



## Operating Instructions DVD Home Theater Sound System Model No. **SC-HT855**

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

**Example:**



## High-quality picture

HDMI capability, Advanced progressive scan and more.

page **11**

## Compatible with a variety of media formats

DVD-RAM, DVD-Audio, DVD-Video, DivX and more.

page **18**

## High-performance sound effects

Sound quality enhancement, Bass enhancement and more.

page **36**

**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.

<b>System</b>	SC-HT855
<b>This unit</b>	SA-HT855
<b>Front speakers</b>	SB-FS540
<b>Center speaker</b>	SB-PC540
<b>Surround speakers</b>	SB-FS741
<b>Subwoofer</b>	SB-W540

## Accessories



Please check and identify the supplied accessories. Use numbers indicated in parentheses when asking for replacement parts.

(Product numbers correct as of February 2006. These may be subject to change.)

- 1 Remote control**  
(N2QAYZ000003)



- 2 Remote control batteries**



- 1 AM loop antenna**  
(N1DAAAA00002)



- 1 FM indoor antenna**  
(RSA0007-L)



- Speaker cables**  
1×short cable  
(REEX0449B-1L)  
2×long cables  
(REEX0049E-1K)



- 2 Sheets of speaker cable stickers**



- 2 Stands**  
(RYPX0128-S)



- 2 Bases**  
(RYPX0120-S)



- 8 Screws**  
(XSN5+12FJ)



- 2 Cover plates**  
(RGPX0239-K)



- 1 AC mains lead**  
(K2CT3CA00004)



- 1 Antenna plug adaptor**  
(K1YZ02000013)



### ■ **Optional accessories**

#### **Optical cable**

- RP-CA2010AE (1.0 m)
- RP-CA2020AE (2.0 m)

### ■ **Sales and Support Information**

#### Customer Care Centre

- For customers within the UK: 08705 357357
- For customers within the Republic of Ireland: 01 289 8333
- Visit our website for product information
- E-mail: [customer.care@panasonic.co.uk](mailto: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](http://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](http://www.panasonic.co.uk/guarantee).*

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# Caution for AC Mains Lead



## (For United Kingdom) ("EB" area code model only)

For your safety, please read the following text carefully. This appliance is supplied with a moulded three pin mains plug for your safety and convenience.

A 5-ampere fuse is fitted in this plug.

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

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

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

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

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

### CAUTION!

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

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

If in any doubt please consult a qualified electrician.

### IMPORTANT


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

Blue: Neutral, Brown: Live.

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

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

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

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

**THIS PLUG IS NOT WATERPROOF—KEEP DRY.**

### Before use

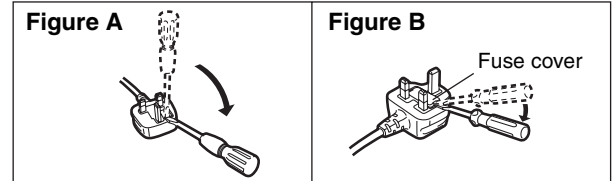
Remove the connector cover.

### How to replace the fuse

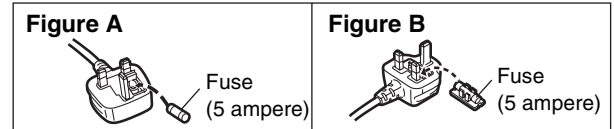
The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.

Illustrations may differ from actual AC mains plug.

1. Open the fuse cover with a screwdriver.



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



# Safety precautions

## Placement

Set the unit up on an even surface away from direct sunlight, high temperatures, high humidity, and excessive vibration. These conditions can damage the cabinet and other components, thereby shortening the unit's service life.

Do not place heavy items on the unit.

## Voltage

Do not use high voltage power sources. This can overload the unit and cause a fire.

Do not use a DC power source. Check the source carefully when setting the unit up on a ship or other 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.

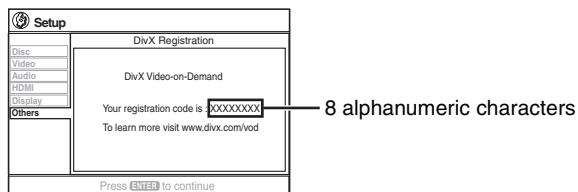
## About DivX VOD content

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](http://www.divx.com/vod).

### Display the unit's registration code

(→ page 32, "DivX Registration" in "Others" menu)



- 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 press and hold [—SETUP].
  - you press [■ STOP]. (Press [⏸ PAUSE] to pause play.)
  - you press [⏪, ⏩ SKIP] or [⏴, ⏵ SLOW/SEARCH] etc. and arrive at another content or the start of the content being played.
- Resume (→ page 21, Stop) and Marker (→ page 27, Play Menu) functions do not work.



# STEP 1

## Assembling the front speakers

The supplied stands are specially designed for attachment to Panasonic SB-FS540 front speakers. Use only as indicated in this setup.

### Preparation

- To prevent damage or scratches, lay down a soft cloth and perform assembly on it.
- For assembly, use a Phillips-head screwdriver.
- Make sure you have all the indicated components before starting assembly, setup, and connection.
- There is no difference between the right and left speakers and stands.
- For optional wall mount, refer to page 41.

2 Front speakers  
(with cover plate)



2 Stands  
(with cable)



2 Bases



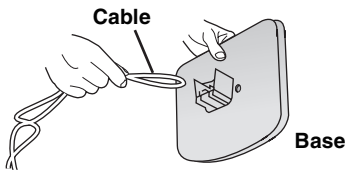
8 Screws



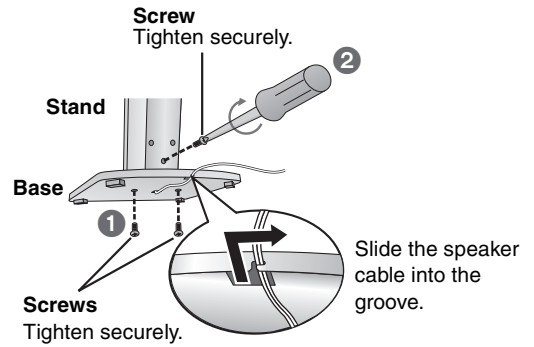
### 1 Attach the stand to the base.

#### ① Thread the speaker cable through the base.

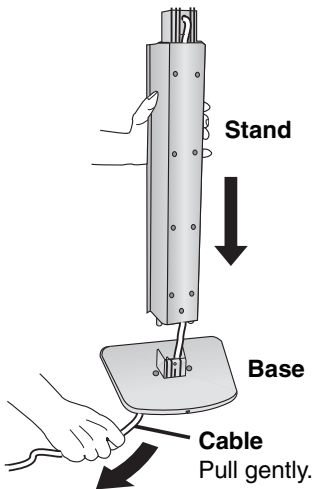
For quicker threading, loosely fold the cable in half (do not crease), pass the folded portion through the hole, and then pull the rest of the cable through the base.



### 2 Secure the stand to the base.

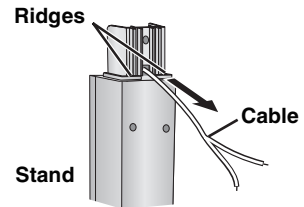


#### ② Attach the stand to the base while gently pulling on the end of the speaker cable.

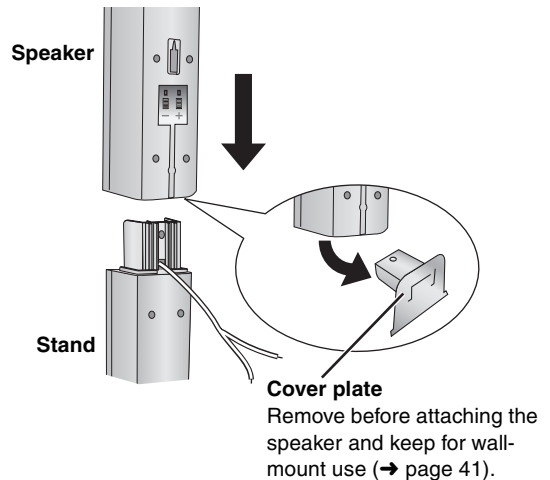


### 3 Attach the speaker to the stand.

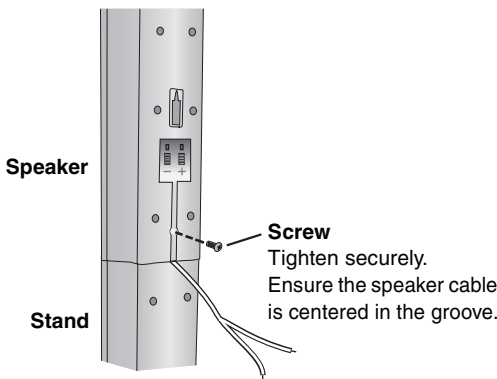
#### ① Pull out the end of the speaker cable and position it between the ridges.



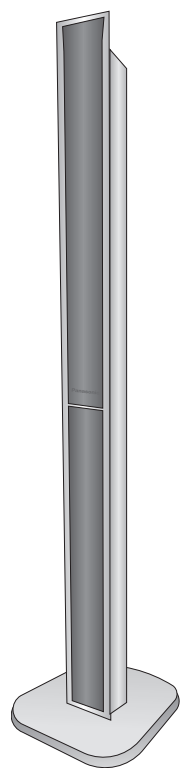
#### ② Attach the speaker to the stand.



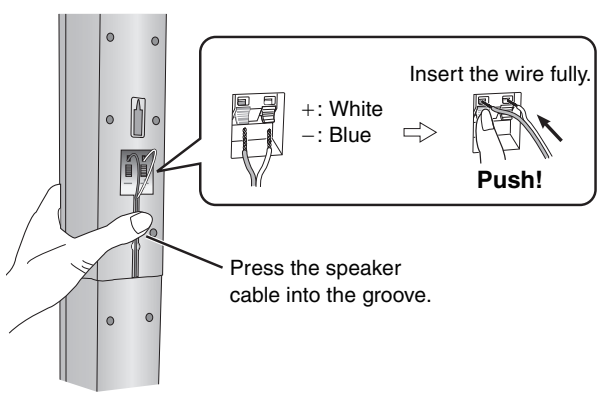
#### 4 Secure the speaker to the stand.



**Assembled!**

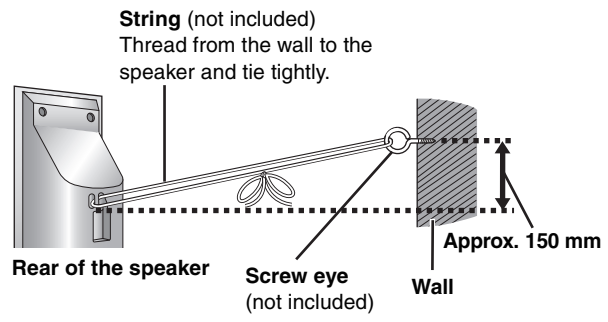


#### 5 Connect the speaker cable.



#### ■ Preventing the 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.

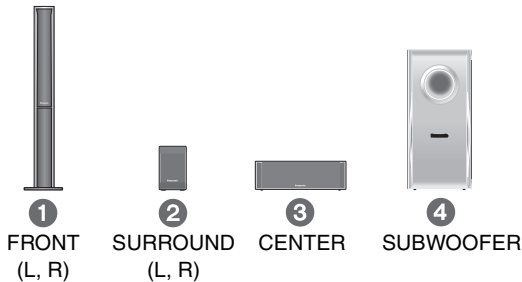




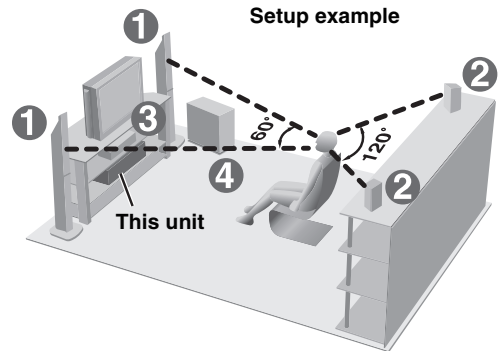
## STEP 2 Positioning the speakers

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.
- Left and right speakers are interchangeable, but front and surround speakers are not.
- Place the front, center, and surround speakers at approximately the same distance from the seating position. The angles in the diagram are approximate.



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.



### • Use only supplied speakers

- Using other speakers can damage the unit, and sound quality will be negatively affected.
- Set the speakers up on an even surface to prevent them from falling. Take proper precautions to prevent the speakers from falling if you cannot set them up on an even surface.

### This unit

#### Note

- Keep your speakers at least 10 mm away from the system for proper ventilation.
- To allow for proper ventilation and to maintain good airflow around this unit, position it with at least 5 cm of space on all sides.
- Do not block the ventilation holes of this unit.

### Center speaker

- Vibration caused by the center speaker can disrupt the picture if it is placed directly on the television. Put the center speaker on a rack or shelf.
- To prevent the speakers from falling, do not place directly on top of the television.

### Subwoofer

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

### Caution

- Do not stand on the base. Be cautious when children are near.

e.g. Front speaker



- Do not touch the netted area of the speakers.

e.g. Surround speaker



### Notes on speaker use

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

### If irregular coloring occurs on your television

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

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

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

### Caution

- **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.**



# STEP 3

## Speaker connections

### Speaker cables

- 1 x short cable: For center speaker
- 2 x long cables: For surround speakers



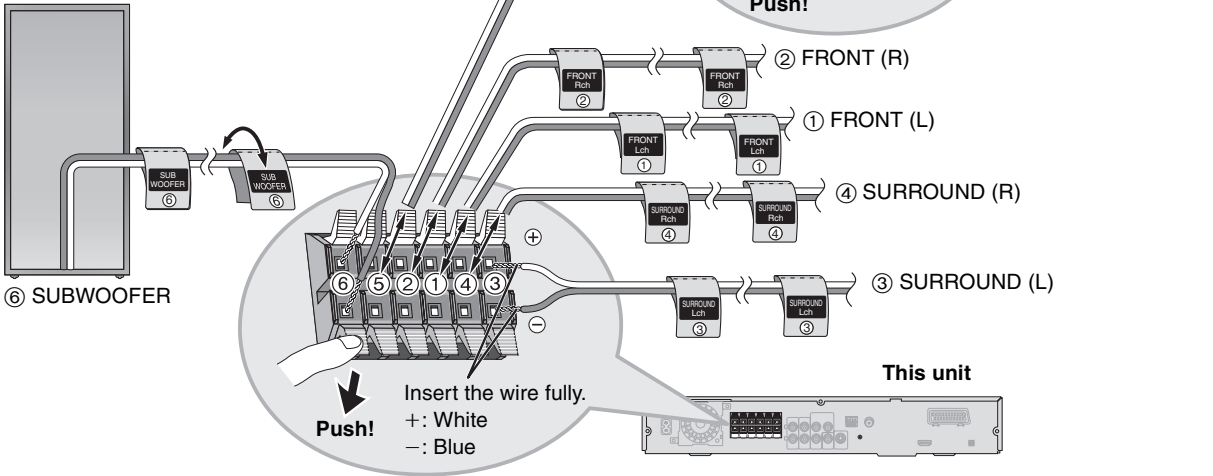
### 2 sheets of speaker cable stickers

- Attach the speaker-cable stickers to make connection easier.



**X**

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



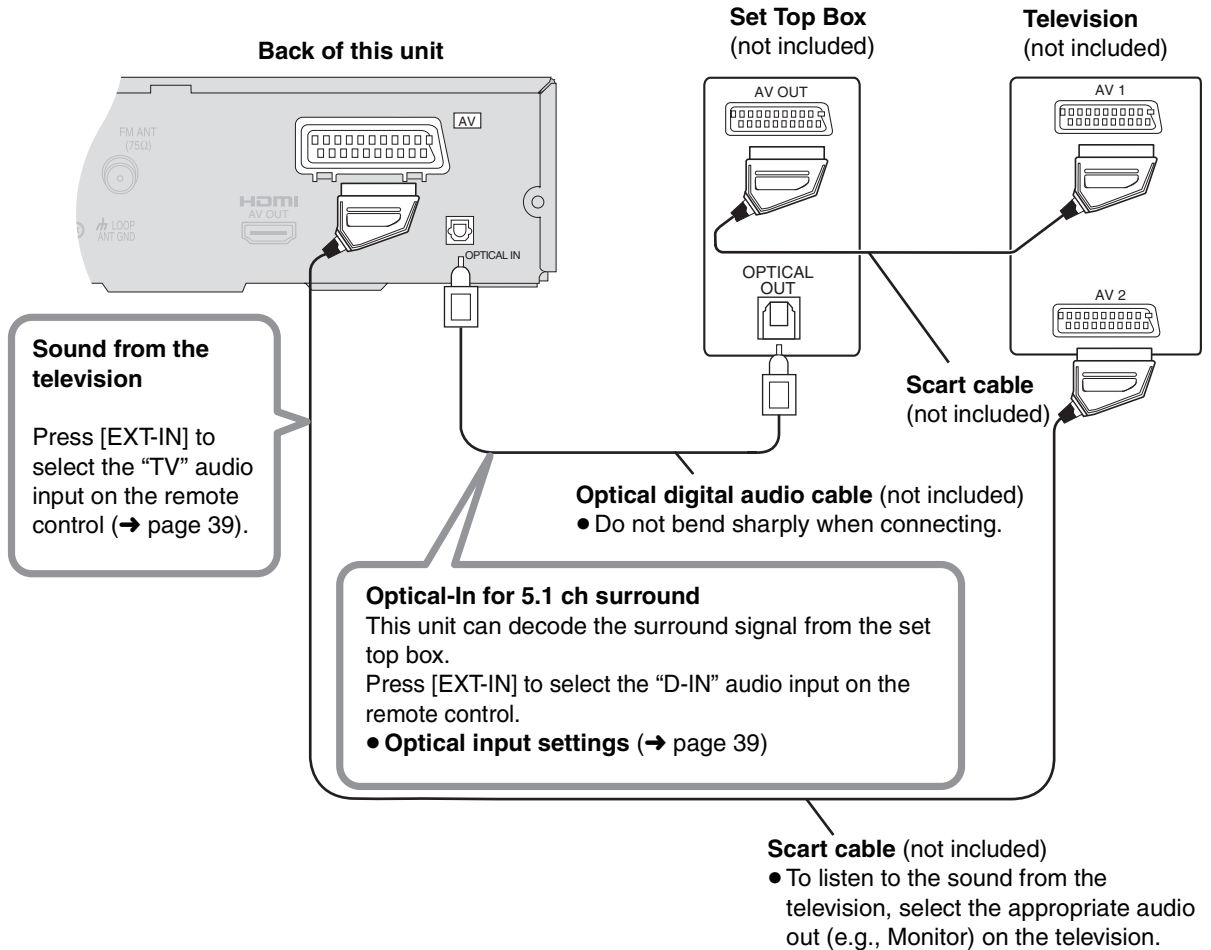
## STEP 4 Audio, video and radio connections

- **Do not connect through the video cassette recorder.**  
Due to copy guard protection, the picture may not be displayed properly.
- Turn the television off before connecting, and refer to the television's operating instructions.

