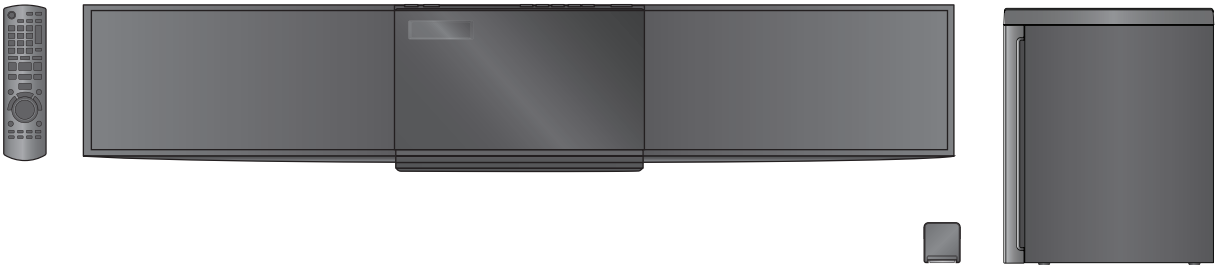


Panasonic®

Operating Instructions Blu-ray Disc Home Theater Sound System

Model No. **SC-BFT800**



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.

Included Installation Instructions (⇒ 4, 13)

The installation should never be done by any other than a qualified installation specialist.

Before commencing work, carefully read these installation instructions and the operating instructions to ensure that installation is performed correctly.

(Please keep these instructions. You may need them when maintaining or moving this unit.)



HDMI

AVCHD™

**VIERA
Link**



Model number suffix "EB" denotes UK model.

EB GN

VQT2Z56

CAUTION!

THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR
PERFORMANCE OF PROCEDURES OTHER THAN
THOSE SPECIFIED HEREIN MAY RESULT IN
HAZARDOUS RADIATION EXPOSURE.
DO NOT OPEN COVERS AND DO NOT REPAIR
YOURSELF. REFER SERVICING TO QUALIFIED
PERSONNEL.

CAUTION!

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

WARNING:

TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK OR
PRODUCT DAMAGE,

- DO NOT EXPOSE THIS APPARATUS TO RAIN, MOISTURE, DRIPPING OR SPLASHING AND THAT NO OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHALL BE PLACED ON THE APPARATUS.
- USE ONLY THE RECOMMENDED ACCESSORIES.
- DO NOT REMOVE THE COVER (OR BACK); THERE ARE NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

THIS UNIT IS INTENDED FOR USE IN MODERATE
CLIMATES.

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

The socket outlet shall be installed near the equipment and easily accessible.

The mains plug of the power supply cord shall remain readily operable.

To completely disconnect this apparatus from the AC Mains, disconnect the power supply cord plug from AC receptacle.



(Back of product)

CAUTION - VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN
<AND INTERLOCK DEFEATED>. DO NOT STARE INTO BEAM.
FDA 21CFR / CLASS II (IIa)

CAUTION - CLASS 1M VISIBLE AND INVISIBLE LASER RADIATION
WHEN OPEN AND INTERLOCKS DEFEATED. DO NOT VIEW DIRECTLY
WITH OPTICAL INSTRUMENTS. IEC60825-1, +A2 / CLASS 1M

VARNING - KLASS 1M SYNLLIG OCH OSYNLLIG LASERSTRÅLNING NÄR
DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRÄKTA EJ
STRÅLEN DIREKT GENOM OPTISKT INSTRUMENT.

FORSIGTIG - SYNLLIG OG USYNLLIG LASERSTRÅLING KLASSE 1M, NÄR
LÅGET ER ÅBENT OG SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION.
UNDGÅ AT SE LIGE PÅ MED OPTISKE INSTRUMENTER.

VARO - AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET
ALTUUNA LUOKAN 1M NÄKYVÄÄ JA NÄKYMÄTÖNTÄ LASERSÄTEILYÄ.
ÄLÄ KATSO OPTISELLA LAITTEELLA SUORAAN SÄTEESEEN.

VORSICHT - SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG
KLASSE 1M, WENN ABDECKUNG GEÖFFNET UND
SICHERHEITSVERRIEGELUNGEN ÜBERBRÜCKT. NICHT DIREKT MIT
OPTISCHEN INSTRUMENTEN BETRACHTEN.

ATTENTION - RAYONNEMENT LASER VISIBLE ET INVISIBLE, CLASSE 1M.
EN CAS D'OUVERTURE ET LORSQUE LA SÉCURITÉ EST NEUTRALISÉE.
NE PAS REGARDER DIRECTEMENT À L'AIDE D'INSTRUMENTS D'OPTIQUE.

RQLXS1007

(Back of product)

(For the United Kingdom and Republic of Ireland)

**DIGITAL TRANSMITTER RFAX1032,
ACTIVE SUBWOOFER SB-WA500**

CE11770

OPERATING AT 2400 MHz TO 2483.5 MHz

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 to Authorised Representative: Panasonic Marketing Europe GmbH,
Panasonic Testing Centre, Winsbergring 15, 22525 Hamburg, Germany

This product is intended to be used in the following countries.
AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IS, IT, LU, MT, NL, NO,
PT, SE, TR

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

(For the Republic of Ireland)**Gaeilge****Dearbhú Comhréireachta (DoC)**

Leis seo, dearbháinn "Panasonic Corporation" go bhfuil an táirge seo i gcomhréir le riachtanais riachtanacha agus forálacha ábhartha eile den Treoir 1999/5/EC.

Féadfaidh custaiméirí coilp dár nDearbhú Comhréireachta (DoC) bunaidh dár dtáirgí R&TTE ónár bhfreastalait um Dhearbhú Comhréireachta (DoC):
<http://www.doc.panasonic.de>

Mionsonraí Teagmhála Ionadaí Údaraithe: Panasonic Marketing Europe GmbH,
Panasonic Testing Centre, Winsbergring 15, 22525 Hamburg, An Ghearmáin

Tá an táirge seo ceaptha chun a úsáid sna tíortha seo a leanas.
AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IS, IT, LU, MT, NL, NO,
PT, SE, TR

Tá an táirge seo ceaptha don ghnáth-thomhaltóir. (Catagóir 3)

Caution for AC Mains Lead



(For the United Kingdom and Republic of Ireland)

For your safety, please read the following text carefully.

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

A 5-ampere fuse is fitted in this plug.

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

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

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

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

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

CAUTION!

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY.

THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

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

If in any doubt please consult a qualified electrician.

IMPORTANT


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

Blue: Neutral, Brown: Live.

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

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

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

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

THIS PLUG IS NOT WATERPROOF—KEEP DRY.

Before use

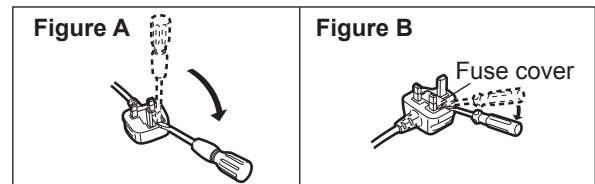
Remove the connector cover.

How to replace the fuse

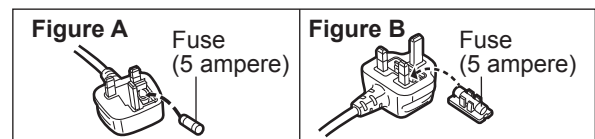
The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.

Illustrations may differ from actual AC mains plug.

- 1 Open the fuse cover with a screwdriver.



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



Safety precautions

Placement

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

Voltage

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

AC mains lead protection

Ensure the AC mains lead is connected correctly and not damaged. Poor connection and lead damage can cause fire or electric shock. Do not pull, bend, or place heavy items on the lead.

Grasp the plug firmly when unplugging the lead. Pulling the AC mains lead can cause electric shock. Do not handle the plug with wet hands. This can cause electric shock.

Foreign matter

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

Do not let liquids get into the unit. This can cause electric shock or malfunction. If this occurs, immediately disconnect the unit from the power supply and contact your dealer. Do not spray insecticides onto or into the unit. They contain flammable gases which can ignite if sprayed into the unit.

Service

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

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

WARNING:

PROFESSIONAL INSTALLATION IS REQUIRED.
PANASONIC DISCLAIMS ANY PROPERTY DAMAGE AND/OR SERIOUS INJURY, INCLUDING DEATH RESULTING FROM IMPROPER INSTALLATION OR INCORRECT HANDLING.

Requests regarding handling:

- Exercise care when selecting the location for the unit because it may discolour or deform due to light or heat if it is placed where it is exposed to direct sunlight, or near a heater.
 - Clean the wall mount brackets by wiping them with a soft, dry cloth (such as cotton or flannel). If the wall mount brackets are very dirty, remove the dirt using a neutral detergent diluted in water, and then wipe them clean with a dry cloth.
- Do not use benzene, thinner, or furniture wax as this may cause the coating to peel.

Precautions for wall mount bracket installation

- The wall mount brackets are for use in attaching the unit to a vertical wall. Do not attach to any surface other than a vertical wall.
- To ensure correct unit performance and prevent trouble, do not install at any of the following locations:
 - Near sprinklers or fire/smoke detectors
 - Where there is a risk of exposure to vibration or impact
 - Near high-voltage wires or dynamic power supplies
 - Near sources of magnetism, heat, water vapour or soot
 - Locations exposed to air blown from heating equipment
 - Where droplets of condensation from an air conditioner or other unit may form.
- Attach using techniques suited to the structure and materials of the installation location.
- Spread a soft blanket or cloth over the floor so that the unit and floor will not be marked or scratched during the assembly and installation work.
- When screwing down the parts, ensure that the screws are neither insufficiently tightened nor over tightened.
- Take sufficient care to ensure safety around you when performing the assembly and installation work or while moving about during the course of the work.
- Do not install the unit underneath ceiling lamps (spotlights, halogen lamps, etc.). Otherwise, the cabinet may be bent or damaged by high heat.

Do not connect this unit to the household mains socket while installing.
When screwing down the parts, ensure that the screws are not insufficiently tightened or over tightened.

WARNING

Ensure that the installation location is strong enough to support long-term use.

- If its strength becomes insufficient over the course of long-term use, the unit may drop, possibly causing injury.

The installation work should never be done by any other than a qualified installation specialist.

- Incorrect installation may cause equipment to fall, and personal injury may result.

Include a safety factor when considering the strength of the proposed installation location (approx. 10 times the product weight).

- If strength is not sufficient the equipment may fall, and personal injury may result.

Do not install at a location that cannot bear the load.

- If the installation location lacks sufficient strength, the equipment may fall.

Do not modify the wall mount brackets.

- Otherwise the unit may fall and become damaged, and personal injury may result.

Install the unit by taking only the steps which are specified in these instructions: Do not install it in any other way.

- Otherwise the unit may drop and become damaged, and personal injury may result.

Do not install at a location other than a vertical wall.

- Otherwise the unit may drop and become damaged, and personal injury may result.

CAUTION

Do not install at any locations subject to humidity, dust, smoke, steam or heat or under an air conditioner where water may drip onto the unit.

- This may have an adverse effect on the unit and cause fire or electric shock.

Leave a clearance between the rear panel and the wall.

- The unit has air ventilation holes at the front and rear. Covering these may result in a fire.

Install the mounting screws and power cable in such a way that they will not make contact with metal objects or wiring inside the wall.

- Electric shocks may result from contact with any metal objects inside the wall.

For installation, use the special-purpose constituent parts.

- Otherwise, the unit may fall off the wall, and personal injury may result.

When removing this unit, remove the wall mounting screws as well.

- Otherwise the mounting screws may get caught and personal injury may result.

To operate this unit safely, install it at an appropriate height.

- Otherwise the unit may fall, and personal injury may result.

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- Operations in these instructions are described mainly with the remote control, but you can perform the operations on the main unit if the controls are the same.

System	SC-BFT800
Main unit	SA-BFT800
Active subwoofer (with a digital transmitter)	SB-WA500

- Some accessories and external devices mentioned in these operating instructions that are not supplied with this product may not be on sale in certain regions.
- Please note that the actual controls and components, menu items, etc. of your Blu-ray Disc Home Theater Sound System may look somewhat different from those shown in the illustrations in these Operating Instructions.

Accessory

Check the supplied accessories before using this unit.

- ☐ **1 Remote control**
(N2QAYB000558)
- ☐ **2 Batteries for remote control**
- ☐ **1 FM indoor antenna**
(RSAX0002)



- ☐ **1 Antenna plug adaptor**
(K1YZ02000013)
For the United Kingdom and Republic of Ireland



- ☐ **AC mains lead**
For the main unit
1 For the United Kingdom and Republic of Ireland
(K2CZ3YY00005)



- 1 For Australia and New Zealand
(K2CJ2DA00010)



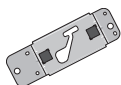
- For the active subwoofer
1 For the United Kingdom and Republic of Ireland
(RFAX1027C)



- 1 For Australia and New Zealand
(RFAX1027D)



- ☐ **2 Wall mount bracket**
(RYQ0801-K)

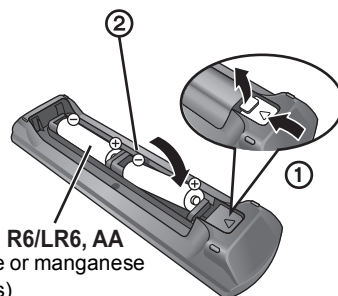


- ☐ **4 Screw**
(RYQ0804-K)



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. (⇒ 9)



Mishandling of batteries can cause electrolyte leakage which can damage items the fluid contacts 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 an automobile exposed to direct sunlight for a long period of time with doors and windows closed.
 - Do not take apart or short circuit.
 - Do not attempt to recharge alkaline or manganese batteries.
 - Do not use batteries if the covering has been peeled off.
- Remove batteries if the remote control is not going to be used for a long period of time. Store in a cool, dark place.

CAUTION

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



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.

■ Maintenance of the lens

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

■ 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 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. (⇒ 42, "To return all settings to the factory preset.")

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



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]

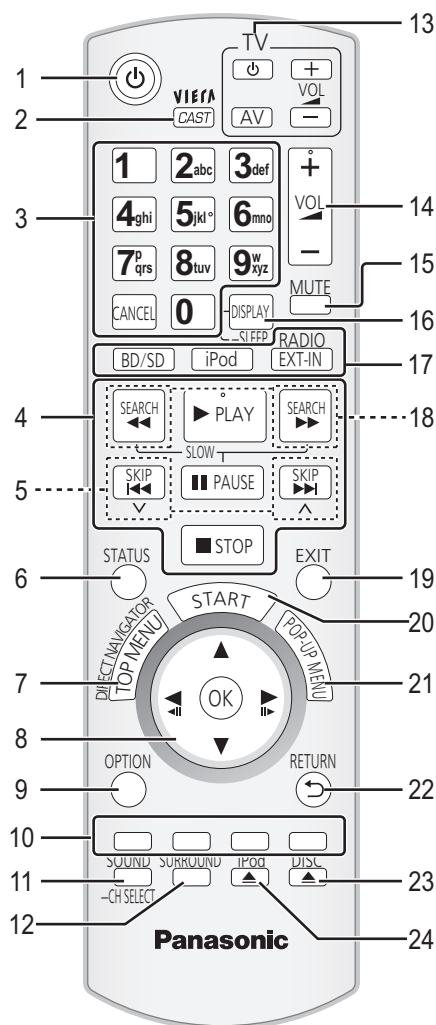
These symbols are only valid in the European Union. If you wish to discard these items, please contact your local authorities or dealer and ask for the correct method of disposal.



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.

