



# Operating Instructions

## DVD/CD PLAYER

Model No. **DVD-S52**

### *Dear customer*

Thank you for purchasing this product.  
For optimum performance and safety, please read these instructions carefully.  
Before connecting, operating or adjusting this product, please read the instructions completely. Please keep this manual for future reference.

If you have any questions contact  
**1-800-211-PANA(7262)**

The warranty can be found on page 29.

La referencia rápida en español se puede encontrar en la página 30, 31.

### Region number

The player plays DVD-Video marked with labels containing the region number "1" or "ALL".

Example:



# Panasonic®

## MULTI-FORMAT PLAYBACK

See page 4 for details



Getting started

Operations

Reference

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# IMPORTANT SAFETY INSTRUCTIONS

Read these operating instructions carefully before using the unit. Follow the safety instructions on the unit and the applicable safety instructions listed below. Keep these operating instructions handy for future reference.

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this apparatus near water.
- 6) Clean only with dry cloth.
- 7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 11) Only use attachments/accessories specified by the manufacturer.
- 12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
- 13) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.



## Accessories



To order accessories, refer to  
"Accessory Purchases" on page 29.

Use numbers when asking for replacement parts.  
(Product numbers correct as of February 2006.  
These may be subject to change.)



- 1 Remote control (EUR7631190R)
- 2 Remote control batteries
- 1 Audio/video cable (K2KA6BA00004)
- 1 AC power supply cord (K2CB2CB00020)

### Note

For use with this unit only. Do not use it with other equipment. Also, do not use cords for other equipment with this unit.

### User memo:

DATE OF PURCHASE	_____
DEALER NAME	_____
DEALER ADDRESS	_____
TELEPHONE NUMBER	_____

The model number and serial number of this product can be found on either the back or the bottom of the unit. Please note them in the space provided below and keep for future reference.

MODEL NUMBER

**DVD-S52**

SERIAL NUMBER

**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.

	<b>CAUTION</b> RISK OF ELECTRIC SHOCK DO NOT OPEN	
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE SCREWS. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.		



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

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

### FCC Note:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Any unauthorized changes or modifications to this equipment would void the user's authority to operate this device.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

### Responsible Party:

Panasonic Corporation of North America  
One Panasonic Way Secaucus, NJ 07094  
Telephone No.: 1-800-211-7262

# Discs that can be played

## Commercial discs

Disc Logo	Indicated in these instructions by	Remarks
	<b>DVD-V</b>	High quality movie and music discs
	<b>DVD-A</b>	High fidelity music discs <sup>#1</sup>
	<b>VCD</b>	Music discs with video Including SVCD (Conforming to IEC62107)
	<b>CD</b>	Music discs <sup>#2</sup>

<sup>#1</sup>Some DVD-Audio discs contain DVD-Video content. To play DVD-Video content, select "Play as DVD-Video" (→ page 18, Other Menu).

<sup>#2</sup>This unit is compatible with HDCD (→ page 28, Glossary), but does not support the Peak Extend function (a function which expands the dynamic range of high level signals). (During HDCD play, "HDCD" lights on the unit's display.)

### Regarding DVD-Audio

Some multi-channel DVD-Audio will prevent down-mixing (→ page 28, Glossary) of all or part of their contents if this is the manufacturer's intention. When playing such discs, or such parts of the disc, unless the number of connected speakers is the same as the disc's channel specification, audio will not be output properly (e.g. part of the audio is missing, multi-channel audio cannot be selected and audio is played in two channels). Refer to the disc's jacket for more information.

## Recorded discs (Yes:Available, No:Not available)

Disc Logo	Recorded on a DVD video recorder, etc.		Recorded on a personal computer, etc.				Necessity of finalize <sup>#6</sup>
	DVD-VR <sup>#2</sup>	DVD-V <sup>#4</sup>	WMA	MP3	JPEG	MPEG4	
	Yes	—	No	Yes	Yes	Yes	Not necessary
	Yes	Yes	No	Yes	Yes	Yes	Necessary
	Yes <sup>#3</sup>	Yes	No	No	No	No	Necessary
+R/+RW —	No	(Yes) <sup>#5</sup>	No	No	No	No	Necessary
+R DL —	No	(Yes) <sup>#5</sup>	No	No	No	No	Necessary
CD-R/RW <sup>#1</sup> —	—	—	Yes	Yes	Yes	Yes	Necessary <sup>#7</sup>

• It may not be possible to play the above discs in all cases due to the type of discs, the condition of the recording, the recording method and how the files were created (→ page 5, Tips for making data discs).

<sup>#1</sup> This unit can play CD-R/RW recorded with CD-DA or Video CD format.

**WMA MP3 JPEG** This unit also plays HighMAT discs.

<sup>#2</sup> Discs recorded on DVD video recorders or DVD video cameras, etc. using Version 1.1 of the Video Recording Format (a unified video recording standard).

<sup>#3</sup> Discs recorded on DVD video recorders or DVD video cameras using Version 1.2 of the Video Recording Format (a unified video recording standard).

<sup>#4</sup> Discs recorded on DVD video recorders or DVD video cameras using DVD-Video Format.

<sup>#5</sup> Recorded using a format different from DVD-Video Format, therefore some functions cannot be used.

<sup>#6</sup> A process that allows play on compatible equipment. To play a disc that is displayed as "Necessary" on this unit, the disc must first be finalized on the device it was recorded on.

<sup>#7</sup> Closing the session will also work.

## ■ Tips for making data discs

Format	Disc	Extension	Reference
<b>WMA</b>	<b>CD-R/RW</b>	“.WMA” “.wma”	<ul style="list-style-type: none"> <li>• Compatible compression rate: between 48 kbps and 320 kbps</li> <li>• You cannot play WMA files that are copy protected.</li> <li>• This unit is not compatible with Multiple Bit Rate (MBR: a file that contains the same content encoded at several different bit rates).</li> </ul>
<b>MP3</b>	<b>DVD-RAM DVD-R/RW CD-R/RW</b>	“.MP3” “.mp3”	<ul style="list-style-type: none"> <li>• Sampling frequency: 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</li> <li>• Compatible compression rate: between 32 kbps and 320 kbps</li> <li>• This unit is not compatible with ID3 tags.</li> </ul>
<b>JPEG</b>	<b>DVD-RAM DVD-R/RW CD-R/RW</b>	“.JPG” “.jpg” “.JPEG” “.jpeg”	<ul style="list-style-type: none"> <li>• JPEG files taken on a digital camera that conforms to DCF Standard Version 1.0 are displayed. <ul style="list-style-type: none"> <li>– Files that have been altered, edited or saved with computer picture editing software may not be displayed.</li> </ul> </li> <li>• This unit cannot display moving pictures, MOTION JPEG and other such formats, still pictures other than JPEG (e.g. TIFF) or play pictures with attached audio.</li> </ul>
<b>MPEG4</b>	<b>DVD-RAM DVD-R/RW CD-R/RW</b>	“.ASF” “.asf”	<ul style="list-style-type: none"> <li>• You can play MPEG4 data [conforming to SD VIDEO specifications (ASF standard)/MPEG4 (Simple Profile) video system/G.726 audio system] recorded with the Panasonic SD multi cameras or DVD video recorders with this unit.</li> <li>• The recording date may differ from that of the actual date.</li> </ul>

- If groups were created away from the root like “002 group” in the illustration right, the eighth one onwards is displayed on the same vertical line in the menu screen.
- There may be differences in the display order on the menu screen and computer screen.
- This unit cannot play files recorded using packet write.

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

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

### DVD-RAM

- Discs must conform to UDF 2.0.

### DVD-R/RW

- Discs must conform to UDF bridge (UDF 1.02/ISO9660).
- This unit is not compatible with multi-session. The default session only is played.

### CD-R/RW

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

## ■ Discs that cannot be played

Version 1.0 of DVD-RW, DVD-ROM, CD-ROM, CDV, CD-G, SACD, Photo CD, DVD-RAM that cannot be removed from their cartridges, 2.6-GB and 5.2-GB DVD-RAM, PAL discs\* and “Chaoji VCD” available on the market including CVD, DVCD and SVCD that do not conform to IEC62107.

\*You can play DVD-Audio; however, still pictures may be displayed enlarged.

