

Panasonic®

Operating Instructions Blu-ray Disc™ Player

Model No. DMP-BD77



Thank you for purchasing this product.
For optimum performance and safety, please read these instructions carefully.
Please keep this manual for future reference.

GN GC GA GJ GW

VQT3V42

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.

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.

For Australia and New Zealand

- This unit is intended for use in moderate climates.

Except Australia and New Zealand

- This unit is intended for use in tropical 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 place the unit on amplifiers/receivers or equipment that may become hot. The heat can damage the unit.
- Do not expose this unit to direct sunlight, high temperatures, high humidity, and excessive vibration.

Batteries

Mishandling of batteries can cause electrolyte leakage and may cause a fire.

- Danger of explosion if battery is incorrectly replaced. Replace only with the type recommended by the manufacturer.
- When disposing the batteries, please contact your local authorities or dealer and ask for the correct method of disposal.
- 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.

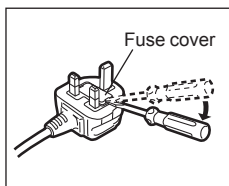
Remove batteries if you do not intend to use the remote control for a long period of time. Store in a cool, dark place.

(For the AC mains plug of three pins)

How to replace the fuse

Follow the instructions below.

1. Open the fuse cover with a screwdriver.



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

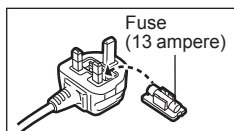


Table of contents

Getting started

Safety precautions	2
Accessories	4
Unit and media care	4
Playable media	5
Control reference guide	7

Getting started

Connections and settings

STEP 1 : Connecting to a TV	8
STEP 2 : Connecting to an amplifier/receiver	9
STEP 3 : Connecting to the network	10
STEP 4 : Connecting the AC mains lead	10
STEP 5 : Settings	11
STEP 6 : Reprogramming the remote control	13

Connections and settings

Playback

Inserting or removing media	14
HOME menu	14
Multi User Mode	15
Playback	16
Enjoying Network Service	18
Home Network feature	19
"HDMI CEC"	21

Playback

Settings

Option menu	22
Setup menu	24

Settings

Reference

Troubleshooting guide	29
Messages	32
Supplemental information	33
Specifications	34

Reference

- **Restriction on use of unauthorized copied content (⇒ 35)**
- **Firmware updates (⇒ 12)**

Accessories

Check the supplied accessories before using this unit.

1 Remote control

(N2QAYB000736)

2 Batteries for remote control

For Australia and New Zealand

1 Audio/Video cable

Except Australia and New Zealand

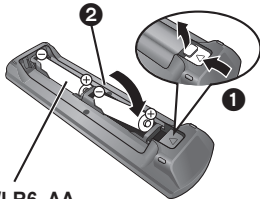
1 HDMI Cable



- Product numbers provided in these operating instructions correct as of February 2012. These may be subject to change.

■ Using the remote control

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



R6/LR6, AA

(Alkaline or manganese batteries)

Point it at the remote control signal sensor on this unit. (⇒ 7)

Unit and media care

■ Clean this unit with a soft, dry cloth

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

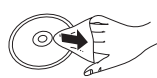
■ This unit's lens

Lens cleaner: RP-CL720AE

- This lens cleaner may not be for sale depending on the region.
- 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 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 disc cleaning sprays, benzine, thinner, static electricity prevention liquids or any other solvent.
- 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 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. (⇒ 29, "To return all settings to the factory preset.")

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

Playable media

Device	Disc markings	Device types	Contents format
BD		BD-Video	Video
		BD-RE	Video, JPEG
		BD-R	Video, DivX®, MKV
DVD		DVD-Video	Video
		DVD-R	Video, AVCHD, DivX®, MKV, JPEG, FLAC, MP3, WAV
		DVD-RW	Video, AVCHD
		—	
CD		Music CD	Music [CD-DA]
		—	DivX®, MKV, JPEG, FLAC, MP3, Music [CD-DA], WAV
USB	—	USB devices (up to 2 TB)	DivX®, MKV, MP4, MPEG, JPEG, FLAC, MP3, WAV

• See pages 6 and 34 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

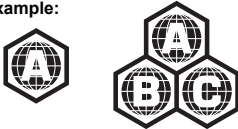
■ Region management information

BD-Video:

For South East Asia

This unit can play BD-Video discs supporting the region code "A".

Example:



For Australia, New Zealand and the Middle East

This unit can play BD-Video discs supporting the region code "B".

Example:



For India

This unit can play BD-Video discs supporting the region code "C".

Example:



DVD-Video:

For the Middle East

This unit can play DVD-Video discs supporting the region number "2" or "ALL".

Example:



For South East Asia

This unit can play DVD-Video discs supporting the region number "3" or "ALL".

Example:



For Australia and New Zealand

This unit can play DVD-Video discs supporting the region number "4" or "ALL".

Example:



For India

This unit can play DVD-Video discs supporting the region number "5" 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.
- If "Dolby D/Dolby D +/Dolby TrueHD" is set to "PCM", the maximum possible number of Dolby® sound is 2ch PCM. (⇒ 25)

■ Music CD

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

■ USB device

- This unit does not guarantee connection with all USB devices.
- This unit does not support USB device charging.
- FAT12, FAT16, FAT32 and NTFS file systems are supported.
- This unit supports USB2.0 High Speed.
- This unit can support an HDD formatted to FAT32 and NTFS.
Some types of HDD may require the use of its external power supply unit.

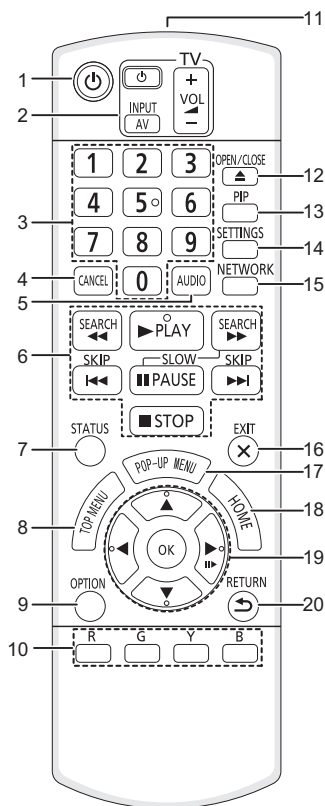
■ BD-RE, BD-R

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

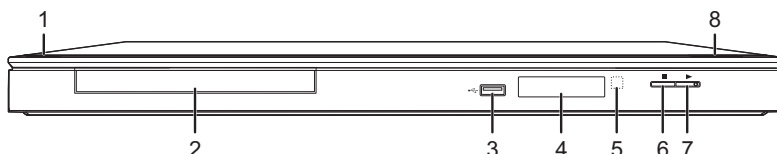


- It may not be possible to play the above media in some cases due to the type of media, the condition of the recording, the recording method and how the files were created.
- The producers of the disc can control how discs are played, so you may not always be able to control play as described in these operating instructions. Read the disc's instructions carefully.

