

Panasonic®

Operating Instructions DVD Home Theater Sound System

Model No. **SC-PTX50**



QUICKSTART GUIDE → P 5-9

Region number

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

Example:



Dolby Virtual Speaker

Enjoy surround sound effect
with a variety of sources.

31

USB connectivity

34

High-quality picture

HDMI capability, Advanced
progressive scan and more.

35



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

Note

"EB" on the packaging indicates the United Kingdom.

Dear customer

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

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

System	SC-PTX50
This unit	SA-PTX50
Front speakers	SB-HF100
Subwoofer	SB-HWX50

CAUTION!

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

WARNING:

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

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

This 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!

- 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.

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.

THIS UNIT IS INTENDED FOR USE IN MODERATE CLIMATES.

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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Please check and identify the supplied accessories. Use numbers indicated in parentheses when asking for replacement parts.
(Product numbers correct as of January 2008. These may be subject to change.)

☐ **1 Remote control**
(N2QAYB000097)



☐ **2 Remote control batteries**



☐ **1 FM indoor antenna**
(RSA0007-M)



☐ **2 speaker cables**
(REEX0449K-2K)



☐ **1 AC mains lead**
(K2CT3CA00004)



☐ **1 Antenna plug adaptor**
(K1YZ02000013)



■ Sales and Support Information

Customer Care Centre

- For customers within the UK: 0844 844 3852
- For customers within the Republic of Ireland: 01 289 8333
- Visit our website for product information
- E-mail: customer.care@panasonic.co.uk

Direct Sales at Panasonic UK

- Order accessory and consumable items for your product with ease and confidence by phoning our Customer Care Centre Monday-Thursday 9:00am-5:30pm, Friday 9:30am-5:30pm (Excluding public holidays).
- Or go on line through our Internet Accessory ordering application at www.panasonic.co.uk.
- Most major credit and debit cards accepted.
- All enquiries transactions and distribution facilities are provided directly by Panasonic UK Ltd.
- It couldn't be simpler!
- Also available through our Internet is direct shopping for a wide range of finished products, take a browse on our website for further details.

Interested in purchasing an extended guarantee?
Please call 0870 240 6284 or visit our website
www.panasonic.co.uk/guarantee.

For your safety, please read the following text carefully. This appliance is supplied with a moulded three pin mains plug for your safety and convenience. A 5-ampere fuse is fitted in this plug. Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362. Check for the ASTA mark  or the BSI mark  on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced. If you lose the fuse cover the plug must not be used until a replacement cover is obtained. A replacement fuse cover can be purchased from your local dealer.

CAUTION!

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

If a new plug is to be fitted please observe the wiring code as stated below.
If in any doubt please consult a qualified electrician.

IMPORTANT

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

Blue: Neutral, Brown: Live.

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

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

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

THIS PLUG IS NOT WATERPROOF—KEEP DRY.

Before use

Remove the connector cover.

How to replace the fuse

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

Illustrations may differ from actual AC mains plug.

1. Open the fuse cover with a screwdriver.

Figure A

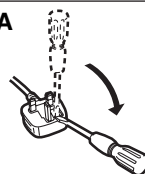
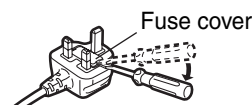


Figure B



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

Figure A



Figure B



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.

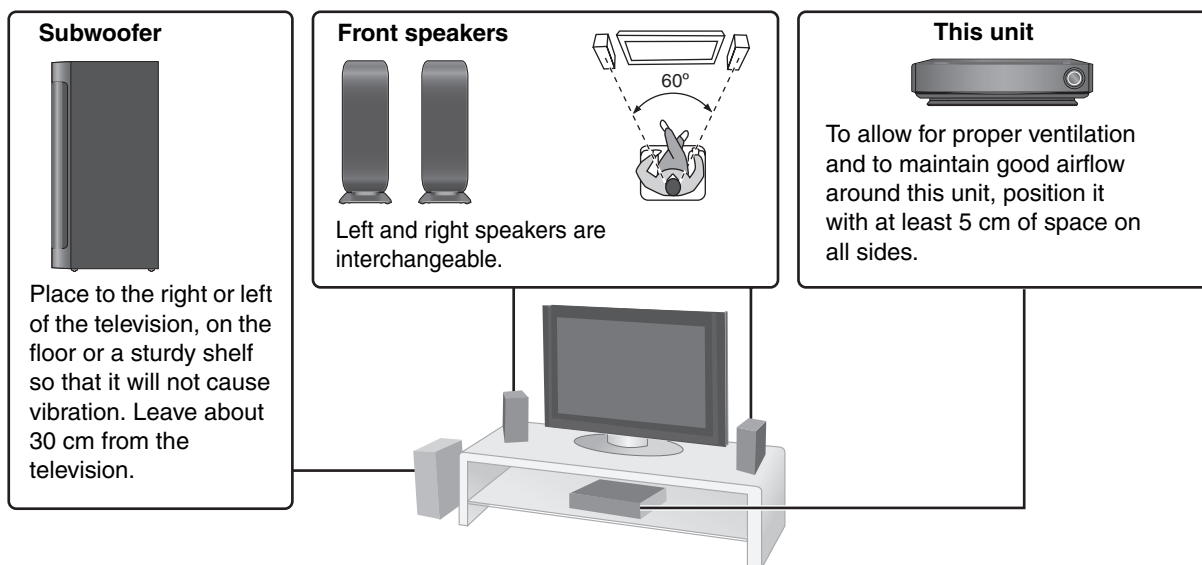
How you set up your speakers can affect the bass and the sound field. Note the following points:

- 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.
- For optional wall mount, refer to page 6.

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.
- Connect the supplied speakers and subwoofer to this unit only. Do not attempt to connect the supplied speakers and subwoofer to the external amplifier and so on.

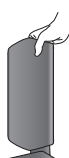
Caution

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

Caution

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

(Continued on next page)



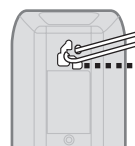


■ Preventing the front speakers from falling

- You will need to obtain the appropriate screw eyes to match the walls or pillars to which they are going to be fastened.
- Consult a qualified housing contractor concerning the appropriate procedure when attaching to a concrete wall or a surface that may not have strong enough support. Improper attachment may result in damage to the wall or speakers.

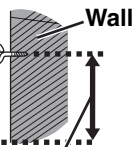
String (not included)

Thread from the wall to the speaker and tie tightly.



Rear of the speaker

Screw eye
(not included)



Approx. 150 mm

Speaker installation options

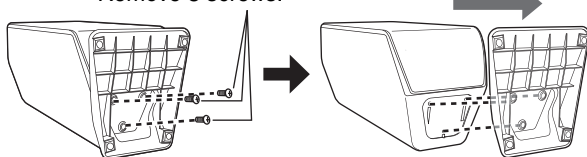
■ Attaching to a wall

You can attach the front speakers to a wall.

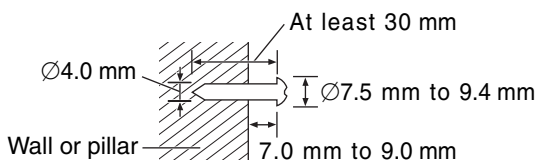
- The wall or pillar on which the speakers are to be attached should be capable of supporting 10 kg per screw. Consult a qualified building contractor when attaching the speakers to a wall. Improper attachment may result in damage to the wall and speakers.

① Detach stand.

Remove 3 screws.



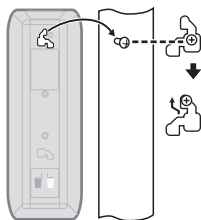
② Drive a screw (not included) into the wall.



- Ensure that the screw is positioned at least 70 mm away from the ceiling.

③ Fit the speaker securely onto the screw(s) with the hole(s).

Front speaker



e.g.

DO NOT

In this position, the speaker will likely fall if moved to the left or right.

DO

Move the speaker so that the screw is in this position.

■ Fitting speaker stands (not included) (Front speakers only)

Ensure the stands meet these conditions before purchasing them.

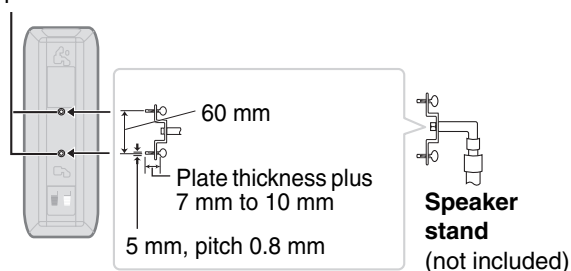
Note the diameter and length of the screws and the distance between screws as shown in the diagram.

- The stands must be able to support over 10 kg.
- The stands must be stable even if the speakers are in a high position.

e.g.