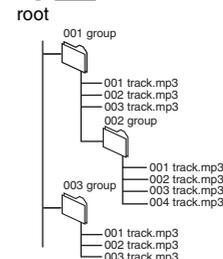
### Note about using a DualDisc

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

## ■ Handling precautions

- Do not attach labels or stickers to discs (This may cause disc warping, rendering it unusable).
- Do not write on the label side with a ball-point pen or other writing instrument.
- Do not use record cleaning sprays, benzine, thinner, static electricity prevention liquids 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.

e.g. **MP3**



# STEP 1 Connection

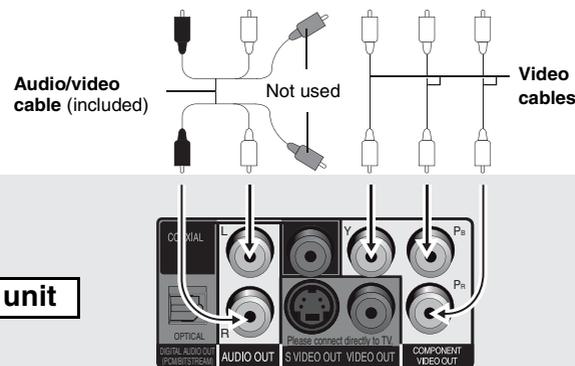
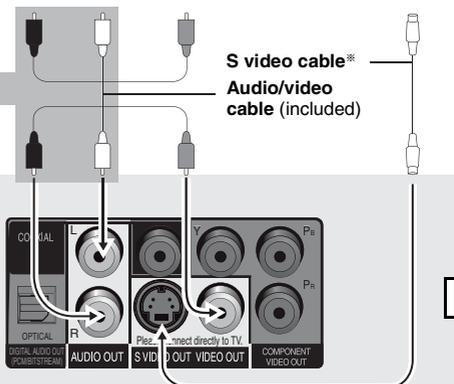
## ■ Connection to a television

- Do not place the unit on amplifiers or equipment that may become hot. The heat can damage the unit.
- **Do not connect through the video cassette recorder.** Due to copy guard protection, the picture may not display properly.
- Turn off all equipment before connection and read the appropriate operating instructions.
- Connect the terminals of the same color.

With VIDEO IN or S VIDEO IN

Television

With COMPONENT VIDEO IN



Back of the unit

\*When using this connection, the audio cable (red and white plugs) should also be connected.

You can connect the audio cable to the 2-channel audio input terminals of an analog amplifier or system component to enjoy stereo sound.

Select "Darker" from the "Black Level Control" (→ page 19, "Video" tab).

### To enjoy progressive video

Connect to a progressive output compatible television. Set "Video Output Mode" to "480p", then follow the instructions on the menu screen (→ page 17, Picture Menu).

All Panasonic televisions with 480p input connectors are compatible. Consult the manufacturer if you have another brand of television.

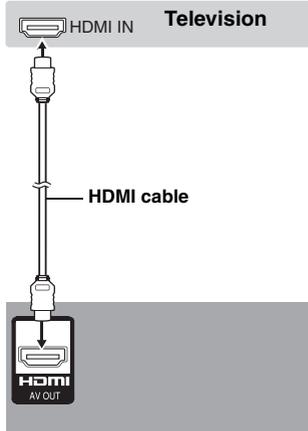
## ■ Enjoying higher quality audio and video (HDMI connection) (→ Page 28, Glossary)

By connecting to an HDMI compatible high-definition television, video recordings can be converted to, and output as, high-definition video (720p,1080i). You can also enjoy multi-channel surround sound by connecting to an HDMI compatible amplifier with multi-channel output terminals.

### With HDMI compatible television

To enjoy digital high-definition video and high quality audio with a single cable.

- You can enjoy multi-channel surround sound by connecting an amplifier with COAXIAL or OPTICAL terminal (→ page 8).

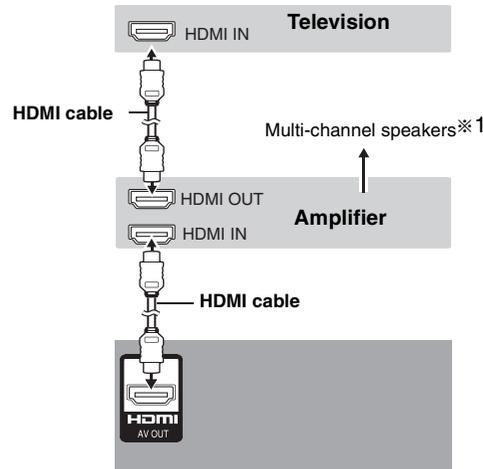


#### Back of the unit

- Set "Video Output" to "On" and "Audio Output" to "On" (→ page 20, "HDMI" tab).

### With HDMI compatible television and amplifier

To enjoy digital multi-channel surround sound in addition to digital high-definition video.

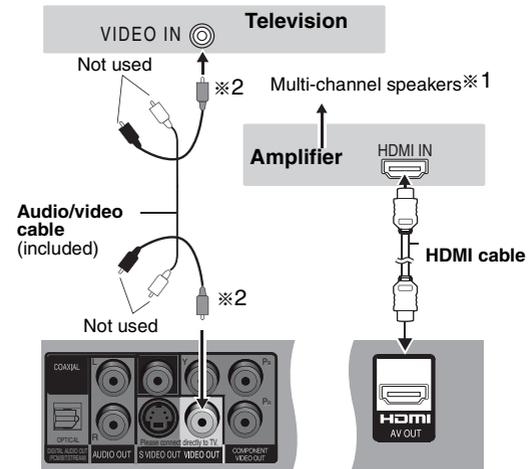


#### Back of the unit

- Set "Video Output" to "On" and "Audio Output" to "On" (→ page 20, "HDMI" tab).

### With HDMI compatible amplifier

You can still enjoy multi-channel surround sound when your television is not HDMI compatible by connecting an HDMI compatible amplifier.



#### Back of the unit

- Set "Audio Output" to "On". When you connect to a television through the COMPONENT VIDEO terminal only, set "Video Output" to "Off", too (→ page 20, "HDMI" tab).

※1 **DVD-V** Audio will be output in 2 channels when output as PCM.

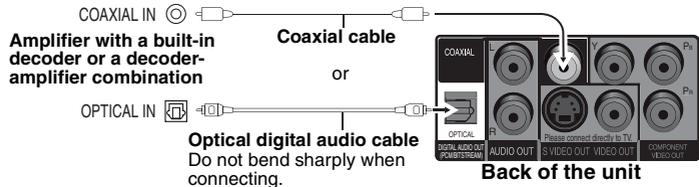
Change "Dolby Digital" and "DTS Digital Surround" (→ page 20, "Audio" tab).

※2 You can also use the S VIDEO and COMPONENT VIDEO terminals.

- To enjoy high-definition video, connect to an HDMI compatible high-definition television and set "Video Output Mode" (→ page 17, Picture Menu).
- For stable operation and preventing deterioration of video quality, please purchase an HDMI cable 5 m (16 2/3 feet) or less in length with the HDMI logo.
- If the speaker setup cannot be completed on the amplifier, then use the "Speaker Settings" setting (→ page 20, "HDMI" tab).
- It is not compatible with the HDMI Control Function (CEC).
- Should you connect equipment that does not support CPPM (→ page 28, Glossary), the audio from the CPPM copy protected DVD-Audio cannot be output from HDMI AV OUT terminal. Connect the audio cable (L, R) of the Audio/Video cable to an HDMI compatible AUDIO IN terminal.

## STEP 1 Connection

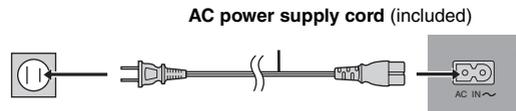
### ■ Enjoying multi-channel surround sound with COAXIAL IN or OPTICAL IN



- You cannot use DTS Digital Surround decoders not suited to DVD.
- Even if using this connection, output will be only 2 channels when playing DVD-Audio. To enjoy multi-channel surround sound, connect with HDMI terminals (→ page 7).

Set "Audio Output" to "Off" (→ page 20, "HDMI" tab), and change "PCM Digital Output", "Dolby Digital" and "DTS Digital Surround" (→ page 20, "Audio" tab).

### ■ Connect the AC power supply cord last



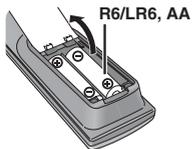
To household AC outlet (AC 120 V, 60 Hz)

### Conserving power

This unit consumes a small amount of power even when it is turned off (1 W). To save power when the unit is not to be used for a long time, unplug it from the household AC outlet.

## STEP 2 The remote control

### ■ Batteries



- 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.

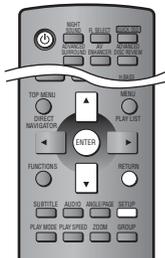
Mishandling of batteries can cause electrolyte leakage which can damage items the fluid contacts and may cause a fire.

Remove 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 sensor (→ page 9), avoiding obstacles, at a maximum range of 7 m (23 feet) directly in front of the unit.

