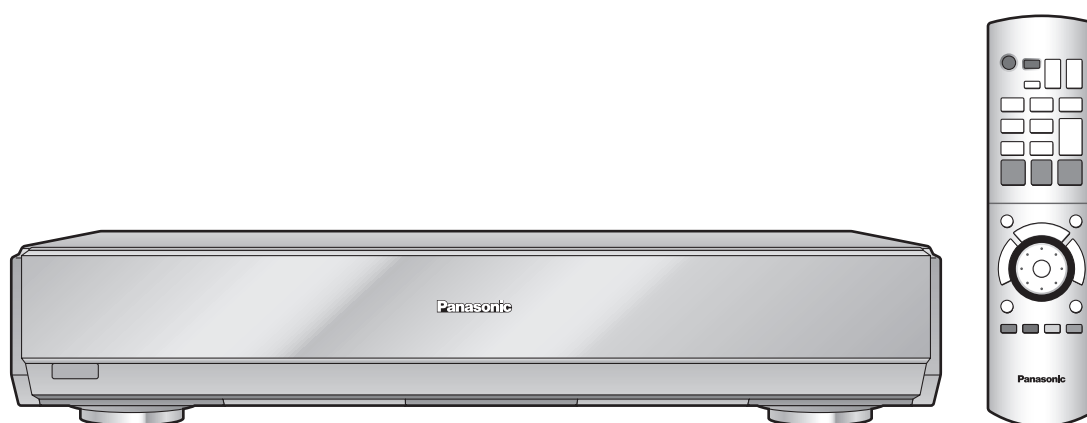


Panasonic®

Operating Instructions BD/DVD Player

Model No. **DMP-BD10**



Dear customer

Thank you for purchasing this product.

For optimum performance and safety, please read these instructions carefully.

Before connecting, operating or adjusting this product, please read the instructions completely.

Please keep this manual for future reference.



BD-Video



Region management information							
BD-Video This unit plays BD-Video marked with labels containing the region code B.	Region B						
DVD-Video This unit plays DVD-Video marked with labels containing the region number or "ALL". <table><thead><tr><th>Region</th><th>Number</th></tr></thead><tbody><tr><td>The United Kingdom, Republic of Ireland and Continental Europe</td><td>2</td></tr><tr><td>Australia and New Zealand</td><td>4</td></tr></tbody></table>	Region	Number	The United Kingdom, Republic of Ireland and Continental Europe	2	Australia and New Zealand	4	Example: The United Kingdom, Republic of Ireland and Continental Europe    Australia and New Zealand   
Region	Number						
The United Kingdom, Republic of Ireland and Continental Europe	2						
Australia and New Zealand	4						

Caution for AC Mains Lead

(For the United Kingdom and Republic of Ireland)

For your safety, please read the following text carefully.

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

A 5-ampere fuse is fitted in this plug.

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

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

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

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

A replacement fuse cover can be purchased from your local dealer.

CAUTION!

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY. THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

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

If in any doubt please consult a qualified electrician.

IMPORTANT

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

Blue: Neutral, Brown: Live.

As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured Black or Blue. The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured Brown or Red.

WARNING: DO NOT CONNECT EITHER WIRE TO THE EARTH TERMINAL WHICH IS MARKED WITH THE LETTER E, BY THE EARTH SYMBOL  OR COLOURED GREEN OR GREEN/YELLOW.

THIS PLUG IS NOT WATERPROOF—KEEP DRY.

Before use

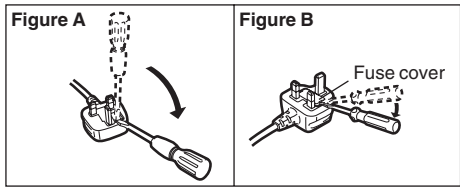
Remove the connector cover.

How to replace the fuse

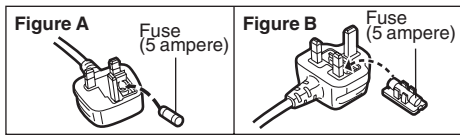
The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.

Illustrations may differ from actual AC mains plug.

1. Open the fuse cover with a screwdriver.



2. Replace the fuse and close or attach the fuse cover.



Safety precautions

Placement

Set the unit up on an even surface away from direct sunlight, high temperatures, high humidity, and excessive vibration. These conditions can damage the cabinet and other components, thereby shortening the unit's service life. Do not place heavy items on the unit.

Voltage

Do not use high voltage power sources. This can overload the unit and cause a fire. Do not use a DC power source. Check the source carefully when setting the unit up on a ship or other place where DC is used.

AC mains lead protection

Ensure the AC mains lead is connected correctly and not damaged. Poor connection and lead damage can cause fire or electric shock. Do not pull, bend, or place heavy items on the lead. Grasp the plug firmly when unplugging the lead. Pulling the AC mains lead can cause electric shock. Do not handle the plug with wet hands. This can cause electric shock.

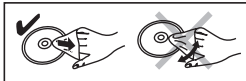
Disc handling

Clean discs

Wipe with a damp cloth and then wipe dry.

Disc handling precautions

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



Foreign matter

Do not let metal objects fall inside the unit. This can cause electric shock or malfunction.

Do not let liquids get into the unit. This can cause electric shock or malfunction. If this occurs, immediately disconnect the unit from the power supply and contact your dealer.

Do not spray insecticides onto or into the unit. They contain flammable gases which can ignite if sprayed into the unit.

Service

Do not attempt to repair this unit by yourself. If sound is interrupted, indicators fail to light, smoke appears, or any other problem that is not covered in these instructions occurs, disconnect the AC mains lead and contact your dealer or an authorized service center. Electric shock or damage to the unit can occur if the unit is repaired, disassembled or reconstructed by unqualified persons.

Extend operating life by disconnecting the unit from the power source if it is not to be used for a long time.

Maintenance

Clean this unit with a soft, dry cloth

- Never use alcohol, paint thinner or benzene to clean this unit.
- Before using chemically treated cloth, read the instructions that came with the cloth carefully.
- Cleaning of the lens is generally not necessary.
- Do not use any lens cleaners as they may damage the unit.

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Accessory information



Please check and identify the supplied accessories. Use numbers indicated in parentheses when asking for replacement parts.
(Product numbers correct as of August 2006. These may be subject to change.)

☐ Remote control

For the United Kingdom, Republic of
Ireland and Continental Europe



(EUR7658Y90)

For Australia and New Zealand



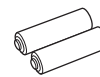
(EUR7658YA0)

☐ Audio/Video cable



(K2KA6BA00003)

☐ Batteries for remote control



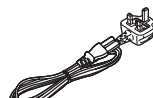
☐ AC mains lead

For the United Kingdom, Republic of Ireland and
Continental Europe



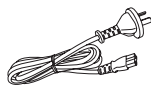
For the Continental
Europe

(K2CQ2CA00002)



For the United
Kingdom and
Republic of Ireland

(K2CT3CA00004)



For Australia and New Zealand

(K2CJ2DA00011)

- For use with this unit only. Do not use it with other equipment.
Also, do not use cords for other equipment with this unit.

For the United Kingdom and Republic of Ireland

■ Sales and Support Information Customer Care Centre

- For customers within the UK: 08705 357357
- For customers within the Republic of Ireland: 01 289 8333
- Visit our website for product information
- E-mail: customer.care@panasonic.co.uk

Direct Sales at Panasonic UK

- Order accessory and consumable items for your product with ease and confidence by phoning our Customer Care Centre Monday–Thursday 9:00am–5:30pm, Friday 9:30am–5:30pm (Excluding public holidays).
- Or go on line through our Internet Accessory ordering application at www.panasonic.co.uk
- Most major credit and debit cards accepted.
- All enquiries transactions and distribution facilities are provided directly by Panasonic UK Ltd.
- It couldn't be simpler!
- Also available through our Internet is direct shopping for a wide range of finished products, take a browse on our website for further details.

Interested in purchasing an extended guarantee?

Please call 0870 240 6284 or visit our website www.panasonic.co.uk/guarantee.

Disc information

This unit is compatible with a variety of disc types and formats, including both packaged discs and recorded discs. Use the following chart to learn more about the discs that can be played on this unit.

Packaged discs

This chart shows the different type of retail/commercial discs you can use, and also includes the industry-standard logos that should appear on the discs and/or packaging.

	Logo	Features	Indicated as
 BD-Video	 BD-Video	High Definition (HD) movie and music discs	BD-V
 DVD-Video	 	High quality movie and music discs.	DVD-V
 DVD-Audio		High fidelity music discs. Some DVD-Audio discs contain DVD-Video content.*	DVD-A DVD-V
 Video CD	 	Compact Discs (CD's) that contain music and video. Including SVCD (Conforming to IEC62107)	VCD
 CD		Compact Discs (CD's) that contain audio and music.	CD

*To play DVD-Video content, set "DVD-Audio Video mode Playback" to "On" (⇒ 21, "Disc" tab).

Recorded discs

This chart shows the different type of discs recorded with DVD recorders, DVD video cameras, personal computers, etc. that you can use.

Finalized This mark means you must finalize (⇒ 30, Glossary) the disc with the DVD recorder, etc. before playback.

	Logo	Formats	Indicated as
 DVD-RAM		• Discs recorded using Version 1.1 of the DVD Video Recording Format (a unified video recording standard). • JPEG formats.	DVD-VR JPEG
 DVD-R/RW Finalized	 	• Discs recorded using DVD-Video Format. • Discs recorded using Version 1.1 of the DVD Video Recording Format (a unified video recording standard).	DVD-V DVD-VR
 DVD-R DL Finalized		• Discs recorded using DVD-Video Format. • Discs recorded using Version 1.2 of the DVD Video Recording Format (a unified video recording standard).	DVD-V DVD-VR
 +R/+RW/+R DL Finalized	—	• Discs recorded using +VR (+R/+RW Video Recording) format	DVD-V
 CD-R/RW Finalized	—	• CD-DA formats. • VCD formats including SVCD (Conforming to IEC62107) • MP3 formats. • JPEG formats.	CD VCD MP3 JPEG

• It may not be possible to play the above discs in some cases due to the type of discs, the condition of the recording, the recording method and how the files were created.

Regarding BD-Video

- If the audio track of the disc was recorded with Dolby TrueHD, it will be output as Dolby Digital audio.
- If the audio track of the disc was recorded with DTS-HD, it will be output as DTS audio.
- When BD-J application (► 30, Glossary) is executed, operations may take a little more time than usual. Please wait, there is nothing wrong with this unit.
- When playing a two disc set of BD-Video, once the first disc finishes playing, video may continue to display even if playback has been stopped.

Regarding DVD-Audio

Some multi-channel DVD-Audio will prevent down-mixing (► 30, Glossary) of all or part of their contents if this is the manufacturer's intention. When playing such discs, or such parts of the disc, unless the number of connected speakers is the same as the disc's channel specification, audio will not be output properly (e.g. part of the audio is missing, multi-channel audio cannot be selected and audio is played in two channels). Refer to the disc's jacket for more information.

Tips for making MP3/JPEG files

File format	MP3	JPEG
Playable discs	CD-R/RW ^{#1}	DVD-RAM ^{#2} , CD-R/RW ^{#1}
Extension	Files must have the extension ".mp3" or ".MP3".	Files must have the extension ".jpg" or ".JPG".
Number of pixels	—	between 34×34 and 6144×4096 pixels (Sub sampling is 4:2:2 or 4:2:0)
Bit rates	32 kbps to 320 kbps	—
Sampling frequency	44.1 kHz/48 kHz	—
Reference	• ID3 tags: not compatible • If there is a large amount of still picture data etc. within a MP3 file, play may not be possible.	• Compatible formats: DCF^{#3} compliant (Content recorded on a digital camera, etc.) • MOTION JPEG: not compatible
	• English alphabet and Arabic numerals are displayed correctly. Other characters may not be displayed correctly. • The display order on this unit may differ from how the order is displayed on a computer. • Depending on how you create the disc (writing software), files (tracks) and folders (groups) may not play in the order you numbered them. • This unit is not compatible with packet-write format. • Depending on the recording conditions, the disc may not play. • Operation may take time to complete when there are many files (tracks) and/or folders (groups) and some files (tracks) may not display or be playable.	

^{#1} CD-R/RW

- Compatible formats: ISO9660 level 1 or 2 (except for extended formats), Joliet
- This unit is compatible with multi-session but reading or play of the disc may take time if there are a lot of sessions.

^{#2} DVD-RAM

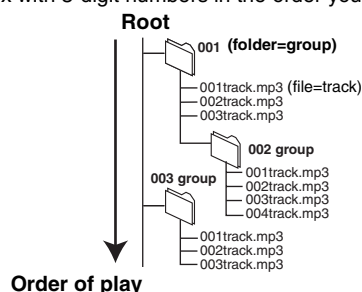
- Discs must conform to UDF 2.0.

^{#3} Design rule for Camera File system: unified standard established by Japan Electronics and Information Technology Industries Association (JEITA).

You can play MP3 and still pictures (JPEG) on this unit by making folders as shown below. However depending on how you create the disc (writing software), play may not be in the order you numbered the folders.

Structure of MP3 folders in CD-R/CD-RW

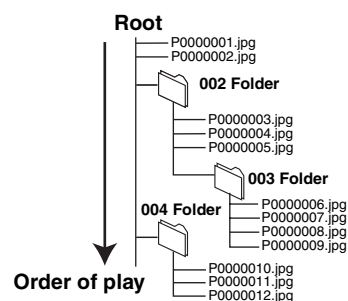
Prefix with 3-digit numbers in the order you want to play them.



Structures of still pictures (JPEG) in CD-R/CD-RW

Files inside a folder are displayed in the order they were updated or taken.

- When the highest level folders are "DCIM" folders, they are displayed first on the tree.

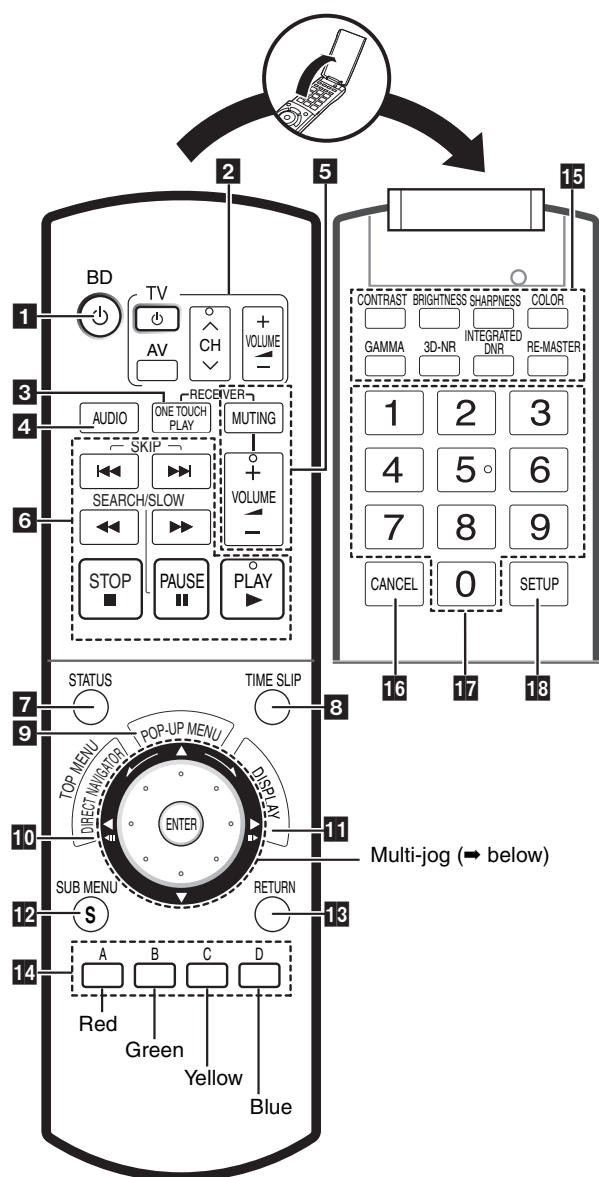


Discs that cannot be played

- BD-R, BD-RE v1/v2
- 2.6-GB and 5.2-GB DVD-RAM
- DVD-RAM that cannot be removed from their cartridges
- Version 1.0 of DVD-RW
- DVD-ROM, CD-ROM, CDV, CD-G, SACD and Photo CD
- WMA discs
- DivX discs
- "Chaoji VCD" available on the market including CVD, DVCD and SVCD that do not conform to IEC62107.
- HD DVD
- Other discs that are not specifically supported

Control reference guide

Remote control



Multi-jog operation

•Select items on menu screens and set items.

