

Operating Instructions Portable Blu-ray Disc Player

Model No. **DMP-B15**



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.

Note: "EB" on the packaging indicates the United Kingdom.



Region management information

BD-Video

This unit plays BD-Video marked with labels containing the region code "A" or "B".

Example: For the United Kingdom and Continental Europe

Region Code

For the United Kingdom and Continental Europe "B"

For Asia "A"

For Australia and New Zealand "B"



DVD-Video

This unit plays DVD-Video marked with labels containing the region number or "ALL".

Example: For the United Kingdom and Continental Europe

Region Number

For the United Kingdom and Continental Europe "2"

For Asia "3"

For 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

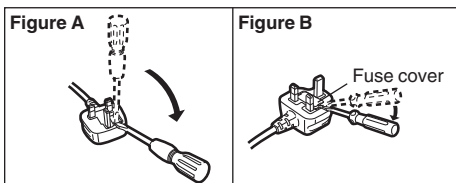
Remove the connector cover.

How to replace the fuse

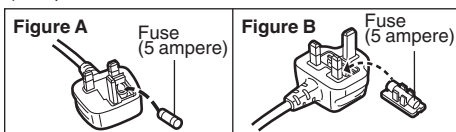
The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.

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.



IMPORTANT SAFETY INSTRUCTIONS

Read these operating instructions carefully before using the unit. Follow the safety instructions on the unit and the applicable safety instructions listed below. Keep these operating instructions handy for future reference.

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this apparatus near water.
- 6) Clean only with dry cloth.
- 7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9) Protect the AC mains lead from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 10) Only use attachments/accessories specified by the manufacturer.
- 11) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
- 12) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 13) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as AC mains lead or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.



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.
- USE ONLY THE RECOMMENDED ACCESSORIES.
- DO NOT REMOVE THE COVER (OR BACK); THERE ARE NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

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.

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.

CAUTION

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

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.

For Asia

THIS UNIT IS INTENDED FOR USE IN TROPICAL CLIMATES.

For the United Kingdom, Continental Europe, Australia and New Zealand, Republic of Ireland

THIS UNIT IS INTENDED FOR USE IN MODERATE CLIMATES.

Product Identification Marking is located on the rear of unit.

Product Identification Marking is located on the bottom of AC adaptor.

Batteries**1 Battery pack (Lithium ion battery pack)**

- Use the specified unit to recharge the battery pack.
- Do not use the battery pack with equipment other than the specified unit.
- Do not use the player outside if it is snowing or raining. (The battery pack is not waterproof.)
- Do not get dirt, sand, liquids, or other foreign matter on the terminals.
- Do not touch the plug terminals (+ and –) with metal objects.
- Do not disassemble, remodel, heat or throw into fire.
- Do not heat or expose to flame.
- Do not leave the battery(ies) in an automobile exposed to direct sunlight for a long period of time with doors and windows closed.

2 Button-type battery (Lithium battery)

- Insert with poles aligned.
- Do not touch the terminals (+ and –) with metal objects.
- Do not recharge, disassemble, remodel, heat or throw into fire.
- Keep out of reach of children
- Do not heat or expose to flame.
- Do not leave the battery(ies) in an automobile exposed to direct sunlight for a long period of time with doors and windows closed.

If any electrolyte should come into contact with your hands or clothes, wash it off thoroughly with water.

If any electrolyte should come into contact with your eyes, never rub the eyes.

Rinse eyes thoroughly with water, and then consult a doctor.

3 Disposing of the batteries

Check and follow your local regulations before disposal.

Warning

Risk of fire, explosion and burns. Do not disassemble. Do not heat the batteries above the following temperatures or incinerate.

Button-type battery 100°C

Battery pack 60°C

Notice about the rechargeable battery

The battery is designated recyclable. Please follow your local recycling regulations.

AC adaptor

This AC adaptor operates on AC between 110 V and 240 V. But

- Obtain a suitable plug adaptor if the plug does not fit the AC mains socket.

Warning

Keep the Button-Type battery out of the reach of children. Never put Button-Type battery in mouth. If swallowed call your doctor.

WARNING

DRIVER MUST NOT OPERATE OR VIEW THIS UNIT WHILE OPERATING THE VEHICLE.

Doing so will distract the driver and could cause a collision resulting in serious injury or property damage.

Do not rest the unit on your lap for a long time while using it. The unit can become hot and cause burns.

To prevent damage

Avoid the following:

- Spraying flammable insecticides near the unit.
 - Pressing the LCD.
 - Touching the lens and other parts of the laser pickup.
- Do not use the unit in the following places:
- Sandy places such as beaches.
 - On top of cushions, sofas, or hot equipment such as amplifiers.
- Do not leave in an unventilated automobile or exposed to direct sunlight and high temperatures.

Precautions for Listening with the Headphones or Earphones

- Do not play your headphones or earphones at a high volume. Hearing experts advise against continuous extended play.
- If you experience a ringing in your ears, reduce volume or discontinue use.
- Do not use while operating a motorized vehicle. It may create a traffic hazard and is illegal in many areas.
- You should use extreme caution or temporarily discontinue use in potentially hazardous situations.
- Even if your headphones or earphones are the open-air type designed to let you hear outside sounds, don't turn up the volume so high that you can't hear what's around you.
- Excessive sound pressure from earphones and headphones can cause hearing loss.

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Accessories



Please check and identify the supplied accessories.
Use numbers indicated in parentheses when asking for replacement parts.

(Product numbers correct as of March 2009. These may be subject to change.)

- ☐ 1 Remote control (N2QAJC000016)
- ☐ 1 Button-type battery for remote control
(for replacement ⇒ page 9)
- ☐ 1 Audio/Video cable (K2KC4CB00026)
- ☐ 1 AC adaptor (RFEA219W)
- ☐ For the United Kingdom and Republic of Ireland
1 AC mains lead (K2CT3CA00004)
- ☐ For Continental Europe
1 AC mains lead (K2CQ2CA00006)
- ☐ For Australia and New Zealand
1 AC mains lead (K2CJ2DA00008)
- ☐ For Asia
2 AC mains leads
AC mains lead with a label is for Thailand.(K2CP2CA00001)
AC mains lead without a label is for areas other than Thailand.(K2CQ2CA00006)
 - For use with this unit only. Do not use it with other equipment. Also, do not use cords for other equipment with this unit.
- ☐ 1 Car DC Adaptor* (RFEC206P-Y)
- ☐ 1 Headrest Mounting Bracket* (RXQ1706)
- ☐ 1 Safety belt* (RFC0150-K)
- ☐ 1 Rechargeable battery pack (DY-DB15)
 - DY-DB15 is available as option.
- ☐ 1 Cleaning Cloth (RFE0215)

* For installation and handling methods, refer to the operating instructions "Enjoying in a car".

For the United Kingdom and Republic of Ireland

■ Sales and Support Information Customer Care Centre

- For customers within the UK: 0844 844 3852
- 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

- For customers: 0844 844 3856
- Order accessory and consumable items for your product with ease and confidence by phoning our Customer Care Centre Monday–Thursday 9:00 a.m.–5:30 p.m., Friday 9:30 a.m.–5:30 p.m. (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.

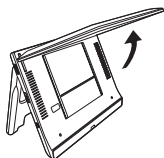
Interested in purchasing an extended guarantee?
Please call 0870 240 6284 or visit our website
www.panasonic.co.uk/guarantee.

Unit and media care

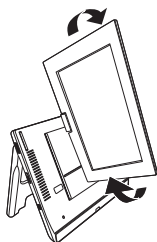
Rotating the screen

When rotating the screen, rotate it after opening it to 90° as shown below. Rotating the screen without opening the angle enough or opened to 180° may scratch the area around the screen and the main unit so take care.

① Open the screen approximately 90°.



② Rotate the screen slowly.

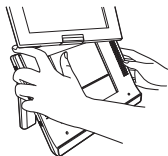


Applying excessive force when rotating the screen, or rotating the screen forcibly in the opposite direction to the rotating direction may cause malfunction.

■Caution

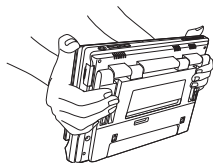
- Do not insert a finger between the screen and the main unit when rotating the screen. Doing so may result in fingers getting caught between the main unit and the screen and cause injuries. Especially keep an eye on children.

DO NOT



Holding the unit

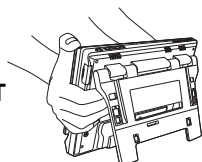
Hold the unit with the stand closed.



■Caution

- Do not insert a finger between the main unit and the stand when installing or moving this unit. Doing so may result in fingers getting caught between the unit and the stand and cause injuries. Especially keep an eye on children.

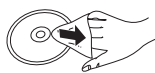
DO NOT



Disc and card handling

■Clean discs

DO



DO NOT



Wipe with a damp cloth and then wipe dry.

■Disc and card handling precautions

- Handle discs by the edges to avoid inadvertent scratches or fingerprints on the disc.
- Do not attach labels or stickers to discs (This may cause disc warping, rendering it unusable).
- Do not write on the label side with a ball-point pen or other writing instrument.
- Do not use record cleaning sprays, benzine, thinner, static electricity prevention liquids or any other solvent.
- Do not use scratch-proof protectors or covers.
- Clean any dust, water, or foreign matter from the terminals on the rear side of the card.
- 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.

Maintenance

■To clean this unit, wipe with a soft, dry cloth.

- Wipe gently with the cleaning cloth (included).
- To remove stubborn dirt, wet the cleaning cloth, wring well, and then wipe. Afterwards, wipe gently with dry soft cloth.
- Do not use a microfiber dust cloth on the LCD screen. Follow the caution when wiping the outer casing.
- Never use alcohol, paint thinner or benzine to clean this unit.
- The LCD and around the LCD are specially-processed. Wiping them with a hard cloth or rubbing them strongly may scratch the surfaces.

■Maintenance of the lens

- Remove dust carefully with an air blower for camera lenses (optional).
- Recommended product:
Lens cleaner kit (SZZP1038C) (Available from Panasonic dealers.)
- You cannot use a CD type lens cleaner.
- Be careful not to touch the lens with your fingers.

To dispose or transfer this unit

This unit may record information of your operating procedures. If you discard this unit either by disposal or transfer, then follow the procedures to return all the settings to the factory presets to delete the recorded information. (⇒ 42, "To return all settings other than some settings to the factory preset.")

- When BD-Video is played back, the operation history may be recorded in the memory of this unit. The recorded contents differ depending on the disc.

Media (Disc and card) information

Commercially sold 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.

Type of media and logo	Features	Indicated as
BD-Video 	High Definition (HD) movie and music discs • Discs supporting BD-Live (BD-ROM Profile 2) that allows interactive functions to be used when this unit is connected to the Internet in addition to the BONUSVIEW function.  • Discs supporting BONUSVIEW (BD-ROM Profile 1 version 1.1/Final Standard Profile) that allows Picture-in-Picture functions to be used. 	BD-V
DVD-Video  	High quality movie and music discs	DVD-V
CD 	Compact Discs (CD's) that contain audio and music • Operation and sound quality of CDs that do not conform to CD-DA specifications (copy control CDs, etc.) cannot be guaranteed.	CD

About playback compatibility for BD-R and BD-RE with high definition recordings of high definition broadcasts

With DMP-B15 purchased in the below countries, it is possible to playback discs with recordings of the high definition broadcasts listed to the right which were recorded with Panasonic Blu-ray Disc recorders.

As high definition broadcasts are a new technology, areas confirmed as of March 2009 are as below.

Country	Digital Broadcast
France	TNT HD (Compatible model DMP-B15EG)
United Kingdom	freesat (Compatible model DMP-B15EB)
Australia	Digital Terrestrial Broadcasting for Australia (DVB-T) (Compatible model DMP-B15GN)
New Zealand	Digital Terrestrial Broadcasting for New Zealand (DVB-T) (Compatible model DMP-B15GN)

User recorded media

This chart shows the different type of discs recorded with other devices that you can use.

Finalized This mark means you must finalize the disc with the DVD recorder, etc. before playback. For details about finalizing, refer to the operating instructions for your equipment.

Type of media and logo	Formats	Indicated as
BD-RE 	• Version 3 of the BD-RE Recording Format • JPEG format	BD-V JPEG
BD-R 	• Version 2 of the BD-R Recording Format	BD-V
DVD-RAM 	• Version 1.1 of the DVD Video Recording Format • JPEG format • AVCHD format	DVD-VR JPEG AVCHD
DVD-R/RW Finalized  	• DVD-Video Format • Version 1.1 of the DVD Video Recording Format • AVCHD format • DivX format (DVD-RW is not supported) • MP3 format (DVD-RW is not supported) • JPEG format (DVD-RW is not supported)	DVD-V DVD-VR AVCHD DivX MP3 JPEG
DVD-R DL Finalized 	• DVD-Video Format • Version 1.2 of the DVD Video Recording Format • AVCHD format • DivX format • MP3 format • JPEG format	DVD-V DVD-VR AVCHD DivX MP3 JPEG
+R/+RW/+R DL Finalized	• +VR (+R/+RW Video Recording) Format • AVCHD format	DVD-V AVCHD
CD-R/RW Finalized	• CD-DA format • MP3 format • JPEG format • DivX format	CD MP3 JPEG DivX

- 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.
- When a disc recorded in the AVCHD format is being played, the video may be paused for a few seconds at portions spliced, due to deletion or editing.

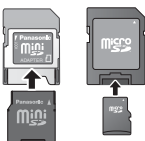
SD cards

This chart shows the different type of cards recorded with other devices that you can use.

Type of media	Formats	Indicated as
SD Memory Card* (from 8 MB to 2 GB)	• JPEG format	JPEG
SDHC Memory Card (from 4 GB to 32 GB)	• AVCHD format • MPEG2 format	AVCHD MPEG2

* Includes miniSD Card, microSD Card and microSDHC Card
The card types mentioned above will be referred to as “SD card” in these operating instructions.

- A miniSD Card, microSD Card and microSDHC Card must be used with the attached adaptor that comes with the card.



- We recommend using a Panasonic SD card.

Please confirm the latest information on the following website.

<http://panasonic.co.jp/pavc/global/cs>

(This site is in English only.)

- This unit is compatible with SD Memory Cards that meet SD Card Specifications FAT12 and FAT16 formats, as well as SDHC Memory Cards in FAT32 format.
- When using from 4 GB to 32 GB SD cards, only SD cards that display the SDHC logo can be used.
- Useable memory is slightly less than the card capacity.
- If the SD card is formatted on a PC, you may not be able to use it on this unit.
- Keep the Memory Card out of reach of children to prevent swallowing.
- When a card recorded in the AVCHD format is being played, the video may momentarily pause, especially where one recording ends and the next one begins. This is normal and does not indicate a problem.
- Switch the write-protect switch to the “LOCK” position to protect the content from accidental erasure.

Discs that cannot be played in this unit

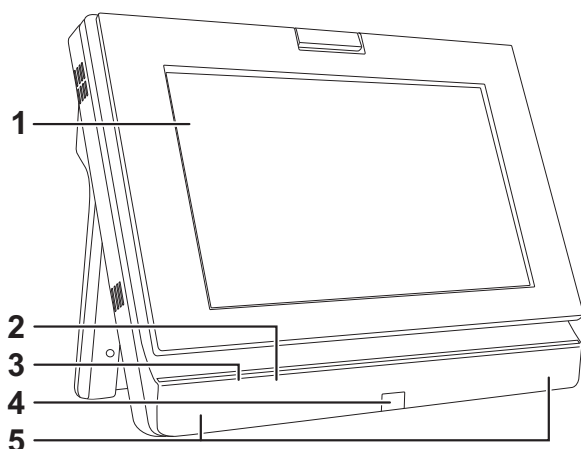
- BD-RE with the cartridge
- 2.6 GB and 5.2 GB DVD-RAM
- DVD-RAM that cannot be removed from their cartridges
- 3.95 GB and 4.7 GB DVD-R for Authoring
- DVD-R, DVD-R DL, DVD-RW, +R, +R DL recorded on another unit and not finalized
- BD-Video not containing a supported region code
- DVD-Video not containing a supported region number
- Version 1.0 of DVD-RW
- DVD-ROM, CD-ROM, CDV, CD-G, CVD, SACD, Photo CD, MV-Disc and PD
- DVD-Audio
- Video CD and SVCD
- WMA discs
- HD DVD
- Other discs that are not specifically supported

Overview

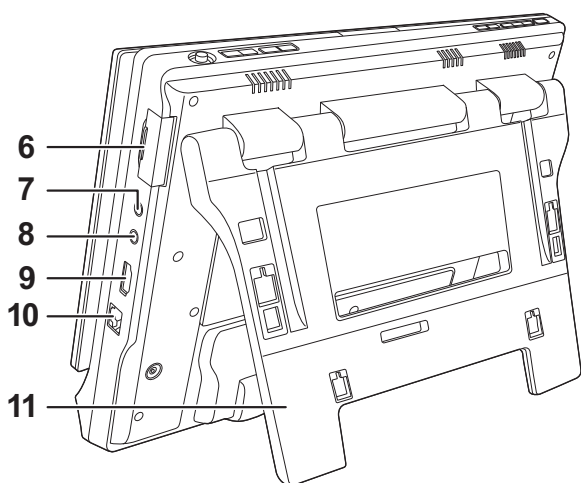
The Unit

Instructions for operations are generally described using the remote control in these operating instructions.

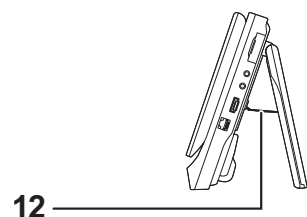
Front View



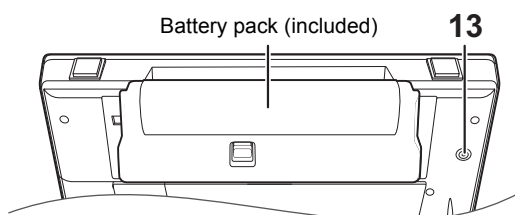
Rear View



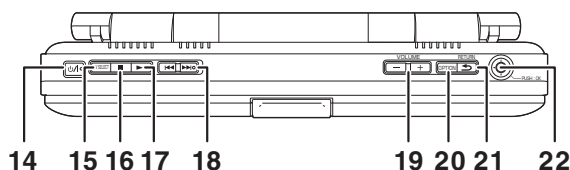
Side View



Bottom View

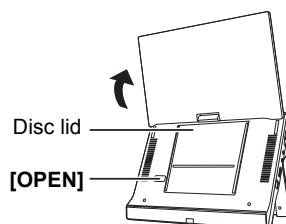


Top View



1 LCD screen

When the screen is opened



2 [CHARGE] indicator (⇒ 11)

While recharging the battery pack, this indicator lights up.

3 [ON] indicator (⇒ 11)

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.