## STEP 3 QUICK SETUP



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

<b>1</b>  Power ON.	<b>2</b>  Shows QUICK SETUP screen.	<b>3</b>  Follow the message and make the settings.	<b>4</b>  Press to finish QUICK SETUP.	<b>5</b>  Press to exit.
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To change these settings later, select "QUICK SETUP" (→ page 20, "Others" tab).

## Basic play

### 1 Power ON.



### 2 Open the disc tray.



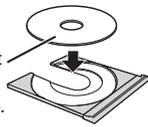
Stop Pause



Remote control sensor

### 3 Load the disc.

- Load double-sided discs so the label for the side you want to play is facing up.
- DVD-RAM: Remove discs from their cartridges before use.



### 4 Start play.

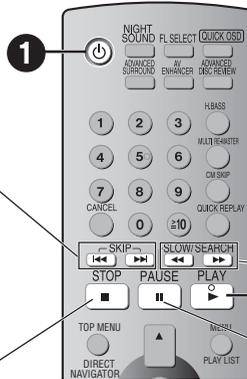


## Skip

- **DVD-VR** Can also skip to the markers.

## Stop

- The position is memorized when "▷" flashes on the display.
- Press **[▶]** (PLAY) to resume. (**Resume play**)
  - Press **[■]** to clear the position.
  - Even after the unit is turned off, the position is memorized (Normal playback only).



## Repeat play

- Select "Repeat" (→ page 12, Repeat play) or "A-B Repeat" (→ page 16, Play Menu).

## Search (during play)

### Slow-motion (during pause)

- Up to 5 steps
- Press **[▶]** (PLAY) to restart play.
- **VCD** Slow-motion: forward direction only
- **MPEG4** Slow-motion: Does not work.

## Pause

- Press **[▶]** (PLAY) to restart play.

## 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.

- To play **MP3**, **JPEG** or **MPEG4** on DVD-RAM that contain both **DVD-VR** and another format (e.g. **JPEG**), select "Play as Data Disc" (→ Page 18, Other Menu).
- "D.MIX" on the display indicates that a soundtrack with three or more channels can be down-mixed to two channels (→ Page 28, Glossary).
- Discs continue to rotate while menus are displayed. Press **[■]** when you finish to preserve the unit's motor and your television screen.
- Total title number may not be displayed properly on +R/+RW.

If you are experiencing problems, refer to troubleshooting guide (→ page 22-24).

## Basic play

### Group skip

WMA MP3 JPEG  
MPEG4



• Does not work while paused.

### Frame-by-frame

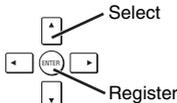
(during pause)

DVD-VR DVD-V  
VCD



• **VCD** forward direction only

### On-screen item select



### Return to previous screen



### Enter number



DVD-VR DVD-A DVD-V VCD CD  
e.g. To select 12: [≥10] → [1] → [2]

WMA MP3 JPEG MPEG4  
e.g. To select 123: [1] → [2] → [3] → [ENTER]

### Disc menu



**DVD-A DVD-V**  
Shows a disc top menu.  
**DVD-VR**  
Plays the programs (→ page 14).  
WMA MP3 JPEG MPEG4  
Plays data discs (→ page 15).



**DVD-V**  
Shows a disc menu.  
**DVD-VR**  
Plays a playlist (→ page 14).  
WMA MP3 JPEG MPEG4  
Plays data discs (→ page 15).



**VCD** with playback control  
Shows a disc menu.

### Main unit display



Number display  
↑  
↓  
Time display

Information screen  
JPEG



## Changing the play sequence

PLAY MODE



### All group/Program/Random play

Except **DVD-VR**

Disable HighMAT disc play to use random and program play. Select "Play as Data Disc" in Other Menu (→ page 18).

#### ■ All group play **DVD-A**

- 1 While stopped, press [PLAY MODE] several times.
- 2 Press [▶] (PLAY).

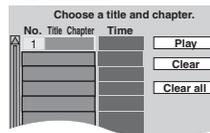
All Group Playback

Press PLAY to start

#### ■ Program play (up to 32 items)

- 1 While stopped, press [PLAY MODE] several times.
- 2 Press the numbered buttons to select the items (→ left, Enter number).  
Repeat this step to program other items.
- 3 Press [▶] (PLAY).

e.g. **DVD-V**



Selecting all the items (on the disc or in the title or group)

Press [ENTER] and [▲ ▼] to select "ALL", then press [ENTER] again to register.

#### Changing the program

Press [▲ ▼] to select an item.

–To change an item, repeat step 2.

–To clear an item, press [CANCEL] (or select "Clear" and press [ENTER]).

• Press [ANGLE/PAGE] to skip page by page.

#### Clearing the whole program

Select "Clear all" and press [ENTER]. The whole program is also cleared when the unit is turned off or the disc tray is opened.

#### ■ Random play

- 1 While stopped, press [PLAY MODE] several times.
- 2 **DVD-A DVD-V WMA MP3 JPEG MPEG4**  
Press the numbered buttons to select a group or a title (→ left, Enter number).
- 3 Press [▶] (PLAY).

e.g. **DVD-V**



To exit the all group, program or random mode

Press [PLAY MODE] several times while stopped.

# Convenient functions



QUICK OSD  
(Main unit)

## Displaying current playback condition

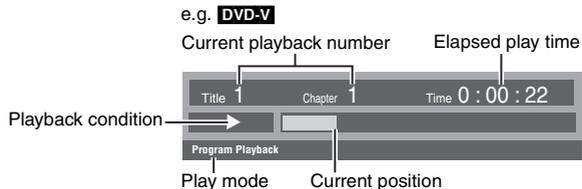
**Quick OSD**

Press [QUICK OSD].

Basics → Details

← Off ←

### Basics



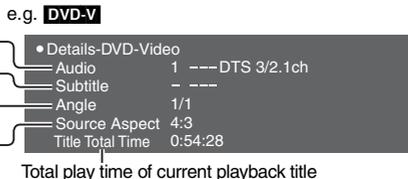
### Details

See page 13, for changing soundtracks

See page 13, for changing subtitles

See page 13, Angle select for changing angles

Aspect of current playback title



- **MPEG4** "Video" and "Audio" information is not displayed during search.



ADVANCED DISC REVIEW

## Reviewing titles/programs to play

**Advanced Disc Review**

DVD-VR DVD-V (Except +R/+RW)  
(Normal playback only)

### 1 Press [ADVANCED DISC REVIEW].

Reviews each title/program.

### 2 Press [▶] (PLAY) when you find a title/program to play.



- You can also review each 10 minutes. Select "Interval Mode" (→ page 19, "Advanced Disc Review" in "Disc" tab).
- This may not work depending on the play position.
- **DVD-VR** Does not work:
  - with still picture part.
  - when playing a playlist.



AV ENHANCER

## Recalling recommended audio/video setting

**AV Enhancer**

By pressing just one button the disc type is automatically determined and the best audio and video settings are configured.

Functions

**AV Enhancer Auto**

Press [AV ENHANCER] to select "Auto", "User1", "User2" or "User3".

- Off: Cancelled  
The best audio and video settings are configured.
- Auto: Suitable for video (**DVD-V**).
- User1\*: Suitable for music.
- User2\*: Suitable for music.
- User3\*: Suitable for video (**DVD-VR**).

\*You can change the settings for User1–3 to your preference (→ page 18, "AV Enhancer" in Other Menu).

When AV Enhancer (Auto) is on, you cannot change the individual settings indicated below.

#### Audio settings:

- Night Sound Mode, H.Bass (→ below),
- Multi Re-master, Advanced Surround (→ page 12),
- Dialogue Enhancer (→ page 17),
- Sound Enhancement (→ page 18)

#### Video settings:

- Picture Mode (→ page 17)

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



NIGHT SOUND

## Controlling louder portions of audio

**Night Sound Mode**

Except JPEG MPEG4

You can enjoy movies and music late at night because the quieter parts of the audio are accentuated.

Functions

**Night Sound Mode On**

Press [NIGHT SOUND] to select "On".

- This may not work depending on the disc's recording.
- This does not work with **MP3** on DVD-RAM or DVD-R/RW.



H.BASS

## Enjoying heavy bass with the speakers

**H.Bass**

DVD-V

Press [H.BASS] to select "On".

- This may not work depending on the disc's recording.
- If the sound is distorted or there is noise, set to "Off".
- This does not work when Night Sound Mode (→ above) is on.

Functions

**H.Bass On**

## Convenient functions



### Enjoying virtual surround **Advanced Surround**

Motion pictures with 2 or more channels

Press [ADVANCED SURROUND] to select "SP 1", "SP 2", "HP 1" or "HP 2".

