

Service Manual

DVD/CD Player

Model No. **DVD-S58EB**
DVD-S58EE
DVD-S58EG
DVD-S58EP
DVD-S38EB
DVD-S38EE
DVD-S38EG
DVD-S38EP



DVD-S58

Colour
(K).....Black Type

⚠ 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. IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety. These parts are marked by

 in the Schematic Diagrams, Circuit Board Layout, Exploded Views and Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent X-RADIATION, shock, fire, or other hazards. Do not modify the original design without permission of manufacturer.

2. An Isolation Transformer should always be used during the servicing of AC Adaptor whose chassis is not isolated from the AC power line. Use a transformer of adequate power rating as this protects the technician from accidents resulting in personal injury from electrical shocks. It will also protect AC Adaptor from being damaged by accidental shorting that may occur during servicing.
3. 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.
4. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
5. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

1.2. 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 $1\text{ M}\Omega$ and $5.2\text{ M}\Omega$. When the exposed metal does not have a return path to the chassis, the reading must be infinity.

1.3. 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 $1.5\text{ k}\Omega$, 10 W resistor, in parallel with a $0.15\text{ }\mu\text{F}$ capacitor, between each exposed metallic part on the set and a good earth ground, as shown in Figure 1.
3. Use an AC voltmeter, with $1\text{ k}\Omega/\text{V}$ 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 V RMS . A leakage current tester (Simpson Model 229 or equivalent) may be used to make the hot checks, leakage current must not exceed $1/2\text{ mA}$. 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.

Hot-Check Circuit

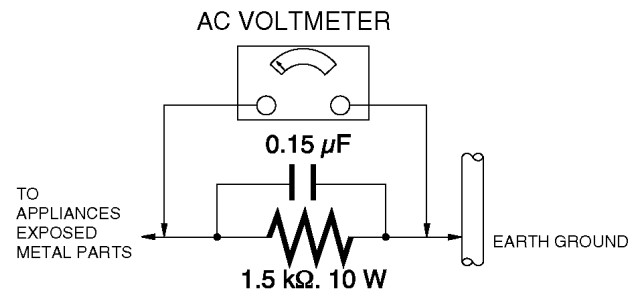


Figure. 1

2 Warning

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

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices.

Examples of typical ES devices are IC (integrated circuits) and some field-effect transistors and semiconductor "chip" components.

The following techniques should be used to help reduce the incidence of component damage caused by electrostatic discharge (ESD).


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

CAUTION :

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

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

IMPORTANT SAFETY NOTICE

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

2.2. Caution for AC Cord (For the United Kingdom and Republic of Ireland)

2.2.1. Information for Your Safety

IMPORTANT

Your attention is drawn to the fact that recording of pre-recorded tapes or discs or other published or broadcast material may infringe copyright laws.

WARNING

To reduce the risk of fire or shock hazard, do not expose this equipment to rain or moisture.

CAUTION

To reduce the risk of fire or shock hazard and annoying interference, use the recommended accessories only.

FOR YOUR SAFETY

DO NOT REMOVE THE OUTER COVER

To prevent electric shock, do not remove the cover. No user serviceable parts inside. Refer servicing to qualified service personnel.

2.2.2. Caution for AC Mains Lead

For your safety, please read the following text carefully.

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

A 5-ampere fuse is fitted in this plug.

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

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



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

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

A replacement fuse cover can be purchased from your local Panasonic Dealer.

If the fitted moulded plug is unsuitable for the socket outlet in your home then the fuse should be removed and the plug cut off and disposed of safely.

There is a danger of severe electrical shock if the cut off plug is inserted into any 13-ampere socket.

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

If in any doubt, please consult a qualified electrician.

2.2.2.1. Important

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

Blue	Neutral
Brown	Live

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured BLUE must be connected to the terminal in the plug which is marked with the letter N or coloured BLACK.

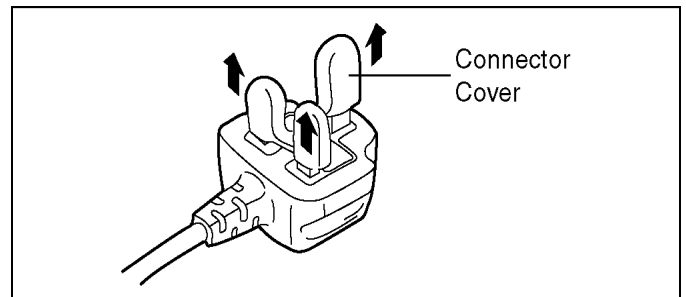
The wire which is coloured BROWN must be connected to the terminal in the plug which is marked with the letter L or coloured RED.

Under no circumstances should either of these wires be connected to the earth terminal of the three pin plug, marked with the letter E or the Earth Symbol.



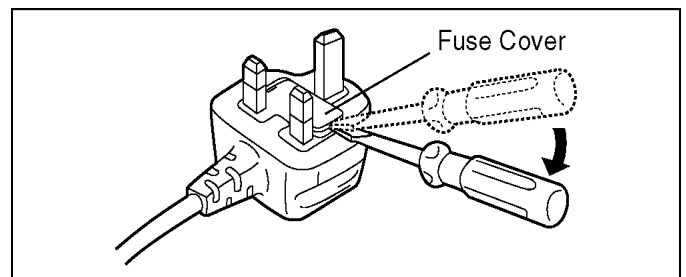
2.2.2.2. Before Use

Remove the Connector Cover as follows.

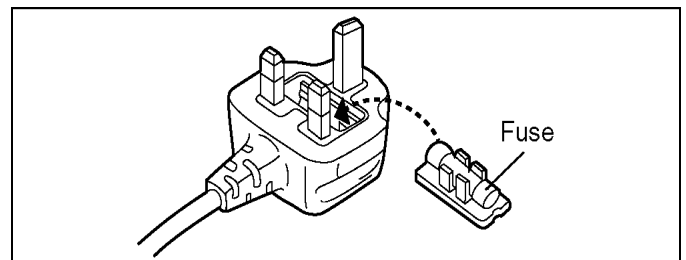


2.2.2.3. How to Replace the Fuse

1. Remove the Fuse Cover with a screwdriver.



2. Replace the fuse and attach the Fuse cover.



2.3. Precaution of Laser Diode

CAUTION

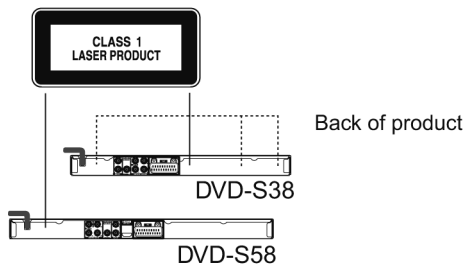
This product utilizes a laser diode with the unit turned "on", invisible laser radiation is emitted from the pick-up lens.
Wave length: 770 to 800 nm (CDs)/645 to 660 nm (DVDs)
Maximum output radiation power from pick-up: 100 μ W/VDE
Laser radiation from the pick-up lens is safety level, but be sure the followings:

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

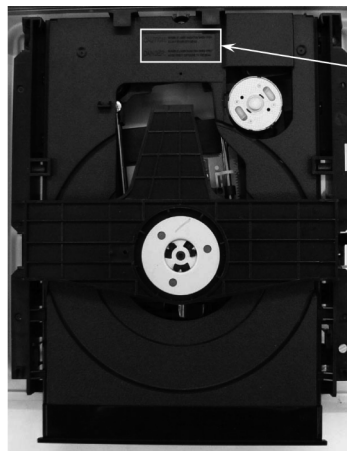
ACHTUNG

Dieses Produkt enthält eine Laserdiode.
Im eingeschalteten Zustand wird unsichtbare Laserstrahlung von der Lasereinheit abgestrahlt.
Wellenlänge: 770 to 800 nm (CDs)/645 to 660 nm (DVDs)
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.



Illustrations show the model for the United Kingdom and Republic of Ireland.



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.

2.4. Static Electricity Protection Measures

- The laser diode in the traverse unit (optical pick-up) may break down due to potential difference caused by static electricity of clothes or human body.
So, be careful of electrostatic breakdown during repair of the traverse unit (optical pick-up).

2.5. Ground for electrostatic breakdown prevention

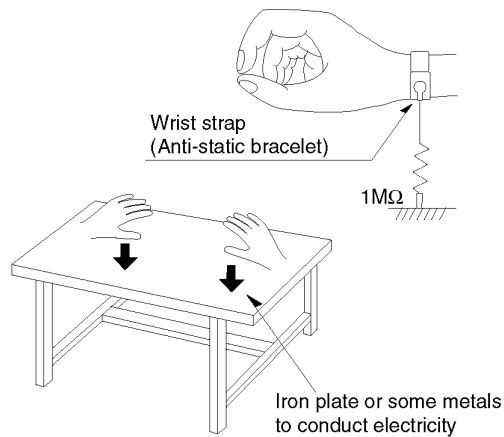
- As for parts that use optical pick-up (laser diode), the optical pick-up is destroyed by the static electricity of the working environment.
Repair in the working environment that is grounded.

2.5.1. Work table grounding

- Put a conductive material (sheet) or steel sheet on the area where the traverse unit (optical pick-up) is placed, and ground the sheet.