### Ex.1 Connecting with your television and Set Top Box

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

- Select "RGB/No Output" (RGB only) from QUICK SETUP (→ page 16).
- Set "Video Output" to "Off" (→ page 32, "HDMI" menu).
- This connection will also enable you to play audio from your television through your home theater system. Refer to "Operating other equipment" (→ page 39).
- Do not use the HDMI cable when you use the scart cable for the connection.

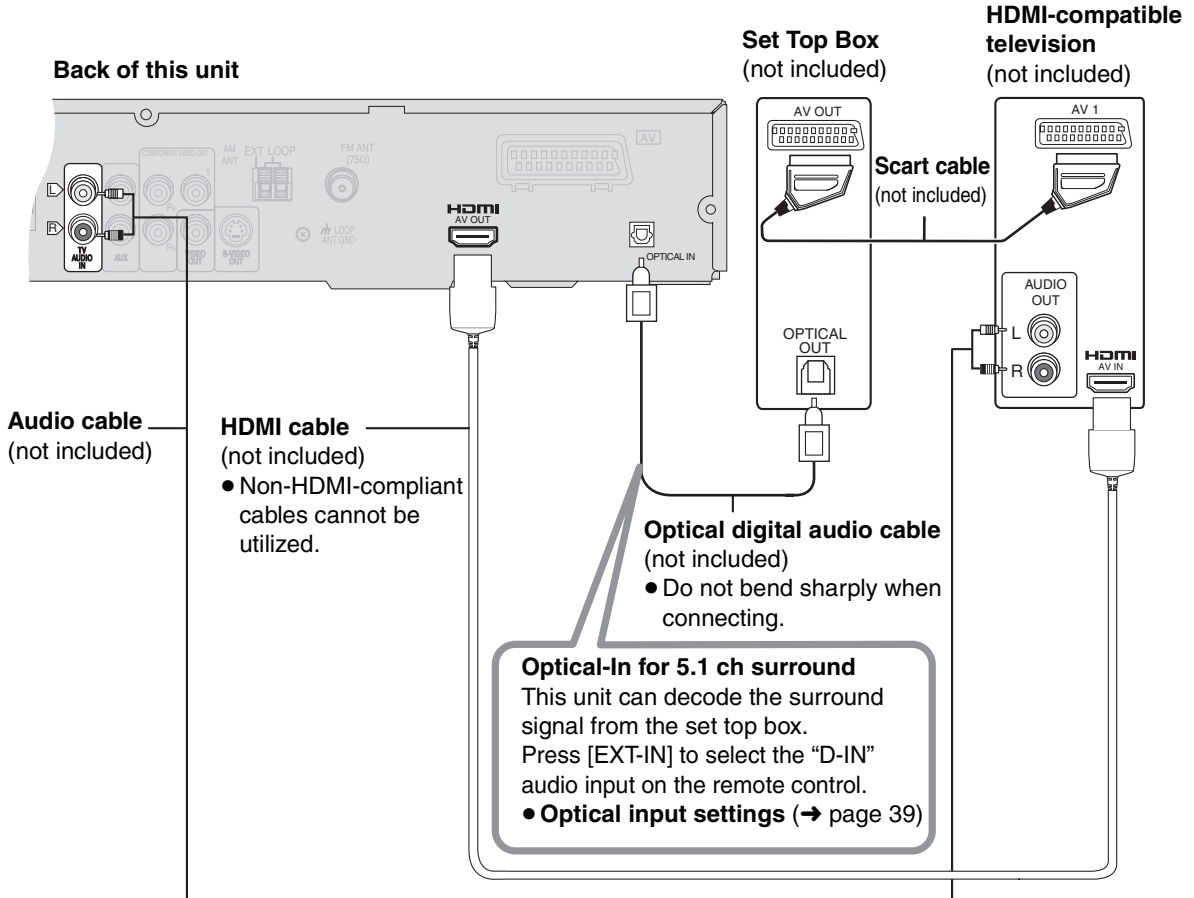


## Ex.2 Connecting with your HDMI-compatible television and Set Top Box

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) from the HDMI AV OUT terminal.

- Do not use the scart cable when you use the HDMI cable for the connection.
- Do not connect any kind of audio/video distribution devices between this unit and the television (such as an amplifier, etc.).
- Set "Video Output" to "On" and "Audio Output" to "On" (→ page 32, "HDMI" menu).
- Set "Video Output Mode" (→ page 28, Picture Menu).



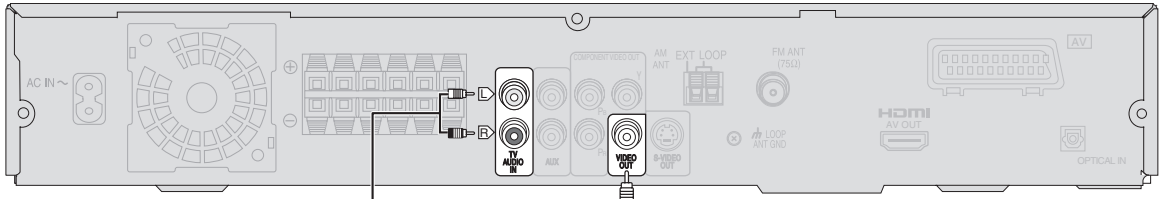
### ■ HDAVI Control function

If your Panasonic television is an HDMI control compatible television, you can operate your television synchronizing with home-theater operations or vice versa (→ page 40).

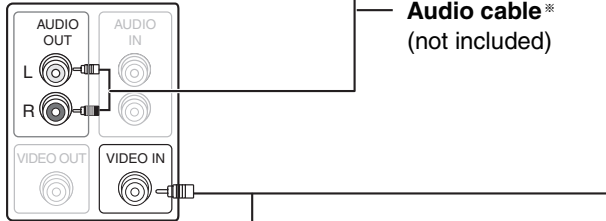
- It is recommended that you use Panasonic's HDMI cable.  
[Recommended part number: RP-CDHG15 (1.5 m), RP-CDHG30 (3.0 m), RP-CDHG50 (5.0 m), etc.]
- Non-HDMI-compliant cables cannot be utilized.

## Connecting to a television with AUDIO/VIDEO terminals

### Back of this unit



### Television (not included)



Audio cable\*  
(not included)

Video cable  
(not included)

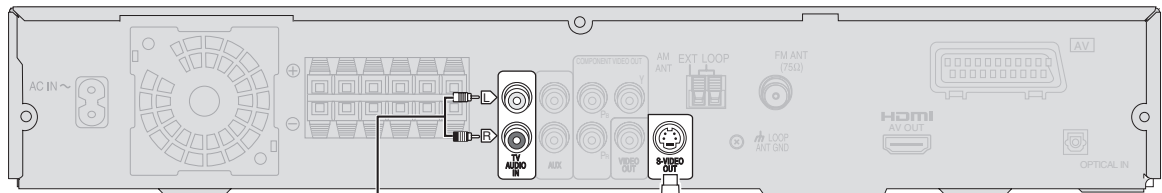
\* This audio connection will enable you to play audio from your television through your home theater system. Refer to “Operating other equipment” (→ page 39). You can also connect to the AUX terminals on this unit. The TV AUDIO IN and AUX terminals are for external audio input.

## Using other video connections for improved picture quality

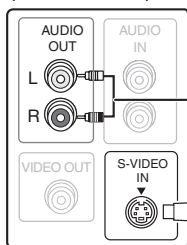
### ■ Television with an S-VIDEO IN terminal

The S-VIDEO OUT terminal achieves a more vivid picture than the VIDEO OUT terminal by separating the chrominance (C) and luminance (Y) signals. (Actual results depend on the television.)

### Back of this unit



### Television (not included)



Audio cable\*  
(not included)

S-video cable  
(not included)

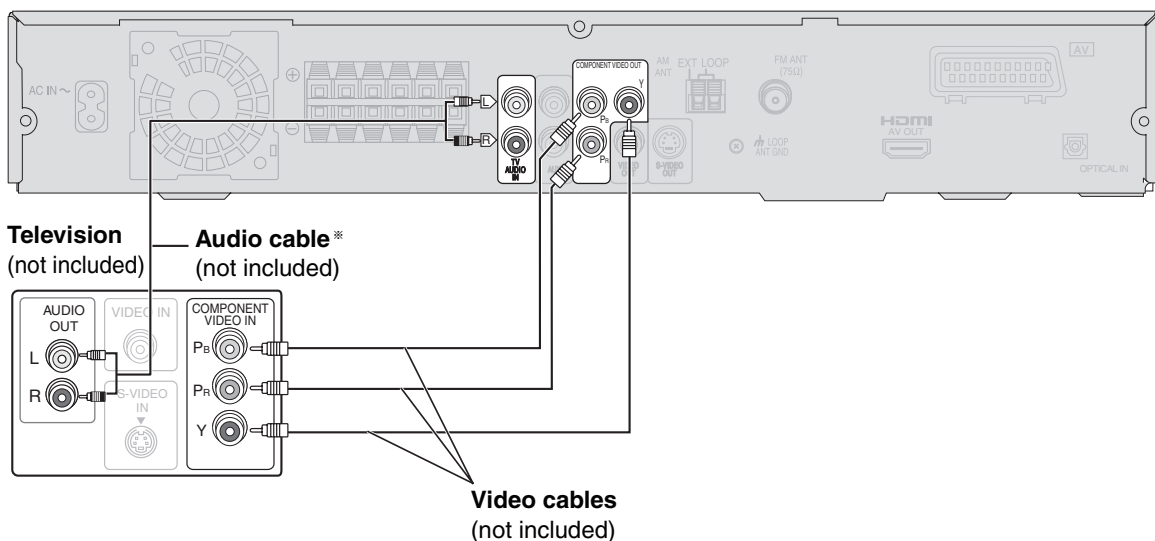
\* This audio connection will enable you to play audio from your television through your home theater system. Refer to “Operating other equipment” (→ page 39). You can also connect to the AUX terminals on this unit. The TV AUDIO IN and AUX terminals are for external audio input.

## ■ Television with COMPONENT VIDEO IN terminals

The COMPONENT VIDEO OUT terminals provides a purer picture than the S-VIDEO OUT terminal. These terminals can be used for either interlaced or progressive output. Connection using these terminals outputs the colour difference signals (P<sub>B</sub>/P<sub>R</sub>) and luminance signal (Y) separately in order to achieve high fidelity in reproducing colours.

- The description of the component video input terminals depends on the television or monitor (e.g. Y/P<sub>B</sub>/P<sub>R</sub>, Y/B-Y/R-Y, Y/C<sub>B</sub>/C<sub>R</sub>). Connect to terminals of the same colour.
- When making this connection, select “Video/YPbPr” (Video and YPbPr) or “S-Video/YPbPr” (S-Video and YPbPr) from QUICK SETUP (→ page 16). If “RGB/No Output” (RGB only) is selected, the RGB signal is output from the SCART (AV) terminal, but no signal is output from the component video output terminals.

### Back of this unit



\* This audio connection will enable you to play audio from your television through your home theater system. Refer to “Operating other equipment” (→ page 39).

You can also connect to the AUX terminals on this unit. The TV AUDIO IN and AUX terminals are for external audio input.

### To enjoy progressive video

- Connect to a progressive output compatible television.
  - ① Set “Video Output” to “Off” (→ page 32, “HDMI” menu).
  - ② Set “Video Output Mode” to “480p” or “576p”, and then follow the instructions on the menu screen (→ page 28, Picture Menu).
- 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 the FM and AM antennas

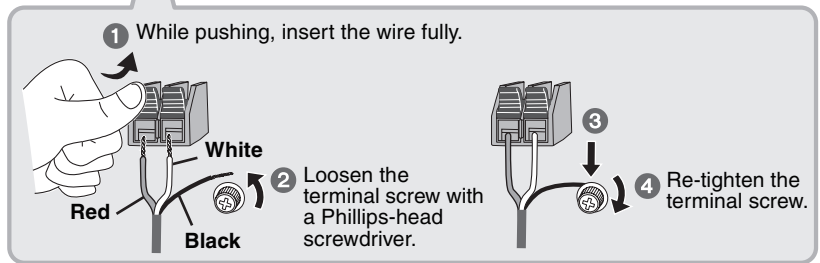
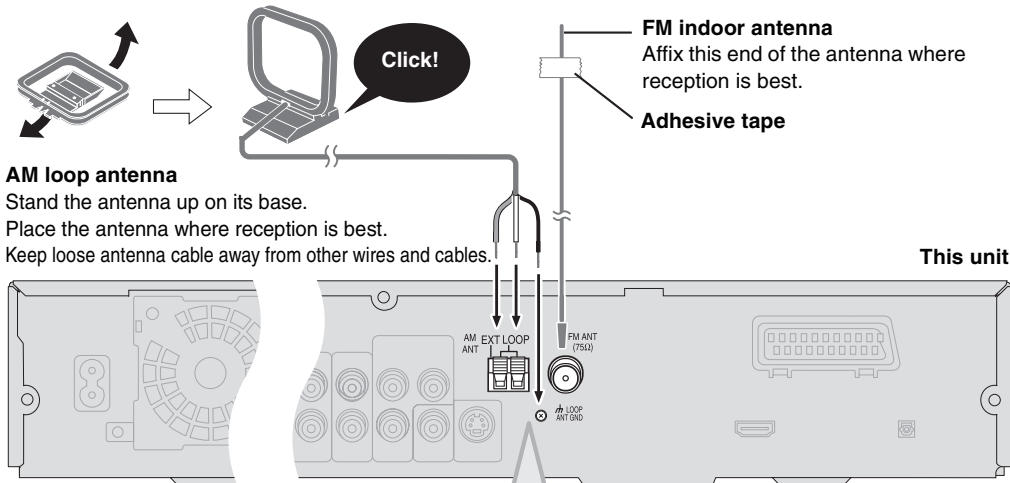
AM loop antenna



FM indoor antenna



- Using an outdoor antenna (optional) (→ page 35).

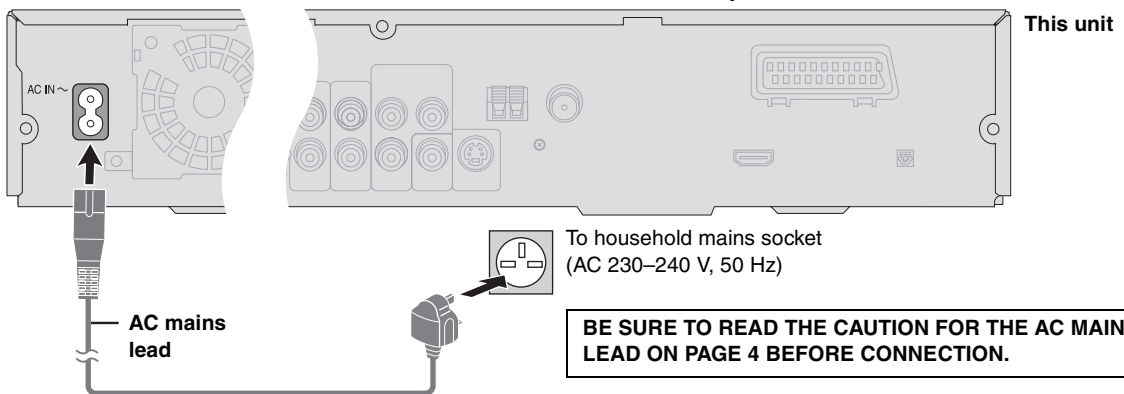


## STEP 5 AC mains lead connection

AC mains lead



- Connect the AC mains lead after all other connections are complete.



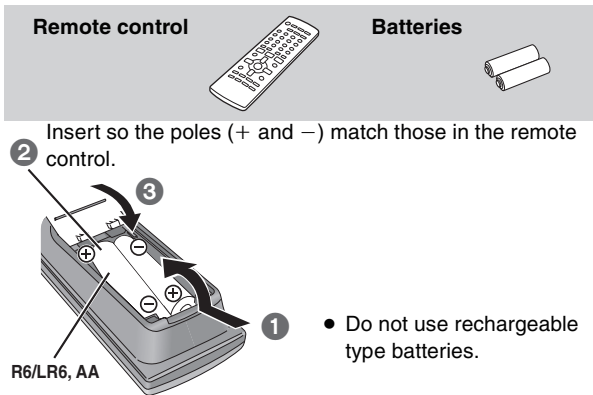
### Conserving power

This unit consumes a small amount of power, even when it is turned off (approx. 0.5 W). To save power when the unit is not to be used for a long time, unplug it from the household mains socket. You will need to reset some memory items after plugging in the unit.

