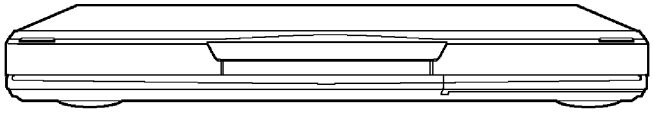
ORDER NO.CHM0902005CE
B35

Service Manual

Blu-ray Disc Player



Model No. DMP-BD60P
DMP-BD60PC
DMP-BD601P
DMP-BD605P
DMP-BD80P
DMP-BD80PC

Notes: These model's BDP/Digital P.C.B. Module are - RFKNBD60P
- RFKNBD60PC
- RFKNBD80P
- RFKNBD80PC.

Caution:
Pairing of BD Drive and Digital P.C.B. as "BDP/ Digital P.C.B. Module" have to be replaced together. If the either BD drive or Digital P.C.B. is changed, BD Drive unit has to be re-aligned. Because the alignment data for BD Drive Unit is stored in Digital P.C.B..

Vol. 1
Colour
(K).....Black Type

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This product is licensed under the AVC patent portfolio license and VC-1 patent portfolio license for the personal and non-commercial use of a consumer to (i) encode video in compliance with the AVC Standard and VC-1 Standard ("AVC/VC-1 Video") and/or (ii) decode AVC/VC-1 Video that was encoded by a consumer engaged in a personal and non-commercial activity and/or was obtained from a video provider licensed to provide AVC/VC-1 Video. No license is granted or shall be implied for any other use. Additional information may be obtained from MPEG LA, LLC. See http://www.mpegla.com.

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⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals 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, make 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 1MΩ and 5.2MΩ.
   When the exposed metal does not have a return path to the chassis, the reading must be ∞.

1.1.2. Leakage current hot check (See Figure 1.)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a 1.5kΩ, 10 watts resistor, in parallel with a 0.15μF 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 milliampere. 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.

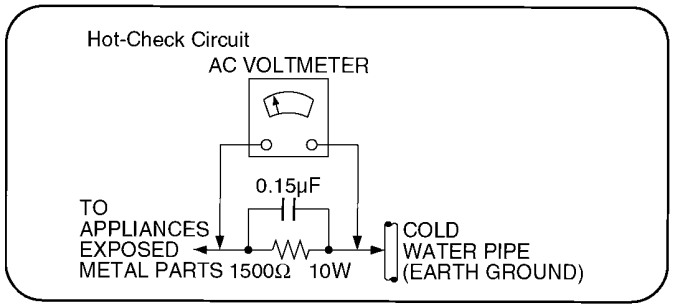


Figure 1

1.2. Caution for fuse replacement

(For English)
CAUTION:
Replace with the same type fuse:
(Manufacturer: Hollyland, Type:50T, 2A, 250V)

(For Canadian French)
ATTENTION:
Utiliser un fusible de rechange de même type:
(Fabricant: Hollyland, Type:50T, 2A, 250V)

2 Warning

2.1. Prevention of Electrostatic Discharge (ESD) to Electrostatic Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatic Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistor-sand 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 sufficient to damage an ES device).

IMPORTANT SAFETY NOTICE

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

2.2. Precaution of Laser Diode

CAUTION:

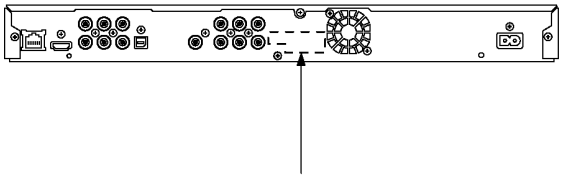
This product utilizes a laser diode with the unit turned “on”, invisible laser radiation is emitted from the pickup lens.
Wave length: 782 nm (CDs)/ 662 nm (DVDs)/ 405 nm (BDs)
Maximum output radiation power from pickup: 100 μ W/VDE
Laser radiation from the pickup lens is safety level, but be sure the followings:

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

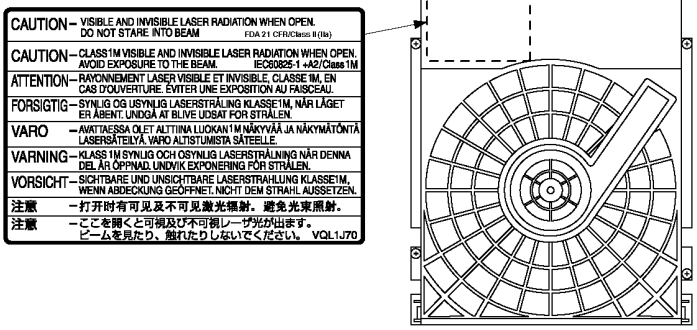
ACHTUNG:

Dieses Produkt enthält eine Laserdiode.
Im eingeschalteten Zustand wird unsichtbare Laserstrahlung von der Laserinheit abgestrahlt.
Wellenlänge: 782 nm (CDs)/ 662 nm (DVDs)/ 405 nm (BDs)
Maximale Strahlungsleistung der Lasereinheit: 100 μ W/VDE
Die Strahlung der Lasereinheit ist ungefährlich, wenn folgende Punkte beachtet werden:

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



Product complies with DHHS Rules 21 CFR Subchapter J in effect at date of manufacture.
Panasonic Corporation
Kadoma, Osaka, Japan



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.

2.3. Service caution based on legal restrictions

2.3.1. General description about Lead Free Solder (PbF)

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

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

Definition of PCB Lead Free Solder being used

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

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

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

Recommended Lead Free Solder (Service Parts Route.)

- The following 3 types of lead free solder are available through the service parts route.
  RFKZ03D01KS----------(0.3mm 100g Reel)
  RFKZ06D01KS----------(0.6mm 100g Reel)
  RFKZ10D01KS----------(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%

3 Service Navigation

3.1. Service Information

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

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

1) This service manual does not contain the following information, because of the impossibility of servicing at component level.

   * Schematic Diagram, Block Diagram and P.C.B. layout of BDP/Digital P.C.B. Module.
   * Parts List for individual parts of BDP/Digital P.C.B. Module.
   * Exploded View and Parts List for individual parts of BDP/Digital P.C.B. Module.

2) The following category are recycle module part. Please send them to Central Repair Center.

   * BDP/Digital P.C.B. Module (BD60P, 601P, 605P : RFKNBD60P)
     (BD60PC : RFKNBD60PC)
     (BD80P : RFKNBD80P)
     (BD80PC : RFKNBD80PC)

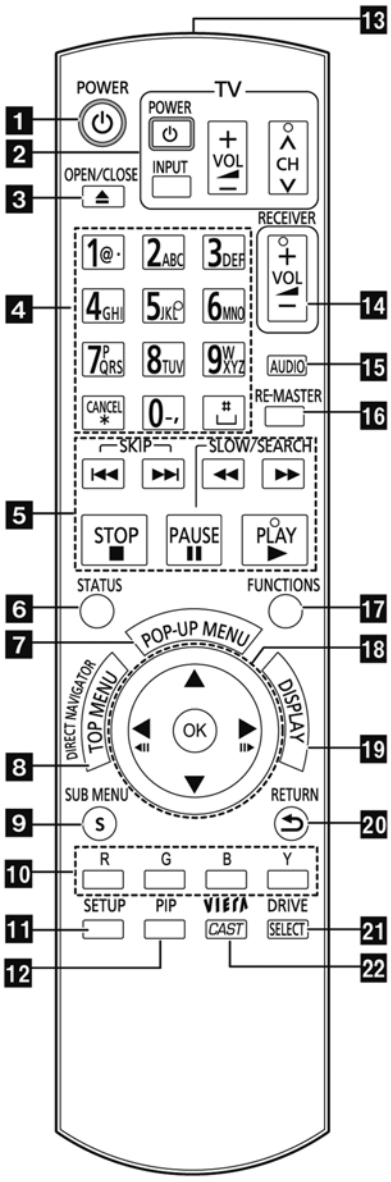
4 Specifications

Power supply	AC 120 V, 60 Hz
Power consumption	Approx. 20 W
Power consumption in standby mode	Less than 0.5 W
in quick start standby mode	6 W
Optical pick-up	System with 2 lenses, (405 nm wavelength for BDs, 650 nm wavelength for DVDs, 790 nm wavelength for CDs)
Media	
Playable discs	BD-Video BD-ROM Version 2 BD-RE Version 3 (Single Layer / Dual Layer), JPEG BD-R Version 2 (Single Layer / Dual Layer) DVD - RAM DVD Video Recording format, AVCHD format, JPEG DVD-R/ DVD-R DL DVD-Video format (*1), DVD Video Recording format (*1), AVCHD format (*1), DivX (*2, *3), JPEG (*2), MP3 (*2) DVD-RW DVD-Video format (*1), DVD Video Recording format (*1), AVCHD format (*1) +R/+R DL/ +RW Video (*1), AVCHD format (*1) DVD-VIDEO DVD-Video format CD-Audio CD-DA CD-R/CD-RW CD-DA, JPEG (*2), MP3 (*2), DivX (*2, *3) (*1) Finalizing is necessary. (*2) ISO9660 level 1 or 2 (except for extended formats), Joliet. This unit is compatible with multi-session. This unit is not compatible with packet writing. (*3) Official DivX® Certified product. Plays all versions of DivX® video (including DivX® 6) with standard playback of DivX® media files. Certified to the DivX Home Theater Profile. GMC (Global Motion Compensation) is not supported. DivX, DivX Certified, and associated logos are trademarks of DivX, Inc. and are used under license. Maximum number of folders recognizable: 300 folders (including the root folder) Maximum number of files recognizable: 200 files
SD Card	SD Memory Card (*4) formatted FAT12, FAT16, FAT32 (*5) JPEG, AVCHD format, MPEG-2 (*4) includes SDHC card includes miniSD™ cards (need a miniSD™ adaptor) includes microSD™ cards (need a microSD™ adaptor) (*5) not support long file name.
USB device	USB Standard : USB2.0 High Speed Format : FAT12, FAT16, FAT32(*6) (*6) not support long file name.
Contents	
JPEG SD card CD-R/RW DVD-RAM BD-RE DVD-R USB device	Pixels: 34 x 34 - 8192 x 8192 Sub sampling: 4:2:2, 4:2:0 Motion JPEG not supported SD card: JPEG conforming DCF (Design rule for Camera File System) Thawing Time: approx. 2 sec (7M pixels) Maximum numbers of folders and files; Maximum folders: 99(CD) / 300(SD card) / 300(DVD-RAM) / 300(BD-RE) / 300(DVD-R) / 300(USB device) Maximum files: 999(CD) / 3000(SD card) / 3000(DVD-RAM) / 9999(BD-RE) / 3000(DVD-R) / 3000(USB device)
MP3 CD-R/RW DVD-R USB device	Compression rate: 32 kbps - 320 kbps Sampling rate: 44.1 kHz, 48 kHz
AVCHD (H.264) SD card DVD	AVCHD format V1.0

Region Code	DVD: #1 BD: Region A
Playable discs (SL: Single Layer/ DL: Dual Layer)	BD-ROM(SL/DL): compliant Ver. 1.3 BD-RE(SL/DL): BD-MV BD-R(SL/DL): BD-MV DVD-ROM(SL/DL): DVD-Video DVD-RAM: DVD-VR DVD-R: DVD-Video, DVD-VR DVD-R(DL): DVD-Video, DVD-VR DVD-RW: DVD-Video, DVD-VR +R: Video +R(DL): Video +RW: Video CD: CD-DA, CD-R/RW
HDMI	480p(525p)/ 1080i(1125i)/ 720p(750p)/ 1080p(1125p) HDMI™ (Deep color, High Bit rate Audio) This unit supports "HDAVI Control 4" function.
Signal system	NTSC
Video output	Output level: 1.0 Vp-p (75 Ω) Output connector: Pin jack (1 system)
Component video output (1080i/ 720p/ 480p/ 480i)	Y output level: 1.0 Vp-p (75 Ω) P_B output level: 0.7 Vp-p (75 Ω) P_R output level: 0.7 Vp-p (75 Ω) Output connector: Pin jack (Y: green, P_B: blue, P_R: red) (1 system)
Audio output	Output level: 2 Vrms (1 kHz 0 dB) Output connector: Pin jack Number of connectors: 7.1 channel discrete output, 1 system (2 channel + 5.1 channel discrete output)
Audio performance	Frequency response ▪DVD (linear audio) 4 Hz - 22 kHz (48 kHz sampling) 4 Hz - 44 kHz (96 kHz sampling) ▪CD-Audio 4 Hz - 20 kHz S/N ratio 115 dB Dynamic range 100 dB Total harmonic distortion 0.003%
Digital audio output	Optical digital output Optical terminal Coaxial digital output Pin jack
HDMI AV output	Output format 1080p/1080i/720p/480p Output Connector Type A (19 pin)
SD card slot	Connector 1 system
USB slot	Connector 1 system
Ethernet	10BASE-T/ 100BASE-TX 1 system
Others	
Dimensions	Excluding the projecting parts: 430 (W) x 55 (H) x 242 (D) mm [Approx. 16 15/16 " (W) x 2 3/16" (H) x 9 9/16 " (D)] Including the projecting parts: 430 (W) x 55 (H) x 249 (D) mm [Approx. 16 15/16 " (W) x 2 3/16" (H) x 9 13/16 " (D)]
Mass	Approx. 2.6 kg (5.7 lbs)
Operating Temperature range	5˚C - 35˚C (41˚F - 95˚F)
Operating Humidity range	10 % - 80 % RH (no condensation)
LASER Specification	
Class I LASER Product	
Wave Length	405 nm(BDs), 650 nm(DVDs), 790 nm(CDs)
Laser Power	No hazardous radiation is emitted with the safety protection.
Solder	These models use lead free solder (PbF)

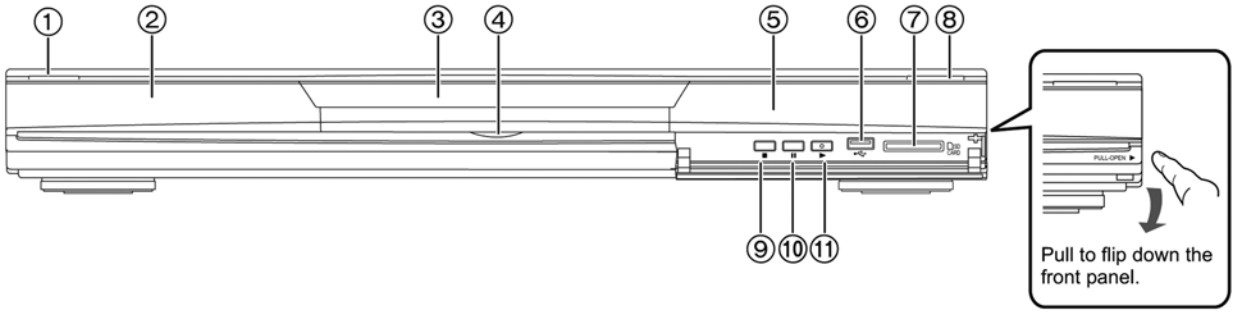
Notes : Mass and dimensions are approximate.
Specifications are subject to change without notice.

5 Location of Controls and Components



1 Turn the unit on and off
2 TV operation buttons
You can operate the TV through the unit's remote control.
[⏻ TV POWER] : Turn the television on and off
[INPUT] : Input select
[+ – VOL] : Adjust the volume
[∧ ∨ CH] : Channel select
3 Open or close the disc tray
4 Select title numbers, etc./Enter numbers or characters
[CANCEL] : Cancel
5 Basic playback control buttons
6 Show status messages
7 Show Pop-up menu
8 Show Top menu/Direct Navigator
9 Show sub menu
10 These buttons are used when;
- Operating a BD-Video disc that includes Java™ applications (BD-J). For more information about operating this kind of disc, please read the instructions that came with the disc.
- Displaying "Title View" and "Album View" screens.
- Operating contents of VIERA CAST.

11 Show Setup menu
12 Switch on/off Secondary Video (Picture-in-picture)
13 Transmit the remote control signal
14 Adjust the volume of an amplifier/receiver through the unit's remote control.
15 Select audio
16 Reproduce more natural audio
17 Show FUNCTIONS menu
18 Selection/OK, Frame-by-frame
19 Show on-screen menu
20 Return to previous screen
21 Select drive (BD/DVD/CD, SD card or USB device)
22 Displays the Home screen of the VIERA CAST



① **POWER button (POWER ⏻/I)**
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.
② Display

Disc indicator	SD card indicator	USB device indicator

The indicator blinks when reading data from a disc, a card or a USB device, or writing data to a card.
③ Disc tray
④ BD80: SD Card LED
- It is possible to set the LED to turn on/off.

⑤ Remote control signal sensor
⑥ USB port
⑦ SD card slot
⑧ Open or close the disc tray
⑨ Stop
⑩ Pause
⑪ Start play

Rear panel terminals

6 Operating Instructions

6.1. Taking out the Disc from BD Drive Unit when the Disc cannot be ejected by OPEN/CLOSE button

6.1.1. Forcible Disc Eject

6.1.1.1. When the power can be turned off.

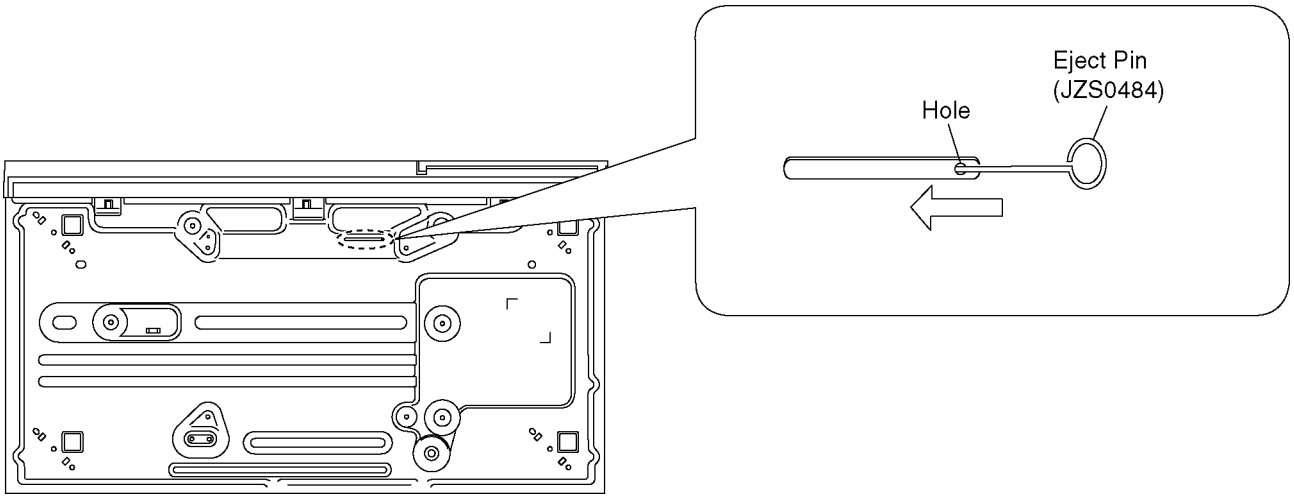
1. Turn off the power and press [PAUSE] and [OPEN/CLOSE] keys on the front panel simultaneously for 5 seconds.

6.1.1.2. When the power can not be turned off.

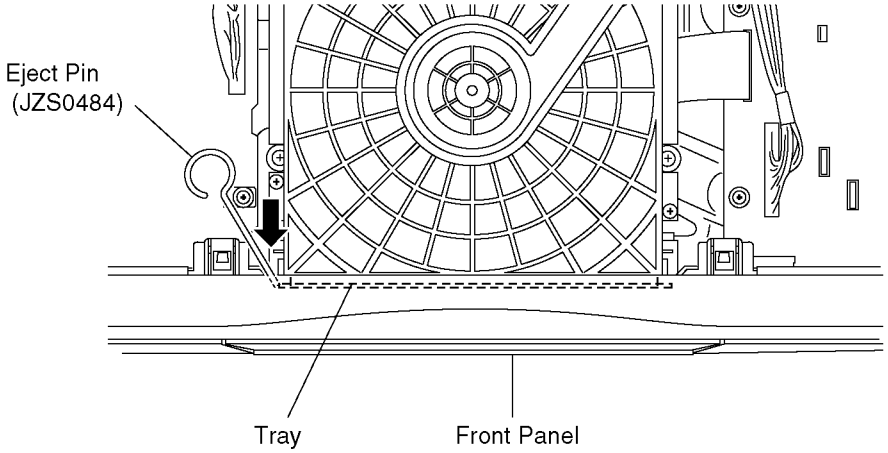
1. Press [POWER] key on the front panel for over 10 seconds to turn off the power forcibly, and press [PAUSE] and [OPEN/CLOSE] keys on the front panel simultaneously for 5 seconds.

6.1.2. When the Forcible Disc Eject can not be done.

1. Turn off the power and pull out AC cord.
2. Remove the Top Case.
3. Insert Eject Pin (JZS0484) into the hole on the bottom of BD Drive and slide the Eject Pin in the direction of the arrow to eject tray slightly.



4. Put deck upward, and push out Tray by Eject Pin (JZS0484) or minus screw driver (small).



7 Service Mode

7.1. Self-Diagnosis and Special Mode Setting

7.1.1. Self-Diagnosis Functions

Self-Diagnosis Function provides information for errors to service personnel by Self-Diagnosis Display when any error has occurred.

U, H** and F** are stored in memory and held.**

You can check latest error code by transmitting [0] [1] of Remote Controller in Service Mode.

Automatic Display on FL will be cancelled when the power is turned off or AC input is turned off during self-diagnosis display is ON.

Error Code	Diagnosis contents	Description	Monitor Display	Automatic FL display
U30	Remote control code error	Display appears when main unit and remote controller codes are not matched.	No display	SET * * is remote controller code of the main unit. Display for 5 seconds.
U59	Abnormal inner temperature detected	Display appears when the drive temperature exceeds 70°C. The power is turned off forcibly. For 30 minutes after this, all key entries are disabled. (Fan motor operates at the highest speed for the first 5 minutes. For the remaining 25 minutes, fan motor is also stopped.) The event is saved in memory as well.	No display	U59 U59 is displayed for 30 minutes.
U71	HDMI incompatible error (HDCP incompatible)	Display this error when the equipment (compatible with DVI such as TV, amplifier etc.) connected to the unit by HDMI is incompatible with HDCP. *HDCP = High-bandwidth Digital Content Protection	No display	U71
U72	HDMI connection error (communication error)	This error is displayed when there are any communication problems with the unit and the equipments (TV, amplifier etc.) connected to the unit by HDMI. (or when there is a problem with the HDMI cable)	No display	U72 U72 display disappears when error has been solved by Power OFF/ON of connecting equipment or by inserting/removing of HDMI cable.
U73	HDMI connection error (authentication error)	when authentication error occurs while the equipments (TV, amplifier etc.) are connected by HDMI. (or when there is a problem with the HDMI cable)	No display	U73 U73 display disappears when error has been solved by Power OFF/ON of connecting equipment or by inserting/removing of HDMI cable.
F99	Hang-up	Displayed when communication error has occurred between Main microprocessor and Timer microprocessor.	No display	F99 Displayed is left until the [POWER] key is pressed.
H19	Inoperative fan motor	When inoperative fan motor is detected after powered on, the power is turned off automatically. The event is saved in memory.	No display	No display
F00	No error information	Initial setting for error code in memory (Error code Initialization is possible with error code initialization and main unit initialization.)	No display	No display
F34	Initialization error	When initialization error is detected after starting up main microprocessor, the power is turned off automatically. The event is saved in memory.	No display	No display
F58	Drive hardware error	When drive unit error is detected, the event is saved in memory.	No display	No display

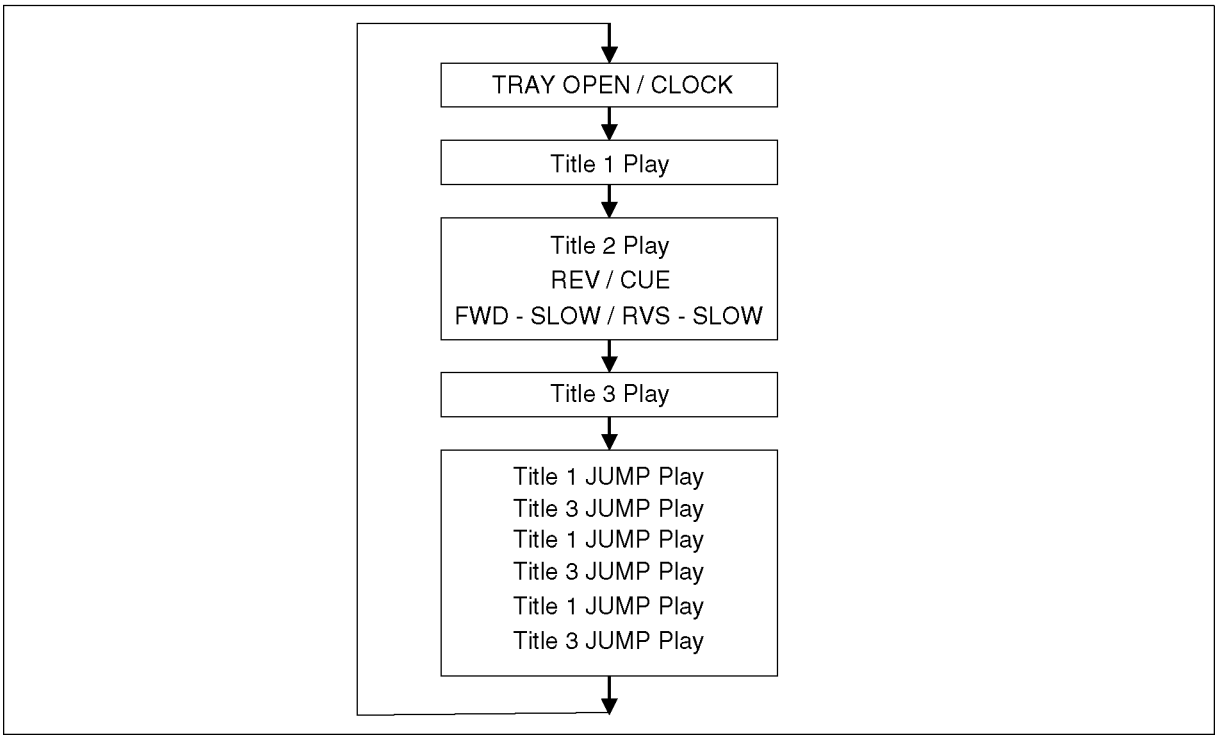
Error Code	Diagnosis contents	Description	Monitor Display	Automatic FL display
UNSUP-PORT	Unsupported disc error	*An unsupported format disc was played, although the drive starts normally. *The data format is not supported, although the media type is supported. *Exceptionally in case of the disc is dirty.	**This disc is incompatible.**	Display for 5 seconds. UNSUPPORT The character indication flows sideways.
NO READ	Disc read error	*A disc is flawed or dirty. *A poor quality failed to start. *The track information could not be read.	**Cannot read. Please check the disc.**	NoREAD
HARD ERR	Drive error	The drive detected a hard error.	**DVD drive error.**	Display for 5 seconds. HARD ERR The character indication flows sideways.
SELF CHECK	Restoration operation	Since the power cord fell out during a power failure or operation, it is under restoration operation. *It will OK, if a display disappears automatically. If a display does not disappear, there is the possibility that defective Digital P.C.B. / BDP drive.	No display	SELF CHECK The character indication flows sideways.
PLEASE WAIT	Unit is in termination process	Unit is in termination process now. BYE is displayed and power will be turned off.	No display	PLEASEWAIT The character indication flows sideways.
No PLAY	When there is a viewing restriction on a BD-Video or DVD-Video.	Rating password is set.	No display	No PLAY

7.1.2. Special Modes Setting

Item		FL display	Key operation
Mode name	Description		Front Key
Rating password	The audiovisual level setting password is initialized to Level 8.	INIT	Open the tray, and press [SKIP REV (Remote Controller)] and [PLAY] simultaneously for 5 seconds.
Service Mode	Setting every kind of modes for servicing. *Details are described in **7.1.3. Service Mode at a glance**.	SERV	When the power is off, press [PAUSE], [PLAY] and [SETUP (Remote Controller)] keys simultaneously for 5 seconds.
BD-ROM history cleaning	< Persistent Storage> of BD-ROM standard is cleaned. Screen display: [The player's history data has been cleared] is displayed for five seconds.	****** Same display as before execution.	When the power is on, disc is not in tray, press [STOP] and [POWER (Remote Controller)] keys simultaneously for 5 seconds.
Forced disc eject	Removing a disc that cannot be ejected. The tray will open and unit will shift to P-off mode. While Demonstration Lock is being set, this Forced disc eject function is not accepted.	The display before execution leaves. ******	When the power is off, press [PAUSE] and [OPEN/CLOSE] keys simultaneously for 5 seconds.
Forced power-off	When the power button is not effective while power is ON, turn off the power forcibly.	Display in P-off mode.	Press [POWER] key over than 10 seconds.
Aging	Perform sequence of modes as * Aging Description shown below continually.	Display following the then mode.	When the power is ON, press [PAUSE], [PLAY] and [OPEN/CLOSE] simultaneously for over 5 seconds and less than 10 seconds. **NOTE1:** If the unit has hung-up because of pressing keys for over 10 seconds, once turn off the power, and re-execute this command. *When releasing Aging mode, press [POWER] key over 10 seconds.

