

Operating Instructions

Blu-ray Disc™ Player

Model No. **DMP-BDT310**

DMP-BDT210

DMP-BDT110



The illustration shows the image of DMP-BDT310.

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.



Region management information

BD-Video

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

Example:



DVD-Video

This unit plays DVD-Video marked with labels containing the region number "2" or "ALL".

Example:



Model number suffix "EB" denotes UK model

EB

VQT3B75-2

Features

■ 3D video playback (⇒ 21)

You can enjoy powerful videos with realistic sensations by connecting this unit with a High Speed HDMI Cable to a 3D compatible TV.

■ Wireless connection (⇒ 11, 13)

DMP-BDT310, DMP-BDT210 and DMP-BDT110 support Wi-Fi technology.

BDT310 **BDT210** : A wireless LAN is built in.

BDT110 : A wireless connection can be made with the Wireless LAN Adaptor (optional).

■ DLNA (⇒ 25)

You can enjoy viewing video and pictures saved on a DLNA Certified media server connected to the home network with this unit.

■ DivX HD (⇒ 20)

Enjoy high definition picture and high quality sound of DivX HD video.

■ SDXC Card (⇒ 6)

This unit supports SDXC Card. SDXC is the latest standard of SD Card and a higher storage capacity card.

■ VIERA CAST (⇒ 24)

Internet services (such as YouTube, Picasa Web Albums, etc.) can be accessed easily by using the VIERA CAST button.

About descriptions in these operating instructions

- Instructions for operations are generally described using the remote control.
- These operating instructions are applicable to models DMP-BDT310, DMP-BDT210 and DMP-BDT110. Unless otherwise indicated, illustrations in these operating instructions are of DMP-BDT310.
BDT310 **BDT210** **BDT110** : indicates features applicable to DMP-BDT310, DMP-BDT210 and DMP-BDT110, respectively.

Glossary

Refer to following site for technical terms.

http://www.panasonic.co.uk/html/en_GB/Technology/0-9/217724/index.html

Firmware updates (⇒ 15)

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Safety precautions

WARNING

Unit

- To reduce the risk of fire, electric shock or product damage,
 - Do not expose this unit to rain, moisture, dripping or splashing.
 - Do not place objects filled with liquids, such as vases, on this unit.
 - Use only the recommended accessories.
 - Do not remove covers.
 - Do not repair this unit by yourself. Refer servicing to qualified service personnel.
 - Do not let metal objects fall inside this unit.
 - Do not place heavy items on this unit.

AC mains lead

- To reduce the risk of fire, electric shock or product damage,
 - Ensure that the power supply voltage corresponds to the voltage printed on this unit.
 - Insert the mains plug fully into the socket outlet.
 - Do not pull, bend, or place heavy items on the lead.
 - Do not handle the plug with wet hands.
 - Hold onto the mains plug body when disconnecting the plug.
 - Do not use a damaged mains plug or socket outlet.
- Install this unit so that the AC mains lead can be unplugged from the socket outlet immediately if any problem occurs.

SD card

- Keep the Memory Card out of reach of children to prevent swallowing.

CAUTION

Unit

- This unit 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 place sources of naked flames, such as lighted candles, on this unit.
- This unit may receive radio interference caused by mobile telephones during use. If such interference occurs, please increase separation between this unit and the mobile telephone.
- This unit is intended for use in moderate climates.

Placement

- Place this unit on an even surface.
- To reduce the risk of fire, electric shock or product damage,
 - Do not install or place this unit in a bookcase, built-in cabinet or in another confined space. Ensure this unit is well ventilated.
 - Do not obstruct this unit's ventilation openings with newspapers, tablecloths, curtains, and similar items.
 - Do not expose this unit to direct sunlight, high temperatures, high humidity, and excessive vibration.

Batteries

- Danger of explosion if battery is incorrectly replaced. Replace only with the type recommended by the manufacturer.
- Mishandling of batteries can cause electrolyte leakage and may cause a fire.
 - Do not mix old and new batteries or different types at the same time.
 - Do not heat or expose to flame.
 - Do not leave the battery(ies) in a car exposed to direct sunlight for a long period of time with doors and windows closed.
 - Do not take apart or short circuit.
 - Do not recharge alkaline or manganese batteries.
 - Do not use batteries if the covering has been peeled off.
 - Remove batteries if you do not intend to use the remote control for a long period of time. Store in a cool, dark place.
- When disposing the batteries, please contact your local authorities or dealer and ask for the correct method of disposal.



Caution for AC Mains Lead

For your safety, please read the following text carefully.

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

A 5-ampere fuse is fitted in this plug.

Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-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

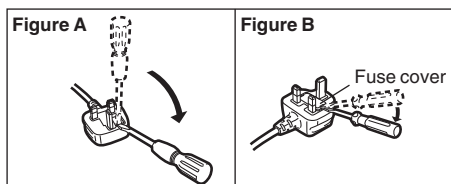
Remove the connector cover.

How to replace the fuse

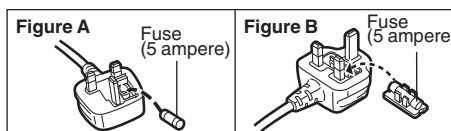
The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.

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.



Accessories

Check the supplied accessories before using this unit.

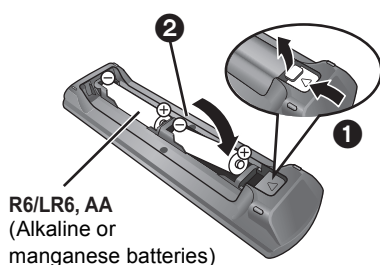
- 1 **Remote control**
(N2QAYB000576)
- 2 **Batteries for remote control**
 - 1 **AC mains lead**
(K2CT2YY00003)



- Product numbers provided in these operating instructions correct as of December 2010. These may be subject to change.
- Do not use AC mains lead with other equipment.

Using the remote control

Insert so the poles (+ and –) match those in the remote control.



Point it at remote control signal sensor on this unit. (⇒ 5)

Unit and media care

■ Clean this unit with a soft, dry cloth

- Never use alcohol, paint thinner or benzene to clean this unit.
- Before using chemically treated cloth, carefully read the instructions that came with the cloth.

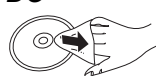
■ Clean the lens with the lens cleaner

Lens cleaner: RP-CL720AE

- This lens cleaner may not be available for sale in all countries, e.g. not available in Germany, please consult your Panasonic dealer for advice.
- This lens cleaner is sold as specific for DIGA, but can be used on this unit as well.

■ Clean discs

DO



DO NOT



Wipe with a damp cloth and then wipe dry.

■ Disc and card handling precautions

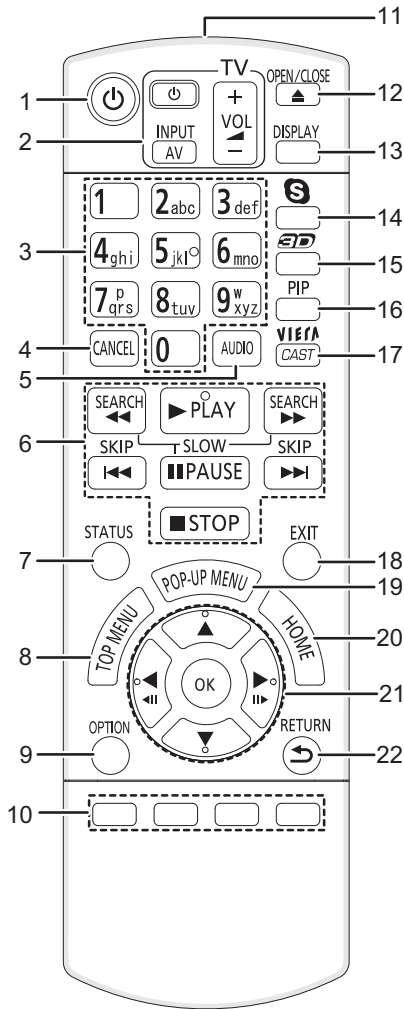
- Handle discs by the edges to avoid inadvertent scratches or fingerprints on the disc.
- Do not attach labels or stickers to discs.
- Do not use record cleaning sprays, benzene, thinner, static electricity prevention liquids or any other solvent.
- Clean any dust, water, or foreign matter from the terminals 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.

■ To dispose of or transfer this unit

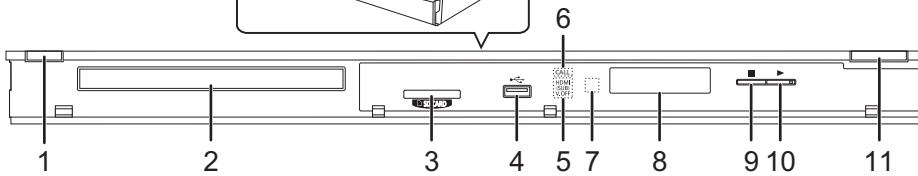
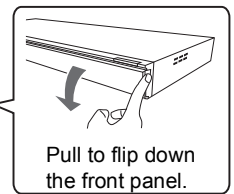
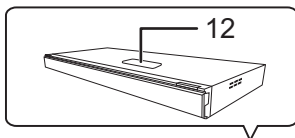
The unit may keep the user settings information in the unit. If you discard this unit either by disposal or transfer, then follow the procedure to return all the settings to the factory presets to delete the user settings. (⇒ 35, "To return all settings to the factory preset.")

- The operation history may be recorded in the memory of this unit.

Control reference guide










- 1 Turn the unit on and off
- 2 **TV operation buttons** (⇒ 16)
You can operate the TV through the unit's remote control.
[TV] : Turn the television on and off
[AV] : Switch the input select
[+ - VOL] : Adjust the volume
- 3 Select title numbers, etc./Enter numbers or characters (⇒ 24)
- 4 Cancel
- 5 Select audio (⇒ 18)
- 6 Basic playback control buttons (⇒ 17, 18)
- 7 Show status messages (⇒ 17)
- 8 Show Top menu/DIRECT NAVIGATOR (⇒ 17)
- 9 Show OPTION menu (⇒ 18)
- 10 Coloured buttons (red, green, yellow, blue)
These buttons are used when;
 - Operating a BD-Video disc that includes Java™ applications (BD-J).
 - Operating contents of VIERA CAST. (⇒ 24)
- 11 Transmit the remote control signal
- 12 Open or close the disc tray (⇒ 16)
CAUTION
Do not place objects in front of the unit. The disc tray may collide with objects when it is opened, and this may cause malfunction.
- 13 Show playback menu (⇒ 28)
- 14 Start up a video communication (⇒ 24)
- 15 Set up 3D effects (⇒ 21)
- 16 Switch on/off Secondary Video (Picture-in-picture) (⇒ 19)
- 17 Displays the Home screen of the VIERA CAST (⇒ 24)
- 18 Exit the menu screen
- 19 Show Pop-up menu (⇒ 17)
- 20 Show HOME menu (⇒ 17)
- 21 Selection/OK, Frame-by-frame (⇒ 18)
- 22 Return to previous screen



- 1 **Standby/on switch** (⏻/⏻) (⇒ 13)
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.
- 2 Disc tray (⇒ 16)
- 3 SD card slot (⇒ 16)
- 4 USB port (⇒ 16)
- 5 **BDT310** : V.OFF LED (Video off LED)
It is possible to set the LED to turn on/off. (⇒ 32)
- 6 CALL LED (⇒ 24)
The LED will light up when this unit receives incoming call etc. of the video communication.
- 7 Remote control signal sensor
Distance: Within approx. 7 m
Angle: Approx. 20° up and down, 30° left and right
- 8 Display
- 9 Stop (⇒ 18)
- 10 Start play (⇒ 17)
- 11 Open or close the disc tray (⇒ 16)
- 12 **BDT310** **BDT210** : Touch Free Sensor (⇒ 34)
The LED will light up when TOUCH-FREE SENSOR is activated.

Rear panel terminals (⇒ 8–12)

Playable discs/Cards/USB devices

Device	Disc markings	Device types	Contents format*
BD		BD-Video	Video
		BD-RE	Video JPEG/ MPO (3D still picture)
		BD-R	Video DivX® MKV
DVD		DVD-Video	Video
		DVD-R	Video AVCHD DivX® MKV
		DVD-R DL	MP3 JPEG/ MPO (3D still picture)
		DVD-RW	Video AVCHD
	—	+R/+RW/+R DL	
CD		Music CD	Music [CD-DA]
	—	CD-R CD-RW	DivX® MKV Music [CD-DA] MP3 JPEG/ MPO (3D still picture)
SD		SD Memory Card (from 8 MB to 2 GB) SDHC Memory Card (from 4 GB to 32 GB) SDXC Memory Card (48 GB, 64 GB) (Compatible with both mini and micro types)	MPEG2 AVCHD JPEG/ MPO (3D still picture)
USB	—	USB devices (up to 2 TB)	DivX® MKV MP3 JPEG/ MPO (3D still picture)

* See page 7 and 39 for more information on the types of content that can be played.