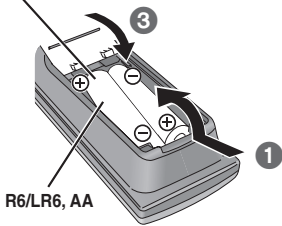
### Note

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.

## STEP 6 Preparing the remote control



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



- Do not use rechargeable type batteries.

### Do not:

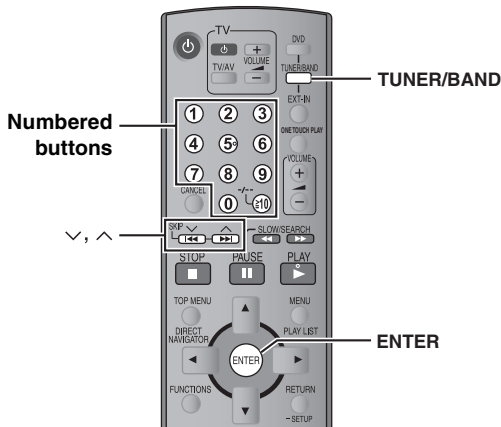
- mix old and new batteries.
  - use different types at the same time.
  - heat or expose to flame.
  - take apart or short circuit.
  - attempt to recharge alkaline or manganese batteries.
  - use batteries if the covering has been peeled off.
- Mishandling of batteries can cause electrolyte leakage which can severely damage the remote control.

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

### Use

Aim at the remote control signal sensor (→ page 17), avoiding obstacles, at a maximum range of 7 m directly in front of the unit.

## STEP 7 Presetting the radio stations



Up to 15 stations can be set in each band, FM and AM.

- Press [TUNER/BAND] to select “FM” or “AM”.
  - Press [-TUNE MODE] to select “MANUAL”.  
Each time you press the button:  
MANUAL ↔ PRESET
  - Press [v TUNING ^] to tune to the preferred frequency.
    - To start automatic tuning, press and hold [v TUNING ^] until the frequency starts scrolling. Tuning stops when a station is found.
  - While listening to the broadcast Press [ENTER].
  - 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. To select 12:  
[≥10] → [1] → [2]
- Alternatively, press [v, ^], and then press [ENTER].

### Confirming the preset channels

- Press [TUNER/BAND] to select “FM” or “AM”.
  - Press [-TUNE MODE] to select “PRESET”.  
Each time you press the button:  
MANUAL ↔ PRESET
  - Press the numbered buttons to select the channel.
    - To select a 2-digit number e.g. Display
    - e.g. 12: [≥10] → [1] → [2]
- Alternatively, press [v, ^].

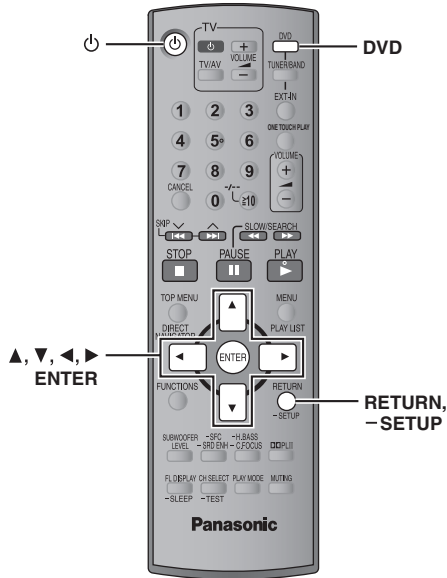


# STEP 8 Performing QUICK SETUP

The QUICK SETUP screen assists you to make necessary settings.

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

- This remote control can perform some basic television operations (→ page 39).



1		Turn on the unit.
2		Select "DVD/CD".
3		Press and hold to show the QUICK SETUP screen.
4	 Select Register 	Follow the messages and make the settings. <ul style="list-style-type: none"> <li>• Menu Language</li> <li>• TV Type</li> <li>• TV Aspect</li> <li>• Video Out (AV/Component)</li> </ul> (For details → below)
5		Press to finish QUICK SETUP.
6		Press repeatedly to exit.

### To change these settings later

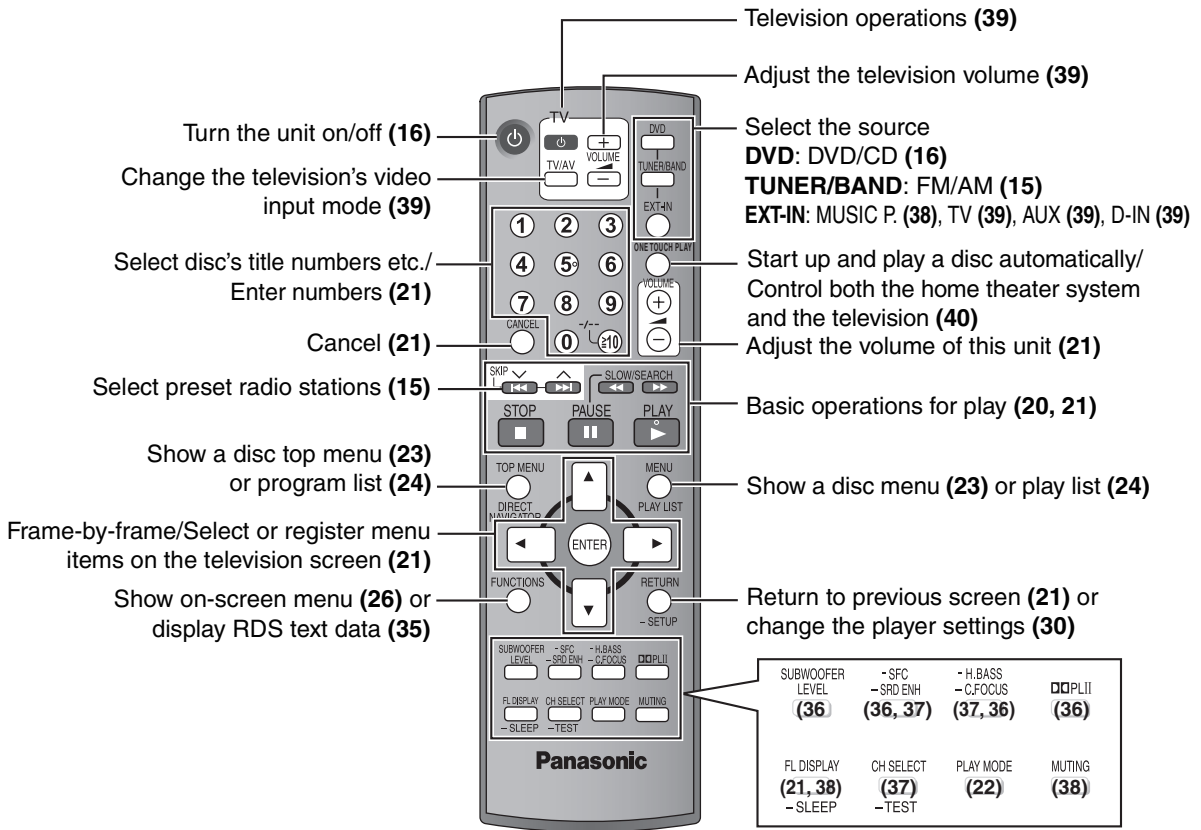
Select "QUICK SETUP" in the "Others" menu (→ page 32).

## Details of settings

<b>Menu Language</b> Choose the language for the on-screen messages.	<ul style="list-style-type: none"> <li>• <span style="border: 1px solid black; padding: 2px;">English</span></li> <li>• Français</li> <li>• Deutsch</li> <li>• Italiano</li> <li>• Español</li> <li>• Polski</li> <li>• Svenska</li> <li>• Nederlands</li> </ul>
<b>TV Type</b> Select to suit the type of television.	<ul style="list-style-type: none"> <li>• <span style="border: 1px solid black; padding: 2px;">Standard (Direct View TV)</span></li> <li>• Projection TV</li> <li>• CRT Projector</li> <li>• Plasma TV</li> <li>• LCD TV/Projector</li> </ul>
<b>TV Aspect</b> Choose the setting to suit your television and preference.	<ul style="list-style-type: none"> <li>• <span style="border: 1px solid black; padding: 2px;">4:3</span>: Regular aspect television</li> <li>• 16:9: Widescreen television</li> </ul>
<b>Video Out (AV/Component)</b> Choose the video signal format to be output from the SCART (AV) and Component terminal.	<ul style="list-style-type: none"> <li>• <span style="border: 1px solid black; padding: 2px;">Video/YPbPr</span>: Video and YPbPr</li> <li>• S-Video/YPbPr: S-Video and YPbPr</li> <li>• RGB/No Output: RGB only</li> </ul>

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

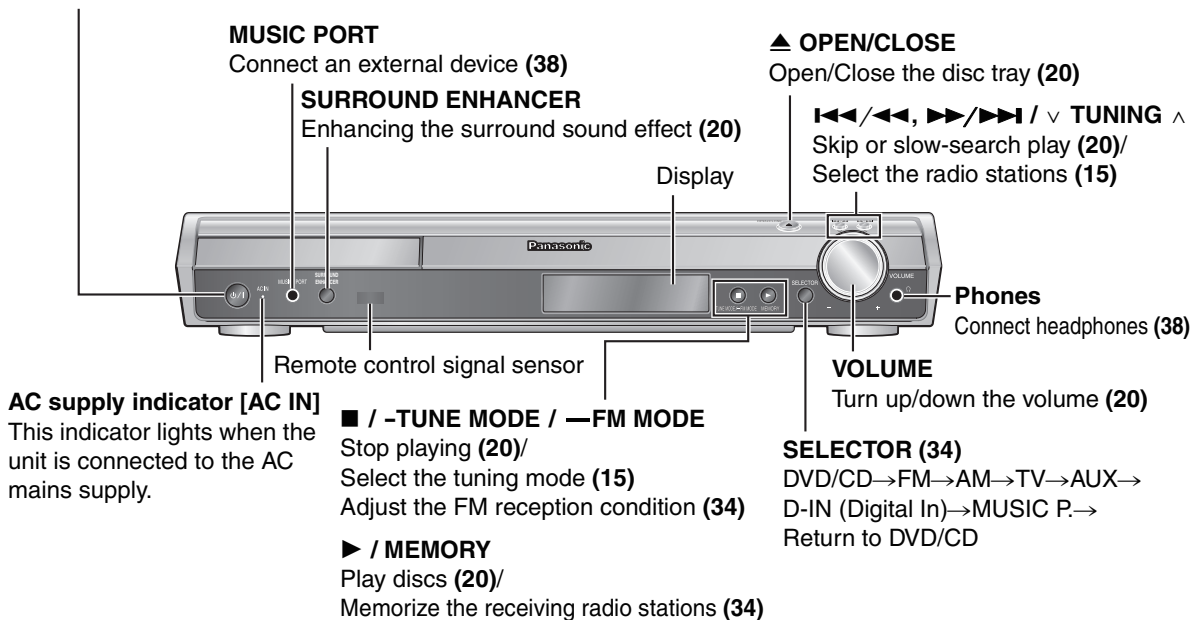
See page references in parentheses.



**To use functions labeled with "—":**  
 Press and hold the button for at least 2 seconds.







## Standby/on switch [⏻/⏻]

Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power. (20)



# Discs that can be played

Operations in these instructions are described mainly with formats. Icons such as **DVD-V** show the formats.

	<b>DVD-Video</b> <b>DVD-V</b> —
	<b>DVD-Audio</b> <b>DVD-A</b> <b>DVD-V</b> <ul style="list-style-type: none"> <li>• <b>DVD-V</b> Some DVD-Audio discs contain DVD-Video content. To play DVD-Video content, select “Play as DVD-Video” in Other Menu (→ page 29).</li> </ul>
	<b>Video CD</b> <b>VCD</b> <ul style="list-style-type: none"> <li>• Including SVCD (Conforming to IEC62107)</li> </ul>
	<b>DVD-RAM</b> <b>DVD-VR</b> <b>MP3</b> <b>JPEG</b> <b>MPEG4</b> <b>DivX</b> *1 <ul style="list-style-type: none"> <li>• <b>DVD-VR</b> Recorded with devices using Version 1.1 of the Video Recording Format (a unified video recording standard), such as DVD video recorders, DVD video cameras, personal computers, etc.</li> <li>• <b>JPEG</b> Recorded with Panasonic SD multi cameras or DVD video recorders using the DCF (Design rule for Camera File system) Standard Version 1.0.</li> <li>• <b>MPEG4</b> 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].</li> </ul>
	<b>DVD-R (DVD-Video)*2/DVD-RW (DVD-Video)</b> <b>DVD-V</b> <ul style="list-style-type: none"> <li>• Discs recorded and finalized*3 on DVD video recorders or DVD video cameras.</li> </ul> <b>DVD-R (VR)*2/DVD-RW (VR)</b> <b>DVD-VR</b> <ul style="list-style-type: none"> <li>• Discs recorded and finalized*3 on DVD video recorders or DVD video cameras using Version 1.1 (or 1.2 DVD-R DL only) of the Video Recording Format (a unified video recording standard).</li> </ul> <b>DVD-R/DVD-RW</b> <b>MP3</b> <b>JPEG</b> <b>MPEG4</b> <b>DivX</b> *1 <ul style="list-style-type: none"> <li>• Finalize*3 the disc after recording.</li> </ul>
—	<b>+R (Video)*2/+RW (Video)</b> <b>DVD-V</b> <ul style="list-style-type: none"> <li>• Discs recorded and finalized*3 on DVD video recorders or DVD video cameras.</li> </ul>
	<b>CD</b> <b>CD</b> <b>WMA</b> <b>MP3</b> <b>JPEG</b> <b>VCD</b> <b>MPEG4</b> <b>DivX</b> *1 <ul style="list-style-type: none"> <li>• This unit can play CD-R/RW recorded with the above formats. Close the sessions or finalize*3 the disc after recording.</li> <li>• <b>CD</b> This unit is compatible with HDCD, but does not support the Peak Extend function (a function which expands the dynamic range of high-level signals). HDCD-encoded CDs sound better because they are encoded with 20 bits, as compared with 16 bits for all other CDs.</li> <li>• <b>WMA</b> <b>MP3</b> <b>JPEG</b> This unit also plays HighMAT discs.</li> <li>• <b>WMA</b> This unit does not support Multiple Bit Rate (MBR: a file that contains the same content encoded at several different bit rates).</li> </ul>

\*1Functions added with DivX Ultra are not supported.

\*2Includes single-sided, double-layered discs.

\*3A process that allows play on compatible equipment.

- It may not be possible to play all the above-mentioned discs in some cases due to the type of disc or condition of the recording.

## ■ Discs that cannot be played

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.

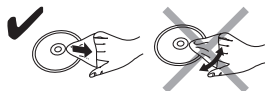
## ■ Video systems

- 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 31, “NTSC Disc Output” in “Video” menu).

## Disc caution

### ■ *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, benzene, 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.

## Maintenance

Clean this unit with a soft, dry cloth.

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

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

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



# Basic play

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

## Using this unit

**1** Turn the unit on.



**2** Select "DVD/CD".



- Select "TV", "AUX", "FM" or "AM" to enjoy television, cable TV programs or radio. (Refer to pages 10 to 14 for the necessary connections.)

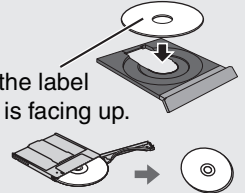
**3** Open the disc tray.

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.



**SURROUND ENHANCER**  
(→ page 37)

■ (Stop)



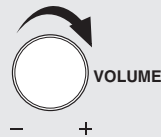
**5** Start play.



The tray is automatically closed.

To change the sound quality  
→ page 36

**6** Adjust the volume.



Press to skip.

Press and hold to

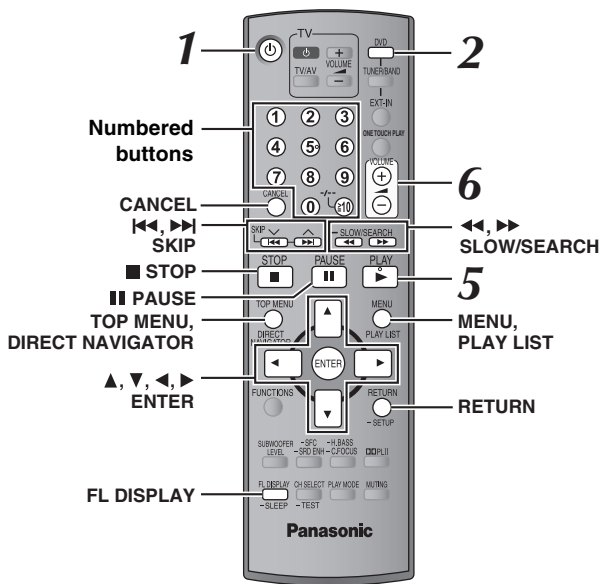
- search during play
- start slow-motion play during pause (**Motion picture part**)
- Press [▶] (Play) to start normal play.



