signal for DVD Module
86	DVD_CLK	I	Clock Signal for DVD Module
87	DVD_MUTE	I	DVD Muting
88	TOOL1	-	Pull-Up to Resistor
89	TOOL0	-	Pull-Up to Resistor
90	RESET	-	Pull-Up to Resistor
91	DA/OTW	-	Pull-Up to Resistor
92	OPT_EN	-	Pull-Up to Resistor
93	FLMD0	-	FL Driver Control Signal
94	X2	I	Oscillator Clock Signal
95	X1	I	Oscillator Clock Signal
96	REGC	-	Pull-Up to Resistor
97	VSS	-	VSS (GND)
98	EVSS0	-	VSS (GND)
99	VDD	-	Reference Voltage Supply
100	EVDD0	-	Reference Voltage Supply

23.2. IC800 (C0HBB0000057): IC Display Driver

Pin No.	Terminal Name	I/O	Function
1	LED1	O	LED Output
2	LED2	O	LED Output
3	LED3	O	LED Output
4	LED4	O	LED Output
5	OSC	I	Oscillator Input
6	DOUT	-	Data Output (No connection)
7	DIN	I	Data Input
8	CLK	I	Clock Input
9	STB	I	Serial Interface Strobe
10	K1	-	Key Data Input (No connection)
11	K2	-	Key Data Input (No connection)
12	VSS	-	Logic Ground

Pin No.	Terminal Name	I/O	Function
13	VDD	-	Logic Power Supply
14	P18	-	High-Voltage Segment Output (No connection)
15	P17	O	High-Voltage Segment Output
16	P16	O	High-Voltage Segment Output
17	P15	O	High-Voltage Segment Output
18	P14	O	High-Voltage Segment Output
19	P13	O	High-Voltage Segment Output
20	P12	O	High-Voltage Segment Output
21	P11	O	High-Voltage Segment Output
22	P10	O	High-Voltage Segment Output
23	P9	O	High-Voltage Segment Output
24	P8	O	High-Voltage Segment Output
25	P7	O	High-Voltage Segment Output
26	P6	O	High-Voltage Segment Output
27	P5	O	High-Voltage Segment Output
28	P4	O	High-Voltage Segment Output
29	P3	O	High-Voltage Segment Output
30	VEE	-	Pull-Down Level
31	P2	O	High-Voltage Segment/Grid Output
32	P1	O	High-Voltage Segment/Grid Output
33	G1	O	High-Voltage Segment/Grid Output
34	G2	O	High-Voltage Segment/Grid Output
35	G3	O	High-Voltage Segment/Grid Output
36	G4	O	High-Voltage Segment/Grid Output
37	G5	O	High-Voltage Segment/Grid Output
38	G6	O	High-Voltage Segment/Grid Output
39	G7	O	High-Voltage Grid Output
40	G8	O	High-Voltage Grid Output
41	G9	O	High-Voltage Grid Output
42	G10	O	High-Voltage Grid Output
43	VDD	-	Logic Power Supply
44	VSS	-	Logic Ground

23.3. IC1306 (C2HBZY000024): IC DSP

Pin No.	Terminal Name	I/O	Function
1	VSS	-	Ground (0V)
2	AHCLKX0/AHCLKX2	I/O	McASP0 and McASP2 Transmit Master Clock
3	AMUTE0	O	McASP0 MUTE Output
4	AMUTE1	O	McASP1 MUTE Output
5	AHCLKX1	I/O	McASP1 Transmit Master Clock
6	VSS	-	Ground (0V)
7	ACLKX1	I/O	McASP1 Transmit Bit Clock
8	CVDD	-	Core Supply
9	ACLKR1	I/O	McASP1 Receive Bit Clock
10	DVDD	-	IO Supply
11	AFSX1	I/O	McASP1 Transmit Frame Sync (L/R Clock)
12	AFSR1	I/O	McASP1 Receive Frame Sync (L/R Clock)
13	VSS	-	Ground (0V)
14	/RESET	I	Device reset pin
15	VSS	-	Ground (0V)
16	CVDD	-	Core Supply
17	CLKIN	I	Alternate clock input (3.3 V LVCMOS Input)
18	VSS	-	Ground (0V)
19	TMS	I	Test Mode Select
20	CVDD	-	Core Supply
21	/TRST	I	Test Reset
22	OSCVSS	-	Oscillator VSS tap point (for filter only)
23	OSCIN	I	1.2 V Oscillator Input

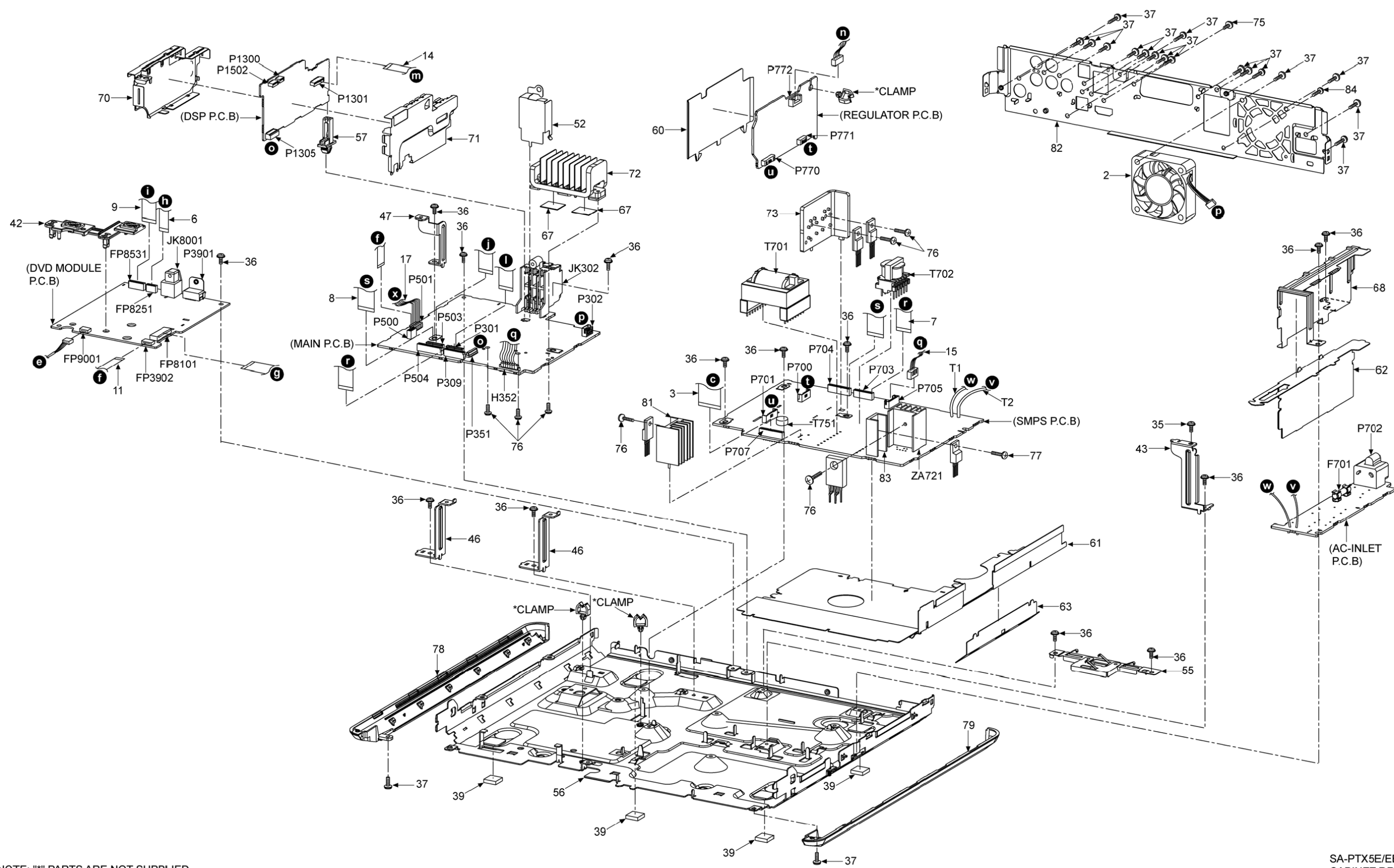
Pin No.	Terminal Name	I/O	Function
24	OSCOUT	O	1.2 V Oscillator Output
25	OSCVDD	-	Oscillator 1.2 V VDD tap point (for filter only)
26	VSS	-	Ground (0V)
27	PLLHV	-	PLL 3.3 V Supply Input (requires external filter)
28	TDI	I	Test Data In
29	TDO	O	Test Data Out
30	VSS	-	Ground (0V)
31	DVDD	-	IO Supply
32	/EMU[0]	I/O	Emulation Pin 0
33	CVDD	-	Core Supply
34	/EMU[1]	I/O	Emulation Pin 1
35	TCK	I	Test Clock
36	VSS	-	Ground (0V)
37	/EM_CAS	O	SDRAM Column Address Strobe
38	/EM_WE	O	SDRAM Write Enable
39	EM_WE_DQM[0]	O	Write Enable or Byte Enable for EM_D [7:0]
40	VSS	-	Ground (0V)
41	EM_D[7]	I/O	EMIF Data Bus [Lower 16 Bits]
42	DVDD	-	IO Supply
43	EM_D[6]	I/O	EMIF Data Bus [Lower 16 Bits]
44	CVDD	-	Core Supply
45	EM_D[5]	I/O	EMIF Data Bus [Lower 16 Bits]
46	EM_D[4]	I/O	EMIF Data Bus [Lower 16 Bits]
47	VSS	-	Ground (0V)
48	EM_D[3]	I/O	EMIF Data Bus [Lower 16 Bits]
49	EM_D[2]	I/O	EMIF Data Bus [Lower 16 Bits]
50	DVDD	-	IO Supply
51	EM_D[1]	I/O	EMIF Data Bus [Lower 16 Bits]
52	EM_D[0]	I/O	EMIF Data Bus [Lower 16 Bits]
53	CVDD	-	Core Supply
54	VSS	-	Ground (0V)
55	EM_D[15]	I/O	EMIF Data Bus [Lower 16 Bits]
56	EM_D[14]	I/O	EMIF Data Bus [Lower 16 Bits]
57	CVDD	-	Core Supply
58	EM_D[13]	I/O	EMIF Data Bus [Lower 16 Bits]
59	EM_D[12]	I/O	EMIF Data Bus [Lower 16 Bits]
60	DVDD	-	IO Supply
61	EM_D[11]	I/O	EMIF Data Bus [Lower 16 Bits]
62	VSS	-	Ground (0V)
63	EM_D[10]	I/O	EMIF Data Bus [Lower 16 Bits]
64	EM_D[9]	I/O	EMIF Data Bus [Lower 16 Bits]
65	CVDD	-	Core Supply
66	EM_D[8]	I/O	EMIF Data Bus [Lower 16 Bits]
67	EM_WE_DQM[1]	O	Write Enable or Byte Enable for EM_D [15:8]
68	DVDD	-	IO Supply
69	VSS	-	Ground (0V)
70	EM_CLK	O	SDRAM Clock
71	EM_CKE	O	SDRAM Clock Enable
72	VSS	-	Ground (0V)
73	DVDD	-	IO Supply
74	EM_A[11]	O	EMIF Address Bus
75	EM_A[9]	O	EMIF Address Bus
76	EM_A[8]	O	EMIF Address Bus
77	CVDD	-	Core Supply
78	VSS	-	Ground (0V)
79	EM_A[7]	O	EMIF Address Bus
80	EM_A[6]	O	EMIF Address Bus
81	DVDD	-	IO Supply
82	VSS	-	Ground (0V)
83	EM_A[5]	O	EMIF Address Bus
84	EM_A[4]	O	EMIF Address Bus
85	CVDD	-	Core Supply
86	EM_A[3]	O	EMIF Address Bus

Pin No.	Terminal Name	I/O	Function
87	VSS	-	Ground (0V)
88	EM_A[2]	O	EMIF Address Bus
89	EM_A[1]	O	EMIF Address Bus
90	CVDD	-	Core Supply
91	EM_A[0]	O	EMIF Address Bus
92	DVDD	-	IO Supply
93	EM_A[10]	O	EMIF Address Bus
94	EM_BA[1]	O	SDRAM Bank Address and Asynchronous Memory Low-Order Address
95	VSS	-	Ground (0V)
96	EM_BA[0]	O	SDRAM Bank Address and Asynchronous Memory Low-Order Address
97	/EM_CS[0]	O	SDRAM Chip Select
98	/EM_RAS	O	SDRAM Row Address Strobe
99	VSS	-	Ground (0V)
100	/EM_CS[2]	O	Asynchronous Memory Chip Select
101	CVDD	-	Core Supply
102	EM_R/W	O	Asynchronous Memory Read/not Write
103	DVDD	-	IO Supply
104	/EM_OE	O	SDRAM Output Enable
105	/SPI0_ENA/ I2C1_SDA	I/O	SPI0 Enable (Ready) or I2C1 Serial Data
106	VSS	-	Ground (0V)
107	/SPI0_SCS/ I2C1_SCL	I/O	SPI0 Slave Chip Select or I2C1 Serial Clock
108	SPI0_CLK/ I2C0_SCL	I/O	SPI0 Serial Clock or I2C0 Serial Clock
109	VSS	-	Ground (0V)
110	SPI0_SIMO	I/O	SPI0 Data Pin Slave In Master Out
111	SPI0_SOMI/ I2C0_SDA	I/O	SPI0 Data Pin Slave Out Master In or I2C0 Serial Data
112	DVDD	-	IO Supply
113	AXR0[0]	I/O	McASP0 Serial Data 0
114	VSS	-	Ground (0V)
115	AXR0[1]	I/O	McASP0 Serial Data 1
116	AXR0[2]	I/O	McASP0 Serial Data 2
117	AXR0[3]	I/O	McASP0 Serial Data 3
118	VSS	-	Ground (0V)
119	AXR0[4]	I/O	McASP0 Serial Data 4
120	AXR0[5]/ SPI1_SCS	I/O	McASP0 Serial Data 5 or SPI1 Slave Chip Select
121	AXR0[6]/ SPI1_ENA	I/O	McASP0 Serial Data 6 or SPI1 Enable (Ready)
122	AXR0[7]/ SPI1_CLK	I/O	McASP0 Serial Data 7 or SPI1 Serial Clock
123	CVDD	-	Core Supply
124	VSS	-	Ground (0V)
125	DVDD	-	IO Supply
126	AXR0[8]/ AXR1[5]/ SPI1_SOMI	I/O	McASP0 Serial Data 8 or McASP1 Serial Data 5 or SPI1 Data Pin Slave Out Master In
127	AXR0[9]/ AXR1[4]/ SPI1_SIMO	I/O	McASP0 Serial Data 9 or McASP1 Serial Data 4 or SPI1 Data Pin Slave in Master Out
128	CVDD	-	Core Supply
129	VSS	-	Ground (0V)
130	AXR0[10]/AXR1[3]	I/O	McASP0 Serial Data 10 or McASP1 Serial Data 3
131	AXR0[11]/AXR1[2]	I/O	McASP0 Serial Data 11 or McASP1 Serial Data 2
132	CVDD	-	Core Supply
133	VSS	-	Ground (0V)
134	AXR0[12]/AXR1[1]	I/O	McASP0 Serial Data 12 or McASP1 Serial Data 1
135	AXR0[13]/AXR1[0]	I/O	McASP0 Serial Data 13 or McASP1 Serial Data 0
136	DVDD	-	IO Supply

Pin No.	Terminal Name	I/O	Function
137	AXR0[14]/AXR2[1]	I/O	McASP0 Serial Data 14 or McASP2 Serial Data 1
138	AXR0[15]/AXR2[0]	I/O	McASP0 Serial Data 15 or McASP2 Serial Data 0
139	ACLKR0	I/O	McASP0 Receive Bit Clock
140	VSS	-	Ground (0V)
141	AFSR0	I/O	McASP0 receive Frame Sync (L/R Clock)
142	ACLKX0	I/O	McASP0 Transmit Bit Clock
143	AHCLKR0/AHCLKR1	I/O	McASP0 and McASP1 Receive Master Clock
144	AFSX0	I/O	McASP0 Transmit Frame Sync (L/R Clock)