■ Discs that cannot be played by this unit

- DVD-RAM
- Super Audio CD
- Photo CD
- DVD-Audio
- Video CD and Super Video CD
- WMA discs
- DivX Plus HD discs
- HD DVD

■ Region management information

BD-Video

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

Example:



DVD-Video

This unit plays DVD-Video marked with labels containing the region number "2" or "ALL".

Example:



■ Finalize

DVD-R/RW/R DL, +R/+RW/+R DL and CD-R/RW recorded by a recorder, etc. needs to be finalized by the recorder to play on this unit. Please refer to the recorder's instructions.

■ BD-Video

- 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.
 - **[BDT110]** : If "Dolby D/Dolby D +/Dolby TrueHD" is set to "PCM", the maximum possible number of Dolby sound is 5.1ch PCM. (⇒ 31)

■ 3D

- 3D videos and 3D still pictures can be played back when this unit is connected to a 3D compatible TV using a High Speed HDMI Cable.
- 2D video can be enjoyed as 3D virtually. (⇒ 21)




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

■ Music CD

Operation and sound quality of CDs that do not conform to CD-DA specifications (copy control CDs, etc.) cannot be guaranteed.

■ SD card

- miniSD Cards, microSD Cards, microSDHC Cards and microSDXC Cards can be used, but must be used with an adaptor card. These are usually supplied with such cards, or otherwise customer provided.
 
- To protect the card's contents, move the record prevention tab (on the SD card) to "LOCK".
- 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 (Does not support long file name.) and SDXC Memory Cards in exFAT.
- If the SD card is used with incompatible computers or devices, recorded contents may be erased due to the card being formatted etc.
- Useable memory may be slightly less than the card capacity.

■ USB device

- This unit does not guarantee connection with all USB devices.
- This unit does not support USB device charging.
- When using Communication Camera TY-CC10W or Wireless LAN Adaptor DY-WL10, connect it to the rear terminal of this unit. (⇒ 11, 24)
- FAT12, FAT16 and FAT32 file systems are supported.
- This unit supports USB 2.0 High Speed.
- This unit can support an HDD formatted to FAT32. Some types of HDD may require the use of its external power supply unit.

■ BD-RE, BD-R

Discs recorded in DR mode using Panasonic Blu-ray Disc recorders may not playback the audio etc., correctly.

STEP 1 : Connecting to a TV

- Do not place the unit on amplifiers/receivers or equipment that may become hot. The heat can damage the unit.
- Before making any connections we suggest you temporarily disconnect all the units from AC power.
- Do not connect video signals through a video recorder. Due to copy guard protection the picture may not be displayed properly.

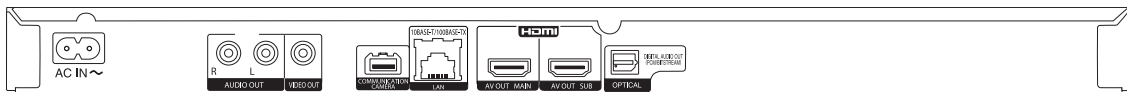
- Please use High Speed HDMI Cables that have the HDMI logo (as shown on the cover). It is recommended that you use Panasonic's HDMI cable. When outputting 1080p signal, please use HDMI cables 5.0 meters or less.

Recommended part number (High Speed HDMI Cable):
 RP-CDHS15 (1.5 m), RP-CDHS30 (3.0 m),
 RP-CDHS50 (5.0 m), etc.

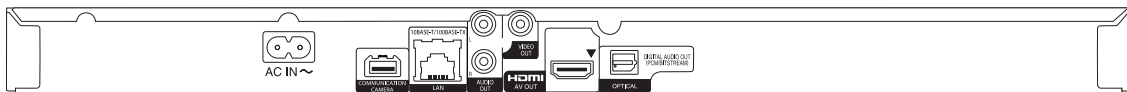
BE SURE TO READ THE CAUTION FOR THE AC MAINS LEAD ON PAGE 3 BEFORE CONNECTION.

BDT310

Back of the unit



BDT210

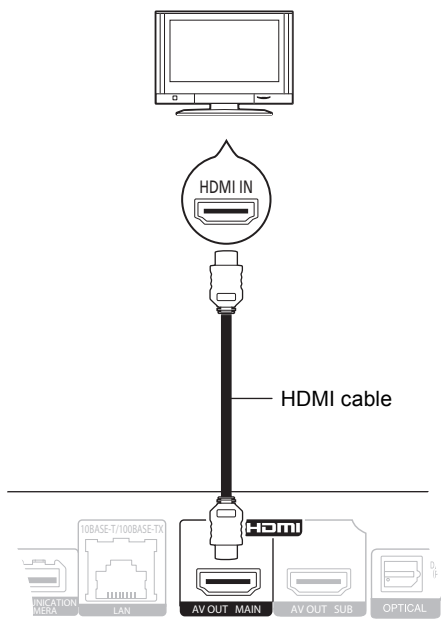


BDT110



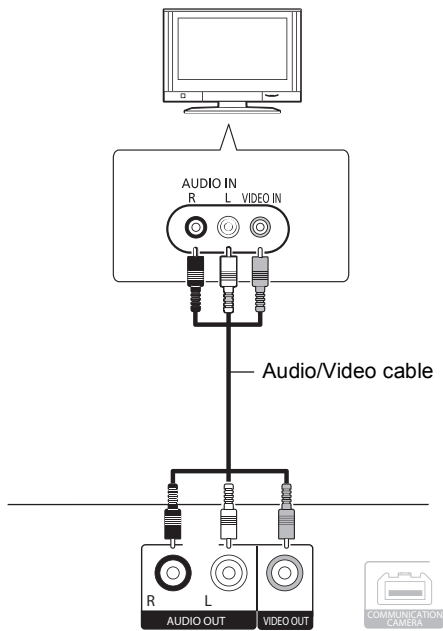
■ Via an HDMI AV OUT terminal (High quality)

- **BDT310** : Use HDMI AV OUT MAIN terminal.
- It is possible to play back 3D videos and 3D still pictures by connecting this unit with a 3D compatible TV.



- Set "HDMI Audio Output" to "On" (⇒ 33).
- The HDMI connection supports VIERA Link "HDAVI Control" (⇒ 27).

■ Via a VIDEO OUT terminal (Standard quality)

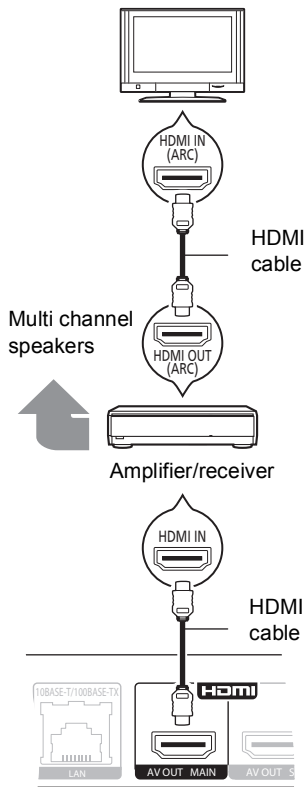


- Connect terminals of the same colour.

STEP 2 : Connecting to an amplifier/receiver

■ Via an HDMI AV OUT terminal

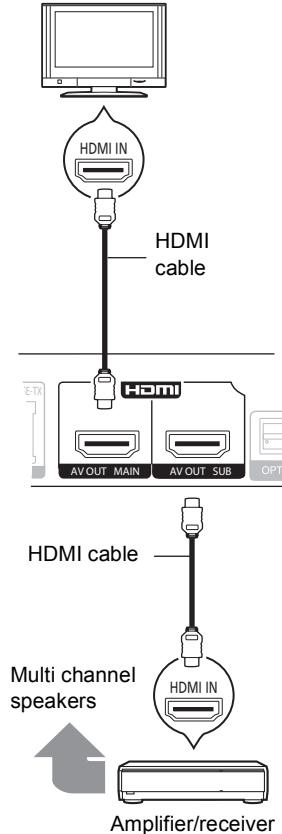
- **BDT310** : Use HDMI AV OUT MAIN terminal.
- It is possible to playback 3D videos and 3D still pictures when the connected TV and amplifier/receiver are 3D compatible.



- Set "HDMI Audio Output" to "On" (⇒ 33).
- Set "Digital Audio Output" depending on the connected amplifier/receiver (⇒ 31).
- The HDMI connection supports VIERA Link "HDAVI Control" (⇒ 27).
- When connecting to a non-3D compatible amplifier/receiver, connect this unit to a TV via HDMI AV OUT, then connect the TV and the amplifier/receiver, using HDMI cables for the respective connections.
 - Please note, however, that the audio can only be up to 5.1ch.
- When using the TV or amplifier/receiver that does not have the indication of "(ARC)" (non-ARC-compatible) on the HDMI terminal, in order to enjoy TV's sound by amplifier it is also required to connect the amplifier/receiver and TV using an optical digital cable.

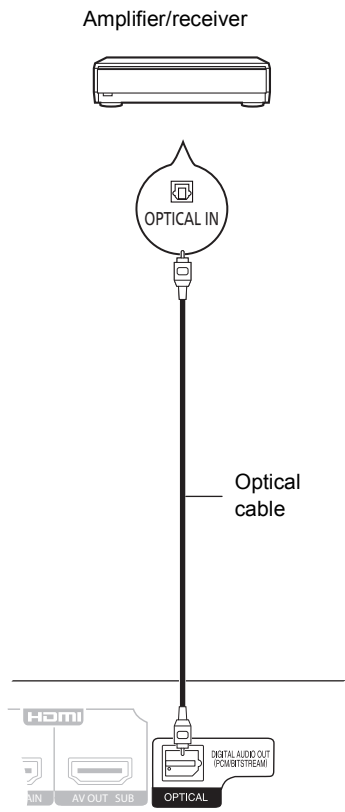
■ **BDT310** : Via an HDMI AV OUT SUB terminal

- You can enjoy richer sound by using the HDMI AV OUT SUB terminal.
- It is possible to playback 3D videos and 3D still pictures when the connected TV is 3D compatible, even if the amplifier/receiver is not 3D compatible.



- Set "HDMI Audio Output" to "On" (⇒ 33).
- Set "HDMI(SUB) Output Mode" to "V.OFF(Video Off)". (⇒ 21)
 - Audio is output in high resolution regardless of compatibility of the amplifier/receiver with 3D.
- The HDMI connection using HDMI AV OUT MAIN supports VIERA Link "HDAVI Control" (⇒ 27). The HDMI AV OUT SUB terminal is not compatible with the VIERA Link "HDAVI Control".

■ Via an OPTICAL terminal



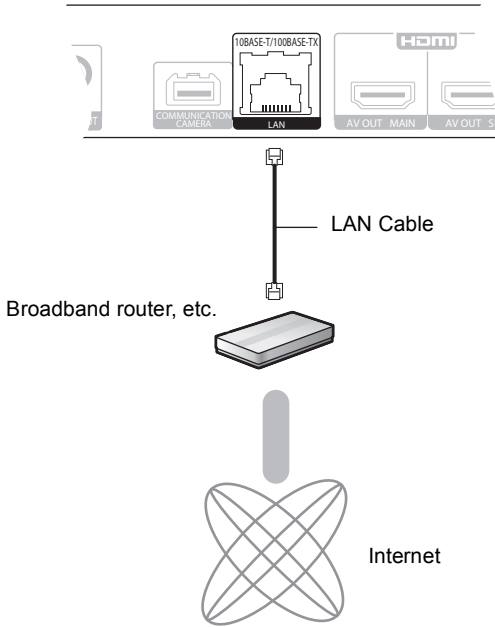
- When connecting a TV (⇒ 8) with HDMI AV OUT terminal, set "HDMI Audio Output" to "Off" (⇒ 33).
- Set "Digital Audio Output" depending on the used terminal and connected amplifier/receiver (⇒ 31).

STEP 3 : Connecting to a broadband network

The following services can be used when this unit is connected to broadband.

- Firmware can be updated (⇒ 15)
- You can enjoy BD-Live (⇒ 19)
- You can enjoy VIERA CAST (⇒ 24)
- You can access other devices (Home Network) (⇒ 25)

■ LAN cable connection

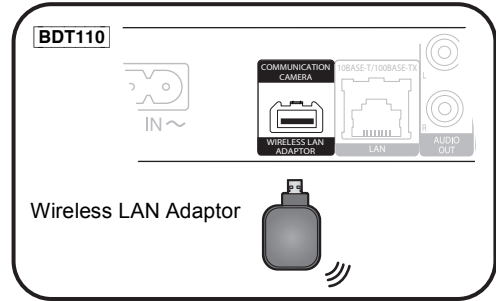


- Use category 5 or above straight LAN cables (STP) when connecting to peripheral devices.
- Inserting any cable other than a LAN cable in the LAN terminal can damage the unit.