[▲, ▼, ◀, ▶]

Press up, down, left or right to select an item.

You can also turn the wheel to select an item.



Press [ENTER] to confirm.

See page 13 for the operations during playback.



NOTE

•Turn the Multi-jog lightly.

If you press it strongly when turning it, [▲, ▼, ◀, ▶] may be mistakenly activated.

•About Multi-jog Setting

The wheel operation can be turned off.

Set the "Multi-jog Setting" to "Off" (► 23, "Others" tab).

- 1** Turn the unit on or set to standby mode (► 12)

2 TV operation buttons

You can operate the TV through the unit's remote control. See page 11 for the remote control setting.

TV	Turn the television on or set to standby mode		Channel select
AV	Switch the input channel		Adjust the volume

- 3** (► 18)

Works only with Panasonic HDAVI Control compatible equipment.

- 4** Select audio (► 13)

5 Receiver operation buttons

You can operate a Panasonic amplifier/receiver through the unit's remote control.

MUTING	Mute the sound		Adjust the volume
--------	----------------	--	-------------------

6 Basic playback control buttons

See page 12 for the details.

- 7** Show status messages (► 13)

- 8** Skip the specified time (► 13)

- 9** Show Pop-up menu (► 15)

- 10** Show Top menu/Direct Navigator (► 15)

- 11** Show On-screen menu (► 19)

- 12** Show sub menu (► 15, 17)

- 13** Return to previous screen

- 14**

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.

The A and B buttons are also used with the "Title View", "Picture (JPEG) View" and "Album View" screens.

15 Buttons that adjust picture and sound quality

See page 14 for the details.

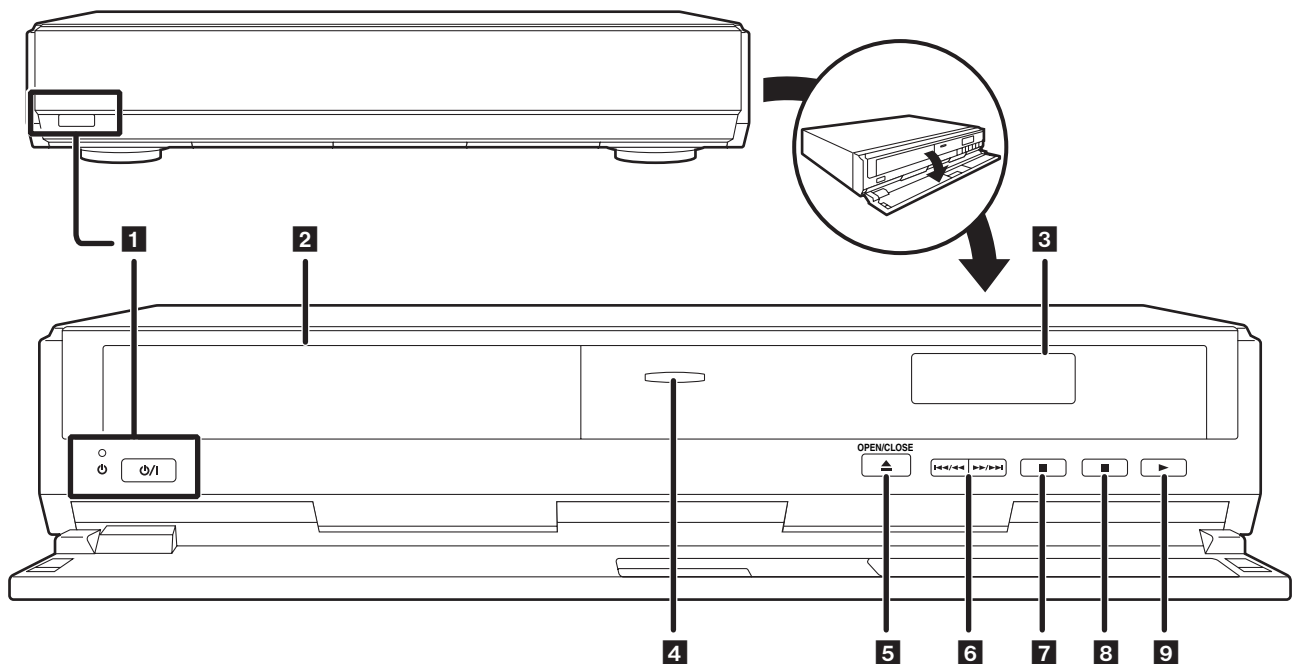
- 16** Cancel

17 Numbered buttons

Select title numbers, etc./Enter numbers (► 13)

- 18** Show Setup menu (► 21)

Main unit

**1** **Standby/on switch (⏻/⏻) (⇒ 12)**

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.

Standby/on indicator (⏻)

When the unit is connected to the AC mains supply, this indicator lights up in standby mode and goes out when the unit is turned on.

2 Disc tray (⇒ 12)**3** Display**4** Illumination lamp

Lights when the unit is turned on.

5 **OPEN/CLOSE** Open/close disc tray (⇒ 12)**6** Search / Skip

Search: Press and hold
Skip: Press

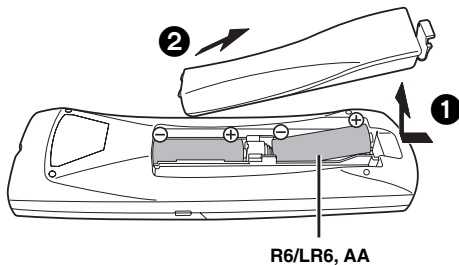
7 Stop (⇒ 12)**8** Pause (⇒ 12)**9** Start play (⇒ 12)

Rear panel terminals (⇒ 8–10)

Using remote control

Batteries

Insert so the poles (+ and –) match those in the remote control. When closing the lid, insert it from the – (minus) side.

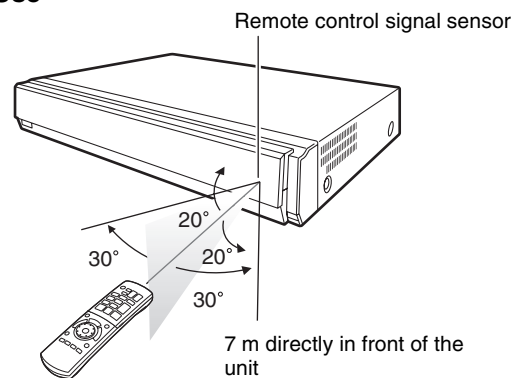


R6/LR6, AA

- Do not use rechargeable type batteries.
- Do not mix old and new batteries.
- Do not use different types at the same time.
- Do not heat or expose to flame.
- Do not take apart or short circuit.
- Do not attempt to recharge alkaline or manganese batteries.
- Do not use batteries if the covering has been peeled off.

Mishandling of batteries can cause electrolyte leakage which can damage items the fluid contacts and may cause a fire. Remove batteries if the remote control is not going to be used for a long period of time. Store in a cool, dark place.

Use



If you cannot operate the unit or television using the remote control after changing the batteries, please re-enter the codes (⇒ 11).

Connection

From the list below, please choose the connection method that fits your TV viewing environment best and follow the illustrations to connect your player.

- If you connect to a television using a 21-pin Scart cable → **A**
- If you connect to a television using an included Audio/Video cable → **B**
- If you connect to an HDMI (⇒ 30, Glossary) compatible television → **C**
- If you connect to an HDMI compatible television and an HDMI compatible amplifier/receiver to enjoy surround sound → **D** (⇒ 9)

The connection examples (**A B C D**) are the most commonly used methods for connecting the unit. For other connection methods, please see pages 9 and 10.

- Do not place the unit on amplifiers or equipment that may become hot. The heat can damage the unit.
- **Do not connect through the video cassette recorder.** Due to copy guard protection, the picture may not display properly.
- Turn off all equipment before connection and read the appropriate operating instructions.
- Connect terminals of the same colour.

Conserving power

This unit consumes a small amount of power even when it is set to standby mode (approx. 1 W). To save power when the unit is not to be used for a long time, unplug it from the household mains socket.

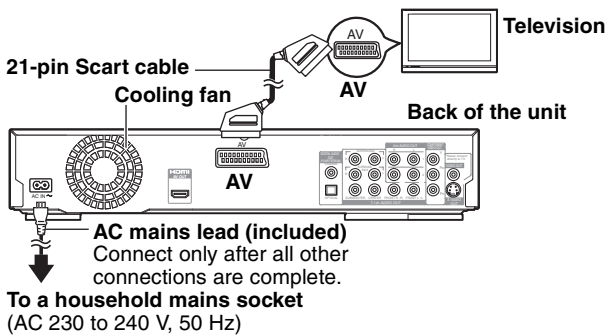
Please use HDMI cables that have the HDMI logo (as shown on the cover). It is recommended that you use Panasonic's HDMI cable.
Recommended part number: RP-CDHG15 (1.5 m), RP-CDHG30 (3.0 m), RP-CDHG50 (5.0 m), etc.

For the United Kingdom and Republic of Ireland only
BE SURE TO READ THE CAUTION FOR THE AC MAINS LEAD ON PAGE 2 BEFORE CONNECTION.

Basic connections

A Connecting to a television with a 21-pin Scart cable

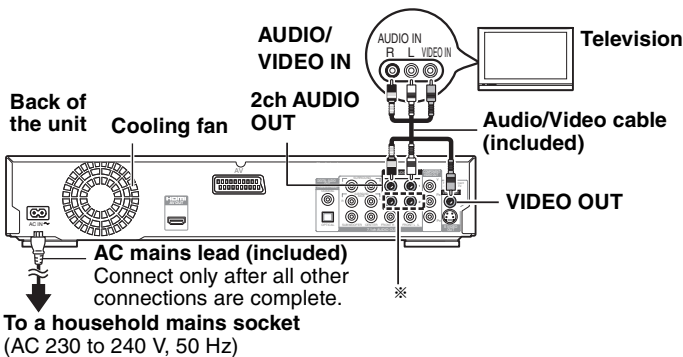
Using a 21-pin Scart cable, you can simply connect the player directly to your television set.



- NOTE**
- High definition video cannot be output with this connection. Use connection **C** (⇒ below) or **D** (⇒ 9) for high definition video.
- TIPS**
- Two methods to improve picture quality**
- If your television is compatible with S Video, select “S Video (with component)” in “AV Output” of the “Connection” tab (⇒ 23).
 - If your television is compatible with RGB, select “RGB (without component)” in “AV Output” of the “Connection” tab (⇒ 23), and select “Off” in “HDMI Video Mode” of the “HDMI” tab (⇒ 23).
- To enjoy an even richer sound**
- Use connections **G** or **H** (⇒ 10).

B Connecting to a television with an Audio/Video cable

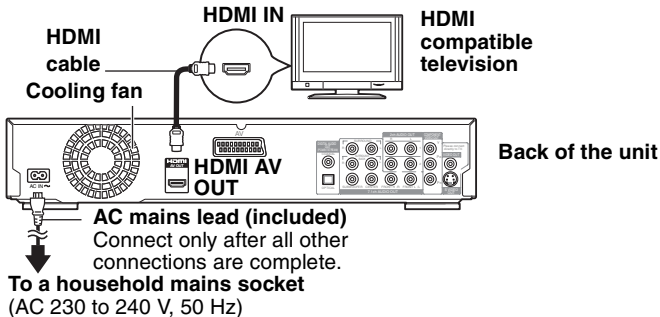
Using the included Audio/Video cable, you can directly connect the player to your television set.



- NOTE**
- High definition video cannot be output with this connection. Use connection **C** (⇒ below) or **D** (⇒ 9) for high definition video.
- TIPS**
- * With audio cables, you can connect these AUDIO OUT terminals to the 2-channel audio input terminals of an analog amplifier/receiver or system component to enjoy stereo sound.
- To improve picture quality**
- Use connections **E** or **F** (⇒ 9).
- To enjoy an even richer sound**
- Use connections **G** or **H** (⇒ 10). (Unplug the red and white plug.)

C Connecting to an HDMI compatible television

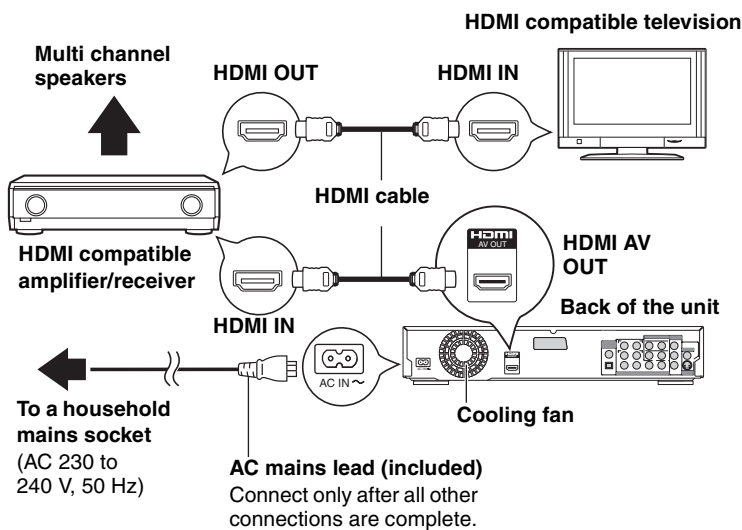
You can enjoy high quality, digital video and audio with just one HDMI cable.



- NOTE**
- When you use 1080p (1125p) video output, please use Panasonic HDMI cables 5 meters or shorter.
- NECESSARY SETTINGS**
- From the Setup menu (⇒ 23, “HDMI” tab), set “HDMI Video Mode” and “HDMI Audio Output” to “On”.
- To enjoy an even richer sound**
- Use connections **G** or **H** (⇒ 10) additionally. In this case, set “HDMI Video Mode” to “On” and “HDMI Audio Output” to “Off” in the Setup menu (⇒ 23, “HDMI” tab).
- With this connection, you can use HDAVI Control**
- See page 18 for the details.

D Connecting to an HDMI compatible television and HDMI compatible amplifier/receiver

You can connect the player to your HDMI compatible amplifier/receiver with an HDMI cable to enjoy digital surround sound along with high quality digital video. Using an additional HDMI cable, you can connect the amplifier/receiver to your HDMI compatible television.



- When you use 1080p (1125p) video output, please use Panasonic HDMI cables 5 meters or shorter.
- When playing BD-Video, only LPCM or Dolby Digital Plus (► 30, Glossary) can be output as 7.1ch.

NECESSARY SETTINGS

- From the Setup menu (► 23, "HDMI" tab), set "HDMI Video Mode" and "HDMI Audio Output" to "On".
- If the speaker setup cannot be completed on the amplifier/receiver, change multi channel speaker settings by selecting "Multi-channel" in "Speaker" of the "Connection" tab (► 23).
- If connecting to an amplifier/receiver incompatible with HDCP (► 30, Glossary), copy-protected DVD-Audio cannot be output through the HDMI terminal. Connect to the amplifier/receiver with audio cables (red and white), coaxial cable, or optical digital audio cable (► 10).

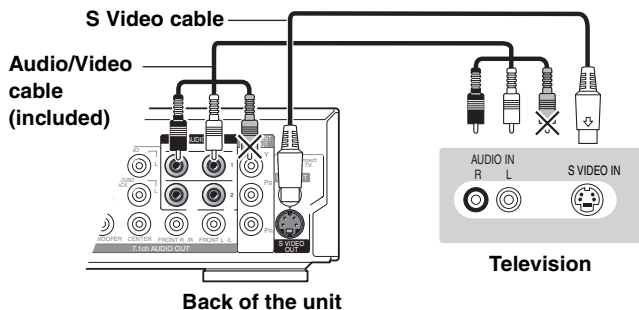


- With this connection, you can use HDAVI Control**
- See page 18 for the details.