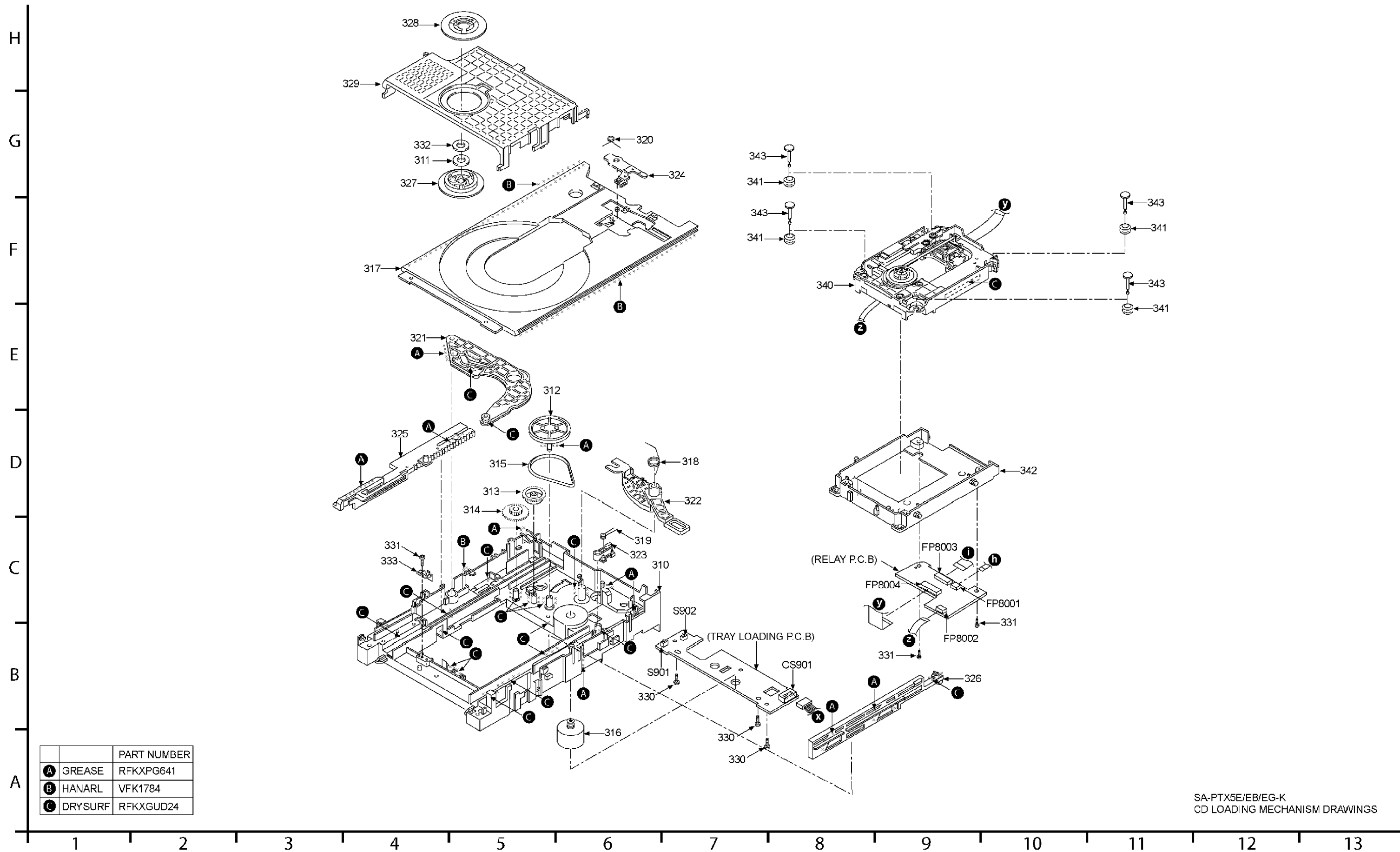
24 Exploded Views

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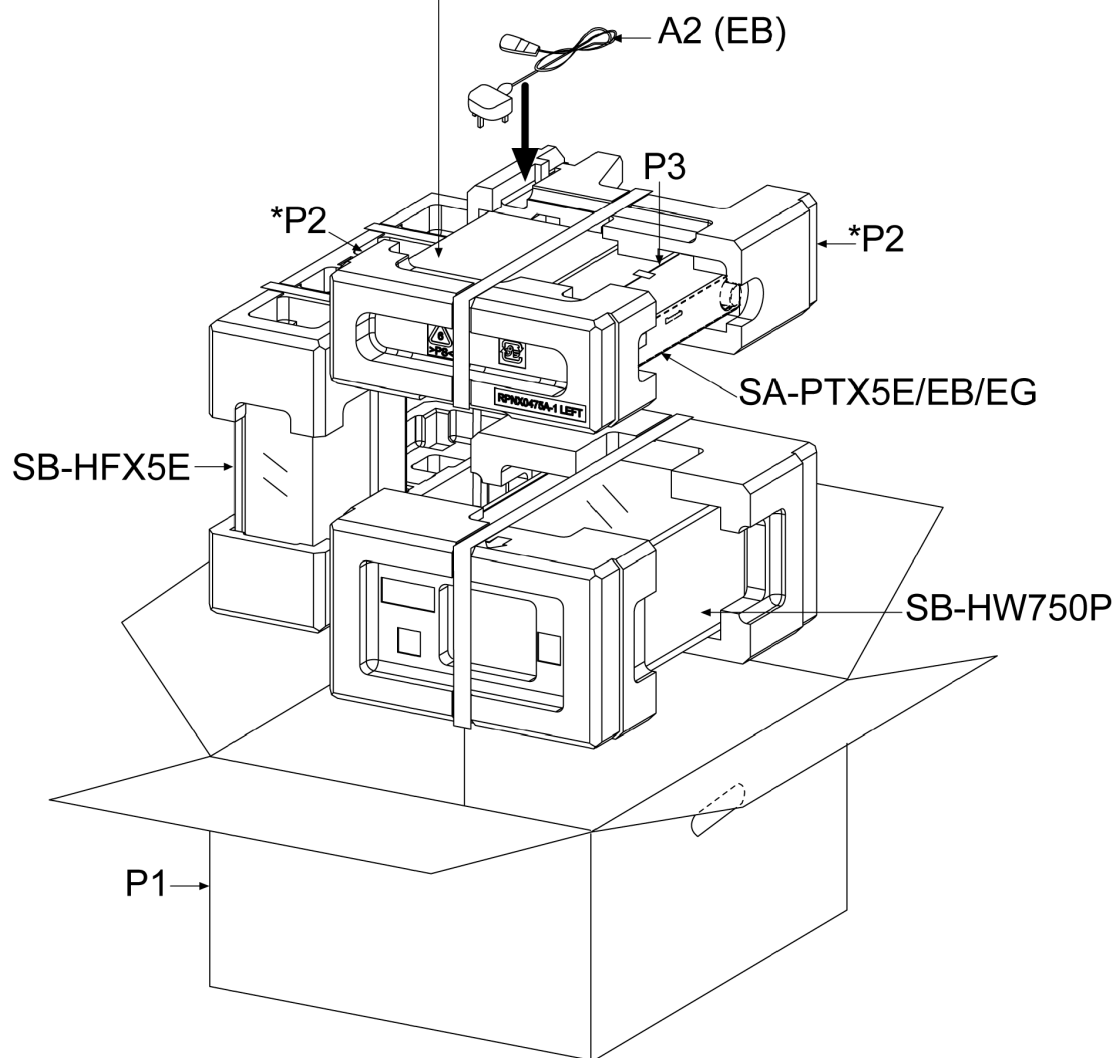
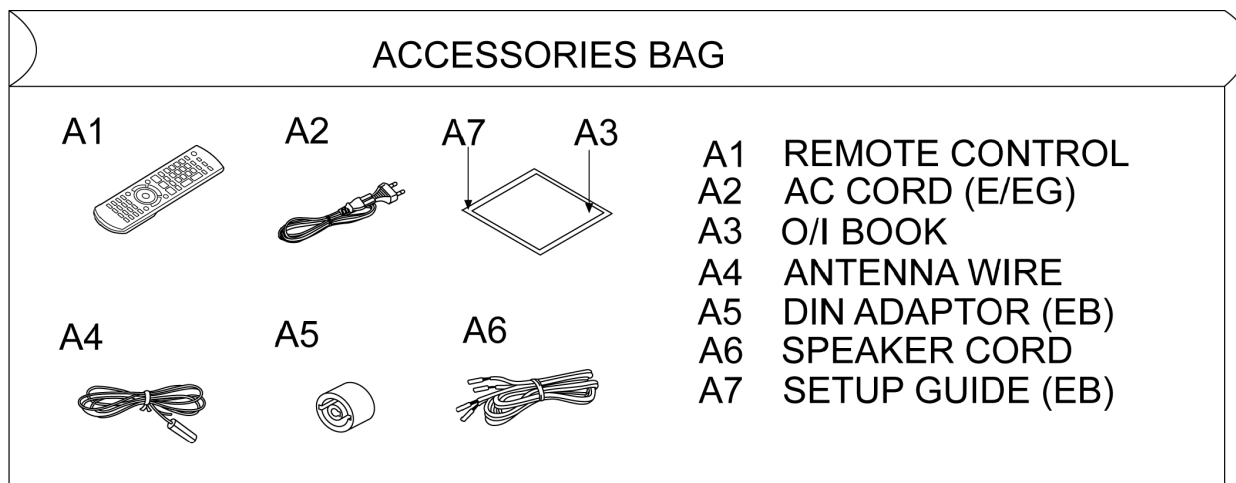


TAKE NOTE: "[]" PARTS ARE NOT SUPPLIED.

SA-PTX5E/EB/EG-K
CABINET DRAWINGS



24.2. Packaging



*P2 — POLYFOAM LEFT
 — POLYFOAM RIGHT

25 Replacement Parts List

Notes:

- Important safety notice:
Components identified by $\triangle$ mark have special characteristics important for safety purpose.
Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.
When replacing any of components, be sure to use only manufacture's specified parts shown in the parts list.
- Warning: This product uses a laser diode. Refer to caution statements.
- Capacity values are in microfarads (μ F) unless specified otherwise, P=Pico-farads (pF), F=Farads (F).
- Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM), 1M=1,000K (OHM).
- The parenthesized indications in the Remarks columns specify the model names and areas. (Refer to the cover page)
- The marking (RTL) indicates the retention time is limited for this item. After the discontinuation of this assembly in production, it will no longer be available.
- Parts mentioned [M] are supplied from PAVCSG.
- Parts mentioned [SPG] are supplied from PAVC.
- Reference for O/I book languages are as follows:

