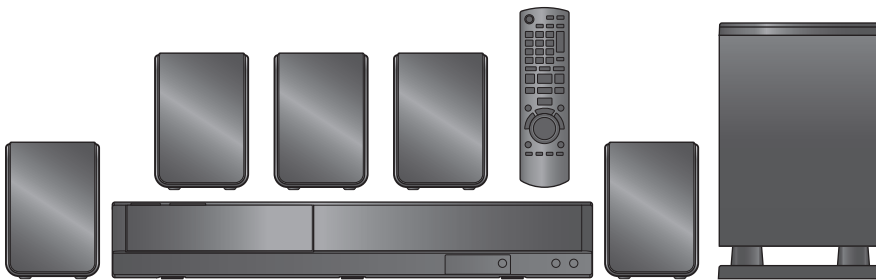


Operating Instructions DVD Home Theater Sound System

Model No. **SC-PT90**



QUICKSTART GUIDE → P 6-9

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.

The illustrations shown may differ from your unit.

Region number

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

Example



Model number suffix "EB" denotes UK model.

System		SC-PT90
This unit		SA-PT90
Speaker system	Front speakers	SB-HF70
	Center speaker	SB-HC70
	Surround speakers	SB-HS70
Subwoofer		SB-HW22

- Please note that the actual controls and components, menu items, etc. of your DVD Home Theater Sound System may look somewhat different from those shown in the illustrations in these Operating Instructions.
- Operations in these instructions are described mainly with the remote control, but you can perform the operations on this unit if the controls are the same.

Accessories



Please check and identify the supplied accessories. Use numbers indicated in parentheses when asking for replacement parts. (Product numbers correct as of May 2010. These may be subject to change.)

- ☐ 1 Remote control (N2QAYB000456)
- ☐ 2 Remote control batteries
- ☐ 1 FM indoor antenna (RSAX0002)
- ☐ 1 Antenna plug adaptor (K1YZ02000013)
- ☐ Speaker cables
 - 3 short cables (REEX1184)
 - 2 long cables (REEX1184A)
- ☐ 1 AC mains lead (K2CZ3YY00005)

■ 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 9:00am-5:30pm, Friday 9:30am-5:30pm (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.

Caution for AC Mains Lead

For your safety, please read the following text carefully. This appliance is supplied with a moulded three pin mains plug for your safety and convenience. A 5-ampere fuse is fitted in this plug. Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362. Check for the ASTA mark  or the BSI mark  on the body of the fuse. If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced. If you lose the fuse cover the plug must not be used until a replacement cover is obtained. A replacement fuse cover can be purchased from your local dealer.

CAUTION!

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

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

If in any doubt please consult a qualified electrician.

IMPORTANT

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

Blue: Neutral, Brown: Live.

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

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

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

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

Before use

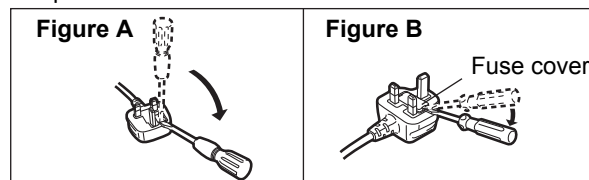
Remove the connector cover.

How to replace the fuse

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

Illustrations may differ from actual AC mains plug.

1. Open the fuse cover with a screwdriver.



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

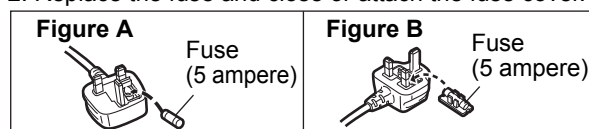


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CAUTION!

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

WARNING:

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

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Reference

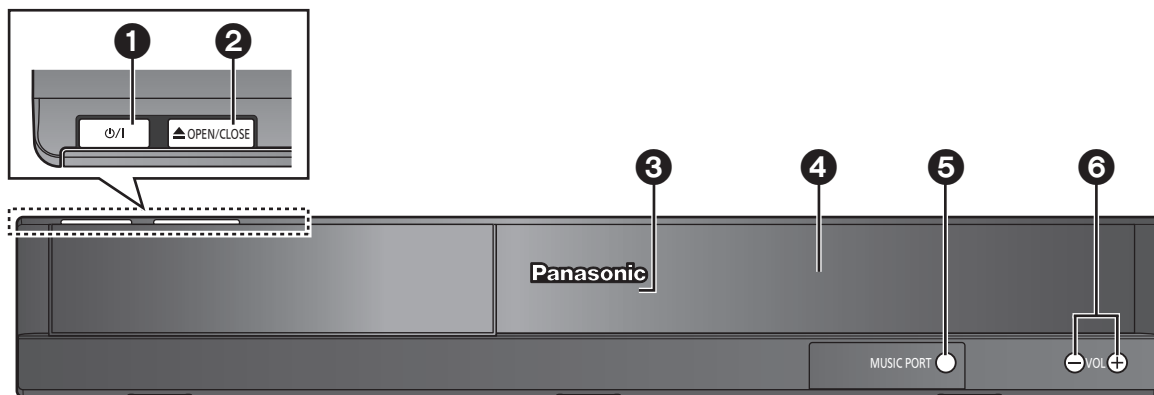
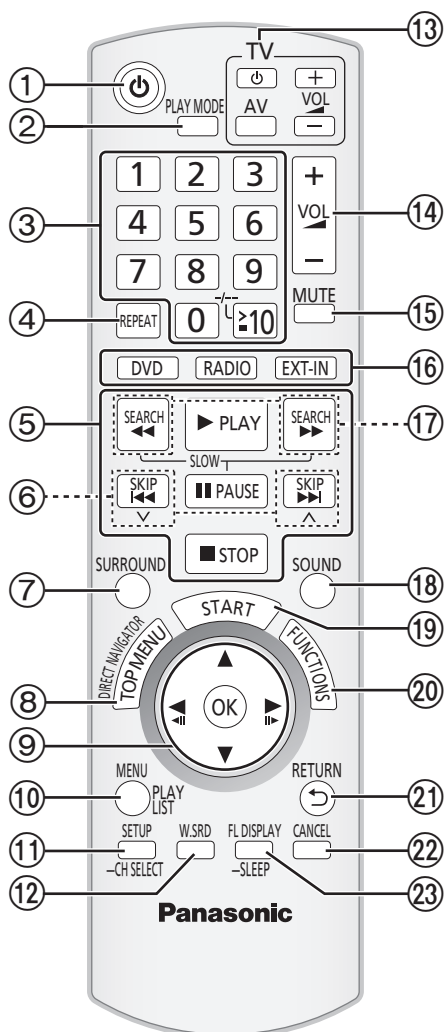
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CAUTION!

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

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

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



Remote control

- ① Turn this unit on/off (⇒ 8)
- ② Select the play mode (⇒ 13)
- ③ Select channels and title numbers etc. / Enter numbers (⇒ 9, 12)
- ④ Set the repeat mode (⇒ 12)
- ⑤ Basic operations for play (⇒ 12)
- ⑥ Select preset radio stations (⇒ 9)
- ⑦ Select surround sound effects (⇒ 11)
- ⑧ Show a disc top menu or program list (⇒ 12, 14)
- ⑨ Select or confirm menu items / Frame-by-frame (⇒ 12)
- ⑩ Show a disc menu or play list (⇒ 12, 14)
- ⑪ Show setup menu or select speaker channel (⇒ 8, 12)
- ⑫ Turn Whisper-mode Surround on/off (⇒ 11)
- ⑬ **TV operations**
Aim the remote control at the Panasonic TV and press the button.
[⏻]: Turn the TV on/off
[AV]: Change the TV's video input mode
[+ , VOL, -]: Adjust the TV volume
This may not work properly with some models.
- ⑭ Adjust the volume of this unit
- ⑮ **Mute the sound**
 - "MUTE" flashes on this unit's display while the function is on.
 - To cancel, press the button again or adjust the volume.
 - Muting is cancelled when you switch the unit to standby.
- ⑯ **Source select**
[DVD]: Select disc as the source (⇒ 12)
[RADIO]: Select FM tuner (⇒ 9)
[EXT-IN]: Select external audio as the source (⇒ 10)
AV → AUX → ARC → MUSIC P.
↑
- ⑰ Select radio stations manually (⇒ 9)
- ⑱ Select sound mode (⇒ 11)
- ⑲ Show START menu (⇒ 10)
- ⑳ Show on-screen menu (⇒ 14)
- ㉑ Return to previous screen (⇒ 12)
- ㉒ Cancel (⇒ 13)
- ㉓ Switch information on this unit's display (⇒ 12)
or
Set the Sleep timer
Press and hold [-SLEEP].
While the time is shown on this unit's display, press [-SLEEP] repeatedly.
SLEEP 30 → SLEEP 60 → SLEEP 90 → SLEEP 120
↑ OFF (Cancel) ←
- To confirm the remaining time, press and hold the button again.

Avoiding interference with other Panasonic equipment

Other Panasonic audio/video equipment may start functioning when you operate the unit using the supplied remote control.

You can operate this unit in another mode by setting the remote control operating mode to "REMOTE 2".

This unit and remote control must be set to the same mode.

- 1 Press [EXT-IN] to select "AUX".
 - 2 Press and hold [▲ OPEN/CLOSE] on this unit and [2] on the remote control until this unit's display shows "REMOTE 2".
 - 3 Press and hold [OK] and [2] on the remote control for at least 2 seconds.
- To change the mode back to "REMOTE 1", repeat the steps above by replacing [2] with [1].

This unit

① Standby/on switch (⏻/⏻)

Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.

② Open/Close the disc tray (⇒ 12)

③ Remote control signal sensor

④ Display

⑤ Connect external music device (⇒ 17)

⑥ Adjust the volume of this unit

Saving energy

This unit is designed to conserve its power consumption and save energy.

- In "DVD/CD" mode, this unit will automatically switch to standby mode after 30 minutes of inactivity.

step 1 | Installation

How you set up your speakers can affect the bass and the sound field.

Note the following points:

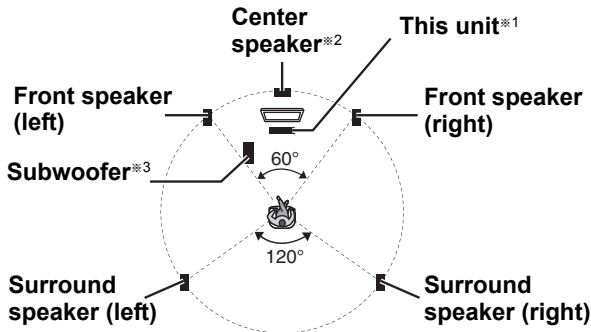
- Place speakers on flat secure bases.
- Placing speakers too close to floors, walls, and corners can result in excessive bass. Cover walls and windows with thick curtains.
- For optional wall mount, refer to page 22.

Note

Keep your speakers at least 10 mm away from the system for proper ventilation.

Setup example ("Surround layout (Recommended)":
Standard surround placement)

Place the front, center, and surround speakers at approximately the same distance from the seating position. The angles in the diagram are approximate.



