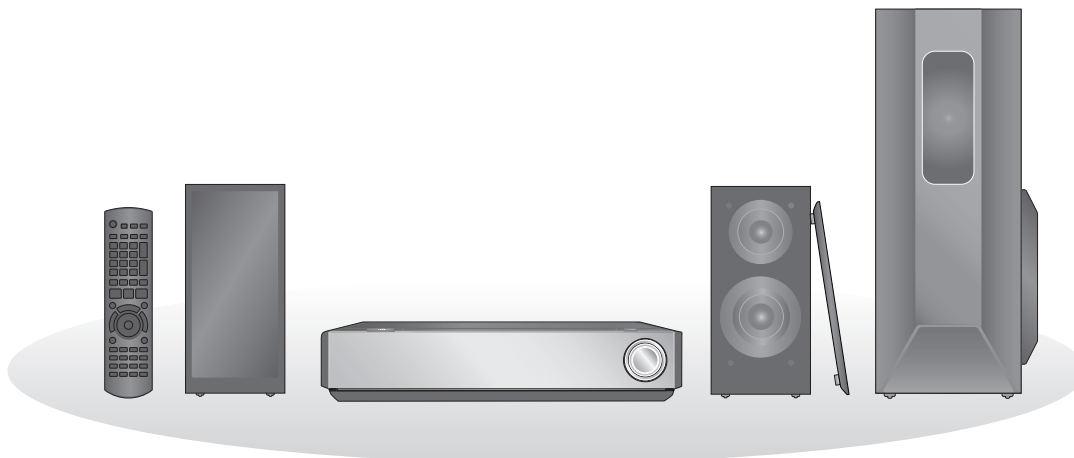


Panasonic®

Operating Instructions

DVD Home Theater Sound System

Model No. **SC-PTX5**



Region number

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

Region	Number
Continental Europe	2
Australia and N.Z.	4

Example: **Continental Europe**



High-quality picture
HDMI capability, Advanced
progressive scan and more.

7

Dolby Virtual Speaker
Enjoy surround sound effect
with a variety of sources.

29

USB connectivity

31



Before connecting, operating or adjusting this product,
please read the instructions completely.
Please keep this manual for future reference.

E GN

RQTX0022-1B

Dear customer

Thank you for purchasing this product. For optimum performance and safety, please read these instructions carefully.



- These operating instructions are applicable to a variety of regions.
- Unless otherwise indicated, illustrations in these operating instructions are for Continental Europe.
- Operations in these instructions are described mainly with the remote control, but you can perform the operations on the main unit if the controls are the same.

System	SC-PTX5
Main unit	SA-PTX5
Front speakers	SB-HFX5
Subwoofer	SB-HW750

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.

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.

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.



LUOKAN 1 LASERLAITE KLASS 1 LASER APPARAT



(Side of product)

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.

CAUTION	- LASER RADIATION WHEN OPEN. DO NOT STARE INTO BEAM.	FDA 21 CFR / Class
CAUTION	- CLASS 1M VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. DO NOT VIEW DIRECTLY WITH OPTICAL INSTRUMENTS. IEC60825-1 A2/ Class 1M.	
WARNING	- CLASS 1M SYNLIG OCH OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. BETRÄKTA EJ STRÅLEN DIREKT GENOM OPTISKT INSTRUMENT.	
FORSIGTIG	- SYNLIG OG OSYNLIG LASERSTRÅLNING KLASS 1M. NÄR LÅGET ER ÅBENT, UNDGÅ AT SE LIGE PÅ MED OPTISKE INSTRUMENTER.	
VARO!	- AVARTIENNA OLET ALTIIN LUOKAN 1M NÄKYYVÄÄ JA NÄKYMÄTÖNTÄ, LASERSÄTEILYÄ. ÄLÄ KATSO OPTISELLA LAITTEELLA SUORAAN SÄTEESEEN.	
VORSICHT	- SICHTBARE UND UNSICHTBARE LASERSTRÄHLUNG 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	- ここを覗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。避免光害照射。	GB7241.1-2001/1985 类 RQLX50075

(Inside of product)
(Produktets innsida)
(Tuotteen sisällä)

Accessories



Please check and identify the supplied accessories.

- ☐ 1 Remote control
(N2QAYB000097)



- ☐ 1 FM indoor antenna



- ☐ 1 AC mains lead
Continental Europe



- ☐ 2 Remote control batteries



- ☐ 2 Speaker cables



Australia and N.Z.



- ☐ Australia and N.Z.
1 Video cable



- ☐ Australia and N.Z.
1 Universal Dock for iPod



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digital broadcasting or satellite receiver 31

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step 1 Positioning

This unit comes equipped with a Dolby Virtual Speaker circuit installed. Using just the supplied speakers and the subwoofer, and by reproducing acoustic effects very similar to 5.1ch surround, you can enjoy a true "home theater" experience even within a limited space.

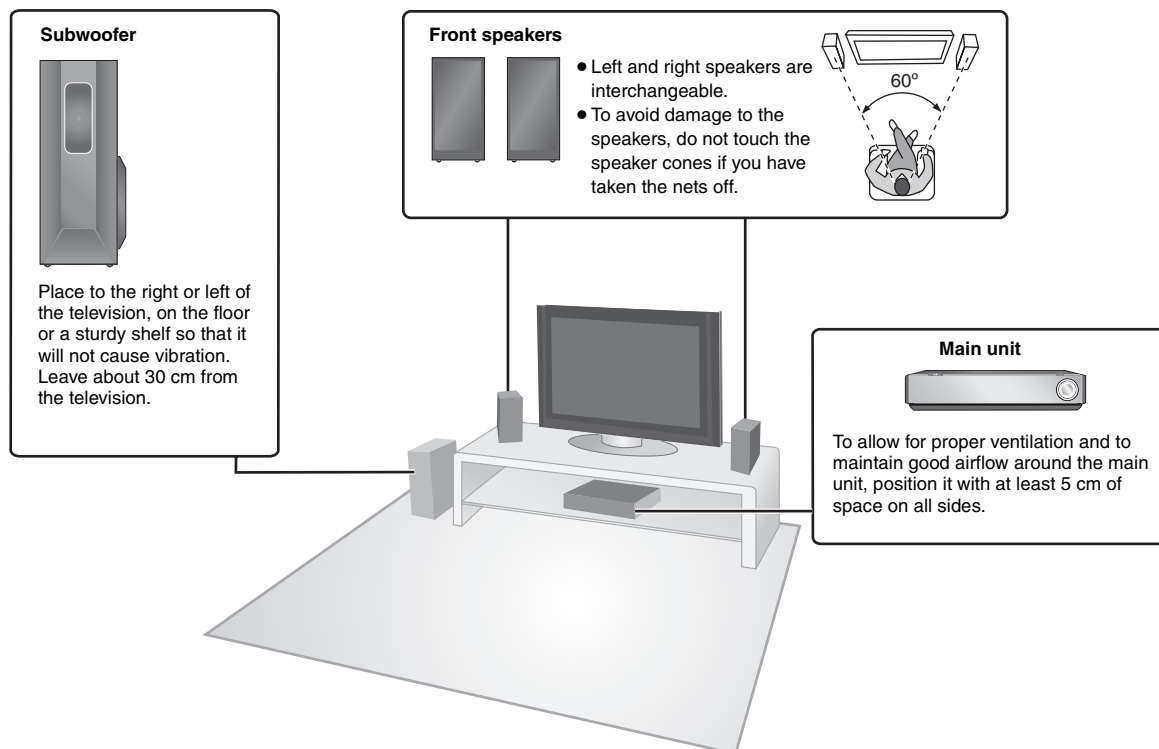
How you set up your speakers can affect the bass and the sound field. Note the following points:

- 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.

Note

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

Setup example



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.

Caution

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

DO
NOT



DO



If irregular colouring occurs on your television

The front speakers are designed to be used close to a television, but the picture may be affected with some televisions and setup combinations.

If this occurs, turn the television off for about 30 minutes.

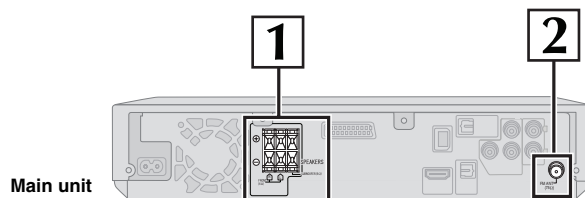
The demagnetizing function of the television should correct the problem. If it persists, move the speakers further away from the television.

Caution

- The main 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 the speakers to walls or ceilings.

step 2 Cable connections

Turn off all equipment before connection and read the appropriate operating instructions.
Do not connect the AC mains lead until all other connections are complete.

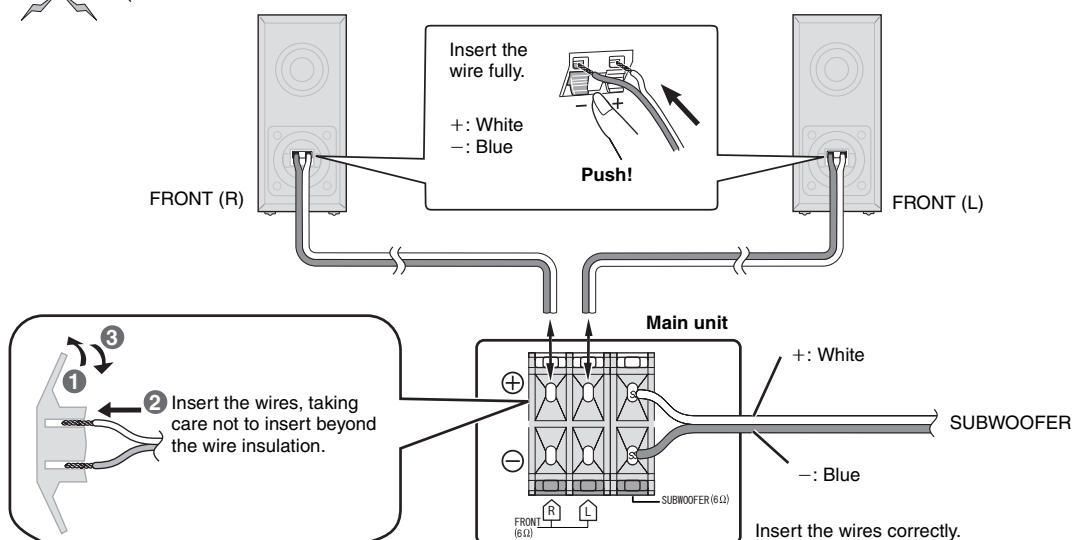


1 Speaker connections

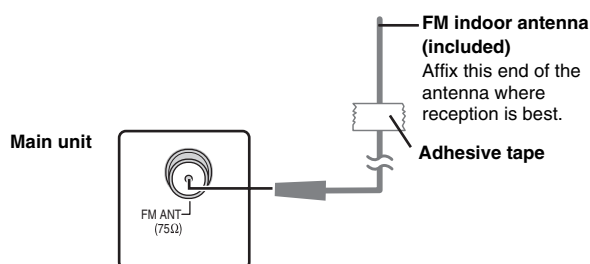
DO NOT



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



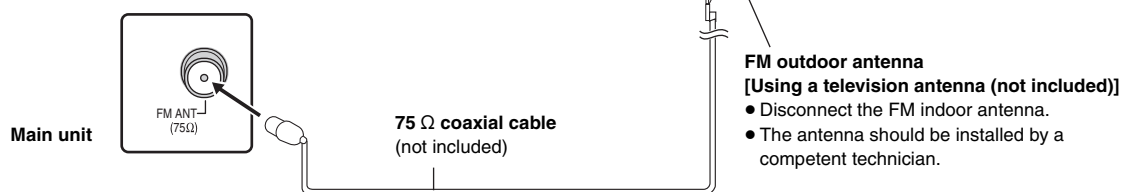
2 Radio antenna connections



Using an FM outdoor antenna (optional)

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.



(Continued on next page)



Simple Setup

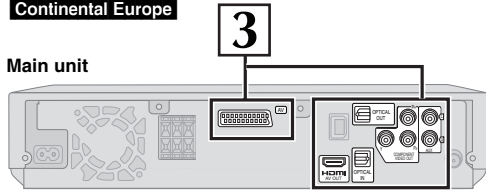
Cable connections

step 2

Cable connections

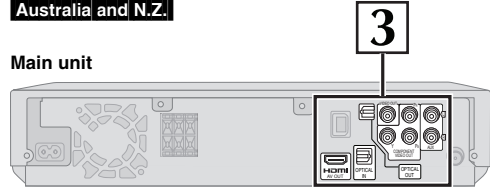
Continental Europe

Main unit



Australia and N.Z.

Main unit



3 Audio and video connections

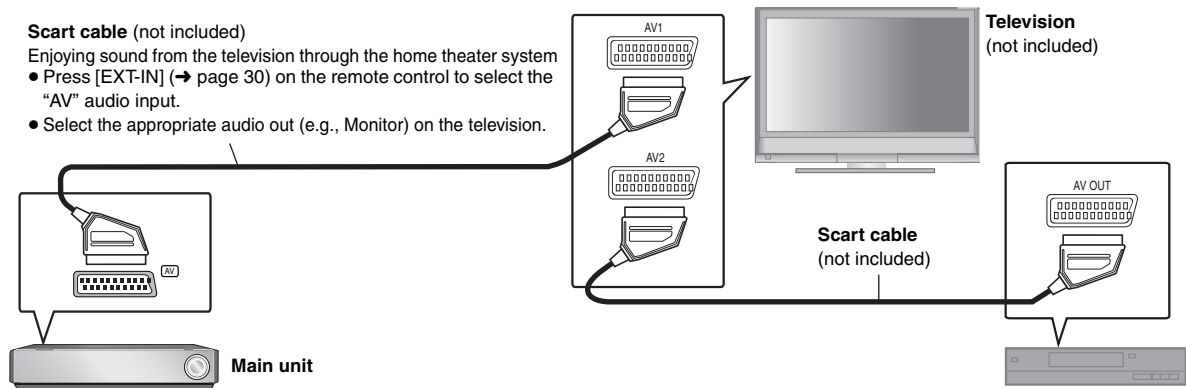
Basic setup example

Continental Europe

Scart cable (not included)

Enjoying sound from the television through the home theater system

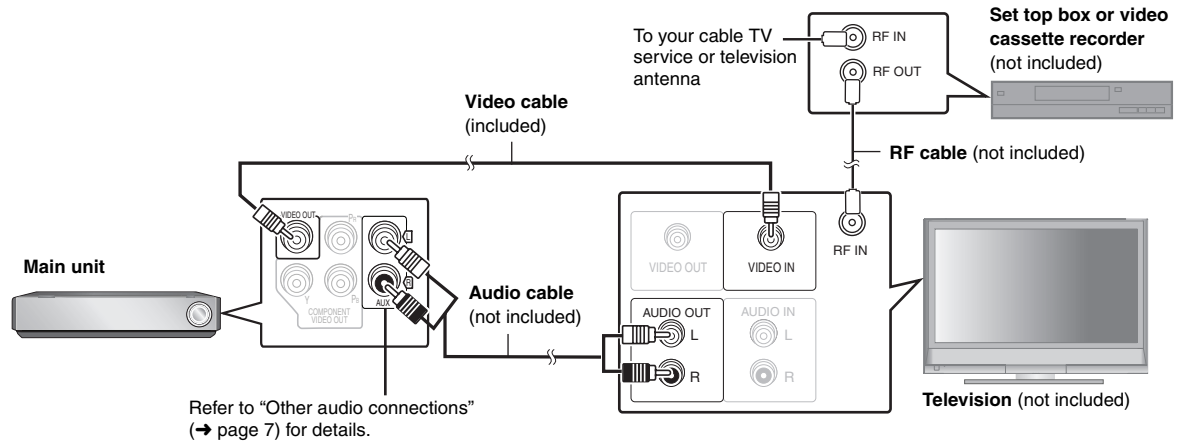
- Press [EXT-IN] (→ page 30) on the remote control to select the "AV" audio input.
- Select the appropriate audio out (e.g., Monitor) on the television.