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

25.1. Component Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS	
1	J3CBC000001	TUNER PACK	[M]
2	L6FAJCC0007	DC FAN MOTOR	[M]
3	REEX0680	19P FFC WIRE (PANEL-SMPS)	[M]
4	REEX0681	50P FFC WIRE (DVD-IO)	[M]
5	REEX0682	26P FFC WIRE (MN-IO)	[M]
6	REEX0684	6P FFC WIRE (CDLD-DVD)	[M]
7	REEX0686	15P FFC WIRE (MN-SMPS)	[M]
8	REEX0687	19P FFC WIRE (MN-SMPS)	[M]
9	REEX0688	26P FFC WIRE (CDLD-DVD)	[M]
10	REEX0691	13P FFC WIRE (IO-HP)	[M]
11	REEX0692	7P FFC WIRE (MN-DVD)	[M]
12	REEX0755	4P FFC (SSW-PSW)	[M]
13	REEX0756	14P FFC WIRE (IO-DPORT)	[M]
14	REEX0786	26P FFC WIRE (IO-MN, DSP-IO)	[M]
15	REXX0569	7P FLAT WIRE (MN-SMPS)	[M]
17	REXX0572	7P FLAT WIRE (MN-CDLD)	[M]
18	REXX0573	5P WIRE (USB-DVD)	[M]
22	REXX0649	SCART GROUND WIRE	[M]
23	RGKX0388-K	VOLUME RING ORNAMENT	[M]
24	RGKX0389-Q	VOLUME LIGHTING RING	[M]
25	RGLX0140-Q	LIGHT PIECE	[M]
26	RFKGAPTX5EBK	FRONT PANEL ASS'Y	[M]
27	RGUX0704-K	POWER BUTTON	[M]
28	RGUX0705-K	SURROUND BUTTON	[M]
29	RGUX0706-K	OPERATION BUTTON	[M]
30	RHDX26002	SCREW	[M]
31	RMCX0038	SPRING PLATE	[M]
33	RGWX0107-K	VOLUME KNOB	[M]
34	RHD26046	SCREW	[M]
35	RHD30090-1	SCREW	[M]
36	RHD30111-3	SCREW	[M]
37	RHD30119-S	SCREW	[M]
38	RHDC0023	SCREW	[M]
39	RKA0059-K	LEG RUBBER	[M]
40	RKM0132B-K	TOP PANEL	[M]
42	RMAX0103A	MECHA CHASSIS	[M]
43	RMAX0123	DSP PCB HOLDER A	[M]
44	RMAX1112-1	FRONT PANEL SHIELD	[M]
45	RMAX1113-K	XM/D-PORT CHASSIS	[M]
46	RMAX1114	I/O PCB BRACKET	[M]
47	RMAX1115	I/O-MAIN PCB BRACKET	[M]
48	RMAX0134	POWER PCB BRACKET	[M]
49	RMCX0045	USB GROUND	[M]
50	RMCX0047	GROUND SPRING	[M]
51	RMCX0048	HP PCB GROUND	[M]
52	RMCX0050	SPEAKER JACK GROUND	[M]
53	RMCX0051-1	FRONT SHIELD GROUND	[M]
54	RMCX0052	IO PCB GROUND	[M]
55	RMCX0057	MAIN PCB GROUND	[M]
56	RMKX0128-1	BOTTOM CHASSIS	[M]
57	RMN0203	PCB HOLDER	[M]
58	RMNX0149	FL HOLDER	[M]
59	RMNX0151	LED HOLDER	[M]
60	RMNX0219	DC INSULATOR	[M]
61	RMNX0220-1	POWER INSULATOR	[M]
62	RMNX0221-1	AC INLET INSULATOR	[M]
63	RMNX0234	POWER INSULATOR B	[M]
64	RMNX0235-1	F/PANEL INSULATOR	[M]
65	RMNX0239	F/PANEL INSULATOR B	[M]
66	RMNX0244	TUNER INSULATOR	[M]
67	RMZX0037	D-AMP RADIATION RUBB	[M]
68	RSCX0156	AC METAL SHIELD	[M]
69	RXQX0045-1	TOP CHASSIS UNIT	[M]
70	RXQX0052-1	DSP SHIELD UNIT A	[M]
71	RXQX0053-1	DSP SHIELD UNIT B	[M]
72	RXXX0091	AMPLIFIER HEATSINK UNIT	[M]
73	RXXX0094	REGULATOR HEATSINK UNIT	[M]
74	RYQX0326C-K	LID ORNAMENT UNIT	[M]
74-1	RMGX0046-1	CUSHION LID	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
75	XSB3+6FJ	SCREW	[M]
76	XTB3+10JFJ	SCREW	[M]
77	XTB3+6JFJ	SCREW	[M]
78	RGKX0391-K1	LEFT BOTTOM ORNAMENT	[M]
79	RGKX0392-K1	RIGHT BOTTOM ORNAMENT	[M]
81	RMXY0196	HEATSINK (EXT-BIG)	[M]
82	RGRX0062F-A3	REAR PANEL	[M]EG/E
82	RGRX0062F-B3	REAR PANEL	[M]EB
83	RMXY0191C	HEAT SINK	[M]
84	XTB3+5FFJ	SCREW	[M]
85	RGKX0390-K	TRAY LID	[M]
		TRAVERSE DECK	
310	RMK0591A	MECHA CHASSIS	[M]
311	RHM0003-J	MAGNET	[M]
312	RDG0547	PULLEY GEAR	[M]
313	RDG0548-1	RELAY GEAR	[M]
314	RDG0549	DRIVE GEAR	[M]
315	RDV0070	BELT	[M]
316	REM0133	MOTOR UNIT	[M]
317	RGQ0395-K1	TRAY	[M]
318	RME0350	CHANGE LEVER SPRING	[M]
319	RME0351A	LOCK LEVER SPRING	[M]
320	RME0353	TRAY SLIDER SPRING	[M]
321	RML0627-2	DRIVE ARM	[M]
322	RML0628	CHANGE LEVER	[M]
323	RML0629	LOCK LEVER	[M]
324	RML0631	TRAY SLIDER	[M]
325	RMM0247-3	DRIVE RACK	[M]
326	RMM0248	SUB RACK	[M]
327	RMR1446-X	CLAMPER	[M]
328	RMR1447-X	MAGNET HOLDER	[M]
329	RMR1468-K	CLAMP PLATE	[M]
330	XTN26+6GFJ	SCREW	[M]
331	XTV2+6GFJ	PCB SCREW	[M]
332	XWG6FFJ	WASHER	[M]
333	RMC0387	SUPPORT SPRING	[M]
340	RAE2025Z-S	DT6.0J TRAVERSE UNIT	[M] △
341	RMG0598A-K	FLOATING RUBBER	[M]
342	RMR1596-X2	MIDDLE CHASSIS	[M]
343	RMS0789	FIXED PIN	[M]
		PRINTED CIRCUIT BOARDS	
	REP4238A	TRAY LOADING P.C.B.	[M] (RTL)
	REPX0563H	DVD MODULE P.C.B.	[M] (RTL)E
	REPX0563M	DVD MODULE P.C.B.	[M] (RTL)EB /EG
	REPX0604A	RELAY P.C.B.	[M] (RTL)
	REPX0615A	PANEL/SMPS/AC-INLET P.C.B.	[M] (RTL)
	REPX0616A	D-PORT/MAIN/INPUT - OUTPUT/SURROUND SWITCH/POWER SWITCH/ USB/HEADPHONE/REGULATOR P.C.B.	[M] (RTL)EG
	REPX0616B	D-PORT/MAIN/INPUT - OUTPUT/SURROUND SWITCH/POWER SWITCH/ USB/HEADPHONE/REGULATOR P.C.B.	[M] (RTL)E
	REPX0616E	D-PORT/MAIN/INPUT - OUTPUT/SURROUND SWITCH/POWER SWITCH/ USB/HEADPHONE/REGULATOR P.C.B.	[M] (RTL)EB
	REPX0617A	DSP P.C.B.	[M] (RTL)
		INTEGRATED CIRCUITS	
IC100	C0CBAHG00011	IC +9V REGULATOR	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
IC103	B3ZAZ0000017	IC OPTICAL OUT	[M]
IC105	C1AB00002750	IC AUDIO SELECTOR (9CH FUNCTION SWITCH)	[M]
IC108	C0CBCDH00001	IC +5V REGULATOR	[M]
IC200	C9ZB00000461	IC VIDEO BUFFER	[M]
IC201	C9ZB00000461	IC VIDEO BUFFER	[M]
IC203	C1AB00001731	IC VIDEO BUFFER	[M]
IC205	C0ABBB000403	IC SCART OUT AMP	[M]
IC250	C1BB00001008	IC RDS DEMODULATOR	[M]
IC280	C0ABBB000403	IC IPOD AMP	[M]
IC310	C0AABB000085	IC HEADPHONE AMP	[M]
IC313	C1AB00002461	IC DIGITAL AUDIO PWM PROCESSOR	[M]
IC315	C0JBAA0000501	IC AND GATE	[M]
IC316	C0DBGYY00269	IC REGULATOR	[M]
IC317	C1AB00002460	IC AUDIO DIGITAL AMP	[M]
IC318	C1AB00002460	IC AUDIO DIGITAL AMP	[M]
IC319	C0EBE0000338	IC VOLTAGE DETECTOR	[M]
IC501	C2CBYY000513	IC SYSTEM CONTROL	[M]
IC503	C0CBABG00027	IC +3.3V REGULATOR	[M]
IC504	C0EBE0000456	IC RESET	[M]
IC505	C0JBAB0000837	IC INVERTER	[M]
IC506	C0JBAB0000837	IC INVERTER	[M]
IC700	C0CBADG00023	IC REGULATOR (A5V)	[M]
IC701	C0EAS0000032	IC ERROR AMP	[M]
IC703	MIP2F20MSSCF	IC SWITCHING REGULATOR	[M]
IC704	C0DAEMZ00001	IC SHUNT REGULATOR	[M]
IC706	C5HACYY00003	IC SWITCHING REGULATOR	[M]
IC707	C0DBGYY00269	IC REGULATOR (A12V)	[M]
IC772	C0DBAMH00009	IC REGULATOR (D6V)	[M]
IC773	C0DBAMH00009	IC REGULATOR (DSP3.3V)	[M]
IC774	C0CBABG00027	IC REGULATOR (D3.3V)	[M]
IC800	C0HBB0000057	IC DISPLAY DRIVER	[M]
IC901	C0ABBB000403	IC MUSIC PORT AMP	[M]
IC902	C0DBEHG00006	IC REGULATOR (D5V)	[M]
IC903	C0DBEHG00006	IC REGULATOR	[M]EB/E
IC904	C0GAY0000013	IC REFLECTIVE PHOTO SENSOR	[M]
IC1300	C0FBAY000032	IC A/D CONVERTER	[M]
IC1301	C0FBAY000032	IC A/D CONVERTER	[M]
IC1302	C0FBAY000032	IC A/D CONVERTER	[M]
IC1303	C0FBAY000032	IC A/D CONVERTER	[M]
IC1305	C3FBMD000197	IC 16M FLASH ROM	[SPG]
IC1306	C2HBZY000024	IC DSP	[M]
IC1307	C0DBEHG00006	IC +1.2V REGULATOR	[M]
IC1308	C3ABMG000228	IC 16M SDRAM	[M]
IC1310	C0JBAA0000501	IC AND GATE	[M]
IC1311	C0FBBK000049	IC A/D CONVERTER	[M]
IC1312	C0JBAB0000907	IC INVERTER GATE	[M]
IC1314	C0CBABG00027	IC +3.3V REGULATOR	[M]
IC3901	MN864702A	IC HDMI TRANSMITTER	[M]
IC3952	C0CBCDC00063	IC TERMINAL VOLTAGE REGULATOR	[M]
IC8001	MN2DS0018MA	IC DV5.0LSI	[M]
IC8051	C3ABPG000145	IC 64M SDRAM	[M]
IC8111	C0DBZYY00018	IC +3.3V DC-DC CONVERTER	[M]
IC8151	C0DBEHG00006	IC +1.2V REGULATOR	[M]
IC8251	C0GBG0000048	IC MOTOR DRIVE	[M]
IC8421	C0FBBK000050	IC AUDIO DAC	[M]
IC8601	C0EBA0000029	IC RESET	[M]
IC8606	C0EBE0000456	IC RESET	[M]
IC8651	RFKWMHB0D322	IC 32M FLASH MEMORY	[SPG]EB/E
IC8651	RFKWMHB0E322	IC 32M FLASH MEMORY	[SPG]E
IC8701	C0JBAB0000907	IC INVERTER GATE	[M]
IC8901	C0JBAA0000501	IC AND GATE	[M]
IC9001	C0JBAZ001251	IC LATCH	[M]
IC9002	C0JBAZ001251	IC LATCH	[M]
IC9003	C0JBAB0000908	IC INVERTER GATE	[M]
IC9005	C0DBZYE00002	IC REGULATOR	[M]
		TRANSISTORS	
Q201	XN0460100L	TRANSISTOR	[M]
Q202	B1ABCF000011	TRANSISTOR	[M]
Q203	B1ABGC000001	TRANSISTOR	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
Q204	B1ABGC000001	TRANSISTOR	[M]
Q205	B1ABGC000001	TRANSISTOR	[M]
Q206	B1ABGC000001	TRANSISTOR	[M]
Q207	B1ABGC000001	TRANSISTOR	[M]EG/E
Q208	B1ABGC000001	TRANSISTOR	[M]EG/E
Q301	B1ABGC000001	TRANSISTOR	[M]
Q302	B1ABGC000001	TRANSISTOR	[M]
Q303	B1ABGC000001	TRANSISTOR	[M]
Q304	B1ABGC000001	TRANSISTOR	[M]
Q305	2SB0709AHL	TRANSISTOR	[M]
Q306	B1ABCF000011	TRANSISTOR	[M]
Q307	B1ADBL000010	TRANSISTOR	[M]
Q308	B1ABCF000011	TRANSISTOR	[M]
Q309	B1ABCF000011	TRANSISTOR	[M]
Q310	B1ABCF000011	TRANSISTOR	[M]
Q311	B1ABCF000011	TRANSISTOR	[M]
Q312	B1ABCF000011	TRANSISTOR	[M]
Q313	B1ABCF000011	TRANSISTOR	[M]
Q314	B1BACG000023	TRANSISTOR	[M]
Q315	B1ABCF000011	TRANSISTOR	[M]
Q316	B1ADCF000001	TRANSISTOR	[M]
Q317	B1ADCF000001	TRANSISTOR	[M]
Q500	2SD0601AHL	TRANSISTOR	[M]
Q501	2SD0601AHL	TRANSISTOR	[M]
Q502	B1ADCE000012	TRANSISTOR	[M]
Q503	XN0460100L	TRANSISTOR	[M]
Q702	2SC3940ARA	TRANSISTOR	[M]
Q703	B1ABCF000176	TRANSISTOR	[M]
Q704	B1BCCG000002	TRANSISTOR	[M]
Q706	B1ABCF000176	TRANSISTOR	[M]
Q710	B1BARK000001	TRANSISTOR	[M]
Q712	UNR211H00L	TRANSISTOR	[M]
Q713	B1GBCFJN0033	TRANSISTOR	[M]
Q801	B1GBCFJN0033	TRANSISTOR	[M]
Q802	B1ADCE000012	TRANSISTOR	[M]
Q1300	B1ADCF000001	TRANSISTOR	[M]
Q1305	B1ABCF000011	TRANSISTOR	[M]
Q3901	2SD1819A0L	TRANSISTOR	[M]
Q3902	B1CFHA000002	TRANSISTOR	[M]
Q3903	B1CFHA000002	TRANSISTOR	[M]
Q3941	2SD1819A0L	TRANSISTOR	[M]
Q3942	2SD1819A0L	TRANSISTOR	[M]
Q3943	2SD1819A0L	TRANSISTOR	[M]
Q8321	2SB1218ARL	TRANSISTOR	[M]
Q8325	2SB1218ARL	TRANSISTOR	[M]
Q8331	2SB1218ARL	TRANSISTOR	[M]
Q8335	2SB1218ARL	TRANSISTOR	[M]
Q8341	2SB1218ARL	TRANSISTOR	[M]
Q8551	2SD1819A0L	TRANSISTOR	[M]
Q8552	B1ADGB000008	TRANSISTOR	[M]
Q8561	2SD1819A0L	TRANSISTOR	[M]
Q8562	B1ADGB000008	TRANSISTOR	[M]
QR102	B1GBCFJJ0051	TRANSISTOR	[M]
QR200	UNR211H00L	DIGITAL TRANSISTOR	[M]
QR201	B1GBCFJJ0051	TRANSISTOR	[M]
QR202	B1GBCFJJ0051	TRANSISTOR	[M]EB
QR203	B1GBCFJJ0051	TRANSISTOR	[M]
QR204	B1GBCFJJ0051	TRANSISTOR	[M]
QR205	UNR211H00L	DIGITAL TRANSISTOR	[M]
QR206	B1GBCFJJ0051	TRANSISTOR	[M]
QR207	UNR211H00L	DIGITAL TRANSISTOR	[M]
QR210	B1GBCFJJ0051	TRANSISTOR	[M]
QR211	B1GBCFJJ0051	TRANSISTOR	[M]
QR300	B1GBCFJJ0051	TRANSISTOR	[M]
QR304	UNR211H00L	DIGITAL TRANSISTOR	[M]
QR305	B1GBCFJJ0051	TRANSISTOR	[M]
QR306	B1GBCFJJ0051	TRANSISTOR	[M]
QR500	B1GBCFJN0033	TRANSISTOR	[M]
QR501	B1GFAFNN0001	TRANSISTOR	[M]
QR502	B1GFAFNN0001	TRANSISTOR	[M]
QR503	B1GBCFJJ0051	TRANSISTOR	[M]
QR504	UNR211H00L	DIGITAL TRANSISTOR	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
QR506	B1ABGC000005	TRANSISTOR	[M]EG
QR506	B1GBCFJJ0051	TRANSISTOR	[M]EB/E
QR507	B1ABGC000005	TRANSISTOR	[M]EG
QR507	B1GBCFJJ0051	TRANSISTOR	[M]EB/E
QR508	B1ABGC000005	TRANSISTOR	[M]EG
QR508	UNR211H00L	DIGITAL TRANSISTOR	[M]EB/E
QR700	B1GBCFJJ0051	TRANSISTOR	[M]EG/E
QR701	B1GBCFJJ0051	TRANSISTOR	[M]EG/E
QR702	B1GBCFJJ0051	TRANSISTOR	[M]EG/E
QR711	B1GBCFJJ0051	TRANSISTOR	[M]
QR712	B1GBCFJJ0051	TRANSISTOR	[M]
QR713	B1ABCF000176	TRANSISTOR	[M]
QR714	B1GBCFJJ0051	TRANSISTOR	[M]
QR1305	B1GBCFJJ0051	TRANSISTOR	[M]
QR8111	XP0621400L	CHIP TRANSISTOR	[M]
QR8420	UNR521100L	CHIP TRANSISTOR	[M]
QR8571	UNR511V00L	CHIP TRANSISTOR	[M]
PC701	B3PAA0000529	PHOTO COUPLER	[M] △
PC702	B3PAA0000529	PHOTO COUPLER	[M] △
PC703	B3PAA0000529	PHOTO COUPLER	[M] △
		DIODES	
D100	B0JAMD000005	DIODE	[M]
D101	B0ACCK000005	DIODE	[M]
D106	B0ACCK000005	DIODE	[M]
D107	B0BC010A0007	DIODE	[M]
D108	B0BC01200019	DIODE	[M]
D109	B0BC5R000009	DIODE	[M]
D111	B0BC01400019	DIODE	[M]
D201	B0JCAE000001	DIODE	[M]
D202	B0JCAE000001	DIODE	[M]
D300	B0EAKM000117	DIODE	[M]
D301	B0EAKM000117	DIODE	[M]
D302	B0ACCK000005	DIODE	[M]
D303	B0BC01400019	DIODE	[M]
D312	B0ACCK000005	DIODE	[M]
D313	B0ACCK000005	DIODE	[M]
D314	B0ACCK000005	DIODE	[M]
D315	B0ACCK000005	DIODE	[M]
D316	B0ACCK000005	DIODE	[M]
D318	B0BC010A0007	DIODE	[M]
D322	MA2J72800L	DIODE	[M]
D500	B0EAKM000117	DIODE	[M]
D501	B0EAKM000117	DIODE	[M]
D502	B0JCAE000001	DIODE	[M]EG
D700	B0HBSM000043	DIODE	[M]
D701	B0EBNR000028	DIODE	[M]
D702	B0HBSM000052	DIODE	[M]
D703	MAZ80300LL	DIODE	[M]
D704	B0ZAZ0000052	DIODE	[M]
D705	B0HAJM000005	DIODE	[M]
D707	B0BC010A0007	DIODE	[M]
D708	B0HAJM000005	DIODE	[M]
D709	B0BC01700015	DIODE	[M]
D710	B0ACCK000005	DIODE	[M]
D711	B0BC6R100010	DIODE	[M]
D713	B0HAJM000005	DIODE	[M]
D714	B0ACCK000005	DIODE	[M]
D715	B0EDKT000009	DIODE	[M]
D716	B0JAJG000005	DIODE	[M]
D717	B0EAKB000004	DIODE	[M]
D718	MAZ83000ML	DIODE	[M]
D719	B0ACCK000005	DIODE	[M]
D720	B0HAJM000005	DIODE	[M]
D730	B0ACCK000005	DIODE	[M]
D732	B0ACCK000005	DIODE	[M]
D735	B0BC9R000008	DIODE	[M]
D737	MAZ81100HL	DIODE	[M]
D739	B0JCMD000010	DIODE	[M]
D740	B0HAJM000005	DIODE	[M]
D742	MAZ82700LL	DIODE	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
D743	B0BC01700015	DIODE	[M]
D750	B0ACCK000005	DIODE	[M]
D752	B0ACCK000005	DIODE	[M]
D753	B0ACCK000005	DIODE	[M]
D754	B0ACCK000005	DIODE	[M]
D755	B0BC01700015	DIODE	[M]
D756	MAZ81100HL	DIODE	[M]
D757	B0BC010A0007	DIODE	[M]
D770	B0JCPC000004	DIODE	[M]
D771	B0JCPC000004	DIODE	[M]
D801	B3AEA0000058	DIODE	[M]
D802	B0BC8R100004	DIODE	[M]
D803	B0ACCK000005	DIODE	[M]
D840	B3ABB0000306	DIODE	[M]
D870	B3AAB0000037	DIODE	[M]
D1302	B0ACCK000005	DIODE	[M]
D1303	B0BC5R000009	DIODE	[M]
D1304	B0BC2R4A0006	DIODE	[M]
D3901	MA2J72800L	DIODE	[M]
D8211	MA2J11100L	DIODE	[M]
D8571	MA2J72800L	DIODE	[M]
		CONNECTORS	
CS901	K1KA07BA0061	7P CONNECTOR	[M]
P100	K1KA10AA0031	10P CONNECTOR	[M]
P101	K1MN50BA0173	50P CONNECTOR	[M]
P105	K1MN26BA0033	26P CONNECTOR	[M]
P107	K1MY13BA0078	13P CONNECTOR	[M]
P108	K1MN26BA0033	26P CONNECTOR	[M]
P110	K1MN26BA0033	26P CONNECTOR	[M]
P111	REXX0612	8P WIRE (REG-IO)	[M]
P116	K1MY14BA0049	14P CONNECTOR	[M]
P301	K1MY26AA0021	26P CONNECTOR	[M]
P302	K1KA03AA0180	3P CONNECTOR	[M]
P309	K1MN15AA0003	15P CONNECTOR	[M]
P351	K1KB30AA0129	30P CONNECTOR	[M]
P500	K1MN07AA0076	7P CONNECTOR	[M]
P501	K1YZ07000001	7P WIRE HOLDER	[M]
P503	K1MY26AA0021	26P CONNECTOR	[M]
P504	K1MN19AA0004	19P CONNECTOR	[M]
P700	K1KA05AA0031	5P CONNECTOR	[M]
P701	K1KA08AA0031	8P CONNECTOR	[M]
P702	K2AA2B000015	AC INLET	[M] △
P703	K1MN15AA0003	15P CONNECTOR	[M]
P704	K1MN19AA0004	19P CONNECTOR	[M]
P705	K1KA07AA0193	7P CONNECTOR	[M]
P707	K1MN19AA0004	19P CONNECTOR	[M]
P770	K1KB08B00041	8P CONNECTOR	[M]
P771	K1KB05B00022	5P CONNECTOR	[M]
P772	K1KA08BA0061	8P CONNECTOR	[M]
P800	K1MN19B00021	19P FFC CONNECTOR	[M]
P801	K1KA06BA0061	6P CONNECTOR	[M]
P870	K1MN04BA0148	4P CONNECTOR	[M]
P900	K1MY13BA0078	13P CONNECTOR	[M]
P930	K1KA05BA0061	5P CONNECTOR	[M]
P931	K1FY104B0011	USB CONNECTOR	[M]
P960	K1MY14BA0049	14P CONNECTOR	[M]
P961	K1FY124DA001	D-PORT CONNECTOR	[M]
P1300	K1MY10AA0021	10P CONNECTOR	[M]
P1301	K1MY26AA0021	26P CONNECTOR	[M]
P1305	K1KA30BA0190	30P FFC CONNECTOR	[M]
P1502	K1MN08A00068	8P FFC CONNECTOR	[M]
P3901	K1FY119E0002	HDMI CONNECTOR	[M]
FP3902	K1MN07BA0148	7P CONNECTOR	[M]
FP8001	K1MN06BA0147	6P CONNECTOR	[M]
FP8002	K1MN06BA0148	6P CONNECTOR	[M]
FP8003	K1MY26BA0053	26P CONNECTOR	[M]
FP8004	K1MY26BA0030	26P FFC CONNECTOR	[M]
FP8101	K1MN50BA0173	50P CONNECTOR	[M]
FP8251	K1MN06AA0076	6P CONNECTOR	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
FP8531	K1MY26AA0021	26P CONNECTOR	[M]
FP9001	K1KA05BA0014	5P CONNECTOR	[M]
		VARIABLE RESISTORS	
VR800	EVEKF2F3024M	VR VOLUME JOG	[M]
VA930	EZJZ1V171AA	CHIP VARISTOR	[M]
VA931	EZJZ1V171AA	CHIP VARISTOR	[M]
VA3901	EZAE62A50AX	ESD SUPPRESSOR	[M]
VA3902	EZAE62A50AX	ESD SUPPRESSOR	[M]
VA3903	EZAE62A50AX	ESD SUPPRESSOR	[M]
VA3904	EZAE62A50AX	ESD SUPPRESSOR	[M]
VA3905	EZAE62A50AX	ESD SUPPRESSOR	[M]
VA3906	EZAE62A50AX	ESD SUPPRESSOR	[M]
VA3907	EZAE62A50AX	ESD SUPPRESSOR	[M]
VA3908	EZAE62A50AX	ESD SUPPRESSOR	[M]
VA3909	EZJZ0V800AA	VARISTOR	[M]
VA3910	EZJZ0V800AA	VARISTOR	[M]
VA3911	EZJZ0V800AA	VARISTOR	[M]
VA3912	EZJZ0V800AA	VARISTOR	[M]
VA3913	EZJZ0V800AA	VARISTOR	[M]
		SWITCHES	
S800	EVQ21405R	SW OPEN/CLOSE	[M]
S801	EVQ21405R	SW SELECTOR	[M]
S802	EVQ21405R	SW REVERSE/TUNING DOWN	[M]
S803	EVQ21405R	SW FORWARD/TUNING UP	[M]
S804	EVQ21405R	SW PLAY/MEMORY	[M]
S805	EVQ21405R	SW STOP/-TUNE MODE/-FM MODE	[M]
S806	EVQPQMB55	SW SURROUND	[M]
S870	EVQPQMB55	SW POWER	[M]
S901	RSH1A044-1A	SW PLAY	[M]
S902	RSH1A044-1A	SW OPEN	[M]
		THERMISTORS	
TH701	D4CAA5R10001	THERMISTOR	[M] △
TH702	D4CAA5R10001	THERMISTOR	[M] △
		COILS & TRANSFORMERS	
L200	G0A200D00002	COIL	[M]
L201	G0A200D00002	COIL	[M]
L250	J0JBC0000041	CHIP INDUCTOR	[M]
L251	J0JBC0000041	CHIP INDUCTOR	[M]
L252	J0JBC0000041	CHIP INDUCTOR	[M]
L300	G0A200D00002	COIL	[M]
L301	G0A200D00002	COIL	[M]
L302	G1C100M00045	INDUCTOR	[M]
L303	G1C100M00045	INDUCTOR	[M]
L304	G1C100M00045	INDUCTOR	[M]
L305	G0C3R3JA0027	COIL	[M]
L306	G0B9R5K00003	COIL	[M]
L307	G0B9R5K00003	COIL	[M]
L308	G0B9R5K00003	COIL	[M]
L703	ELF19H010A	LINE CHOKE COIL	[M] △
L704	ELF15N035AN	LINE FILTER	[M] △
L710	G0C390JA0055	COIL	[M]
L771	G0A101ZA0028	COIL	[M]
L772	G0A101ZA0027	COIL	[M]
L773	G0A200D00002	COIL	[M]
L774	G0A200D00002	COIL	[M]
L900	J0JCC0000103	FILTER	[M]
L901	J0JBC0000019	CHIP INDUCTOR	[M]
L902	J0JBC0000019	CHIP INDUCTOR	[M]
L903	J0JCC0000103	FILTER	[M]
L904	J0JCC0000103	FILTER	[M]
L905	J0JBC0000019	CHIP INDUCTOR	[M]
L906	J0JBC0000019	CHIP INDUCTOR	[M]
L907	ERJ3GEY0R00V	CHIP JUMPER	[M]
L930	G1BYYB00009	MODE CHOKE COIL	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
L3903	J0MAB0000170	FILTER	[M]
L3904	J0MAB0000170	FILTER	[M]
L3905	J0MAB0000170	FILTER	[M]
L3906	J0MAB0000170	FILTER	[M]
L8001	G1C100K00019	CHIP COIL	[M]
L8201	G1C100K00019	CHIP COIL	[M]
L8301	G1C100K00019	CHIP COIL	[M]
L8302	G1C100K00019	CHIP COIL	[M]
L8303	G1C100K00019	CHIP COIL	[M]
L8330	G1C100K00019	CHIP COIL	[M]
L8501	G1C100K00019	CHIP COIL	[M]
L8550	G1C100KA0055	CHIP INDUCTOR	[M]
		CHIP INDUCTORS	
LB200	J0JBC0000015	CHIP INDUCTOR	[M]
LB201	J0JCC0000186	CHIP BEAD	[M]
LB207	J0JBC0000015	CHIP INDUCTOR	[M]
LB208	J0JBC0000015	CHIP INDUCTOR	[M]
LB209	J0JBC0000015	CHIP INDUCTOR	[M]
LB210	J0JBC0000015	CHIP INDUCTOR	[M]
LB211	J0JBC0000015	CHIP INDUCTOR	[M]
LB213	J0JBC0000015	CHIP INDUCTOR	[M]
LB214	J0JBC0000015	CHIP INDUCTOR	[M]
LB215	J0JBC0000015	CHIP INDUCTOR	[M]
LB216	J0JBC0000015	CHIP INDUCTOR	[M]
LB217	J0JBC0000015	CHIP INDUCTOR	[M]
LB218	J0JBC0000015	CHIP INDUCTOR	[M]
LB219	J0JBC0000015	CHIP INDUCTOR	[M]
LB220	ERJ3GEY0R00V	CHIP RESISTOR	[M]
LB221	ERJ3GEY0R00V	CHIP RESISTOR	[M]
LB222	ERJ3GEY0R00V	CHIP RESISTOR	[M]
LB223	ERJ3GEY0R00V	CHIP RESISTOR	[M]
LB224	ERJ3GEY0R00V	CHIP RESISTOR	[M]
LB225	ERJ3GEY0R00V	CHIP RESISTOR	[M]
LB226	ERJ3GEY0R00V	CHIP RESISTOR	[M]
LB227	ERJ3GEY0R00V	CHIP RESISTOR	[M]
LB228	ERJ3GEY0R00V	CHIP RESISTOR	[M]
LB229	ERJ3GEY0R00V	CHIP RESISTOR	[M]
LB230	ERJ3GEY0R00V	CHIP RESISTOR	[M]
LB231	ERJ3GEY0R00V	CHIP RESISTOR	[M]
LB232	ERJ3GEY0R00V	CHIP RESISTOR	[M]
LB233	ERJ3GEY0R00V	CHIP RESISTOR	[M]
LB234	ERJ3GEY0R00V	CHIP RESISTOR	[M]
LB324	J0JKB0000003	INDUCTOR	[M]
LB325	J0JKB0000003	INDUCTOR	[M]
LB326	J0JBC0000041	CHIP INDUCTOR	[M]
LB711	ERJ3GEY0R00V	CHIP RESISTOR	[M]
LB712	ERJ3GEY0R00V	CHIP RESISTOR	[M]
LB714	J0JBC0000014	CHIP INDUCTOR	[M]
LB715	J0JBC0000041	CHIP INDUCTOR	[M]
LB716	J0JBC0000041	CHIP INDUCTOR	[M]
LB930	J0JHC0000034	CHIP FERRITE BEAD	[M]
LB931	J0JHC0000034	CHIP FERRITE BEAD	[M]
LB932	J0JHC0000048	FILTER BEAD CORE	[M]
LB933	J0JHC0000048	FILTER BEAD CORE	[M]
LB934	J0JHC0000048	FILTER BEAD CORE	[M]
LB935	J0JHC0000048	FILTER BEAD CORE	[M]
LB936	J0JHC0000048	FILTER BEAD CORE	[M]
LB937	J0JHC0000048	FILTER BEAD CORE	[M]
LB1300	J0JBC0000041	CHIP INDUCTOR	[M]
LB1301	J0JBC0000041	CHIP INDUCTOR	[M]
LB1302	J0JBC0000041	CHIP INDUCTOR	[M]
LB1303	J0JBC0000041	CHIP INDUCTOR	[M]
LB1304	J0JBC0000041	CHIP INDUCTOR	[M]
LB1305	J0JBC0000041	CHIP INDUCTOR	[M]
LB1306	J0JBC0000041	CHIP INDUCTOR	[M]
LB1307	J0JBC0000041	CHIP INDUCTOR	[M]
LB1310	J0JBC0000041	CHIP INDUCTOR	[M]
LB1311	J0JHC0000048	FILTER BEAD CORE	[M]
LB1312	J0JHC0000048	FILTER BEAD CORE	[M]
LB1313	J0JHC0000048	FILTER BEAD CORE	[M]
LB1314	J0JHC0000048	FILTER BEAD CORE	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
LB1315	J0JHC0000048	FILTER BEAD CORE	[M]
LB1316	J0JHC0000048	FILTER BEAD CORE	[M]
LB1317	J0JBC0000041	CHIP INDUCTOR	[M]
LB1318	J0JGC0000020	FILTER	[M]
LB1319	J0JGC0000020	FILTER	[M]
LB1321	J0JGC0000020	FILTER	[M]
LB1322	J0JBC0000041	CHIP INDUCTOR	[M]
LB1323	J0JBC0000041	CHIP INDUCTOR	[M]
LB1324	J0JHC0000048	FILTER BEAD CORE	[M]
LB1325	J0JHC0000048	FILTER BEAD CORE	[M]
LB1326	J0JHC0000048	FILTER BEAD CORE	[M]
LB1327	J0JHC0000048	FILTER BEAD CORE	[M]
LB1330	J0JHC0000048	FILTER BEAD CORE	[M]
LB1331	J0JBC0000041	CHIP INDUCTOR	[M]
LB1332	J0JGC0000020	FILTER	[M]
LB1333	J0JGC0000020	FILTER	[M]
LB1340	J0JBC0000015	CHIP INDUCTOR	[M]
LB1341	J0JBC0000015	CHIP INDUCTOR	[M]
LB1342	J0JBC0000015	CHIP INDUCTOR	[M]
LB1343	J0JBC0000015	CHIP INDUCTOR	[M]
LB1344	J0JBC0000015	CHIP INDUCTOR	[M]
LB1345	J0JBC0000015	CHIP INDUCTOR	[M]
LB1346	J0JBC0000015	CHIP INDUCTOR	[M]
LB1347	J0JBC0000015	CHIP INDUCTOR	[M]
LB1351	J0JBC0000015	CHIP INDUCTOR	[M]
LB1352	J0JBC0000015	CHIP INDUCTOR	[M]
LB3901	J0JHC0000045	CHIP INDUCTOR	[M]
LB3902	J0JHC0000045	CHIP INDUCTOR	[M]
LB3903	J0JCC0000119	CHIP INDUCTOR	[M]
LB3904	J0JCC0000119	CHIP INDUCTOR	[M]
LB3905	J0JCC0000119	CHIP INDUCTOR	[M]
LB3906	J0JCC0000119	CHIP INDUCTOR	[M]
LB3907	J0JHC0000045	CHIP INDUCTOR	[M]
LB3908	J0JHC0000045	CHIP INDUCTOR	[M]
LB8001	J0JHC0000045	CHIP INDUCTOR	[M]
LB8011	J0JHC0000045	CHIP INDUCTOR	[M]
LB8257	ERJ3GEY0R00V	CHIP RESISTOR	[M]
LB8258	ERJ3GEY0R00V	CHIP RESISTOR	[M]
LB8259	ERJ3GEY0R00V	CHIP RESISTOR	[M]
LB8260	ERJ3GEY0R00V	CHIP RESISTOR	[M]
LB8301	J0JBC0000042	CHIP BEAD	[M]
LB8302	J0JBC0000042	CHIP BEAD	[M]
LB8303	J0JBC0000042	CHIP BEAD	[M]
LB8304	J0JBC0000042	CHIP BEAD	[M]
LB8305	J0JBC0000042	CHIP BEAD	[M]
LB8401	J0JBC0000042	CHIP BEAD	[M]
LB8421	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8422	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8423	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8424	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8425	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8426	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8427	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8428	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8429	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8431	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8491	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8530	J0JHC0000045	CHIP INDUCTOR	[M]
LB8531	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8551	J0JBC0000042	CHIP BEAD	[M]
LB8561	J0JBC0000042	CHIP BEAD	[M]
LB8571	J0JBC0000042	CHIP BEAD	[M]
LB8691	ERJ2GEJ101X	CHIP RESISTOR	[M]
LB8692	ERJ2GEJ101X	CHIP RESISTOR	[M]
LB8693	ERJ2GEJ101X	CHIP RESISTOR	[M]
LB8701	J0JBC0000044	HIGH LOSS INDUCTOR	[M]
LB8702	J0JBC0000044	HIGH LOSS INDUCTOR	[M]
LB9001	J0JCC0000119	CHIP INDUCTOR	[M]
		PRIMARY WIRES	
T1	REXX0574	BROWN WIRE (SMPS-AC)	[M] △
T2	REXX0575	BLUE WIRE (SMPS-AC)	[M] △