- ※1 Position with at least 5 cm of space on all sides for proper ventilation.
- ※2 Put on a rack or shelf. Vibration caused by the speaker can disrupt the picture if it is placed directly on the TV.
- ※3 Place to the right or left of the TV, on the floor or a sturdy shelf so that it will not cause vibration. Leave about 30 cm from the TV.

Depending on the room layout, you may like to use all the speakers at the front ("Front layout (Alternative)") (⇒ 9, EASY SETUP settings).

Notes on speaker use

• Use only supplied speakers

- Using other speakers can damage the unit, and sound quality will be negatively affected.
- You can damage your speakers and shorten their useful life if you play sound at high levels over extended periods.
- Reduce the volume in the following cases to avoid damage:
 - When playing distorted sound.
 - When the speakers are reverberating due to a record player, noise from FM broadcasts, or continuous signals from an oscillator, test disc, or electronic instrument.
 - When adjusting the sound quality.
 - When turning the unit on or off.

If irregular colouring occurs on your TV

The center speaker is designed to be used close to a TV, but the picture may be affected with some TVs and setup combinations.

If this occurs, turn the TV off for about 30 minutes. The demagnetising function of the TV should correct the problem. If it persists, move the speakers further away from the TV.

Caution

- This unit and supplied speakers 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 these speakers to walls using methods other than those described in this manual.

Caution

Do not touch the front netted area of the speakers. Hold by the sides.

step 2 | Connections

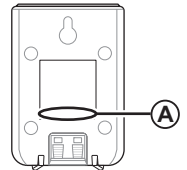
Turn off all equipment before connection and read the appropriate operating instructions.

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

1 Speaker connections

Speaker (rear)

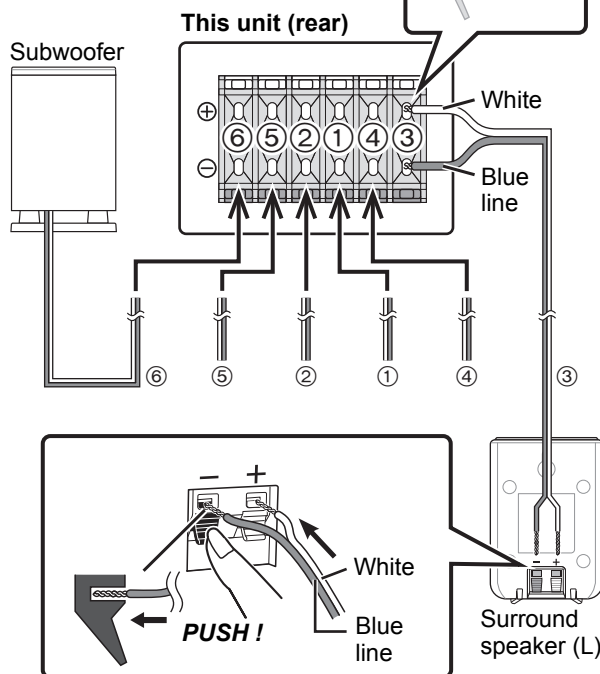
Refer to the rear label of the speaker before connecting the appropriate cable. Verify the type of speaker with the label on the rear of the speaker.



Speakers	Ⓐ	Cable type
⑤ Center speaker	CENTER / CENTRE	short
② Front speaker (R)	FRONT / AVANT	
① Front speaker (L)		
④ Surround speaker (R)	SURROUND / AMBIPHONIE	long
③ Surround speaker (L)		

Connect the speaker cables.
Insert the wire fully, taking care not to insert beyond the wire insulation.

+: White
-: Blue line

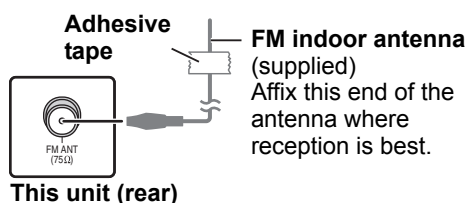


Note

Be careful not to cross (short circuit) or reverse the polarity of the speaker wires as doing so may damage the speakers.

2 Radio antenna connections

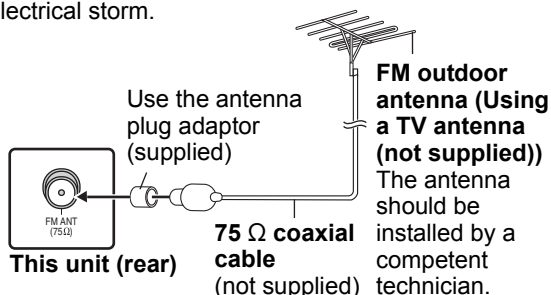
Using an indoor antenna



Using an outdoor antenna

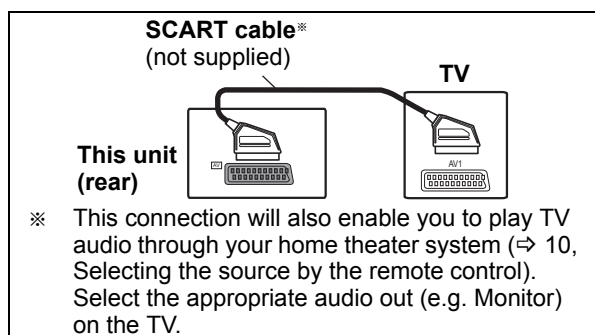
Use outdoor antenna if radio reception is poor.

- Disconnect the antenna when the unit is not in use.
- Do not use the outdoor antenna during an electrical storm.



3 Audio and video connections

Basic setup example



- When both the HDMI cable and SCART cable are connected, there will be no RGB output from the SCART (AV) terminal.

Other video connection

HDMI AV OUT

This connection provides the best picture quality.

Connect the HDMI cable (not supplied) from the HDMI AV OUT terminal on this unit to the HDMI AV IN terminal on your TV.

- If your TV is not ARC compatible, make the extra audio connection.
- Set "VIDEO PRIORITY" to "ON" (⇒ 19, HDMI menu).
- Set "VIDEO FORMAT" in Menu 4 (HDMI) (⇒ 15).

VIERA Link "HDAVI Control"

If your Panasonic TV is VIERA Link compatible, you can operate your TV synchronising with home theater operations or vice versa (⇒ 16, Using the VIERA Link "HDAVI Control™").

ARC (Audio Return Channel)

If the TV is ARC compatible, audio from the TV can be sent to this unit via the HDMI cable without the need to make an extra audio connection. For details, refer to the operating instructions for your TV.

- Be sure to connect to the TV's ARC compatible terminal.
- After connecting with the HDMI cable, make settings to suit the type of audio from your digital equipment (⇒ 10).
- Only Dolby Digital and PCM can be played with this connection.

Note

- Please use High Speed HDMI Cables that have the HDMI logo (as shown on the cover).
- Non-HDMI-compliant cables cannot be utilised.
- It is recommended that you use Panasonic's HDMI cable. Recommended part number: RP-CDHS15 (1.5 m), RP-CDHS30 (3.0 m), RP-CDHS50 (5.0 m), etc.
- For TV with more than one HDMI terminal, refer to the operating instructions for the TV to determine which terminal to connect to.

Do not make the video connections through the VCR.

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

Other audio connection

AUX

This connection enables you to play audio from your TV, STB or VCR through your home theater system (⇒ 10, Selecting the source by the remote control).

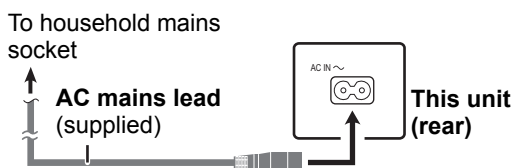
Connect the audio cable (not supplied) from the AUX terminal on this unit to the AUDIO OUT terminal on your TV.

- Connect to the terminals of the same colour.

Note

If you have various sound sources (such as Blu-ray player, DVD recorder, VCR, etc.), connect them to the available inputs on the TV and the TV output should then be connected to the SCART (AV), AUX or HDMI AV OUT terminal of this unit.

step 3 | AC mains lead connection



BE SURE TO READ THE CAUTION FOR THE AC MAINS LEAD ON PAGE 2 BEFORE CONNECTION.

Conserving power

This unit consumes a small amount of power, even when it is in standby mode (approx. 0.9 W). To save power when the unit is not to be used for a long time, unplug it from the household mains socket. You will need to reset some memory items after plugging in this unit.

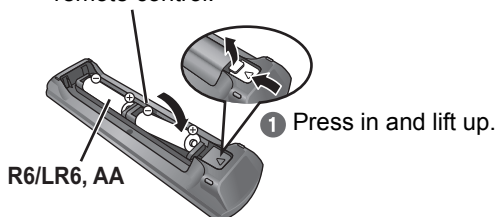
Note

The supplied AC mains lead is for use with this unit only. Do not use it with other equipment. Also, do not use cords for other equipment with this unit.

step 4 | Preparing the remote control

Batteries

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



- Replace the cover.

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.

- Use alkaline or manganese batteries.
- 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:

- mix old and new batteries.
- use different types of batteries at the same time.
- take apart or short circuit.
- attempt to recharge alkaline or manganese batteries.
- use batteries if the covering has been peeled off.

Mishandling of batteries can cause electrolyte leakage which can severely damage the remote control.

Remove the batteries if the remote control is not going to be used for a long period of time. Store in a cool, dark place.

Use

Aim at the remote control signal sensor (⇒ 5), avoiding obstacles.

Distance: Within approx. 7 m

Angle: Within approx. 20° up and down, approx. 30° to the left and right

step 5 | EASY SETUP

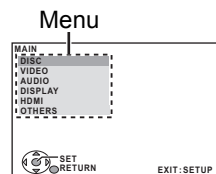
The EASY SETUP screen assists you in making necessary settings.

Preparation

Turn on your TV and select the appropriate video input mode (e.g. VIDEO 1, AV 1, HDMI, etc.) to suit the connection to this unit.

- To change your TV's video input mode, refer to its operating instructions.
- This remote control can perform some basic TV operations (⇒ 5).

- Press [⏻] to turn on the unit.
 - When the EASY SETUP screen appears automatically, skip steps 2 to 6.
- Press [DVD] to select "DVD/CD".
- Press [SETUP] to show the setup menu.



- Press [▲, ▼] to select "OTHERS" and press [OK].
- Press [▲, ▼] to select "EASY SETUP" and press [OK].
- Press [OK] to select "SET".
- Press [▲, ▼] to select "Yes" and press [OK].
- Follow the messages and make the settings with [▲, ▼, ◀, ▶] and [OK]. (⇒ 9, EASY SETUP settings)
- Press [OK] to finish EASY SETUP.

EASY SETUP settings

- **Language**
Select the language used on menu screen.
- **TV aspect**
Select the aspect to suit your TV.
- **Speaker layout**
Select "Surround layout (Recommended)" mode or "Front layout (Alternative)" mode according to your speaker layout (⇒ 6, Installation).
- **Speaker check**
Listen to speaker output to confirm speaker connections.
- **Speaker output**
Make surround sound setting for speaker output.
- **TV audio**
Select the audio input connection from your TV.
For AUX connection (⇒ 8): Select "AUX".
For HDMI connection (⇒ 7): Select "ARC".
For SCART (AV) connection (⇒ 7): Select "AV".
This will be the TV audio setting for VIERA Link "HDAVI Control". (⇒ 16)

Note

- If this unit is connected to a "HDAVI Control 3 or later" compatible TV via HDMI cable, the menu language and TV aspect information will be retrieved via VIERA Link.
- If this unit is connected to a "HDAVI Control 2" compatible TV via HDMI cable, the menu language information will be retrieved via VIERA Link.
- Settings in the EASY SETUP can also be changed in the player settings (e.g. language, TV aspect, TV audio (⇒ 17)).