Metal screw holes

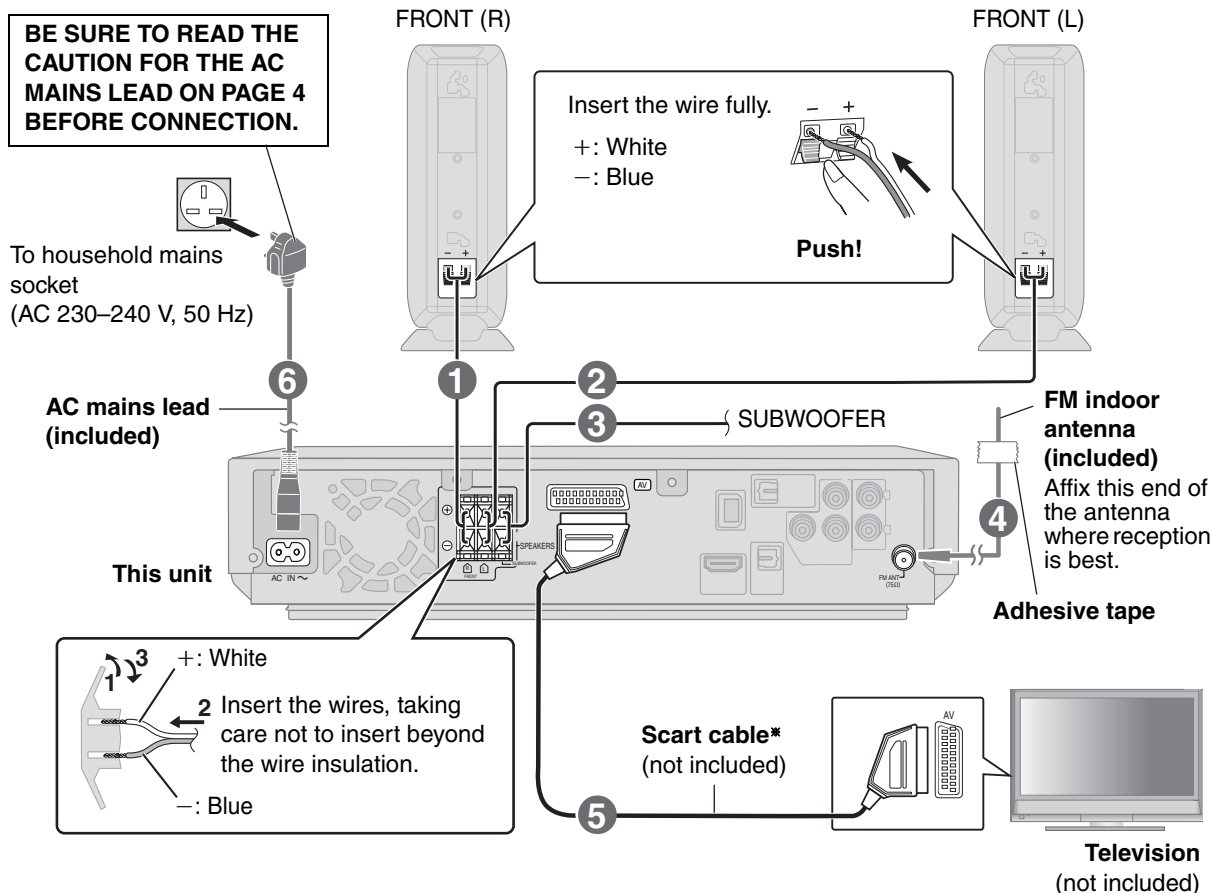
For attaching to speaker stands



step 2

Basic 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.



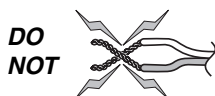
* This connection will also enable you to play audio from your television through your home theater system (→ page 32, Enjoying audio from the television). Select the appropriate audio out (e.g., Monitor) on the television.

When connecting the speakers and subwoofer

(1, 2, 3)

Insert the wires correctly.

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



Conserving power

This 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 this unit.

Note

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

Optional Connections

For other audio and video connections

- Connecting to a television with COMPONENT VIDEO IN terminals (→ page 35)
- Connecting to a television with HDMI terminal (→ page 35)
- Connecting to a digital audio source (→ page 36)
- Connecting to a 5.1 channel amplifier (→ page 36)
- Connecting to a set top box, satellite receiver or video cassette recorder (→ page 36)

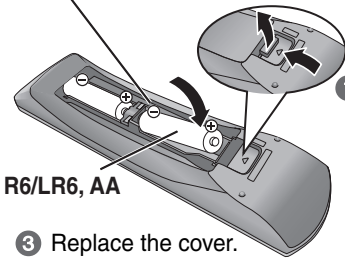
If radio reception is poor

- Using an FM outdoor antenna (→ page 36)



**step 3****Preparing the remote control****Batteries**

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



- 1 Press in and lift up.

- 3 Replace the cover.

- Do not use rechargeable type batteries.
- Do not heat or expose to flame.
- Do not leave the battery(ies) in an automobile exposed to direct sunlight for a long period of time with doors and windows closed.

Do not:

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

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

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

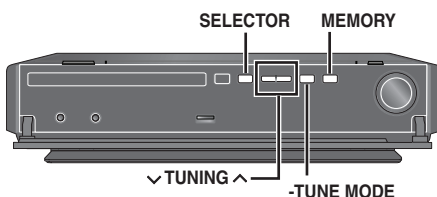
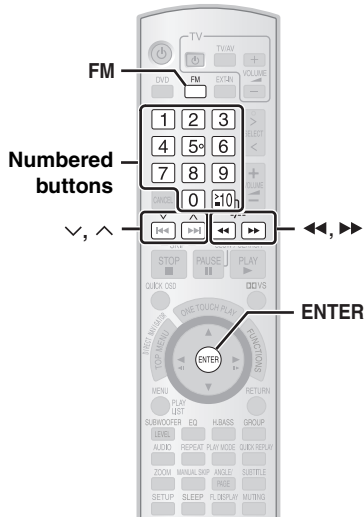
Use

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

CAUTION

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer.

Dispose of used batteries according to the manufacturer's instructions.

step 4**Presetting the radio stations**

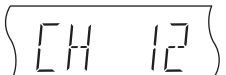
Radio operations are described mainly with the remote control.

You can alternatively use the corresponding button on this unit.

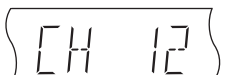
*1 [SELECTOR] *2 [v TUNING ^] *3 [MEMORY]

Up to 30 stations can be set.

- Press [FM]*1 to select "FM".
- Press [◀, ▶]*2 to select the frequency.
 - When performing this step on this unit, first press [-TUNE MODE] to select "MANUAL", and then press [v TUNING ^] to select the frequency. To start automatic tuning, press and hold [◀, ▶] until the frequency starts scrolling. Tuning stops when a station is found.
- While listening to the 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. Display 12: [≥10] → [1] → [2] Alternatively, press [v, ^], and then press [ENTER]*3.

**Confirming the preset channels**

- Press [FM]*1 to select "FM".
- Press the numbered buttons to select the channel.
 - To select a 2-digit number e.g. Display 12: [≥10] → [1] → [2] Alternatively, press [v, ^].
 - To perform this step on this unit, first press [-TUNE MODE] to select "PRESET", and then press [v TUNING ^] to select the channel.



step 5

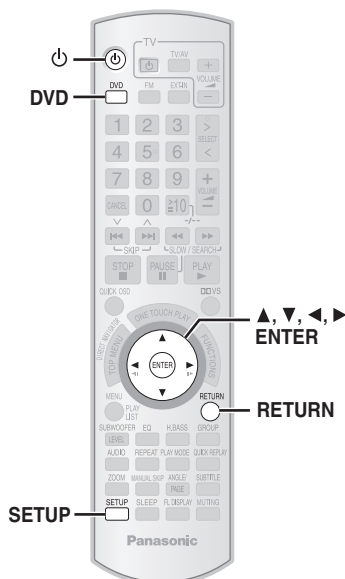
Performing QUICK SETUP

The QUICK SETUP screen assists you to make necessary settings.



To display the picture, turn on the television and select the appropriate video input (e.g. VIDEO 1, AV 1, etc.) to suit the connections to this unit.

- To select 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) (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 27).

Details of settings

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

- Boxed items are the factory settings in the above table.



Control reference guide

See page references in parentheses.



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.

Turn this unit on/off (9)

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

Cancel (15)

Select preset radio stations/channels (8, 30)

Basic operations for play (14, 15)

Display current playback condition (16)

Start up and play a disc automatically (15, 28)

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

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

Select the source
[DVD]: DVD/CD (9)
[FM]: FM (8, 30)
[EXT-IN]: USB (34), AV (32), AUX (32), D-IN (33), OPTION (33), MUSIC P. (32)
[>, < SELECT]: DVD/CD, USB, FM, AV, AUX, MUSIC P., D-IN, OPTION

Adjust the volume of this unit

Select radio stations/channels manually (8, 30)

Select Dolby Virtual Speaker mode (31)

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

Show on-screen menu (20) or display RDS text data (30)

Return to previous screen (15)

Mute the sound
 • "MUTING" flashes in this unit's display while the function is on.
 • To cancel, press the button again or adjust the volume.
 • Muting is cancelled when you switch the unit to standby.