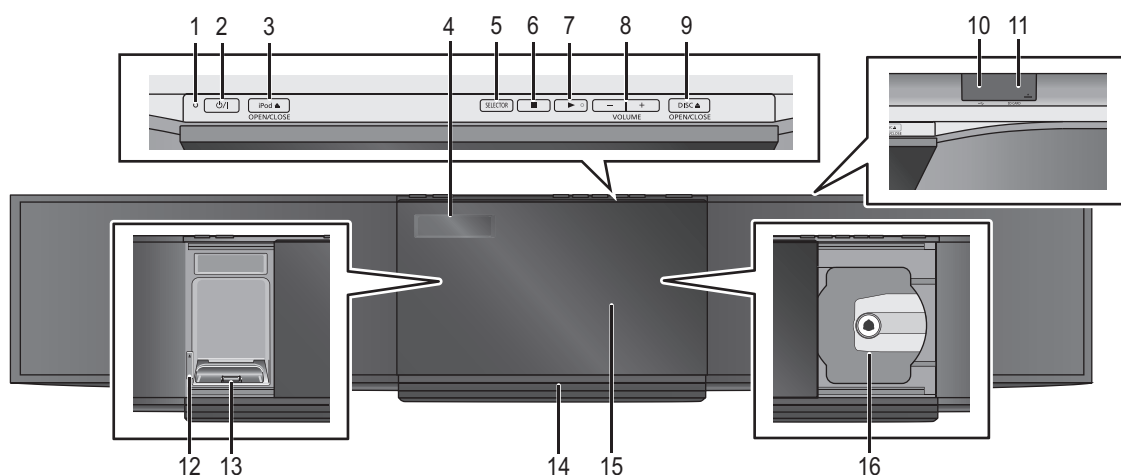
Control reference guide



Remote control

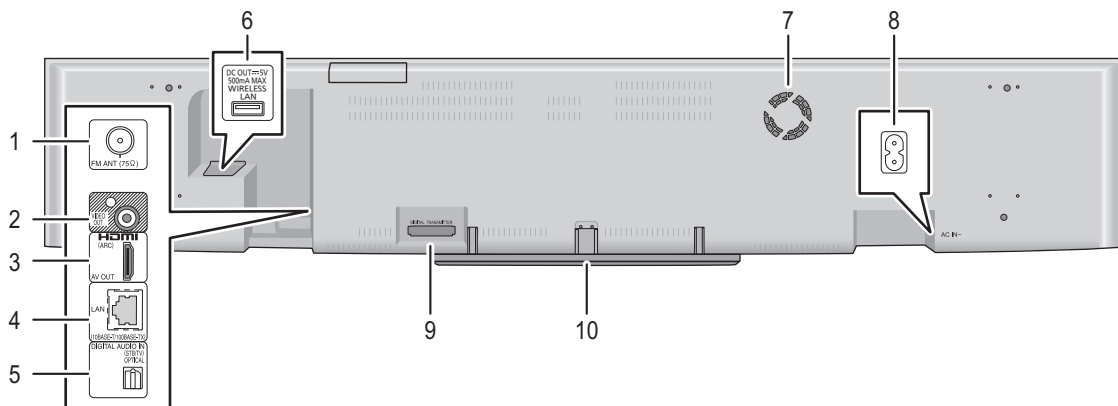
- 1 Turn the unit on and off (⇒ 19)
- 2 Display the Home screen of VIERA CAST (⇒ 35)
- 3 Select title numbers, etc./Enter numbers or characters (⇒ 35)
[CANCEL]: Cancel
- 4 Basic playback control buttons (⇒ 25)
- 5 Select preset radio stations (⇒ 30)
- 6 Show status messages (⇒ 25)
- 7 Show Top Menu/DIRECT NAVIGATOR (⇒ 25)
- 8 [▲, ▼, ◀, ▶]: Menu selection
[OK]: Selection
[◀, ▶]: Select preset radio station (⇒ 30)
[◀] (◀◀), [▶] (▶▶): Frame-by-frame (⇒ 25)
- 9 Show OPTION menu (⇒ 26)
- 10 Coloured buttons (red, green yellow, blue)
These buttons are used when;
 - Operating a BD-Video disc that includes Java™ applications (BD-J).
 - Displaying "Title View" and "Album View" screens. (⇒ 28)
 - Operating contents of VIERA CAST (⇒ 35)
- 11 Set the sound mode (⇒ 24)/Select speaker channel (⇒ 24)
- 12 Select surround sound effects (⇒ 24)
- 13 **TV operation buttons**
You can operate the TV through the unit's remote control.
[⏻]: Turn the television on and off
[AV]: Switch the input select
[+ - VOL]: Adjust the volume
- 14 Adjust the volume of the main unit
- 15 Mute the sound
 - "MUTE" flashes on the unit's display, while the function is on.
 - To cancel, press the button again or adjust the volume.
 - Muting is cancelled if the unit is turned off.
- 16 Show Playback menu (⇒ 35)/Set the sleep timer
 - ① Press and hold [-SLEEP].
 - ② While "SLEEP * *" is displayed, press [-SLEEP] several times to select the time (in minutes).
 - Timer selection is up to 120 minutes.
 - Select "OFF" when cancelling the setting.
 - To confirm the remaining time
Press and hold the button again.
- 17 Select the source
[BD/SD]: Select disc drive or SD card drive (⇒ 23)
[iPod]: Select iPod/iPhone as the source (⇒ 23, 34)
[RADIO/EXT-IN]: Select FM tuner, USB or external audio as the source (⇒ 23, 29, 31)
- 18 Select radio stations manually (⇒ 29)
- 19 Exit the menu screen
- 20 Show START menu (⇒ 23)
- 21 Show Pop-up menu (⇒ 25)
- 22 Return to previous screen
- 23 Open or close the disc side sliding door
- 24 Open or close the iPod/iPhone side sliding door

Main unit (Front)











- | | |
|--|--|
| <p>1 Power indicator
The indicator lights when this unit is turned on.</p> <p>2 Standby/on switch (⏻/⏻) (⇒ 19)
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.</p> <p>3 Open or close the iPod/iPhone side sliding door (⇒ 22)</p> <p>4 Display (FL display)</p> <p>5 Select the source (⇒ 23)</p> <p>6 Stop (⇒ 25)</p> <p>7 Start play (⇒ 25)</p> <p>8 Adjust the volume of the main unit</p> | <p>9 Open or close the disc side sliding door (⇒ 22)</p> <p>10 USB port (⇒ 22)</p> <p>11 SD card slot (⇒ 22)</p> <p>12 iPod/iPhone Docking switch lever (⇒ 33)</p> <p>13 Connect iPod/iPhone (⇒ 33)</p> <p>14 Remote control signal sensor
Distance: within approx. 7 m.
Angle: Approx. 20° up and down, 30° left and right</p> <p>15 Sliding door</p> <p>16 Disc tray</p> |
|--|--|

Main unit (Rear)



- | | |
|--|---|
| <p>1 FM radio antenna terminal (⇒ 16)</p> <p>2 VIDEO OUT terminal (⇒ 14)</p> <p>3 HDMI AV OUT terminal (⇒ 15)</p> <p>4 LAN port (⇒ 17)</p> <p>5 DIGITAL AUDIO IN terminal (⇒ 14 , 15)</p> <p>6 USB port for optional wireless LAN adaptor (⇒ 17)</p> <p>7 Cooling fan</p> | <p>8 AC IN terminal (⇒ 18)</p> <p>9 Digital transmitter dock (⇒ 16)
Connect a digital transmitter when using an active subwoofer.</p> <p>10 Stand (⇒ 13)</p> |
|--|---|

Playable discs/Cards/USB devices

Type	Logo examples	Type detail	Playable contents*
BD		BD-Video	Video
		BD-RE	Video JPEG
		BD-R	Video DivX®
DVD		DVD-Video	Video
		DVD-RAM	Video AVCHD JPEG
		DVD-R	Video AVCHD
		DVD-R DL	DivX® MP3 JPEG
		DVD-RW	Video AVCHD
	—	+R/+RW/+R DL	
CD		Music CD	Music [CD-DA]
	—	CD-R CD-RW	DivX® Music [CD-DA] MP3 JPEG
SD		SD Memory Card (8 MB to 2 GB) SDHC Memory Card (4 GB to 32 GB) SDXC Memory Card (48 GB, 64 GB) (Compatible with both mini and micro types) (as of August 2010)	MPEG2 AVCHD JPEG
USB	—	USB device (up to 128 GB)	DivX® MP3 JPEG

* See page 11, 46–47 for more information on the types of content that can be played.

■ Discs that cannot be played in this unit

Any other disc that is not specifically supported or previously described.

- 2.6 GB and 5.2 GB DVD-RAM
- DVD-RAM that cannot be removed from cartridge
- Super Audio CD
- Photo CD
- DVD-Audio
- Video CD and Super Video CD
- WMA discs
- HD DVD

■ Region management information

BD-Video

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

Example:



DVD-Video

For the United Kingdom and Republic of Ireland

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

Example:



For Australia and New Zealand

This unit plays DVD-Video marked with labels containing the region number "4" 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

- 3D videos can be played back when this unit is connected to a 3D compatible TV using a High Speed HDMI Cable.
- This unit supports high bit rate audio (Dolby Digital Plus, Dolby TrueHD, DTS-HD High Resolution Audio and DTS-HD Master Audio) adopted in BD-Video. In order to enjoy these audio formats, refer to page 39.



- 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.
- Keep the Memory Card out of reach of children to prevent swallowing.
- 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.
- FAT12, FAT16 and FAT32 file systems are supported.
- This unit supports USB 2.0 High Speed.

STEP 1: Placement

Caution

- The main unit and the active subwoofer are to be used only as indicated in this setup. Failure to do so may lead to damage to the amplifier and/or the speakers, and may result in the risk of fire. Consult a qualified service person if damage has occurred or if you experience a sudden change in performance.
- Do not attempt to attach the main unit to a wall using methods other than those described in this manual.

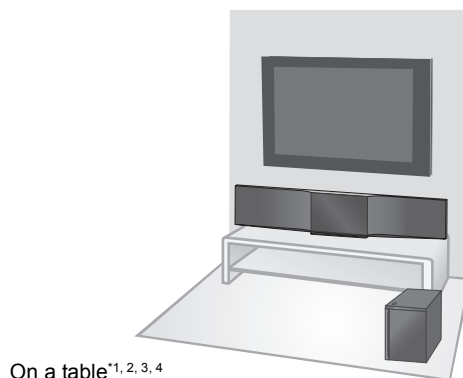
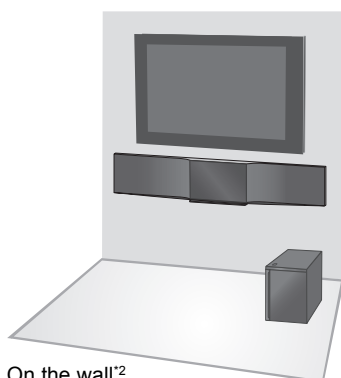
How you place the main unit and the active subwoofer can affect the bass and the sound field.

The main unit

Place the main unit near the TV.

The main unit should be placed parallel to the seating position.

e.g.



*1 Place the main unit on a flat secure base.

*2 Secure the main unit to prevent it from falling.

*3 **Do not place the main unit in front of a 3D compatible TV. The unit may block the transmitter for the 3D eyewear.**

*4 Do not place the main unit too close to the TV. The unit may interfere with the TV's various sensors (ambient light, etc.).



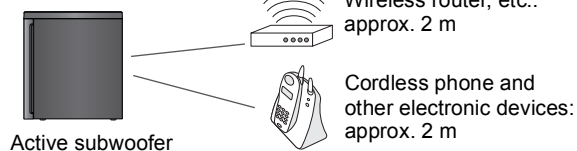
- You can damage the speakers and shorten their useful life if you play sound at high levels over extended periods.
- Placing the main unit too close to the floor, walls, and corners can result in excessive bass. Cover walls and windows with thick curtains.
- Do not use the active subwoofer or this unit in a metal cabinet or bookshelf.
- Remove the wall mount brackets from the main unit when using to place this unit.

The active subwoofer

Place to the right or left of the TV, on the floor or on a sturdy shelf so that it will not cause vibration. Leave about 30 cm from the TV.

To avoid interference, maintain the following distances between the active subwoofer and other electronic devices that use the same radio frequency (2.4 GHz band).

e.g.,



The active subwoofer will automatically seek a clear channel if any of these other devices interfere with its communication.

When this happens there is a brief interruption to the audio coming from the subwoofer.

This is the normal operation of the product working to assure the best possible performance of your home theatre audio system.

If the interference persists, try moving the other devices to another location outside the range of the active subwoofer or move the active subwoofer nearer to this unit.

- Place the active subwoofer within approximately 10 m of this unit, and in a horizontal position with the top panel faced upward.
- To allow for proper ventilation and to maintain good airflow around the active subwoofer, position it with at least 5 cm of space on all sides.

Attaching the main unit to a wall

Never use any other method than specified to install.

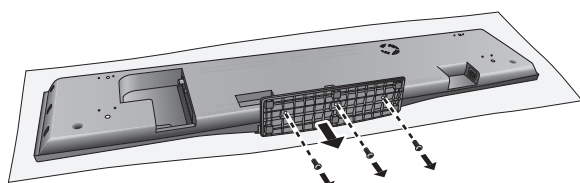
To attach this unit to the wall, refer to the following instructions.

Installation work should never be done by any other than a qualified installation specialist.

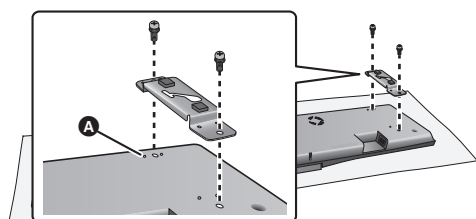
Preparation

- To prevent damage or scratches, lay down a soft cloth and perform the assembly on it.
- Keep the screws out of reach of children to prevent swallowing.

- At the bottom of the main unit:
Detach the stand after removing the screws.



- On the rear of the main unit:
Place the wall mount bracket by aligning the holes in the wall mount bracket with the projecting parts **A**.



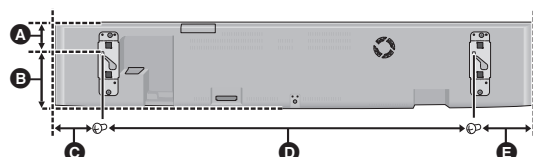
- Screw the wall mount bracket firmly into place.

- Screw tightening torque: 100 N•cm to 120 N•cm.
- Repeat the steps above when installing the second wall mount bracket.

- Complete all the necessary connections to this unit.

- Connect the AC mains lead to this unit, but do not connect it to the household mains socket until the installation is completed.

- Use the measurements indicated below to identify the screwing positions on the wall.



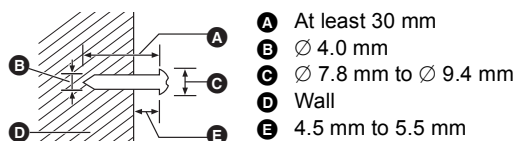
- | | |
|-----------------|-------------------|
| A 62 mm | D 803 mm |
| B 126 mm | E 128.5 mm |
| C 103 mm | |

- Position the unit with at least 100 mm of space above the unit and 100 mm on either side of the unit. If not, it will not be possible to attach the unit to the wall.
- Be sure that there is enough space above the unit and that the screw hole positions are level with each other before drilling into the wall.
- Be sure to use a spirit level to ensure that both screwing positions are horizontal to each other.

- Check the strength of the installation location.

- Check the wall strength at the 2 screwing positions. If the strength at any of these positions is lacking, provide sufficient reinforcement.
 - The position in the wall where the screw is to be attached should be capable of supporting over 20 kg.