Control reference guide



- 1 Turn the unit on and off
- 2 TV operation buttons (⇒ 13)
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
- 4 Cancel
- 5 Select audio (⇒ 16)
- 6 Basic playback control buttons (⇒ 16)
- 7 Show status messages (⇒ 17)
- 8 Show Top menu (⇒ 17)
- 9 Show Option menu (⇒ 22)
- 10 Coloured buttons (red, green, yellow, blue)
Used for various purposes depending on the display
- 11 Transmit the remote control signal
- 12 Open or close the disc tray (⇒ 14)
- 13 Switch on/off Secondary Video (Picture-in-picture) (⇒ 22)
- 14 Show Setup menu (⇒ 24)
- 15 Show the selection screen of network features (⇒ 18)
- 16 Exit the menu screen
- 17 Show Pop-up menu (⇒ 17)
- 18 Show HOME menu (⇒ 14)
- 19 [▲, ▼, ◀, ▶] : Move the highlight for selection
[OK] : Confirm the selection
[■▶] : Frame-by-frame (⇒ 16)
- 20 Return to previous screen



- 1 **Standby/on switch** (⏻/⏻) (⇒ 11)
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 (⇒ 14)
- 3 USB port (⇒ 14)
- 4 Display (⇒ 33)
- 5 Remote control signal sensor
Distance: Within approx. 7 m
Angle: Approx. 20° up and down, 30° left and right
- 6 Stop (⇒ 16)
- 7 Start play (⇒ 16)
- 8 Open or close the disc tray (⇒ 14)

Rear panel terminals (⇒ 8–10)

STEP 1 : Connecting to a TV

Perform either one of the following connections in accordance with your TV input terminal.

- Before making any connections, we recommend that 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.
- Use the High Speed HDMI cables. Non-HDMI-compliant cables cannot be utilized.

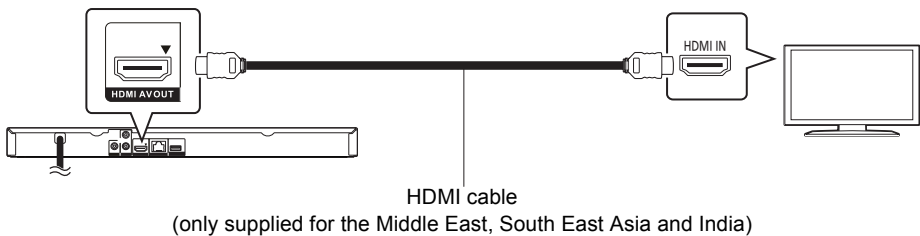
For the Middle East, South East Asia and India The HDMI-compliant cable is supplied with this unit.

It is recommended that you use Panasonic's HDMI cable. When outputting 1080p signal, please use HDMI cables 5.0 meters or less.

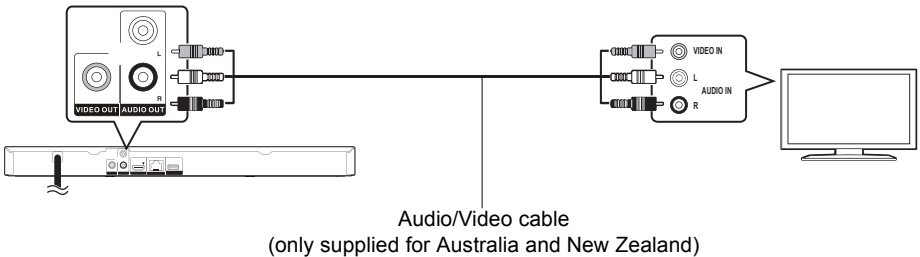
Recommended part number (High Speed HDMI Cable):

RP-CDHS15 (1.5 m), RP-CDHS30 (3.0 m), RP-CDHS50 (5.0 m), etc.

HDMI AV OUT (High quality)

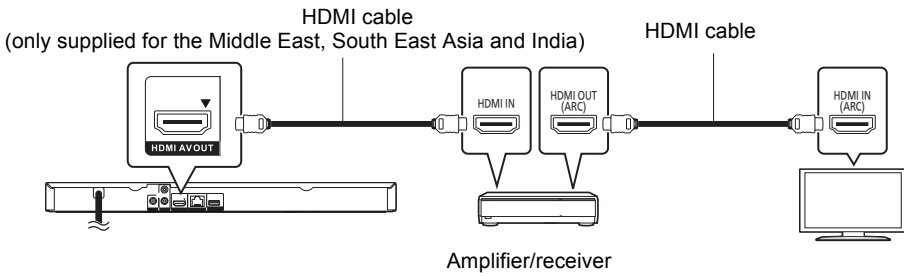


VIDEO OUT (Standard quality)



- Connect terminals of the same colour.

STEP 2 : Connecting to an amplifier/receiver



- Set "Digital Audio Output" (⇒ 25).
- 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/receiver it is also required to connect the amplifier/receiver and TV using an optical digital cable.

STEP 3 : Connecting to the network

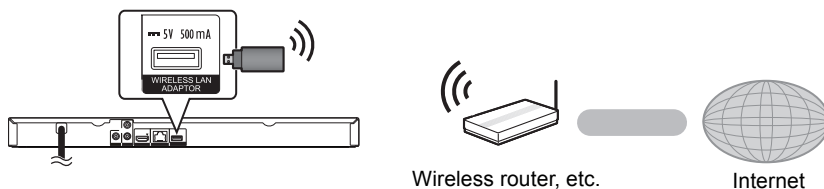
The following services can be used when this unit is connected to broadband.

- Firmware can be updated (⇒ 12)
- You can enjoy BD-Live (⇒ 17)
- You can enjoy Network Service (⇒ 18)
- You can access other devices (Home Network) (⇒ 19)

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

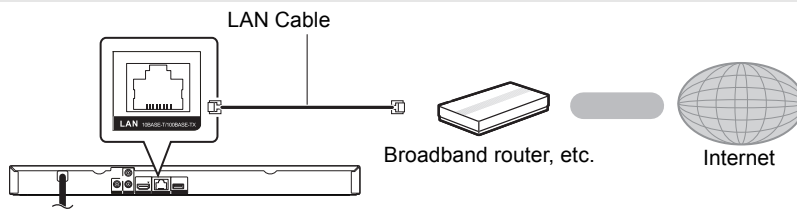
Wireless LAN connection

Connect the Wireless LAN Adaptor DY-WL5 (optional). Only DY-WL5 can be used. Read the operating instructions for DY-WL5 thoroughly when using it.



- A wireless LAN connection can be used only in those countries where the wireless function is authorized for use. Use of a wireless LAN connection is prohibited in the regions where DY-WL5 is not sold.
- 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 provided in airports, stations, cafes, etc.

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.

STEP 4 : Connecting the AC mains lead



- This unit consumes a small amount of AC power (⇒ 34) 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.