2.5.2. Human body grounding

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



2.5.3. When exchange the Drive

- Before remove the ESD prevention bag, make sure to use the anti-static wrist strap to discharge the static electricity when replace the Drive.

Note:

The ESD prevention bag is used to replace the original short-circuit point.
It can be removed while placing the Drive.

3 Service Navigation

3.1. Service Information

This service manual contains technical information, which 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, the information will be followed by service manual to be controlled with original service manual.

Note:

The replacement parts of this model is supplied as block unit.

Please use Troubleshooting Guide for your reference of the repair.

3.2. Caution for DivX

Please will always pass the customer “Warning for Customers Who Use the DivX Video-on-Demand content.” with the product and get it when you unavoidably exchange DIGITAL P.C.B. including FLASH ROM (When the product is exchanged, it is the same.). You must use print attached to service part (DIGITAL P.C.B. including FLASH ROM) or must use copy of print below as “Warning for Customers Who Use the DivX Video-on-Demand content.”

Information needed without fail for the customer for whom it is used continuing DivX Video-on-Demand Service to “Manual for the customer” is recorded.

Appendix:

*Parts that memorize user’s information are only FLASH ROM.

*The registration of Registration Code is possible for half a year up to 6 recorders up to 10 recorders a year.

About DivX Video-on-Demand Control

ABOUT DIVX VIDEO-ON-DEMAND:

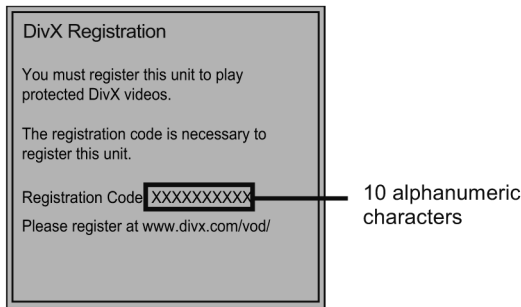
This DivX Certified® device must be registered in order to play DivX Video-on-Demand (VOD) content.

To generate the registration code, locate the DivX VOD section in the device setup menu.

Go to vod.divx.com with this code to complete the registration process and learn more about DivX VOD.

- Video images of the DivX VOD contents stored on USB device can be output only through the HDMI output terminal.

Display the unit’s registration code.



- After playing DivX VOD content for the first time, the registration code is not displayed.
- If you purchase DivX VOD content using a registration code different from this unit’s code, you will not be able to play this content.

Cancel the unit’s registration.

Press [◀, ▶] to select “Yes” in “DivX Registration”. Use the deregistration code to cancel the registration in www.divx.com.

Regarding DivX VOD content that can only be played a set number of times

Some DivX VOD contents can only be played a set number of times. When you play this content, the number of times already played and initially playable number of times is displayed.

- The remaining number of plays decreases each time a programme is played. However, when playing from the point where play was previously stopped, the remaining number of plays does not decrease due to the resume play function.

Registration Code is memorized in FLASH ROM (Digital P.C.B.).

If exchange above P.C.B. or FLASH ROM, new registration Code differ from previous Registration Code will be generated.

In this case if your customer uses DivX Video-on-Demand service, he/she will no longer be able to play any content that he/she purchased under that same registration code.

Therefore your customer will need to obtain and register the new registration code.

*Copy this page and cut on the dotted line and give the lower half to your customer.

Warning for Customers Who Use the DivX Video-on-Demand content.

1. The registration code has been changed for the repair of the product or the product exchange.
2. Obtain and register a new registration code, otherwise you will no longer be able to play DivX Video-on-Demand content.
3. Follow the procedure on the DivX Video-on-Demand web site to register at <http://vod.divx.com/>.

*If you do not use the DivX Video-on-Demand content, please ignore this warning.

4 Specifications

Power supply: AC 230 to 240 V, 50 Hz
Power consumption: Approx. 10 W
Power consumption in standby mode: Less than 1W

Dimensions: [DVD-S58] 430(W) x 209(D) x 38(H) mm
[DVD-S38] 360(W) x 209(D) x 38(H) mm

Mass: [DVD-S58] Approx. 1.8 kg
[DVD-S38] Approx. 1.6kg

Signal system: PAL/NTSC

Operating temperature range: + 5 to + 35°C

Operating humidity range: 20 to 80 % RH (no condensation)

Discs played [8 cm(3") or 12 cm(5")]:

- (1) DVD Video (DVD-Video format)
- (2) DVD-RW (DVD-Video format*1)
- (3) DVD-R / DVD-R DL (DVD-Video format*1, JPEG*2*3*4*5*6, MP3*3*7*8*9, DivX*3*10*11*12*13)
- (4) CD-R / CD-RW (CD-DA, JPEG*2*3*4*5*6, MP3*3*7*8*9, DivX*3*10*11*12*13, Video CD, Super Video CD)
- (5) Audio CD (CD-DA)
- (6) Video CD (Formats 1.0, 1.1, 2.0)
- (7) Super Video CD
- (8) +RW / +R / +R DL (Video*1)

*1 Finalizing is necessary.
*2 The file extensions has to be '.JPG' or '.JPEG'.
*3 ISO9660 level 1 or 2 (except for extended formats)
This unit is compatible with multi-session.
This unit is not compatible with packet writing.
*4 Picture resolution: between 34 x 34 and 6144 x 4096 pixels (sub sampling is 4:2:2 or 4:2:0)
MOTION JPEG is not supported.
*5 The total combined maximum number of recognizable picture contents and folders: 9999 picture contents and 188 folders.
*6 Files that have been altered, edited or saved with computer picture editing software may not be displayed.
*7 The file extensions has to be '.mp3'.
*8 Compression rate: 32 kbps to 320 kbps
Sampling rate: 44.1 kHz, 48 kHz
*9 Not compatible with ID3 tags.
*10 The file extensions has to be '.DIVX', '.divx', '.AVI', or '.avi'.
*11 Subtitle text file is supported.
*12 Plays all versions of DivX video (including DivX 6) with standard playback of DivX media files.
Certified to the DivX Home Theater Profile V3.0.
GMC (Global Motion Compensation) not support.
*13 The total combined maximum number of recognizable file contents and folders: 9999 file contents and 188 folders (include root folder).

Video output:
Output level: 1.0 Vp-p (75 Ω)
Output connector: Pin jack (1 system)
AV (21 pin) (1 system)

HDMI AV Output: (DVD-S58 only)
Output format: 1080p/1080i/720p/576p/480p
Output connector: TypeA (19 pin)
This unit supports "HDMI CEC" function.

Component video output: (480p/480i:60 Hz) (576p/576i:50 Hz)
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)

RGB output:
Output level: 0.7 Vp-p (75 Ω)
Output connector: AV (21 pin) (1 system)

Video performance:
Horizontal resolution: More than 500 lines
Video S/N ratio: More than 53 dB

Audio output:
Output level: 2 Vrms (1 kHz, 0 dB)
Output connector: Pin jack (1 system)
AV (21pin) (1 system)
Number of connectors: 2 channel

Audio performance:

- (1) Frequency response:
DVD (linear audio): 4 Hz-22 kHz (48 kHz sampling)
CD audio: 4 Hz-20 kHz
- (2) S / N ratio:
CD audio: 90dB
- (3) Dynamic range:
CD audio: 80dB
- (4) Total harmonic distortion:
CD audio: 0.04%

Digital audio output:
Coaxial digital output: Pin jack

Pickup:
Wave length: 770 to 800 nm (CD) /
645 to 660 nm (DVD)
Laser power: CLASS I / CLASS I

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

Solder:
This model uses lead free solder PbF).

4.1. Others (Licenses)

Manufactured under license from Dolby Laboratories. Dolby and the double-D symbol are trademarks of Dolby Laboratories.

Manufactured under license under U.S. Patent #: 5,451,942 & other U.S. and worldwide patents issued & pending. DTS and the Symbol are registered trademarks and DTS Digital Out and the DTS logos are trademarks of DTS, Inc. Product includes software. © DTS, Inc. All Rights Reserved.

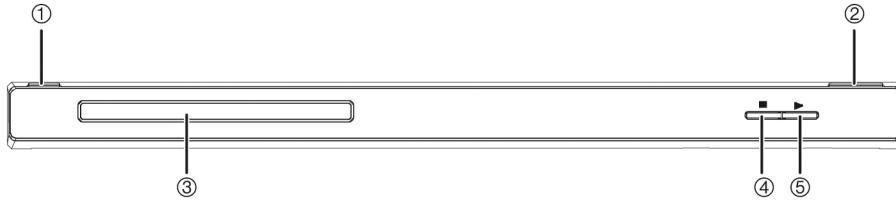
HDMI, the HDMI Logo, and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries.

DivX® is a registered trademark of DivX, Inc., and is used under license.

This product incorporates copyright protection technology that is protected by U.S. patents and other intellectual property rights. Use of this copyright protection technology must be authorized by Rovi Corporation, and is intended for home and other limited viewing uses only unless otherwise authorized by Rovi Corporation. Reverse engineering or disassembly is prohibited.