Item		FL display	Key operation
Mode name	Description		Front Key

Aging Contents (Example):



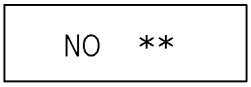
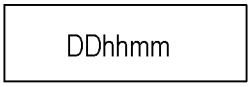
Demonstration lock/ unlock	Ejection of the disc is prohibited. The lock setting is effective until unlocking the tray and not released by Main unit initialization of service mode.	*When lock the tray. LOCK LOCK is displayed for 3 seconds.	When the power is on (SS mode), press [PLAY] and [OPEN/CLOSE] keys simultaneously for 5 seconds. **Note:** When a disc is not in tray, this setting is not effective.
		*When unlock the tray. UNLOCK UNLOCK is displayed for 3 seconds.	When the power is on (SS mode), press [PLAY] and [OPEN/CLOSE] keys simultaneously for 5 seconds.
		*When press OPEN/CLOSE key while the tray being locked. LOCK Display LOCK for 3 seconds.	Press [OPEN/CLOSE] key while the tray is being locked.
Progressive initialization	The progressive setting is initialized to Interlace.	The display before execution leaves. ******	When the power is on (SS mode), press [STOP] and [PLAY] simultaneously for 5 seconds.
Default setting	The date of Menu, Mode and EEPROM setting, etc. is set to the default condition in factory.	HELLO ↓ BYE HELLO, BYE are displayed 10 seconds.	When the power is off, press [PAUSE], [POWER] and [OPEN/CLOSE] simultaneously for 5 seconds.

7.1.3. Service Modes at a glance

Service mode setting: While the power is off, press **[PAUSE], [PLAY] and [SETUP (Remote Controller)]** simultaneously for five seconds.

Item		FL display	Key operation
Mode name	Description		(Remote controller key)
Release Items	Item of Service Mode executing is cancelled.	SERV	Press [0] [0] or [Return] in service mode.
Error Code Display	Last Error Code of U/H/F held by Timer is displayed on FL. *Details are described in **7.1.1. Self-Diagnosis Functions.**	♣□□ *♣ shows U/H/F. □□ shows number. If any error history dose not exist, [F00] is displayed.	Press [0] [1] in service mode
ROM Version Display	1. Region code (displayed for 5 sec.) 2. Main firm version (displayed for 5 sec.) 3. Timer firm version (displayed for 5 sec.) 4. Drive firm version (displayed for 5 sec.) 5. ROM correction version (left displayed)	1. NO$% $: Region of DVD (Example: 1,2.....) %: Region of BD (Example: A,B.....) 2. **** 3. ****** 4. **** 5. *** * are version displays.	Press [0] [2] in service mode
Drive check	Simple quality of BD drive.	When BD drive is OK DRV OK When BD drive is NG DRV NG *If the date of the present or the trouble occurred time is incorrect, it may be not able to judge correctly.	Press [3] [8] in service mode.

Item		FL display	Key operation
Mode name	Description		(Remote controller key)
Laser Used Time Indication	Check laser used time (hours) of drive.	Laser used time: BD Playback BP＊＊＊＊ Laser used time: BD Recording BR＊＊＊＊ Laser used time: DVD Playback DP＊＊＊＊ Laser used time: DVD Recording DR＊＊＊＊ Laser used time: CD Playback CD＊＊＊＊ l(****) is the used time display in hour. lLaser used time of BD/ DVD/ CD in Playback/Recording mode is counted.	Press [4] [1] in service mode.

Item		FL display	Key operation
Mode name	Description		(Remote controller key)
BD drive last error	BD drive error code display.	1. Error Number is displayed for 5 seconds.  2. Time when the error has occurred is display for 5 seconds.  DD : Day hh : Hour mm : Minute 3. Last drive error (1/2) is displayed for 5 seconds.  00 : Bad disc 03 : Bad disc 04 : Bad disc or drive malfunction 4. Last drive error (2/2) is displayed for five seconds.  5. Error occurring disc type is displayed for 5 seconds. DVD-RW  CD-R  CD-RW  DVD+R  DVD+RW  BD-ROM 	Press [4] [2] in service mode.

Item		FL display	Key operation
Mode name	Description		(Remote controller key)
		BD-RE BDRE BD-R BDR DVD ROM DVD CD CD RAM (2.6GB) RAM26 RAM (4.7GB) RAM47 DVD-R DVDR Others MEDIA* * is displayed the respoced value from RTSC. 6. Disc maker ID is displayed for 5 seconds. ****** 7. Factor of drive error (hexadeci-mal) occurring is left displayed. ＊＊++□□ ＊＊: Error occurring operation code (This is not used) ++: Error occurring disc type 0 DVD-ROM 1 CD 2 2.6GB DVD-RAM 3 4.7GB DVD-RAM 4 DVD-R After 5 Others	In case that the maker cannot be identified, display is black out.

<table>
<tr><th colspan="2">Item</th><th rowspan="2">FL display</th><th rowspan="2">Key operation
(Remote controller key)</th></tr>
<tr><th>Mode name</th><th>Description</th></tr>
<tr><td></td><td></td><td>□□: Error occurring disc situation
<table><tr><th rowspan="2">Display</th><th colspan="4">Detail</th></tr><tr><th>Disc distinction</th><th>With or without Cartridge</th><th>Disc cart-ridge state</th><th>Size</th></tr><tr><td>00</td><td>OK</td><td>With</td><td>Not opened</td><td>12cm</td></tr><tr><td>10</td><td>OK</td><td>With</td><td>Not opened</td><td>8cm</td></tr><tr><td>20</td><td>OK</td><td>With</td><td>Opened</td><td>12cm</td></tr><tr><td>30</td><td>OK</td><td>With</td><td>Opened</td><td>8cm</td></tr><tr><td>40</td><td>OK</td><td>Without</td><td>Not opened</td><td>12cm</td></tr><tr><td>50</td><td>OK</td><td>Without</td><td>Not opened</td><td>8cm</td></tr><tr><td>60</td><td>OK</td><td>Without</td><td>Opened</td><td>12cm</td></tr><tr><td>70</td><td>OK</td><td>Without</td><td>Opened</td><td>8cm</td></tr><tr><td>80</td><td>NG</td><td>With</td><td>Not opened</td><td>12cm</td></tr><tr><td>90</td><td>NG</td><td>With</td><td>Not opened</td><td>8cm</td></tr><tr><td>A0</td><td>NG</td><td>With</td><td>Opened</td><td>12cm</td></tr><tr><td>B0</td><td>NG</td><td>With</td><td>Opened</td><td>8cm</td></tr><tr><td>C0</td><td>NG</td><td>Without</td><td>Not opened</td><td>12cm</td></tr><tr><td>D0</td><td>NG</td><td>Without</td><td>Not opened</td><td>8cm</td></tr><tr><td>E0</td><td>NG</td><td>Without</td><td>Opened</td><td>12cm</td></tr><tr><td>F0</td><td>NG</td><td>Without</td><td>Opened</td><td>8cm</td></tr></table></td><td></td></tr>
<tr><td>CEC (H) output</td><td>Check of the CEC terminal high output of HDMI.</td><td>When the check is OK
CECHOK
When the check is NG
CECHNG</td><td>Press [5] [5] in service mode.</td></tr>
<tr><td>CEC (L) output</td><td>Check of the CEC terminal low output of HDMI.</td><td>When the check is OK
CECLOK
When the check is NG
CECLNG</td><td>Press [5] [6] in service mode.</td></tr>
<tr><td>Tray OPEN/CLOSE Test</td><td>The BD drive tray is opened and closed repeatedly.</td><td>******
* is number of open/close cycle times.</td><td>Press [9] [1] in service mode
*When releasing this mode, press the [POWER] button of Remote Controller more than 10 seconds.</td></tr>
<tr><td>Delete the Laser Used Time</td><td>Laser used time stored in the memory of the unit is deleted.</td><td>CLR</td><td>Press [9] [5] in service mode.</td></tr>
<tr><td>Delete the Last Drive Error</td><td>Delete the Last Drive Error information stored on the BD Drive.</td><td>CLR</td><td>Press [9] [6] in service mode.</td></tr>
<tr><td>Delete the Error History</td><td>Delete Error History information stored on the unit.</td><td>CLR</td><td>Press [9] [7] in service mode.</td></tr>
<tr><td>Error code initialization</td><td>Initialization of the last error code held by timer (Write in F00)</td><td>CLR</td><td>Press [9] [8] in service mode.</td></tr>
<tr><td>Initialize Service</td><td>Last Drive Error, Error history and Error Codes stored on the unit are initialized to factory setting.</td><td>CLR</td><td>Press [9] [9] in service mode.</td></tr>
<tr><td>Finishing service mode</td><td>Release Service Mode.</td><td>Display in STOP (SS) mode.
******</td><td>Press power button on the front panel or Remote controller in service mode.</td></tr>
</table>

8 Service Fixture & Tools

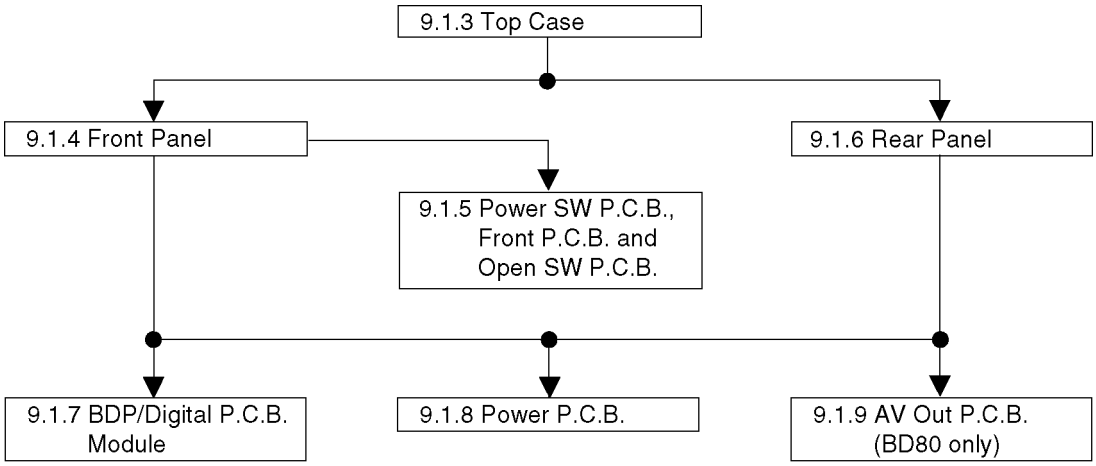
Part Number	Description	Pcs	Compatibility
RFKZ0216	Extension Cable (AV Out P.C.B. - Digital P.C.B. / 23 Pin)	1	Same as EH55 Series
RFKZ0168	Extension Cable (Power P.C.B. - Fan Motor / 3 Pin)	1	Same as EH55 Series
RFKZ0239	Extension Cable (Front P.C.B. - Digital P.C.B. / 10 Pin)	1	Same as EH55 Series
RFKZ0367	Extension Cable (Power P.C.B. - Front P.C.B. / 6 Pin)	1	Same as EH55 Series
JZS0484	Eject Pin	1	Same as ES15/ E50 Series
RFKZ03D01KS	Lead Free Solder (0.3mm/100g Reel)	-	Same as EH55 Series
RFKZ06D01KS	Lead Free Solder (0.6mm/100g Reel)	-	Same as EH55 Series
RFKZ10D01KS	Lead Free Solder (1.0mm/100g Reel))	-	Same as EH55 Series
RFKZ0316	Solder Remover (Lead free low temperature Solder/50g)	-	Same as EH55 Series
RFKZ0328	Flux	-	Same as EH55 Series

9 Disassembly and Assembly Instructions

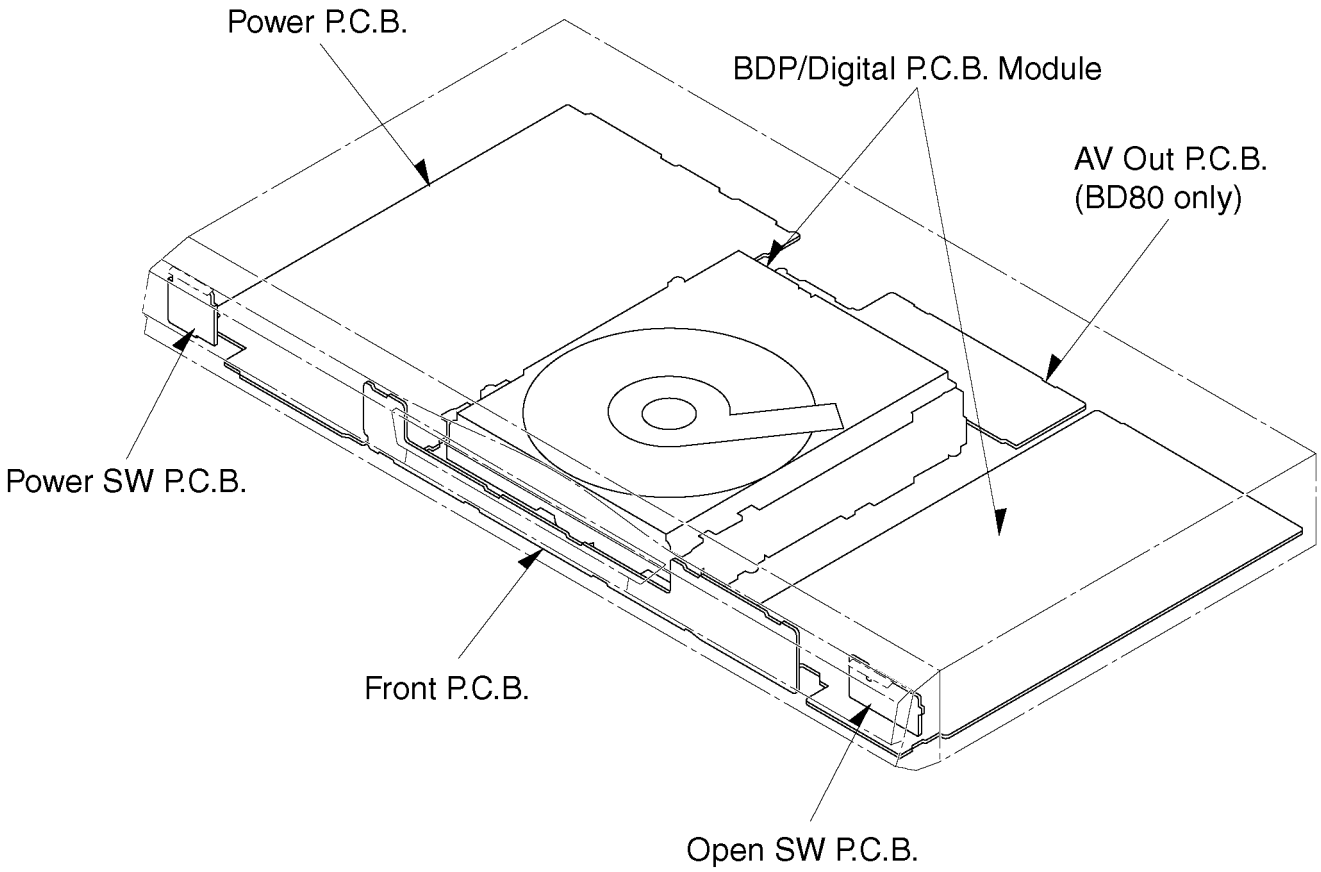
9.1. Unit

9.1.1. Disassembly Flow Chart

The following chart is the procedure for disassembling the casing and inside parts for internal inspection when carrying out the servicing.
To assemble the unit, reverse the steps shown in the chart below.

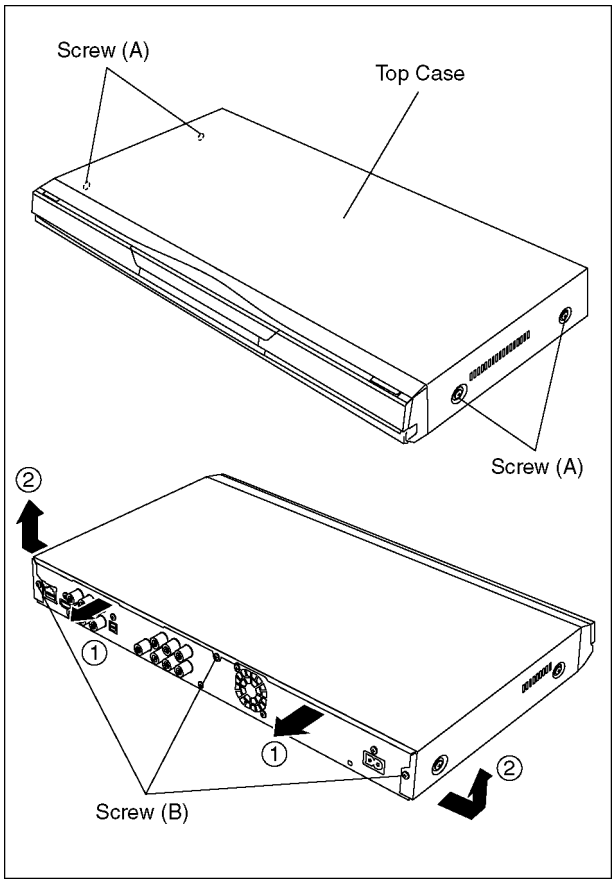


9.1.2. P.C.B. Positions



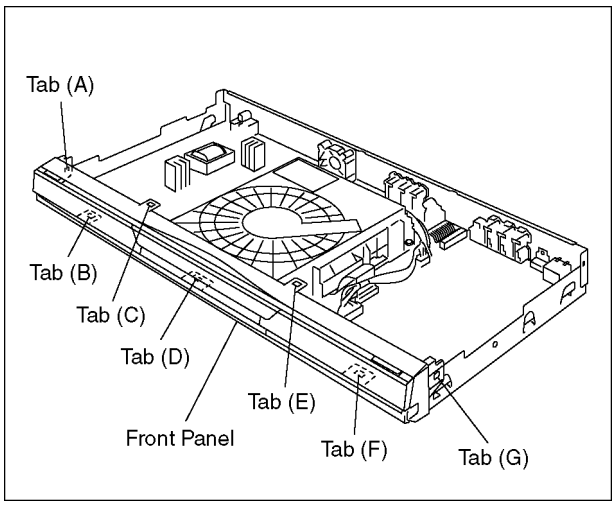
9.1.3. Top Case

1. Remove the 4 Screws (A) and 3 Screws (B).
2. Slide Top Case rearward and open the both ends at rear side of the Top Case a little and lift the Top Case in the direction of the arrows.



9.1.4. Front Panel

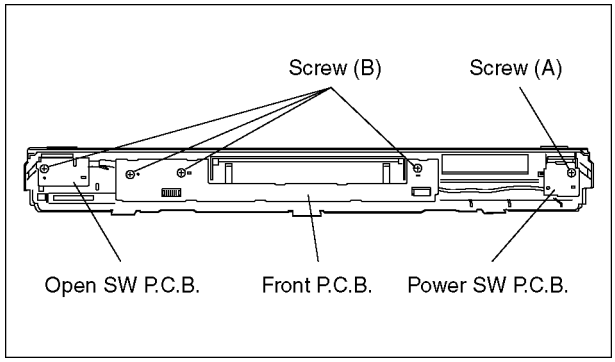
1. Unlock 7 tabs (A) - (G) turn.
   Pull with the Front Panel in the direction of your side.



9.1.5. Power SW P.C.B., Front P.C.B. and Open SW P.C.B.

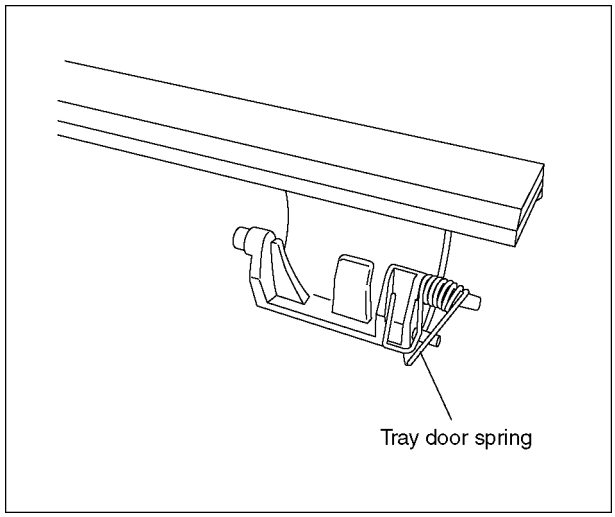
9.1.5.1. Power SW P.C.B., Front P.C.B. and Open SW P.C.B.

1. Remove the screw (A).
2. Remove the Power SW P.C.B..
3. Remove the 4 Screws (B).
4. Remove the Front P.C.B. and Open SW P.C.B..

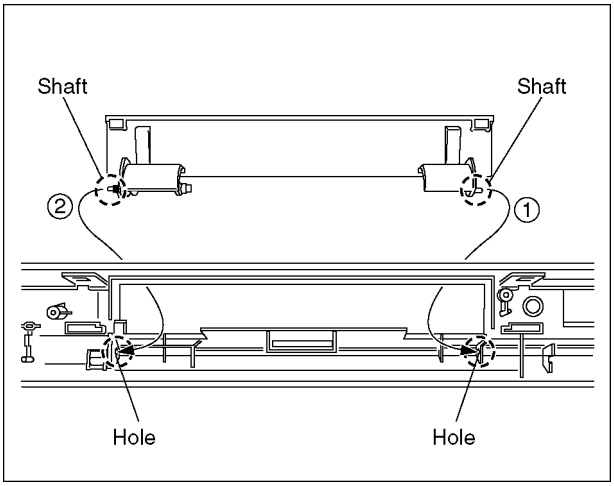


9.1.5.2. How to assemble Tray door ass'y

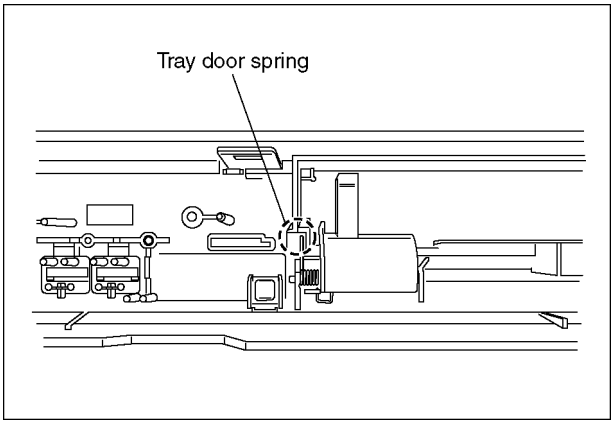
1. Attach the Tray door spring to Tray door ass'y.



2. Attach Tray door ass'y in order from ① to ②
   ①: Insert the shaft in the hole.
   ②: Insert the shaft in the hole.

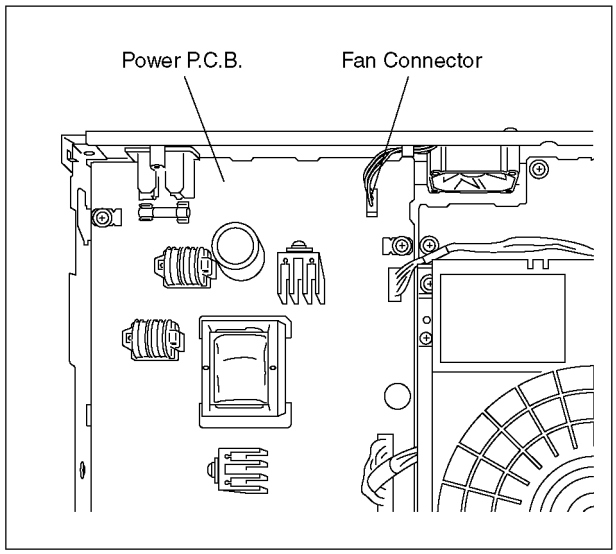


3. Confirm the Tray door spring is attached as following.

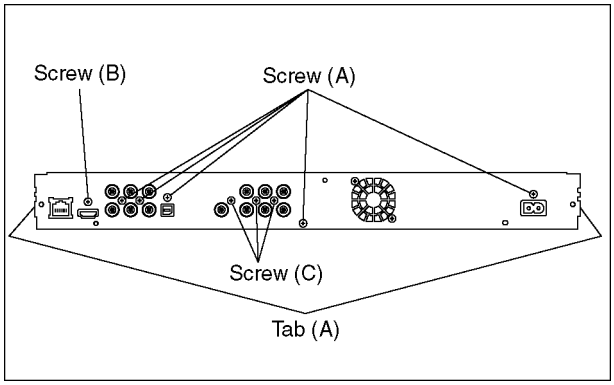


9.1.6. Rear Panel

1. Remove the Fan Connector from Power P.C.B.



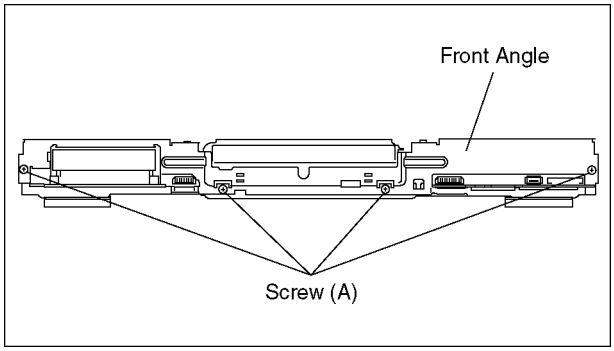
2. Remove the 5 Screws (A) and Screw (B).
3. Remove the 3 Screws (C). (BD80 only)
4. Unlock 2 locking Tabs (A) to remove the Rear Panel.



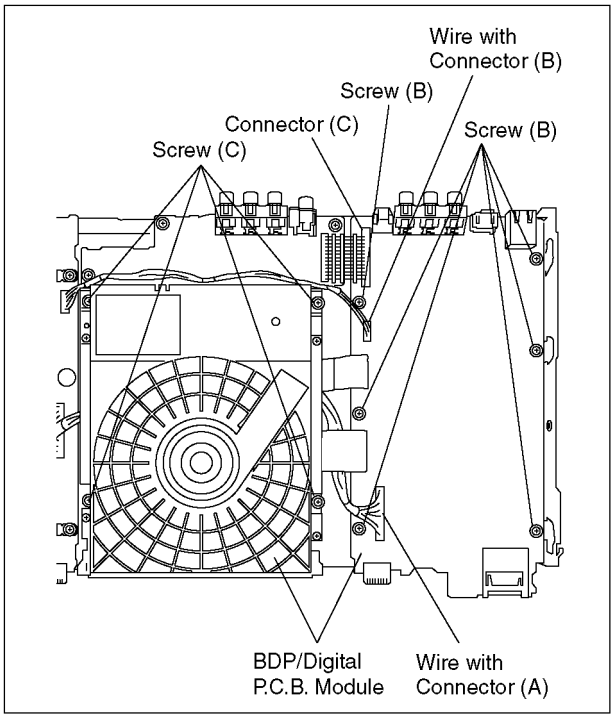
9.1.7. BDP/Digital P.C.B. Module

Caution:
Pairing of BD Drive and Digital P.C.B. as "BDP/ Digital P.C.B. Module" have to be replaced together. If the either BD drive or Digital P.C.B. is changed, BD Drive unit has to be re-adjusted. Because the adjustment data for BD Drive Unit is stored in Digital P.C.B..

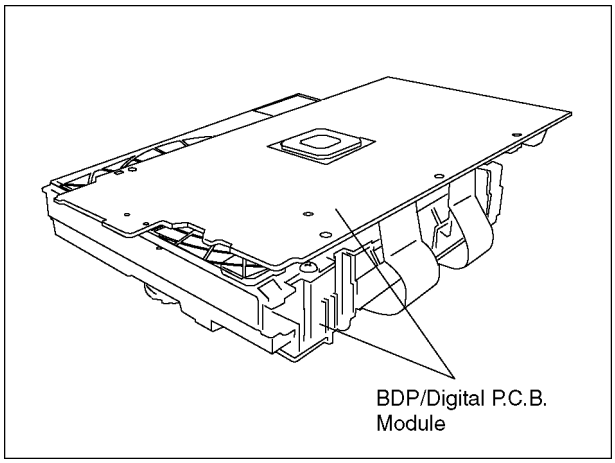
1. Remove the 4 Screws (A) to remove Front Angle.



2. Remove the Wire with Connector (A), (B).
3. Remove the Connector (C). (BD80 only)
4. Remove the 6 Screws (B) to remove Digital P.C.B..
5. Remove the 4 Screws (C) to remove BD Drive.