For details about connection method, refer to the instructions supplied with the connected equipment.

■ Wireless LAN connection

- **BDT310** **BDT210** : Wireless LAN is built in. (There is no need to connect a Wireless LAN Adaptor.)
- **BDT110** : Connect the Wireless LAN Adaptor DY-WL10 (optional).



- For up to date compatibility information on your Wireless router refer to <http://panasonic.jp/support/global/cs/> (This site is in English only.)
- The unit is not compatible with public wireless LAN services (Hotspot etc.) provided in airports, stations, cafes etc.
- **BDT110** :
 - Only the Wireless LAN Adaptor DY-WL10 (optional) can be used.
 - Read the operating instructions for the Wireless LAN Adaptor DY-WL10 (optional) thoroughly when using it.
 - To simultaneously connect the Wireless LAN Adaptor DY-WL10 (optional) and a LAN cable, use the extension cable supplied with the DY-WL10.

Precautions of Wireless LAN connection

The following limits are in place regarding the usage of this unit or Wireless LAN adaptor. You must be aware of these limits before using these devices.

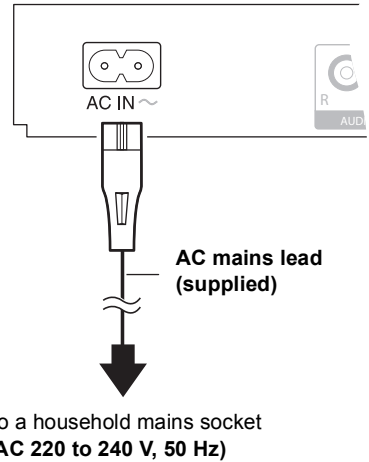
Panasonic will in no way be responsible for any incidental damage which may arise due to a failure to obey these limits, or to any condition of use or disuse of these devices.

- **Data transmitted and received over radio waves may be intercepted and monitored.**
- **This unit or Wireless LAN adaptor contain delicate electronic components.**

Please use these devices in the manner in which it was intended and follow the following points:

- Do not expose these devices to high temperatures or direct sunlight.
- Do not bend, or subject these devices to strong impacts.
- Keep these devices away from moisture.
- Do not disassemble or alter the device in any way.

STEP 4 : Connecting AC mains lead



- This unit consumes a small amount of AC power ("Quick Start": "Off", approx. 0.2 W) even when turned off. In the interest of power conservation, if you will not be using this unit for an extended period of time, it can be disconnected.

STEP 5 : Settings

Easy Setting

After connecting your new player for the first time and pressing [⏻], a screen for the basic settings will appear.

Preparation

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

1 Press [⏻].

Setup screen appears.

If this unit is connected to a Panasonic TV (VIERA) supporting HDAVI Control 2 or later via an HDMI cable, then setting information on the TV such as "On-Screen Language" is acquired by this unit.

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

"On-Screen Language", "TV Aspect", "Quick Start" and "Touch Free Sensor [BDT310] [BDT210]" are set. (⇒ 32, 34)

After completing "Easy Setting", you can perform "Network Easy Setting".



- You can perform this setup anytime by selecting "Easy Setting" in the Setup menu. (⇒ 34)
- You can also change these settings individually. (⇒ 32, 34)

Touch Free Sensor [BDT310] [BDT210]

By setting "Sensor" in "Touch Free Sensor" to "On", you can open or close the tray just by waving your hand over the TOUCH-FREE SENSOR on the upper side of the unit. (This will also work when in stand-by.)

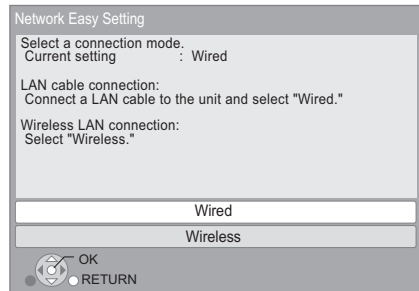
- Be aware that the TOUCH-FREE SENSOR may function unintentionally in the following cases:
 - When your hand or arm, an object, a small child, or a small animal comes close to the upper part of the unit
 - When an object is placed on top of the unit and vibration is applied
 - When connecting a cable etc. to the rear of the unit
- Reactive distance of the sensor is automatically set in accordance with the installation conditions at the time of power supply connection and when the open/close button is pressed. To prevent an incorrect setting, do not place your hands or objects above the unit at these times.
- Depending on the usage conditions, the TOUCH-FREE SENSOR may stop working or the reactive distance may become shorter. In such cases, press the tray open/close button once.

Network Easy Setting

After completing "Easy Setting", you can continue with "Network Easy Setting".

Select "Wired" or "Wireless" and press [OK].

[BDT310]



■ "Wired" connection

Follow the on-screen instructions to make your connection settings.

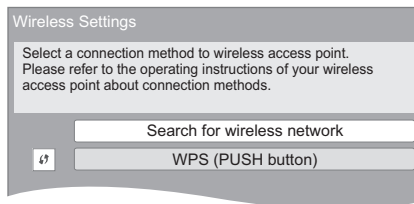
- When you experience problems (⇒ 14)

■ "Wireless" connection

Before beginning wireless connection setup

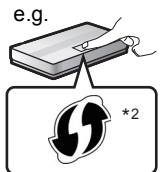
- Obtain your network name (SSID).
- If your wireless connection is encrypted please be sure that you know your encryption key.
- [BDT110] : If "Wireless LAN Adaptor is not connected." is displayed, check that the Wireless LAN Adaptor is fully inserted. Alternatively, disconnect and reconnect it. If there is still no change in the display, consult your dealer for advice.

Select "WPS (PUSH button)" or "Search for wireless network" and then follow the on-screen instructions and make the settings.



WPS (PUSH button):

If your Wireless router supports WPS (PUSH button), you can easily perform the settings by pressing WPS button on it. WPS (Wi-Fi Protected Setup) is a standard that facilitates settings relating to the connection and security of wireless LAN devices.



- ① Press WPS button or corresponding button of Wireless router until the lamp starts flashing.
 - For details, refer to the operating instruction of Wireless router.
- ② Press [OK].

Search for wireless network:

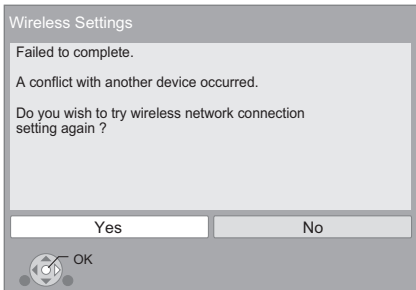
- When you select “Search for wireless network”, the available wireless networks will be displayed. Select your network name and press [OK].
 - If your network name is not displayed search again by pressing the red button on the remote control.
 - Stealth SSID will not be displayed when you select “Search for wireless network”. Enter manually by using “Manual setting”.
 (Press [HOME] ⇒ select “Setup” ⇒ select “Player Settings” ⇒ select “Network” ⇒ [OK] ⇒ select “Network Settings” ⇒ [OK] ⇒ select “Wireless Settings” ⇒ [OK] ⇒ select “Connection Setting” ⇒ [OK] ⇒ select “Manual setting” ⇒ [OK])

- If your wireless network is encrypted, Encryption Key input screen will be displayed. Input the encryption key of your network.

¹ An SSID (Service Set Identification) is a name used by wireless LAN to identify a particular network. Transmission is possible if the SSID matches for both devices.
² Wi-Fi Protected Setup-compatible Wireless router may have the mark.

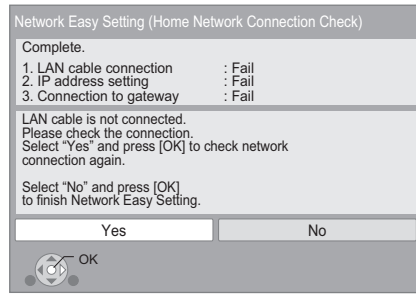
When you experience problems with settings

Wireless Settings



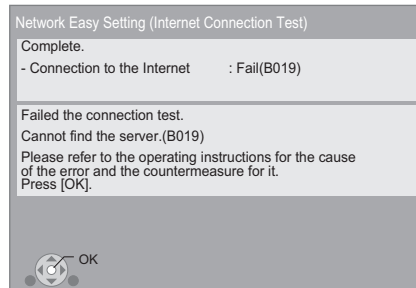
Display	Check the following
A conflict with other devices occurred.	<ul style="list-style-type: none"> • Please wait a few moments, and then try again.
A time out error occurred.	<ul style="list-style-type: none"> • Setting of the Wireless router for MAC Address etc.
An authentication error or a time out error occurred.	<ul style="list-style-type: none"> • The signal may be weak. [BDT110] : Using the USB extension cable supplied with the Wireless LAN Adaptor, adjust the position of the Wireless LAN Adaptor. • The SSID and the encryption key of the Wireless router. • Please wait a few moments, and then try again.
A device error occurred.	<ul style="list-style-type: none"> • [BDT110] : Connection of Wireless LAN Adaptor • If there is no improvement in symptom, consult your dealer.

Network Easy Setting (Home Network Connection Check)



Display	Check the following
1. LAN cable connection or Wireless Settings :Fail 2. IP address setting :Fail 3. Connection to gateway :Fail	<ul style="list-style-type: none"> • Connection of the LAN cables (⇒ 11)
1. LAN cable connection or Wireless Settings :Pass 2. IP address setting :Fail 3. Connection to gateway :Fail	<ul style="list-style-type: none"> • Connection and settings of the hub and router • Settings of “IP Address / DNS Settings” (⇒ 33)
1. LAN cable connection or Wireless Settings :Pass 2. IP address setting :Pass or Home network available 3. Connection to gateway :Fail	

Network Easy Setting (Internet Connection Test)



Display	Check the following
Cannot find the server. (B019)	<ul style="list-style-type: none"> • “Primary DNS” and “Secondary DNS” settings of “IP Address / DNS Settings” (⇒ 33)
Failed to connect to the server. (B020)	<ul style="list-style-type: none"> • The server may be busy or the service may have been suspended. Please wait a few moments, and then try again. • Settings of “Proxy Server Settings” (⇒ 33) and the router



- Refer to the operating instructions of the hub or router.
- You can perform this setup anytime by selecting "Network Easy Setting" in the Setup menu. (⇒ 33)
- You can redo these settings individually using "Network Settings". (⇒ 33)
- Do not use this unit or Wireless LAN adaptor to connect to any wireless network for which you do not have usage rights. During automatic searches in a wireless network environment, wireless networks (SSID) for which you do not have usage rights may be displayed; however, using these networks may be regarded as illegal access.
- After performing network settings on this unit, the settings (encryption level, etc.) of the Wireless router might change. When you have trouble getting online on your PC, perform the network settings on your PC in accordance with the settings of Wireless router.
- Please be aware that connecting to a network without encryption may result in the content of the communication being illegitimately viewed by a third party, or the leaking of data such as personal or secret information.

Firmware updates

Occasionally, Panasonic may release updated firmware for this unit that may add or improve the way a feature operates. These updates are available free of charge.

This unit is capable of checking the firmware automatically when connected to the Internet via a broadband connection. When a new firmware version is available, the following message is displayed.

New firmware is available.
Please update firmware in Setup.

To update the firmware

Press [HOME] ⇒ select "Setup" ⇒ select "Player Settings" ⇒ select "Others" ⇒ [OK] ⇒ select "Firmware Update" ⇒ [OK] ⇒ select "Update Now"

DO NOT DISCONNECT the unit from the AC power or perform any operation while the update takes place. After the firmware is installed, "FINISH" will be displayed on the unit's display. Unit will restart and the following screen will be displayed.

The firmware has been updated.
Current Version:x.xx



- 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.jp/support/global/cs/> (This site is in English only.) To show the firmware version on this unit. (⇒ 34, "System Information")
- Downloading will require several minutes. It may take longer or may not work properly depending on the connection environment.
- If you do not want to check for the latest firmware version, set "Automatic Update Check" to "Off". (⇒ 34)

STEP 6 :

Reprogramming the remote control

For other Panasonic products

If you have more than one Panasonic player/recorder and the remote control operates both products at once, you will need to change the remote control code on one product to prevent this occurrence. (⇒ 34, "Remote Control")

For TV

You can operate the TV using the unit's remote control.