### Note

- Discs continue 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



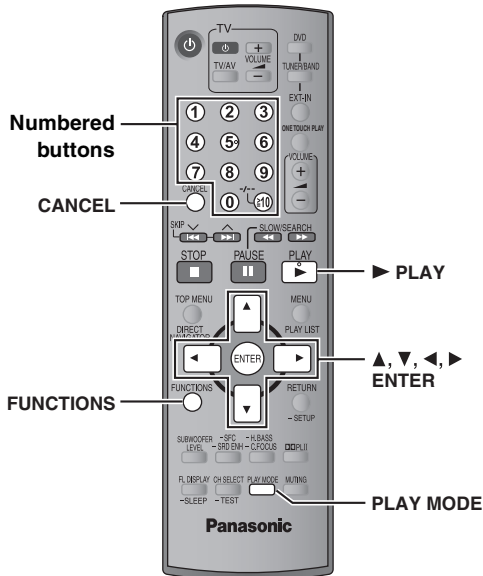
<p><b>On-screen item select</b></p>	<p>—</p>
<p><b>Enter number</b></p>	<p><b>DVD-VR</b> <b>DVD-A</b> <b>DVD-V</b> <b>VCD</b> <b>CD</b> e.g. To select 12: [≥10] → [1] → [2] <b>VCD</b> with playback control Press [■ STOP] to cancel the PBC function, and then press the numbered buttons. <b>WMA</b> <b>MP3</b> <b>JPEG</b> <b>MPEG4</b> <b>DivX</b> e.g. To select 123: [1] → [2] → [3] → [ENTER] ● Press [CANCEL] to cancel the number(s).</p>
<p><b>Stop</b></p>	<p>The position is memorized while "RESUME" is on the display. ● Press [▶ PLAY] to resume. ● Press [■ STOP] again to clear the position.</p>
<p><b>Pause</b></p>	<p>● Press [▶ PLAY] to restart play.</p>
<p><b>Skip</b></p>	<p>● <b>WMA</b> <b>MP3</b> <b>JPEG</b> <b>MPEG4</b> <b>DivX</b> [This feature does not work during program and random play (→ page 22).] [▲, ▼]: <b>Group skip</b> [◀, ▶]: <b>Content skip</b></p>
<p><b>Search (during play)</b></p> <p><b>Slow-motion (during pause)</b></p>	<p>● Up to 5 steps. ● Press [▶ PLAY] to start normal play. ● <b>VCD</b> Slow-motion: forward direction only. ● <b>MPEG4</b> <b>DivX</b> Slow-motion: Does not work.</p>
<p><b>Frame-by-frame (during pause)</b></p>	<p><b>DVD-A</b> (Motion picture part) <b>DVD-VR</b> <b>DVD-V</b> <b>VCD</b> ● <b>VCD</b> Forward direction only.</p>
<p><b>Disc menu</b></p>	<p><b>DVD-A</b> <b>DVD-V</b> Shows a disc top menu. <b>DVD-VR</b> Press the button to show the programs (→ page 24).</p>
<p><b>Return to previous screen</b></p>	<p>—</p>
<p><b>This unit display</b></p>	<p><b>DVD-VR</b> <b>DVD-A</b> <b>DVD-V</b> <b>WMA</b> <b>MP3</b> <b>MPEG4</b> <b>DivX</b> Time display ↔ Information display (e.g. <b>DVD-VR</b> Program number) <b>JPEG</b> When Slideshow (→ page 27) is on: SLIDE ↔ Contents number When Slideshow is off: PLAY ↔ Contents number</p>



Basic play

RQT8724

# Convenient functions



## Displaying current playback condition

FUNCTIONS

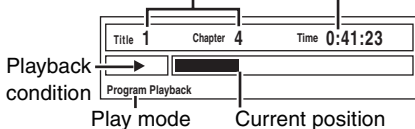
Press [FUNCTIONS].

Each time you press the button:

Main menu (→ page 26) → Basics → Details  
 ↑ off (No on-screen display) ←

### Basics

e.g. **DVD-V** Current playback number Elapsed play time



### 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.

## All group, Program and Random play

PLAY MODE

- Selecting "Play as Data Disc" in Other Menu (→ page 29) will be effective if the following functions are not available to play WMA, MP3, JPEG, MPEG4 or DivX video contents.
- **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 (Normal play) ←

To exit the all group, program and random mode

Press [PLAY MODE] several times while stopped.

## All group play

**DVD-A**

Press [▶ PLAY].

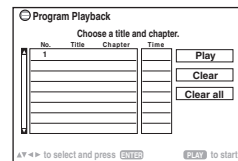
All Group Playback

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].

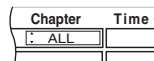
## To select an item using the cursor buttons

Press [ENTER] and [▲, ▼] to select an item, and then press [ENTER] again to register.

## 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]).

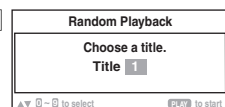
## To clear the whole program

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

- 1 **DVD-A** **DVD-V** **WMA** **MP3** **JPEG** **MPEG4** **DivX** 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**

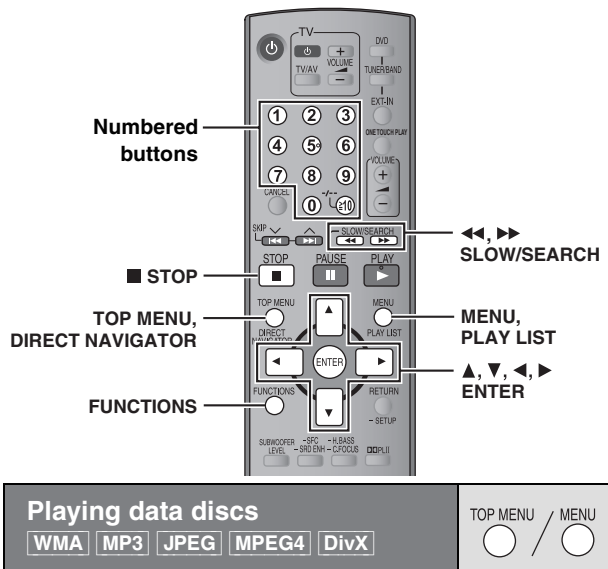
- To enter all groups, press [◀, ▶] to select "All" and press [ENTER].

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

- 2 Press [▶ PLAY].



# Playing data discs using navigation menus



## Using the submenu

- While Navigation Menu is displayed Press [FUNCTIONS].
- 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
Previous group	To go to previous group
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.

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



- 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".

- Press [▶] to select "Find" and press [ENTER]. The search result screen appears.

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

Selecting "Play as Data Disc" in Other Menu (→ page 29) will be effective if the following functions are not available to play WMA, MP3, JPEG, MPEG4 or DivX video contents.

- Playing HighMAT™ discs (→ page 24)

## Playing items in order (Playback Menu)

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

e.g.

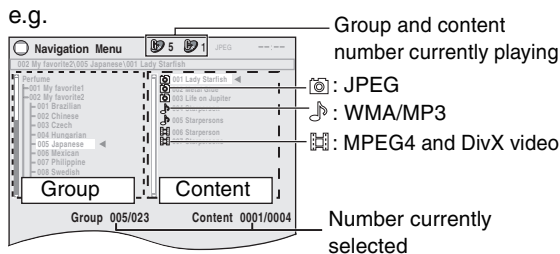
All contents	All	Total 434
WMA/MP3	Audio	Total 7
JPEG	Picture	Total 427
MPEG4 and DivX video	Video	Total 2

\* to select and press [ENTER]

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

## Playing from the selected item (Navigation Menu)

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



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

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

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.)

(Continued on next page)

## Selecting a track using CD text

CD

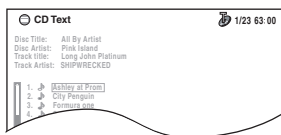
TOP MENU / MENU



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



- 2 Press [▲, ▼] to select the track and press [ENTER].
  - Press [FUNCTIONS] to show the playback condition and current position.

## Playing HighMAT™ discs

WMA MP3 JPEG

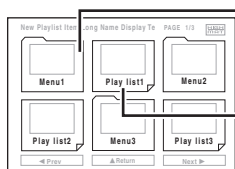
TOP MENU / MENU



- 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.

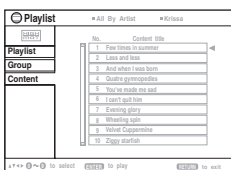


Menu: Takes you to the next menu which shows play lists or another menu  
 Playlist: play starts

## Selecting from the list

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

e.g.



- 2 Press [◀] followed by [▲, ▼] to switch among "Playlist", "Group" and "Content" lists.
- 3 Press [▶] followed by [▲, ▼] to select an item and press [ENTER].

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

DVD-VR

DIRECT NAVIGATOR / PLAY LIST

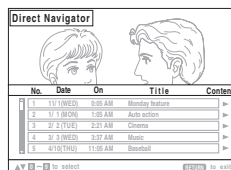


- Titles appear only if the titles are recorded on the disc.
- You cannot edit programs, playlists and disc titles.

## Playing the programs

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

e.g.



- 2 Press [▲, ▼] or the numbered buttons to select the program.
  - To select a 2-digit number e.g. 12: [≥10] → [1] → [2]
  - Press [▶] to show the contents of the program and the disc.

- 3 Press [ENTER].

## Playing a playlist

This works only when the disc contains a play list.

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

e.g.



- 2 Press [▲, ▼] or the numbered buttons to select the playlist.
  - To select a 2-digit number e.g. 12: [≥10] → [1] → [2]
- 3 Press [ENTER].

## Playing scenes one by one

- ① While the playlist menu is displayed Press [▶].
- ② Press [▲, ▼] to select "Scene List" and press [ENTER].
  - "Contents" shows playlist information.
- ③ Press [▲, ▼, ◀, ▶] to select a scene and press [ENTER].

## Tips for making data discs

- 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.

## 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.

## 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).

Files must have the extension (→ below).

**WMA** (Extension: “.WMA” or “.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).

**MP3** (Extension: “.MP3” or “.mp3”)

- Compatible compression rate: between 32 kbps and 320 kbps
- This unit does not support ID3 tags.
- Compatible sampling rates:
  - DVD-RAM, DVD-R/RW: 11.02, 12, 22.05, 24, 44.1 and 48 kHz
  - CD-R/RW: 8, 11.02, 12, 16, 22.05, 24, 32, 44.1 and 48 kHz

**JPEG** (Extension: “.JPG”, “.jpg”, “.JPEG” or “.jpeg”)

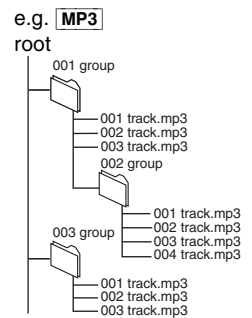
- JPEG files taken on a digital camera that conform to DCF Standard (Design rule for Camera File system) Version 1.0 are displayed. Files that have been altered, edited or saved with computer picture editing software may not be displayed.
- This unit cannot display moving pictures, MOTION JPEG and other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

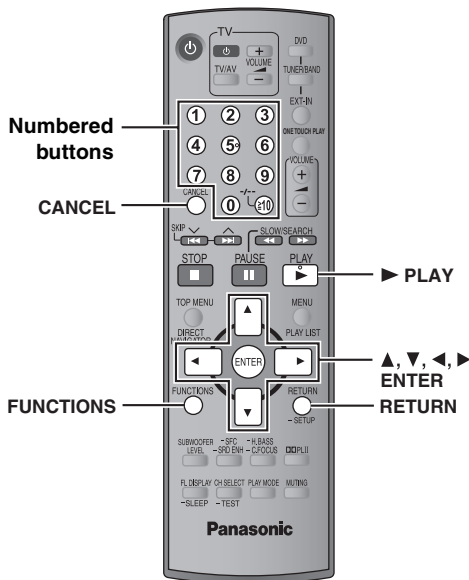
**MPEG4** (Extension: “.ASF” or “.asf”)

- 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 video recorders with this unit.
- The recording date may differ from that of the actual date.

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

- You can play 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.
- GMC (Global Motion Compensation) is 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.





<b>1</b>	FUNCTIONS	<b>Show the Main menu.</b>
<b>2</b>	Select  ENTER  Go to the next menu Register Return to the previous menu	<b>Select the menu.</b> e.g. <b>DVD-V</b>
<b>3</b>	Select  Register ENTER Register 1 2 3 4 5 6 7 8 9 0 ±10	<b>Make the settings.</b> e.g. <b>DVD-V</b>
<b>4</b>	RETURN	<b>Press to exit.</b>

**Main menu**  
Items shown differ depending on the type of disc.

<b>Program Group</b> <b>Title</b> <b>Chapter</b> <b>Track</b> <b>Playlist</b> <b>Content</b>	<b>To start from a specific item</b> e.g. <b>DVD-VR</b> To select Program 12 Press the numbered buttons: [1] → [2] → [ENTER]
-------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------

Functions	Program Search 12
Program 2/16	Time 0:34:15
Audio	

<b>Time</b>	(Time Slip and Time Search do not work with +R/+RW discs.) <b>To skip incrementally or decrementally (Time Slip for play only)</b> 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 [▲, ▼]. <b>To start from a specific time (Time Search)</b> <b>To change remaining/elapsed time display</b>
<b>Video</b>	<b>MPEG4</b> <b>DivX</b> <b>To display pixel number</b> <b>DivX</b> fps (frame per second) is also displayed.
<b>Audio</b>	<b>DVD-A</b> <b>DVD-V</b> <b>DivX</b> (with multiple soundtracks) <b>To select audio soundtrack</b> <b>DVD-VR</b> <b>VCD</b> <b>DivX</b> <b>To select "L", "R" or "LR"</b> <b>DVD-V</b> (Karaoke disc) <b>To select "On" or "Off" for vocals</b> • Read the disc's instructions for details. <b>Signal type/data</b> LPCM/PPCM/DD 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 • <b>DivX</b> It may take some time for play to start if you change the audio on a DivX video disc.
<b>Still Picture</b>	<b>WMA</b> <b>MP3</b> <b>To display the current bitrate or sampling frequency</b>
<b>Thumbnail</b>	<b>To show thumbnail images</b>
<b>Subtitle</b>	<b>DVD-V</b> <b>DivX</b> (with multiple subtitles) <b>VCD</b> (SVCD only) <b>To select subtitle language</b> • On +R/+RW, a subtitle number may be shown for subtitles that are not displayed. • <b>DVD-VR</b> "On" or "Off" appears only with discs that contain subtitle on/off information (Subtitle on/off information cannot be recorded using Panasonic DVD Recorders).

<b>Marker (VR)</b>	<b>DVD-VR</b> <b>To recall a marker recorded on DVD-Video recorders</b> Press [▲, ▼] → Press [ENTER].
<b>Angle</b>	(with multiple angles) <b>To select a video angle</b>
<b>Rotate Picture</b>	<b>To rotate a picture</b>
<b>Slideshow</b>	<b>To turn on/off slideshow</b> On ←→ Off <b>To change the slideshow timing</b> 1 (Fast) to 5 (Slow)
<b>Other Settings</b>	(→ below)

### Other Settings

Items shown differ depending on the type of disc.

<b>Play Speed</b>	<b>DVD-A</b> (Motion picture part) <b>DVD-VR</b> <b>DVD-V</b> <b>To change play speed</b> – from “×0.6” to “×1.4” • Press [▶ PLAY] to return to normal play. • After you change the speed – Dolby Pro Logic II and Sound Enhancement have no effect. – Audio output switches to 2-channel stereo. – Sampling frequency of 96 kHz is converted to 48 kHz. • This function may not work depending on the disc’s recording.
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### ■ Play Menu

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

<b>Repeat</b>	<b>DVD-VR</b> : Program→All→Off • During playlist play: Scene→Playlist→Off <b>DVD-A</b> : Track→Group*→Off <b>DVD-V</b> : Chapter→Title*→Off <b>VCD CD</b> : Track→All→Off <b>WMA MP3 MPEG4 DivX</b> : Content→Group*→Off <b>JPEG</b> : Group*→Off *“All” is displayed during all group ( <b>DVD-A</b> ), program or random play.
<b>A-B Repeat</b>	Except <b>JPEG DVD-VR</b> (Still picture part) <b>MPEG4 DivX</b> <b>To repeat a specified section</b> Press [ENTER] at the starting and ending points. Press [ENTER] again to cancel.

<b>Marker</b>	Except <b>DVD-VR</b> <b>To mark up to 5 positions to play again</b> Press [ENTER] (The unit is now ready to accept markers.) To mark a position: Press [ENTER] (at the desired point). To mark another position: Press [◀, ▶] to select “*” → Press [ENTER]. To recall a marker: Press [◀, ▶] → Press [ENTER]. To erase a marker: Press [◀, ▶] → Press [CANCEL]. • This feature does not work during program and random play. • Markers you add are cleared when you open the disc tray or switch the unit to standby.
<b>Advanced Disc Review</b>	<b>DVD-VR</b> (Except still picture part) <b>DVD-V</b> (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 30). <b>When you find a title/program to play</b> Press [▶ PLAY]. • This may not work depending on the disc and the play position. • <b>DVD-VR</b> This does not work when playing a playlist (→ page 24).

### ■ Picture Menu

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

Items shown differ depending on the type of disc.

Picture Menu (Continued)

Video Output Mode

To select suitable picture quality with your television

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

When HDMI connection is being used and "Video Output" (→ page 32, "HDMI" menu) is set to "On"

- \*480p/576p/720p (progressive)
- \*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 "576p" or "480p".)

- Output from the COMPONENT VIDEO OUT terminals will be "576p" or "480p". When HDMI connection is **not** being used and "Video Output" (→ page 32, "HDMI" menu) is set to "Off"

- \*480p/576p (progressive)
- \*480i/576i (interlace)

When you select "xxx\*p" (progressive) and 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

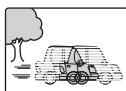
If you have chosen "xxx\*p" (progressive) or "1080i" (interlace) (→ above), select the method of conversion for progressive output to suit the type of material.

- 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.

**Cinema:** 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.

Source Select

DivX

When you select "Auto" the constructing method of the DivX contents is automatically distinguished and output. If the picture is distorted, select "I (Interlace)" or "P (Progressive)" depending on which constructing method was used when the contents were recorded to disc.

**Auto, I (Interlace), P (Progressive)**

HD Picture Enhancer

This works when the HDMI connection is being used and "Video Output" (→ page 32, "HDMI" menu) is set to "On".

**To sharpen the "720p" and "1080i" picture quality**

Off ↔ 1 ↔ 2 ↔ 3 (sharpest picture)

HDMI Colour Space

This works when the HDMI connection is being used and "Video Output" (→ page 32, "HDMI" menu) is set to "On".