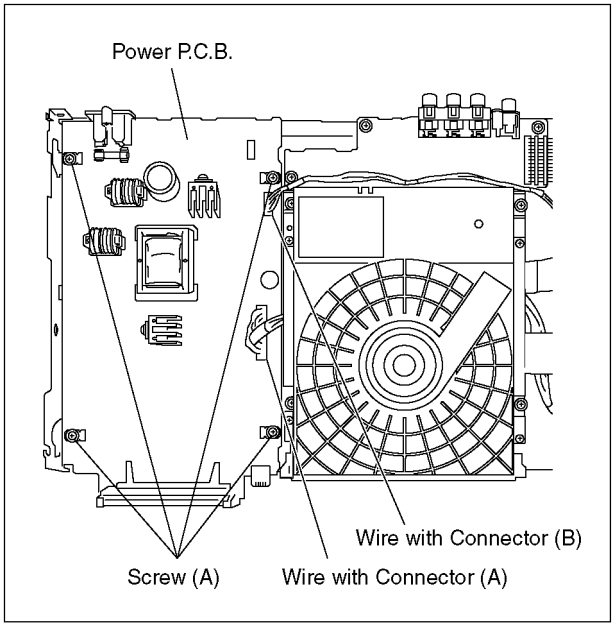


6. Put Digital P.C.B. on BD Drive and remove BDP/Digital P.C.B. Module.



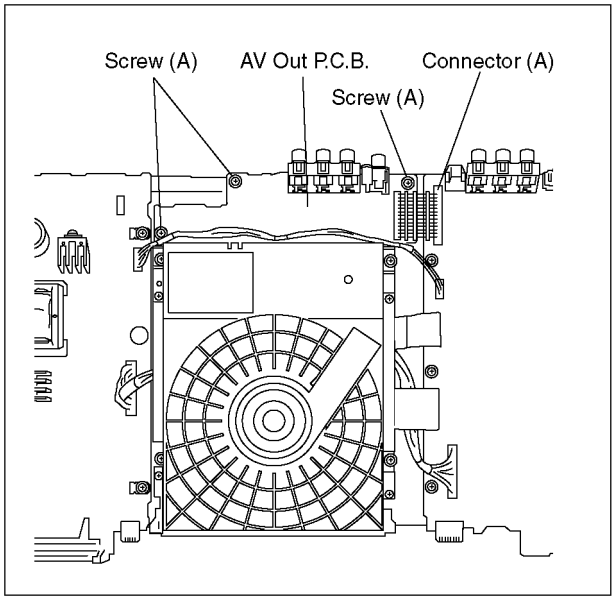
9.1.8. Power P.C.B.

1. Remove the Wire with Connector (A) and Wire with Connector (B).
2. Remove the 4 screws (A) to remove Power P.C.B..



9.1.9. AV Out P.C.B. (BD80 only)

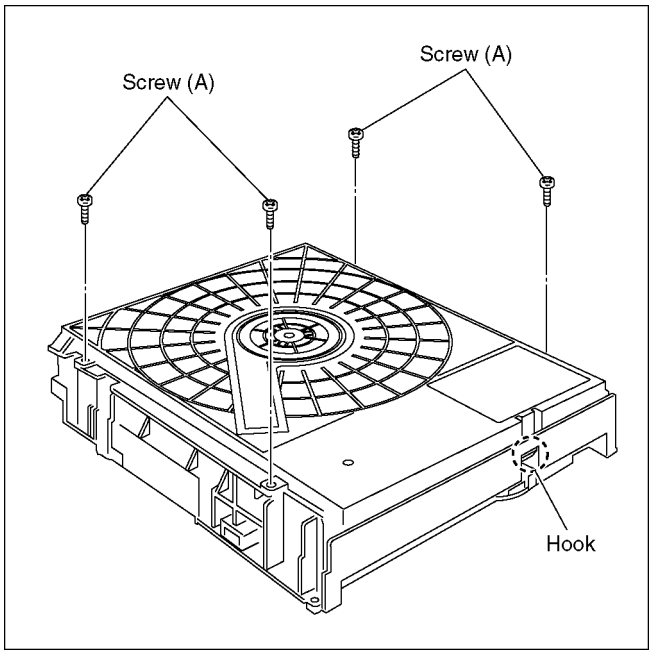
1. Remove the Connector (A).
2. Remove the 3 screws (A) to remove AV Out P.C.B..



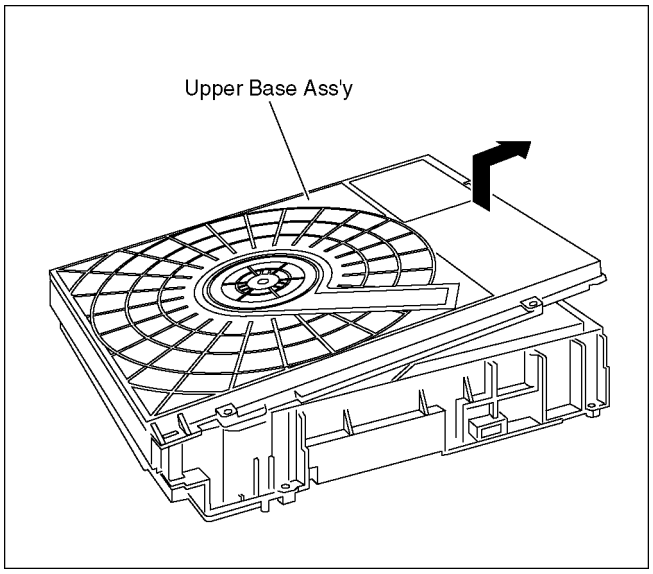
9.2. BD Drive

9.2.1. Upper Base Ass’y

1. Remove the 4 Screws (A), and push the Hook in.

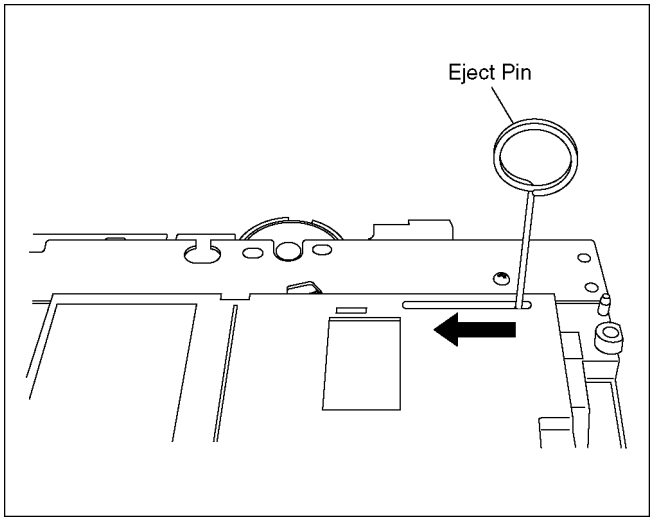


2. Lift up the Upper Base Ass'y, and pull it out to the direction of arrow.

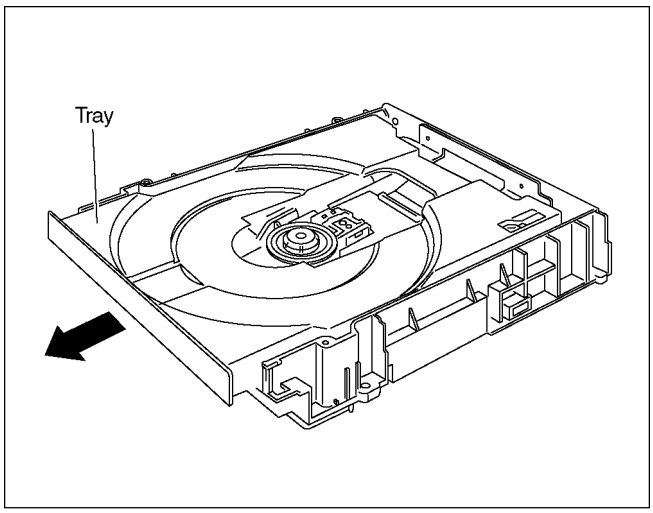


9.2.2. Tray

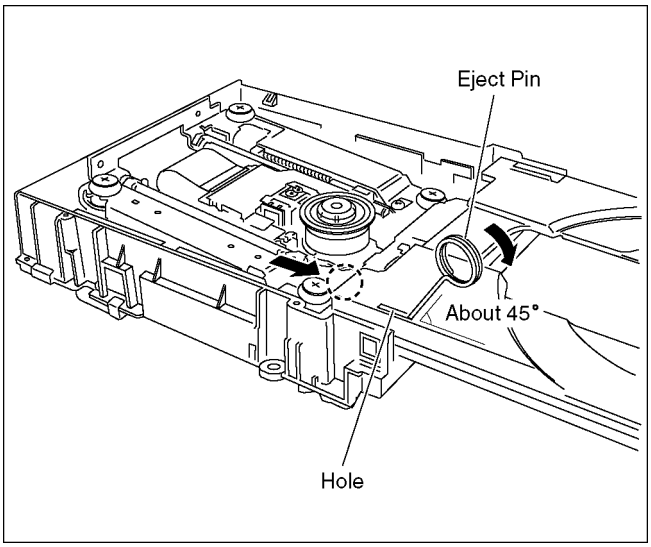
1. Perform the step “9.2.1. Upper Base Ass’y”.
2. Insert the Eject Pin into the hole of the bottom side, and slide it to the direction of arrow until it can be.



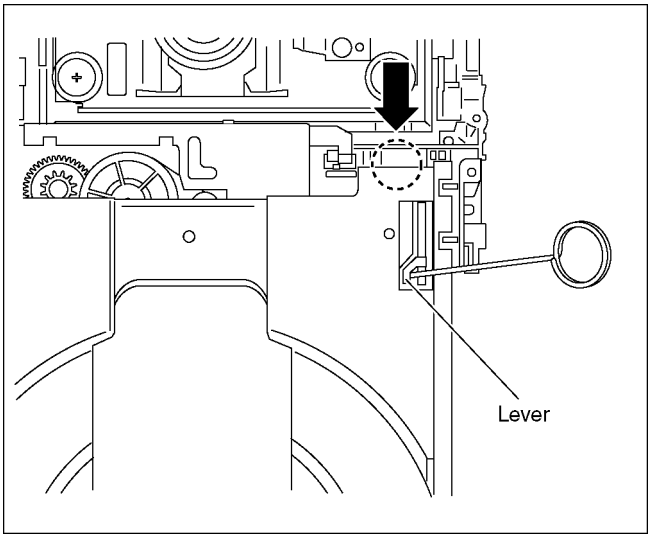
3. Pull the Tray to the direction of arrow until it can be.



4. Insert the Eject Pin into the hole of the Tray at 45 degrees, and lean it to the direction of arrow with pushing the dotted point of the tray forward.
   Then the one side of the tray is come off from the Drive.

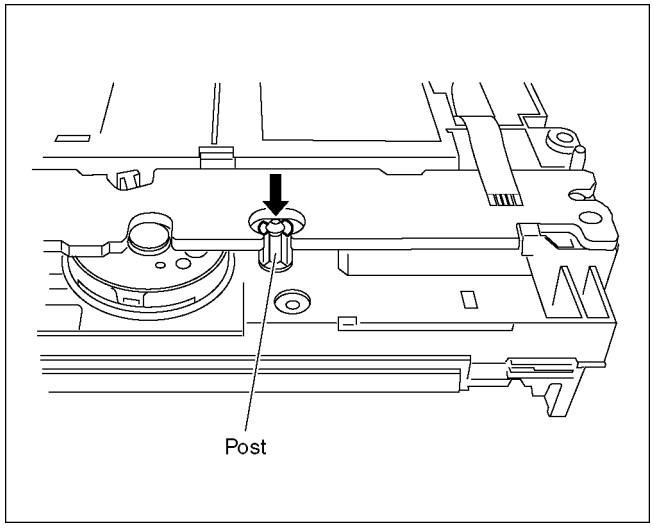


5. Insert the Eject Pin into the Tray as below figure, lift up the lever using the Eject Pin while pushing the dotted point of the Tray.
   And remove the Tray.

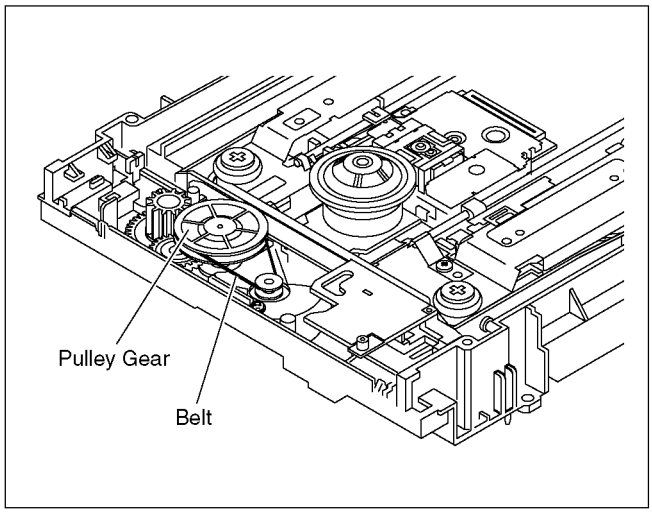


9.2.3. Pulley Gear, Belt

1. Perform the step “9.2.2. Tray”.
2. Push the Post to the direction of arrow by using the slotted screwdriver.

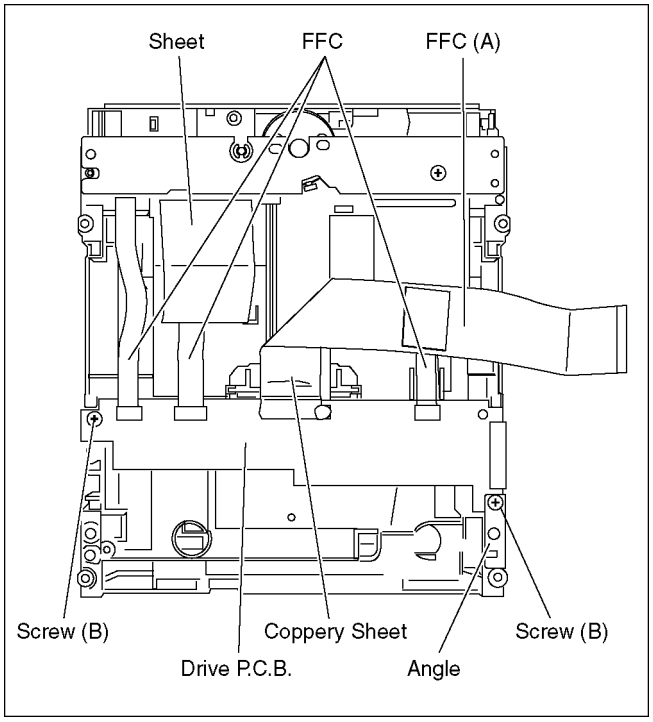


3. Remove the Pulley Gear and Belt.



9.2.4. Slide Cam

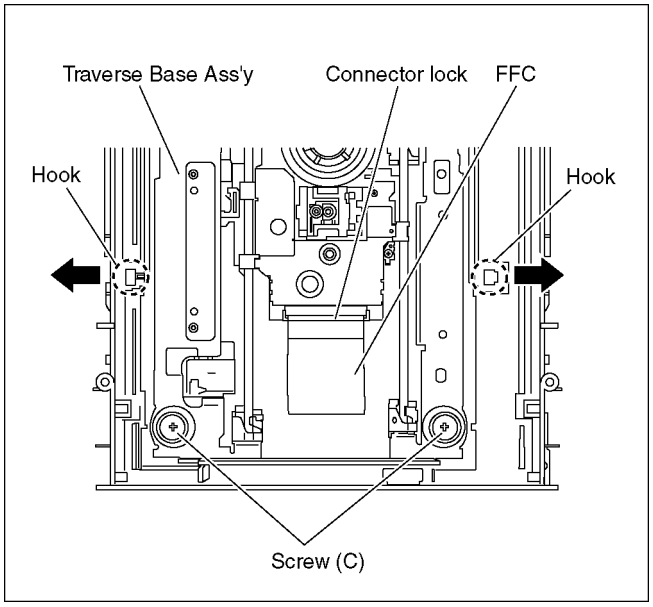
1. Perform the step “9.2.3. Pulley Gear, Belt”.
2. Remove the Sheet.
3. Disconnect the 3 FFCs.
4. Remove the 2 Screws (B) and the Angle.
5. Peel off Coppery Sheet from FFC (A) and remove the Drive P.C.B.



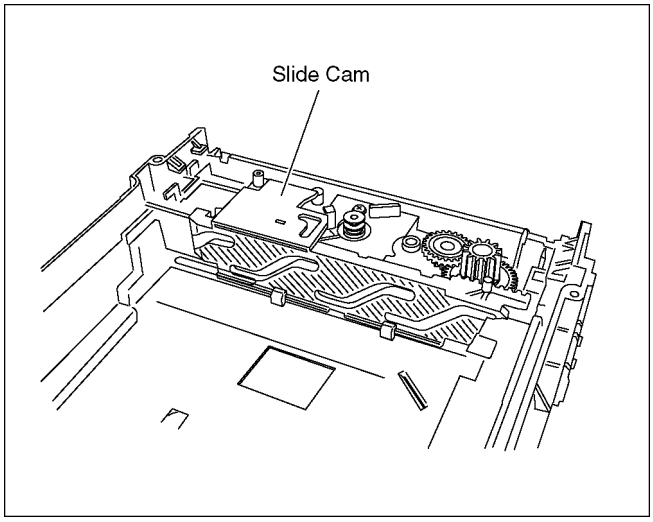
Caution:

Though the Drive P.C.B. is not supplied as replacement parts, it must be removed for after disassembling.

6. Open the connector lock, and disconnect the FFC.
7. Remove the 2 Screws (C), and remove the Traverse Base Ass’y with spreading the 2 hooks to the direction of arrows.

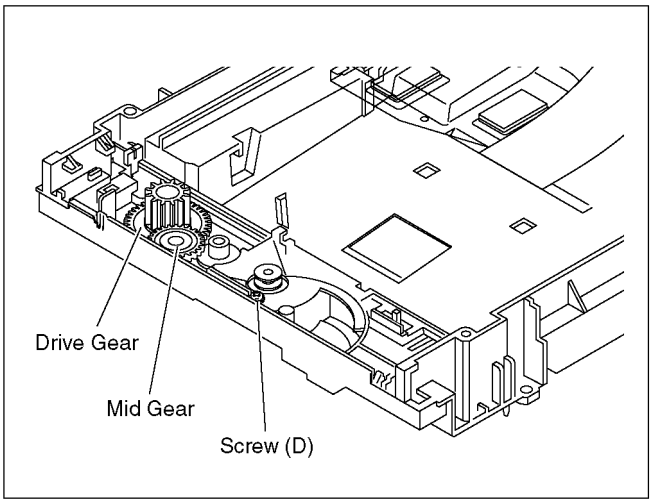


8. Remove the Slide Cam.

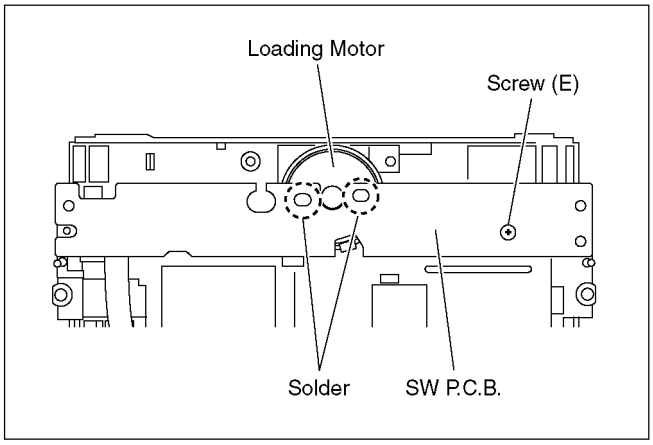


9.2.5. Mid Gear, Drive Gear and Loading Motor

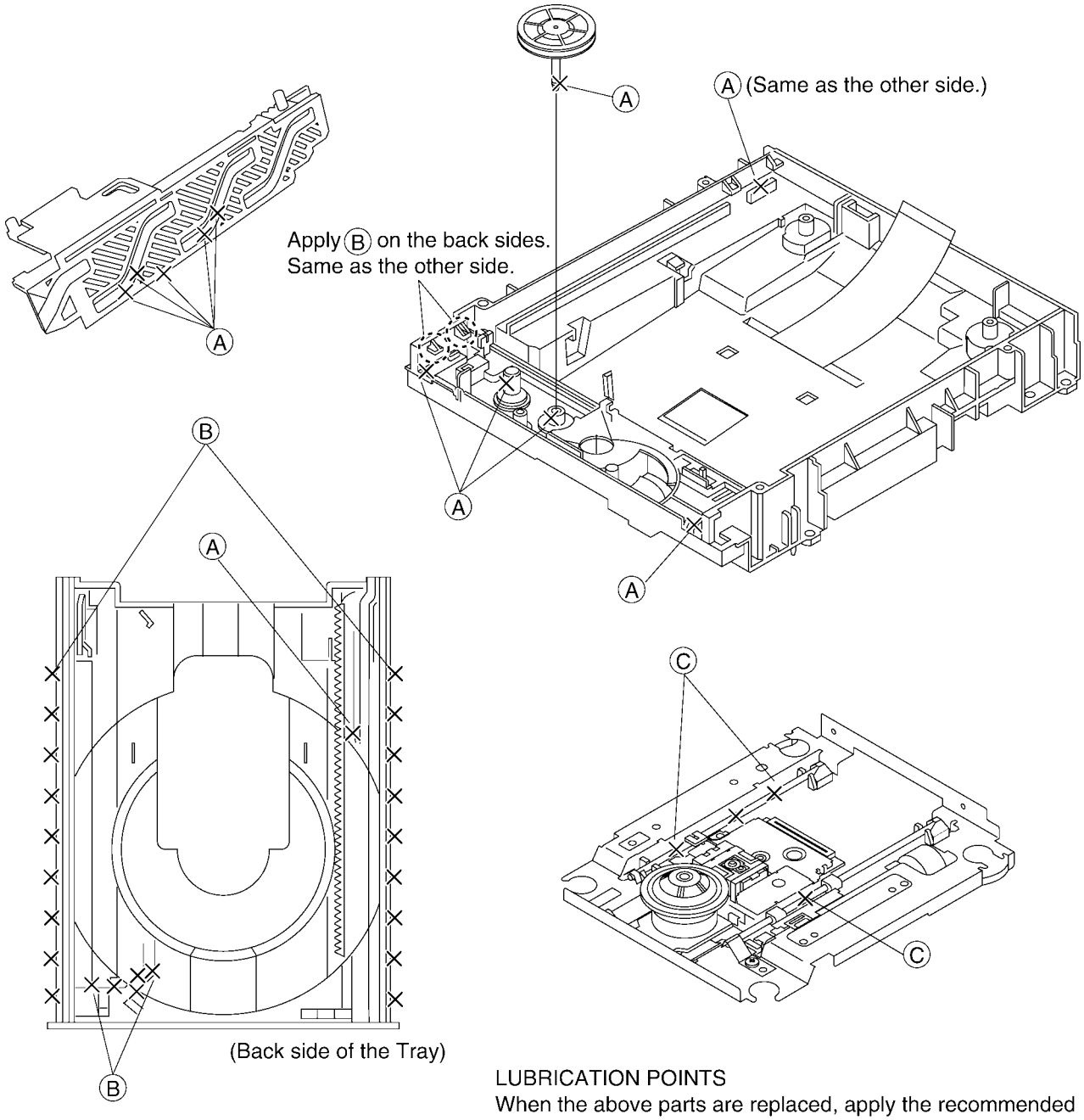
1. Perform the step “9.2.4. Slide Cam”.
2. Remove the Mid Gear and Drive Gear.
3. Remove the Screw (D) to remove the Loading Motor.



4. Remove the Screw (E), and remove the SW P.C.B. with the Loading Motor.
   Remove the 2 soldering points, and remove the Loading Motor.



9.2.6. Grease



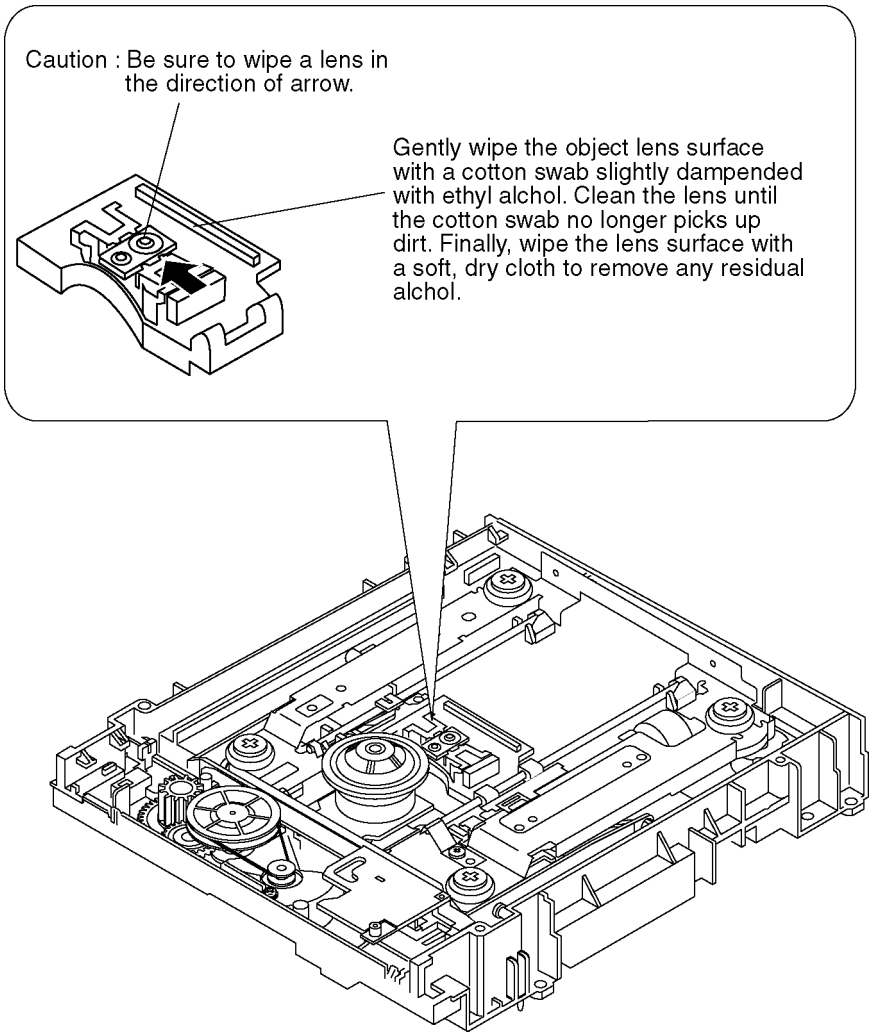
LUBRICATION POINTS

When the above parts are replaced, apply the recommended lubricants or adhesive for better maintenance of the unit.

Mark	Kind of lubricant	Part No.
Ⓐ	Grease	RFKZ0484
Ⓑ	Hanarl	RFKZ0441
Ⓒ	Grease	RFKXPG641

9.2.7. How to Clean the Lens of Optical Pick-UP

Follow the “9.2.1. Upper Base Ass’y



10 Measurements and Adjustments

10.1. Service Positions

Note:

For description of the disassembling procedure, see the section 9.

10.1.1. Checking and Repairing of Power P.C.B.

1. Top Case

- Remove 3 Screws on rear.
- Remove 4 Screws on side.
- Remove Top Case.

2. Front Panel

- Unlock the 7 Tabs that is locking Front Panel and Bottom Chassis.
- Remove the Front Panel.

3. Rear Panel

- Remove the 9 Screws (One is for HDMI) fixing the Rear Panel.
- Disconnect the Fan Connector, and remove the Rear Panel.

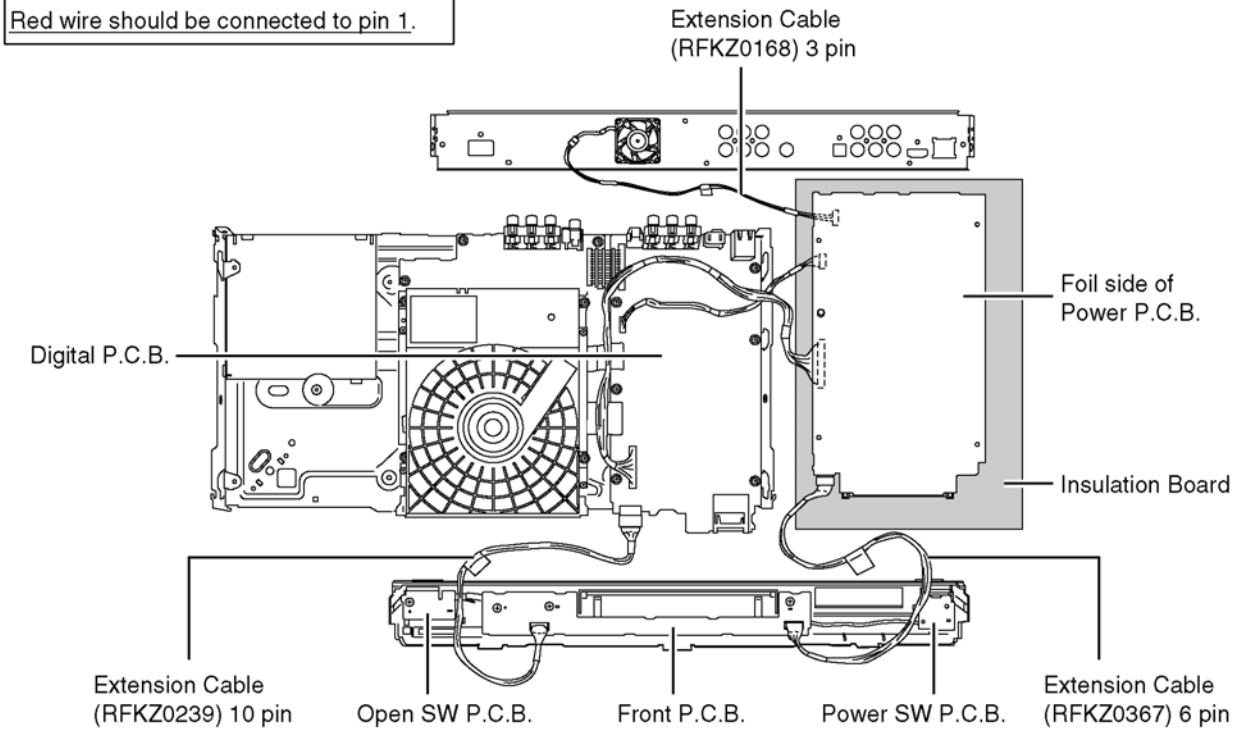
4. Power P.C.B.