Listening to the radio

Presetting stations automatically

Up to 30 stations can be set.

- 1 Press [RADIO] to select "FM".**
 - 2 Press [MENU].**
Each time you press the button:
LOWEST (factory preset):
To begin auto preset with the lowest frequency.
CURRENT:
To begin auto preset with the current frequency.*
※ To change the frequency, refer to "Manual tuning" (⇒ right).
 - 3 Press and hold [OK].**
Release the button when "FM 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 (⇒ right).

Listening/confirming the preset channels

- 1 Press [RADIO] to select "FM".**
 - 2 Press the numbered buttons to select a channel.**
 - To select a 2-digit number
e.g. 12: [≥10] ⇒ [1] ⇒ [2]
- Alternatively, press [v, ^].
- The FM setting is also shown on the TV display.

If noise is excessive

- Press and hold [PLAY MODE] to display "MONO".**
To cancel the mode, press and hold the button again until "AUTO ST" is displayed.
- The mode is also cancelled when you change the frequency.

Manual tuning

- 1 Press [RADIO] to select "FM".**
- 2 Press [SEARCH◀◀, 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.

Presetting stations manually

Up to 30 stations can be set.

- 1 While listening to the radio broadcast Press [OK].**
 - 2 While the frequency is flashing on the display Press the numbered buttons to select a channel.**
 - To select a 2-digit number
e.g. 12: [≥10] ⇒ [1] ⇒ [2]
- Alternatively, press [v, ^], and then press [OK].
- A station previously stored is overwritten when another station is stored in the same channel preset.

Using the START menu

You can select sound effects, desired source, or access playback/menus by using the START menu.

1 Press [START] to show the START menu.

- When using VIERA Link "HDAVI Control", the TV also turns on when the START menu is displayed. e.g.



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

- To exit, press [START].

3 Press [▲, ▼] to make the setting and press [OK].

When "Input Selection" is selected

You can select a desired source from the menu.

- DVD/CD (⇒ 12), FM RADIO (⇒ 9), AV* (⇒ below), AUX* (⇒ below), ARC* (⇒ below), MUSIC PORT (⇒ below)

※ "(TV)" will appear beside "AV", "AUX" or "ARC", indicating the TV audio setting for VIERA Link "HDAVI Control" (⇒ 16).

When "Sound" is selected

You can select sound quality settings (⇒ 11, EQ (Equaliser)).

When a disc is loaded, you can also access playback or menus from the START menu.

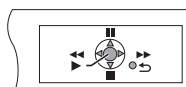
e.g. **DVD-V**



Playback/menu access

When the on-screen control panel appears

e.g. **DVD-V** (when "Playback Disc" is selected from the START menu)



You can operate the playback with the indicated controls.

Selecting the source by the remote control

Press	To select
[DVD]	DVD/CD
[RADIO]	FM (⇒ 9)
[EXT-IN]	Each time you press the button:
	AV: For audio input through the SCART (AV) terminal.
	AUX: For audio input through the AUX terminal.
	ARC: For audio input through the HDMI AV OUT terminal.
	MUSIC P.: For audio input through MUSIC PORT. (⇒ 17)

Note

Confirm the audio connection to the SCART (AV), AUX or HDMI AV OUT terminal on this unit when you select the corresponding sources (⇒ 7, 8). Reduce the volume on the TV to its minimum, and then adjust the volume of this unit.

Listening to the TV or other device's audio from this unit's speakers

Preparation

- Make sure that there is an audio connection between this unit and the TV or other device. (⇒ 7, 8)
- Turn on the TV or/and other device.

Press [EXT-IN] to choose the source that is used to connect this unit to the TV or other device.

- To change the surround sound effects and sound mode, refer to "Enjoying sound effects from all speakers" (⇒ 11)
- If your Panasonic TV is VIERA Link compatible, refer to "Using the VIERA Link "HDAVI Control"™" (⇒ 16) for other related functions.

Making settings for digital audio input

Select to suit the type of audio from the HDMI AV OUT terminal on this unit.

Setting must be made for the "ARC" selector.

- Boxed items are the factory presets.

Available settings	
Mode	Setting
MAIN/SAP:	(Only works with Dolby Dual Mono) – MAIN+SAP (stereo audio) – MAIN – SAP "SAP" = Secondary Audio Program • Set PCM FIX mode to "PCM OFF" to listen to the "MAIN" or "SAP" audio.
DRC: (Dynamic Range Compression)	– DRC ON Adjust for clarity even when the volume is low by compressing the range of the lowest sound level and the highest sound level. Convenient for late night viewing. (Only works with Dolby Digital) – DRC OFF The full dynamic range of the signal is reproduced.
PCM FIX:	– PCM ON Select when receiving only PCM signals. – PCM OFF Select when receiving Dolby Digital and PCM signals. • When receiving true 5.1-channel surround sound, select "PCM OFF".

1 Press [EXT-IN] several times to select "ARC".

2 Press [PLAY MODE] several times to select the mode.

3 While the selected mode is displayed Press [▲, ▼] and select the desired setting.

Enjoying sound effects from all speakers

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

Note

When changing the surround sound effect, Whisper-mode Surround or the sound modes, the setting is displayed on the TV screen if "DVD/CD" is the selected source during video playback.

Enjoying surround sound effects

Press [SURROUND].

Each time you press the button:

For "Surround layout (Recommended)"* mode

STANDARD:

Sound is output as it was recorded/encoded. Speaker output varies depending on the source.

MULTI-CH:

You can enjoy sound from the front speakers, as well as the surround speakers even when playing a 2-channel sound.

MANUAL: (⇒ below)

While "MANUAL" is displayed, press [◀, ▶] to select other surround modes.

Each time you press [◀, ▶]:

DOLBY PLII MOVIE

Suitable for movies, or videos recorded in Dolby Surround. (except [DivX])

DOLBY PLII MUSIC

Adds 5.1-channel effects to stereo sources. (except [DivX])

S.SRD (Super Surround)

You can enjoy sound from all speakers with stereo sources.

STEREO

Sound will only be output to the front speakers and the subwoofer from any source.

Recommended modes to enjoy TV audio or stereo sources from all speakers:

- DOLBY PLII MOVIE
- DOLBY PLII MUSIC
- S.SRD

"SRD" lights in this unit's display when there is output from the surround speakers.

For "Front layout (Alternative)"* mode

STANDARD:

Stereo source is output as 2.1-channel audio. When playing surround sources, you can enjoy 5.1-channel surround-like effect even with all the speakers at the front.

STEREO:

You can play any source in stereo. Surround sound effect is unavailable.

A.SRD (Advanced Surround):

You can enjoy surround effect with any audio source.

When the signal is DTS or Dolby Digital, "/DTS" or "/DOLBY DIGITAL" will also be displayed respectively.

* Selected mode in "Speaker layout" (⇒ 9, EASY SETUP settings).

Selecting sound mode

1 Press [SOUND] to select a sound mode.

Each time you press the button:

EQ: Equaliser

SUBW LVL: Subwoofer Level

C.FOCUS: Center Focus (Only when "Surround layout (Recommended)" mode is selected in "Speaker layout" (⇒ 9, EASY SETUP settings).)

2 While the selected mode is displayed, press [◀, ▶] to make the settings.

Refer to the following for setting details of each sound effect.

EQ (Equaliser)

You can select sound quality settings.

Each time you press [◀, ▶]:

FLAT: Cancel (no effect is added).

HEAVY: Adds punch to rock.

CLEAR: Clarifies higher sounds.

SOFT: For background music.

SUBW LVL (Subwoofer level)

You can adjust the amount of bass. The unit automatically selects the most suitable setting according to the type of playback source.

SUB W 1 ↔ SUB W 2 ↔ SUB W 3 ↔ SUB W 4

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

C.FOCUS (Center Focus)

(Effective when playing audio containing the center channel sound.)

You can make the sound of the center speaker seem like it is coming from within the TV.

C.FOCUS ON ↔ C.FOCUS OFF

Whisper-mode Surround

Except [DivX]

You can enhance the audio effect for low volume 5.1-channel sound. (Convenient for late night viewing.)

Press [W.SRD].

Each time you press the button:

WHISPER-MODE SRD ON ↔ WHISPER-MODE SRD OFF

Adjusting the speaker output level manually

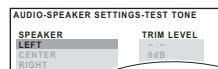
(Only when "Surround layout (Recommended)" mode is selected in "Speaker layout" (⇒ 9, EASY SETUP settings).)

Preparation

- To display the picture, turn on the TV and select the appropriate video input mode.
- Press [+, VOL, -] to adjust the volume to normal listening level.
- Press [DVD] to select "DVD/CD".
- Select "TEST TONE" from "SPEAKER SETTINGS" in AUDIO menu (⇒ 19).

1 Press [OK] to enter test tone mode.

e.g.



Test tone will be output to each channel in the following order.

LEFT, CENTER, RIGHT, SURROUND RIGHT, SURROUND LEFT

- 2 Press [OK] then [▲, ▼] to adjust the speaker level for each speaker. (CENTER, SURROUND RIGHT, SURROUND LEFT)**
 -6 dB to +6 dB (Factory preset: 0 dB)

Adjusting the speaker level during playback

(Effective only when "Surround layout (Recommended)" mode is selected in "Speaker layout" (⇒ 9, EASY SETUP settings) and playing 5.1-channel sound.)

- 1 Press and hold [-CH SELECT] to select the speaker.**

While the speaker channel is displayed, press [-CH SELECT].

L → C → R → RS → LS → SW



- You can adjust SW (Subwoofer) only if the disc includes a subwoofer channel.
- "S" appears on this unit's display when you have selected "S.SRD" (⇒ 11, Enjoying surround sound effects). In this case, you can adjust both surround speaker levels at the same time using [▲, ▼].
 S: -6 dB to +6 dB

- 2 Press [▲] (increase) or [▼] (decrease) to adjust the speaker level for each speaker.**

C, RS, LS, SW: -6 dB to +6 dB

(L, R: Only the balance is adjustable.) (⇒ below)

Adjusting the balance of the front speakers

(For "Front layout (Alternative)"* mode: Front and surround speakers)

- 1 Press and hold [-CH SELECT] to select "L" or "R".**

- 2 While "L" or "R" is selected, press [◀, ▶].**

* Selected mode in "Speaker layout" (⇒ 9, EASY SETUP settings).

Basic play

Preparation

To display the picture, turn on your TV and change its video input mode (e.g. VIDEO 1, AV 1, HDMI, etc.) to suit the connection to this unit.

- 1 Press [⏻] to turn on the unit.**
- 2 Press [DVD] to select "DVD/CD".**
- 3 Press [▲ OPEN/CLOSE] to open the disc tray.**

- 4 Load the disc.**

- Load double-sided discs so the label for the side you want to play is facing up.