SUBWOOFER LEVEL (31)	EQ (31)	H.BASS (31)	GROUP (15)
AUDIO (16)	REPEAT (16)	PLAY MODE (17)	QUICK REPLAY (16)
ZOOM (17)	MANUAL SKIP (16)	ANGLE/PAGE (17)	SUBTITLE (16)
SETUP (24)	SLEEP (15)	FL DISPLAY (15)	

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 this unit's display.

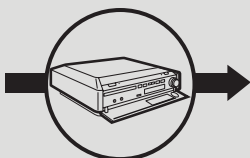
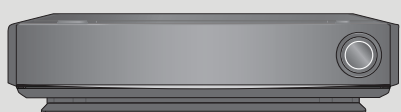
Avoiding interference with other Panasonic equipment

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

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

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

- 1 Press and hold [▶▶] on this unit and [2] on the remote control until this 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 [⏻/I].

Standby/on switch [⏻/I]

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, 30)

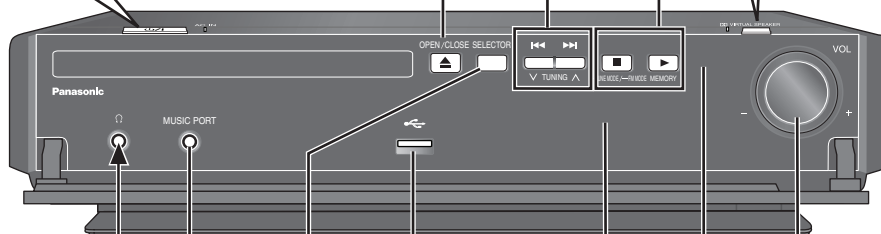
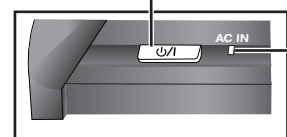
▲ OPEN/CLOSE

Open/Close the disc tray (14)

Dolby Virtual Speaker LED

⏮ VIRTUAL SPEAKER

Enjoy surround sound effect (31)



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.
Excessive sound pressure from earphones and headphones can cause hearing loss.

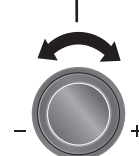
USB terminal
Connect a USB device (34)

SELECTOR

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

MUSIC PORT

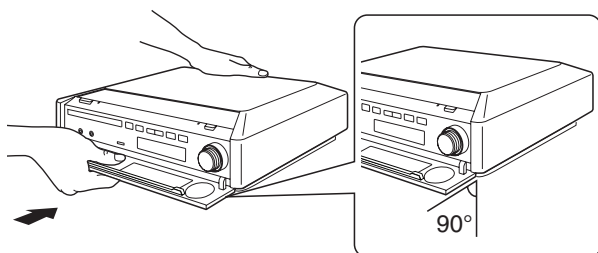
Connect an external device (32)



Adjust the volume of this unit.

Remote control signal sensor

■ If the front cover comes off



- 1 Hold rear side of this 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 23, 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 25, “NTSC Disc Output” in “Video” menu).

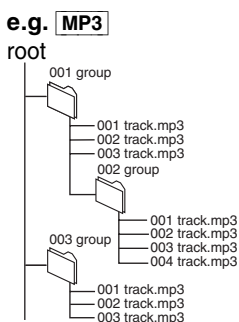
■ Tips for making data discs

Format	Disc	Extension	Reference
WMA	CD-R/RW	“.WMA” “.wma”	- 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”	- This unit does not support ID3 tags. - Sampling frequency and compression rate: – 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”	- JPEG files taken on a digital camera that conform to DCF Standard (Design rule for Camera File system) Version 1.0 are displayed. – Files that have been altered, edited or saved with computer picture editing software may not be displayed. - This unit cannot display moving pictures, MOTION JPEG and other such formats, still pictures other than JPEG (e.g. TIFF), or play pictures with attached audio.
MPEG4	DVD-RAM DVD-R/RW CD-R/RW	“.ASF” “.asf”	- 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”	- 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 41, 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.



Basic play

To display the picture, turn on the television and select the appropriate video input mode (e.g. VIDEO 1, AV 1, etc.) to suit the connections to this unit.

- To select your television's video input mode, refer to its operating instructions.

Using this unit

1 Power on.

⏻/I

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.

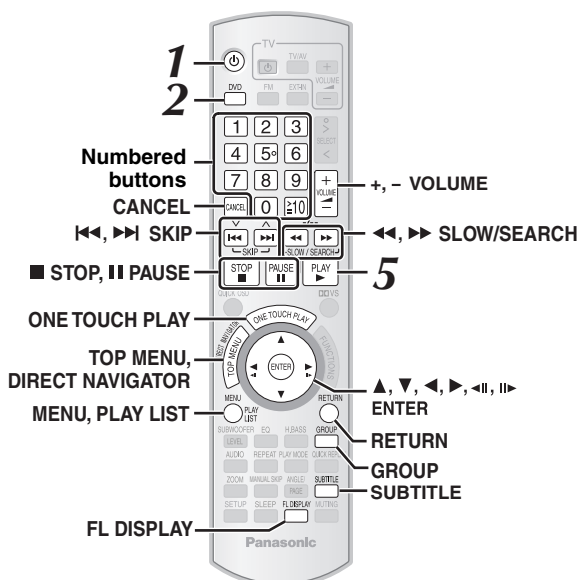
- Adjust the volume.
- You can enjoy surround sound effect when you press [VIRTUAL SPEAKER] and select the mode (→ page 31).

▶

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.

Using the remote control



Using the remote control

One touch play



This 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 resume 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)



- Up to 5 steps.
- Press [▶ PLAY] to start normal play.

Slow-motion (during pause)



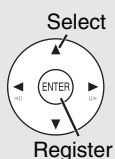
- **VCD** Slow-motion: forward direction only.
- **MPEG4 DivX** Slow-motion: Does not work.

Frame-by-frame (during pause)

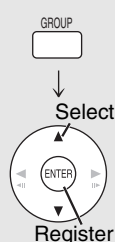


- **DVD-A** (Motion picture part)
DVD-VR DVD-V VCD
- **VCD** Forward direction only.

On-screen item select

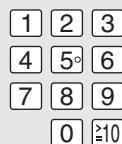


Start play from a selected group



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

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



This unit display



DVD-VR DVD-A DVD-V WMA MP3 JPEG 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

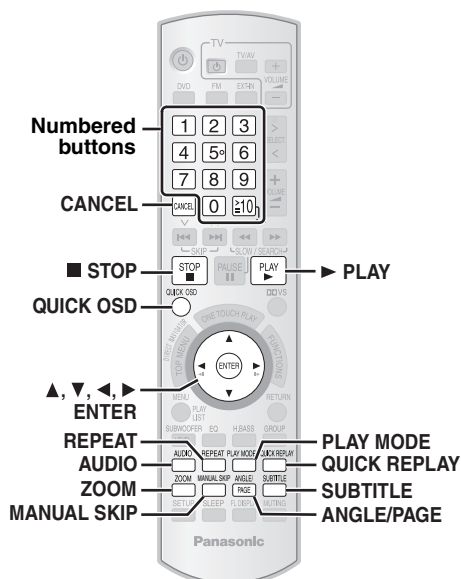


JPEG

Date → Details of the picture
↑ No information ↓



Basic play



Displaying current playback condition

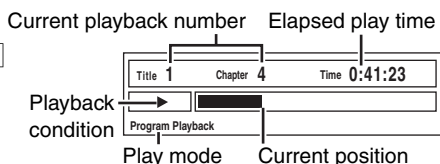
QUICK OSD

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



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

Repeat	Off	Off
		Chapter Title

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

Skipping about 30 seconds forward

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

MANUAL SKIP



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** About DivX subtitles text display (→ page 23)

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

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

QUICK REPLAY



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

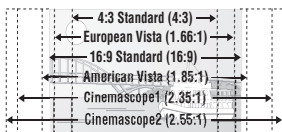
This feature expands a letterbox picture to fit the screen.

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

DVD-A (motion picture part) **DVD-VR** **DVD-V** **VCD**

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

e.g.



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)

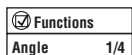
- **MPEG4** **DivX** It may not be possible to zoom up to "×4.00" depending upon the connected television and its settings.

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 23) 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].

All Group Playback

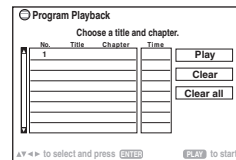
Press PLAY to start

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**

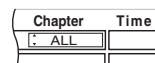
[1] → [2] → [ENTER]

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

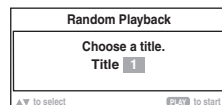
Select "Clear all" with [▲, ▼, ◀, ▶] and press [ENTER]. The whole program is also cleared when the disc tray is opened, the unit is turned off or another source is selected.