2 Follow the on-screen instructions and apply the settings.

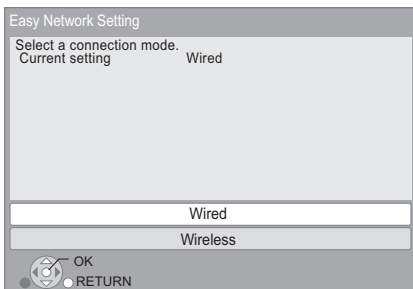


- You can perform this setup anytime by selecting "Easy Setting" in the Setup menu. (⇒ 27)

Easy Network Setting

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

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



■ "Wired" connection

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

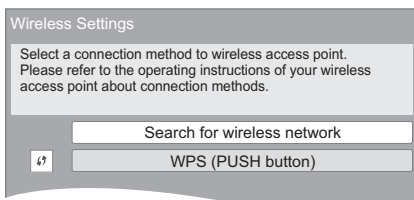
■ "Wireless" connection

Before beginning wireless connection setup

- Obtain your network name (SSID*1).
- If your wireless connection is encrypted, please be sure that you know your encryption key.
- 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.

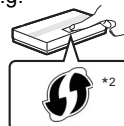
Select "Search for wireless network" or "WPS (PUSH button)" and press [OK], then follow the on-screen instructions and apply the settings.

e.g.,



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 the wireless router until the lamp starts flashing.
 - For details, refer to the operating instruction of the 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”. (While displaying the HOME menu, press [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.



- Refer to the operating instructions of the hub or router.
- You can perform this setup anytime by selecting “Easy Network Setting” in the Setup menu. (⇒ 26)
- You can redo these settings individually using “Network Settings”. (⇒ 26)
- Do not use this unit 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 the 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.

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 The wireless router compatible with Wi-Fi Protected Setup™ may have the mark.

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] ⇒ press [SETTINGS] ⇒ select “System” ⇒ [OK] ⇒ select “Firmware Update” ⇒ [OK] ⇒ select “Update Now” ⇒ [OK]

DO NOT DISCONNECT the unit from the AC power or perform any operation while the update takes place.

After the firmware is installed, “FlIn” 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. (⇒ 28, “Firmware Version 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”. (⇒ 28)


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 to prevent this occurrence. (⇒ 28, “Remote Control”)

For TV

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

1 Input the 2-digit code (⇒ 33) while pressing  TV].

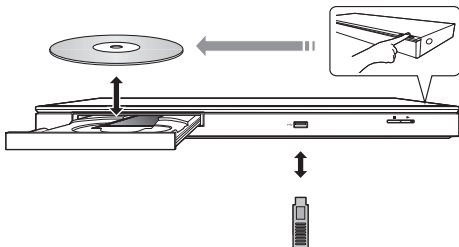
e.g., 01: [0] ⇒ [1]

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



Notes

- When inserting a media item, ensure that it is facing the right way up.
- 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.
- Use the front USB port when you connect a USB memory or a USB HDD. The USB port on the rear panel is only for the Wireless LAN Adaptor DY-WL5 (optional).

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.

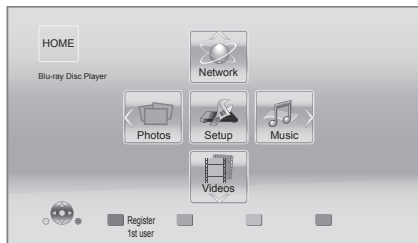
HOME menu

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 [⏻] to turn on the unit.
- 2 Press [OK] or [▲, ▼, ◀, ▶] to select the item.
 - If there are any other items, repeat this step.



Videos/Photos/Music

Disc	Play back the contents. (⇒ 16)
USB	<ul style="list-style-type: none"> • When multiple contents are recorded, select the types of contents or the title.

Network

Network Service	Displays the Home screen of Network Service. (⇒ 18)
Home Network	DLNA Client (⇒ 19)
	Media Renderer (⇒ 20)

Setup

Player Settings	(⇒ 24)
USB Management	(⇒ 17)
Wallpaper	Changes the background of HOME menu.

To show the HOME menu

Press [HOME].



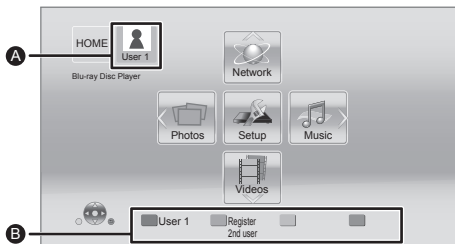
- Items to be displayed may vary with the media.
- Where necessary, set "Mixed Data Disc Option" when using a disc with both data files (MP3, JPEG, DivX, etc.) and Video (BD-VA and AVCHD). (⇒ 27)

Multi User Mode

Multi User Mode is a function that enables switching of multiple settings easily. Up to 4 people can use the unit with their own settings.

The following settings can be personalized.

- The user icon
- The wallpaper of HOME menu
- The picture settings (⇒ 22, 24)



- A** The user name and icon currently selected
- B** Personalize a new user and switch the users with coloured buttons.

Personalizing a new user

- 1** Press [HOME].
- 2** Press a coloured button that indicates new user personalization.
- 3** Select an item and change the settings according to the indications.

The following items can be set.

Input Nickname	Personalize a user name.
Select Icon	<p>Personalize a user icon.</p> <p>Select from Illustrations The image can be selected from prepared illustrations.</p> <p>Create from Photos You can select a photo in recording media as an icon. (⇒ 22, "Icon Registration")</p>
Select Wallpaper	<p>Personalize a background of the HOME menu.</p> <ul style="list-style-type: none"> • Other than prepared wallpapers, you can also select a photo in recording media as a wallpaper. (⇒ 22, "Wallpaper")

- 4** Select "Confirm" and press [OK].

To change the personalized user information
Select "Edit User Information" from Setup menu. (⇒ 27)

Switching the user

Press the coloured buttons in the HOME menu to switch to the user corresponding to the button.

Playback

1 Insert the media.

Playback starts depending on the media.

2 Select the item to play and press [OK].

Repeat this procedure if necessary.



- 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. (⇒ 24)
- 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.
- DivX and MKV: Successive play is not possible.
- It is not possible to play back 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.).

Operations during playback

Following 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▶▶].

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.

Frame-by-frame

While paused, press [▶] (▣▣▶).

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

Changing audio

Press [AUDIO].

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

Displaying menus and playback information

Show top menu/pop-up menu

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

Select the item and press [OK].

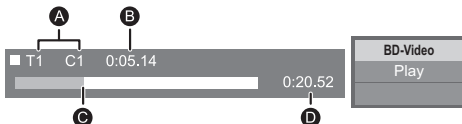
Show the status messages

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.