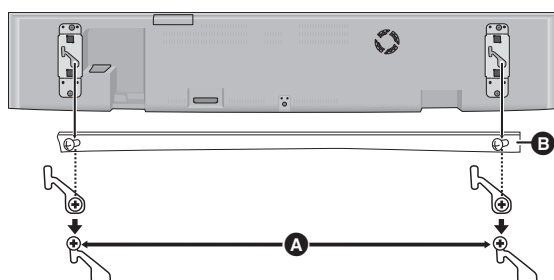
- Drive 2 screws (not supplied) into the screwing positions identified in step 5.



- | |
|-------------------------------|
| A At least 30 mm |
| B Ø 4.0 mm |
| C Ø 7.8 mm to Ø 9.4 mm |
| D Wall |
| E 4.5 mm to 5.5 mm |

- Take care when fixing this unit to the wall. Always ensure that there are no electrical cables or pipes in the wall before hanging this unit.
- Be sure to use commercially available screws with nominal diameter of Ø4.0 mm suited to the wall surface material (wood, steel frame, concrete, etc.) and also capable of supporting over 20 kg each for attaching this unit to the wall.
- Improper attachment may result in damage to the wall and this unit.

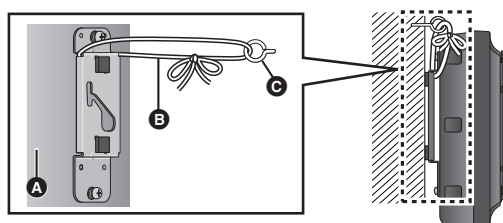
- Mount the unit securely onto the screws.



- A** Move the main unit so that the screw is in this position.
B Wall

- Be sure that both the wall mount brackets are securely attached to the screws.
- If this unit is tilting forward, remove this unit from the screws and adjust by tightening the screws.

- Attach the cord to a wall with a screw (not supplied).



- A** Rear of the main unit
B Fall prevention cord (not supplied)
C Screw eye (not supplied)

- Check the strength of the installation location. If the strength at any of these positions is lacking, provide sufficient reinforcement.

STEP 2: Connections

Turn off all equipment before connection and read the appropriate operating instructions.

Do not connect the AC mains lead until all other connections are complete.

Connection to a TV

- This system supports the PCM and the Dolby Digital bitstream input audio. However, for example the system does not support the DTS bitstream input audio.



- **Do not make the video connections through the VCR.**

Due to copy guard protection, the picture may not be displayed properly.

- Turn off all equipment before connection.

■ OPTICAL IN

- After making the digital audio connection, make settings to suit the type of audio from your digital equipment (⇒ 31).

■ HDMI

The HDMI connection supports VIERA Link "HDAVI Control" (⇒ 31) when used with a compatible Panasonic TV.

- 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.

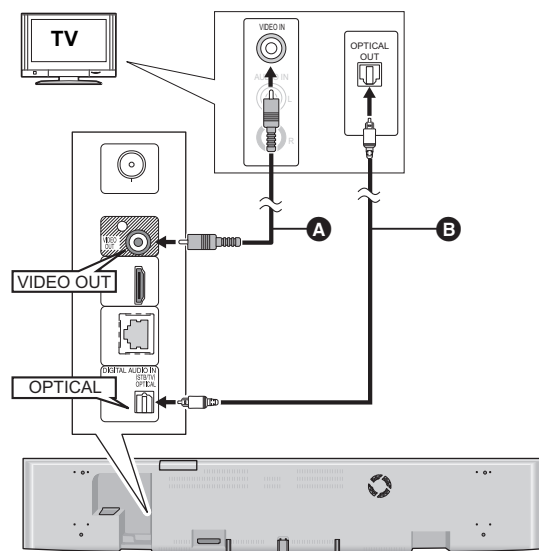
Recommended part number (High Speed HDMI Cable):

RP-CDHS15 (1.5 m), RP-CDHS30 (3.0 m),

RP-CDHS50 (5.0 m), etc.

- Audio will be output through the system's speakers when "Off" is selected in "HDMI Audio Output". (⇒ 40)

Basic connection



To enjoy TV audio from this home theatre system's speakers

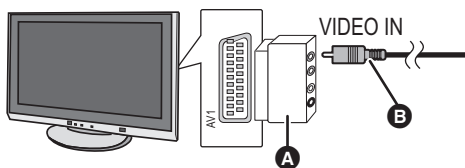
- 1 Connect the TV and the main unit with the Optical digital audio cable (not supplied).
- 2 Select "DIGITAL IN" or "D-IN" as a source (⇒ 23).

A Video cable (not supplied)

B Optical digital audio cable (not supplied)

For the United Kingdom and Republic of Ireland

e.g.,



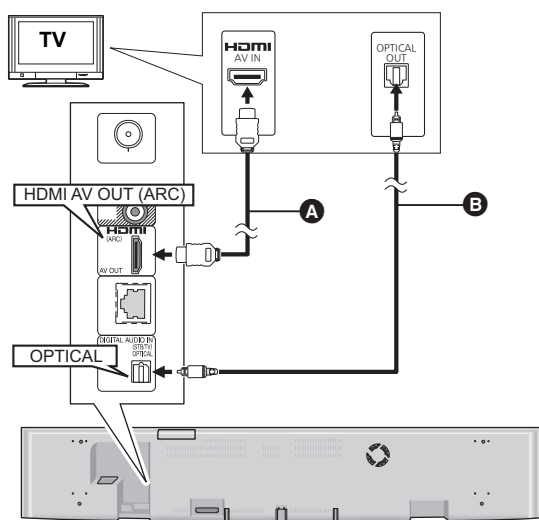
If the TV does not have a VIDEO IN terminal, connect using a Scart adaptor (Scart—VIDEO IN).

A Scart adaptor (not supplied)

B Video cable (not supplied)

Connection for the best picture and audio

- It is possible to playback 3D videos by connecting this unit with a 3D compatible TV.



To enjoy TV audio from this home theatre system's speakers

- 1 Connect the TV and the main unit with the Optical digital audio cable (not supplied).
- 2 Select "DIGITAL IN" or "D-IN" as a source (⇒ 23).

- A** HDMI cable (not supplied)
- B** Optical digital audio cable (not supplied)

ARC (Audio Return Channel)

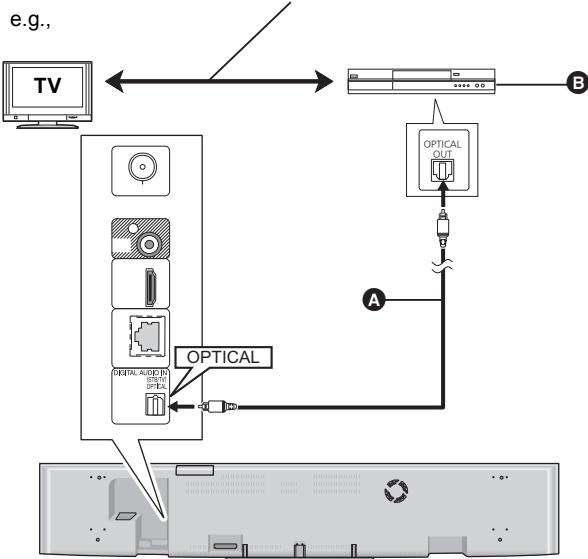
(Available when using an ARC compatible TV)

With this function it is possible to receive the digital audio signal from the TV without connecting the optical digital audio cable (**B**). Be sure to connect to the TV's ARC compatible terminal.

- Select "ARC" as the audio input source (⇒ 23).
- Refer to the operating instructions of the TV for the settings to output digital audio.

Connection with Set Top Box, etc.

Refer to the operating instructions of the respective devices for the optimal connections.



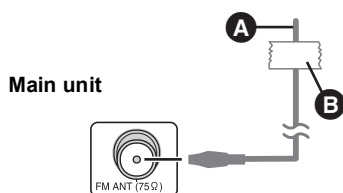
To enjoy TV audio from this home theatre system's speakers

- 1 Connect the STB and the main unit with the Optical digital audio cable (not supplied).
- 2 Select "DIGITAL IN" or "D-IN" as a source (⇒ 23).

- A** Optical digital audio cable (not supplied)
- B** Set Top Box (Cable/Satellite), etc.

Radio antenna connection

Using an indoor antenna



A FM indoor antenna (supplied)

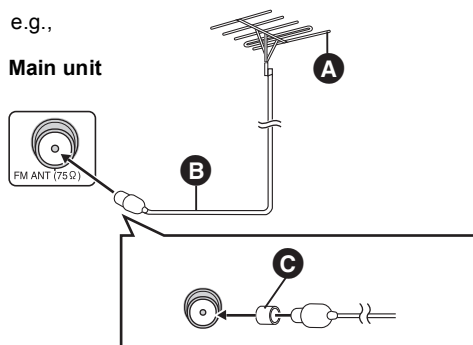
B Adhesive tape

Affix this end of the antenna where reception is best.

Using an outdoor antenna

Use outdoor antenna if FM radio reception is poor.

e.g.,



A FM outdoor antenna [Using a TV antenna (not supplied)]

The antenna should be installed by a competent technician.

B 75 Ω coaxial cable (not supplied)

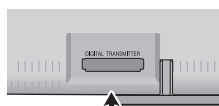
C Antenna plug adaptor (United Kingdom and Republic of Ireland only)

• Keep the adaptor out of reach of children to prevent swallowing.

Digital transmitter connection

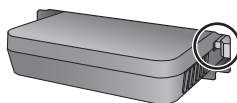
Do not insert or remove while the home theatre unit is on.

Rear of the main unit

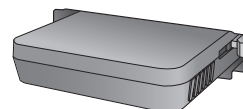


Insert fully until you hear a click.

DO



DO NOT



Make sure that the digital transmitter is fully inserted.

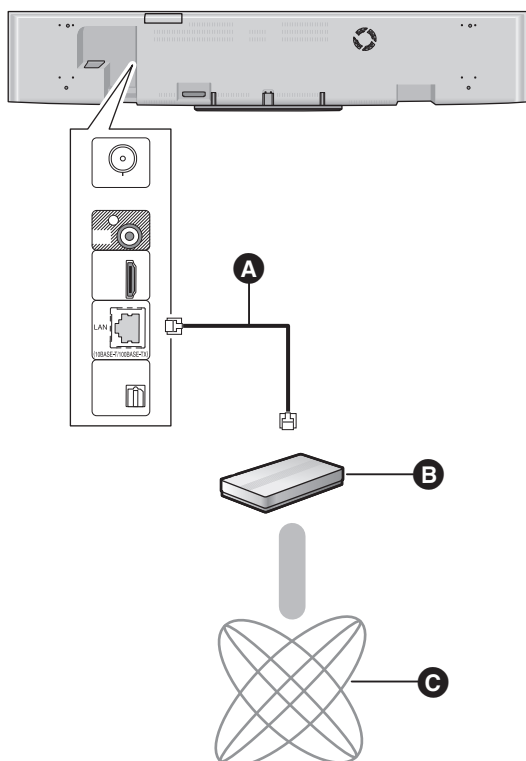
If the digital transmitter is not fully inserted, the sound may not be available from the active subwoofer.

Connection to a broadband network

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

- Firmware can be updated (⇒ 21)
- You can enjoy the BD-Live (⇒ 26)
- You can enjoy the VIERA CAST (⇒ 35)
- DLNA feature (⇒ 36)

■ Using LAN (ethernet) cable

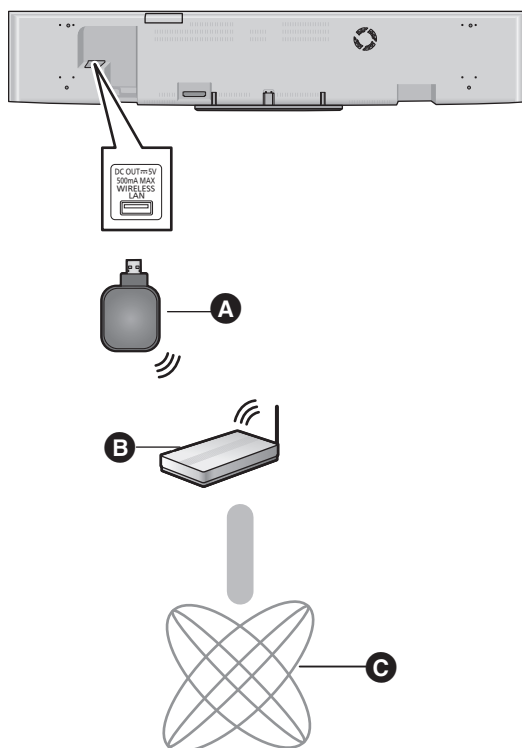


- A** LAN Cable [Straight] (not supplied)
- B** Broadband router, etc.
- C** Internet

- Use shielded LAN cables 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.

■ Using Wireless LAN Adaptor DY-WL10 (optional)



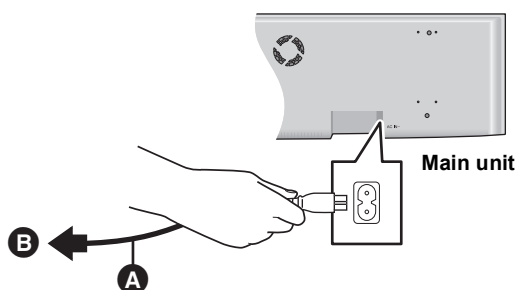
- A** Wireless LAN Adaptor
- B** Wireless router (Access point), etc.
- C** Internet

- 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.
- For up to date compatibility information on your Wireless router (Access Point) 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.

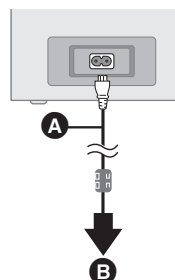
STEP 3: AC mains lead connection

For the United Kingdom and Republic of Ireland only

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



- A AC mains lead (supplied)
- B To a household mains socket



Rear of the active subwoofer

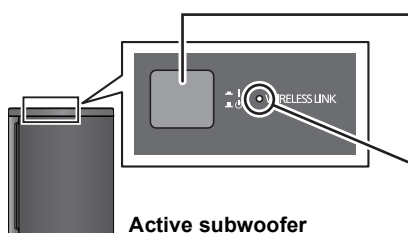
- AC mains lead with a ferrite core is for the active subwoofer. Do not use any other AC mains lead except the supplied one.

- A AC mains lead (supplied)
- B To a household mains socket

- Connect only after all other connections are complete.
- The main unit consumes a small amount of AC power, even when it is turned off (When the "Quick Start" setting is "Off": approx. 0.1 W, the active subwoofer: approx. 0.4 W). In the interest of power conservation, if you will not be using this unit for a long time, unplug it from the household mains socket.
- Do not use any other AC mains lead except the supplied one.

STEP 4: Active subwoofer wireless connection

Turn on the active subwoofer after all connections are complete.



Press [■ I, ■ ⏻] on the active subwoofer.

Unit on/off button [■ I, ■ ⏻]

■ I: The active subwoofer is on.

■ ⏻: The active subwoofer is off.

WIRELESS LINK indicator

Red: The active subwoofer is on and the wireless link is deactivated.

Green: The active subwoofer is on and the wireless link is activated.
("W" is also displayed on the main unit's display.)

■ When "W" is not displayed on the main unit's display (Making the active subwoofer link)

If you should change the digital transmitter, repeat the pairing steps using the new digital transmitter.

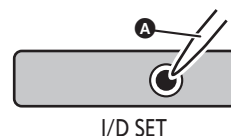
- ③ While "P" is displayed, press [I/D SET] on the bottom of the active subwoofer.

Preparation

- Make sure to connect the AC mains lead of the active subwoofer.
- Insert the digital transmitter into the main unit.
- Turn on the main unit and reduce the volume.

- ① Turn on the active subwoofer.
- ② While pressing [■] on the main unit, press the number button [2] on the remote control until "P" lights in the main unit's display.

- A Use a pointed object.