Ref. No.	Part No.	Part Name & Description	Remarks
		TRANSFORMERS	
T701	ETS35BC2LGAD	MAIN TRANSFORMER	[M] △
T702	ETS19AB221AG	SUB TRANSFORMER	[M] △
T751	G4D1A0000117	SWITCHING TRANSFORMER	[M] △
		COMPONENT COMBINATION	
Z701	ERZV10V511CS	ZENER	[M] △
Z800	B3RAD0000051	REMOTE SENSOR	[M]
		FUSE HOLDERS	
ZA701	EYF52BCY	FUSE HOLDER	[M]
ZA702	EYF52BCY	FUSE HOLDER	[M]
ZA721	RMX0196	HEATSINK (EXT-BIG)	[M]
		TERMINALS	
ZJ501	K4CZ01000027	TERMINAL	[M]
ZJ502	K4CZ01000027	TERMINAL	[M]
ZJ701	K4CZ01000027	TERMINAL	[M]
ZJ702	K9ZZ00000424	TERMINAL	[M]
ZJ703	K4CZ01000027	TERMINAL	[M]
ZJ704	K4CZ01000027	TERMINAL	[M]
		RELAY	
RY701	K6B1AEA00003	POWER RELAY	[M] △
		OSCILLATORS	
X250	H0H433400002	CRYSTAL OSCILLATOR	[M]
X500	H2B100500004	CERAMIC RESONATOR	[M]
X1300	H0J245500068	CRYSTAL OSCILLATOR	[M]
X1301	H0J240500023	CRYSTAL OSCILLATOR	[M]
X8621	H0J270500085	CRYSTAL OSCILLATOR	[M]
X9004	H1A4805B0027	CRYSTAL OSCILLATOR	[M]
		DISPLAY TUBE	
FL800	A2BB00000168	FL DISPLAY	[M]
FL8101	F1H0J1050018	INDUCTOR	[M]
FL8102	F1H0J1050018	INDUCTOR	[M]
FL8103	F1H0J1050018	INDUCTOR	[M]
FL8104	F1J1E1040022	INDUCTOR	[M]
FL8421	F1H0J1050018	INDUCTOR	[M]
		FUSE	
F701	K5D402BNA005	FUSE	[M] △
		FUSE PROTECTOR	
FP700	K5G202AA0002	FUSE PROTECTOR	[M] △
		HOLDERS	
H352	K1YZ07000001	7P WIRE HOLDER	[M]
H805	K1MN04BA0148	4P CONNECTOR	[M]
H806	REXX0570	6P WIRE (PAN-SSW)	[M]
		JACKS	
JK200	K1FB121B0012	JACK SCART TERMINAL	[M]
JK201	K2HASYYG0001	JACK COMBO (VIDEO OUT, AUX)	[M]
JK302	K4BC06B00035	JACK SPEAKER	[M]
JK900	K2HC103A0024	JACK HEADPHONE	[M]
JK901	K2HC1YYA0005	JACK MUSIC PORT	[M]
JK8001	B3RAB0000056	JACK OPTICAL	[M]
		PACKING MATERIALS	

Ref. No.	Part No.	Part Name & Description	Remarks
P1	RP6X1735-1	PACKING CASE	[M]EG
P1	RP6X1736-1	PACKING CASE	[M]E
P1	RP6X1737-1	PACKING CASE	[M]EB
P2	RPNX0475	POLYFOAM (MAIN SET)	[M]
P3	RPFX0058-1J	MIRAMAT	[M]
		ACCESSORIES	
A1	N2QAYB000097	REMOTE CONTROL	[M]
A1-1	RKK-NC96CS	R/C BATTERY COVER	[M]
A2	K2CQ2CA00007	AC CORD	[M] △ EG/E
A2	K2CT3CA00004	AC CORD	[M] △ EB
A3	RQTX0016-D	O/I BOOK (GE/IT/FR)	[M]EG
A3	RQTX0017-H	O/I BOOK (DU/DA/SW)	[M]EG
A3	RQTX0018-E	O/I BOOK (SP/PO/CZ)	[M]E
A3	RQTX0019-B	O/I BOOK (EN)	[M]EB
A3	RQTX0022-B	O/I BOOK (EN)	[M]E
A4	RSA0007-M	ANTENNA WIRE	[M]
A5	K1YZ02000013	DIN ADAPTOR	[M]EB
A6	REEX0449B-2	SP CORD (4M)	[M]
A7	RQTX0020-B	SET-UP GUIDE (EN)	[M]EB
		RESISTORS	
R100	ERJ3GEYF153V	15K 1/16W	[M]
R101	ERJ3GEYJ152V	1.5K 1/16W	[M]
R102	ERJ3GEYJ152V	1.5K 1/16W	[M]
R103	ERJ3GEYJ472V	4.7K 1/16W	[M]
R104	ERJ3GEYJ472V	4.7K 1/16W	[M]
R105	ERJ3GEY0R00V	0 1/16W	[M]
R106	ERJ3GEY0R00V	0 1/16W	[M]
R107	ERJ3GEYJ103V	10K 1/16W	[M]
R108	ERJ3GEYJ103V	10K 1/16W	[M]
R109	ERJ3GEY0R00V	0 1/16W	[M]
R110	ERJ3GEY0R00V	0 1/16W	[M]
R111	ERJ3GEYJ103V	10K 1/16W	[M]
R112	ERJ3GEYJ103V	10K 1/16W	[M]
R113	ERJ3GEYF153V	15K 1/16W	[M]
R114	ERJ3GEYJ102V	1K 1/16W	[M]
R115	ERJ3GEYJ102V	1K 1/16W	[M]
R116	ERJ3GEYJ393V	39K 1/16W	[M]
R117	ERJ3GEYJ393V	39K 1/16W	[M]
R118	ERJ3GEYJ152V	1.5K 1/16W	[M]
R119	ERJ3GEYJ152V	1.5K 1/16W	[M]
R120	D0GB563JA008	56K 1/16W	[M]
R121	D0GB563JA008	56K 1/16W	[M]
R126	ERJ3GEY0R00V	0 1/16W	[M]
R127	ERJ3GEY0R00V	0 1/16W	[M]
R128	ERJ3GEYJ392V	3.9K 1/16W	[M]
R129	ERJ3GEYJ392V	3.9K 1/16W	[M]
R131	ERJ3GEYJ103V	10K 1/16W	[M]
R132	ERJ3GEYJ103V	10K 1/16W	[M]
R133	ERJ3GEYJ222V	2.2K 1/16W	[M]
R134	ERJ3GEYJ222V	2.2K 1/16W	[M]
R163	ERJ3GEYJ392V	3.9K 1/16W	[M]
R164	ERJ3GEYJ392V	3.9K 1/16W	[M]
R165	ERJ3GEYJ473V	47K 1/16W	[M]
R166	ERJ3GEYJ473V	47K 1/16W	[M]
R167	ERJ3GEYJ473V	47K 1/16W	[M]
R168	ERJ3GEYJ473V	47K 1/16W	[M]
R169	ERJ3GEYJ472V	4.7K 1/16W	[M]
R170	ERJ3GEYJ472V	4.7K 1/16W	[M]
R171	ERJ3GEYJ472V	4.7K 1/16W	[M]
R172	ERJ3GEYJ472V	4.7K 1/16W	[M]
R173	ERJ3GEYJ472V	4.7K 1/16W	[M]
R174	ERJ3GEYJ472V	4.7K 1/16W	[M]
R177	ERJ3GEYJ472V	4.7K 1/16W	[M]
R178	ERJ3GEYJ472V	4.7K 1/16W	[M]
R180	ERJ3GEYJ392V	3.9K 1/16W	[M]
R182	ERJ3GEYJ392V	3.9K 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R183	ERJ3GEYJ392V	3.9K 1/16W	[M]
R185	ERJ3GEYJ392V	3.9K 1/16W	[M]
R189	ERJ3GEYJ101V	100 1/16W	[M]
R190	ERJ3GEYJ472V	4.7K 1/16W	[M]
R191	ERJ3GEYJ472V	4.7K 1/16W	[M]
R192	ERJ3GEYJ473V	47K 1/16W	[M]
R193	ERJ3GEYJ473V	47K 1/16W	[M]
R194	ERJ3GEYJ473V	47K 1/16W	[M]
R195	ERJ3GEYJ473V	47K 1/16W	[M]
R196	ERJ3GEYJ473V	47K 1/16W	[M]
R197	ERJ3GEYJ473V	47K 1/16W	[M]
R200	ERJ3GEYJ101V	100 1/16W	[M]
R205	ERJ3GEYJ222V	2.2K 1/16W	[M]EB
R205	ERJ3GEYJ331V	330 1/16W	[M]EG/E
R207	ERJ3GEYJ223V	22K 1/16W	[M]
R208	ERJ3GEYJ473V	47K 1/16W	[M]
R210	ERJ3GEYJ223V	22K 1/16W	[M]
R212	ERJ3GEYJ223V	22K 1/16W	[M]
R213	ERJ3GEYJ222V	2.2K 1/16W	[M]
R215	ERJ3GEYJ222V	2.2K 1/16W	[M]
R216	ERJ3GEYJ222V	2.2K 1/16W	[M]
R217	ERJ3GEYJ183V	18K 1/16W	[M]
R219	ERJ3GEYJ223V	22K 1/16W	[M]
R220	ERJ3GEYJ223V	22K 1/16W	[M]
R221	ERJ3GEYJ223V	22K 1/16W	[M]
R223	ERJ3GEYJ472V	4.7K 1/16W	[M]
R224	ERJ3GEYJ472V	4.7K 1/16W	[M]
R225	D0GB681JA008	680 1/16W	[M]EB
R225	ERJ3GEYJ122V	1.2K 1/16W	[M]E
R225	ERJ3GEYJ472V	4.7K 1/16W	[M]EG
R226	ERJ3GEYJ471V	470 1/16W	[M]EG
R226	ERJ3GEYJ821V	820 1/16W	[M]EB/E
R227	ERJ3GEYJ471V	470 1/16W	[M]EG
R227	ERJ3GEYJ821V	820 1/16W	[M]EB/E
R228	D0GB681JA008	680 1/16W	[M]EB
R228	ERJ3GEYJ122V	1.2K 1/16W	[M]E
R228	ERJ3GEYJ472V	4.7K 1/16W	[M]EG
R229	ERJ3GEYJ471V	470 1/16W	[M]
R230	ERJ3GEYF750V	75 1/16W	[M]
R231	ERJ3GEYF750V	75 1/16W	[M]
R232	ERJ3GEYF750V	75 1/16W	[M]
R235	ERJ3GEYF750V	75 1/16W	[M]
R236	ERJ3GEYF750V	75 1/16W	[M]
R237	ERJ3GEYF750V	75 1/16W	[M]
R238	ERJ3GEYF750V	75 1/16W	[M]
R246	ERJ3GEYJ221V	220 1/16W	[M]
R247	ERJ3GEYJ221V	220 1/16W	[M]
R248	ERJ3GEYJ153V	15K 1/16W	[M]
R249	ERJ3GEYJ153V	15K 1/16W	[M]
R250	D0GB750JA008	75 1/16W	[M]
R251	D0GB750JA008	75 1/16W	[M]
R252	ERJ3GEYJ560V	56 1/16W	[M]
R253	ERJ3GEYJ102V	1K 1/16W	[M]
R254	ERJ3GEYJ104V	100K 1/16W	[M]
R255	ERJ3GEYJ102V	1K 1/16W	[M]
R256	ERJ3GEYJ102V	1K 1/16W	[M]
R257	ERJ3GEYF473V	47K 1/16W	[M]
R258	ERJ3GEYF473V	47K 1/16W	[M]
R261	ERJ3GEYF473V	47K 1/16W	[M]
R262	ERJ3GEYF473V	47K 1/16W	[M]
R263	ERJ3GEYJ102V	1K 1/16W	[M]
R264	ERJ3GEYJ102V	1K 1/16W	[M]
R270	ERJ3GEYJ101V	100 1/16W	[M]
R275	ERJ3GEYJ102V	1K 1/16W	[M]
R276	ERJ3GEYJ102V	1K 1/16W	[M]
R280	ERJ3GEYJ472V	4.7K 1/16W	[M]
R281	ERJ3GEYJ472V	4.7K 1/16W	[M]
R282	ERJ3GEYJ472V	4.7K 1/16W	[M]
R283	ERJ3GEYJ472V	4.7K 1/16W	[M]
R284	ERJ3GEYJ472V	4.7K 1/16W	[M]
R289	ERJ3GEYJ102V	1K 1/16W	[M]
R290	ERJ3GEYJ122V	1.2K 1/16W	[M]E
R290	ERJ3GEYJ222V	2.2K 1/16W	[M]EG