Connection methods for using other video terminals

E With S VIDEO terminals

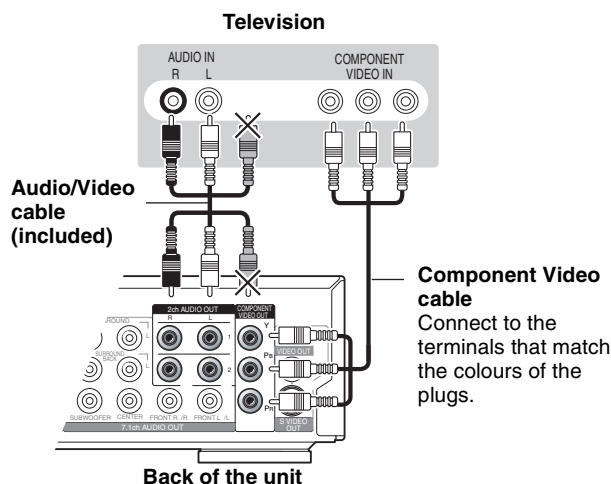
The S VIDEO OUT terminal achieves a more vivid picture than the VIDEO OUT terminal.



- High definition video cannot be output with this connection. Use connection C (► 8) or D (► above) for high definition video.
- Unplug the yellow plug of Audio/Video cable.
- Actual video quality depends on the television.

F With COMPONENT VIDEO terminals

These terminals can be used for either interlace or progressive output (► 30, Glossary) and provide a purer picture than the S VIDEO OUT terminal.



- Unplug the yellow plug of Audio/Video cable.

Regarding the high definition video output

- Some discs prohibit high definition video output from COMPONENT VIDEO OUT terminals. In this case, video resolution is converted and output as 576p/480p.

If you have a regular television (CRT: cathode ray tube)

- Use component output with progressive "Off", even if it is progressive compatible, because progressive output can cause some flickering. This is the same for multi system televisions using PAL mode. (For progressive output ► 20)



To enjoy high definition/progressive video

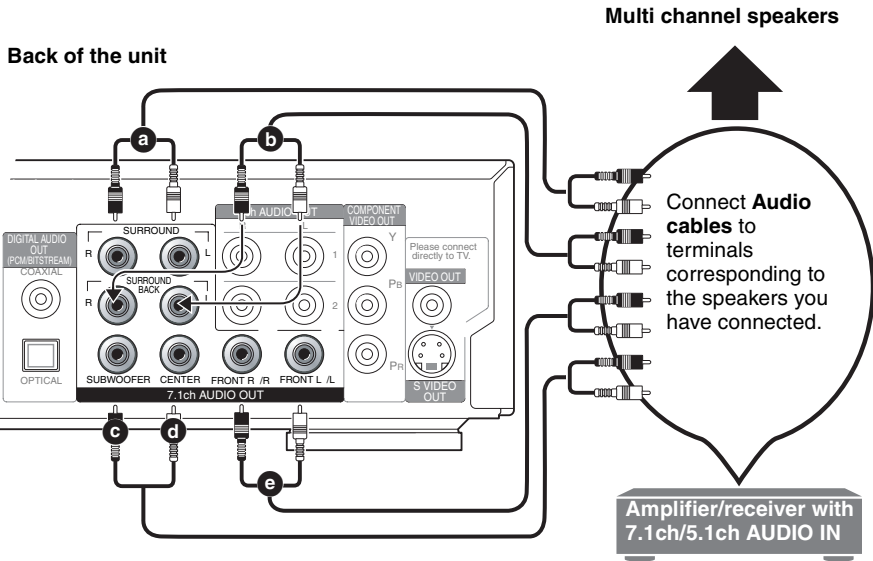
- Connect to a progressive compatible television.
- Select "Video (with component)" in "AV Output" of the "Connection" tab (► 23).
- From the Setup menu (► 23), select "576p/480p", "720p" or "1080i" in "Component Resolution" of the "Connection" tab.
- From the Setup menu (► 23, "HDMI" tab), set "HDMI Video Mode" to "Off". Otherwise, the video is output as 576i/480i.

(Continued on the next page)

Connecting an amplifier/receiver (excluding HDMI connection)

Ⓒ Connecting to an amplifier/receiver with the 7.1ch/5.1ch AUDIO terminal

You can enjoy surround sound using the 7.1ch AUDIO OUT terminals. The 7.1ch AUDIO OUT terminals offer you another option for enjoying surround sound.



Cable connections

- a Surround speaker (L/R)
- b Surround back speaker (L/R)
(Not necessary when connecting to 5.1 channel AUDIO IN)
- c Subwoofer
- d Centre speaker
- e Front speaker (L/R)



- This unit supports playback of DVD-Video discs in surround sound up to 5.1 channels.
- Depending on how the disc was recorded, the audio may not be output properly on the number of channels desired.
- When playing BD-Video, only LPCM or Dolby Digital Plus can be output as 7.1ch.

NECESSARY SETTINGS

- If the speaker setup cannot be completed on the amplifier/receiver, change multi channel speaker settings by selecting "Multi-channel" in "Speaker" of the "Connection" tab (► 23).

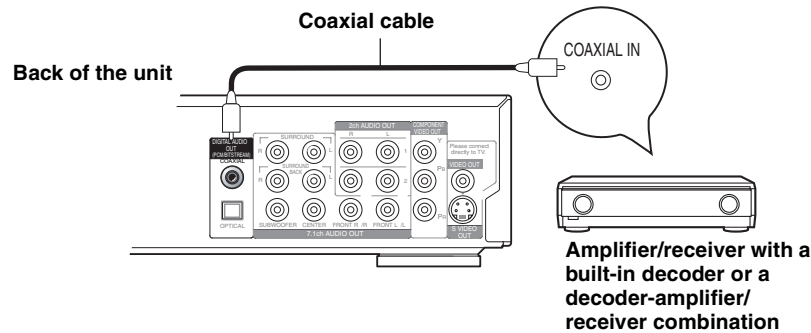
Only when this unit is connected to an HDMI compatible television (► 8, Ⓒ)

- From the Setup menu (► 23, "HDMI" tab), set "HDMI Audio Output" to "Off". Otherwise, audio is output as two channels only, and also output from the television's speakers.

Ⓗ Connecting to an amplifier/receiver with the DIGITAL AUDIO terminal

You can enjoy surround sound using the DIGITAL AUDIO OUT terminals. The DIGITAL AUDIO OUT terminals offer you another option for enjoying surround sound.

With COAXIAL IN



- You cannot use DTS Digital Surround decoders (► 30, Glossary) incompatible with DVD.
- Even if using this connection, output will be only 2 channels when playing DVD-Audio. To enjoy multi-channel surround sound, use connections Ⓓ (► 9) or Ⓒ (► above).
- If the audio track of the disc was recorded with Dolby Digital Plus, it will be output as Dolby Digital audio.

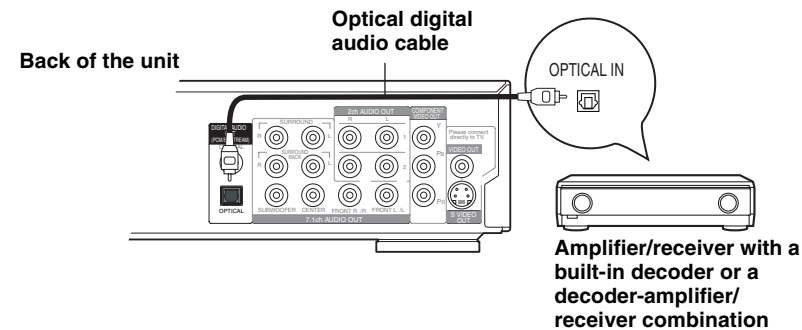
NECESSARY SETTINGS

- Change the settings in "Digital Audio Output" (► 22, "Sound" tab).

Only when this unit is connected to an HDMI compatible television (► 8, Ⓒ)

- From the Setup menu (► 23, "HDMI" tab), set "HDMI Audio Output" to "Off". Otherwise, the sound may not be output with the desired settings.

With OPTICAL IN



Easy Setting

After connecting your new player and pressing the standby/on button, a screen will appear and you will be prompted to perform setup for the basic settings. Please follow the guide and perform setup.

Preparation

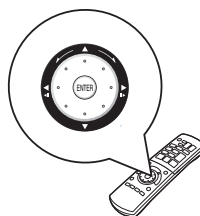
Turn on the television and select the appropriate video input on the television.

1 Press [⏻ BD].

Setup screen appears.

2 Follow the on-screen instructions and make the settings with [▲, ▼, ◀, ▶] and [ENTER].

"Language"※, "TV Aspect" and "Speaker" are set. You can also change their settings individually ("Display" and "Connection" tab → 22, 23).



- You can perform this setup anytime by selecting "Easy Setting" in Setup menu (→ 23, "Others" tab).

※ "Language" can only be selected in the United Kingdom, Republic of Ireland and Continental European models.

Remote control setting

Setting the television operation

You can configure the TV operation buttons on the remote control to turn the television on or set to standby mode, change the television input mode, and change the television channel and volume.

Point the remote control at the television.

1 While pressing [RETURN], enter the code with the numbered buttons.

e.g., 01: [0] → [1]

2 Test by turning on the television and changing channels.



- If your television brand has more than one code listed, select the one that allows correct operation.
- If your television brand is not listed or if the code listed for your television does not allow control of your television, this remote control is not compatible with your television. Use the television's remote control.

For the United Kingdom, Republic of Ireland and Continental Europe

Manufacturer and Code No			
Panasonic	01/02/03/04/45	IRRADIO	30
AIWA	35	ITT	25
AKAI	27/30	JVC	17/39
BLAUPUNKT	09	LOEWE	07/46
BRANDT	10/15	METZ	28/31
BUSH	05/06	MITSUBISHI	06/19/20
CURTIS	31	MIVAR	24
DESMET	05/31/33	NEC	36
DUAL	05/06	NOKIA	25/26/27
ELEMIS	31	NORDMENDE	10
FERGUSON	10	ORION	37
GOLDSTAR/LG	31	PHILIPS	05/06
GOODMANS	05/06/31	PHONOLA	31/33
GRUNDIG	09	PIONEER	38
HITACHI	22/23/31/40/41/42	PYE	05/06
INNO HIT	34	RADIOLA	05/06
		SABA	10
		SALORA	26
		SAMSUNG	31/32/43
		SANSUI	05/31/33
		SANYO	21
		SBR	06
		SCHNEIDER	05/06/29/30/31
		SELECO	06/25
		SHARP	18
		SIEMENS	09
		SINUDYNE	05/06/33
		SONY	08
		TELEFUNKEN	10/11/12/13/14
		THOMSON	10/15/44
		TOSHIBA	16
		WHITE WESTINGHOUSE	05/06

For Australia and New Zealand

Manufacturer and Code No	
Panasonic/National	01/02/03/04
GOLDSTAR/LG	15/16
HITACHI	08
JVC	07
MITSUBISHI	09/10
NEC	13
PHILIPS	12
SAMSUNG	12/17/18
SANYO	14/19
SHARP	11
SONY	05
TOSHIBA	06

When other Panasonic products respond to this remote control

Change the remote control code on the main unit and the remote control (the two must match) if you place other Panasonic products close together. Use "1", the factory set code, under normal circumstances.

1 Press [SETUP].

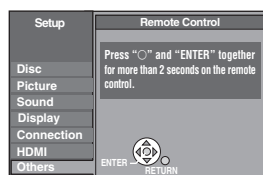
2 Press [▲, ▼] to select "Others" and press [▶].

3 Press [▲, ▼] to select "Remote Control" and press [ENTER].

4 Press [▲, ▼] to select the code (1, 2, or 3) and press [ENTER].

5 To change the code on the remote control While pressing [ENTER], press and hold the numbered button ([1], [2] or [3]) for more than 2 seconds.

6 Press [ENTER].



When the following indicator appears on the unit's display and you are unable to operate the unit

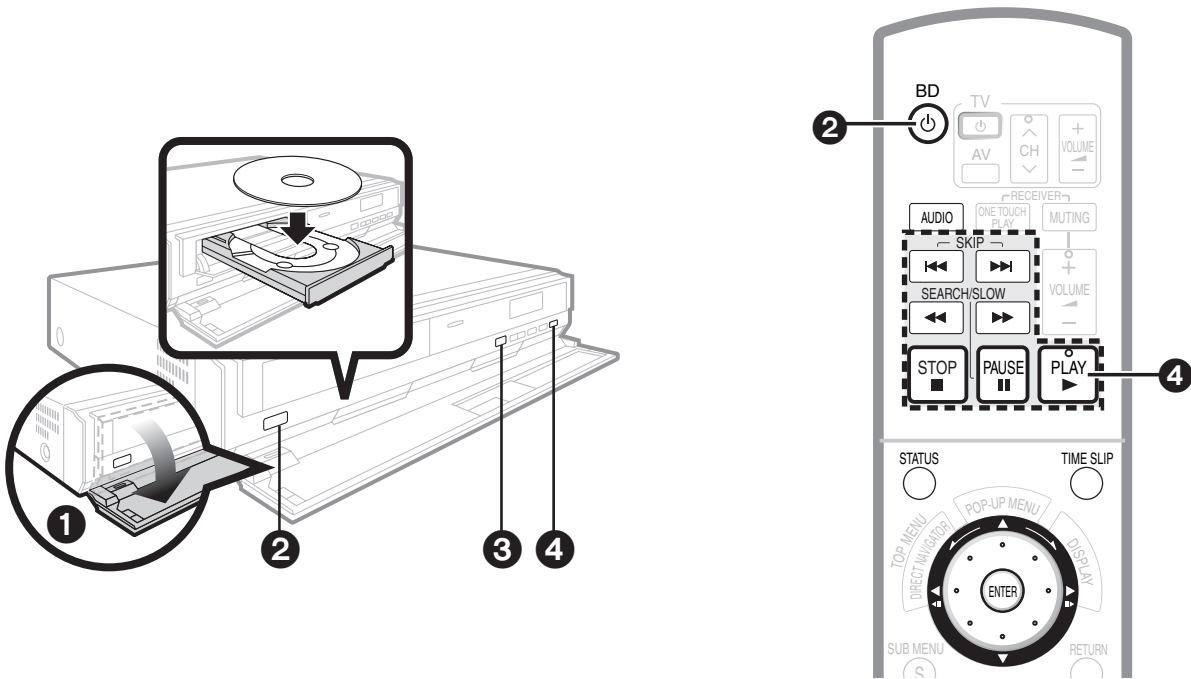


The unit's remote control code

- Press and hold [ENTER] and the indicated number button at the same time for more than 2 seconds.

Basic play

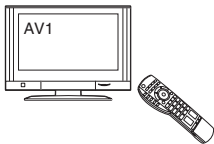
Instructions for operations are generally described using the remote control in this manual.



Start play

Preparation

Turn on the television and select the appropriate video input on the television with the remote control for the television.



- 1 Open the front cover.
- 2 Press [POWER] to turn on the unit.
- 3 Press [OPEN/CLOSE] to open the disc tray and load the disc.
 - Load double-sided discs so the label for the side you want to play is facing up.
 - DVD-RAM: Remove discs from their cartridges before use.

4 Press [PLAY] (PLAY) to start play.

- When a menu screen appears → 15, Showing disc menu, step 2
- If the screen prompting you to use the colour buttons appears, continue to operate with the colour buttons on the remote control.

Basic playback control



Start play

- It is not possible to play continuously from one side of a double sided disc to the other. You will need to eject the disc and turn it over.



Stop

The stopped position is memorized.

Resume play function

Press [PLAY] (PLAY) to restart from this position.

- The disc position is cleared if the tray is opened or [STOP] is pressed several times.
- **DVD-A** **CD** **VCD** **MP3**: The disc position is cleared if the unit is set to standby mode.

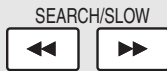
Note

DISCS CONTINUE TO ROTATE WHILE MENUS ARE DISPLAYED. Press [STOP] when you have finished playback to protect the unit's motor, your television screen and so on.