5 Location of Controls and Components

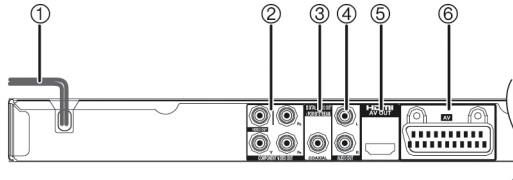
Front and Rear panels



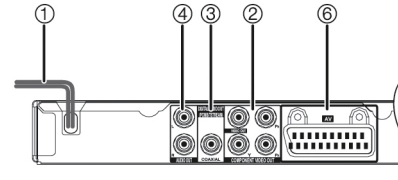
- ① **Standby/on switch (⏻/⏻)**
 - Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.
- ② **▲ OPEN/CLOSE**
 - Opens/closes the disc tray
- ③ **Disc tray**
- ④ **■ (Stop)**
 - Stops playback
- ⑤ **▶ (Play)**
 - Starts playback

(For the United Kingdom and Republic of Ireland)

DVD-S58

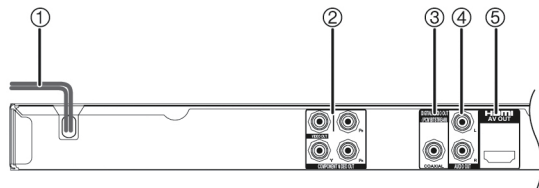


DVD-S38

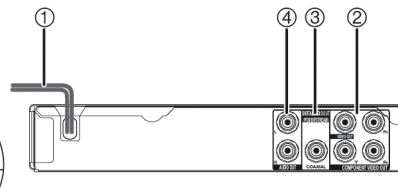


(For others)

DVD-S58

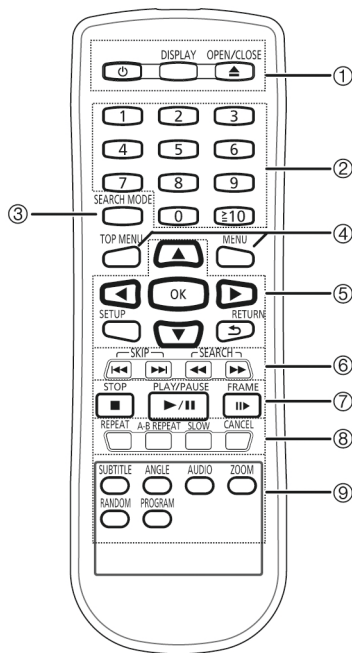


DVD-S38



- ① (AC mains lead)
 - Connects to a standard AC outlet
- ② **VIDEO OUT**
 - Connects to Video input of a TV
- COMPONENT VIDEO OUT (YPBPR)**
 - Connects to Component Video input of a TV
- ③ **DIGITAL AUDIO OUT (PCM/ BITSTREAM) (COAXIAL)**
 - Connects to coaxial Audio input of a digital audio equipment
- ④ **AUDIO OUT (L, R)**
 - Connects to Audio input of a TV, an amplifier, receiver or stereo audio device
- ⑤ **HDMI AV OUT (DVD-S58 only)**
 - Connects to HDMI input of a TV, an amplifier or receiver
- ⑥ **AV (For the United Kingdom and Republic of Ireland only)**
 - Connects to Scart input of a TV

Remote Control



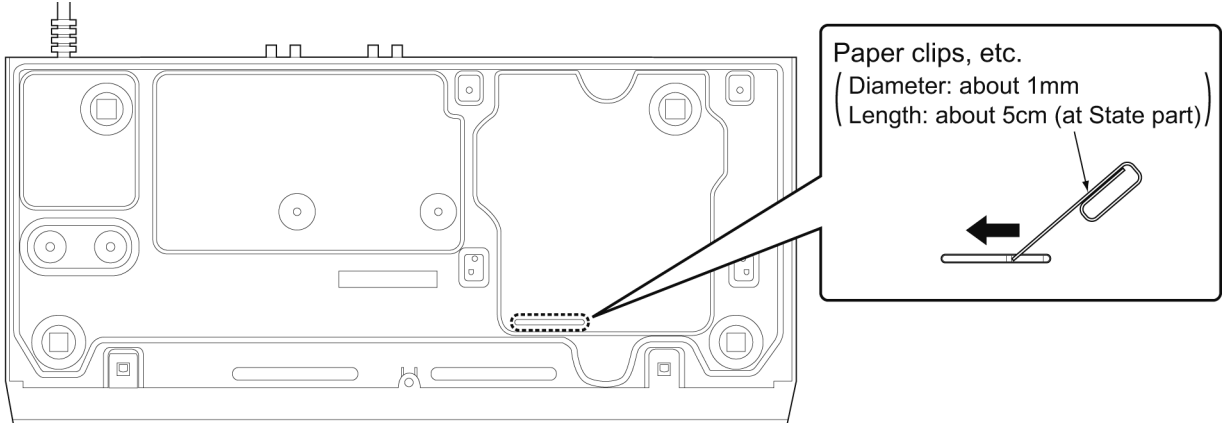
- ① **Standby/on switch** – To switch the DVD player to standby mode or ON
DISPLAY – Displays information on TV screen during playback
OPEN/CLOSE – Opens/closes the disc tray
- ② **Numeric keypad** – Selects numbered items in a menu
- ③ **SEARCH MODE** – Starts to select the point
- ④ **TOP MENU** – Shows Top menu
MENU – Shows Menu
- ⑤ **▲▼◀▶**
▲/▼ – Cursor buttons for moving up/down
◀/▶ – Cursor buttons for moving to the left or right
OK – Confirms menu selection
SETUP – Enters or exits the system setup menu
RETURN – Come/go back
- ⑥ **SKIP**
 – Skips to previous title/chapter/track
 – Skips to next title/ chapter/track
SEARCH
 – Starts fast reverse
 – Starts fast forward
- ⑦ **STOP** – Stops playback
PLAY/PAUSE – Starts or pauses playback
FRAME – Plays Video frame by frame
- ⑧ **REPEAT** – Selects various repeat mode
A-B REPEAT – Repeats playback from point A to B on a disc
SLOW – Starts slow motion playback
CANCEL – Clear the input information
- ⑨ **SUBTITLE** – Switches between different subtitle
ANGLE – Switches the camera angle during playback
AUDIO – Changes soundtracks
ZOOM – Changes zoom ratio
RANDOM – Starts random playback
PROGRAM – Starts program playback

6 Operating Instructions

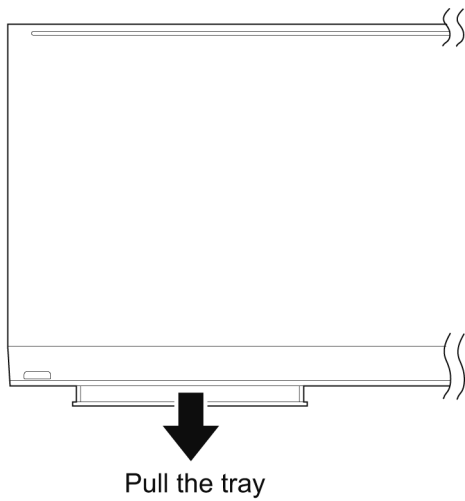
6.1. Taking out the Disc from Drive Unit when the Disc cannot be ejected by OPEN/CLOSE button

6.1.1. When the Disc Eject can not be done.

1. Turn off the power and pull out AC cord.
2. Put the unit so that bottom can be seen.
3. Insert paper clips, etc. into the hole on the bottom of Drive and slide the paper clips, etc. in the direction of the arrow to eject tray slightly.