Ref. No.	Part No.	Part Name & Description	Remarks
R291	ERJ3GEYJ122V	1.2K 1/16W	[M]E
R291	ERJ3GEYJ222V	2.2K 1/16W	[M]EG
R292	ERJ3GEYJ471V	470 1/16W	[M]EG
R292	ERJ3GEYJ821V	820 1/16W	[M]E
R293	ERJ3GEYJ471V	470 1/16W	[M]EG
R293	ERJ3GEYJ821V	820 1/16W	[M]E
R295	ERJ3GEYJ102V	1K 1/16W	[M]
R360	ERJ3GEYJ473V	47K 1/16W	[M]
R361	ERJ3GEYJ473V	47K 1/16W	[M]
R362	ERJ3GEYJ473V	47K 1/16W	[M]
R363	ERJ3GEYJ473V	47K 1/16W	[M]
R364	ERJ3GEYJ473V	47K 1/16W	[M]
R365	ERJ3GEYJ473V	47K 1/16W	[M]
R366	ERJ3GEYJ473V	47K 1/16W	[M]
R367	ERJ3GEYJ473V	47K 1/16W	[M]
R368	ERJ3GEYJ473V	47K 1/16W	[M]
R369	ERJ3GEYJ473V	47K 1/16W	[M]
R370	ERJ3GEYJ473V	47K 1/16W	[M]
R371	ERJ3GEYJ473V	47K 1/16W	[M]
R372	ERJ3GEYJ473V	47K 1/16W	[M]
R373	ERJ3GEYJ473V	47K 1/16W	[M]
R374	ERJ3GEYJ473V	47K 1/16W	[M]
R375	ERJ3GEYJ473V	47K 1/16W	[M]
R376	ERJ3GEYJ473V	47K 1/16W	[M]
R377	ERJ3GEYJ473V	47K 1/16W	[M]
R378	ERJ3GEYJ472V	4.7K 1/16W	[M]
R380	ERJ3GEYJ104V	100K 1/16W	[M]
R381	ERJ3GEYJ473V	47K 1/16W	[M]
R382	ERJ3GEYJ104V	100K 1/16W	[M]
R383	ERJ3GEYJ472V	4.7K 1/16W	[M]
R384	ERJ3GEYJ472V	4.7K 1/16W	[M]
R385	ERJ3GEYJ473V	47K 1/16W	[M]
R386	ERJ3GEYF473V	47K 1/16W	[M]
R387	ERJ3GEYJ152V	1.5K 1/16W	[M]
R388	ERJ3GEYJ152V	1.5K 1/16W	[M]
R389	ERJ3GEYJ103V	10K 1/16W	[M]
R390	ERJ3GEYJ103V	10K 1/16W	[M]
R391	ERJ3GEYJ103V	10K 1/16W	[M]
R392	ERJ3GEYJ103V	10K 1/16W	[M]
R393	ERJ3GEYJ472V	4.7K 1/16W	[M]
R394	ERJ3GEYJ103V	10K 1/16W	[M]
R395	ERJ3GEYJ103V	10K 1/16W	[M]
R396	ERJ3GEYJ472V	4.7K 1/16W	[M]
R397	ERJ3GEY0R00V	0 1/16W	[M]
R398	ERJ3GEY0R00V	0 1/16W	[M]
R399	ERJ3GEY0R00V	0 1/16W	[M]
R400	ERJ3GEY0R00V	0 1/16W	[M]
R401	ERJ3GEY0R00V	0 1/16W	[M]
R402	ERJ3GEY0R00V	0 1/16W	[M]
R403	ERJ3GEY0R00V	0 1/16W	[M]
R404	ERJ6GEYJ201V	200 1/10W	[M]
R405	ERJ3GEY0R00V	0 1/16W	[M]
R406	ERJ3GEY0R00V	0 1/16W	[M]
R407	ERJ3GEYJ101V	100 1/16W	[M]
R408	ERJ6GEYJ201V	200 1/10W	[M]
R409	ERJ3GEY0R00V	0 1/16W	[M]
R410	D0HB183ZA002	18K 3W	[M]
R411	ERJ3GEY0R00V	0 1/16W	[M]
R412	ERJ3GEY0R00V	0 1/16W	[M]
R413	ERJ3GEY0R00V	0 1/16W	[M]
R418	ERJ3GEYJ223V	22K 1/16W	[M]
R419	ERJ3GEYJ223V	22K 1/16W	[M]
R420	ERJ3GEYJ103V	10K 1/16W	[M]
R421	ERJ3GEYJ103V	10K 1/16W	[M]
R422	ERJ3GEYJ103V	10K 1/16W	[M]
R423	ERJ3GEYJ103V	10K 1/16W	[M]
R424	ERJ3GEYJ223V	22K 1/16W	[M]
R427	ERJ3GEYJ223V	22K 1/16W	[M]
R430	ERJ3GEYJ102V	1K 1/16W	[M]
R441	ERJ3GEYJ390V	39 1/16W	[M]
R442	ERJ3GEYJ390V	39 1/16W	[M]
R443	ERJ3GEYJ101V	100 1/16W	[M]
R446	ERJ3GEY0R00V	0 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R448	ERJ3GEY0R00V	0 1/16W	[M]
R449	ERJ6GEYJ470V	47 1/10W	[M]
R451	ERJ6GEYJ470V	47 1/10W	[M]
R452	ERJ3GEYJ472V	4.7K 1/16W	[M]
R453	ERJ3GEYJ472V	4.7K 1/16W	[M]
R454	ERJ6GEYJ470V	47 1/10W	[M]
R455	ERJ6GEYJ470V	47 1/10W	[M]
R456	ERJ3GEYJ472V	4.7K 1/16W	[M]
R457	ERJ3GEYJ472V	4.7K 1/16W	[M]
R458	ERJ3GEYJ100V	10 1/16W	[M]
R459	ERJ3GEYJ390V	39 1/16W	[M]
R460	ERJ3GEYJ100V	10 1/16W	[M]
R461	ERJ3GEYJ390V	39 1/16W	[M]
R462	ERJ3GEYJ101V	100 1/16W	[M]
R463	ERJ3GEYJ101V	100 1/16W	[M]
R464	ERJ3GEYF473V	47K 1/16W	[M]
R465	ERJ3GEYJ100V	10 1/16W	[M]
R466	ERJ3GEYJ100V	10 1/16W	[M]
R467	ERJ3GEYJ100V	10 1/16W	[M]
R468	ERJ3GEYJ100V	10 1/16W	[M]
R469	ERJ3GEYJ101V	100 1/16W	[M]
R470	ERJ3GEYJ101V	100 1/16W	[M]
R471	ERJ3GEYJ101V	100 1/16W	[M]
R472	ERJ3GEYJ100V	10 1/16W	[M]
R473	ERJ3GEYJ100V	10 1/16W	[M]
R474	ERJ3GEYJ273V	27K 1/16W	[M]
R475	ERJ3GEYJ153V	15K 1/16W	[M]
R476	ERJ6GEYJ180V	18 1/10W	[M]
R477	ERJ6GEYJ180V	18 1/10W	[M]
R478	ERJ6GEYJ180V	18 1/10W	[M]
R479	ERJ6GEYJ180V	18 1/10W	[M]
R480	ERJ6GEYJ180V	18 1/10W	[M]
R481	ERJ6GEYJ180V	18 1/10W	[M]
R482	ERJ3GEYJ103V	10K 1/16W	[M]
R483	ERJ3GEYJ103V	10K 1/16W	[M]
R484	ERJ6GEYJ473V	47K 1/10W	[M]
R485	D0GD563JA017	56K 1/16W	[M]
R486	ERJ6GEYJ224V	220K 1/10W	[M]
R487	ERJ6GEYJ224V	220K 1/10W	[M]
R488	ERJ3GEYJ104V	100K 1/16W	[M]
R489	ERJ3GEYJ333V	33K 1/16W	[M]
R490	ERJ3GEYJ104V	100K 1/16W	[M]
R491	ERJ3GEYJ104V	100K 1/16W	[M]
R492	ERJ3GEYJ333V	33K 1/16W	[M]
R493	ERJ3GEYJ104V	100K 1/16W	[M]
R494	ERJ6GEYJ103V	10K 1/10W	[M]
R495	ERJ6GEYJ3R3V	3.3 1/10W	[M]
R496	ERJ6GEYJ3R3V	3.3 1/10W	[M]
R497	ERJ3GEYJ3R3V	3.3 1/16W	[M]
R498	ERJ3GEYJ3R3V	3.3 1/16W	[M]
R499	ERJ6GEYJ3R3V	3.3 1/10W	[M]
R500	ERJ3GEYJ225V	2.2M 1/16W	[M]
R501	ERJ3GEYJ104V	100K 1/16W	[M]
R502	ERJ3GEYJ473V	47K 1/16W	[M]
R503	ERJ3GEYJ472V	4.7K 1/16W	[M]
R504	ERJ3GEYJ222V	2.2K 1/16W	[M]
R505	ERJ3GEYJ272V	2.7K 1/16W	[M]
R506	ERJ3GEYJ223V	22K 1/16W	[M]
R507	ERJ3GEYJ473V	47K 1/16W	[M]
R508	ERJ6GEYJ562V	5.6K 1/10W	[M]
R509	ERJ3GEYJ332V	3.3K 1/16W	[M]
R511	ERJ3GEYJ103V	10K 1/16W	[M]
R512	ERJ3GEYJ473V	47K 1/16W	[M]
R516	ERJ3GEYJ103V	10K 1/16W	[M]
R517	ERJ3GEYJ103V	10K 1/16W	[M]
R520	ERJ6GEYJ103V	10K 1/10W	[M]
R521	ERJ6GEYJ103V	10K 1/10W	[M]
R522	ERJ6GEYJ103V	10K 1/10W	[M]
R523	ERJ6GEYJ103V	10K 1/10W	[M]
R524	ERJ3GEYJ473V	47K 1/16W	[M]
R525	ERJ3GEYJ103V	10K 1/16W	[M]
R526	ERJ3GEYJ103V	10K 1/16W	[M]
R527	ERJ3GEYJ103V	10K 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R529	ERJ3GEYJ103V	10K 1/16W	[M]
R531	ERJ3GEYJ473V	47K 1/16W	[M]
R532	ERJ3GEYJ103V	10K 1/16W	[M]
R533	ERJ3GEYJ103V	10K 1/16W	[M]
R534	ERJ3GEYJ103V	10K 1/16W	[M]
R535	ERJ3GEYJ102V	1K 1/16W	[M]
R537	ERJ3GEYJ473V	47K 1/16W	[M]
R539	ERJ3GEYJ102V	1K 1/16W	[M]
R541	ERJ3GEYJ103V	10K 1/16W	[M]
R542	D0GF100JA014	10 1/16W	[M]EG
R542	ERJ6GEYJ103V	10K 1/10W	[M]EB/E
R543	ERJ6GEYJ103V	10K 1/10W	[M]EB/E
R543	ERJ6GEYJ562V	5.6K 1/10W	[M]EG
R544	D0GF100JA014	10 1/16W	[M]EG
R544	ERJ6GEYJ103V	10K 1/10W	[M]EB/E
R545	D0GF100JA014	10 1/16W	[M]EG
R545	ERJ6GEYJ103V	10K 1/10W	[M]EB/E
R546	ERJ6GEYJ103V	10K 1/10W	[M]EB/E
R546	ERJ6GEYJ222V	2.2K 1/10W	[M]EG
R547	ERJ6GEYJ562V	5.6K 1/10W	[M]EG
R548	ERJ6GEYJ562V	5.6K 1/10W	[M]EG
R560	ERJ6GEYJ223V	22K 1/10W	[M]EG
R576	ERJ3GEYJ103V	10K 1/16W	[M]
R578	ERJ3GEYJ562V	5.6K 1/16W	[M]
R580	ERJ3GEYJ122V	1.2K 1/16W	[M]
R582	ERJ3GEYJ122V	1.2K 1/16W	[M]
R583	ERJ3GEYJ221V	220 1/16W	[M]
R584	ERJ3GEYJ103V	10K 1/16W	[M]
R585	ERJ3GEYJ221V	220 1/16W	[M]
R586	ERJ3GEYJ332V	3.3K 1/16W	[M]
R587	ERJ3GEYJ221V	220 1/16W	[M]
R588	ERJ3GEYJ473V	47K 1/16W	[M]
R589	ERJ3GEYJ103V	10K 1/16W	[M]
R590	ERJ3GEYJ103V	10K 1/16W	[M]
R591	ERJ3GEYJ103V	10K 1/16W	[M]
R592	ERJ3GEYJ103V	10K 1/16W	[M]
R593	ERJ3GEYJ473V	47K 1/16W	[M]
R594	ERJ3GEYJ473V	47K 1/16W	[M]
R595	ERJ3GEYJ273V	27K 1/16W	[M]
R598	ERJ3GEYJ103V	10K 1/16W	[M]
R601	ERJ3GEYJ103V	10K 1/16W	[M]
R602	ERJ3GEYJ221V	220 1/16W	[M]
R619	ERJ3GEYJ103V	10K 1/16W	[M]
R620	ERJ3GEYJ103V	10K 1/16W	[M]
R621	ERJ3GEYJ103V	10K 1/16W	[M]
R622	ERJ3GEYJ103V	10K 1/16W	[M]
R623	ERJ3GEYJ103V	10K 1/16W	[M]
R624	ERJ3GEYJ103V	10K 1/16W	[M]
R625	ERJ3GEYJ223V	22K 1/16W	[M]
R626	ERJ3GEYJ223V	22K 1/16W	[M]
R627	ERJ3GEYJ472V	4.7K 1/16W	[M]
R628	ERJ6GEYJ3R3V	3.3 1/10W	[M]
R629	ERJ3GEYJ224V	220K 1/16W	[M]
R630	ERJ6GEYJ103V	10K 1/10W	[M]
R631	ERJ3GEYJ224V	220K 1/16W	[M]
R632	ERJ6GEYJ103V	10K 1/10W	[M]
R633	ERJ6GEYJ103V	10K 1/10W	[M]
R634	ERJ6GEYJ104V	100K 1/10W	[M]
R635	ERJ6GEYJ185V	1.8M 1/10W	[M]
R636	ERJ6GEYJ102V	1K 1/10W	[M]
R637	D0AF102JA039	1K 1/4W	[M]
R638	ERJ3GEYJ100V	10 1/16W	[M]
R639	ERJ3GEYJ100V	10 1/16W	[M]
R640	D0GD563JA017	56K 1/16W	[M]
R641	ERJ3GEYJ221V	220 1/16W	[M]EG
R642	ERJ6GEYJ562V	5.6K 1/10W	[M]
R643	ERJ6GEYJ562V	5.6K 1/10W	[M]
R644	ERJ3GEYJ103V	10K 1/16W	[M]
R645	ERJ3GEYJ562V	5.6K 1/16W	[M]
R646	ERJ3GEYJ562V	5.6K 1/16W	[M]
R647	ERJ3GEYJ562V	5.6K 1/16W	[M]
R649	ERJ3GEYJ221V	220 1/16W	[M]
R651	ERJ3GEYJ472V	4.7K 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R652	ERJ3GEYJ472V	4.7K 1/16W	[M]
R653	ERJ3GEYJ221V	220 1/16W	[M]
R654	ERJ3GEY0R00V	0 1/16W	[M]
R655	ERJ3GEY0R00V	0 1/16W	[M]
R657	ERJ6GEYJ472V	4.7K 1/10W	[M]
R661	ERJ3GEYJ103V	10K 1/16W	[M]
R665	ERJ3GEYJ221V	220 1/16W	[M]
R667	ERJ3GEYJ221V	220 1/16W	[M]
R668	ERJ3GEYJ103V	10K 1/16W	[M]
R669	ERJ3GEYJ103V	10K 1/16W	[M]
R670	ERJ3GEYJ103V	10K 1/16W	[M]
R671	ERJ3GEYJ103V	10K 1/16W	[M]
R672	ERJ3GEYJ103V	10K 1/16W	[M]
R701	D0AF220JA039	22 1/4W	[M]
R702	ERG2SJ683P	68K 1/32W	[M]
R703	ERJ6GEYJ102V	1K 1/10W	[M]
R704	ERJ6GEYJ102V	1K 1/10W	[M]
R705	ERG2SJ683P	68K 1/32W	[M]
R706	ERJ6GEYJ101V	100 1/10W	[M]
R709	ERJ6GEYJ242V	2.4K 1/10W	[M]
R710	ERJ6GEYJ562V	5.6K 1/10W	[M]
R711	ERJ6GEYJ273V	27K 1/10W	[M]
R712	ERJ6GEY0R00V	0 1/10W	[M]
R713	ERJ6GEYJ472V	4.7K 1/10W	[M]
R714	ERJ6GEYJ102V	1K 1/10W	[M]
R715	ERJ6GEYJ102V	1K 1/10W	[M]
R717	D0GD122JA017	1.2K 1/16W	[M]
R718	ERX2SJR33P	0.33 1/32W	[M]
R719	ERX2SJR33P	0.33 1/32W	[M]
R721	ERJ6GEYJ472V	4.7K 1/10W	[M]
R722	ERJ6GEYJ103V	10K 1/10W	[M]
R723	ERJ6GEYJ473V	47K 1/10W	[M]
R724	ERJ6GEYJ184V	180K 1/10W	[M]
R725	D0GD220JA017	22 1/16W	[M]
R726	D0AF104JA039	100K 1/4W	[M]
R727	ERDS1TJ475B	4.7M 1/2W	[M]
R728	ERJ6GEYJ471V	470 1/10W	[M]
R729	ERJ6GEYJ103V	10K 1/10W	[M]
R731	ERJ6GEYJ222V	2.2K 1/10W	[M]
R732	ERJ6GEYJ474V	470K 1/10W	[M]
R733	ERJ6GEYJ153V	15K 1/10W	[M]
R734	ERJ6GEYJ123V	12K 1/10W	[M]
R735	ERJ6GEY0R00V	0 1/10W	[M]
R736	ERJ6GEYJ102V	1K 1/10W	[M]
R739	ERJ6GEYJ101V	100 1/10W	[M]
R740	ERJ6GEYJ242V	2.4K 1/10W	[M]
R745	ERJ3GEYJ104V	100K 1/16W	[M]
R750	ERJ6GEYJ472V	4.7K 1/10W	[M]
R752	ERJ6GEYJ821V	820 1/10W	[M]
R754	ERJ6GEYJ821V	820 1/10W	[M]
R756	ERJ6GEYJ472V	4.7K 1/10W	[M]
R758	D0AF561JA039	560 1/4W	[M]
R761	ERJ6GEYJ562V	5.6K 1/10W	[M]
R762	ERJ6GEYJ470V	47 1/10W	[M]
R763	ERJ6GEYJ473V	47K 1/10W	[M]
R765	ERJ6GEYJ104V	100K 1/10W	[M]
R766	ERJ6GEYJ394V	390K 1/10W	[M]
R772	ERJ3GEYJ102V	1K 1/16W	[M]
R773	ERJ3GEYJ471V	470 1/16W	[M]
R774	ERJ3GEYJ332V	3.3K 1/16W	[M]
R775	ERJ3GEYJ122V	1.2K 1/16W	[M]
R776	ERJ3GEYJ102V	1K 1/16W	[M]
R777	ERJ3GEYJ102V	1K 1/16W	[M]
R780	ERJ3GEY0R00V	0 1/16W	[M]
R780	ERJ3GEYJ101V	100 1/16W	[M]EG/E
R781	ERJ3GEY0R00V	0 1/16W	[M]
R781	ERJ3GEYJ273V	27K 1/16W	[M]EG/E
R782	ERJ3GEYJ101V	100 1/16W	[M]EG/E
R783	ERJ3GEYJ101V	100 1/16W	[M]EG/E
R785	ERDS1FVJ1R2T	1.2 1/2W	[M]
R791	ERJ3GEY0R00V	0 1/16W	[M]
R792	ERJ3GEY0R00V	0 1/16W	[M]
R797	ERJ3GEY0R00V	0 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R798	ERJ3GEY0R00V	0 1/16W	[M]
R802	ERJ3GEYJ104V	100K 1/16W	[M]
R803	ERJ3GEYJ680V	68 1/16W	[M]
R804	ERJ3GEYJ102V	1K 1/16W	[M]
R805	ERJ3GEY0R00V	0 1/16W	[M]
R806	ERJ3GEY0R00V	0 1/16W	[M]
R807	ERJ3GEYJ680V	68 1/16W	[M]
R808	ERJ3GEYJ223V	22K 1/16W	[M]
R809	ERJ3GEYJ223V	22K 1/16W	[M]
R810	ERJ3GEYJ101V	100 1/16W	[M]
R812	ERJ3GEYJ222V	2.2K 1/16W	[M]
R813	ERJ3GEYJ332V	3.3K 1/16W	[M]
R814	ERJ3GEYJ472V	4.7K 1/16W	[M]
R815	D0GB682JA008	6.8K 1/16W	[M]
R816	ERJ3GEYJ153V	15K 1/16W	[M]
R817	D0GB563JA008	56K 1/16W	[M]
R818	ERJ3GEYJ152V	1.5K 1/16W	[M]
R819	ERJ3GEYJ101V	100 1/16W	[M]
R820	ERJ3GEYJ470V	47 1/16W	[M]
R821	ERJ3GEY0R00V	0 1/16W	[M]
R822	ERJ3GEYJ182V	1.8K 1/16W	[M]
R823	ERJ3GEY0R00V	0 1/16W	[M]
R824	ERJ3GEY0R00V	0 1/16W	[M]
R825	ERJ6GEYJ561V	560 1/10W	[M]
R826	ERJ3GEYJ223V	22K 1/16W	[M]
R840	ERJ3GEYJ122V	1.2K 1/16W	[M]
R841	ERJ3GEYJ102V	1K 1/16W	[M]
R871	ERJ3GEYJ471V	470 1/16W	[M]
R901	ERJ3GEYJ103V	10K 1/16W	[M]
R902	ERJ3GEYJ103V	10K 1/16W	[M]
R903	ERJ3GEYJ103V	10K 1/16W	[M]
R904	ERJ3GEYJ103V	10K 1/16W	[M]
R905	ERJ3GEYJ103V	10K 1/16W	[M]
R906	ERJ3GEYJ103V	10K 1/16W	[M]
R907	ERJ3GEYJ472V	4.7K 1/16W	[M]
R908	ERJ3GEYJ472V	4.7K 1/16W	[M]
R909	ERJ3GEYJ102V	1K 1/16W	[M]
R910	ERJ3GEYJ102V	1K 1/16W	[M]
R911	ERJ3GEYJ562V	5.6K 1/16W	[M]
R912	ERJ3GEYJ333V	33K 1/16W	[M]
R913	ERJ3GEYJ333V	33K 1/16W	[M]EB/E
R932	ERJ3GEYJ273V	27K 1/16W	[M]EB/E
R933	ERJ3GEYJ333V	33K 1/16W	[M]EB/E