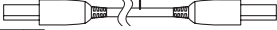

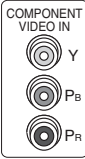
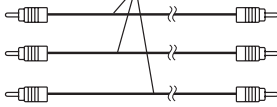
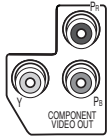
To improve picture quality, you can change the video signal output from the SCART (AV) terminal.

- Select "RGB/No Output" (RGB only) from QUICK SETUP (→ page 9).
- Set "Video Mode" to "Off" (→ page 25, "HDMI" menu).
- Do not use the HDMI cable when you use the scart cable for the connection.

Australia and N.Z.







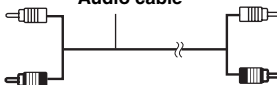

Other video connections for improved picture quality

Television terminals	Cables required (not included)	Main unit terminals	Features
	<p>HDMI cable</p>  <p>Note</p> <ul style="list-style-type: none"> Non-HDMI-compliant cables cannot be utilized. It is recommended that you use Panasonic's HDMI cable. Recommended part number: RP-CDHG15 (1.5 m), RP-CDHG30 (3.0 m), RP-CDHG50 (5.0 m), etc. 	<p>HDMI</p> 	<p>This connection provides the best picture quality.</p> <ul style="list-style-type: none"> Set "Video Mode" to "On" (→ page 25, "HDMI" menu). Set "Video Output Mode" (→ page 21, Picture Menu). <p>VIERA Link "HDAVI Control"</p> <p>If your Panasonic television is a VIERA Link compatible television, you can operate your television synchronising with home-theater operations or vice versa (→ page 26, Using the VIERA Link "HDAVI Control™").</p> <ul style="list-style-type: none"> Make the extra audio connection (→ below) when you use VIERA Link "HDAVI Control" function.
 <p>Continental Europe</p> <p>All Panasonic televisions with 625 (576)/50i-50p, 525 (480)/60i-60p input terminals are progressive compatible. Consult the manufacturer if you have another brand of television.</p>	<p>Video cables</p> 	<p>COMPONENT VIDEO</p>  <ul style="list-style-type: none"> Connect to terminals of the same colour. 	<p>This connection provides a purer picture than the SCART (AV) Continental Europe or VIDEO OUT Australia and N.Z. terminal.</p> <ul style="list-style-type: none"> Continental Europe When making this connection, select "Video/YPbPr" or "S-Video/YPbPr" from QUICK SETUP (→ page 9). If "RGB/No Output" is selected, the RGB signal is output from the SCART (AV) terminal, but no signal is output from the component video terminals. <p>To enjoy progressive video</p> <ul style="list-style-type: none"> Connect to a progressive output compatible television. <ol style="list-style-type: none"> Set "Video Mode" to "Off" (→ page 25, "HDMI" menu). Set "Video Output Mode" to "480p" or "576p", and then follow the instructions on the menu screen (→ page 21, Picture Menu).

Note

- Do not make the video connections through the video cassette recorder. Due to copy guard protection, the picture may not be displayed properly.
- Only one video connection is required. Choose one of the video connections above depending on your television.

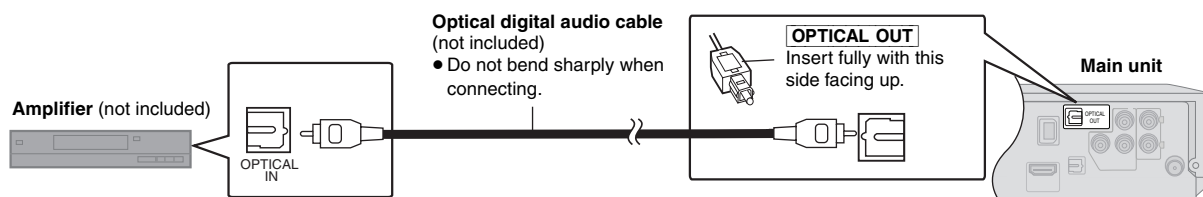
Other audio connections

Television or external equipment terminal	Cable required (not included)	Main unit terminal	Features
	<p>Optical digital audio cable</p>  <ul style="list-style-type: none"> Do not bend sharply when connecting. 	<p>OPTICAL IN</p> 	<p>This unit can decode the surround signals received through the set top box, digital broadcasting or satellite broadcasts. Refer to your equipment's operating instructions for details. Only Dolby Digital and PCM can be played with this connection.</p> <ul style="list-style-type: none"> After making this connection, make settings and select sound effects to suit your digital equipment (→ page 31).
	<p>Audio cable</p> 	<p>AUX</p> 	<p>This connection enables you to play audio from your television, set top box or video cassette recorder through your home theater system.</p> <ul style="list-style-type: none"> Press [EXT-IN] on the remote control to select "AUX" audio input (→ page 30).

5.1 channel amplifier connection

To enjoy 5.1 channel surround sound DVD-Video, connect an amplifier with a built-in Dolby Digital or DTS decoder using an optical digital audio cable.

- Set "PCM Digital Output", "Dolby Digital", "DTS Digital Surround" and "MPEG" (→ page 24).



Note

- Using the connections shown above, you can output CD or DVD audio only.
- Before purchasing an optical digital audio cable, check the terminal shape of the equipment to be connected.
- You cannot use DTS Digital Surround decoders not suited to DVD.
- Even if using this connection method, output will be in only 2 channels when playing DVD-Audio.

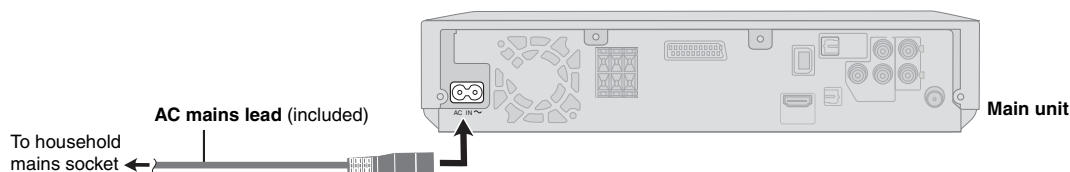


Simple Setup

Cable connections

step 3

AC mains lead connection



Conserving power

The main unit consumes a small amount of power, even when it is in standby mode (approx. 0.3 W). To save power when the unit is not to be used for a long time, unplug it from the household AC mains socket. You will need to reset some memory items after plugging in the main unit.

Note

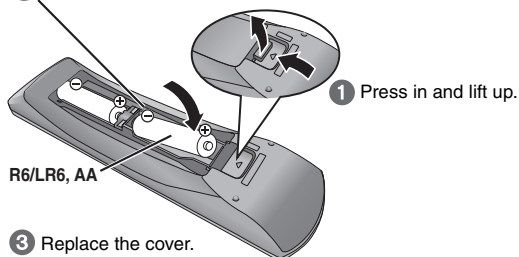
The included AC mains lead is for use with the main unit only. Do not use it with other equipment. Also, do not use cords for other equipment with the main unit.

step 4

Preparing the remote control

Batteries

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



- 3 Replace the cover.

- Do not use rechargeable type batteries.

Do not:

- mix old and new batteries.
 - use different types at the same time.
 - heat or expose to flame.
 - 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.

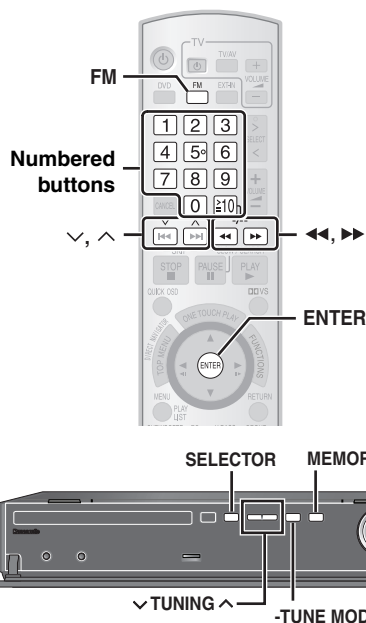
Remove the batteries if the remote control is not going to be used for a long period of time. Store in a cool, dark place.

Use

Aim at the remote control signal sensor (→ page 11), avoiding obstacles, at a maximum range of 7 m directly in front of the unit.

step 5

Presetting the radio stations



Radio operations are described mainly with the remote control. You can alternatively use the corresponding button on the main unit.

#1 [SELECTOR]

#2 [TUNING]

#3 [MEMORY]

Up to 30 stations can be set.

- 1 Press [FM]*1 to select "FM".

- 2 Press [◀, ▶]*2 to select the frequency.

- When performing this step on the main unit, first press [-TUNE MODE] to select "MANUAL", and then press [TUNING] to select the frequency.

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

- 3 While listening to the broadcast

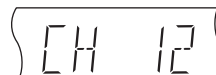
Press [ENTER]*3.

- 4 While the frequency and "PGM" are 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 [TUNING], and then press [ENTER]*3.



Confirming the preset channels

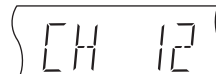
- 1 Press [FM]*1 to select "FM".

- 2 Press the numbered buttons to select the channel.

- To select a 2-digit number

e.g. 12: [10] → [1] → [2]

Alternatively, press [TUNING].



- To perform this step on the main

unit, first press [-TUNE MODE] to select "PRESET", and then press [TUNING] to select the channel.

step 6

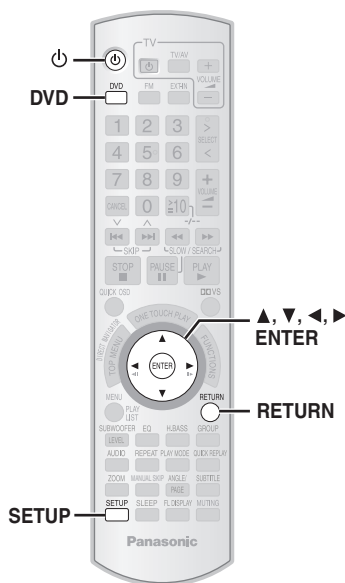
Performing QUICK SETUP

The QUICK SETUP screen assists you to make necessary settings.



To display the picture from the main unit, turn on your television and change its video input mode (e.g. VIDEO 1, AV 1, etc.).

- To change your television's video input mode, refer to its operating instructions.
- This remote control can perform some basic television operations (→ page 10).



1		Turn on the unit.
2		Select "DVD/CD".
3		Show the QUICK SETUP screen.
4		Follow the messages and make the settings. • Menu Language • TV Type • TV Aspect • Video Out (AV/Component)* ¹ (For details → below)
5		Press to finish QUICK SETUP.
6		Press to exit.

To change these settings later
Select "QUICK SETUP" in the "Others" menu (→ page 25).

Details of settings

Menu Language Choose the language for the on-screen messages.	^{#1} • English • Français • Español • Deutsch • Polski • Русский • Česky • Magyar ^{#2} • English • Français • Español • Deutsch • Italiano • Nederlands • Svenska • Polski
TV Type Select to suit the type of television.	• <u>Standard (Direct View TV)</u> • CRT Projector • LCD TV/Projector • Projection TV • Plasma TV
TV Aspect Choose the setting to suit your television and preference.	• 4:3: Regular aspect television • 16:9: Widescreen television
Video Out (AV/Component)*¹ Choose the video signal format to be output from the SCART (AV) and COMPONENT VIDEO OUT terminals.	• <u>Video/YPbPr</u> • S-Video/YPbPr • RGB/No Output

• Underlined items are the factory settings in the above table.

*¹ Continental Europe

*² Australia and N.Z.



Simple Setup

Performing QUICK SETUP

RQTX0022

Control reference guide

See page references in parentheses.

Control reference guide

Turn the main unit on/off (9)

Select disc's title numbers etc./Enter numbers (15)

Cancel (15)

Select preset radio stations/channels (8, 28)

Basic operations for play (14, 15)

Display current playback condition (16)

Start up and play a disc automatically (15, 26)

Show a disc top menu (18) or program list (19)

Show a disc menu (18) or playlist (19)

Turn the unit off automatically (Sleep timer)

- The maximum setting is 120-min (in 30-min steps).
- Press the button again to confirm the remaining time on the unit's display.
- To cancel, select "OFF" in the main unit's display.

Television operations

Aim the remote control at the Panasonic television and press the button.

[TV]: Turn the television on/off

[TV/AV]: Change the television's video input mode

[+ , -]: Adjust the television volume

- This may not work properly with some models.

Select the source

[DVD]: DVD/CD (9)

[FM]: FM (8, 28)

[EXT-IN]: USB (31), AV **Continental Europe** (30), AUX (30), D-IN (31), OPTION (30), MUSIC P. (30)

[> , < SELECT]: DVD/CD, USB, FM, AV **Continental Europe**, AUX, MUSIC P., D-IN, OPTION

Adjust the volume of the main unit

Select radio stations/channels manually (8, 28)

Select Dolby Virtual Speaker mode (29)

Frame-by-frame/Select or register menu items on the television screen (15)

Show on-screen menu (20) or display RDS text data **Continental Europe** (28)

Return to previous screen (15)

Mute the sound

- "MUTING" flashes in the main 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.