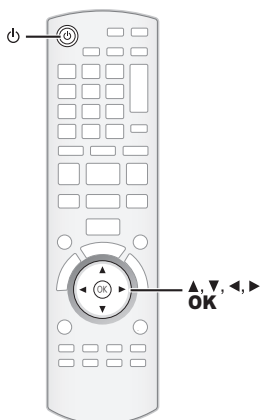


- The indicator on the active subwoofer turns green.
- If "P" goes off before you press [I/D SET], repeat step ② and then continue the procedure.
- ④ While pressing [■] on the main unit, press the number button [2] on the remote control.
- ⑤ Turn off and on the active subwoofer.
 - Make sure the indicator on the active subwoofer lights up green. ("W" is also displayed on the main unit's display.)

STEP 5: Easy setup

The Easy setup assists you to make necessary settings.

Follow the on-screen prompts to make basic settings for the system.



Preparation

- Turn on your TV and select the appropriate video input mode (e.g., VIDEO 1, AV 1, HDMI, etc.) to suit the connections to this unit.
- Confirm the digital transmitter connection. (⇒ 16)

1 Press [⏻] to turn on this unit.

2 Press [L I, L ⏻] on the active subwoofer to turn it on.

- Make sure the wireless link indicator lights green. (⇒ 18)

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

Language

Select the language used on menu screen.

TV Aspect

Select the aspect to suit your TV and preference.

Speaker check

Check if the connection to each speaker is valid.

TV Audio

Select the audio input connection from your TV, [item with "(TV)"].

Quick Start

Speed of startup from standby mode is increased.

4 Press [OK] several times to finish the “Easy setup”.

After completing “Easy setup”, you can perform “Network Easy Setting”.

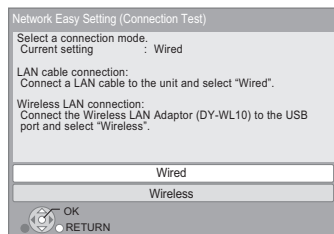


- You can perform this setup anytime by selecting “Easy setup” in the Setup menu. (⇒ 41)
- Language and TV Aspect settings are automatically retrieved if this unit is connected to a Panasonic TV (VIERA) supporting HDAVI Control 2 or later via an HDMI cable.

Network Easy Setting

When “BD/DVD” is selected as the source

Select “Wired” or “Wireless” and press [OK].



“Wired” connection

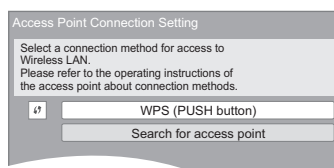
Follow the on-screen instructions to make your connection settings.

- When you experience problems (⇒ 20)

“Wireless” connection

If you select “Wireless” and “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 access point” and then follow the on-screen instructions and make the settings.



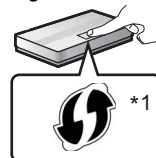
WPS (PUSH button):

If your Wireless router (Access point) 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 (Access point) until the lamp starts flashing.
 - For details, refer to the operating instruction of Wireless router (Access point).
- ② Press [OK].

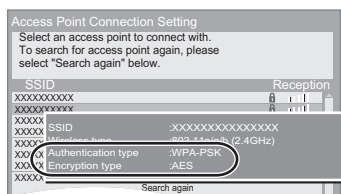
e.g.,



Search for access point:

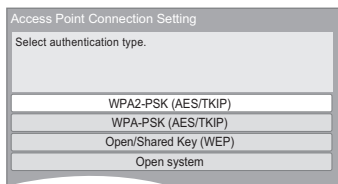
Available Wireless routers (Access points) are searched and listed. You can select the one to use from the list.

- ① Press [▲, ▼] to select SSID*2 of Wireless router (Access point) you want to connect with. Then press [OPTION] to show information of the selected router, make a note of the authentication and encryption type.



- If you can not find the SSID*2, select “Search again”.

- ② Press [RETURN] and then press [OK].
Then select an item on the following screen which corresponds to the authentication type noted down in step ① (⇒ 19).



Follow the on-screen instructions to make the settings.

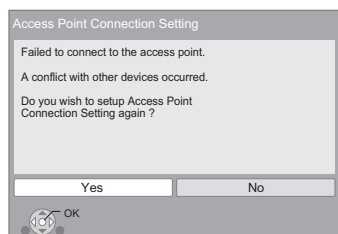
- Input your encryption key code in “Encryption Key” supplied with your Wireless router (Access point).



- *1 Wi-Fi Protected Setup-compatible Wireless router (Access point) may have the mark.
*2 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.

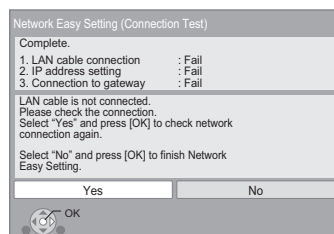
When you experience problems with settings

Access Point Connection Setting



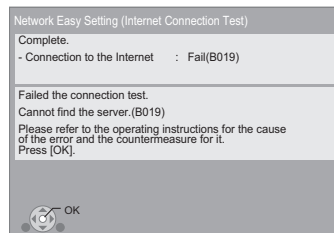
Display	Check the following
A conflict with other devices occurred.	<ul style="list-style-type: none"> • Please wait a few moments, and then try again.
A time out error occurred.	<ul style="list-style-type: none"> • Setting of the Wireless router (Access point) for MAC Address etc. • The signal may be weak. 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 (Access point). • Please wait a few moments, and then try again.
An authentication error or a time out error occurred.	<ul style="list-style-type: none"> • Connection of Wireless LAN Adaptor • If there is no improvement in symptom, consult your dealer.
A device error occurred.	<ul style="list-style-type: none"> • Connection of Wireless LAN Adaptor • If there is no improvement in symptom, consult your dealer.

Network Easy Setting (Connection Test)



Display	Check the following
1. LAN cable connection or Connection to access point :Fail 2. IP address setting :Fail 3. Connection to gateway :Fail	<ul style="list-style-type: none"> • Connection of the LAN cables (⇒ 17)
1. LAN cable connection or Connection to access point :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” (⇒ 41)
1. LAN cable connection or Connection to access point :Pass 2. IP address setting :Home network available 3. Connection to gateway :Fail	
1. LAN cable connection or Connection to access point :Pass 2. IP address setting :Pass 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” (⇒ 41)
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” (⇒ 41) 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. (⇒ 40)
- You can redo these settings individually using "Network Settings". (⇒ 40)
- **Do not use this device to connect to any wireless network for which you do not have usage rights.**
During automatic search 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 (Access point) might change. When you have trouble getting online on your PC, perform the network settings of your PC in accordance with the settings of Wireless router (Access point).
- 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 updating

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 screen is displayed.

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

To update the firmware

Press [START] ⇒ select "To Others" ⇒ [OK] ⇒ select "Setup" ⇒ [OK] ⇒ select "General" ⇒ [OK] ⇒ select "Firmware Update" ⇒ [OK] ⇒ select "Update Now"

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/>

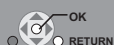
(This site is in English only.)

To show the firmware version on this unit. (⇒ 41, "System Information")

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 Installed Version:x.xx



- 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". (⇒ 41)

STEP 6: Reprogramming the remote control

When other Panasonic products respond to this remote control

Change "Remote Control" (⇒ 41) on the main unit and the remote control (the two must match) if you place other Panasonic products close together and it responds to this remote control.

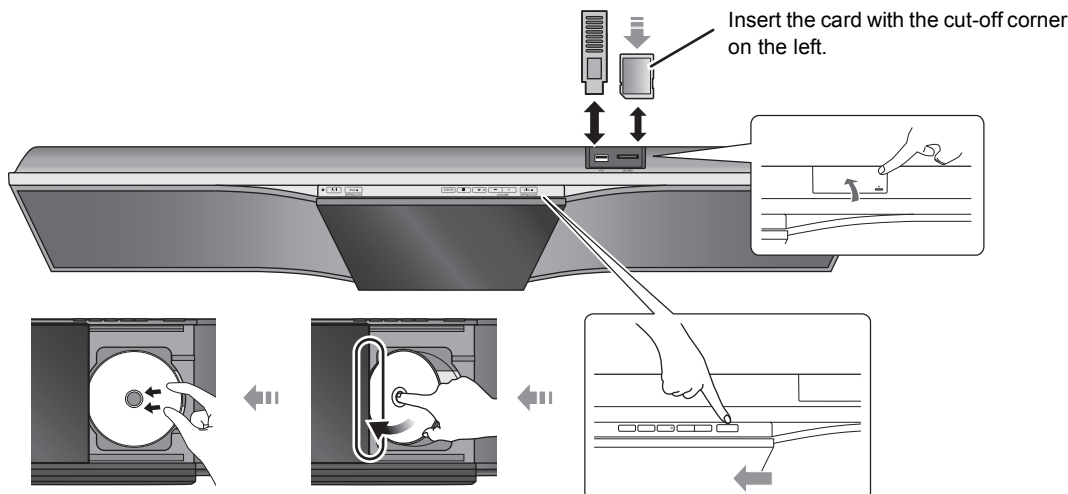
To change the code on the main unit.

- 1 While stopped, press [START].
- 2 Press [▲, ▼] to select "To Others" and press [OK].
- 3 Press [▲, ▼] to select "Setup" and press [OK].
- 4 Press [▲, ▼] to select "General" and press [OK].
- 5 Press [▲, ▼] to select "Remote Control" and press [OK].
- 6 Press [▲, ▼] to select the code (1 or 2) and press [OK].

To change the code on the remote control.

- 1 While pressing [OK]
Press and hold the number button (1 or 2), which has the same number you selected in the step 6 for more than 5 seconds.
- 2 Press [OK].

Inserting or removing media



Inserting a disc

- ① Press [DISC ▲ OPEN/CLOSE] to open the sliding door.
- ② With the label of the disc facing towards you, tilt the disc into the disc tray under the sliding door.
- ③ Place the disc onto the spindle in the centre and then push the disc down until it clicks into place.

Removing a disc

- ① Press [DISC ▲ OPEN/CLOSE] to open the sliding door.
- ② Hold the centre and the top right of the disc and pull the top right of the disc to unlock it from the spindle.
- ③ Tilt the disc so as not to touch the sliding door and remove the disc.

- When inserting a disc, ensure that the label of the disc is facing towards you.
- While the reading indicator is displayed, do not turn off the unit or remove the media. Such action may result in loss of the media's contents.
- When removing the SD card, press on the centre of the card and pull it straight out.
- If the USB device is not recognized by the main unit, disconnect the USB device from the main unit and reconnect it.
- It may take some time to be recognized by the main unit.

■ To switch sources

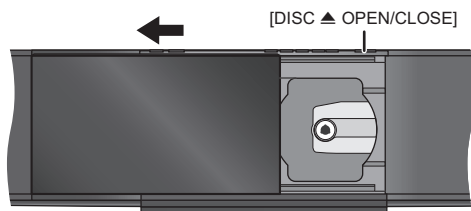
Press [BD/SD] or [EXT-IN] to select "BD/DVD", "SD" or "USB".

- If media is inserted while the unit is stopped, the source switches automatically depending on the inserted media.

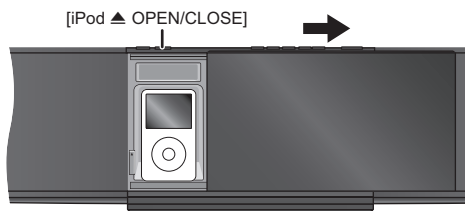
Operating the sliding door

- Do not open or close the sliding door by hand.

Press [DISC ▲ OPEN/CLOSE] to open the sliding door to insert a disc.



Press [iPod ▲ OPEN/CLOSE] to open the sliding door to connect an iPod/iPhone.



Press [DISC ▲ OPEN/CLOSE] again to close the sliding door.

Press [iPod ▲ OPEN/CLOSE] again to close the sliding door.



- Keep your hands away from the sliding door while it is opening or closing. Your hand or clothing's, etc. might get caught inside the door.
- Keep your fingers away from the sliding door when it is closing to avoid possible minor injuries.
- Do not leave the disc side of the sliding door open. Dirt may mount on the lens.
- Do not touch the lens or other parts of the laser pickup.
- During disc playback the sliding door will not open when [iPod ▲ OPEN/CLOSE] is pressed.
 - If [iPod ▲ OPEN/CLOSE] is pressed twice, disc playback will stop and the sliding door will open.
- The sliding door will not close and "DOCK UNLOCKED" is displayed if the iPod/iPhone is not correctly connected.
- If the sliding door is opened to the left with [DISC ▲ OPEN/CLOSE], you cannot close the sliding door with [iPod ▲ OPEN/CLOSE]. If the sliding door is opened to the right with [iPod ▲ OPEN/CLOSE], you cannot close the sliding door with [DISC ▲ OPEN/CLOSE].
- The sliding door for the iPod/iPhone will not close automatically when the unit is turned off.

START menu

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

- 1 Press [START].
- 2 Press [▲, ▼] to select the item and press [OK].
e.g., BD-Video



Playback Viewing Picture		Play back the contents.
Top Menu		(⇒ 25)
Menu		(⇒ 25)
Network	Home Network (DLNA)	(⇒ 36)
	Internet Content	Displays the Home screen of the VIERA CAST (⇒ 35)
Input Selection		Switches to each source BD/DVD/CD SD card iPod FM Radio: To enjoy the FM radio (⇒ 29) USB device To enjoy sound from the TV (⇒ 31) ARC^{*1}: When using an HDMI cable (Available when using an ARC compatible TV) DIGITAL IN^{*1}: When using an Optical digital audio cable To enjoy sound from other devices (⇒ 31) DIGITAL IN^{*2}: When using an Optical digital audio cable ^{*1} "(TV)" is displayed next to items set for TV AUDIO input. ^{*2} "(CABLE/SATELLITE)" is displayed next to DIGITAL IN when set for CABLE/SATELLITE AUDIO input.
Sound(Equalizer)		(⇒ 24)

To Others	Playlists: You can play playlists created on DVD-VR.
	Setup: (⇒ 38)
	Card Management: (⇒ 26)

To exit the screen
Press [START].

■ Selecting the source by the remote control

Button	Source
BD/SD	BD/DVD or SD card (SD) (⇒ 25)
iPod	iPod (IPOD) (⇒ 33)
RADIO EXT-IN	FM Radio (FM) (⇒ 29) USB device (USB) (⇒ 25) To enjoy sound from the TV (⇒ 31) ARC^{*1} DIGITAL IN^{*1} (D-IN) To enjoy sound from other devices (⇒ 31) DIGITAL IN^{*2} (D-IN) ^{*1} "(TV)" is displayed next to items set for TV AUDIO input. ^{*2} "(CABLE/SATELLITE)" is displayed next to DIGITAL IN when set for CABLE/SATELLITE AUDIO input.



- Items to be displayed may vary with the media.
- When the selector is switched, it may take time to playback the selected video and/or audio.

Enjoying sound effects from all speakers

Enjoying surround sound effects

Press **[SURROUND]** several times to select the effect.

7.1CH VIRTUAL SURROUND

You can enjoy 5.1/6.1/7.1-channel surround-like effect using 2.1-channel speakers.

2CH STEREO

You can play any source in stereo without the surround sound effect.

DOLBY VIRTUAL SPEAKER REFERENCE

You can enjoy a surround sound effect similar to 5.1 ch (Dolby Digital or DTS) with any audio source, using the included front speakers and the active subwoofer. You can also enjoy a surround sound effect with stereo source such as CDs.

DOLBY VIRTUAL SPEAKER WIDE

This mode widens the acoustic field of the front speakers.

■ Adjusting speaker level during play

- ① Press and hold **[–CH SELECT]** to activate the speaker setting mode.
- ② Press **[–CH SELECT]** several times to select the speaker. Each time you press the button:

L R ↔ SW

L R: Front speaker

(left and right: only the balance is adjustable.)