R934	ERJ3GEYJ333V	33K 1/16W	[M]EB/E
R960	ERJ3RED224V	220K 3W	[M]
R961	ERJ3RED334V	330K 3W	[M]
R962	ERJ6GEY0R00V	0 1/10W	[M]
R963	ERJ3GEY0R00V	0 1/16W	[M]
R1300	ERJ3GEYJ102V	1K 1/16W	[M]
R1301	ERJ3GEYJ102V	1K 1/16W	[M]
R1302	ERJ3GEYJ102V	1K 1/16W	[M]
R1303	ERJ3GEYJ102V	1K 1/16W	[M]
R1304	ERJ3GEYJ102V	1K 1/16W	[M]
R1305	ERJ3GEYJ102V	1K 1/16W	[M]
R1306	ERJ3GEYJ102V	1K 1/16W	[M]
R1307	ERJ3GEYJ102V	1K 1/16W	[M]
R1309	ERJ3GEY0R00V	0 1/16W	[M]
R1310	ERJ3GEY0R00V	0 1/16W	[M]
R1311	ERJ3GEYJ330V	33 1/16W	[M]
R1313	ERJ3GEYJ330V	33 1/16W	[M]
R1314	ERJ3GEYJ220V	22 1/16W	[M]
R1315	ERJ3GEYJ220V	22 1/16W	[M]
R1317	ERJ3GEYJ220V	22 1/16W	[M]
R1321	ERJ3GEYJ220V	22 1/16W	[M]
R1322	ERJ3GEYJ220V	22 1/16W	[M]
R1323	ERJ3GEYJ220V	22 1/16W	[M]
R1324	ERJ3GEYJ220V	22 1/16W	[M]
R1325	ERJ3GEYJ102V	1K 1/16W	[M]
R1326	ERJ3GEYJ102V	1K 1/16W	[M]
R1327	ERJ3GEYJ102V	1K 1/16W	[M]
R1328	ERJ3GEYJ103V	10K 1/16W	[M]
R1329	ERJ3GEYJ273V	27K 1/16W	[M]
R1330	ERJ3GEYJ333V	33K 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R1331	ERJ3GEYJ333V	33K 1/16W	[M]
R1339	ERJ3GEYJ221V	220 1/16W	[M]
R1340	ERJ3GEYJ102V	1K 1/16W	[M]
R1341	ERJ3GEY0R00V	0 1/16W	[M]
R1342	ERJ3GEYJ102V	1K 1/16W	[M]
R1344	ERJ3GEYJ102V	1K 1/16W	[M]
R1346	ERJ3GEYJ330V	33 1/16W	[M]
R1347	ERJ3GEYJ330V	33 1/16W	[M]
R1348	ERJ3GEYJ330V	33 1/16W	[M]
R1349	ERJ3GEYJ330V	33 1/16W	[M]
R1350	ERJ3GEYJ330V	33 1/16W	[M]
R1351	ERJ3GEYJ330V	33 1/16W	[M]
R1353	ERJ3GEY0R00V	0 1/16W	[M]
R1354	ERJ3GEYJ820V	82 1/16W	[M]
R1355	ERJ3GEYJ820V	82 1/16W	[M]
R1356	ERJ3GEYJ330V	33 1/16W	[M]
R1357	ERJ3GEYJ820V	82 1/16W	[M]
R1358	ERJ3GEYJ330V	33 1/16W	[M]
R1359	ERJ3GEYJ330V	33 1/16W	[M]
R1360	ERJ3GEYJ330V	33 1/16W	[M]
R1361	ERJ3GEYJ330V	33 1/16W	[M]
R1362	ERJ3GEYJ330V	33 1/16W	[M]
R1363	ERJ3GEYJ105V	1M 1/16W	[M]
R1364	ERJ3GEYJ102V	1K 1/16W	[M]
R1365	ERJ3GEYJ221V	220 1/16W	[M]
R1366	ERJ3GEY0R00V	0 1/16W	[M]
R1367	ERJ3GEY0R00V	0 1/16W	[M]
R1368	ERJ3GEY0R00V	0 1/16W	[M]
R1369	ERJ3GEY0R00V	0 1/16W	[M]
R1370	ERJ3GEY0R00V	0 1/16W	[M]
R1371	ERJ3GEYJ473V	47K 1/16W	[M]
R1372	ERJ3GEYJ330V	33 1/16W	[M]
R1373	ERJ3GEYJ473V	47K 1/16W	[M]
R1374	ERJ3GEYJ102V	1K 1/16W	[M]
R1375	ERJ3GEYJ473V	47K 1/16W	[M]
R1376	ERJ3GEYJ102V	1K 1/16W	[M]
R1377	ERJ3GEYJ102V	1K 1/16W	[M]
R1378	ERJ3GEYJ102V	1K 1/16W	[M]
R1379	ERJ3GEYJ102V	1K 1/16W	[M]
R1380	ERJ3GEYJ473V	47K 1/16W	[M]
R1382	ERJ3GEYJ330V	33 1/16W	[M]
R1387	ERJ3GEYJ473V	47K 1/16W	[M]
R1388	ERJ3GEYJ330V	33 1/16W	[M]
R1389	ERJ3GEYJ473V	47K 1/16W	[M]
R1390	ERJ3GEYJ473V	47K 1/16W	[M]
R1391	ERJ3GEYJ330V	33 1/16W	[M]
R1392	ERJ3GEYJ330V	33 1/16W	[M]
R1393	ERJ3GEYJ331V	330 1/16W	[M]
R1394	ERJ3GEYJ331V	330 1/16W	[M]
R1438	ERJ6GEYJ100V	10 1/10W	[M]
R1440	ERJ3GEYJ103V	10K 1/16W	[M]
R1443	ERJ3GEYJ105V	1M 1/16W	[M]
R1444	ERJ3GEYJ391V	390 1/16W	[M]
R1445	ERJ3GEYJ103V	10K 1/16W	[M]
R1481	ERJ3GEY0R00V	0 1/16W	[M]
R1482	ERJ3GEY0R00V	0 1/16W	[M]
R3901	ERJ2GEJ511X	510 1/32W	[M]
R3902	ERJ2GEJ103X	10K 1/32W	[M]
R3903	ERJ2GEJ103X	10K 1/32W	[M]
R3904	ERJ2GEJ472X	4.7K 1/32W	[M]
R3905	ERJ2GEJ202X	2K 1/32W	[M]
R3906	ERJ2GEJ472X	4.7K 1/32W	[M]
R3907	ERJ2GEJ222X	2.2K 1/32W	[M]
R3921	ERJ2GE0R00X	0 1/32W	[M]
R3924	ERJ2GE0R00X	0 1/32W	[M]
R3925	ERJ2GEJ103X	10K 1/32W	[M]
R3941	ERJ2GEJ273X	27K 1/32W	[M]
R3942	ERJ2GEJ224X	220K 1/32W	[M]
R3943	ERJ2GEJ104X	100K 1/32W	[M]
R3944	ERJ2GEJ221X	220 1/32W	[M]
R3945	ERJ2GEJ103X	10K 1/32W	[M]
R3946	ERJ2GEJ272X	2.7K 1/32W	[M]
R3947	ERJ2GEJ103X	10K 1/32W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R8001	ERJ2GEJ103X	10K 1/32W	[M]
R8003	ERJ2GEJ103X	10K 1/32W	[M]
R8011	ERJ2GEJ220X	22 1/32W	[M]
R8012	ERJ2GEJ220X	22 1/32W	[M]
R8013	ERJ2GEJ220X	22 1/32W	[M]
R8025	ERJ3GEY0R00V	0 1/16W	[M]
R8041	ERJ2GEJ330X	33 1/32W	[M]
R8153	ERJ2RHD621X	620 1/32W	[M]
R8154	ERJ2RHD102X	1K 1/32W	[M]
R8211	ERJ2GEJ103X	10K 1/32W	[M]
R8221	ERJ2GEJ822X	8.2K 1/32W	[M]
R8225	ERJ2GEJ822X	8.2K 1/32W	[M]
R8230	ERJ2GEJ222X	2.2K 1/32W	[M]
R8231	ERJ2GEJ223X	22K 1/32W	[M]
R8232	ERJ2GEJ752X	7.5K 1/32W	[M]
R8251	D0GD6R8JA017	6.8 1/16W	[M]
R8261	ERJ2GEJ823X	82K 1/32W	[M]
R8262	ERJ2GEJ153X	15K 1/32W	[M]
R8263	ERJ2GEJ823X	82K 1/32W	[M]
R8264	ERJ2GEJ153X	15K 1/32W	[M]
R8311	ERJ2RHD242X	2.4K 1/16W	[M]
R8312	ERJ2RHD102X	1K 1/16W	[M]
R8313	ERJ2RHD153X	15K 1/16W	[M]
R8314	ERJ2RHD153X	15K 1/16W	[M]
R8315	ERJ2RKD240X	24 1/16W	[M]
R8316	ERJ2RKD240X	24 1/16W	[M]
R8317	ERJ2GEJ153X	15K 1/32W	[M]
R8318	ERJ2GEJ153X	15K 1/32W	[M]
R8321	ERJ3RBD201V	200 1/16W	[M]
R8322	ERJ3GEY0R00V	0 1/16W	[M]
R8323	ERJ2GEJ330X	33 1/32W	[M]
R8324	ERJ2GEJ102X	1K 1/32W	[M]
R8325	ERJ3RBD201V	200 1/16W	[M]
R8326	ERJ3GEY0R00V	0 1/16W	[M]
R8327	ERJ2GEJ330X	33 1/32W	[M]
R8328	ERJ2GEJ102X	1K 1/32W	[M]
R8331	ERJ3RBD201V	200 1/16W	[M]
R8332	ERJ3GEY0R00V	0 1/16W	[M]
R8333	ERJ2GEJ330X	33 1/32W	[M]
R8334	ERJ2GEJ102X	1K 1/32W	[M]
R8335	ERJ3RBD201V	200 1/16W	[M]
R8336	ERJ2GEJ330X	33 1/32W	[M]
R8337	ERJ2GEJ102X	1K 1/32W	[M]
R8341	ERJ3RBD201V	200 1/16W	[M]
R8342	ERJ2GEJ330X	33 1/32W	[M]
R8343	ERJ2GEJ102X	1K 1/32W	[M]
R8401	ERJ2GEJ101X	100 1/32W	[M]
R8402	ERJ2GEJ100X	10 1/32W	[M]
R8420	ERJ2GEJ222X	2.2K 1/32W	[M]
R8421	ERJ2GE0R00X	0 1/32W	[M]
R8531	ERJ2GEJ152X	1.5K 1/32W	[M]
R8532	ERJ2GEJ222X	2.2K 1/32W	[M]
R8533	ERJ2GE0R00X	0 1/32W	[M]
R8541	ERJ2GEJ153X	15K 1/32W	[M]
R8551	ERJ2GE0R00X	0 1/32W	[M]
R8552	ERJ2GEJ102X	1K 1/32W	[M]
R8553	ERJ2GEJ102X	1K 1/32W	[M]
R8554	ERJ2GEJ680X	68 1/32W	[M]
R8555	ERJ2GEJ2R2X	2.2 1/32W	[M]
R8556	ERJ3GEYJ560V	56 1/16W	[M]
R8557	D0GB510JA007	51 1/16W	[M]
R8558	ERJ2GEJ473X	47K 1/32W	[M]
R8559	ERJ2GEJ153X	15K 1/32W	[M]
R8561	ERJ2GE0R00X	0 1/32W	[M]
R8562	ERJ2GEJ102X	1K 1/32W	[M]
R8563	ERJ2GEJ102X	1K 1/32W	[M]
R8564	ERJ2GEJ220X	22 1/32W	[M]
R8565	ERJ2GEJ2R2X	2.2 1/32W	[M]
R8566	ERJ3GEYJ560V	56 1/16W	[M]
R8567	D0GB510JA007	51 1/16W	[M]
R8568	ERJ2GEJ473X	47K 1/32W	[M]
R8601	ERJ2GEJ104X	100K 1/32W	[M]
R8611	ERJ2GEJ101X	100 1/32W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R8613	ERJ2GEJ101X	100 1/32W	[M]
R8621	ERJ2GEJ105X	1M 1/32W	[M]
R8622	ERJ2RHD102X	1K 1/16W	[M]
R8901	ERJ2GEJ470X	47 1/32W	[M]
R9007	ERJ2GEJ103X	10K 1/32W	[M]
R9008	ERJ2GEJ105X	1M 1/32W	[M]
R9009	ERJ2GEJ102X	1K 1/32W	[M]
R9011	ERJ2GE0R00X	0 1/32W	[M]
R9012	ERJ2GE0R00X	0 1/32W	[M]
R9013	ERJ2GE0R00X	0 1/32W	[M]
R9014	ERJ2GE0R00X	0 1/32W	[M]
R9015	ERJ2GE0R00X	0 1/32W	[M]
R9016	ERJ2GE0R00X	0 1/32W	[M]
R9017	ERJ2GE0R00X	0 1/32W	[M]
R9022	ERJ2GE0R00X	0 1/32W	[M]
R9023	ERJ2GE0R00X	0 1/32W	[M]
R9024	ERJ2GEJ103X	10K 1/32W	[M]
R9025	ERJ2GEJ103X	10K 1/32W	[M]
R9026	ERJ2GEJ103X	10K 1/32W	[M]
R9027	ERJ2GEJ103X	10K 1/32W	[M]
R9028	ERJ2GEJ103X	10K 1/32W	[M]
R9029	ERJ2GEJ103X	10K 1/32W	[M]
R9035	ERJ2GE0R00X	0 1/32W	[M]
R9036	ERJ2GEJ103X	10K 1/32W	[M]
R9037	ERJ2GEJ103X	10K 1/32W	[M]
R9040	ERJ2GEJ103X	10K 1/32W	[M]
R9041	ERJ2GEJ103X	10K 1/32W	[M]
R9042	ERJ2GEJ103X	10K 1/32W	[M]
R9045	ERJ2GEJ103X	10K 1/32W	[M]
R9055	ERJ2GEJ103X	10K 1/32W	[M]
R9080	ERJ2GEJ103X	10K 1/32W	[M]
R9083	ERJ2GEJ470X	47 1/32W	[M]
R9084	ERJ2GEJ470X	47 1/32W	[M]
R9085	ERJ2GEJ470X	47 1/32W	[M]
R9086	ERJ2GEJ470X	47 1/32W	[M]
R9087	ERJ2GEJ470X	47 1/32W	[M]
R9088	ERJ2GEJ470X	47 1/32W	[M]
RX500	D1H82214A024	CHIP RESISTOR	[M]
RX501	D1H82214A024	CHIP RESISTOR	[M]
RX502	D1H82214A024	CHIP RESISTOR	[M]
RX503	D1H82214A024	CHIP RESISTOR	[M]
RX504	D1H82214A024	CHIP RESISTOR	[M]
RX505	D1H82214A024	CHIP RESISTOR	[M]
RX506	D1H82214A024	CHIP RESISTOR	[M]
RX507	D1H82214A024	CHIP RESISTOR	[M]
RX508	D1H82214A024	CHIP RESISTOR	[M]
RX509	D1H82214A024	CHIP RESISTOR	[M]
RX510	D1H82214A024	CHIP RESISTOR	[M]
RX511	D1H82214A024	CHIP RESISTOR	[M]
RX512	D1H82214A024	CHIP RESISTOR	[M]
RX514	D1H82214A024	CHIP RESISTOR	[M]
RX515	D1H82214A024	CHIP RESISTOR	[M]
RX1300	D1H83304A024	CHIP RESISTOR	[M]
RX1301	D1H83304A024	CHIP RESISTOR	[M]
RX1302	D1H83304A024	CHIP RESISTOR	[M]
RX1303	D1H83304A024	CHIP RESISTOR	[M]
RX1304	D1H83304A024	CHIP RESISTOR	[M]
RX1305	D1H83304A024	CHIP RESISTOR	[M]
RX1306	D1H83304A024	CHIP RESISTOR	[M]
RX1307	D1H83304A024	CHIP RESISTOR	[M]
RX1308	D1H83304A024	CHIP RESISTOR	[M]
RX1309	D1H83304A024	CHIP RESISTOR	[M]
RX1310	D1H83304A024	CHIP RESISTOR	[M]
RX3707	D1H84714A024	CHIP RESISTOR	[M]
RX3708	D1H84714A024	CHIP RESISTOR	[M]
RX3901	D1H410120001	CHIP RESISTOR	[M]
RX8001	D1H410320002	CHIP RESISTOR	[M]
RX8011	D1H88204A024	CHIP RESISTOR	[M]
RX8012	D1H88204A024	CHIP RESISTOR	[M]
RX8013	D1H88204A024	CHIP RESISTOR	[M]
RX8014	D1H88204A024	CHIP RESISTOR	[M]
RX8015	D1H88204A024	CHIP RESISTOR	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
RX8016	D1H88204A024	CHIP RESISTOR	[M]
RX8017	D1H88204A024	CHIP RESISTOR	[M]
RX8018	D1H422020001	CHIP RESISTOR	[M]
RX8019	D1H422020001	CHIP RESISTOR	[M]
RX8020	D1H422020001	CHIP RESISTOR	[M]
RX8031	D1H447220001	CHIP RESISTOR	[M]
RX8032	D1H447220001	CHIP RESISTOR	[M]
RX8111	D1H422320002	CHIP RESISTOR	[M]
RX8401	D1H410120001	CHIP RESISTOR	[M]
RX8402	D1H410120001	CHIP RESISTOR	[M]
RX8531	D1H456020001	CHIP RESISTOR	[M]
RX8532	D1H85604A024	CHIP RESISTOR	[M]
RX8533	D1H456020001	CHIP RESISTOR	[M]
RX8534	D1H456020001	CHIP RESISTOR	[M]
RX8611	D1H447220001	CHIP RESISTOR	[M]
RX8691	D1H410320002	CHIP RESISTOR	[M]
RX9014	D1H85604A024	CHIP RESISTOR	[M]
RX9015	D1H85604A024	CHIP RESISTOR	[M]
RX9016	D1H85604A024	CHIP RESISTOR	[M]
RX9017	D1H85604A024	CHIP RESISTOR	[M]
RX9018	D1H447220001	CHIP RESISTOR	[M]
RX9019	D1H8R0040009	CHIP RESISTOR	[M]
RX9020	D1H447220001	CHIP RESISTOR	[M]
K200	ERJ3GEY0R00V	CHIP RESISTOR	[M]
K202	ERJ3GEY0R00V	CHIP RESISTOR	[M]
K214	ERJ3GEY0R00V	CHIP RESISTOR	[M]
K216	ERJ6GEY0R00V	CHIP RESISTOR	[M]
K217	ERJ6GEY0R00V	CHIP RESISTOR	[M]
K218	ERJ6GEY0R00V	CHIP RESISTOR	[M]
K220	ERJ6GEY0R00V	CHIP RESISTOR	[M]
K221	ERJ3GEY0R00V	CHIP RESISTOR	[M]
K256	ERJ3GEY0R00V	CHIP RESISTOR	[M]
K258	ERJ3GEY0R00V	CHIP RESISTOR	[M]
K260	ERJ3GEY0R00V	CHIP RESISTOR	[M]
K262	ERJ3GEY0R00V	CHIP RESISTOR	[M]
K264	ERJ3GEY0R00V	CHIP RESISTOR	[M]
K266	ERJ3GEY0R00V	CHIP RESISTOR	[M]
K275	ERJ3GEY0R00V	CHIP RESISTOR	[M]
K281	ERJ3GEY0R00V	CHIP RESISTOR	[M]
K282	ERJ3GEY0R00V	CHIP RESISTOR	[M]
K287	ERJ3GEY0R00V	CHIP RESISTOR	[M]
K288	ERJ3GEY0R00V	CHIP RESISTOR	[M]
K289	ERJ3GEY0R00V	CHIP RESISTOR	[M]EB
K301	ERJ3GEY0R00V	CHIP RESISTOR	[M]
K303	ERJ3GEY0R00V	CHIP RESISTOR	[M]E/EG
K310	ERJ3GEY0R00V	CHIP RESISTOR	[M]E/EG
K700	ERJ3GEY0R00V	CHIP RESISTOR	[M]
K1301	ERJ3GEY0R00V	CHIP RESISTOR	[M]
K1303	ERJ3GEY0R00V	CHIP RESISTOR	[M]
K3903	ERJ3GEY0R00V	CHIP RESISTOR	[M]
K3905	ERJ2GE0R00X	CHIP RESISTOR	[M]
K3908	ERJ3GEY0R00V	CHIP RESISTOR	[M]
K8001	ERJ2GE0R00X	CHIP RESISTOR	[M]E
K8002	ERJ2GE0R00X	CHIP RESISTOR	[M]EB/E G
K8003	ERJ2GE0R00X	CHIP RESISTOR	[M]E
K8004	ERJ2GE0R00X	CHIP RESISTOR	[M]EB/E G
K8006	ERJ2GE0R00X	CHIP RESISTOR	[M]E
K8007	ERJ2GE0R00X	CHIP RESISTOR	[M]EB/E G
K8008	ERJ2GE0R00X	CHIP RESISTOR	[M]E
K8009	ERJ2GE0R00X	CHIP RESISTOR	[M]EB/E G
K8251	ERJ3GEY0R00V	CHIP RESISTOR	[M]
K8691	ERJ2GE0R00X	CHIP RESISTOR	[M]
K8695	ERJ2GE0R00X	CHIP RESISTOR	[M]
W39	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W41	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W42	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W43	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W63	ERJ3GEY0R00V	CHIP RESISTOR	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