Label facing up



- 5 Press [▶ PLAY] to start play.**

- Press [+ , VOL, -] to adjust the volume.

Note

- When you press [▲ OPEN/CLOSE] to close the disc tray, this unit automatically starts playing the disc in the tray.
- **DISCS CONTINUE TO ROTATE WHILE MENUS ARE DISPLAYED.**
 Press [■ STOP] when you finish to preserve the unit's motor and your TV screen.
- Total title number may not be displayed properly on +R/+RW.

Basic controls

One touch play: [▶ PLAY]

(during standby mode)

This unit automatically turns on and starts playing the disc in the tray.

Stop: [■ STOP]

The position is memorised while "RESUME STOP" is on the screen.

- Press [▶ PLAY] to resume.
- Press [■ STOP] again to clear the position.

Pause: [⏸ PAUSE]

- Press [▶ PLAY] to restart play.

Skip: [SKIP ◀◀, SKIP ▶▶]

Search: [SEARCH ◀◀, SEARCH ▶▶] (during play)

Slow-motion: [SEARCH ◀◀, SEARCH ▶▶] (during pause)

- Up to 5 steps.
- Press [▶ PLAY] to start normal play.
- **VCD** Slow-motion: Forward direction only.
- **MPEG4 DivX** Slow-motion: Does not work.

Frame-by-frame: [◀⏮, ⏭▶] (during pause)

DVD-VR **DVD-V** **VCD**

- **DVD-VR** **VCD** Forward direction only.

On-screen item select: [▲, ▼, ◀, ▶, OK]

[▲, ▼, ◀, ▶]: Select

[OK]: Confirm

Enter number: Numbered buttons

DVD-VR **DVD-V** **VCD** **CD**

e.g. To select 12: [≥10] ⇒ [1] ⇒ [2]

VCD with playback control

Press [■ STOP] to cancel the PBC function, and then press the numbered buttons.

DVD-V **Show a disc top menu:** [TOP MENU]

DVD-V **Show a disc menu:** [MENU]

Return to previous screen: [RETURN]

VCD (with playback control) **Show a disc menu:** [RETURN]

This unit display: [FL DISPLAY]

DVD-VR **DVD-V** **WMA** **MP3** **MPEG4** **DivX**

Time display ↔ Information display (e.g. **DVD-VR** Program number)

JPEG

SLIDE ↔ Contents number

Other modes of play

Repeat play

This works only when the elapsed play time can be displayed. It also works with all JPEG content.

During play, press [REPEAT] to select an item to be repeated.

e.g. **DVD-V**

◀ TITLE → ▶ CHAP. → ▶ OFF

To cancel, select "OFF".

Items shown differ depending on the type of disc and playback mode.

Preparation

While stopped, press [PLAY MODE] to select the play mode.

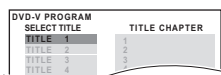
Program and random playback screens appear sequentially.

Program _____ → Random
 ↑ Exit program and random screens ←

- **[DVD-VR]** Select "DATA" in "DVD-VR/DATA" (⇒ 20, OTHERS menu) to play MP3, JPEG, MPEG4 or DivX contents.
- If "PLAYBACK MENU" screen appears, select "AUDIO/PICTURE" or "VIDEO" (⇒ right, Using PLAYBACK MENU), then proceed with the above.
- For a disc with both WMA/MP3 and JPEG contents, select either music or picture contents.
 WMA/MP3: Select "MUSIC PROGRAM" or "MUSIC RANDOM".
 JPEG: Select "PICTURE PROGRAM" or "PICTURE RANDOM".
- **[DVD-V]** Some items cannot be played even if you have programmed them.

Program play (up to 30 items)

- 1 Press [▲, ▼] to select an item and press [OK].
 e.g. **[DVD-V]**



- Repeat this step to program other items.
- To return to the previous menu, press [RETURN].

- 2 Press [▶ PLAY] to start play.

To select all the items

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

To clear the selected program

1 Press [▶] and then press [▲, ▼] to select the program.

2 Press [CANCEL].

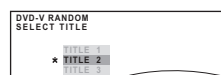
To clear the whole program

Press [▶] several times to select "CLEAR ALL", and then press [OK].

The whole program is also cleared when the disc tray is opened, the unit is turned off or another source is selected.

Random play

- 1 (Only when the disc has groups or multiple titles.)
 Press [▲, ▼] to select a group or title and press [OK].
 e.g. **[DVD-V]**



- "*" represents selected. To deselect, press [OK] again.

- 2 Press [▶ PLAY] to start play.

Using navigation menus**Playing data discs**

WMA MP3 JPEG MPEG4 DivX

[DVD-VR] Select "DATA" in "DVD-VR/DATA" (⇒ 20, OTHERS menu) to play MP3, JPEG, MPEG4 or DivX contents.

Using PLAYBACK MENU

"PLAYBACK MENU" screen appears when the disc contains both video (MPEG4/DivX) and other format (WMA/MP3/JPEG).



Press [▲, ▼] to select "AUDIO/PICTURE" or "VIDEO" and press [OK].

- To start play, press [▶ PLAY].
- To select an item to play, refer "Playing from the selected item" (⇒ below).

Playing from the selected item

You can select to play from your desired item while the "DATA-DISC" screen is displayed.

e.g.

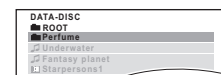
Group (Folder): [Folder icon]

Content (File):

[Music icon] : WMA/MP3

[Image icon] : JPEG

[Image icon] : MPEG4/DivX



- To display/exit the screen, press [MENU].

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

- Press [◀, ▶] to skip page by page.
 - To return to 1 level up from the current folder, press [RETURN].
 - Maximum: 28 characters for file/folder name.
- Play starts from the selected content.

[JPEG] Selecting the picture in Thumbnail menu

- 1 While picture is displayed, press [TOP MENU] to show the thumbnail menu.

e.g.

Group name Group and content number



- 2 Press [▲, ▼, ◀, ▶] to select a picture and press [OK].

- Press [SKIP ◀◀, SKIP ▶▶] to skip page by page.

To go to other group

- 1 Press [▲] to select the group name.
- 2 Press [◀, ▶] to select the group and press [OK].

Playing DVD-R/-RW (DVD-VR) discs

DVD-VR

- Titles appear only if the titles are recorded on the disc.
- You cannot edit programs, play lists and disc titles.

Playing the programs

1 While stopped, press [DIRECT NAVIGATOR].

e.g.

PG	DATE	LENGTH	TITLE
1	10/11 02:15	0:16:02	LIVE CONCERT
2	12/05 01:30	0:38:25	AUTO ACTION

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

- Press [◀, ▶] to skip page by page.

Playing a play list

This works only when the disc contains a play list.

1 While stopped, press [PLAY LIST].

e.g.

PL	DATE	LENGTH	TITLE
1	11/11 00:01	0:00:10	CITY PENGUIN
2	12/01 01:20	0:01:25	FOOTBALL

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

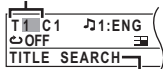
- Press [◀, ▶] to skip page by page.

Using on-screen menus

1 Press [FUNCTIONS] to show the on-screen menu.

Each time you press the button:

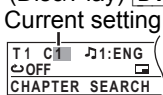
- Menu 1 (Disc/Play) e.g. Menu 1 (Disc/Play) **DVD-V**
- Menu 2 (Video)
- Menu 3 (Audio)
- Menu 4 (HDMI)
- Exit



Item name

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

e.g. Menu 1 (Disc/Play) **DVD-V**



Current setting

3 Press [▲, ▼] to make the settings and press [OK].

4 Press [RETURN] to exit.

Items shown differ depending on the type of disc.

Menu 1 (Disc/Play)

TRACK SEARCH, TITLE SEARCH, CONTENT SEARCH, CHAPTER SEARCH, PG SEARCH (Program Search), PL SEARCH (Playlist Search)

To start from a specific item

- VCD** This does not work when using playback control.

e.g. **DVD-V**: T2 C5

To select numbers for data disc

e.g. 123: [≥10] ⇒ [1] ⇒ [2] ⇒ [3] ⇒ [OK]

AUDIO

DVD-V **DivX** (with multiple soundtracks)

To select audio soundtrack

DVD-VR **VCD**

To select “L”, “R”, “L+R” or “L R”

Actual operations depend on the disc. Read the disc's instructions for details.

Signal type/data

LPCM/PPCM/□ D/DTS/MP3/MPEG: Signal type
kHz (Sampling frequency)/bit/ch (Number of channels)

e.g. 3/2 1ch

.1: Low frequency effect
(not displayed if there is no signal)

0: No surround

1: Mono surround

2: Stereo surround (left/right)

1: Center

2: Front left+Front right

3: Front left+Front right+Center

- DivX** It may take some time for play to start if you change the audio on a DivX video disc.

PLAY SPEED

DVD-VR **DVD-V**

To change play speed

—from “×0.6” to “×1.4” (in 0.1-unit steps)

- Press [▶ PLAY] to return to normal play.
- After you change the speed
 - Dolby Pro Logic II has no effect.
 - Audio output switches to 2-channel stereo.
 - Sampling frequency of 96 kHz is converted to 48 kHz.
- This function may not work depending on the disc's recording.

REPEAT MODE

(⇒ 12, Repeat play)

A-B Repeat (To repeat a specified section)

Except **JPEG** **MPEG4** **DivX** **DVD-VR** (Still picture part) **VCD** (SVCD)

Press [OK] at the starting and ending points.

- Select “OFF” to cancel.

SUBTITLE

DVD-V **DivX** (with multiple subtitles) **VCD** (SVCD only)

To select subtitle language

- On +R/+RW, a subtitle number may be shown for subtitles that are not displayed.

DVD-VR (with subtitle on/off information)

To select “ON” or “OFF”

- This may not work depending on the disc.

DivX (⇒ 20, Displaying DivX subtitles text)

ANGLE

DVD-V (with multiple angles)

To select a video angle

JPG
DATE

DATE DISPLAY

JPEG To select “ON” or “OFF” for picture's date display

ROTATION

JPEG To rotate a picture (during pause)

0 ↔ 90 ↔ 180 ↔ 270
↑ ↖ ↗ ↓

Menu 2 (Video)

PICTURE MODE

NORMAL

CINEMA1: Mellows images and enhances detail in dark scenes.

CINEMA2: Sharpens images and enhances detail in dark scenes.

DYNAMIC: Enhances the contrast for powerful images.

ANIMATION: Suitable for animation.

ZOOM

To select zoom sizes

NORMAL, AUTO (DVD-VR DVD-V VCD MPEG4 DivX),
×2, ×4

• **JPEG**: during pause

TRANSFER MODE

If you have chosen “480p”/“576p”/“720p”/“1080p” or “1080i” (“VIDEO FORMAT” in Menu 4 (HDMI)), select the method of conversion for progressive output to suit the type of material.

• The setting will return to “AUTO” or “AUTO1” when the disc tray is opened, the unit is turned off or another source is selected.

When playing PAL discs

AUTO: Automatically detects the film and video content, and appropriately converts it.

VIDEO: Select when using “AUTO”, and the content is distorted.