4 Remote control signal sensor (⇒ 9)

5 Speaker

6 SD card slot (⇒ 13)

7 Audio/video input/output terminal (⇒ 25)

8 Headphone terminal [] (3.5 mm stereo mini jack)

9 HDMI AV OUT terminal (⇒ 25)

10 LAN terminal (⇒ 28)

11 Stand (⇒ 10)

12 Stopper wire (⇒ 10)

13 DC IN terminal (⇒ 11)

14 Turn the unit on and off (⇒ 12)

15 Switch the media to playback

It will switch every time it is pressed.



16 Stop (⇒ 15)

17 Playback (⇒ 14)

18 Skip title numbers, etc. (⇒ 15)

19 Adjust the volume (⇒ 14)

20 Show the OPTION menu (⇒ 18)

21 Return to previous screen

22 Selection/OK

To select:

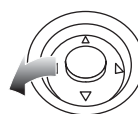
Tilt up, down, left, or right ([▲], [▼], [◀], [▶])

To enter:

Press straight in

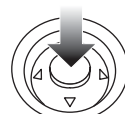
Example:

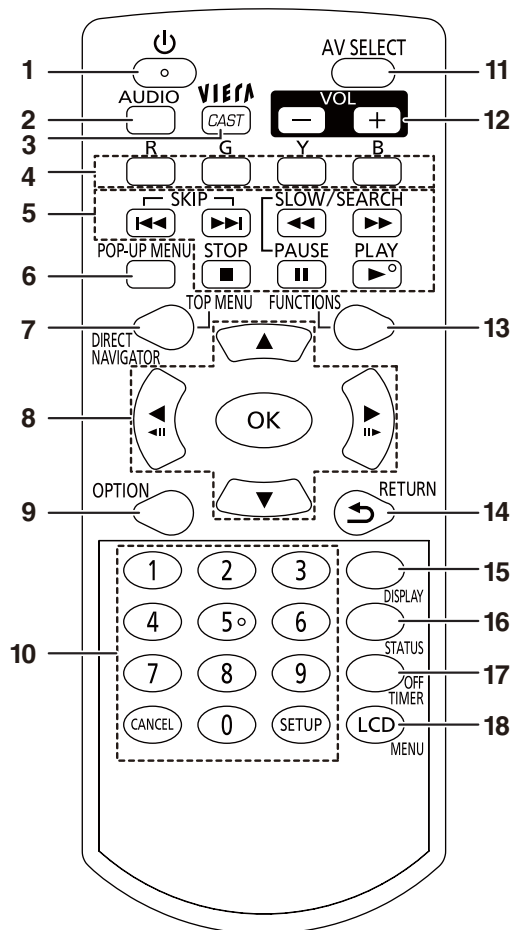
To select left item



Example:

To enter the operation





- 1 Turn the unit on and off (⇒ 12)
- 2 Select audio (⇒ 16)
- 3 Show the Home screen of the VIERA CAST (⇒ 30)
- 4 Use according to the instructions on the screen
- 5 Basic operations for playback (⇒ 14–15)
- 6 Show Pop-up menu (⇒ 14)
- 7 Show Top menu/Direct Navigator (⇒ 14)
- 8 Selection/OK, Frame-by-frame
 - To select: Press up, down, left, or right ([▲], ▼, ◀, ▶])
 - To enter: Press [OK]
 - Frame forward / Frame backward: (While paused) press left or right ([◀|||][|||▶])
- 9 Show the OPTION menu (⇒ 18)
- 10 Select title numbers, etc./Enter numbers (⇒ 16) or characters (⇒ 30)
- 11 Switch the media to playback (⇒ 14)
It will switch every time it is pressed.

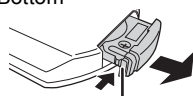


- 12 Adjust the volume (⇒ 14)
- 13 Show FUNCTIONS menu (⇒ 12)
- 14 Return to previous screen
- 15 Show on-screen menu (⇒ 23)
- 16 Show status messages (⇒ 16)
- 17 Turn the unit off automatically (⇒ 12)
- 18 Change the screen settings (⇒ 13)

■Insert the button-type battery (included)

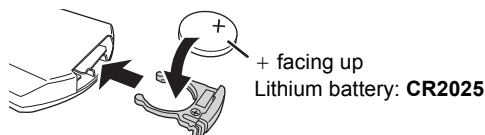
- ① Pull out the holder.

Bottom



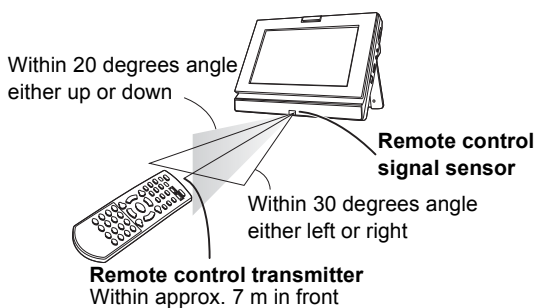
Pull out while pressing here

- ② Insert the battery and return the holder.



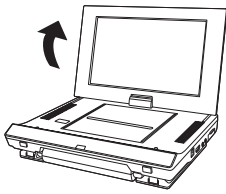
- Keep the button-type battery out of reach of children to prevent swallowing.

■Range of use

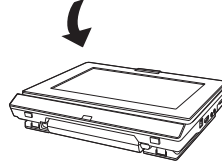
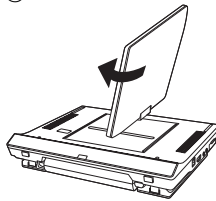


Installation of the unit

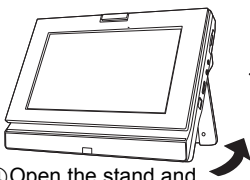
① Open the screen.



② Rotate the screen.



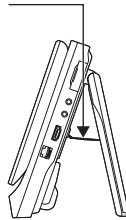
④ Open the stand and set the unit vertically.



③ Turn the screen outwards and close.

Open the stand and set the unit on a horizontal and stable level surface.

- Open the stand until the stopper wire is fully stretched.
- If the screen is rotated when the unit is turned on, the display on the screen will disappear and the unit will be automatically turned off. (⇒ 12)
- The unit cannot be turned on in situations other than ③ or ④ above or when the screen is rotated. (⇒ 12)
- Rotating the screen without opening the angle enough may scratch the area around the LCD etc. (⇒ 5, "Rotating the screen")
- The unit's speakers do not have magnetic shielding. Do not place the unit near televisions, personal computers or other devices easily influenced by magnetism. Do not keep this unit and magnetized cards (bank cards, commuter passes, etc.) close together.



When moving the unit:

- Turn the unit off.
- Close the screen and the stand.
- Do not hold onto the screen or the stand.

About the LCD screen

There may be 0.01% or less chance of missing or constantly turned on pixels, but this is not a malfunction.

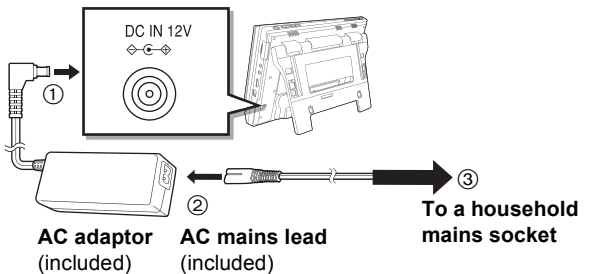
Attention

Do not place the unit with the LCD display-side down when the screen is open.

Doing so may scratch the surface of the LCD as the display and the area around the display are specially-processed.

Preparing the power Supply

Using the unit connected to the AC adaptor



The unit is in the standby condition (the [⏻] indicator lights) when the AC mains lead is connected. The primary circuit is always "live" as long as the AC adaptor is connected to an electrical outlet.

- When connecting the AC adaptor, use the unit after setting it vertically. Placing the unit with the stand closed (e.g.: ⇨ 10, ③ in "Installation of the unit") may cause damage to or malfunction with the AC adaptor.

To conserve power

This unit consumes 0.5 W (Approximately 5 W when Quick Start is set to "On") of power even when turned off. When the unit is not going to be used for a long time, disconnect the AC mains lead from the household mains socket.

Using the battery pack

This unit can be used in places without a mains socket, such as outdoors, by attaching the included battery pack.

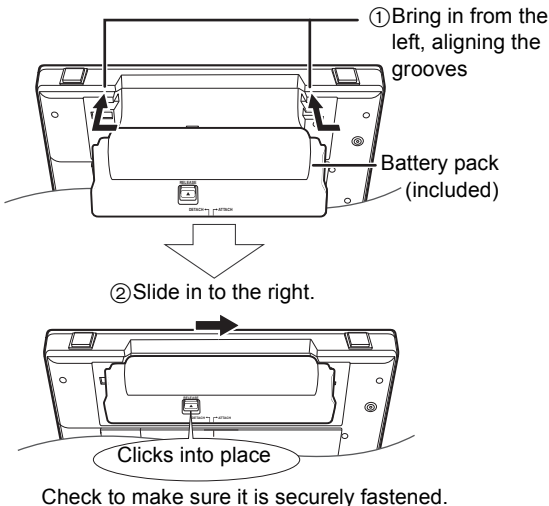
- The battery is not charged at the time of purchase. Charge before initial use.
- The battery is designed only for use with this unit. It cannot be used with other equipment.

■Attaching the battery pack

Turn the unit off before attaching or detaching the battery pack.

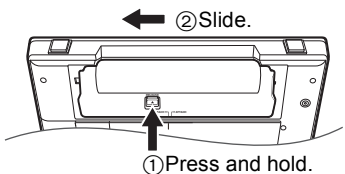
- Attach the battery after closing with the LCD screen facing inwards and the stand open.

Bottom side of this unit



■Detaching the battery pack

Bottom side of this unit



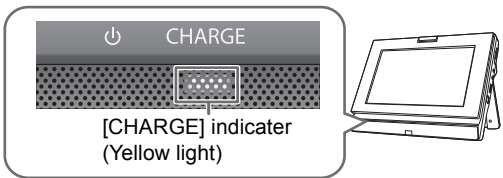
When not using for long periods of time

- Detach the battery pack (⇨ above).
(Even when the unit is turned off, there is a small amount of voltage running through the unit, and this may result in a malfunction.)
- Recharge the battery for re-use.

■Recharging the battery pack

Attach the battery pack and connect the AC adaptor (⇨left).

- The [CHARGE] indicator lights while charging the battery, and the [CHARGE] indicator turns off when battery charging is finished.



■Approximate recharging and play times (Hours)

Recharging*1	Play*2		
	LCD brightness level		
	-5	0	+5
7	2.5	2.25	2

*1 When the unit is off [at 20 °C]

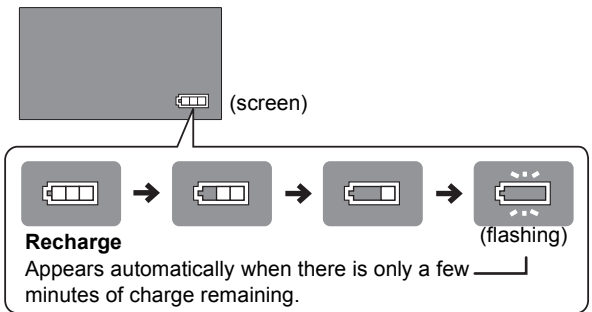
*2 At room temperature using headphones [at 20 °C]

- The times indicated on the above may differ depending on use.
- To change the LCD brightness (⇨ 13, "Adjusting the pictures on the LCD screen").

■Checking the remaining battery charge

When the unit is on (⇨ 12, "Turning on/off the unit") and powered by the battery pack

Press [OPTION] to check on the LCD (displays for a few seconds).

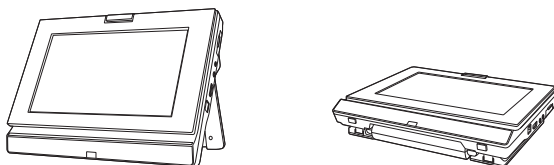


Turning on/off the unit

Press [⏻] (approx. 0.5 sec.).

The unit is turned off when [⏻] is pressed again.

- If the screen is rotated when the unit is turned on, the display on the screen will disappear and the unit will be automatically turned off. (⇒ 10)
- The unit cannot be turned on in situations other than the following or when the screen is rotated. (⇒ 10)



- When the "Auto Power Off" is set to "On" (initially set to "On"), the unit will be turned off automatically after 15 minutes (5 minutes when the battery pack is used) when it is in stopped status (⇒ 36).
- The startup will take time. The operation related to startup of the unit after turning on this unit can be quickened by setting the initial setup "Quick Start" (⇒ 36) to "On" (initially set to "Off"). (The power consumption will increase)
- You may hear operational sounds when the unit is turned on, but this is due to the initialization of the pickup unit, and it is not a malfunction.

For the United Kingdom and Continental Europe

Easy Setting

After installation of the unit and pressing [⏻], a screen for the basic settings will appear.

Follow the on-screen instructions and make the settings with [▲, ▼] and [OK].

"On-Screen Language" is set. (⇒ 34)

- You can perform this setup anytime by selecting "Easy Setting" in the Setup menu. (⇒ 36)
- You can also change this setting individually. (⇒ 34)

Turn the unit off automatically

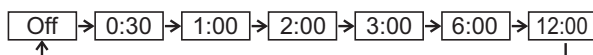
The unit is turned off automatically after set time has passed.

Switch by pressing the [OFF TIMER].

e.g., 30 min.



It will switch every time it is pressed.



Showing FUNCTIONS menu

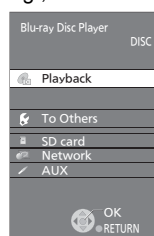
Some functions of this unit can be operated from the FUNCTIONS menu.

1 Press [FUNCTIONS].

- Functions displayed depend on the media and operating conditions.
- The FUNCTIONS menu cannot be displayed on the unit when selecting "AUX" with [AV SELECT]. When connecting to a TV (VIERA) with an HDMI cable, the unit's FUNCTIONS menu can be displayed on the TV screen. (⇒ 27, "Using the FUNCTIONS menu to operate this unit")

2 Press [▲, ▼] to select the item and press [OK].

e.g.,



• Playback (⇒ 14, 30)

Show the Home screen of the VIERA CAST when selecting "Network" with [AV SELECT].

• Top Menu (⇒ 14)

• Menu (⇒ 14, 18, 22)

• Viewing Picture (⇒ 18)

• To Others

– "Playlists":

You can play playlists created on DVD-VR.

Press [▲, ▼, ◀, ▶] to select the playlist and press [OK].

– "Setup" (⇒ 32)

– "Card Management" (⇒ 17)

• Disc (⇒ 14)

Switches to the disc drive.

• SD card (⇒ 14)

Switches to the SD drive.

• Network (⇒ 30)

Show the Home screen of the VIERA CAST.

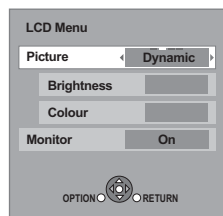
• AUX (⇒ 25)

Adjusting the pictures on the LCD screen

1 Press [LCD].

• It is also possible to display with the following procedures.

- ① Press [OPTION].
- ② Select "To Others" with [**▲**, **▼**], and select [OK].
- ③ Select "LCD Menu" with [**▲**, **▼**], and select [OK].



2 Select the item with [**▲**, **▼**].

3 Change the setting with [**▲**, **▼**, **◀**, **▶**].

• Underlined items are the factory presets.

■ When selecting other settings than "AUX" with [AV SELECT]

Picture: Adjusting image quality

- Standard: Standard
- Dynamic: Picture with high contrast
- Night: Picture suitable for viewing in dark places
- User:
 - Brightness : -5 to +5
 - Colour : -5 to +5

Monitor: Displaying images

- On: Image display
- Off: No image

■ When selecting "AUX" with [AV SELECT] (⇒ 25)

PICTURE: Adjusting image quality

- STANDARD: Standard
- DYNAMIC: Picture with high contrast
- NIGHT: Picture suitable for viewing in dark places
- USER:
 - BRIGHTNESS : -5 to +5
 - COLOUR : -5 to +5

MONITOR: Displaying images

- NORMAL: When you want to view 4:3 images
- FULL: When you want to view 16:9 images
- OFF: No image

- If you are not using the LCD on this unit, select "Off (OFF)" to conserve power. (The [⏻] indicator flashes.)
- If the settings in "PICTURE" are changed when "AUX" is selected, the settings in "Picture" will also change. The settings will change in the same way even when something other than "AUX" is selected.

To exit the screen

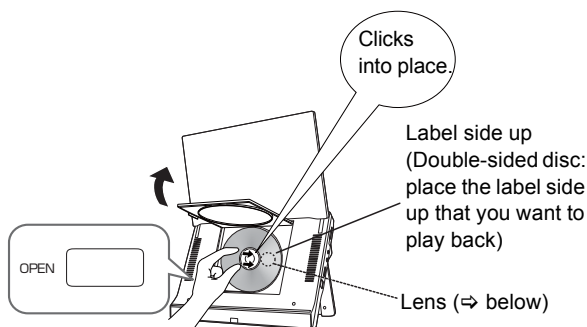
Press [LCD] or [RETURN].

To display images when the "Monitor (MONITOR)" is set to "Off (OFF)"

Press [LCD] or [OPTION].

Loading the disc or SD card

Disc

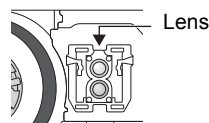


1 Open the screen and press [OPEN].

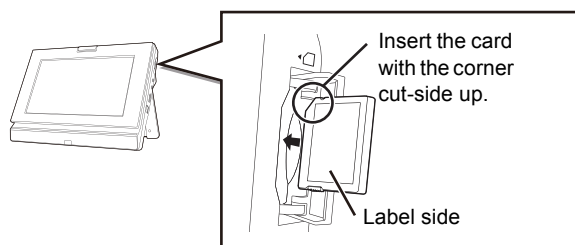
2 Set the disc holding the unit with your hand and close the lid.

3 Close the screen.

- Some discs may start playing when it is loaded with the unit turned on.
- About discs with a cartridge
 - BD-RE with a cartridge: It cannot be used with this unit. (It cannot be used even if the disc is taken out from the cartridge.)
 - DVD-RAM, 8 cm disc: Remove the disc from the cartridge and set the disc in the tray.
 - Place the disc back into the cartridge for storage to prevent dirt and scratches after use.
- Do not touch the lens as it may make it dirty.



SD card



1 Open the cover at the side of the unit.

2 Insert the SD card into the SD card slot.

3 Press on the centre of the card until it clicks into place. Close the cover.

To remove the card

In step 2 above, press the centre of the card until it "clicks", and pull the card out straight.

Basic play (Playing video contents)

Instructions for operations are generally described using the remote control in these operating instructions.

Preparation

Insert a disc or SD card (⇒ 13).

Press [AV SELECT] to select “DISC” or “SD”.

Play starts.