W67	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W75	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W77	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W81	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W83	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W84	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W85	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W89	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W90	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W91	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W225	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W226	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W227	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W231	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W251	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W252	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W253	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W254	ERJ3GEY0R00V	CHIP RESISTOR	[M]
W255	ERJ3GEY0R00V	CHIP RESISTOR	[M]
		CAPACITORS	
C101	ECJ1VB1H102K	1000P 50V	[M]
C102	ECJ1VB1H102K	1000P 50V	[M]
C103	ECJ1VB1H471K	470P 50V	[M]
C104	ECJ1VB1H471K	470P 50V	[M]
C105	ECJ1VB1C105K	1 16V	[M]
C106	ECJ1VB1C105K	1 16V	[M]
C107	ECJ1VB1H471K	470P 50V	[M]
C108	ECJ1VB1H471K	470P 50V	[M]
C109	ECJ1VB1C105K	1 16V	[M]
C110	ECJ1VB1C105K	1 16V	[M]
C111	ECJ1VC1H221J	220P 50V	[M]
C112	ECJ1VC1H221J	220P 50V	[M]
C113	ECJ1VB1C105K	1 16V	[M]
C114	ECJ1VB1C105K	1 16V	[M]
C115	ECJ1VC1H221J	220P 50V	[M]
C116	ECJ1VC1H221J	220P 50V	[M]
C117	ECJ1VB1C105K	1 16V	[M]
C118	ECJ1VB1C105K	1 16V	[M]
C119	ECJ1VC1H221J	220P 50V	[M]
C120	ECJ1VC1H221J	220P 50V	[M]
C121	ECJ1VB1C105K	1 16V	[M]
C122	ECJ1VB1C105K	1 16V	[M]
C129	ECJ1VC1H221J	220P 50V	[M]
C130	ECJ1VC1H221J	220P 50V	[M]
C131	ECJ1VB1C105K	1 16V	[M]
C132	ECJ1VB1C105K	1 16V	[M]
C135	ECJ1VB1C105K	1 16V	[M]
C136	ECJ1VB1C105K	1 16V	[M]
C140	ECJ1VB1H471K	470P 50V	[M]
C141	ECJ1VB1H471K	470P 50V	[M]
C142	ECJ1VB1H471K	470P 50V	[M]
C143	ECJ1VB1H471K	470P 50V	[M]
C144	ECJ1VB1H471K	470P 50V	[M]
C145	ECJ1VB1H471K	470P 50V	[M]
C162	F2A1C100A234	10 16V	[M]
C163	F2A1C100A234	10 16V	[M]
C164	ECJ1VB1H102K	1000P 50V	[M]
C165	ECJ1VB1H102K	1000P 50V	[M]
C170	F1J0J106A014	10 6.3V	[M]
C173	F1K1A106A020	10 10V	[M]
C174	F1K1A106A020	10 10V	[M]
C175	F1K1A106A020	10 10V	[M]
C176	F1K1A106A020	10 10V	[M]
C177	F1K1A106A020	10 10V	[M]
C178	F1K1A106A020	10 10V	[M]
C179	ECJ1VB1C105K	1 16V	[M]EB
C179	F1K1A106A020	10 10V	[M]EG/E
C180	ECJ1VC1H470K	47P 50V	[M]
C183	F1K1A106A020	10 10V	[M]
C184	ECJ1VB1C104K	0.1 16V	[M]
C185	ECJ1VB1C104K	0.1 16V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C186	ECJ1VC1H470K	47P 50V	[M]
C187	ECA0JAM471XB	470 6.3V	[M]EG
C200	ECJ1VB1C105K	1 16V	[M]
C201	ECJ1VB1C105K	1 16V	[M]
C202	ECJ1VB1C105K	1 16V	[M]
C203	ECJ1VB1C104K	0.1 16V	[M]
C204	ECJ1VB1H103K	0.01 50V	[M]
C205	ECJ1VB1C105K	1 16V	[M]
C206	ECJ1VB1C105K	1 16V	[M]
C207	ECJ1VB1C105K	1 16V	[M]
C208	ECJ1VB1C105K	1 16V	[M]
C209	ECJ1VB1C105K	1 16V	[M]
C210	ECJ1VB1H104K	0.1 50V	[M]
C211	ECJ1VB1H103K	0.01 50V	[M]
C212	ECJ1VB1C105K	1 16V	[M]
C213	ECJ1VB1C105K	1 16V	[M]
C214	F2A0J470A245	47 6.3V	[M]
C215	F2A1C100A234	10 16V	[M]
C216	F2A0J470A245	47 6.3V	[M]
C217	F2A0J470A245	47 6.3V	[M]
C218	F2A0J220A245	22 6.3V	[M]
C220	ECJ1VB1C105K	1 16V	[M]
C221	ECJ1VB1C104K	0.1 16V	[M]
C222	ECJ1VB1C105K	1 16V	[M]
C223	ECJ1VB1C105K	1 16V	[M]
C226	ECJ1VB1C105K	1 16V	[M]
C227	ECJ1VB1C105K	1 16V	[M]
C228	ECJ1VB1C103K	0.01 16V	[M]
C229	F1J0J106A014	10 6.3V	[M]
C232	ECJ1VB1C103K	0.01 16V	[M]
C233	ECA0JAM471XB	470 6.3V	[M]
C234	ECA0JAM471XB	470 6.3V	[M]
C235	ECA0JAM471XB	470 6.3V	[M]
C241	ECJ1VC1H102J	1000P 50V	[M]
C242	ECJ1VC1H102J	1000P 50V	[M]
C245	ECJ1VC1H102J	1000P 50V	[M]
C246	ECJ1VC1H102J	1000P 50V	[M]
C250	ECJ1VC1H470K	47P 50V	[M]
C251	F2A1H220A182	22 50V	[M]
C252	ECJ1VC1H470K	47P 50V	[M]
C253	ECJ1VB1H331K	330P 50V	[M]
C254	F2A1A330A010	33 10V	[M]
C255	ECJ1VB1H102K	1000P 50V	[M]
C256	ECJ1VB1C103K	0.01 16V	[M]
C257	F2A1A330A010	33 10V	[M]
C258	ECJ1VC1H470K	47P 50V	[M]
C267	ECJ1VB1H104K	0.1 50V	[M]
C271	F2A1H2R2A234	2.2 50V	[M]
C280	ECJ1VC1H102J	1000P 50V	[M]
C281	ECJ1VC1H470K	47P 50V	[M]
C282	ECJ1VC1H470K	47P 50V	[M]
C283	F1K1A106A020	10 10V	[M]
C284	F2A1C100A234	10 16V	[M]
C285	ECJ1VB1C105K	1 16V	[M]
C286	ECJ1VB1C105K	1 16V	[M]
C287	ECJ1VB1C105K	1 16V	[M]
C288	ECJ1VB1C105K	1 16V	[M]
C289	ECJ1VB1C105K	1 16V	[M]
C290	ECJ1VC1H470K	47P 50V	[M]
C291	ECJ1VC1H470K	47P 50V	[M]
C293	ECJ1VB1C105K	1 16V	[M]
C294	F2A1C100A234	10 16V	[M]
C295	F1K1A106A020	10 10V	[M]
C296	F2A1C100A234	10 16V	[M]
C297	F1K1A106A020	10 10V	[M]
C300	ECJ1VB1A225K	2.2 10V	[M]EB/E
C300	ECJ2FB0J106K	10 6.3V	[M]EG
C380	ECJ1VB1H471K	470P 50V	[M]
C383	F1K1A106A020	10 10V	[M]
C384	F1K1A106A020	10 10V	[M]
C385	ECJ1VC1H470K	47P 50V	[M]
C386	ECJ1VB1C105K	1 16V	[M]
C395	ECJ1VB1H471K	470P 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C396	ECJ1VB1H471K	470P 50V	[M]
C397	ECJ1VB1H471K	470P 50V	[M]
C398	F2A1H4R7A234	4.7 50V	[M]
C399	F2A1H4R7A234	4.7 50V	[M]
C400	F2A1H2R2A234	2.2 50V	[M]
C401	ECJ1VC1H101J	100P 50V	[M]
C402	ECJ1VC1H101J	100P 50V	[M]
C403	ECJ1VC1H101J	100P 50V	[M]
C404	ECJ1VC1H220J	22P 50V	[M]
C405	ECJ1VC1H220J	22P 50V	[M]
C406	F2A1C100A207	10 16V	[M]
C407	ECJ1VB1H104K	0.1 50V	[M]
C408	ECJ1VB1C105K	1 16V	[M]
C409	F2A1H4R7A234	4.7 50V	[M]
C410	F2A1H4R7A234	4.7 50V	[M]
C411	ECJ1VB1H103K	0.01 50V	[M]
C412	ECJ1VC1H101K	100P 50V	[M]
C413	ECJ1VB1H104K	0.1 50V	[M]
C414	ECJ1VB1H103K	0.01 50V	[M]
C415	ECJ1VB1H103K	0.01 50V	[M]
C416	ECJ1VB1C105K	1 16V	[M]
C417	ECJ1VB1H104K	0.1 50V	[M]
C418	ECJ1VB1H104K	0.1 50V	[M]
C419	ECJ1VB1H104K	0.1 50V	[M]
C420	ECJ1VB1H104K	0.1 50V	[M]
C421	ECJ1VB1H104K	0.1 50V	[M]
C422	ECA1CM330B	33 16V	[M]
C423	F2A1C2700003	27 16V	[M]
C424	ECJ1VC1H470K	47P 50V	[M]
C425	ECJ1VC1H102J	1000P 50V	[M]
C426	ECJ1VC1H102J	1000P 50V	[M]
C427	F2A1C2700003	27 16V	[M]
C428	ECJ1VB1H104K	0.1 50V	[M]
C429	F2A1C2700003	27 16V	[M]
C430	F2A1C2700003	27 16V	[M]
C431	ECJ1VB1C105K	1 16V	[M]
C432	ECJ1VB1C105K	1 16V	[M]
C433	ECJ1VC1H470K	47P 50V	[M]
C434	ECJ1VC1H470K	47P 50V	[M]
C435	ECA1CM330B	33 16V	[M]
C436	ECJ1VB1H104K	0.1 50V	[M]
C437	ECJ1VB1H104K	0.1 50V	[M]
C438	ECJ1VC1H102J	1000P 50V	[M]
C439	ECJ1VC1H102J	1000P 50V	[M]
C440	ECJ1VB1H104K	0.1 50V	[M]
C441	ECJ1VB1H104K	0.1 50V	[M]
C442	ECJ1VB1H104K	0.1 50V	[M]
C443	ECJ1VB1H104K	0.1 50V	[M]
C444	ECJ1VB1H104K	0.1 50V	[M]
C445	ECJ1VB1H104K	0.1 50V	[M]
C446	ECJ1VB1H104K	0.1 50V	[M]
C447	ECJ1VB1H104K	0.1 50V	[M]
C448	ECA1HAK010XB	1 50V	[M]
C449	F2A1H330A182	33 50V	[M]
C450	ECJ1VB1H104K	0.1 50V	[M]
C451	ECJ1VB1H104K	0.1 50V	[M]
C452	ECJ1VB1H104K	0.1 50V	[M]
C453	ECJ1VB1H104K	0.1 50V	[M]
C454	ECJ1VB1H333K	0.033 50V	[M]
C455	ECJ1VB1H333K	0.033 50V	[M]
C456	ECJ1VB1H333K	0.033 50V	[M]
C457	ECJ1VB1H333K	0.033 50V	[M]
C458	ECJ1VB1H333K	0.033 50V	[M]
C459	ECJ1VB1H333K	0.033 50V	[M]
C462	ECJ1VB1H104K	0.1 50V	[M]
C463	ECJ1VB1H104K	0.1 50V	[M]
C464	ECJ1VB1H104K	0.1 50V	[M]
C465	ECJ1VB1H104K	0.1 50V	[M]
C466	ECJ1VB1H104K	0.1 50V	[M]
C467	ECJ1VC1H470K	47P 50V	[M]
C468	ECJ1VB1H471K	470P 50V	[M]
C469	ECJ1VB1H104K	0.1 50V	[M]
C471	ECJ1VB1H471K	470P 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C472	ECJ1VB1H331K	330P 50V	[M]
C473	ECJ1VB1H331K	330P 50V	[M]
C474	ECJ1VB1H331K	330P 50V	[M]
C475	ECJ1VB1H331K	330P 50V	[M]
C476	ECJ1VB1H331K	330P 50V	[M]
C477	ECJ1VB1H331K	330P 50V	[M]
C478	ECJ1VB1H104K	0.1 50V	[M]
C479	ECJ1VB1H103K	0.01 50V	[M]
C480	F1K1V105A003	1 35V	[M]
C481	F1K1V105A003	1 35V	[M]
C482	F1K1V105A003	1 35V	[M]
C483	F1K1V105A003	1 35V	[M]
C484	F1K1V105A003	1 35V	[M]
C485	F1K1V105A003	1 35V	[M]
C486	F2A1H1R0A234	1 50V	[M]
C487	ECJ1VB1H103K	0.01 50V	[M]
C488	F2A1V6810014	680 35V	[M]
C489	F2A1V6810014	680 35V	[M]
C490	F2A1V6810014	680 35V	[M]
C492	ECJ1VB1H104K	0.1 50V	[M]
C493	F2A0J221A245	220 6.3V	[M]
C494	ECQV1H474JL3	0.47 50V	[M]
C495	ECQV1H474JL3	0.47 50V	[M]
C496	ECQV1H474JL3	0.47 50V	[M]
C497	ECJ1VB1H104K	0.1 50V	[M]
C498	ECJ1VB1H104K	0.1 50V	[M]
C499	ECJ1VB1H104K	0.1 50V	[M]
C500	ECJ1VB1H221K	220P 50V	[M]
C501	ECJ1VC1H470K	47P 50V	[M]
C503	ECJ1VB1H331K	330P 50V	[M]
C504	ECA0JAK470XB	47 6.3V	[M]
C505	ECJ1VB1H102K	1000P 50V	[M]
C506	F2A0J102A247	1000 6.3V	[M]
C508	ECJ1VB1H102K	1000P 50V	[M]
C510	ECJ1VB1H102K	1000P 50V	[M]
C511	ECJ1VB1H102K	1000P 50V	[M]
C512	ECJ1VB1H102K	1000P 50V	[M]
C513	ECJ1VB1H104K	0.1 50V	[M]
C514	ECJ1VB1A474K	0.47 10V	[M]
C515	ECJ1VB1H102K	1000P 50V	[M]
C516	ECJ1VB1H102K	1000P 50V	[M]
C517	ECJ1VB1H104K	0.1 50V	[M]
C518	ECJ1VB1H561K	560P 50V	[M]
C519	ECJ1VB1H561K	560P 50V	[M]
C520	ECJ1VB1H561K	560P 50V	[M]
C521	ECJ1VB1H561K	560P 50V	[M]
C522	ECJ1VB1H561K	560P 50V	[M]
C523	ECJ1VB1H561K	560P 50V	[M]
C524	ECJ1VB1H223K	0.022 50V	[M]
C525	ECJ1VB1H331K	330P 50V	[M]
C526	ECJ1VB1H331K	330P 50V	[M]
C527	ECJ1VB1H331K	330P 50V	[M]
C528	ECJ1VB1H104K	0.1 50V	[M]
C529	ECJ1VB1H104K	0.1 50V	[M]
C530	ECJ1VB1H104K	0.1 50V	[M]
C531	ECJ1VB1H103K	0.01 50V	[M]
C532	ECJ1VB1H103K	0.01 50V	[M]
C533	ECJ1VB1H103K	0.01 50V	[M]
C534	ECJ1VB1H103K	0.01 50V	[M]
C535	ECJ1VB1H103K	0.01 50V	[M]
C536	ECJ1VB1H103K	0.01 50V	[M]
C537	ECA1HAK100XB	10 50V	[M]
C538	ECA1HAK100XB	10 50V	[M]
C539	F2A1V100A184	10 35V	[M]
C540	ECJ1VB1H104K	0.1 50V	[M]
C541	ECA1HAK100XB	10 50V	[M]
C542	ECJ1VB1H102K	1000P 50V	[M]
C543	ECA1CM330B	33 16V	[M]
C544	F2A1V2220047	2200 35V	[M]
C545	ECJ1VB1H104K	0.1 50V	[M]
C546	ECJ1VB1H102K	1000P 50V	[M]
C547	ECJ1VB1H102K	1000P 50V	[M]
C548	ECJ1VB1H102K	1000P 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C549	ECJ1VB1H102K	1000P 50V	[M]
C550	ECJ1VB1H102K	1000P 50V	[M]
C551	ECJ1VB1H102K	1000P 50V	[M]
C552	ECJ1VC1H101K	100P 50V	[M]
C553	ECJ1VB1H104K	0.1 50V	[M]
C554	ECJ1VB1H104K	0.1 50V	[M]
C555	ECJ1VB1H103K	0.01 50V	[M]
C556	ECJ1VB1H104K	0.1 50V	[M]
C560	ECJ1VC1H101K	100P 50V	[M]
C561	ECJ1VC1H101K	100P 50V	[M]
C562	ECJ1VC1H101K	100P 50V	[M]
C563	ECJ1VB1H102K	1000P 50V	[M]
C564	ECJ1VB1H102K	1000P 50V	[M]
C566	ECJ2FB0J106K	10 6.3V	[M] EG
C567	ECJ2FB0J106K	10 6.3V	[M] EG
C700	F2A1C100A234	10 16V	[M]
C701	F1J2E1030004	0.01 250V	[M]
C702	ECQU2A104MLC	0.1	[M] △
C703	F2A1V2220047	2200 35V	[M]
C705	ECQP6103JUB	0.1 630V	[M]
C706	F2B2G1810011	180 400V	[M]
C707	ECJ1VB1H221K	220P 50V	[M]
C708	ECJ1VB1H472K	4700P 50V	[M]
C709	ECJ1VB1H102K	1000P 50V	[M]
C710	F1BAF471A013	470P	[M]
C711	F2A1V220A184	22 35V	[M]
C712	ECJ1VC1H471J	470P 50V	[M]
C713	F2A1H1R0A234	1 50V	[M]
C714	ECJ1VB1H223K	0.022 50V	[M]
C715	ECJ1VB1H102K	1000P 50V	[M]
C716	F1B3F6810007	680P	[M]
C717	ECJ1VB1H103K	0.01 50V	[M]
C718	F1BAF1020020	1000P	[M] △
C719	F2B2G1000001	10 400V	[M]
C720	F1BAF1020020	1000P	[M] △
C721	F2A0J471A247	470 6.3V	[M]
C722	F2A1C102B037	1000 16V	[M]
C723	ECQP6182JUB	1800P 630V	[M]
C724	F2A1H1R0A234	1 50V	[M]
C725	ECQU2A104MLC	0.1	[M] △
C726	ECJ1VB1H104K	0.1 50V	[M]
C727	F1BAF471A013	470P	[M] △
C728	F1BAF471A013	470P	[M] △
C729	ECJ1VB1H103K	0.01 50V	[M]
C730	F1BAF1020020	1000P	[M] △
C731	ECJ1VB1H102K	1000P 50V	[M]
C732	ECJ1VB1H104K	0.1 50V	[M]
C733	F1J0J106A014	10 6.3V	[M]
C734	ECJ1VB1H472K	4700P 50V	[M]
C735	ECJ1VB1H223K	0.022 50V	[M]
C736	F2A1C470A234	47 16V	[M]
C737	F1BAF1020020	1000P	[M] △
C738	ECQU2A104MLC	0.1	[M] △