SUBWOOFER LEVEL (29)	EQ (29)	H.BASS (29)	GROUP (15)
AUDIO (16)	REPEAT (16)	PLAY MODE (17)	QUICK REPLAY (16)
ZOOM (17)	MANUAL SKIP (16)	ANGLE/PAGE (17)	SUBTITLE (16)
SETUP (23)	SLEEP	FL DISPLAY (15)	

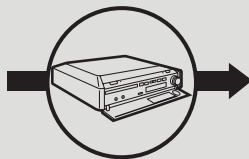
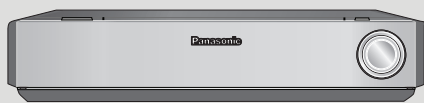
Avoiding interference with other Panasonic equipment

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".

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

- 1 Press and hold [▶▶] on the main unit and [2] on the remote control until the main unit's display shows "REMOTE 2".
- 2 Press and hold [ENTER] and [2] on the remote control for at least 2 seconds.

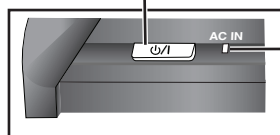
To change the mode back to "REMOTE 1", repeat both steps above by replacing [2] with [1].



When opening and closing the front cover, be careful not to touch the standby/on switch [⏻/⏻].

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. (14)



AC supply indicator [AC IN]

This indicator lights when the unit is connected to the AC mains supply.

⏮, ⏭, ⏮/⏭ TUNING ▲

Skip (14)/
Select the radio stations/channels (8, 28)

▲ OPEN/CLOSE

Open/Close the disc tray (14)

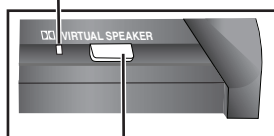
■ /-TUNE MODE / —FM MODE

Stop playing (14)/
Select the tuning mode (8, 28)
Adjust the FM reception condition (28)

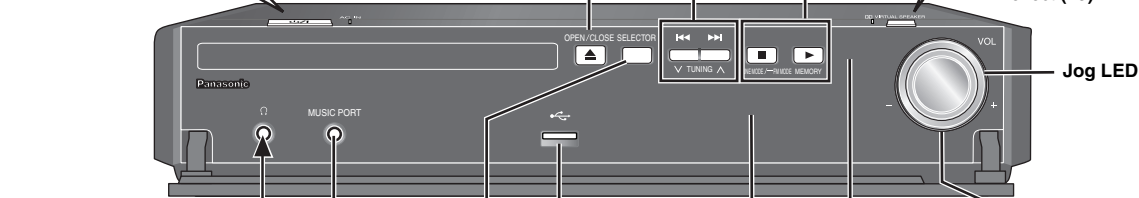
► /MEMORY

Play discs (14)/
Memorize the receiving
radio stations/channels (8, 28)

Dolby Virtual Speaker
LED



DO VIRTUAL SPEAKER
Enjoy surround sound
effect (29)



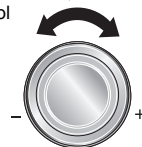
Headphones
(not included)
Headphone plug type:
Ø3.5 mm stereo mini plug

- Reduce the volume before connecting.
- Audio is automatically switched to 2-channel stereo.
- To prevent hearing damage, avoid listening for prolonged periods of time.

USB terminal
Connect a USB device (31)

Display

Remote control
signal sensor



Adjust the volume
of the main unit.

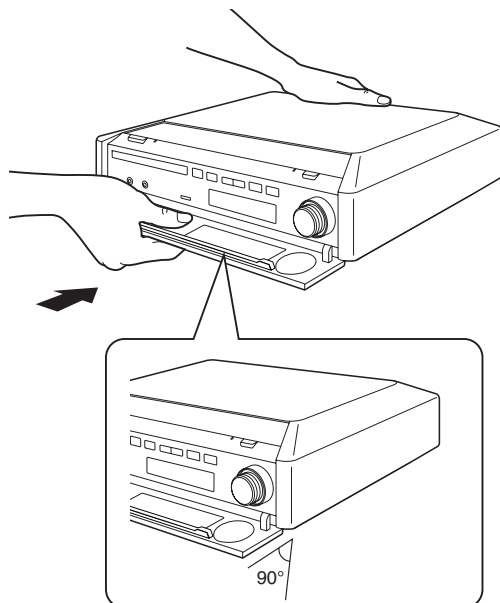
SELECTOR

DVD/CD→USB→FM→
AV **Continental Europe**→AUX→
MUSIC P.→D-IN→OPTION→
Return to DVD/CD

MUSIC PORT

Connect an external
device (30)





■ If the front cover comes off






- 1 Hold rear side of main unit by one hand and match up left or right side protruding hook on the cover first with the corresponding slot on the unit.
- 2 Push the hook firmly towards the unit until it clicks into place. Then push the succeeding hooks one by one until all have clicked into place.
- 3 Check that the cover now moves correctly.
— If it does not, remove it and repeat the above procedure.

Discs that can be played

Commercial discs

Disc	Logo	Indicated in these instructions by	Remarks
DVD-Video		DVD-V	High quality movie and music discs
DVD-Audio		DVD-A	High fidelity music discs ^{*1}
Video CD		VCD	Music discs with video Including SVCD (Conforming to IEC62107)
CD		CD	Music discs

Recorded discs (○: Playable, —: Not playable)

Disc	Logo	Recorded on a DVD video recorder, etc.		Recorded on a personal computer, etc.					Finalizing ^{*7}
		DVD-VR ^{*3}	DVD-V ^{*5}	WMA	MP3	JPEG	MPEG4	DivX	
DVD-RAM		○	—	—	○	○	○	○	Not necessary
DVD-R/RW		○	○	—	○	○	○	○	Necessary
DVD-R DL		○ ^{*4}	○	—	—	—	—	—	Necessary
+R/+RW	—	—	(○) ^{*6}	—	—	—	—	—	Necessary
+R DL	—	—	(○) ^{*6}	—	—	—	—	—	Necessary
CD-R/RW ^{*2}	—	—	—	○	○	○	○	○	Necessary ^{*8}

• 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 (→ page 13, Tips for making data discs).

^{*1} Some DVD-Audio discs contain DVD-Video content. To play DVD-Video content, select "Play as Data Disc" (→ page 22, Other Menu).

^{*2} This unit can play CD-R/RW recorded with CD-DA or Video CD format.

WMA MP3 JPEG This unit also plays HighMAT discs.

^{*3} Discs recorded on DVD recorders or DVD video cameras, etc. using Version 1.1 of the Video Recording Format (a unified video recording standard).

^{*4} Discs recorded on DVD recorders or DVD video cameras using Version 1.2 of the Video Recording Format (a unified video recording standard).

^{*5} Discs recorded on DVD recorders or DVD video cameras using DVD-Video Format.

^{*6} Recorded using a format different from DVD-Video Format, therefore some functions cannot be used.

^{*7} A process that allows play on compatible equipment. To play a disc that is indicated as "Necessary", the disc must first be finalized on the device it was recorded on.

^{*8} Closing the session will also work.

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-ROM, CD-ROM, CDV, CD-G, SACD and Photo CD, DVD-RAM that cannot be removed from their cartridge, 2.6-GB and 5.2-GB 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 television must match the system used on the disc.
- PAL discs cannot be correctly viewed on an NTSC television.
- This unit can convert NTSC signals to PAL 60 for viewing on a PAL television (→ page 24, "NTSC Disc Output" 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

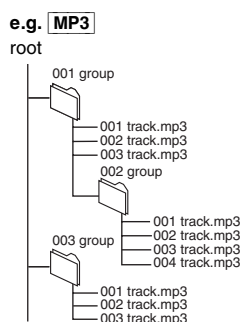
Format	Disc	Extension	Reference
WMA	CD-R/RW	“.WMA” “.wma”	<ul style="list-style-type: none"> Compatible compression rate: between 48 kbps and 320 kbps You cannot play WMA files that are copy-protected. This unit does not support Multiple Bit Rate (MBR: an encoding process for audio content that produces an audio file encoded at several different bit rates).
MP3	DVD-RAM DVD-R/RW CD-R/RW	“.MP3” “.mp3”	<ul style="list-style-type: none"> This unit does not support ID3 tags. Sampling frequency and compression rate: <ul style="list-style-type: none"> DVD-RAM, DVD-R/RW: 11.02, 12, 22.05, 24 kHz (8–160 kbps), 44.1 and 48 kHz (32–320 kbps) CD-R/RW: 8, 11.02, 12, 16, 22.05, 24 kHz (8–160 kbps), 32, 44.1 and 48 kHz (32–320 kbps)
JPEG	DVD-RAM DVD-R/RW CD-R/RW	“.JPG” “.jpg” “.JPEG” “.jpeg”	<ul style="list-style-type: none"> JPEG files taken on a digital camera that conform to DCF Standard (Design rule for Camera File system) Version 1.0 are displayed. <ul style="list-style-type: none"> 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	DVD-RAM DVD-R/RW CD-R/RW	“.ASF” “.asf”	<ul style="list-style-type: none"> You can play MPEG4 data [conforming to SD VIDEO specifications (ASF standard)/MPEG4 (Simple Profile) video system/G.726 audio system] recorded with Panasonic SD multi cameras or DVD recorders with this unit. The recording date may differ from that of the actual date.
DivX	DVD-RAM DVD-R/RW CD-R/RW	“.DIVX” “.divx” “.AVI” “.avi”	<ul style="list-style-type: none"> Plays all versions of DivX® video (including DivX®6) [DivX video system/MP3, Dolby Digital or MPEG audio system] with standard playback of DivX® media files. Functions added with DivX Ultra are not supported. 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.

- When there are more than 8 groups, the eighth group onwards will be displayed on one vertical line in the menu screen.
- There may be differences in the display order on the menu screen and computer screen.
- This unit cannot play files recorded using packet write.

Naming folders and files

(Files are treated as contents and folders are treated as groups on this unit.)

At the time of recording, prefix folder and file names. This should be with numbers that have an equal number of digits, and should be done in the order you want to play them (this may not work at times).



DVD-RAM

- Discs must conform to UDF 2.0.

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.

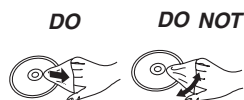
Regarding DVD-Audio

Some 5.1 channel DVD-Audio will prevent down-mixing (→ page 38, Glossary) of all or part of their contents if this is the manufacturer's intention. When playing such discs, or such parts of the disc, unless the number of connected speakers is the same as the disc's channel specification, audio will not be output properly (e.g., part of the audio is missing, 5.1 channel sound cannot be selected and audio is played in two channels). Refer to the disc's jacket for more information.

Maintenance

■ To clean discs

Wipe with a damp cloth and then wipe dry.



■ 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.



Discs that can be played / Maintenance

Basic play

- To display the picture from the main unit, turn on your television and change its video input mode (e.g. VIDEO 1, AV 1, etc.).
- To change your television's video input mode, refer to its operating instructions.

Using the main unit

1 Power on.



2 Select "DVD/CD".

SELECTOR



3 Open the disc tray.

OPEN/CLOSE



4 Load the disc.

- Load double-sided discs so the label for the side you want to play is facing up.
- For DVD-RAM, remove the disc from its cartridge before use.



Press to skip.



5 Start play.

- Adjust the volume.
- You can enjoy surround sound effect when you press [VIRTUAL SPEAKER] and select the mode (→ page 29).

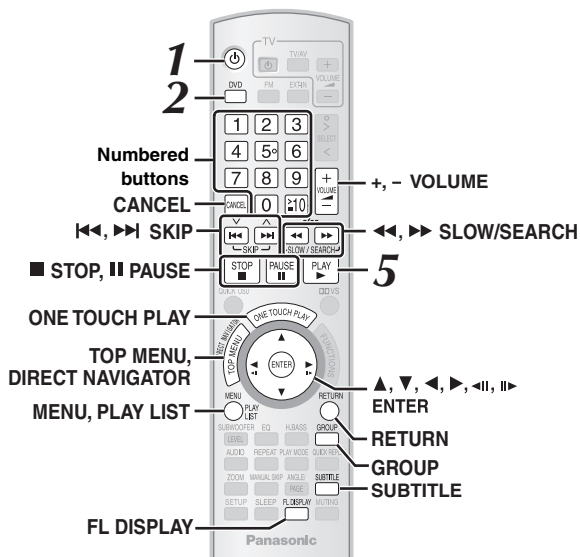


Note

- DISC CONTINUES TO ROTATE WHILE MENUS ARE DISPLAYED.** To preserve the unit's motor and your television screen, press [■] (Stop) when you are finished with the menus.
- Total title number may not be displayed properly on +R/+RW.

If you are experiencing problems, refer to troubleshooting (→ page 32 to 35).

Using the remote control



One touch play



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

Stop



The position is memorized while "RESUME" is on the display.
• Press [▶ PLAY] to resume.
• Press [■ STOP] again to clear the position.

Pause



• Press [▶ PLAY] to restart play.

Skip



• **WMA MP3 JPEG MPEG4 DivX**
[This feature does not work during program and random play (→ page 17).]
[▲, ▼]: **Group skip**
[◀, ▶]: **Content skip**

Search

(during play)



Slow-motion

(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.

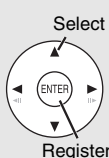
Frame-by-frame

(during pause)



DVD-A (Motion picture part)
DVD-VR DVD-V VCD
• **VCD** Forward direction only.

On-screen item select



Enter number



DVD-VR DVD-A 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.

WMA MP3 JPEG MPEG4 DivX

e.g. To select 123:
[1] → [2] → [3] → [ENTER]

• Press [CANCEL] to cancel the number(s).



Disc menu



DVD-A DVD-V

Shows a disc top menu.

DVD-VR

Press the button to show the programs (→ page 19).



DVD-V

Shows a disc menu.

DVD-VR

Press the button to show a playlist (→ page 19).



VCD with playback control
Shows a disc menu.