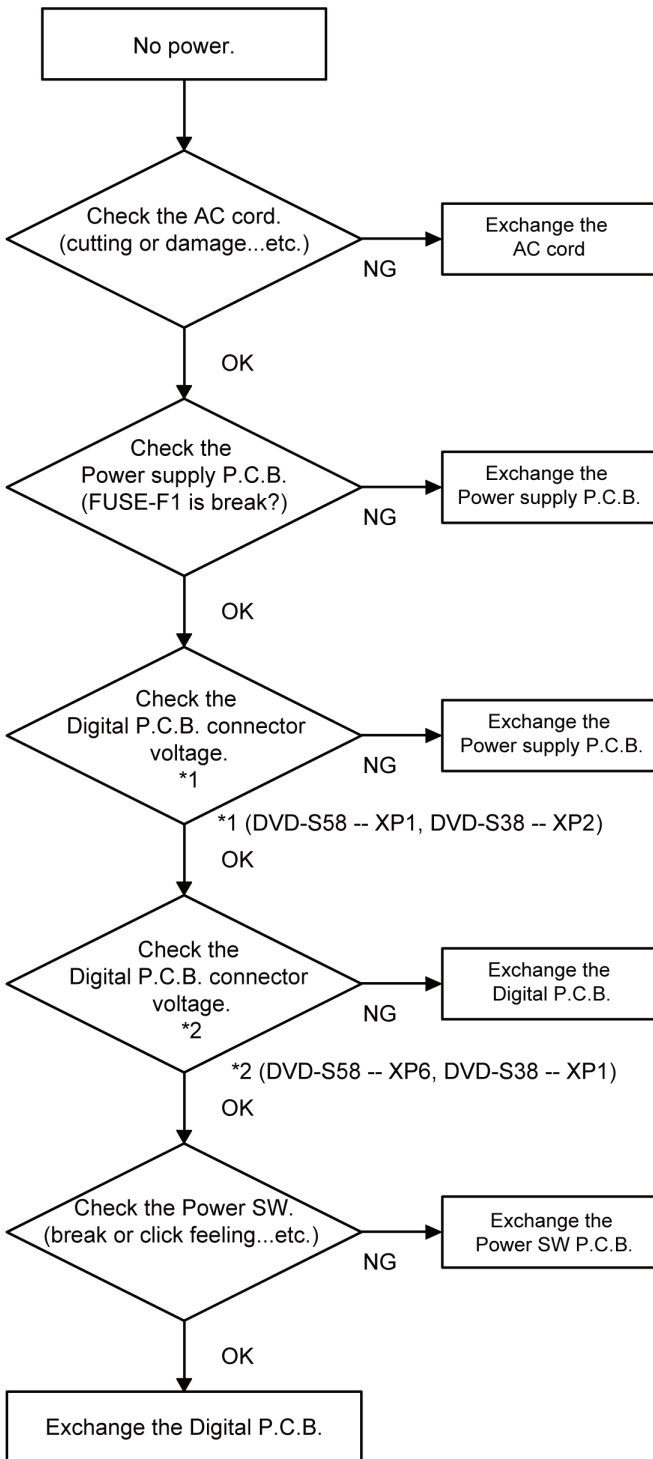


4. Pull the tray in the direction of the arrow.

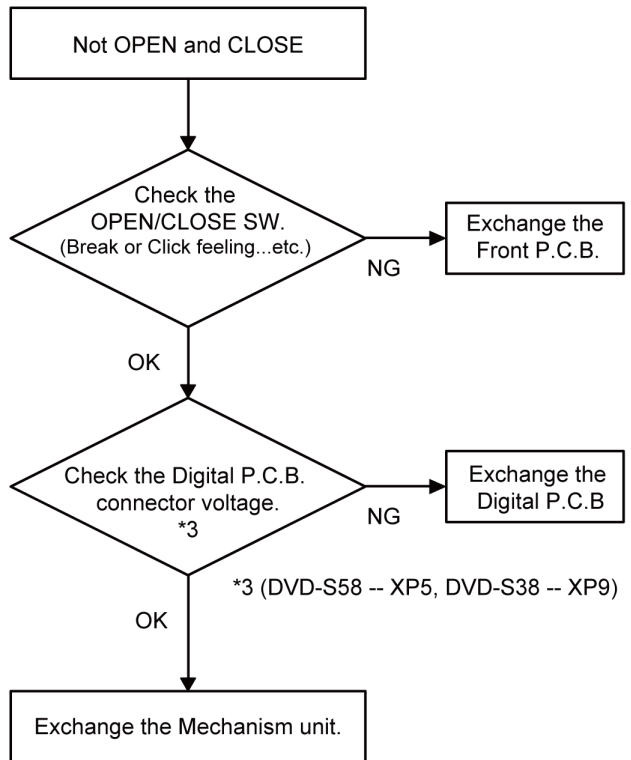


7 Troubleshooting Guide

Simptom - 1



Simptom - 2



VOLTAGE DATA (measurement value)

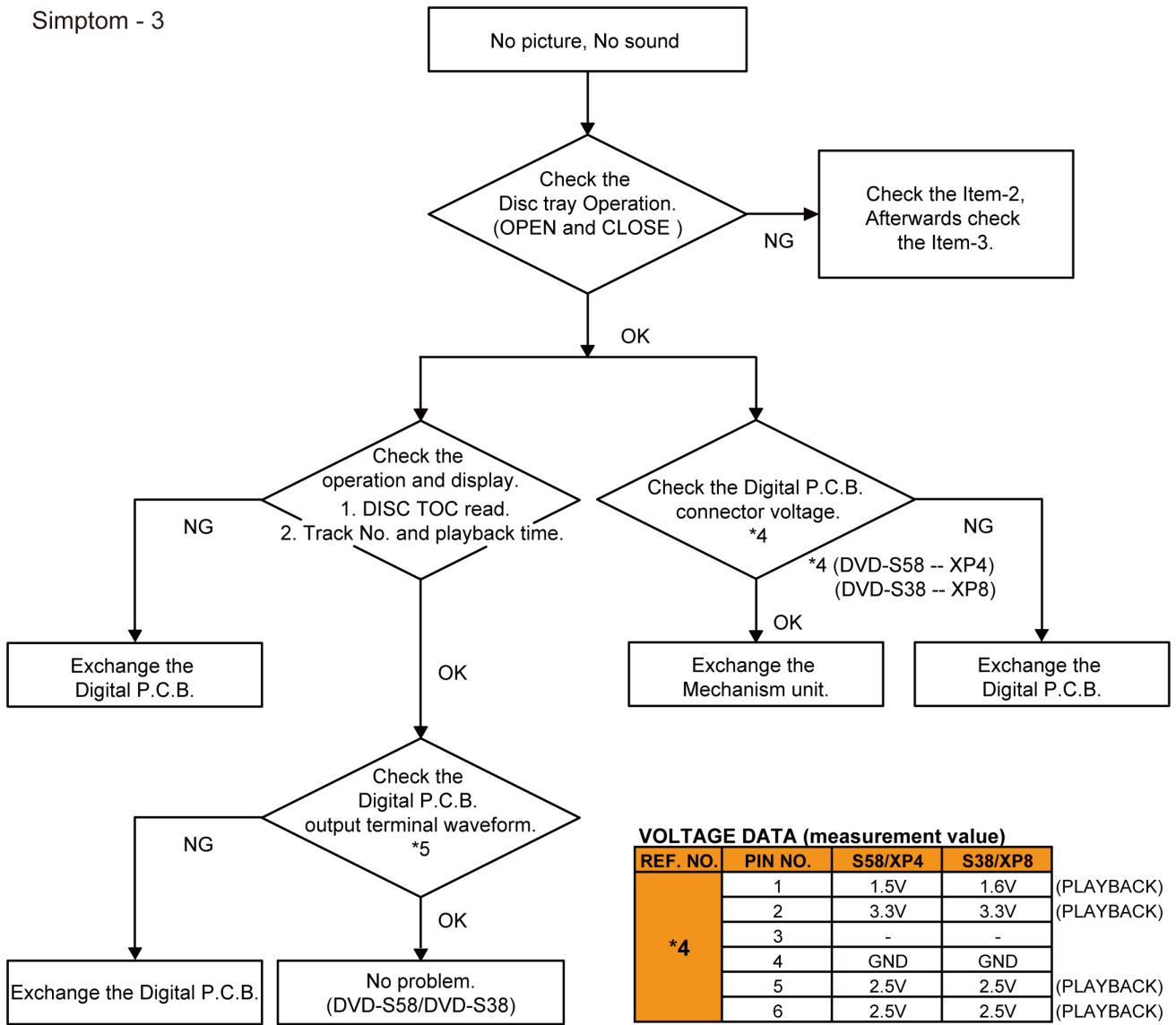
REF. NO.	PIN NO.	S58/XP1	S38/XP2
*1	1	5.1V	5.2V
	2	5.1V	5.2V
	3	0.0V	0.0V
	4	13.5V	13.9V
	5	GND	GND

REF. NO.	PIN NO.	S58/XP6	S38/XP1
*2	1	3.3V	3.3V
	2	4.9V	5.0V
	3	0.0V	0.0V
	4	GND	GND
	5	5.0V	5.1V
	6	3.5V	3.5V

REF. NO.	PIN NO.	S58/XP5	S38/XP9
*3	1	4.1V	4.3V
	2	4.0V	4.3V
	3	-	-
	4	GND	GND
	5	-	-

(CLOSE)
(OPEN)