Pause

- Press [PAUSE] again or [PLAY] (PLAY) to restart play.



Search/Slow-motion

Search (During play)

The speed increases up to 5 steps.

- Press [PLAY] (PLAY) to revert to normal playback speed.

- **BD-V**: Audio is not heard during all levels of search.

DVD-V **DVD-VR** **VCD**: Audio is heard during first level of forward search.

DVD-A **CD** **MP3**: Audio is heard during all levels of search.

Slow-motion (During pause)

The speed increases up to 5 steps.

- **BD-V** **VCD**: Forward direction [SKIP] only.

- Press [PLAY] (PLAY) to revert to normal playback speed.

You can also use Multi-jog to Search/Slow-motion. (→ 13, Search/Slow-motion)



Skip

Skip to the title, chapter or track you want to play.

- Each press increases the number of skips.

Other operations during play



Open remote control cover



Starting from a selected item

Play starts from the selected title, chapter or track.

MP3 JPEG

e.g., 5: [0] → [0] → [5]
15: [0] → [1] → [5]

Other discs (You can select a track with DVD-Audio.)

e.g., 5: [0] → [5]
15: [1] → [5]

DVD-A Selecting groups

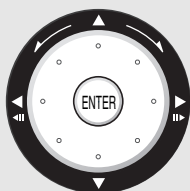
While stopped (screen saver is displayed on the television → right)

e.g., 5: [5]

- This works only when stopped (screen saver is displayed on the television → right) with some discs.

VCD (with playback control)

If you press the numbered buttons while stopped (the above screen saver is displayed on the television) you can cancel playback control. (Elapsed play time appears on the unit's display.)



Frame-by-frame

While paused, press [◀] (◀||) or [▶] (||▶).

Each press shows the next frame.

- Press and hold to change in succession forward or backward.
- Press [▶] (PLAY) to revert to normal playback speed.

BD-V VCD: Forward direction [▶] (||▶) only.

BD-V This function does not work while the BD-J is being executed.

Search/Slow-motion

Forward search: During play, turn the wheel right.

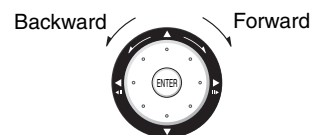
Forward slow-motion: During pause, turn the wheel right.

Backward search: During play, turn the wheel left.

Backward slow-motion: During pause, turn the wheel left.

- Press [▶] (PLAY) to revert to normal playback speed.
- Turn the Multi-jog lightly. If you press it strongly when turning it, [▲, ▼, ◀, ▶] may be mistakenly activated.

- The wheel operation can be turned off. Set the "Multi-jog Setting" to "Off" (→ 23, "Others" tab).



TIME SLIP



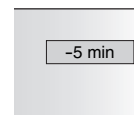
Skipping the specified time (Time Slip) **BD-V DVD-VR**

① Press [TIME SLIP].

② Press [▲, ▼] to select the time and press [ENTER].

Play skips the specified time.

- Each time you press [▲, ▼], the time increases [▲] or decreases [▼] by 1 minute intervals. (Press and hold for 10-minute intervals.)
- The display automatically disappears after approximately 5 seconds.



STATUS



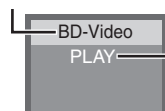
Status messages

The Status display gives you information about what is currently being played. Each time you press the [STATUS] button, the information displayed will change.

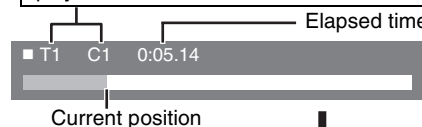
e.g. **BD-V**

Type of disc

Play status



T: Title/Track PL: Playlist
C: Chapter PBC: Playback control
G: Group
Items change depending on the disc played.



Current position

No display

Depending on the kind of disc or the playback status, this display may not appear.

AUDIO

Changing audio during play

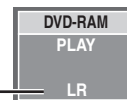
DVD-VR VCD

LR → L → R

BD-V DVD-V DVD-A

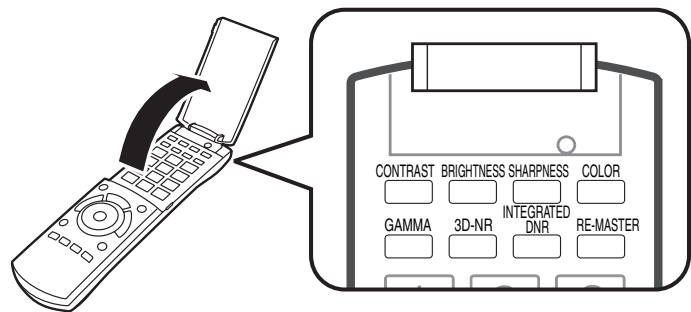
You can change the audio channel number each time you press the button. This allows you to change things like the soundtrack language (→ 19, Soundtrack).

e.g., "LR" is selected



e.g., English is selected.

Adjusting picture and sound quality



Adjusting the picture

During video playback, pressing each of the following buttons will display the corresponding on-screen adjustment as shown in the illustration on the right. Adjustments are made in units of 1 each time the button is pressed. You can also make the same adjustments by pressing the left or right cursor keys.



Press the buttons below.



Contrast
Increases the contrast between light and dark parts of the picture (−7 to +7).



Gamma
Adjusts the brightness of dark portions of the screen (0 to +5).



Brightness
Brightens the picture (0 to +15).



3D-NR (Noise Reduction)
Reduces the rough noise in the background to give a greater feeling of depth (0 to +4).



Sharpness
Adjusts the sharpness of the edges of the horizontal lines (−6 to +6).



Integrated DNR (Digital Noise Reduction)
Smooths block noise and reduces the smudging that appears around contrasting sections of the picture (0 to +3).



Colour
Adjusts the shade of the picture's colour (−7 to +7).

Reproducing more natural audio

The purpose of the Re-master function is to add audio to portions of a track where audio was not recorded, or to reproduce audio signals that were lost in a natural, rich manner.



Re-master
DVD-V* DVD-VR* CD

- **During multi-channel output**
This feature reproduces the frequencies lost during recording to give you a sound closer to the original.
- **During 2 ch output**
This feature gives you a more natural sound by adding higher frequency signals not recorded on the track. (For example, playing DVD-Video recorded with 48 kHz at 96 kHz.)

Press [RE-MASTER] to select “1”, “2” or “3”.

“Re-master” has three different modes. Select the one that you like best.

Setting	When playing LPCM sound Type of music	Other types of sound Effect level
1	High tempo (e.g., pop and rock)	Light
2	Various tempos (e.g., jazz)	Medium
3	Low tempo (e.g., classical)	Strong
Off	Off	Off



- * Tracks recorded with 48 kHz only
- This may not work depending on the disc's recording.
 - When connecting with DIGITAL AUDIO OUT terminal, the actual output sampling frequency depends on “Digital Audio Output” setting in the “Sound” tab (➡ 22).

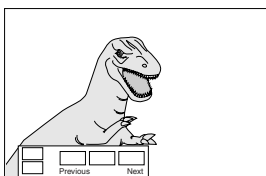
Operations using menu screen

Showing Pop-up menu **BD-V**

The Pop-up menu is a special feature available with some BD-Video discs. This menu may be different depending on discs, and selectable items may differ as well. For more information on how to operate the menu on your BD-Video discs please read the operating instructions that came with the disc.

1 Press [POP-UP MENU].

e.g.,



2 Press [▲, ▼, ◀, ▶] to select the item and press [ENTER].



TIPS

- Pop-up menu also appears by pressing [SUB MENU] and selecting "Pop-up menu".

To exit the screen

- Press [POP-UP MENU].

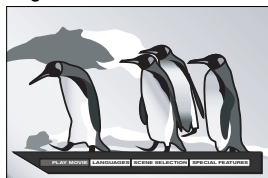
Showing disc menu **BD-V DVD-V DVD-A VCD***

This menu may be different depending on discs, and selectable items may differ as well. For more information on how to operate the menu on your discs, please read the operating instructions that came with the disc.

1 Press [TOP MENU].

VCD* Press [RETURN] while playing.

e.g.,



2 Press [▲, ▼, ◀, ▶] to select the item and press [ENTER].

VCD* Press the numbered buttons to select the item.

e.g., 5: [0] → [5] 15: [1] → [5]



TIPS

* With playback control

Using the sub menu to show menu screen

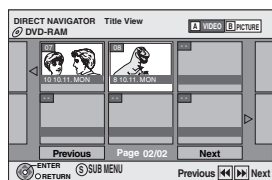
- ① Press [SUB MENU]. Sub menu appears on the screen.
- ② Press [▲, ▼] to select "Pop-up menu", "Top Menu" or "Menu" and press [ENTER]. Items differ depending on the disc type playing.

To exit the screen

- Press [TOP MENU].

Playing programmes with the menu screen **DVD-VR**

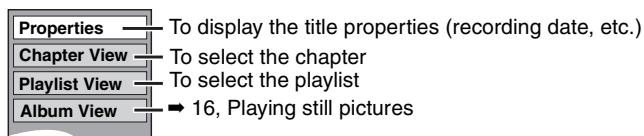
1 Press [DIRECT NAVIGATOR].



2 Press [▲, ▼, ◀, ▶] to select the programme and press [ENTER].

Using the sub menu

- ① While the above screen is displayed Press [SUB MENU]. The sub menu appears.



- ② Press [▲, ▼] to select the item and press [ENTER].
- ③ Only when "Chapter View" or "Playlist View" is selected Press [▲, ▼, ◀, ▶] to select the item and press [ENTER].



TIPS

- Press [◀, ▶] to show other pages.

- If "Album View" or "Picture (JPEG) View" screen is displayed, press the "A" button to switch to the "Title View" screen.

To exit the screen

- Press [DIRECT NAVIGATOR].

Playing MP3 files and still pictures

Playing MP3 files **MP3**

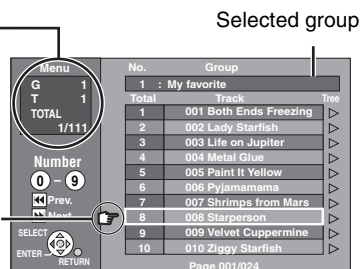
You can play MP3 files recorded onto a CD-R/RW.

1 Press [DIRECT NAVIGATOR].

G: Group No.
T: Track No. in the group
TOTAL: Track No./Total tracks in all groups

- Files are treated as tracks and folders are treated as groups.

"G" indicates the track currently playing.

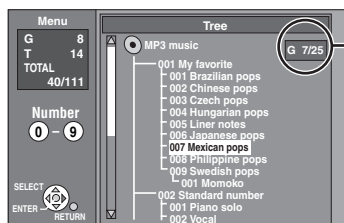


2 Press [▲, ▼] to select the track and press [ENTER].

Play starts on the selected track.

Showing list of groups

- While the file list (above) is displayed Press [►] while a track is highlighted to display the tree screen.



Selected group No. /Total groups
If the group has no track, "—" is displayed as group number.

- Press [▲, ▼] to select a group and press [ENTER].
The file list for the group appears.



- When the JPEG Menu is displayed, perform steps below.

- Press [DIRECT NAVIGATOR] to exit menu screen.
- Set "Mixed Disc-Audio & Pictures" to "MP3" (► 21, "Disc" tab).



- You can also select the track with the numbered buttons. (► 13, Starting from a selected item)

- Press [◀, ▶] to show other pages.

To exit the screen

Press [DIRECT NAVIGATOR].



- You cannot select groups that contain no compatible files.



To return to the previous screen
Press [RETURN].

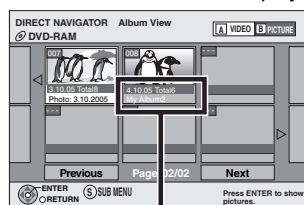
Playing still pictures **JPEG**

You can play still pictures recorded onto a DVD-RAM and CD-R/RW.

1 Press [DIRECT NAVIGATOR].

DVD-RAM

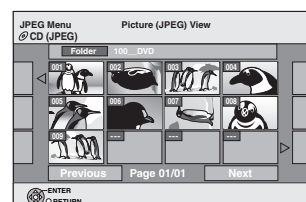
"Album View" screen is displayed



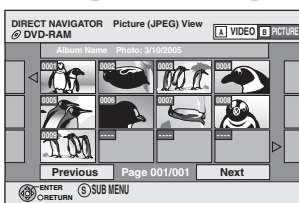
Recording date of the first picture in the album, number of pictures and album name.

CD-R/RW

"Picture (JPEG) View" screen is displayed
► Go step 3



2 Press [▲, ▼, ◀, ▶] to select the album and press [ENTER].



3 Press [▲, ▼, ◀, ▶] to select the still picture and press [ENTER].



DVD-RAM

- When "Title View" screen is displayed, press the "B" button to switch to the "Album View" screen.

CD-R/RW

- When the MP3 Menu is displayed, perform steps below.

- Press [DIRECT NAVIGATOR] to exit menu screen.
- Set "Mixed Disc-Audio & Pictures" to "Pictures" (► 21, "Disc" tab).



- Press [◀, ▶] to display the previous or next still picture.
- Useful functions during still picture play (► 17).

- To select the still pictures in another folder (► 17)
- You can also select the still pictures with the numbered buttons. (► 13, Starting from a selected item)

To return to the previous screen
Press [RETURN].

To exit the screen

Press [DIRECT NAVIGATOR].

Useful functions during still picture play

Start Slide Show

You can display still pictures one by one at a constant interval.

- ① While the "Album View" (DVD-RAM) or "Picture (JPEG) View" (CD-R/RW) screen is displayed
Press [▲, ▼, ◀, ▶] to select the album (for DVD-RAM) or "Folder" (for CD-R/RW) and press [SUB MENU].
- ② Press [▲, ▼] to select "Start Slide Show" and press [ENTER].
 - DVD-RAM only
You can also start slideshow by pressing [▶] (PLAY) after selecting the album.

Slide Show Setting

To change the display interval

- ① While the "Album View" (DVD-RAM) or "Picture (JPEG) View" (CD-R/RW) screen is displayed
Press [▲, ▼, ◀, ▶] to select the album (for DVD-RAM) or "Folder" (for CD-R/RW) and press [SUB MENU].
- ② Press [▲, ▼] to select "Slide Show Setting" and press [ENTER].
- ③ Press [▲, ▼] to select "Display interval" and press [◀, ▶] to select the desired interval (0–30 seconds) and press [ENTER].

To repeat slideshow

After step ② above

Press [▲, ▼] to select "Repeat Play" and press [◀, ▶] to select "On" or "Off" and press [ENTER].

Rotate

- ① While playing
Press [SUB MENU].
- ② Press [▲, ▼] to select "Rotate RIGHT" or "Rotate LEFT" and press [ENTER].
 - The rotation information will not be stored.

Zoom in/Zoom out

This function is only available for still pictures smaller than 640×480 pixels.

- ① While playing
Press [SUB MENU].
- ② Press [▲, ▼] to select "Zoom in" and press [ENTER].
 - To return the picture to its original size, press [▲, ▼] to select "Zoom out" in step ② and press [ENTER].
 - When zooming in, the picture may be cut off.
 - The enlargement information will not be stored.

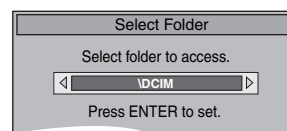
To select the still pictures in another folder

DVD-RAM

To switch to another higher folder

(Only if there is a multiple number of higher folders recognizable)

- ① While the "Album View" screen is displayed
Press [SUB MENU].
- ② Press [▲, ▼] to select "Select Folder" and press [ENTER].
- ③ Press [◀, ▶] to select the higher folder and press [ENTER].



CD-R/RW

- ① While the "Picture (JPEG) View" screen is displayed
Press [▲, ▼, ◀, ▶] to select "Folder" and press [ENTER].
- ② Press [▲, ▼] to select the folder and press [ENTER].



To show the picture properties

While playing

Press [STATUS] twice.

To exit the picture properties screen, press [STATUS].

e.g. JPEG on DVD-RAM

Shooting date



Control with HDMI (HDAVI Control™)

What is HDAVI Control?