SP (Speaker) 1 (Natural) SP 2 (Enhanced)  
HP (Headphone) 1 (Natural) HP 2 (Enhanced) Off

- When using discs recorded with surround sound, sound seems to come from speakers on either side of you.
- When using headphones from the connected equipment, select "HP 1" or "HP 2".
- Optimum seating position is 3 to 4 times the distance between the front left and right speakers or the width of the television if using the television's speakers.
- Do not use in combination with surround effects on other equipment.
- This does not work when Night Sound Mode or H.Bass (→ page 11) is on.



Advanced Surround SP 1

MULTI RE-MASTER

### Reproducing more natural audio **Multi Re-master**

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

**DVD-A** (Discs recorded with 44.1 kHz and 48 kHz only)

**VCD** **CD**

- During multi-channel output of these discs, this feature reproduces the frequencies lost during recording to give you a sound closer to the original.
- During 2 ch output of these discs, this feature gives you a more natural sound by adding the higher frequency signals not recorded on the disc, for example, playing DVD-Video recorded with 48 kHz at 96 kHz. (→ page 28, "Sampling frequency" in Glossary)

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

This feature reproduces the higher frequencies lost during recording to give you a sound closer to the original.

Press [MULTI RE-MASTER] to select "1", "2" or "3".

Setting	<b>DVD-A</b> <b>DVD-V</b> <b>CD</b> (LPCM/PPCM)	Other discs
	Type of music	Effect level
1	High tempo (e.g., pop and rock)	Light
2	Various tempos (e.g., jazz)	Medium
3	Low tempo (e.g., classical)	Strong
Off	Off	Off



Multi Re-master 1

- When connecting with DIGITAL AUDIO OUT terminal, the actual output sampling frequency depends on "PCM Digital Output" setting in "Audio" tab (→ page 20).
- This may not work depending on the disc's recording.
- This does not work when Night Sound Mode, H.Bass (→ page 11) or Advanced Surround (→ above) is on.
- This does not work with **MP3** on DVD-RAM or DVD-R/RW.

FUNCTIONS



**Repeat play** (Only when the elapsed play time can be displayed)

**JPEG**: you can use even if there is no elapsed time display.)

- 1 Press [FUNCTIONS].
  - 2 Press [▲ ▼] to select "Other Settings" and press [▶].
  - 3 Press [▲ ▼] to select "Play Menu" and press [▶].
  - 4 Press [▲ ▼] to select "Repeat" and press [▶].
  - 5 Press [▲ ▼] to select an item to be repeated and press [ENTER].
- Depending on the disc, the items that can be selected will differ.

QUICK REPLAY



**Quick replay** (Only when the elapsed play time can be displayed)

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

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

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



CM SKIP



**Skipping a minute forward**

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

Convenient when you want to skip commercials etc.

During play, press [CM SKIP].

- This may not work depending on the play position.
- **DVD-VR** Does not work:
  - with still picture part.
  - when playing a playlist.

PLAY SPEED



**Changing play speed** **DVD-VR** **DVD-V**

During play, press [PLAY SPEED] to select "Fast", "Normal" or "Slow".



Play Speed ◀ x1.4

Normal

✓Fast

Slow

**Fine adjustments**

While the menu is displayed

Press [◀ ▶] to increase or decrease the playing speed from ×0.6 to ×1.4 in 0.1 units.

- Press [▶] (PLAY) to return to the normal play.
- After you change the speed
  - Night Sound Mode, H.Bass (→ page 11), Advanced Surround (→ left), Multi Re-master (→ left) and Sound Enhancement (→ page 18) do not work.
  - When using this function, digital audio output switches to PCM-2 ch.
  - 96 kHz sampling frequency is converted to 48 kHz.
- This may not work depending on the disc's recording.

GROUP <input type="text"/>	<b>Starting play from a selected group</b> <b>DVD-A WMA MP3 JPEG MPEG4</b>
-------------------------------	---

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

- 1 While stopped, press [GROUP].
- 2 Press [ $\blacktriangle$   $\blacktriangledown$ ] or the numbered buttons to select a group and press [ENTER].

<input checked="" type="checkbox"/> Functions Group Search $\blacktriangledown$ 1
--

- **DVD-A** To play all groups ( $\rightarrow$  page 10, All group play)

SUBTITLE <input type="text"/>	<b>Changing subtitles</b> <i>Discs with subtitles</i>
----------------------------------	--

**DVD-V**

Press [SUBTITLE] to select the subtitle language.  
To clear/display the subtitles

Press [ $\blacktriangle$   $\blacktriangleright$ ] to select "On" or "Off".

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

<input checked="" type="checkbox"/> Functions Subtitle $\blacktriangle$ Off $\blacktriangleright$
--

**DVD-VR** (with subtitle on/off information)

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

- On or Off only can be selected.
- Subtitle on/off information cannot be recorded using Panasonic DVD Recorders.

AUDIO <input type="text"/>	<b>Changing soundtracks</b> <b>DVD-A DVD-V</b> (with multiple soundtracks) <b>DVD-VR VCD</b>
-------------------------------	--

Press [AUDIO] to select the soundtrack.

**DVD-VR VCD**

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

<input checked="" type="checkbox"/> Functions Audio 1
--

**DVD-V** (Karaoke discs)

While the menu is displayed

Press [ $\blacktriangle$   $\blacktriangleright$ ] to select "On" or "Off" of vocals. Read the disc's instructions for details.

**Signal type/data**

LPCM/PPCM/ $\square\square$  Digital/DTS/MPEG: Signal type  
kHz (Sampling frequency)/bit/ch (Number of channels)

Example: 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

ZOOM <input type="text"/>	<b>Zoom</b> <i>Motion pictures</i>
------------------------------	---------------------------------------

This feature expands a letterbox picture to fit the screen.

Press [ZOOM] to select the preset aspect ratio or "Auto". (Just Fit Zoom)

**DVD-VR DVD-V VCD**

Auto  $\rightarrow$  4:3 Standard  $\rightarrow$  European Vista  $\rightarrow$  16:9 Standard

$\uparrow$  Cinemascope2  $\leftarrow$  Cinemascope1  $\leftarrow$  American Vista  $\downarrow$

- Depending on the disc, the preset aspect ratio may not be displayed.

**MPEG4**

Standard  $\rightarrow$  Original  
 $\uparrow$  Full  $\leftarrow$

**Fine adjustments (Manual Zoom)**

Press [ $\blacktriangle$   $\blacktriangleright$ ] while the menu is displayed. (Press and hold to alter faster.)

$\rightarrow$  from  $\times 1.00$  to  $\times 1.60$  (in 0.01 units), from  $\times 1.60$  to  $\times 2.00$  (in 0.02 units)

**MPEG4** only

$\rightarrow$  from  $\times 2.00$  to  $\times 4.00$  (in 0.05 units)

- It may not be possible to zoom up to  $\times 4.00$  depending upon the connected television and its settings.

<input checked="" type="checkbox"/> Functions Just Fit Zoom $\times 1.00$ $\blacktriangleright$
--

ANGLE/PAGE <input type="text"/>	<b>Angle select</b> <b>DVD-V</b> with multiple angles <b>Still picture rotation</b> <b>JPEG</b> /advance <b>DVD-A</b>
------------------------------------	--

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

e.g. **DVD-V**

<input checked="" type="checkbox"/> Functions Angle 1/4
--

# Using navigation menus

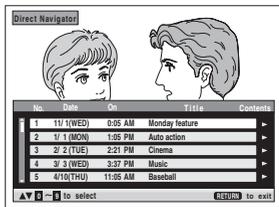


## Playing programs/playlists DVD-VR

- Titles appear only if they have been entered.
- You cannot edit playlists and titles.

### Playing the programs

- 1 Press [DIRECT NAVIGATOR].
- 2 Press [▲ ▼] or the numbered buttons to select the program.
  - Press [ANGLE/PAGE] to skip page by page.
  - To select a 2-digit number  
e.g. 23: [≥10] → [2] → [3]
  - Press [▶] to show the contents of the program.
- 3 Press [ENTER].



## Playing CD CD

Titles appear with CD text playback.

- 1 Press [MENU].
- 2 Press [▲ ▼] to select the track and press [ENTER].

- Press [ANGLE/PAGE] to skip page by page.
- To exit the screen, press [MENU].

e.g. CD text



Press [FUNCTIONS] to switch between guide messages and the playback condition indicator.



## Playing HighMAT™ discs WMA MP3 JPEG

While the menu is displayed  
Press [▲ ▼ ◀ ▶] to select items then press [ENTER].



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

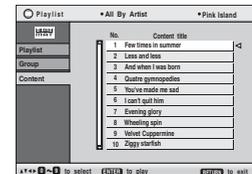


Playlist:  
Play starts.