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**



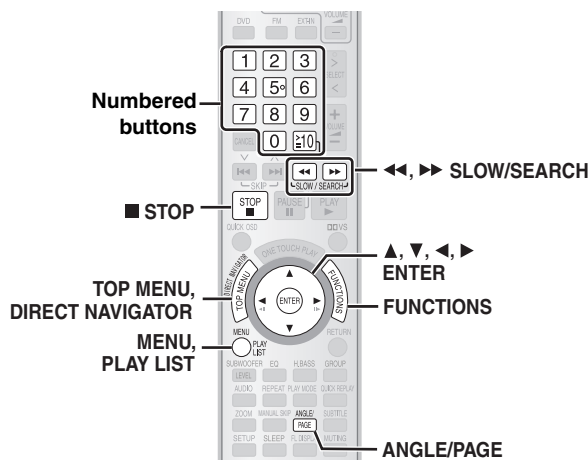
DVD-A

- 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].

Playing data discs using navigation menus



Playing data discs

WMA MP3 JPEG

- Select "Play as Data Disc" in Other Menu (→ page 23) when using
 - HighMAT discs without using the HighMAT function, or
 - DVD-RAM or DVD-R/RW discs containing MP3, JPEG, MPEG4 or DivX files.

Playing items in order (Playback Menu)

1 Press [TOP MENU].

- To exit the screen, press [TOP MENU].

e.g.

Playback Menu	
WMA/MP3/JPEG	All Total 435
WMA/MP3	Audio Total 7
JPEG	Picture Total 427
MPEG4 and DivX video	Video Total 2

▲▼ to select and press [ENTER]

2 Press [▲, ▼] to select "All", "Audio", "Picture" or "Video" and press [ENTER].

Playing from the selected item (Navigation Menu)

1 Press [MENU].

- To exit the screen, press [MENU].

e.g.

Navigation Menu	
Group	Content
001 Lady Starline	001 Lady Starline
002 My Secret	002 My Secret
003 My Secret	003 My Secret
004 My Secret	004 My Secret
005 My Secret	005 My Secret
006 My Secret	006 My Secret
007 My Secret	007 My Secret
008 My Secret	008 My Secret
009 My Secret	009 My Secret
010 My Secret	010 My Secret

Group and content number currently playing

Group 005/023 Content 0001/0004

Number currently selected

2 Press [◀] followed by [▲, ▼] to select the group and press [ENTER].

3 To play content in the group in order Press [ENTER].

To start play from the selected content Press [▲, ▼] to select and [ENTER].

- Press [ANGLE/PAGE] to skip page by page in the group or content field.
- To enjoy listening to WMA/MP3 contents while showing a JPEG image on the screen, select a JPEG file first and then select audio contents. (The opposite order is not effective.)

Using the submenu

① While Navigation Menu (→ left) is displayed Press [FUNCTIONS].

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

Items shown differ depending on the type of disc.

✓ Multi	Groups and contents are displayed.
List	Contents only
Tree	Groups only
Thumbnail	Thumbnail images [JPEG]
Next group	To go to next group [WMA] [MP3]
Previous group	To go to previous group [WMA] [MP3]
All	WMA/MP3, JPEG, MPEG4 and DivX video
Audio	WMA/MP3 only
Picture	JPEG only
Video	MPEG4 and DivX video only
Help display	To switch between guide messages and the elapsed play time indicator
Find	To search by content or group title (→ below)

Searching by a content or group title

Highlight a group title to search the group, or a content title to search its content.

① While the submenu is displayed (→ above) Press [▲, ▼] to select "Find" and press [ENTER].

* A	Find
-----	------

② Press [▲, ▼] to select a character and press [ENTER].

- Repeat to enter another character.
- Lower case characters are also searched.
- Press [◀, ▶ SLOW/SEARCH] to skip between A, E, I, O and U.
- Press [◀] to erase a character.
- Leave the asterisk (*) when you search for the titles including the character you enter.
- Erase the asterisk (*) to search for the titles starting with the character you enter. To add the asterisk (*) again, display the submenu again and select "Find".

③ Press [▶] to select "Find" and press [ENTER].

The search result screen appears.

④ Press [▲, ▼] to select the content or group and press [ENTER].

Selecting a track using CD text

CD

Titles appear with CD Text disc playback.

1 Press [TOP MENU] or [MENU].

- To exit the screen, press [TOP MENU] or [MENU].

e.g. CD text

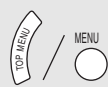
CD	
Disc Title:	All By Artist
Disc Artist:	Pink Island
Track Title:	Long John Plaidman
Track Artist:	SHIPWRECKED
1	Activity at Prison
2	City Penguin
3	Forever and

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

- Press [ANGLE/PAGE] to skip page by page.
- Press [FUNCTIONS] to show the playback condition and current position.

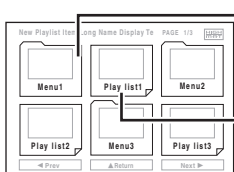
Playing HighMAT™ discs

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.

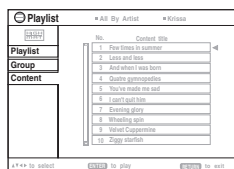


Menu: Takes you to the next menu which shows playlists or another menu
 Playlist: Play starts

Selecting from the list

- 1 During play Press [MENU].
 - To exit the screen, press [MENU].
- 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.

e.g.



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

DVD-VR

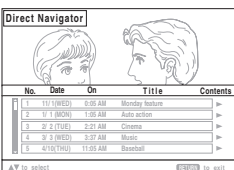


- Titles appear only if the titles are recorded on the disc.
- You cannot edit programs, playlists and disc titles.

Playing the programs

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

e.g.



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].

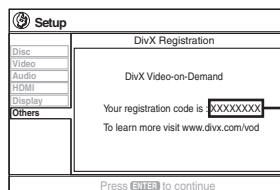
About DivX VOD content

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 27, "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.)

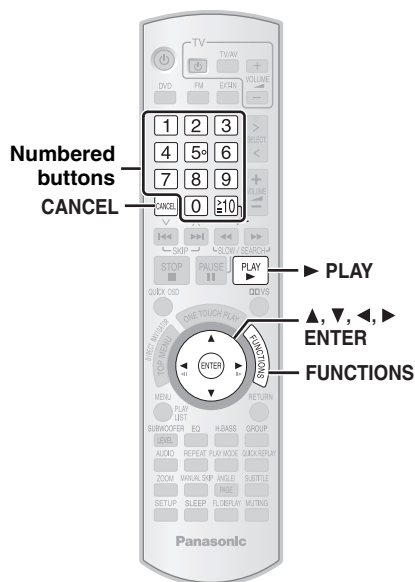
Regarding DivX content that can only be played a set number of times

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 Go to the next menu Register Return to the previous menu	Select the menu. e.g. DVD-V
3	Select Register	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
Video	MPEG4 DivX To display pixel number DivX fps (frame per second) is also displayed.
Audio	(→ page 16, Changing soundtracks) 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	(→ page 21)

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.
Advanced Disc Review	DVD-VR (Except still picture part) DVD-V (Except +R/+RW) Allows you to browse the disc contents and start playing from the selected position. You can select either “Intro Mode” or “Interval Mode” in “Advanced Disc Review” in the “Disc” menu (→ page 24). When you find a title/program to play Press [▶ PLAY]. • This may not work depending on the disc and the play position. • DVD-VR This does not work when playing a playlist (→ page 19).

■ Picture Menu

Picture Mode	Normal Cinema1: Mellows images and enhances detail in dark scenes. Cinema2: Sharpens images and enhances detail in dark scenes. Animation: Suitable for animation. Dynamic: Enhances the contrast for powerful images. User: Press [ENTER] to select “Picture Adjustment” (→ below).
	Picture Adjustment Contrast: Increases the contrast between light and dark parts of the picture. Brightness: Brightens the picture. Sharpness: Adjusts the sharpness of the edges of horizontal lines. Colour: Adjusts the shade of the picture's colour. Gamma: Adjusts the brightness of dark parts. Depth Enhancer: Reduces the rough noise in the background to give a greater feeling of depth.

Video Output Mode

To select suitable picture quality with your television

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

When using HDMI connection with “Video Mode” (→ page 26, “HDMI” menu) set to “On”

- * **480p/576p/720p/1080p** (progressive)
- * **480i/576i/1080i** (interlace)
- Select a video output with an “*” mark. The “*” mark shows that the video output is acceptable with your television.
- Selecting a video output without an “*” mark can result in the picture being distorted. If the picture is distorted, press and hold [CANCEL] until the picture is displayed correctly. (The output will return to “480p” or “576p”.)