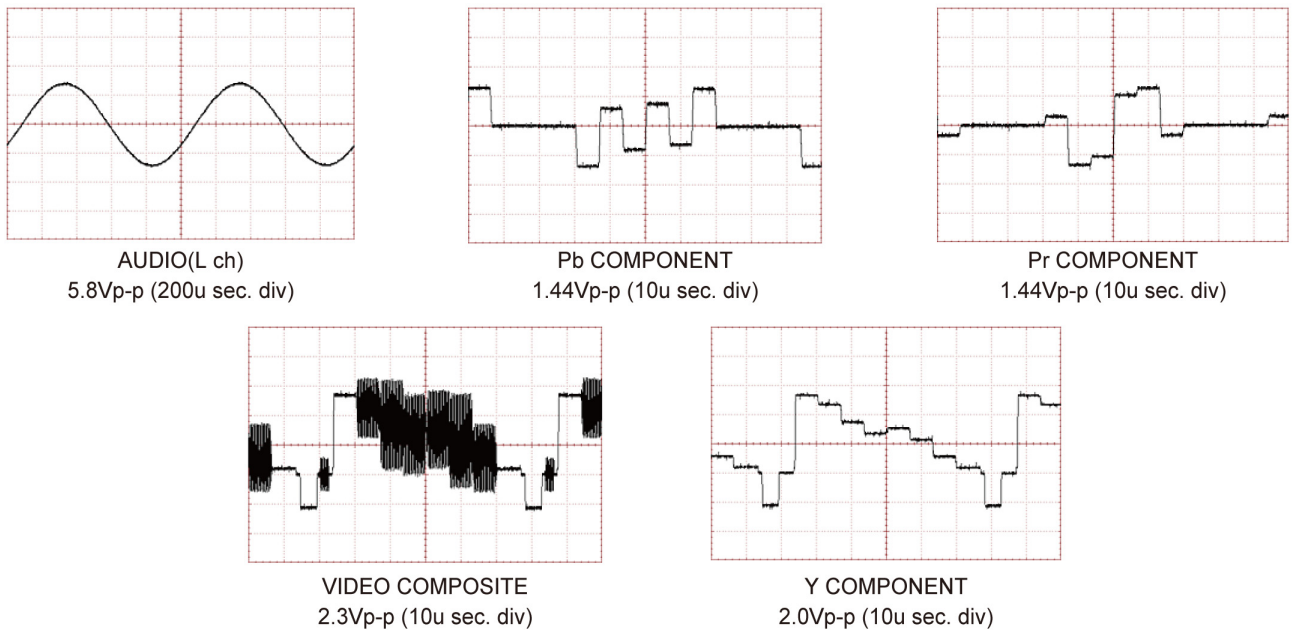
Simptom - 3



VOLTAGE DATA (measurement value)

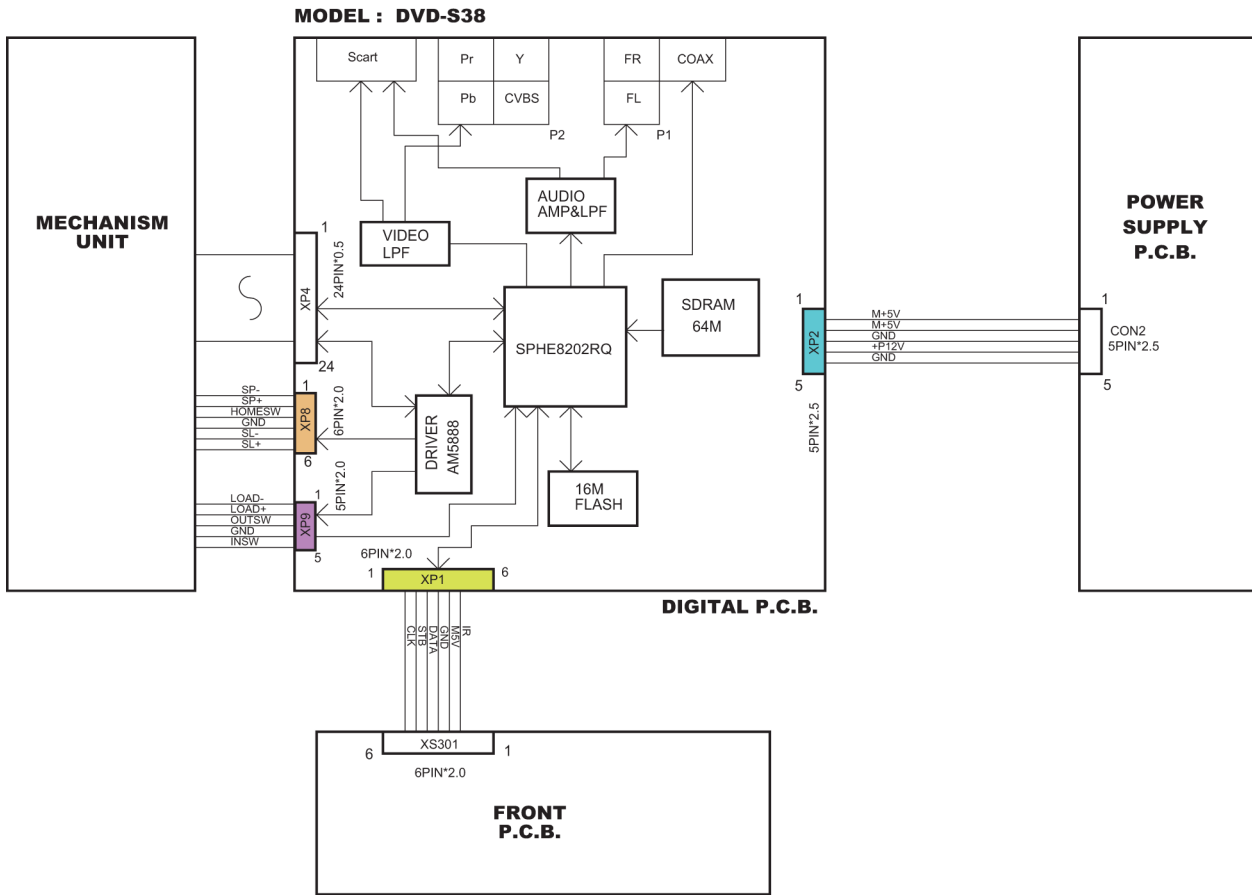
REF. NO.	PIN NO.	S58/XP4	S38/XP8	
*4	1	1.5V	1.6V	(PLAYBACK)
	2	3.3V	3.3V	(PLAYBACK)
	3	-	-	
	4	GND	GND	
	5	2.5V	2.5V	(PLAYBACK)
	6	2.5V	2.5V	(PLAYBACK)

*5 DIGITAL P.C.B. OUTPUT TERMINAL WAVEFORM



8 Wiring Connection and Voltage Data

8.1. DVD-S38



DVD-S38 VOLTAGE DATA (measurement value)

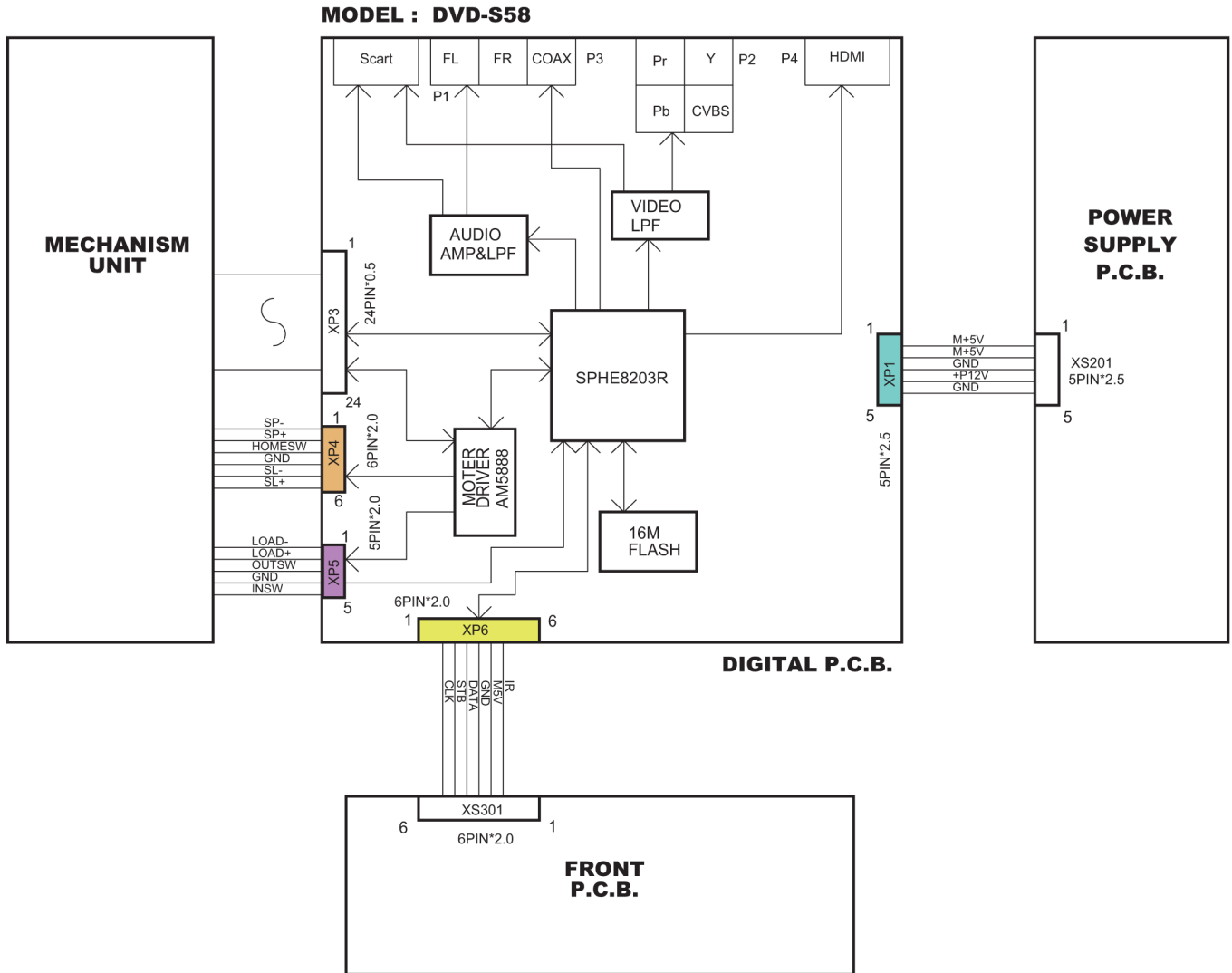
REF. NO.	PIN NO.	VALUE
XP8	1	1.6V (PLAYBACK)
	2	3.3V (PLAYBACK)
	3	-
	4	GND
	5	2.5V (PLAYBACK)
	6	2.5V (PLAYBACK)