1 Input the 2-digit code (⇒ 40) with the number buttons while pressing [TV].

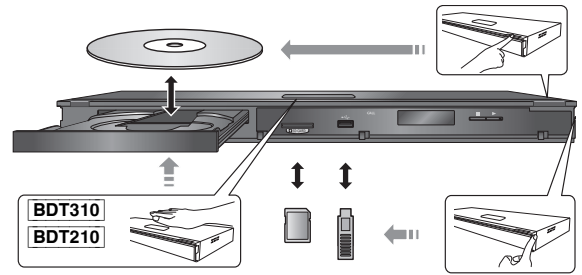
e.g., 01: [0] ⇒ [1]

2 Test by turning on the television.



- If your television brand has more than one code listed, select the one that allows correct operation.

Inserting or removing media



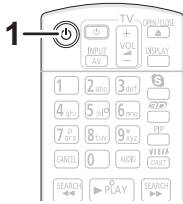
- When inserting a media item, ensure that it is facing the right way up.
- When removing the SD card, press on the centre of the card and pull it straight out.
- If you connect a Panasonic product with a USB connection cable, the setup screen may be displayed on the connected equipment. For details, refer to the instructions for the connected equipment.

HOME menu

Major functions of this unit can be operated from the HOME menu.

Preparation

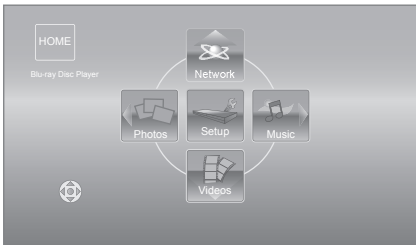
Turn on the television and select the appropriate video input on the television.



1 Press [POWER] to turn on the unit.

The Home menu will be displayed.

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



- When a media is inserted, contents selection screen for that media is displayed.
- If there are any other items, repeat this step.
- To return to HOME menu, select "HOME" or press [RETURN] several times.

Videos/ Photos/ Music	Disc	Play back the contents. (⇒ 22, 23)
	SD card	• When multiple contents are recorded, select the types of contents or the title.
	USB	
Network	Internet Content	Displays the Home screen of VIERA CAST. (⇒ 24)
	Home Network	DLNA Client (⇒ 25)
		Media Renderer (⇒ 26)
Setup	Player Settings	(⇒ 30)
	SD Card Management	(⇒ 19)
	Wallpaper	Changes the screen background of HOME menu.

To show the HOME menu

Press [HOME].



- Items to be displayed may vary with the media.

Playing video contents

BD DVD CD SD USB

1 Insert the media.

When the contents menu is displayed, press [▲, ▼, ◀, ▶] to select the item.

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

When a message screen is displayed while playing back 3D compatible video software, play back in accordance with the instructions.

■ To show menus

You can display Top Menu, DIRECT NAVIGATOR or Pop-up Menu.

Press [TOP MENU] or [POP-UP MENU].

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

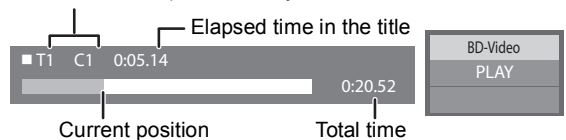
■ To show the status messages

While playing, press [STATUS].

The status messages give you information about what is currently being played. Each time you press [STATUS], the display information may change or will disappear from the screen.

e.g. BD-Video

T: Title, C: Chapter, PL: Playlist



- 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. (⇒ 31)
- DISCS CONTINUE TO ROTATE WHILE MENUS ARE DISPLAYED. Press [STOP] when you have finished playback to protect the unit's motor, your television screen and so on.
- Depending on media and contents, the display may change or may not appear.
- DivX and MKV: Successive play is not possible.
- It is not possible to playback AVCHD and MPEG2 video which have been dragged and dropped, copied and pasted to the media.
- To save on electricity, the unit is turned off automatically if there is no button operation for about 30 minutes when not playing back (such as when paused, displaying the menu, displaying still pictures, etc.).

Other operations during play

These functions may not work depending on the media and contents.

Stop

Press [■STOP].

The stopped position is memorized.

Resume play function

Press [▶PLAY] to restart from this position.

- The position is cleared if the tray is opened or you press [■STOP] several times to display "STOP" on the unit's display.
- On BD-Video discs including BD-J, the resume play function does not work.

Pause

Press [⏸PAUSE].

- Press [⏸PAUSE] again or [▶PLAY] to restart play.

Search/Slow-motion

Search

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

- Music and MP3: The speed is fixed to a single step.

Slow-motion

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

- BD-Video and AVCHD: Forward direction [SEARCH▶▶] only.

The speed increases up to 5 steps.

- Press [▶PLAY] to revert to normal playback speed.

Skip

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

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

- Each press increases the number of skips.

Frame-by-frame

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

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

Changing audio

Press [AUDIO].

You can change the audio channel number or soundtrack language, etc.

Useful functions

1 Press [OPTION].

2 Select an item, then press [OK].

While DIRECT NAVIGATOR screen is displayed

Properties	To display the title properties (recording date, etc.).
Chapter View	To select the chapter.
View Playlists	To play playlists.
View Titles	To select the title.
Folder	To switch to another folder.

While playing

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.
Top Menu	To display Top Menu.
Pop-up Menu	To display Pop-up Menu.
Menu	To display Menu.
3D Settings	2D video can be virtually output as 3D, or output effect of the 3D video can be setup. (⇒ 21)

- Depending on the played contents if you perform "Screen Aspect", there may be no effect.
- When "TV Aspect" (⇒ 32) is set to "4:3 Pan & Scan" or "4:3 Letterbox", the "Zoom" effect in "Screen Aspect" is disabled.



- Depending on the media and contents, displayed items are different.

■ Displaying subtitle text

You can display subtitle text on the DivX and MKV video disc with this unit.

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.).

Set "Subtitle" in "Disc" (⇒ 28)



- DivX and MKV video files that do not display "Text" do not contain subtitle text.
- If the subtitle text is not displayed correctly, try changing the language settings. (⇒ 30)
- This function has no relation to the subtitles specified in DivX standard specifications and has no clear standard.

Enjoying BD-Live or picture-in-picture in BD-Video

Enjoying BD-Live discs with Internet

BD-Live allows you to enjoy more functions such as subtitles, exclusive images and online games by connecting this unit to the Internet. Since most of the BD-Live compatible discs are played back using the BD-Live function, additional contents are required to be downloaded into the external memory (local storage).

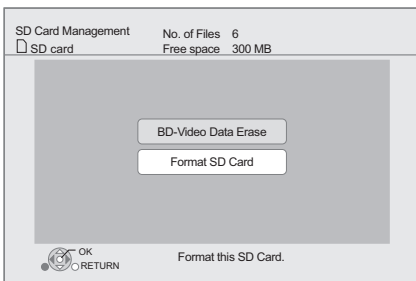
- This unit uses an SD card as a local storage device.
BD-Live function cannot be used when there is no SD card inserted.

- 1 Perform network connection and settings. (⇒ 11, 13)**
- 2 Insert an SD card with 1 GB or more free space.**
- 3 Insert the disc.**

■ Deleting data/Formatting SD cards

If you no longer need data recorded on the SD card, you can delete data with the following operation.

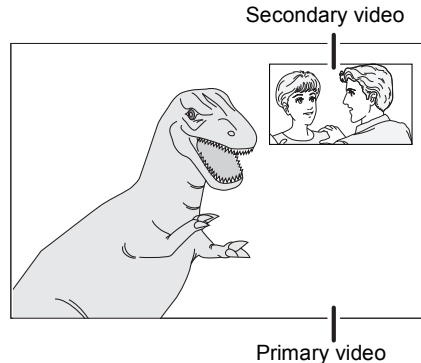
- ① Insert an SD card.
- ② Press [HOME].
- ③ Press [OK] to select "Setup".
- ④ Press [▶] to select "SD Card Management".
- ⑤ Press [▲, ▼] to select "BD-Video Data Erase" or "Format SD Card" and press [OK].



- ⑥ Press [◀, ▶] to select "Yes" and press [OK].
- ⑦ Press [◀, ▶] to select "Start" and press [OK].

Playing picture-in-picture

To turn on/off secondary video
Press [PIP].



To turn on/off secondary audio
[DISPLAY] ⇒ select "Disc" ⇒ [▶] ⇒ select "Signal Type" ⇒ [OK] ⇒ set "Soundtrack" in "Secondary Video" to "On" or "Off"



- 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.
- 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.
- To use BD-Live function, it is recommended that you format the card on this unit. If the SD card you use is formatted, all data on the card will be erased. It cannot be recovered.
- "BD-Live Internet Access" may need to be changed for certain discs (⇒ 30).
- When discs supporting BD-Live are played back, the player or disc IDs may be sent to the content provider via the Internet.
- 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 (⇒ 31).

Regarding 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. Visit divx.com for more information and software tools to convert your files into DivX video.

ABOUT DIVX VIDEO-ON-DEMAND:

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

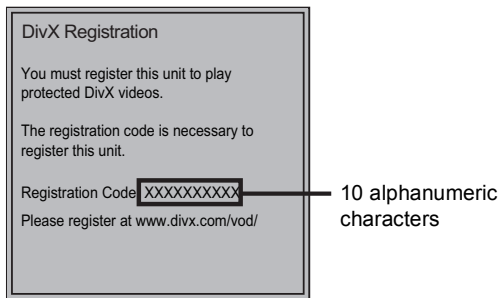
To obtain your registration code, locate the DivX VOD section in your device setup menu.

Go to vod.divx.com for more information on how to complete your registration.

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

Display the unit's registration code.

(⇒ 34, "DivX Registration" in "Others")



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

Cancel the unit's registration.

(⇒ 34, "DivX Registration" in "Others")

Press [◀, ▶] to select "Yes" in "DivX Registration".

Use the deregistration code to cancel the registration in www.divx.com.

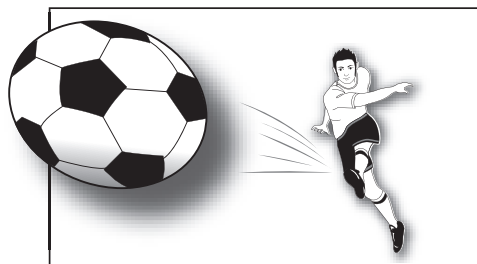
Regarding DivX VOD content that can only be played a set number of times

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

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

Enjoying 3D video

You can enjoy powerful 3D videos with realistic sensations by connecting this unit with a High Speed HDMI Cable to a 3D compatible TV.



The image is an illustration.

When playing back a disc that has recorded titles with a 2 screen structure (Side by side) etc. which can be enjoyed in 3D, it will playback in accordance with the 3D settings on the TV, regardless of the settings mentioned to the table below.

- Screen displays, such as Playback menu, will not display correctly.

Preparation

Connect 3D compatible TV to an HDMI AV OUT terminal of this unit using a High Speed HDMI Cable. (⇒ 8, 9)

- Perform the necessary preparations for the TV.

Method of playback is the same as normal disc playback. (⇒ 17)

- Playback following the instructions displayed on the screen.

3D settings

Perform the following settings as necessary.

3D BD-Video Playback	It is also possible to play back 3D discs in 2D (conventional video). (⇒ 30)
3D Type	If 3D video cannot be played back in 3D, change the settings as required by the connected TV format. (⇒ 32) <ul style="list-style-type: none"> • Change the settings for 3D on the TV also when "Side by side" is selected.
[BDT310] HDMI(SUB) Output Mode	If the amplifier/receiver is connected to the HDMI AV OUT SUB terminal (⇒ 9), set to "V.OFF(Video Off)". (⇒ 32) <ul style="list-style-type: none"> • HDMI (SUB) V.OFF LED on this unit will light. (⇒ 32)
3D Playback Message	Hide the 3D viewing warning screen. (⇒ 32)
Graphic Display Level	Adjust the pop-up position for the playback menu or message screen etc. (⇒ 29)

Useful functions

- 1 While playing
Press [**3D**].
- 2 Select an item, then press [OK].

Signal Format	Original	Keep original picture format.
	Side by side	3D picture format comprising of left and right screens.
	2D to 3D	Converts 2D pictures to 3D effect.
3D Picture Mode	Normal	Playback pictures with normal 3D effects.
	Soft	You can enjoy 3D pictures with a feeling of broadness, holding back the depth perception.
	Manual Settings	Set 3D effect manually. Distance Set the amount of depth perception. Screen Type Selects how the screen appears during 3D playback (flat or round). Frame Width Set the amount of feathering at the edge of screen. Frame Colour Set the colour of feathering at the edge of screen.

These functions are also accessible by pressing [OPTION] and selecting "3D Settings".



- Depending on the contents, displayed items are different.
- Please refrain from viewing 3D images if you do not feel well or are experiencing visual fatigue.
In the event that you experience dizziness, nausea, or other discomfort while viewing 3D images, discontinue use and rest your eyes.
- Depending on the connected TV, the video being played back might switch to 2D video due to changes in resolution etc. Check the 3D setting on the TV.
- 3D video might not output the way it is set in "HDMI Video Format" or "24p Output" (⇒ 32).