- If play does not start, press [▶] (PLAY).
- If a media with data in different file formats is inserted, the file selection menu is displayed. Press [▲, ▼] to select the desired file format and press [OK].
- If the menu is displayed, press [▲, ▼, ◀, ▶] to select the item and press [OK].
- If the screen prompting you to use the colour buttons appears, continue to operate with the colour buttons on the remote control.

• DISCS CONTINUE TO ROTATE WHILE MENUS ARE DISPLAYED. Press [■] when you finish to preserve the unit's motor.

- Signal from PAL discs is output as PAL. Signal from NTSC discs is output as “NTSC” or “PAL60”. You can select “NTSC” or “PAL60” in “NTSC Contents Output” for NTSC discs. (⇒ 33)
- The producers of the disc can control how discs are played. So you may not always be able to control play as described in these operating instructions. Read the disc's instructions carefully.
- When playing a set of two or more BD-Video discs, the menu screen may continue to display even if the disc has been ejected.
- The start of playback may take time depending on the disc or SD card.
- The sound of rotation may be audible during disc playback, but this is not a malfunction.

To adjust the volume

Press [- VOL] or [+ VOL].

- When using headphones, turn down the volume before connection.

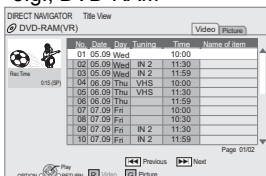
To show menus

BD-V AVCHD DVD-VR DVD-V DivX

Press [TOP MENU/DIRECT NAVIGATOR].

- Total title number may not be displayed properly on +R/+RW.

e.g., DVD-RAM



To show Pop-up menu

BD-V

The Pop-up menu is a special feature available with some BD-Video discs. This menu may vary with discs. For the operating method, refer to the instructions for the disc.

- ① Press [POP-UP MENU].
 - ② Press [▲, ▼, ◀, ▶] to select the item and press [OK].
- Pop-up menu also appears by pressing [OPTION] and selecting “Pop-up Menu”.
 - Press [POP-UP MENU] to exit the screen.

Playing HD Video or SD Video

AVCHD MPEG2

It is possible to playback the HD (High Definition) video recorded on the Panasonic High definition Video Camera on the DVD-RAM/R/RW/R DL/+R/+RW/+R DL or SD card, and SD (Standard Definition) Video recorded on the Panasonic SD Video Camera on the SD card.

Preparation

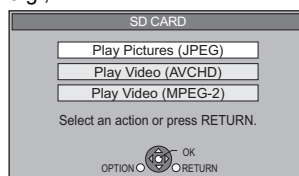
Insert a disc or SD card (⇒ 13).

1 Press [AV SELECT] to select “DISC” or “SD”.

- “Title View” or “Video (MPEG-2)” screen is displayed.
- If a media containing data in different file formats is inserted, the file selection menu may be displayed.

Press [▲, ▼] to select “Play Video (AVCHD)” or “Play Video (MPEG-2)” and press [OK].

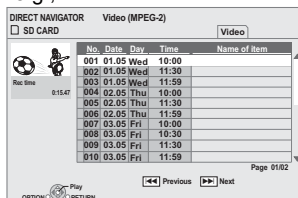
e.g.,



2 Press [▲, ▼, ◀, ▶] to select the title and press [OK].

- Total title number may not be displayed properly on +R/+RW.

e.g.,



To return to the menu screen

Press [DIRECT NAVIGATOR].

To exit the menu screen

Press [RETURN].

To switch from other menus to AVCHD or MPEG2 menu

(If the media contains data in different file formats)

- ① Press [FUNCTIONS].
- ② Press [▲, ▼] to select “Menu” and press [OK].
- ③ Press [▲, ▼] to select “Play Video (AVCHD)” or “Play Video (MPEG-2)” and press [OK].

- It may pause for a few seconds on the break of images when editing such as partial deletion is performed.
- High definition video (transfer rate of 18 Mbps or faster) cannot be played back correctly if it was recorded on a DVD compatible to double speed or slower.

Chapter playback

DVD-VR

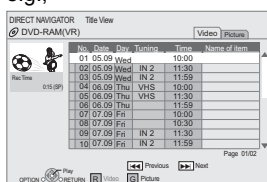
Preparation

Insert a disc (⇒ 13).

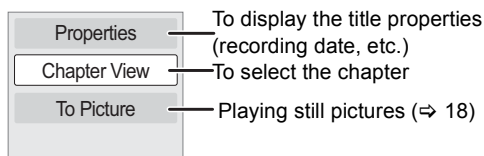
- 1 Press **[AV SELECT]** to select "DISC".

- "Title View" screen is displayed.

e.g.,

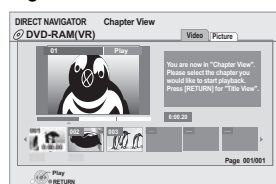


- 2 Press **[▲, ▼]** to select the title and press **[OPTION]**.
- 3 Press **[▲, ▼]** to select "Chapter View" and press **[OK]**.



- 4 Press **[◀, ▶]** to select the chapter and press **[OK]**.

e.g.,



Other operations during play

These functions may not work depending on the media.

STOP



Stop

The stopped position is memorized.

Resume play function

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

- The memorized position is cleared in the following instances:
 - **[■]** is pressed several times
 - The disc or SD card is removed
 - The unit is turned off due to such occurrences as power outage, the removal of the AC adaptor or waste of the battery pack's remaining power when the unit is turned on
- **BD-V**: On BD-Video discs including BD-J (⇒ 48), the resume play function does not work.
- **CD MP3 DivX MPEG2**: The position is cleared if the unit is turned off.

PAUSE



Pause

- Press **[||]** again or **[▶]** (PLAY) to restart play.

SLOW/SEARCH



Search/Slow-motion

The speed increases up to 5 steps.

- Press **[▶]** (PLAY) to revert to normal playback speed.
- For some discs, the speed may not change.

Search

While playing, press **[◀◀]** or **[▶▶]**.

- **DVD-VR DVD-V**: Audio is heard during the first level of forward search.
- **BD-V AVCHD DivX MPEG2**: Audio is not heard during all levels of search.
- **CD MP3**: The speed is fixed to a single step.

Slow-motion

While paused, press **[◀◀]** or **[▶▶]**.

- **BD-V AVCHD**: Forward direction **[▶▶]** only.
- **DVD-VR**: If continued for approx. 5 minutes, slow-motion play pauses automatically.

SKIP



Skip

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

- Each press increases the number of skips.
- **DivX**: Backward direction **[◀◀]** only.

Basic play (Playing video contents)

(continued)



Starting from a selected item

During playback, you can access specific recordings or scenes through direct entry of the numbered buttons.

Play starts from the selected title or chapter.

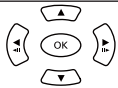
BD-V **AVCHD**

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

DVD-V

e.g., 5: [0] ⇒ [5] 15: [1] ⇒ [5]

- While stopped (the image on the right is displayed on the screen), the title is designated. While playing, the chapter is designated.



Frame-by-frame

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

Each press shows the next frame.

- Press and hold to change in forward or backward succession.
- Press [▶] (PLAY) to revert to normal playback speed.
- BD-V** **AVCHD**: Forward direction [▶] (||▶) only.

Screen Aspect

When black bars are shown at the top, bottom, left, and right sides of the screen, you can enlarge the image to fill the screen.

- Press [OPTION].
- Press [▲, ▼] to select "To Others" and press [OK].
- Press [▲, ▼] to select "Screen Aspect" and press [OK].
- Press [◀, ▶] to select "Side cut" or "Zoom".

Normal: Normal output

Side cut: The black bars on the right and left sides of the 16:9 image disappear and the image is enlarged. Please note that the right and left sides of the image are cut off when the black bar is not displayed.

Zoom: The black bars on the top and bottom sides of the 4:3 image disappear and the image is enlarged. Please note that the top and bottom sides of the image are cut off when the black bar is not displayed.

- Please note that the top, bottom and sides of the image will be cut off in images with no black bars.
- Screen aspect will return to "Normal" in the following instances:
 - Playback of images starts/ends
 - The unit is turned on/off
- BD-V** **DVD-V**: "Side cut" does not have any effect.
- When "TV Aspect" (⇒ 34) is set to "4:3 Pan & Scan" or "4:3 Letterbox", the "Zoom" effect is disabled.



Status messages

The status messages give you information about what is currently being played. Each time you press [STATUS], the information displayed will change.

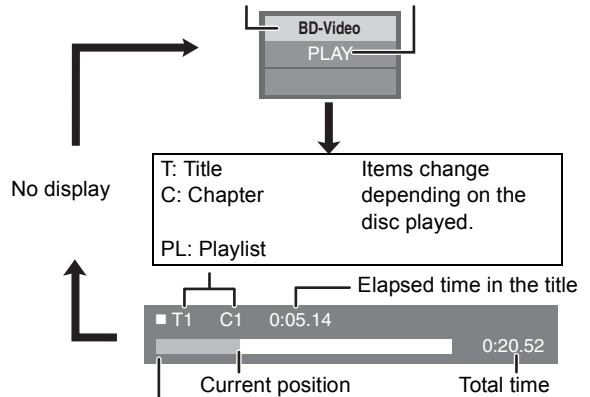
- It is also possible to display with the following procedures:

- Press [OPTION].
- Select "Status" with [▲, ▼], and select [OK].

e.g., **BD-V**

Type of disc

Play status



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

AUDIO



Changing audio during play

- It is also possible to display with the following procedures:

- Press [OPTION].
- Select "To Others" with [▲, ▼], and select [OK].
- Select "Audio" with [▲, ▼], and select [OK].

BD-V **DVD-V**

e.g., **DVD-V**



English is selected.

You can change the audio channel number each time you press [AUDIO] or [▲, ▼]. This allows you to change the soundtrack language (⇒ 23, Soundtrack), etc.

DVD-VR **DivX** **MPEG2**

AudioLR → AudioL → Audio R

e.g.,



You can change soundtracks each time you press [AUDIO] or [OK].

Enjoying BD-Live or BONUSVIEW in BD-Video

BD-V

What is BONUSVIEW?

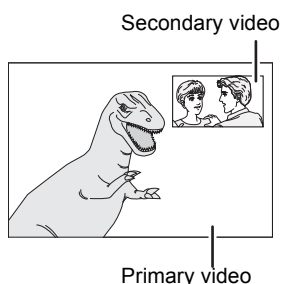
BONUSVIEW allows you to enjoy functions such as picture-in-picture or secondary audio etc., with BD-Video supporting BD-ROM Profile 1 version 1.1/ Final Standard Profile.

What is BD-Live?

In addition to the BONUSVIEW function, BD-Video supporting BD-ROM Profile 2 that has a network extension function allows you to enjoy more functions such as subtitles, exclusive images and online games by connecting this unit to the Internet. In order to use the Internet feature, you must have this unit connected to a broadband network (⇒ 28).

- These discs may not be on sale in certain regions.
- The usable functions and the operating method may vary with each disc, please refer to the instructions on the disc and/or visit their website.

Playing secondary video (picture-in-picture) and secondary audio



To turn on/off secondary video

Set "Video" in "Secondary Video" to "On" or "Off" (⇒ 23, Press [DISPLAY] ⇒ "Disc" ⇒ "Signal Type")

The secondary video is played.

To turn on/off secondary audio

Set "Soundtrack" in "Secondary Video" to "On" or "Off" (⇒ 23, Press [DISPLAY] ⇒ "Disc" ⇒ "Signal Type")

The secondary audio is played.

- During search/slow-motion or frame-by-frame, only the primary video is displayed.
- When "BD-Video Secondary Audio" in "Digital Audio Output" is set to "Off", secondary audio will not be played even if you set "Soundtrack" in "Secondary Video" to "On". Please check that "BD-Video Secondary Audio" is set to "On" (⇒ 33).
- The playback method determined by the disc will take priority, so it may not play back in the manner specified with this unit.
- When the secondary video is turned off, the secondary audio will not be played.

Enjoying BD-Live discs with Internet

Many BD-Live compatible discs require content to be downloaded onto an SD card (⇒ 49, Local storage) in order to access the available BD-Live features.

- An SD card with 1 GB or more of free space (SD Speed Class Rating 2 or higher) needs to be inserted prior to inserting the BD-Live compatible disc.

Some BD-Live content available on the Blu-ray discs may require an Internet account to be created in order to access the BD-Live content. Follow the screen display or instruction manual of the disc for information on acquiring an account.

Preparation

- Connect to the network. (⇒ 28)

1 Insert an SD card (⇒ 13).

- If the SD card menu screen is displayed, press [RETURN] to clear the screen.

2 Insert the disc (⇒ 13).

3 Press [AV SELECT] to select "DISC".

- For operation method, refer to the instructions on the disc.

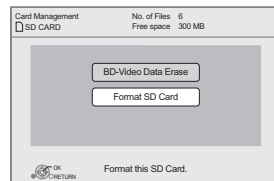
To use the above functions, it is recommended that you format the card on this unit. Format the card using the following procedures:

Formatting SD cards/Deleting data

- If the SD card you use is formatted, all data on the card will be erased. It cannot be recovered.

e.g.,

- ① Insert an SD card (⇒ 13).
- ② Press [AV SELECT] to select "SD".
- ③ Press [FUNCTIONS].
- ④ Press [▲, ▼] to select "To Others" and press [OK].
- ⑤ Press [▲, ▼] to select "Card Management" and press [OK].
- ⑥ Press [▲, ▼] to select "BD-Video Data Erase" or "Format SD Card" and press [OK].
- ⑦ Press [◀, ▶] to select "Yes" and press [OK].
- ⑧ Press [◀, ▶] to select "Start" and press [OK].



- If you experience any problems, first, try formatting the SD card in this unit.
- A message may be displayed when the SD card doesn't have enough storage capacity for BD-Live content. Please make space available on the current SD card, or insert another SD card.
- While using this feature, do not open the cover at the side of the unit or touch the SD card.
- While using this feature, do not remove the SD card. Doing so will cause playback to stop.
- The unit must be connected to the Internet and set up (⇒ 28) to use the BD-Live functions. "BD-Live Internet Access" may need to be changed for certain discs (⇒ 32).
- When discs supporting BD-Live are played back, the player or disc IDs may be sent to the content provider via the Internet. You can restrict Internet access (⇒ 32).
- The playback may be paused depending on the communication environment. Some functions may be disabled to prevent skipping to sections that have not been downloaded, etc.

Playing still pictures

JPEG

Playback of the BD-RE, DVD-RAM/R/R DL or CD-R/RW with still pictures recorded. This unit can also play still pictures recorded on the SD card.

(About structure of folders ⇒ 39, "Structure of folders that can play back on this unit")

Preparation

Insert a disc or SD card (⇒ 13).

1 Press [AV SELECT] to select "DISC" or "SD".

■BD-RE, DVD-RAM

"Album View" screen is displayed.

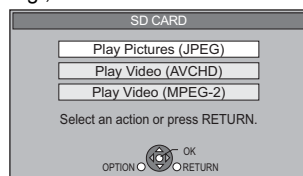
- When the "Title View" screen is displayed, press the [G] button to switch to the "Album View" screen.
- If the DVD-RAM containing both JPEG and AVCHD format is inserted, the file selection menu may be displayed.

■DVD-R/R DL, CD-R/RW, SD card

- If the media containing data in different file formats is inserted, the file selection menu may be displayed.

Press [▲, ▼] to select "Play Pictures (JPEG)" and press [OK].

e.g.,

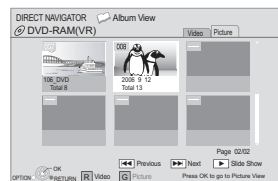


"Picture View" screen is displayed.

⇒ Go to step 3

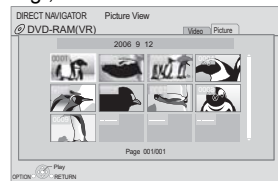
2 Press [▲, ▼, ◀, ▶] to select the album and press [OK].

e.g.,



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

e.g.,



- Press [◀, ▶] to display the previous or next still picture.
- Press [◀◀, ▶▶] to show other pages.
- Playback is not possible for pictures other than JPEGs.
- Black bars may be displayed on the top, bottom or sides depending on the picture aspect ratio.

To return to the previous screen

Press [RETURN].

To exit the screen

Press [DIRECT NAVIGATOR].

To switch from other menus to JPEG menu

(If the media contains data in different file formats)

- ① Press [FUNCTIONS].
- ② Press [▲, ▼] to select "Menu" and press [OK].
- ③ Press [▲, ▼] to select "Play Pictures (JPEG)" and press [OK].

Useful functions during still picture play

Start Slideshow

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

■BD-RE, DVD-RAM

1 While the "Album View" screen is displayed Press [▲, ▼, ◀, ▶] to select the album and press [OPTION].

- You can also start slideshow by pressing [▶] (PLAY) after selecting the album.

2 Press [▲, ▼] to select "Start Slide Show" and press [OK].

■DVD-R/R DL, CD-R/RW, SD card

1 While the "Picture View" screen is displayed Press [OPTION].

2 Press [▲, ▼] to select "Start Slide Show" and press [OK].

To stop slideshow

Press [■].

Slideshow Settings

In step 2 in Start Slideshow (⇒ above)

1 Press [▲, ▼] to select "Slide Show Settings" and press [OK].

2 To change the display interval

Press [▲, ▼] to select "Display Interval" and press [◀, ▶] to select the interval ("Long", "Normal" or "Short").

- When a still picture with large number of pixels is played, the display interval may become longer. Even if the setting is changed, the display interval may not become shorter.

To set display method

Press [▲, ▼] to select "Transition Effect" and press [◀, ▶] to select "Fade", "Motion" and "Random".

- "Fade": Pictures are changed by fading out and fading in.
- "Motion": Pictures are changed by fading out and fading in, while they are enlarged, reduced, or moved up or down.
- "Random": In addition to the "Motion", pictures are changed by various methods.

To repeat slideshow

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

To listen to a Background Music (SD card only)

The music CD can be played back as Background Music during the slideshow.

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

- You cannot search or skip on the music.
- When the slideshow stops, the playback of the music also stops.

- 3 Press [▲, ▼, ▶, ▶] to select "Set" and press [OK].

Rotate

- 1 While playing (except for slideshow)
Press [OPTION].
- 2 Press [▲, ▼] to select "Rotate RIGHT" or "Rotate LEFT" and press [OK].

- The rotation information will be stored until the unit is turned off or the media is removed.

Zoom out

This function is only available for small-sized still pictures.

- 1 While playing (except for slideshow)
Press [OPTION].
- 2 Press [▲, ▼] to select "Zoom out" and press [OK].

- To cancel "Zoom out", press [▲, ▼] to select "Zoom in" in step 2 and press [OK].
- The zoom-out information will not be stored.