REF. NO.	PIN NO.	VALUE
XP2	1	5.2V
	2	5.2V
	3	0.0V
	4	13.9V
	5	GND

REF. NO.	PIN NO.	VALUE
XP9	1	4.3V (CLOSE)
	2	4.3V (OPEN)
	3	-
	4	GND
	5	-

REF. NO.	PIN NO.	VALUE
XP1	1	3.3V
	2	5.0V
	3	0.0V
	4	GND
	5	5.1V
	6	3.5V

8.2. DVD-S58



DVD-S58 VOLTAGE DATA (measurement value)

REF. NO.	PIN NO.	VALUE
XP4	1	1.5V (PLAYBACK)
	2	3.3V (PLAYBACK)
	3	-
	4	GND
	5	2.5V (PLAYBACK)
	6	2.5V (PLAYBACK)

REF. NO.	PIN NO.	VALUE
XP5	1	4.1V (CLOSE)
	2	4.0V (OPEN)
	3	-
	4	GND
	5	-

REF. NO.	PIN NO.	VALUE
XP1	1	5.1V
	2	5.1V
	3	0.0V
	4	13.5V
	5	GND

REF. NO.	PIN NO.	VALUE
XP6	1	3.3V
	2	4.9V
	3	0.0V
	4	GND
	5	5.0V
	6	3.5V

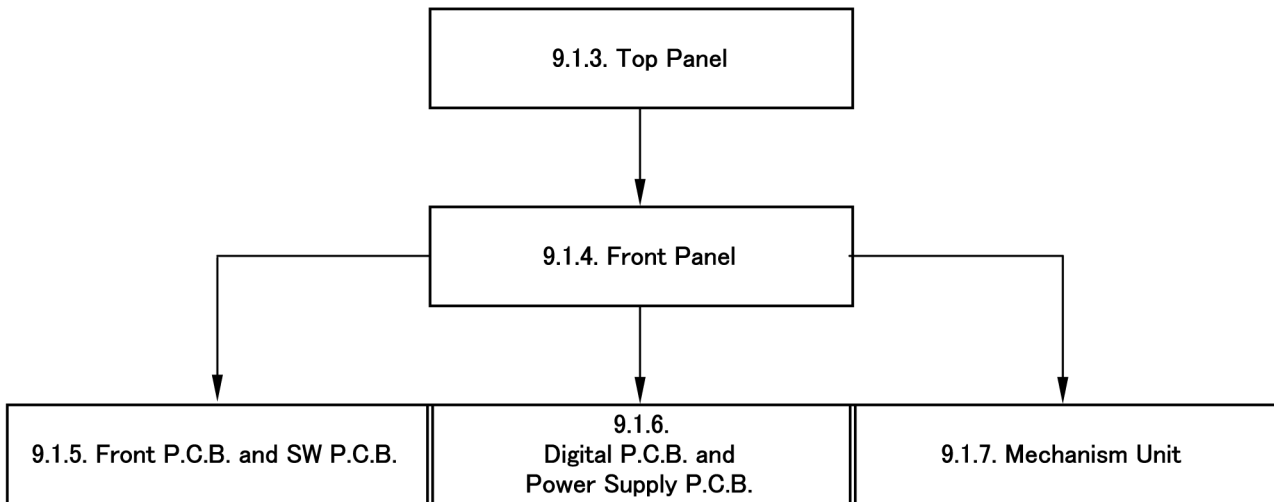
9 Disassembly and Assembly Instructions

9.1. Unit

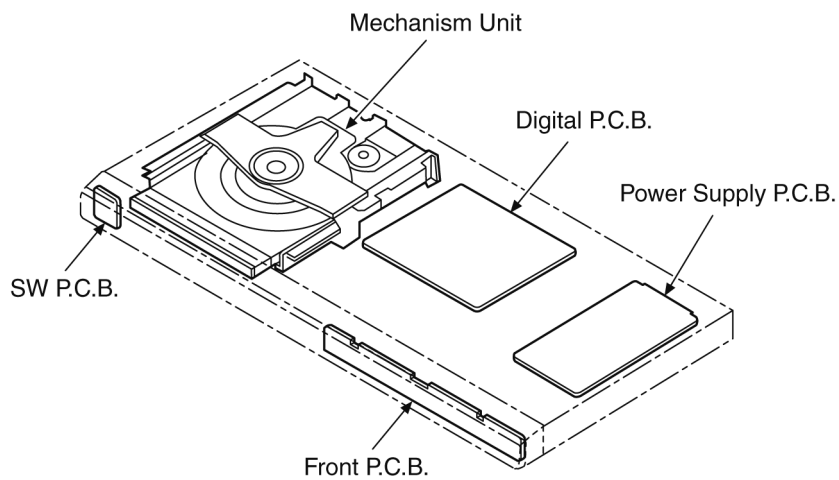
9.1.1. Disassembly Flow Chart

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.

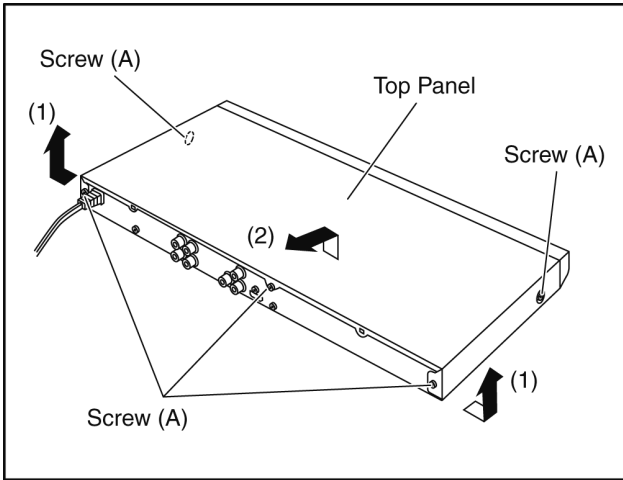


9.1.2. P.C.B. Positions



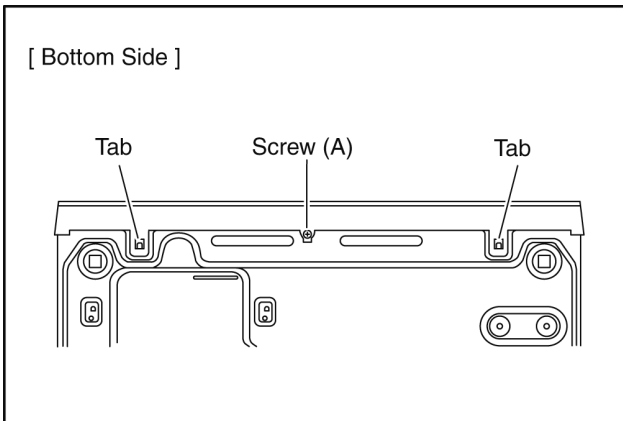
9.1.3. Top Panel

1. Remove the 5 Screws (A).
2. Expanded the both ends of the back of the top panel in the direction of arrow (1), and then remove it pull up in the direction of arrow (2).