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

● **It is recommended that you use Panasonic's HDMI cable.**

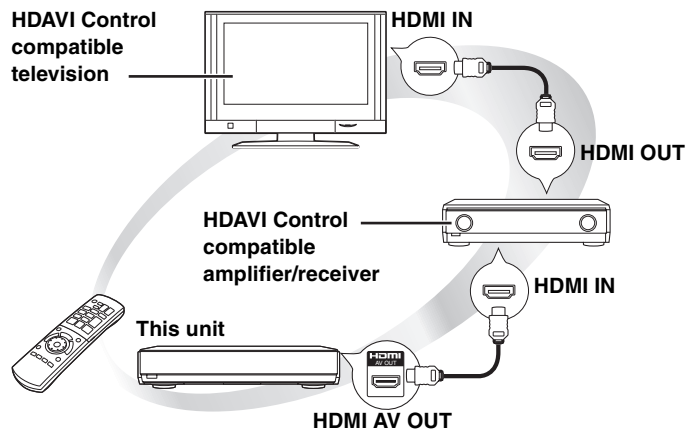
Recommended part number:
RP-CDHG15 (1.5 m), RP-CDHG30 (3.0 m),
RP-CDHG50 (5.0 m), etc.

● **Non-HDMI-compliant cables cannot be utilized.**

● **After connecting the unit to a television using an HDMI cable, set "Control with HDMI" to "On" (⇒ 23).**

● **Set the HDAVI Control operations on the connected equipment (e.g., television).**

● **Turn on all HDAVI Control compatible equipment, set the television to standby mode and turn it on again, and then select this unit's input channel on the connected television so that the HDAVI Control function works properly. Also when the connection or settings are changed, repeat this procedure.**



Please see page 8 (Connection ㉓) or 9 (Connection ㉔) for detailed setup.

Functions made possible with HDAVI Control are...

One touch play

You can turn on this unit, television and amplifier/receiver, and start playing the disc in the play position with a single press of a button.

Press [ONE TOUCH PLAY].

- When operating, point the remote control at the remote control signal sensor on the main unit.



NOTE

- When [ONE TOUCH PLAY] or [▶] (PLAY) is pressed on this unit for "Automatic input switching" or "Power on link", the playback image is not immediately displayed on the screen and it may not be possible to watch the contents from where playback started. In this case, press [◀◀] or [◀] to go back to where playback started.

Automatic input switching

When the following operations are performed the television will automatically switch the input channel and displays the corresponding action.

- When play starts on the unit
- When an action that uses the display screen is performed (e.g., Direct Navigator screen)

Power on link

When the television is off and the following operations are performed, the television will automatically turn on and displays the corresponding action.

- When play starts on the unit
- When an action that uses the display screen is performed (e.g., Direct Navigator screen)

Power off link

All connected equipment compatible with HDAVI Control including this unit is automatically set to standby mode when you set the television to standby mode.

- This unit is automatically set to standby mode even during playback or any other operation.
- Only this unit is set to standby mode when you press the standby/on button of the unit or the remote control for shutting it down. Other connected equipment compatible with HDAVI Control stays on.

Changing settings with the On-screen menu

What is On-screen menu?

The On-screen menu is a menu that appears on screen, regardless of whether a disc is being played or stopped, when [DISPLAY] is pressed. The On-screen menu allows you to turn subtitles on or off, switch audio tracks, and change a variety of other settings.

Disc	Soundtrack	1	DD Digital	2/0 ch
Play	Subtitle	Off		
Picture	Audio channel	L R		
Sound				
Other				
Menus		Items		Settings and details

On-screen menu operations

- 1 Press [DISPLAY] to show On-screen menu.
- 2 Press [▲, ▼] to select the menu and press [►].
- 3 Press [▲, ▼] to select the item and press [►].
- 4 Press [▲, ▼] to select the setting.



NOTE

• Depending on the condition of the unit (playing, stopped, etc.) and disc contents, there may be some items that you cannot select or change.



TIPS

• Some items can be changed by pressing [ENTER].

To exit the On-screen menu
Press [DISPLAY].

What you can change with On-screen menu

Menus	Items	Settings and details
Disc	Soundtrack*	BD-V DVD-V DVD-A Select the audio and language (⇒ below, Language, Audio attribute). DVD-VR The disc's audio attributes appear (⇒ below, Audio attribute). VCD (SVCD) Select the soundtrack number. Soundtrack numbers are displayed even when there is only one audio type.
	Subtitle*	BD-V DVD-V Turn the subtitle on/off and select the language (⇒ below, Language). DVD-VR (Only discs that contain subtitle on/off information) Turn the subtitle on/off. VCD (SVCD) Turn the subtitle on/off and select the subtitle number. Subtitle numbers are displayed even if there are not multiple subtitles.
	Subtitle Style	BD-V Select the subtitle style.
	PBC (Playback control ⇒ 30)	VCD Indicates whether menu play (playback control) is on or off.
	Audio channel	DVD-VR VCD ⇒ 13, Changing audio during play
	Angle*	BD-V DVD-V Change the number to select an angle.
	STILL-P (Still picture)	DVD-A Selects the play method for still pictures. • Slide Show: Plays according to the default order on the disc. • Page: Select the still picture number and play. • RANDOM: Plays in random order. • Return: Returns to the default still picture on the disc.

* You may have to use the menus on the disc to make changes (⇒ 15).

Language		
ENG: English	DAN: Danish	THA: Thai
FRA: French	POR: Portuguese	POL: Polish
DEU: German	RUS: Russian	CES: Czech
ITA: Italian	JPN: Japanese	SLK: Slovak
ESP: Spanish	CHI: Chinese	HUN: Hungarian
NLD: Dutch	KOR: Korean	FIN: Finnish
SVE: Swedish	MAL: Malay	*: Others
NOR: Norwegian	VIE: Vietnamese	

Audio attribute	
LPCM/PPCM/DD Digital/DD Digital +/- DD TrueHD/DTS-HD/DTS/MPEG	Signal type
ch (channel)	Number of channels
k (kHz)	Sampling frequency
b (bit)	Number of bits

(Continued on the next page)

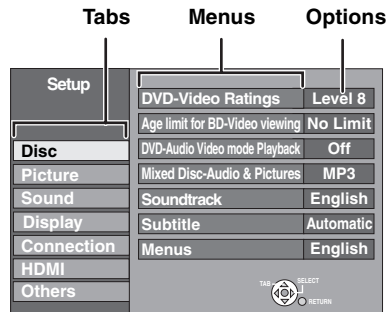
Playback

Settings

Menus	Items	Settings and details
Play	Repeat Play	(Only when the elapsed time is being displayed on the unit display.) Selects the item which you want to repeat. The items displayed differ depending on the type of disc. • All Entire disc • Chapter Chapter • Group Entire group • PL Playlist • Title Title (DVD-Video, etc.) • Track Track • Off Select "Off" to cancel.
Picture	Picture Mode	BD-V DVD-V DVD-VR VCD Select the picture quality mode during play. • Normal: Default setting • Soft: Soft picture with fewer video artifacts • Fine: Details are sharper • Cinema: Mellows movies, enhances detail in dark scenes. • User: You can make further adjustments. Press [▲, ▼, ◀, ▶] to select "Picture Adjustment" and press [ENTER]. If the video adjustment buttons on the remote control are used, the setting is automatically changed to "User". Contrast: Brightness: Sharpness: Colour: Gamma: 3D-NR: Integrated DNR: ➡ For details, see page 14
	DNR	BD-V DVD-V DVD-VR VCD Reduces mosaic-like distortion and picture degradation. On ↔ Off
	Progressive*	Select "On" to enable progressive output. • Depending on the type of television used, the video may be stretched horizontally when video is output in progressive mode. When this occurs, select "Off" and the video will then be output as "576i/480i". • This setting will be fixed to "On" if you connect with an HDMI cable and set "HDMI Video Mode" to "On" (➡ 23, "HDMI" tab). Note • When connected to a regular television (CRT: Cathode ray tube) or a multi-system television using PAL mode, even if it is progressive compatible, progressive output can cause some flickering. Turn off "Progressive" if this occurs.
	Transfer*	Select the method of conversion for progressive output to suit the type of material being played (➡ 30, Glossary, Film and video). When playing PAL discs (When the tray is opened, the setting will return to "Auto".) • Auto: Automatically detects the film and video content, and appropriately converts it. • Video: Select when using "Auto", and the content is distorted. When playing NTSC discs • Auto1 (Normal): Automatically detects the film and video content, and appropriately converts it. • Auto2: In addition to "Auto1", automatically detects film contents with different frame rates and appropriately converts it. • Video: Select when using "Auto1" and "Auto2", and the content is distorted.
	4:3 Aspect	BD-V DVD-V DVD-VR VCD You can select how images made for 4:3 aspect screens are displayed on a 16:9 aspect television. • Zoom: Makes 4:3 letterbox video expand to full screen on a wide screen television (16:9). • Normal: The picture is displayed as a 4:3 ratio image in the centre of the screen.
Sound	V.S.S.	DVD-V DVD-VR (Dolby Digital with 2 channels or more only) Enjoy a surround-like effect if you are using two front speakers only. • Emphasis • Natural • Off • Turn V.S.S. off if it causes distortion. • Do not use in combination with surround effects on other equipment. • V.S.S. does not work for bilingual recordings.
	Dialog Enhancer	BD-V DVD-V DVD-VR (Dolby Digital with 3 channels or more only, including a centre channel) The volume of the centre channel is raised to make dialog easier to hear. On ↔ Off
	Re-master	DVD-V DVD-VR CD • 1–3, Off (➡ 14, Reproducing more natural audio)
	Digital Filter	When audio is output from AV terminal, 2ch AUDIO OUT terminals, or 7.1ch AUDIO OUT terminals (➡ 8–10) • Normal: A clear timbre. • Slow: Gives music atmosphere, with softness and a feeling of depth.
Other	Position	Select the position of the On-screen menu. • 1 (Standard): Highest to • 5: Lowest

* Only when you have selected "576p/480p", "720p", "1080i" in "Component Resolution" (➡ 23, "Connection" tab)

Changing the unit's settings



Setup menu operations

- 1 While stopped
Press [SETUP].
- 2 Press [▲, ▼] to select the tab and press [▶].
- 3 Press [▲, ▼] to select the menu and press [ENTER].
- 4 Press [▲, ▼] to select the option and press [ENTER].



• There may be differences in operation methods. If this happens, follow the on-screen instructions for the operation.



To return to the previous screen
Press [RETURN].

To exit the screen
Press [SETUP].

Summary of settings

The settings remain intact even if you switch the unit to standby.

Tabs	Menus	Options (Underlined items are the factory presets.)
Disc	DVD-Video Ratings Set a ratings level to limit DVD-Video play. Follow the on-screen instructions. Enter a 4-digit password with the numbered buttons when the password screen is shown. It will be the common password for both "DVD-Video Ratings" and "Age limit for BD-Video viewing". • Do not forget your password.	• <u>8 No Limit</u>: All DVD-Video can be played. • 1 to 7: Prohibits play of DVD-Video with corresponding ratings recorded on them. • 0 Lock All: Prohibits play of all DVD-Video.
	Age limit for BD-Video viewing Set an age limit of BD-Video play.	• <u>No Limit</u>: All BD-Video can be played. • 0 to 254 year(s): Prohibits play of BD-Video with corresponding ratings recorded on them.
	DVD-Audio Video mode Playback Select "On" to play DVD-Video content on some DVD-Audio.	• <u>On</u>: The setting returns to "Off" when you change the disc or set the unit to standby mode. • <u>Off</u>
	Mixed Disc-Audio & Pictures When playing a CD-R/RW recorded with both MP3 and JPEG files, you can select which types of files you would like to give priority to.	• <u>MP3</u> • <u>Pictures</u>
	Soundtrack Choose the language for audio, subtitle and disc menus. • <u>BD-V</u> <u>DVD-V</u> • Some discs start in a certain language despite any changes you make here.	• <u>English</u> • <u>Spanish</u> • <u>Other ****</u>
	Subtitle • When the selected language is not available on the disc, the default language is played. There are discs where you can only switch the language from the menu screen (⇒ 15).	• <u>Automatic</u>: If the language selected for "Soundtrack" is not available, subtitles of that language will automatically appear if available on that disc. • <u>English</u> • <u>Spanish</u> • <u>Other ****</u>
Picture	Menus • Enter a code (⇒ 29) with the numbered buttons when you select "Other ****".	• <u>English</u> • <u>Spanish</u> • <u>Other ****</u>
	Still Mode <u>DVD-V</u> Select the type of picture shown when you pause playback (⇒ 30, Glossary, Frames and fields).	• <u>Automatic</u> • <u>Field</u>: Select if jittering occurs when "Automatic" is selected. (The picture is coarser.) • <u>Frame</u>: Select if small text or fine patterns cannot be seen clearly when "Automatic" is selected. (The picture is clearer and finer.)
	Seamless Play Select the play mode between playlist chapter segments and partially deleted titles.	• <u>On</u>: The chapters in playlists are played seamlessly. This does not work when there are several audio types included on the playlist. Additionally, the positioning of chapter segments may change slightly. • <u>Off</u>: The points where chapters in playlists change are played accurately, but the picture may freeze for a moment.

Tabs	Menus	Options (Underlined items are the factory presets.)
Sound	Dynamic Range Compression <u>BD-V</u> <u>DVD-V</u> (Dolby Digital and Dolby Digital Plus only) Change the dynamic range (⇒ 30, Glossary) for late night viewing.	●On ● <u>Off</u>
	Digital Audio Output Change the settings when you have connected equipment through this unit's digital audio out terminal (⇒ 10). ●Press [ENTER] to show the following settings.	
	PCM Down Conversion Select how to output audio with a sampling frequency of 96 kHz or 88.2 kHz. ●Signals are converted to 48 kHz or 44.1 kHz despite the settings across if the signals have a sampling frequency of over 96 kHz or 88.2 kHz, or the disc has copy protection. ● <u>BD-V</u> Refer to "BD-Video Function Sound" (⇒ below).	●On: Signals are converted to 48 kHz or 44.1 kHz. (Choose when the connected equipment cannot process signals with sampling frequency of 96 kHz or 88.2 kHz.) ● <u>Off</u> : Signals are output as 96 kHz or 88.2 kHz. (Choose when the connected equipment can process signals with sampling frequency of 96 kHz or 88.2 kHz.)
	Dolby Digital 	Select how to output the signal. If "Bitstream" is selected, the bitstream is output from the unit and the connected equipment decodes the signal. If "PCM" is selected, this unit decodes the signal and output it as 2 channel from DIGITAL AUDIO OUT terminal. ● <u>Bitstream</u> : When connecting to equipment displaying the Dolby Digital logo. ● <u>PCM</u> : When connecting to equipment not displaying the Dolby Digital logo.
	Dolby Digital Plus  DTS  MPEG	The bitstream signal of Dolby Digital is output. ● <u>PCM</u> : Dolby Digital Plus PCM sound is output in 2 channels. The bitstream signal of DTS is output. ● <u>PCM</u> : When connecting to equipment not displaying the DTS logo. When connected to equipment with a built-in MPEG decoder. ● <u>PCM</u> : When connected to equipment without a built-in MPEG decoder.
Display	BD-Video Function Sound <u>BD-V</u> This will set the operation sounds you hear from the menu, etc. while playing a BD-Video disc. Please note that if you have selected "Bitstream" digital audio output (⇒ above), these sounds will not be heard even if this is set to "On".	●On ● <u>Off</u> ● <u>Note</u> : When "On" is selected, sampling frequency is converted to 48 kHz. Sound is output at higher than 48 kHz sampling frequency only when both this item and "PCM Down Conversion" are set to "Off".
	Language* Choose the language for these menus and on-screen messages.	● <u>English</u> ●Deutsch ●Français ●Italiano ●Español ●Nederlands
	On-Screen Messages Choose whether to show status messages automatically.	● <u>Automatic</u> ●Off
	FL Display Changes the brightness of the unit's display.	● <u>Bright</u> ●Dim: The display is dimmed and the illumination lamp is turned off. ●Automatic: The display is dimmed and the illumination lamp is turned off during playback, and reappears if a button is pressed.
	Software License	Information about the software used by this unit is displayed.
Connection	TV Aspect Set to match the type of television connected.	Regular aspect television (4:3) ●4:3 Pan & Scan: Video recorded for a widescreen is played as Pan & Scan (unless prohibited by the producer of the disc). When playing BD-Video, video is output as "4:3 Letterbox". ●4:3 Letterbox: Video recorded for a widescreen is played in the letterbox style. Widescreen television(16:9) ● <u>16:9</u> : Video recorded for 4:3 aspect screen is displayed as a 4:3 ratio image in the centre of the screen. ●16:9 full: Video recorded for 4:3 aspect screen is displayed as a horizontally stretched 16:9 image.
	TV System Change the setting to match the equipment you are connecting with. ●If picture output is not smooth, change the setting.	● <u>PAL</u> : Select when connecting to a PAL or multi-system television. NTSC discs are played as PAL60. ● <u>BD-V</u> This unit cannot convert BD-Video from NTSC signals to PAL60 signals; therefore video cannot be displayed properly when you connect this unit to the AV terminal, VIDEO terminal or S VIDEO terminal. ●NTSC: Select when connecting to a NTSC television. NTSC discs are played as NTSC.