- Press **[◀, ▶]** to adjust the balance of the front speakers.

SW: Active subwoofer

- Press **[▲]** (increase) or **[▼]** (decrease) to adjust the speaker level of the active subwoofer.
–6 dB to +6 dB

■ Changing the sound modes

- ① Press **[SOUND]** several times to select the mode.
 - The selected mode will only be displayed on the main unit.
- ② While the selected mode is displayed Press **[◀, ▶]** and select the desired setting.

EQUALIZER

You can select sound quality settings.

FLAT

Cancel (no effect is added).

HEAVY

Adds punch to rock.

CLEAR

Clarifies higher sounds.

SOFT

For background music.

SUBWOOFER LEVEL

You can adjust the amount of bass.

1 (Weakest effect) to 4 (Strongest effect)

- The setting you make is retained, and recalled every time you play the same type of source.

H.BASS

You can enhance low-frequency sound so that heavy bass sound can be heard clearly, even if the acoustics of your room are not optimal.

- The setting you make is retained, and recalled every time you play the same type of source.

WHISPER-MODE SURROUND

You can enhance the surround effect for low volume sound. (Convenient for late night viewing.)

CLEAR-MODE DIALOG

You can make the dialogue stand out from the background noise and also hear sound as if it is coming from the centre of the TV.

DUAL (“D-IN”, “ARC” only)

You can select to suit the type of audio on the main unit.

M1

M2

M1+M2 (stereo audio)

(Only works with Dolby Dual Mono)

- “M1” or “M2” is not available if “On” is selected in “Digital Audio Input”. (⇒ 39)

AUTO STEREO (“FM” only)

If noise is excessive, you can select the type of FM radio audio. Depending on the broadcast system, stereo or monaural will be selected.

MONO

The sound becomes monaural.



- The sound effects/modes may not be available or have no effect with some sources.
- You may experience a reduction in sound quality when these sound effects/modes are used with some sources. If this occurs, turn the sound effects/modes off.

Playing video contents

BD DVD CD SD USB

Preparation

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

1 Press [⏻] to turn on the unit.

2 Insert the media.

Play starts.

- If the menu is displayed, press [▲, ▼, ◀, ▶] to select the item and press [OK].
- When a message screen is displayed while playing back 3D compatible video software, play back in accordance with the instructions.
- If play does not start, press [▶ PLAY].

■ To show menus

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

Press [TOP MENU/DIRECT NAVIGATOR] or [POP-UP MENU].

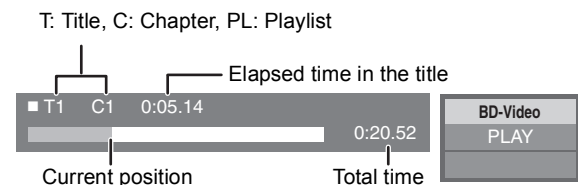
- Press [▲, ▼, ◀, ▶] to select the item and press [OK].
- Pop-up menu also appears by pressing [OPTION] and selecting "Pop-up Menu".

■ 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 information displayed will change.

e.g. BD-Video



- 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. (⇒ 38)
- 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: Successive play is not possible.
- When a menu is displayed at the time a 1080/60p (1920×1080/60 progressive) video recorded by a Panasonic digital high-definition video camera is played back, select "Play Video (AVCHD)".
- It is not possible to playback AVCHD and MPEG2 video which have been dragged and dropped, copied and pasted to the media.

Other operations during play

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

Stop

Press [■ STOP].

The stopped position is memorised.

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 (⇒ 49), 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 [SKIP ◀◀] or [SKIP ▶▶].

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

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

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.

Useful functions

1 Press [OPTION].

2 Select an item and press [OK].

While DIRECT NAVIGATOR screen is displayed

Properties	To display the titles properties (recording date, etc.).
Chapter View	To select the chapter.
To Picture	Playing still pictures (⇒ 28).
Folder	To switch to another folder.
View Titles	To select the title.

While playing

Screen Aspect	When black bars are shown at the top and bottom or 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.

- Depending on the played contents if you perform "Screen Aspect", there may be no effect.
- When "TV Aspect" (⇒ 39) is set to "4:3" or "4:3 Letterbox", the "Zoom" effect in "Screen Aspect" is disabled.



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

Enjoying BD-Live or BONUSVIEW in BD-Video

What is BONUSVIEW?

BONUSVIEW allows you to enjoy functions such as picture-in-picture or secondary audio etc.

What is BD-Live?

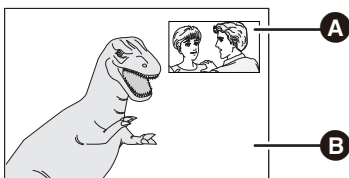
In addition to the BONUSVIEW function, BD-Live allows you to enjoy more functions such as subtitles, exclusive images and online games by connecting this unit to the Internet.

- The usable functions and the operating method may vary with each disc, please refer to the instructions on the disc and/or visit their website.

Playing picture-in-picture

To turn on/off secondary video

- 1 Press [DISPLAY].
- 2 Press [▲, ▼] to select the "Disc" menu and press [►].
- 3 Press [▲, ▼] to select the "Signal Type" menu and press [OK].
- 4 Press [▲, ▼] to select the "Video" under "Secondary Video" menu and press [►].
- 5 Press [▲, ▼] to select the "On" or "Off".
- 6 Press [RETURN] to exit.



To turn on/off secondary audio

- 1 Press [DISPLAY].
- 2 Press [▲, ▼] to select the "Disc" menu and press [►].
- 3 Press [▲, ▼] to select the "Signal Type" menu and press [OK].
- 4 Press [▲, ▼] to select the "Soundtrack" under "Secondary Video" menu and press [►].
- 5 Press [▲, ▼] to select the "On" or "Off". When "On" is selected, press [►] and then press [▲, ▼] to select the language.
- 6 Press [RETURN] to exit.



- 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 (⇒ 39).

Enjoying BD-Live discs with Internet

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.

1 Connect to the network. (⇒ 17)

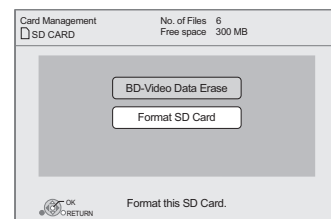
2 Insert an SD card (with 1 GB or more free space). SD card is used as the local storage (⇒ 49).

3 Insert the disc.

■ Deleting data/Formatting SD cards

There are various functions in BD-Video that you can enjoy by copying data to the SD card (Local Storage). 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 [START].
- 3 Press [▲, ▼] to select "To Others" and press [OK].
- 4 Press [▲, ▼] to select "Card Management" and press [OK].
- 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].



- To use the above functions, 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 (⇒ 38).
- When discs supporting BD-Live are played back, the player or disc IDs may be sent to the content provider via the Internet.

Regarding DivX

ABOUT DIVX PLUS™ HD:

DivX® is a digital video format created by DivX, Inc. This is an official DivX Certified® device that plays DivX video, including DivX Plus™ HD video (H.264/.MKV) up to 1080p and premium content. Visit www.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 DivX Video-on-Demand (VOD) content.

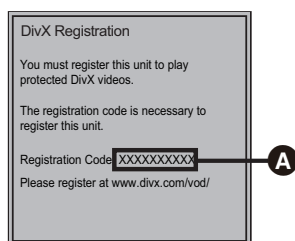
To generate the registration code, locate the DivX VOD section in the device setup menu.

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

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

Display the unit's registration code.

(⇒ 41, "DivX Registration" in "General")



A 10 alphanumeric characters

- 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.

(⇒ 41, "DivX Registration" in "General")

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.

■ Displaying subtitle text

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

Set "Subtitle" in "Disc" (⇒ 35)



- DivX video files that do not display "Text" do not contain subtitle text.
- If the subtitles text is not displayed correctly, try changing the language settings. (⇒ 38)
- You may not display subtitle text depending on a file.

Enjoying Blu-ray 3D™ video

BD

You can enjoy powerful videos with realistic sensations of the Blu-ray 3D™ compatible video software by connecting this unit with a High Speed HDMI Cable to a 3D compatible TV.



The illustration is an image.

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, and select HDMI video input mode on the TV. (⇒ 14, 15)

- Perform the necessary preparations for the TV.

Method of playback is the same as normal disc playback. (⇒ 25)

- Playback following the instructions displayed on the screen.

3D settings

Perform the following settings as necessary.

Playback method for 3D disc	It is also possible to playback 3D discs in 2D (conventional video). (⇒ 38)
3D Type	If you cannot play back in 3D, change the settings as required by the connected TV format. (⇒ 39) <ul style="list-style-type: none">• Change the settings for 3D on the TV also when "Side by side" is selected.
3D Playback Message	Hide the 3D viewing warning screen. (⇒ 38)
Graphic Display Level	Adjust the pop-up position for the playback menu or message screen etc. (⇒ 36)



- 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" (⇒ 40).

Playing still pictures

BD DVD CD SD USB

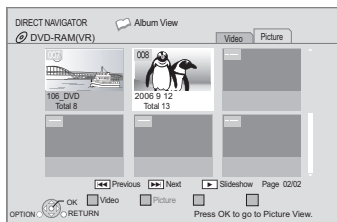
(BD-RE, DVD-RAM/-R/-R DL, CD-R/RW, SD Card, USB device)

1 Insert a disc, SD card or USB device.

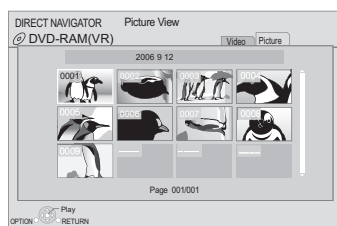
If the menu is displayed, press [**▲**, **▼**] to select the item and press [**OK**].

2 BD-RE, DVD-RAM

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



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



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

To exit the screen

Press [**TOP MENU/DIRECT NAVIGATOR**].

■ To show the picture properties

While playing, press [**STATUS**] twice.

e.g. JPEG on DVD-RAM
Shooting date



To exit the screen

Press [**STATUS**].

Useful functions

1 Press [**OPTION**].

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

While "Album View" or "Picture View" screen is displayed

Start Slideshow	You can display still pictures one by one at a constant interval.
Slideshow Setting	<p>Display Interval Change the display interval.</p> <p>Transition Effect Set display method.</p> <p>Repeat Play Repeat slideshow.</p> <p>Soundtrack Music files on an iPod/iPhone or a music CD or USB device can be played back as background music during the slideshow.</p> <p>Soundtrack Folder A folder to play back can be selected when a USB device with recorded MP3 is connected to this unit.</p> <p>Press [▲, ▼, ◀, ▶] to select "Set" and press [OK].</p>
Select Folder	To switch to another higher folder. <ul style="list-style-type: none"> Only if there is a multiple number of higher folders recognizable.
Folder	To select the still pictures in another folder.
To Video	Playing video contents (⇒ 25).
To album view	To display album view.

While playing (except for slideshow)

Rotate RIGHT	Rotate the still picture.
Rotate LEFT	
Zoom out	<p>Reduce the still picture.</p> <ul style="list-style-type: none"> This function is only available for small-sized still pictures.
Zoom in	Cancel "Zoom out".



- Depending on the media and 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 a music CD, a USB device with MP3 recorded and an iPod/iPhone are inserted/connected to this unit, iPod/iPhone has a priority to be played back as background music.

Playing music

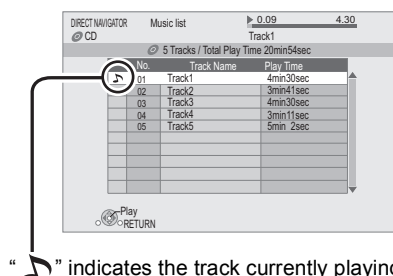
DVD CD USB

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

1 Insert a disc or USB device.

If the menu is displayed, press [**▲**, **▼**] to select the item and press [OK].

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



■ Playing a track in another folder

- While the “Music list” is displayed
Press [OPTION].
- Press [**▲**, **▼**] to select “Select Folder” and press [OK].



- You cannot select folders that contain no compatible tracks.

Listening to the Radio

Presetting stations automatically

Up to 30 stations can be set.

1 Press [RADIO] to select “FM”.

2 Press [STATUS] to select the position to start the auto preset search.

LOWEST:

To begin auto preset with the lowest frequency (FM87.50).

CURRENT:

To begin auto preset with the current frequency.*

*To change the frequency, refer to “Presetting stations manually”.

3 Press and hold [OK].

Release the button when “AUTO” is displayed.

The tuner starts to preset all the stations it can receive into the channels in ascending order.



- “SET OK” is displayed when the stations are set, and the radio tunes to the last preset station.
- “ERROR” is displayed when automatic presetting is unsuccessful. Preset the stations manually.

Presetting stations manually

Preparation

Select a radio broadcast.

- Press [RADIO] to select “FM”.
- Press [SEARCH◀◀] or [SEARCH▶▶] to select the frequency.

- To start automatic tuning, press and hold [SEARCH◀◀], [SEARCH▶▶] until the frequency starts scrolling. Tuning stops when a station is found.

1 While listening to the radio broadcast Press [OK].

2 While “P” is flashing on the display Press the number buttons to select a channel.

To select a 1-digit number

e.g., 1: [1] ⇒ [OK].

To select a 2-digit number

e.g., 12: [1] ⇒ [2]



- A station previously stored is overwritten when another station is stored in the same channel preset.

Listening/confirming the preset channels

- 1 Press [RADIO] to select “FM”.
- 2 Press the number buttons to select the channel.

To select a 1-digit number

e.g., 1: [1] ⇒ [OK].

To select a 2-digit number

e.g., 12: [1] ⇒ [2].

Alternatively, press [∧, ∨] or [◀, ▶].

RDS broadcasting

For the United Kingdom and Republic of Ireland

If the station you are listening to is transmitting RDS signals, “RDS” will light up on the display.

While listening to the radio broadcast

Press [DISPLAY] to display the text data.

PS: Programme service

PTY: Programme type

OFF: Frequency display

PTY displays			
NEWS	VARIED	FINANCE	COUNTRY
AFFAIRS	POP M	CHILDREN	NATIONAL
INFO	ROCK M	SOCIAL A	OLDIES
SPORT	M.O.R. M*	RELIGION	FOLK M
EDUCATE	LIGHT M	PHONE IN	DOCUMENT
DRAMA	CLASSICS	TRAVEL	TEST
CULTURE	OTHER M	LEISURE	ALARM
SCIENCE	WEATHER	JAZZ	

* M.O.R. M=Middle of the road music

■ Display on the main unit

TUNED/STEREO:

Displayed when receiving stereo broadcasting

TUNED:

Displayed when receiving monaural broadcasting or monaural sound is selected.

■ If noise is excessive

- ① Press [SOUND] several times to select “AUTO STEREO”.
- ② While the selected mode is displayed on the unit's display
Press [◀, ▶] and select “MONO”.
The sound becomes monaural.

Select “AUTO STEREO” in step ② to cancel the mode.

Depending on the broadcast system, stereo or monaural will be selected.

“MONO” is also cancelled when you change the frequency.

- This setting can be preset for each broadcasting station.

Enjoying TV with unit's speakers

Preparation

Turn on your TV and select the appropriate audio input mode [ARC, D-IN] to suit the connections to this unit. (⇒ 23)

Surround sound effects

You can enhance stereo sources with surround sound effect.

Press [SURROUND] several times to select the effect.

For more detailed information on this operation, please refer to the “Enjoying surround sound effects” section on page 24.

Sound modes

You can adjust the mode depending on the source or situation.

- 1 Press [SOUND] several times to select the mode.
- 2 While the selected mode is displayed on the unit's display
Press [◀, ▶] and select the desired setting.

For more detailed information on this operation, please refer to the “Changing the sound modes” section on page 24.