- To return to the menu screen, press [TOP MENU] then press [RETURN] several times.
- To change the menu background, press [FUNCTIONS].  
The background changes to the one recorded on the disc.
- To display/exit the screen, press [TOP MENU].

### Selecting from the list

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



### Playing a playlist (Only when the disc contains a playlist)

- 1 Press [PLAY LIST].
- 2 Press [▲ ▼] or the numbered buttons to select the play list.
  - Press [ANGLE/PAGE] to skip page by page.
  - To select a 2-digit number  
e.g. 23: [≥10] → [2] → [3]
- 3 Press [ENTER].



### Playing a scene

- 1 Do steps 1–2 (→ above, Playing a playlist).
- 2 Press [▶].
- 3 Press [▲ ▼] to select “Scene List” and press [ENTER].
  - Select “Contents” to show the contents of the program.
- 4 Press [▲ ▼ ◀ ▶] to select a scene and press [ENTER].

TOP MENU MENU

## Playing data discs **WMA MP3 JPEG MPEG4**

Select "Play as Data Disc" (→ page 18, Other Menu) in the following cases:

-To play HighMAT discs without using the HighMAT function

-To play **MP3**, **JPEG** or **MPEG4** on DVD-RAM that contain both **DVD-VR** and another format (e.g. **JPEG**)

### Playing items in order (Playback Menu)

While the menu is displayed

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

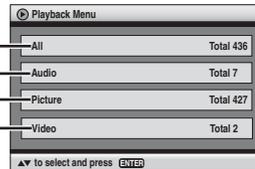
- To display/exit the screen, press [TOP MENU].

All contents

WMA/MP3

JPEG

MPEG4

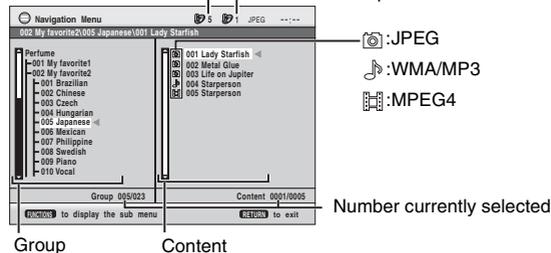


▲▼ to select and press [ENTER]

### Playing from the selected item (Navigation Menu)

- 1 Press [MENU].
- 2 Press [**▲ ▼ ◀ ▶**] to select the group and press [ENTER].
- 3 • To play content in the group in order Press [ENTER].  
• To start play from the selected content Press [**▲ ▼**] to select and press [ENTER].

Group and content number currently playing

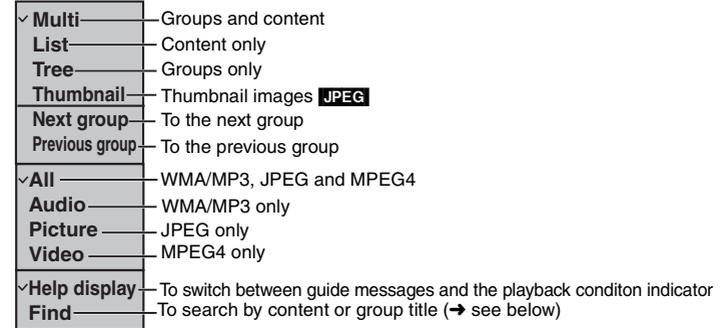


Number currently selected

- Press [ANGLE/PAGE] to skip page by page.
- To listen to WMA/MP3 while showing a JPEG image on the screen Select a JPEG first, and then select WMA/MP3. (The opposite order is not effective.)
- To exit the screen, press [MENU].

### Using the submenu

- 1 Press [MENU].
- 2 Press [FUNCTIONS].
- 3 Press [**▲ ▼**] to select an item and press [ENTER].



### Searching by a content or group title

- 1 Press [MENU].
  - Press [**◀ ▶**] to highlight a group title to search a group, or a content title to search its content.
- 2 Press [FUNCTIONS].
- 3 Press [**▲ ▼**] to select "Find" and press [ENTER].
- 4 Press [**▲ ▼**] to select a character and press [ENTER].
  - Repeat to enter another character.
  - Lower case is also searched.
  - Press [**◀ ▶**] to skip between A, E, I, O and U.
  - Press [**◀**] to erase a character.
  - Erase the asterisk (\*) to search for the titles starting with that character.
- 5 Press [**▶**] to select "Find" and press [ENTER].  
The search result screen appears.
- 6 Press [**▲ ▼**] to select the content or group and press [ENTER].



# Using On-Screen Menus

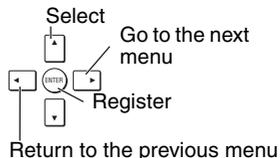
1

FUNCTIONS



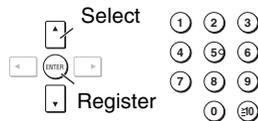
Press.

2



Select the menu.

3



Make the settings.

4

RETURN



Press to exit.

Items shown differ depending on the type of software.

## Main menus

**Program, Group, Title  
Chapter, Track  
Playlist, Content** To start from a specific item  
 • Press [▲ ▼] to select and press [ENTER].  
 • Press and hold [▲ ▼] to alter faster.

**Time** To skip incrementally or decrementally\* (Time Slip for play only)  
 1. Press [ENTER] twice to show Time Slip indicator.  
 2. Press [▲ ▼] to select the time and press [ENTER].  
 • Press and hold [▲ ▼] to alter faster.

To start from a specific time\* (Time Search)  
 To change remaining/elapsed time display

**Video** To display pixel number.

**Audio** (→ page 13, Changing soundtracks)  
 To display the current bitrate or sampling frequency

**Still Picture** To switch still picture

**Thumbnail** To show thumbnail images

**Subtitle** (→ page 13, Changing subtitles)

**Marker (VR)** To recall a marker recorded on DVD-Video recorders

**Angle** (→ page 13, Angle select)

**Rotate Picture** (→ page 13, Still picture rotation)

**Slideshow** To turn on/off slideshow  
 To change the slideshow timing (1 Fast ↔ 5 Slow)  
 • When using Slideshow, Skip/Rotate picture may not work correctly depending on the play position.

**Other Settings** (→ right)

## Other Settings

**Play Speed** (→ page 12, Changing play speed)

### ■ Play Menu

(Only when the elapsed play time can be displayed, **JPEG** The Repeat and Marker functions can be used.)

**Repeat** (→ page 12, Repeat play)

**A-B Repeat** To repeat a specified section  
 Press [ENTER] at the starting and ending points.  
 Press [ENTER] again to cancel.  
 • **DVD-VR** (still picture part): Does not work.

**Marker** To mark up to 5 positions to play again  
 Press [ENTER] (The unit is now ready to accept markers.)  
 To mark a position: [ENTER] (at the desired point)  
 To mark another position: [◀ ▶] to select "\*" → [ENTER]  
 To recall a marker: [◀ ▶] → [ENTER]  
 To erase a marker: [◀ ▶] → [CANCEL]

• This feature doesn't work during program and random play.  
 • Markers you add clear when you open the disc tray or switch the unit to standby.

**Advanced Disc Review** (→ page 11)

\* Except +R/+RW

## Picture Menu

Picture Mode	<p><b>Normal:</b> Normal images</p> <p><b>Cinema1:</b> Mellows images and enhances detail in dark scenes.</p> <p><b>Cinema2:</b> Sharpens images and enhances detail in dark scenes.</p> <p><b>Animation:</b> Suitable for animation</p> <p><b>Dynamic:</b> Enhances the contrast for powerful images.</p> <p><b>User</b> (Press [ENTER] to select <b>"Picture Adjustment"</b>) (→ below)</p>
	<p><b>Picture Adjustment</b></p> <p><b>Contrast:</b> Increases the contrast between light and dark parts of the picture (-7 to +7).</p> <p><b>Brightness:</b> Brightens the picture (0 to +15).</p> <p><b>Sharpness:</b> Adjusts the sharpness of the edges of the horizontal lines (-7 to +7).</p> <p><b>Color:</b> Adjust the shade of the picture's color (-7 to +7).</p> <p><b>Gamma :</b> Adjusts the brightness of dark parts (0 to +5).</p> <p><b>Depth Enhancer :</b> Reduce the rough noise in the background to give a greater feeling of depth (0 to +4).</p> <p><b>MPEG DNR:</b> Smoothes block noise and reduces the smudging that appears around contrasting sections of the picture (0 to +3).</p>
Video Output Mode	<p><b>With HDMI connection (When "Video Output" is set to "On")</b> (→ page 20, "HDMI" tab)</p> <p>Video recordings will be converted to, and output as, high definition video. The picture quality will vary depending on the connected equipment. Choose the picture quality to your preference.</p> <p><b>480p (progressive) 720p (progressive)</b></p> <p><b>1080i (interlace)</b></p> <p>● "*" will be displayed next to those video outputs possible with the connected equipment. Selecting an item without "*" can result in the picture being distorted.</p> <p>Should the picture be distorted, press and hold [CANCEL] until the picture is displayed correctly.</p> <p>The setting will return to "480p".</p> <p>● Output from the COMPONENT VIDEO OUT terminal will be "480p".</p> <p><b>With HDMI connection (When "Video Output" is set to "Off")</b> (→ page 20, "HDMI" tab) or other connections</p> <p><b>480i (interlace) 480p (progressive)</b></p> <p>When you select "480p" and a confirmation screen appears, select "Yes" only if connecting to a progressive output compatible television.</p>