FILM: Select this if the edges of the film content appear jagged or rough when “AUTO” is selected. However, if the video content is distorted as shown in the illustration to the right, then select “AUTO”.



When playing NTSC discs

AUTO1: Automatically detects the film and video content, and appropriately converts it.

AUTO2: In addition to “AUTO1”, automatically detects film contents with different frame rates and appropriately converts it.

VIDEO: Select if the video content is distorted when using “AUTO1” or “AUTO2”.

SOURCE SELECT DivX

When you select “AUTO” the constructing method of the DivX contents is automatically distinguished and output. If the picture is distorted, select “INTERLACE” or “PROGRESSIVE” depending on which constructing method was used when the contents were recorded to disc.

AUTO, INTERLACE, PROGRESSIVE

Menu 3 (Audio)

DIALOGUE ENHANCER

To make the dialogue in movies easier to hear

DVD-V (Dolby Digital, DTS, 3-channel or higher, with the dialogue recorded in the center channel)

DivX (Dolby Digital, 3-channel or higher, with the dialogue recorded in the center channel)

OFF, ON

Menu 4 (HDMI)

HDMI STATUS

To show HDMI information

e.g.

HDMI - INFORMATION	
1	CONNECTED STATE CONNECTED
2	AUDIO STREAM PCM
3	MAX CHANNEL 2ch
4	VIDEO FORMAT 720p
5	COLOUR SPACE YCbCr 4:4:4

1 Connection status

2 Shows the output signal type.
(When “OFF” is selected in “AUDIO OUT” (⇒ 19, HDMI menu), “— — —” will be displayed.)

3 Shows the number of audio channels.

4 (⇒ below, VIDEO FORMAT)

5 (⇒ below, COLOUR SPACE)

HD ENHANCER

This works when the HDMI connection is being used with “VIDEO PRIORITY” (⇒ 19, HDMI menu) set to “ON”.

To sharpen the “720p”, “1080i” and “1080p” picture quality
OFF, 1 (weakest) to 3 (strongest)

VIDEO FORMAT

This works when the HDMI connection is being used with “VIDEO PRIORITY” (⇒ 19, HDMI menu) set to “ON”.

To select suitable picture quality with your TV

(Video recordings will be converted to, and output as, high-definition video.)

* **480p/576p/720p/1080p** (progressive)

* **480i/576i/1080i** (interlaced)

• If the picture is distorted, press and hold [CANCEL] until the picture is displayed correctly. (The output will return to “480p”/“576p”.)

* The numbers displayed depend on the disc being played. One of the above numbers is displayed.

COLOUR SPACE

This works when the HDMI connection is being used with “VIDEO PRIORITY” (⇒ 19, HDMI menu) set to “ON”.

To select suitable picture colour with your TV

YCbCr 4:2:2

YCbCr 4:4:4

RGB

• An “*” mark will appear if compatible with your TV.

• If the picture colour is distorted, press and hold [CANCEL] until the picture colour is displayed correctly.

Using the VIERA Link “HDAVI Control™”

What is VIERA Link “HDAVI Control”

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 the HDMI cable. See the operating instructions for connected equipment for operational details.

- VIERA Link “HDAVI Control”, based on the control functions provided by HDMI which is an industry standard known as HDMI CEC (Consumer Electronics Control), is a unique function that we have developed and added. As such, its operation with other manufacturers’ equipment that supports HDMI CEC cannot be guaranteed.
- This unit supports “HDAVI Control 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.

The TV with “HDAVI Control 2 or later” function enables the following operation: Easy control only with VIERA remote control (for “HDAVI Control 2 or later”) (⇒ 17).

Preparation

- Confirm that the HDMI connection has been made (⇒ 7).
- Set “VIERA Link” to “ON” (⇒ 19, HDMI menu).
- To complete and activate the connection correctly, turn on all VIERA Link “HDAVI Control” compatible equipment and set the TV to the corresponding HDMI input mode for this unit.

Setting the TV audio for VIERA Link “HDAVI Control”

Select “AV”, “AUX” or “ARC” to work with the linked operations.

Refer to TV audio setting in EASY SETUP (⇒ 9) or “TV AUDIO” in HDMI menu (⇒ 19).

Confirm the audio connection to the SCART (AV) terminal (for “AV”), AUX terminal (for “AUX”) or HDMI AV OUT terminal (for “ARC”) (⇒ 7, 8).

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

- ※1 “AV”, “AUX” or “ARC” works depending on the TV audio setting (⇒ above, Setting the TV audio for VIERA Link “HDAVI Control”).

What you can do with “HDAVI Control”

Auto lip sync

(Available when using VIERA Link “HDAVI Control” with “HDAVI Control 3 or later” compatible TV)

This function automatically provides synchronised audio and video output. (This works only when the source is “DVD/CD”, “AV”^{※1}, “AUX”^{※1} or “ARC”^{※1}.)

- When using “DVD/CD” as the source, set “TIME DELAY” in VIDEO menu to “0 ms/AUTO” (⇒ 18).

One touch play

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

During standby mode, press [▶ PLAY] to start disc playback.

This unit’s speakers will be automatically activated (⇒ 17).

Note

Playback may not be immediately displayed on the TV. If you miss the beginning portion of playback, press [SKIP ◀◀] or [SEARCH ◀◀] to go back to where playback started.

Auto input switching (Power on link)

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

–When play starts on the unit

–When an action that uses the display screen is performed (e.g., START menu)

- When you switch the TV input to TV tuner mode or the STB input channel, this unit will automatically switch to “AV”^{※1}, “AUX”^{※1} or “ARC”^{※1}.

- When this unit is in “DVD/CD” mode, the TV will automatically switch its input mode for this unit.

- The TV will automatically switch to TV tuner mode when:

–you press [EXIT].^{※2, 3}

–you press [RETURN] to exit the START menu.^{※2, 3}

–you select “AV”^{※1}, “AUX”^{※1} or “ARC”^{※1} from the START menu.

–playback stops ([DVD-V] [VCD]) or when this unit turns off.^{※3}

※2 This does not work during playback or resume mode when “DVD/CD” is selected as the source.

※3 Only after the TV automatically switched to the HDMI input mode for this unit.

Power off link

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

To continue audio playback even when the TV is turned off, select “VIDEO” (⇒ 19, “POWER OFF LINK” in HDMI menu).

Note

When you press [⏻], only this unit turns off. Other connected equipment compatible with VIERA Link “HDAVI Control” stays on.

For details, refer also to the operating instructions for your TV.

Speaker Selection

You can select whether audio is output from this unit's speakers or the TV speakers by using the TV menu settings. For details, refer to the operating instructions for your TV.

Home Cinema

This unit's speakers are active.

- When you turn on this unit, this unit's speakers will be automatically activated.
- When this unit is in standby mode, changing the TV speakers to this unit's speakers in the TV menu will automatically turn this unit on and select "AV"※1, "AUX"※1 or "ARC"※1 as the source.
- The TV speakers are automatically muted.
- You can control the volume setting using the volume or mute button on the TV's remote control. (The volume level is displayed on this unit's display.)
- To cancel muting, you can also use this unit's remote control (⇒ 5).
- If you turn off this unit, TV speakers will be automatically activated.

TV

TV speakers are active.

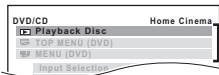
- The volume of this unit is set to "0".
 - This function works only when "DVD/CD", "AV"※1, "AUX"※1 or "ARC"※1 is selected as the source on this unit.
- Audio output is 2-channel audio.

When switching between this unit speakers and TV speakers, the TV screen may be blank for several seconds.

Easy control only with VIERA remote control (for "HDAVI Control 2 or later")

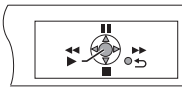
You can control the playback menus of this unit with the TV's remote control.

- 1 Select this unit's operation menu by using the TV menu settings.
(For details, refer to the operating instructions for your TV.)
The START menu will be shown.
e.g. **DVD-V**



Playback/menu access

- The START menu can also be shown by using a button on the TV's remote control (e.g. [OPTION]).
 - When "DVD/CD" is selected as the source, the TV's remote control works only during stop mode.
- 2 Select the desired item on the START menu (⇒ 10).
- When the on-screen control panel appears
e.g. **DVD-V** (when "Playback Disc" is selected from the START menu.)



You can operate the playback with the indicated controls.

- The on-screen control panel can also be shown by using a button on the TV's remote control (e.g. [OPTION]).
 - This works only during "DVD/CD" playback and resume modes.

Note

- Depending on the menu, some button operations cannot be performed from the TV's remote control.
- You cannot input numbers with the numbered buttons on the TV's remote control ([0] to [9]). Use this unit's remote control to select the play list etc.

Playing from MUSIC PORT

The MUSIC PORT allows you to connect and enjoy music from an external music device (e.g. MP3 player) through your home theater system.

Preparation

- To avoid distorted sound, make sure that any equaliser function of your external device is turned off.
- Reduce the volume of this unit and external music device.

1 Connect the external music device (not supplied) to the MUSIC PORT.

Plug type: Ø3.5 mm stereo mini plug

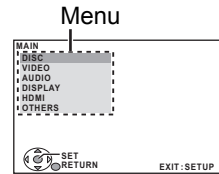
2 Press [EXT-IN] to select "MUSIC P."

Adjust the volume on the external music device to a normal listening level, and then adjust the volume of this unit.

Changing the player settings

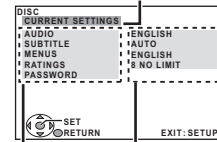
1 Press [DVD] to select "DVD/CD".

2 Press [SETUP] to show the setup menu.



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

Display the current setting of the items below



Item Setting

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

5 Press [▲, ▼] to make the settings and press [OK].

6 Press [SETUP] to exit.

- To return to the previous screen, press [RETURN].
- The settings remain intact even if you switch the unit to standby.
- Boxed items are the factory settings in the following menus.

AUDIO

Choose the audio language.

- **ENGLISH** ● FRENCH ● SPANISH ● GERMAN
- ITALIAN ● SWEDISH ● DUTCH ● POLISH
- ORIGINAL ^{※1} ● OTHER — — — ^{※2}

SUBTITLE

Choose the subtitle language.

- **AUTO** ^{※3} ● ENGLISH ● FRENCH ● SPANISH
- GERMAN ● ITALIAN ● SWEDISH ● DUTCH
- POLISH ● OTHER — — — ^{※2}

MENUS

Choose the language for disc menus.

- **ENGLISH** ● FRENCH ● SPANISH ● GERMAN
- ITALIAN ● SWEDISH ● DUTCH ● POLISH
- OTHER — — — ^{※2}

※1 The original language designated on the disc is selected.

※2 Input the appropriate code from the language code list (⇒ 24).

※3 If the language selected for "AUDIO" is not available, subtitles appear in that language (if available on the disc).

SUBTITLE TEXT **DivX**

Select a suitable item according to the language used for DivX subtitles text (⇒ 20).

- LATIN1 ● **LATIN2** ● CYRILLIC ● TURKISH

This item is displayed only after a file with subtitle text (⇒ 20) has been played and when "LANGUAGE" in DISPLAY menu is set to "ENGLISH" (⇒ 19).