Clear-mode Dialog

You can make the dialogue stand out from the background noise and also hear sound as if it is coming from the centre of the TV.

- 1 Press [SOUND] several times to select “CLEAR-MODE DIALOG”.
- 2 While the selected mode is displayed on the unit's display
Press [◀, ▶] and select “ON” or “OFF”.

Selecting the type of audio from the DIGITAL AUDIO IN terminal

- 1 Press [SOUND] several times to select "DUAL".
 - 2 While the selected mode is displayed on the unit's display
Press [◀, ▶] and select the desired setting.
M1
M2
M1+M2 (stereo audio)
(Only works with Dolby Dual Mono)
- "M1" or "M2" is not available if "On" is selected in "Digital Audio Input". (⇒ 39)



- Audio that is input through the DIGITAL AUDIO IN terminal is not output from the HDMI AV OUT terminal.

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) 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.

Preparation

- ① Set "VIERA Link" to "On" (⇒ 40).
(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.

Setting the audio link

■ Setting the audio link with the TV

With the remote control;

- Select the actual TV audio connection on the main unit.
- ① Press [START] and press [▲, ▼] to select "To Others" and press [OK].
 - ② Press [▲, ▼] to select "Setup" and press [OK].
 - ③ Press [▲, ▼] to select "TV / Device Connection" and press [OK].
 - ④ Press [▲, ▼] to select "TV Audio Input".
 - ⑤ Press [◀, ▶] to switch "ARC" or "DIGITAL IN".
 - Select "ARC"*1 in "TV Audio Input" when the DIGITAL AUDIO IN terminal is used for the STB connection.

Whenever the connection or settings are changed, reconfirm the points above.

■ Setting the audio link with the STB

With the remote control;

- Select the STB input channel on the TV.
- ① Press [EXT-IN] to select "D-IN".
 - ② Press [STATUS] to select "CABLE/SATELLITE AUDIO ON".
- If the input channel of the STB on the TV is changed or if you want to change the device allocated for the linked operations, select "CABLE/SATELLITE AUDIO OFF" in step ② above and then repeat steps ① to ②.



- VIERA Link "HDAVI Control", based on the control functions provided by HDMI which is an industry standard known as HDMI CEC (Consumer Electronics Control), is a unique function that we have developed and added. As such, its operation with other manufacturers' equipment that supports HDMI CEC cannot be guaranteed.
- This unit supports "HDAVI Control 5" function.
"HDAVI Control 5" is the newest standard (current as of December, 2009) for Panasonic's HDAVI Control compatible equipment. This standard is compatible with Panasonic's conventional HDAVI equipment.
- Please refer to individual manuals for other manufacturers' equipment supporting VIERA Link function.

*1 The selection works only when using an ARC compatible TV.

One touch play

You can turn on this unit and the TV, and start play with a single press of a button.

While the unit and the TV are in standby mode;
Press **[▶ PLAY]**.

Speaker Selection

You can select whether audio is output from the unit's speakers or the TV speakers by using the TV menu settings.

Home Cinema

This unit's speakers are active.

- When this unit is in standby mode, changing the TV speakers to this unit's speakers in the TV menu will automatically turn the unit on and select, "ARC"*1,*2 or "D-IN" (DIGITAL IN)*2 as the source.
- You can control the volume setting using the volume or mute button on the TV's remote control.
- If you turn off this unit, TV speakers will be automatically activated.

TV

TV speakers are active.

- The volume of this unit is set to "0".
- Audio output is 2-channel audio.



- When switching between this unit's speakers and TV speakers, the TV screen may be blank for several seconds.
- The audio from "DIGITAL IN", "FM Radio" or "iPod" will be output from this unit's speakers even though the TV speakers are selected.

*1 The selection works only when using an ARC compatible TV.

*2 "ARC" or "D-IN" works depending on the setting in "Setting the audio link".

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)

For the United Kingdom and Republic of Ireland

– BD-Video, DVD-Video:

When playback stops, the TV will automatically return to TV tuner mode.

- When you switch the TV input to TV tuner mode, this unit will automatically switch to "ARC"*1,*2 or "D-IN" (DIGITAL IN)*2.
- This function does not work when the iPod/iPhone selector is chosen. (⇒ 34)

*1 The selection works only when using an ARC compatible TV.

*2 "ARC" or "D-IN" works depending on the setting in "Setting the audio link".

Automatic lip-sync function (for HDAVI Control 3 or later)

Delay between audio and video is automatically adjusted, enabling you to enjoy smooth audio for the picture.(⇒ 39, "Audio Delay")

- This function works only when "BD/DVD", "SD", "USB", "ARC"*1,*2 or "D-IN" (DIGITAL IN)*2 is selected as the source on this unit.

*1 The selection works only when using an ARC compatible TV.

*2 "ARC" or "D-IN" works depending on the setting in "Setting the audio link".

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 the TV
(When the unit is connected to a Panasonic TV (VIERA) that supports HDAVI Control 2 or later.)
Select "Video" in "Power Off Link" (⇒ 40)

Easy control only with VIERA remote control

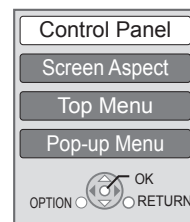
Only TV supports "HDAVI Control 2" or later

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

- This works only during "BD/DVD", "SD" or "USB" playback and resume modes.

1 Press [OPTION].

e.g. BD-Video



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.
- Depending on the menu, some button operations cannot be performed from the TV's remote control.

Using the iPod/iPhone

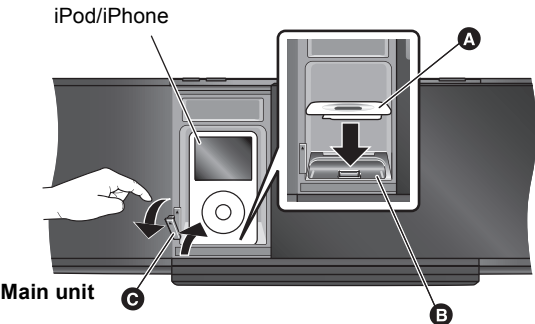
iPod/iPhone Connection

Preparation

- Before connecting/disconnecting the iPod/iPhone, turn the main unit off or reduce the volume of the main unit to its minimum.
- Make sure that the video cable connection is made to view photos/videos from the iPod/iPhone. (⇒ 14)

1 Press [iPod ▲ OPEN/CLOSE] to open the sliding door and be sure to insert the iPod/iPhone dock adapter supplied with the iPod/iPhone into the Dock for iPod/iPhone.
Insert the side of the iPod/iPhone dock adapter with the clips facing towards you first and then push the opposite side until it clicks into place.

2 Press [▲] to unlock the Dock for iPod/iPhone and pull the docking switch lever to tilt the Dock for iPod/iPhone.



- A** Dock adapter (not supplied)
- Attach the dock adapter until firmly fitting into the dock. The adapter should be supplied with your iPod/iPhone for the stable use.
 - If you need an adapter, consult your iPod/iPhone dealer.
- B** Dock for iPod/iPhone
- C** [▲] Docking switch lever

3 Connect the iPod/iPhone firmly.

4 Gently push the docking switch lever back until it clicks into place.

5 Press [iPod ▲ OPEN/CLOSE] to close the sliding door.

Removing an iPod/iPhone

- ① Press [iPod ▲ OPEN/CLOSE] to open the sliding door.
- ② Press [▲] to unlock the Dock for iPod/iPhone and then pull the docking switch lever to tilt the Dock for iPod/iPhone and pull the iPod/iPhone straight out.
- ③ Push the docking switch lever back until it clicks into place.

If the Dock for iPod/iPhone is not tilt when connecting/disconnecting the iPod/iPhone, it may cause damage to the connector.



About recharging the battery

- iPod/iPhone will start recharging regardless of whether this unit is on or off.
- "IPOD *" will be shown on the main unit's display during iPod/iPhone charging in main unit standby mode.
- Once fully recharged, additional recharging will not occur.

Compatible iPod/iPhone (as of August 2010)

- Compatibility depends on the software version of your iPod/iPhone.

Name	Memory size
iPod touch 3rd generation	32 GB, 64 GB
iPod nano 5th generation (video camera)	8 GB, 16 GB
iPod touch 2nd generation	8 GB, 16 GB, 32 GB
iPod classic	120 GB, 160 GB (2009)
iPod nano 4th generation (video)	8 GB, 16 GB
iPod classic	160 GB (2007)
iPod touch 1st generation	8 GB, 16 GB, 32 GB
iPod nano 3rd generation (video)	4 GB, 8 GB
iPod classic	80 GB
iPod nano 2nd generation (aluminum)	2 GB, 4 GB, 8 GB
iPod 5th generation (video)	60 GB, 80 GB
iPod 5th generation (video)	30 GB
iPod nano 1st generation	1 GB, 2 GB, 4 GB
iPod 4th generation (colour display)	40 GB, 60 GB
iPod 4th generation (colour display)	20 GB, 30 GB
iPod 4th generation	40 GB
iPod 4th generation	20 GB
iPod mini	4 GB, 6 GB
iPhone 3GS	16 GB, 32 GB
iPhone 3G	8 GB, 16 GB
iPhone	4 GB, 8 GB, 16 GB

TV

Other devices

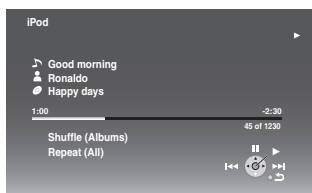
Preparation

- Make sure that the "IPOD" source is selected. Press [iPod] to select the source.
- **To view photos/videos from the iPod/iPhone**
Operate the iPod/iPhone menu to make the appropriate photo/video output settings for your TV.
- To display the picture, turn on the TV and select the appropriate video input mode.

Enjoy music/video

- 1 Press [iPod] to select "IPOD".
- 2 Press [STATUS] several times to select the music menu or videos menu.
- 3 Press [▲, ▼] to select an item and press [OK].
 - Repeat this step until the selected title starts playback.
 - Press [◀, ▶] to display the previous or next page.

e.g., music playback screen



To exit, press [TOP MENU/DIRECT NAVIGATOR].

Enjoy photos

- 1 Press [iPod] to select "IPOD".
- 2 Press [STATUS] several times to select "ALL" on the unit's display.
- 3 Switch the TV input to video in.
- 4 Play a slideshow on your iPod/iPhone.
The picture will be displayed on your TV.

To use the iPod touch/iPhone features

- If the sliding door is closed, press [iPod ▲ OPEN/CLOSE] to open it.
The main unit will continue to operate even if the sliding door is open.
Proceed operations through the iPod/iPhone display.
- ① Press the Home button on the iPod touch/iPhone.
 - ② Select the iPod touch/iPhone features on the touch screen to operate.

You can use the remote control to operate the iPod/iPhone menu.

The operation may vary among iPod/iPhone models.

- [▲, ▼]: To navigate menu items
- [OK]: To go to the next menu.
- [RETURN]: To return to the previous menu.

- 1 Press [START].
- 2 Press [▲, ▼] to select "Menu" and then press [OK].
- 3 Press [▲, ▼] to select "Play Mode" and then press [OK].
- 4 Press [▲, ▼] to select an item and press [OK].

Shuffle (For music playback only.)

Songs:

Play all songs on iPod/iPhone in random order.

Albums:

Play all songs on an album in random order.

Repeat

One:

Play a single song/video repeatedly.

All:

Play all songs/videos from selected items (e.g., Playlists, Albums, etc.) repeatedly.

- 5 Press [▲, ▼] to select the setting and press [OK].



- The setting of the playback mode will be kept until changes are made on the same iPod/iPhone.
- This function does not work when "Use iPod display (All)" is selected.

Basic controls

(For music and video playback only)

Buttons	Functions
[▶ PLAY]	Play
[■ STOP]	Pause
[PAUSE]	
[SKIP ◀◀, SKIP ▶▶]	Skip
(Press and hold) [SEARCH ◀◀, SEARCH ▶▶]	Search



- Sound modes are available (⇒ 24).

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 August 2010)

Preparation

- Network connection (⇒ 17)
- Network setting (⇒ 19)

1 Press [VIERA CAST].

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 return to VIERA CAST Home screen

Press [VIERA CAST].

To exit from VIERA CAST

Press [EXIT], [START] or [TOP MENU/DIRECT NAVIGATOR].

- When the Blu-ray disc logo is selected on the Home screen, the playback source will be changed and go back to the source previously selected.



- In the following cases, settings are possible using "Internet Content Settings" (⇒ 41)
 - 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. (⇒ 21)
- 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.

Playback menu

1 Press [BD/SD] to select "BD/DVD".

2 Press [DISPLAY].

e.g., BD-Video

Disc	Signal Type		
Play	Subtitle	Off	Main 1ENG
Picture			
Sound	Subtitle Style	-	Angle -
Menus		Items	
		Settings	

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

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

5 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, Audio attribute and Video attribute: (⇒ 47)

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.

Angle

Select the number of the angle.

Some items may be changed only on the disc specific menu. (⇒ 25)

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.

Graphic Display Level

(Only when "Full HD" is selected in "3D Type" (⇒ 39).)

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

Picture

Mode

Select the picture quality mode during play.

Detail Clarity

The picture is sharp and detailed.

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" (⇒ 40) and play discs recorded at a rate of 60 fields per second.

Sound

Sound Effects*

(Discs recorded at 48 kHz or less)

This feature gives you brighter sound by increasing the high frequency portion of the audio.

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

Dialog Enhancer*

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

High Clarity Sound

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

- Only when you have selected "Enable" in "High Clarity Sound" (⇒ 39)

* When audio is output from the HDMI AV OUT terminal this function is effective only when "Dolby D/Dolby D +/Dolby TrueHD" or "DTS/DTS-HD" is set to "PCM". (⇒ 39)

DLNA feature

You can enjoy music, video and pictures contents saved on a DLNA Certified media server (such as a PC with Windows 7 installed etc.) connected to the home network with this unit. You also can enjoy viewing them with 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/>

- For the operation of equipment connected to the network, refer to their respective operating instructions.
- Not compatible with certain audio, video and image files.

Preparation

- ① Perform network connection (⇒ 17) and network setting (⇒ 19) of this unit.
- ② Perform Home Network settings of the PC or DIGA.

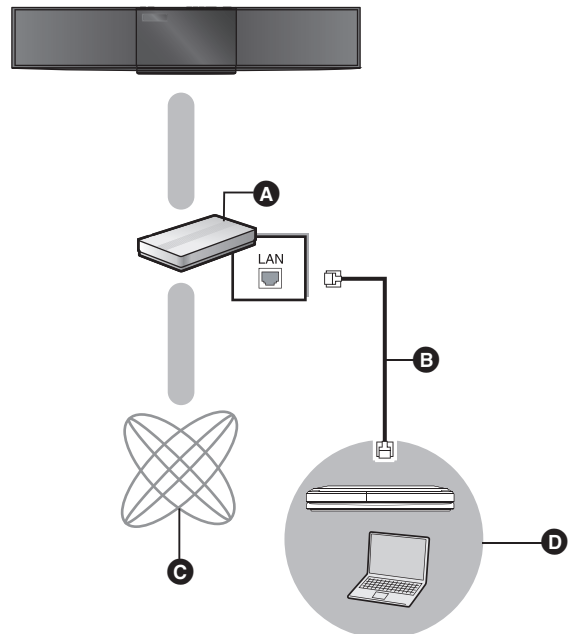
When connected to a PC with Windows 7 installed

- Add the contents and folder to the libraries of PC.
- 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 the operations in steps 1-4 of "Enjoy contents on the equipment connected to this unit via the network" (⇒ 37).