To select the still pictures in another folder

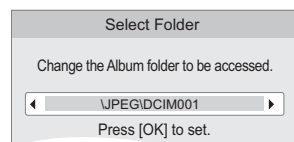
■ BD-RE, DVD-RAM

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 [OPTION].
- 2 Press [▲, ▼] to select "Select Folder" and press [OK].
- 3 Press [◀, ▶] to select the higher folder and press [OK].

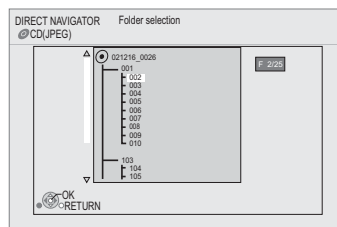
e.g.,



■ DVD-R/R DL, CD-R/RW

- 1 While the "Picture View" screen is displayed
Press [OPTION].
- 2 Press [▲, ▼] to select "Folder" and press [OK].
- 3 Press [▲, ▼] to select a folder and press [OK].

e.g.



To show the picture properties

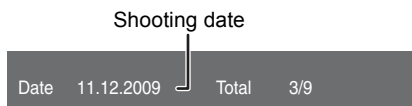
While playing

Press [STATUS] twice.

- It is also possible to display with the following procedures:

- ① Press [OPTION].
- ② Select "Status" with [▲, ▼], and select [OK].

e.g., JPEG on DVD-RAM



To exit, press [STATUS].

Playing DivX® videos

DivX

ABOUT DIVX VIDEO:

DivX® is a digital video format created by DivX, Inc. This is an official DivX Certified device that plays DivX video.

You can play DVD-R/R DL and CD-R/RW discs which contain DivX video contents that have been recorded on a personal computer.

(About structure of folders ⇒ 39, "Structure of folders that can play back on this unit")

- Because DivX format can use many different codecs, there is no guarantee that all DivX files will play. (⇒ 38, "About MP3/JPEG/DivX files")

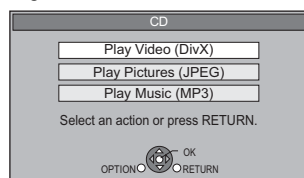
Preparation

Insert a disc (⇒ 13).

1 Press [AV SELECT] to select "DISC".

- If the media containing data in different file formats is inserted, the file selection menu may be displayed. Press [▲, ▼] to select "Play Video (DivX)" and press [OK].

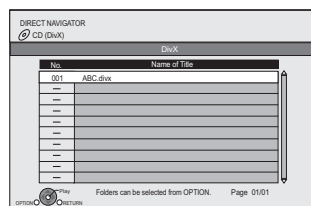
e.g.,



2 Press [▲, ▼] to select the title and press [OK].

Play starts on the selected title.

e.g.,



- The picture sizes set for recording may prevent the unit from showing pictures in the proper aspect. You may be able to adjust the aspect through the TV.
- Successive play is not possible.
- You can use search and skip functions. (⇒ 15)
- Press [◀◀, ▶▶] to show other pages.

To switch from other menus to DivX menu

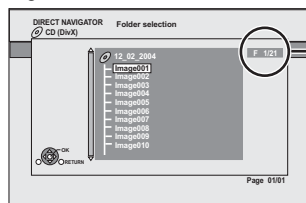
(If the media contains data in different file formats)

- ① Press [FUNCTIONS].
- ② Press [▲, ▼] to select "Menu" and press [OK].
- ③ Press [▲, ▼] to select "Play Video (DivX)" and press [OK].

Playing a title in another folder

- 1 While the "DIRECT NAVIGATOR" is displayed Press [OPTION].
- 2 Press [▲, ▼] to select "Folder" and press [OK].
- 3 Press [▲, ▼] to select a folder and press [OK].

e.g.,



Selected folder No. / Total folders

If the folder has no title, "—" is displayed as folder number.

- You cannot select folders that contain no compatible files.

To return to the previous screen

Press [RETURN].

Regarding DivX VOD content

ABOUT DIVX VIDEO-ON-DEMAND:

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

First generate the DivX VOD registration code for your device and submit it during the registration process.

[Important: DivX VOD content is protected by a DivX DRM (Digital Rights Management) system that restricts playback to registered DivX Certified devices. If you try to play DivX VOD content not authorized for your device, the message "Authorisation Error." will be displayed and your content will not play.] Learn more at www.divx.com/vod.

Display the unit's registration code.

(⇒ 36, "DivX Registration" in "General")



8 alphanumeric characters

- After playing DivX VOD content for the first time, another registration code is then displayed in "DivX Registration". Do not use this registration code to purchase DivX VOD content. If you use this code to purchase DivX VOD content, and then play the content on this unit, you will no longer be able to play any content that you purchased using the previous code.
- If you purchase DivX VOD content using a registration code different from this unit's code, you will not be able to play this content. ("Authorisation Error." is displayed.)

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

Some DivX VOD content can only be played a set number of times. When you play this content, the remaining number of plays is displayed. You cannot play this content when the number of remaining plays is zero. ("Rental Expired." is displayed.)

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

Displaying subtitles text

You can display subtitles text onto the DivX video disc on this unit.

This function has no relation to the subtitles specified in DivX standard specifications and has no clear standard. The operation might be different or it may not operate properly depending on the way the file was made or the state of this unit (playing, stopped, etc.).

- 1 While playing**
Press [DISPLAY].
- 2 Press [▲, ▼] to select "Disc" and press [▶].**
- 3 Press [▲, ▼] to select "Subtitle" and press [▶].**
- 4 Press [▲, ▼] to select "On" and press [▶].**
- 5 Press [▲, ▼] to select "Text".**

- DivX video files that do not display "Text" do not contain subtitles text.
Subtitles text cannot be displayed.

To exit the screen

Press [DISPLAY].

- If the subtitles text are not displayed correctly, try changing the language settings. (⇒ 32)

Playing music

CD MP3

You can play generally available a music CDs or MP3 files recorded onto a DVD-R/R DL and CD-R/RW.
(About structure of folders ⇒ 39, "Structure of folders that can play back on this unit")

Preparation

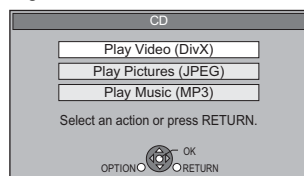
Insert a disc (⇒ 13).

1 Press [AV SELECT] to select "DISC".

"Music list" screen is displayed.

- If the media containing data in different file formats is inserted, the file selection menu may be displayed.
Press [▲, ▼] to select "Play Music (MP3)" and press [OK].

e.g.,

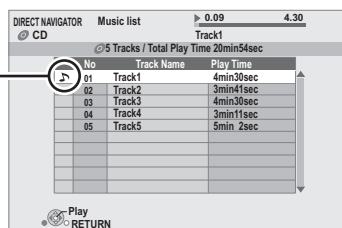


2 Press [▲, ▼] to select the track and press [OK].

Play starts on the selected track.

- Playback for some discs may start automatically.

e.g., **CD**



"🎵" indicates the track currently playing.

- You can use search and skip functions. (⇒ 15)
- When the television is connected and the "Screen Saver Function" is set to "On" (⇒ 34), the screen switches to Screen Saver mode if there is no operation for 10 minutes after starting playback. (Playback continues.)

Playing music continuously even after the television is set to standby

When the unit is connected to a Panasonic TV (VIERA) that supports HDAVI Control 2 or later and other device supports VIERA Link, the unit is turned off if the power to the television is turned off, since "Power off link" (⇒ 26) operates.

The following operations make it possible to keep the power of the unit ON and to play music continuously.

- ① While playing music
Press [OPTION].
- ② Press [▲, ▼] to select "TV Power" and press [OK].
 - Sound may be discontinued for several seconds when the power to the television is turned off.
 - If the operation mentioned above is executed while audio is output from the television, the sound may not be output from the device. It is recommended to set the device beforehand so that audio will be output from the device.

To switch from other menus to MP3 menu

(If the media contains data in different file formats)

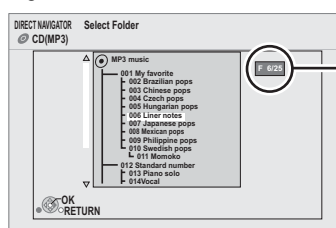
- ① Press [FUNCTIONS].
- ② Press [▲, ▼] to select "Menu" and press [OK].
- ③ Press [▲, ▼] to select "Play Music (MP3)" and press [OK].

Playing a track in another folder

MP3

- 1 While the "Music list" is displayed
Press [OPTION].
- 2 Press [▲, ▼] to select "Select Folder" and press [OK].
- 3 Press [▲, ▼] to select a folder and press [OK].

e.g.,



Selected folder
No. /Total folders
If the folder has no track, "–" is displayed as folder number.

- You cannot select folders that contain no compatible tracks.

To return to the previous screen

Press [RETURN].

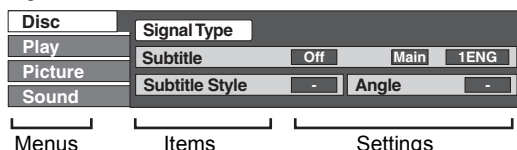
Changing settings with the on-screen menu

On-screen menu operations

1 Press [DISPLAY].

- It is also possible to display with the following procedures:
 - ① Press [OPTION].
 - ② Select "To Others" with [▲, ▼], and select [OK].
 - ③ Select "Settings for Playback" with [▲, ▼], and select [OK].

e.g., BD-Video



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

2 Press [▲, ▼] to select the menu and press [▶].

3 Press [▲, ▼] to select the item and press [▶].

4 Press [▲, ▼] to select the setting.

- Some items can be changed by pressing [OK].

To exit the on-screen menu

Press [DISPLAY].

What you can change with the on-screen menu

■ Disc menu

Signal Type

BD-V

• Primary Video

- Video: The original video recording method appears. (⇒ right, Video attribute)
- Soundtrack: Select the type of audio or language. (⇒ right, Language, Audio attribute)

• Secondary Video

- Video: Select on/off of images.
The original video recording method appears. (⇒ right, Video attribute)
- Soundtrack: Select on/off of audio and the language. (⇒ right, Language, Audio attribute)

Video

AVCHD

The original video recording method appears. (⇒ right, Video attribute)

Soundtrack

AVCHD DVD-V

Select the type of audio or language. (⇒ below, Language, Audio attribute)

DVD-VR MPEG2

The audio attributes appear. (⇒ below, Audio attribute)

DivX

Select the soundtrack number.

- Soundtrack numbers are displayed even when there is only one audio type.

Subtitle

BD-V AVCHD 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.

DivX

Turn the subtitle on/off and select "Text" or the subtitle number.

- Subtitle number is displayed even if there are not multiple subtitles.

Subtitle Style

BD-V

Select the subtitle style.

Audio channel

DVD-VR DivX MPEG2

(⇒ 16, Changing audio during play)

Angle

BD-V DVD-V

Select the number of the angle.

Some items may be changed only on the disc specific menu. (⇒ 14)

Language

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

Audio attribute

LPCM/ ☒ Digital/ ☒ Digital+/ ☒ TrueHD/DTS/DTS 96/DTS-HD HI RES/DTS-HD MSTR/MPEG	Signal type
ch (channel)	Number of channels
k (kHz)	Sampling frequency
b (bit)	Number of bits
bps (bit per second)	Transfer rate of bit

Video attribute

MPEG-2/MPEG-4 AVC/VC-1	Video recording method
480/576/720/1080	Video Format
24p/50i/60i/50p/60p	Video Frame rate
YCbCr4:2:2/YCbCr4:4:4/RGB	Colour Space
bps (bit per second)	Transfer rate of bit

Changing settings with the on-screen menu

(continued)

■ Play menu

Repeat Play

(Only when the elapsed time is being displayed on the unit's display.)

Select the item which you want to repeat. The items displayed differ depending on the type of media.

- All tracks All tracks
- Chapter Chapter
- Playlists Playlist
- Title Title
- One track Track
- Off

Select "Off" to cancel.

Random

CD MP3

While playing, press [**▲**, **▼**] to select "On".

Random playback starts from the next track.

- On
- Off

■ Picture menu

Mode

BD-V AVCHD DVD-VR DVD-V DivX MPEG2

Select the picture quality mode during play.

- Normal: Default setting
- Soft: Soft picture with smoother video
- Fine: Details are sharper
- Cinema: Mellows movies, enhances detail in dark scenes.
- User: You can make further adjustments.
(⇒ below)

① Press [**►**] to select "Picture Adjustment" and press [OK].

② Select the item using [**▲**, **▼**] and adjust it with [**◀**, **▶**].

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

Brightness: Brightens the picture (0 to +15).

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

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

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

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

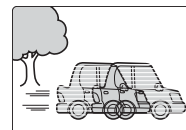
When "24p Output" is set to "On", this function may not operate. (⇒ 34)

Integrated NR: Smooths block noise and reduces the smudging that appears around contrasting sections of the picture (0 to +3).

Progressive

Select the method of conversion for progressive output to suit the type of material being played (⇒ 48, Film and video).

- Auto: Automatically detects the film and video content, and appropriately converts it.
- Video: Select when using "Auto" and the content is distorted.
- Film: Select this if the edges of the film content appear jagged or rough when "Auto" is selected.
However, if the video content is distorted as shown in the illustration below, then select "Auto".



24p

DVD-V

- On
- Off

Only when you have selected "On" in "24p Output" (⇒ 34) and play discs recorded at a rate of 60 fields per second.

■ Sound menu

Dialog Enhancer

BD-V AVCHD DVD-VR DVD-V DivX MPEG2 (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

This function is effective for audio from the HDMI AV OUT terminal only when "Dolby D/Dolby D +/Dolby TrueHD" or "DTS/DTS-HD" is set to "PCM".

Using this unit with other equipment

It is possible to enjoy the video and audio of this unit on the TV and amplifier, or to enjoy the video from other video devices on the LCD screen of this unit.

- Turn off all equipment before connecting and read the appropriate operating instructions.
- Do not connect video signals through a video recorder. Due to copy guard protection the picture may not be displayed properly.

Connection with the HDMI cable

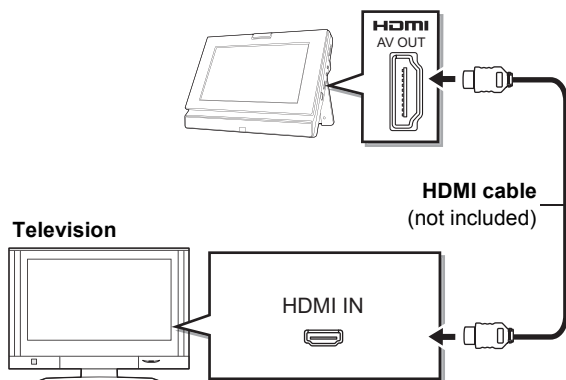
It is possible to enjoy the high quality video and audio of this unit on the large screen by connecting this unit with the TV using a single cable.

- Linked operation is possible by connecting to a Panasonic TV (VIERA) or amplifier that is compatible with the VIERA Link (HDMI) function. (⇒ 26)

- Non-HDMI-compliant cables cannot be utilized.
- Please use High Speed HDMI Cables that have the HDMI logo (as shown on the cover). It is recommended that you use Panasonic's HDMI cable. When outputting 1080/24p signal(⇒ 34, "HDMI Video Format"), please use HDMI cables 5.0 meters or less.
RP-CDHG10 (1.0 m), RP-CDHG15 (1.5 m),
RP-CDHG20 (2.0 m), RP-CDHG30 (3.0 m),
RP-CDHG50 (5.0 m), etc.
- This unit incorporates HDMI (x.v.Colour™, High Bit rate Audio) technology. (⇒ 49)

Preparation

Connect the devices to the unit.



You can enjoy the high quality surround audio in Dolby Digital Plus, Dolby TrueHD, and DTS-HD by connecting this unit to the HDMI compatible multi-channel amplifier. (⇒ 37) (Only when connected to an amplifier compatible with each audio)

- 1 Turn on the power of the connected device (TV, etc.), and switch the input.

Example: Set the input to "HDMI" or similar (the name of input may be different depending on the connected device).

- 2 Start playback on this unit.

Video and audio are output from the connected device.

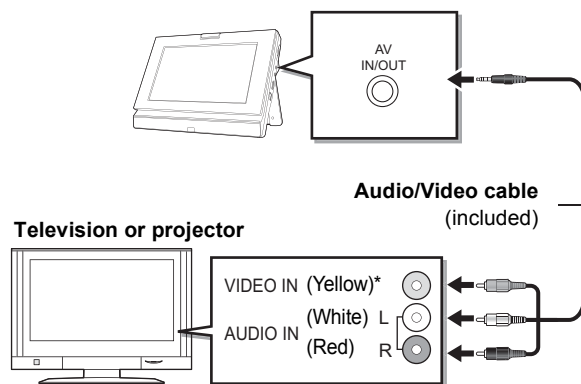
- The quality of video will lower on the screen of this unit when HDMI is connected, but it is not a malfunction.

Connection with the Audio/Video cable

Enjoy video and audio on other devices

Preparation

Connect a TV or a projector to this unit.



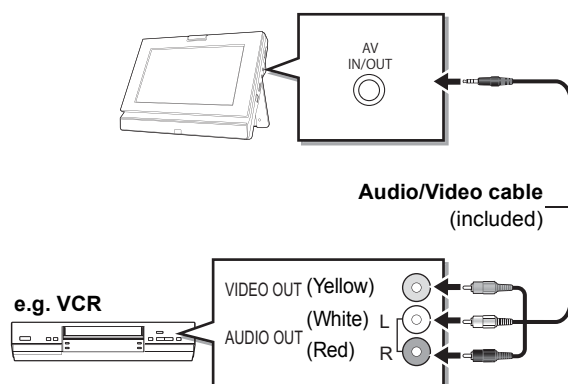
* The video input (yellow) plug on the Audio/Video cable (included) is not used when connecting to an amplifier or similar.

- 1 Turn on the power of the connected device, and switch the input.
Example: Set the input to "Video 2" or similar (the name of input may be different depending on the connected device).
- 2 Start playback on this unit.

Enjoy video and audio from other devices on this unit

Preparation

Connect the video device to this unit.



Press [AV SELECT] to switch to "AUX".

- Operate playback using the connected equipment. (Please read the operating instructions for the connected equipment)
- The unit does not turn off automatically even when "Auto Power Off" is set to "On" (⇒ 36). Turn the unit off when you have finished using it.
- To adjust the pictures on the LCD screen. (⇒ 13)

- Audio/Video cable (included) is designed only for use with this unit. Video and audio may not playback correctly if it is used with other equipment.
- If you raise the volume on the television while playing this unit, the volume may abruptly become very loud when you switch to a television broadcast. Return the volume to its normal level before changing.

Linked operations with the TV

(VIERA Link “HDAVI Control™”)

What is VIERA Link “HDAVI Control”?

VIERA Link “HDAVI Control” is a convenient function that offers linked operations of this unit, and a Panasonic TV (VIERA) or other device under “HDAVI Control”.