Transfer Mode	<p>If you have chosen "480p", "720p" or "1080i" (→ left), select the method of conversion to suit the type of material.</p> <p>● When the tray is opened, the setting will return to Auto1.</p> <p><b>Auto1</b> (normal): Automatically detects the film and video content, and appropriately converts it.</p> <p><b>Auto2:</b> In addition to Auto1, automatically detects film contents with different frame rates and appropriately converts it.</p> <p><b>Video:</b> Select when using Auto1 and Auto2, and the content is distorted.</p>
	<p><b>With HDMI connection (When "Video Output" is set to "On")</b> (→ page 20, "HDMI" tab)</p> <p>Makes the quality of HDMI video output (720p,1080i) sharp.</p> <p><b>Off, 1</b>(weakest) to <b>3</b> (strongest)</p>
HDMI Color Space	<p><b>With HDMI connection (When "Video Output" is set to "On")</b> (→ page 20, "HDMI" tab)</p> <p>The picture quality will vary depending on the connected equipment. Choose the picture quality to your preference. Should one of the items below not be possible with the connected equipment it will not be displayed.</p> <p><b>RGB YCbCr (4:4:4) YCbCr (4:2:2)</b></p> <p>● "RGB Range" (→ page 20, "HDMI" tab) is available when "RGB" is selected.</p>
	<p><b>Audio Menu</b></p> <p><b>Night Sound Mode</b> (→ page 11)</p> <p><b>H.Bass</b> (→ page 11)</p> <p><b>Advanced Surround</b> (→ page 12)</p> <p><b>Dialogue Enhancer</b></p> <p>To make the dialogue in movies easier to hear <b>DVD-V</b> (Dolby Digital, DTS, 3-channel or over, with the dialogue recorded in the center channel)</p> <p><b>On</b> ←→ <b>Off</b></p> <p><b>Multi Re-master</b> (→ page 12)</p>

Continued on next page

## Using On-Screen Menus

### ■ Audio Menu

Sound Enhancement	You can enjoy comfortable, analog-like sound. <b>DVD-VR</b> <b>DVD-V</b> (Discs recorded with 48 kHz only) <b>DVD-A</b> (Discs recorded with 44.1 kHz and 48 kHz only) <b>VCD</b> <b>CD</b> <b>WMA</b> <b>MP3</b> (Disc recording is other than 8 kHz, 16 kHz or 32 kHz) On $\longleftrightarrow$ Off
	<ul style="list-style-type: none"> <li>This does not work when Night Sound Mode, H.Bass(→ page 11), Advanced Surround or Multi Re-master (→ page 12) is on.</li> <li>This may not work depending on the disc's recording.</li> <li>This does not work with <b>MP3</b> on DVD-RAM or DVD-R/RW.</li> </ul>
Attenuator	With <b>AUDIO OUT</b> connections (→ page 6) Switch on if sound is distorted. On $\longleftrightarrow$ Off

### ■ Display Menu

Information	On $\longleftrightarrow$ Off
Subtitle Position	0 to -60 (in 2 units)
Subtitle Brightness	Auto, 0 to -7
4:3 Aspect	To select how to show images made for 4:3 aspect screens on a 16:9 aspect television Normal: Laterally stretches images. Auto: The standard setting is "Shrink". However, this automatically changes to "Zoom" with a letterbox picture. Shrink: Images appear in the center of the screen. Zoom: Expands to 4:3 aspect ratio.
Just Fit Zoom	(→ page 13, Zoom)
Manual Zoom	(→ page 13, Zoom)
Bit Rate Display	<i>Motion pictures</i> On $\longleftrightarrow$ Off
GUI See-through	Off, On, Auto (Switches on automatically when the images appear on the display.)
GUI Brightness	-3 to +3
HDMI Status	Indicates various information when connected with HDMI AV OUT terminal. (→ below, Confirming HDMI information)
Quick OSD	(→ page 11)

### ■ Confirming HDMI information

•HDMI Status—HDMI is connected.	Connection status
HDMI Information	(→ page 13, Changing soundtracks)
Audio Stream PCM/Dolby Digital/DTS	Shows the maximum channel number of the connected equipment.
Max Channel 6ch	(→ page 17, Video Output Mode)
Video Format 480p/720p/1080i	(→ page 17, HDMI Color Space)
Color Space YCbCr(4:4:4)/YCbCr(4:2:2)/RGB	

### To preset the settings

You can preset your favorite video/audio effects onto "User1", "User2" and "User3".

#### Preparation

Adjust the settings indicated below to your preference. (When "Auto" is selected, this is not available.)

#### Audio settings:

Night Sound Mode/H.Bass (→ page 11)  
Advanced Surround/Multi Re-master (→ page 12)  
Dialogue Enhancer/ (→ page 17, Audio Menu)  
Sound Enhancement (→ left)

#### Video settings:

Picture Mode (→ page 17, Picture Menu)

1. Select "Save Settings" and press [ENTER].
2. Press [ $\blacktriangle$   $\blacktriangledown$ ] to select the setting location (User1, User2 or User3) and press [ENTER].
3. Follow the instructions on the menu screen and press [ENTER] last.

#### To recall the settings (→ page 11)

#### To confirm the settings

1. Press [ $\blacktriangle$   $\blacktriangledown$ ] to select "User1", "User2" or "User3" and press [ENTER].
2. Select "Save Settings" and press [ENTER] twice. To exit the screen, select "No" and press [ENTER].

### AV Enhancer

#### Setup

(→ page 19, Changing the player settings)

#### Play as DVD-Video or Play as DVD-Audio

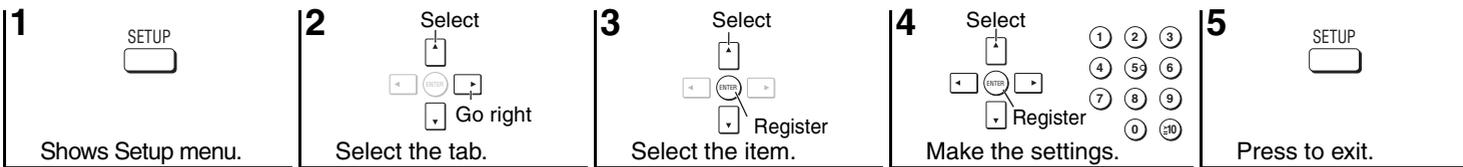
Select "Play as DVD-Video" to play **DVD-V** on DVD-Audio.

#### Play as DVD-VR Play as HighMAT or Play as Data Disc

Select "Play as Data Disc" to play **MP3** **JPEG** or **MPEG4** on DVD-RAM that contain both **DVD-VR** and another format (e.g. **JPEG**) or to play HighMAT discs without using the HighMAT function.

- All possible outputs are displayed.
- The current output for "Audio Stream", "Video Format" and "Color Space" will be underlined.
- When "Off" is selected in "Audio Output" (→ page 20, "HDMI" tab) "—" will be displayed in "Audio Stream" and "Max Channel".

# Changing the player settings



- Referring to pages 19 to 21, change as required.
- The settings remain intact even if you switch the unit to standby.
- Underlined items are the factory preset.

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

## ■ “Disc” tab

<b>Audio</b> Choose the audio language.	<u>English</u> French   Spanish   Original* <sup>1</sup> Other***** <sup>2</sup>
<b>Subtitle</b> Choose the subtitle language.	<u>Automatic</u> <sup>3</sup> English   French   Spanish Other***** <sup>2</sup>
<b>Menus</b> Choose the language for disc menus.	<u>English</u> French   Spanish   Other***** <sup>2</sup> • Changing the menu language from QUICK SETUP also changes this setting.
<b>Advanced Disc Review</b> Select how to review (→ page 11).	<b>Intro Mode:</b> Reviews each title/program. <b>Interval Mode:</b> Reviews each 10 minutes.
<b>Ratings</b> Set a ratings level to limit DVD-Video play. • Follow the on-screen instructions.	Setting ratings (When level 8 is selected) <b>8 No Limit</b> <b>1 to 7:</b> To prohibit play of DVD-Video with corresponding ratings recorded on them. <b>0 Lock All:</b> To prevent play of discs without ratings levels. When setting a 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 exceeding the ratings level is inserted in the unit. Follow the on-screen instructions.