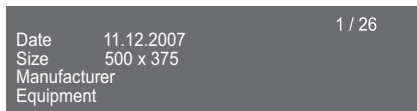
- Depending on media and contents, the display may change or may not appear.

e.g., BD-Video



- A** T: Title, C: Chapter, PL: Playlist
- B** Elapsed time in the title
- C** Current position
- D** Total time

e.g., JPEG



Enjoying BD-Live

With "BD-Live" discs, you can enjoy bonus contents that use Internet access.

For this BD-Live function, connection of a USB device is necessary along with Internet connection.

- 1 Perform network connection and settings.**
(⇒ 10, 11)
- 2 Connect a USB device with 1 GB or more free space.**
 - The USB device is used as the local storage.
- 3 Insert the disc.**

Deleting data on the USB device

Select "USB Management" in the Home menu (⇒ 14), then select "BD-Video Data Erase" and press [OK].



- 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.
- "BD-Live Internet Access" may need to be changed for certain discs (⇒ 26).

Slideshow

Play a slideshow of photos and make various settings during the playback.

- 1 Insert the media.**
- 2 Select "Photos".**
- 3 Select an item and press the green button.**
The following items can be set.

Start Slideshow	Start the slideshow. You can display still pictures in the selected folder one by one at a constant interval.
Interval	Change the display interval.
Transition Effect	Select the effect when sliding pictures.
Repeat Play	Set whether to repeat the slideshow.



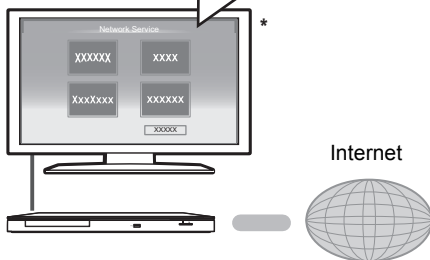
- Still pictures displayed as "⊠" cannot be played back with this unit.

Enjoying Network Service

Network Service allows you to access some specific websites supported by Panasonic, and enjoy Internet contents such as photos, videos, etc. from Network Service home screen. This unit has no full browser function and all features of websites may not be available.

Network Service provides a variety of selected Internet services such as the following.

- Online movie rental service
- Video browsing service



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

Preparation

- Network connection (⇒ 10)
- Network setting (⇒ 11)

- 1 Press [NETWORK].**
- 2 Press [▶] to select "Network Service".**
- 3 Select the item and press [OK].**

To exit from Network Service

Press [EXIT] or [HOME].



- Set "Network Service Lock" in "Ratings", when restricting the use of Network Service. (⇒ 27)
- 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 may not be able to use the Network Service function properly. (⇒ 12)
- Network Service Home screen is subject to change without notice.
- The services through Network Service 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.

Home Network feature

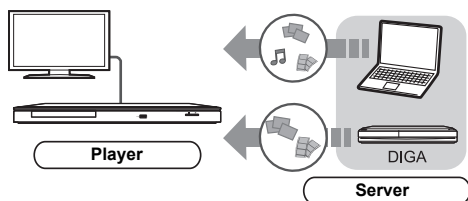
Playing back contents on the DLNA server

You can share photos, videos and music stored in the DLNA Certified media server (PC with Windows 7 installed, smartphone, etc.) connected to your home network, and enjoy the contents with this player.

You can also enjoy viewing the video and photos recorded in Panasonic DLNA compatible recorders (DIGA).

Refer to our website about the sales area, etc.

(⇒ 20)



Preparation

- ① Perform network connection (⇒ 10) and network settings (⇒ 11) of this unit.
- ② Perform Home Network settings of the connected equipment.

When connected to other than DIGA,

- 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.

When connected to DIGA,

- ③ Register this unit to your DIGA.

- 1 Press [HOME].
- 2 Select “Network”.
- 3 Select “Home Network”.
- 4 Select “DLNA Client”.
 - The list can be updated by pressing the red button on the remote control.
- 5 Select the equipment and press [OK].
- 6 Select the item to play and press [OK].
 - You may be able to use convenient functions depending on the content by pressing [OPTION].
 - Control Panel is displayed once the playback starts. Press [OK] if the Control Panel is not displayed, and press [RETURN] to hide the Control Panel.

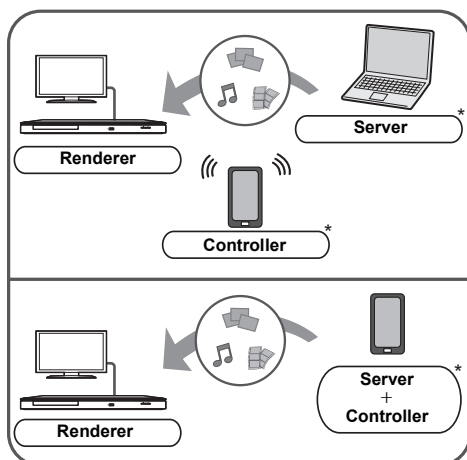
To exit from Home Network

Press [EXIT] or [HOME].

Using the Digital Media Controller

You can use the smartphone, etc. as the Digital Media Controller (DMC) to play back contents from DLNA server on the Renderer (this unit).

Possible applications:



* DMC compatible software should be installed.

Preparation

Perform steps ① and ②. (⇒ 19)

- 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”. (⇒ 26)
 - You can register up to 16 devices.

- 1 Press [HOME].**
- 2 Select “Network”.**
- 3 Select “Home Network”.**
- 4 Select “Media Renderer”.**
- 5 Operate the DMC compatible devices.**

To exit from Media Renderer screen

Press [HOME].



For more details, refer to the following website and the operating instructions for each of the equipment.
<http://panasonic.jp/support/global/cs/>
(This site is in English only.)

- 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.

“HDMI CEC”

This unit supports HDMI CEC (Consumer Electronics Control).

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

Preparation

- ① Set “HDMI CEC” to “On” (⇒ 27).
(The default setting is “On”.)
- ② Set the “HDMI CEC” operations on the connected equipment (e.g., TV).
- ③ Turn on all “HDMI CEC” compatible equipment and select this unit’s input channel on the connected TV so that the “HDMI CEC” function works properly.

Also when the connection or settings are changed, repeat this procedure.

Automatic input switching Power on link

When play starts on the unit, the TV will automatically switch the input channel and the screen of this unit will be displayed. Additionally when the TV is off, the TV will automatically turn on.

Power off link

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




- Operation cannot be guaranteed on all HDMI CEC devices.

Option menu

A variety of playback operations and settings can be performed from this menu.

Available options differ depending on the playing contents and the condition of the unit.

About Multi User Mode

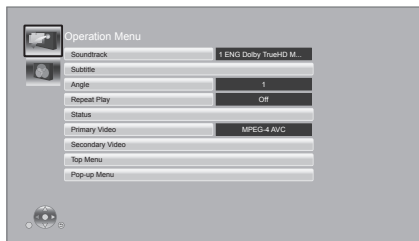
 : Settings of the items with this indication are saved by the respective users registered in the HOME menu.

Please refer to page 15 for details about user registration and switching.

1 Press [OPTION].

- When playing music, select “Playback Settings” and press [OK].

e.g., BD-Video



2 Select an item and change the settings.

To exit the screen

Press [OPTION].