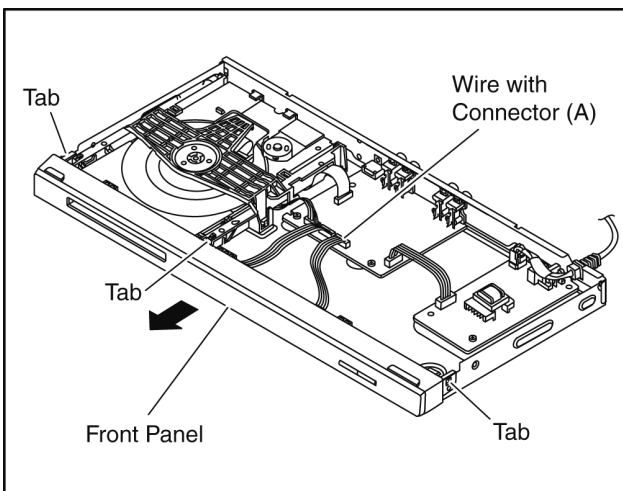


9.1.4. Front Panel

1. Remove the Screw (A).
2. Unlock 2 tabs.

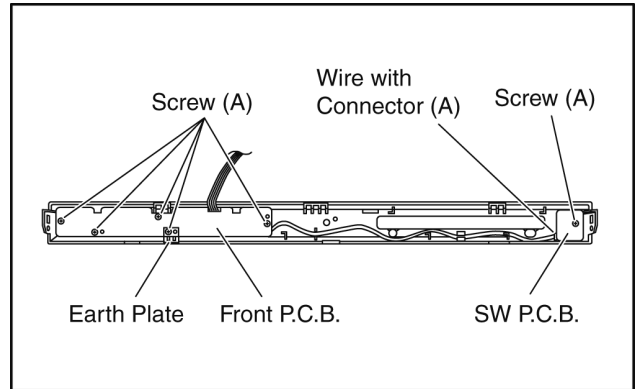


3. Remove the Wire with Connector (A).
4. Unlock 3 tabs.
5. Remove the Front Panel.



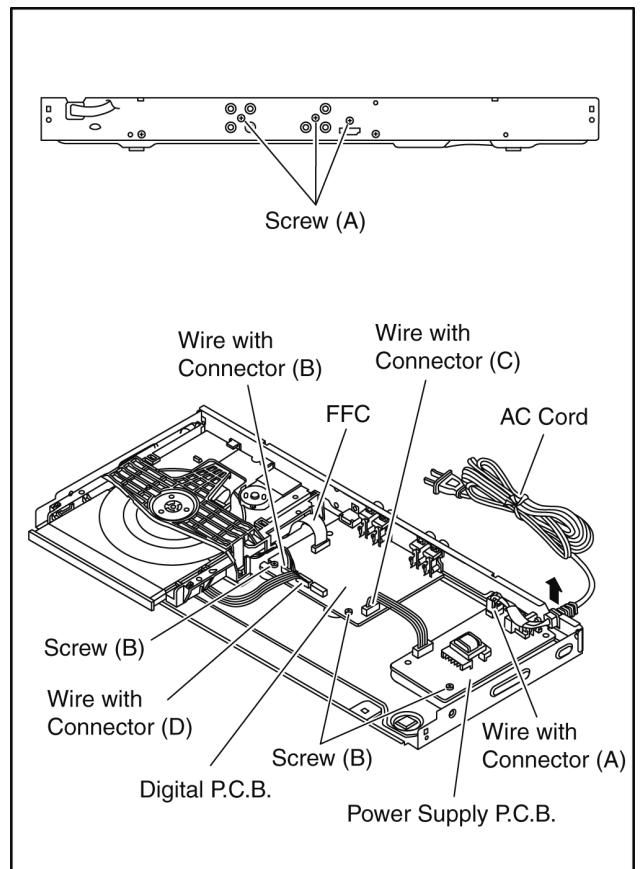
9.1.5. Front P.C.B. and SW P.C.B.

1. Remove the 6 Screws (A).
2. Remove the Earth Plate.
3. Remove the Wire with Connector (A).
4. Remove the Front P.C.B. and SW P.C.B..



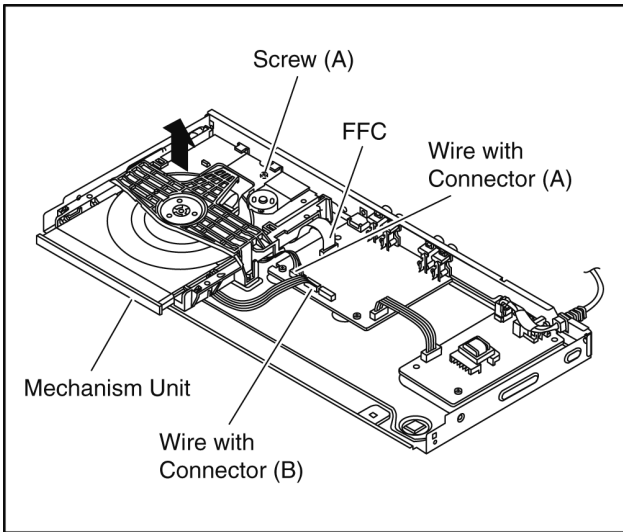
9.1.6. Digital P.C.B. and Power Supply P.C.B.

1. Remove the 3 Screws (A).
2. Remove the Wire with Connector (A).
3. Remove the AC cord.
4. Remove the Wire with Connector (B), Wire with Connector (C) and Wire with Connector (D).
5. Remove the FFC.
6. Remove the 3 Screws (B).
7. Remove the Digital P.C.B. and Power Supply P.C.B..



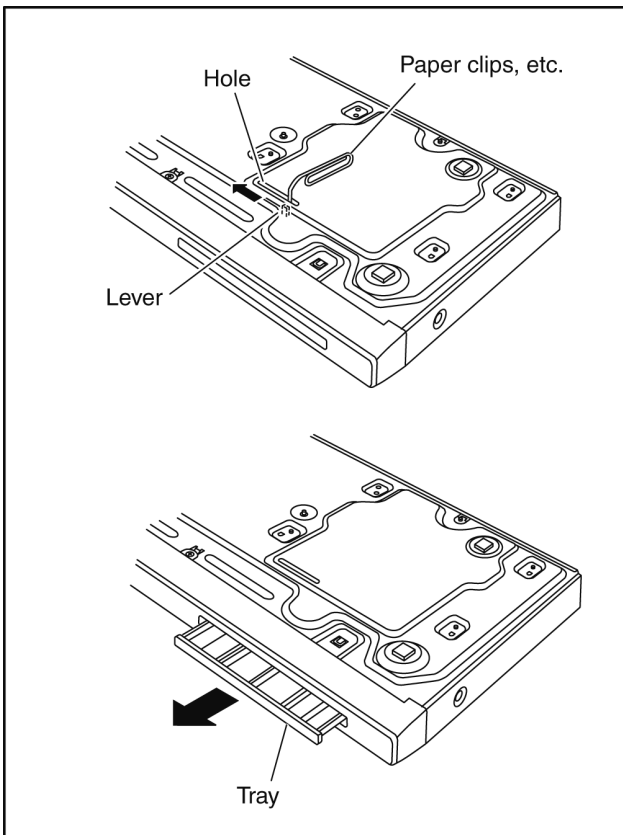
9.1.7. Mechanism Unit

1. Remove the Screw (A).
2. Remove the Wire with Connector (A) and Wire with Connector (B).
3. Remove the FFC.
4. Remove the Mechanism Unit.



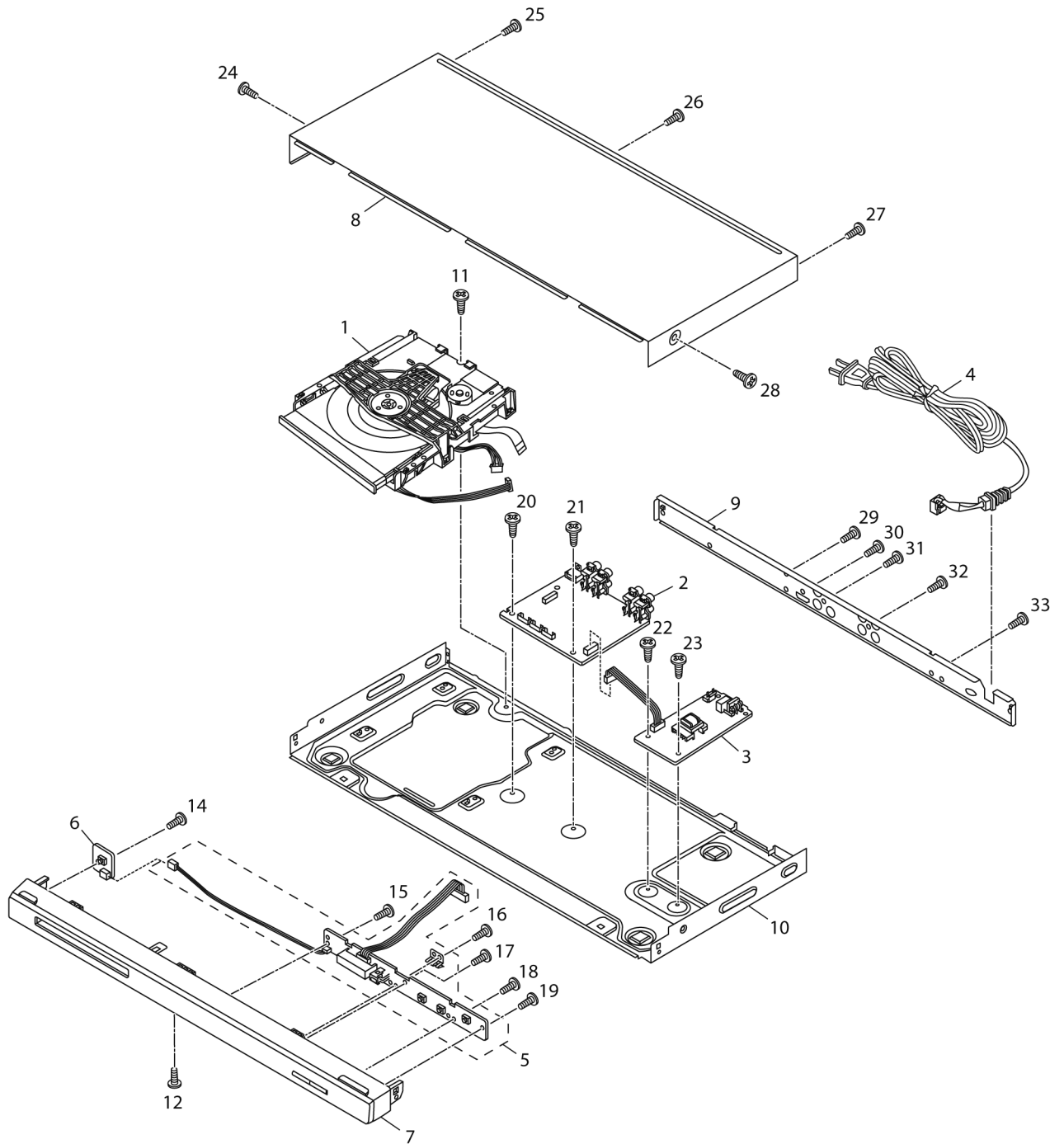
Manual release method of tray

1. Insert paper clips, etc. into the hole on the bottom of DVD Drive, and slide the lever in the direction of arrow to eject tray slightly.
2. Pull the tray in the direction of the arrow.