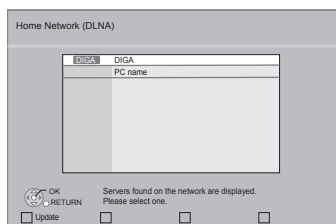


- A Broadband router, Wireless router (Access point), etc.
- B LAN Cable (Straight)
- C Internet
- D DLNA Certified media server

Enjoy contents on the equipment connected to this unit via the network

- 1 Press [START].
- 2 Press [▲, ▼] to select “Network” and press [OK].
- 3 Press [▲, ▼] to select “Home Network (DLNA)” and press [OK].
 - A list of equipment connected via the network is displayed.
 - This list can be updated by pressing the red button on the remote control.

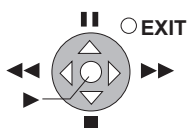
e.g.



- 4 Press [▲, ▼] to select the equipment to playback the contents, and press [OK].
- 5 Press [▲, ▼, ◀, ▶] to select the item to playback (folder), and press [OK].
 - Menu structure will be different depending on the equipment connected to this unit. Select the contents by repeating the operation.
 - 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.



- Depending on the equipment, playback of pictures may not be possible.
- Items displayed in grey on the display cannot be played back by this unit.
- This unit cannot be played back via connected equipment.
- Depending on the performance of the connected PC, video frames may be dropped during playback, or video may not playback at all.

Useful functions for when playing back pictures

The following operations are possible when playing back pictures from connected equipment.

While contents list is displayed

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

Start Slideshow	You can display still pictures one by one at a constant interval.
Slideshow Settings	Interval Change the display interval. Repeat Play Repeat slideshow. Press [▲, ▼, ◀, ▶] to select “Set” and press [OK].

While playing

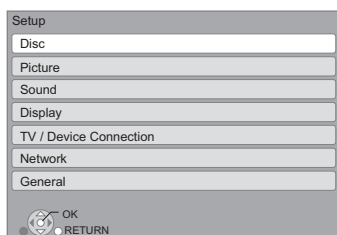
- ① Press [OPTION].
 - If OPTION menu is not displayed, press [OPTION] again.
- ② Select an item, then press [OK].

Status	Show the picture properties (⇒ 28).
Rotate RIGHT (except for slideshow)	Rotate the still picture.
Rotate LEFT (except for slideshow)	

Setup menu

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

- 1 Press [START] and press [▲, ▼] to select "To Others" and press [OK].
- 2 Press [▲, ▼] to select "Setup" and press [OK].



- 3 Press [▲, ▼] to select the menu and press [OK].
- 4 Press [▲, ▼] to select the item and press [OK].
If there are any other items, repeat these steps.
- 5 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 password of the following items are common.
Don't forget your password.

- "DVD-Video Ratings"
- "BD-Video Ratings"
- "Lock" (⇒ 41)

Disc

DVD-Video Ratings

Set a ratings level to limit DVD-Video play.

- Follow the on-screen instructions. Enter the 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.

Playback method for 3D disc

Select the playback method of 3D compatible video software.

3D Playback Message

Set to display or hide the 3D viewing warning screen when playing back the 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 (⇒ 47) 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 (⇒ 47) with the number buttons when you select "Other *****".

Menu Preference

Choose the language for the disc menus.

- Enter a code (⇒ 47) with the number buttons when you select "Other *****".

BD-Live Internet Access (⇒ 26)

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.

DivX Subtitle Text

Select a suitable item according to the language used for DivX subtitles text (⇒ 27).

- 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 dialogue 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.
- 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). (⇒ 26)

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

Digital Audio Input

Press [OK] to show the following settings:

PCM-Fix

Select the audio signal to input.

- “On”: PCM is available.
 - “Off”: PCM and Dolby Digital are available.
- Select “On” if the sound is cut off intermittently.

Downmix

Select the downmix system to enjoy multi-channel or 2-channel sound.

- Select “Surround encoded” to enjoy the surround sound.
- There is no downmix effect on the bitstream audio signal.
- The audio will be output in “Stereo” in the following cases.
 - AVCHD playback
 - Playback of secondary audio (including the button click sound).

High Clarity Sound

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

- Set to “Enable” and then set “High Clarity Sound” on the Playback menu to “On”. (⇒ 36)

Audio Delay

Mis-sync between the video and audio is corrected by delaying the audio output.

Speaker

Refer to page 41.

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 5 minutes or more, the displayed screen switches to the other states automatically.

- While playing and pausing, etc., this function is not available.
- While playing music (CD-DA or MP3), after about 5 minutes DIRECT NAVIGATOR screen switches to a blank screen with “Screen Saver” message.

FL Display

Changes the brightness of the unit’s display.

- If “Automatic” is selected, the display is dimmed but brightens when you perform some operations.

Software Licence

Information about the software used by this unit is displayed.

TV / Device Connection

3D Type



Select the format of the connected TV.

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

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	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.
------	--

HDMI Connection

Press [OK] to show the following settings:

HDMI Video Format

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

- If “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, it 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” (⇒ 36) to “On”
- When BD-Video images other than 24p are played, images are output at 60p.

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.

- Audio will be output through the system’s speakers when “Off” is selected.

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.

Power Off Link

Select the desired power off link setting of this unit for VIERA Link operation (⇒ 32). (This works depending on the settings of the connected VIERA Link “HDAVI Control” compatible equipment.)

Video/Audio:

When the TV is turned off, this unit will turn off automatically.

Video:

When the TV is turned off, this unit will turn off except during the following conditions:

- CD or MP3 audio playback
- iPod/iPhone mode
- Radio mode
- “ARC” or “D-IN” (DIGITAL IN) mode (non-selected TV AUDIO setting for VIERA Link)
- “D-IN” (DIGITAL IN) mode (non-selected CABLE/ SATELLITE AUDIO setting for VIERA Link)

TV Audio Input

Select the TV audio input to work with the VIERA Link operations.

TV System

Change the setting to match the equipment you are connecting with.

- 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 (⇒ 19)

Network Settings

Perform network-related settings individually.

Press [OK] to show the following settings:

LAN Connection Mode

Select connection method.

Access Point Connection Setting

This allows the Wireless router (Access point) 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 (Access point) connection wizard will be displayed.

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 (⇒ 35) (VIERA CAST)

Press [OK] to show the following settings:

Lock

You can restrict using 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.

MAC Address

Displays the MAC address of this unit.

General

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 ⇒ 50)

*Depending on the power conserving setting activated on the TV, this function may have less effect when the unit is started by the power on link function. (⇒ 32)

Easy setup (⇒ 19)

You can execute basic settings to optimize your home theatre system.

Default Settings

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

DivX Registration (⇒ 27)

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 of optional Wireless LAN Adaptor.

Firmware Update (⇒ 21)

Press [OK] to show the following settings.

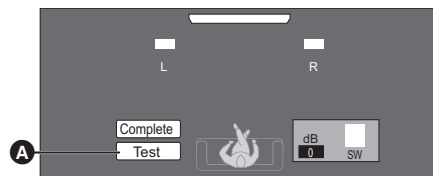
Automatic Update Check

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.

Speaker settings



- ① Select “Test” (A) and press [OK].
A test signal is output.

L → R → SW
↑

- ② While listening to the test signal of the subwoofer (SW)
Press [▲, ▼] to adjust the volume.
The volume can be adjusted between +6 dB and –6 dB.
- ③ Press [OK].
The test signal stops.

To finish the speaker setting

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

Troubleshooting guide

Before requesting service, please perform the following steps.

Do you have the latest firmware installed?

Firmware updates may be released to correct operating irregularities that are discovered with certain movies. (⇒ 21)



Make the following checks.

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

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 [⏻/I] on the main unit for 5 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.

While the unit is off, press and hold [SKIP ►►] on the remote control and [DISC ▲ OPEN/CLOSE] on the unit at the same time for more than 5 seconds.

General operation

To return to the factory preset.

- Select "Yes" in "Default Settings" in the Setup menu. (⇒ 41)

To return all settings to the factory preset.

- Reset the unit as follows:
While the unit is off, press and hold [+ VOLUME], [DISC ▲ OPEN/CLOSE] and [⏻/I] on the main unit at the same time for more than 5 seconds.

The remote control doesn't work properly.

- The remote control and main unit are using different codes.
Change the code on the remote control. (⇒ 21)
- It may be necessary to set the code of the remote control again after changing the batteries for the remote control.
(⇒ 21)

Disc cannot be played.

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

Still pictures (JPEG) do not playback normally.

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

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.

While the disc tray is empty and "BD/DVD" is selected as a source, press and hold [SKIP ◀◀] on the remote control and [▶] (Play) on the unit at the same time for more than 5 seconds. The ratings level returns to the factory preset.

Power

No power.

- Insert the AC mains lead securely into a household mains socket. (⇒ 18)

The unit switches to standby mode.

- When the time set for the sleep timer has passed, the main unit will be turned off. (⇒ 8)
- One of the unit's safety devices is activated. Press [⏻/I] on the main unit to turn the unit on.

The main unit is turned off when the input for the TV is changed.

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

Displays

The display is dim.

- Change "FL Display" in the Setup menu. (⇒ 39)

TV screen and video

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

Picture is distorted.

Jittering occurs.

- An incorrect resolution is selected in "HDMI Video Format".
Reset the setting as follows:
While the disc tray is empty and "BD/DVD" is selected as a source, press and hold [▶] (Play) and [■] (Stop) on the main unit at the same time for more than 5 seconds to cancel the setting.
- When Dolby Digital Plus, Dolby TrueHD, and DTS-HD audio are not output in bitstream, select "Yes" in "Default Settings" and make proper settings. (⇒ 41)
- The unit and television are using different video systems.
While stopped, keep pressing [■] (Stop) and [DISC ▲ 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 "Playback method for 3D disc" in the Setup menu is set to "3D Playback", images may not output depending on the connection method. Remove the disc from this unit and select "2D Playback". (⇒ 38)

When playing back a 3D disc, audio can be heard but not video image on the TV.

- Change the video input mode to the suitable HDMI video input mode on the TV.

The contents of the USB device cannot be read.

- If inserted during playback, the USB device may not be recognised by this unit.

Video is not output.

- Set the "High Clarity Sound" in the Playback menu to "Off" to use the VIDEO OUT terminal. (⇒ 36)
-

Video is not output in high-definition.

- Confirm that "HDMI Video Format" in the Setup menu is set properly. (⇒ 40)
-

3D video is not output.

- Are the settings on this unit and the TV correct? (⇒ 15)
-

3D video is not output correctly as 2D.

- Is the "Playback method for 3D disc" set to "2D Playback"? (⇒ 38)
 - Discs that have recorded titles with Side by side (2 screen structure) which 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. (⇒ 39)
 - Adjust the aspect setting on the television.
(Adjustment using "Screen Aspect" (⇒ 26) on the unit is also possible.)
-

For the United Kingdom and Republic of Ireland**After choosing "Home Cinema" in "Speaker Selection" with the TV's remote control, the TV's input selection also changes.**

- Disconnect the HDMI cable from the TV and reconnect it to a different HDMI IN terminal.
-

Sound

No sound.**Low volume.****Distorted sound.****Cannot hear the desired audio type.**

- Check connections to other equipment. (⇒ 14–18)
- Ensure the speaker settings for your speakers are correct. (⇒ 41)
- To output audio from a device connected with an HDMI cable, set "HDMI Audio Output" to "On" in the Setup menu. (⇒ 40)
- When "BD-Video Secondary Audio" is set to "On", Dolby TrueHD, Dolby Digital Plus, DTS-HD Master Audio and DTS-HD High Resolution Audio are output as Dolby Digital or DTS Digital Surround.
- Re-master will not work when the bitstream signal is output from the HDMI AV OUT terminal. (⇒ 36)
- Depending on the connected equipment, the sound may be distorted if this unit is connected with an HDMI cable.
- Select a suitable surround sound effect to optimise and enjoy the original multi-channel source. (⇒ 24)

Cannot switch audio.

- When audio is output from the HDMI AV OUT terminal, set "Dolby D/Dolby D +/Dolby TrueHD", "DTS/DTS-HD" or "MPEG Audio" to "PCM". (⇒ 39)
-

No sound from the TV.

- Press [EXT-IN] to select the corresponding source. (⇒ 23)
 - The ARC (Audio Return Channel) function is not available. Instead, use an optical digital audio cable to have the TV sound. (⇒ 14, 15)
 - If the TV is not ARC compatible and only the HDMI connection is used, an extra audio connection is necessary (⇒ 14, 15).
 - If there is no sound from the equipment connected to this unit's DIGITAL AUDIO IN terminal, please make sure that the optical audio output of the equipment is set to PCM.
-

iPod/iPhone operation

Cannot charge or operate.

- Check that the iPod/iPhone is connected firmly. (⇒ 33)
 - The battery of the iPod/iPhone is depleted. Charge the iPod/iPhone, and then operate again.
-

Cannot display iPod/iPhone videos/photos on the TV.

- Make sure that TV is connected to the VIDEO OUT terminal on this unit. (⇒ 14)
 - Operate the iPod/iPhone menu to make the appropriate video/photo output settings for your TV. (Refer to operating instructions for your iPod/iPhone.)
-

The TV input channel unintentionally changes to HDMI input.

- When the main unit is connected with an "HDAVI Control" compatible TV and VIDEO IN is selected for iPod/iPhone video or photo playback, the TV input channel will automatically change to the HDMI input channel when [START] is pressed.
– Re-select the TV's VIDEO IN input channel.
-

Radio

Distorted sound or noise is heard.

- Adjust the position of the antenna.
 - Use an outdoor antenna. (⇒ 16)
-

A beat sound is heard.

- Try to keep a certain amount of distance between the antenna and the TV.

Network

I can't connect to the network.

- Confirm the network connection and settings. (⇒ 17, 40)
- Check the operating instructions for each device and connect accordingly.

When using Wireless LAN connection, video or audio from the DLNA Certified media server is played back intermittently, 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 (Access Point) may solve the problem. If you use 802.11n (2.4 GHz or 5 GHz) Wireless router (Access Point), 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 "Access Point Connection Setting" screen (⇒ 40), 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 (Access point) and see if the connection state improves. If there is no improvement, connect to a wired network and perform the "Network Easy Setting" (⇒ 19) again.

The contents of the USB device cannot be read.

- USB devices connected using USB extension cable other than the supplied with the Wireless LAN Adaptor DY-WL10 (optional) or a USB hub may not be recognised by this unit.

Active Subwoofer

No power.

- Ensure the AC mains lead of the active subwoofer is connected properly.

After turning the subwoofer on, it immediately turns off.

- Unplug the AC mains lead and consult your dealer.

No sound from the subwoofer.

- Check that the active subwoofer is turned on.
- Check that the wireless link indicator lights green. (⇒ 18)

The wireless link indicator lights red.

"W" is flashing or does not light on the main unit's display.

- There is no link between this unit and the active subwoofer.
 - Check that this unit and the active subwoofer are turned on.
 - Ensure that the digital transmitter is fully inserted into the digital transmitter dock on this unit. (⇒ 16)
 - Turn the active subwoofer off and then back on.Alternatively, turn the active subwoofer off, disconnect the AC mains lead and then reconnect it.

Consult your dealer if the problem persists.

The audio from the subwoofer is interrupted.

- The active subwoofer is automatically seeking a clear channel. If the interference persists, try moving the other wireless devices to another location outside the range of the active subwoofer or move the active subwoofer nearer to this unit. (⇒ 12)

Other difficulties with playback

BD-Video or DVD-Video is not played.

- Ensure the disc is for the correct BD-Video region code or DVD-Video region number, and is not defective. (⇒ 11)
- You have set a ratings level to limit BD-Video or DVD-Video play. Change this setting. (⇒ 38)
- Some BD-Video can only be output with HDMI.

I can't play back BD-Live.