Return to previous screen



Main unit display



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

Time display

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

JPEG

When Slideshow (→ page 20) is on:
SLIDE↔Contents number
When Slideshow is off:
PLAY↔Contents number

Information screen



JPEG

Date → Details of the picture
← No information ←

Start play from a selected group



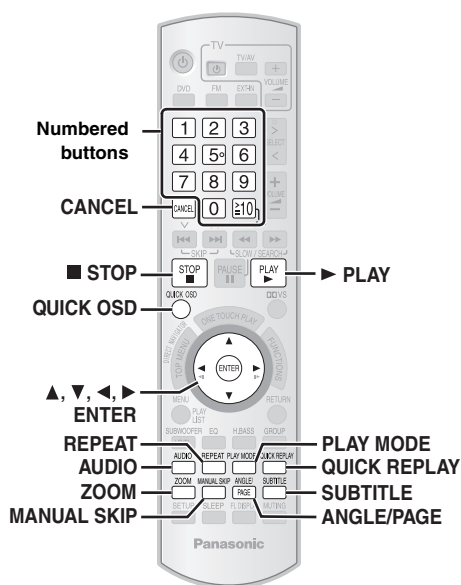
DVD-A WMA MP3 JPEG MPEG4 DivX

A folder on WMA/MP3, MPEG4, JPEG and DivX discs is treated as a "Group".



Basic play

Convenient functions



Displaying current playback condition

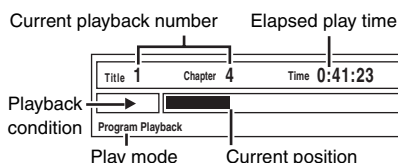
QUICK OSD

Press [QUICK OSD].

Basics → Details
 off (No on-screen display) ←

Basics

e.g. DVD-V



Details

e.g. DVD-V

Details - DVD-Video	
Audio information	Audio 1 ---DTS 3/2.1ch
Subtitle information	Subtitle ---
Angle information	Angle 1/1
Aspect of current title	Source Aspect 4:3
Total play time of current title	Title Total Time 0:54:28

[MPEG4] [DivX] "Video" and "Audio" information is not displayed during search.

Repeat play

REPEAT

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

During play

Press [REPEAT] several times to select an item to be repeated.

e.g. DVD-V

[Functions]	
Repeat	Off
	[Off] [Chapter] [Title]

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

Skipping about 30 seconds forward

MANUAL SKIP

DVD-VR DVD-V (Except +R/+RW)

Convenient when you want to skip commercials etc.

During play

Press [MANUAL SKIP].

- This may not work depending on the play position.
- [DVD-VR] This does not work with still picture part or when playing a playlist.

Changing subtitles

SUBTITLE

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

Press [SUBTITLE] to select the subtitle language.

To clear/display the subtitles

e.g. DVD-V

Press [◀, ▶] to select "On" or "Off".

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

[Functions]	
Subtitle	<Off>

DVD-VR (with subtitle on/off information)

Press [SUBTITLE] to select "On" or "Off".

- Subtitle on/off information cannot be recorded using Panasonic DVD Recorders.
- [DivX] [Continental Europe] About DivX subtitles text display (→ page 22).

Changing soundtracks

AUDIO

DVD-A DVD-V [DivX] (with multiple soundtracks) DVD-VR VCD

Press [AUDIO] several times to select the soundtrack.

DVD-VR VCD [DivX]

e.g. DVD-V

You can use this button to select "L", "R" or "LR".

[Functions]	
Audio	1

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

Signal type/data

LPCM/PPCM/Digital/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.

Quick replay

QUICK REPLAY

DVD-A DVD-VR DVD-V WMA MP3 VCD CD

Press [QUICK REPLAY] to skip back a few seconds.

- This may not work depending on the disc's recording.
- This does not work with +R/+RW.

Changing the zoom ratio

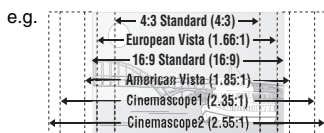
ZOOM

This feature expands a letterbox picture to fit the screen.

Press [ZOOM] to select the preset aspect ratio or "Auto".

[DVD-A] (motion picture part) [DVD-V] [DVD-V] [VCD]

Auto, 4:3 Standard, European Vista,
16:9 Standard, American Vista,
Cinemascope1, Cinemascope2



[MPEG4] [DivX]

Standard (×0.25 full-screen),

Original (actual recorded size),

Full (full-screen)

- This function may not work depending on the disc's recording.

Fine adjustments (Manual Zoom)

Press [◀, ▶] while the menu is displayed. (Press and hold to alter faster.)

– in 0.01-unit steps from "×1.00" to "×1.60"

– in 0.02-unit steps from "×1.60" to "×2.00"

– in 0.05-unit steps from "×2.00" to "×4.00" ([MPEG4] [DivX] only)

- [MPEG4] [DivX] It may not be possible to zoom up to "×4.00" depending upon the connected television and its settings.

Angle selection and still picture rotation/advance

ANGLE/
PAGE

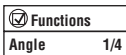
Press [ANGLE/PAGE] to select the angle or rotate/advance the still picture.

e.g. [DVD-V]

[DVD-V] (with multiple angles): Angle selection

[JPEG]: Still picture rotation

[DVD-A]: Still picture advance



All group, Program and Random play

PLAY MODE

- Select "Play as Data Disc" in Other Menu (→ page 22) when using
 - HighMAT discs without using the HighMAT function, or
 - DVD-RAM or DVD-R/RW discs containing MP3, JPEG, MPEG4 or DivX files.
- [DVD-V] Some items cannot be played even if you have programmed them.
- [DVD-A] Some discs contain bonus groups. If a password screen appears after selecting a group, enter the password with the numbered buttons to play the bonus group. Refer also to the disc's jacket.

Press [PLAY MODE] while stopped.

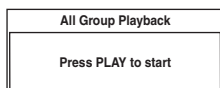
All group, program and random playback screens appear sequentially.

All group ([DVD-A]) → Program → Random
 ↑ off (Cancel all group, program and random play) ←

All group play

[DVD-A]

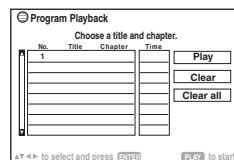
Press [▶ PLAY].



Program play (up to 32 items)

- 1 Press the numbered buttons to select the item.
 ([WMA] [MP3] [JPEG] [MPEG4] [DivX] Press [ENTER] to register the selection.)

e.g. [DVD-V]



- Repeat this step to program other items.

- To select a 2-digit number

e.g. To select 12: [≥10] → [1] → [2]

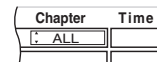
[WMA] [MP3] [JPEG] [MPEG4] [DivX] [1] → [2] → [ENTER]

- 2 Press [▶ PLAY].

To select all the items

While the "Chapter", "Track" or "Content" field is highlighted, press [▲, ▼] to select "ALL". Then press [ENTER] again to register.

e.g. [DVD-V]



To change the selected program

- 1 Press [▲, ▼] to select the program number.

- 2 Press the numbered buttons to change each item.

([WMA] [MP3] [JPEG] [MPEG4] [DivX] Press [ENTER] to register the selection.)

To clear the selected program

- 1 Press [▲, ▼] to select the program number.

- 2 Press [CANCEL] (or press [▲, ▼, ◀, ▶] to select "Clear" and press [ENTER]).

To clear the whole program

Select "Clear all" with [▲, ▼, ◀, ▶] and press [ENTER].

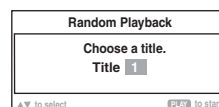
The whole program is also cleared when the disc tray is opened, the unit is turned off or another source is selected.

Random play

[DVD-A] [DVD-V] [WMA] [MP3] [JPEG] [MPEG4] [DivX]

- 1 Press the numbered buttons to select a group or title.
 ([WMA] [MP3] [JPEG] [MPEG4] [DivX] Press [ENTER] to register the selection.)

e.g. [DVD-V]



[DVD-A]

- To enter all groups, press [◀, ▶] to select "All" and press [ENTER].

- To deselect a group, press numbered buttons corresponding to the group you want to clear.

- 2 Press [▶ PLAY].

- 0022En p14-25.fm Page 18 Monday, May 7, 2007 12:28 PM

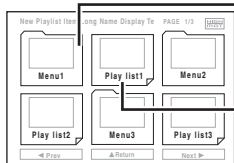
Playing HighMAT™ discs

WMA MP3 JPEG



- 1 Press [TOP MENU].
 - To exit the screen, press [■ STOP].
 - To change the menu background to the one recorded on the disc, press [FUNCTIONS].
- 2 Press [▲, ▼, ◀, ▶] to select the item, and then press [ENTER].
 - Repeat this step if necessary.

e.g.



Menu: Takes you to the next menu which shows playlists or another menu

Playlist: Play starts

Selecting from the list

- 1 During play Press [MENU].
 - To exit the screen, press [MENU].
- e.g.
- 2 Press [◀] followed by [▲, ▼] to switch among "Playlist", "Group" and "Content" lists.
- 3 Press [▶] followed by [▲, ▼] to select an item and press [ENTER].
 - Press [ANGLE/PAGE] to skip page by page.

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

DVD-VR

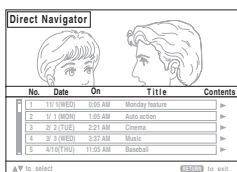


- Titles appear only if the titles are recorded on the disc.
- You cannot edit programs, playlists and disc titles.

Playing the programs

- 1 Press [DIRECT NAVIGATOR].
 - To exit the screen, press [DIRECT NAVIGATOR].

e.g.



- 2 Press [▲, ▼] to select the program.
 - Press [ANGLE/PAGE] to skip page by page.
 - Press [▶] to show the contents of the program and the disc.
- 3 Press [ENTER].

Playing a playlist

This works only when the disc contains a playlist.

- 1 Press [PLAY LIST].
 - To exit the screen, press [PLAY LIST].

e.g.



- 2 Press [▲, ▼] to select the playlist.
 - Press [ANGLE/PAGE] to skip page by page.
- 3 Press [ENTER].

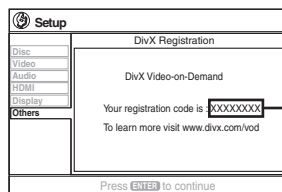
About DivX VOD content

DivX Video-on-Demand (VOD) content is encrypted for copyright protection. In order to play DivX VOD content on this unit, you first need to register the unit.

Follow the online instructions for purchasing DivX VOD content to enter the unit's registration code and register the unit. For more information about DivX VOD, visit www.divx.com/vod.

Display the unit's registration code

(→ page 25, "DivX Registration" in "Others" menu)



8 alphanumeric characters

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

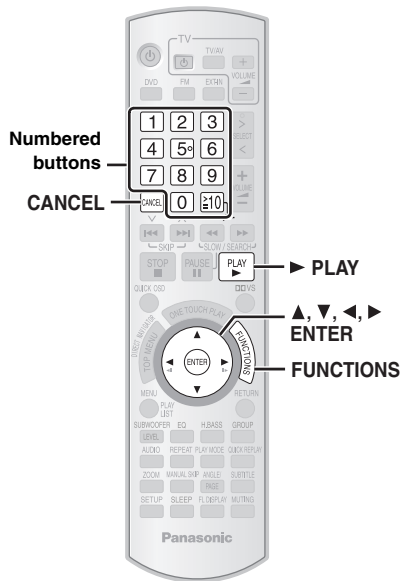
Regarding DivX content that can only be played a set number of times

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

When playing this content

- The number of remaining plays is reduced by one if
 - you press [⏮] or [SETUP].
 - you press [■ STOP].
 - you press [◀◀, ▶▶ SKIP] or [◀◀, ▶▶ SLOW/SEARCH] etc. and arrive at another content.
- Resume function (→ page 15, Stop) does not work.

Using on-screen menus



1		Show the Main menu.
2		Select the menu. e.g. [DVD-V]
3		Make the settings. e.g. [DVD-V]
4		Press to exit.

Main menu

Items shown differ depending on the type of disc.

Program Group Title Chapter Track Playlist Content	To start from a specific item e.g. [DVD-VR] To select Program 12 Press the numbered buttons: [1] → [2] → [ENTER]
Time	(Time Slip does not work with +R/+RW discs.) To skip incrementally or decrementally (Time Slip for play only) 1 Press [ENTER] twice to show the Time Slip indicator. 2 Press [▲, ▼] to select the time and press [ENTER]. • To change the steps more quickly, press and hold [▲, ▼]. To change remaining/elapsed time display [MPEG4] [DivX] To display pixel number [DivX] fps (frame per second) is also displayed.
Video	(→ page 16, Changing soundtracks)
Audio	[WMA] [MP3] To display the current bitrate or sampling frequency
Still Picture	[DVD-A] To switch still pictures

Number Select	[VCD] with playback control To select number While the disc menu is displayed Press [▲, ▼] → Press [ENTER] • To change the numbers more quickly, press and hold [▲, ▼].
Thumbnail	To show thumbnail images
Subtitle	(→ page 16, Changing subtitles)
Marker (VR)	[DVD-VR] To recall a marker recorded on DVD-Video recorders Press [▲, ▼] → Press [ENTER].
Angle	(with multiple angles) To select a video angle (→ page 17, Angle selection and still picture rotation/advance)
Rotate Picture	To rotate a picture
Slideshow	To turn slideshow on/off On ↔ Off To change the slideshow timing 1 (Fast) to 5 (Slow)
Other Settings	(→ below)

Other Settings

Items shown differ depending on the type of disc.

Play Speed	[DVD-A] (motion picture part) [DVD-VR] [DVD-V] To change play speed – from “×0.6” to “×1.4” • Press [▶] [PLAY] to return to normal play. • After you change the speed – Audio output switches to PCM-2 channel. – Sampling frequency of 96 kHz is converted to 48 kHz. • This function may not work depending on the disc's recording.
-------------------	--

■ Play Menu

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

Repeat	(→ page 16, Repeat play)
A-B Repeat	Except [JPEG] [DVD-VR] (Still picture part) [MPEG4] [DivX] To repeat a specified section Press [ENTER] at the starting and ending points. Press [ENTER] again to cancel.

Using on-screen menus

Other Settings

Items shown differ depending on the type of disc.