**To select suitable picture colour with your television**

**RGB**  
**YCbCr (4:4:4)**  
**YCbCr (4:2:2)**

- If the setting above is not compatible with your television, it will not be displayed.

- "RGB Range" (→ page 32, "HDMI" menu) is available when "RGB" is selected.

Audio Menu

Dolby Pro Logic II

(→ page 36, Enhancing the stereo sound: Dolby Pro Logic II)

Dialogue Enhancer

**To make the dialogue in movies easier to hear**

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

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

**On** ↔ **Off**

Sound Enhancement

**To enjoy comfortable, analog-like sound**

**DVD-VR** **DVD-V** (Discs recorded with 48 kHz only)

**WMA** **MP3** (Disc recording is other than 8 kHz, 16 kHz or 32 kHz)

**VCD** **CD**

**On** ↔ **Off**

- This may have no effect depending on the disc's recording.
- This does not work with MP3 on DVD-RAM or DVD-R/RW.



■ **Display Menu**

<b>Information</b>	JPEG On ←→ Off
<b>Subtitle Position</b>	0 to -60 (in 2 unit steps)
<b>Subtitle Brightness</b>	Auto, 0 to -7
<b>4:3 Aspect</b>	<p><b>To select how to show images made for 4:3 aspect screens on a 16:9 aspect television</b></p> <p><b>Normal:</b> Laterally stretches images.</p> <p><b>Auto:</b> Expands 4:3 letterbox images to fill more of the screen. Other images appear in full in the center of the screen.</p> <p><b>Shrink:</b> Images appear in the center of the screen.</p> <p><b>Zoom:</b> Expands to 4:3 aspect ratio.</p> <p>If your television has a similar feature, use it instead for a better effect.</p>
<b>Just Fit Zoom</b>	<p><b>To select the appropriate screen size to fit your television screen</b></p> <p>DVD-A (Motion picture part)                  DVD-VR DVD-V VCD                  Auto, 4:3 Standard, European Vista, 16:9 Standard, American Vista, Cinemascope1, Cinemascope2</p> <p>e.g.</p> <p>MPEG4 DivX                  Standard (×0.25 full-screen), Original (actual recorded size), Full (full-screen)</p> <ul style="list-style-type: none"> <li>This may not work depending on the discs recording.</li> </ul>

<b>Manual Zoom</b>	<p><b>To zoom in and out manually</b></p> <ul style="list-style-type: none"> <li>in 0.01-unit steps from “×1.00” to “×1.60”</li> <li>in 0.02-unit steps from “×1.60” to “×2.00”</li> <li>in 0.05-unit steps from “×2.00” to “×4.00” (MPEG4 DivX only)</li> </ul> <ul style="list-style-type: none"> <li>To change the steps more quickly, press and hold [▲, ▼].</li> <li>MPEG4 DivX It may not be possible to zoom up to “×4.00” depending upon the connected television and its settings.</li> </ul>
<b>Bit Rate Display</b>	DVD-A (Motion picture part) DVD-VR DVD-V VCD MPEG4 DivX On ←→ Off
<b>GUI See-through</b>	<p><b>To make the on-screen menu transparent</b></p> Off, On, Auto
<b>GUI Brightness</b>	<p><b>To adjust the on-screen menu brightness</b></p> -3 to +3
<b>HDMI Status</b>	Indicates various information when connected with HDMI AV OUT terminal. (→ below, Confirming HDMI information)

■ **Other Menu**

<b>Setup</b>	(→ page 30)
<b>Play as DVD-Video</b> or <b>Play as DVD-Audio</b>	<p><b>To play DVD-Video contents of DVD-Audio</b></p> Select “Play as DVD-Video”.
<b>Play as DVD-VR,</b> <b>Play as HighMAT</b> or <b>Play as Data Disc</b>	<p><b>To use functions for data discs</b></p> (→ page 23) (To play JPEG, MP3, MPEG4 or DivX video contents on DVD-RAM, or to play a HighMAT disc without using HighMAT function) Select “Play as Data Disc”.

■ **Confirming HDMI information**

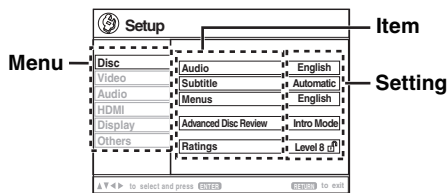
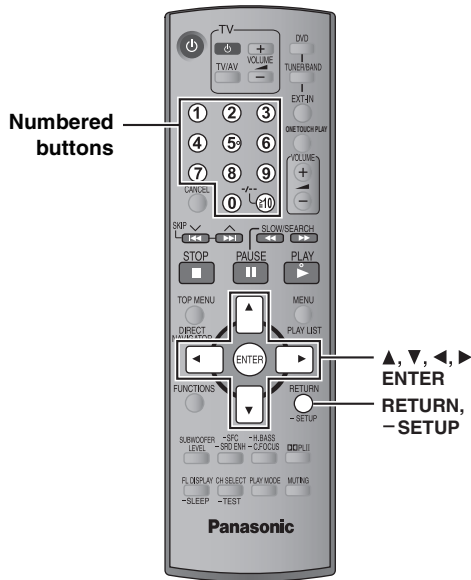
<p>■ HDMI Status—HDMI is connected.</p> <p>HDMI Information</p> <table border="1"> <tr> <td>Audio Stream</td> <td>PCM</td> </tr> <tr> <td>Max Channel</td> <td>2ch</td> </tr> <tr> <td>Video Format</td> <td>480p/576p/720p/1080i</td> </tr> <tr> <td>Colour Space</td> <td>YCbCr (4:4:4)/YCbCr (4:2:2)/RGB</td> </tr> </table>	Audio Stream	PCM	Max Channel	2ch	Video Format	480p/576p/720p/1080i	Colour Space	YCbCr (4:4:4)/YCbCr (4:2:2)/RGB	<p>Connection status</p> <p>Shows the output signal type.</p> <p>Shows the number of audio channels.</p> <p>(→ page 28, Video Output Mode)</p> <p>(→ page 28, HDMI Colour Space)</p>
Audio Stream	PCM								
Max Channel	2ch								
Video Format	480p/576p/720p/1080i								
Colour Space	YCbCr (4:4:4)/YCbCr (4:2:2)/RGB								

**Note**

- All possible types of output are displayed.
- The current output for “Audio Stream”, “Video Format” and “Colour Space” 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 32, “HDMI” menu), “--” will be displayed in “Audio Stream” and “Max Channel”.



# Changing the player settings



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

<b>1</b>		<p><b>Press and hold to show the Setup menu.</b> If you have not performed <b>QUICK SETUP</b> (→ page 16), the <b>QUICK SETUP</b> screen appears.</p>
<b>2</b>	<p>Select</p>	<p><b>Select the menu.</b> • Press [▶] to access the item.</p>
<b>3</b>	<p>Select</p> <p>Register</p>	<p><b>Select the item.</b></p>
<b>4</b>	<p>Select</p> <p>Register</p>	<p><b>Make the settings.</b></p>
<b>5</b>	<p>RETURN</p>	<p><b>Press repeatedly to exit.</b></p>

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

## ■ “Disc” menu

<p><b>Audio</b> Choose the audio language.</p>	<ul style="list-style-type: none"> <li>• <b>English</b> • French • German • Italian • Spanish • Polish</li> <li>• Swedish • Dutch • Original*<sup>1</sup> • Other*<sup>2</sup></li> </ul>
<p><b>Subtitle</b> Choose the subtitle language.</p>	<ul style="list-style-type: none"> <li>• <b>Automatic</b>*<sup>3</sup> • English • French • German • Italian • Spanish</li> <li>• Polish • Swedish • Dutch • Other*<sup>2</sup></li> </ul>
<p><b>Menus</b> Choose the language for disc menus. Changing the menu language in QUICK SETUP also changes this setting.</p>	<ul style="list-style-type: none"> <li>• <b>English</b> • French • German • Italian • Spanish • Polish</li> <li>• Swedish • Dutch • Other*<sup>2</sup></li> </ul>
<p><b>Advanced Disc Review</b> (→ page 27)</p>	<ul style="list-style-type: none"> <li>• <b>Intro Mode</b>: Reviews each title/program.</li> <li>• <b>Interval Mode</b>: Reviews not only each title/program but also each 10-minute interval within a title/program.</li> </ul>
<p><b>Ratings</b> Set a rating level to limit DVD-Video play.</p>	<p>Setting ratings (When level 8 is selected)</p> <ul style="list-style-type: none"> <li>• <b>8 No Limit</b> • 1 to 7 • 0 Lock All: To prevent play of discs without rating levels.</li> </ul> <p>When you select your ratings level, a password screen is shown. Follow the on-screen instructions. <b>Do not forget your password.</b> 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.</p>



\*<sup>1</sup> The original language designated on the disc is selected.

\*<sup>2</sup> Input the appropriate code from the language code list (→ page 33).

\*<sup>3</sup> 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**

<p><b>TV Aspect</b> Choose the setting to suit your television and preference.</p>	<ul style="list-style-type: none"> <li>● <input type="checkbox"/> <b>4:3 Pan&amp;Scan</b>: Regular aspect television (4:3) The sides of the widescreen picture are cut off so it fills the screen (unless prohibited by the disc). </li> <li>● <input type="checkbox"/> <b>4:3 Letterbox</b>: Regular aspect television (4:3) Widescreen picture is shown in the letterbox style. </li> <li>● <input type="checkbox"/> <b>16:9</b>: Widescreen television (16:9)</li> </ul>
<p><b>TV Type</b> Select to suit the type of television.</p>	<ul style="list-style-type: none"> <li>● <input type="checkbox"/> <b>Standard (Direct View TV)</b></li> <li>● <input type="checkbox"/> <b>Projection TV</b></li> <li>● <input type="checkbox"/> <b>CRT Projector</b></li> <li>● <input type="checkbox"/> <b>Plasma TV</b></li> <li>● <input type="checkbox"/> <b>LCD TV/Projector</b></li> </ul>
<p><b>Time Delay</b> When connected with a Plasma display, adjust if you notice the audio is out of sync with the video.</p>	<ul style="list-style-type: none"> <li>● <input type="checkbox"/> <b>0ms</b></li> <li>● <input type="checkbox"/> <b>20ms</b></li> <li>● <input type="checkbox"/> <b>40ms</b></li> <li>● <input type="checkbox"/> <b>60ms</b></li> <li>● <input type="checkbox"/> <b>80ms</b></li> <li>● <input type="checkbox"/> <b>100ms</b></li> </ul>
<p><b>Video Out (AV/Component)</b> Choose the video signal format to be output from the SCART (AV) and Component terminal.</p>	<ul style="list-style-type: none"> <li>● <input type="checkbox"/> <b>Video/YPbPr</b>: Video and YPbPr</li> <li>● <input type="checkbox"/> <b>RGB/No Output</b>: RGB only</li> <li>● <input type="checkbox"/> <b>S-Video/YPbPr</b>: S-Video and YPbPr</li> </ul>
<p><b>Still Mode</b> Specify the type of picture shown when paused.</p>	<ul style="list-style-type: none"> <li>● <input type="checkbox"/> <b>Automatic</b></li> <li>● <input type="checkbox"/> <b>Field</b>*4: The picture is not blurred, but picture quality is lower.</li> <li>● <input type="checkbox"/> <b>Frame</b>*4: Overall quality is high, but the picture may appear blurred.</li> </ul>
<p><b>NTSC Disc Output</b> Choose PAL 60 or NTSC output when playing NTSC discs (→ page 18, Video systems).</p>	<ul style="list-style-type: none"> <li>● <input type="checkbox"/> <b>PAL60</b>: When connected to a PAL television.</li> <li>● <input type="checkbox"/> <b>NTSC</b>: When connected to an NTSC television.</li> </ul>
<p><b>Picture/Video Output</b> Change the video signal format to be output for JPEG, MPEG4 and DivX video if picture output is not smooth during playback.</p>	<ul style="list-style-type: none"> <li>● <input type="checkbox"/> <b>Automatic</b></li> <li>● <input type="checkbox"/> <b>PAL</b></li> <li>● <input type="checkbox"/> <b>NTSC/PAL60</b>: Output will depend on “NTSC Disc Output” setting (→ above).</li> </ul>

\*4 Refer to “Frame still and field still” (→ page 47, Glossary).

■ **“Audio” menu**

<p><b>Dynamic Range Compression</b></p>	<ul style="list-style-type: none"> <li>● <input type="checkbox"/> <b>Off</b></li> <li>● <input type="checkbox"/> <b>On</b>: Adjusts 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)</li> </ul>
<p><b>Speaker Settings (→ page 33)</b> Set the delay time for your center and surround speakers.</p>	<ul style="list-style-type: none"> <li>● <b>Center</b>: <input type="text" value="0.0"/>/1.0/2.0/3.0/4.0/5.0 ms</li> <li>● <b>Surround (L/R)</b>: <input type="text" value="0.0"/>/5.0/10.0/15.0 ms</li> </ul>

(Continued on next page)



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

## ■ “HDMI” menu

<b>RGB Range</b> Set “HDMI Colour Space” to “RGB” (→ page 28, Picture Menu).	<ul style="list-style-type: none"> <li>● <input type="checkbox"/> <b>Standard</b></li> <li>● <b>Enhanced</b>: When the black and white images are not distinct.</li> </ul>
<b>Video Output</b> (This setting is irrelevant when connected through the VIDEO OUT or S-VIDEO OUT terminal.)	<ul style="list-style-type: none"> <li>● <input type="checkbox"/> <b>On</b>: When connected through the HDMI AV OUT terminal. Video is output from the HDMI terminal. Video is also output from the COMPONENT VIDEO OUT terminal, but only in 480p or 576p (progressive). When connected through the SCART (AV) terminal, RGB signal is not output.</li> <li>● <b>Off</b>: When connected through the COMPONENT VIDEO OUT or SCART (AV) terminal. Video is not output from the HDMI AV OUT terminal, but from the COMPONENT VIDEO OUT terminal according to the setting of the “Video Output Mode” (→ page 28, Picture Menu) or SCART (AV) terminal according to the setting of the “Video Out (AV/Component)” in the “Video” menu (→ page 31).</li> </ul>
<b>Audio Output</b>	<ul style="list-style-type: none"> <li>● <b>On</b>: 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.)</li> <li>● <input type="checkbox"/> <b>Off</b>: When audio output is not from the HDMI AV OUT terminal. (The audio is output using the settings of this unit.)</li> </ul>
<b>Control with HDMI</b> (HDAVI Control)	<ul style="list-style-type: none"> <li>● <input type="checkbox"/> <b>On</b>: The HDAVI Control function is available (→ page 40).</li> <li>● <b>Off</b></li> </ul>

## ■ “Display” menu

<b>Menu Language</b>	<ul style="list-style-type: none"> <li style="margin-right: 10px;">● <input type="checkbox"/> <b>English</b></li> <li style="margin-right: 10px;">● Français</li> <li style="margin-right: 10px;">● Deutsch</li> <li style="margin-right: 10px;">● Italiano</li> <li style="margin-right: 10px;">● Español</li> <li style="margin-right: 10px;">● Polski</li> <li style="margin-right: 10px;">● Svenska</li> <li style="margin-right: 10px;">● Nederlands</li> </ul>
<b>On-Screen Messages</b>	<ul style="list-style-type: none"> <li>● <input type="checkbox"/> <b>On</b></li> <li>● <b>Off</b></li> </ul>
<b>Background during Play</b> Select background during JPEG, MPEG4 and DivX video playback.	<ul style="list-style-type: none"> <li>● <input type="checkbox"/> <b>Black</b></li> <li>● <b>Grey</b></li> </ul>

## ■ “Others” menu

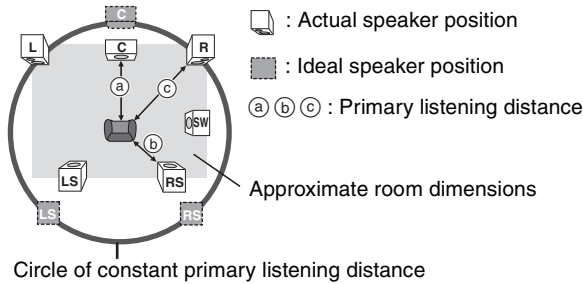
<b>FL Dimmer</b> Change the brightness of the unit’s display.	<ul style="list-style-type: none"> <li>● <input type="checkbox"/> <b>Bright</b></li> <li>● Dim</li> <li>● <b>Auto</b>: The display is dimmed, but brightens when you perform some operations.</li> </ul>
<b>DivX Registration</b> Display the unit’s registration code.	You need this registration code to purchase and play DivX Video-on-Demand (VOD) content (→ page 5, About DivX VOD content).
<b>QUICK SETUP</b>	<ul style="list-style-type: none"> <li>● <input type="checkbox"/> <b>Yes</b></li> <li>● <b>No</b></li> </ul>
<b>Re-initialise Setting</b> Return all values in the Setup menus to the default settings.	<ul style="list-style-type: none"> <li>● <b>Yes</b>: The password screen is shown if “Ratings” (→ page 30) is set. Please enter the same password. After “INIT” on the display disappears, turn the unit off and on again.</li> <li>● <input type="checkbox"/> <b>No</b></li> </ul>

## Changing the delay time of the speakers

**(Effective when playing multi-channel audio)**  
(Center and surround speakers only)

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

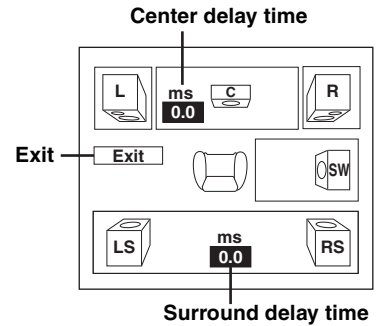
If you have to place the center or surround speakers closer to the seating position, adjust the delay time to make up for the difference.