You can use this function by connecting the equipment with an HDMI cable. See the operating instructions for connected equipment for operational details.

- VIERA Link “HDAVI Control”, based on the control functions provided by HDMI which is an industry standard known as HDMI CEC (Consumer Electronics Control), is a unique function that we have developed and added. As such, its operation with other manufacturers' equipment that supports HDMI CEC cannot be guaranteed.
- **This unit supports “HDAVI Control 4” function.** “HDAVI Control 4” is the newest standard (current as of December, 2008) for Panasonic's HDAVI Control compatible equipment. This standard is compatible with Panasonic's conventional HDAVI equipment.
- Please refer to individual manuals for other manufacturers' equipment supporting VIERA Link function.

Preparation

- ① Connect this unit to your TV or other device with an HDMI cable (⇒ 25).
- ② Set “VIERA Link” to “On” (⇒ 35).
(The default setting is “On”.)
- ③ Set the “HDAVI Control” operations on the connected equipment (e.g., TV).
- ④ Turn on all “HDAVI Control” compatible equipment and select this unit's input channel on the connected TV so that the “HDAVI Control” function works properly.
Also when the connection or settings are changed, repeat this procedure.

When you want to leave the TV on and set only this unit to standby mode

Press [⏻] on this unit's remote control and set to standby mode.

Automatic input switching

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

- When play starts on the unit
- When an action that uses the display screen is performed (e.g., Direct Navigator screen)
- When the HDMI is connected, with the unit turned on (first time only)

For the United Kingdom and Continental Europe

- **BD-V DVD-V** When playback stops, the TV will automatically return to TV tuner mode.

Power on link

When the television is off and the following operations are performed, the television will automatically turn on and display 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, automatically turns off when you switch the television off.

- This unit automatically turns off even during playback or any other operation.

- When [▶] (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.

Playing music continuously even after turning off power to the television (⇒ 22)

When not using “HDAVI Control”

Set “VIERA Link” in the Setup menu to “Off”. (⇒ 35)

Easy control only with VIERA remote control

If you connect this unit to the TV that supports "HDAVI Control 2" or later with an HDMI cable, you can operate this unit using buttons on the TV remote control.

The buttons that you can use for this unit vary depending on the TV. For details, refer to the operating instructions of the TV. Use the remote control supplied with this unit if you cannot operate this unit using buttons on the TV remote control.

- The operation of this unit may be interrupted when you press incompatible buttons on the TV remote control.

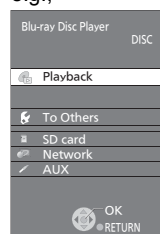
Using the FUNCTIONS menu to operate this unit

By using the TV remote control, you can play media using the FUNCTIONS menu.

- 1 Press the button for VIERA Link on the remote control.
- 2 Select the player.

- The FUNCTIONS menu is displayed.

e.g.,



When the AC adaptor is connected while the unit is turned off and the unit is closed with the screen facing outward (⇒ 10, ③ or ④ in "Installation of the unit"), the unit will automatically turn on. For details, please refer to the TV user manual.

- When the unit's AC adaptor is connected, the unit will turn on with the above operations.

Notice

- Please leave the unit with the screen facing outward and closed. (⇒ 10, ③ or ④ in "Installation of the unit")
The unit cannot be operated with the TV remote control in any other condition.
- When using only the battery pack, operate after turning the unit on.

Using the OPTION menu to operate this unit

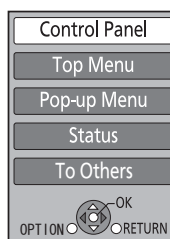
By using the TV remote control, you can play discs using the "Control Panel" and display the Top Menu (for BD-Video and DVD-Video) or Pop-up Menu (for BD-Video).

- 1 Press [OPTION].

- This can also be displayed by using the VIERA menu screen.
- You cannot use the OPTION menu while the Top Menu for BD-Video or DVD-Video is displayed.

- 2 Select an item, then press [OK].

e.g.,

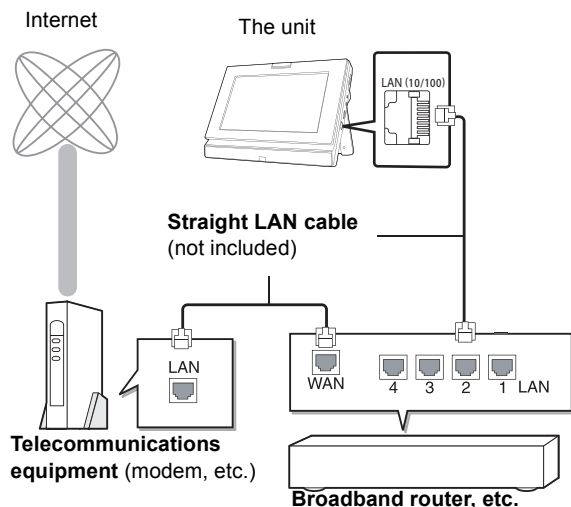


Control Panel	Control Panel is displayed. Follow the indications on the screen.
Top Menu BD-V AVCHD DVD-V	Top menu is displayed.
Menu DVD-V	Menu is displayed.
Pop-up Menu BD-V	Pop-up menu is displayed.
Status	(⇒ 16)
Rotate RIGHT JPEG	Rotate the still picture.
Rotate LEFT JPEG	
Zoom in JPEG	Enlarge or reduce the still picture.
Zoom out JPEG	
To Others	– LCD Menu (⇒ 13) – Audio (⇒ 16) – Settings for Playback (⇒ 23) – Screen Aspect (⇒ 16) – Setup (⇒ 32)

Network connection

The following services can be used when this unit is connected to the internet via a broadband connection.

- Firmware can be updated (⇒ 31)
- You can enjoy the BD-Live (⇒ 17)
- You can enjoy the VIERA CAST (⇒ 30)



- Use shielded LAN cables when connecting to peripheral devices.
- With installation where your broadband modem is connected directly to your PC, a router must be installed.
- Use a router that supports 10BASE-T/100BASE-TX.
- In case all available connection on your router is being used, a hub or switch can be installed to provide additional connections.
- When operating the VIERA CAST, use high-speed internet service no less than 1.5 Mbps for SD (Standard Definition) and 6 Mbps for HD (High Definition) picture quality by your local broadband company.
 - If using slow Internet connection, the video may not be displayed correctly.
- Depending on a contract with your local broadband company, it may be generating communication charges.
- After connecting to the Internet, perform necessary settings. (⇒ right)
- Inserting any cable other than a LAN cable in the LAN terminal can damage the unit.

Network Settings

These settings are used if you will connect this unit to the Internet.

- The connection to the Internet may take time or the Internet may not be connected depending on the connection environment. (⇒ 29)
- It is required that you use a broadband connection.

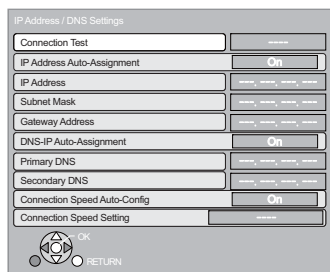
Preparation

- Connect to the network. (⇒ left)

Testing of “IP Address / DNS Settings”

Always test the connection when a LAN cable is connected.

- 1 Press [SETUP].
- 2 Press [▲, ▼] to select “Network Settings” and press [OK].
- 3 Press [▲, ▼] to select “IP Address / DNS Settings” and press [OK].
- 4 Press [▲, ▼] to select “Connection Test” and press [OK].



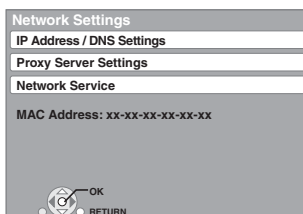
“Testing”: The test is in progress.

“Pass”: The connection is completed.
Press [RETURN] to exit.

“Fail”: Please check the connection and settings.
(⇒ 29)

- Perform the “Connection Test” also when any change was made to the “IP Address / DNS Settings”.

- If the connection test fails, it may be necessary to set the MAC address of this unit at the router side. The MAC address can be displayed by pressing [SETUP] and selecting “Network Settings”.



Setting the IP address

In most cases, default settings can normally be used without making any changes.

Set the IP address only when the router has no DHCP server functions or when the router's DHCP server function is disabled.

After performing steps 1–3 (⇒ 28)

4 Press [▲, ▼] to select “IP Address Auto-Assignment” and press [◀, ▶] to select “Off”.

- Generally leave “On” selected.
- When “Off” is selected, “DNS-IP Auto-Assignment” (⇒ below) is also automatically “Off”.

5 Press [▲, ▼] to select “IP Address”, “Subnet Mask” or “Gateway Address” and press [OK].

6 Enter numbers with the numbered buttons and press [OK].

7 If a wrong number is entered, then press [CANCEL]. Press [◀, ▶] to select “Yes” and press [OK].

- After checking the specifications for your broadband router, enter each number. If the number is unknown, then check the number of other devices such as personal computers connected via a LAN cable. Assign a different number from those of other devices for the “IP Address” and the same number for others.

- The numeric input range is between 0 and 255.

Setting the DNS-IP

In most cases, default settings can normally be used without making any changes.

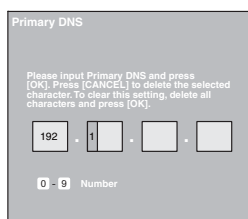
When setting an assigned DNS server from your Internet service provider, perform the following settings.

After performing steps 1–3 (⇒ 28)

4 Press [▲, ▼] to select “DNS-IP Auto-Assignment” and press [◀, ▶] to select “Off”.

5 Press [▲, ▼] to select “Primary DNS” or “Secondary DNS” and press [OK].

6 Enter numbers with the numbered buttons and press [OK].



- If a wrong number is entered, then press [CANCEL].

7 Press [◀, ▶] to select “Yes” and press [OK].

- Follow the instructions given by your Internet service provider and enter the numbers.

If the number is unknown, then check the number of other devices such as personal computers connected via a LAN cable and assign the same number.

- The numeric input range is between 0 and 255.

Setting the connection speed

When the connection test results in “Fail” after the IP and DNS-IP addresses are assigned, perform the following settings.

After performing steps 1–3 (⇒ 28)

4 Press [▲, ▼] to select “Connection Speed Auto-Config” and press [◀, ▶] to select “Off”.

5 Press [▲, ▼] to select “Connection Speed Setting” and press [◀, ▶] to select a connection speed.

- Select a connection speed in accordance with the environment of the network connected.
- When the settings are changed, the network connection may be slower or disabled depending on the device.

Testing of “Proxy Server Settings”

Always test the connection when new “Proxy Server Settings” have been made.

1 Press [SETUP].

2 Press [▲, ▼] to select “Network Settings” and press [OK].

3 Press [▲, ▼] to select “Proxy Server Settings” and press [OK].

4 Press [▲, ▼] to select “Connection Test” and press [OK].

“Testing”: The test is in progress.

“Pass”: The connection is completed.
Press [RETURN] to exit.

“Fail”: Please check the connection and settings.

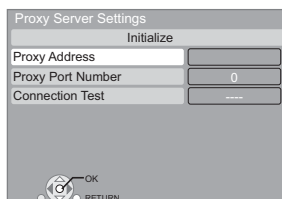
Setting the proxy server

In most cases, default settings can normally be used without making any changes.

Please use this setting when instructed to by your Internet service provider.

After performing steps 1–3 (⇒ above)

4 Press [▲, ▼] to select “Proxy Address” and press [OK].

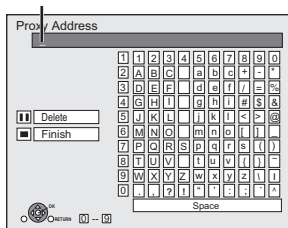


(Continued on the next page)

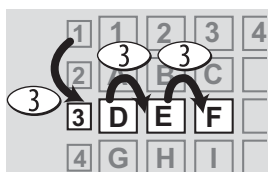
Network settings (continued)

5 Press [▲, ▼, ◀, ▶] to select a character and press [OK].

Text field: shows the text you have entered



Using the numbered buttons to enter characters
e.g., entering the letter "F"



① Press [3] to move to the 3rd row.

② Press [3] twice to highlight "F".

③ Press [OK].

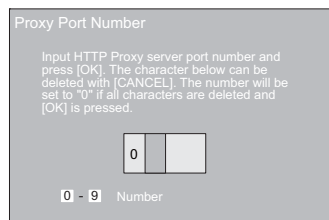
Repeat this step to enter other characters.

• Press [■] to delete.

6 Press [■] when you complete the entry.

7 Press [▲, ▼] to select "Proxy Port Number" and press [OK].

8 Enter numbers with the numbered buttons and press [OK].



9 Press [◀, ▶] to select "Yes" and press [OK].

• The specified ports may be blocked and not be able to be used depending on the network environment.

In order to restore the default settings

After performing steps 1–3 (⇒ 29)

① Press [▲, ▼] to select "Initialize" and press [OK].

② Press [◀, ▶] to select "Yes" and press [OK].

Enjoying VIERA CAST™

You can access a selection of Internet services from the Home screen with VIERA CAST, for example YouTube, Picasa Web Albums. (Current as of March 2009)

• VIERA CAST requires a broadband Internet connection. Dial-up Internet connections cannot be used.

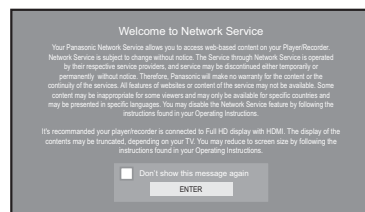
Preparation

• Network connection (⇒ 28)

• Network setting (⇒ 28)

1 Press [VIERA CAST].

• Message is displayed. Please read these instructions carefully and then press [OK] to start VIERA CAST function.



Images are for illustration purpose, message may change without notice.

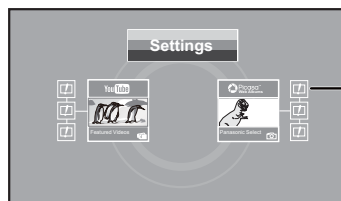
2 Press [▲, ▼, ◀, ▶] to select the item and press [OK].

• You can operate VIERA CAST using the following buttons on the unit's remote control:

[▲, ▼, ◀, ▶], [OK], [RETURN], coloured buttons and numbered buttons

• To access more features on YouTube or Picasa Web Albums site, enter your user ID and password that you have previously set up with these sites through the Internet on your PC. However, not all features may be accessible through VIERA CAST.

VIERA CAST Home screen;



After you access YouTube or Picasa Web Albums from the VIERA CAST Home screen and add your favourite videos or albums to VIERA CAST, you can choose them easily from the Home screen.

Images are for illustration purpose, contents may change without notice.

Regarding "Settings"

Set VIERA CAST Home screen.

• **My Account:** You can remove your account from the unit.

• **Lock:** Enter a password to lock YouTube and Picasa Web Albums.

• Notices

• Depending on the usage conditions, it may take a while to read all the data.

• The connection to the Internet may take time or the Internet may not be connected depending on the connection environment.

To return to VIERA CAST Home screen

Press [VIERA CAST].

To exit from VIERA CAST

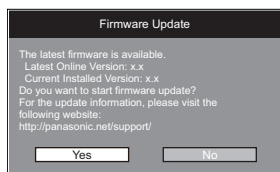
- Press [FUNCTIONS] then press [RETURN] to cancel the menu.
-
- Set the "Network Lock" to "On" to restrict using VIERA CAST. (⇒ 35)
 - If the audio is distorted while using the VIERA CAST feature set the "Audio Auto Gain Control" to "Off" (⇒ 35)
 - When the entire picture cannot be displayed on the screen, set the "Reduced Screen Display" to "On". (⇒ 35)
 - Set the "On-Screen Language", to switch the language for Home screen. (⇒ 34)
 - Set the "Time Zone" or "Summer Time" when wrong time is displayed on the screen. (⇒ 35)
-
- VIERA CAST™ home screen is subject to change without notice.
 - The services through VIERA CAST™ are operated by their respective service providers, and service may be discontinued either temporarily or permanently without notice. Therefore, Panasonic will make no warranty for the content or the continuity of the services.
 - All features of websites or content of the service may not be available.
 - Some content may be inappropriate for some viewers.
 - Some content may only be available for specific countries and may be presented in specific languages.

Firmware updating

Occasionally, Panasonic releases firmware updates for this Portable BD player. Firmware is embedded software that controls this unit's microprocessor. These updates may add or improve a feature of this unit. Firmware updates may also be released to correct operating irregularities that are discovered with certain movies. These updates are available at no charge.

Automatically check the firmware

- Only when connecting the AC adaptor
- When this unit remains connected to the Internet, it will automatically check for the latest firmware version when it is turned on.
- When latest firmware version is available, the following screen is displayed.
- Select "Yes" or "No".



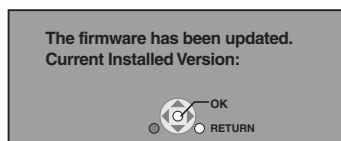
Press [◀, ▶] to select "Yes" and press [OK].

Follow the on-screen instructions to proceed.

After the latest firmware is downloaded, the firmware will be updated.

- If "No" is selected, then manually update the firmware later. (⇒ right)

After the firmware is updated and the system is restarted, the following screen indicates that the firmware update has been completed.



- Other operations are not possible during firmware updates. Additionally, do not perform the following operations as they may damage the unit:
 - Turn the unit off
 - Remove the AC mains lead from the household AC mains socket
 - Open the disc lid
- Downloading will require several minutes. It may take longer or the Internet may not be connected depending on the connection environment. It is required that you use a broadband connection.
- When the unit is connected to the Internet, communication charges may be generated.
- If you do not want to check for the latest firmware version when the unit is turned on, set "Automatic Update Check" to "Off". (⇒ 36)
- **If downloading on this unit fails or this unit is not connected to the Internet, then you can download the latest firmware from the following website and burn it to a CD-R to update the firmware.**
<http://panasonic.net/support/>
(This site is in English only.)

Manually updating the firmware

If the firmware update is not carried out when the unit is turned on, a message is displayed when displaying the FUNCTIONS menu.

The latest firmware is available.
Please update firmware in Setup.

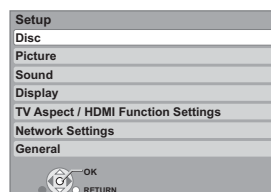
- ① Press [SETUP].
- ② Press [▲, ▼] to select "General" and press [OK].
- ③ Press [▲, ▼] to select "Firmware Update" and press [OK].
- ④ Press [▲, ▼] to select "Update Now" and press [OK].
- ⑤ Press [◀, ▶] to select "Yes" and press [OK].

Changing the unit's settings

Change the unit's settings if necessary. The settings remain intact even if you switch the unit to standby.