Regarding Language : (⇒ 33)

Operation Menu

■ Soundtrack

Show or change the soundtrack.

■ Audio channel

Select the audio channel number.

■ Subtitle

Change the subtitle settings.

■ Angle

Select the number of the angle.

■ Repeat Play

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

Select the item that 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.

■ Start Slideshow

Start the slideshow.

■ Status

Show the status messages.

■ Rotate RIGHT

■ Rotate LEFT

Rotate the still picture.

■ Wallpaper

Set the still picture to the wallpaper of HOME menu. (⇒ 14)

■ Icon Registration

Set the still picture as your user icon. (⇒ 15)

■ Video

The recording method of original video appears.

■ Primary Video

The recording method of original primary video appears.

■ Secondary Video

Video	Select on/off of images. The recording method of original video appears. <ul style="list-style-type: none">• During search/slow-motion or frame-by-frame, only the primary video is displayed.
Soundtrack	Select on/off of audio and the language.

■ Top Menu

Display Top Menu.

■ Pop-up Menu

Display Pop-up Menu.

■ Menu

Display Menu.

Picture Settings

■ Picture Mode

Select the picture quality mode during play.

- If you select "User", you can change settings in "Picture Adjustment".

■ Picture Adjustment

Specific picture quality settings can be performed.

■ Progressive

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

- When the content is distorted, change the settings from "Auto" to "Video".

■ Reset to Default Picture Settings


Return picture settings to the factory preset.

Setup menu

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

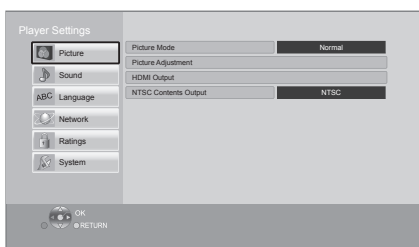
Some items in the Setup menu are common to the Option menu. You can get the same effect with both menus.

About Multi User Mode

 : Settings of the items with this indication are saved by the respective users registered in the HOME menu.

Please refer to page 15 for details about user registration and switching.

1 While displaying the HOME menu, press [SETTINGS].



2 Select an item and change the settings.

To exit the screen

Press [EXIT].

Picture

Picture Mode (⇒ 23)

Picture Adjustment (⇒ 23)

HDMI Output

Press [OK] to show the following settings:

> HDMI Video Format

The items supported by the connected devices are indicated on the screen as “*”. When any item without “*” is selected, the images may be distorted.

- If “Automatic” is selected, the best suited output resolution to the connected television is automatically selected.
- 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 equipment 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 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.

> 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.

NTSC Contents Output

(This works only for video output from the VIDEO OUT terminal.)

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

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

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

➢ HDMI Audio Output

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

■ 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.
- The audio will be output in "Stereo" in the following cases:
 - AVCHD playback
 - Playback of secondary audio (including the button click sound).

Language

■ Soundtrack Preference

Choose the language for audio.

- If "Original" is selected, the original language of each disc will be selected.
- Enter a code (⇒ 33) 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 (⇒ 33) when you select "Other *****".

■ Menu Preference

Choose the language for the disc menus.

- Enter a code (⇒ 33) when you select "Other *****".

Except South East Asia

■ Subtitle Text

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

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

For South East Asia

■ On-Screen Language

Choose the language for menus and on-screen messages.

Network

■ Easy Network Setting (⇒ 11)

■ Network Settings

Perform network-related settings individually.
Press [OK] to show the following settings:

➤ LAN Connection Mode

Select the LAN connection method.

➤ Wireless Settings

This allows the wireless router and connection settings to be set. Current connection settings and connection state can be checked.

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 sets the connection speed.

- If you connect using the "Double Speed Mode (40MHz)", 2 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 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.

➤ 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.

Except South East Asia

➤ 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.)

➤ Remote Device Settings (⇒ 20)

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.

➤ BD-Live Internet Access (⇒ 17)

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.

Ratings

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

■ DVD-Video Ratings

Set a ratings level to limit DVD-Video play.

■ BD-Video Ratings

Set an age limit of BD-Video play.

■ Network Service Lock

You can restrict the usage of Network Service.

System

■ Easy Setting

You can execute basic settings.



■ TV Settings

Press [OK] to show the following settings:

➤ 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.

➤ 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. (⇒ 24)

➤ Screen Saver Function

This is to prevent burn-in on the screen.

- When this is set to "On":
If a list of playback content is displayed and there is no operation for 10 minutes or more, the screen switches to HOME menu automatically.
- While playing and pausing, etc., this function is not available.

➤ On-Screen Messages

Choose whether to show status messages automatically.

➤ HDMI CEC

Set to use "HDMI CEC" function when connected via HDMI cable to a device that supports "HDMI CEC".

- Select "Off" when you do not want to use "HDMI CEC".

■ Unit Settings

Press [OK] to show the following settings:

➤ Mixed Data Disc Option

Select the playback contents on discs with both data files and Video.

- If "MP3/JPEG/DivX" is selected, the video menu function (except DivX and MKV) cannot be played back.
- If "BD-DAV/AVCHD" is selected, data file cannot be played back.

➤ Front Panel Display

Changes the brightness of the unit's display.

- If "Automatic" is selected, the display is set to bright and only dimmed during playback.

➤ Edit User Information

Change the user information registered in the HOME menu.

■ Quick Start

Speed of startup from standby mode is increased.

- When set to "On", the internal control unit will be powered and the idle power consumption will increase so compared to when set to "Off".
(About the power consumption ⇒ 34)

■ Remote Control

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

■ Firmware Update (⇒ 12)

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.

■ System Information

Press [OK] to show the following settings:

➤ Software Licence

Information about the software used by this unit is displayed.

➤ Firmware Version Information

Display firmware version of this unit and wireless LAN module.

■ DivX (R) Registration

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

■ Default Settings

This returns all values in the Setup menu and the Option menu to the default settings, except for some settings of network, ratings, remote control code, language, etc.

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. (⇒ 12)

The following do not indicate a problem with this unit:

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

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

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 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.
 - "00rEt" is displayed on the unit's display.
- ② Repeatedly press [▶] (right) on the remote control or [⏻/⏪] on the unit until "06FtO" 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. (⇒ 28)

To return all settings to the factory preset.

- Reset the unit 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.
 - "00rEt" is displayed on the unit's display.
 - ② Repeatedly press [▶] (right) on the remote control or [⏻/⏪] on the unit until "08FIn" 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 5 seconds.

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 "SE □" is displayed on the unit's display when a button is pressed on the remote control, change the code on the remote control. (⇒ 28, 32)

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.
 - "00rEt" is displayed on the unit's display.
 - ② Repeatedly press [▶] (right) on the remote control or [⏻/⏪] on the unit until "03VL" 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.