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

a Center speaker		b Surround speaker	
Difference (Approx.)	Setting	Difference (Approx.)	Setting
30 cm	1.0 ms	150 cm	5.0 ms
60 cm	2.0 ms	300 cm	10.0 ms
90 cm	3.0 ms	450 cm	15.0 ms
120 cm	4.0 ms		
150 cm	5.0 ms		

- Press [**▲**, **▼**] to select the delay time box and press [**ENTER**].
- Press [**▲**, **▼**] to adjust the delay time and press [**ENTER**].



### To finish the speaker setting

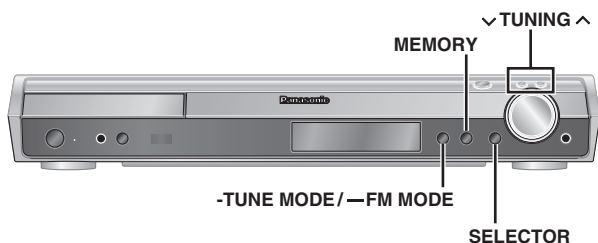
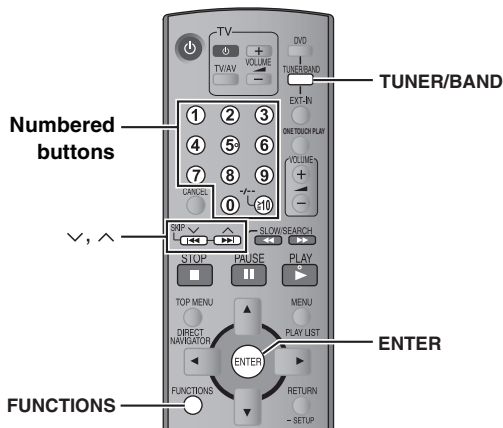
Press [**◀**] to select "Exit" and press [**ENTER**].

When you change the surround speaker setting for Dolby Digital, the setting also changes for Dolby Pro Logic II. e.g., the settings for Music are the same as those for Dolby Digital.

Dolby Digital	Dolby Pro Logic II	
	Music	Movie
0 ms	0 ms	10 ms
5 ms	5 ms	15 ms
10 ms	10 ms	20 ms
15 ms	15 ms	25 ms

## Language code list

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



## Tuning

*This unit only*

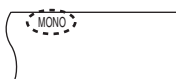
- 1 Press [SELECTOR] to select "FM" or "AM".
- 2 Press [-TUNE MODE] to select "MANUAL".  
Each time you press the button:  
MANUAL ↔ PRESET
- 3 Press [∇ TUNING ▲] to select the frequency.
  - To start automatic tuning, press and hold [∇ TUNING ▲] until the frequency starts scrolling. Tuning stops when a station is found.

### ■ If noise is excessive

When "FM" is selected

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 canceled when you change the frequency.

When "AM" is selected

Press [FUNCTIONS] on the remote control.

Each time you press the button: BP 2 ↔ BP 1

## Presetting the channel

Up to 15 stations can be set in each band, FM and AM.

- 1 Press [TUNER/BAND] to select "FM" or "AM".
- 2 Press [-TUNE MODE] to select "MANUAL".  
Each time you press the button:  
MANUAL ↔ PRESET

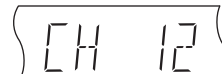
- 3 Press [∇ TUNING ▲] to tune to the preferred frequency and press [ENTER].

- 4 While the frequency and "PGM" are flashing on the display Press the numbered buttons to select a channel.

- To select a 2-digit number e.g. Display

e.g. To select 12:

[≥10] → [1] → [2]



Alternatively, press [∇, ▲], and then press [ENTER].

The station occupying a channel is erased if another station is preset to that channel.

## Presetting stations automatically

*This unit only*

Up to 15 stations can be set in each band, FM and AM.

- 1 Press [SELECTOR] to select "FM" or "AM".
- 2 Press [-TUNE MODE] to select "MANUAL".  
Each time you press the button:  
MANUAL ↔ PRESET
- 3 Press [∇ TUNING ▲] to tune to the frequency where you want to begin presetting.
  - Set the channel reception (FM: 87.50, AM: 522) if you want to begin presetting from the lowest frequency.
- 4 Press and hold [MEMORY].  
Release the button when "FM AUTO" or "AM AUTO" is displayed.  
  
This unit presets the stations it can receive into the channels in ascending order.
  - It automatically stops searching when 15 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 (→ left).

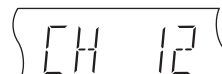
## Selecting the preset channels

- 1 Press [TUNER/BAND] to select "FM" or "AM".
- 2 Press [-TUNE MODE] to select "PRESET".  
Each time you press the button:  
MANUAL ↔ PRESET
- 3 Press the numbered buttons to select the channel.

- To select a 2-digit number e.g. Display

e.g. 12: [≥10] → [1] → [2]

Alternatively, press [∇, ▲].



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



## 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 (factory preset) → PTY → Frequency display

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

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

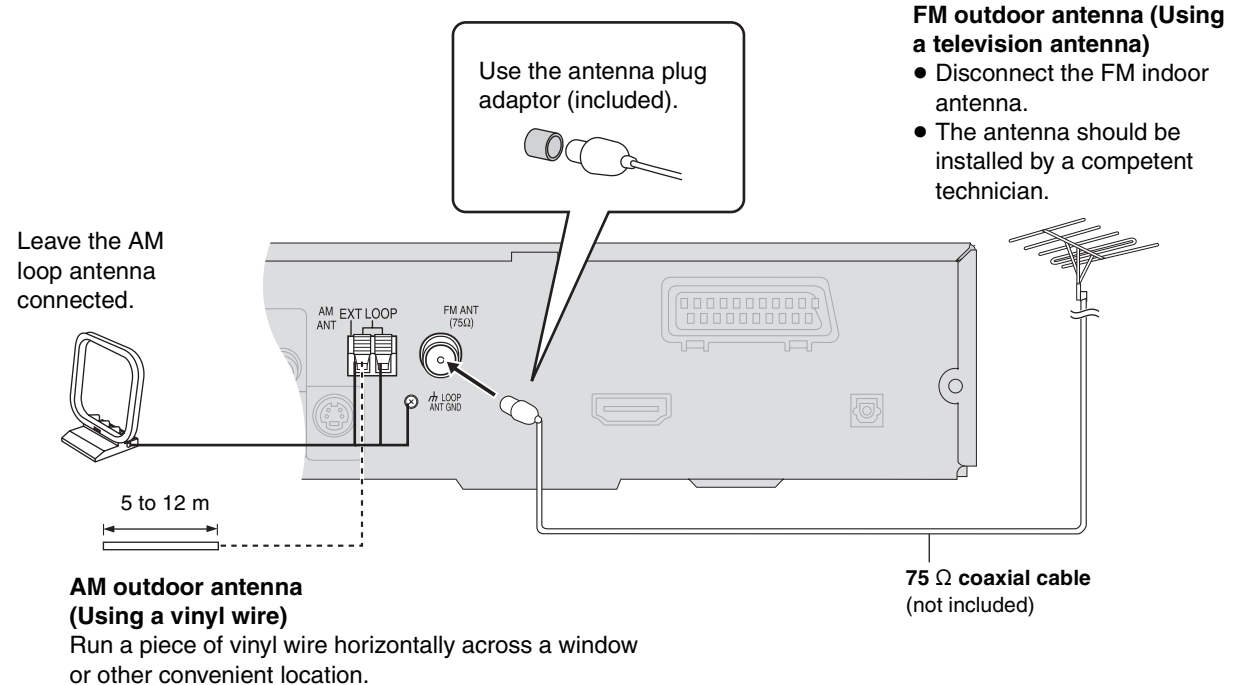
### Note

RDS displays may not be available if reception is poor.

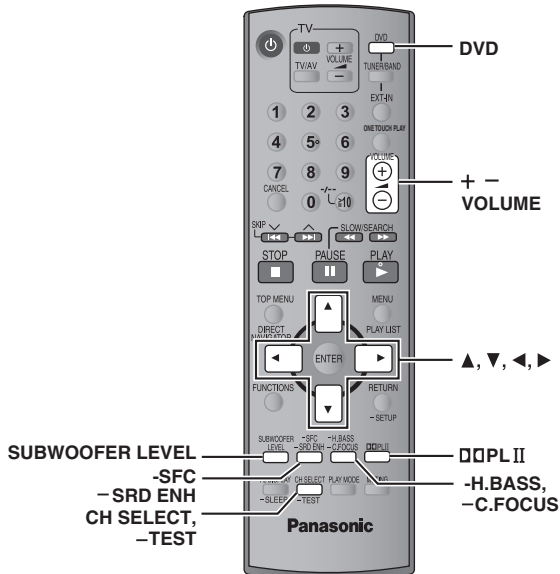
## Using an outdoor antenna (optional)

Use outdoor antennas if radio reception is poor.

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



# Using sound effects



## Enhancing the sound from the center speaker: Center Focus



**This applies to discs where the dialogue is recorded in the center channel.**

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

**Press and hold [—C.FOCUS].**

**Each time you press and hold the button:** (Settings can be confirmed on the display or the television screen.)

C FOCUS ON ↔ C FOCUS OFF



- This does not work when Sound Field Control (MOVIE, SPORT or MUSIC) is turned on.
- This also works when Dolby Pro Logic II is turned on.

## Enhancing the stereo sound: Dolby Pro Logic II



Except **DivX**

Dolby Pro Logic II is an advanced decoder that derives 5-channel surround (Left and Right Front, Center, Left and Right Surround) from stereo sound sources, whether or not it has been specifically Dolby Surround encoded.

**Press [DOLBY II].**

**Each time you press the button:** (Settings can be confirmed on the display or the television screen.)

**Movie:** Movie software, recorded in Dolby Surround.

**Music:** Stereo sources

**Off:** Cancel

e.g. Display



- This works only in DVD/CD or Digital In mode.
- "DOLBY II" lights when there is effect.
- This does not work when audio is output from HDMI AV OUT terminal.
- This does not work when "AUDIO L" or "AUDIO R" is selected in Audio Mode (→ page 39).

## Changing the sound quality: Sound Field Control



**Press [-SFC].**

**Each time you press the button:**

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

**FLAT:** Cancel (no effect is added) (factory preset).

**MOVIE:** Use this mode when playing movie software.

**SPORT:** Simulates sound to make you feel like you are at a sports event.

**MUSIC:** Adds surround effects to stereo sources.

**HEAVY:** Adds punch to rock.

**CLEAR:** Clarifies higher sounds.

**SOFT:** For background music.

- To check the current setting, press [-SFC].
- MOVIE, SPORT and MUSIC are not available when Dolby Pro Logic II is on, or when playing a disc recorded with a multi-channel source.
- You can adjust the volume of the surround speakers to get the best surround effect (→ page 37, Adjusting the volume of each speaker: Speaker level adjustments).
- When MOVIE, SPORT or MUSIC is turned on, you can enjoy audio from your television in 5.1-channel surround sound (→ page 39).

## Adjusting the amount of bass: 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.)

• **DVD-V** **DVD-VR**

SUB W 4 (factory preset) → SUB W 1 → SUB W 2 → SUB W 3

• **When another source is selected**

SUB W 2 (factory preset) → SUB W 3 → SUB W 4 → SUB W 1

- 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, except when Sound Field Control (MOVIE, SPORT or MUSIC) is turned on.
- \* When Sound Field Control (MOVIE, SPORT or MUSIC) is on, the factory presets are as follows:
- MOVIE: SUB W 4
  - SPORT: SUB W 2
  - MUSIC: SUB W 1



## Enhancing the bass sound: H.BASS

-H.BASS  
-C.FOCUS



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.)

e.g. Display



#### • DVD-V DVD-VR

H.BASS ON (factory preset) ←→ H.BASS OFF

#### • When another source is selected

H.BASS OFF (factory preset) ←→ H.BASS ON

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

## Enhancing the surround sound effect: Surround Enhancer

-SFC  
-SRD.ENH



Automatically adjusts each speaker to enhance the surround sound effect of multi-channel audio. When playing two-channel audio, the audio of the L/R front speakers is also output through the L/R surround speakers (audio is not output from the center speaker) and creates a surround sound effect.

### Press and hold [-SRD ENH].

#### Each time you press and hold the button:

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

SRD ENH ON ←→ SRD ENH OFF

e.g. Display



## Adjusting the volume of each speaker: Speaker level adjustments

CH SELECT



-TEST

This is one of the ways to get appropriate surround effects.

### Preparation

Press [DVD].

#### 1 While stopped and no on-screen display is shown Press and hold [-TEST] to output a test signal.

- To stop the test signal, press and hold [-TEST] again.

L: Front left      C: Center      R: Front right  
RS: Right surround    LS: Left surround

- There is no output from SW (subwoofer) channel.

#### 2 Press [VOLUME, +] or [-] to set the volume level normally used for listening.

#### 3 Press [▲] (increase) or [▼] (decrease) to adjust the speaker level for each speaker.

- Adjust the speaker levels to the same level as the front speakers.

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

### ■ To adjust speaker level during play

[Effective when playing multi-channel audio or when Dolby Pro Logic II or Sound Field Control (MOVIE, SPORT or MUSIC) is on.]

#### ① Press [CH SELECT] to select the speaker.

L → C → R → RS → LS → SW



SW: Subwoofer

- You can adjust SW only if the disc includes a subwoofer channel.
- "SW" does not appear on the display and is not adjustable when "DOLBII" is lit.
- "S" appears on the display when "MOVIE", "SPORT" or "MUSIC" is selected with Sound Field Control (→ page 36).  
In this case, you can adjust both surround speaker levels at the same time using [▲, ▼].  
S: -6 dB to +6 dB

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

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

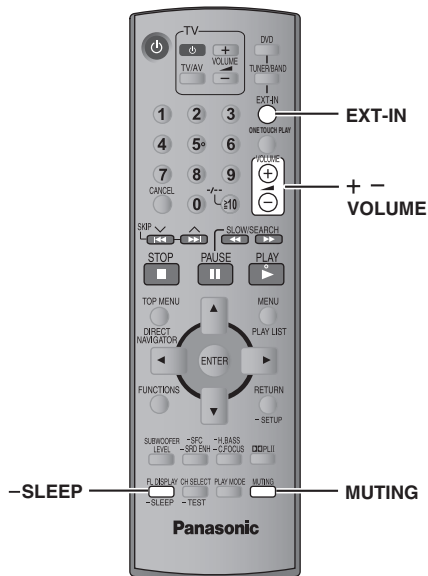
(L, R: Only the balance is adjustable.)

- To adjust the balance of the front speakers, while "L" or "R" is selected, press [◀, ▶].





# Using other useful functions



## Using headphones

*This unit only*

- 1 Reduce the volume and connect the headphones (not included).

Headphone plug type: Ø3.5 mm stereo mini plug



- 2 Adjust headphone volume with [VOLUME].

- Audio is automatically switched to 2-channel stereo.

### Note

To prevent hearing damage, avoid listening for prolonged periods of time.

## Using the Music Port

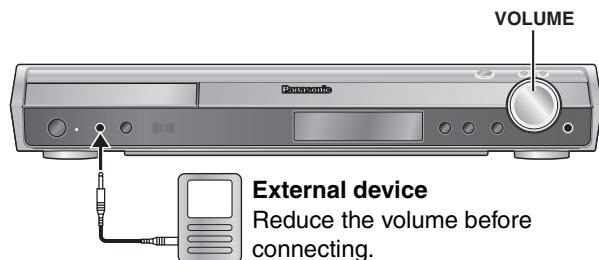
The Music Port allows you to connect and enjoy music from an external device (e.g. MP3 player) through your home theater system.

### Preparation

To avoid distorted sound, make sure that any equalizer function of your external device is turned off.

- 1 Reduce the volume and connect the external device (not included).

Plug type: Ø3.5 mm stereo mini plug



- 2 Press [EXT-IN] to select "MUSIC P.". (Settings can be confirmed on the display or the television screen.)

MUSIC P. → TV → AUX  
 ↑ D-IN (Digital In) (→ page 39) ↓

e.g. Display



- 3 Adjust the external device volume to a normal listening level, and then adjust the volume of this unit with [VOLUME].

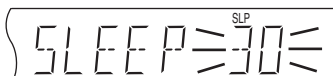
- You can enjoy surround sound when you turn on Sound Field Control (MOVIE, SPORT or MUSIC) (→ page 36).

## Setting the sleep timer



- 1 Press and hold [—SLEEP].

e.g. Display



- 2 While the time is shown Press [—SLEEP] to select the time (in minutes).

SLEEP 30 → SLEEP 60 → SLEEP 90  
 ↑ OFF ← SLEEP 120 ←

### To cancel the timer

While the time is shown, press [—SLEEP] to select "OFF".

### To confirm the remaining time

Press and hold [—SLEEP] again.

### To change the setting

Repeat the procedure from the beginning.

## Muting the sound

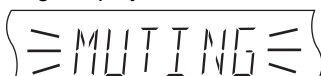


Press [MUTING].

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

"MUTING" flashes on the unit's display.