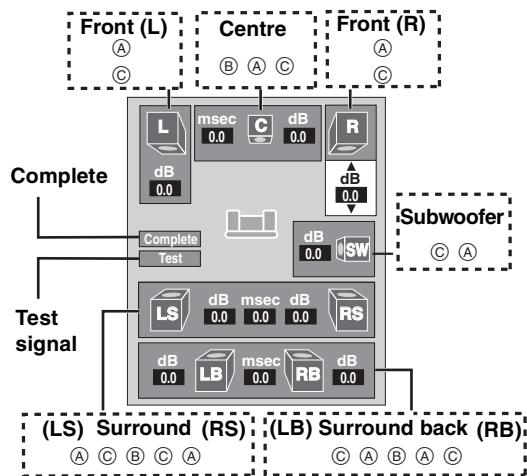
* "Language" can only be selected in the United Kingdom, Republic of Ireland and Continental European models.

Tabs	Menus	Options (Underlined items are the factory presets.)		
Connection (continued)	AV Output Choose the video signal format to be output from the AV terminal.	● <u>Video (with component)</u>: Select when a TV is connected that can receive a composite signal. ● S Video (with component): Select when a TV is connected that can receive an S Video signal. ● RGB (without component): Select when a TV is connected that can receive an RGB signal.		
	Component Resolution This sets the video output resolution when using the component video terminal. Set according to the signal and terminal of the connected TV.	● <u>576i/480i</u> ● 720p	● 576p/480p ● 1080i	480i, 480p: When playing NTSC discs 576i, 576p: When playing PAL discs
	Speaker You can set the unit to output the best possible sound for your speakers. Select "2-Channel" if the speaker settings can be set on the connected equipment.	● <u>Multi-channel</u>: When using three or more speakers with equipment that cannot set the speaker settings. You can adjust the settings for speaker size, presence, channel balance and audio-delay. (⇒ 24) ● 2-Channel: When using two speakers. ● Attenuator: When audio is output from 2ch or 7.1ch AUDIO OUT terminals and sound is distorted. ● On ● <u>Off</u>		
HDMI	HDMI Video Mode Select "On" when video is output from HDMI AV OUT terminal.	● <u>On</u>: Note: Video from COMPONENT VIDEO OUT terminal is output as "576i/480i" if this is selected. ● Off: Select this when connected through the COMPONENT VIDEO OUT terminal. Also, select this when connected through the AV terminal and "RGB (without component)" (⇒ above, "Connection" tab) is selected.		
	HDMI Video Format You can only select settings compatible with the connected equipment. This setting normally does not need to be changed. However if you are concerned about output picture quality, it may be improved by changing the setting. Still pictures play at a resolution equivalent to 576p/480p regardless of the settings.	● <u>Automatic</u>: Automatically selects the output resolution best suited to the connected television (1080p, 1080i, 720p or 576p/480p). ● 576p/480p ● 720p ● 1080i ● 1080p		
	HDMI Output Range Effective when connected to a device that only supports RGB output.	● <u>Standard</u>: ● Enhanced: When the black and white images are not distinct.		
	HDMI Audio Output This setting selects whether or not to output audio from HDMI. Note : If "On" is selected, audio output from the 7.1ch AUDIO OUT terminal will match the number of channels on the equipment connected with HDMI.	● <u>On</u>: ● Off: When the TV is connected to this unit with an HDMI cable, and you are connected to an amplifier/receiver that does not support HDMI.		
	Control with HDMI	● <u>On</u>: When "On" is selected, you can operate other HDAVI control compatible devices (⇒ 18). ● Off:		
Others	Off Timer Select how long the unit remains on when it is not being used.	● 2 hours	● <u>6 hours</u>	● Off
	Remote Control (⇒ 11)	● <u>Set Code 1</u>	● Set Code 2	● Set Code 3
	Multi-jog Setting Select "Off" to turn the wheel operation off.	● <u>On</u>	● Off	
	Easy Setting You can execute basic settings ("Language"*, "TV Aspect", "Speaker" setting).	● Yes	● <u>No</u>	
	Default Settings This returns all values in the Setup menu and the On-screen menu, except for "DVD-Video Ratings" and "Age limit for BD-Video viewing" to the default settings.	● Yes	● <u>No</u>	

* "Language" can only be selected in the United Kingdom, Republic of Ireland and Continental European models.

Changing the speaker setting to suit your speakers

When connecting to an amplifier/receiver to enjoy multi-channel surround sound, use the following settings on this unit if they cannot be set on the amplifier/receiver.



Speaker presence and size (A)

- Press [▲, ▼, ◀, ▶] to select the speaker icon (A) and press [ENTER].
- Press [▲, ▼] to select the setting and press [ENTER].

Icon examples:

Surround speaker (LS)

- **Large:** Select when the speaker supports low-frequency (under 100 Hz) reproduction.



Large



Small



No

- **Small:** Select when the speaker does not support low-frequency reproduction.

In order to make an ideal listening environment, settings of speaker sizes may be automatically adjusted.

For example, if the subwoofer is set to “No”, the front speakers will automatically be set to “Large”. (In this case, we recommend connecting a speaker that can reproduce bass below 100 Hz.)

Delay time (B)

(Effective when playing multi-channel audio)

(Centre, surround and surround back speakers only)

For optimum listening with 7.1/5.1-channel sound, all the speakers, except for the subwoofer, should be the same distance from the seating position.

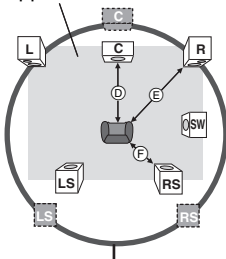
If you have to place the centre, surround and surround back speakers closer to the seating position, adjust the delay time to make up for the difference.

If either distance (D) or (E) is less than (E), find the difference in the relevant table and change to the recommended setting.

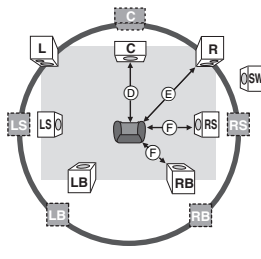
- Press [▲, ▼, ◀, ▶] to select the delay time box (B) and press [ENTER].
- Press [▲, ▼] to select the setting and press [ENTER].

5.1ch speaker connection

Approximate room dimensions



7.1ch speaker connection



Circle of constant primary listening distance

□: Actual speaker position (D) (E) (F) : Primary listening distance

■: Ideal speaker position

D Centre speaker

Difference	Setting
Approx. 34 cm	1.0 msec
Approx. 68 cm	2.0 msec
Approx. 102 cm	3.0 msec
Approx. 136 cm	4.0 msec
Approx. 170 cm	5.0 msec

F Surround/Surround back speakers

Difference	Setting
Approx. 170 cm	5.0 msec
Approx. 340 cm	10.0 msec
Approx. 510 cm	15.0 msec

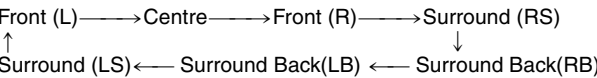
Channel balance (C)

(Effective when playing multi-channel audio)

This does not work when connected with HDMI terminals and “HDMI Audio Output” (► 23, “HDMI” tab) is set to “On”.

- Select “Test” and press [ENTER].

A test signal is output.



- While listening to the test signal, press [▲, ▼] to adjust the volume of each speaker

Front speakers: 0.0 to -6.0 dB

Except for front speakers: 0.0 to -12.0 dB

- Press [ENTER].

The test signal stops.

- No signal is output for the subwoofer. To adjust its volume, play something, then return to this screen to adjust to suit your taste.

To finish the speaker setting

Press [▲, ▼, ◀, ▶] to select “Complete” and press [ENTER].

Frequently asked questions

Refer to the following items if you have any doubts about unit operations.

		Page
Setup		
What do I need to play multi channel surround sound?	• Connect to... –an amplifier/receiver compatible with HDMI. –an amplifier/receiver with 7.1ch/5.1ch AUDIO IN. –an amplifier/receiver with a built-in (Dolby Digital, DTS or MPEG) decoder.	9, 10
Are headphones and speakers directly connected to the unit?	• You cannot directly connect them to the unit. Connect through the amplifier/receiver, etc.	9, 10
Is my television progressive output compatible?	• All Panasonic televisions that have 625 (576)/50i · 50p, 525 (480)/60i · 60p input terminals are compatible. Consult the manufacturer if you have another brand of television.	—
My television has a Scart terminal and component video input terminal. Which should I connect with?	• If you have a regular television (CRT: cathode ray tube) we recommend using the Scart terminal. You can enjoy high-quality RGB video from this unit by connecting to an RGB compatible television. - If you have an LCD/plasma television or LCD projector compatible with progressive scan, connect through the component video terminals for high-quality progressive video. - If you have a CRT television or a multi-system television using PAL mode that is compatible with progressive scan, we cannot recommend progressive output as some flickering can occur.	8, 9

Disc

Can I play BD-Video, DVD-Video, DVD-Audio and Video CDs bought in another country?	• You cannot play: –BD-Video discs that do not include region “B”. –DVD-Video discs that do not include your region number or “ALL”. Refer to the cover of these operating instructions for more information about your region number. - Refer to the disc's jacket for more information.	Cover Cover
Can BD-Video/DVD-Video that does not have a region code/number be played?	• The region management information for BD-Video/DVD-Video indicates that the disc conforms to industry standards. You cannot play discs that do not conform to industry standards or do not have a region code or number.	—
Please tell me about disc compatibility with this unit.	• This unit plays BD-Video, DVD-Video, DVD-Audio, Video CD, CD, DVD-RAM (DVD Video Recording format/JPEG), DVD-R/RW (DVD-Video format and DVD Video Recording format), DVD-R DL (DVD-Video format and DVD Video Recording format), +R, +RW and +R DL.	4
	• This unit also plays CD-R/CD-RW discs which have been recorded in one of the following standards: CD-DA, Video CD, MP3 and still pictures (JPEG). Close the session after recording.	4
	• You cannot write to a disc with this unit.	—

Troubleshooting guide

Before requesting service, make the following checks. If you are in doubt about some of the check points, or if the solutions indicated in the chart do not solve the problem, consult your dealer for instructions.

The following do not indicate a problem with this unit:

- Regular disc rotating sounds.
- Image disturbance during search.

To reset this unit

		Page
To return to the factory preset (No setting)	• Reset the unit as follows: 1 Press [⏻/I] on the unit to set to standby mode. 2 Press and hold [▶▶/▶▶], [▲ OPEN/CLOSE] and [■] on the unit at the same time until “HELLO” appears on the display. 3 Wait until “TEST” appears next. 4 Press [⏻/I] on the unit to set to standby mode. 5 Disconnect the AC mains lead. Wait one minute, then reconnect it.	—
To return all the settings other than the ratings level to the factory preset	• Select “Yes” in “Default Settings” in the Setup menu (“Others” tab). This returns all values in the Setup menus and On-screen menu, except for the ratings level to the default settings.	23
To restore the unit if it freezes due to one of the safety devices being activated	• Press and hold [⏻/I] on the main unit for 10 seconds. (The settings remain unchanged.)	—

Power

No power.	• Insert the AC mains lead securely into a working household mains socket.	8, 9
The unit switches to standby mode.	• This is a power saving feature. It can be changed if desired using “Off Timer” in the Setup menu (“Others” tab). • One of the unit's safety devices is activated. Press [⏻/I] on the main unit to turn the unit on.	23
		—

(Continued on the next page)

Operation		Page
Cannot operate the television.	- Change the manufacturer code. Some televisions cannot be operated even if you change the code. - It may be necessary to set the manufacturer code again after changing the batteries.	11
The remote control doesn't work properly.	- The remote control and main unit are using different codes. Change the code on the remote control. Press and hold [ENTER] and the indicated number button at the same time for more than 2 seconds.  - The batteries are depleted. Replace them with new ones. - You are not pointing the remote control at the main unit's remote control signal sensor during operation. - Coloured glass may obstruct the signal reception/transmission. - Don't place the signal sensor in direct sunlight or in areas that may be subject to sunlight exposure. - It may be necessary to set the code on the remote control again after changing the batteries.	11 7 7 — — 11
The unit is on but cannot be operated.	- Some operations may be prohibited by the disc. - The unit is hot ("U59" appears on the display). Wait for "U59" to disappear. - One of the unit's safety devices may have been activated. Reset the unit as follows: - Press [⏻] on the main unit to switch the unit to standby. If the unit doesn't switch to standby, press and hold [⏻] on the main unit for about 10 seconds. The unit is forcibly switched to standby. Alternatively, disconnect the AC mains lead, wait one minute, then reconnect it. - Press [⏻] on the main unit to switch it on. If the unit still cannot be operated, consult the dealer. - Condensation has formed: Wait 1 to 2 hours for it to evaporate.	— 28 —
Play fails to start even when [▶] (PLAY) is pressed. Play starts but then stops immediately.	- Insert the disc correctly with the label facing up. - The disc is dirty. - You tried to play a blank disc or unplayable disc on this unit.	12 2 4, 5
The Video CD picture does not display properly.	- When connecting to multi-system TV, select "NTSC" in "TV System" in the Setup menu. - When connecting to PAL TV, the lower part of the picture cannot be displayed correctly during search.	22 —
Time Slip does not work.	Time Slip does not work when the unit's "TV System" settings are different from the title recorded on the disc.	22
Cannot eject disc.	The unit may have a problem. While the unit is off, press and hold [■] and [▶▶/▶▶] on the main unit at the same time for about 5 seconds. Remove the disc and consult the dealer.	—
Startup is slow.	- Startup takes time in the following situations. - Immediately after a power failure or the AC mains lead is connected. - When the unit is connected with an HDMI cable.	—
When the unit is turned on, audio and video output takes a long time.		
Takes time to read DVD-RAM.	It may take time to read a disc if it is being used for the first time in this unit or it has not been used for a long time.	—

Displays

The display is dim.	Change "FL Display" in the "Display" tab of the Setup menu.	22
The elapsed time displayed is actually less than the playtime.	The displayed play time is converted from the number of frames at 29.97 frames (equal to 0.999 seconds) to one second. There will be a slight difference between the time displayed and the actual elapsed time (e.g., actual one-hour elapsed time may display as approximately 59 minutes 56 seconds).	—

TV screen and video

The images from this unit do not appear on the television.	Make sure that the television is connected to the AV terminal, VIDEO OUT terminal, S VIDEO OUT terminal, COMPONENT VIDEO OUT terminals or HDMI AV OUT terminal on this unit.	8, 9
Picture is distorted.	- Make sure that the television's input setting (e.g., AV 1) is correct. - Progressive output is set to on but the connected television is not progressive compatible. While stopped, press and hold [■] and [▶] (PLAY) on the main unit at the same time for more than 5 seconds to cancel this setting. The setting will change to interlace. - Set "Transfer" in Picture menu to "Auto". - The unit and television are using different video systems. While stopped, keep pressing [■] and [▲ OPEN/CLOSE] on the main unit for 5 or more seconds. The system switches from PAL to NTSC or vice versa. - The system used on the disc doesn't match your television. - PAL discs cannot be correctly viewed on an NTSC television. - This unit can convert NTSC signals to PAL60 for viewing on a PAL television ("TV System" in the "Connection" tab). BD-V This unit cannot convert BD-Video from NTSC signals to PAL60 signals; therefore video cannot be displayed properly when you connect this unit to the AV terminal, VIDEO terminal or S VIDEO terminal.	— — 20 — 22
The television may display incorrectly or colours appear faded.		
Video is not output in high definition.	- High definition video cannot be output through the AV, VIDEO OUT or S VIDEO OUT terminals. - Depending on the BD-Video, output from the COMPONENT VIDEO OUT terminals may be restricted to 576p/480p.	— —
RGB video is not output from the AV terminal.	When connecting to an amplifier/receiver with an HDMI cable, set "HDMI Video Mode" in the "HDMI" tab to "Off".	23
Status messages do not appear.	Select "Automatic" in "On-Screen Messages" of the "Display" tab in the Setup menu.	22
The 4:3 aspect ratio picture expands left and right.	- Use the television to change the aspect. Refer to your television's operating instructions. - If connecting with a component video cable, set "Progressive" to "Off" in the Picture menu. If this doesn't help or you cannot set it to "Off", then set the "TV Aspect" of the "Connection" tab to "4:3 Pan & Scan" in the Setup menu.	— 20, 22
Screen size is wrong.		