- Disconnect the Wire with Connector (15 pin) and the Wire with Connector (4 pin) between Power P.C.B. and Digital P.C.B.
- Remove the 4 Screws, and remove the Power P.C.B..
- Connecting the Power SW P.C.B. to the Power P.C.B. with original cable.
  Connecting the original Wire with Connector (15 pin) and the original Wire with Connector (4 pin) between Power P.C.B. and Digital P.C.B.

Connect Extension Cables shown below.

Between Power P.C.B. and Front P.C.B.: (RFKZ0367) 6 pin
Between Power P.C.B. and Fan Motor: (RFKZ0168) 3 pin
Between Digital P.C.B. and Front P.C.B.: (RFKZ0239) 10 pin

Caution:
Red wire should be connected to pin 1.



10.1.2. Checking and Repairing of BDP/Digital P.C.B. Module

1. Top Case

- Remove 3 Screws on rear.
- Remove 4 Screws on side.
- Remove Top Case.

2. Front Panel

- Unlock the 7 Tabs that is locking Front Panel and Bottom Chassis.
- Remove the Front Panel.

3. Rear Panel

- Remove the 9 Screws (One is for HDMI) fixing the Rear Panel.
- Disconnect the Fan Connector, and remove the Rear Panel.

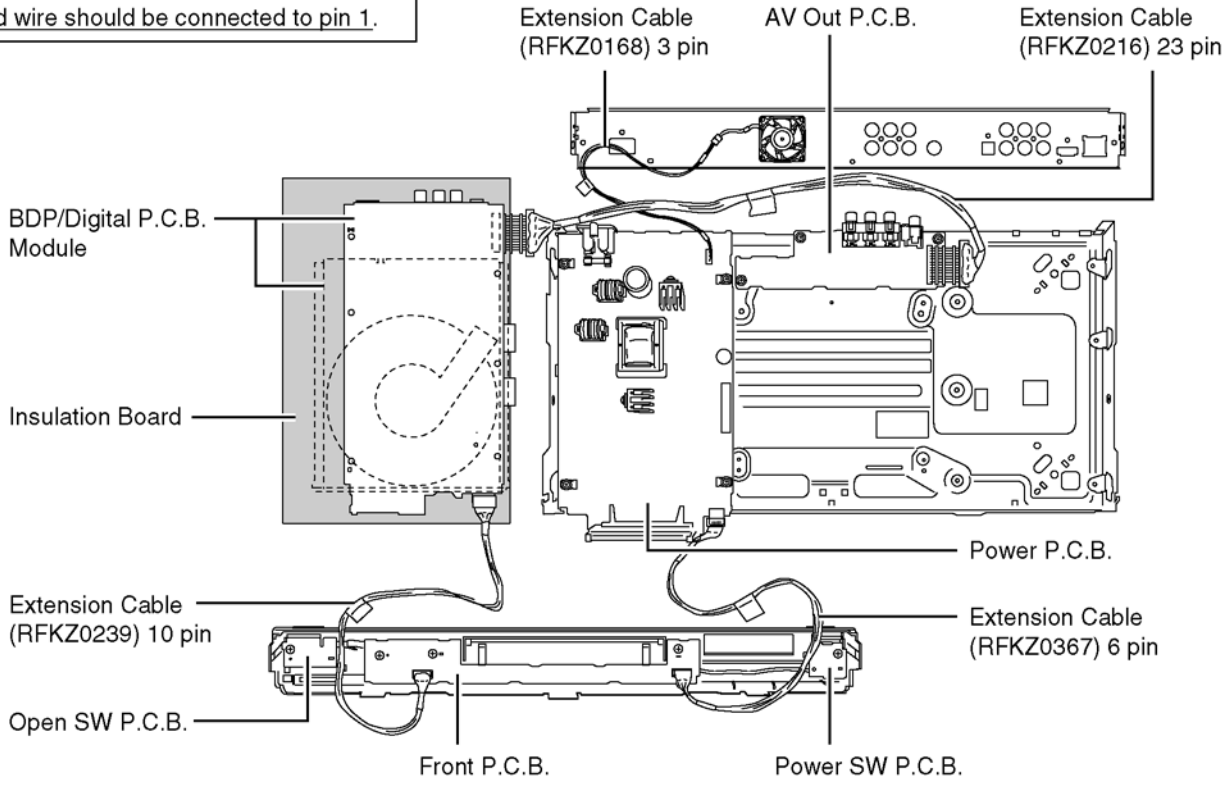
4. BDP/Digital P.C.B. Module

- Disconnect the Wire with Connector (15 pin) and the Wire with Connector (4 pin) between Power P.C.B. and Digital P.C.B.
- Disconnect the Connector (23 pin).
  Remove the 6 Screws fixing the Digital P.C.B.
  Remove the 4 Screws fixing the BD Drive.
- Connecting the Power SW P.C.B. to the Power P.C.B. with original cable.
  Connecting the original Wire with Connector (15 pin) and the original Wire with Connector (4 pin) between Power P.C.B. and Digital P.C.B.
  Put Insulation Board on BD Drive, and put the Digital P.C.B. on Insulation Board.

Connect Extension Cables shown below.

Between Digital P.C.B. and AV Out P.C.B.: (RFKZ0216) 23 pin
Between Power P.C.B. and Front P.C.B.: (RFKZ0367) 6 pin
Between Power P.C.B. and Fan Motor: (RFKZ0168) 3 pin
Between Digital P.C.B. and Front P.C.B.: (RFKZ0239) 10 pin

Caution:
Red wire should be connected to pin 1.



10.1.3. Checking and Repairing of AV Out P.C.B. (BD80 only)

1. Top Case

- Remove the 3 Screws on rear.
- Remove the 4 Screws on side.
- Remove Top Case.

2. Rear Panel

- Remove the 9 Screws (One is for HDMI) fixing the Rear Panel.
- Disconnect the Fan Motor Connector, and remove the Rear Panel.

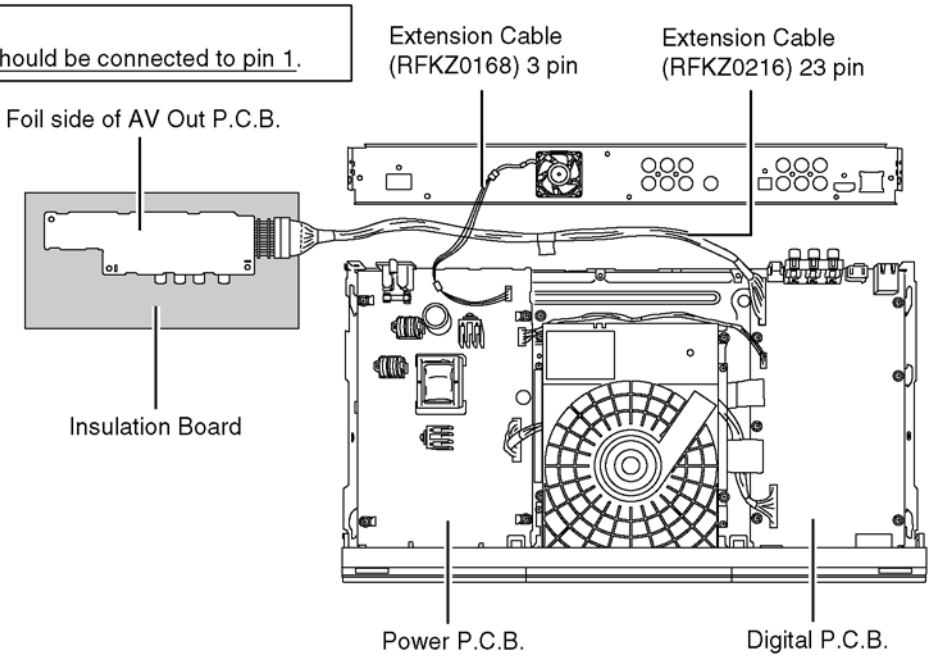
3. AV Out P.C.B.

- Disconnect the Connector (23 pin) between AV Out and Digital P.C.B.
- Remove the 3 Screws, and remove the AV Out P.C.B.
- Put AV Out P.C.B. on Insulation Board so that its foil side faces top.

Connect the Extension Cables shown below.

- Between AV Out P.C.B. and Digital P.C.B.: (RFKZ0216) 23 pin
- Between Power P.C.B. and Fan Motor: (RFKZ0168) 3 pin

Caution:
Red wire should be connected to pin 1.



10.1.4. Caution for Replacing Parts

10.1.4.1. Items that should be done after replacing parts

√: Necessary —: Unnecessary

Replacing Parts \ Items that Should be done	Updating Firmware (Note 1)
BDP/Digital P.C.B.	√

Note 1:
Download latest Firmware and burn it on CD-R or CD-RW, and update Firmware.

10.1.4.2. Standard Inspection Specifications after Making Repairs

After making repairs, we recommend performing the following inspection, to check normal operation.

No.	Procedure	Item to Check
1	Turn on the power, and confirm items pointed out.	Items pointed out should reappear.
2	Insert RAM disc.	The Panasonic RAM disc should be recognized.
4	Perform playback for one minute using the RAM disc.	No abnormality should be seen in the picture, sound or operation. *Panasonic DVD-RAM disc should be used when recording and playback.
5	Perform playback for one minute using the BD-Video disc.	No abnormality should be seen in the picture, sound or operation.
6	If a problem is caused by a BD-Video disc, VCD, DVD-R, DVD-Video, Audio-CD, or MP3, playback the test disc.	No abnormality should be seen in the picture, sound or operation.
7	After checking and making repairs, upgrade the firmware to the latest version.	Make sure that [UPD OK] appears in the FL displays. *[UNSUPPORT] display means the unit is already updated to newest same version. Then version up is not necessary.
8	Transfer [9][9] in the service mode setting, and initialize the service settings (return various settings and error information to their default values. The laser time is not included in this initialization).	Make sure that [CLR] appears in the FL display. After checking it, turn the power off.

Use the following checklist to establish the judgment criteria for the picture and sound.

Item	Contents	Check	Item	Contents	Check
Picture	Block noise		Sound	Distorted sound	
	Crosscut noise			Noise (static, background noise, etc.)	
	Dot noise			The sound level is too low.	
	Picture disruption			The sound level is too high.	
	Not bright enough			The sound level changes.	
	Too bright				
	Flickering color				
	Color fading				

CHM0902005CE

Service Manual

Diagrams and Replacement Parts List

Blu-ray Disc Player

Model No.
DMP-BD60P
DMP-BD60PC
DMP-BD601P
DMP-BD605P
DMP-BD80P
DMP-BD80PC

Vol.1
Colour
(K).....Black Type

S1. About Indication of The Schematic Diagram

S1.1. Important Safety Notice

COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS USE ONLY THE SAME TYPE.

1.Although reference number of the parts is indicated on the P.C.B. drawing and/or schematic diagrams, it is NOT mounted on the P.C.B. when it is displayed with "$" mark.

2.It is only the "Test Round" and no terminal (Pin) is available on the P.C.B. when the TP (Test Point) indicated as "●" mark.

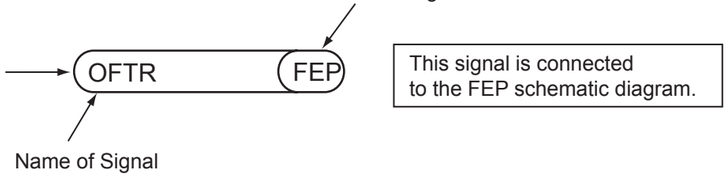
3.The voltage being indicated on the schematic diagram is measured in "Standard-Playback" mode when there is no specify mode is mentioned.

4.Although the voltage and waveform available on here is measured with standard frame, it may be differ from actual measurement due to modification of circuit and so on.

5.The voltage being indicated here may be include observational-error (deviation) due to internal-resistance and/or reactance of equipment. Therefore, handle the value indicated on here as reference.

6.Use the parts number indicated on the Replacement Parts List .

7.Indication on Schematic diagrams:



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S2. Voltage and Waveform Chart

Note) Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard.
Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.

S2.1. Audio Out P.C.B.

REF No.	PIN No.	PB	STOP
P4001	1	1.7	1.7
P4001	2	5	5
P4001	3	0	0
P4001	4	2.6	2.6
P4001	5	0	0
P4001	6	2.6	2.6
P4001	7	0	0
P4001	8	0	0
P4001	9	0	0
P4001	10	0	0
P4001	11	2.6	2.6
P4001	12	2.6	2.6
P4001	13	2.6	2.6
P4001	14	2.7	2.7
P4001	15	-4.9	1.6
P4001	16	5	5
P4001	17	5.9	5.9
P4001	18	2.5	2.5
P4001	19	3.3	3.3
P4001	20	11.5	11.5
P4001	21	12.2	12.2
P4001	22	-10.8	-10.8
P4001	23	-11.5	-11.5
Q4001	E	0	0
Q4001	C	0	0
Q4001	B	-4.9	0.7
Q4002	E	0	0
Q4002	C	0	0
Q4002	B	-4.9	0.7
Q4003	E	0	0
Q4003	C	0	0
Q4003	B	-4.9	0.7
Q4004	E	0	0
Q4004	C	0	0
Q4004	B	-4.9	0.7
Q4005	E	11.5	11.5
Q4005	C	12.2	12.2
Q4005	B	12.2	12.2
Q4006	E	0	0
Q4006	C	0	0
Q4006	B	-4.9	0.7
Q4007	E	0	0
Q4007	C	0	0
Q4007	B	-4.9	0.7
Q4008	E	-10.8	-10.8
Q4008	C	-11.5	-11.5
Q4008	B	-11.5	-11.5
Q4009	E	3.4	3.4
Q4009	C	5	5
Q4009	B	4	4
Q4010	E	2	2
Q4010	C	0	0
Q4010	B	1.7	1.7
QR4001	1	0	0
QR4001	2	0	0
QR4001	3	12.2	12.2
QR4001	4	12.2	12.2
QR4001	5	3.3	3.3
QR4001	6	0	0
QR4002	1	-11.5	-11.5
QR4002	2	0	0

REF No.	PIN No.	PB	STOP
QR4002	3	12.2	12.2
QR4002	4	12.2	12.2
QR4002	5	12.2	12.2
QR4002	6	-11.5	-11.5

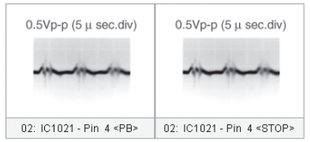
S2.2. Power_P P.C.B.

REF No.	PIN No.	PB	STOP
IC1021	1	2.5	2.5
IC1021	2	1.6	1.6
IC1021	3	0	0
IC1021	4	2.9	2.9
IC1021	5	0	0
IC1021	6	7.5	7.5
IC1021	7	16.5	16.5
IC1021	8	-	-
IC1021	9	-	-
IC1101	1	8.4	8.4
IC1101	2	2.5	2.5
IC1101	3	0	0
IC1102	1	-15	-15
IC1102	2	-	-
IC1102	3	-16.4	-16.4
IC1102	4	-17.7	-17.7
IC1102	5	-11.8	-11.8
IC1102	6	-	-
IC1102	7	-	-
IC1102	8	-11.8	-11.8
IC1103	1	12.2	12.2
IC1103	2	4.5	4.5
IC1103	3	1.2	1.2
IC1103	4	1.2	1.2
IC1103	5	1.2	1.2
IC1103	6	0	0
IC1103	7	7.5	7.5
IC1103	8	12.2	12.2
IC1104	1	3.3	3.3
IC1104	2	6	6
IC1104	3	0	0
IC1104	4	5.1	5.1
IC1104	5	1.1	1.1
IC7001	1	-	-
IC7001	2	-	-
IC7001	3	-	-
IC7001	4	-	-
IC7001	5	1.9	1.9
IC7001	6	3.3	3.3
IC7001	7	3.3	3.3
IC7001	8	3.3	3.3
IC7001	9	3.2	3.2
IC7001	10	0	0
IC7001	11	0	0
IC7001	12	0	0
IC7001	13	3.3	3.3
IC7001	14	-20	-20
IC7001	15	-20	-20
IC7001	16	-14.7	-14.7
IC7001	17	-17.3	-17.3
IC7001	18	-12.1	-12.1
IC7001	19	-9.5	-9.5
IC7001	20	-14.7	-14.7
IC7001	21	-14.7	-14.7
IC7001	22	-12.1	-12.1
IC7001	23	-14.7	-14.7
IC7001	24	-17.3	-17.3
IC7001	25	-14.7	-14.7
IC7001	26	-20	-20
IC7001	27	-20	-20
IC7001	28	-20	-20

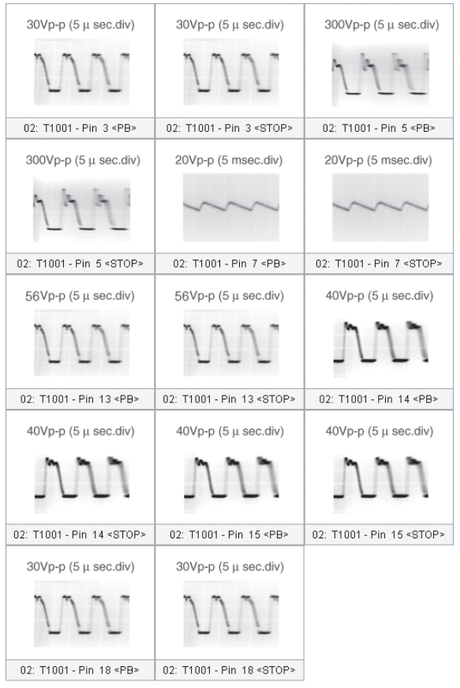
REF No.	PIN No.	PB	STOP
IC7001	29	-6.8	-6.8
IC7001	30	-20	-20
IC7001	31	-20	-20
IC7001	32	-20	-20
IC7001	33	-	-
IC7001	34	-	-
IC7001	35	-	-
IC7001	36	-17.6	-17.6
IC7001	37	-17.6	-17.6
IC7001	38	-17.6	-17.6
IC7001	39	-17.6	-17.6
IC7001	40	-17.6	-17.6
IC7001	41	-17.6	-17.6
IC7001	42	-17.6	-17.6
IC7001	43	3.3	3.3
IC7001	44	0	0
IC7002	1	6	6
IC7002	2	0	0
IC7002	3	1.4	1.4
IC7002	4	3.3	3.3
IC7002	5	6	6
P1102	1	3.3	3.3
P1102	2	0	0
P1102	3	3.3	3.3
P1102	4	3.3	3.3
P1102	5	0	0
P1102	6	0	0
P1102	7	0	0
P1102	8	6	6
P1102	9	6	6
P1102	10	12.2	12.2
P1102	11	12.2	12.2
P1102	12	5.2	5.2
P1102	13	0	0
P1102	14	-11.5	-11.5
P7004	1	12.3	12.3
P7004	2	0	0
P7004	3	0	0
P7004	4	5.1	5.1
Q1022	1	9.5	9.5
Q1022	2	8.4	8.4
Q1022	3	0	0
Q1022	4	1.8	1.8
Q1023	1	1.2	1.2
Q1023	2	0	0
Q1023	3	0	0
Q1023	4	0	0
Q1101	E	-20.4	-20.4
Q1101	C	-23.2	-23.2
Q1101	B	-21.1	-21.1
Q1102	1	12.3	12.3
Q1102	2	12.3	12.3
Q1102	3	12.3	12.3
Q1102	4	6.2	6.2
Q1102	5	12.3	12.3
Q1102	6	12.3	12.3
Q1102	7	12.3	12.3
Q1102	8	12.3	12.3
Q1104	1	12.2	12.2
Q1104	2	12.2	12.2
Q1104	3	12.2	12.2

REF No.	PIN No.	PB	STOP
Q1104	4	7.5	7.5
Q1104	5	6	6
Q1104	6	6	6
Q1104	7	6	6
Q1104	8	6	6
Q1106	E	-11.5	-11.5
Q1106	C	-12.3	-12.3
Q1106	B	-12.3	-12.3
Q1107	E	0	0
Q1107	C	12.3	12.3
Q1107	B	0	0
Q7001	E	3.3	3.3
Q7001	C	3.3	3.3
Q7001	B	2.6	2.6
Q7003	E	-15	-15
Q7003	C	-15	-15
Q7003	B	-14.3	-14.3
QR1101	E	0	0
QR1101	C	0	0
QR1101	B	3.3	3.3
QR1102	E	0	0
QR1102	C	0	0
QR1102	B	3.3	3.3
QR1105	E	0	0
QR1105	C	0	0
QR1105	B	0	0
QR7001	E	0	0
QR7001	C	0	0
QR7001	B	3.3	3.3
QR7003	E	3.3	3.3
QR7003	C	3.2	3.2
QR7003	B	0	0
QR7004	E	0	0
QR7004	C	0	0
QR7004	B	3.3	3.3
T1001	1	-	-
T1001	2	0	0
T1001	3	-	-
T1001	4	-	-
T1001	5	-	-
T1001	6	-	-
T1001	7	-	-
T1001	8	-	-
T1001	9	-	-
T1001	10	-	-
T1001	11	-	-
T1001	12	-	-
T1001	13	-	-
T1001	14	-	-
T1001	15	-	-
T1001	16	0	0
T1001	17	0	0
T1001	18	-	-