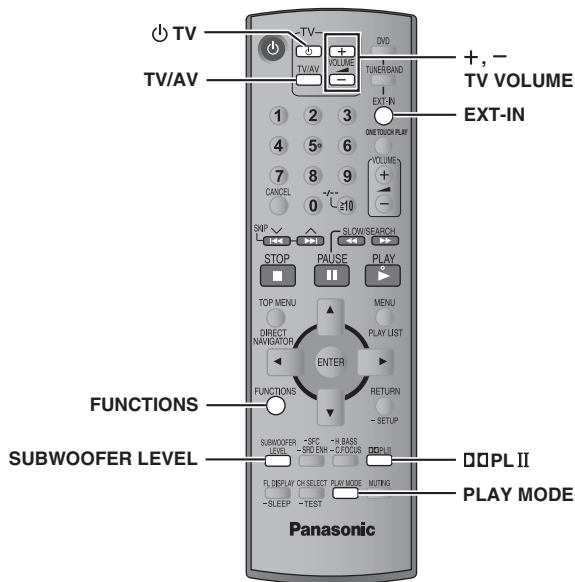
e.g. Display



### To cancel

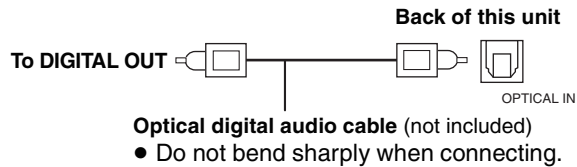
- Press [MUTING] again or reduce the volume to minimum "VOL 0", and then raise it to the required level.
- Muting is canceled when you switch the unit to standby.

# Operating other equipment



## Operating the set top box, digital broadcasting or satellite receiver

This unit can decode the surround signals received through 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.



- Press [EXT-IN] several times to select "D-IN" (Digital In) as the source.
- This unit: Press [SELECTOR] several times.

## Operating the television

You can use the remote control to operate a Panasonic television.

**Note**  
The remote control may not work properly with some models.

**Aim the remote control at the television.**  
**Turning the television on/off**  
Press [TV].

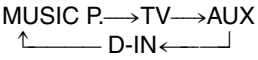
**Switching the television's video input mode**  
Press [TV/AV].

**Adjusting the volume**  
Press [+ , - TV VOLUME].

### To play audio from your television through your home theater system

Press [EXT-IN] to select "TV" or "AUX" as the source, reduce the volume on the television to its minimum, and control the volume on this unit.

Each time you press the button:  
(Settings can be confirmed on the display or the television screen.)



- You can enjoy 5.1-channel surround sound when you turn on Sound Field Control (MOVIE, SPORT or MUSIC) (→ page 36).

### When you select "D-IN" as the source, you can select the following sound effects.

(These functions only work with Dolby Digital or PCM, excluding Audio Mode, which only works with Dolby Digital Dual Mono.)

- PCM FIX Mode**  
Press and hold [FUNCTIONS].  
**PFIFF ON:** Select when receiving only PCM signals.  
**PFIFF OFF** (factory preset): Select when receiving Dolby Digital and PCM signals.

- Dynamic Range Compression**  
Press and hold [SUBWOOFER LEVEL].  
**DRC ON:** Adjusts 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** (factory preset)

- Audio Mode**  
Press and hold [PLAY MODE].  
**AUDIO ST, AUDIO L, AUDIO R**  
(“AUDIO L” and “AUDIO R” only appear when the signal is Dolby Digital Dual Mono.)

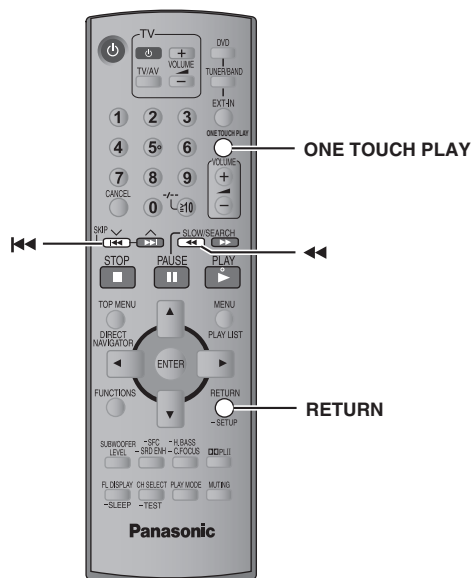
**Dolby Pro Logic II (→ page 36)**  
Press [DOLBY II].

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

Operating other equipment



# Operating both the television and the home theater system: Control with HDMI (HDAVI Control)



## What is HDAVI Control?

HDAVI Control is a convenient function that offers linked operation of this unit and Panasonic TV (VIERA) with HDAVI Control. You can use this function by connecting the equipment with the HDMI cable. For operational details, see the operating instructions of the connected equipment.

## Preparation

- Confirm that the HDMI connection (→ page 11) has been made.
- Confirm that the scart cable is **not** connected.
- Set “Control with HDMI” (HDAVI Control) to “On” (→ page 32, “HDMI” menu).
- To complete and activate the connection correctly, turn on all HDAVI Control compatible equipment and select the input channel corresponding to the home theater on the television.

- Whenever the connection or settings are changed, reconfirm the points above.
- When you turn off this unit, TV selector changes to TV tuner.

## One Touch Play

You can turn on this unit and television, and start playing the disc in the play position with a single press of a button.

Press [ONE TOUCH PLAY].

### 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.

## Automatic input switching

When the following operations are performed the television will automatically switch the input channel and display the corresponding action. Also, the speakers automatically switch to this unit's speakers.

- When play starts on the unit
- When an action that uses the display screen is performed (e.g., Direct Navigator screen)

## Theatre speaker

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

## Home theatre

Theatre speakers are active.

- The television speakers are automatically muted.
- You can control the volume setting using the volume or mute button on the television remote control. (The volume level is displayed on this unit's FL display.)
- If you turn off the home theater system, speakers automatically switch to the television.

## TV speakers

Television speakers are active.

- The volume of the home theater system is set to “0”.
- Audio output is 2-channel audio.

- To cancel muting, you can also use the home theater remote control (→ page 38, Muting the sound).
- When switching between the home theater system and television speakers, the TV screen may be blank for several seconds.
- You can set whether the main unit will automatically switch to “TV” or “D-IN” by pressing and holding [RETURN] while the main unit is in “TV” or “D-IN” mode respectively.

## 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”, “TV”<sup>\*\*</sup> or “D-IN”<sup>\*\*</sup> 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.)

<sup>\*\*</sup> Depending on the function setting you made above, “TV” or “D-IN”, Power off link works only when:

- The function is set to “TV”, and “TV” is selected as the source.
- The function is set to “D-IN”, and “D-IN” is selected as the source.

# Speaker installation options

## ■ Attaching to a wall

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

- The wall or pillar on which the speakers are to be attached should be capable of supporting over 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.
- When mounting the front speakers to a wall, we recommend using a string (not included) to prevent it from falling.

### 2 Screws

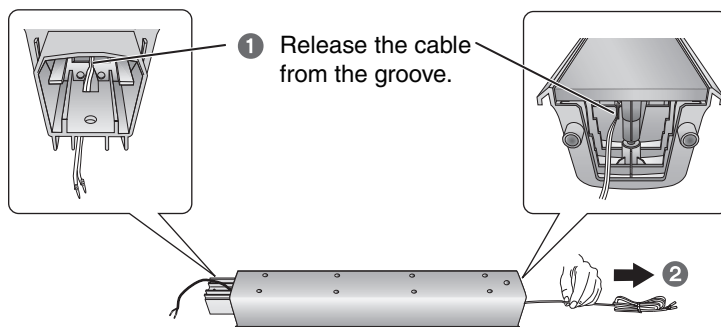


### 2 Cover plates



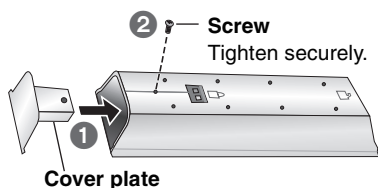
## Preparation for front speakers

1 Remove the speaker cable from the stand.



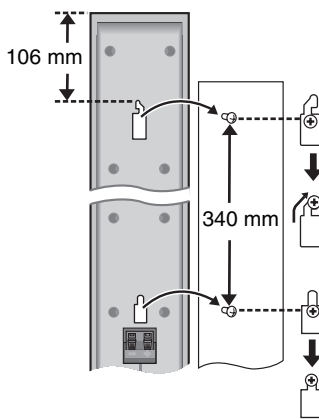
2 Connect the cable (→ page 7).

① Attach the cover plate to the front speaker.

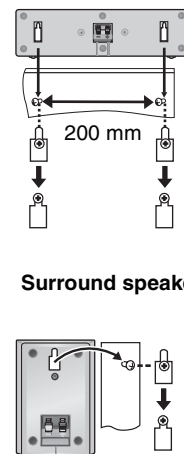


③ Fit the speaker securely onto the screw(s) with the hole(s).

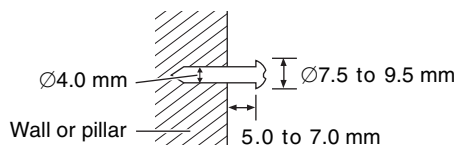
Front speaker



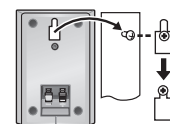
Center speaker



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



Surround speaker



e.g.



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



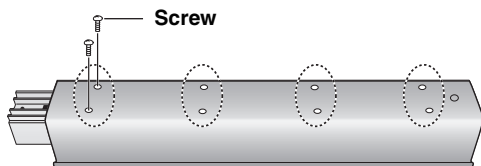
Move the speaker so that the screw is in this position.

(Continued on next page)

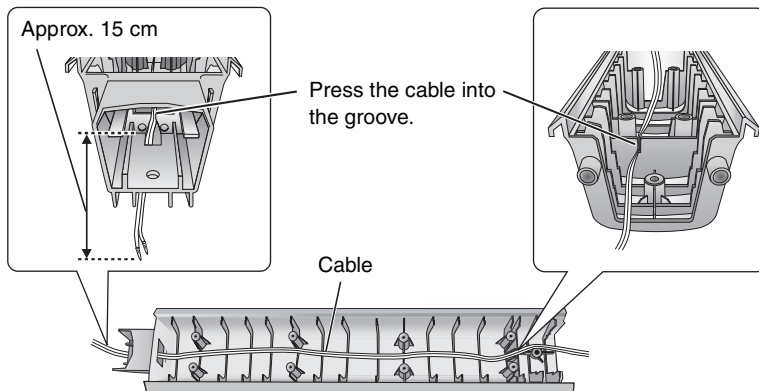


## Reattaching the speaker cable to the stand

1 Remove the eight screws from the stand, and remove the speaker net.



2 Position the cable.



3 Attach the speaker net with the screws.

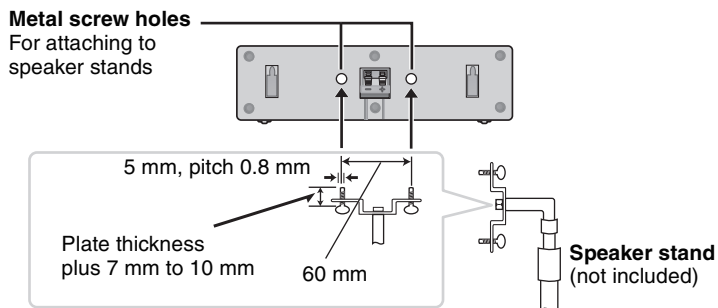
## ■ *Fitting speaker stands* (not included) (Except front speakers)

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. **Center speaker**



# 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		Page
<b>No power.</b>	<ul style="list-style-type: none"> <li>● Insert the AC mains lead securely.</li> </ul>	14
<b>The unit is automatically switched to standby mode.</b>	<ul style="list-style-type: none"> <li>● The Sleep timer was working and had reached the set time limit.</li> </ul>	38
<b>Unresponsive or inoperable function</b>		
<b>No response when any buttons are pressed.</b>	<ul style="list-style-type: none"> <li>● This unit cannot play discs other than the ones listed in these operating instructions.</li> <li>● 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.</li> <li>● Condensation has formed. Wait 1 to 2 hours for it to evaporate.</li> </ul>	18 — —
<b>No response when remote control buttons are pressed.</b>	<ul style="list-style-type: none"> <li>● Check that the batteries are installed correctly.</li> <li>● The batteries are depleted. Replace them with new ones.</li> <li>● Aim the remote control at the remote control signal sensor and operate.</li> </ul>	15 15 17
<b>No picture or sound.</b>	<ul style="list-style-type: none"> <li>● Check the video or speaker connection.</li> <li>● Check the power or input setting of the connected equipment and this unit.</li> <li>● Check that the disc has something recorded on it.</li> </ul>	7, 9-13 — —
<b>You have forgotten your ratings password.</b> Reset all the settings to Factory Preset.	<ul style="list-style-type: none"> <li>● 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.</li> </ul>	—
<b>The HDAVI Control function does not respond.</b>	<ul style="list-style-type: none"> <li>● 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.</li> </ul>	40
<b>Specific operation undesirable or unexpected</b>		
<b>It takes time before play starts.</b>	<ul style="list-style-type: none"> <li>● 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. <b>MP3</b></li> <li>● This is normal on DivX video. <b>DivX</b></li> </ul>	— —
<b>Folders on a data CD are not displayed correctly.</b> <b>WMA</b> <b>MP3</b> <b>JPEG</b> <b>MPEG4</b> <b>DivX</b>	<ul style="list-style-type: none"> <li>● Folders deeper than the eighth layer are displayed as the eighth layer.</li> </ul>	—
<b>A menu screen appears during skip or search.</b> <b>VCD</b>	<ul style="list-style-type: none"> <li>● This is normal for Video CDs.</li> </ul>	—
<b>Playback control menu does not appear.</b> <b>VCD</b> with playback control	<ul style="list-style-type: none"> <li>● Press [■ STOP] twice and then press [▶ PLAY].</li> </ul>	—
<b>Program and Random play do not work.</b> <b>DVD-V</b>	<ul style="list-style-type: none"> <li>● These functions do not work with some DVD-Videos.</li> </ul>	—
<b>Selecting audio soundtrack "2" does not change the audio.</b> <b>DVD-A</b>	<ul style="list-style-type: none"> <li>● Even if a second soundtrack is not recorded, two numbers are normally shown.</li> </ul>	—
<b>Play does not start.</b>	<ul style="list-style-type: none"> <li>● This unit may not play WMA and MPEG4 that contains still picture data.</li> <li>● If playing DivX VOD content, refer to the homepage where you purchased the DivX VOD content. (Example: <a href="http://www.divx.com/vod">www.divx.com/vod</a>) <b>DivX</b></li> <li>● If a disc contains CD-DA and other formats, proper playback may not be possible.</li> </ul>	— — —
<b>Play restarts from the beginning when the soundtrack is changed.</b> <b>DVD-A</b>	<ul style="list-style-type: none"> <li>● This is normal for DVD-Audio.</li> </ul>	—
<b>Scenes are skipped intermittently.</b> <b>DVD-VR</b> <b>DVD-V</b>	<ul style="list-style-type: none"> <li>● If you change the volume or sound effects during Advanced Disc Review, the function continues without the on-screen display. Cancel the function.</li> </ul>	27



Subtitle		Page
<b>Subtitle position is wrong.</b>	<ul style="list-style-type: none"> <li>Adjust the position. ("Subtitle Position" in Display Menu)</li> </ul>	29
<b>No subtitles.</b>	<ul style="list-style-type: none"> <li>Display the subtitles. ("Subtitle" in Main menu)</li> <li>Subtitles may not be displayed depending on the disc. <b>DivX</b></li> </ul>	26
<b>Marker</b>		
<b>Cannot add markers.</b>	<ul style="list-style-type: none"> <li>You cannot add markers with DVD-RAM or DVD-R/-RW (DVD-VR) discs.</li> <li>If the disc's elapsed play time does not appear on the unit's display, you cannot add markers.</li> </ul>	—
<b>A-B repeat</b>		
<b>Point B is automatically set.</b>	<ul style="list-style-type: none"> <li>The end of an item becomes point B when it is reached.</li> </ul>	—
<b>Sound abnormal or improper</b>		
<b>Sound is distorted.</b>	<ul style="list-style-type: none"> <li>Noise may occur when playing WMA.</li> <li>When using the HDMI output, audio may not be output from other terminals.</li> </ul>	—
<b>Effects do not work.</b>	<ul style="list-style-type: none"> <li>Some audio effects do not work or have less effect with some discs.</li> </ul>	—
<b>Humming is heard during play.</b>	<ul style="list-style-type: none"> <li>An AC mains lead or fluorescent light is near this unit. Keep other appliances and cables away from this unit.</li> </ul>	—
<b>No sound.</b>	<ul style="list-style-type: none"> <li>There may be a slight pause in sound when you change the play speed.</li> <li>Audio may not be output due to how files were created. <b>DivX</b></li> <li>Audio may not be heard when more than 4 devices are connected with HDMI cables. Reduce the number of connected devices.</li> <li>When using the HDMI connection, ensure that "Audio Output" in the "HDMI" menu is set to "On".</li> </ul>	— — — 32
<b>Sound mixed.</b>	<ul style="list-style-type: none"> <li>If you are using the SCART (AV) terminal and the audio input terminals (TV AUDIO IN) at the same time, turn off the connected equipment at one or the other terminals.</li> </ul>	—
<b>Menus</b>		
<b>The Setup menu cannot be accessed.</b>	<ul style="list-style-type: none"> <li>Select "DVD/CD" as the source.</li> <li>Cancel All group, Program and Random play.</li> </ul>	— 22