TV screen and video (continued)

Page

There is a lot of after-image when playing video.	• Turn “3D-NR”, “Integrated DNR” or “DNR” off if it is on.	14, 20
When playing DVD-Video using progressive output, one part of the picture momentarily appears to be doubled up.	• Set “Progressive” in the Picture menu to “Off”. This problem is caused by the editing method or material used on DVD-Video, but should be corrected if you use interlace output.	20
There is no apparent change in picture quality when adjusted with the Picture menu in the On-screen menu.	• The effect is less perceivable with some types of video.	—

Sound

No sound. Low volume. Distorted sound. Cannot hear the desired audio type.	• Check the connections and the “Digital Audio Output” settings. Check the input mode on the amplifier/receiver if you have connected one. • Press [AUDIO] to select the audio. • Turn off V.S.S. in the following cases. – When using discs that do not have surround sound effects such as Karaoke discs. – When playing bilingual broadcast programmes. • DVD-A The disc may have restrictions on the method of audio output. With some multi-channel discs, unless the number of connected speakers is the same as the disc’s channel specification, audio will not be output properly. Refer to the disc’s jacket for more information. • Set “Attenuator” in the “Speaker” menu of the “Connection” tab to “On” if it causes distortion with AUDIO OUT connections. • Match the speaker settings with the connected equipment. Change multi channel speaker settings by selecting “Multi-channel” in “Speaker” of the “Connection” tab. • The sound effects will not work when the bitstream signal is output from the HDMI AV OUT terminal or the DIGITAL AUDIO OUT terminal. • If the audio track of the disc was recorded with Dolby TrueHD, it will be output as Dolby Digital audio. • If the audio track of the disc was recorded with Dolby Digital Plus or Dolby TrueHD, Dolby Digital audio will be output from the DIGITAL AUDIO OUT terminal. • If the audio track of the disc was recorded with DTS-HD, it will be output as DTS audio.	8–10, 22 13 20 — 23 23 — — — —
Cannot switch audio.	• There are discs for which audio cannot be changed because of how the disc was created. • When connecting an amplifier/receiver using a coaxial, an optical digital audio cable or an HDMI cable, you cannot switch the audio if “Dolby Digital” is set to “Bitstream”. Set “Dolby Digital” to “PCM” or connect using audio cables.	— 9, 10, 22

HDMI connections

The images from this unit do not appear on the television.	• To output video from a device connected with an HDMI cable, set “HDMI Video Mode” in the “HDMI” tab to “On” in the Setup menu.	23
Picture is distorted.	• Picture may not be seen when more than 4 devices are connected with HDMI cables. Reduce the number of connected devices.	—
The 4:3 aspect ratio picture expands left and right.	• Change “TV Aspect” type to “16:9”.	22
Screen size is wrong.		
When playing DVD-Video using progressive output, one part of the picture momentarily appears to be doubled up.	• When you use the HDMI AV OUT terminal for video output, follow the steps below for setting. 1 Connect this unit to the TV with any cable except the HDMI cable 2 Set “HDMI Video Mode” in the “HDMI” tab to “Off” in the Setup menu	23
No sound. Low volume. Distorted sound. Cannot hear the desired audio type.	• DVD-A The disc may have a restriction on the method of audio output. This unit cannot playback multi-channel discs that prevent down-mixing unless the unit is connected with an HDMI cable to an amplifier/receiver supporting HDCP. Refer to the disc jacket for more information. • Audio may not be heard when more than 4 devices are connected with HDMI cables. Reduce the number of connected devices. • The sound effects will not work when the bitstream signal is output from the HDMI AV OUT terminal or the DIGITAL AUDIO OUT terminal. • To output audio from a device connected with an HDMI cable, set “HDMI Audio Output” in the “HDMI” tab to “On” in the Setup menu. • If the unit is connected to a television with an HDMI cable and the audio from the 7.1ch AUDIO OUT terminal is output as two channels only, set “HDMI Audio Output” in the “HDMI” tab to “Off” in the Setup menu. • If the sound is distorted when the unit is connected to an amplifier/receiver with the HDMI cable, adjust the settings in “Speaker” in the Setup menu to match the connection. • Depending on the connected equipment, the sound may be distorted if this unit is connected with an HDMI cable. • The sound effects will not work when the bitstream signal is output from the HDMI AV OUT terminal.	— — — 23 23 23 — —
Cannot switch audio.	• When connecting an amplifier/receiver using a coaxial, an optical digital audio cable or an HDMI cable, you cannot switch the audio if “Dolby Digital” is set to “Bitstream”. Set “Dolby Digital” to “PCM” or connect using audio cables.	9, 10, 22

Other difficulties with playback

Audio and video momentarily pause.	• This occurs between playlist chapters.	—
DVD-Video is not played.	• You have set a ratings level to limit DVD-Video play. Change this setting.	21
BD-Video is not played.	• You have set a ratings level to limit BD-Video play. Change this setting. • Some BD-Video can only be output with HDMI.	21 —
Alternative soundtrack and subtitles cannot be selected.	• The languages are not recorded on the disc. • You may not be able to use the On-screen menu to change the soundtrack and subtitles on some discs. Use the disc’s menus to make changes.	— 15

Other difficulties with playback (continued)

Page

No subtitles.	- Subtitles are not recorded on the disc. - Turn the subtitles on. Set "Subtitle" on the On-screen menu to "On".	— 19
Angle cannot be changed.	Angles can only be changed during scenes where different angles are recorded.	—
The resume play function does not work.	- Memorized positions are canceled when - press [■] several times. - open the disc tray. [DVD-A] [CD] [VCD] [MP3]: set to standby mode.	—

Messages

The following messages or service numbers appear on the television or unit's display when something unusual is detected during startup and use.

On the television

Page

Cannot play.	You inserted an incompatible disc.	4, 5
Cannot play on this unit.	You tried to play a non-compatible image.	5
Cannot output Audio with HDMI because of copyright protection.	Should you connect equipment that does not support HDCP the audio from the CPPM copy protected DVD-Audio cannot be output from HDMI AV OUT terminal. Connect the audio cable of the Audio/Video cable (Red, White), optical digital audio cable or coaxial cable to the corresponding terminals.	8–10
No Disc	The disc may be upside down.	—
⊘	The operation is prohibited by the unit or disc.	—

On the unit's display

F99	The unit fails to operate properly. Press [⏻/I] on the main unit to switch the unit to standby. Now press [⏻/I] on the main unit again to turn the unit on.	—
HDMI ONLY*	Some BD-Video discs can only be output with HDMI.	—
No PLAY	When there is a viewing restriction on a BD-Video or DVD-Video.	21
No READ	The disc is dirty or badly scratched. The unit cannot play.	—
PLEASE WAIT*	- Displayed when the unit is started and set to standby mode. This is not a malfunction. - The unit is carrying out its recovery process. You cannot operate the unit while "PLEASE WAIT" is displayed.	— —
U30 □ (“□” stands for a number.)	The remote control and main unit are using different codes. Change the code on the remote control.  Press and hold [ENTER] and the indicated number button at the same time for more than 2 seconds.	11
UNFORMAT*	You inserted an unformatted DVD-RAM, DVD-RW, +RW, an unused +R, +R DL or DVD-RW (DVD-Video format).	—
UNSUPPORT*	You have inserted a disc the unit cannot play.	4, 5
U59	- The unit is hot. - The unit switches to standby for safety reasons. Wait for about 30 minutes until the message disappears. - Select a position with good ventilation when installing the unit. Do not block the cooling fan on the rear of the unit.	—
U71	The connected equipment is not HDMI compatible.	—
U72 U73	- The HDMI connection acts unusually. - The connected equipment is not HDMI compatible. - Please use HDMI cables that have the HDMI logo (as shown on the cover). - The HDMI cable is damaged.	—
H□□ or F□□	- There is something unusual. (The service number displayed after H and F depends on the unit's condition.) - Check the unit using the troubleshooting guide. If the service number does not disappear, do the following. - Disconnect the plug from the household mains socket, wait a few seconds, then reconnect it. - Press [⏻/I] to turn the power on. (The unit may be fixed.) - If the service number does not disappear despite doing the above, request service from the dealer. Inform the dealer of the service number when requesting service.	— 25–28

* The messages are alternately displayed.

Specifications

Signal system: NTSC/PAL
Operating temperature range: +5 to +35 °C
Operating humidity range: 10 to 80 % RH (no condensation)
Discs played (8 cm or 12 cm):
BD (BD-Video)
DVD (DVD-Video, DVD-Audio)
DVD-RAM (DVD-VR, JPEG^{*1, 2, 6})
DVD-R/RW (DVD-Video, DVD-VR)
+ R/+ RW (Video)
CD, CD-R/RW
(CD-DA, Video CD, SVCD^{*4}, MP3^{*3, 5}, JPEG^{*1, 3, 6})
Video output:
Output level: 1 Vp-p (75 Ω)
Output terminal: Pin jack (1 system)/AV
S-video output:
Y output level: 1 Vp-p (75 Ω)
C output level: NTSC: 0.286 Vp-p (75 Ω) at Burst
PAL: 0.300 Vp-p (75 Ω) at Burst
Output terminal: S terminal (1 system)/AV
Component video output: (1080i^{*7}/720p^{*7}/576p/480p/576i/480i)
Y output level: 1 Vp-p (75 Ω)
P_B output level: 0.7 Vp-p (75 Ω)
P_R output level: 0.7 Vp-p (75 Ω)
Output terminal: Pin jack (Y: green, P_B: blue, P_R: red)
(1 system)
RGB video output:
R output level: 0.7 Vp-p (75 Ω)
G output level: 0.7 Vp-p (75 Ω)
B output level: 0.7 Vp-p (75 Ω)
Output terminal: AV
Audio output:
Output level: 2 Vrms (1 kHz, 0 dB)
Output terminal: Pin jack/AV
Number of terminals: 2 channel: 2 system
7.1 channel discrete output (7.1 channel): 1 system
Audio performance:
Frequency response:
•DVD (linear audio): 2 Hz to 22 kHz (48 kHz sampling)
2 Hz to 44 kHz (96 kHz sampling)
•DVD-Audio: 2 Hz to 88 kHz (192 kHz sampling)
•CD-Audio: 2 Hz to 20 kHz
S/N ratio: 125 dB
Dynamic range: 118 dB
Total harmonic distortion: 0.0012 %

Digital audio output:
Optical digital output: Optical terminal
Coaxial digital output: Pin jack
HDMI AV output
Output format:
•Video: 1080p/1080i/720p/576p/480p
•Audio: 192 kHz/96 kHz/48 kHz/44.1 kHz
Output terminal: Type A (19 pin)
System with 2 lenses
Optical pick-up:
LASER Specification (Pickup):
Wave length: 785 nm (CDs)/662 nm (DVDs)/405 nm (BDs)
Laser power:
No hazardous radiation is emitted with the safety protection
NORSK
Bølgelengde: 785 nm (CDs)/662 nm (DVDs)/405 nm (BDs)
Laserstyrke: Ingen farlig stråling sendes ut
Power supply: AC 230 to 240 V, 50 Hz
Power consumption: 42 W
Power consumption in standby mode: approx. 1 W
Dimensions (W×D×H)
Excluding the projecting parts: 430 mm×331.6 mm×85 mm
Including the projecting parts: 430 mm×338.3 mm×85 mm
Mass: approx. 4.5 kg

Note
Specifications are subject to change without notice.

^{*1} Picture resolution: between 34×34 and 6144×4096 pixels (sub sampling is 4:2:2 or 4:2:0)
^{*2} The total combined maximum number of recognizable picture contents and folders: 3000 picture contents and 300 folders.
^{*3} The total combined maximum number of recognizable audio and picture contents and folders: 999 audio and picture contents and 99 folders.
^{*4} Conforming to IEC62107
^{*5} Compatible compression rate: between 32 kbps and 320 kbps
Compatible sampling rate: 44.1 kHz, 48 kHz
^{*6} MOTION JPEG is not supported.
^{*7} Only 60 Hz

Language code list Enter the code with the numbered buttons.

Abkhazian: 6566	Catalan: 6765	Gujarati: 7185	Lingala: 7678	Rhaeto-Romance: 8277	Tamil: 8465
Afar: 6565	Chinese: 9072	Hausa: 7265	Lithuanian: 7684	Tatar: 8484	
Afrikaans: 6570	Corsican: 6779	Hebrew: 7387	Macedonian: 7775	Romanian: 8279	Telugu: 8469
Albanian: 8381	Croatian: 7282	Hindi: 7273	Malagasy: 7771	Russian: 8285	Thai: 8472
Ameharic: 6577	Czech: 6783	Hungarian: 7285	Malay: 7783	Samoan: 8377	Tibetan: 6679
Arabic: 6582	Danish: 6865	Icelandic: 7383	Malayalam: 7776	Sanskrit: 8365	Tigrinya: 8473
Armenian: 7289	Dutch: 7876	Indonesian: 7378	Maltese: 7784	Scots Gaelic: 7168	Tonga: 8479
Assamese: 6583	English: 6978	Interlingua: 7365	Maori: 7773	Serbian: 8382	Turkish: 8482
Aymara: 6589	Esperanto: 6979	Irish: 7165	Marathi: 7782	Serbo-Croatian: 8372	Turkmen: 8475
Azerbaijani: 6590	Estonian: 6984	Italian: 7384	Moldavian: 7779	Shona: 8378	Twì: 8487
Bashkir: 6665	Faroeese: 7079	Japanese: 7465	Mongolian: 7778	Sindhi: 8368	Ukrainian: 8575
Basque: 6985	Fiji: 7074	Javanese: 7487	Nauru: 7865	Singhalese: 8373	Urdu: 8582
Bengali; Bangla: 6678	Finnish: 7073	Kannada: 7578	Nepali: 7869	Slovak: 8375	Uzbek: 8590
	French: 7082	Kashmiri: 7583	Norwegian: 7879	Slovenian: 8376	Vietnamese: 8673
Bhutani: 6890	Frisian: 7089	Kazakh: 7575	Oriya: 7982	Somali: 8379	Volapük: 8679
Bihari: 6672	Galician: 7176	Kirghiz: 7589	Pashto, Pushto: 8083	Spanish: 6983	Welsh: 6789
Breton: 6682	Georgian: 7565	Korean: 7579	Persian: 7065	Sundanese: 8385	Wolof: 8779
Bulgarian: 6671	German: 6869	Kurdish: 7585	Polish: 8076	Swahili: 8387	Xhosa: 8872
Burmese: 7789	Greek: 6976	Laotian: 7679	Portuguese: 8084	Swedish: 8386	Yiddish: 7473
Byelorussian: 6669	Greenlandic: 7576	Latin: 7665	Punjabi: 8065	Tagalog: 8476	Yoruba: 8979
Cambodian: 7577	Guarani: 7178	Latvian, Lettish: 7686	Quechua: 8185	Tajik: 8471	Zulu: 9085

Glossary

BD-J

Some BD-Video discs contain Java applications, and these applications are called BD-J. Depending on the BD-J application, you can enjoy various interactive features in addition to playing normal video.