Setup menu operations

- 1** While stopped
Press [SETUP].
- 2** Press [▲, ▼] to select the menu and press [OK].
- 3** Press [▲, ▼] to select the item and press [OK].
- 4** If there are any other items, repeat these steps.
Press [▲, ▼, ◀, ▶] to select the option and press [OK].



• 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].

• Setup menu is also possible to display with the following procedures.

- ① While stopped, press [OPTION]
- ② Select "To Others" with [▲, ▼], and select [OK]
- ③ Select "Setup" with [▲, ▼], and select [OK]

Summary of settings

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 "DVD-Video Ratings", "BD-Video Ratings" and "Network Lock". • 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. Changing settings (When level 0 to 7 is selected) • Unlock Player • Change Level • Change Password • Temporary Unlock
BD-Video Ratings 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. Changing settings (When 0 to 254 year(s) is selected) • Unlock Player • Change Level • Change Password • Temporary Unlock
Soundtrack Preference	Choose the language for audio, subtitle and disc menus. <u>BD-V</u> <u>DVD-V</u>	• <u>English</u> • Italian • Original: The original language of each disc will be selected. • Other **** • German • Spanish • French • Dutch*
Subtitle Preference	• Some discs start in a certain language despite any changes you make here. • 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.(⇒ 14)	• <u>Automatic</u>: If the language selected for "Soundtrack Preference" is not available, subtitles of that language will automatically appear if available on that disc. • English • Italian • Other **** • German • Spanish • French • Dutch*
Menu Preference	• Enter a code (⇒ 36) with the numbered buttons when you select "Other ****".	• <u>English</u> • Italian • Other **** • German • Spanish • French • Dutch*
BD-Live Internet Access <u>BD-V</u> (⇒ 17) You can restrict Internet access when BD-Live functions are used.		• <u>Permit</u>: Internet access is permitted for all BD-Live contents. • <u>Limit</u>: Internet access is permitted only for BD-Live contents which have content owner certificates. • Prohibit: Internet access is prohibited for all BD-Live contents without a certificate. Internet access is prohibited for all BD-Live contents.
DivX Subtitle Text <u>DivX</u> Select a suitable item according to the language used for DivX subtitles text (⇒ 21). • This item is displayed only when pressing [SETUP] after playing back a file.		• Latin1 • <u>Latin2</u> • Cyrillic • English, German, Spanish, etc. • Polish, Czech, Hungarian, etc. • Russian, etc.

* Only For the United Kingdom and Continental Europe.

“Picture”

Still Mode BD-V AVCHD DVD-V Select the type of picture shown when you pause playback (⇒ 48, Frames and fields).	● Automatic ● Field: Select if jittering occurs when “Automatic” is selected. (The picture is coarser.) ● Frame: Select if small text or fine patterns cannot be seen clearly when “Automatic” is selected. (The picture is clearer and finer.)
Seamless Play DVD-VR Select the play mode between playlist chapter segments and partially deleted titles.	● On: The chapters in playlists are played seamlessly. This does not work while searching or when there are several audio types included on the playlist. Additionally, the positioning of chapter segments may change slightly. ● Off: The points where chapters in playlists change are played accurately, but the picture may freeze for a moment.
NTSC Contents Output Select PAL60 or NTSC output when playing NTSC discs.	● NTSC: NTSC discs are played as NTSC. ● PAL60: Select if picture is not displayed correctly when “NTSC” is selected.

“Sound”

Dynamic Range Compression BD-V AVCHD DVD-V DivX (Dolby Digital, Dolby Digital Plus and Dolby TrueHD only) Change the dynamic range (⇒ 48) for late night viewing.	● On ● Off
Digital Audio Output ● Press [OK] to show the following settings. For details on digital output (⇒ 37)	
Dolby D/Dolby D +/ Dolby TrueHD DTS/DTS-HD Select whether Dolby Digital, Dolby Digital Plus, Dolby TrueHD, DTS Digital Surround, DTS-HD High Resolution Audio or DTS-HD Master Audio is output in “Bitstream” or “PCM” format. ● Not making the proper settings may result in noise. ● If the unit is connected with the HDMI AV OUT terminal, the specifications of the connected equipment take precedence over this unit and audio selected in these items may not be output (e.g., when a television is connected, the HDMI audio output of this unit is limited to down-mixed 2ch.)	● Bitstream: Select “Bitstream” when the connected equipment can decode the respective audio format. – Connect equipment supporting HDMI (High Bit rate Audio) and use a High Speed HDMI Cable in order to output high bit rate audio such as Dolby Digital Plus, Dolby TrueHD, DTS-HD High Resolution Audio or DTS-HD Master Audio. ● PCM: Select “PCM” when the connected equipment cannot decode the respective audio format. Refer to the operating instructions for connected devices to verify whether or not they can decode each of the audio formats.
MPEG Audio	● Bitstream: When connected to equipment with a built-in MPEG decoder. ● PCM: When connected to equipment without a built-in MPEG decoder.
BD-Video Secondary Audio BD-V Turn on/off the clicking sound on the menu and audio with secondary video in picture-in-picture mode. (⇒ 17)	● On: The primary audio and secondary audio are mixed and output. The sampling frequency is converted to 48 kHz. ● Off: The button click sound on the menu and secondary audio are not output.
Downmix Switch the downmix system for playing back multi-channel surround sound. ● When “Dolby D/Dolby D +/Dolby TrueHD” or “DTS/DTS-HD” is set to “Bitstream”, there are no downmix effects for the outputted audio. ● The audio will be outputted in “Stereo” in the following cases: – AVCHD playback – Playback of clicking sound on the menu and audio with secondary video in picture-in-picture mode	● Stereo: When connected to equipment that does not support the virtual surround function. ● Surround encoded: When connected to equipment that supports the virtual surround function (to convert 2-channel to multi channel surround).

Changing the unit's settings (continued)

“Display”

On-Screen Messages Choose whether to show status messages automatically.	● <u>Automatic</u> ● Off
On-Screen Language* Choose the language for these menus and on-screen messages.	● <u>English</u> ● Deutsch ● Français ● Italiano ● Español ● Nederlands
Screen Saver Function This is to prevent burn-in on the television screen.	● <u>On</u>: – No activity has occurred for 10 minutes or longer, the screen switches to the other states automatically. – When playing the 4:3 image, the masked-off area on the screen become grey. [Only when connecting with an HDMI cable, “TV Aspect” (⇒ below) is set to “16:9” and “HDMI Video Format” (⇒ below) is set to any mode other than “576p/480p”.] ● Off
Software License	Information about the software used by this unit is displayed.

* Only for the United Kingdom and Continental Europe.

“TV Aspect / HDMI Function Settings”

TV Aspect “TV Aspect” operates on the screen of the unit or the connected TV.	To view an image connected to a 4:3 TV: ● 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. To view an image on the unit or connected to a 16:9 widescreen TV: ● 16:9: 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.
HDMI Connection ● Press [OK] to show the following settings.	
HDMI Video Format The items supported by the connected devices are indicated on the screen as “*”. When any item without “*” is selected, the images may be distorted. ● If the image is distorted, set to “576p/480p” or set again correctly.	● <u>Automatic</u>: Automatically selects the output resolution best suited to the connected television (1080/24p*, 1080i, 720p or 576p/480p). ● 576p/480p ● 1080i – When the unit is connected to an amplifier/receiver that does not support the resolution set on the unit, the video cannot be output properly. * 1080/24p can only be output in the conditions below when “24p Output” (⇒ below) is set to “On”. – BD-V Playing back 24p images – DVD-V Playing back with the settings for playback “24p” (⇒ 24) “On”
24p Output BD-V DVD-V This unit displays each frame at 1/24 second intervals - the same interval originally shot with the film camera. ● Only when this unit is connected to a TV supporting 1080/24p output via an HDMI cable, you can set to “On”. ● If this unit is connected to an HDTV through other equipment, it must also be 1080p compatible.	● <u>On</u>: Images in 1080/24p are output in 24p as they are. – When outputting 1080/24p signal, we recommend using High Speed HDMI Cables that have the HDMI logo (as shown on the cover) and are less than 5.0 meters to prevent video distortion etc. ● <u>Off</u>
HDMI Output Range Effective when connected to a device that only supports RGB output.	● <u>Standard</u>: The video is output as it is. ● <u>Enhanced</u>: When the black and white contrast of a video is low, the signal is enhanced to reproduce clear video.
HDMI Audio Output Set whether or not to output audio from the HDMI AV OUT terminal.	● <u>On</u> ● Off

VIERA Link Set to use "HDAVI Control" function when connected with an HDMI cable to a device that supports "HDAVI Control".	● <u>On</u>: ● <u>Off</u>: Select when you do not want to use "HDAVI Control".
TV System Change the setting to match the equipment you are connecting with. ● If picture output is not smooth, change the setting. ● When NTSC contents are played, they are outputted in the signal format specified in the "NTSC Contents Output", irrespective of the settings here.	● <u>NTSC</u>: Select when connecting to a NTSC television. ● <u>PAL</u>: Select when connecting to a PAL or multi-system television. For Asia The default setting is NTSC.

"Network Settings"

IP Address / DNS Settings (⇒ 28)	
Proxy Server Settings (⇒ 29)	
Network Service (⇒ 30) (VIERA CAST) ● Press [OK] to show the following settings.	
Network Lock You can restrict using VIERA CAST. 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 "DVD-Video Ratings", "BD-Video Ratings" and "Network Lock". ● Do not forget your password.	● <u>On</u> ● <u>Off</u> Changing settings (When "On" is selected) ● Change Password
Audio Auto Gain Control Volume that is different depending on the contents is adjusted automatically to the standard volume while using the VIERA CAST. ● Depending on contents, this function effect will not work. ● Select "Off" when the audio is warped.	● <u>On</u> ● <u>Off</u>
Reduced Screen Display The screen is displayed reduced so the displayed screen of the VIERA CAST does not get truncated.	● <u>On</u> ● <u>Off</u>
Time Zone By selecting the time zone, it is possible to set the unit's time to match your location. ● Some VIERA CAST contents require the time zone to be set. Set the time zone if necessary.	● GMT -12 to +12 (For Continental Europe: The initial setting is "+1".) (For the United Kingdom: The initial setting is "0".) (For Australia and New Zealand: "+10".) (For Asia: "+8".) GMT 0 = WET (Western European Time) GMT +1= CET (Central European Time) GMT +2= EET (Eastern European Time)
Summer Time Select "On" when using Daylight Saving time.	● <u>On</u> ● <u>Off</u>

Changing the unit's settings (continued)

"General"

Auto Power Off ● During disc or SD card operation only Select whether the unit is automatically turned off when about 15 minutes (about 5 minutes when using the battery pack) have elapsed while stopped.		● <u>On</u> ● Off:	Select when you do not want to use this function.
Quick Start Speed of startup from standby mode is increased. ● Quick Start only functions when the AC adaptor is connected.		● On: ● <u>Off</u>	Since internal control unit will be powered, power consumption in standby mode (⇒ 46) will increase in comparison to when "Off".
Easy Setting* You can execute basic settings ("On-Screen Language").		● Yes	● <u>No</u>
Default Settings This returns all values in the Setup menu and the on-screen menu, except for "On-Screen Language", "IP Address / DNS Settings", "Proxy Server Settings", "Network Service", "DVD-Video Ratings" and "BD-Video Ratings" to the default settings.		● Yes	● <u>No</u>
DivX Registration <u>DivX</u> (⇒ 20) You need this registration code to purchase and play DivX Video-on-Demand (VOD) content.			
Firmware Update (⇒ 31) ● Press [OK] to show the following settings.			
Automatic Update Check When this equipment remains connected to the Internet, it will check for the latest firmware version when it is turned on and you can update it if necessary.		● <u>On</u>	● Off
Update Now You can update the firmware manually. ● Only when connecting the AC adaptor		● Yes	● <u>No</u>

* Only for the United Kingdom and Continental Europe.

Language code list Enter the code with the numbered buttons.

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

Enjoying High Bit rate Audio and Video

About audio from audio output terminal

Connect an amplifier/receiver and confirm the desired audio type and necessary settings (“BD-Video Secondary Audio”, “Dolby D/Dolby D +/Dolby TrueHD” or “DTS/DTS-HD”). (⇒ 33)

- The number of channels listed is the maximum possible number of output channels.

HDMI AV OUT

Terminal	HDMI AV OUT			
“Dolby D/Dolby D +/Dolby TrueHD”/“DTS/DTS-HD”	“Bitstream”*1		“PCM”*2	
“BD-Video Secondary Audio”	“On”*3	“Off”	“On”	“Off”
Dolby Digital/ Dolby Digital EX*4	Dolby Digital/ Dolby Digital EX*5	Dolby Digital/ Dolby Digital EX	5.1ch PCM*6	
Dolby Digital Plus	Dolby Digital	Dolby Digital Plus		
Dolby TrueHD		Dolby TrueHD		
DTS Digital Surround/ DTS-ES*4	DTS Digital Surround/ DTS-ES*5	DTS Digital Surround/ DTS-ES	DVD-V 5.1ch BD-V 7.1ch *7	
DTS-HD High Resolution Audio	DTS Digital Surround	DTS-HD High Resolution Audio	BD-V 7.1ch*6,*7	
DTS-HD Master Audio		DTS-HD Master Audio		
7.1ch LPCM	Down-mixed 5.1ch PCM	7.1ch PCM	Down-mixed 5.1ch PCM*3	7.1ch PCM

- Also, depending on the specifications or the settings of the amplifier/receiver, the results of the output may vary.
- *1 When the connected equipment is not supported with these audio formats, the audio is output as Dolby Digital bitstream, DTS Digital Surround bitstream or down-mixed 2ch PCM (e.g., TV).
- *2 When the connected equipment is not supported with multi channel surround, the audio is output as down-mixed 2ch PCM.
- *3 **BD-V**: When playing BD-Video without secondary audio or button click sound, the audio is output as the same format as if “BD-Video Secondary Audio” was set to “Off”.
- *4 With PCM output, Dolby Digital EX and DTS-ES will be PCM audio decoded as Dolby Digital and DTS Digital Surround respectively.
- *5 **BD-V**: When “BD-Video Secondary Audio” is set to “On”, Dolby Digital EX is output as Dolby Digital and DTS-ES is output as DTS Digital Surround, however if playing BD-Video without secondary audio or button click sound, the audio is output as the original format.
- *6 The output is PCM audio decoded as Dolby Digital for Dolby Digital Plus or Dolby TrueHD, and as DTS Digital Surround for DTS-HD High Resolution Audio and DTS-HD Master Audio.
- *7 **BD-V**: When the connecting equipment supports 7.1 channel surround, output will be extended from 5.1 ch or 6.1 ch to 7.1 ch according to the specification of DTS, Inc.

Enjoying High Bit rate Audio of BD-Video

BD-V
This unit supports high bit rate audio (Dolby Digital Plus, Dolby TrueHD, DTS-HD High Resolution Audio and DTS-HD Master Audio) adopted in BD-Video.
In order to enjoy these audio formats, the following conditions are necessary. (Part shown in the shaded area of table given above)

NECESSARY CONNECTIONS

- HDMI AV OUT terminal: (⇒ 25)

NECESSARY SETTINGS

- Set “BD-Video Secondary Audio” to “Off”. (⇒ 33)
- Set “HDMI Audio Output” to “On”. (⇒ 34)
- HDMI AV OUT terminal: Set “Dolby D/Dolby D +/Dolby TrueHD” or “DTS/DTS-HD” to “Bitstream” or “PCM”. (⇒ 33)

- The button click sound on the menu and audio with secondary video in picture-in-picture mode (⇒ 17) is not output.

Regarding 24p output

BD-V
Many BD-Video movie contents are recorded in 24 frames/second in accordance with the film materials. However, they will normally be output in 60 frames/second in accordance with the display format. These can be output in 24p as the original. Therefore, high-quality video can be enjoyed, such as the improved clarity, enhanced perspective, etc.

NECESSARY CONNECTIONS

- Connect to a TV supporting 1080/24p input via an HDMI cable.

NECESSARY SETTINGS

- “24p Output” and “HDMI Audio Output”: “On”(⇒ 34)

About MP3/JPEG/DivX files

MP3

File format	MP3
Playable media	CD-R* ¹ , CD-RW* ¹ , DVD-R* ¹ , DVD-R DL* ¹
Extension	Files must have the extension ".mp3" or ".MP3".
Compression rate	32 kbps to 320 kbps
Sampling rate	44.1 kHz/48 kHz
Reference	ID3 tags: version 1, 2.2, 2.3, 2.4 ID3 is a tag embedded in MP3 track to provide information about the track. This unit supports the versions listed above but only titles and the names of artists can be displayed. ● If there is a large amount of still picture data etc. within a MP3 file, play may not be possible.

JPEG

File format	JPEG
Playable media	CD-R* ¹ , CD-RW* ¹ , DVD-RAM* ² , DVD-R* ¹ , DVD-R DL* ¹ , BD-RE* ³ , SD card
Extension	Files must have the extension ".jpg" or ".JPG".
Picture resolution	between 34×34 and 8192×8192 pixels (sub sampling is 4:2:2 or 4:2:0)
Reference	JPEG conforming DCF*⁴ is supported. Thawing Time: approx. 2 sec. (7M pixels) ● MOTION JPEG and Progressive JPEG is not supported.

DivX

File format	DivX
Playable media	CD-R* ¹ , CD-RW* ¹ , DVD-R* ¹ , DVD-R DL* ¹
Extension	Files must have the extension ".DIVX", ".divx", ".AVI" or ".avi".
Picture resolution	between 32×32 and 720×576 pixels

Reference	● Certified to the DivX Home Theater Profile. Video – Number of stream: Up to 1 – Codec: DIV3, DIV4, DIVX, DV50, DIV6 – FPS (Frame Per Second): Up to 30 fps Audio – Number of stream: Up to 8 – Format: MP3, MPEG, Dolby Digital – Multi channel: Dolby Digital is possible. MPEG multi is 2 ch conversion. ● GMC (Global Motion Compensation) is not supported. ● Picture may stop if the DivX files are greater than 2 GB.
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Subtitles text file of DivX

File format	Subtitles text file of DivX
Playable media	CD-R* ¹ , CD-RW* ¹ , DVD-R* ¹ , DVD-R DL* ¹
File format	MicroDVD, SubRip, or TMLayer
Extension	Files must have the extension ".SRT", ".srt", ".SUB", ".sub", ".TXT", or ".txt"
Reference	● The DivX video file and subtitles text file are inside the same folder, and the file names are the same except for the file extensions. ● If there are more than one subtitles text files inside the same folder, they are displayed in the following order of priority: ".srt", ".sub", ".txt". ● In the following situations, the subtitles cannot be displayed as recorded. Furthermore, depending on the methods used to create the file or the state of the recording, only parts of the subtitles may be displayed, or the subtitles may not be displayed at all. – When special text or characters are included in the subtitles text. – When the file size is larger than 256 KB. – When characters with specified styling are included in the subtitle data. – Codes that specify the character style within files are displayed as subtitle characters. – When data with a different format exists within the subtitle data. ● If the file name of the DivX video file is not displayed correctly on the menu screen (the file name is displayed as "_"), the subtitles text may not be displayed correctly. ● Depending on the disc, the subtitles text cannot be displayed when search and other such operations are being performed.