C750	F2A1H100A248	10 50V	[M]
C751	F2A1E101A132	100 25V	[M]
C752	F2A1C221A243	220 16V	[M]
C755	ECQB1H392KF3	3900P 50V	[M]
C756	F2A1V470A190	47 35V	[M]
C758	F1J2E1030004	0.01 250V	[M]
C759	F2A1V2220047	2200 35V	[M]
C760	F2A1C4710045	470 16V	[M]
C761	F2A1E100A202	10 25V	[M]
C770	F2A1A470A185	47 10V	[M]
C771	ECJ1VC1H101K	100P 50V	[M]
C772	ECJ1VC1H101K	100P 50V	[M]
C773	ECJ1VC1H101K	100P 50V	[M]
C774	ECJ1VC1H101K	100P 50V	[M]
C775	ECA0JAM471XB	470 6.3V	[M]
C776	F2A1C100A234	10 16V	[M]
C778	ECJ1VB1H104K	0.1 50V	[M]
C779	ECJ1VB1H104K	0.1 50V	[M]
C780	F2A1E471A205	470 25V	[M]
C781	EEUFC0J821B	820 6.3V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C782	F2A1C100A234	10 16V	[M]
C783	ECA0JAM471XB	470 6.3V	[M]
C784	EEUFC1A102B	1000 10V	[M]
C785	F2A1E471A205	470 25V	[M]
C786	ECJ1VB1C105K	1 16V	[M] EG/E
C787	ECJ1VB1C105K	1 16V	[M] EG/E
C800	ECEA1HKA220B	22 50V	[M]
C801	ECEA1HKA220B	22 50V	[M]
C802	ECJ1VC1H101K	100P 50V	[M]
C803	ECJ1VC1H101K	100P 50V	[M]
C804	ECJ1VC1H101K	100P 50V	[M]
C805	ECJ1VC1H101K	100P 50V	[M]
C806	ECJ1VC1H101K	100P 50V	[M]
C807	F2A1H3R3A213	3.3 50V	[M]
C808	ECJ1VB1H103K	0.01 50V	[M]
C809	F2A0J101A208	100 6.3V	[M]
C810	ECJ1VC1H101K	100P 50V	[M]
C811	ECJ1VB1H103K	0.01 50V	[M]
C812	F2A1C470A234	47 16V	[M]
C813	ECJ1VB1H103K	0.01 50V	[M]
C814	ECJ1VC1H101K	100P 50V	[M]
C815	ECJ1VC1H101K	100P 50V	[M]
C816	ECJ1VC1H101K	100P 50V	[M]
C817	ECJ1VC1H101K	100P 50V	[M]
C818	ECJ1VC1H101K	100P 50V	[M]
C819	ECJ1VB1H103K	0.01 50V	[M]
C900	ECJ1VC1H101K	100P 50V	[M] EB/E
C901	ECJ1VB1H473K	0.047 50V	[M]
C902	ECJ1VC1H101K	100P 50V	[M] EB/E
C903	ECJ1VB1H473K	0.047 50V	[M]
C904	ECJ1VC1H101K	100P 50V	[M]
C905	ECJ1VC1H101K	100P 50V	[M]
C906	ECJ1VC1H470K	47P 50V	[M]
C907	ECJ1VC1H470K	47P 50V	[M]
C908	ECJ1VB1C105K	1 16V	[M]
C909	ECJ1VB1C105K	1 16V	[M]
C910	ECJ1VC1H470K	47P 50V	[M]
C911	ECJ1VC1H470K	47P 50V	[M]
C912	ECJ1VB1C104K	0.1 16V	[M]
C913	ECJ1VB1C105K	1 16V	[M]
C914	ECJ1VB1C105K	1 16V	[M]
C915	F2A1H2R2A234	2.2 50V	[M]
C916	ECJ1VB1H102K	1000P 50V	[M]
C917	ECJ1VB1H102K	1000P 50V	[M]
C918	ECJ1VB1A225K	2.2 10V	[M]
C919	ECJ1VB1A225K	2.2 10V	[M]
C920	ECJ1VB1H102K	1000P 50V	[M]
C921	ECJ1VB1H102K	1000P 50V	[M]
C930	ECJ1VB1A225K	2.2 10V	[M] EB/E
C931	ECJ1VB1A225K	2.2 10V	[M] EB/E
C960	ECJ1VB1C104K	0.1 16V	[M]
C961	ECJ1VB1H103K	0.01 50V	[M]
C984	ECA1EAK100XE	10 25V	[M]
C1300	ECJ1VC1H102J	1000P 50V	[M]
C1301	ECJ1VC1H102J	1000P 50V	[M]
C1302	ECJ1VC1H102J	1000P 50V	[M]
C1303	ECJ1VC1H102J	1000P 50V	[M]
C1305	ECJ1VC1H102J	1000P 50V	[M]
C1306	ECJ1VC1H102J	1000P 50V	[M]
C1307	ECJ1VC1H102J	1000P 50V	[M]
C1308	ECJ1VC1H102J	1000P 50V	[M]
C1309	ECJ2FB0J106K	10 6.3V	[M]
C1310	ECJ2FB0J106K	10 6.3V	[M]
C1311	ECJ2FB0J106K	10 6.3V	[M]
C1312	ECJ2FB0J106K	10 6.3V	[M]
C1314	ECJ1VB1C105K	1 16V	[M]
C1315	ECJ1VB1C105K	1 16V	[M]
C1316	ECJ1VB1C105K	1 16V	[M]
C1317	ECJ1VB1C105K	1 16V	[M]
C1318	ECJ1VB1C104K	0.1 16V	[M]
C1319	ECJ1VB1C104K	0.1 16V	[M]
C1320	ECJ2FB0J106K	10 6.3V	[M]
C1321	ECJ1VB1C104K	0.1 16V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C1322	ECJ2FB0J106K	10 6.3V	[M]
C1323	ECJ1VB1C104K	0.1 16V	[M]
C1324	ECJ2FB0J106K	10 6.3V	[M]
C1325	ECJ1VB1C104K	0.1 16V	[M]
C1326	ECJ2FB0J106K	10 6.3V	[M]
C1329	ECJ1VB1H103K	0.01 50V	[M]
C1330	ECJ1VB1H103K	0.01 50V	[M]
C1331	ECJ1VB1H103K	0.01 50V	[M]
C1332	ECJ1VB1H103K	0.01 50V	[M]
C1334	ECJ2FB0J106K	10 6.3V	[M]
C1335	ECJ2FB0J106K	10 6.3V	[M]
C1336	ECJ2FB0J106K	10 6.3V	[M]
C1337	ECJ1VC1H102J	1000P 50V	[M]
C1339	ECJ1VB1C104K	0.1 16V	[M]
C1340	ECJ1VB1C104K	0.1 16V	[M]
C1341	ECJ1VB1C104K	0.1 16V	[M]
C1342	ECJ1VB1C104K	0.1 16V	[M]
C1344	ECJ2FB0J106K	10 6.3V	[M]
C1345	ECJ1VC1H100C	10P 50V	[M]
C1346	ECJ1VC1H100C	10P 50V	[M]
C1347	ECJ1VB1C104K	0.1 16V	[M]
C1348	ECJ1VB1C104K	0.1 16V	[M]
C1349	ECJ1VB1C104K	0.1 16V	[M]
C1350	ECJ1VB1C104K	0.1 16V	[M]
C1351	ECJ1VB1C104K	0.1 16V	[M]
C1352	ECJ1VB1C104K	0.1 16V	[M]
C1353	ECJ1VB1C104K	0.1 16V	[M]
C1354	ECJ1VB1C104K	0.1 16V	[M]
C1355	ECJ1VB1C104K	0.1 16V	[M]
C1356	ECJ1VB1C104K	0.1 16V	[M]
C1357	ECJ1VB1H103K	0.01 50V	[M]
C1358	ECJ1VB1C104K	0.1 16V	[M]
C1359	ECJ1VB1C104K	0.1 16V	[M]
C1360	ECJ1VB1C104K	0.1 16V	[M]
C1361	ECJ1VB1C104K	0.1 16V	[M]
C1362	ECJ1VB1C104K	0.1 16V	[M]
C1363	ECJ1VB1C104K	0.1 16V	[M]
C1364	ECJ1VB1C104K	0.1 16V	[M]
C1365	ECJ1VB1C104K	0.1 16V	[M]
C1366	ECJ1VB1A225K	2.2 10V	[M]
C1367	ECJ1VB1C104K	0.1 16V	[M]
C1368	ECJ1VB1C104K	0.1 16V	[M]
C1369	ECJ1VB1C104K	0.1 16V	[M]
C1370	EEE0GA331WP	330 4V	[M]
C1371	ECJ1VB1C104K	0.1 16V	[M]
C1372	ECJ1VB1C104K	0.1 16V	[M]
C1373	ECJ1VB1C104K	0.1 16V	[M]
C1374	ECJ1VB1C104K	0.1 16V	[M]
C1375	ECJ1VB1C104K	0.1 16V	[M]
C1376	ECJ1VB1C104K	0.1 16V	[M]
C1377	ECJ1VB1C104K	0.1 16V	[M]
C1378	ECJ1VB1C104K	0.1 16V	[M]
C1379	ECJ1VB1C104K	0.1 16V	[M]
C1380	ECJ1VB1C104K	0.1 16V	[M]
C1381	ECJ1VB1C104K	0.1 16V	[M]
C1382	ECJ1VB1C104K	0.1 16V	[M]
C1383	ECJ1VB1C104K	0.1 16V	[M]
C1384	ECJ1VB1C104K	0.1 16V	[M]
C1385	ECJ1VB1C104K	0.1 16V	[M]
C1386	ECJ1VB1C104K	0.1 16V	[M]
C1387	ECJ1VC1H101J	100P 50V	[M]
C1388	ECJ1VC1H101J	100P 50V	[M]
C1389	ECJ2FB0J106K	10 6.3V	[M]
C1390	ECJ1VC1H471J	470P 50V	[M]
C1391	ECJ1VB1A225K	2.2 10V	[M]
C1393	ECJ2FB0J106K	10 6.3V	[M]
C1394	ECJ1VB1H103K	0.01 50V	[M]
C1395	ECJ2FB0J106K	10 6.3V	[M]
C1398	ECJ1VB1H103K	0.01 50V	[M]
C1399	ECJ1VC1H101K	100P 50V	[M]
C1400	ECJ1VC1H101K	100P 50V	[M]
C1401	ECJ1VC1H101K	100P 50V	[M]
C1402	ECJ1VC1H101K	100P 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C1416	ECJ1VC1H471J	470P 50V	[M]
C1424	ECJ2FB0J106K	10 6.3V	[M]
C1431	ECJ1VB1C104K	0.1 16V	[M]
C1432	ECJ1VB1C104K	0.1 16V	[M]
C1433	ECJ1VC1H180J	18P 50V	[M]
C1434	ECJ1VC1H180J	18P 50V	[M]
C1467	ECJ1VB1A225K	2.2 10V	[M]
C1468	EEE0JA101SP	100 6.3V	[M]
C1490	ECJ1VB1C104K	0.1 16V	[M]
C1491	ECJ1VC1H102J	1000P 50V	[M]
C1492	ECJ1VC1H102J	1000P 50V	[M]
C1493	ECJ1VC1H102J	1000P 50V	[M]
C1494	ECJ1VC1H102J	1000P 50V	[M]
C3901	EEE0GA331WP	330 4V	[M]
C3902	EEE0GA331WP	330 4V	[M]
C3904	EEE0GA331WP	330 4V	[M]
C3906	EEE0GA331WP	330 4V	[M]
C3907	ECJ0EB1A104K	0.1 10V	[M]
C3908	ECJ0EB1A104K	0.1 10V	[M]
C3909	ECJ1VB0J105K	1 6.3V	[M]
C3910	ECJ0EB1A104K	0.1 10V	[M]
C3911	ECJ1VB0J105K	1 6.3V	[M]
C3913	ECJ0EB1A104K	0.1 10V	[M]
C3914	ECJ0EB1A104K	0.1 10V	[M]
C3915	ECJ1VB0J105K	1 6.3V	[M]
C3916	ECJ0EB1A104K	0.1 10V	[M]
C3917	ECJ1VB0J105K	1 6.3V	[M]
C3918	ECJ0EB1A104K	0.1 10V	[M]
C3919	ECJ1VB0J105K	1 6.3V	[M]
C3920	ECJ1VB0J105K	1 6.3V	[M]
C3921	ECJ0EB1A104K	0.1 10V	[M]
C3922	ECJ0EB1A104K	0.1 10V	[M]
C3923	ECJ1VB0J105K	1 6.3V	[M]
C3924	ECJ1VB0J105K	1 6.3V	[M]
C3925	ECJ0EB1A104K	0.1 10V	[M]
C3926	ECJ0EB1A104K	0.1 10V	[M]
C3927	ECJ1VB0J105K	1 6.3V	[M]
C3928	ECJ0EB1A104K	0.1 10V	[M]
C3929	ECJ0EB1A104K	0.1 10V	[M]
C3930	ECJ1VB0J105K	1 6.3V	[M]
C3932	ECJ1VB0J105K	1 6.3V	[M]
C3940	ECJ0EB1A104K	0.1 10V	[M]
C3941	ECJ0EC1H221J	220P 50V	[M]
C3954	ECJ0EF1C104Z	0.1 16V	[M]
C3955	F1G1C1030007	0.01 16V	[M]
C3956	ECJ1VB0J105K	1 6.3V	[M]
C3964	ECJ0EB1A104K	0.1 10V	[M]
C8001	EEE0GA331WP	330 4V	[M]
C8002	F2G0J330A031	33 6.3V	[M]
C8003	ECJ0EF1C104Z	0.1 16V	[M]
C8004	ECJ0EF1C104Z	0.1 16V	[M]
C8005	ECJ0EF1C104Z	0.1 16V	[M]
C8006	ECJ0EF1C104Z	0.1 16V	[M]
C8007	ECJ0EF1C104Z	0.1 16V	[M]
C8011	F2G0J101A066	100 6.3V	[M]
C8012	ECJ0EF1C104Z	0.1 16V	[M]
C8013	ECJ0EF1C104Z	0.1 16V	[M]
C8014	ECJ0EF1C104Z	0.1 16V	[M]
C8015	ECJ0EF1C104Z	0.1 16V	[M]
C8016	ECJ0EF1C104Z	0.1 16V	[M]
C8018	ECJ0EF1C104Z	0.1 16V	[M]
C8020	ECJ0EF1C104Z	0.1 16V	[M]
C8021	ECJ0EF1C104Z	0.1 16V	[M]
C8022	ECJ0EF1C104Z	0.1 16V	[M]
C8023	ECJ0EF1C104Z	0.1 16V	[M]
C8026	ECJ0EF1C104Z	0.1 16V	[M]
C8051	ECJ1VB0J105K	1 6.3V	[M]
C8052	ECJ0EB1A104K	0.1 10V	[M]
C8053	ECJ0EF1C104Z	0.1 16V	[M]
C8054	ECJ0EC1H221J	220P 50V	[M]
C8055	ECJ1VB0J105K	1 6.3V	[M]
C8056	F1G1E2220001	2200P 25V	[M]
C8057	ECJ1VB0J105K	1 6.3V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C8111	ECJ0EB1A104K	0.1 10V	[M]
C8112	ECJ1VB0J105K	1 6.3V	[M]
C8113	F1G1E4710001	470P 25V	[M]
C8151	ECJ1VB0J475K	4.7 6.3V	[M]
C8152	ECJ1VB1C105K	1 16V	[M]
C8201	F2G0J101A066	100 6.3V	[M]
C8202	ECJ0EB1A104K	0.1 10V	[M]
C8203	ECJ0EB1A104K	0.1 10V	[M]
C8211	ECJ0EB1E122K	1200P 25V	[M]
C8221	F1G1E1020001	1000P 25V	[M]
C8222	ECJ0EB1E821K	820P 25V	[M]
C8225	F1G1E1020001	1000P 25V	[M]
C8226	F1G1E1020001	1000P 25V	[M]
C8231	ECJ0EB1A104K	0.1 10V	[M]
C8232	ECJ0EB1A104K	0.1 10V	[M]
C8251	F2G0J221A065	220 6.3V	[M]
C8252	ECJ0EF1C104Z	0.1 16V	[M]
C8253	ECJ0EF1C104Z	0.1 16V	[M]
C8255	F2G1C220A037	22 16V	[M]
C8256	ECJ0EF1C104Z	0.1 16V	[M]
C8257	F2G1C470A076	47 16V	[M]
C8258	ECJ0EF1C104Z	0.1 16V	[M]
C8261	ECJ0EF1C104Z	0.1 16V	[M]
C8262	ECJ0EF1C104Z	0.1 16V	[M]
C8301	F2G0J221A031	220 6.3V	[M]
C8302	F2G0J330A031	33 6.3V	[M]
C8303	ECJ0EB1A104K	0.1 10V	[M]
C8304	ECJ0EB1A104K	0.1 10V	[M]
C8305	ECJ0EB1A104K	0.1 10V	[M]
C8306	ECJ0EB1A104K	0.1 10V	[M]
C8311	ECJ0EB1A104K	0.1 10V	[M]
C8312	ECJ1VB0J105K	1 6.3V	[M]
C8313	ECJ1VB0J105K	1 6.3V	[M]
C8320	ECJ0EF1C104Z	0.1 16V	[M]
C8321	ECJ0EB1A104K	0.1 10V	[M]
C8325	ECJ0EB1A104K	0.1 10V	[M]
C8330	F2G0J470A031	47 6.3V	[M]
C8331	ECJ0EB1A104K	0.1 10V	[M]
C8335	ECJ0EB1A104K	0.1 10V	[M]
C8340	ECJ0EF1C104Z	0.1 16V	[M]
C8341	ECJ0EB1A104K	0.1 10V	[M]
C8401	F1G1H150A565	15P 50V	[M]
C8421	F2G0J101A083	100 6.3V	[M]
C8422	ECJ0EF1C104Z	0.1 16V	[M]
C8423	F2G0J330A083	33 6.3V	[M]
C8424	ECJ0EF1C104Z	0.1 16V	[M]
C8426	ECJ0EF1C104Z	0.1 16V	[M]
C8427	ECJ0EF1C104Z	0.1 16V	[M]
C8428	ECJ0EF1C104Z	0.1 16V	[M]
C8429	ECJ0EF1C104Z	0.1 16V	[M]
C8430	ECJ0EF1C104Z	0.1 16V	[M]
C8501	F2G0J101A031	100 6.3V	[M]
C8502	ECJ0EF1C104Z	0.1 16V	[M]
C8503	ECJ0EF1C104Z	0.1 16V	[M]
C8504	ECJ0EF1C104Z	0.1 16V	[M]
C8505	ECJ0EF1C104Z	0.1 16V	[M]
C8506	ECJ0EF1C104Z	0.1 16V	[M]
C8511	ECJ1VB0J105K	1 6.3V	[M]
C8512	ECJ1VB0J105K	1 6.3V	[M]
C8513	ECJ0EB1A104K	0.1 10V	[M]
C8514	ECJ0EB1A104K	0.1 10V	[M]
C8515	ECJ0EB1A104K	0.1 10V	[M]
C8516	ECJ0EB1A104K	0.1 10V	[M]
C8521	ECJ0EB1A104K	0.1 10V	[M]
C8522	ECJ0EB1A104K	0.1 10V	[M]
C8523	ECJ0EF1C104Z	0.1 16V	[M]
C8524	ECJ0EF1C104Z	0.1 16V	[M]
C8525	F1G1C562A039	5600P 16V	[M]
C8526	ECJ0EB1C183K	0.018 16V	[M]
C8527	F1G1A333A013	0.033 10V	[M]
C8528	ECJ1VB0J105K	1 6.3V	[M]
C8529	ECJ1VB0J105K	1 6.3V	[M]
C8530	ECJ0EF1C104Z	0.1 16V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C8531	F1G1H101A566	100P 50V	[M]
C8532	ECJ0EC1H221J	220P 50V	[M]
C8533	ECJ0EF1C104Z	0.1 16V	[M]
C8537	ECJ0EF1C104Z	0.1 16V	[M]
C8538	ECJ0EF1C104Z	0.1 16V	[M]
C8541	F1G1E4720002	4700P 25V	[M]
C8550	F2G0J330A031	33 6.3V	[M]
C8551	ECJ0EF1C104Z	0.1 16V	[M]
C8552	F2G1C100A072	10 16V	[M]
C8553	F2G0J470A031	47 6.3V	[M]
C8554	ECJ1VB0J105K	1 6.3V	[M]
C8561	ECJ0EF1C104Z	0.1 16V	[M]
C8562	F2G1C100A072	10 16V	[M]
C8563	F2G0J470A031	47 6.3V	[M]
C8564	ECJ1VB0J105K	1 6.3V	[M]
C8571	F1K1A106A020	10 10V	[M]
C8572	ECJ0EF1C104Z	0.1 16V	[M]
C8601	ECJ0EF1C104Z	0.1 16V	[M]
C8602	F1G1C153A039	0.015 16V	[M]
C8606	ECJ0EF1C104Z	0.1 16V	[M]
C8611	ECJ0EF1C104Z	0.1 16V	[M]
C8621	ECJ0EC1H070D	7P 50V	[M]
C8622	ECJ0EC1H080D	8P 50V	[M]
C8651	ECJ0EF1C104Z	0.1 16V	[M]
C8652	ECJ0EF1C104Z	0.1 16V	[M]
C8701	ECJ0EB1A104K	0.1 10V	[M]
C8901	ECJ0EF1C104Z	0.1 16V	[M]
C9002	ECJ0EF1C104Z	0.1 16V	[M]
C9003	ECJ0EF1C104Z	0.1 16V	[M]
C9004	ECJ0EC1H080D	8P 50V	[M]
C9005	ECJ0EC1H090D	9P 50V	[M]
C9006	ECJ0EB1A104K	0.1 10V	[M]
C9007	ECJ0EF1C104Z	0.1 16V	[M]
C9017	ECJ0EB1A104K	0.1 10V	[M]