Bitstream

This is the digital form of multi-channel audio data (e.g., 5.1 channel) before it is decoded into its various channels.

CPPM (Content Protection for Prerecorded Media)

A copy protection system used for DVD-Audio files. This unit supports CPPM.

Decoder

A decoder restores the coded audio signals on DVDs to normal. This is called decoding.

Dolby Digital

This is a method of coding digital signals developed by Dolby Laboratories. Apart from stereo (2-channel) audio, these signals can also be multi-channel audio. A large amount of audio information can be recorded on one disc using this method.

Dolby Digital Plus

Dolby Digital Plus was designed specifically for high definition content, offering surround sound support of up to 7.1 channels, higher bit rate performance, quicker data transfer speeds, and backwards compatibility with current home entertainment systems.

Down-mixing

This is the process of remixing the multi-channel audio found on some discs into two channels. It is useful when you want to listen to the 5.1-channel audio recorded on DVDs through your television's speakers. Some discs prohibit down-mixing and this unit can then only output the front two channels.

DVD-A Tracks that do not allow down-mixing will not play correctly on this unit except when connecting with an HDMI cable to an amplifier/receiver that meets HDMI standards (ver. 1.1 or later) and is CPPM compatible.

DTS (Digital Theater Systems)

This surround system is used in many movie theaters. There is good separation between the channels, so realistic sound effects are possible.

Dynamic range

Dynamic range is the difference between the lowest level of sound that can be heard above the noise of the equipment and the highest level of sound before distortion occurs.

Dynamic range compression means reducing the gap between the loudest and softest sounds. This means you can listen at low volumes but still hear dialog clearly.

Film and video

DVD-Video is recorded using either film or video. This unit can determine which type has been used, then uses the most suitable method of progressive output.

Film: Recorded at 25 frames per second (PAL discs) or 24 frames per second (NTSC discs). (NTSC discs recorded at 30 frames per second as well.)

Generally appropriate for motion picture films.

Video: Recorded at 25 frames/50 fields per second. (PAL discs) or 30 frames/60 fields per second (NTSC discs). Generally appropriate for TV drama programmes or animation.

Finalize

A process that makes play of a recorded CD-R, CD-RW, DVD-R, etc. possible on equipment that can play such media.

After finalizing, the disc becomes play-only and you can no longer record or edit.

Frames and fields

Frames refer to the single images that constitute the video you see on your television. Each frame consists of two fields.



Frame

Field

Field

- A frame still shows two fields, so there may be some blurring, but picture quality is generally better.
- A field still shows less picture information so it may be rougher, but there is no blurring.

HDCP (High-Bandwidth Digital Content Protection)

HDCP is a type of digital rights management developed for use with HDMI connections, etc. HDCP was developed to protect digital content and prevent unsecured transmissions by using a variety of methods such as encryption and authentication.

HDMI (High-Definition Multimedia Interface)

HDMI is a digital interface for consumer electronic products. Unlike conventional connections, it transmits uncompressed digital video and audio signals on a single cable. This unit supports high-definition video output [720p (750p), 1080i (1125i), 1080p (1125p)] from HDMI AV OUT terminals. To enjoy high-definition video a high definition compatible television is required.

JPEG (Joint Photographic Experts Group)

This is a system used for compressing/decoding colour still pictures. If you select JPEG as the storage system on digital cameras, etc., the data will be compressed to 1/10–1/100 of its original size. The benefit of JPEG is less deterioration in picture quality considering the degree of compression.

LPCM (Linear PCM)

These are uncompressed digital signals, similar to those found on CDs.

MP3 (MPEG Audio Layer 3)

An audio compression method that compresses audio to approximately one tenth of its size without any considerable loss of audio quality. You can play MP3 you have recorded onto CD-R and CD-RW.

Pan&Scan/Letterbox

In general, DVD-Video are produced with the intention that they be viewed on a widescreen television (16:9 aspect ratio), so images often don't fit regular (4:3 aspect ratio) televisions. Two styles of picture, "Pan & Scan" and "Letterbox", deal with this problem.

Pan&Scan: The sides are cut off so the picture fills the screen.



Letterbox: Black bands appear at the top and bottom of the picture so the picture itself appears in an aspect ratio of 16:9.



Playback control (PBC)

If a Video CD has playback control, you can select scenes and information with menus.

(This unit is compatible with version 2.0 and 1.1.)

Progressive/Interlace

The PAL video signal standard has 625 (or 576) interlaced (i) scan lines, whereas progressive scanning, called 625p (or 576p), uses twice the number of scan lines. For the NTSC standard, these are called 525i (or 480i) and 525p (or 480p) respectively.

Using progressive output, you can enjoy the high-resolution video recorded on media such as DVD-Video.

Your television must be compatible to enjoy progressive video.

Panasonic televisions with 625 (576)/50i · 50p, 525 (480)/60i · 60p input terminals are progressive compatible.

RGB

This refers to the three primary colours of light, red (R), green (G), and blue (B) and also the method of producing video that uses them. By dividing the video signal into the three colours for transmission, noise is reduced for even higher quality images.

Sampling frequency

Sampling is the process of converting the heights of sound wave (analog signal) samples taken at set periods into digits (digital encoding). Sampling frequency is the number of samples taken per second, so larger numbers mean more faithful reproduction of the original sound.

1080i (1125i)

In one high definition image, 1080 (1125) alternating scan lines pass every 1/60th of a second to create an interlace image. Because 1080i (1125i) more than doubles current television broadcasts of 480i, the detail is much clearer and creates a more realistic and rich image.

1080p (1125p)

In one high definition image, 1080 (1125) scan lines pass at the same time every 1/60th of a second to create a progressive image. Since progressive video does not alternate scan lines like interlace, there is a minimal amount of screen flicker.

720p (750p)

In one high definition image, 720 (750) scan lines pass at the same time every 1/60th of a second to create a progressive image. Since progressive video does not alternate scan lines like interlace, there is a minimal amount of screen flicker.

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.
DO NOT OPEN COVERS AND DO NOT REPAIR YOURSELF. REFER
SERVICING TO QUALIFIED PERSONNEL.

WARNING:

TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK OR PRODUCT
DAMAGE, DO NOT EXPOSE THIS APPARATUS TO RAIN, MOISTURE,
DRIPPING OR SPLASHING AND THAT NO OBJECTS FILLED WITH
LIQUIDS, SUCH AS VASES, SHALL BE PLACED ON THE APPARATUS.

CAUTION!

- DO NOT INSTALL OR PLACE THIS UNIT IN A BOOKCASE, BUILT-IN
CABINET OR IN ANOTHER CONFINED SPACE. ENSURE THE UNIT IS
WELL VENTILATED. TO PREVENT RISK OF ELECTRIC SHOCK OR
FIRE HAZARD DUE TO OVERHEATING, ENSURE THAT CURTAINS
AND ANY OTHER MATERIALS DO NOT OBSTRUCT THE
VENTILATION VENTS.
- DO NOT OBSTRUCT THE UNIT'S VENTILATION OPENINGS WITH
NEWSPAPERS, TABLECLOTHS, CURTAINS, AND SIMILAR ITEMS.
- DO NOT PLACE SOURCES OF NAKED FLAMES, SUCH AS LIGHTED
CANDLES, ON THE UNIT.
- DISPOSE OF BATTERIES IN AN ENVIRONMENTALLY FRIENDLY
MANNER.

This product may receive radio interference caused by mobile
telephones during use. If such interference is apparent, please
increase separation between the product and the mobile
telephone.

The socket outlet shall be installed near the equipment and easily
accessible.
The mains plug of the power supply cord shall remain readily
operable.
To completely disconnect this apparatus from the AC Mains,
disconnect the power supply cord plug from AC receptacle.

THIS UNIT IS INTENDED FOR USE IN MODERATE CLIMATES.

SUOMI

VAROITUS!

LAITTEEN KÄYTTÄMINEN MUULLA KUIN TÄSSÄ KÄYTTÖOHJEESSA
MAITTEEN TAVALLA SAATAA ALTISTAA KÄYTTÄJÄN
TURVALLISUUSLUOKAN 1 YLITÄVÄLLE NÄKYMÄTTÖMÄLLE
LASERSÄTEILYLLE.

VAROITUS:

TULIPALO-, SÄHKÖISKUVAARAN TAI TUOTETTA KOHTAAVAN MUUN
VAHINGON VÄHENTÄMISEKSI EI LAITETTA SAA ALTISTAA
SATEELLE, KOSTEUEDELLE, VESIPISAROILLE TAI ROISKEELLE, EIKÄ
NESTETTÄ SISÄLTÄVIÄ ESINEITÄ, KUTEN ESIMERKIKSI
MALJAKOITA, SAA ASETTAA LAITTEEN PÄÄLLE.

VAROITUS!

- ÄLÄ ASENNAA TAI LAITA TÄTÄ LAITETTA KABINETTITYYPPISEEN
KIRJAKAAPPIIN TAI MUUHUN SULJETTUUN TILAAN, JOTTA
TUULETUS ONNISTUISI. VARMISTA, ETTÄ VERHO TAI MIKÄÄN MUU
MATERIAALI EI HUONONNA TUULETUSTA, JOTTA VÄLTETTÄISIIN
YLIKUUMENEMISESTA JOHTUVA SÄHKÖISKU- TAI
TULIPALOVAARA.
- ÄLÄ PEITÄ LAITTEEN TUULETUSAUKKOJA SANOMALEHDELLÄ,
PÖYTÄLIINALLA, VERHOLLA TAI MUULLA VASTAAVALLA
ESINEELLÄ.
- ÄLÄ ASETA PALAVAA KYNTTILÄÄ TAI MUUTA AVOTULEN
LÄHDETTÄ LAITTEEN PÄÄLLE.
- HÄVITÄ PARISTOT LUONTOA VAHINGOITTAMATTOMALLA TAVALLA.

Pistorasia tulee asentaa laitteen lähelle helppopääsyiseen
paikkaan.
Verkkojohdon pistokkeen on oltava aina helposti käytettävissä.
Tämä laite voidaan kytkeä kokonaan irti verkkovirrasta irrottamalla
verkkojohdon pistoke pistorasiasta.

TÄMÄ LAITE ON TARKOITETTU KÄYTETTÄVÄKSI LEUDOSSA
ILMASTOSSA.

NORSK

ADVARSEL!

DETTE PRODUKTET ANVENDER EN LASER.
BETJENING AV KONTROLLER, JUSTERINGER ELLER ANDRE
INNGREP ENN DE SOM ER BESKREVET I DENNE BRUKSANVISNING,
KAN FØRE TIL FARLIG BESTRÅLING.
DEKSLER MÅ IKKE ÅPNES, OG FORSØK ALDRI Å REPARERE
APPARATET PÅ EGENHÅND. ALT SERVICE OG REPARASJONSARBEID
MÅ UTFØRES AV KVALIFISERT PERSONELL.

ADVARSEL:

FOR Å REDUSERE FAREN FOR BRANN, ELEKTRISK STØT ELLER
SKADER PÅ PRODUKTET, MÅ DETTE APPARATET IKKE UTSETTES
FOR REGN, FUKTIGHET, VANNDRÅPER ELLER VANNSPRUT. DET MÅ
HELLER IKKE PLASSERES GJENSTANDER FYLT MED VANN, SLIK
SOM BLOMSTERVASER, OPPÅ APPARATET.

ADVARSEL!

- APPARATET MÅ IKKE PLASSERES I EN BOKHYLLE, ET
INNEBYGGET KABINETT ELLER ET ANNET LUKKET STED HVOR
VENTILASJONSFORHOLDENE ER UTILSTREKKELIGE. SØRG FOR
AT GARDINER ELLER LIGNENDE IKKE FORVERRRER
VENTILASJONSFORHOLDENE, SÅ RISIKO FOR ELEKTRISK SJOKK
ELLER BRANN FORÅRSAKET AV OVERHETING UNNGÅS.
- APPARATETS VENTILASJONSÅPNINGER MÅ IKKE DEKKES TIL
MED AVISER, BORDDUKER, GARDINER OG LIGNENDE.
- PLASSER IKKE ÅPEN ILD, SLIK SOM LEVENDE LYS, OPPÅ
APPARATET.
- BRUKTE BATTERIER MÅ KASSERES UTEN FARE FOR MILJØET.

Strømuttaket må befinne seg i nærheten av utstyret og være lett
tilgjengelig.
Støpslet på strømkabelen må være klart til bruk.
Når dette apparatet skal kobles helt fra strømmettet (AC), må
støpslet på strømkabelen trekkes ut av stikkkontakten.

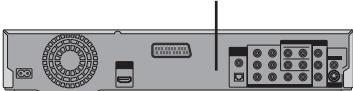
DETTE APPARATET ER BEREKNET TIL BRUK UNDER
MODERATE KLIMAFORHOLD.

CLASS 1 LASER PRODUCT KLASS 1 LASER APPARAT	LASER KLASSE 1 EN60825-1	LUOKAN 1 LASERLAITE APPAREIL À LASER DE CLASSE 1
CAUTION – CLASS 2M LASER RADIATION WHEN OPEN. DO NOT STARE INTO THE BEAM OR VIEW DIRECTLY WITH OPTICAL INSTRUMENTS. VORSICHT – LASERSTRAHLUNG KLASSE 2M, WENN ABDECKUNG GEÖFFNET. NICHT IN DEN STRAHL BLICKEN ODER DIREKT MIT OPTISCHEN INSTRUMENTEN BETRACHTEN. ADVARSEL – KLASSE 2M LASERSTRÅLING VED ÅBNING. SE IKKE IND I STRÅLEN – HELLER IKKE MED OPTISKA INSTRUMENTER. ADVARSEL – KLASSE 2M LASERSTRÅLING NÅR DEKSEL ÅPNES. STIRRA IKKE INN I STRÅLEN ELLER SE DIREKTE MED OPTISKE INSTRUMENTER. VARNING – LASERSTRÅLING KLASSE 2M VID ÖPPEN LUCKA. STIRRA INTE IN I STRÅLEN VARKEN DIREKT ELLER GENOM OPTIK. VARO – AVATTAESSA OLET ALTTIINA LUOKAN 2M LASERSÄTEILYLLE. ÄLÄ TUJOTA SÄTEESEEN TAI KATSO OPTISELLA LAITTEELLA SUORAAN SÄTEESEEN.		
CAUTION – CLASS 3B INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO THE BEAM. VORSICHT – UNSICHTBARE LASERSTRAHLUNG KLASSE 3B, WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN. ADVARSEL – KLASSE 3B USYNLIG LASERSTRÅLING VED ÅBNING. UNDGÅ UDSÆTTELSE FOR STRÅLING. ADVARSEL – KLASSE 3B USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES. UNNGÅ EKSPONERING FOR STRÅLEN. VARNING – ÖSYNLIG LASERSTRÅLING KLASSE 3B VID ÖPPEN LUCKA. UNDVIK EXPONERING FÖR LASERSTRÅLNINGEN. VARO – AVATTAESSA OLET ALTTIINA LUOKAN 3B NÄKYMÄTÖNTÄ LASERSÄTEILYÄ. VARO ALTISTUMISTA SÄTEELLE.		
CAUTION – Laser radiation when open. DO NOT STARE INTO BEAM. DANGER – Invisible Laser radiation when open. AVOID DIRECT EXPOSURE TO BEAM.		

(Inside of product)
(Produktets innside)
(Tuotteen sisällä)



LUOKAN 1 LASERLAITE
KLASS 1 LASER APPARAT



(Back of product)

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