■ Audio Menu

Dialogue Enhancer	<p>To make the dialogue in movies easier to hear</p> <p>DVD-V (Dolby Digital, DTS, MPEG, 3-channel or higher, with the dialogue recorded in the center channel)</p> <p>DivX (Dolby Digital, 3-channel or higher, with the dialogue recorded in the center channel)</p> <p>On \longleftrightarrow Off</p>
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■ Display Menu

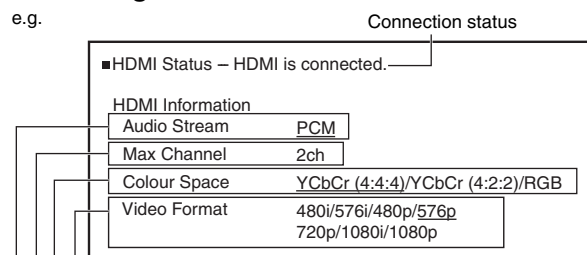
Information	JPEG On \longleftrightarrow Off
Subtitle Position	0 to -60 (in 2 unit steps)
Subtitle Brightness	Auto, 0 to -7
4:3 Aspect	<p>To select how to show images made for 4:3 aspect screens on a 16:9 aspect television</p> <p>Normal: Laterally stretches images.</p> <p>Auto: Expands 4:3 letterbox images to fill more of the screen. Other images appear in full in the center of the screen.</p> <p>Shrink: Images appear in the center of the screen.</p> <p>Zoom: Expands to 4:3 aspect ratio. If your television has a similar feature, use it instead for a better effect.</p>
Just Fit Zoom	<p>To select the appropriate screen size to fit your television screen</p> <p>(\rightarrow page 17, Changing the zoom ratio)</p>
Manual Zoom	To zoom in and out manually
Bit Rate Display	<p>DVD-A (motion picture part) DVD-VR DVD-V</p> <p>VCD MPEG4 DivX</p> <p>On \longleftrightarrow Off</p>
GUI See-through	To make the on-screen menu transparent Off, On, Auto
GUI Brightness	To adjust the on-screen menu brightness -3 to +3
HDMI Status	Indicates various information when connected with HDMI AV OUT terminal. (\rightarrow right, Confirming HDMI information)
Quick OSD	<p>To display current playback condition</p> <p>Off, Basics, Details</p> <p>After registering the item, press [RETURN] to show the QUICK OSD screen (\rightarrow page 16).</p>

■ Other Menu

Setup	(\rightarrow page 23)
Play as DVD-Video or Play as DVD-Audio	To play DVD-Video contents of DVD-Audio Select "Play as DVD-Video".
Play as DVD-VR, Play as HighMAT or Play as Data Disc	<p>To use functions for data discs (\rightarrow page 18)</p> <p>(To play MP3, JPEG, MPEG4 or DivX files on DVD-RAM or DVD-R/RW, or to play a HighMAT disc without using the HighMAT function)</p> <p>Select "Play as Data Disc".</p>

Confirming HDMI information

e.g.



(\rightarrow page 21, Video Output Mode)

(\rightarrow page 21, HDMI Colour Space)

Shows the number of audio channels.

Shows the output signal type.

Note

- All possible types of output are displayed.
- The current output for "Audio Stream", "Colour Space" and "Video Format" will be underlined.
(If you select a video output without an "*" mark in the "Video Output Mode" in Picture Menu, the selected video format will not be underlined.)
- When "Off" is selected in "Audio Output" (\rightarrow page 25, "HDMI" menu), "—" will be displayed in "Audio Stream" and "Max Channel".

About DivX subtitles text display

You can display subtitles text recorded onto the DivX video disc on this unit. This function has no relation to the subtitles specified in DivX standard specifications and has no clear standard. Depending on the methods used to create the file, the following functions may not work.

Displaying subtitles text

- 1 During play, press [FUNCTIONS] and press [\blacktriangle , \blacktriangledown] to select "Subtitle".
 - DivX video files that do not display "Text" do not contain subtitles text. Subtitles text cannot be displayed.
- 2 Press [\blacktriangleleft , \blacktriangleright] to select "On" and press [ENTER].
 - If the subtitles text are not displayed correctly, try changing the language settings (\rightarrow below).

Subtitles text language settings

- 1 During play, press [SETUP].
- 2 Press [\blacktriangle , \blacktriangledown] to select "Disc" and press [ENTER].
- 3 Press [\blacktriangle , \blacktriangledown] to select "Subtitle Text (DivX)" and press [ENTER].
- 4 Press [\blacktriangle , \blacktriangledown] to select "Latin1", "Latin2", "Cyrillic" or "Turkish" and press [ENTER].
 - The initial setting is "Latin2".
 - To exit the screen, press [SETUP].

Types of subtitles text file that can be displayed

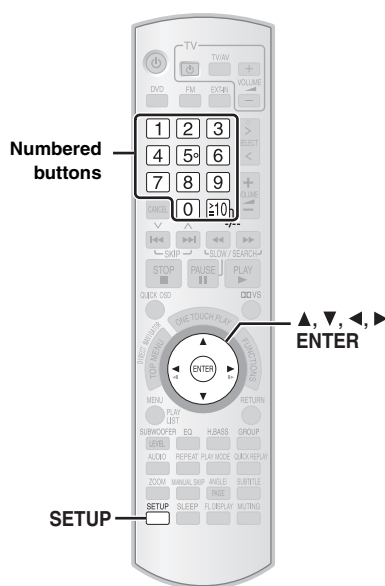
Subtitles text that satisfy the following conditions can be displayed on this unit.

- File format: MicroDVD, SubRip, or TMLayer
- 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".

Limitations of this unit

- In the following situations, the subtitles cannot be displayed as recorded. Furthermore, depending on the methods used to create the file or the state of the recording, only parts of the subtitles may be displayed, or the subtitles may not be displayed at all.
 - When special text or characters are included in the subtitles text.
 - When the file size is larger than 256KB.
 - When characters with styling specified are included in the subtitle data. Codes that specify the character style within files are displayed as subtitle characters.
 - When data with a different format exists within the subtitle data.
- If the file name of the DivX video file is not displayed correctly on the Menu screen (the file name is displayed as "_"), the subtitles text may not be displayed correctly.
- The subtitles text cannot be displayed when search, Time Slip and other such operations are being performed.
- The subtitles text cannot be displayed when On-Screen Menus, Navigation Menu and other such menu screens are being displayed.

Changing the player settings



1	SETUP	Show the Setup menu.
		<p>Menu</p> <p>If you have not performed QUICK SETUP (→ page 9), the QUICK SETUP screen appears.</p>
2		Select the menu.
3		Select the item.
4		Make the settings. • Numbered buttons can be used.
5	SETUP	Press to exit.

Changing the player settings

- The settings remain intact even if you switch the unit to standby.
- Underlined items are the factory settings in the following table.

QUICK SETUP enables successive settings of the items in the shaded area.

■ “Disc” menu

Audio Choose the audio language.	• <u>English</u> • (Language options)* ¹ • Original* ² • Other**** ³
Subtitle Choose the subtitle language.	• <u>Automatic</u> * ⁴ • English • (Language options)* ¹ • Other**** ³
Menus Choose the language for disc menus. Changing the menu language in QUICK SETUP also changes this setting.	• <u>English</u> • (Language options)* ¹ • Other**** ³
Advanced Disc Review (→ page 21)	• <u>Intro Mode</u> : Reviews each title/program. • <u>Interval Mode</u> : Reviews not only each title/program but also each 10-minute interval within a title/program.
Ratings Set a rating level to limit DVD-Video play.	Setting ratings (When level 8 is selected) • <u>8 No Limit</u> • 1 to 7 • 0 Lock All: To prevent play of discs without rating levels. 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. Enter your password and then follow the on-screen instructions.

*¹ Language options

Continental Europe: French, Spanish, German, Polish, Russian, Czech and Hungarian

Australia and N.Z.: French, Spanish, German, Italian, Dutch, Swedish and Polish

*² The original language designated on the disc is selected.

*³ Input the appropriate code from the language code list (→ page 25).

*⁴ If the language selected for “Audio” is not available, subtitles appear in that language (if available on the disc).



(Continued on next page)

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Changing the player settings

QUICK SETUP enables successive settings of the items in the shaded area.

■ “Video” menu

TV Aspect Choose the setting to suit your television and preference.	● 4:3 Pan&Scan: Regular aspect television (4:3) The sides of the widescreen picture are cut off so it fills the screen (unless prohibited by the disc). 					
	● 4:3 Letterbox: Regular aspect television (4:3) Widescreen picture is shown in the letterbox style. 					
	● 16:9: Widescreen television (16:9)					
TV Type Select to suit the type of television.	● Standard (Direct View TV) ● Projection TV		● CRT Projector ● Plasma TV		● LCD TV/Projector	
Time Delay When connected with a Plasma display, adjust if you notice the audio is out of sync with the video.	● <u>0ms</u>	● 20ms	● 40ms	● 60ms	● 80ms	● 100ms
Video Out (AV/Component) *7 Choose the video signal format to be output from the SCART (AV) and COMPONENT VIDEO OUT terminals.	● Video/YPbPr ● RGB/No Output <div>● S-Video/YPbPr</div>					
Still Mode Specify the type of picture shown when paused.	● Automatic ● Field*5: The picture is not blurred, but picture quality is lower. ● Frame*5: Overall quality is high, but the picture may appear blurred.					
NTSC Disc Output Choose PAL 60 or NTSC output when playing NTSC discs (→ page 12, Video systems).	● PAL60: When connected to a PAL television. ● NTSC: When connected to an NTSC television.					
Picture/Video Output Change the video signal format to be output for JPEG, MPEG4 and DivX video if picture output is not smooth during playback.	● Automatic ● PAL ● NTSC/PAL60: Output will depend on “NTSC Disc Output” setting (→ above).					

■ “Audio” menu

PCM Digital Output Check the digital input limitations of the equipment you connect using OPTICAL OUT terminal and select the maximum sampling frequency of PCM digital output.	<ul style="list-style-type: none">● Up to 48 kHz: When connected to equipment compatible with 44.1 or 48 kHz● Up to 96 kHz: When connected to equipment compatible with 88.2 or 96 kHz<ul style="list-style-type: none">– Signals from copy-protected discs are converted to 48 or 44.1 kHz.– Some equipment cannot handle sampling frequencies of 88.2 kHz, even if they can handle 96 kHz. Read your equipment's operating instructions for details.	
Dolby Digital ^{*6}	<ul style="list-style-type: none">● <u>Bitstream</u>● PCM	Select to suit the type of equipment you connected to the HDMI AV OUT or OPTICAL 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.)
DTS Digital Surround ^{*6}	<ul style="list-style-type: none">● <u>Bitstream</u>● PCM	
MPEG ^{*6}	<ul style="list-style-type: none">● <u>PCM</u>● Bitstream	
Dynamic Range Compression	<ul style="list-style-type: none">● Off● On: Adjusts for clarity even when the volume is low. Convenient for late night viewing. (Only works with Dolby Digital)	

*5 Refer to “Frame still and field still” (→ page 38, Glossary).

*6 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.

*7 **Continental Europe**

QUICK SETUP enables successive settings of the items in the shaded area.

■ “HDMI” menu

RGB Range Set “HDMI Colour Space” to “RGB” (→ page 21, Picture Menu).	<ul style="list-style-type: none"> ● <u>Standard</u> ● <u>Enhanced</u>: When the black and white images are not distinct.
Video Mode (This setting is irrelevant when connected through the VIDEO OUT terminal. ^{*10})	<ul style="list-style-type: none"> ● <u>On</u>: When connected through the HDMI AV OUT terminal. Video is output from the HDMI terminal. Video is also output from the COMPONENT VIDEO OUT terminal, but only in 480i or 576i (interlace). When connected through the SCART (AV)^{*8} terminal, RGB signal is not output. ● <u>Off</u>: When connected through the COMPONENT VIDEO OUT or SCART (AV)^{*8} terminal. Video is output from the COMPONENT VIDEO OUT terminal according to the setting of the “Video Output Mode” (→ page 21, Picture Menu) or SCART (AV)^{*8} terminal according to the setting of the “Video Out (AV/Component)” in the “Video” menu (→ page 24). Video is also output from the HDMI AV OUT terminal, but only in 480p or 576p (progressive).
Audio Output	<ul style="list-style-type: none"> ● <u>On</u>: 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 the main unit.) ● <u>Off</u>: When audio output is not from the HDMI AV OUT terminal. (The audio is output using the settings of the main unit.)
VIERA Link	<ul style="list-style-type: none"> ● <u>On</u>: The VIERA Link “HDAVI Control” function is available (→ page 26). ● <u>Off</u>

■ “Display” menu

Menu Language	^{*9} ● <u>English</u> ● Français ● Español ● Deutsch ● Polski ● Русский ● Česky ● Magyar ^{*10} ● <u>English</u> ● Français ● Español ● Deutsch ● Italiano ● Nederlands ● Svenska ● Polski
On-Screen Messages	<ul style="list-style-type: none"> ● <u>On</u> ● <u>Off</u>
Background during Play Select background during JPEG, MPEG4 and DivX video playback.	<ul style="list-style-type: none"> ● <u>Black</u> ● <u>Grey</u>

■ “Others” menu

FL Dimmer Change the brightness of the unit's display and Jog LED.	<ul style="list-style-type: none"> ● <u>Bright</u> ● <u>Dim</u> (Jog LED turns off.) ● <u>Auto</u>: The display is dimmed, but brightens when you perform some operations. (Jog LED turns on when you perform some operations.)
DivX Registration Display the unit's registration code.	You need this registration code to purchase and play DivX Video-on-Demand (VOD) content (→ page 19, About DivX VOD content).
QUICK SETUP	<ul style="list-style-type: none"> ● <u>Yes</u> ● <u>No</u>
Re-initialise Setting Return all values in the Setup menus to the default settings.	<ul style="list-style-type: none"> ● <u>Yes</u>: The password screen is shown if “Ratings” (→ page 23) is set. Please enter the same password. After “INIT” on the display disappears, turn the unit off and on again. ● <u>No</u>

^{*8} SCART (AV): **Continental Europe**

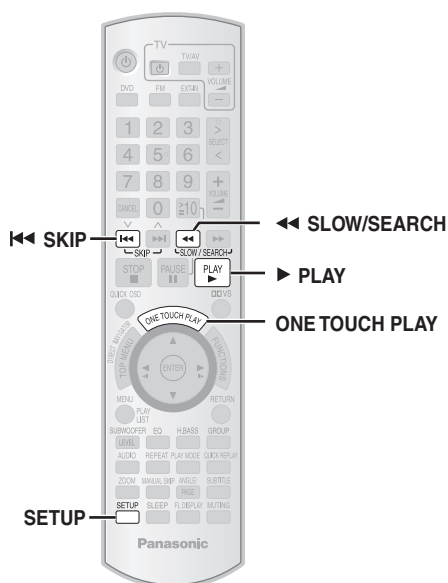
^{*9} **Continental Europe**

^{*10} **Australia and N.Z.**

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
Ameharic: 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	Twi: 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	

Using the 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 television (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 2" function.