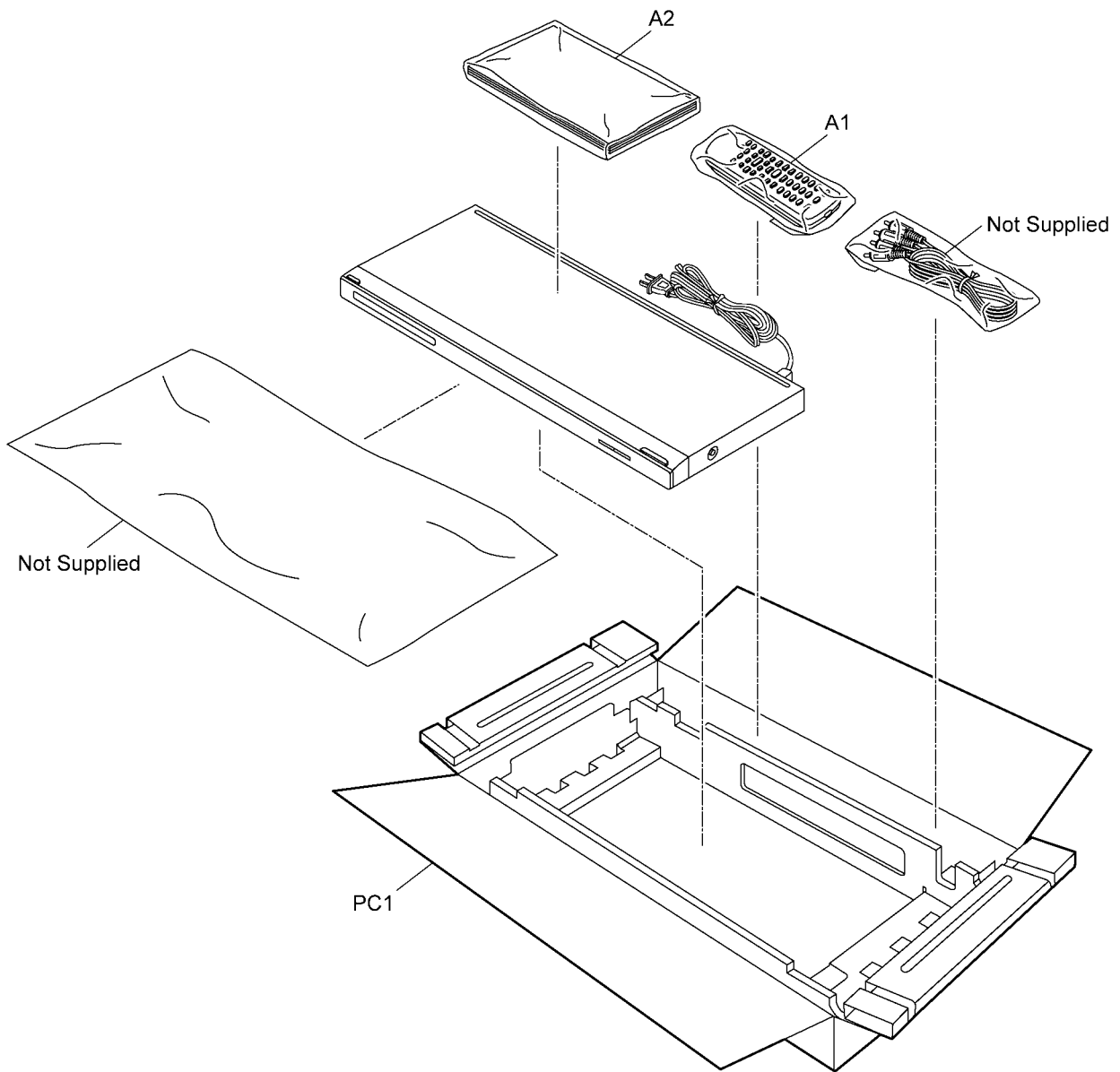


10 Exploded View and Replacement Parts List

10.1. Casing Parts & Mechanism Section



10.2. Packing & Accessories Section



10.3. Replacement Parts List

Notes:

*Important safety notice:

Components identified by Δ mark have special characteristics important for safety.

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

*All parts are supplied by PAVCSG.

Safety	Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
Δ	A2	VUA0IDS58EE	OPERATING INSTRUCTIONS	1	EE
	PC1	VUAPCDS38EG	PACKING CASE	1	S38EG
	PC1	VUAPCDS38EP	PACKING CASE	1	S38EP
	PC1	VUAPCDS38EB	PACKING CASE	1	S38EB
	PC1	VUAPCDS38EE	PACKING CASE	1	S38EE
	PC1	VUAPCDS58EG	PACKING CASE	1	S58EG
	PC1	VUAPCDS58EP	PACKING CASE	1	S58EP
	PC1	VUAPCDS58EB	PACKING CASE	1	S58EB
	PC1	VUAPCDS58EE	PACKING CASE	1	S58EE

Safety	Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
Δ	1	VUAMHDS58EG	MECHANISM UNIT	1	
	2	VUEDBDS38EB	DIGITAL P.C.B.	1	S38
	2	VUEDBDS58EB	DIGITAL P.C.B.	1	S58
Δ	3	VUEPBD38EB	POWER SUPPLY P.C.B.	1	S38
Δ	3	VUEPBD58EB	POWER SUPPLY P.C.B.	1	S58
Δ	4	VUEACDS58EG	AC CORD	1	S38EG/ EP/EE
Δ	4	VUEACDS58EB	AC CORD	1	S38EB
Δ	4	VUEACDS58EG	AC CORD	1	S58EG/ EP/EE
Δ	4	VUEACDS58EB	AC CORD	1	S58EB
	5	VUEFBDS38EB	FRONT P.C.B.	1	S38
	5	VUEFBDS58PP	FRONT P.C.B.	1	S58
	6	VUESBDS38PP	SW P.C.B.	1	S38
	6	VUESBDS58PP	SW P.C.B.	1	S58
	7	VUAFPDS38EG	FRONT PANEL	1	S38
	7	VUAFPDS58EG	FRONT PANEL	1	S58
	8	VUATPDS38PP	TOP PANEL	1	S38
	8	VUATPDS58PP	TOP PANEL	1	S58
	9	VUABPDS38PP	BACK PANEL	1	S38EG/ EP/EB
	9	VUABPDS38PN	BACK PANEL	1	S38EE
	9	VUABPDS58EG	BACK PANEL	1	S58EG/ EP/EB
	9	VUABPDS58EE	BACK PANEL	1	S58EE
	10	VUABCDS38PP	BOTTOM CABINET	1	S38
	10	VUABCDS58EG	BOTTOM CABINET	1	S58
	11	VUA63BSCW1	SCREW	1	
	12	VUA64BSCW3	SCREW	1	S58
	14	VUA63BSCW2	SCREW	1	
	15	VUA63BSCW2	SCREW	1	
	16	VUA63BSCW2	SCREW	1	
	17	VUA63BSCW2	SCREW	1	
	18	VUA63BSCW2	SCREW	1	
	19	VUA63BSCW2	SCREW	1	
	20	VUA64BSCW3	SCREW	1	S58
	20	VUA63BSCW3	SCREW	1	S38
	21	VUA64BSCW3	SCREW	1	S58
	21	VUA63BSCW3	SCREW	1	S38
	22	VUA64BSCW3	SCREW	1	S58
	22	VUA63BSCW3	SCREW	1	S38
	23	VUA64BSCW3	SCREW	1	S58
	23	VUA63BSCW3	SCREW	1	S38
	24	VUA63SSCW1	SCREW	1	
	25	VUA63SSCW1	SCREW	1	
	26	VUA63SSCW1	SCREW	1	
	27	VUA63SSCW1	SCREW	1	
	28	VUA63SSCW1	SCREW	1	
	29	VUA64BSCW3	SCREW	1	S58
	30	VUA64BSCW3	SCREW	1	S58
	31	VUA63BSCW1	SCREW	1	
	32	VUA63BSCW1	SCREW	1	
	33	VUA64BSCW3	SCREW	1	S58
	A1	VUARCD58EG	REMOTE CONTROLLER	1	
Δ	A2	VUA0IDS58EG	OPERATING INSTRUCTIONS	1	EG
Δ	A2	VUA0IDS58EP	OPERATING INSTRUCTIONS	1	EP
Δ	A2	VUA0IDS58EB	OPERATING INSTRUCTIONS	1	EB