Playing still pictures

BD DVD CD SD USB

(BD-RE, DVD-R/-R DL, CD-R/RW, SD Card, USB device)

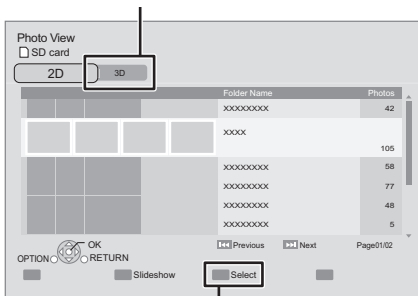
In order to play back 3D still pictures (MPO), this unit should be connected to a Full HD 3D compatible TV via an HDMI terminal.

1 Insert the media.

When the contents menu is displayed, press [▲, ▼, ◀, ▶] to select the item. (⇒ 17)

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

"3D" : 3D still pictures (MPO) are sorted here. To play back in 3D, select from "3D". (Still pictures in "2D" are played back in 2D)



To select folders or still pictures that are played on slideshow.

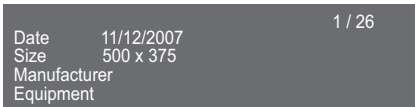
3 Press [▲, ▼, ◀, ▶] to select the still picture and press [OK].

Press [◀, ▶] to display the previous or next still picture.

To show DIRECT NAVIGATOR screen or exit the screen Press [TOP MENU].

■ To show the still picture properties

While playing, press [STATUS] once or twice.



To exit the screen

Press [STATUS].

Useful functions

1 Press [OPTION].

2 Select an item, then press [OK].

While Photo View screen is displayed

Slideshow	Start Slideshow You can display still pictures one by one at a constant interval.
	Interval Change the display interval.
	Transition Effect Set display method.
	Repeat Play Repeat slideshow.
	Random Soundtrack Background music is played in random order.
	Soundtrack An MP3 on the USB device can be played back during the slideshow of JPEG on the USB device or the SD card. (A music CD also can be played back during the slideshow of JPEG on the SD card.)

While playing

Start Slideshow	Start the slideshow.
Screen Aspect	Switch the screen mode.
Status	Show the still picture properties.
Rotate RIGHT	Rotate the still picture.
Rotate LEFT	
Wallpaper	Set the still picture to the wallpaper of HOME screen. (⇒ 17)
Graphic Display Level	Pop-up position for the playback menu or message screen etc. can be adjusted during 3D playback.



- Depending on the condition of the unit and media contents, displayed items are different.
- 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.
- When both the music CD and the USB device with recorded MP3 is inserted into this unit, the music CD has priority to be played back as background music.
- Still pictures displayed as "⊗" cannot be played back with this unit.

Playing music

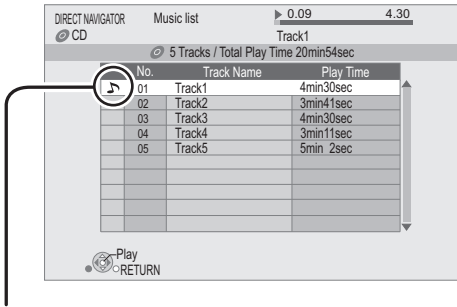
DVD CD USB

(DVD-R/-R DL, music CD, CD-R/RW, USB device)

1 Insert the media.

When the contents menu is displayed, press
[▲, ▼, ◀, ▶] to select the item. (⇒ 17)

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



“🎵” indicates the track currently playing.

To show DIRECT NAVIGATOR screen or exit the screen
Press [TOP MENU].

Playing a track in another folder

- 1 While DIRECT NAVIGATOR screen is displayed
Press [OPTION].
- 2 Press [▲, ▼] to select “Select Folder”
and press [OK].



- You cannot select folders that contain no compatible tracks.

Enjoying VIERA CAST

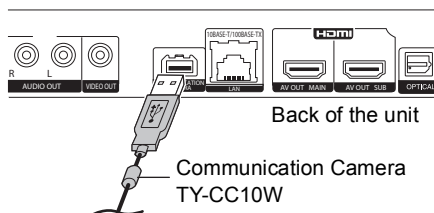
You can access a selection of Internet services from the Home screen with VIERA CAST, for example YouTube, Picasa Web Albums. (Current as of December 2010)

Preparation

- Network connection (⇒ 11)
- Network setting (⇒ 13)

To enjoy video communication (ex. Skype™) :

- Connect this unit with optional Communication Camera (TY-CC10W or compatible equipment). Depending on the area, this optional camera may not be available. Please consult your local Panasonic dealer for advice.



- **BDT110** : When this unit is connected by wireless LAN connection, connect the Communication Camera via the USB port on the front of this unit.

- For operating method refer to the following website.
<http://panasonic.jp/support/global/cs/>
(This site is in English only.)

1 Press [VIERA CAST].

- The video communication service can be accessed directly by [**S**] button.
- Message is displayed. Please read these instructions carefully and then press [OK].

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

Operable buttons:

[▲, ▼, ◀, ▶], [OK], [RETURN], coloured buttons, number buttons

VIERA CAST Home screen;



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

To exit from VIERA CAST

Press [EXIT], [HOME] or [TOP MENU].



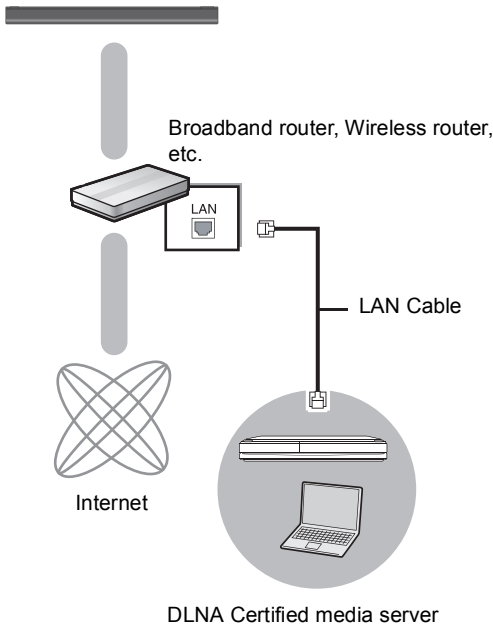
- When playing content from a disc/SD card and/or USB device VIERA CAST cannot be accessed by pressing [VIERA CAST].
- In the following cases, settings are possible using "Internet Content Settings" (⇒ 33)
 - When restricting the use of VIERA CAST.
 - When the audio is distorted.
 - When wrong time is displayed
- If using slow Internet connection, the video may not be displayed correctly. A high-speed Internet service with a speed of at least 6 Mbps is recommended.
- Be sure to update the firmware when a firmware update notice is displayed on the screen. If the firmware is not updated, you will not be able to use the VIERA CAST function. (⇒ 15)
- 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.

Playing contents saved on other equipment

You can enjoy viewing a content saved on other equipment (Windows 7 operating system, smartphone, etc.) connected to the home network with this unit.

Preparation

- ① Perform network connection (⇒ 11) and network setting (⇒ 13) of this unit.
- ② Perform Home Network settings of the connected equipment.



For details about the setting and operation method of connected equipment, and compatible equipment, refer to the following Website and the operating instructions for each item of equipment.
<http://panasonic.jp/support/global/cs/>
(This site is in English only.)

Playing back contents on the DLNA server (DLNA)

It is possible to play back the video, still pictures, and music in the shared folder of the Windows 7 operating system. You can also enjoy viewing the video and still pictures recorded in Panasonic DLNA compatible recorders (DIGA).

- The countries where DIGA is available are limited. Refer to following site for availability.

<http://panasonic.jp/support/global/cs/>

Preparation

Perform steps ① and ②.

When connected to a PC with Windows 7 installed

- Add the contents and folder to the Windows Media® Player library.
- Playlist of Windows Media® Player can play back only the contents that are stored in the libraries.

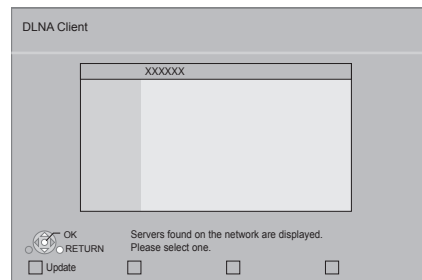
Regarding setting method of Windows 7 refer to its instructions or help.

When connected to a Panasonic DLNA compatible recorder (DIGA)

When a message requesting operation of the equipment to be registered is displayed, perform steps 1-4.

- 1 Press [HOME].
- 2 Press [▲] to select "Network".
- 3 Press [▲] to select "Home Network".
- 4 Press [▲] to select "DLNA Client".
 - A list of equipment connected via the network is displayed.
 - This list can be updated by pressing the red button on the remote control.

e.g.



- 5 Press [▲, ▼] to select the equipment to playback the contents, and press [OK].

(Continued on the next page.)

6 Press [▲, ▼, ◀, ▶] to select the item to playback (folder), and press [OK].

- You may be able to use convenient functions depending on the disc or content by pressing [OPTION] or [DISPLAY].
- Control Panel is displayed once the playback starts. Operation can be performed with [▲, ▼, ◀, ▶], [OK] and [EXIT].

Control Panel

e.g.



- Press [OK] if the Control Panel is not displayed.
- Press [RETURN] to hide the Control Panel.

To exit from Home Network

Press [EXIT], [HOME] or [TOP MENU].

Play back the contents in the DLNA server using DMC

It is possible to play back the video or still pictures in the shared folder of the DLNA server by controlling with DLNA DMC (Digital Media Controller) compatible equipment.

- Windows Media® Player and a smartphone that has the compatible application serve as the DLNA server and the DMC.

Preparation

Perform steps ① and ②. (⇒ 25)

- ③ Add the contents and folder to the libraries of the Windows Media® Player or the smartphone, etc.
 - Playlist of Windows Media® Player can play back only the contents that are stored in the libraries.
- ④ Perform the “Remote Device Settings”. (⇒ 34)
 - The maximum number of equipment that can be registered is 16.

1 Press [HOME].

2 Press [▲] to select “Network”.

3 Press [▲] to select “Home Network”.

4 Press [▶] to select “Media Renderer”.

5 Operate the DMC compatible equipment.

To exit from Media Renderer screen

Press [HOME].



- Ensure that the router for your home network has adequate security system to prevent unauthorized access.
- Menu structure will be different depending on the equipment connected to this unit. Select the contents by repeating the operation.
- Depending on the contents and the connected equipment, playback may not be possible.
- Items displayed in grey on the display cannot be played back by this unit.
- This unit can be played back via connected equipment only when controlled using DMC.
- Depending on the performance of the connected PC, video frames may be dropped during playback, or video may not playback at all.

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.

* **BDT310** : Only when connecting via an HDMI AV OUT MAIN terminal on this unit.

Preparation

- ① Set “VIERA Link” to “On” (⇒ 33).
(The default setting is “On”.)
- ② Set the “HDAVI Control” operations on the connected equipment (e.g., TV).
- ③ 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.

Automatic input switching Power on link

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

- When play starts on the unit
- When an action that uses the display screen is performed (e.g., DIRECT NAVIGATOR screen)
- BD-Video, DVD-Video:
When playback stops, the TV will automatically return to TV tuner mode.
- **BDT310** : When “HDMI(SUB) Output Mode” (⇒ 32) is set to “Normal” and the power of the device connected to the HDMI AV OUT SUB is turned on, the Power on link to the device connected to the HDMI AV OUT MAIN will not work.

Power off link

All connected equipment compatible with “HDAVI Control”, including this unit, automatically turns off when you switch the television off.

Playing music continuously even after turning off power to the television

When the unit is connected to a Panasonic TV (VIERA) that supports HDAVI Control 2 or later and an amplifier/receiver supports VIERA Link.

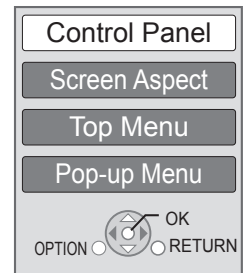
- ① While playing music
Press [OPTION].
- ② Press [**▲**, **▼**] to select “TV Power” and press [OK].

Easy control only with VIERA remote control

Only TV supports “HDAVI Control 2” or later

By using the TV remote control, you can play discs using the “Control Panel” and display the Top Menu or Pop-up Menu, etc.

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



- The OPTION menu may not appear while the Top Menu for BD-Video or DVD-Video is displayed.