The TV with "HDAVI Control 2" function enables the following operation: VIERA Link Control only with TV's remote control (for "HDAVI Control 2") (→ page 27).

"HDAVI Control 2" is the newest standard (current as of February, 2007) for Panasonic's HDAVI Control compatible equipment. This standard is compatible with Panasonic's conventional HDAVI equipment.

Preparation

- Confirm that the HDMI connection (→ page 7) has been made and **Continental Europe** the scart cable is not connected.
- Set "VIERA Link" to "On" (→ page 25, "HDMI" menu).
- To complete and activate the connection correctly, turn on all VIERA Link "HDAVI Control" compatible equipment and set the television to the corresponding HDMI input mode for the home theater system.

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

One touch play

You can turn on the home theater system and television, and start playing the disc with a single press of a button.

Press [ONE TOUCH PLAY].

Theater speakers will be automatically activated (→ page 27).

- This function also works if you press [▶ PLAY] on the home theater remote control during home theater standby mode.

Note

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

Auto input switching

- When you switch the television input to:
 - TV tuner mode, the home theater system will automatically switch to "AUX"* or "D-IN"*.
 - HDMI input mode for the home theater system, the home theater system will automatically switch to "DVD/CD" if it is in "AUX"* or "D-IN"* mode.
- When you start disc play, the television will automatically switch to the HDMI input mode for the home theater system.

- * To toggle the mode that this function works with, press [SETUP] while the main unit is in "AUX" or "D-IN" mode.
- The default setting is "AUX".

Power off link

When the television is turned off, the home theater system goes into standby mode automatically.

- This function works only when "DVD/CD", "USB", "AUX"* or "D-IN"* is selected as the source on the home theater system.
- When the television is turned on, the home theater system does not turn on automatically. (Power on link is not available.)

Note

Only the home theater system turns off when you press [⏻] for shutting it down. Other connected equipment compatible with VIERA Link "HDAVI Control" stays on.

- * For "AUX" or "D-IN" mode, power off link can be set to work with one or the other. To toggle the mode that this function works with, press [SETUP] while the main unit is in "AUX" or "D-IN" mode.
- The default setting is "AUX".

Speaker control

You can select whether audio is output from the home theater system or the television speakers by using the television menu settings. For details, refer to the operating instructions of your television.

Home Cinema

Theater speakers are active.

- When the home theater system is in standby mode, changing the television speakers to theater speakers in the television menu will automatically turn the home theater system on and select "AUX"* or "D-IN"* as the source.
- The television 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 the main unit's FL display.)
- To cancel muting, you can also use the home theater remote control (→ page 10).
- If you turn off the home theater system, television speakers will be automatically activated.

TV

Television speakers are active.

- The volume of the home theater system is set to "0".
 - This function works only when "DVD/CD", "USB", "AUX"* or "D-IN"* is selected as the source on the home theater system.
- Audio output is 2-channel audio.

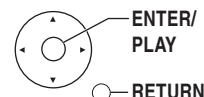
- When switching between the theater and television speakers, the TV screen may be blank for several seconds.

* To toggle which input source the main unit will automatically switch to, press [SETUP] while the main unit is in "AUX" or "D-IN" mode.
– The default setting is "AUX".

VIERA Link Control only with TV's remote control (for "HDAVI Control 2")

You can control the disc menus of the home theater system with the TV's remote control when using the "DVD/CD" or "USB" source. When operating the TV's remote control, refer to the below illustration for operation buttons.

- 1 Select the theater operation menu by using the television menu settings.
(For details, refer to the operating instructions of your television.)



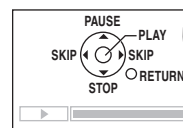
- The home theater system will automatically switch to "DVD/CD" if it is in "AUX"* or "D-IN"* mode.

* To toggle the mode that this function works with, press [SETUP] while the main unit is in "AUX" or "D-IN" mode.
– The default setting is "AUX".

- 2 Select the desired item.



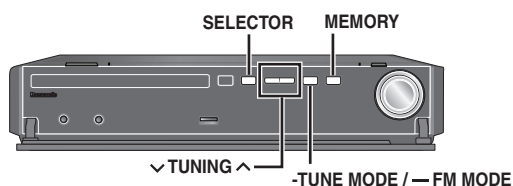
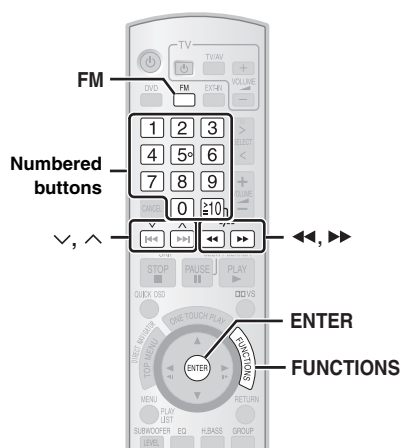
- "TOP MENU": Shows a disc top menu (→ page 15, 18) or program list (→ page 19).
- "MENU": Shows a disc menu (→ page 15, 18) or play list (→ page 19).
- "Control Panel": The basic operations for discs are available.



Note

- Depending on the menu, some button operations cannot be performed from the TV's remote control.
- "Control Panel" can be selected directly by using a button on the TV's remote control (e.g. [OPTION]).
- You cannot input numbers with the numbered buttons on the TV's remote control ([0] to [9]). Use the home theater's remote control to select the playlist etc.

Using the FM radio



Radio operations are described mainly with the remote control. You can alternatively use the corresponding button on the main unit.

*1 [SELECTOR] *2 [TUNING] *3 [MEMORY]

Presetting stations automatically

Up to 30 stations can be set.

1 Press [FM]*1 to select "FM".

2 Press and hold [ENTER]*3.

Release the button when "FM AUTO" is displayed.

The tuner tunes to the lowest frequency and 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 channels manually (→ right).

Selecting the preset channels

1 Press [FM]*1 to select "FM".

2 Press the numbered buttons to select the channel.

- To select a 2-digit number
e.g. 12: [10] → [1] → [2]

Alternatively, press [TUNING].

- To perform this step on the main unit, first press [-TUNE MODE] to select "PRESET", and then press [TUNING] to select the channel.

When a stereo FM broadcast is being received, "ST" lights in the display.

If noise is excessive

Press and hold [-FM MODE] on the main unit to display "MONO".

Press and hold [-FM MODE] again to cancel the mode.

- The mode is also canceled when you change the frequency.

Manual tuning

1 Press [FM]*1 to select "FM".

2 Press [TUNING]*2 to select the frequency.

- When performing this step on the main unit, first press [-TUNE MODE] to select "MANUAL", and then press [TUNING] to select the frequency.
- To start automatic tuning, press and hold [TUNING] until the frequency starts scrolling. Tuning stops when a station is found.

Presetting the channel

Up to 30 stations can be set.

- While listening to the radio broadcast

Press [ENTER]*3.

- While the frequency and "PGM" are 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 [TUNING], and then press [ENTER]*3.

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

RDS broadcasting

Continental Europe

The unit can display the text data transmitted by the radio data system (RDS) available in some areas.

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

When "FM" is selected

Press [FUNCTIONS] to display the text data.

Each time you press the button:

PS: Program service

PTY: Program type

FRQ: Frequency display

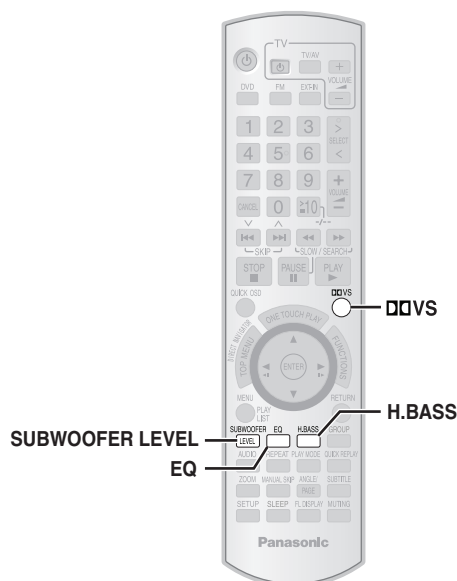
PTY displays			
NEWS	VARIED	FINANCE	COUNTRY
AFFAIRS	POP M	CHILDREN	NATIONAL
INFO	ROCK M	SOCIAL A	OLDIES
SPORT	M-O-R- M*	RELIGION	FOLK M
EDUCATE	LIGHT M	PHONE IN	DOCUMENT
DRAMA	CLASSICS	TRAVEL	TEST
CULTURE	OTHER M	LEISURE	ALARM
SCIENCE	WEATHER	JAZZ	

*"M-O-R- M"=Middle of the road music

Note

RDS displays may not be available if reception is poor.

Using sound effects



Note

- The following sound effects may not be available or have no effect with some sources, or when headphones are used (→ page 11).
- 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.

Using the equalizer function

EQ

Press [EQ].

Each time you press the button:

- FLAT:** Cancel (no effect is added).
HEAVY: Adds punch to rock.
CLEAR: Clarifies higher sounds.
SOFT: For background music.

- To check the current setting, press [EQ].

Enhancing the bass sound: H.BASS

H.BASS

You can enhance low-frequency sound so that heavy bass sound can be heard clearly, even if the acoustics of your room are not optimal. The unit automatically selects the most suitable setting according to the type of playback source.

Press [H.BASS].

Each time you press the button:
 H.BASS ON ←→ H.BASS OFF

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

Adjusting the amount of bass: Subwoofer level

SUBWOOFER
LEVEL

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

Press [SUBWOOFER LEVEL].

You can select the level from "SUB W 1" (weakest) to "SUB W 4" (strongest).

- To check the current setting, press [SUBWOOFER LEVEL].
- The setting you make is retained, and recalled every time you play the same type of source.

Enjoying surround sound effect: Dolby Virtual Speaker

DOLBY
VS

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

Press [DOLBY VS].

Each time you press the button:

REFERENCE: Standard mode

WIDE:

Wide mode

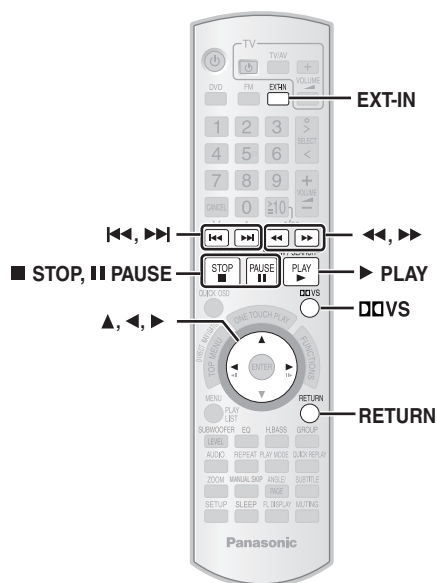
Widens the acoustic field of the front speakers. This has a good effect when there is little space between the speakers.

OFF:

Cancel (no effect is added)

- Dolby Virtual Speaker is not available and "ERROR" is displayed under the following conditions:
 - During play, when the selector is set to "DVD/CD" and the audio source currently playing is in the 3.1 ch, 3 ch, 1.1 ch or 1 ch.
 - When you are playing DVD-Audio content which prohibits down-mixing.
 - When headphones are connected.
- "DOLBY VS" lights when Dolby Virtual Speaker is turned on and the play source is 2 ch.
- The Dolby Virtual Speaker LED may turn off depending on the FL Dimmer settings (→ page 25).

Operating other equipment



You can play an external source through your home theater system.

Enjoying audio from the television

Preparation

Confirm the audio connection to the SCART (AV) **Continental Europe** or AUX terminal on the main unit.

Press [EXT-IN] repeatedly to select "AV"*1 or "AUX"*2.

- Reduce the volume on the television to its minimum, and then adjust the volume of the main unit.
- You can enjoy surround sound effect when you press [DVS] to turn on Dolby Virtual Speaker (→ page 29).

*1 **Continental Europe** Select "AV" when using the scart connection (→ page 6).

*2 Select "AUX" when using the AUX connection (→ page 7).

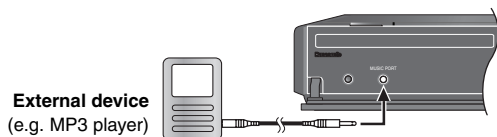
Using the Music Port

Preparation

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

1 Connect the external device (not included).

Plug type: Ø3.5 mm stereo mini plug

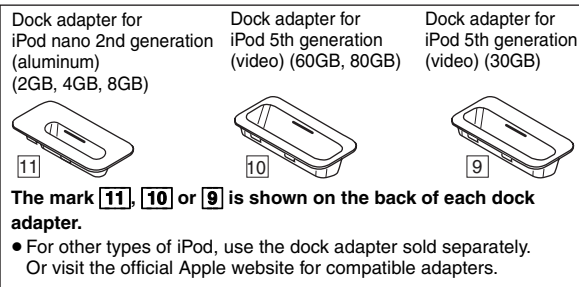


2 Press [EXT-IN] repeatedly to select "MUSIC P."

- Adjust the volume on the external device to a normal listening level, and then adjust the volume of the main unit.
- You can enjoy surround sound effect when you press [DVS] to turn on Dolby Virtual Speaker (→ page 29).

Using the iPod

For Continental Europe, use an optional SH-PD10 Panasonic Universal Dock for iPod.

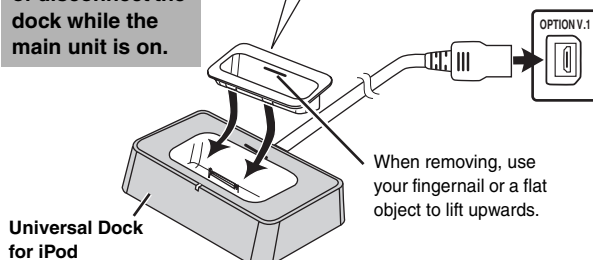


The mark **11**, **10** or **9** is shown on the back of each dock adapter.

- For other types of iPod, use the dock adapter sold separately.
- Or visit the official Apple website for compatible adapters.

Do not connect or disconnect the dock while the main unit is on.

Connect the dock to the back of the main unit.