RATINGS

Set a rating level to limit DVD-Video play.

Setting ratings (When level 8 is selected)

- 0 LOCK ALL: To prevent play of discs without rating levels.
- 1 to 7
- **8 NO LIMIT**

When you select your ratings level, a password screen is shown.

Follow the on-screen instructions.

Do not forget your password.

A message screen will be shown if a DVD-Video disc exceeding the rating level is inserted in the unit.

Follow the on-screen instructions.

PASSWORD

Change the password for "RATINGS".

- **SETTING**

To change ratings (When level 0 to 7 is selected)

- CHANGE: Follow the on-screen instructions.

TV ASPECT

Choose the setting to suit your TV.

- **16:9**: Widescreen TV (16:9)
 - 4:3: Regular aspect TV (4:3)
- The sides of the widescreen picture are cut off so it fills the screen (unless prohibited by the disc).



- 4:3LETTERBOX: Regular aspect TV (4:3)
- Widescreen picture is shown in the letterbox style.

**TIME DELAY**

When connected with a Plasma display, adjust if you notice the audio is out of sync with the video.

- **0 ms/AUTO** ● 20 ms ● 40 ms ● 60 ms
- 80 ms ● 100 ms

When using VIERA Link "HDAVI Control" with "HDAVI Control 3 or later" compatible TV (⇒ 16), select "0 ms/AUTO".

Audio and video will automatically be set in sync.

NTSC DISC OUT

Choose PAL 60 or NTSC output when playing NTSC discs (⇒ 21, Video systems).

- NTSC: When connected to an NTSC TV.
- **PAL60**: When connected to a PAL TV.

STILL MODE

Specify the type of picture shown when paused.

- **AUTO**
- FIELD: The picture is not blurred, but picture quality is lower.
- FRAME: Overall quality is high, but the picture may appear blurred.

VIDEO OUT – SCART

Choose the video signal format to be output from the SCART (AV) terminal.

- VIDEO
- S-VIDEO
- RGB 1: (Only when connected to a RGB compatible TV)

If you always would like to view the picture from the unit in RGB signal, select this mode. The TV screen will automatically switch to display the picture from the unit when the unit is turned on.

- **RGB 2**: (Only when connected to a RGB compatible TV)
- When in TV tuner mode, if the selector is set to "DVD/CD", the TV screen will automatically switch to display the picture from the unit only during disc playback (**DVD-V** **DVD-VR** **VCD**) or when viewing on-screen menu of DVD/CD.

The TV picture will be displayed when the selector is set to "AV". With other selectors, the picture from this unit will be displayed.

AUDIO menu

Select to suit the type of equipment you connected to the HDMI AV OUT terminal.

Select "BITSTREAM" when the equipment can decode the bitstream (digital form of 5.1-channel data). Otherwise, select "PCM".

(If the bitstream is output to the equipment without a decoder, high levels of noise can be output and may damage your speakers and hearing.)

DOLBY DIGITAL*

- **BITSTREAM** ● PCM

DTS*

- **BITSTREAM** ● PCM

MPEG*

- **BITSTREAM** ● **PCM**

* When audio is output from HDMI AV OUT terminal, and the connected equipment does not support the item selected, the actual output will depend on the performance of this connected equipment.

DYNAMIC RANGE

- **ON**: Adjusts for clarity even when the volume is low. Convenient for late night viewing. (Only works with Dolby Digital)

- **OFF**

SPEAKER SETTINGS

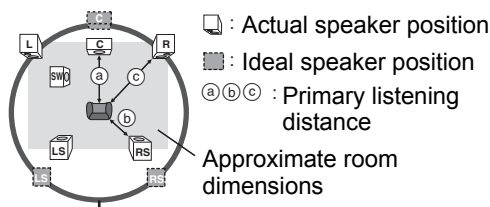
Select the delay time of the speakers.

(Effective only when "Surround layout (Recommended)" mode is selected in "Speaker layout" (⇒ 9, EASY SETUP settings) and playing 5.1-channel sound.)

(Center and surround speakers only)

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

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



Circle of constant primary listening distance

If either distance (a) or (b) is less than (c), find the difference in the table and change to the recommended setting.

(a) Center speaker		(b) Surround speaker	
Difference (Approx.)	Setting	Difference (Approx.)	Setting
30 cm	1ms	150 cm	5ms
60 cm	2ms	300 cm	10ms
90 cm	3ms	450 cm	15ms
120 cm	4ms		
150 cm	5ms		

● SETTINGS:

- **C DELAY** (Center Delay):

0ms, 1ms, 2ms, 3ms, 4ms, 5ms

Select the delay time for your center speaker.

- **LS/RS DELAY** (Left Surround/Right Surround Delay):

0ms, 5ms, 10ms, 15ms

Select the delay time for your surround speakers.

● TEST TONE: SETTING

This item is only displayed when "DVD/CD" is selected.

Use the test tone for speaker level adjustments

(⇒ 11, Adjusting the speaker output level manually).

DISPLAY menu

LANGUAGE

Choose the language for the on-screen messages.

- **ENGLISH** ● FRANÇAIS ● ESPAÑOL ● DEUTSCH
- ITALIANO ● SVENSKA ● NEDERLANDS ● POLSKI

HDMI menu

VIDEO PRIORITY

- **ON**: When using the HDMI AV OUT terminal for video output. The resolution of the video output from the HDMI AV OUT terminal is optimised according to the capability of the connected equipment (e.g. TV).
- **OFF**: When not using the HDMI AV OUT terminal for video output.

AUDIO OUT

- **ON**: When audio output is from the HDMI AV OUT terminal. (Depending on the capabilities of the connected equipment, audio output may differ from the audio settings of this unit.)
- **OFF**: When audio output is not from the HDMI AV OUT terminal. (The audio is output using the settings of this unit.)

RGB RANGE

This works only when "COLOUR SPACE" in Menu 4 (HDMI) is set to RGB (⇒ 15).

- **STANDARD**
- **ENHANCED**: When the black and white images are not distinct.

VIERA Link

- **ON**: The VIERA Link "HDAVI Control" function is available (⇒ 16).
- **OFF**

POWER OFF LINK

Select the desired power off link setting of this unit for VIERA Link operation (⇒ 16). (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:
 - audio playback (**CD** **MP3** **WMA**)
 - radio mode
 - "AV", "AUX" or "ARC" mode (non-selected TV audio setting for VIERA Link)

TV AUDIO

Select the TV audio input to work with the VIERA Link operations (⇒ 16).

- **AUX**
- **ARC**
- **AV**

REGISTRATION **DivX**

Display the unit's registration code.

● **SHOW CODE**

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

This setting is only displayed until a DivX VOD content is played or after this unit is deregistered.

DEREGISTRATION **DivX**

Display the unit's deregistration code.

● **SET**

You need this deregistration code to cancel this unit's registration (⇒ right).

This setting is only displayed after playing DivX VOD content for the first time.

SLIDE SHOW TIME

Set the speed of the slideshow.

Factory preset: **3 SEC**

- 1 SEC to 15 SEC (in 1-unit steps)
- 15 SEC to 60 SEC (in 5-unit steps)
- 60 SEC to 180 SEC (in 30-unit steps)

FL DIMMER

Change the brightness of the unit's display.

● **BRIGHT**

● **DIM:** The display is dimmed.

● **AUTO:** The display is dimmed, but brightens when you perform some operations.

EASY SETUP

- **SET** (⇒ 8)

DVD-VR/DATA

Select to play only DVD-VR or DATA format.

- **[DVD-VR]:** To play the video programs on DVD-R/-RW.
- **DATA:** To play the data files on DVD-R/-RW.

SCREEN DIMMER

This is to prevent burn marks on the TV screen.

● **OFF**

- **[WAIT 5 MIN]:** If there is no operation for 5 minutes, the picture turns grey. The TV screen will resume when you perform some operations. (This does not work during video and picture playback.)

DEFAULTS

This returns all values in the MAIN menu to the default settings.

● **RESET**

The password screen is shown if "RATINGS" (⇒ 18) is set. Please enter the same password, then turn the unit off and on again.

DivX information**ABOUT DIVX VIDEO:**

DivX® is a digital video format created by DivX, Inc. This is an official DivX Certified® device that plays DivX video. Visit www.divx.com for more information and software tools to convert your files into DivX video.

ABOUT DIVX VIDEO-ON-DEMAND:

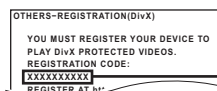
This DivX Certified® device must be registered in order to play DivX Video-on-Demand (VOD) content.

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.

Display the unit's registration code

(⇒ left, "REGISTRATION" in OTHERS menu)



10 alphanumeric characters

- After playing DivX VOD content for 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

Select "SET" in "DEREGISTRATION" (⇒ left) and follow the on-screen instructions.

Use the deregistration code to cancel the registration in <http://vod.divx.com>.

Regarding DivX 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.

Resume function (⇒ 12, **[■ STOP]**) does not work.

Displaying DivX subtitles text

You can display subtitles text on a DivX video disc with this unit.

This function has no relation to the subtitles specified in the DivX standard specifications and has no clear standard.

Set "SUBTITLE" in Menu 1 (Disc/Play) (⇒ 14)**Types of subtitles text file that can be displayed**

Subtitles text that satisfy the following conditions can be displayed on this unit.

- File format: MicroDVD, SubRip, or TMLPlayer
- File extension: ".SRT", ".srt", ".SUB", ".sub", ".TXT", or ".txt"
- File name: No more than 44 characters excluding the file extension
- The DivX video file and subtitles text file are inside the same folder, and the file names are the same except for the file extensions.
- If there are more than one subtitles text files inside the same folder, they are displayed in the following order of priority: ".srt", ".sub", ".txt".

Note

- If the file name of the DivX video file is not displayed correctly on the menu screen (the file name is displayed as "※"), or the file size exceeds 256 KB, the subtitles text may not be displayed correctly.
- The subtitles text cannot be displayed during menu display or when operations such as search are being performed.
- DivX video files that do not display "TEXT ON" do not contain subtitles text. Subtitles text cannot be displayed.
- If the subtitles text are not displayed correctly, try changing the subtitle text settings (⇒ 18).

Discs that can be played

Commercial discs

Type of media/Logo	Remarks	Indicated as
DVD-Video  	High quality movie and music discs	DVD-V
Video CD  	Music discs with video Including SVCD (Conforming to IEC62107)	VCD
CD 	Music discs	CD

Recorded discs

Type of media/Logo	Formats	Indicated as
DVD-R/RW  	•DVD-Video Format •Version 1.1 of the DVD Video Recording Format •MP3 format •JPEG format •DivX® format •MPEG4 format	DVD-V DVD-VR MP3 JPEG DivX MPEG4
DVD-R DL 	•DVD-Video Format •Version 1.2 of the DVD Video Recording Format •DivX® format	DVD-V DVD-VR DivX
+R/+RW/+R DL	•+VR (+R/+RW Video Recording) Format	DVD-V
CD-R/RW	•MP3 format •JPEG format •WMA format •DivX® format •MPEG4 format	MP3 JPEG WMA DivX MPEG4

- Before playback, finalise the disc on the device it was recorded on.
- It may not be possible to play all the above-mentioned discs in some cases due to the type of disc, the condition of the recording, the recording method, or how the files were created (⇒ right, Tips for making data discs).