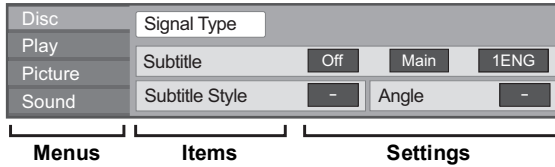


- The buttons that you can use for this unit vary depending on the TV. For details, refer to the operating instructions of the TV.
- The operation of this unit may be interrupted when you press incompatible buttons on the TV remote control.
- This unit supports “HDAVI Control 5” function. “HDAVI Control 5” is the newest standard (current as of December, 2010) for Panasonic’s HDAVI Control compatible equipment. This standard is compatible with Panasonic’s conventional HDAVI equipment.
- 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.
- Please refer to individual manuals for other manufacturers’ equipment supporting VIERA Link function.

Playback menu

1 Press [DISPLAY].

e.g., BD-Video



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 screen

Press [DISPLAY].

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

Regarding Language : (⇒ 40)

Disc

Signal Type

Primary Video	Video	The recording method of original video appears.
	Soundtrack	Select the type of audio or language.
Secondary Video	Video	Select on/off of images. The recording method of original video appears.
	Soundtrack	Select on/off of audio and the language.

Video

The recording method of original video appears.

Soundtrack

Show or change the soundtrack.

Subtitle

Turn the subtitle on/off, and change the language depending on the media.

Subtitle Style

Select the subtitle style.

Audio channel

Select the audio channel number.
(⇒ 18, "Changing audio")

Angle

Select the number of the angle.



- Some items may be changed only on the disc specific menu. (⇒ 17)

Play

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.




Select "Off" to cancel.

Random

Select whether or not to play random.

Playback Information Window **BDT310** **BDT210**

Displays the following.

	Audio/video attribute information of disc.
	Settings status of "Digital Audio Output" (⇒ 31).
	HDMI output information. (BDT310 First: HDMI(MAIN), Second: HDMI(SUB))

Press [RETURN] to exit.

Graphic Display Level

(Only when "Full HD" is selected in "3D Type" (⇒ 32).)

Pop-up position for the playback menu or message screen etc. can be adjusted during 3D playback.

Picture

Mode

Select the picture quality mode during play.

- If you select "User", you can make further adjustments. Press [▶] to select "Picture Adjustment" and press [OK].
- 3D NR: Reduces the rough noise in the background to give a greater feeling of depth. When "24p Output" is set to "On", this function may not operate. (⇒ 32)
- Integrated NR: Smooths block noise and reduces the smudging that appears around contrasting sections of the picture.

Advanced Settings

Chroma Process

The high-resolution processing of HDMI chroma signals produces a high-resolution picture with rich picture quality.

Detail Clarity

The picture is sharp and detailed.

Super Resolution

Pictures of normal image quality are corrected to sharp and detailed images when output as 1080i/1080p from HDMI AV OUT.

Progressive

Select the method of conversion for progressive output to suit the type of material being played.

- If the video is disrupted when "Auto" is selected, select either "Video" or "Film" depending on the material to be played back.

24p

Movies and other material recorded on DVD-Video at 24p are output at 24p.

- Only when you have selected "On" in "24p Output" (⇒ 32) and play discs recorded at a rate of 60 fields per second.

Sound

Sound Effects^{*1 *2}

Select the sound effect.

- **Digital Tube Sound** **BDT310** **BDT210** : This feature gives you warm sound, like that produced by a vacuum tube amplifier.
- **Re-master**: This feature gives you brighter sound by increasing the high frequency portion of the audio. (Discs recorded at 48 kHz or less)
Recommended setting

Re-master 1	Pop and rock
Re-master 2	Jazz
Re-master 3	Classical

- **Night Surround**: Enjoy a movie with powerful sound even when the volume is kept low at night. The audio is set in such a way that it can be heard easily.

Dialogue Enhancer^{*2}

The volume of the centre channel is raised to make dialog easier to hear.

High Clarity Sound **BDT310** **BDT210**

When connected to TV via the HDMI terminal for outputting image, it produces clearer sound.

- Only when you have selected "Enable" in "High Clarity Sound". (⇒ 31)

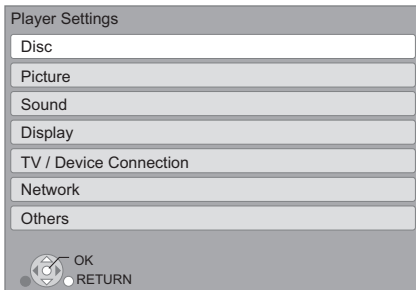
^{*1} Not every function can be set individually.

^{*2} This function is effective for audio from the HDMI terminal or the OPTICAL terminal only when "Digital Audio Output" is set to "PCM" (⇒ 31). (However, in this case, audio is output as 2ch from the OPTICAL terminal.)

Setup menu

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

- 1 Press [HOME].
- 2 Press [OK] to select "Setup".
- 3 Press [▼] to select "Player Settings".



- 4 Press [▲, ▼] to select the menu and press [OK].
- 5 Press [▲, ▼] to select the item and press [OK].
If there are any other items, repeat these steps.
- 6 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.

About the password

The following items use the same password.
Don't forget your password.

- "DVD-Video Ratings"
- "BD-Video Ratings"
- "Lock" (⇒ 33)

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 number buttons when the password screen is shown.

BD-Video Ratings

Set an age limit of BD-Video play.

- Follow the on-screen instructions. Enter the 4-digit password with the number buttons when the password screen is shown.

3D BD-Video Playback

Select the playback method of 3D compatible video software.

Soundtrack Preference

Choose the language for audio.

- If "Original" is selected, the original language of each disc will be selected.
- Enter a code (⇒ 40) with the number buttons when you select "Other ****".

Subtitle Preference

Choose the language for the subtitle.

- If "Automatic" is selected and the language selected for "Soundtrack Preference" is not available, subtitles of that language will automatically appear if available on that disc.
- Enter a code (⇒ 40) with the number buttons when you select "Other ****".

Menu Preference

Choose the language for the disc menus.

- Enter a code (⇒ 40) with the number buttons when you select "Other ****".

BD-Live Internet Access (⇒ 19)

You can restrict Internet access when BD-Live functions are used.

- If "Limit" is selected, Internet access is permitted only for BD-Live contents which have content owner certificates.

Subtitle Text

Select a suitable item according to the language used for DivX or MKV subtitles text (⇒ 18).

- This item is displayed only after playing back a file.

Picture

Still Mode

Select the type of picture shown when you pause playback.

Automatic	Automatically selects the type of picture shown.
Field	Select if jittering occurs when "Automatic" is selected.
Frame	Select if small text or fine patterns cannot be seen clearly when "Automatic" is selected.

Seamless Play

The chapter segments in playlists are played seamlessly.

- Select "On", when the picture freezes for a moment at the chapters segment in playlists.

NTSC Contents Output

Select PAL60 or NTSC output when playing NTSC discs.

Sound

Dynamic Range Compression

You can listen at low volumes but still hear dialog clearly. (Dolby Digital, Dolby Digital Plus and Dolby TrueHD only)

- "Auto" is effective only when playing Dolby TrueHD.

Digital Audio Output

Press [OK] to show the following settings.

Dolby D/Dolby D +/Dolby TrueHD DTS/DTS-HD MPEG Audio

Select the audio signal to output.

- Select "PCM", when the connected equipment cannot decode the respective audio format. This unit decodes the audio format and transmits to the connected equipment.
- Not making the proper settings may result in noise.

BD-Video Secondary Audio

Select whether to mix or not mix the primary audio and secondary audio (including the button click sound). (⇒ 19)

- If "Off" is selected, the unit outputs the primary audio only.

PCM Down Conversion

Select how to output audio with a sampling frequency of 96 kHz for the PCM output from the DIGITAL AUDIO OUT.

- If "On" is selected, the signals that are converted to 48 kHz are output.
- If "Off" is selected, and the connected equipment does not support 96 kHz, the sound will not be output normally.
- Signals are converted to 48 kHz despite the settings in the following cases:
 - when the signals have a sampling frequency of 192 kHz
 - when the disc has copy protection
 - when "BD-Video Secondary Audio" is set to "On"

Downmix

Select the downmix system of multi-channel to 2-channel sound.

- Select "Surround encoded", when the connected equipment supports the virtual surround function.
- There is no effect on "Bitstream" via HDMI AV OUT and DIGITAL AUDIO OUT.
- The audio will be output in "Stereo" in the following cases:
 - AVCHD playback
 - Playback of secondary audio (including the button click sound).

7.1ch Audio Reformating **BDT310** **BDT210**

Surround sound with 6.1ch or less is automatically expanded and played back at 7.1ch.

- If "Off" is selected, sound is played over the original number of channels.
(Note that in the case of 6.1ch audio, playback will be at 5.1ch.)
- Audio reformatting is enabled in the following cases:
 - When you have selected "PCM" in "Digital Audio Output".
 - When the audio is Dolby Digital, Dolby Digital Plus, Dolby TrueHD or LPCM.
 - BD-Video playback

High Clarity Sound **BDT310** **BDT210**

When connected to TV via the HDMI terminal for outputting image, it produces clearer sound.

- Set to "Enable" and then set "High Clarity Sound" on the Playback menu to "On". (⇒ 29)

Audio Delay

Synchronization between picture and sound is corrected by adjusting the delay time of the audio output.

Display

On-Screen Messages

Choose whether to show status messages automatically.

On-Screen Language

Choose the language for menus and on-screen messages.

Screen Saver Function

This is to prevent burn-in on the screen.

- When this is set to "On":
If there is no operation for 10 minutes or more, DIRECT NAVIGATOR screen switches to HOME menu automatically.
- While playing and pausing, etc., this function is not available.
- As for Music [CD-DA] or MP3, regardless of the setting, if there is no operation for a while, DIRECT NAVIGATOR screen switches to the other states automatically.

Front Panel Display

Changes the brightness of the unit's display.

- If "Automatic" is selected the display is dimmed during playback and bright except during playback.

HDMI(SUB) V.OFF LED Control **BDT310**

Set to light the HDMI (SUB) V.OFF LED or not.

- This will light when "HDMI(SUB) Output Mode" is set to "V.OFF(Video Off)", and the power of the connected equipment to the HDMI AV OUT SUB is on.

Software Licence

Information about the software used by this unit is displayed.

TV / Device Connection

3D Settings

Press [OK] to show the following settings:

3D Type

Select the format of the connected TV.

- Change the settings for 3D on the TV also when "Side by side" is selected.



3D Playback Message

Set to display or hide the 3D viewing warning screen when playing back the 3D compatible video software.

TV Aspect

Set to match the type of television connected.

When connected to a 4:3 aspect television and playing 16:9 ratio image:

4:3 Pan & Scan	The sides are cut off so the picture fills the screen. When playing BD-Video, video is output as "4:3 Letterbox".	
4:3 Letterbox	Black bands appear at the top and bottom of the picture.	

When connected to a 16:9 widescreen television and playing 4:3 ratio image:

16:9	Video is displayed as a 4:3 ratio image in the centre of the screen.
16:9 full	Video is displayed as a horizontally stretched 16:9 image.

HDMI Connection

Press [OK] to show the following settings:

HDMI(SUB) Output Mode **BDT310**

Set to output the video from the HDMI AV OUT SUB terminal or not.

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 "Automatic" is selected, automatically selects the output resolution best suited to the connected television.
- To enjoy high-definition video up-converted to 1080p, you need to connect the unit directly to 1080p compatible HDTV (High Definition Television). If this unit is connected to an HDTV through other equipment, the other must also be 1080p compatible.

24p Output

When this unit is connected to a TV supporting 1080/24p output using an HDMI cable, movies and other material recorded at 24p are output at 24p.

- When playing DVD-Video, set to "On" and then set "24p" in "Picture" (⇒ 29) to "On"
- When BD-Video images other than 24p are played, images are output at 60p.
- 24p :
A progressive image recorded at a rate of 24 frames per second (motion-picture film). Many BD-Video movie contents are recorded in 24 frames/second in accordance with the film materials.

HDMI Colour Mode

This setting is for selecting colour-space conversion of the image signal when the unit is connected using an HDMI cable.

HDMI Audio Output

This setting selects whether or not to output audio from HDMI.

- Select "Off" when the TV is connected to this unit via an HDMI terminal, and this unit is also connected to other devices, such as an amplifier/receiver via an OPTICAL terminal.

VIERA Link

Set to use "HDAVI Control" function when connected with an HDMI cable to a device that supports "HDAVI Control".

- Select "Off" when you do not want to use "HDAVI Control".

Deep Colour Output

This setting is for selecting whether to use Deep Colour Output when a television that supports Deep Colour is connected.

Contents Type Flag

Depending on the playback content, the TV will output adjusting to the optimal method when a TV that supports this function is connected.

TV System

Perform the setup so it matches the TV System of the connected TV.

- When NTSC contents are played, they are outputted in the signal format specified in the "NTSC Contents Output", irrespective of the settings here.

Network

Network Easy Setting (⇒ 13)

Network Settings

Perform network-related settings individually.