- 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 media (writing software), files and folders may not play in the order you numbered them.
- Depending on how you create the structure of folders (writing software), files and folders may not play. (⇒ 39)
- This unit is not compatible with packet-write format.
- Depending on the recording conditions, the media may not play.
- Operation may take time to complete when there are many files and/or folders and some files may not display or be playable.

- *1 ISO9660 level 1 or 2 (except for extended formats), Joliet
This unit is compatible with multi-session.
- This unit is not compatible with packet writing.
- *2 Discs must conform to UDF 2.0.
- *3 Discs must conform to UDF 2.5.
- *4 Design rule for Camera File system: unified standard
established by Japan Electronics and Information
Technology Industries Association (JEITA).

Structure of folders that can play back on this unit

You can play files on this unit by structure of folders as shown below. However depending on the method of writing data (writing software), play may not be in the order you numbered the folders.

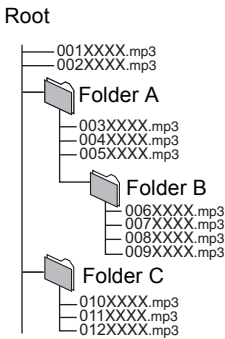
-  : Folder which can be displayed with this unit
- ***: Numbers
- XXX: Letters
- *1 ***: from 001 to 999
- *2 ***: from 100 to 999
- XXX: up to 5 figures
- *3 *****: from 0001 to 9999

Structure of MP3 folders

in DVD-R/DVD-R DL/CD-R/CD-RW

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

e.g.,

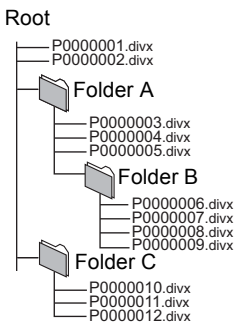


Structure of DivX folders

in DVD-R/DVD-R DL/CD-R/CD-RW

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

e.g.,

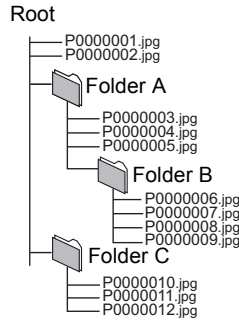


Structures of still picture (JPEG) folders

in DVD-R/DVD-R DL/CD-R/CD-RW

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

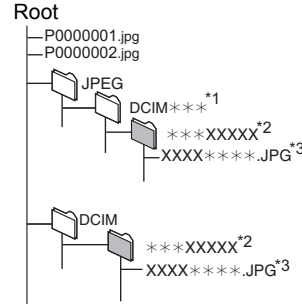
e.g.,



in BD-RE/DVD-RAM

- Folder structure is not displayed.

e.g.,

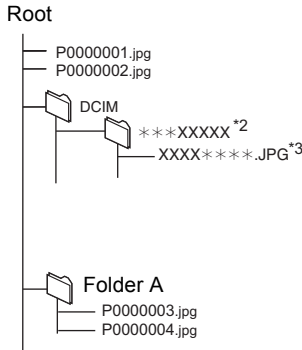


in SD card

Displays JPEG files in all folders.

- Folder structure is not displayed.

e.g.,



Indicators and screen messages

Indicators

The [⏻] indicator flashes rapidly.	• The unit has malfunctioned. Consult your dealer.
The [⏻] indicator flashes slowly.	• "Monitor" on LCD Menu is "Off" (no image). Turn the unit off when no image is being played.
The [CHARGE] indicator flashes rapidly.	• There is a problem with the battery pack. Turn the unit on and check the message on the LCD. (⇒ below, 41)
The [CHARGE] indicator flashes slowly.	• Battery pack charge is low. The unit will turn off automatically after a few minutes.

Screen messages

Cannot read. Please check the disc.	• Clean the disc. (⇒ 5)
 ERROR U580	• You inserted a disc that has not been finalized. (⇒ 6)
 ERROR U581	• A problem has occurred with the battery pack. Consult your dealer.
 ERROR U582	• The battery pack has been recharging but has failed to recharge for some reason. Recharge again.
PLEASE WAIT	• You are recharging in a location that is too hot or too cold. Recharge at normal temperature (+5 to +35 °C).
F99	• The unit is starting up. Wait until the display disappears.
U72 U73	• The unit is not operating correctly. Press [⏻/I] on the unit for 3 seconds or longer and turn off the unit. Then, turn on the unit again by pressing [⏻/I].
U76	• There was a problem when connecting the HDMI. – Connected device is not compatible with HDMI. – Use a cable with an HDMI logo. – The HDMI cable is damaged.
U77	• BD-RE, BD-R, BD-Video or DVD Video with copyright protection cannot be played back since the device connected to the HDMI terminal is not compatible with the copyright protection.
F ☐ ☐ H ☐ ☐ (☐ ☐ stands for a number.)	• Video cannot be output since the copyright protection information on the BD-RE, BD-R, BD-Video or DVD Video being played back is not valid.
Authorisation Error. This unit is not authorised to play this title.	• A problem has occurred. (Numbers following the "F" or the "H" will be different depending on the status of the unit) Turn off the unit once, and turn it back on. Alternatively, turn off the unit, disconnect the AC adaptor and the battery pack, and attach them back again.
Cannot play.	• DivX : You are trying to play the DivX VOD content that was purchased with a different registration code. You cannot play the content on this unit. (⇒ 20)
Cannot play on this unit.	• You inserted an incompatible disc. (⇒ 6)
No disc is inserted.	• You tried to play a non-compatible image. (⇒ 38)
Rental Expired.	• Re-insert the SD card.
⌚ This operation is not available.	• The disc may be upside down.
⌚ This operation is prohibited by this disc.	• DivX : The DivX VOD content has zero remaining plays. You cannot play it. (⇒ 20)
Cannot connect. Please check the connection of the LAN cable.	• Some operations are unsupported by the unit. For example; – BD-V : During playback, reverse slow-motion or reverse frame-by-frame is not possible.
	• Depending on the disc, you may not be able to perform search or skip when film previews and warning screens are being played back.
	• When a hub is used but its Link lamp does not light up, check the cable connection, LAN terminal connection, cable itself (a crossover cable may have been used by mistake), etc. (⇒ 28)

IP address is not set.	● The "IP Address" in "IP Address / DNS Settings" is "----. ---. ---. ---". Set the "IP Address", "Subnet Mask", and "Gateway Address". (Select the automatic address acquisition if necessary.) (⇒ 29)
Cannot obtain IP address. Please check the connection or setting of the router.	● If you use a hub, then check the connection between the hub and the router. – Use the UPLINK port of the hub to connect to a router. (⇒ 28) – Check whether or not the hub's Link lamp lights up. If it does not light up, then check the cable connection, LAN terminal connection, cable itself (a crossover cable may have been used by mistake), etc. ● If the above conditions are OK, then the router may not operate in DHCP mode. Check the router settings and operation. You may reset the router to restore it to normal. (⇒ 29)
This IP address is already in use. Please check the setting.	● This unit's IP address is used by another device. Check the IP addresses of this unit, personal computers, and routers, etc. If necessary, reconfigure them to avoid IP addresses from being duplicated.
Connection test could not be conducted.	● Turn the unit off. Disconnect the power source (the AC adaptor or battery pack) and reconnect it and try again. If the same symptom persists, then consult your dealer.
IP address is not set correctly.	
Connection test was unsuccessful. No reply from Gateway. Please check the connection or setting of the router.	● If you use a hub, then check the connection between the hub and the router. (⇒ 28) – Use the UPLINK port of the hub to connect to a router. – If the hub's Link lamp does not light up, then check the cable connection, LAN terminal connection, cable itself (a crossover cable may have been used by mistake), etc. ● Check the "IP Address", "Subnet Mask", and "Gateway Address" in the "IP Address / DNS Settings". (⇒ 29) ● If the MAC address information is required, then press [SETUP] to display the "Network Settings" menu. (⇒ 28)
Network connection was rejected. Please confirm Setup "BD-Live Internet Access".	● When you set "BD-Live Internet Access" to "Limit" and play BD-Live contents which do not have a content owner certificate, the Internet access of the content is not allowed. If you allow the content to connect to Internet, set "BD-Live Internet Access" to "Permit". (⇒ 32)
Could not check for latest firmware version. Please try again later.	● The firmware download server is currently unavailable. Please try again later.

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 malfunction.

- Sound from the AC adaptor during recharging.
- The battery pack warming up when recharging or during use.
- The surface and area around the unit becoming warm when used for long periods.
Move the unit after waiting for 3 minutes after unplugging the AC adaptor when it needs to be moved or maintained.
- Operating noises when the unit is turned on.

Safety devices may be operating when the unit does not respond to operations.

① Press [⏻/I] on the unit to turn it off.

If the unit is not turned off, hold down for approximately 3 seconds to turn to standby.

② Press [⏻/I] on the unit to turn it on.

If operation is still not possible after performing the above operations, consult the dealer where the unit was purchased.

To reset this unit

To restore the unit if it freezes due to one of the safety devices being activated.	• Press and hold [⏻/I] on the unit for 3 seconds. (The settings remain unchanged.)
To return all settings other than some settings to the factory preset.	• Select "Yes" in "Default Settings" in the Setup menu. This returns all values in the Setup menu and the on-screen menu, except for "On-Screen Language", "IP Address / DNS Settings", "Proxy Server Settings", "DVD-Video Ratings", "BD-Video Ratings" and "Network Service" to the default settings. (⇒ 36)
To return all settings to the factory preset	• Reset the unit as follows: 1 Press [⏻/I] on the unit to turn off the unit. 2 Press and hold [⏻/I] and [RETURN  3 The power will turn on and then turn off.

* Only for the United Kingdom and Continental Europe.

Power

No power.	• Check connections to the AC adaptor or battery pack. (⇒ 11) • The unit has protection circuitry that is activated if it becomes too hot or too cold. The unit will not work if this occurs. Use the unit between 5 °C and 35 °C. • Hold down [⏻/I] for some time. • The unit may not come on immediately after it is turned off. Once the "BYE" display disappears, press [⏻/I] and turn the unit on. • The unit can be turned on only when the unit is closed with the screen facing outwards (⇒ 10, ③ or ④ in "Installation of the unit").
Unit turns off automatically.	• The unit turns off after it has been stopped for about 15 minutes (about 5 minutes when the unit is powered by the battery pack) to conserve power (only when "Auto Power Off" in the Setup menu is set to "On"). (⇒ 36) Turn the unit on again. • Press [OFF TIMER] and the unit will be turned off automatically. (⇒ 12) • Safety devices may be operating. Press [⏻/I] and turn the unit on. • When using VIERA Link (HDMI), the unit will be automatically turned off if the TV is turned off. If VIERA Link (HDMI) is not being used, set "VIERA Link" settings to "Off". (⇒ 35) • If the screen is rotated when the unit is turned on, the display on the screen will disappear and the unit will be automatically turned off. (⇒ 10)
Cannot charge or the [CHARGE] indicator fails to light.	• The charging time increases when the temperature is too hot or too cold, and charging may not be possible under some circumstances. • Check connections to the AC adaptor or battery pack. (⇒ 11)
Play time dramatically reduced after recharging.	• The battery pack has reached the end of its service life (It can be recharged about 300 times).

Operation

The unit is on but cannot be operated.	• The unit can be operated only when closed with the screen facing outwards (⇒ 10, ③ or ④ in "Installation of the unit"). • Is the incorrect playback media or operation function selected? • The unit may not be operating properly due to lightning, static electricity or some other external factor. Turn the unit off and then back to ON. Alternatively, turn the unit off, disconnect the power source (AC or battery pack), and then reconnect it. • Condensation has formed. Wait 1 to 2 hours for it to evaporate.
Play fails to start even when [▶] (PLAY) is pressed. Play starts but then stops immediately.	• Insert the media correctly with the label facing up. (⇒ 13) • The media is dirty. (⇒ 5) • You tried to play a blank media or unplayable media on this unit. (⇒ 6) • DivX: If playing DivX VOD content, refer to the homepage where you purchased it. (⇒ 20)
No response when remote control buttons pressed.	• The unit can be operated only when closed with the screen facing outwards (⇒ 10, ③ or ④ in "Installation of the unit"). • Check that the battery is installed correctly. (⇒ 9) • The battery is depleted: Replace it with new one. (⇒ 9) • Point the remote control at the remote control sensor and operate. (⇒ 9)
Start up is slow. It takes time before play starts.	• Make sure that "Quick Start" is set to "On". (⇒ 36) • Start up takes time in the following situations. – Immediately after a power failure or the AC adaptor is connected. – When the unit is connected with an HDMI cable.
Played back image is distorted or does not playback correctly. (AVCHD)	• High definition video (transfer rate of 18 Mbps or faster) cannot be played back correctly if it was recorded on a DVD compatible to double speed or slower.
Cannot set "On" in "24p Output".	• Only when this unit is connected to a TV supporting 1080/24p output via an HDMI cable, you can set to "On". (⇒ 34)

LCD

No picture on the LCD.	• Check connections. (⇒ 11) • Select "On" in "Monitor". (⇒ 13) • The LCD screen is turned off automatically when the LCD screen is rotated. (⇒ 10) • The LCD screen can be turned on only when the unit is closed with the screen facing outwards. (⇒ 10, ③ or ④ in "Installation of the unit") • DivX: Images may not be output due to how files were created. (⇒ 38)
The LCD is dark.	• Select the appropriate picture quality mode. (⇒ 13)
LCD pixels turn black or radiate different colours.	• The LCD is constructed with precision technology so 99.99 % of the pixels are active, but of the remaining of 0.01 %, there are pixels that may be black or emit light constantly. This phenomenon is not a malfunction.
Picture is distorted.	• The quality of video will lower on the screen of this unit when HDMI is connected. (⇒ 25)
There is a lot of after-image when playing video.	• Turn "3D NR" or "Integrated NR" off if it is on. (⇒ 24)
The 4:3 aspect ratio picture expands left and right.	• Check the setting for "TV Aspect". (⇒ 34) • Check the setting for "Screen Aspect". (⇒ 16)
Screen size is wrong.	
Still pictures (JPEG) do not play back normally.	• The images that were edited on the PC, such as Progressive JPEG, etc., may not play back. (⇒ 38)

Sound

No sound from the unit's speaker.	• The speaker is off if headphones are connected. • Turn up the volume. (⇒ 14)
Cannot hear the desired audio type.	• Press [AUDIO] to select the audio. (⇒ 16) • DivX: Audio may not be output depending on how files were created. (⇒ 38)
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 an HDMI cable, you cannot switch the audio if "Dolby D/Dolby D+/Dolby TrueHD" or "DTS/DTS-HD" is set to "Bitstream". Set "Dolby D/Dolby D+/Dolby TrueHD" or "DTS/DTS-HD" to "PCM" or connect using AV IN/OUT terminal. (⇒ 33)

Troubleshooting guide (continued)

Connection

The images from this unit do not appear on the television. Picture is distorted. Jittering occurs.	• Make sure that the television is connected to the AV IN/OUT terminal or HDMI AV OUT terminal on this unit. (⇒ 25) • Make sure that the television's input setting (e.g., VIDEO 1) is correct. • If "24p Output" is set to "On" when the unit is connected to a TV through any terminal other than HDMI, images may not display properly. In this case, set "24p Output" to "Off". (⇒ 34) • When "24p Output" is set to "On", HDMI authentication takes place where 24p images switch to other images, and a black screen is displayed. (⇒ 34) • When "24p Output" is set to "On", jittering may occur while playing DVD-Video other than 24p images. In this case, turn "24p Output" to "Off". (⇒ 34) • An incorrect resolution is selected in "HDMI Video Format", when the television is connected to HDMI AV OUT terminal. Set the item again. • Picture may not be seen when more than 4 devices are connected with HDMI cables. Reduce the number of connected devices. • The unit and television are using different video systems. Change the setting to match the equipment you are connecting with ("TV System" in the "TV Aspect / HDMI Function Settings" ⇒ 35). • 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 ("NTSC Contents Output" in the "Picture"). (⇒ 33)
The screen changes automatically.	• When the "Screen Saver Function" in the Setup menu is set to "On", the display may return to the screen saver mode automatically if there is no operation for 10 minutes or more. (⇒ 34)
Video is not output in high definition.	• High definition video cannot be output through the AV IN/OUT terminals. • Confirm that the "HDMI Video Format" in the Setup menu is set properly. (⇒ 34)
Audio is not output in bitstream.	• Dolby Digital Plus, Dolby TrueHD, and DTS-HD audio are not output in bitstream. To output the bitstream, select "Default Settings" to restore the factory presets and make proper settings.
The 4:3 aspect ratio picture expands left and right. Screen size is wrong.	• Use the television to change the aspect. Refer to your television's operating instructions. • When using an HDMI cable, change "TV Aspect" type to "4:3 Pan & Scan". (⇒ 34)
No sound from other speakers.	• Check all connections and settings. (⇒ 25)
Cannot hear the desired audio type.	• Audio may not be heard when more than 4 devices are connected with HDMI cables. Reduce the number of connected devices.
Cannot switch audio.	• When connecting an amplifier/receiver using an HDMI cable, you cannot switch the audio if "Dolby D/Dolby D +/Dolby TrueHD" or "DTS/DTS-HD" is set to "Bitstream". Set "Dolby D/Dolby D +/Dolby TrueHD" or "DTS/DTS-HD" to "PCM" or connect using AV IN/OUT terminal. (⇒ 33)

Card

The capacity of the SD card decreased.	• When a BD-Video that supports BD-Live is used, and an SD card is in the slot, data may be written to the SD card. (⇒ 17)
Music on an SD card cannot be played.	• Data that can be played from an SD card are AVCHD, MPEG2 and JPEG data. (⇒ 7)
The contents of the card cannot be read.	• The card is not compatible or the contents on the card may be damaged. (⇒ 7) • Turn off and then turn on the unit again.

Network

I can't connect to the network.	• Are you subscribed to high speed internet connection? Check that the LAN cable is properly connected. (⇒ 28) • Have you plugged a telephone cord into the LAN terminal on this unit? Connect with a straight LAN cable. (⇒ 28) • Confirm the power for the modem or broadband router is turned on. • Confirm the network settings. Follow any instructions you may have received from your ISP (Internet Service Provider) and make changes to the settings. • Are the broadband router settings correct? Read the operating instructions for the broadband router. • Is the broadband router and/or modem connected correctly? Check the operating instructions for each device and connect accordingly. • Check the "Network Settings" and "BD-Live Internet Access" settings. (⇒ 28, 32, 35)
VIERA CAST does not operate or connect.	• Is the network connection correct? (⇒ 28) • Image of the video contents may be incomplete or may not display depending on how busy the environment or the connected line is.