<IC1021>

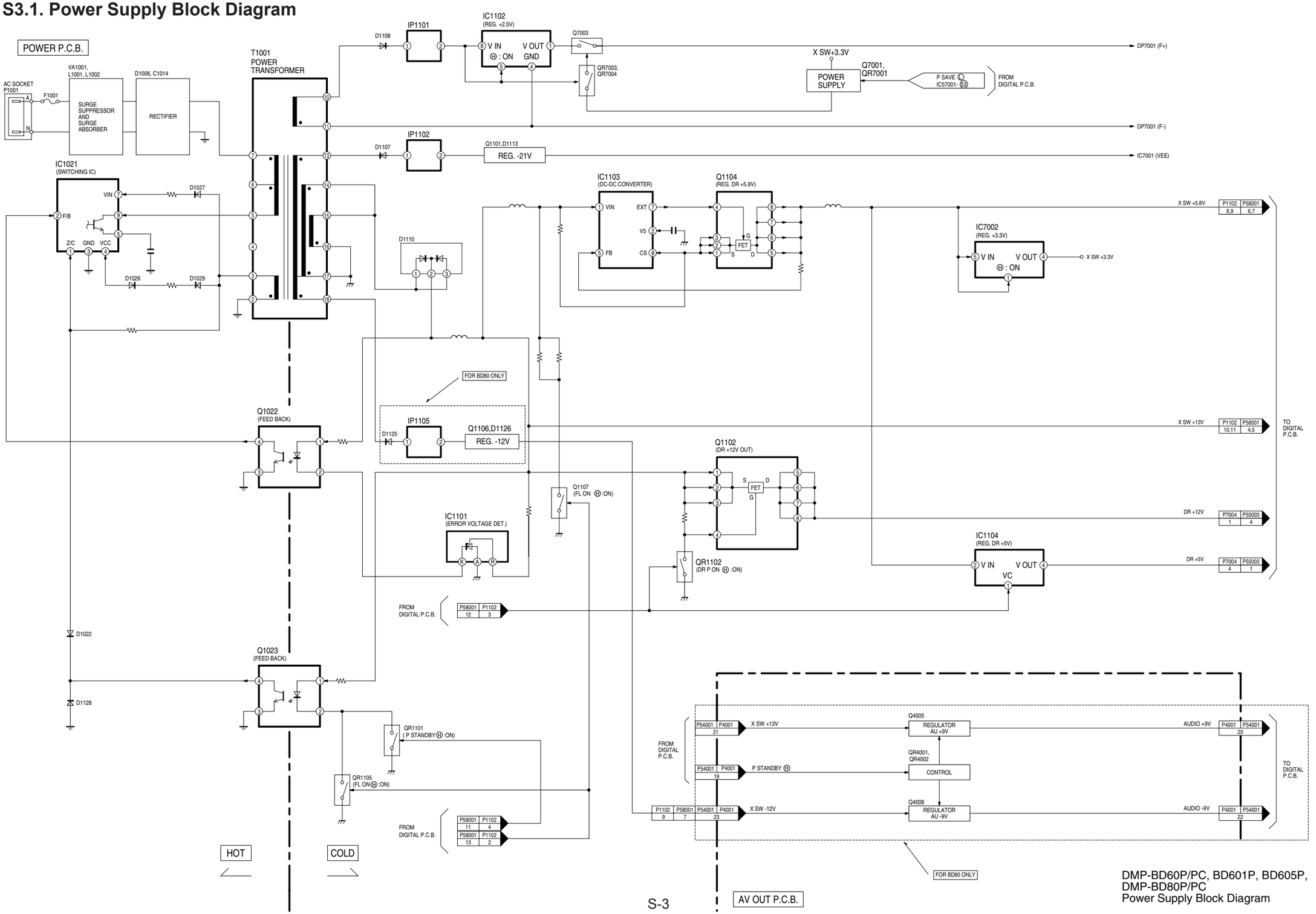


<T1001>



S3. Block Diagram

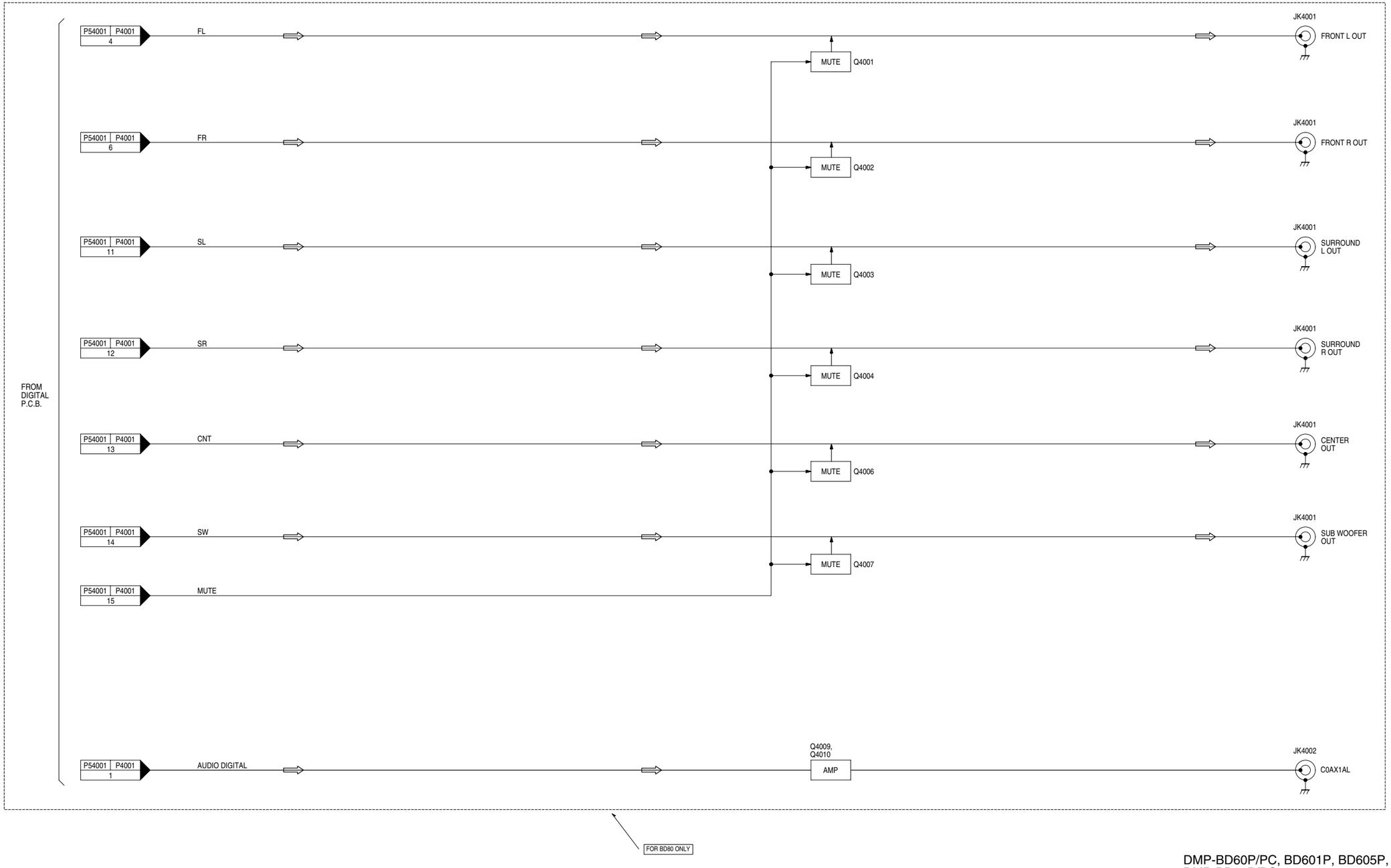
S3.1. Power Supply Block Diagram



DMP-BD60P/PC, BD601P, BD605P, DMP-BD80P/PC
Power Supply Block Diagram

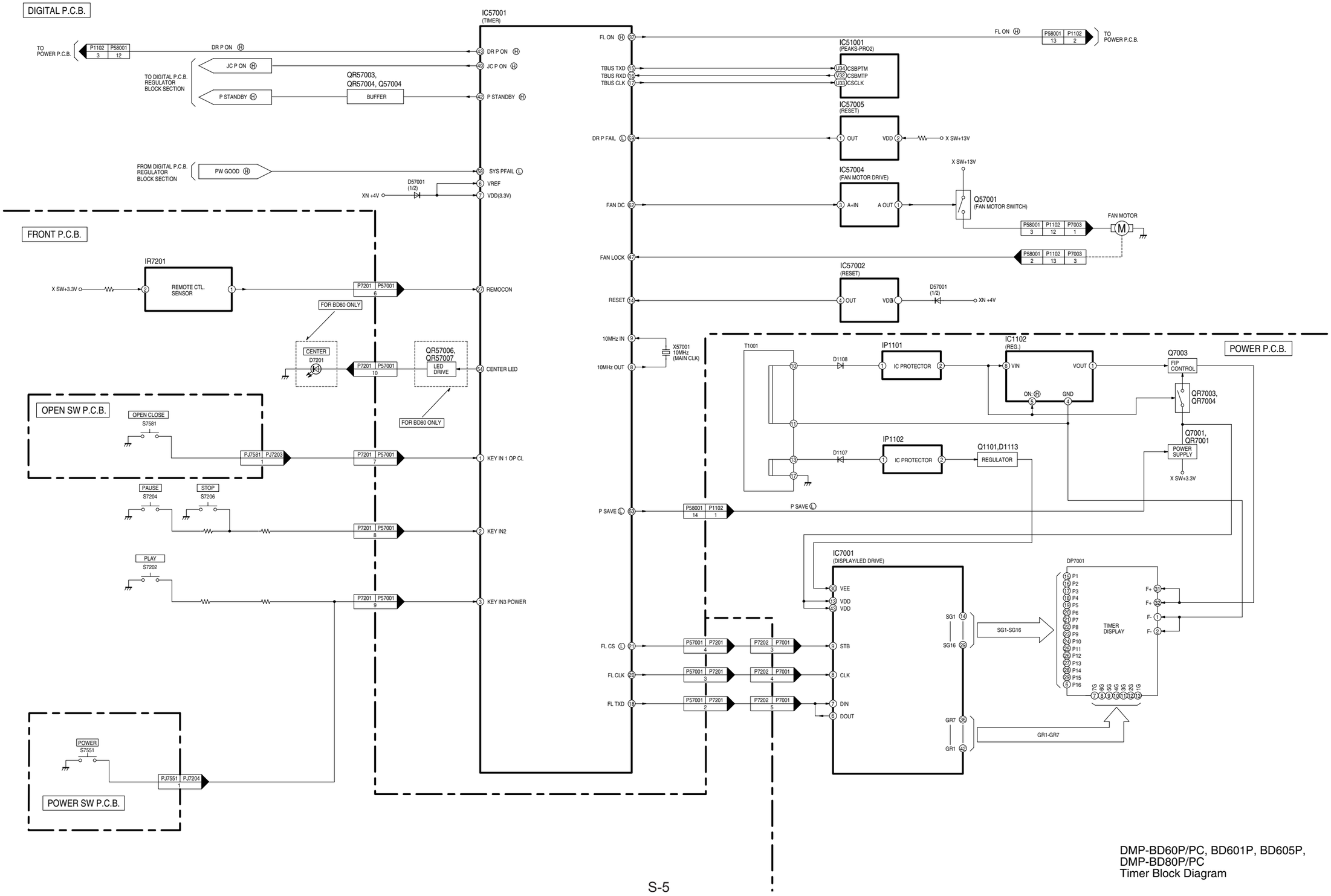
S3.2. Analog Audio Block Diagram

AUDIO PB SIGNAL



DMP-BD60P/PC, BD601P, BD605P, DMP-BD80P/PC
Analog Audio
Block Diagram

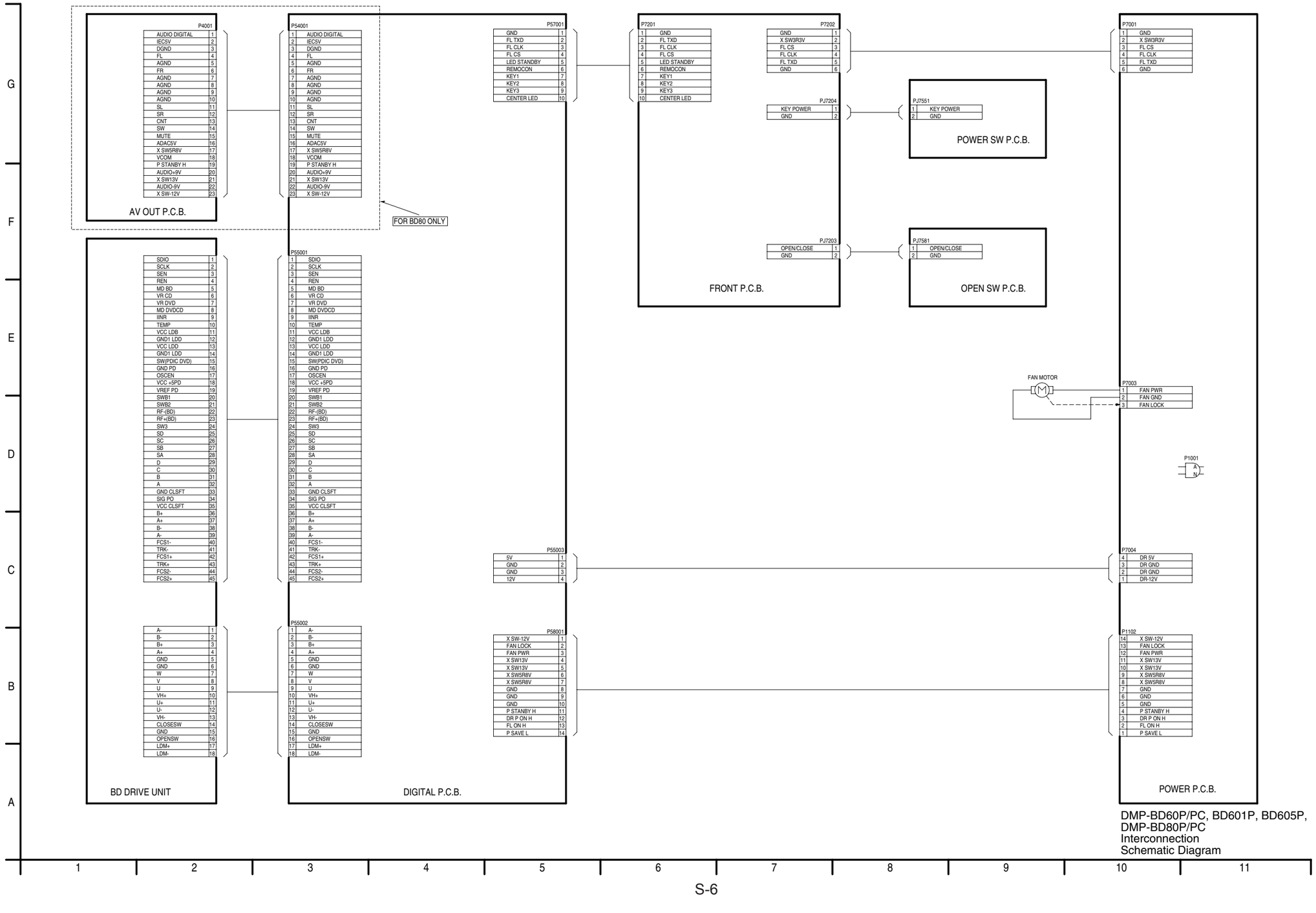
S3.3. Timer Block Diagram



DMP-BD60P/PC, BD601P, BD605P, DMP-BD80P/PC
Timer Block Diagram

S4. Schematic Diagram

S4.1. Interconnection Diagram



DMP-BD60P/PC, BD601P, BD605P, DMP-BD80P/PC
Interconnection
Schematic Diagram

S4.2. Audio Out Schematic Diagram

1/4	

DMP-BD60P/BD80P Series
Audio Out
Schematic Diagram

N

M

L

K

J

I

H

G

CKAB4001 AUDIO_DIGITAL 1
CKAB4002 IEC5V 2
CKAB4003 DGND 3
CKAB4004 FL 4
CKAB4005 AGND 5
CKAB4006 FR 6
AGND 7
AGND 8
AGND 9
AGND 10
CKAB4007 SL 11
CKAB4008 SR 12
CKAB4009 CNT 13
CKAB4010 SW 14
CKAB4011 MUTE 15
CKAB4012 ADAC5V 16
CKAB4013 X_SW5R8V 17
CKAB4014 VCOM 18
CKAB4015 P_STANBY_H 19
CKAB4016 AUDIO+9V 20
CKAB4017 X_SW13V 21
CKAB4018 AUDIO-9V 22
CKAB4019 X_SW-12V 23

P4001
K1KA23A00003

G_IEC958
G_FL_A
G_FR_A
G_SL_A
G_SR_A
G_CNT_A
G_SW_A

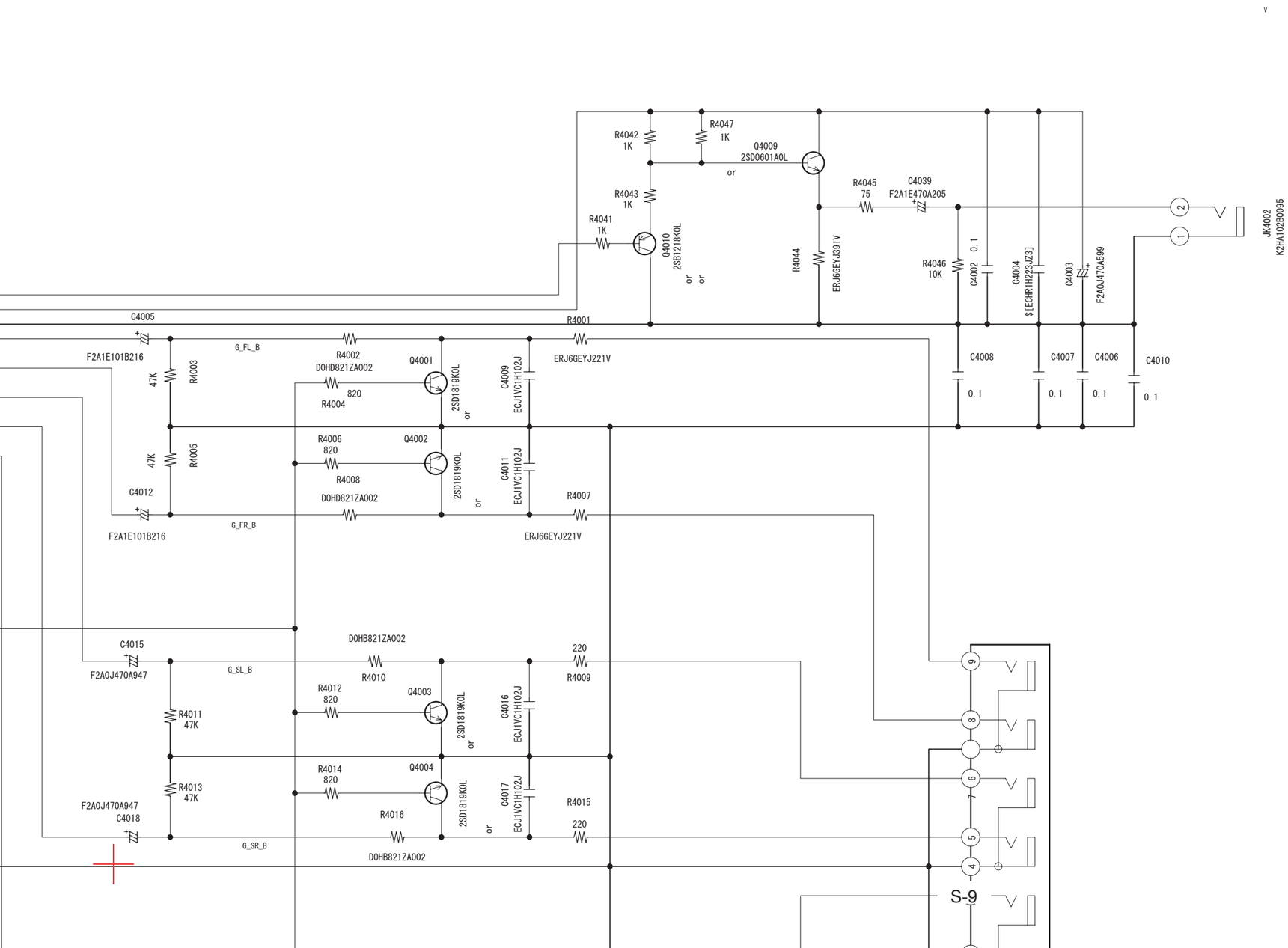
C4005
F2A1E101B216
47K R4003
G_FL_B
47K R4005
C4012
F2A1E101B216
G_FR_B

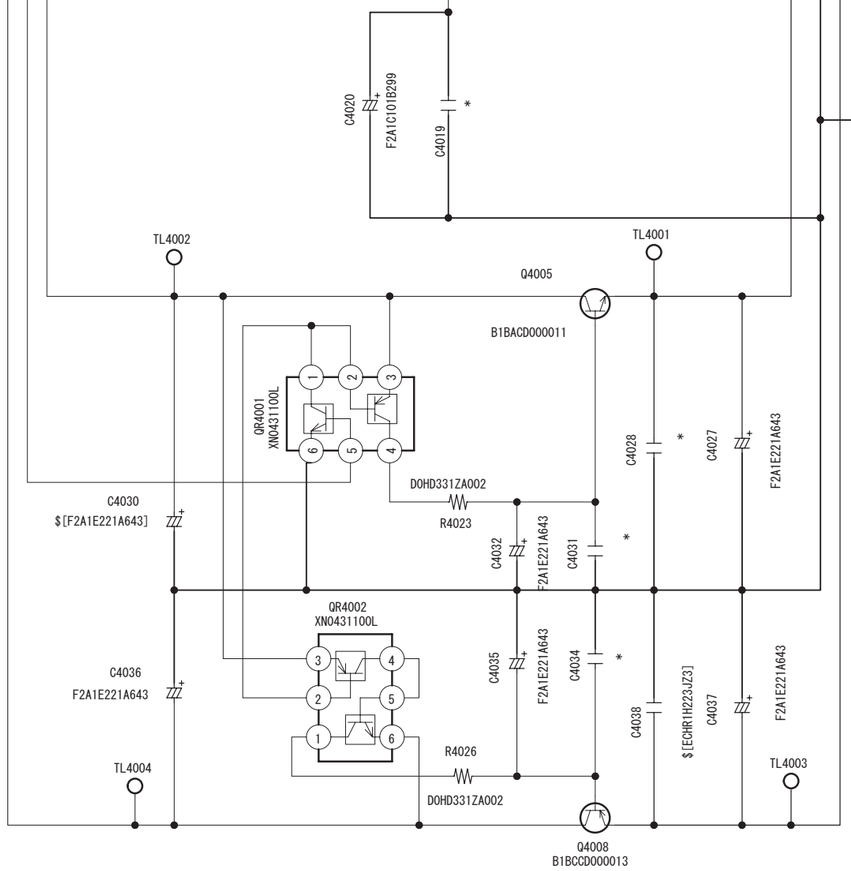
C4013
$[ECHR1H223JZ3]
C4014
$[F2A1E221A643]

C4015
F2A0J470A947
G_SL_B
R4011
47K
R4013
47K
F2A0J470A947
C4018
G_SR_B

C4020
F2A1C101B299
C4019
*

S-8


R4042 1K
R4047 1K
Q4009 2SD0601A0L
or
R4043 1K
R4041 1K
Q4010 2SB1218K0L
or
or
R4044 ERJ6GEYJ391V
R4045 75
C4039 F2A1E470A205
R4046 10K
C4002 0.1
C4004 $(EOHR1H223JZ3)
C4003 F2A0J470A599
JK4002 K2HA102B0095
C4005
F2A1E101B216
G_FL_B
R4001
ERJ6GEYJ221V
R4003 47K
R4002 D0HD821ZA002
820
R4004
Q4001 2SD1819K0L
or
C4009 ECJ1VC1H102J
C4008 0.1
C4007 0.1
C4006 0.1
C4010 0.1
R4005 47K
R4006 820
R4008
Q4002 2SD1819K0L
or
C4011 ECJ1VC1H102J
C4012
F2A1E101B216
G_FR_B
D0HD821ZA002
R4007
ERJ6GEYJ221V
C4015
F2A0J470A947
G_SL_B
D0HB821ZA002
R4010
220
R4009
R4011 47K
R4012 820
Q4003 2SD1819K0L
or
C4016 ECJ1VC1H102J
R4013 47K
R4014 820
Q4004 2SD1819K0L
or
C4017 ECJ1VC1H102J
F2A0J470A947
C4018
G_SR_B
R4016
D0HB821ZA002
R4015
220
S-9



V

V

VariationCategory

	A	B	
C4019	ECHR1H223JZ3	F0A2E103A012	
C4028	ECHR1H223JZ3	F0A2E103A012	
C4031	ECHR1H223JZ3	F0A2E103A012	
C4034	ECHR1H223JZ3	F0A2E103A012	

Modify Category

	Variation	Type
1	BD55PP, PP1, EG	A
	BD80PP, PC, GN, EG, EB, P1, PC1, EG1, EB1, GN1	B

DMP-BD60P/BD80P Series
Audio Out
Schematic Diagram

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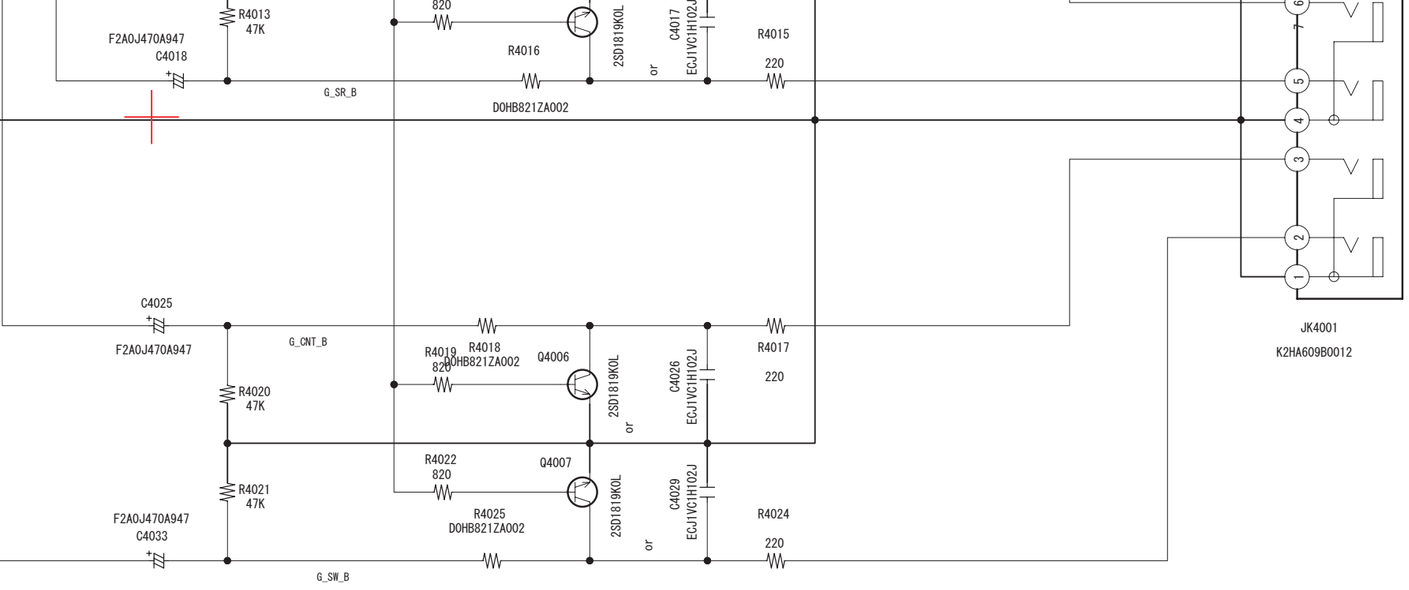

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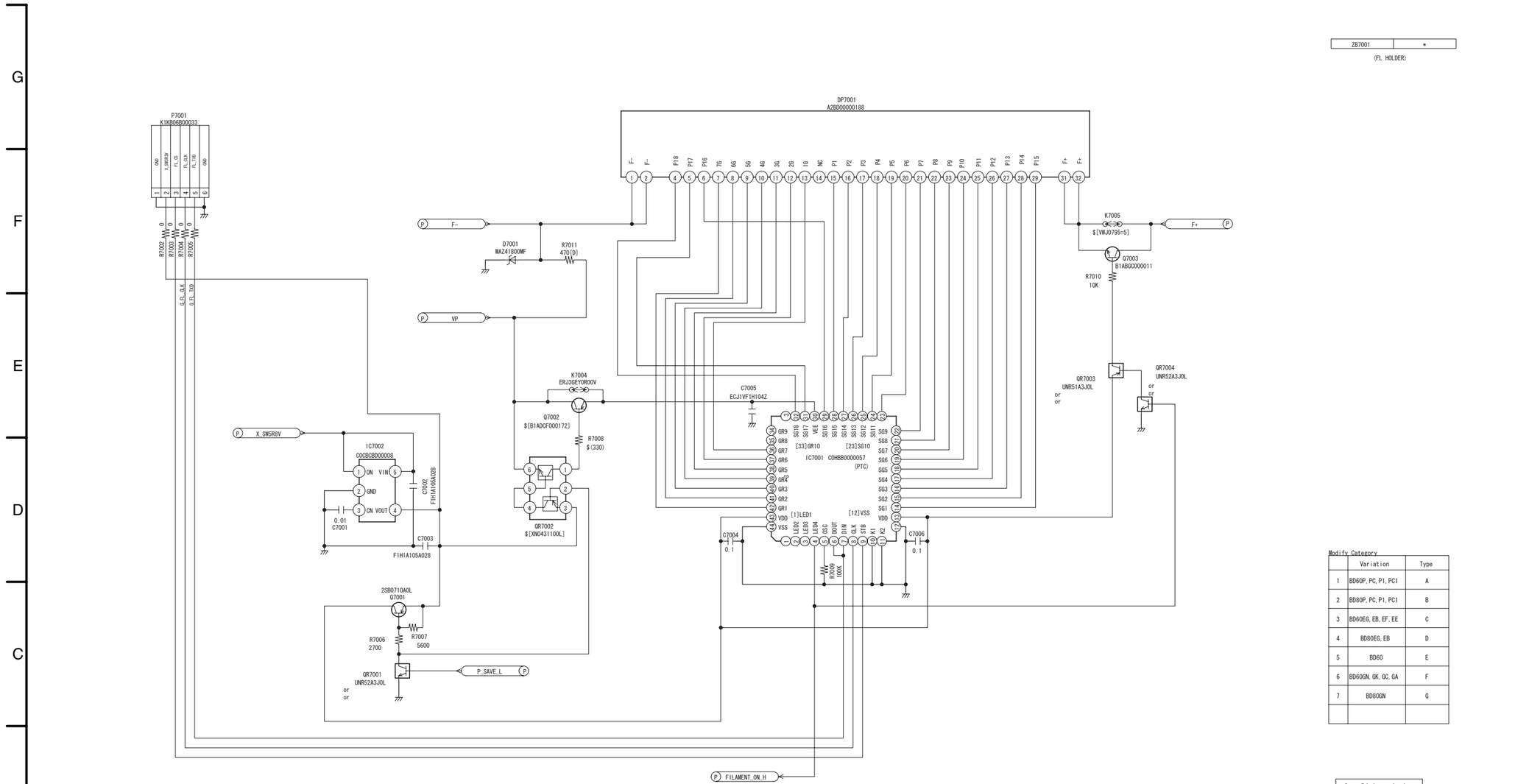
DMP-BD60P/BD80P Series
Audio Out
Schematic Diagram
4/4

11 12 13 14 15 16 17 18 19 20 21

S4.3. FL (F) Schematic Diagram



P7003
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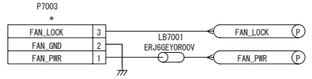

P7004
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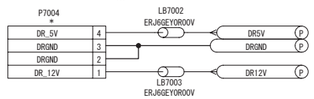

VariationCategory

	A	B	C	D	E	F	G	
P7003	K1KA03AA0180	K1KA03AA0180	K1KA03AA0301	K1KA03AA0301	K1KA03AA0180	K1KA03AA0180	K1KA03AA0180	
P7004	K1KA04AA0180	K1KA04AA0180	K1KA04AA0301	K1KA04AA0301	K1KA04AA0180	K1KA04AA0180	K1KA04AA0180	
ZB7001	RMN0913	RMN0913	RMN0913-J	RMN0913-J	RMN0913	RMN0913	RMN0913	

Modify Category

	Variation	Type
1	BD60P, PC, P1, PC1	A
2	BD80P, PC, P1, PC1	B
3	BD60EG, EB, EF, EE	C
4	BD80EG, EB	D
5	BD60	E
6	BD60GN, GK, GC, GA	F
7	BD80GN	G

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[PR]

DMP-BD60P/BD80P Series
FL Section
(Power_P P.C.B.(1/2))
Schematic Diagram(F)

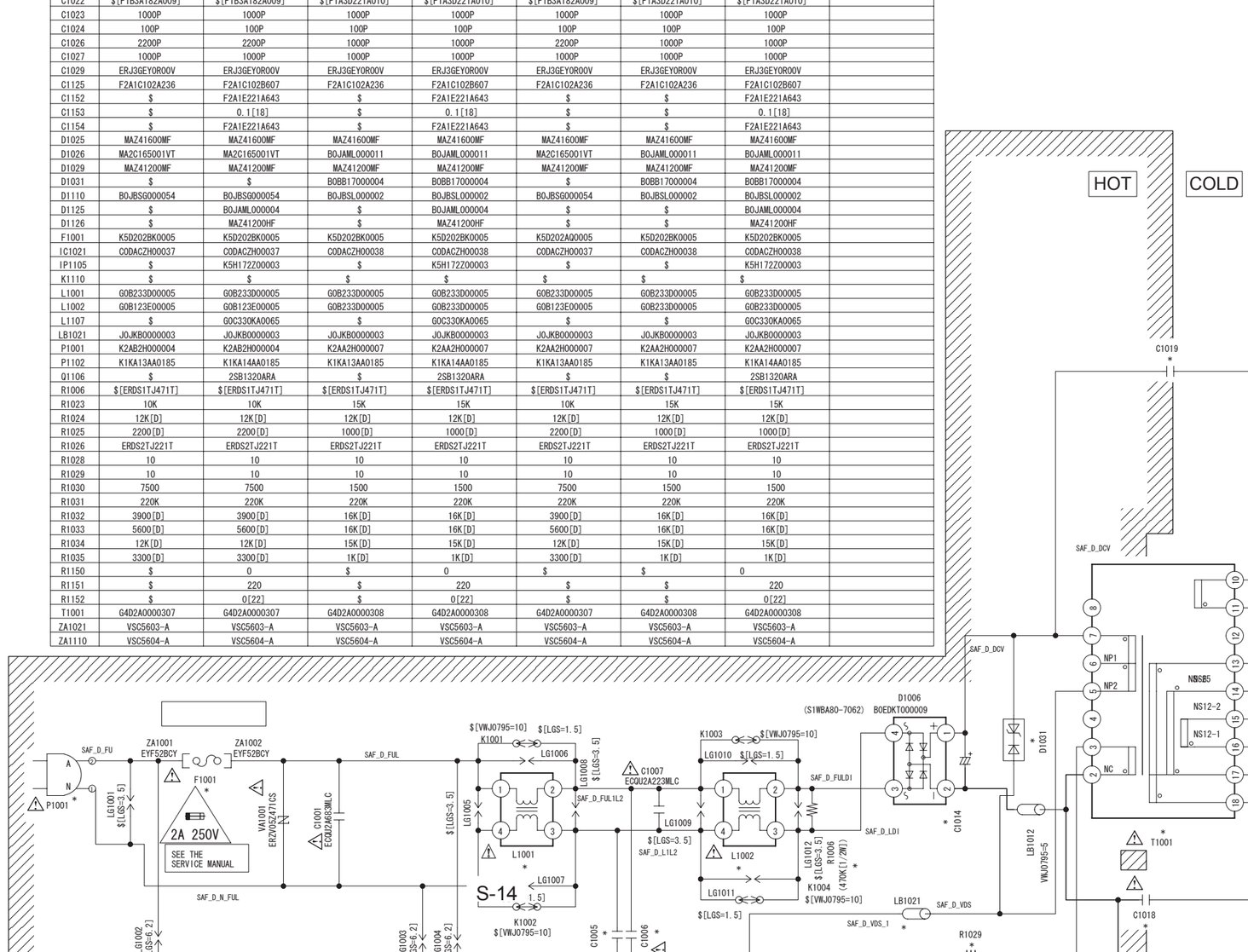
S4.4. Power_P (P) Schematic Diagram

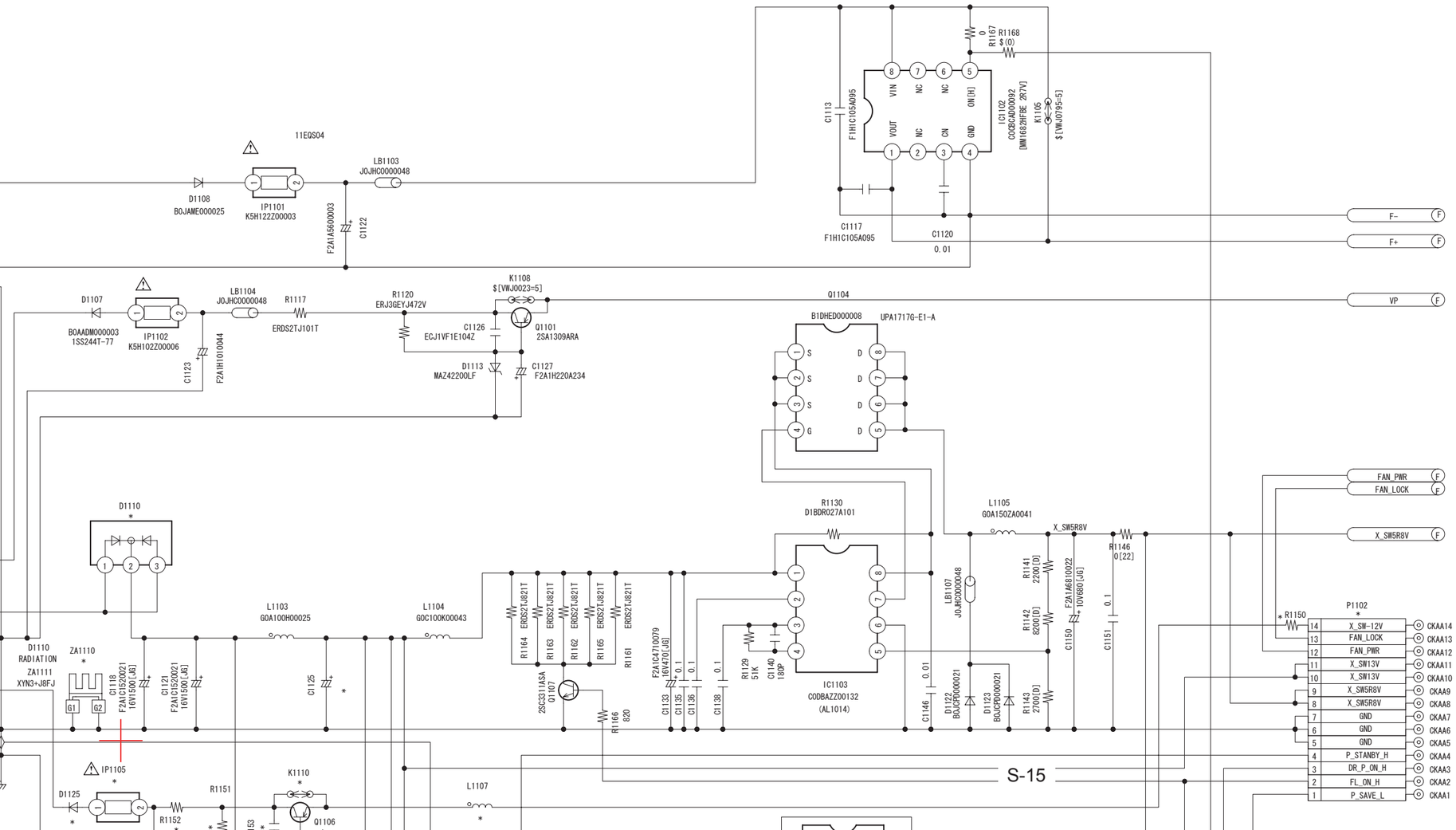
1/4	

DMP-BD60P/BD80P Series
Power_P Section
(Power_P P.C.B.(2/2))
Schematic Diagram(P)