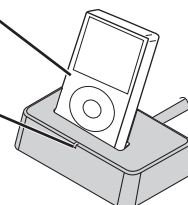
Charging the iPod

iPod (not included)

- Connect the iPod firmly.



The indicator lights up when the iPod is inserted, and charging starts.



Charging time

iPod nano 2nd generation (aluminum)	Until iPod is fully charged
iPod 5th generation (video)	
iPod nano 1st generation	
iPod 4th generation (color display)	5 hours (fixed)
iPod 4th generation	
iPod mini	

Note

- AC mains lead must be connected with the main unit.
- "OPTION ✱" will be shown on the main unit's display during iPod charging in main unit standby mode. It will go off when charging is finished.
- For the above models under "fixed 5-hour charging", "OPTION ✱" continues to be displayed throughout this duration, even when your iPod is fully charged. You can turn off this display by removing the iPod from the dock.
- Compatibility depends on the software version of your iPod.
- For more information, refer to the operating instructions for iPod or **Continental Europe** SH-PD10.

Playing tracks from the iPod

Preparation









- Adjust the volume on the iPod to a normal listening level.
- Reduce the volume of the main unit.
- Confirm the iPod connection (→ above).

1 Press [EXT-IN] repeatedly to select "OPTION".

The iPod turns on.

2 Press [▶ PLAY] to play the iPod.

- Adjust the volume of the main unit.
- You can enjoy surround sound effect when you press [DVS] to turn on Dolby Virtual Speaker (→ page 29).

 	To pause track
<p>Alternatively, press [■] on the main unit.</p> <p>(During play/pause)</p>  	To skip a track
<p>Alternatively, press [◀◀, ▶▶] on the main unit.</p> <p>(During play/pause)</p>   <p>or press and hold</p>  	To search the current track

When you select another source, or turn the main unit off, the iPod turns off.

Note

Image/video display through the home theater is not available.

Compatible iPod

Name	Memory size	Name	Memory size
iPod nano 2nd generation (aluminum)	2GB, 4GB, 8GB	iPod 4th generation (color display)	40GB, 60GB
iPod 5th generation (video)	60GB, 80GB	iPod 4th generation (color display)	20GB, 30GB
iPod 5th generation (video)	30GB	iPod 4th generation	40GB
iPod nano 1st generation	1GB, 2GB, 4GB	iPod 4th generation	20GB
		iPod mini	4GB, 6GB

- Compatibility depends on the software version of your iPod.

Setting the sound effects for set top box, digital broadcasting or satellite receiver

Preparation

Confirm the audio connection to the OPTICAL IN terminal on the main unit (→ page 7).

Press [EXT-IN] repeatedly to select “D-IN” (Digital In).

When you select “D-IN” as the source, you can select the following sound effects. (These functions only work with Dolby Digital or PCM.)

PCM FIX Mode

Press and hold [►].

PFIX ON: Select when receiving only PCM signals.

PFIX OFF: Select when receiving Dolby Digital and PCM signals.

Dynamic Range Compression

Press and hold [◀].

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

Audio Mode (This function only works with Dolby Digital Dual Mono.)

Press and hold [▲].

AUDIO ST (stereo audio), **AUDIO L**, **AUDIO R**

Dolby Virtual Speaker (→ page 29)

Press [DVS].

Note

Audio that is input through the OPTICAL IN terminal cannot be output through the HDMI terminal.

USB connection and operation

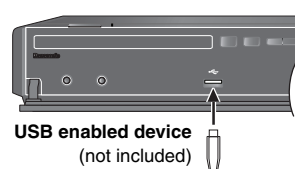
The USB connectivity enables you to connect and play tracks or files from USB mass storage devices.

Typically, USB memory devices. (Bulk transfer only)

Preparation

- Before connecting any USB mass storage device to the unit, ensure that the data stored therein has been backed up.

1 Connect the USB mass storage device (not included).



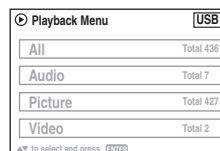
USB enabled device
(not included)

- It is not recommended to use a USB extension cable. The USB device is not recognised by this unit.

2 Press [EXT-IN] repeatedly to select “USB”.

- Adjust the volume of the main unit.
- You can enjoy surround sound effect when you press [DVS] to turn on Dolby Virtual Speaker (→ page 29).

e.g.



3 Begin playback by selecting the track from the USB mass storage device.

To return to the previous screen, press [RETURN].

For other operating functions, they are similar to those described in “Playing discs” (→ page 14 to 25).

Compatible devices

Devices which are defined as USB mass storage class:

- USB devices that support bulk only transfer.
- USB devices that support USB 2.0 full speed.

Supported Formats

	Format	Extension
Still pictures	JPG	“.jpg”, “.JPG” “.jpeg”, “.JPEG”
Music	MP3 WMA	“.mp3”, “.MP3” “.wma”, “.WMA”
Video	MPEG4*	“.asf”, “.ASF”

* For Panasonic D-Snap/DIGA

Note

- CBI (Control/Bulk/Interrupt) is not supported.
- Digital Cameras that use PTP protocol or which require additional program installation when connected to a PC are not supported.
- A device using NTFS file system is not supported. [Only FAT 12/16/32 (File Allocation Table 12/16/32) file system is supported].
- Depending on the sector size, some files may not work. It will not operate with Janus enabled MTP (Media Transfer Protocol) devices.
- Maximum folder: 400 folders
- Maximum file: 4000 files
- Maximum file name: 44 characters
- Maximum folder name: 44 characters
- Only one memory card will be selected when connecting a multiport USB card reader. Typically the first memory card inserted.

Troubleshooting guide

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

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.	10

Unit displays

The display is dark.	● Select "Bright" in "FL Dimmer" in the "Others" menu.	25
"NO PLAY"	● You inserted a disc the unit cannot play; insert one it can. ● You inserted a blank disc. ● You inserted a disc that has not been finalized.	12 — —
"NO DISC"	● You have not inserted a disc; insert one. ● You have not inserted the disc correctly; insert it correctly.	— 14
"OVER CURRENT ERROR"	● The USB device is drawing too much power. Switch to DVD/CD mode, remove the USB and turn the unit off.	—
"F61"	● Check and correct the speaker cable connections. If this does not fix the problem, consult the dealer.	5
"F76"	● There is a power supply problem. Consult the dealer.	—
"DVD U11"	● Disc may be dirty. Wipe it clean.	13
"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.	— —
"D.MIX" is flashing. DVD-A	● Down-mixing is the process of remixing the 5.1 channel sound found on some discs into two channels. The disc contains single-channel or 5.1 channel signals which may not be reproduced authentically.	—
"U70□" □ stands for a number. The actual number following "U70" will depend on the state of the main 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 the main unit and remote control. Depending on the number being displayed ("1" or "2"), press and hold [ENTER] and the corresponding numbered button ([1] or [2]) for at least 2 seconds.	10

General operation

No response when any buttons are pressed.	● This unit cannot play discs other than the ones listed in these operating instructions. ● 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.	12 — —
No response when remote control buttons are pressed.	● Check that the batteries are installed correctly. ● The batteries are depleted. Replace them with new ones. ● Aim the remote control at the remote control signal sensor and operate.	8 8 11
Other products respond to the remote control.	● Change the remote control operating mode.	10
No picture or sound.	● Check the video or speaker connection. ● Check the power or input setting of the connected equipment and the main unit. ● Check that the disc has something recorded on it.	5, 6 — —
You have forgotten your ratings password. Reset all the settings to Factory Preset.	● While stopped and "DVD/CD" is the source, press and hold [■] (Stop) on the main unit and [≥10] on the remote control until "Initialised" disappears from the television. Turn the unit off and on again. All settings will return to the default values.	—
The VIERA Link "HDAVI Control" function does not respond.	● Depending on the condition of the home theater system or the connected equipment, it may be necessary to repeat the same operation so that the function can work correctly.	26



Disc operation

It takes time before play starts.	<ul style="list-style-type: none"> 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] 	—
Folders on a data CD are not displayed correctly. [WMA] [MP3] [JPEG] [MPEG4] [DivX]	<ul style="list-style-type: none"> Folders deeper than the eighth layer are displayed as the eighth layer. 	—
A menu screen appears during skip or search. [VCD]	<ul style="list-style-type: none"> This is normal for Video CDs. 	—
Playback control menu does not appear. [VCD] with playback control	<ul style="list-style-type: none"> Press [■ STOP] twice and then press [▶ PLAY]. 	—
Program and Random play do not work. [DVD-V]	<ul style="list-style-type: none"> These functions do not work with some DVD-Videos. 	—
Play does not start.	<ul style="list-style-type: none"> 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: www.divx.com/vod) [DivX] If a disc contains CD-DA and other formats, proper playback may not be possible. 	— — —
Play restarts from the beginning when the soundtrack is changed. [DVD-A]	<ul style="list-style-type: none"> This is normal for DVD-Audio. 	—
Subtitle position is wrong.	<ul style="list-style-type: none"> Adjust the position. ("Subtitle Position" in Display Menu) 	22
No subtitles.	<ul style="list-style-type: none"> Display the subtitles. ("Subtitle" in Main menu) Subtitles may not be displayed depending on the disc. [DivX] 	20 —
Point B is automatically set.	<ul style="list-style-type: none"> The end of an item becomes point B when it is reached. 	—
The Setup menu cannot be accessed.	<ul style="list-style-type: none"> Select "DVD/CD" as the source. Cancel All group, Program and Random play. 	— 17

Sound

Sound is distorted.	<ul style="list-style-type: none"> Noise may occur when playing WMA. When using the HDMI output, audio may not be output from other terminals. 	— —
Effects do not work.	<ul style="list-style-type: none"> None of the audio effect work when the unit is outputting bitstream signals from the OPTICAL OUT terminal. Some audio effects do not work or have less effect with some discs. 	— —
Humming is heard during play.	<ul style="list-style-type: none"> An AC mains lead or fluorescent light is near the main unit. Keep other appliances and cables away from the main unit. 	—
No sound.	<ul style="list-style-type: none"> 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] Audio may not be heard when more than 4 devices are connected with HDMI cables. Reduce the number of connected devices. When using the HDMI connection, ensure that "Audio Output" in the "HDMI" menu is set to "On". 	— — — 25
Selecting audio soundtrack "2" does not change the audio. [DVD-A]	<ul style="list-style-type: none"> Even if a second soundtrack is not recorded, two numbers are normally shown. 	—

(Continued on next page)



Troubleshooting guide

Picture

The picture on the television is not displayed correctly or disappears.	<ul style="list-style-type: none"> • The unit and television are using different video systems. Use a multi-system or PAL television. • The system used on the disc does not match your television. <ul style="list-style-type: none"> – PAL discs cannot be correctly viewed on an NTSC television. – This unit can convert NTSC signals to PAL 60 for viewing on a PAL television ("NTSC Disc Output" in "Video" menu). • Ensure that the unit is connected directly to the television, and is not connected through a video cassette recorder. • Mobile telephone chargers can cause some disturbance. • If you are using an indoor television antenna, change to an outdoor antenna. • The television antenna wire is too close to the unit. Move it away from the unit. • Change "Source Select" in Picture Menu. DivX • Picture may not be seen when more than 4 devices are connected with HDMI cables. Reduce the number of connected devices. • When using the COMPONENT VIDEO OUT terminal, ensure that progressive output is not selected when the connected television is not progressive compatible. Press and hold [CANCEL] until the picture is displayed correctly. (The output will return to "480i" or "576i".) • When using the HDMI AV OUT terminal, ensure that video output unacceptable with the connected television is not selected. Press and hold [CANCEL] until the picture is displayed correctly. (The output will return to "480p" or "576p".) • Continental Europe When using SCART (AV) terminal, set "Video Mode" in the "HDMI" menu to "Off". 	— — 24 6 — — — 21 — 21 21 25
	Picture stops. DivX	—
	Picture size does not fit the screen.	24 22 22
	Menu is not displayed correctly.	22 22 22
	Auto zoom function does not work well.	— 22 —
	When playing PAL disc, picture distorted.	21

iPod with Universal Dock for iPod

Cannot charge or operate even when the indicator on the dock lights.	<ul style="list-style-type: none"> • Check that the iPod is connected firmly. • The battery of the iPod is depleted. Charge the iPod, and then operate again. 	30 —
---	---	----------------

HDMI or progressive video

There is ghosting when HDMI or progressive output is on.	<ul style="list-style-type: none"> • This problem is caused by the editing method or material used on DVD-Video, but should be corrected if you use interlaced output. <ul style="list-style-type: none"> – When using the COMPONENT VIDEO OUT terminal, set "Video Output Mode" in Picture Menu to "480i" or "576i". (Alternatively, press and hold [CANCEL] to switch to "480i" or "576i".) – When using the HDMI AV OUT terminal, set "Video Output Mode" in Picture Menu to "480i" or "576i" output marked with an "*". Or, disable the HDMI AV OUT connection and use other video connections. Make the settings in the following order: <ol style="list-style-type: none"> 1 Set "Video Mode" in the "HDMI" menu to "Off". 2 Set "Video Output Mode" in Picture Menu to "480i" or "576i". (Alternatively, press and hold [CANCEL] to switch to "480i" or "576i".) 	21 21 , 25
Pictures not in progressive output.	<ul style="list-style-type: none"> • Select "480p" or "576p" in "Video Output Mode" in Picture Menu. • The unit's VIDEO OUT Australia and N.Z. or SCART (AV) Continental Europe terminal outputs an interlaced signal even if "PRG" is displayed. 	21 6



Radio

Distorted sound or noise is heard. "ST" flickers or does not light.	<ul style="list-style-type: none"> Adjust the position of the FM antenna. Use an outdoor antenna. 	— 5
A beat sound is heard.	<ul style="list-style-type: none"> Turn the television off or move it away from the unit. 	—

USB

The USB drive or its contents cannot be read.	<ul style="list-style-type: none"> The USB drive format or its contents is/are not compatible with the system. The USB host function of this product may not work with some USB devices. USB devices with storage capacity of more than 32 GB may not work in some instances. 	31 — —
Slow operation of the USB device.	<ul style="list-style-type: none"> Large file size or high memory USB device takes longer time to read and display on the TV. 	—

Television displays

"⊘"	<ul style="list-style-type: none"> The operation is prohibited by the unit or disc. 	—
"Cannot play group xx, content xx" "Cannot display group xx, content xx"	<ul style="list-style-type: none"> You are trying to display incompatible group or content. 	—
"Group xx content xx is protected"	<ul style="list-style-type: none"> You are trying to play protected group or content. You cannot play it. 	—
"Check the disc"	<ul style="list-style-type: none"> This disc may be dirty. 	13
"This disc may not be played in your region"	<ul style="list-style-type: none"> 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
"Due to copyright protection, audio cannot be output from HDMI" [DVD-A]	<ul style="list-style-type: none"> If you connect to equipment that does not support CPPM (→ page 38, Glossary), audio from a CPPM copy-protected DVD-Audio disc cannot be output from the HDMI AV OUT terminal. 	—
No on-screen display.	<ul style="list-style-type: none"> Select "On" in "On-Screen Messages" in the "Display" menu. 	25
"Authorization Error" [DivX]	<ul style="list-style-type: none"> You are trying to play the DivX VOD content that was purchased with a different registration code. You cannot play the content on this unit. 	19
"Rented Movie Expired" [DivX]	<ul style="list-style-type: none"> The DivX VOD content has zero remaining plays. You cannot play it. 	19
Main unit's screen saver remains	<ul style="list-style-type: none"> When using the HDMI connection, audio/video information is continually transferred between the main unit and the television regardless of which source has been selected on the main unit. This is normal. 	—



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 authorized 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.