When using HDMI connection with “Video Mode” (→ page 26, “HDMI” menu) set to “Off” or when using component video connection

- * **480p/576p** (progressive)
- * **480i/576i** (interlace)
- When you select “xxx*p”, a confirmation screen appears. Select “Yes” only if connecting to a progressive output compatible television.
- * The numbers displayed depend on the disc being played. One of the above numbers is displayed.

Transfer Mode

If you have chosen “xxx*p” (progressive) or “1080i” (interlace) (→ above), select the method of conversion for progressive output to suit the type of material.

- The setting will return to Auto or Auto1 when the disc tray is opened, the unit is turned off or another source is selected.

When playing PAL discs, MPEG4 or DivX video contents

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

Video: Select when using Auto, and the content is distorted.

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



When playing NTSC discs

Auto1: Automatically detects the film and video content, and appropriately converts it.

Auto2: In addition to Auto1, automatically detects film contents with different frame rates and appropriately converts it.

Video: Select when using Auto1 and Auto2, and the content is distorted.

(Continued on next page)

About DivX subtitles text display

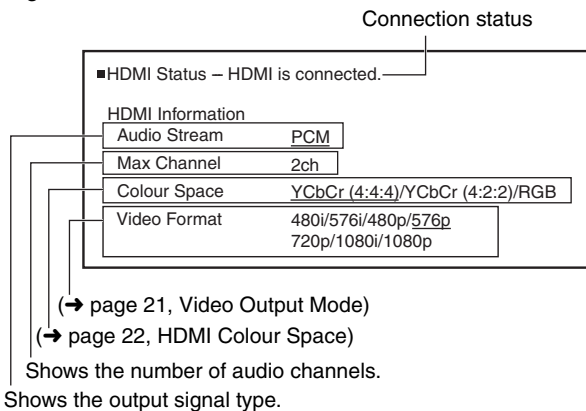
Items shown differ depending on the type of disc.

Other Menu

Setup	(→ page 24)
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	To use functions for data discs (→ page 18) (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) Select "Play as Data Disc".

Confirming HDMI information

e.g.



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" (→ page 26, "HDMI" menu), "—" will be displayed in "Audio Stream" and "Max Channel".

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 [▲, ▼] to select "Subtitle".
 - DivX video files that do not display "Text" do not contain subtitles text. Subtitles text cannot be displayed.
- 2 Press [◀, ▶] to select "On" and press [ENTER].
 - If the subtitles text are not displayed correctly, try changing the language settings (→ below).

Subtitles text language settings

- 1 During play, press [SETUP].
- 2 Press [▲, ▼] to select "Disc" and press [ENTER].
- 3 Press [▲, ▼] to select "Subtitle Text (DivX)" and press [ENTER].
- 4 Press [▲, ▼] 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.

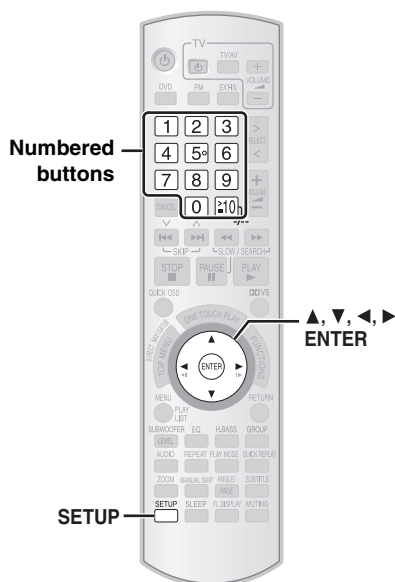
- File format: MicroDVD, SubRip, or TMLayer
- File extension: ".SRT", ".srt", ".SUB", ".sub", ".TXT", or ".txt"
- File name: No more than 44 characters excluding the file extension
- The DivX video file and subtitles text file are inside the same folder, and the file names are the same except for the 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.																		
		<table border="1"> <thead> <tr> <th>Item</th> <th>Setting</th> </tr> </thead> <tbody> <tr> <td>Setup</td> <td></td> </tr> <tr> <td>Disc</td> <td>English</td> </tr> <tr> <td>Video</td> <td>Automatic</td> </tr> <tr> <td>Audio</td> <td>English</td> </tr> <tr> <td>HDMI</td> <td>Advanced Disc Review</td> </tr> <tr> <td>Display</td> <td>Intro Mode</td> </tr> <tr> <td>Others</td> <td>Ratings</td> </tr> <tr> <td></td> <td>Level 8</td> </tr> </tbody> </table> Menu If you have not performed QUICK SETUP (→ page 9), the QUICK SETUP screen appears.	Item	Setting	Setup		Disc	English	Video	Automatic	Audio	English	HDMI	Advanced Disc Review	Display	Intro Mode	Others	Ratings		Level 8
Item	Setting																			
Setup																				
Disc	English																			
Video	Automatic																			
Audio	English																			
HDMI	Advanced Disc Review																			
Display	Intro Mode																			
Others	Ratings																			
	Level 8																			
2	Select ENTER Go right	Select the menu. • Press [▶] to access the item.																		
3	Select ENTER Register	Select the item.																		
4	Select ENTER Register	Make the settings. • Numbered buttons can be used.																		
5	SETUP	Press to exit.																		

- The settings remain intact even if you switch the unit to standby.
- Boxed 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.	- English - Swedish - French - Polish - Spanish - Original*¹ - German - Other***² - Italian - Dutch
Subtitle Choose the subtitle language.	- Automatic*³ - Dutch - English - Swedish - French - Polish - Spanish - Other***² - German - Italian
Menus Choose the language for disc menus. Changing the menu language in QUICK SETUP also changes this setting.	- English - Swedish - French - Polish - Spanish - Other***² - German - Italian - Dutch
Advanced Disc Review (→ page 21)	- Intro Mode: Reviews each title/program. - Interval Mode: 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) 8 No Limit 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 The original language designated on the disc is selected.

*² Input the appropriate code from the language code list (→ page 27).

*³ If the language selected for “Audio” is not available, subtitles appear in that language (if available on the disc).

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.	● 0ms ● 20ms ● 40ms ● 60ms ● 80ms ● 100ms
Video Out (AV/Component) Choose the video signal format to be output from the SCART (AV) and COMPONENT VIDEO OUT terminals.	● Video/YPbPr: Video and YPbPr ● S-Video/YPbPr: S-Video and YPbPr ● RGB/No Output: RGB only
Still Mode Specify the type of picture shown when paused.	● Automatic ● Field^{※4}: The picture is not blurred, but picture quality is lower. ● Frame^{※4}: 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).

※4 Refer to “Frame still and field still” (→ page 41, Glossary).



■ “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.	● 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 – 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 ^{※5}	● Bitstream ● PCM	Select to suit the type of equipment you connected to the HDMI AV OUT or OPTICAL OUT terminal.
DTS Digital Surround ^{※5}	● Bitstream ● PCM	Select "Bitstream" when the equipment can decode the bitstream (digital form of 5.1 channel data). Otherwise, select "PCM".
MPEG ^{※5}	● PCM ● Bitstream	(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.)
Dynamic Range Compression	● Off ● On: Adjusts for clarity even when the volume is low. Convenient for late night viewing. (Only works with Dolby Digital)	

※5 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.

■ “HDMI” menu

RGB Range Set “HDMI Colour Space” to “RGB” (→ page 22, Picture Menu).	● Standard ● Enhanced: When the black and white images are not distinct.
Video Mode	● On: When connected through the HDMI AV OUT terminal. Video is output in 480p/576p/720p/1080p (progressive) or 480i/576i/1080i (interlace) according to the setting of the “Video Output Mode” (→ page 21, Picture Menu). ● Off: Video is also output from the HDMI AV OUT terminal in 480p/576p (progressive) or 480i/576i (interlace) according to the setting of the “Video Output Mode” (→ page 21, Picture Menu).
Audio Output	● On: When audio output is from the HDMI AV OUT terminal. (Depending on the capabilities of the connected equipment, audio output may differ from the audio settings of this unit.) ● Off: When audio output is not from the HDMI AV OUT terminal. (The audio is output using the settings of this unit.)
VIERA Link	● On: The VIERA Link “HDAVI Control” function is available (→ page 28). ● Off

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

■ “Display” menu

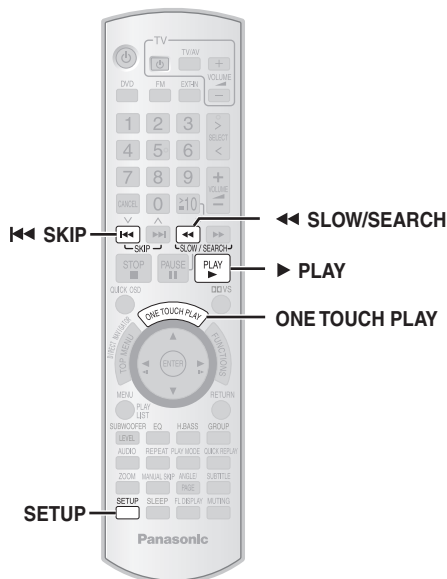
Menu Language	- English - Italiano	- Français - Nederlands	- Español - Svenska	- Deutsch - Polski
On-Screen Messages	On	Off		
Background during Play Select background during JPEG, MPEG4 and DivX video playback.	Black	Grey		

■ “Others” menu

FL Dimmer Change the brightness of the unit's display.	- Bright - Dim	Auto: The display is dimmed, but brightens 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	- Yes - No	
Re-initialise Setting Return all values in the Setup menus to the default settings.	- Yes: The password screen is shown if “Ratings” (→ page 24) is set. Please enter the same password. After “INIT” on the display disappears, turn the unit off and on again. - No	

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	Twí: 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	



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 29). “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 35) has been made.
- Set “VIERA Link” to “On” (→ page 26, “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 29).