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

\*<sup>2</sup> Input a code number referring to the table (→ page 26).

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

## ■ “Video” tab

<b>TV Aspect</b> Choose the setting to suit your television and preference.	<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). <b>4:3 Letterbox:</b> Regular aspect television (4:3) Widescreen picture is shown in the letterbox style. <b>16:9:</b> Widescreen television (16:9)	 
<b>TV Type</b> Select to suit the type of television.	<b>Standard (Direct View TV)</b> <b>CRT Projector</b> <b>LCD TV/Projector</b> <b>Projection TV</b> <b>Plasma TV</b>	
<b>Time Delay</b> When connected with an AV amplifier and Plasma display, adjust if you notice the audio is out of sync with the video.	<b>0ms</b> <b>20ms</b> <b>40ms</b> <b>60ms</b> <b>80ms</b> <b>100ms</b>	
<b>Still Mode</b> Specify the type of picture shown when paused.	<b>Automatic</b> <b>Field:</b> The picture is not blurred, but picture quality is lower. <b>Frame:</b> Overall quality is high, but the picture may appear blurred.	
<b>Black Level Control</b> Change the black level of the picture if you connected a television through the COMPONENT VIDEO OUT terminals.	<b>Lighter:</b> When connected through VIDEO OUT or S VIDEO OUT. <b>Darker:</b> When connected through COMPONENT VIDEO OUT. • This setting is irrelevant when connected through the HDMI AV OUT terminal.	

## Changing the player settings

### ■ “Audio” tab

<p><b>PCM Digital Output*</b> Check the digital input limitations of the equipment you connect using COAXIAL or OPTICAL terminal and select the maximum sampling frequency of PCM digital output.</p>	<p><b>Off:</b> When not connected with COAXIAL or OPTICAL terminal</p> <p><b>Up to 48 kHz:</b> When connected to equipment compatible with 44.1 or 48 kHz</p> <p><b>Up to 96 kHz:</b> When connected to equipment compatible with 88.2 or 96 kHz</p> <p><b>Up to 192 kHz:</b> When connected to equipment compatible with 176.4 or 192 kHz</p> <ul style="list-style-type: none"> <li>● Signals from copy-protected discs are converted to 48 or 44.1 kHz.</li> <li>● Some equipment cannot handle sampling frequencies of 88.2 kHz, even if they can handle 96 kHz. Read your equipment's operating instructions for details.</li> </ul>
<p><b>Dolby Digital*</b> With COAXIAL, OPTICAL or HDMI AV OUT connections (→ page 7,8)</p>	<p><b>Bitstream</b> <b>PCM</b></p> <p>Select “<b>Bitstream</b>” when the equipment can decode the bitstream (digital form of multi-channel data). Otherwise, select “<b>PCM</b>”.</p>
<p><b>DTS Digital Surround*</b> With COAXIAL, OPTICAL or HDMI AV OUT connections (→ page 7,8)</p>	<p><b>Bitstream</b> <b>PCM</b></p> <p>(If the bitstream is output to the equipment without a decoder, high levels of noise can be output and may damage your speakers and hearing.)</p>
<p><b>Dynamic Range Compression</b></p>	<p><b>Off</b></p> <p><b>On:</b> Adjusts for clarity even when the volume is low through compressing the range of the lowest sound level and the highest sound level. Convenient for late night viewing. (Only works with Dolby Digital)</p>

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

### ■ “HDMI” tab

<p><b>RGB Range</b> Set “HDMI Color Space” to “RGB” (→ page 17, Picture Menu) .</p>	<p><b>Standard</b> <b>Enhanced:</b> When the black and white images are not distinct.</p>
<p><b>Video Output</b> (This setting is irrelevant when connected through the VIDEO or S VIDEO OUT terminal.)</p>	<p><b>On:</b> Select this when connected through the HDMI terminal. Video is output from the HDMI terminal. Video is also output from the COMPONENT VIDEO OUT terminal, but only in 480p (progressive).</p> <p><b>Off:</b> Select this when connected through the COMPONENT VIDEO OUT terminal. Video is not output from the HDMI terminal, but from the COMPONENT VIDEO OUT terminal according to the setting of the “Video Output Mode” (→ page 17, Picture Menu).</p>
<p><b>Audio Output</b></p>	<p><b>On:</b> When audio output is from HDMI AV OUT terminal. (Depending on the capabilities of the connected equipment, audio output may differ from the audio settings.)</p> <p><b>Off:</b> When audio output is not from HDMI AV OUT terminal. (The audio is output using the settings of this unit.)</p>
<p><b>Speaker Settings</b> Choose the settings to suit your audio system and the listening environment (→ page 21, Changing the speaker setting to suit your speakers).</p>	<p>Speaker Type</p> <p><b>Multi-channel:</b> when 3 or more speakers are connected.</p> <p><b>2-channel:</b> when 2 speakers are connected.</p> <p><b>Multi-channel Setting</b> (If you select “Multi-channel”) Speaker presence and size Delay time</p>

### ■ “Display” tab

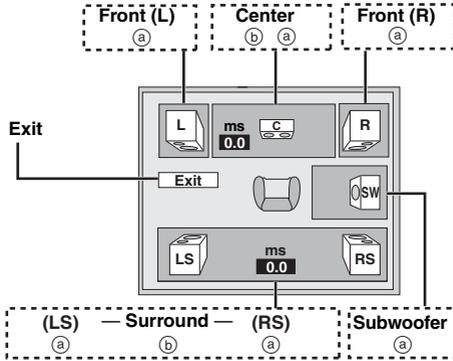
Menu Language	English	Français	Español
On-Screen Messages	On	Off	
Background during Play Select background during JPEG and MPEG4 playback.	Black	Gray	

### ■ “Others” tab

<p><b>FL Dimmer</b> Changes the brightness of the unit's display.</p>	<p><b>Bright</b>      <b>Dim</b> <b>Auto:</b> The display is dimmed, but brightens only when you perform some operations.</p>
<p><b>Auto Power Off</b></p>	<p><b>On:</b> The unit switches to standby mode after about 30 minutes in the stop mode.</p> <p><b>Off</b></p>
<p><b>QUICK SETUP</b></p> <p><b>Re-initialize Setting</b> This returns all values in the Setup menus to the default settings.</p>	<p><b>Yes</b>      <b>No</b></p> <p><b>Yes:</b> The password screen is shown if “Ratings” (→ page 19) is set. Please enter the same password and press [ENTER].</p> <p><b>No</b></p>

## Changing the speaker setting to suit your speakers

When connecting with an HDMI cable to an amplifier, use the following settings on this unit if you cannot set the speaker delay effect on the amplifier.



### Speaker presence and size (a)

1. Press [**▲ ▼ ◀ ▶**] to select an item and press [**ENTER**].
2. Press [**▲ ▼**] to change the content and press [**ENTER**].

#### Icon examples:

Surround speaker (LS)



Large



Small



No

- **Large:** Select when the speaker supports low-frequency (under 100 Hz) reproduction.
- **Small:** Select when the speaker does not support low-frequency reproduction.

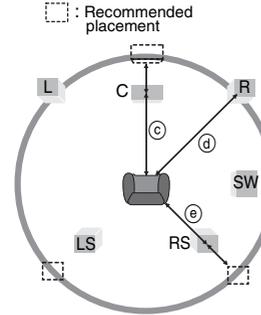
If the subwoofer is set to "No", the front speakers will automatically be set to "Large". (In this case, we recommend connecting a speaker that can reproduce bass below 100 Hz.)

### Delay time (b)

#### (Effective when playing multi-channel audio)

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

1. Press [**▲ ▼ ◀ ▶**] to select an item and press [**ENTER**].
2. Press [**▲ ▼**] to change the content and press [**ENTER**].



#### (c) Center speaker

Difference	Setting
Approx. 34 cm (1 $\frac{1}{10}$ feet)	1.0 ms
Approx. 68 cm (2 $\frac{1}{2}$ feet)	2.0 ms
Approx. 102 cm (3 $\frac{3}{10}$ feet)	3.0 ms
Approx. 136 cm (4 $\frac{3}{5}$ feet)	4.0 ms
Approx. 170 cm (5 $\frac{1}{2}$ feet)	5.0 ms

#### (e) Surround speakers

Difference	Setting
Approx. 170 cm (5 $\frac{1}{2}$ feet)	5.0 ms
Approx. 340 cm (11 feet)	10.0 ms
Approx. 510 cm (16 $\frac{1}{2}$ feet)	15.0 ms

#### To finish the speaker setting

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

## 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, refer to the "Customer Services Directory" on page 29. (Reference pages are shown in parentheses.)