Picture abnormal or unviewable		Page
<b>The picture on the television is not displayed correctly or disappears.</b>	<ul style="list-style-type: none"> <li>• The unit and television are using different video systems. Use a multi-system or PAL television.</li> </ul>	—
	<ul style="list-style-type: none"> <li>• The system used on the disc does not match your television.               <ul style="list-style-type: none"> <li>– PAL discs cannot be correctly viewed on an NTSC television.</li> <li>– This unit can convert NTSC signals to PAL 60 for viewing on a PAL television (“NTSC Disc Output” in “Video” menu).</li> </ul> </li> </ul>	31
	<ul style="list-style-type: none"> <li>• Ensure that the unit is connected directly to the television, and is not connected through a video cassette recorder.</li> </ul>	—
	<ul style="list-style-type: none"> <li>• Mobile telephone chargers can cause some disturbance.</li> </ul>	—
	<ul style="list-style-type: none"> <li>• If you are using an indoor television antenna, change to an outdoor antenna.</li> </ul>	—
	<ul style="list-style-type: none"> <li>• The television antenna wire is too close to the unit. Move it away from the unit.</li> </ul>	—
	<ul style="list-style-type: none"> <li>• Change “Source Select” in Picture Menu. <b>DivX</b></li> </ul>	28
	<ul style="list-style-type: none"> <li>• Picture may not be seen when more than 4 devices are connected with HDMI cables. Reduce the number of connected devices.</li> </ul>	—
	<ul style="list-style-type: none"> <li>• When using HDMI output, the video signal is progressive. Use other video connections if your television is not compatible with progressive video.</li> </ul>	10, 12, 13
	<ul style="list-style-type: none"> <li>• If the picture is distorted or not displayed when using HDMI output, press and hold [CANCEL] until the picture is displayed correctly. (The output will return to “480p” or “576p”.)</li> <li>• When using SCART (AV) terminal, set “Video Output” in the “HDMI” menu to “Off”.</li> </ul>	32
<b>Picture size does not fit the screen.</b>	<ul style="list-style-type: none"> <li>• Change “TV Aspect” in the “Video” menu.</li> </ul>	31
	<ul style="list-style-type: none"> <li>• Use the television to change the aspect. If your television does not have that function, change “4:3 Aspect” in Display Menu.</li> </ul>	29
	<ul style="list-style-type: none"> <li>• Change the zoom setting. (“Just Fit Zoom” or “Manual Zoom” in Display Menu)</li> </ul>	29
<b>Picture stops.</b> <b>DivX</b>	<ul style="list-style-type: none"> <li>• Picture may stop if the DivX files are greater than 2 GB.</li> </ul>	—
<b>Menu is not displayed correctly.</b>	<ul style="list-style-type: none"> <li>• Restore the zoom ratio to “× 1.00”. (“Manual Zoom” in Display Menu)</li> </ul>	29
	<ul style="list-style-type: none"> <li>• Set “Subtitle Position” in Display Menu to “0”.</li> </ul>	29
	<ul style="list-style-type: none"> <li>• Set “4:3 Aspect” in Display Menu to “Normal”.</li> </ul>	29
<b>Auto zoom function does not work well.</b>	<ul style="list-style-type: none"> <li>• Turn off television zoom function.</li> </ul>	—
	<ul style="list-style-type: none"> <li>• Use the other preset aspect ratios or manual adjustment.</li> </ul>	29
	<ul style="list-style-type: none"> <li>• Zoom function may not work well, especially in dark scenes and may not work depending on the type of disc.</li> </ul>	—
<b>When playing PAL disc, picture distorted.</b>	<ul style="list-style-type: none"> <li>• Set “Transfer Mode” in Picture Menu to “Auto”.</li> </ul>	28
<b>Progressive video</b>		
<b>There is ghosting when progressive or HDMI output is on.</b>	<ul style="list-style-type: none"> <li>• This problem is caused by the editing method or material used on DVD-Video, but should be corrected if you use interlaced output. Set “Video Output Mode” in Picture Menu to “480i” or “576i”. (Alternatively, press and hold [CANCEL] to switch to “480i” or “576i”.)</li> </ul>	28
	<ul style="list-style-type: none"> <li>• Disable the HDMI AV OUT connection and use other video connections. Make the settings in the following order:               <ol style="list-style-type: none"> <li>1 Set “Video Output” in the “HDMI” menu to “Off”.</li> <li>2 Set “Video Output Mode” in Picture Menu to “480i” or “576i”. (Alternatively, press and hold [CANCEL] to switch to “480i” or “576i”.)</li> </ol> </li> </ul>	28, 32
<b>Pictures not in progressive output.</b>	<ul style="list-style-type: none"> <li>• Select “480p” or “576p” in “Video Output Mode” in Picture Menu.</li> <li>• The unit’s VIDEO OUT, S-VIDEO OUT or SCART (AV) terminal outputs the interlaced signal even if “PRG” is displayed.</li> </ul>	28, 10, 12

(Continued on next page)



## Listening to the radio

Page

<b>Distorted sound or noise is heard.</b> “ST” flickers or does not light.	<ul style="list-style-type: none"> <li>Adjust the position of the FM or AM antenna.</li> <li>Use an outdoor antenna.</li> </ul>	— 35
<b>A beat sound is heard.</b>	<ul style="list-style-type: none"> <li>Turn the television off or move it away from the unit.</li> </ul>	—
<b>A low hum is heard during AM broadcasts.</b>	<ul style="list-style-type: none"> <li>Separate the antenna from other cables.</li> </ul>	—

## Unit displays

<b>The display is dark.</b>	<ul style="list-style-type: none"> <li>Select “Bright” in “FL Dimmer” in the “Others” menu.</li> </ul>	32
<b>“NO PLAY”</b>	<ul style="list-style-type: none"> <li>You inserted a disc the unit cannot play; insert one it can.</li> <li>You inserted a blank disc.</li> <li>You inserted a disc that has not been finalized.</li> </ul>	18 — —
<b>“NO DISC”</b>	<ul style="list-style-type: none"> <li>You have not inserted a disc; insert one.</li> <li>You have not inserted the disc correctly; insert it correctly.</li> </ul>	— 20
<b>“F61”</b>	<ul style="list-style-type: none"> <li>Check and correct the speaker cable connections. If this does not fix the problem, consult the dealer.</li> </ul>	7, 9
<b>“DVD U11”</b>	<ul style="list-style-type: none"> <li>Disc may be dirty. Wipe it clean.</li> </ul>	19
<b>“ERROR”</b>	<ul style="list-style-type: none"> <li>Incorrect operation performed. Read the instructions and try again.</li> </ul>	—
<b>“DVD H□□”</b> <b>“DVD F□□□”</b> □ stands for a number.	<ul style="list-style-type: none"> <li>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.</li> <li>If the service numbers fail to clear, note the service number and contact a qualified service person.</li> </ul>	— —
<b>“D.MIX” is flashing.</b> <b>DVD-A</b>	<ul style="list-style-type: none"> <li>Down-mixing is the process of remixing the multiple-channel audio found on some discs into two channels. The disc contains single-channel or multiple-channel signals which may not be reproduced authentically.</li> </ul>	—
<b>“U701”</b>	<ul style="list-style-type: none"> <li>The connected equipment is not HDMI-compatible.</li> </ul>	—
<b>“U70□”</b> □ stands for a number. The actual number following “U70” will depend on the state of this unit.	<ul style="list-style-type: none"> <li>The HDMI connection acts unusually.                             <ul style="list-style-type: none"> <li>The connected equipment is not HDMI-compatible.</li> <li>The HDMI cable is too long.</li> <li>The HDMI cable is damaged.</li> </ul> </li> </ul>	— — —

## Television displays

<b>“⊘”</b>	<ul style="list-style-type: none"> <li>The operation is prohibited by the unit or disc.</li> </ul>	—
<b>“Cannot play group xx, content xx”</b> <b>“Cannot display group xx, content xx”</b>	<ul style="list-style-type: none"> <li>You are trying to display incompatible group or content.</li> </ul>	—
<b>“This disc may not be played in your region”</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	Cover page
<b>No on-screen display.</b>	<ul style="list-style-type: none"> <li>Select “On” in “On-Screen Messages” in the “Display” menu.</li> </ul>	32
<b>“Group xx content xx is protected”</b>	<ul style="list-style-type: none"> <li>You are trying to play protected group or content. You cannot play it.</li> </ul>	—
<b>“Check the disc”</b>	<ul style="list-style-type: none"> <li>This disc may be dirty.</li> </ul>	19
<b>“Authorization Error”</b> <b>DivX</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	5
<b>“Rented Movie Expired”</b> <b>DivX</b>	<ul style="list-style-type: none"> <li>The DivX VOD content has zero remaining plays. You cannot play it.</li> </ul>	5
<b>“Due to copyright protection, audio cannot be output from HDMI”</b> <b>DVD-A</b>	<ul style="list-style-type: none"> <li>If you connect to equipment that does not support CPPM (→ page 47, Glossary), audio from a CPPM copy-protected DVD-Audio disc cannot be output from the HDMI AV OUT terminal.</li> </ul>	—
<b>This unit’s screen saver remains.</b>	<ul style="list-style-type: none"> <li>When using the HDMI connection, audio/video information continually transferring between this unit and the television regardless of which source has been selected on this unit. This is normal.</li> </ul>	—



## **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 multi-channel audio. A large amount of audio information can be recorded on one disc using this method.

## **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) from the HDMI AV OUT terminal. To enjoy high-definition video, a high-definition compatible television is required.

## **I/P/B**

MPEG 2, the video compression standard adopted for use with DVD-Video, codes frames using these 3 picture types.

**I:** Intra coded picture

This picture has the best quality and is the best to use when adjusting the picture.

**P:** Predictive coded picture

This picture is calculated based on past I- or P-pictures.

**B:** Bidirectionally-predictive coded picture

This picture is calculated by comparing past and future I- and P-pictures so it has the lowest volume of information.

## **JPEG (Joint Photographic Experts Group)**

This is a system used for compressing/decoding colour still pictures. If you select JPEG as the storage system on digital cameras, etc., the data will be compressed to 1/10–1/100 of its original size. 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

### RMS Output Power: Dolby Digital Mode

Front Ch	110 W per channel (3 Ω), 1 kHz, 10 % THD
Surround Ch	90 W per channel (4 Ω), 1 kHz, 10 % THD
Center Ch	225 W per channel (6 Ω), 1 kHz, 10 % THD
Subwoofer Ch	225 W per channel (6 Ω), 100 Hz, 10 % THD
Total RMS Dolby Digital mode power	850 W

### DIN Output Power: Dolby Digital Mode

Front Ch	80 W per channel (3 Ω), 1 kHz, 1 % THD
Surround Ch	65 W per channel (4 Ω), 1 kHz, 1 % THD
Center Ch	75 W per channel (6 Ω), 1 kHz, 1 % THD
Subwoofer Ch	75 W per channel (6 Ω), 100 Hz, 1 % THD
Total DIN Dolby Digital mode power	440 W

## FM/AM TUNER, TERMINALS SECTION

<b>Preset Memory</b>	FM 15 stations AM/MW 15 stations
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### Frequency Modulation (FM)

Frequency range	87.50–108.00 MHz (50-kHz step)
Sensitivity	1.8 μV (IHF)
S/N 26 dB	1.4 μV
Antenna terminals	75 Ω (unbalanced)

### Amplitude Modulation (AM/MW)

Frequency range	522–1629 kHz (9-kHz step)
AM Sensitivity S/N 20 dB at 999 kHz	560 μV/m

### Digital audio input

Optical digital input	Optical terminal (1 system)
Sampling frequency	32 kHz, 44.1 kHz, 48 kHz

### Phone jack

Terminal	Stereo, 3.5 mm jack
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### Front Music Port

Sensitivity	100 mV, 15 kΩ
Terminal	Stereo, 3.5 mm jack

## DISC SECTION

### Discs played (8 cm or 12 cm)

- (1) DVD (DVD-Video, DVD-Audio, DivX<sup>®</sup>\*1, 2)
- (2) DVD-RAM (DVD-VR, MP3<sup>®</sup>\*2, 6, JPEG<sup>®</sup>\*2, 3, MPEG4<sup>®</sup>\*2, 4, DivX<sup>®</sup>\*1, 2)
- (3) DVD-R (DVD-Video, DVD-VR, MP3<sup>®</sup>\*2, 6, JPEG<sup>®</sup>\*2, 3, MPEG4<sup>®</sup>\*2, 4, DivX<sup>®</sup>\*1, 2)
- (4) DVD-R DL (DVD-Video, DVD-VR)
- (5) DVD-RW (DVD-Video, DVD-VR, MP3<sup>®</sup>\*2, 6, JPEG<sup>®</sup>\*2, 3, MPEG4<sup>®</sup>\*2, 4, DivX<sup>®</sup>\*1, 2)
- (6) +R/+RW (Video)
- (7) +R DL (Video)
- (8) CD, CD-R/RW [CD-DA, Video CD, SVCD<sup>®</sup>\*5, MP3<sup>®</sup>\*2, 6, WMA<sup>®</sup>\*2, 7, JPEG<sup>®</sup>\*2, 3, MPEG4<sup>®</sup>\*2, 4, DivX<sup>®</sup>\*1, 2, HighMAT Level 2 (Audio and Image)]

\*1 Plays all versions of DivX<sup>®</sup> video (including DivX<sup>®</sup>=6) with standard playback of DivX<sup>®</sup> media files. Certified to the DivX Home Theater Profile. GMC (Global Motion Compensation) is not supported.

\*2 The total combined maximum number of recognizable audio, picture and video contents and groups: 4000 audio, picture and video contents and 400 groups.

\*3 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.

\*4 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

\*5 Conforming to IEC62107

\*6 MPEG-1 Layer 3, MPEG-2 Layer 3

\*7 Windows Media Audio Ver.9.0 L3  
Not compatible with Multiple Bit Rate (MBR)

### Pick up

Wavelength (DVD/CD)	662/785 nm
Laser power (DVD/CD)	CLASS 1/CLASS 1M

### Audio output (Disc)

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

<b>Video system</b>	PAL625/50, PAL525/60, NTSC
<b>Composite video output</b>	
Output level	1 Vp-p (75 Ω)
Terminal	Pin jack (1 system) Scart jack (1 system)
<b>S-video output</b>	
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	S terminal (1 system) Scart jack (1 system)
<b>Component video output</b>	
(NTSC: 480p/480i, PAL: 576p/576i)	
Y output level	1 Vp-p (75 Ω)
P <sub>B</sub> output level	0.7 Vp-p (75 Ω)
P <sub>R</sub> output level	0.7 Vp-p (75 Ω)
Terminal	Pin jack (Y: green, P <sub>B</sub> : blue, P <sub>R</sub> : red) (1 system)
<b>RGB video output</b>	
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)
<b>HDMI AV output</b>	
Terminal	19-pin type A connector HDMI Ver.1.2a (EDID Ver.1.3)

## SPEAKER SECTION

### Front speakers SB-FS540

<b>Type</b>	1 way, 1 speaker system (Bass reflex)
<b>Speaker unit(s)</b>	Impedance 3 Ω
Full range	6.5 cm Cone type
<b>Input power (IEC)</b>	125 W* (Max)
<b>Output sound pressure</b>	80 dB/W (1.0 m)
<b>Frequency range</b>	87 Hz–25 kHz (–16 dB) 98 Hz–22 kHz (–10 dB)
<b>Dimensions (W×H×D)</b>	252 mm×1123 mm×234 mm
<b>Mass</b>	3.7 kg

### Surround speakers SB-FS741

<b>Type</b>	1 way, 1 speaker system (Bass reflex)
<b>Speaker unit(s)</b>	Impedance 4 Ω
Full range	6.5 cm Cone type
<b>Input power (IEC)</b>	90 W* (Max)
<b>Output sound pressure</b>	80 dB/W (1.0 m)
<b>Frequency range</b>	96 Hz–25 kHz (–16 dB) 120 Hz–22 kHz (–10 dB)
<b>Dimensions (W×H×D)</b>	92 mm×135 mm×95.4 mm
<b>Mass</b>	0.75 kg

### Center speaker SB-PC540

<b>Type</b>	2 way, 2 speaker system (Bass reflex)
<b>Speaker unit(s)</b>	Impedance 6 Ω
1. Full range	6.5 cm Cone type
2. Full range	6.5 cm Cone type
<b>Input power (IEC)</b>	250 W* (Max)
<b>Output sound pressure</b>	84 dB/W (1.0 m)
Cross over frequency	5 kHz
<b>Frequency range</b>	105 Hz–25 kHz (–16 dB) 125 Hz–22 kHz (–10 dB)
<b>Dimensions (W×H×D)</b>	270 mm×92 mm×95.4 mm
<b>Mass</b>	1.25 kg

### Subwoofer SB-W540

<b>Type</b>	1 way, 1 speaker system (Bass reflex)
<b>Speaker unit(s)</b>	Impedance 6 Ω
Woofer	16 cm Cone type
<b>Input power (IEC)</b>	250 W (Max)
<b>Output sound pressure</b>	80 dB/W (1.0 m)
<b>Frequency range</b>	32 Hz–220 Hz (–16 dB) 38 Hz–180 Hz (–10 dB)
<b>Dimensions (W×H×D)</b>	183 mm×396 mm×267 mm
<b>Mass</b>	4 kg

## GENERAL

<b>Power supply</b>	AC 230–240 V, 50 Hz
<b>Power consumption</b>	This unit 115 W
<b>Dimensions (W×H×D)</b>	430 mm×60 mm×354 mm
<b>Mass</b>	This unit 3.35 kg
<b>Operating temperature range</b>	+5 °C to +35 °C
<b>Operating humidity range</b>	5 % to 90 % RH (no condensation)

### Power consumption in standby mode

approx. 0.5 W

\* Rating with low-cut filter equipped amplifier

### Note

1. Specifications are subject to change without notice. Mass and dimensions are approximate.
2. Total harmonic distortion is measured by a digital spectrum analyzer.
3. 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.



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**Memo:**





### 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.

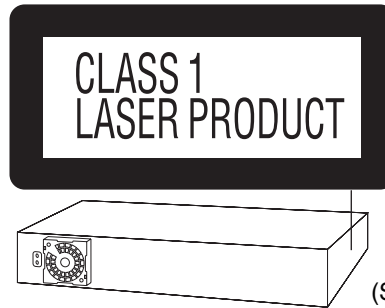
### CAUTION!

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

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

The socket outlet shall be installed near the equipment and easily accessible or the mains plug or an appliance coupler shall remain readily operable.

THIS UNIT IS INTENDED FOR USE IN MODERATE CLIMATES.



(Side of product)



(Inside of product)

### 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.