- Disconnect and reconnect the USB cable. If it still does not recognize the connection, turn this unit off and on again.
- USB devices may not be recognized by this unit when connected using the following :
 - a USB hub
 - a USB extension cable other than the supplied with the Wireless LAN Adaptor DY-WL5 (optional)
- If you connect USB HDD to this unit, use the USB cable that is supplied with the HDD.

The unit switches to standby mode.

- This unit will automatically turn to standby mode after 30 minutes if it is inactive. (⇒ 16)
 - One of the unit's safety devices is activated (U59 is displayed). Wait until this unit has cooled down.
-

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.
 - "00rEt" is displayed on the unit's display.
 - ② Repeatedly press [▶] (right) on the remote control or [⏻/⏪] on the unit until "04PrG" 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 5 seconds.
 - Set the item again. (⇒ 24)
 - When Dolby Digital Plus, Dolby TrueHD, and DTS-HD audio are not output in bitstream, select "Yes" in "Default Settings" and make proper settings. (⇒ 28)
- The unit and television are using different video systems.
 - 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.
 - "00rEt" is displayed on the unit's display.
 - ② Repeatedly press [▶] (right) on the remote control or [⏻/⏪] on the unit until "05Pln" 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 5 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 (⇒ 24, "NTSC Contents Output").

Video is not output in high-definition.

- Confirm that "HDMI Video Format" in the Setup menu is set properly. (⇒ 24)
-

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. (⇒ 27)
 - Adjust the aspect setting on the television.
-

Audio

Cannot hear the desired audio type.

- Check the connections and the “Digital Audio Output” settings. (⇒ 9 , 25)
 - To output audio from a device connected with an HDMI cable, set “HDMI Audio Output” to “On” in the Setup menu. (⇒ 25)
-

Playback

Disc cannot be played.

- The disc is dirty. (⇒ 4)
-

Still pictures (JPEG) do not play back normally.

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

I can't play back BD-Live.

- Confirm that this unit is connected to the broadband Internet. (⇒ 10)
 - Confirm the “BD-Live Internet Access” settings. (⇒ 26)
 - Confirm a USB device is connected to a USB port. (⇒ 14)
-

Network

I can't connect to the network.

- Confirm the network connection and settings. (⇒ 10, 11, 26)
 - 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) wireless router may solve the problem. If you use 802.11n (2.4 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 (⇒ 26), 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 “Easy Network Setting” (⇒ 11) again.
-

Messages

The following messages or service numbers may appear on the TV or unit's display.

On the television

Cannot play.

- You inserted an incompatible disc.

Cannot play on this unit.

- You tried to play a non-compatible image.

No disc inserted.

- The disc may be upside down.

⊘ This operation is not available.

- Some operations are unsupported by the unit.
For example;
 - 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

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.



H□□ or F□□

("□" stands for a number.)

- There is something unusual.
- Check the unit using the troubleshooting guide. If the service number remains displayed, 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.

If the service number remains displayed despite doing the above, request service from the dealer. Inform the dealer of the service number when requesting service.

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	NORMENDE	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	SINDUYNE	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	05
MITSUBISHI	05/19/20/47	WESTINGHOUSE	05
MIVAR	24	YAMAHA	18/41

■ Display languages list

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

■ Language code list

Language	Code	Language	Code	Language	Code
Abkhazian	6566	Gujarati:	7185	Rhaeto-Romance:	
Afar:	6565	Hausa:	7265	Romanian:	8279
Afrikaans:	6570	Hebrew:	7387	Russian:	8285
Albanian:	8381	Hindi:	7273	Samoan:	8377
Amharic:	6577	Hungarian:	7285	Sanskrit:	8365
Arabic:	6582	Icelandic:	7383	Scots Gaelic:	7168
Armenian:	7289	Indonesian:	7378	Serbian:	8382
Assamese:	6583	Interlingua:	7365	Serbo-Croatian:	8372
Aymara:	6589	Irish:	7165	Shona:	8378
Azerbaijani:	6590	Italian:	7384	Sindhi:	8368
Bashkir:	6665	Japanese:	7465	Sinhalese:	8373
Basque:	6985	Javanese:	7487	Slovak:	8375
Bengali; Bangla:		Kannada:	7578	Slovenian:	8376
	6678	Kashmiri:	7583	Somali:	8379
Bhutani:	6890	Kazakh:	7575	Spanish:	8393
Bihari:	6672	Kirghiz:	7589	Sundanese:	8385
Breton:	6682	Korean:	7579	Swahili:	8387
Bulgarian:	6671	Kurdish:	7585	Swedish:	8386
Burmese:	7789	Laotian:	7679	Tagalog:	8476
Byelorussian:	6669	Latin:	7665	Tajik:	8471
Cambodian:	7577	Latvian, Lettish:	7686	Tamil:	8465
Catalan:	6765	Lingala:	7678	Tatar:	8484
Chinese:	9072	Lithuanian:	7684	Telugu:	8469
Corsican:	6779	Macedonian:	7775	Thai:	8472
Croatian:	7282	Malagasy:	7771	Tibetan:	6679
Czech:	6783	Malay:	7783	Tigrinya:	8473
Danish:	6865	Malayalam:	7776	Tonga:	8479
Dutch:	7876	Maltese:	7784	Turkish:	8482
English:	6978	Maori:	7773	Turkmen:	8475
Esperanto:	6979	Marathi:	7782	Tw:	8487
Estonian:	6984	Moldavian:	7779	Ukrainian:	8575
Faroese:	7079	Mongolian:	7778	Urdu:	8582
Fiji:	7074	Nauru:	7865	Uzbek:	8590
Finnish:	7073	Nepali:	7869	Vietnamese:	8673
French:	7082	Norwegian:	7879	Volapuk:	8679
Frisian:	7089	Oriya:	7982	Welsh:	6789
Galician:	7176	Pashto, Pushto:	8083	Wolof:	8779
Georgian:	7565	Persian:	7065	Xhosa:	8872
German:	6869	Polish:	8076	Yiddish:	7473
Greek:	6976	Portuguese:	8084	Yoruba:	8979
Greenlandic:	7576	Punjabi:	8065	Zulu:	9085
Guarani:	7178	Quechua:	8185		

■ Unit's display list

This list only contains displays that are difficult to read.

Display	Reading	Display	Reading
BYE	BYE	OPEN	OPEN
READ	READ	PLAY	PLAY
STOP	STOP	SETUP	SETUP
Photo	Photo	SLIDE	SLIDE
DISC	DISC	USB	USB
NET	NET	START	START
UPD 1	UPD □*	FIN	FINISH
SET 2	SET □*	-----	No DISC, No PLAY, No READ, UNSUPPORT

* " □ " stands for a number.