Press [OK] to show the following settings:

LAN Connection Mode

Select connection method.

Wireless Settings

This allows the Wireless router and connection settings to be set and the current connection settings and connection state to be checked when a wireless connection is used.

Connection Setting

The Wireless router connection wizard will be displayed.

Double Speed Mode Setting (2.4GHz)

When a 2.4 GHz wireless format is used, this setting sets the connection speed.

- If you connect using the "Double Speed Mode (40MHz)", two channels use the same frequency band, and there is consequently a greater risk of reception interference. This can cause the connection speed to drop or the connection to become unstable.

IP Address / DNS Settings

This is for checking the state of the network connection and setting the IP address and DNS-related.

Press [OK] to show the respective setting.

- "Connection Speed Setting" is enabled only when "Connection Speed Auto-Config" is turned "Off".

Proxy Server Settings

This is for checking the state of connection with the Proxy server and performing settings.

Press [OK] to show the respective setting.

Internet Content Settings (⇒ 24) (VIERA CAST)

Press [OK] to show the following settings:

Lock

You can restrict the usage of VIERA CAST.

- Follow the on-screen instructions. Enter the 4-digit password with the number buttons when the password screen is shown.

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.

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.

Summer Time

- Select "On" when using Daylight Saving time.

Network Drive Connection

It is possible to access the shared folder of equipment not compatible with DLNA, such as the Windows XP operating system, and play back video, still pictures, and music on this unit.

For the setting and operation method of connected equipment, refer to the following Website.

<http://panasonic.jp/support/global/cs/>
(This site is in English only.)

(Continued on the next page.)

Remote Device Settings (⇒ 26)

Press [OK] to show the following settings:

Remote Device Operation

Enable to operate by DMC.

- If “On” is selected, “Quick Start” is fixed to “On”.

Device Name Entry

Set the name of this unit to be displayed on the connected equipment.

Registration Type

Automatic	Allow connection to all the equipment that is accessing this unit.
Manual	Set the permission of the connection individually for the equipment that is accessing this unit.

Remote Device List

Registering/deregistering of the displayed equipment can be performed when “Manual” in “Registration Type” is selected.

MAC Address

Displays the MAC address of this unit.

Others

Remote Control

Change the remote control code if other Panasonic products react to this remote control.

Quick Start

Speed of startup from standby mode is increased.

- Internal control unit will be powered when it is set to “On” so compared to when the setting is “Off” the following will occur.
 - Idle power consumption will increase. (about the power consumption ⇒ 39)

Easy Setting

You can execute basic settings (“On-Screen Language”, “TV Aspect”, “Quick Start”, “Touch Free Sensor” **BDT310** **BDT210**).

Default Settings

This returns all values in the Setup menu and the playback menu, except for “Remote Control”, “On-Screen Language”, “LAN Connection Mode”, “Wireless Settings”, “IP Address / DNS Settings”, “Proxy Server Settings”, “Lock”, “DVD-Video Ratings” and “BD-Video Ratings” etc. to the default settings.

Touch Free Sensor **BDT310** **BDT210**

Press [OK] to show the following settings:

Sensor (⇒ 5)

Tray is opened and closed by waving your hands above the top part of this unit.

Sound Level

Adjust the volume of the sensor.

DivX Registration (⇒ 20)

You need this registration code to purchase and play DivX Video-on-Demand (VOD) content.

System Information

Display firmware version of this unit and wireless LAN module.

Firmware Update (⇒ 15)

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.

Update Now

You can update the firmware manually if a firmware update is available.

Troubleshooting guide

Before requesting service, please perform the following checks.

If the problem remains unresolved, consult your dealer for instructions.

Do you have the latest firmware installed?

Firmware updates may be released to correct operating irregularities that are discovered with certain movies.

(⇒ 15)

The following do not indicate a problem with this unit:

- Regular disc rotating sounds.
- Image disturbance during search.
- Image disturbance when replacing 3D discs.

■ Unit doesn't respond to remote control or front panel buttons.

Press and hold [⏻/⏪] on the main unit for 3 seconds.

- If still unable to turn the unit off, disconnect the AC mains lead, wait 1 minute, then reconnect the AC mains lead.

■ Cannot eject disc.

The unit may have a problem.

- ① While the unit is off, press and hold [OK], the yellow button and the blue button on the remote control at the same time for more than 5 seconds.
 - “00 RET” is displayed on the unit's display.
- ② Repeatedly press [▶] (right) on the remote control or [⏻/⏪] on the unit until “06 FTO” is displayed on the unit's display.
- ③ Press [OK] on the remote control or [▲ OPEN/CLOSE] on the unit.

General operation

To return to the factory preset.

- Select “Yes” in “Default Settings” in the Setup menu. (⇒ 34)

To return all settings to the factory preset.

- Reset the unit as follows:
- ① While the unit is off, press and hold [OK], the yellow button and the blue button on the remote control at the same time for more than 5 seconds.
 - “00 RET” is displayed on the unit's display.
- ② Repeatedly press [▶] (right) on the remote control or [⏻/⏪] on the unit until “08 FIN” is displayed on the unit's display.
- ③ Press and hold [OK] on the remote control or [▲ OPEN/CLOSE] on the unit for at least 3 seconds.

This unit is turned off when the input for the TV is switched.

- This is a normal phenomenon when using VIERA Link (HDAVI Control 4 or later). For details please read the operating instructions for the TV.

The remote control doesn't work properly.

- Change the batteries in the remote control. (⇒ 4)
- The remote control and main unit are using different codes. If “SET □” is displayed on the unit's display when a button is pressed on the remote control, change the code on the remote control. (⇒ 34)

The TV tuner mode is not displayed when the TV is switched on.

- This phenomenon may occur, depending on the TV setting, when “Quick Start” is set to “On”.
- Depending on the TV, this phenomenon may be prevented by reconnecting the HDMI cable to a different HDMI input terminal or by changing the HDMI auto connection setting.

You have forgotten your ratings password. You want to cancel the ratings level.

- The ratings level returns to the factory preset.
- ① While the unit is on, press and hold [OK], the yellow button and the blue button on the remote control at the same time for more than 5 seconds.
 - “00 RET” is displayed on the unit's display.
- ② Repeatedly press [▶] (right) on the remote control or [⏻/⏪] on the unit until “03 VL” is displayed on the unit's display.
- ③ Press [OK] on the remote control or [▲ OPEN/CLOSE] on the unit.

This unit does not recognize the USB connection correctly.

- If USB device is connected to this unit while playing a disc or in a video communication the connection will not be recognized. Press [HOME] and reconnect USB device.
- [BDT310] [BDT210] : USB memory and USB HDD are not recognized via the rear USB port of this unit.
- Disconnect and reconnect the USB cable. If it still does not recognize the connection, turn this unit off and on again.
- USB devices connected using a USB extension cable other than the supplied with the Wireless LAN Adaptor DY-WL10 (optional) [BDT110] or a USB hub may not be recognized by this unit.
- If you connect USB HDD to this unit, use USB extension cable that is supplied with the HDD.
- If two USB memory and USB HDD are connected simultaneously, they will not be recognized by this unit.

Picture

The images from this unit do not appear on the television.

Picture is distorted.

- An incorrect resolution is selected in “HDMI Video Format”. Reset the setting as follows:
 - ① While the unit is on, press and hold [OK], the yellow button and the blue button on the remote control at the same time for more than 5 seconds.
 - “00 RET” is displayed on the unit’s display.
 - ② Repeatedly press [▶] (right) on the remote control or [⏪/I] on the unit until “04 PRG” is displayed on the unit’s display.
 - ③ Press and hold [OK] on the remote control or [▲ OPEN/CLOSE] on the unit for at least 3 seconds.
 - Set the item again. (⇒ 32)
- When Dolby Digital Plus, Dolby TrueHD, and DTS-HD audio are not output in bitstream, select “Yes” in “Default Settings” and make proper settings. (⇒ 34)
- The unit and television are using different video systems. While stopped, keep pressing [■STOP] and [▲ OPEN/CLOSE] on the main unit for 5 or more seconds. The system switches from PAL to NTSC or vice versa.
- The system used on the disc doesn’t match your television.
 - PAL discs cannot be correctly viewed on an NTSC television.
 - This unit can convert NTSC signals to PAL60 for viewing on a PAL television (“NTSC Contents Output” in the “Picture”).
- When “3D BD-Video Playback” in the Setup menu is set to “Automatic”, images may not be output depending on the connection method. After removing the disc from this unit, select “Set before play” in the Setup menu, and select “2D Playback” in the setup screen displayed when playing 3D discs. (⇒ 30)

Video is not output.

- **BDT310** **BDT210** : Set “High Clarity Sound” in the playback menu to “Off” to use the VIDEO OUT terminal. (⇒ 29)
- **BDT310** : Video from the HDMI AV OUT SUB terminal is not output when the “HDMI(SUB) Output Mode” is set to “V.OFF(Video Off)”. (⇒ 32)

Video is not output in high-definition.

- Confirm that “HDMI Video Format” in the Setup menu are set properly. (⇒ 32)

3D video is not output.

- Is there a non-3D compatible amplifier/receiver connected between this unit and a TV? (⇒ 9)
- **BDT310** : If there is a non-3D compatible amplifier/receiver connected to the HDMI AV OUT SUB terminal, set the “HDMI(SUB) Output Mode” to “V.OFF(Video Off)”. (⇒ 9)
- Are the settings on this unit and the TV correct? (⇒ 21)
- Is the amplifier/receiver that is connected between this unit and TV on?

3D video is not output correctly as 2D.

- Select “Set before play” in the Setup menu, and select “2D Playback” in the setup screen displayed when playing 3D discs. (⇒ 30)
- Discs that have recorded titles with Side by side (2 screen structure) and that can be enjoyed in 3D are played back in accordance with the settings of the TV.

A black band is displayed around the edge of the screen.

The aspect ratio of the screen is abnormal.

- Confirm the “TV Aspect” is set properly. (⇒ 32)
- Adjust the aspect setting on the television

Audio

Cannot switch audio.

- When connecting an amplifier/receiver using an OPTICAL terminal or an HDMI terminal, you cannot switch the audio if “Digital Audio Output” is set to “Bitstream”. Set “Digital Audio Output” to “PCM”. (⇒ 31)

Cannot hear the desired audio type.

- Check the connections and the “Digital Audio Output” settings.(⇒ 9 , 31)
- To output audio from a device connected with an HDMI cable, set “HDMI Audio Output” to “On” in the Setup menu. (⇒ 33)
- **BDT310** : When connecting this unit to a TV via an HDMI AV OUT MAIN and to an amplifier/receiver via an HDMI AV OUT SUB, set “HDMI(SUB) Output Mode” to “V.OFF(Video Off)”. (⇒ 9)

There is no sound coming out from the TV.

BDT310

- Audio may not output from the TV when the amplifier/receiver is connected to the HDMI AV OUT SUB, and “HDMI(SUB) Output Mode” (⇒ 32) is set to “V.OFF(Video Off)”. In such a case, output audio from the amplifier/receiver. To output audio from the TV, set the “HDMI(SUB) Output Mode” to “Normal”.

Playback

Disc cannot be played.

- The disc is dirty. (⇒ 4)
- Check the region code. (⇒ 7)

Still pictures (JPEG) do not playback normally.

- The images that were edited on the PC, such as Progressive JPEG, etc., may not playback.

I can't playback BD-Live.

- The SD card is write-protected. (⇒ 7)
- Confirm that this unit is connected to the broadband Internet. (⇒ 11)
- Confirm the "BD-Live Internet Access" settings. (⇒ 30)
- Confirm an SD Card is inserted into the SD Card slot. (⇒ 16)

Network

I can't connect to the network.

- Confirm the network connection and settings. (⇒ 11, 13, 33)
- Check the operating instructions for each device and connect accordingly.

When using Wireless LAN connection, video from the DLNA Certified media server is not played back or video frames are dropped during playback.

- Higher transfer rate router such as 802.11n (2.4 GHz or 5 GHz) Wireless router may solve the problem. If you use 802.11n (2.4 GHz or 5 GHz) Wireless router, it is necessary to set the encryption type to "AES". Simultaneous use with a microwave, cordless telephone etc. at 2.4 GHz may result in connection interruptions or other problems.
- On the "Wireless Settings" screen (⇒ 33), the continuous lighting of at least 4 "Reception" indicators is the target for a stable connection. If 3 or fewer indicators are lit or the connection is being interrupted, change the position or angle of your Wireless router and see if the connection state improves. If there is no improvement, connect to a wired network and perform the "Network Easy Setting" (⇒ 13) again.

Messages

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

On the television

Cannot play.

- You inserted an incompatible disc.

Cannot play on this unit.