Other difficulties with playback

Audio and video momentarily pause.	• This occurs between playlist chapters or scenes (AVCHD). • When playing a title recorded on both layers, the unit automatically switches between layers and plays the title in the same way as a normal programme. However, video and audio may momentarily cut out when the unit is switching layers.
BD-Video or DVD-Video is not played.	• Ensure the disc is for the correct BD-Video region code or DVD-Video region number, and is not defective. (⇒ cover) • You have set a ratings level to limit BD-Video or DVD-Video play. Change this setting. (⇒ 32) • Some BD-Video can only be output with HDMI.
Picture-in-picture is not played with BD-Video.	• Confirm whether the disc supports picture-in-picture.
BD-Live is not played with BD-Video.	• Confirm whether the disc supports BD-Live. (⇒ 17) • The inserted SD card does not have sufficient available capacity. (⇒ 17) • The SD card is write-protected. (⇒ 7) • Sub contents copied to an SD card are provided by the disc producer as a part of the BD-Video content. Even if you record images and audio onto an SD card, it cannot be played as a BD-Live. (⇒ 17)
Alternative soundtrack and subtitles cannot be selected.	• The languages are not recorded on the media. • 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. (⇒ 14)
No subtitles.	• Subtitles are not recorded on the media. • Turn the subtitles on. Set "Subtitle" on the on-screen menu to "On". (⇒ 23)
Angle cannot be changed.	• Angles can only be changed during scenes where different angles are recorded.
The resume play function does not work.	• The memorized position is cleared in the following instances: – [■] is pressed several times – The disc or SD card is removed – The unit is turned off during CD or SD card playback – The unit is turned off due to such occurrences as power outage, the removal of the AC adaptor or waste of the battery pack's remaining power when the unit is turned on • The resume play function may not work depending on the media. • BD-V: On BD-Video discs including BD-J, the resume play function does not work.
You have forgotten your ratings password.	• While the disc and SD card are removed, press and hold [SKIP ◀◀] and [OPTION] on the unit at the same time for more than 5 seconds. Turn the unit off. "DVD-Video Ratings", "BD-Video Ratings" and "Network Service" will return to the default settings.
The VIERA Link does not work.	• Is the unit screen facing outward and closed? (⇒ 10, ③ or ④ in "Installation of the unit") The unit cannot be operated with the TV remote control in any other condition. • When using the unit with only the battery pack, operate after turning the unit on. (⇒ 12)
When a recorder or player etc. is operated with a remote control, the unit is also simultaneously operated.	• Change the remote control codes on the Panasonic recorders or players.
When the unit's remote control is operated, other Panasonic recorders or players etc. are also simultaneously operated.	

Specifications

Power supply: DC 12 V (DC IN terminal)/
DC 7.2 V (Exclusive battery terminal)

Power consumption (using included AC adaptor):

Play Mode: Approx. 22 W (Unit only Approx. 18 W)

Recharge mode: Approx. 12 W

Standby mode (Quick Start "Off"): Approx. 0.5 W

Standby mode (Quick Start "On"): Approx. 5 W

AC adaptor:

Power source: AC 110 to 240 V, 50/60 Hz

Power consumption: 36 W

DC output: 12 V, 2000 mA

Car DC Adaptor:

DC output: 12 V, 2 A (Vehicle with 12 V battery only)

Battery pack (lithium ion): DY-DB15 (included)

Voltage: 7.2 V

Capacity (Minimum): 4200 mAh

Dimensions (W×H×D) (excluding protrusions and battery):

256 mm (W)×202 mm (H)×58.7 mm (D)

Mass:

Including battery Approx. 1688 g

Without battery Approx. 1455 g

Operating temperature range: +5 to +35 °C

Operating humidity range: 10 to 80 % RH (no condensation)

Signal system: PAL/PAL60(NTSC) selectable

LCD screen:

8.9" α-Si, TFT wide-screen LCD (1024×600×RGB)

HDMI AUDIO/VIDEO output:

Number of terminals: 1 system

LAN:

Number of terminals: 1 system (10BASE-T/100BASE-TX)

AUDIO/VIDEO output/input:

Output/input terminal: φ 3.5 mm mini jack

Number of terminals: 1 system (output/input selectable)

Composite-video:

Output/input level: 1 Vp-p (75 Ω)

Audio:

Output/input level: 1.5 Vrms (1 kHz, 0 dB, 10 kΩ)

Audio performance:

Frequency response:

•DVD (linear audio): 4 Hz to 22 kHz (48 kHz sampling)

4 Hz to 44 kHz (96 kHz sampling)

•CD audio: 4 Hz to 20 kHz

S/N ratio: 100 dB

Dynamic range: 90 dB

Total harmonic distortion: 0.015 %

Speaker:

Output: 0.5 W + 0.5 W (8 Ω)

Headphone output:

Output: φ 3.5 mm stereo mini jack

Number of terminals: 1 system

Pickup:

Wave length:

405 nm/661 nm/783 nm (BD/DVD/CD)

Laser power: CLASS 2/CLASS 2M/CLASS 3B (BD/DVD/CD)

NORSK

Pickup:

Bølgelengde: 405 nm/661 nm/783 nm (BD/DVD/CD)

Laserstyrke: Ingen farlig stråling sendes ut
(med sikkerhets-beskyttelse)

Playable disc:

BD-Video

BD-ROM: Version 2

BD-RE: Version 3 (Single Layer, Dual Layer),
JPEG

BD-R: Version 2 (Single Layer, Dual Layer)

DVD-RAM: DVD Video Recording format,
AVCHD format, JPEG

DVD-R/DVD-R DL: DVD-Video format*¹, DVD-Video
Recording format*¹, AVCHD format*¹,
DivX*^{2,3}, JPEG*², MP3*²

DVD-RW: DVD-Video format*¹, DVD-Video
Recording format*¹, AVCHD format*¹

+R/+RW/+R DL: Video*¹, AVCHD format*¹

DVD-VIDEO: DVD-Video format

CD-Audio: CD-DA

CD-R/CD-RW: CD-DA, JPEG*², MP3*², DivX*^{2,3}

SD card:

SD Memory Card*⁴ formatted FAT12, FAT16, FAT32*⁵:
JPEG, AVCHD format, MPEG-2

JPEG*⁶:

Playable media: BD-RE, DVD-RAM, DVD-R, DVD-R DL,
CD-R, CD-RW, SD card

Pixels: 34 × 34 to 8192 × 8192

Sub Sampling: 4:2:2, 4:2:0

Maximum numbers of folders

•CD-R, CD-RW: 99

•BD-RE, DVD-RAM, DVD-R, DVD-R DL,
SD card: 300

Maximum numbers of files

•CD-R, CD-RW: 999

•BD-RE: 9999

•DVD-RAM, DVD-R, DVD-R DL, SD card: 3000

MP3:

Playable media: DVD-R, DVD-R DL, CD-R, CD-RW

Compression rate: 32 kbps to 320 kbps

Sampling rate: 44.1 kHz, 48 kHz

AVCHD (H.264):

Playable media: DVD-RAM, DVD-R, DVD-R DL, DVD-RW,
+R, +RW, +R DL, SD card

File format: AVCHD format V1.0

HDMI:

480p(525p) / 720p(750p) / 1080i(1125i) / 1080/24p

HDMI™ (x.v.Colour™, High Bit rate Audio)

This unit supports "HDAVI Control 4" function.

Specifications are subject to change without notice.

^{*1} Finalizing is necessary.

^{*2} ISO9660 level 1 or 2 (except for extended formats), Joliet

This unit is compatible with multi-session.

This unit is not compatible with packet writing.

^{*3} Certified to the DivX Home Theater Profile.

GMC (Global Motion Compensation) is not supported.

Maximum number of folders recognizable: 300 folders.
(including the root folder)

Maximum number of files recognizable: 200 files.

^{*4} includes SDHC card

includes miniSD Cards (need a miniSD Adaptor.)

includes microSD/microSDHC Cards (need a microSD Adaptor.)

^{*5} Not support long file name

^{*6} Motion JPEG not supported

● Useable capacity will be less. (SD Card)

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Glossary

AVCHD

AVCHD is a new format (standard) for high definition video cameras that can be used to record and play high-resolution HD images.

BD-J

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

BD-Live

This is a BD-Video (BD-ROM Profile 2) that supports the new functions such as Internet connection, etc. in addition to the BONUSVIEW function.

Bitstream

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

BONUSVIEW (Final Standard Profile)

This is a BD-Video (BD-ROM Profile 1 version 1.1) that supports the new functions such as Picture-in-picture and Secondary Audio, etc.

DivX

DivX is a popular media technology created by DivX, Inc. DivX media files contain highly compressed video with high visual quality that maintains a relatively small file size.

DNS Server

A server which acts like a telephone directory and translates Internet domain names into IP addresses.

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.

Dolby Digital Plus

Multi-channel audio and higher audio quality is made possible using Dolby Digital Plus. BD-Video supports up to 7.1 channel output.

* This unit allows audio to be decoded to a maximum of 5.1 ch of PCM audio and output from the HDMI terminal. Also, audio can be output with "Bitstream" to an AV amplifier that supports it.

Dolby TrueHD

Dolby TrueHD is a very high quality audio format that reproduces the studio master audio. BD-Video supports up to 7.1 channel output.

* This unit allows audio to be decoded to a maximum of 5.1 ch of PCM audio and output from the HDMI terminal. Also, audio can be output with "Bitstream" to an AV amplifier that supports it.

Down-mixing

This is the process of remixing the multi-channel audio found on some discs into fewer channels.

DTS (Digital Theater Systems)

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

DTS-HD

DTS-HD is a high-quality, sophisticated audio format used in movie theatres. Previous DTS Digital Surround-compatible equipment can play DTS-HD as DTS Digital Surround audio. BD-Video supports up to 7.1 channel output.

DTS-HD High Resolution Audio

This is a signal format achieved by improving the previous DTS, DTS-ES and DTS 96/24 formats. It is compatible with sampling frequency 96 kHz/48 kHz. BD-Video supports up to 7.1 channel output.

DTS-HD Master Audio

This is a lossless audio format and compatible with 96 kHz/7.1ch or less. In addition, faithful reproduction of the master audio is enabled using lossless audio encoding technology. BD-Video supports up to 7.1 channel output.

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 are 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.

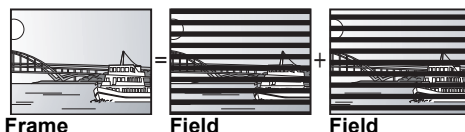
Video: Recorded at 25 frames/50 fields per second (PAL discs) or 30 frames/60 fields per second (NTSC discs). Generally appropriate for TV drama programmes or animation.

Folder

This is a place on the disc, SD card where groups of data are stored together. Additional folders can be created within folders, and you can make detailed classifications depending on the folder structure. (⇒ 39)

Frames and fields

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



- 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.

Gateway

IP address of the electronic device providing Internet access. Usually called a router IP address. (e.g., 192.168.0.1)

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.

Hub

Used for connecting more than one device to the network.

IP address

A set of numbers which distinguish each device on the network when, for example, connected to the Internet. When using a PC in a LAN to access a PC or device that is not included in the LAN, the IP address is called the local IP address. (e.g., 192.168.0.10)

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.

LAN (Local Area Network)

A group of linked devices in a company, school or home. Indicates the boundaries of a particular network.

Local storage

This storage area is used as a destination for sub contents for playing BD-Live on BD-Video.

LPCM (Linear PCM)

This is a type of PCM format.

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

MPEG2 (Moving Picture Experts Group)

A standard for efficiently compressing and expanding colour video.

MPEG2 is a compression standard used for DVD and satellite based digital broadcasting.

MP3 (MPEG Audio Layer 3)

An audio compression method that compresses audio to approximately one tenth of its size without any significant loss of audio quality.

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.



PCM (Pulse Code Modulation)

This is one format for converting analogue audio into digital audio, enabling you to enjoy digital audio with no hassle.

Picture-in-picture

This is a function of BD-Video that plays the primary video and secondary video simultaneously. For instance, the function is capable of playing the original movie as the primary video while playing video commentary from the film director on a small screen as a secondary video.

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.

Router

Distinguishes the IP address assigned to each device, such as the PC, and relays the flow of data within the network.

Sampling frequency

Sampling is the process of converting the heights of sound wave (analogue 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.

Subnet mask

Enables efficient network use. A set of numbers which identify which part of the IP address allocated to every device connected to the router is the network portion.

VIERA CAST

An information service unique to Panasonic where specific Web sites can be viewed on this unit by connecting to the Internet without using a PC.

x.v.Colour™

x.v.Colour™ is a name for devices that are compatible with the xvYCC format, an international standard for expanded colour in motion pictures, and that follow the rules for signal transmission.

You can enjoy vivid colours of wider colour ranges for a more realistic picture when connected to a TV that supports the x.v.Colour™ with HDMI cable.

1080i (1125i)

In one high definition image, 1080 (1125) alternating scan lines pass to create an interlaced 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 to create a progressive image. Since progressive video does not alternate scan lines like interlace, there is a minimal amount of screen flicker.

* This unit can only output 1080/24p.

24p

This is a progressive image recorded at a rate of 24 frames per second.

720p (750p)

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

SUOMI

VAROITUS!

LAITTEEN KÄYTTÄMINEN MUULLA KUIN TÄSSÄ KÄYTTÖOHJEESSA MAINITULLA TAVALLA SAATTAÄ ALTISTAA KÄYTTÄJÄN TURVALLISUUSLUOKAN 1 YLITTÄVÄLLE NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE.

VAROITUS:

VÄHENNÄ TULIPALON, SÄHKÖISKUN TAI LAITTEISTON VAHINGOITTUMISEN VAARAA

- TÄTÄ LAITETTA EI SAA ALTISTAA SATEELLE, KOSTEUDELLE, ROISKEILLE TAI TIPPUVILLE NESTEILLE. LAITTEEN PÄÄLLE EI SAA MYÖSKÄÄN ASETTAA MITÄÄN NESTEELLÄ TÄYTETTYÄ ESINETTÄ, KUTEN MALJAKKOA.
- KÄYTÄ VAIN SUOSITELTUJA LISÄVARUSTEITA.
- ÄLÄ IRROTA KANTTA (TAI TAUSTAA). SISÄLLÄ EI OLE KÄYTTÄJÄN HUOLLETTAVISSA OLEVIA OSIA. HUOLLON SAA SUORITTAA VAIN AMMATTITAITOINEN HENKILÖKUNTA.

VAROITUS!

- ÄLÄ ASENNATA 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 YLIKUUMENEMISESTÄ 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:

FØLG NEDENSTÅENDE INSTRUKSER FOR Å REDUSERE RISIKOEN FOR BRANN, ELEKTRISK STØT OG SKADE PÅ PRODUKTET:

- DETTE APPARATET MÅ IKKE UTSETTES FOR REGN, FUKTIGHET, DRYPP ELLER SPRUT, OG INGEN VÆSKEFYLT GJENSTANDER, SOM F.EKS. VASER, MÅ Plasseres PÅ APPARATET.
- BRUK KUN ANBEFALT TILBEHØR.
- IKKE FJERN DEKSELET (ELLER BAKSIDEN); APPARATET INNEHOLDER INGEN DELER SOM KAN SKIFTES ELLER REPARERES AV BRUKEREN. OVERLAT TIL KVALIFISERTE SERVICETEKNIKERE Å UTFØRE SERVICE.

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 FORVERRER 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 stikkontakten.

DETTE APPARATET ER BEREGNET TIL BRUK UNDER MODERATE KLIMAFORHOLD.

Information for Users on Collection and Disposal of Old Equipment and used Batteries



These symbols on the products, packaging, and/or accompanying documents mean that used electrical and electronic products and batteries should not be mixed with general household waste.

For proper treatment, recovery and recycling of old products and used batteries, please take them to applicable collection points, in accordance with your national legislation and the Directives 2002/96/EC and 2006/66/EC. By disposing of these products and batteries correctly, you will help to save valuable resources and prevent any potential negative effects on human health and the environment which could otherwise arise from inappropriate waste handling.

For more information about collection and recycling of old products and batteries, please contact your local municipality, your waste disposal service or the point of sale where you purchased the items.

Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.



For business users in the European Union

If you wish to discard electrical and electronic equipment, please contact your dealer or supplier for further information.

[Information on Disposal in other Countries outside the European Union]

These symbols are only valid in the European Union. If you wish to discard these items, please contact your local authorities or dealer and ask for the correct method of disposal.



Note for the battery symbol (bottom two symbol examples):

This symbol might be used in combination with a chemical symbol. In this case it complies with the requirement set by the Directive for the chemical involved.

For Asia, Australia and New Zealand

-If you see this symbol-

Information on Disposal in other Countries outside the European Union



This symbol is only valid in the European Union.

If you wish to discard this product, please contact your local authorities or dealer and ask for the correct method of disposal.

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CAUTION - CLASS 3B VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO THE BEAM. IEC60825-1+A2 / CLASS 3B

VARNING - KLASS 3B SYNLIG OCH OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. UNDIK EXPONERING FÖR STRÅLEN.

FORSIGTIG - SYNLIG OG USYNLIG LASERSTRÅLING KLASSE 3B, NÄR LÅGET ER ÅBENT OG SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNGÅ AT BLIVE UDSAT FOR STRÅLEN.

VARO - AVATTASESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTITIN LUOKAN 3B NÄKYVÄÄ JA NÄKYMÄTÖNTÄ LASERSÄTEILYÄ. VARO ALTISTUMISTA SÄTEELLE.

VORSICHT - SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG KLASSE 3B, WENN ABDECKUNG GEÖFFNET UND SICHERHEITSVERRIEGELUNGEN ÜBERBRÜCKT. NICHT DEM STRAHL AUSSETZEN.

ATTENTION - RAYONNEMENT LASER VISIBLE ET INVISIBLE, CLASSE 3B, EN CAS D'OUVERTURE ET LORSQUE LA SÉCURITÉ EST NEUTRALISÉE. ÉVITER UNE EXPOSITION AU FAISCEAU.

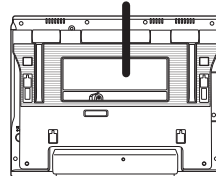
注意 - 打开时及联锁失效时有可见及不可见激光辐射。避免光束照射。

注意 - ここを開き、安全インターロックを解除すると可視及び不可視レーザー光が出ます。ビームを見たり、触れたりしないでください。

RQLS0412

CLASS 1
LASER PRODUCT

LUOKAN 1 LASERLAITE KLASS 1 LASER APPARAT



(Rear of product)

(Rear of product)
(Tuotteen takapuoli)
(Produktets baksida)

EU



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