VariationCategory

	A	B	C	D	E	F	G	
C1005	F1B2G1020002	F1B2G1020002	F1B2G4710001	F1B2G4710001	F1B2G1020002	F1B2G4710001	F1B2G4710001	
C1006	F1B2G1020002	F1B2G1020002	F1B2G4710001	F1B2G4710001	F1B2G1020002	F1B2G4710001	F1B2G4710001	
C1014	F2B2E1510004	F2B2E1510004	F2B2W4700003	F2B2W4700003	F2B2E1510004	F2B2W4700003	F2B2W4700003	
C1018	F1B2G1020002	F1B2G1020002	ECKWNA102MEV	ECKWNA102MEV	F1B2G1020002	ECKWNA102MEV	ECKWNA102MEV	
C1019	$[F1B2G1020002]	$[F1B2G1020002]	ECKWNA102MEV	ECKWNA102MEV	$[F1B2G1020002]	ECKWNA102MEV	ECKWNA102MEV	
C1021	F1B3A182A009	F1B3A182A009	F1A3D221A010	F1A3D221A010	F1B3A182A009	F1A3D221A010	F1A3D221A010	
C1022	$[F1B3A182A009]	$[F1B3A182A009]	$[F1A3D221A010]	$[F1A3D221A010]	$[F1B3A182A009]	$[F1A3D221A010]	$[F1A3D221A010]	
C1023	1000P	1000P	1000P	1000P	1000P	1000P	1000P	
C1024	100P	100P	100P	100P	100P	100P	100P	
C1026	2200P	2200P	1000P	1000P	2200P	1000P	1000P	
C1027	1000P	1000P	1000P	1000P	1000P	1000P	1000P	
C1029	ERJ3GEY0R00V	ERJ3GEY0R00V	ERJ3GEY0R00V	ERJ3GEY0R00V	ERJ3GEY0R00V	ERJ3GEY0R00V	ERJ3GEY0R00V	
C1125	F2A1C102A236	F2A1C102B607	F2A1C102A236	F2A1C102B607	F2A1C102A236	F2A1C102A236	F2A1C102B607	
C1152	$	F2A1E221A643	$	F2A1E221A643	$	$	F2A1E221A643	
C1153	$	0.1[18]	$	0.1[18]	$	$	0.1[18]	
C1154	$	F2A1E221A643	$	F2A1E221A643	$	$	F2A1E221A643	
D1025	MAZ41600MF	MAZ41600MF	MAZ41600MF	MAZ41600MF	MAZ41600MF	MAZ41600MF	MAZ41600MF	
D1026	MA2C165001VT	MA2C165001VT	B0JAML000011	B0JAML000011	MA2C165001VT	B0JAML000011	B0JAML000011	
D1029	MAZ41200MF	MAZ41200MF	MAZ41200MF	MAZ41200MF	MAZ41200MF	MAZ41200MF	MAZ41200MF	
D1031	$	$	B0BB17000004	B0BB17000004	$	B0BB17000004	B0BB17000004	
D1110	B0JBSG000054	B0JBSG000054	B0JBSL000002	B0JBSL000002	B0JBSG000054	B0JBSL000002	B0JBSL000002	
D1125	$	B0JAML000004	$	B0JAML000004	$	$	B0JAML000004	
D1126	$	MAZ41200HF	$	MAZ41200HF	$	$	MAZ41200HF	
F1001	K5D202BK0005	K5D202BK0005	K5D202BK0005	K5D202BK0005	K5D202AQ0005	K5D202BK0005	K5D202BK0005	
IC1021	C0DACZH00037	C0DACZH00037	C0DACZH00038	C0DACZH00038	C0DACZH00037	C0DACZH00038	C0DACZH00038	
IP1105	$	K5H172Z00003	$	K5H172Z00003	$	$	K5H172Z00003	
K1110	$	$	$	$	$	$	$	
L1001	G0B233D00005	G0B233D00005	G0B233D00005	G0B233D00005	G0B233D00005	G0B233D00005	G0B233D00005	
L1002	G0B123E00005	G0B123E00005	G0B233D00005	G0B233D00005	G0B123E00005	G0B233D00005	G0B233D00005	
L1107	$	G0C330KA0065	$	G0C330KA0065	$	$	G0C330KA0065	
LB1021	J0JKB0000003	J0JKB0000003	J0JKB0000003	J0JKB0000003	J0JKB0000003	J0JKB0000003	J0JKB0000003	
P1001	K2AB2H000004	K2AB2H000004	K2AA2H000007	K2AA2H000007	K2AA2H000007	K2AA2H000007	K2AA2H000007	
P1102	K1KA13AA0185	K1KA14AA0185	K1KA13AA0185	K1KA14AA0185	K1KA13AA0185	K1KA13AA0185	K1KA14AA0185	
Q1106	$	2SB1320ARA	$	2SB1320ARA	$	$	2SB1320ARA	
R1006	$[ERDS1TJ471T]	$[ERDS1TJ471T]	$[ERDS1TJ471T]	$[ERDS1TJ471T]	$[ERDS1TJ471T]	$[ERDS1TJ471T]	$[ERDS1TJ471T]	
R1023	10K	10K	15K	15K	10K	15K	15K	
R1024	12K[D]	12K[D]	12K[D]	12K[D]	12K[D]	12K[D]	12K[D]	
R1025	2200[D]	2200[D]	1000[D]	1000[D]	2200[D]	1000[D]	1000[D]	
R1026	ERDS2TJ221T	ERDS2TJ221T	ERDS2TJ221T	ERDS2TJ221T	ERDS2TJ221T	ERDS2TJ221T	ERDS2TJ221T	
R1028	10	10	10	10	10	10	10	
R1029	10	10	10	10	10	10	10	
R1030	7500	7500	1500	1500	7500	1500	1500	
R1031	220K	220K	220K	220K	220K	220K	220K	
R1032	3900[D]	3900[D]	16K[D]	16K[D]	3900[D]	16K[D]	16K[D]	
R1033	5600[D]	5600[D]	16K[D]	16K[D]	5600[D]	16K[D]	16K[D]	
R1034	12K[D]	12K[D]	15K[D]	15K[D]	12K[D]	15K[D]	15K[D]	
R1035	3300[D]	3300[D]	1K[D]	1K[D]	3300[D]	1K[D]	1K[D]	
R1150	$	0	$	0	$	$	0	
R1151	$	220	$	220	$	$	220	
R1152	$	0[22]	$	0[22]	$	$	0[22]	
T1001	G4D2A0000307	G4D2A0000307	G4D2A0000308	G4D2A0000308	G4D2A0000307	G4D2A0000308	G4D2A0000308	
ZA1021	VSC5603-A	VSC5603-A	VSC5603-A	VSC5603-A	VSC5603-A	VSC5603-A	VSC5603-A	
ZA1110	VSC5604-A	VSC5604-A	VSC5604-A	VSC5604-A	VSC5604-A	VSC5604-A	VSC5604-A	

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LB1103
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D1108
B0JAME000025
IP1101
K5H122Z00003
F2A1A5600003
C1122
C1113
F1H1C105A095
R1167
0
R1168
$(0)
IC1102
C0CBCAD00092
[MM1682HFBE 2R7V]
K1105
$[VWJ0795=5]
C1117
F1H1C105A095
C1120
0.01
F-
F+
D1107
B0AADM000003
1SS244T-77
IP1102
K5H102Z00006
C1123
F2A1H1010044
LB1104
J0JHC0000048
R1117
ERDS2TJ101T
R1120
ERJ3GEYJ472V
K1108
$[VWJ0023=5]
C1126
ECJ1VF1E104Z
Q1101
2SA1309ARA
D1113
MAZ42200LF
C1127
F2A1H220A234
Q1104
B1DHED000008
UPA1717G-E1-A
VP
D1110
*
D1110
RADIATION
ZA1111
XYN3+J8FJ
ZA1110
*
C1118
F2A1C152M021
16V1500[J6]
C1121
F2A1C152M021
16V1500[J6]
L1103
G0A100H00025
L1104
G0C100K00043
C1125
ERDS2TJ821T
R1164
R1163
R1162
R1165
R1161
2SC3311ASA
Q1107
R1166
820
F2A1C4710079
16V470[J6]
C1133
C1135
C1136
0.1
C1138
R1129
51K
C1140
150P
IC1103
C0DBAZZ00132
(AL1014)
R1130
D1BDR027A101
L1105
G0A150ZA0041
LB1107
J0JHC0000048
C1146
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D1122
B0JCP5000021
D1123
B0JCP9000021
R1141
2200[D]
R1142
820[D]
R1143
2700[D]
F2A1A6810022
10V680[J6]
C1150
C1151
0.1
X_SW5R8V
R1146
0[22]
FAN_PWR
FAN_LOCK
X_SW5R8V
P1102
*
R1150
*
14 X_SW-12V CKAA14
13 FAN_LOCK CKAA13
12 FAN_PWR CKAA12
11 X_SW13V CKAA11
10 X_SW13V CKAA10
9 X_SW5R8V CKAA9
8 X_SW5R8V CKAA8
7 GND CKAA7
6 GND CKAA6
5 GND CKAA5
4 P_STANBY_H CKAA4
3 DR_P_ON_H CKAA3
2 FL_ON_H CKAA2
1 P_SAVE_L CKAA1
S-15
IP1105
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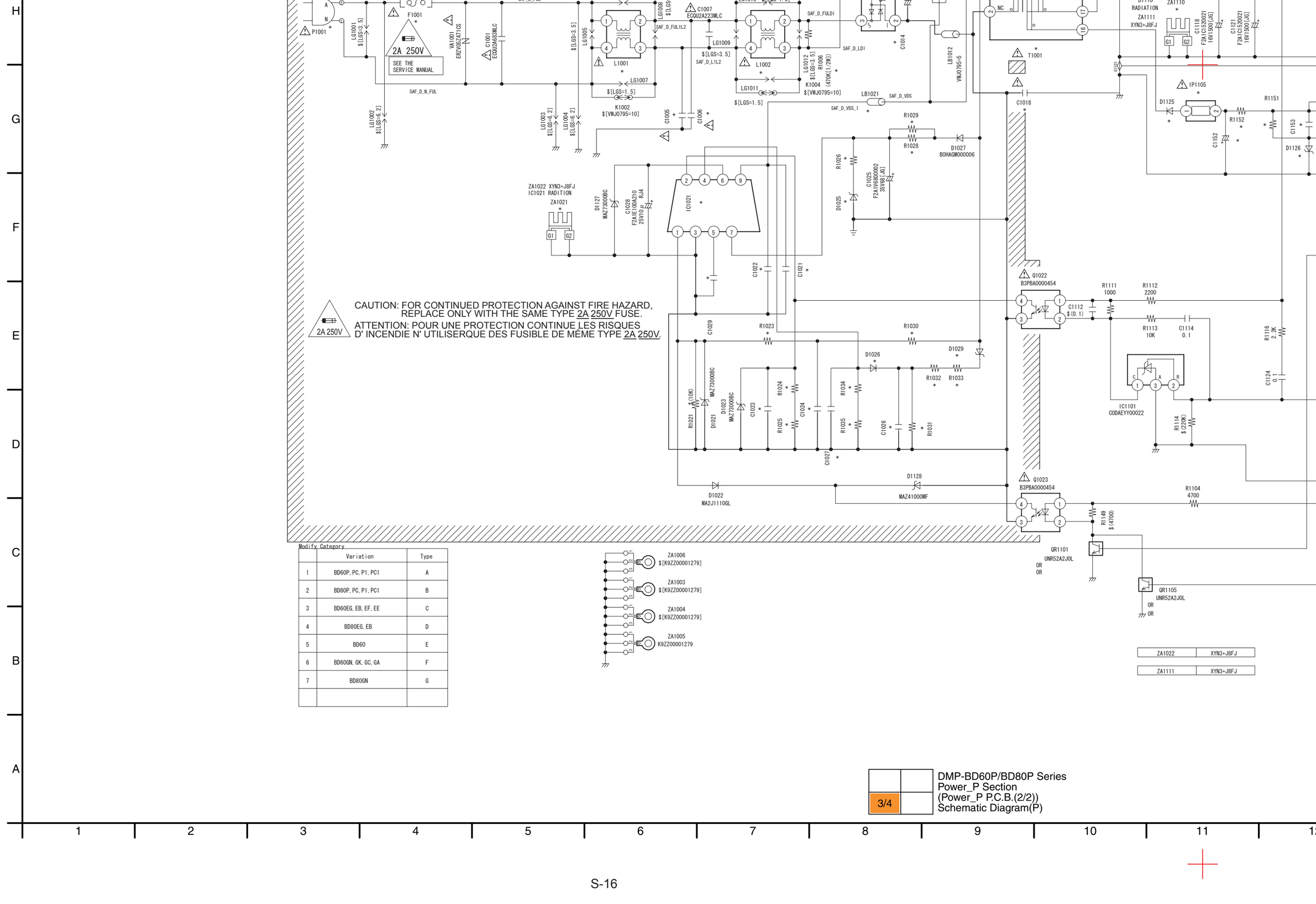
D1125
*
R1151
R1152
*
K1110
*
Q1106
L1107
*



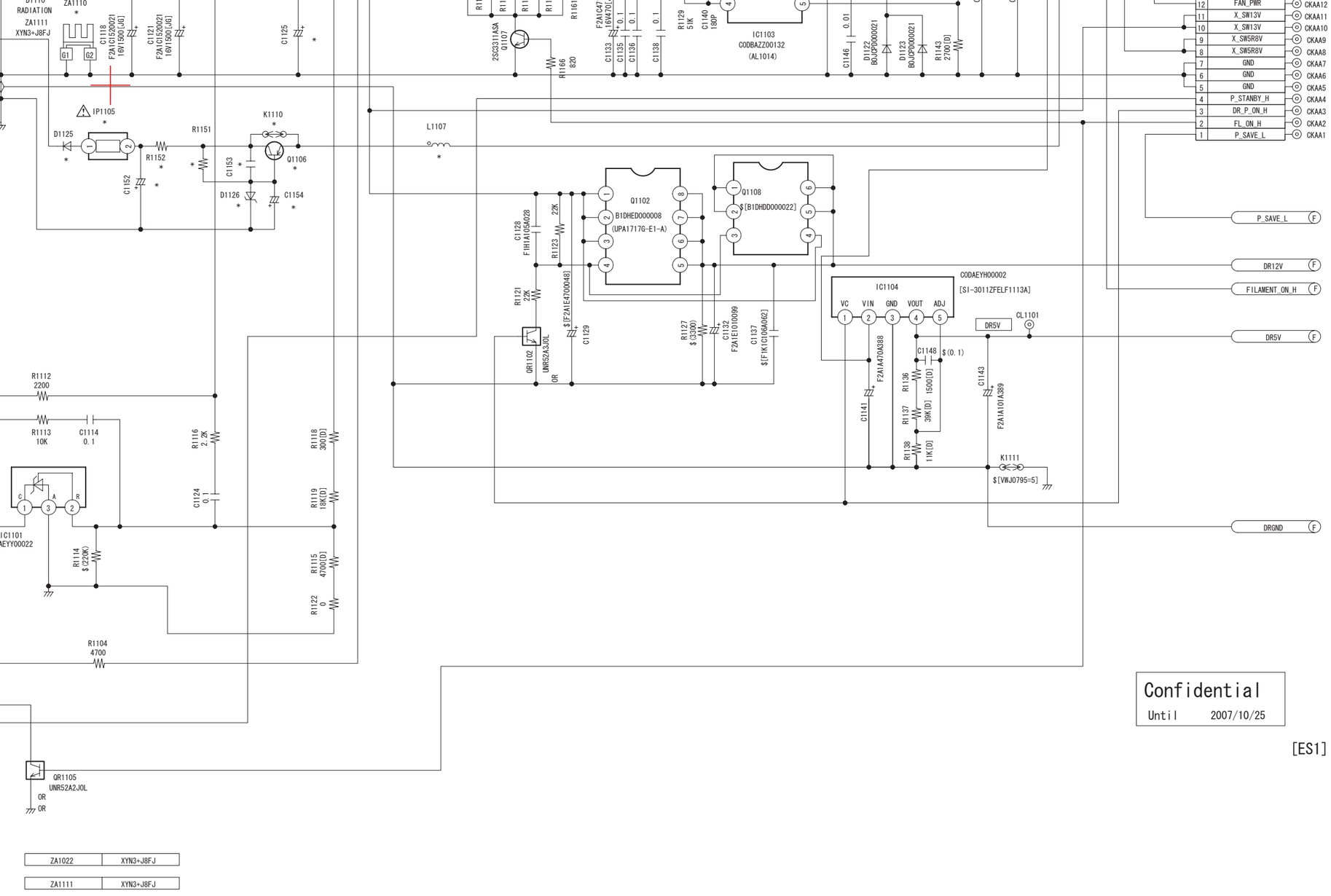
Modify Category

	Variation	Type
1	BD60P, PC, P1, PC1	A
2	BD80P, PC, P1, PC1	B
3	BD60EG, EB, EF, EE	C
4	BD80EG, EB	D
5	BD60	E
6	BD60GN, GK, GC, GA	F
7	BD80GN	G

ZA1022	XYN3+J8FJ
ZA1111	XYN3+J8FJ

DMP-BD60P/BD80P Series
Power_P Section
(Power_P P.C.B.(2/2))
Schematic Diagram(P)

3/4



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[ES1]

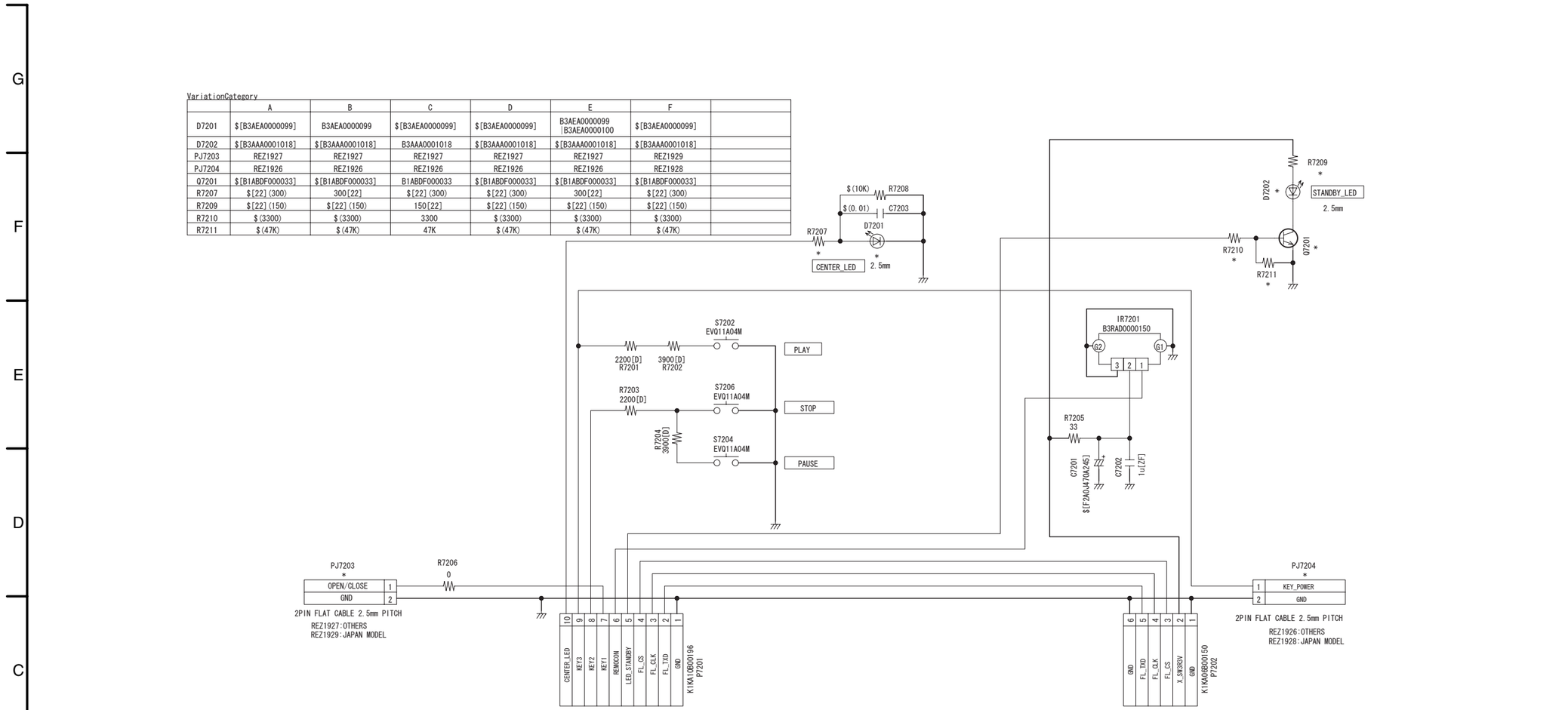
DMP-BD60P/BD80P Series
Power_P Section
(Power_P P.C.B.(2/2))
Schematic Diagram(P)
4/4

11 12 13 14 15 16 17 18 19 20 21

S4.5. Front Schematic Diagram

VariationCategory

	A	B	C	D	E	F	
D7201	$[B3AEA0000099]	B3AEA0000099	$[B3AEA0000099]	$[B3AEA0000099]	B3AEA0000099 |B3AEA0000100	$[B3AEA0000099]	
D7202	$[B3AAA0001018]	$[B3AAA0001018]	B3AAA0001018	$[B3AAA0001018]	$[B3AAA0001018]	$[B3AAA0001018]	
PJ7203	REZ1927	REZ1927	REZ1927	REZ1927	REZ1927	REZ1929	
PJ7204	REZ1926	REZ1926	REZ1926	REZ1926	REZ1926	REZ1928	
Q7201	$[B1ABDF000033]	$[B1ABDF000033]	B1ABDF000033	$[B1ABDF000033]	$[B1ABDF000033]	$[B1ABDF000033]	
R7207	$[22] (300)	300[22]	$[22] (300)	$[22] (300)	300[22]	$[22] (300)	
R7209	$[22] (150)	$[22] (150)	150[22]	$[22] (150)	$[22] (150)	$[22] (150)	
R7210	$(3300)	$(3300)	3300	$(3300)	$(3300)	$(3300)	
R7211	$(47K)	$(47K)	47K	$(47K)	$(47K)	$(47K)	



[PR]

Modify Category

	Variation	Type
1	BD60P, PC, P1, PC1, PU, GN, GC, GA, PU1, GN1, GC1, GA1	A
2	BD80P, PC, P1, PC1, GN, GN1	B
3	BD60GK, GK1	C
4	BD60EG, EB, EF, EE, EG1, EB1, EF1, EE1	D
5	BD80EG, EB, EG1, EB1	E
6	BD60	F

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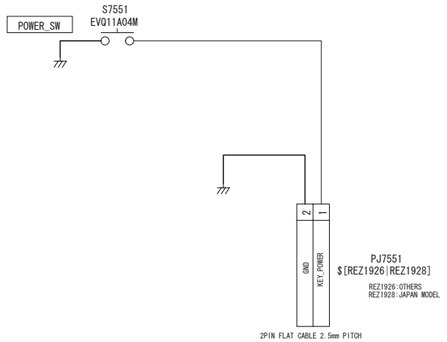
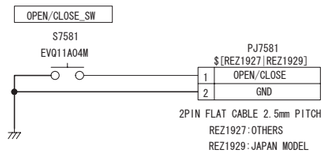
Until 2009/1/19

DMP-BD60P/BD80P Series
Front
Schematic Diagram

S4.6. Power SW Schematic Diagram / S4.7. Open SW Schematic Diagram





2009/1/19 [PR]

[PR]

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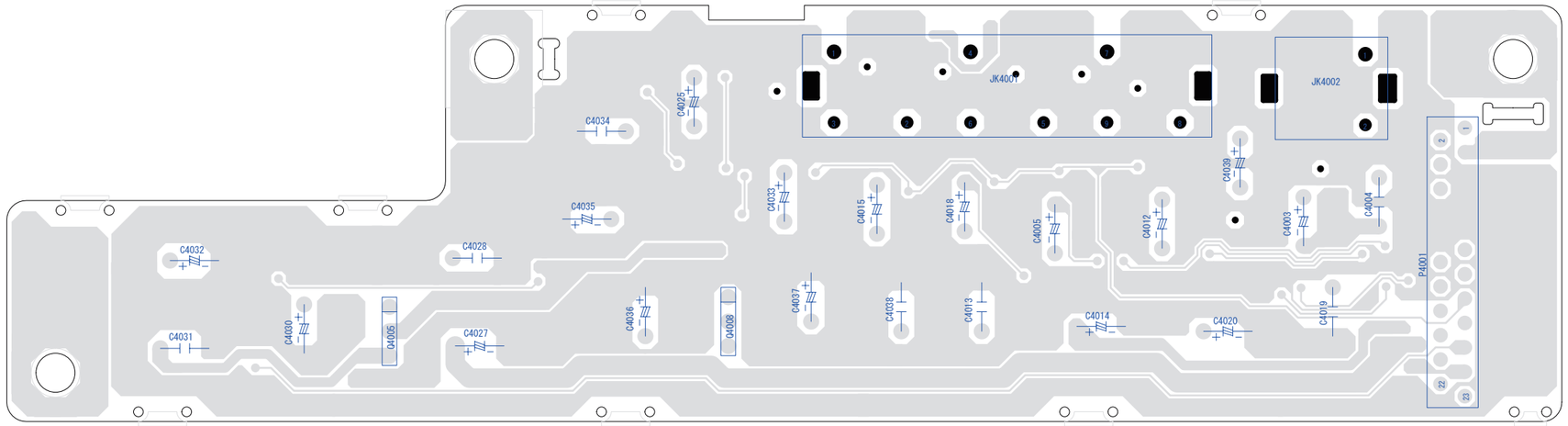
DMP-BD60P/BD80P Series
Power SW
Schematic Diagram

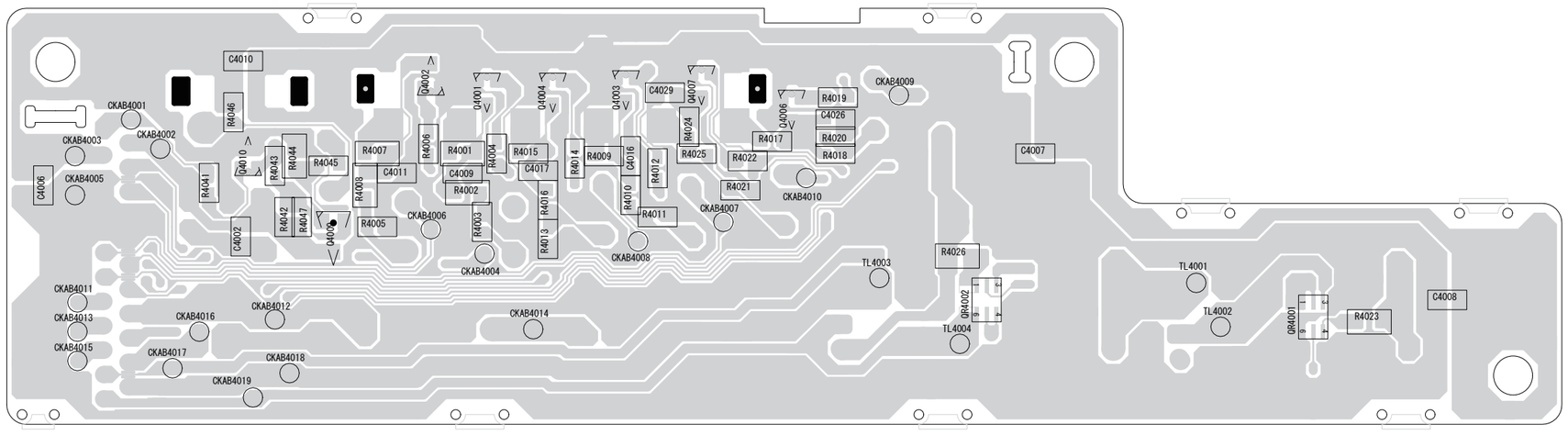
DMP-BD60P/BD80P Series
Open SW
Schematic Diagram

S5. Print Circuit Board

S5.1. Audio Out P.C.B.