- The SD card is write-protected. (⇒ 11)
- Confirm that this unit is connected to the broadband Internet. (⇒ 17)
- Confirm the "BD-Live Internet Access" settings. (⇒ 38)
- Confirm an SD Card is inserted into the SD Card slot. (⇒ 22)

Alternative soundtrack and subtitles cannot be selected.

- The languages are not recorded on the disc.
- You may not be able to use the playback menu to change the soundtrack and subtitles on some discs. Use the disc's menus to make changes. (⇒ 25)

Angle cannot be changed.

- Angles can only be changed during scenes where different angles are recorded.

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.

No disc is inserted.

- The disc may be upside down.

⓪ 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.)

(When using the optional wireless LAN adaptor: DY-WL10)

The current security setting of Wireless LAN is low. It is recommended to change the 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.

No Video

- Depending on the connected iPod/iPhone, video menu may not be available on the TV. Select "ALL" on the unit's display and operate video playback from your iPod/iPhone menu. (⇒ 34)

On the unit's display

F99

- The unit fails to operate properly. Press [⏻/I] on the main unit to switch the unit to standby for 3 seconds. Now press [⏻/I] on the main unit again to turn the unit on.

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 rear of the unit.

U72

U73

- The HDMI connection acts unusually.
 - Turn the unit and TV off.
 - Disconnect the HDMI cable between the player and the TV.

HDMI ONLY

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

NET

- Displays while VIERA CAST is starting up.

No PLAY

- There is a viewing restriction on a BD-Video or DVD-Video. (⇒ 38)

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. (⇒ 21)

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.
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.

UPD□/□

("□" stands for a number.)

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

DOCK UNLOCKED

- The iPod/iPhone docking switch lever is not locked in position. Make sure that the iPod/iPhone docking switch lever is properly pushed back into place.

IPOD OVER CURRENT ERROR

- The iPod/iPhone is drawing too much power. Remove the iPod/iPhone, and turn the unit off and on again.

START

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

FINISH

- The firmware update is completed.

NOT CONDITIONAL

- The requested operation cannot be conducted.

ILLEGAL OPEN

- The sliding door is not in the correct position. Turn the main unit off and on again.

About MP3/JPEG/DivX/AVCHD/MPEG2 files

MP3

File format	MP3
Extension	Files must have the extension ".mp3" or ".MP3".
Compression rate	32 kbps to 320 kbps
Sampling rate	44.1 kHz/48 kHz
Reference	ID3 tags: version 1, 2.2, 2.3, 2.4 (Only titles and the names of artists)

JPEG

File format	JPEG
Extension	Files must have the extension ".jpg" or ".JPG".
Picture resolution	between 34×34 and 8192×8192 pixels (sub sampling is 4:2:2 or 4:2:0)
Reference	JPEG conforming DCF* is supported. • MOTION JPEG and Progressive JPEG is not supported.

* Design rule for Camera File system: unified standard established by Japan Electronics and Information Technology Industries Association (JEITA).

- DVD-RAM must conform to UDF 2.0.
- BD-RE must conform to UDF 2.5.

DivX

File format	DivX
Extension*	Files must have the extension ".DIVX", ".divx", ".AVI" or ".avi"
Picture resolution	Up to 1920×1080 pixels
Reference	<ul style="list-style-type: none"> • DivX certified to play DivX video up to HD 1080p, including premium content. <p>Video</p> <ul style="list-style-type: none"> – Number of stream: Up to 1 – Codec*: MPEG-4 SP (Simple Profile), MPEG-4 ASP (Advanced Simple Profile) – FPS (Frame Per Second)*: Up to 60 fps <p>Audio</p> <ul style="list-style-type: none"> – Number of stream: Up to 8 – Format*: MP3, MPEG, Dolby Digital – Multi channel: Dolby Digital is possible. MPEG multi is 2 ch conversion. • GMC (Global Motion Compensation) is not supported.

* The following (DivX Plus HD) is added to the above DivX specification.

Extension : ".MKV" or ".mkv"

Video Codec: MPEG-4 AVC/H.264

FPS (Frame Per Second):

From 320×240 to 1920×1080: 30 fps

Specifically at 1280×720: 60 fps

Audio Format: MP3, MPEG, Dolby Digital, AAC

- This unit supports DivX files less than 4 GB in a USB device.

- DVD-R and DVD-R DL must conform to UDF 1.02 without ISO9660 and UDF 1.5 with ISO9660.
- BD-R must conform to UDF 2.5.

Subtitles text file of DivX

File format	Subtitles text file of DivX MicroDVD, SubRip, or TMLPlayer
Extension	Files must have the extension ".SRT", ".srt", ".SUB", ".sub", ".TXT", or ".txt"
Reference	<ul style="list-style-type: none"> • The DivX video file and subtitles text file are inside the same folder, and the file names are the same except for the file extensions. • Depending on the methods used to create the file or the state of the recording, only parts of the subtitles may be displayed, or the subtitles may not be displayed at all. • If a file extension is ".mkv" or ".MKV", you can not display the subtitle text.

AVCHD

File format	AVCHD format (V1.0) used on High Definition Video Camera (Panasonic and some others)
Codec	MPEG-4 AVC/H.264
	• Discs must conform to UDF 2.5.

MPEG2

File format	SD-Video format* used on Standard Definition Video Camera (Panasonic and some others)
Codec	MPEG2
	* SD-Video Entertainment Video Profile



- With certain recording states and folder structures, the play order may differ or playback may not be possible.
- CD-R, CD-RW: ISO9660 level 1 or 2 (except for extended formats), Joliet
This unit is compatible with multi-session.
This unit is not compatible with packet writing.
- DVD-R, DVD-R DL (except for AVCHD): ISO9660 level 1 or 2 (except for extended formats), Joliet, UDF bridge (UDF 1.02/ISO9660)
This unit is not compatible with multi-session.
This unit is not compatible with packet writing.

Structure of folders that can be played in this unit

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



Folder which can be displayed with this unit

***: Numbers

XXX: Letters

*1 ***: from 001 to 999

*2 ***: from 100 to 999

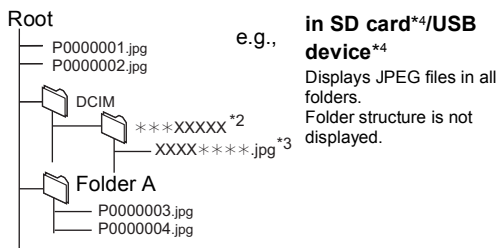
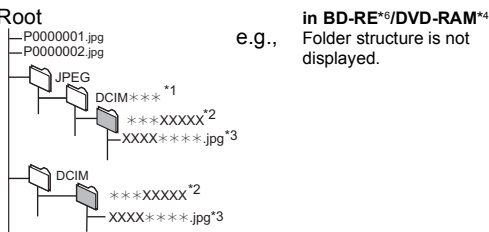
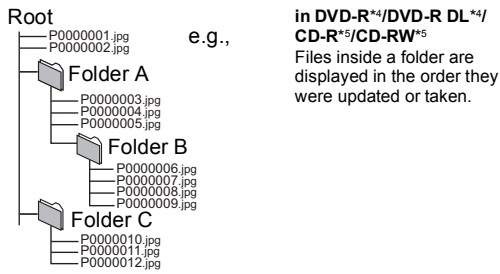
XXXXX: 5 figures

*3 ****: from 0001 to 9999

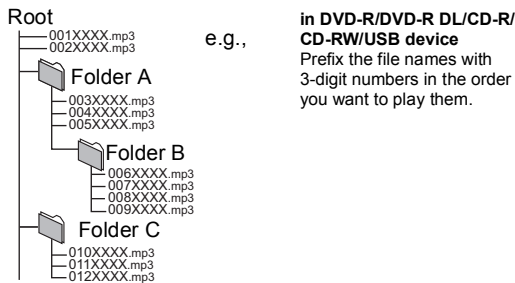
XXXX: 4 figures

Supplemental information

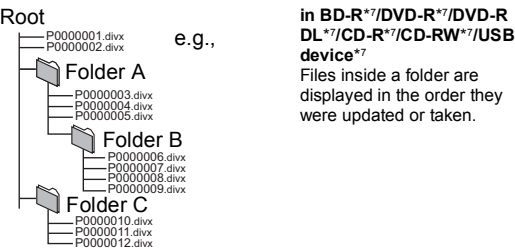
Structures of still picture (JPEG) folders



Structure of MP3 folders



Structure of DivX folders



^{*4} The total combined maximum number of recognizable picture contents and folders: 3000 picture contents and 300 folders.

^{*5} The total combined maximum number of recognizable picture contents and folders: 999 picture contents and 99 folders.

^{*6} The total combined maximum number of recognizable picture contents and folders: 9999 picture contents and 300 folders.

^{*7} The total combined maximum number of recognizable file contents and folders: 200 file contents and 300 folders.

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		

Video attribute

Display	Meaning
MPEG-2/MPEG-4 AVC/VC-1	Video recording method

Audio attribute

Display	Meaning
LPCM/ <input checked="" type="checkbox"/> Digital/ <input checked="" type="checkbox"/> Digital+/ <input checked="" type="checkbox"/> TrueHD/DTS/DTS-ES Mtrx/ DTS-ES Dscrt/DTS 96/DTS 96 ES Mtrx/ DTS-HD HI RES/DTS-HD MSTR/MPEG	Signal type
ch (channel)	Number of channels
k (kHz)	Sampling frequency
b (bit)	Number of bits

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	Samoa:	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:	6678	Kannada:	7578	Slovak:	8375
		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	Marathi:	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

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cdrequest@am-linux.jp

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Glossary

AVCHD

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

BD-J

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

Bitstream

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

Deep Colour

This unit incorporates HDMI technology that can reproduce greater colour gradation (4096 steps) when connected to a compatible TV.

You can enjoy exceptionally rich, natural-looking colours, with smooth, detailed gradation and minimal colour banding. [A lower colour gradation (256 steps), without Deep Colour, will be reproduced if connected to a TV which does not support Deep Colour.

The unit will automatically set appropriate output to suit the connected TV.]

DLNA (Digital Living Network Alliance)

DLNA is a standard that makes DLNA Certified digital electronics easier and more convenient to use on a home network.

Dolby Digital

This is a method of coding digital signals developed by Dolby Laboratories. Apart from stereo (2-channel) audio, these signals can also be multi-channel audio.

Dolby Digital Plus

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

Dolby TrueHD

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

Dolby Virtual Speaker

This system allows you to enjoy a surround effect with two front speakers and a subwoofer. This is not merely a “virtual surround” effect, but rather uses the optimal speaker arrangements and listening positions for 5.1-channel sound.

Down-mixing

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

DTS (Digital Theater Systems)

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

DTS-HD

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

DTS-HD High Resolution Audio

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

DTS-HD Master Audio | Essential

This is a lossless audio format and compatible with 96 kHz/7.1 ch and 192 kHz/2 ch or less. In addition, faithful reproduction of the master audio is enabled using lossless audio encoding technology. BD-Video supports up to 7.1 channel output.

Dynamic range

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

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

HDMI (High-Definition Multimedia Interface)

HDMI is a digital interface for consumer electronic products. Unlike conventional connections, it transmits uncompressed digital video and audio signals on a single cable.

Local storage

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

LPCM (Linear PCM)

These are a kind of PCM format.

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

PCM (Pulse Code Modulation)

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

P4HD (Pixel Precision Progressive Processing for HD)

This is a processor which makes use of an exclusive Panasonic algorithm. Various processing is supported, including a high-level conversion of the TV scanning format from interlace to progressive and a high-level conversion of standard resolution (480i or 576i) video signal to a 1080 High-Definition video signal.

Consequently, this unit is able to provide video of optimal resolution to the connected TV.

x.v.Colour™

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

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

24p

This is 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.

Specifications

GENERAL

Power consumption

Main unit:	60 W
Active subwoofer:	25 W
Digital transmitter:	1.2 W

Power consumption in standby mode

Main unit:	Approx. 0.1 W
------------	---------------

Power consumption in off mode

Active subwoofer:	Approx. 0.4 W
-------------------	---------------

Power supply:

AC 220 V to 240 V, 50 Hz
(For both Main unit and
Active subwoofer)

iPod/iPhone Connector: DC OUT 5 V 500 mA MAX

WIRELESS LAN Connector: DC OUT 5 V 500 mA MAX
(USB 2.0 standard)

Dimensions (W×H×D)

Main unit:	1035 mm×188 mm×85 mm (When Wall Setting) 1035 mm×195 mm×91 mm (When Table Setting)
Active subwoofer:	250 mm×323 mm×356 mm
Digital transmitter:	43.5 mm×37.3 mm×8.2 mm

Mass:

Main unit:	Approx. 5.5 kg (Dimensions and Weight do not include SUB Woofer)
Active subwoofer:	Approx. 6.7 kg
Digital transmitter:	Approx. 0.0095 kg

(For both Main unit and Active subwoofer)

Operating temperature

range: 0 °C to 40 °C

Operating humidity range: 35 % to 80 % RH
(no condensation)

AMPLIFIER SECTION

RMS TTL POWER OUTPUT: 300 W

1 kHz, 10 % total harmonic distortion

FRONT: 90 W per ch (4 Ω)

ACTIVE SUBWOOFER (SB-WA500)

RMS POWER OUTPUT:

100 Hz, 10 % total harmonic distortion

120 W per ch (8 Ω)

SPEAKER SECTION

FRONT SPEAKERS (BUILT-IN)

Type:	2 WAY 2 SPEAKER Bass-ref.
Woofer:	6.5 cm CONE TYPE
Tweeter:	2.5 cm SEMI-DOME TYPE
Frequency range:	95 Hz to 30 kHz (−16 dB), 105 Hz to 25 kHz (−10 dB)

ACTIVE SUBWOOFER (SB-WA500)

Type:	1 WAY 1 SPEAKER Kelton type
Woofer:	16 cm CONE TYPE
Passive radiator:	25 cm
Frequency range:	35 Hz to 180 Hz (−16 dB), 40 Hz to 160 Hz (−10 dB)

FM TUNER SECTION

Frequency range: 87.50 MHz to 108.00 MHz (50 kHz step)

Antenna terminals: 75 Ω (unbalanced)

TERMINAL SECTION

USB:

(Top)	USB 2.0 High Speed
USB port power:	DC OUT 5 V 500 mA MAX
Bit rate:	Up to 4 Mbps (DivX)
(Rear)	USB 2.0 (Use for Wireless LAN Adaptor only)
Ethernet:	10BASE-T/100BASE-TX 1 system
SD card slot:	Connector: 1 system

Digital Audio Input

Optical:	× 1
ARC:	× 1
Sampling frequency:	32 kHz, 44.1 kHz, 48 kHz
Audio Format:	PCM, Dolby Digital

VIDEO SECTION

Signal system:	PAL/NTSC
Video output	
Output level:	1.0 Vp-p (75 Ω)
Output connector:	Pin jack (1 system)
HDMI AV output	
Output format:	1080p/1080i/720p/480p
Output connector:	Type A (19 pin) HDMI (with 3D, ARC, Content Type) This unit supports "HDAVI Control 5" function.

LASER Specification

Class 1 LASER Product

Wave length:	780 nm (CDs)/660 nm (DVDs)/ 405 nm (BDs)
Laser power:	No hazardous radiation is emitted with the safety protection

WIRELESS SECTION

Wireless module

Frequency range:	2.4 GHz to 2.4835 GHz
No. of channels:	3

Specifications are subject to change without notice.

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Sales and Support Information

Customer Care Centre

- For customers within the UK: 0844 844 3852
- For customers within the Republic of Ireland: 01 289 8333
- Visit our website for product information
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.

EU

Pursuant to at the directive 2004/108/EC, article 9(2)
Panasonic Testing Centre
Panasonic Marketing Europe GmbH
Winsbergring 15, 22525 Hamburg, Germany



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