- 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 this 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 this 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 this 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.

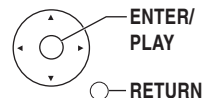
- When switching between the theater and television speakers, the TV screen may be blank for several seconds.

- * To toggle which input source this unit will automatically switch to, press [SETUP] while this 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.

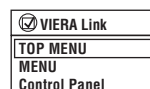
- 1 Select the theater operation menu by using the television menu settings.
(For details, refer to the operating instructions of your television.)



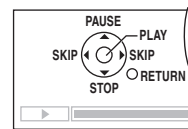
- The home theater system will automatically switch to "DVD/CD" if it is in "AUX"* or "D-IN"* mode.

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

- 2 Select the desired item.



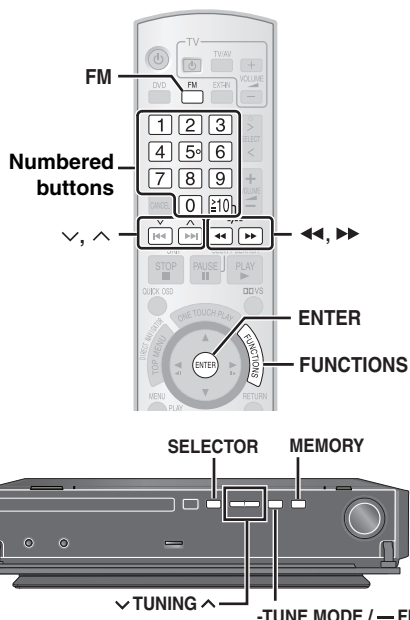
- **"TOP MENU":** Shows a disc top menu (→ page 15, 18) or program list (→ page 19).
- **"MENU":** Shows a disc menu (→ page 15, 18) or play list (→ page 19).
- **"Control Panel":** The basic operations for discs are available.



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.





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

*1 [SELECTOR] *2 [V 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.

- It automatically stops searching when 30 stations are preset to the last.
- "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 [V, ^].

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

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

e.g. Display



If noise is excessive

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

e.g. Display



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

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

Manual tuning

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

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

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

Presetting the channel

Up to 30 stations can be set.

① While listening to the radio broadcast

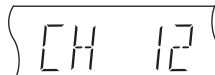
Press [ENTER]*3.

② 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. Display

e.g. 12: [≥10] → [1] → [2]



Alternatively, press [V, ^], and then press [ENTER]*3.

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

RDS broadcasting

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

FREQ: Frequency display

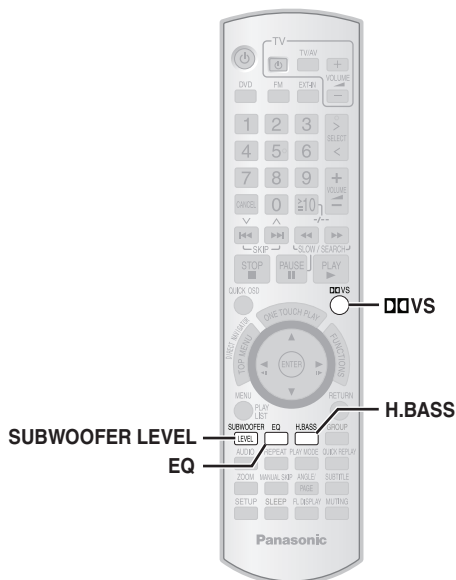
PTY displays			
NEWS	VARIED	FINANCE	COUNTRY
AFFAIRS	POP M	CHILDREN	NATIONAL
INFO	ROCK M	SOCIAL A	OLDIES
SPORT	M-O-R- M*	RELIGION	FOLK M
EDUCATE	LIGHT M	PHONE IN	DOCUMENT
DRAMA	CLASSICS	TRAVEL	TEST
CULTURE	OTHER M	LEISURE	ALARM
SCIENCE	WEATHER	JAZZ	

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

Note

RDS displays may not be available if reception is poor.





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].

(Settings can be confirmed on the display or the television screen.)

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].

(Settings can be confirmed on the display or the television screen.)

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].

(Settings can be confirmed on the display or the television screen.)

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

DOVS

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 [DOVS].

(Settings can be confirmed on the display or the television screen.)

e.g. Display



Each time you press the button:

REFERENCE: Standard mode

WIDE:

Wide mode

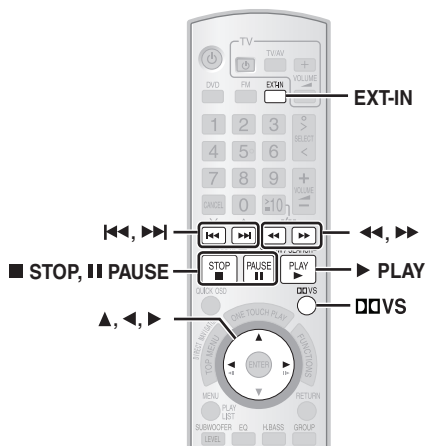
Widens the acoustic field of the front speakers. This has a good effect when there is little space between the speakers.

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.
- “DOVPLII” 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 27).





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) or AUX terminal on this unit.

Press [EXT-IN] repeatedly to select “AV”* or “AUX”*.

- Reduce the volume on the television to its minimum, and then adjust the volume of this unit.
- You can enjoy surround sound effect when you press [DOLBS] to turn on Dolby Virtual Speaker (→ page 31).

*Select “AV” when using the scart connection (→ page 7) and select “AUX” when using the AUX connection (→ page 35).

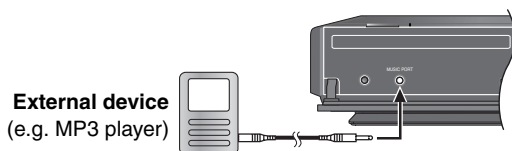
Using the Music Port

Preparation

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

1 Connect the external device (not included).

Plug type: Ø3.5 mm stereo mini plug

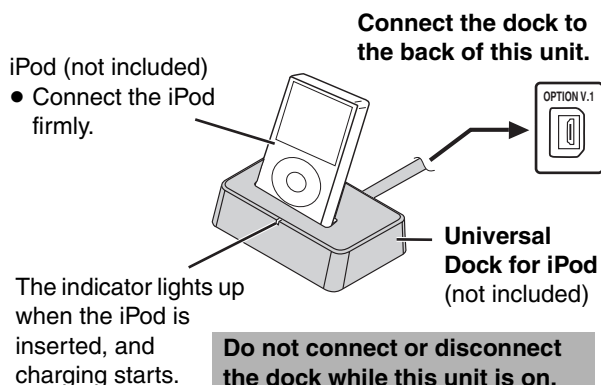


2 Press [EXT-IN] repeatedly to select “MUSIC P.”.

- Adjust the volume on the external device to a normal listening level, and then adjust the volume of this unit.
- You can enjoy surround sound effect when you press [DOLBS] to turn on Dolby Virtual Speaker (→ page 31).

Using the iPod

Use an optional SH-PD10 Panasonic Universal Dock for iPod.



Charging the iPod

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 this unit.
- “OPTION *” will be shown on this unit’s display during iPod charging in this 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 SH-PD10.



■ Playing tracks from the iPod

Preparation

- Adjust the volume on the iPod to a normal listening level.
- Reduce the volume of this unit.
- Confirm the iPod connection (→ page 32).

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

The iPod turns on.

2 Press [▶ PLAY] to play the iPod.

- Adjust the volume of this unit.
- You can enjoy surround sound effect when you press [DQVS] to turn on Dolby Virtual Speaker (→ page 31).

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

When you select another source, or turn this 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 this unit (→ page 36).

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 [▶].

(Settings can be confirmed on the display.)

PFIX ON: Select when receiving only PCM signals.

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

Dynamic Range Compression

Press and hold [◀].

(Settings can be confirmed on the display.)

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 [▲].

(Settings can be confirmed on the display.)