- You tried to play a non-compatible image.
- Confirm "SD" on the unit's display is not displayed and re-insert the card.

No disc is inserted.

- The disc may be upside down.

⊘ This operation is not available.

- Some operations are unsupported by the unit. For example;
 - BD-Video: During playback, reverse slow-motion or reverse frame-by-frame is not possible.

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.)

The wireless access point currently has a low network security setting. It is recommended to change to a higher setting.

- Authentication type for the Wireless LAN is set to "Open system", or the encryption type is set to "No encryption". It is recommended to encrypt for safety reasons. For details, refer to the instructions of the Wireless router being used. Encryption is required when playing back video, etc., from DLNA compatible devices.

On the unit's display

F99

- The unit fails to operate properly. Press [⏻/I] on the main unit for 3 seconds to switch the unit to standby, then switch back on.

HDMI ONLY

- Some BD-Video discs can only be output with HDMI.

NET

- While connecting to a network.

No PLAY

- There is a viewing restriction on a BD-Video or DVD-Video. (⇒ 30)

No READ

- The media is dirty or badly scratched. The unit cannot play.

PLEASE WAIT

- The unit is carrying out internal process. This is not a malfunction. You cannot operate the unit while "PLEASE WAIT" is displayed.

REMOVE

- The USB device is drawing too much power. Remove the USB device.

SET □

("□" stands for a number.)

- The remote control and main unit are using different codes. Change the code on the remote control.

Press and hold [OK] and the indicated number button at the same time for more than 5 seconds.



U59

- The unit is hot. The unit switches to standby for safety reasons. Wait for about 30 minutes until the message disappears. Select a position with good ventilation when installing the unit. Do not block the ventilation hole on the side of the unit.

H□□ or F□□

("□" stands for a number.)

- There is something unusual.
- Check the unit using the troubleshooting guide. If the service number does not disappear, do the following.
 - ① Disconnect the plug from the household mains socket wait a few seconds, then reconnect it.
 - ② Press [⏻/I] to turn the unit on. (The unit may be fixed.)If the service number does not disappear despite doing the above, request service from the dealer. Inform the dealer of the service number when requesting service.

START

- The system is being restarted during the firmware update. Please do not turn off the unit.

UPD□/□

("□" stands for a number.)

- The firmware is being updated. Please do not turn off the unit.

FINISH

- The firmware update is complete.

Specifications

Signal system: PAL/NTSC

Operating temperature range: +5 °C to +35 °C

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

Video output: 1.0 Vp-p (75 Ω)/Pin jack: 1 system

Audio output: 2 Vrms (1 kHz, 0 dB)/Pin jack

Number of connectors: 2 channel: 1 system

Digital audio output: Optical digital output (Optical terminal)

HDMI AV output: Type A (19 pin) **BDT310**: 2 system

BDT210 **BDT110**: 1 system

This unit supports "HDAVI Control 5" function.

SD card slot: Connector: 1 system

USB slot: USB2.0: 2 system

Ethernet: 10BASE-T/100BASE-TX: 1 system

WLAN **BDT310** **BDT210**

Antenna: Tx 1, Rx 2

Standard Compliance: IEEE802.11n / IEEE802.11a / IEEE802.11g / IEEE802.11b

Transmission system: MISO-OFDM system, OFDM system, DSSS system

Frequency range: IEEE802.11n / IEEE802.11a :

5.15 GHz to 5.35 GHz

5.47 GHz to 5.725 GHz

IEEE802.11g / IEEE802.11b / IEEE802.11n :

2.4 GHz to 2.4835 GHz

Transfer rate (standard)*:

IEEE802.11n: Tx Max. 150 Mbps,

Rx Max. 300 Mbps

IEEE802.11g / IEEE802.11a: Max. 54 Mbps

IEEE802.11b: Max. 11 Mbps

Access Mode: Infrastructure mode

Security: WPA2-PSK (TKIP/AES)

WPA-PSK (TKIP/AES)

WEP (64 bit / 128 bit)

(This unit supports WPA and WPA2 encryption.)

LASER Specification

Class I LASER Product:

Wave length: 790 nm (CDs)/655 nm (DVDs)/405 nm (BDs)

Laser power: No hazardous radiation is emitted with the safety protection

Power supply: AC 220 to 240 V, 50 Hz

Power consumption: **BDT310**: Approx. 13 W

BDT210 **BDT110**: Approx. 11 W

Power consumption in standby mode: **Approx. 0.2 W**

Power consumption in quick start standby mode:

BDT310: **Approx. 4.3 W**

BDT210 **BDT110**: **Approx. 3.3 W**

Dimensions (W×D×H) Including the projecting parts:

430 mm×185 mm×35 mm

Mass: Approx. 1.6 kg

Specifications are subject to change without notice.

* Transfer rates are theoretical values; however, actual communication rate will vary according to communication environment or connected equipment.

File format

File format	Extension	Reference
MP3	“.MP3”, “.mp3”	ID3 tags (Only titles and the names of artists)
JPEG	“.JPG”, “.jpg”	<ul style="list-style-type: none"> MOTION JPEG and Progressive JPEG is not supported. You may not be able to play back the file if you have edited the folder structure or the file name on a PC or other device.
DivX	“.DIVX”, “.divx”, “.AVI”, “.avi”	<ul style="list-style-type: none"> The video file and subtitles text file are inside the same folder, and the file names are the same except for the file extensions. Some DivX and MKV file may not be played back, depending on the video resolution and frame rate condition.
	Subtitles text file “.SRT”, “.srt”, “.SUB”, “.sub”, “.TXT”, “.txt”	
MKV	“.MKV”, “.mkv”	<ul style="list-style-type: none"> The video file and subtitles text file are inside the same folder, and the file names are the same except for the file extensions. Some DivX and MKV file may not be played back, depending on the video resolution and frame rate condition.
	Subtitles text file “.SRT”, “.srt”, “.SSA”, “.ssa”, “.ASS”, “.ass”	

- With certain recording states and folder structures, the play order may differ or playback may not be possible.

Audio information

The audio output differs depending on which terminals are connected to the amplifier/receiver, and the settings on the unit. (⇒ 31, Digital Audio Output)

- The number of channels listed is the maximum possible number of output channels when connected to amplifier/receiver compatible with the respective audio format.

Terminal	“Digital Audio Output”	
	“Bitstream”	“PCM”
HDMI AV OUT	Outputs using original audio ¹	BD-Video : 7.1ch PCM ¹⁾²⁾³⁾ DVD-Video : 5.1ch PCM
OPTICAL	Dolby Digital/ DTS Digital Surround	Down-mixed 2ch PCM

¹ When “BD-Video Secondary Audio” is set to “On”, the audio will be output as Dolby Digital, DTS Digital Surround or 5.1ch PCM.

² **BDT110**: The maximum possible number of Dolby sound is 5.1ch PCM.

³ The audio output is amplified from 5.1ch or 6.1ch to 7.1ch depending on the DTS, Inc. specifications.

Supplemental information

■ TV code list

Brand	TV Code	Brand	TV Code
Panasonic	01/02/03/04	NEC	36
AIWA	35	NOBLEX	33
AKAI	27/30	NOKIA	25/26/27/60/61
BEKO	05/71/72/73/74	NORDMENDE	10
BENQ	58/59	OLEVIA	45
BRANDT	10/15	ONWA	30/39/70
BUSH	05	ORION	05
CENTREX	66	PEONY	49/69
CURTIS	05	PHILCO	41/48/64
DAEWOO	64/65	PHILIPS	05/06/46
DESMET	05	PHONOLA	05
DUAL	05	PIONEER	37/38
ELEMIS	05	PROVIEW	52
FERGUSON	10/34	PYE	05
FINLUX	61	RADIOLA	05
FISHER	21	SABA	10
FUJITSU	53	SALORA	26
FUNAI	63/67	SAMSUNG	32/42/43/65/68
GOLDSTAR	05/50/51	SANSUI	05
GOODMANS	05	SANYO	21/54/55/56
GRADIENTE	36	SCHNEIDER	05/29/30
GRUNDIG	09	SEG	05/69/75/76/77/78
HITACHI	05/22/23/40/41	SELECO	05/25
IRRADIO	30	SHARP	18
ITT	25	SIEMENS	09
JVC	17/30/39/70	SINUDYNE	05
KDS	52	SONY	08
KOLIN	45	TCL	31/33/66/67/69
KONKA	62	TELEFUNKEN	10/11/12/13/14
LG	05/50/51	TEVION	52
LOEWE	07/46	THOMSON	10/15/44
MAG	52	TOSHIBA	16/57
METZ	05/28/79	WHITE	
MITSUBISHI	05/19/20/47	WESTINGHOUSE	05
MIVAR	24	YAMAHA	18/41

■ Language code list

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

■ Display languages list

Display Language	Display Language	Display Language	Display Language
ENG	English	JPN	Japanese
FRA	French	CHI	Chinese
DEU	German	KOR	Korean
ITA	Italian	MAL	Malay
ESP	Spanish	VIE	Vietnamese
NLD	Dutch	THA	Thai
SVE	Swedish	POL	Polish
NOR	Norwegian	CES	Czech
DAN	Danish	SLK	Slovak
POR	Portuguese	HUN	Hungarian
RUS	Russian	FIN	Finnish
		ARA	Arabic
		HIN	Hindi
		PER	Persian
		IND	Indonesian
		MRI	Maori
		BUL	Bulgarian
		RUM	Romanian
		GRE	Greek
		TUR	Turkish
		*	Others

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CE 1731 

Declaration of Conformity (DoC)

Hereby, "*Panasonic Corporation*" declares that this product is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

Customers can download a copy of the original DoC to our R&TTE products from our DoC server:

<http://www.doc.panasonic.de>

Contact in the EU: Panasonic Services Europe, a Division of Panasonic Marketing Europe GmbH,
Panasonic Testing Centre, Winsbergring 15, 22525 Hamburg, Germany

This product is intended to be used in the following countries.

Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Iceland, Liechtenstein, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, United Kingdom, Switzerland

This product is intended for general consumer. (Category 3)

The WLAN feature of this product shall exclusively be used inside buildings.

This product on purpose to connect to access point of 2.4 GHz or 5 GHz WLAN.

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.



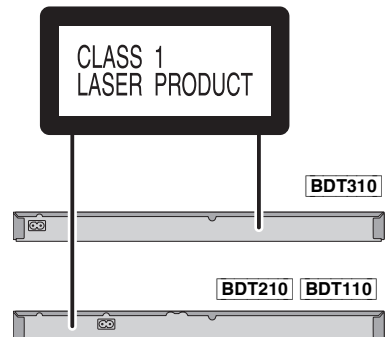
Note for the battery symbol (bottom two symbol examples):

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.

Cd

CAUTION	- VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. DO NOT STARE INTO BEAM. FDA 21 CFR/Class II (Ila)
CAUTION	- CLASS 1M VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. DO NOT VIEW DIRECTLY WITH OPTICAL INSTRUMENTS. IEC60825-1, +A2/CLASS 1M
ATTENTION	- RAYONNEMENT LASER VISIBLE ET INVISIBLE, CLASSE 1M. EN CAS D'OUVERTURE, NE PAS REGARDER DIRECTEMENT A L'AIDE D'INSTRUMENTS D'OPTIQUE.
FORSIGTIG	- SYNLIG OG USYNLIG LASERSTRÅLING KLASSE 1M. NÅR LAGET ER ÅBENT, UNDGÅ AT SE LIGE PÅ MED OPTISKE INSTRUMENTER.
VARO	- AVARTAESSA OLET ALTTIINA LUOKAN 1M NÄKYYVÄ JA NÄKYMÄTÖNTÄ LASERSÄTELYÄ. ÄLÄ KATSO OPTISELLA LAITTEELLA SUORAAN SÄTEESEEN.
WARNING	- KLASS 1M SYNLIG OCH OSYNLIG LASERSTRÅLNING NÅR DENNA DEL ÄR ÖPPNAD. BETRÄKTA EJ STRÅLEN DIREKT GENOM OPTISKT INSTRUMENT.
VORSICHT	- SICHTBARE UND UNSICHTBARE LASERSTRHLUNG KLASSE 1M. WENN ABDECKUNG GEÖFFNET, NICHT DIREKT MIT OPTISCHEN INSTRUMENTEN BETRACHTEN.
注意	- 打开时有可见及不可见激光辐射。避免光束照射。
注意	- ここを開く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。 VQL1V70

(Inside of product)



(Back of product)

Sales and Support Information

Customer Care Centre

- For customers within the UK: 0844 844 3852
- For customers within Ireland: 01 289 8333
- Visit our website for product information
www.panasonic.co.uk
- 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.pas-europe.com.
- 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.

Pursuant to at the directive 2004/108/EC, article 9(2)
Panasonic Testing Centre
Panasonic Marketing Europe GmbH
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