(Component Side)

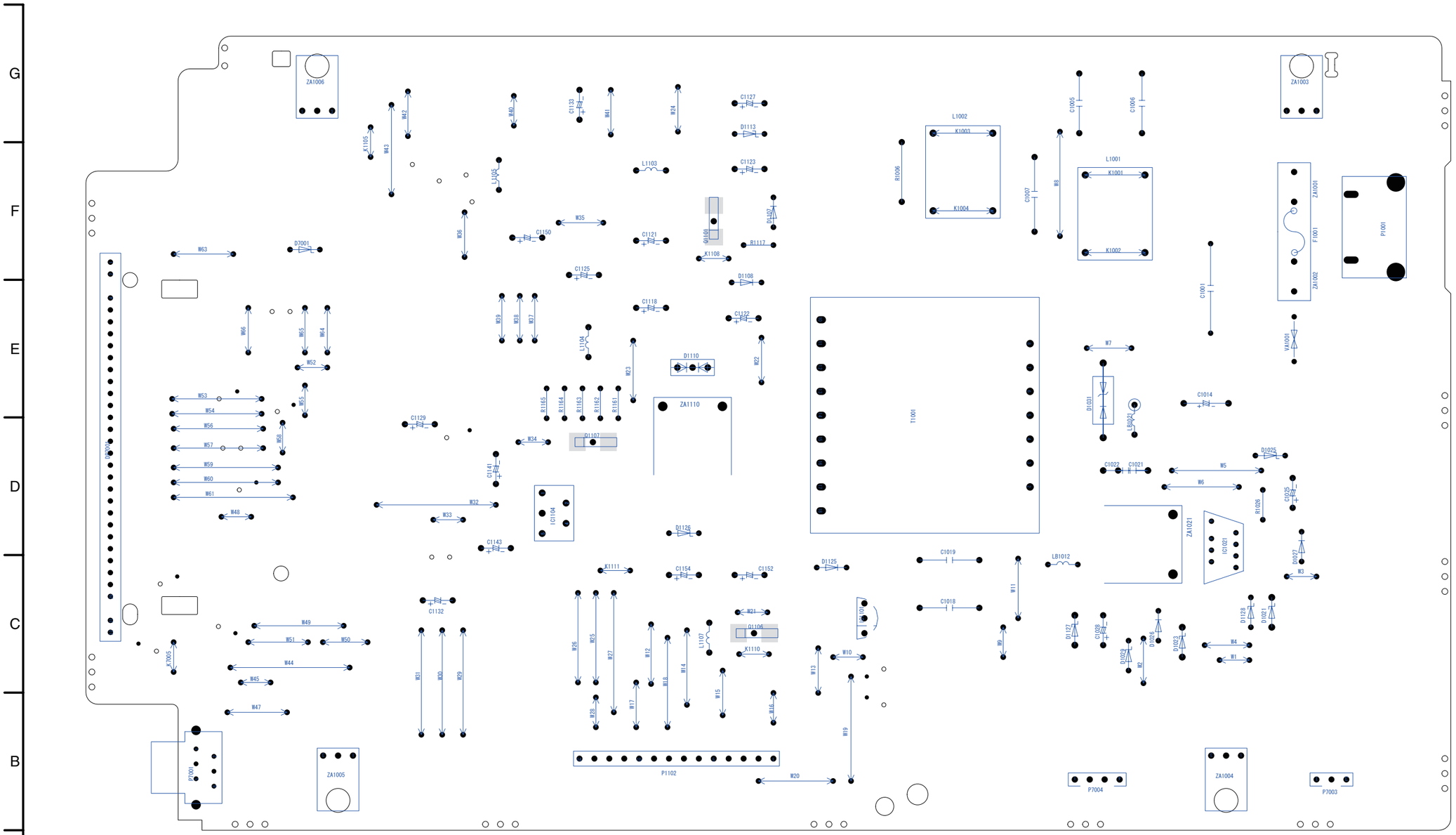


(Foil Side)

DMP-BD60P/BD80P Series
Audio Out P.C.B.

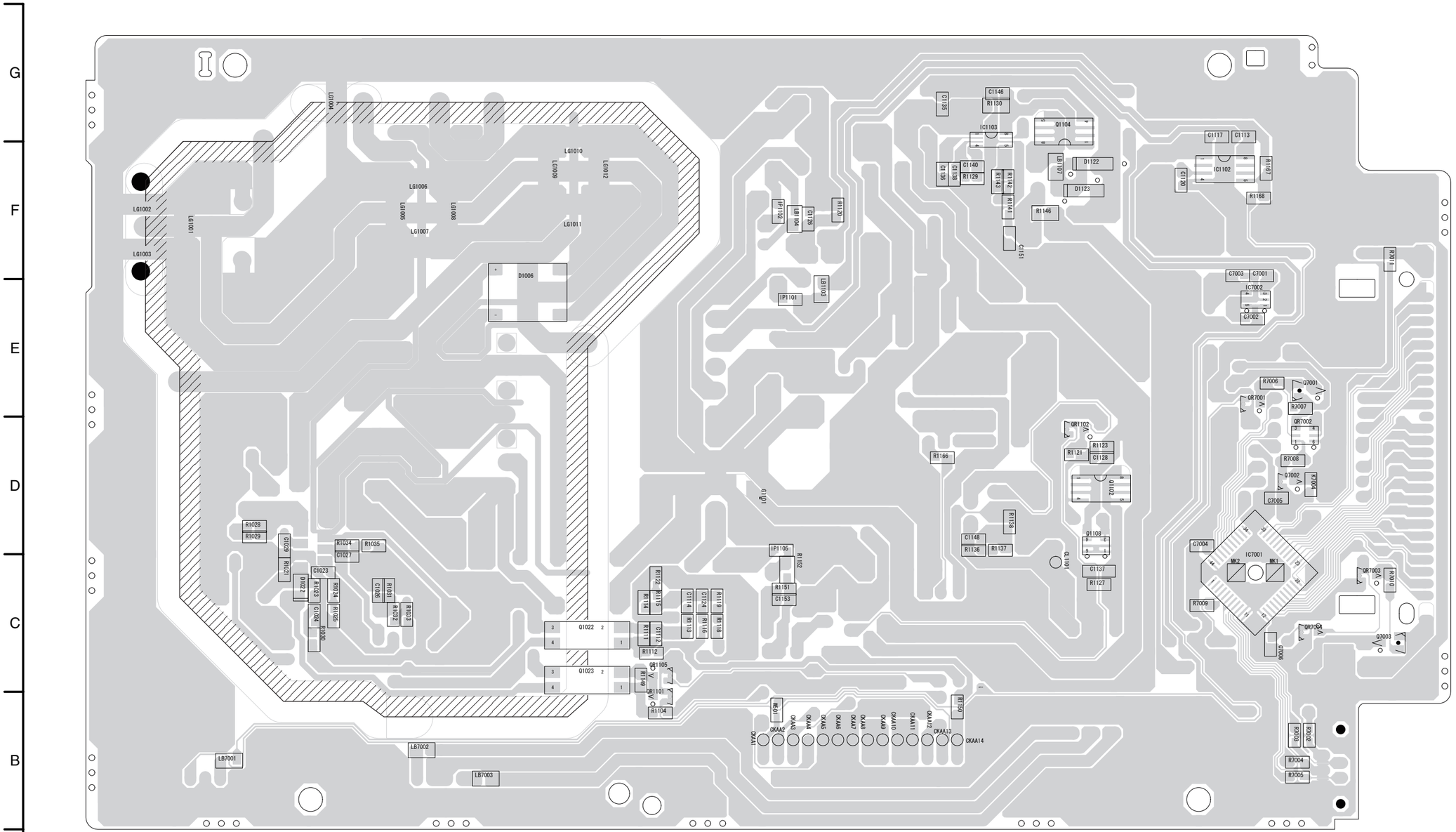
S5.2. Power_P P.C.B.

S5.2.1. Power_P P.C.B. (Component Side)



DMP-BD60P/BD80P Series
Power_P P.C.B.
(Component Side)

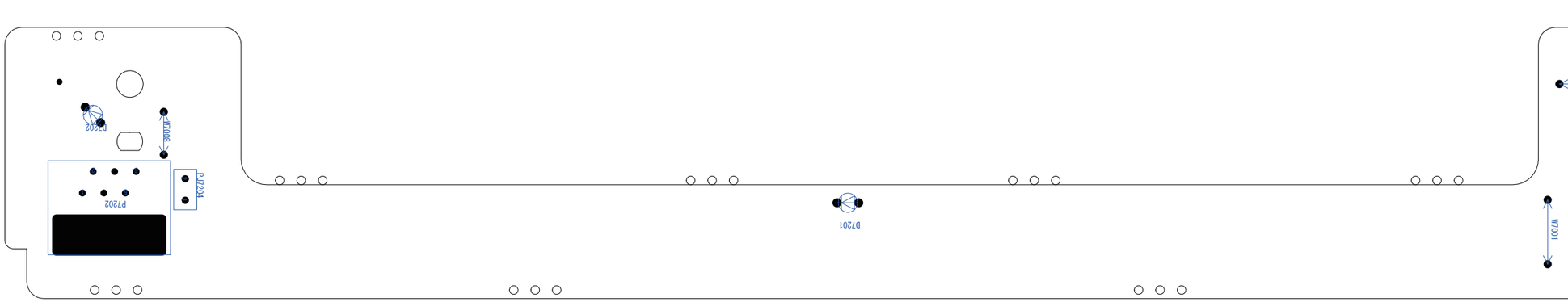
S5.2.2. Power_P P.C.B. (Foil Side)



(Foil Side)

DMP-BD60P/BD80P Series
Power_P P.C.B.
(Foil Side)

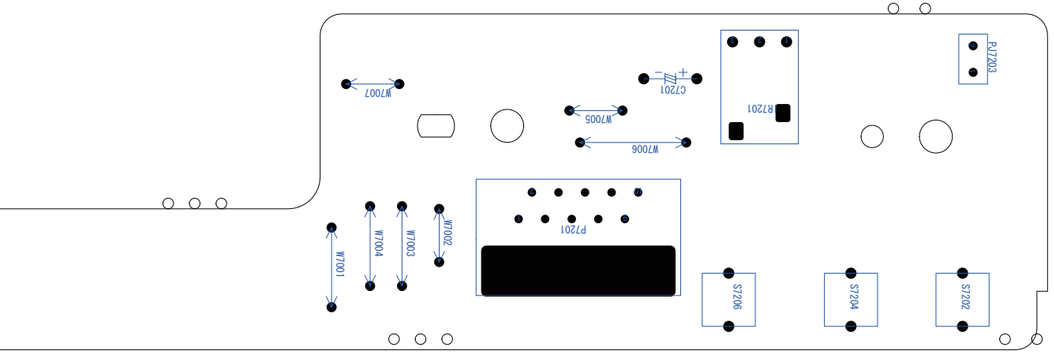
S5.3. Front P.C.B.

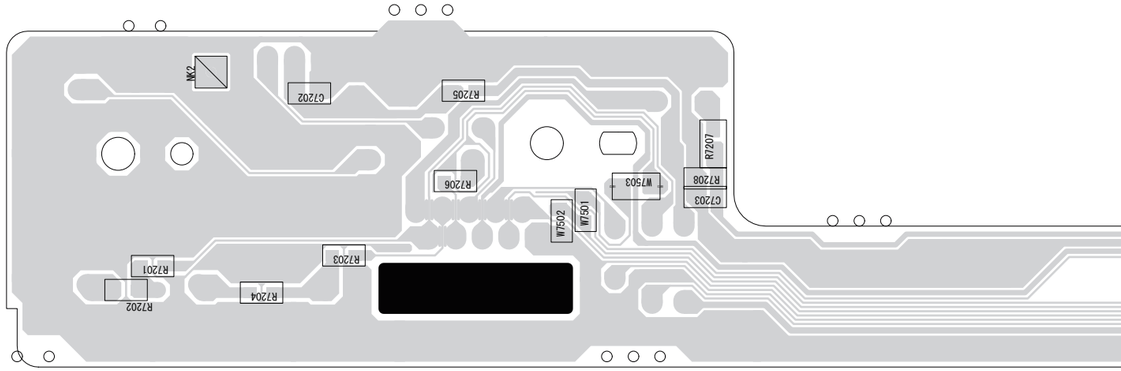


(Component Side)

	2/4

DMP-BD60P/BD80PSeries
Front P.C.B.
(Component Side)

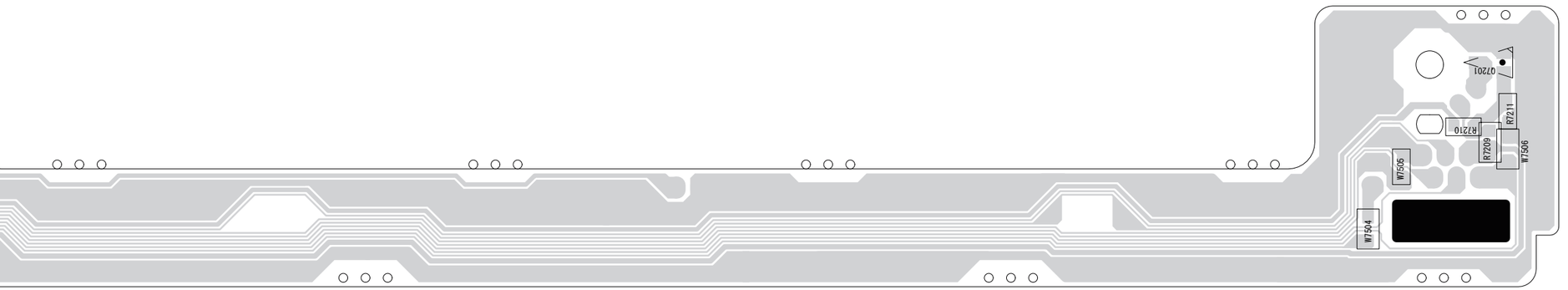




(Foil Side)

3/4	

DMP-BD60P/BD80PSeries
Front P.C.B.
(Foil Side)

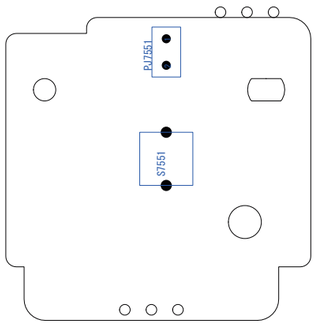


DMP-BD60P/BD80PSeries
Front P.C.B.
(Foil Side)

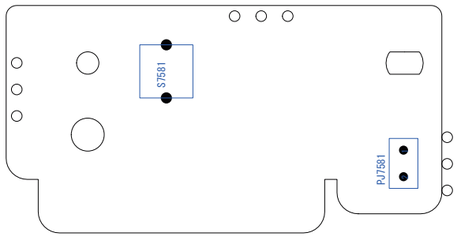
4/4

11 12 13 14 15 16 17 18 19 20 21

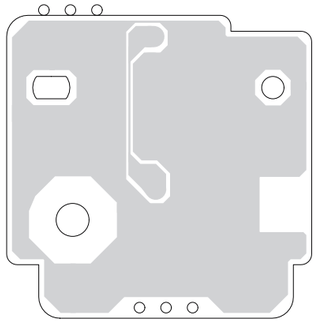
S5.4. Power SW P.C.B. / S5.5. Open SW P.C.B.



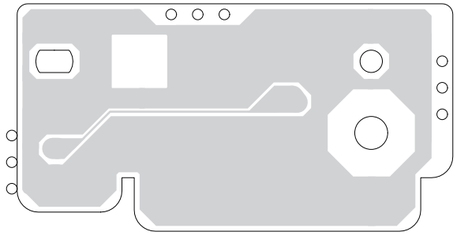
(Component Side)



(Component Side)



(Foil Side)



(Foil Side)

DMP-BD60P/BD80P Series
Power SW P.C.B.

DMP-BD60P/BD80P Series
Open SW P.C.B.

S6. Abbreviation

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
	ASYNC	AUDIO WORD DISTINCTION SYNC
B	BCK	BIT CLOCK (PCM)
	BCKIN	BIT CLOCK INPUT
	BDO	BLACK DROP OUT
	BLKCK	SUB CODE BLOCK CLOCK
	BOTTOM	CAP. FOR BOTTOM HOLD
	BYP	BYPATH
	BYTCK	BYTE CLOCK
C	CAV	CONSTANT ANGULAR VELOCITY
	CBDO	CAP. BLACK DROP OUT
	CD	COMPACT DISC
	CDSCK	CD SERIAL DATA CLOCK
	CDSRDATA	CD SERIAL DATA
	CDRF	CD RF (EFM) SIGNAL
	CDV	COMPACT DISC-VIDEO
	CHNDATA	CHANNEL DATA
	CKSL	SYSTEM CLOCK SELECT
	CLV	CONSTANT LINEAR VELOCITY
	COFTR	CAP. OFF TRACK
	CPA	CPU ADDRESS
	CPCS	CPU CHIP SELECT
	CPDT	CPU DATA
	CPH1~3	CLOCK PULSE SOURCE DRIVE
	CPUADR	CPU ADDRESS LATCH
	CPUADT	CPU ADDRESS DATA BUS
	CPUIRQ	CPU INTERRUPT REQUEST
	CPRD	CPU READ ENABLE
	CPV	GATE DRIVER CLOCK PULSE
	CPWR	CPU WRITE ENABLE
	CS	CHIP SELECT
	CSYNCIN	COMPOSITE SYNC IN
	CSYNCOUT	COMPOSITE SYNC OUT
D	DACCK	D/A CONVERTER CLOCK
	DEEMP	DE-EMPHASIS BIT ON/OFF
	DEMPH	DE-EMPHASIS 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

INITIAL/LOGO		ABBREVIATIONS
	DREQ	DATA REQUEST
	DRESP	DATA RESPONSE
	DSC	DIGITAL SERVO CONTROLLER
	DSLF	DATA SLICE LOOP FILTER
	DVD	DIGITAL VIDEO DISC
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
	OEH	SOURCE DRIVER OUTPUT ENABLE
	OEV 1, 2	GATE DRIVER OUTPUT ENABLE
	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

INITIAL/LOGO		ABBREVIATIONS
	PWMCTL	PWM OUTPUT CONTROL
	PWMDA	PULSE WAVE MOTOR DRIVE A
	PWMOA, B	PULSE WAVE MOTOR OUT A, B
R	RE	READ ENABLE
	RFENV	RF ENVELOPE
	RFO	RF PHASE DIFFERENCE OUTPUT
	RS	(CD-ROM) REGISTER SELECT
	RSEL	RF POLARITY SELECT
	RST	RESET
	RSV	RESERVE
S	SBI0, 1	SERIAL DATA INPUT
	SBO0	SERIAL DATA OUTPUT
	SBT0, 1	SERIAL CLOCK
	SCK	SERIAL DATA CLOCK
	SCKR	AUDIO SERIAL CLOCK RECEIVER
	SCL	SERIAL CLOCK
	SCLK	SERIAL CLOCK
	SDA	SERIAL DATA
	SEG0~UP	FL SEGMENT OUTPUT
	SELCLK	SELECT CLOCK
	SEN	SERIAL PORT ENABLE
	SIN1, 2	SERIAL DATA IN
	SOUT1, 2	SERIAL DATA OUT
	SPDI	SERIAL PORT DATA INPUT
	SPDO	SERIAL PORT DATA OUTPUT
	SPEN	SERIAL PORT R/W ENABLE
	SPRCLK	SERIAL PORT READ CLOCK
	SPWCLK	SERIAL PORT WRITE CLOCK
	SQCK	SUB CODE Q CLOCK
	SQCX	SUB CODE Q DATA READ CLOCK
	SRDATA	SERIAL DATA
	SRMADR	SRAM ADDRESS BUS
	SRMDT0~7	SRAM DATA BUS 0~7
	SS	START/STOP
	STAT	STATUS
	STCLK	STREAM DATA CLOCK
	STD0~UP	STREAM DATA
	STENABLE	STREAM DATA INPUT ENABLE
	STH	SOURCE START PULSE
	STSEL	STREAM DATA POLARITY SELECT
	STV	GATE DRIVER SCAN START PULSE
	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

INITIAL/LOGO		ABBREVIATIONS
	TPSO	OP AMP OUTPUT
	TPSP	OP AMP INVERTED INPUT
	TRCRS	TRACK CROSS SIGNAL
	TRON	TRACKING ON
	TRSON	TRAVERSE SERVO ON
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
	VSS	SOURCE POWER SUPPLY VOLTAGE
W	WAIT	BUS CYCLE WAIT
	WDCK	WORD CLOCK
	WEH	WRITE ENABLE HIGH
	WSR	WORD SELECT RECEIVER
X	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

S7. Replacement Parts List

Note: 1.* Be sure to make your orders of replacement parts according to this list.

2. IMPORTANT SAFETY NOTICE
   - Components identified with the mark ⚠ have the special characteristics for safety.
   - When replacing any of these components, use only the same type.
3. Unless otherwise specified,
   - All resistors are in OHMS, K=1,000 OHMS. All capacitors are in MICRO-FARADS (uf), P=uuF.
4. 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.

E.S.D. standards for Electrostatically Sensitive Devices, refer to "PREVENTION OF ELECTROSTATIC DISCHARGE (ESD) TO ELECTROSTATICALLY SENSITIVE (ES) DEVICES" section.

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
##	VEP74117B	AV OUT P.C.B.		80P 80PC (RTL)
C4002	F1H1C104A071	16V 0.1U	1	80P 80PC
C4003	F2A0J470A599	6.3V 47U	1	80P 80PC
C4005	F2A1E101B216	25V 100U	1	80P 80PC
C4006	F1H1C104A071	16V 0.1U	1	80P 80PC
C4007	F1H1C104A071	16V 0.1U	1	80P 80PC
C4008	F1H1C104A071	16V 0.1U	1	80P 80PC
C4009	ECJ1VC1H102J	50V 1000P	1	80P 80PC
C4010	F1H1C104A071	16V 0.1U	1	80P 80PC
C4011	ECJ1VC1H102J	50V 1000P	1	80P 80PC
C4012	F2A1E101B216	25V 100U	1	80P 80PC
C4015	F2A0J470A947	6.3V 47U	1	80P 80PC
C4016	ECJ1VC1H102J	50V 1000P	1	80P 80PC
C4017	ECJ1VC1H102J	50V 1000P	1	80P 80PC
C4018	F2A0J470A947	6.3V 47U	1	80P 80PC
C4019	F0A2E103A012	250V 0.01U	1	80P 80PC
C4020	F2A1C101B299	16V 100U	1	80P 80PC
C4025	F2A0J470A947	6.3V 47U	1	80P 80PC
C4026	ECJ1VC1H102J	50V 1000P	1	80P 80PC
C4027	F2A1E221A643	25V 220U	1	80P 80PC
C4028	F0A2E103A012	250V 0.01U	1	80P 80PC
C4029	ECJ1VC1H102J	50V 1000P	1	80P 80PC
C4031	F0A2E103A012	250V 0.01U	1	80P 80PC
C4032	F2A1E221A643	25V 220U	1	80P 80PC
C4033	F2A0J470A947	6.3V 47U	1	80P 80PC
C4034	F0A2E103A012	250V 0.01U	1	80P 80PC
C4035	F2A1E221A643	25V 220U	1	80P 80PC
C4036	F2A1E221A643	25V 220U	1	80P 80PC
C4037	F2A1E221A643	25V 220U	1	80P 80PC
C4039	F2A1E470A205	25V 47U	1	80P 80PC
JK4001	K2HA609B0012	JACK	1	80P 80PC
JK4002	K2HA102B0095	JACK	1	80P 80PC
P4001	K1KA23A00003	CONNECTOR(23P)	1	80P 80PC
Q4001	2SD1819K0L	TRANSISTOR	1	80P 80PC
Q4002	2SD1819K0L	TRANSISTOR	1	80P 80PC
Q4003	2SD1819K0L	TRANSISTOR	1	80P 80PC
Q4004	2SD1819K0L	TRANSISTOR	1	80P 80PC
Q4005	B1BACD000011	TRANSISTOR	1	80P 80PC
Q4006	2SD1819K0L	TRANSISTOR	1	80P 80PC
Q4007	2SD1819K0L	TRANSISTOR	1	80P 80PC
Q4008	B1BCCD000013	TRANSISTOR	1	80P 80PC
Q4009	2SD0601A0L	TRANSISTOR	1	80P 80PC
Q4010	2SB1218K0L	TRANSISTOR	1	80P 80PC
QR4001	XN0431100L	TRANSISTOR	1	80P 80PC
QR4002	XN0431100L	TRANSISTOR	1	80P 80PC
R4001	ERJ6GEYJ221V	1/8W 220	1	80P 80PC
R4002	D0HD821ZA002	1/10W 820	1	80P 80PC
R4003	ERJ3GEYJ473V	1/10W 47K	1	80P 80PC
R4004	ERJ3GEYJ821V	1/10W 820	1	80P 80PC
R4005	ERJ3GEYJ473V	1/10W 47K	1	80P 80PC
R4006	ERJ3GEYJ821V	1/10W 820	1	80P 80PC
R4007	ERJ6GEYJ221V	1/8W 220	1	80P 80PC
R4008	D0HD821ZA002	1/10W 820	1	80P 80PC
R4009	ERJ3GEYJ221V	1/10W 220	1	80P 80PC
R4010	D0HB821ZA002	1/16W 820	1	80P 80PC
R4011	ERJ3GEYJ473V	1/10W 47K	1	80P 80PC
R4012	ERJ3GEYJ821V	1/10W 820	1	80P 80PC
R4013	ERJ3GEYJ473V	1/10W 47K	1	80P 80PC
R4014	ERJ3GEYJ821V	1/10W 820	1	80P 80PC
R4015	ERJ3GEYJ221V	1/10W 220	1	80P 80PC
R4016	D0HB821ZA002	1/16W 820	1	80P 80PC
R4017	ERJ3GEYJ221V	1/10W 220	1	80P 80PC
R4018	D0HB821ZA002	1/16W 820	1	80P 80PC
R4019	ERJ3GEYJ821V	1/10W 820	1	80P 80PC
R4020	ERJ3GEYJ473V	1/10W 47K	1	80P 80PC
R4021	ERJ3GEYJ473V	1/10W 47K	1	80P 80PC
R4022	ERJ3GEYJ821V	1/10W 820	1	80P 80PC
R4023	D0HD331ZA002	1/16W 330	1	80P 80PC
R4024	ERJ3GEYJ221V	1/10W 220	1	80P 80PC
R4025	D0HB821ZA002	1/16W 820	1	80P 80PC