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

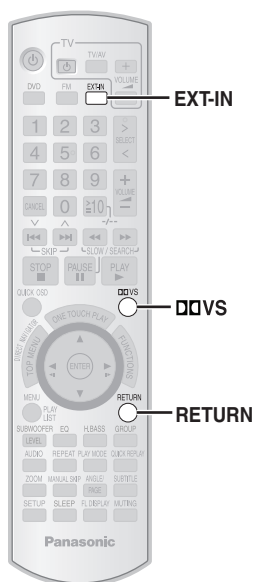
Dolby Virtual Speaker (→ page 31)

Press [DQVS].

Note

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





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.

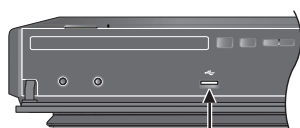
USB connection and operation

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).



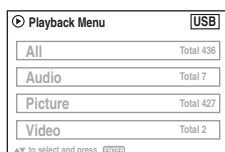
USB enabled device
(not included)

- 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 this unit.
- You can enjoy surround sound effect when you press [DQVS] to turn on Dolby Virtual Speaker (→ page 31).

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 27).



Optional connections

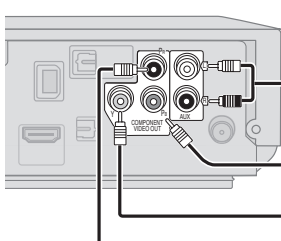
Other audio and video connections

- **Do not make the video connections through the video cassette recorder.**
Due to copy guard protection, the picture may not be displayed properly.

Connecting to a television with COMPONENT VIDEO IN terminals

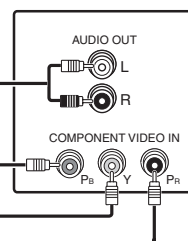
This connection provides a purer picture than the SCART (AV) terminal.

This unit



Audio cable*
(not included)

Video cables
(not included)



Television (not included)



- Connect to terminals of the same colour.

Necessary Settings

- 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.

To enjoy progressive video

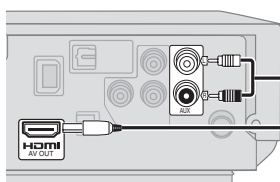
- Connect to a progressive output compatible television.
Set "Video Output Mode" to "480p" or "576p", and then follow the instructions on the menu screen (→ page 21, Picture Menu).

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.

Connecting to a television with HDMI terminal

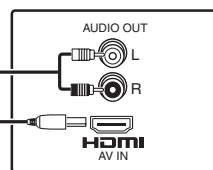
This connection provides the best picture quality.

This unit



Audio cable*
(not included)

HDMI cable
(not included)



HDMI-compatible television (not included)



Note

- 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.
- When the HDMI cable is connected, there will be no video output from the SCART (AV) and COMPONENT VIDEO OUT terminals of this unit.

Necessary Settings

- Set "Video Mode" to "On" (→ page 26, "HDMI" menu).
- Set "Video Output Mode" (→ page 21, Picture Menu).

VIERA Link "HDAVI Control"

If your Panasonic television is a VIERA Link compatible television, you can operate your television synchronising with home-theater operations or vice versa (→ page 28, Using the VIERA Link "HDAVI Control™").

* This audio connection will enable you to play audio from your television through your home theater system (→ page 32, Enjoying audio from the television).

(Continued on next page)

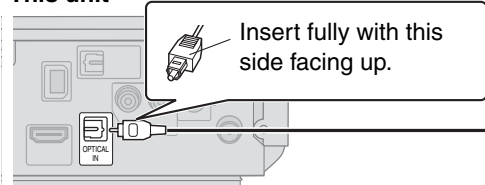


Other audio and video connections

Connecting to a digital audio source

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.

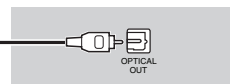
This unit



Optical digital audio cable (not included)

- Do not bend sharply when connecting.

Set top box, satellite receiver or television (not included)



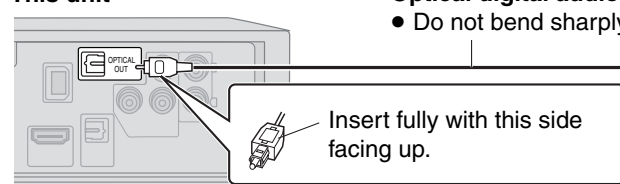
Necessary Settings

- Set the sound effects (→ page 33, Setting the sound effects for set top box, digital broadcasting or satellite receiver).

Connecting to a 5.1 channel amplifier

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.

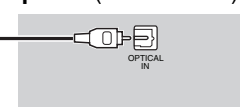
This unit



Optical digital audio cable (not included)

- Do not bend sharply when connecting.

Amplifier (not included)



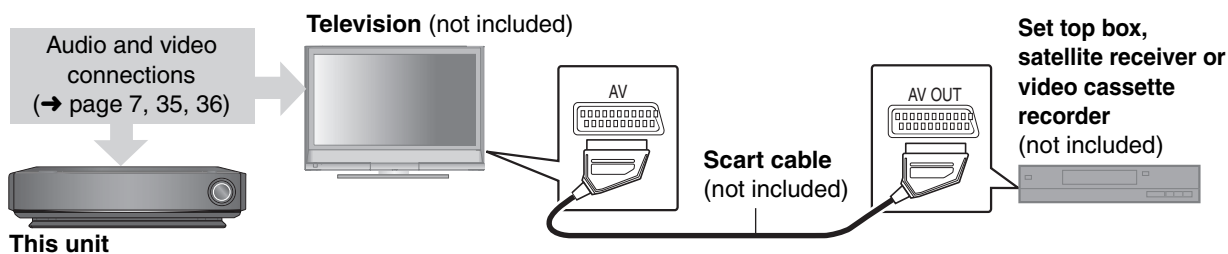
Note

- 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.

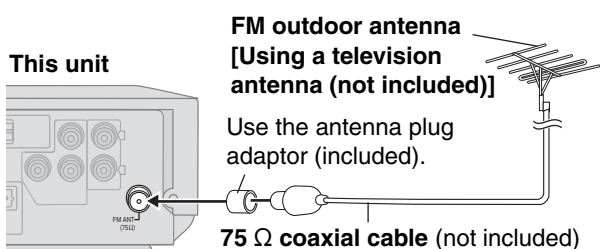
Necessary Settings

- Set "PCM Digital Output", "Dolby Digital", "DTS Digital Surround" and "MPEG" (→ page 26).

Connecting to a set top box, satellite receiver or video cassette recorder



Using an FM outdoor antenna



Use outdoor antenna if radio reception is poor.

- Disconnect the FM indoor antenna.
- The antenna should be installed by a competent technician.

Note

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



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.	7
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.	27
"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.	7
"F76"	There is a power supply problem. Consult the dealer.	—
"DVD U11"	Disc may be dirty. Wipe it clean.	43
"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 this unit.	- The HDMI connection acts unusually. - The connected equipment is not HDMI-compatible. - Please use HDMI cables that have the HDMI logo (as shown on the cover). - The HDMI cable is too long. - The HDMI cable is damaged.	— — — —
"REMOTE 1" or "REMOTE 2"	Match the modes on this unit and remote control. Depending on the number being displayed ("1" or "2"), press and hold [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

(Continued on next page)



General operation (Continued)

No picture or sound.	• Check the video or speaker connection. • When the HDMI cable is connected, there will be no video output from the SCART (AV) and COMPONENT VIDEO OUT terminals of this unit. If the SCART (AV) or COMPONENT VIDEO OUT terminal is to be used, remove the HDMI cable and turn this unit on/off again. • Check the power or input setting of the connected equipment and this unit. • Check that the disc has something recorded on it.	7, 35–36 — — —
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 this 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.	28

Disc operation

It takes time before play starts.	• Play may take time to begin when an MP3 track has still picture data. Even after the track starts, the correct play time will not be displayed. This is normal. MP3 • This is normal on DivX video. DivX	— —
Folders on a data CD are not displayed correctly. WMA MP3 JPEG MPEG4 DivX	• Folders deeper than the eighth layer are displayed as the eighth layer.	—
A menu screen appears during skip or search. VCD	• This is normal for Video CDs.	—
Playback control menu does not appear. VCD with playback control	• Press [■ STOP] twice and then press [▶ PLAY].	—
Program and Random play do not work. DVD-V	• These functions do not work with some DVD-Videos.	—
Play does not start.	• This unit may not play WMA and MPEG4 that contains still picture data. • If playing DivX VOD content, refer to the homepage where you purchased the DivX VOD content. (Example: 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	• This is normal for DVD-Audio.	—
Subtitle position is wrong.	• Adjust the position. (“Subtitle Position” in Display Menu)	22
No subtitles.	• Display the subtitles. (“Subtitle” in Main menu) • Subtitles may not be displayed depending on the disc. DivX	20 —
Point B is automatically set.	• The end of an item becomes point B when it is reached.	—
The Setup menu cannot be accessed.	• Select “DVD/CD” as the source. • Cancel All group, Program and Random play.	— 17