Note about using a DualDisc

The digital audio content side of a DualDisc does not meet the technical specifications of the Compact Disc Digital Audio (CD-DA) format so playback may not be possible.

Discs that cannot be played

Blu-ray, HD DVD, AVCHD discs, DVD-RW version 1.0, DVD-Audio, DVD-ROM, CD-ROM, CDV, CD-G, SACD, Photo CD, DVD-RAM, and "Chaoji VCD" available on the market including CVD, DVCD and SVCD that do not conform to IEC62107.

Video systems

- This unit can play PAL and NTSC, but your TV must match the system used on the disc.
- PAL discs cannot be correctly viewed on an NTSC TV.
- This unit can convert NTSC signals to PAL 60 for viewing on a PAL TV (⇒ 18, "NTSC DISC OUT" in VIDEO menu).

Disc handling precautions

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

Tips for making data discs

WMA (Extension: ".WMA", ".wma")

Disc: CD-R/RW

- Compatible compression rate: between 48 kbps and 320 kbps
- You cannot play WMA files that are copy-protected.

MP3 (Extension: ".MP3", ".mp3")

Disc: DVD-R/RW, CD-R/RW

- This unit does not support ID3 tags.
- Sampling frequency and compression rate:
 - DVD-R/RW: 11.02 kHz, 12 kHz, 22.05 kHz, 24 kHz (8 kbps to 160 kbps), 44.1 kHz and 48 kHz (32 kbps to 320 kbps)
 - CD-R/RW: 8 kHz, 11.02 kHz, 12 kHz, 16 kHz, 22.05 kHz, 24 kHz (8 kbps to 160 kbps), 32 kHz, 44.1 kHz and 48 kHz (32 kbps to 320 kbps)

JPEG (Extension: ".JPG", ".jpg", ".JPEG", ".jpeg")

Disc: DVD-R/RW, CD-R/RW

- JPEG files taken on a digital camera that conform to DCF Standard (Design rule for Camera File system) Version 1.0 are displayed.
 - Files that have been altered, edited or saved with computer picture editing software may not be displayed.
- This unit cannot display moving pictures, MOTION JPEG and other such formats, still pictures other than JPEG (e.g. TIFF), or play pictures with attached audio.

MPEG4 (Extension: ".ASF", ".asf")

Disc: DVD-R/RW, CD-R/RW

- The recording date may differ from that of the actual date.

DivX (Extension: “.DIVX”, “.divx”, “.AVI”, “.avi”)

Disc: DVD-R/R DL/RW, CD-R/RW

- DivX files greater than 2 GB or have no index may not be played properly on this unit.
- This unit supports all resolutions up to maximum of 720×480 (NTSC)/720×576 (PAL).
- You can select up to 8 types of audio and subtitles on this unit.

- There may be differences in the display order on the menu screen and computer screen.
- This unit cannot play files recorded using packet write.

DVD-R/RW

- Discs must conform to UDF bridge (UDF 1.02/ISO9660).
- This unit does not support multi-session. Only the default session is played.

CD-R/RW

- Discs must conform to ISO9660 level 1 or 2 (except for extended formats).
- This unit supports multi-session but if there are many sessions it takes more time for play to start. Keep the number of sessions to a minimum to avoid this.

Maintenance

Clean this unit with a soft, dry cloth

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

Do not use commercially available lens cleaners as they may cause malfunction. Cleaning of the lens is generally not necessary although this depends on the operating environment.

Before moving the unit, ensure the disc tray is empty. Failure to do so will risk severely damaging the disc and the unit.

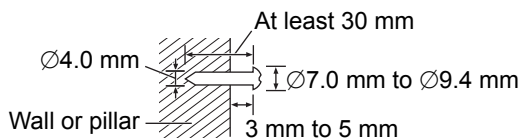
Speaker installation option

Attaching to a wall

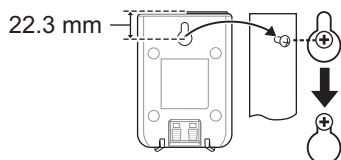
You can attach all of the speakers (except subwoofer) to a wall.

- The wall or pillar on which the speakers are to be attached should be capable of supporting 10 kg per screw. Consult a qualified building contractor when attaching the speakers to a wall. Improper attachment may result in damage to the wall and speakers.

1 Drive a screw (not supplied) into the wall.



2 Fit the speaker securely onto the screw(s) with the hole(s).



Troubleshooting guide

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

Power

No power.

Insert the AC mains lead securely. (⇒ 8)

The unit is automatically switched to standby mode.

- The Sleep timer was working and had reached the set time limit. (⇒ 5)
- In “DVD/CD” mode, this unit will automatically switch to standby mode after 30 minutes of inactivity. (⇒ 5)

This 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 of the TV.

Unit displays

The display is dark.

Select “BRIGHT” in “FL DIMMER” in the OTHERS menu. (⇒ 20)

“NO PLAY”

- You inserted a disc the unit cannot play; insert one it can. (⇒ 21)
- You inserted a blank disc.
- You inserted a disc that has not been finalised.

“NO DISC”

- You have not inserted a disc; insert one.
- You have not inserted the disc correctly; insert it correctly. (⇒ 12)

“F61”

Check and correct the speaker cable connections. If this does not fix the problem, consult the dealer. (⇒ 6)

“F76”

There is a power supply problem. Consult the dealer.

“DVD U11”

Disc may be dirty. Wipe it clean.

“ERROR”

Incorrect operation performed. Read the instructions and try again.

“DVD H□□”

“DVD F□□□”

□ stands for a number.

- Trouble may have occurred. The numbers following “H” and “F” depend on the status of the unit. Turn the unit off and then back on. Alternatively, turn the unit off, disconnect the AC mains lead, and then reconnect it.
- If the service numbers fail to clear, note the service number and contact a qualified service person.

“U70□”

□ stands for a number. (The actual number following “U70” will depend on the state of this unit.)

- The HDMI connection acts unusually.
 - The connected equipment is not HDMI-compatible.
 - Please use HDMI cables that have the HDMI logo (as shown on the cover).
 - The HDMI cable is too long.
 - The HDMI cable is damaged.

“REMOTE 1” or “REMOTE 2”

Match the modes on this unit and remote control.

Depending on the number being displayed (“1” or “2”), press and hold [OK] and the corresponding numbered button ([1] or [2]) for at least 2 seconds. (⇒ 5)

General operation

No response when any buttons are pressed.

- This unit cannot play discs other than the ones listed in these operating instructions. (⇒ 21)
- The unit may not be operating properly due to lightning, static electricity or some other external factor. Turn the unit off and then back on. Alternatively, turn the unit off, disconnect the AC mains lead, and then reconnect it.
- Condensation has formed. Wait 1 to 2 hours for it to evaporate.

No response when remote control buttons are pressed.

- Check that the batteries are installed correctly. (⇒ 8)
- The batteries are depleted. Replace them with new ones. (⇒ 8)
- Aim the remote control at the remote control signal sensor and operate. (⇒ 5)

Other products respond to the remote control.

Change the remote control operating mode. (⇒ 5)

Cannot display the START menu.

Remove the disc and then press [START] again.

No picture or sound.

- Check the video or speaker connection. (⇒ 6, 7)
- Check the power or input setting of the connected equipment and this unit.
- Check that the disc has something recorded on it.

You have forgotten your ratings password.

Reset all the settings to Factory Preset.

While stopped and “DVD/CD” is the source, press and hold [▲ OPEN/CLOSE] on this unit and [≥10] on the remote control until “INITIALIZED” disappears from the TV. Turn the unit off and on again.

All settings will return to the default values.

(This does not work during program and random modes, or when setup menu or START menu is displayed.)

Some characters are not displayed correctly.

Characters other than English alphabet and Arabic numerals may not be displayed correctly.

The VIERA Link “HDAVI Control” function does not respond.

Depending on the condition of this unit or the connected equipment, it may be necessary to repeat the same operation so that the function can work correctly. (⇒ 16)

The setting you made in “TV ASPECT” (⇒ 18, VIDEO menu) or “LANGUAGE” (⇒ 19, DISPLAY menu) does not work.

The settings for “TV ASPECT”^{※1} and “LANGUAGE”^{※2} will automatically follow the information from the TV. (⇒ 9, EASY SETUP settings)

※1 When using VIERA Link “HDAVI Control” with “HDAVI Control 3 or later” compatible TV

※2 When using VIERA Link “HDAVI Control” with “HDAVI Control 2 or later” compatible TV

Disc operation

It takes time before play starts.

- Play may take time to begin when an MP3 track has still picture data. Even after the track starts, the correct play time will not be displayed. This is normal. **[MP3]**
- This is normal on DivX video. **[DivX]**

A menu screen appears during skip or search. **[VCD]**

This is normal for Video CDs.

Playback control menu does not appear.

[VCD] with playback control

Press **[■ STOP]** twice and then press **[▶ PLAY]**.

Program and Random play do not work. **[DVD-V]**

These functions do not work with some DVD-Videos.

Play does not start.

- This unit may not play WMA and MPEG4 that contains still picture data.
- If playing DivX VOD content, refer to the homepage where you purchased the DivX VOD content. (Example: <http://vod.divx.com>) **[DivX]**
- If a disc contains CD-DA and other formats, proper playback may not be possible.

No subtitles.

- Display the subtitles. (“SUBTITLE” in Menu 1) (⇒ 14)
- Subtitles may not be displayed depending on the disc. **[DivX]**

Point B is automatically set.

The end of an item becomes point B when it is reached.

The Setup menu cannot be accessed.

- Select “DVD/CD” as the source.
- Cancel Program and Random play. (⇒ 13)

Sound

Sound is distorted.

- Noise may occur when playing WMA.
- When using the HDMI output, audio may not be output from other terminals.

Effects do not work.

Some audio effects do not work or have less effect with some discs.

Humming is heard during play.

An AC mains lead or fluorescent light is near this unit. Keep other appliances and cables away from this unit.

No sound.

- There may be a slight pause in sound when you change the play speed.
- Audio may not be output due to how files were created. **[DivX]**
- If the input source is bitstream, set the sound setting to PCM on the external equipment.

No sound from the TV.

- If the TV is not ARC compatible and only the HDMI connection is used, an extra audio connection is necessary. (⇒ 8)
- Confirm the audio connection. Press [EXT-IN] to select the corresponding source. (⇒ 7, 8, 10)
- When using the HDMI connection, ensure that “AUDIO OUT” in the HDMI menu is set to “ON”. (⇒ 19)

No sound from the surround speakers.

- When using the “Surround layout (Recommended)” mode, press [SURROUND] to select “MULTI-CH”. (⇒ 11)
- When using the “Front layout (Alternative)” mode, press [SURROUND] to select “A.SRD”. (⇒ 11)

Picture

The picture on the TV is not displayed correctly or disappears.