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WMA is a compression format developed by Microsoft Corporation. It achieves the same sound quality as MP3 with a file size that is smaller than that of MP3.

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Official DivX® Certified product.
Plays all versions of DivX® video (including DivX®6) with standard playback of DivX® media files.
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HDAVI Control™ is a trademark of Matsushita Electric Industrial Co., Ltd.

iPod is a trademark of Apple Inc., registered in the U.S. and other countries.



Specifications

AMPLIFIER SECTION

Dolby Virtual Speaker Mode (RMS)

Front Ch	45 W per channel (6 Ω), 1 kHz, 10 % THD
Subwoofer Ch	50 W per channel (6 Ω), 100 Hz, 10 % THD
Total power output	140 W

Dolby Virtual Speaker Mode (DIN)

Front Ch	25 W per channel (6 Ω), 1 kHz, 1 % THD
Subwoofer Ch	30 W per channel (6 Ω), 100 Hz, 1 % THD
Total power output	80 W

FM TUNER, TERMINALS SECTION

Preset Memory	FM 30 stations
Frequency Modulation (FM)	
Frequency range	87.50–108.00 MHz (50-kHz step)
Sensitivity	1.8 μV (IHF)
S/N 26 dB	1.4 μV
Antenna terminals	75 Ω (unbalanced)
Digital audio input/output	
Optical digital input	Optical terminal
Sampling frequency	32 kHz, 44.1 kHz, 48 kHz
Optical digital output	Optical terminal
Phone jack	
Terminal	Stereo, 3.5 mm jack
Music Port (Front)	
Sensitivity	100 mV, 1.4 kΩ
Terminal (Input)	Stereo, 3.5 mm jack
USB Port	
USB standard	USB 2.0 full speed
Media file format support	MP3 (*.mp3) WMA (*.wma) JPEG (*.jpg) (*.jpeg) MPEG4 (*.asf) FAT12, FAT16, FAT32 Max. 500 MA
USB device file system	
USB Port power	

DISC SECTION

Discs played (8 cm or 12 cm)

- (1) DVD (DVD-Video, DVD-Audio, DivX[®]5, 6)
 - (2) DVD-RAM (DVD-VR, MP3[®]2, 5, JPEG[®]4, 5, MPEG4[®]5, 7, DivX[®]5, 6)
 - (3) DVD-R (DVD-Video, DVD-VR, MP3[®]2, 5, JPEG[®]4, 5, MPEG4[®]5, 7, DivX[®]5, 6)
 - (4) DVD-R DL (DVD-Video, DVD-VR)
 - (5) DVD-RW (DVD-Video, DVD-VR, MP3[®]2, 5, JPEG[®]4, 5, MPEG4[®]5, 7, DivX[®]5, 6)
 - (6) +R/+RW (Video)
 - (7) +R DL (Video)
 - (8) 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, HighMAT Level 2 (Audio and Image)]
- ^{※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 400 groups.
- ^{※6} Plays all versions of DivX[®] video (including DivX[®]6) with standard playback of DivX[®] media files. Certified to the DivX Home Theater Profile.
- ^{※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)	662/785 nm
Laser power (DVD/CD)	CLASS 1/CLASS 1M

NORSK

Bølgelengde (DVD/CD)	662/785 nm
Laserstyrke	Ingen farlig stråling sendes ut

Audio output (Disc)

Number of channels	2.1 ch (FL, FR, 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	Australia and N.Z. Pin jack (1 system) Continental Europe Scart jack (1 system)

Continental Europe 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)

Component video output (NTSC: 480p/480i, PAL: 576p/576i)

Y output level	1 Vp-p (75 Ω)
P _B output level	0.7 Vp-p (75 Ω)
P _R output level	0.7 Vp-p (75 Ω)
Terminal	Pin jack (Y: green, P _B : blue, P _R : red) (1 system)

Continental Europe 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	Type A connector (19-pin)
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HDAVI Control

This unit supports "HDAVI Control 2" function.

SPEAKER SECTION

Front Speaker SB-HFX5

Type	2 way, 2 speaker system (Bass reflex)
Speaker unit(s)	Impedance 6 Ω
1. Woofer	8 cm Cone type
2. Tweeter	2.5 cm Dome type
Input power (IEC)	45 W (Max)
Output sound pressure	79 dB/W (1.0 m)
Cross over frequency	2.5 kHz
Frequency range	58 Hz–40 kHz (–16 dB) 65 Hz–36 kHz (–10 dB)
Dimensions (W×H×D)	103 mm×231 mm×220 mm
Mass	2.5 kg

Subwoofer SB-HW750

Type	1 way, 1 speaker system (Bass reflex)
Speaker unit(s)	Impedance 6 Ω
Woofer	16 cm Cone type
Input power (IEC)	250 W (Max)
Output sound pressure	82 dB/W (1.0 m)
Frequency range	29 Hz–220 Hz (–16 dB) 36 Hz–180 Hz (–10 dB)
Dimensions (W×H×D)	178 mm×425 mm×257 mm
Mass	4 kg

GENERAL

Power supply	Australia and N.Z. AC 230–240 V, 50 Hz Continental Europe AC 230 V, 50 Hz
Power consumption	Main unit 50 W
Dimensions (W×H×D)	325 mm×72 mm×330 mm
Mass	Main unit 3 kg
Operating temperature range	+5 °C to +35 °C
Operating humidity range	5 % to 90 % RH (no condensation)

Power consumption in standby mode

approx. 0.3 W

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.



Glossary

CPPM (Content Protection for Prerecorded Media)

A copy protection system used for DVD-Audio files. This unit supports CPPM.

Decoder

A decoder restores the coded audio signals on DVDs to normal. This is called decoding.

DivX

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

Dolby Digital

This is a method of coding digital signals developed by Dolby Laboratories. Apart from stereo (2-channel) audio, these signals can also be 5.1-channel sound.

Down-mixing

This is a process of remixing the 5.1-channel audio (surround sound) on some discs into two channels. When you want to listen to the audio on a DVD with a 5.1 channel digital surround track through your television speakers, the down-mixed audio will be output.

Some DVD-Audio prevent down-mixing of all or part of their contents. When playing such discs, or such parts of the disc, unless the number of connected speakers is the same as the disc's channel specification, audio will not be output properly.

DTS (Digital Theater Systems)

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

Dynamic range

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

Film and video

DVD-Videos are recorded using either film or video. This unit can determine which type has been used, then uses the most suitable method of progressive output.

Film: Recorded at 25 frames per second (PAL discs) or 24 frames per second (NTSC discs). (NTSC discs recorded at 30 frames per second as well). Generally appropriate for motion picture films.

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

Frame still and field still

Frames are the still pictures that go together to make a moving picture. There are about 30 frames shown each second.

One frame is made up of two fields. A regular television shows these fields one after the other to create frames.

A still is shown when you pause a moving picture. A frame still is made up of two alternating fields, so the picture may appear blurred, but overall quality is high.

A field still is not blurred, but it has only half the information of a frame still so picture quality is lower.

HDMI (High-Definition Multimedia Interface)

HDMI is a next-generation digital interface for consumer electronic products. Unlike conventional connections, it transmits uncompressed digital video and audio signals on a single cable. This unit supports high-definition video output (720p, 1080i, 1080p) from the HDMI AV OUT terminal. To enjoy high-definition video, a high-definition compatible television is required.

JPEG (Joint Photographic Experts Group)

This is a system used for compressing/decoding colour still pictures. The benefit of JPEG is less deterioration in picture quality considering the degree of compression.

Linear PCM (pulse code modulation)

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

MP3 (MPEG Audio Layer 3)

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

MPEG4

A compression system for use on mobile devices or a network, that allows highly efficient recording at a low bit rate.

Playback control (PBC)

If a Video CD has playback control, you can select scenes and information with menus.

Progressive/Interlaced

The PAL video signal standard has 576 interlaced (i) scan lines, whereas progressive scanning, called 576p, uses twice the number of scan lines. For the NTSC standard, these are called 480i and 480p respectively. Using progressive output, you can enjoy the high-resolution video recorded on media such as DVD-Video.

Your television must be compatible to enjoy progressive video.

Sampling frequency

Sampling is the process of converting the heights of sound wave (analog signal) samples taken at set periods into digits (digital encoding). Sampling frequency is the number of samples taken per second, so larger numbers mean more faithful reproduction of the original sound.

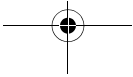
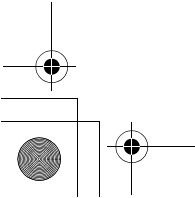
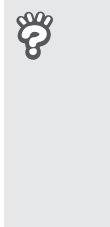
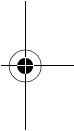
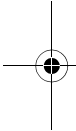
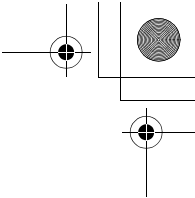
WMA (Windows Media™ Audio)

WMA is a compression format developed by Microsoft Corporation. It achieves the same sound quality as MP3 with a file size that is smaller than that of MP3.





MEMO



SUOMI**VAROITUS!**

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

VAROITUS:

VÄHENNÄ TULIPALON, SÄHKÖISKUN TAI LAITTEISTON VAHINGOITTUMISEN VAARAA

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

VAROITUS!

- ÄLÄ ASENNÄ TAI LAITA TÄTÄ LAITETTA KABINETTITYYPPISEEN KIRJAKAAPPIN TAI MUUHUN SULJETTUUN TILAAN, JOTTA TUULETUS ONNISTUISI. VARMISTA, ETTÄ VERHO TAI MIKÄÄN MUU MATERIAALI EI HUONONNA TUULETUSTA, JOTTA VÄLTETTÄISIIN YLIKUUMENEMISESTA JOHTUVA SÄHKÖISKU- TAI TULIPALOVAARA.
- ÄLÄ PEITÄ LAITTEEN TUULETUSAUKKOJA SANOMALEHDellä, PÖYTÄLIINALLA, VERHOLLA TAI MUULLA VASTAAVALLA ESINEELLÄ.
- ÄLÄ ASETA PALAVAA KYNTTILÄÄ TAI MUUTA AVOTULEN LÄHDETTÄ LAITTEEN PÄÄLLE.
- HÄVITÄ PARISTOT LUONTOA VAHINGOITTAMATTOMALLA TAVALLA.

TÄMÄ LAITE ON TARKOITETTU KÄYTETTÄVÄKSI LEUDOSSA ILMASTOSSA.

Pistorasia tulee asentaa laitteen lähelle helpopääsyiseen paikkaan. Verkkojohdon pistokkeen on oltava aina helposti käytettävissä. Tämä laite voidaan kytkeä kokonaan irti verkkovirrasta irrottamalla verkkojohdon pistoke pistorasiasta.

-If you see this symbol-**Information on Disposal for Users of Waste Electrical & Electronic Equipment (private households)**

This symbol on the products and/or accompanying documents means that used electrical and electronic products should not be mixed with general household waste. For proper treatment, recovery and recycling, please take these products to designated

collection points, where they will be accepted on a free of charge basis. Alternatively, in some countries you may be able to return your products to your local retailer upon the purchase of an equivalent new product. Disposing of this product correctly 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. Please contact your local authority for further details of your nearest designated collection point. 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

This symbol is only valid in the European Union. If you wish to discard this product, please contact your local authorities or dealer and ask for the correct method of disposal.

NORSK**ADVARSEL!**

DETTE PRODUKTET ANVENDER EN LASER. BETJENING AV KONTROLLER, JUSTERINGER ELLER ANDRE INNGREP ENN DE SOM ER BESKREVET I DENNE BRUKSANVISNING, KAN FØRE TIL FARLIG BESTRÅLING. DEKSLER MÅ IKKE ÅPNES, OG FORSØK ALDRI Å REPARERE APPARATET PÅ EGENHÅND. ALT SERVICE OG REPARASJONSARBEID MÅ UTFØRES AV KVALIFISERT PERSONELL.

ADVARSEL:

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

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

ADVARSEL!

- APPARATET MÅ IKKE Plasseres I EN BOKHYLLE, ET INNEBYGGET KABINETT ELLER ET ANNET LUKKET STED HVOR VENTILASJONSFORHOLDENE ER UTILSTREKKELIGE. SØRG FOR AT GARDINER ELLER LIGNENDE IKKE FORVERRER VENTILASJONSFORHOLDENE, SÅ RISIKO FOR ELEKTRISK SJOKK ELLER BRANN FORÅRSAKET AV OVERHETING UNNGÅS.
- APPARATETS VENTILASJONSÅPNINGER MÅ IKKE DEKKES TIL MED AVISER, BORDDUKER, GARDINER OG LIGNENDE.
- Plasser IKKE ÅPEN ILD, SLIK SOM LEVENDE LYS, OPPÅ APPARATET.
- BRUKTE BATTERIER MÅ KASSERES UTEN FARE FOR MILJØET.

DETTE APPARATET ER BEREGNET TIL BRUK UNDER MODERATE KLIMAFORHOLD.

Strømuttaket må befinne seg i nærheten av utstyret og være lett tilgjengelig. Støpslet på strømkabelen må være klart til bruk. Når dette apparatet skal kobles helt fra strømmettet (AC), må støpslet på strømkabelen trekkes ut av stikkkontakten.

Matsushita Electric Industrial Co., Ltd.

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

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