Sound

Sound is distorted.	- Noise may occur when playing WMA. - When using the HDMI output, audio may not be output from other terminals.	— —
Effects do not work.	- 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.	An AC mains lead or fluorescent light is near this unit. Keep other appliances and cables away from this unit.	—
No sound.	- There may be a slight pause in sound when you change the play speed. - Audio may not be output due to how files were created. DivX - 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".	— — — 26
Selecting audio soundtrack "2" does not change the audio. DVD-A	Even if a second soundtrack is not recorded, two numbers are normally shown.	—

Picture

The picture on the television is not displayed correctly or disappears.	- 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. - 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".)	— — 25 7, 35 — — — 22 — 21 21
Picture stops. DivX	Picture may stop if the DivX files are greater than 2 GB.	—
Picture size does not fit the screen.	- Change "TV Aspect" in the "Video" menu. - Use the television to change the aspect. If your television does not have that function, change "4:3 Aspect" in Display Menu. - Change the Zoom setting. ("Just Fit Zoom" or "Manual Zoom" in Display Menu)	25 22 22
Menu is not displayed correctly.	- Restore the zoom ratio to "×1.00". ("Manual Zoom" in Display Menu) - Set "Subtitle Position" in Display Menu to "0". - Set "4:3 Aspect" in Display Menu to "Normal".	22 22 22
Auto zoom function does not work well.	- Turn off television's zoom function. - Use the other preset aspect ratios or manual adjustment. - Zoom function may not work well, especially in dark scenes and may not work depending on the type of disc.	— 22 —
When playing PAL disc, picture distorted.	Set "Transfer Mode" in Picture Menu to "Auto".	21

(Continued on next page)



iPod with Universal Dock for iPod (optional)

Cannot charge or operate even when the indicator on the dock lights.	• Check that the iPod is connected firmly. • The battery of the iPod is depleted. Charge the iPod, and then operate again.	32 —
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HDMI or progressive video

There is ghosting when HDMI or progressive output is on.	• This problem is caused by the editing method or material used on DVD-Video, but should be corrected if you use interlaced output. – When using the 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: 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, 26
Pictures not in progressive output.	• Select “480p” or “576p” in “Video Output Mode” in Picture Menu. • The unit’s SCART (AV) terminal outputs an interlaced signal even if “PRG” is displayed.	21 7

Radio

Distorted sound or noise is heard. “ST” flickers or does not light.	• Adjust the position of the FM antenna. • Use an outdoor antenna.	— 36
A beat sound is heard.	• Turn the television off or move it away from the unit.	—

USB

The USB drive or its contents cannot be read.	• 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.	34 — —
Slow operation of the USB device.	• Large file size or high memory USB device takes longer time to read and display on the TV.	—

Television displays

“⊘”	• The operation is prohibited by the unit or disc.	—
“Cannot play group xx, content xx” “Cannot display group xx, content xx”	• You are trying to display incompatible group or content.	—
“Group xx content xx is protected”	• You are trying to play protected group or content. You cannot play it.	—
“Check the disc”	• This disc may be dirty.	43
“This disc may not be played in your region”	• Only DVD-Video discs that include or have the same region number as the one on the rear panel of this unit can be played.	Cover page
“Due to copyright protection, audio cannot be output from HDMI” DVD-A	• If you connect to equipment that does not support CPPM (→ page 41, Glossary), audio from a CPPM copy-protected DVD-Audio disc cannot be output from the HDMI AV OUT terminal.	—
No on-screen display.	• Select “On” in “On-Screen Messages” in the “Display” menu.	27
“Authorization Error” DivX	• 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	• The DivX VOD content has zero remaining plays. You cannot play it.	19
This unit’s screen saver remains	• When using the HDMI connection, audio/video information is continually transferred between this unit and the television regardless of which source has been selected on this unit. This is normal.	—



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.



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 to 108.00 MHz (50-kHz step)
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
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Music Port (Front)

Sensitivity	100 mV, 1.4 kΩ
Terminal	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)
USB device file system	FAT12, FAT16, FAT32
USB Port power	Max. 500 mA

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

Audio output (Disc)

Number of channels	2.1ch (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	Scart jack (1 system)

S-video output

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

Component video output

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)



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-HF100

Type	2 way, 3 speaker system (Bass reflex)
Speaker unit(s)	Impedance 6 Ω
1. Woofer	6.5 cm Cone type × 2
2. Tweeter	6 cm Cone type
Input power (IEC)	250 W* ⁸ (Max)
Output sound pressure	83 dB/W (1.0 m)
Frequency range	80 Hz to 25 kHz (−16 dB) 93 Hz to 22 kHz (−10 dB)
Dimensions (W×H×D)	121 mm×328 mm×129 mm
Mass	1.7 kg

Subwoofer SB-HWX50

Type	1 way, 1 speaker system (Kelton type)
Speaker unit(s)	Impedance 6 Ω
1. Woofer	16 cm Cone type
2. Passive Radiator	25 cm
Input power (IEC)	250 W (Max)
Output sound pressure	78 dB/W (1.0 m)
Frequency range	35 Hz to 200 Hz (−16 dB) 40 Hz to 198 Hz (−10 dB)
Dimensions (W×H×D)	181 mm×361 mm×315 mm
Mass	4.7 kg

GENERAL

Power supply	AC 230 to 240 V, 50 Hz
Power consumption	This unit 50 W
Dimensions (W×H×D)	325 mm×87 mm×320 mm
Mass	This unit 3.5 kg
Operating temperature range	0 °C to +40 °C
Operating humidity range	35 % to 80 % RH (no condensation)

Power consumption in standby mode

approx. 0.3 W

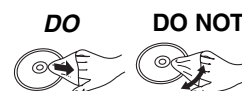
*⁸ Rating with low-cut filter equipped amplifier

Note

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

To clean discs

Wipe with a damp cloth and then wipe dry.



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.

Clean this unit with a soft, dry cloth.

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

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.

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.



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"DTS" and "DTS Digital Surround" are registered trademarks of DTS, Inc.

U.S. Patent Nos. 6,836,549; 6,381,747; 7,050,698; 6,516,132; and 5,583,936.

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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.

This product is licensed under the MPEG-4 Visual patent portfolio license for the personal and non-commercial use of a consumer for (i) encoding video in compliance with the MPEG-4 Visual Standard ("MPEG-4 Video") and/or (ii) decoding MPEG-4 Video that was encoded by a consumer engaged in a personal and non-commercial activity and/or was obtained from a video provider licensed by MPEG LA to provide MPEG-4 Video. No license is granted or shall be implied for any other use. Additional information including that relating to promotional, internal and commercial uses and licensing may be obtained from MPEG LA, LLC. See <http://www.mpegla.com>.



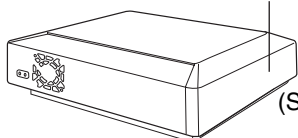
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Official DivX® Certified product.
Plays all versions of DivX® video (including DivX®6) with standard playback of DivX® media files.
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HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.

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.



(Side of product)

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. IEC300825-1 +A21 Class 1M	
WARNING	- KLASS 1M SYNYÄK OCH OSYNYÄK LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. BETRÄKTA EJ STRÅLEN DIREKT GENOM OPTISKA INSTRUMENT.	
FORSIGTIG	- SYNYÄK OCH OSYNYÄK LASERSTRÅLNING KLASS 1M. NÄR LASEN ER ÄR ÖPPEN, UNDÖGÅ AT SE LÖSE PÅ MED OPTISKE INSTRUMENTER.	
VARO!	- HUUTRESSA OLEET ALTUUNA LUOKAN 1M NÄKYVÄÄ JA NÄKYMÄTÖNTÄ, LASERSÄTELYÄ, ÄLÄ KATSO OPTISELLA LAITTEELLA SUORAAN SÄTEESEEN.	
VORSICHT	- SICHTBARE UND UNSICHTBARE LASERSTRÄHLUNG KLASSE 1M. WENN ABEDECKUNG GEÖFFNET, NICHT DIREKT MIT OPTISCHEN INSTRUMENTEN BETRACHTEN.	
ATTENTION	- RAYONNEMENT LASER VISIBLE ET INVISIBLE. CLASSE 1M. EN CAS D'OUVERTURE, NE PAS REGARDER DIRECTEMENT A L'ŒIL D'INSTRUMENTS D'OPTIQUE.	
注意	- ここを開くと可視及び不可視レーザー光が出ます。 ビームを見たり、触れたりしないでください。	
注意	- 打开時有可能及不可見激光辐射。避免光束照射。	GB7247.1-2003/EN 60825-1-2003/IEC 300825-1-2003/UL 1977

(Inside of product)

Matsushita Electric Industrial Co., Ltd.

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

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

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