- The unit and TV are using different video systems. Use a multi-system or PAL TV.
- The system used on the disc does not match your TV.
 - PAL discs cannot be correctly viewed on an NTSC TV.
 - This unit can convert NTSC signals to PAL 60 for viewing on a PAL TV (“NTSC DISC OUT” in VIDEO menu). (⇒ 18)
- Ensure that the unit is connected directly to the TV, and is not connected through a VCR. (⇒ 7)
- Mobile telephone chargers can cause some disturbance.
- If you are using an indoor TV antenna, change to an outdoor antenna.
- The TV antenna wire is too close to the unit. Move it away from the unit.
- Change “SOURCE SELECT” in Menu 2. **DivX** (⇒ 15)
- Reduce the number of connected devices.
- When using the HDMI AV OUT terminal, ensure that an incompatible video output with the connected TV is not selected. Press and hold [CANCEL] until the picture is displayed correctly. (The output will return to “480p” or “576p”.) (⇒ 15)
- Video images converted to 1920×1080 resolution may look different from the true native 1080p full-HD sources. This is not a malfunction of this unit.
- When the HDMI cable is connected, there will be no RGB output from the SCART (AV) terminal. If the SCART (AV) terminal is to be used, remove the HDMI cable and turn this unit on/off again.

Picture size does not fit the screen.

- Change “TV ASPECT” in the VIDEO menu. (⇒ 18)
- Use the TV to change the aspect.
- Change the zoom setting. (“ZOOM” in Menu 2) (⇒ 15)

Menu is not displayed correctly.

Restore the zoom ratio to “NORMAL”. (“ZOOM” in Menu 2) (⇒ 15)

Auto zoom function does not work well.

- Turn off TV’s zoom function.
- Zoom function may not work well, especially in dark scenes and may not work depending on the type of disc.

When playing PAL disc, picture distorted.

Set “TRANSFER MODE” in Menu 2 to “AUTO”. (⇒ 15)

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 terminal.

HDMI progressive video

There is ghosting when HDMI progressive output is on.

This problem is caused by the editing method or material used on DVD-Video, but should be corrected if you use interlaced output. When using the HDMI AV OUT terminal, set “VIDEO FORMAT” in Menu 4 to “480i” or “576i”. Or, disable the HDMI AV OUT connection and use the other video connection. (⇒ 7, 15)

Radio

Distorted sound or noise is heard.

- Adjust the position of the FM antenna.
- Use an outdoor antenna. (⇒ 7)

A beat sound is heard.

Turn the TV off or move it away from the unit.

TV displays

“⊗”

The operation is prohibited by the unit or disc.

“THIS DISC CANNOT BE PLAYED IN YOUR REGION.”

Only DVD-Video discs that include or have the same region number as the one on the rear panel of this unit can be played. (⇒ Cover page)

Language code list

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

Specifications

AMPLIFIER SECTION

RMS Output Power: Dolby Digital Mode

Front Ch	55 W per channel (5 Ω), 1 kHz, 10 % THD
Surround Ch	55 W per channel (5 Ω), 1 kHz, 10 % THD
Center Ch	55 W per channel (5 Ω), 1 kHz, 10 % THD
Subwoofer Ch	55 W per channel (5 Ω), 100 Hz, 10 % THD
Total RMS Dolby Digital mode power	330 W

FM TUNER, TERMINALS SECTION

Preset Memory FM 30 stations

Frequency Modulation (FM)

Frequency range	87.50 MHz to 108.00 MHz (50-kHz step)
Antenna terminals	75 Ω (unbalanced)

Music Port (Front)

Sensitivity	100 mV, 6.8 kΩ
Terminal	Stereo, 3.5 mm jack

DISC SECTION

Discs played (8 cm or 12 cm)

- (1) DVD (DVD-Video, DivX[®]5, 6)
- (2) DVD-R (DVD-Video, DVD-VR, MP3[®]2, 5, JPEG[®]4, 5, MPEG4[®]5, 7, DivX[®]5, 6)
- (3) DVD-R DL (DVD-Video, DVD-VR, DivX[®]5, 6)
- (4) DVD-RW (DVD-Video, DVD-VR, MP3[®]2, 5, JPEG[®]4, 5, MPEG4[®]5, 7, DivX[®]5, 6)
- (5) +R/+RW (Video)
- (6) +R DL (Video)
- (7) CD, CD-R/RW (CD-DA, Video CD, SVCD[®]1, MP3[®]2, 5, WMA[®]3, 5, JPEG[®]4, 5, MPEG4[®]5, 7, DivX[®]5, 6)

※1 Conforming to IEC62107

※2 MPEG-1 Layer 3, MPEG-2 Layer 3

※3 Windows Media Audio Ver.9.0 L3

Not compatible with Multiple Bit Rate (MBR)

※4 Exif Ver 2.1 JPEG Baseline files
Picture resolution: between 160×120 and 6144×4096 pixels (Sub sampling is 4:0:0, 4:2:0, 4:2:2 or 4:4:4). Extremely long and narrow pictures may not be displayed.

※5 The total combined maximum number of recognizable audio, picture and video contents and groups: 4000 audio, picture and video contents and 255 groups. (Excluding Root folder)

※6 Plays DivX[®] video.

※7 MPEG4 data recorded with Panasonic SD multi cameras or DVD video recorders
Conforming to SD VIDEO specifications (ASF standard)/MPEG4 (Simple Profile) video system/
G.726 audio system

Pick up

Wavelength (DVD/CD)	655/790 nm
Laser power (DVD/CD)	CLASS 1M

Audio output (Disc)

Number of channels	5.1 ch (FL, FR, C, SL, SR, SW)
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VIDEO SECTION

Video system PAL625/50, PAL525/60, NTSC

Composite video output

Output level	1 Vp-p (75 Ω)
Terminal	SCART jack (1 system)

S-video output

Y output level	1 Vp-p (75 Ω)
C output level	PAL; 0.3 Vp-p (75 Ω) NTSC; 0.286 Vp-p (75 Ω)
Terminal	SCART jack (1 system)

RGB video output

R output level	0.7 Vp-p (75 Ω)
G output level	0.7 Vp-p (75 Ω)
B output level	0.7 Vp-p (75 Ω)
Terminal	SCART jack (1 system)

HDMI AV output

Terminal	19-pin type A connector
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HDAVI Control

This unit supports "HDAVI Control 5" function.

SPEAKER SECTION

Front speakers SB-HF70

Type 1 way, 1 speaker system (Bass reflex)

Speaker unit(s) Impedance 5 Ω

Full range 6.5 cm Cone type

Output sound pressure 80 dB/W (1 m)

Frequency range 100 Hz to 25 kHz (−16 dB)

150 Hz to 22 kHz (−10 dB)

Dimensions (W×H×D) 80 mm×119 mm×68 mm

Mass 0.32 kg

Surround speakers SB-HS70

Type 1 way, 1 speaker system (Bass reflex)

Speaker unit(s) Impedance 5 Ω

Full range 6.5 cm Cone type

Output sound pressure 80 dB/W (1 m)

Frequency range 100 Hz to 25 kHz (−16 dB)

150 Hz to 22 kHz (−10 dB)

Dimensions (W×H×D) 80 mm×119 mm×68 mm

Mass 0.32 kg

Center speaker SB-HC70

Type 1 way, 1 speaker system (Bass reflex)

Speaker unit(s) Impedance 5 Ω

Full range 6.5 cm Cone type

Output sound pressure 80 dB/W (1 m)

Frequency range 100 Hz to 25 kHz (−16 dB)

150 Hz to 22 kHz (−10 dB)

Dimensions (W×H×D) 80 mm×119 mm×68 mm

Mass 0.39 kg

Subwoofer SB-HW22

Type	1 way, 1 speaker system (Bass reflex)
Speaker unit(s)	Impedance 5 Ω
Woofer	12 cm Cone type
Output sound pressure	79 dB/W (1 m)
Frequency range	35 Hz to 350 Hz (– 16 dB)
	40 Hz to 200 Hz (– 10 dB)
Dimensions (W×H×D)	153 mm×230 mm×233 mm
Mass	2.1 kg

GENERAL

Power supply	AC 220 V to 240 V, 50 Hz
Power consumption	This unit 47 W
Dimensions (W×H×D)	360 mm×58 mm×239 mm
Mass	This unit 2.0 kg
Operating temperature range	0 °C to +40 °C
Operating humidity range	35 % to 80 % RH (no condensation)

Power consumption in standby mode	approx. 0.9 W
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Note

- 1 Specifications are subject to change without notice. Mass and dimensions are approximate.
- 2 Total harmonic distortion is measured by a digital spectrum analyzer.

Licenses

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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 places 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 authorised service center. Electric shock or damage to the unit can occur if the unit is repaired, disassembled or reconstructed by unqualified persons.

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

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]

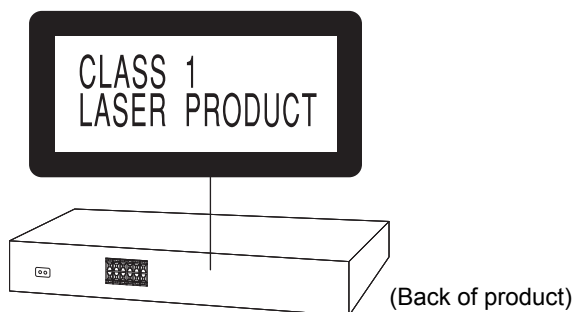
These symbols are only valid in the European Union. If you wish to discard these items, please contact your local authorities or dealer and ask for the correct method of disposal.



Cd

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.



CAUTION	- LASER RADIATION WHEN OPEN. DO NOT STARE INTO BEAM.	FDA 21 CFR / Class II
CAUTION	- CLASS 1M VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. DO NOT VIEW DIRECTLY WITH OPTICAL INSTRUMENTS. IEC60825-1+A2: Class 1M.	
WARNING	- KLASS 1M SYNLIIG OCH OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. BETRÄKTA EJ STRÅLEN DIREKT GENOM OPTISKT INSTRUMENT.	
FORSIGTIG	- SYNLIG OG OSYNLIG LASERSTRÅLING KLASSE 1M. NÄR LÅGET ER ÅBENT, UNDGÅ AT SE LIGE PÅ MED OPTISKE INSTRUMENTER.	
VARO!	- AVHUTTAESSA OLET ALTIIVIN LUOKAN 1M NÄKYVÄÄ JA NÄKYMÄTÖNTÄ LASERSÄTELYÄ. ÄLÄ KATSO OPTISELLÄ LAITTEELLA SUORAAN SÄTEESEEN.	
VORSICHT	- SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG KLASSE 1M. WENN ABDECKUNG GEÖFFNET, NICHT DIREKT MIT OPTISCHEN INSTRUMENTEN BETRACHTEN.	
ATTENTION	- RAYONNEMENT LASER VISIBLE ET INVISIBLE. CLASSE 1M. EN CAS D'OUVERTURE, NE PAS REGARDER DIRECTEMENT À L'AIDE D'INSTRUMENTS D'OPTIQUE.	
注意	- ここを開くと可視及び不可視レーザー光が出ます。 ビームを見たり、触れたりしないでください。	
注意	- 打开时有可见及不可见激光辐射。避免光束照射。	GB7243.1-2001/IEC 类 RQLXS0075

(Inside of product)



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

Pursuant to at the directive 2004/108/EC, article 9(2)
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