Specifications

Signal system	PAL/NTSC
Operating temperature range	+5 °C to +35 °C
Operating humidity range	10 % to 80 % RH (no condensation)
Video output	Output level: 1.0 Vp-p (75 Ω) Output connector: Pin jack (1 system)
Audio output	Output level: 2 Vrms (1 kHz, 0 dB) Output connector: Pin jack Number of connectors: 2 channel 1 system
HDMI AV output	Output connector: Type A (19 pin) 1 system
USB slot	USB2.0 2 system
Ethernet	10BASE-T/100BASE-TX 1 system
LASER Specification	Class 1 LASER Product Wave length: 790 nm (CDs)/ 658 nm (DVDs)/405 nm (BDs) Laser power: No hazardous radiation is emitted with the safety protection
Power supply	For Australia and New Zealand AC 230 to 240 V, 50 Hz For the Middle East AC 220 to 240 V, 50 Hz/60 Hz For South East Asia AC 110 to 240 V, 50 Hz/60 Hz For India AC 230 V, 50 Hz/60 Hz
Power consumption	Approx. 15 W
Power consumption in standby mode	Approx. 0.5 W
Power consumption in quick start standby mode	Approx. 5 W
Dimensions (W×H×D)	430 mm×36 mm×199 mm
Mass	Approx. 1.5 kg

- Specifications are subject to change without notice.

File format

File format	Extension	Reference
MP3	".MP3", ".mp3"	This unit supports ID3 tags, but only titles, artist names and album names can be displayed.
JPEG	".JPG", ".jpg"	<ul style="list-style-type: none"> • MOTION JPEG and Progressive JPEG are 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" Except South East Asia Subtitles text file ".SRT", ".srt", ".SUB", ".sub", ".TXT", ".txt"	<ul style="list-style-type: none"> • Except South East Asia The video file and subtitles text file are inside the same folder, and the file names are the same except for the file extensions.
MKV	".MKV", ".mkv" Except South East Asia Subtitles text file ".SRT", ".srt", ".SSA", ".ssa", ".ASS", ".ass"	<ul style="list-style-type: none"> • Some DivX and MKV file may not play back, depending on the video resolution and frame rate condition.
FLAC	".flac"	Maximum sampling rate: 192 kHz/24 bit
WAV	".wav"	Maximum sampling rate: 192 kHz/24 bit

- 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 the settings on the unit. (⇒ 25, 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" ^{1,2}
HDMI AV OUT	Outputs using original audio ¹	BD-Video : 7.1ch PCM ¹ DVD-Video : 5.1ch 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 The maximum possible number of Dolby sound is 2ch PCM.

Restriction on use of unauthorized copied content


This unit adopts the following technology for copyright protection.

Cinavia Notice

This product uses Cinavia technology to limit the use of unauthorized copies of some commercially-produced film and videos and their soundtracks. When a prohibited use of an unauthorized copy is detected, a message will be displayed and playback or copying will be interrupted.

More information about Cinavia technology is provided at the Cinavia Online Consumer Information Center at <http://www.cinavia.com>. To request additional information about Cinavia by mail, send a postcard with your mailing address to:

Cinavia Consumer Information Center, P.O.
Box 86851, San Diego, CA, 92138, USA.

<p>"AVCHD" is a trademark of Panasonic Corporation and Sony Corporation.</p>
<p>Java is a registered trademark of Oracle and/or its affiliates.</p> 
<p>Manufactured under license from Dolby Laboratories. Dolby and the double-D symbol are trademarks of Dolby Laboratories.</p>
<p>Manufactured under license under U.S. Patent Nos: 5,956,674; 5,974,380; 6,226,616; 6,487,535; 7,392,195; 7,272,567; 7,333,929; 7,212,872 & other U.S. and worldwide patents issued & pending. DTS-HD, the Symbol, & DTS-HD and the Symbol together are registered trademarks & DTS-HD Master Audio Essential is a trademark of DTS, Inc. Product includes software. © DTS, Inc. All Rights Reserved.</p>
<p>This item incorporates copy protection technology that is protected by U.S. patents and other intellectual property rights of Rovi Corporation. Reverse engineering and disassembly are prohibited.</p>
<p>HDMI, the HDMI Logo, and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries.</p>
<p>This product is licensed under the AVC patent portfolio license and VC-1 patent portfolio license for the personal and non-commercial use of a consumer to (i) encode video in compliance with the AVC Standard and VC-1 Standard ("AVC/VC-1 Video") and/or (ii) decode AVC/VC-1 Video that was encoded by a consumer engaged in a personal and non-commercial activity and/or was obtained from a video provider licensed to provide AVC/VC-1 Video. No license is granted or shall be implied for any other use. Additional information may be obtained from MPEG LA, LLC. See http://www.mpegla.com.</p>
<p>MPEG Layer-3 audio coding technology licensed from Fraunhofer IIS and Thomson.</p>
<p>"DVD Logo" is a trademark of DVD Format/Logo Licensing Corporation.</p>
<p>"Wi-Fi", "Wi-Fi Protected Setup", "WPA" and "WPA2" are marks or registered marks of the Wi-Fi Alliance.</p>
<p>DivX®, DivX Certified® and associated logos are trademarks of Rovi Corporation or its subsidiaries and are used under license.</p>
<p>ABOUT DIVX VIDEO: DivX® is a digital video format created by DivX, LLC, a subsidiary of Rovi Corporation. 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 videos.</p>
<p>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.</p>
<p>DLNA, the DLNA Logo and DLNA CERTIFIED are trademarks, service marks, or certification marks of the Digital Living Network Alliance.</p>
<p>Windows is a trademark or a registered trademark of Microsoft Corporation in the United States and other countries.</p>

This product incorporates the following software:

- (1) the software developed independently by or for Panasonic Corporation,
- (2) the software owned by third party and licensed to Panasonic Corporation,
- (3) the software licensed under the GNU General Public License, Version 2 (GPL v2),
- (4) the software licensed under the GNU LESSER General Public License, Version 2.1 (LGPL v2.1) and/or,
- (5) open sourced software licensed under its applicable license terms including but not limited to ICU License, c-arse license,
- (6) Adobe Flash Lite for Digital Home Software licensed by Adobe Systems Incorporated or its affiliates,

For the software categorized as (3) and (4), please refer to the terms and conditions of GPL v2 and LGPL v2.1, as the case may be at <http://www.gnu.org/licenses/old-licenses/gpl-2.0.html> and <http://www.gnu.org/licenses/old-licenses/lgpl-2.1.html>.

In addition, the software categorized as (3) and (4) are copyrighted by several individuals. Please refer to the copyright notice of those individuals at

<http://panasonic.net/avc/oss/bdplayer/AWBPM12.html>

The GPL/LGPL software is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY, without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.

At least three (3) years from delivery of products, Panasonic will give to any third party who contacts us at the contact information provided below, for a charge no more than our cost of physically performing source code distribution, a complete machine-readable copy of the corresponding source code covered under GPL v2/LGPL v2.1.

Contact Information

cdrequest.bdplayer@gg.jp.panasonic.com

Source code is also freely available to you and any other member of the public via our website below.

<http://panasonic.net/avc/oss/bdplayer/AWBPM12.html>

For the software categorized as (5) includes as follows.