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R4026	D0HD331ZA002	1/16W 330	1	80P 80PC
R4041	ERJ3GEYJ102V	1/10W 1K	1	80P 80PC
R4042	ERJ3GEYJ102V	1/10W 1K	1	80P 80PC
R4043	ERJ3GEYJ102V	1/10W 1K	1	80P 80PC
R4044	ERJ6GEYJ391V	1/8W 390	1	80P 80PC
R4045	ERJ3GEYJ750V	1/10W 75	1	80P 80PC
R4046	ERJ3GEYJ103V	1/10W 10K	1	80P 80PC
R4047	ERJ3GEYJ102V	1/10W 1K	1	80P 80PC
##	VEP71153A	POWER P.C.B.		60P 60PC 601P 605P (RTL)
##	VEP71153B	POWER P.C.B.		80P 80PC (RTL)
⚠ C1001	ECQU2A683MLC	0.068U	1	
⚠ C1005	F1B2G1020002	400V 1000P	1	
⚠ C1006	F1B2G1020002	400V 1000P	1	
⚠ C1007	ECQU2A223MLC	0.022U	1	
C1014	F2B2E1510004	250V 150U	1	
⚠ C1018	F1B2G1020002	400V 1000P	1	
C1021	F1B3A182A009	250V 1800P	1	
C1023	ECJ1VB1H102K	50V 1000P	1	
C1024	ECJ1VC1H101J	50V 100P	1	
C1025	F2A1V6800002	35V 68U	1	
C1026	F1H1H222A798	50V 2200P	1	
C1027	ECJ1VB1H102K	50V 1000P	1	
C1028	F2A1E100A210	25V 10P	1	
C1029	ERJ3GEY0R00V	1/10W 0	1	
C1113	F1H1C105A095	16V 1U	1	
C1114	F1H1C104A071	16V 0.1U	1	
C1117	F1H1C105A095	16V 1U	1	
C1118	F2A1C1520021	16V 1500U	1	
C1120	ECJ1VB1H103K	50V 0.01U	1	
C1121	F2A1C1520021	16V 1500U	1	
C1122	F2A1A5600003	10V 56U	1	
C1123	F2A1H1010044	50V 100U	1	
C1124	F1H1C104A071	16V 0.1U	1	
C1125	F2A1C102A236	16V 1000U	1	60P 60PC 601P 605P
C1125	F2A1C102B607	16V 1000U	1	80P 80PC
C1126	ECJ1VF1E104Z	25V 0.1U	1	
C1127	F2A1H220A234	50V 22U	1	
C1128	F1H1A105A028	10V 1U	1	
C1132	F2A1E1010099	25V 100P	1	
C1133	F2A1C4710079	16V 470U	1	
C1135	F1H1C104A071	16V 0.1U	1	
C1136	F1H1C104A071	16V 0.1U	1	
C1138	F1H1C104A071	16V 0.1U	1	
C1140	ECJ1VC1H181J	50V 180P	1	
C1141	F2A1A470A388	10V 47U	1	
C1143	F2A1A101A389	10V 100U	1	
C1146	ECJ1VB1H103K	50V 0.01U	1	
C1150	F2A1A6810022	10V 680U	1	
C1151	F1H1C104A071	16V 0.1U	1	
C1152	F2A1E221A643	25V 220U	1	80P 80PC
C1153	F1H1C104A071	16V 0.1U	1	80P 80PC
C1154	F2A1E221A643	25V 220U	1	80P 80PC
C7001	ECJ1VB1H103K	50V 0.01U	1	
C7002	F1H1A105A028	10V 1U	1	
C7003	F1H1A105A028	10V 1U	1	
C7004	F1H1C104A071	16V 0.1U	1	
C7005	ECJ1VF1H104Z	50V 0.1U	1	
C7006	F1H1C104A071	16V 0.1U	1	
D1006	B0EDKT000009	DIODE	1	
D1021	MAZ73000BC	DIODE	1	
D1022	MA2J1110GL	DIODE	1	
D1023	MAZ73000BC	DIODE	1	
D1025	MAZ41600MF	DIODE	1	
D1026	MA2C165001VT	DIODE	1	
D1027	B0HAGM000006	DIODE	1	
D1029	MAZ41200MF	DIODE	1	
D1107	B0AADM000003	DIODE	1	
D1108	B0JAME000025	DIODE	1	
D1110	B0JBSG000054	DIODE	1	
D1113	MAZ42200LF	DIODE	1	
D1122	B0JCPD000021	DIODE	1	
D1123	B0JCPD000021	DIODE	1	
D1125	B0JAML000004	DIODE	1	80P 80PC

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
D1126	MAZ41200HF	DIODE	1	80P 80PC
D1127	MAZ73000BC	DIODE	1	
D1128	MAZ41000MF	DIODE	1	
D7001	MAZ41800MF	DIODE	1	
DP7001	A2BD00000188	DISPLAY TUBE	1	
⚠ F1001	K5D202BK0005	FUSE	1	
IC1021	C0DACZH00037	IC	1	
IC1101	C0DAEYY00022	IC	1	
IC1102	C0CBCAD00092	IC	1	
IC1103	C0DBAZZ00132	IC	1	
IC1104	C0DAEYH00002	IC	1	
IC7001	C0HBB0000057	IC	1	
IC7002	C0CBCBD00008	IC	1	
⚠ IP1101	K5H122Z00003	IC PROTECTOR	1	
⚠ IP1102	K5H102Z00006	IC PROTECTOR	1	
⚠ IP1105	K5H172Z00003	IC PROTECTOR	1	80P 80PC
K7004	ERJ3GEY0R00V	1/10W 0	1	
⚠ L1001	G0B233D00005	COIL	1	
⚠ L1002	G0B123E00005	COIL	1	
L1103	G0A100H00025	COIL 10UH	1	
L1104	G0C100K00043	COIL 10UH	1	
L1105	G0A150ZA0041	COIL 15UH	1	
L1107	G0C330KA0065	COIL 33UH	1	80P 80PC
LB1021	J0JKB0000003	COIL	1	
LB1103	J0JHC0000048	FILTER	1	
LB1104	J0JHC0000048	FILTER	1	
LB1107	J0JHC0000048	FILTER	1	
LB7001	ERJ6GEY0R00V	1/8W 0	1	
LB7002	ERJ6GEY0R00V	1/8W 0	1	
LB7003	ERJ6GEY0R00V	1/8W 0	1	
⚠ P1001	K2AB2H000004	AC INLET	1	
P1102	K1KA13AA0185	CONNECTOR(13P)	1	60P 60PC 601P 605P
P1102	K1KA14AA0185	CONNECTOR(14P)	1	80P 80PC
P7001	K1KB06B00033	CONNECTOR(6P)	1	
P7003	K1KA03AA0180	CONNECTOR(3P)	1	
P7004	K1KA04AA0180	CONNECTOR(4P)	1	
⚠ Q1022	B3PBA0000454	TRANSISTOR	1	
⚠ Q1023	B3PBA0000454	TRANSISTOR	1	
Q1101	2SA1309ARA	TRANSISTOR	1	
Q1102	B1DHED000008	TRANSISTOR	1	
Q1104	B1DHED000008	TRANSISTOR	1	
Q1106	2SB1320ARA	TRANSISTOR	1	80P 80PC
Q1107	2SC3311ASA	TRANSISTOR	1	
Q7001	2SB0710A0L	TRANSISTOR	1	
Q7003	B1ABGC000011	TRANSISTOR	1	
QR1101	UNR5212J0L	TRANSISTOR	1	
QR1102	UNR52A3J0L	TRANSISTOR	1	
QR1105	UNR5212J0L	TRANSISTOR	1	
QR7001	UNR52A3J0L	TRANSISTOR	1	
QR7003	UNR51A3J0L	TRANSISTOR	1	
QR7004	UNR52A3J0L	TRANSISTOR	1	
R1023	ERJ3GEYJ103V	1/10W 10K	1	
R1024	ERJ3RBD123V	1/16W 12K	1	
R1025	ERJ3RBD222V	1/16W 2.2K	1	
R1026	ERDS2TJ221T	1/4W 220	1	
R1028	ERJ3GEYJ100V	1/10W 10	1	
R1029	ERJ3GEYJ100V	1/10W 10	1	
R1030	ERJ3GEYJ752V	1/10W 7.5K	1	
R1031	ERJ3GEYJ224V	1/10W 220K	1	
R1032	ERJ3RBD392V	1/16W 3.9K	1	
R1033	ERJ3RBD562V	1/16W 5.6K	1	
R1034	ERJ3RBD123V	1/16W 12K	1	
R1035	ERJ3RBD332V	1/16W 3.3K	1	
R1104	ERJ3GEYJ472V	1/10W 4.7K	1	
R1111	ERJ3GEYJ102V	1/10W 1K	1	
R1112	ERJ3GEYJ222V	1/10W 2.2K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R1113	ERJ3GEYJ103V	1/10W 10K	1	
R1115	ERJ3RBD472V	1/16W 4.7K	1	
R1116	ERJ3GEYJ222V	1/10W 2.2K	1	
R1117	ERDS2TJ101T	1/4W 100	1	
R1118	ERJ3RBD301V	1/16W 300	1	
R1119	ERJ3RBD183V	1/16W 18K	1	
R1120	ERJ3GEYJ472V	1/10W 4.7K	1	
R1121	ERJ3GEYJ223V	1/10W 22K	1	
R1122	ERJ3GEY0R00V	1/10W 0	1	
R1123	ERJ3GEYJ223V	1/10W 22K	1	
R1129	ERJ3GEYJ513V	1/10W 51K	1	
R1130	D1BDR027A101	2W 0.027U	1	
R1136	ERJ3RBD152V	1/16W 1.5K	1	
R1137	ERJ3RBD393V	1/16W 39K	1	
R1138	ERJ3RBD113V	1/16W 11K	1	
R1141	ERJ3RBD222V	1/16W 2.2K	1	
R1142	ERJ3RBD822V	1/16W 8.2K	1	
R1143	ERJ3RBD272V	1/16W 2.7K	1	
R1146	ERJ6GEY0R00V	1/8W 0	1	
R1150	ERJ3GEY0R00V	1/10W 0	1	80P 80PC
R1151	ERJ3GEYJ221V	1/10W 220	1	80P 80PC
R1152	ERJ6GEY0R00V	1/8W 0	1	80P 80PC
R1161	ERDS2TJ821T	1/4W 820	1	
R1162	ERDS2TJ821T	1/4W 820	1	
R1163	ERDS2TJ821T	1/4W 820	1	
R1164	ERDS2TJ821T	1/4W 820	1	
R1165	ERDS2TJ821T	1/4W 820	1	
R1166	ERJ3GEYJ821V	1/10W 820	1	
R1167	ERJ3GEY0R00V	1/10W 0	1	
R7002	ERJ3GEY0R00V	1/10W 0	1	
R7003	ERJ3GEY0R00V	1/10W 0	1	
R7004	ERJ3GEY0R00V	1/10W 0	1	
R7005	ERJ3GEY0R00V	1/10W 0	1	
R7006	ERJ3GEYJ272V	1/10W 2.7K	1	
R7007	ERJ3GEYJ562V	1/10W 5.6K	1	
R7009	ERJ3GEYJ104V	1/10W 100K	1	
R7010	ERJ3GEYJ103V	1/10W 10K	1	
R7011	ERJ3RBD471V	1/16W 470	1	
⚠ T1001	G4D2A0000307	TRANSFORMER	1	
⚠ VA1001	ERZV05Z471CS	VARISTOR	1	
W501	ERJ3GEY0R00V	1/10W 0	1	
ZA1001	EYF52BCY	FUSE HOLDER	1	
ZA1002	EYF52BCY	FUSE HOLDER	1	
ZA1005	K9ZZ00001279	EARTH PLATE	1	
ZA1021	VSC5603-A	HEAT SINK	1	
ZA1022	XYN3+J8FJ	SCREW	1	
ZA1110	VSC5604-A	HEAT SINK	1	
ZA1111	XYN3+J8FJ	SCREW	1	
ZB7001	RMN0913	FL HOLDER	1	
##	VEP76191A	FRONT P.C.B.		60P 60PC 601P 605P
##	VEP76191B	FRONT P.C.B.		80P 80PC
C7202	ECJ1VF1A105Z	10V 1U	1	
D7201	B3AEA0000099	LED	1	80P 80PC
IR7201	B3RAD0000150	REMOTE SENSOR	1	
P7201	K1KA10B00196	CONNECTOR(10P)	1	
P7202	K1KA06B00150	CONNECTOR(6P)	1	
PJ7203	REZ1927	WIRE	1	
PJ7204	REZ1926	WIRE	1	
R7201	ERJ3RBD222V	1/16W 2.2K	1	
R7202	ERJ3RBD392V	1/16W 3.9K	1	
R7203	ERJ3RBD222V	1/16W 2.2K	1	
R7204	ERJ3RBD392V	1/16W 3.9K	1	
R7205	ERJ3GEYJ330V	1/10W 33	1	
R7206	ERJ3GEY0R00V	1/10W 0	1	

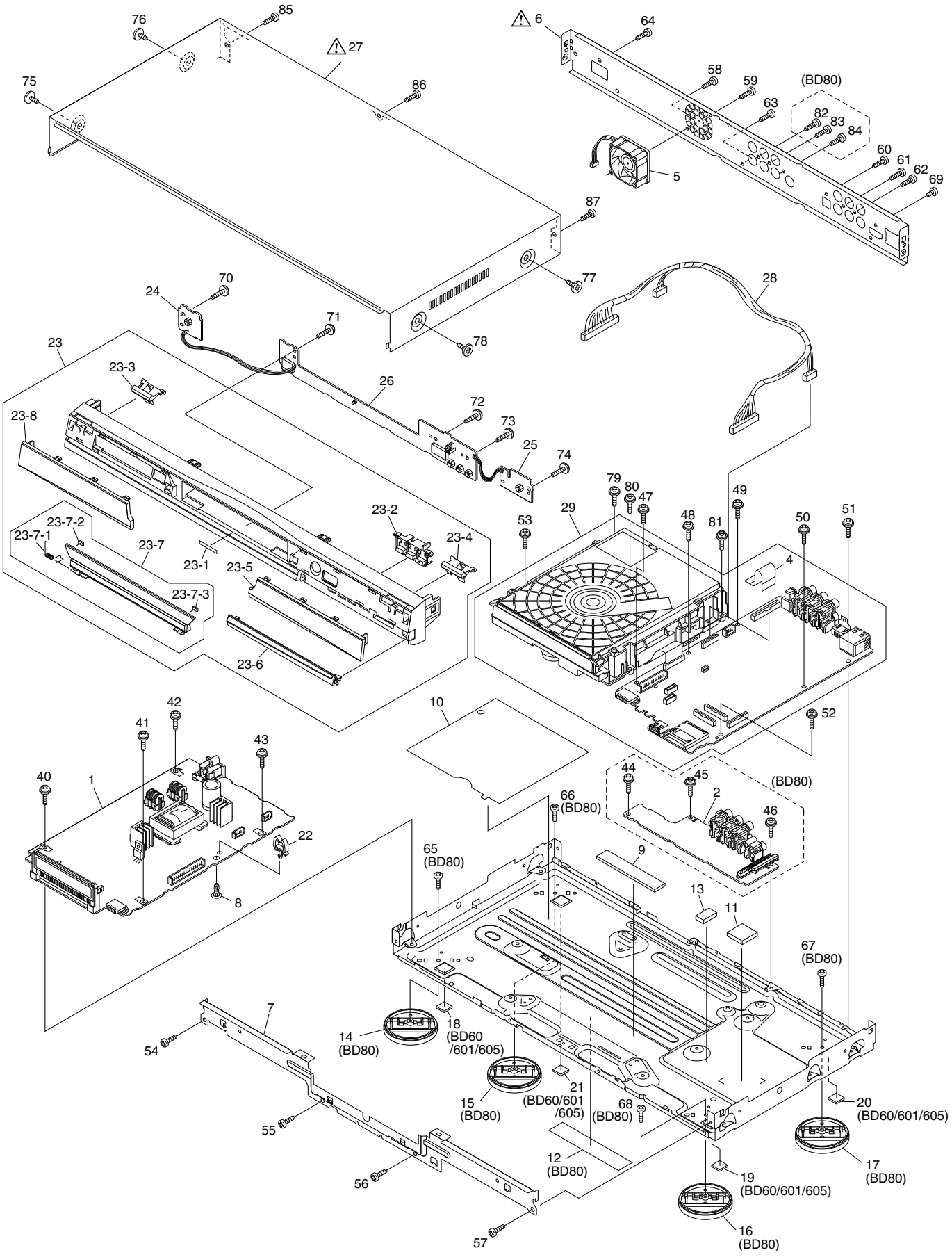
Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R7207	ERJ6GEYJ301V	1/8W 300	1	80P 80PC
S7202	EVQ11A04M	SWITCH,PLAY	1	
S7204	EVQ11A04M	SWITCH,PAUSE	1	
S7206	EVQ11A04M	SWITCH,STOP	1	
W7501	ERJ3GEY0R00V	1/10W 0	1	
W7502	ERJ3GEY0R00V	1/10W 0	1	
W7503	ERJ6GEY0R00V	1/8W 0	1	
W7504	ERJ6GEY0R00V	1/8W 0	1	
W7505	ERJ3GEY0R00V	1/10W 0	1	
W7506	ERJ6GEY0R00V	1/8W 0	1	
##	VEP70292A	POWER SW P.C.B.		(RTL)
S7551	EVQ11A04M	SWITCH,POWER	1	
##	VEP70293A	OPEN SW P.C.B.		(RTL)
S7581	EVQ11A04M	SWITCH,OPEN/CLOSE	1	
##		CASING/ACCESSORY/PACKING		
1	VEP71153A	POWER P.C.B.	1	60P 60PC 601P 605P (RTL)
1	VEP71153B	POWER P.C.B.	1	80P 80PC (RTL)
2	VEP74117B	AV OUT P.C.B.	1	80P 80PC (RTL)
3	RFKB76186A	DIGITAL P.C.B.	1	60P 60PC 601P 605P
3	RFKB76186B	DIGITAL P.C.B.	1	80P 80PC
4	VWJ2058-1	FFC(18P)	1	
5	L6FAGC9E0002	FAN MOTOR	1	
⚠ 6	RGR0389A-G1	REAR PANEL	1	60P
⚠ 6	RGR0389A-H1	REAR PANEL	1	60PC
⚠ 6	RGR0389A-R	REAR PANEL	1	601P
⚠ 6	RGR0389A-S	REAR PANEL	1	605P
⚠ 6	RGR0389B-C1	REAR PANEL	1	80P
⚠ 6	RGR0389B-D1	REAR PANEL	1	80PC
7	RMA2159A-1	FRONT ANGLE	1	
8	RMN0091	PCB SUPPORT	1	
9	RMX0437	INSULATION SHEET	1	
10	RMZ0975A	INSULATION SHEET	1	
11	RSC0851	HEAT TRANSFER SHEET	1	
12	RQLC1025	CAUTION LABEL	1	80P 80PC
13	RSC0854	HEAT TRANSFER SHEET	1	
14	RYQ0684-H	LEG	1	80P 80PC
15	RYQ0684-H	LEG	1	80P 80PC
16	RYQ0684-H	LEG	1	80P 80PC
17	RYQ0684-H	LEG	1	80P 80PC
18	RKA0206A-K	FOOT RUBBER	1	60P 60PC 601P 605P
19	RKA0206A-K	FOOT RUBBER	1	60P 60PC 601P 605P
20	RKA0206A-K	FOOT RUBBER	1	60P 60PC 601P 605P
21	RKA0206A-K	FOOT RUBBER	1	60P 60PC 601P 605P
22	VJF0882	CLAMPER	1	
23	RYP1461-K	FRONT PANEL ASS'Y1	1	60P 60PC
23	RYP1461F-K	FRONT PANEL ASS'Y1	1	601P
23	RYP1461G-K	FRONT PANEL ASS'Y1	1	605P
23	RYP1462-K	FRONT PANEL ASS'Y1	1	80P 80PC
23-1	RGQ0512A-W	SD PANEL LIGHT	1	80P 80PC
23-2	RGU2605-K	OPERATION BUTTON	1	
23-3	RGU2627-K	POWER BUTTON	1	
23-4	RGU2628-K	OPEN/CLOSE BUTTON	1	
23-5	RKW0892-Q	FRONT WINDOW ASS'Y	1	60P 60PC 601P 605P
23-5	RKW0894-Q	FRONT WINDOW ASS'Y	1	80P 80PC
23-6	RYF0846C-K	DOOR ASS'Y	1	60P 60PC 605P
23-6	RYF0846D-K	DOOR ASS'Y	1	601P
23-6	RYF0846A-K	DOOR ASS'Y	1	80P 80PC
23-7	RYF0853-K	TRAY DOOR ASS'Y	1	60P 60PC
23-7	RYF0853A-K	TRAY DOOR ASS'Y	1	601P
23-7	RYF0853B-K	TRAY DOOR ASS'Y	1	605P
23-7	RYF0854-K	TRAY DOOR ASS'Y	1	80P 80PC
23-7-1	RMB0877	TRAY DOOR SPRING	1	
23-7-2	RMG0735-KJ	CUSHION	1	
23-7-3	RMG0735-KJ	CUSHION	1	
23-8	RYK1558-Q	FL WINDOW ASS'Y	1	60P 60PC 601P 605P
23-8	RYK1559-Q	FL WINDOW ASS'Y	1	80P 80PC

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
24	VEP70292A	POWER SW P.C.B.	1	(RTL)
25	VEP70293A	OPEN SW P.C.B.	1	(RTL)
26	VEP76191A	FRONT P.C.B.	1	60P 60PC 601P 605P
26	VEP76191B	FRONT P.C.B.	1	80P 80PC
⚠ 27	RKM0605-K	TOP CASE	1	
28	VEK0N34	WIRE WITH CONNECTOR	1	60P 60PC 601P 605P
28	VEK0N38	WIRE WITH CONNECTOR	1	80P 80PC
29	RFKNBD60P	BDP/DIGITAL P.C.B. MODULE	1	60P 601P 605P
29	RFKNBD80P	BDP/DIGITAL P.C.B. MODULE	1	80P
40	RHD30101-1	SCREW	1	
41	RHD30101-1	SCREW	1	
42	RHD30101-1	SCREW	1	
43	RHD30101-1	SCREW	1	
44	RHD30101-1	SCREW	1	80P 80PC
45	RHD30101-1	SCREW	1	80P 80PC
46	RHD30101-1	SCREW	1	80P 80PC
47	RHD30101-1	SCREW	1	
48	RHD30101-1	SCREW	1	
49	RHD30101-1	SCREW	1	
50	RHD30101-1	SCREW	1	
51	RHD30101-1	SCREW	1	
52	RHD30101-1	SCREW	1	
53	RHD30101-1	SCREW	1	
54	RHD30119-L	SCREW	1	
55	RHD30119-L	SCREW	1	
56	RHD30119-L	SCREW	1	
57	RHD30119-L	SCREW	1	
58	RHD30119-L	SCREW	1	
59	RHD30119-L	SCREW	1	
60	RHD30119-L	SCREW	1	
61	RHD30119-L	SCREW	1	
62	RHD30119-L	SCREW	1	
63	RHD30119-L	SCREW	1	
64	RHD30119-L	SCREW	1	
65	RHD30105-1	SCREW	1	80P 80PC
66	RHD30105-1	SCREW	1	80P 80PC
67	RHD30105-1	SCREW	1	80P 80PC
68	RHD30105-1	SCREW	1	80P 80PC
69	XSN3+4FJ	SCREW	1	
70	RHD26045-J	SCREW	1	
71	RHD26045-J	SCREW	1	
72	RHD26045-J	SCREW	1	
73	RHD26045-J	SCREW	1	
74	RHD26045-J	SCREW	1	
75	RHD30113-1K	SCREW	1	
76	RHD30113-1K	SCREW	1	
77	RHD30113-1K	SCREW	1	
78	RHD30113-1K	SCREW	1	
79	RHD30101-1	SCREW	1	
80	RHD30101-1	SCREW	1	
81	RHD30101-1	SCREW	1	
82	RHD30119-L	SCREW	1	80P 80PC
83	RHD30119-L	SCREW	1	80P 80PC
84	RHD30119-L	SCREW	1	80P 80PC
85	VHD0690-1	SCREW	1	
86	VHD0690-1	SCREW	1	
87	VHD0690-1	SCREW	1	
29	RFKNBD60PC	BDP/DIGITAL P.C.B. MODULE	1	60PC
29	RFKNBD80PC	BDP/DIGITAL P.C.B. MODULE	1	80PC
##	M2		1	(RTL)
⚠ 101	VQL1V70-J	LASER CAUTION LABEL	1	
102	VMA0V86	YOKE	1	
103	VMD5751	UPPER BASE	1	
104	VMD5752	CLAMPER	1	
105	VMT1876-J	DUST COVER A	1	
106	VMZ3737-J	CLAMP COVER	1	
107	VXA8619	TRAY ASS'Y	1	
108	XTV26+10GFJ	SCREW	1	
109	XTV26+10GFJ	SCREW	1	
110	XTV26+10GFJ	SCREW	1	
111	XTV26+10GFJ	SCREW	1	
112	VMD5753	MID BASE	1	
113	VDG1713	PULLEY GEAR	1	
114	VDG1714	MID GEAR	1	
115	VDG1715	DRIVE GEAR	1	
116	VEM0867	LOADING MOTOR U	1	

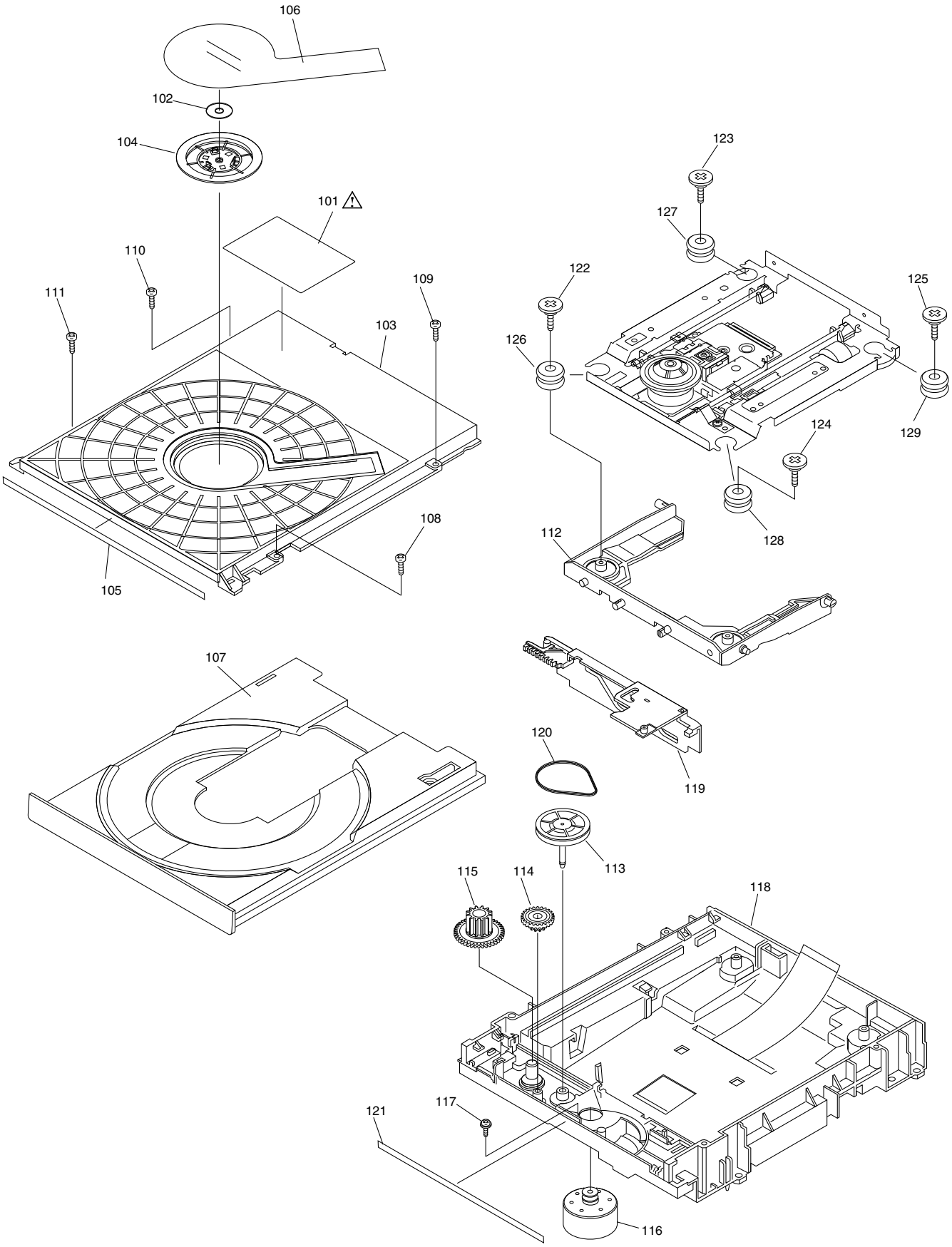
Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
117	VHD1653-1	SCREW	1	
118	VMD5748-1	MECHA CHASSIS	1	
119	VMD5749	SLIDE CAM	1	
120	VMG1809	BELT	1	
121	VMT1877-J	DUST COVER B	1	
122	VHD1518-1	SCREW	1	
123	VHD1518-1	SCREW	1	
124	VHD1518-1	SCREW	1	
125	VHD1518-1	SCREW	1	
126	VMG1883	DAMPER	1	
127	VMG1883	DAMPER	1	
128	VMG1883	DAMPER	1	
129	VMG1883	DAMPER	1	
##	M3		1	(RTL)
⚠ A1	K2CB2CB00022	AC CORD	1	
A2	K1HA19DA0005	HDMI CABLE	1	605P
A3	K2KA6BA00004	AV CORD	1	
A4	N2QAYB000378	REMOTE CONTROL UNIT	1	
A4-1	100300037800	BATTERY COVER	1	
A5	RPQCF0006-2	ACCESSORY BOX	1	
A6	RPFC0031-B	POLYETHYLENE BAG	1	
⚠ A7	RQT9378-1P	OPERATING INSTRUCTIONS	1	601P 605P (IC)
⚠ A7	RQT9378-P	OPERATING INSTRUCTIONS	1	60P 60PC 80P 80PC (IA)
⚠ A7	RQT9379-C	OPERATING INSTRUCTIONS	1	60PC 80PC (IB)
PC1	RPG8737	PACKING CASE	1	60P
PC1	RPG8738	PACKING CASE	1	60PC
PC1	RPG8739	PACKING CASE	1	80P
PC1	RPG8740	PACKING CASE	1	80PC
PC1	RPG8817	PACKING CASE	1	601P
PC1	RPG8818	PACKING CASE	1	605P
PC2	RPF0458	POLYETHYLENE BAG	1	
PC3	RPN2101A	CUSHION(A)	1	
PC4	RPN2101B	CUSHION(B)	1	

S8. Exploded View

S8.1. Frame and Casing Section



S8.2. Mechanism Section



S8.3. Packing Parts and Accessories Section