1. This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (<http://www.openssl.org/>)
2. This product includes software developed by the University of California, Berkeley and its contributors.
3. FreeType code.
4. The Independent JPEG Group's JPEG software.

Further, For Adobe Flash Lite for Digital Home Software ("Flash Software"), please be aware of the following.

- (i) You are not permitted to distribute and copy this Flash Software to any third party,
- (ii) You are not permitted to modify the Flash Software and create derivative works of the Flash Software,
- (iii) You are not permitted to decompile, reverse engineer, disassemble and otherwise reduce the Flash Software to a human-perceivable form,
- (iv) You are not permitted to claim any damages, including direct, indirect, special, incidental, punitive, and consequential damages arising out of or in connection with the Flash Software,
- (v) You fully agree that the ownership of the Flash Software is that of Panasonic Corporation and/or its suppliers or licensors,
- (vi) You agree and acknowledge that it is possible that you cannot access the contents unless you do not obtain and install the latest version of the Flash Software

ICU License - ICU 1.8.1 and later

COPYRIGHT AND PERMISSION NOTICE

Copyright (c) 1995-2010 International Business Machines Corporation and others

All rights reserved.

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, provided that the above copyright notice(s) and this permission notice appear in all copies of the Software and that both the above copyright notice(s) and this permission notice appear in supporting documentation.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OF THIRD PARTY RIGHTS. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR HOLDERS INCLUDED IN THIS NOTICE BE LIABLE FOR ANY CLAIM, OR ANY SPECIAL INDIRECT OR CONSEQUENTIAL DAMAGES, OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

Except as contained in this notice, the name of a copyright holder shall not be used in advertising or otherwise to promote the sale, use or other dealings in this Software without prior written authorization of the copyright holder.

All trademarks and registered trademarks mentioned herein are the property of their respective owners.

c-arse license

Copyright 1998 by the Massachusetts Institute of Technology.

Permission to use, copy, modify, and distribute this software and its documentation for any purpose and without fee is hereby granted, provided that the above copyright notice appear in all copies and that both that copyright notice and this permission notice appear in supporting documentation, and that the name of M.I.T. not be used in advertising or publicity pertaining to distribution of the software without specific, written prior permission.

M.I.T. makes no representations about the suitability of this software for any purpose. It is provided "as is" without express or implied warranty.

David M. Gay's dtoa and strtod license
The author of this software is David M. Gay.
Copyright (c) 1991, 2000, 2001 by Lucent Technologies.
Permission to use, copy, modify, and distribute this software for any purpose without fee is hereby granted, provided that this entire notice is included in all copies of any software which is or includes a copy or modification of this software and in all copies of the supporting documentation for such software.
THIS SOFTWARE IS BEING PROVIDED "AS IS", WITHOUT ANY EXPRESS OR IMPLIED WARRANTY. IN PARTICULAR, NEITHER THE AUTHOR NOR LUCENT MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND CONCERNING THE MERCHANTABILITY OF THIS SOFTWARE OR ITS FITNESS FOR ANY PARTICULAR PURPOSE.

"UNICODE, INC. LICENSE AGREEMENT - DATA FILES AND SOFTWARE
Unicode Data Files include all data files under the directories <http://www.unicode.org/Public/>, <http://www.unicode.org/reports/>, and <http://www.unicode.org/cldr/data/>.
Unicode Software includes any source code published in the Unicode Standard or under the directories <http://www.unicode.org/Public/>, <http://www.unicode.org/reports/>, and <http://www.unicode.org/cldr/data/>.
NOTICE TO USER: Carefully read the following legal agreement. BY DOWNLOADING, INSTALLING, COPYING OR OTHERWISE USING UNICODE INC.'S DATA FILES ("DATA FILES"), AND/OR SOFTWARE ("SOFTWARE"), YOU UNEQUIVOCALLY ACCEPT, AND AGREE TO BE BOUND BY, ALL OF THE TERMS AND CONDITIONS OF THIS AGREEMENT. IF YOU DO NOT AGREE, DO NOT DOWNLOAD, INSTALL, COPY, DISTRIBUTE OR USE THE DATA FILES OR SOFTWARE.
COPYRIGHT AND PERMISSION NOTICE
Copyright (c) 1991-2009 Unicode, Inc. All rights reserved. Distributed under the Terms of Use in <http://www.unicode.org/copyright.html>.
Permission is hereby granted, free of charge, to any person obtaining a copy of the Unicode data files and any associated documentation (the "Data Files") or Unicode software and any associated documentation (the "Software") to deal in the Data Files or Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, and/or sell copies of the Data Files or Software, and to permit persons to whom the Data Files or Software are furnished to do so, provided that (a) the above copyright notice(s) and this permission notice appear with all copies of the Data Files or Software, (b) both the above copyright notice(s) and this permission notice appear in associated documentation, and (c) there is clear notice in each modified Data File or in the Software as well as in the documentation associated with the Data File(s) or Software that the data or software has been modified.
THE DATA FILES AND SOFTWARE ARE PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OF THIRD PARTY RIGHTS. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR HOLDERS INCLUDED IN THIS NOTICE BE LIABLE FOR ANY CLAIM, OR ANY SPECIAL INDIRECT OR CONSEQUENTIAL DAMAGES, OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THE DATA FILES OR SOFTWARE.
Except as contained in this notice, the name of a copyright holder shall not be used in advertising or otherwise to promote the sale, use or other dealings in these Data Files or Software without prior written authorization of the copyright holder."

(1) MS/WMA
This product is protected by certain intellectual property rights of Microsoft Corporation and third parties. Use or distribution of such technology outside of this product is prohibited without a license from Microsoft or an authorized Microsoft subsidiary.
(2) FLAC, WPA Supplicant
The software licenses are displayed when "Software Licence" in the Setup menu is selected. (⇌ 28)

Copyright 2004-2010 Verance Corporation. Cinavia™ is a Verance Corporation trademark. Protected by U.S. Patent 7,369,677 and worldwide patents issued and pending under license from Verance Corporation. All rights reserved.

Information on Disposal in other Countries outside the European Union

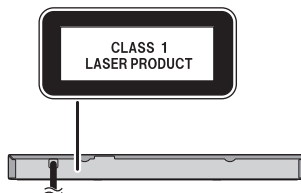


This symbol is only valid in the European Union.

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

CAUTION- VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. DO NOT STARE INTO BEAM.	FDA21CFR / CLASS II (IIa)
CAUTION- CLASS 2 VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. DO NOT STARE INTO BEAM.	IEC60825-1 / CLASS 2
ATTENTION- RAYONNEMENT LASER VISIBLE ET INVISIBLE. CLASSE 2, EN CAS D' OUVERTURE, NE PAS REGARDER DANS LE FAISCEAU.	

(Inside of product)



72-QT3V42-GN0B2

Panasonic Corporation
Web Site: <http://panasonic.net>

En

© Panasonic Corporation 2012

VQT3V42
F0212DT0