### Power

<b>No power.</b>	<ul style="list-style-type: none"> <li>● Insert the AC power supply cord securely into the household AC outlet. <b>(8)</b></li> </ul>
<b>The unit is automatically switched to the standby mode.</b>	<ul style="list-style-type: none"> <li>● When "Auto Power Off" is set to "On", the unit automatically switches to standby after approximately 30 minutes in the stop mode. <b>(20)</b></li> </ul>

### No operation

<b>No response when any buttons pressed.</b>	<ul style="list-style-type: none"> <li>● This unit cannot play discs other than the ones listed in these operating instructions. <b>(4)</b></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 to ON. Alternatively, turn the unit off, disconnect the AC power supply cord, and then reconnect it.</li> <li>● Condensation has formed: Wait 1 to 2 hours for it to evaporate.</li> </ul>
<b>No response when remote control buttons pressed.</b>	<ul style="list-style-type: none"> <li>● Check that the batteries are installed correctly. <b>(8)</b></li> <li>● The batteries are depleted: Replace them with new ones. <b>(8)</b></li> <li>● Point the remote control at the remote control sensor and operate. <b>(9)</b></li> </ul>
<b>No picture or sound.</b>	<ul style="list-style-type: none"> <li>● Check the video or audio connection. <b>(6-8)</b></li> <li>● Check the power or input setting of the connected equipment.</li> <li>● Check that the disc has something recorded on it.</li> </ul>
<b>You have forgotten your ratings password.</b> Reset all the settings to Factory Preset.	<ul style="list-style-type: none"> <li>● While stopped, press and hold [QUICK OSD] and [III] on the unit and then also press and hold [▲OPEN/CLOSE] on the unit until "Initialized" disappears from the television. Turn the unit off and on again. All settings will return to the default values.</li> </ul>

### Specific operation impossible or incorrect

<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; however, this is normal.</li> </ul>
<b>The program and random play functions do not work.</b>	<ul style="list-style-type: none"> <li>● These functions do not work with some DVD-Videos.</li> </ul>
<b>Menu doesn't appear.</b> [VCD] with playback control	<ul style="list-style-type: none"> <li>● Press [■] twice and then press [▶] (PLAY).</li> </ul>

<b>The on-screen menu shows "2" as a soundtrack option when [AUDIO] is pressed, but the audio does not change.</b> <b>Play doesn't start.</b>	<ul style="list-style-type: none"> <li>● This is normal on DVD-Audio. Even if a second soundtrack isn't recorded, two numbers will be shown.</li> <li>● This unit may not play WMA and MPEG4 that contains still picture data.</li> <li>● If a disc contains CD-DA and other formats, proper playback may not be possible.</li> <li>● This is normal on DVD-Audio.</li> </ul>
<b>Play restarts from the beginning of the track when soundtrack is changed.</b> <b>Subtitle position is wrong.</b>	<ul style="list-style-type: none"> <li>● Adjust the position. ("Subtitle Position" in Display Menu) <b>(18)</b></li> <li>● Display the subtitles. <b>(13)</b></li> <li>● Clear the subtitles. <b>(13)</b></li> </ul>
<b>No subtitles.</b> <b>The subtitles overlap closed captions recorded on discs.</b> <b>In A-B Repeat, point B is automatically set.</b> <b>Repeat play is automatically canceled.</b>	<ul style="list-style-type: none"> <li>● The end of an item becomes point B when it is reached.</li> <li>● A-B Repeat is canceled when you press [QUICK REPLAY].</li> <li>● Repeat play may be canceled when you press [CM SKIP] or [ADVANCED DISC REVIEW].</li> </ul>

## Picture incorrect

<b>Picture distorted.</b>	<ul style="list-style-type: none"> <li>● Ensure that the unit is not connected through a video cassette recorder. (6)</li> <li>● Have you selected an item in "Video Output Mode" (→ page 17, Picture Menu) that is incompatible with the connected equipment? Depending on the current connection status, perform corresponding steps.             <ul style="list-style-type: none"> <li>—When connecting to a television that is incompatible with progressive output using the COMPONENT VIDEO OUTPUT terminal: Press and hold [CANCEL] until the picture displays correctly. The settings will return to "480i".</li> <li>—When connecting to a television with an HDMI cable: Press and hold [CANCEL] until the picture displays correctly. The settings will return to "480p".</li> <li>—When connecting to an amplifier with an HDMI cable, and to a television that is incompatible with progressive output using the COMPONENT VIDEO OUTPUT terminal:                 <ol style="list-style-type: none"> <li>1.Disconnect the HDMI (remove the cable/switch off the amplifier).</li> <li>2.Press and hold [CANCEL] until the picture displays correctly. The settings will return to "480i".</li> <li>3.Set "Video Output" to "Off" in the "HDMI" tab. (20)</li> <li>4.Connect the HDMI (connect the cable/switch on the amplifier).</li> </ol> </li> </ul> </li> </ul>
<b>Picture size doesn't fit the screen.</b>	<ul style="list-style-type: none"> <li>● Change "TV Aspect" in "Video" tab. (19)</li> <li>● Use the television to change the aspect. If your television does not have that function, change "4:3 Aspect" in Display Menu. (18)</li> <li>● Change the Zoom setting. (13)</li> </ul>
<b>The television may display incorrectly or colors appear faded.</b>	<ul style="list-style-type: none"> <li>● PAL discs cannot be played. (You can play DVD-Audio; however, still pictures may be displayed enlarged.)</li> <li>● Connect to a progressive output compatible television to enjoy progressive video.</li> <li>● Picture may not be seen when more than 4 devices are connected with HDMI cables. Reduce the number of connected devices.</li> </ul>
<b>Menu not displayed correctly.</b>	<ul style="list-style-type: none"> <li>● Restore the zoom ratio to <math>\times 1.00</math>. (13)</li> <li>● Set "Subtitle Position" in Display Menu to "0". (18)</li> <li>● Set "4:3 Aspect" in Display Menu to "Normal". (18)</li> </ul>
<b>Auto zoom function does not work well.</b>	<ul style="list-style-type: none"> <li>● Turn off TV's zoom function.</li> <li>● Use the other preset aspect ratios or manual adjustment. (13)</li> <li>● Zoom function may not work well, especially in dark scenes and may not work depending on the type of disc.</li> </ul>
<b>Video is not output from HDMI AV OUT.</b>	<ul style="list-style-type: none"> <li>● Change the HDMI video output settings by using either of the procedures below.             <ul style="list-style-type: none"> <li>– Connect the television using VIDEO OUT or S VIDEO OUT terminal, then set "Video Output" to "On" in the "HDMI" tab. (20)</li> <li>– Press and hold [CANCEL] until the picture is displayed. The settings will change to "On".</li> </ul> </li> </ul>

## Progressive video

<b>There is ghosting when progressive 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 interlace output. Change "Video Output Mode" in Picture Menu to "480i". (17)</li> </ul> <p>When connecting with HDMI AV OUT terminal, connect with the other terminals and change the settings in the following order:</p> <ol style="list-style-type: none"> <li>1. Select "Video Output"("HDMI" tab) to "Off". (20)</li> <li>2. Select "Video Output Mode"(Picture Menu) to "480i". (17)</li> </ol>
<b>Pictures not in progressive output.</b>	<ul style="list-style-type: none"> <li>● If the unit is connected to the television through VIDEO OUT or S VIDEO OUT, output will be interlace.</li> </ul>
<b>Closed captions not displayed.</b>	<ul style="list-style-type: none"> <li>● When progressive output or HDMI output is on, closed captions will not be displayed.</li> </ul>

## Sound incorrect

<b>Sound distorted.</b>	<ul style="list-style-type: none"> <li>● Select "Off" in "Advanced Surround". (12)</li> <li>● Set "Attenuator" in Audio Menu to "On" if it causes distortion with AUDIO OUT connections. (18)</li> <li>● Noise may occur when playing WMA files.</li> <li>● The disc may have restrictions on the method of audio output. With some multi-channel discs, unless the number of connected speakers is the same as the disc's channel specification, audio will not be output properly. Refer to the disc's jacket for more information. <b>DVD-A</b></li> <li>● With HDMI AV OUT connections, audio may not be output from other terminals in the way that was set.</li> <li>● Match the speaker settings with the connected equipment. (20)</li> </ul>
<b>Piercing noise comes from the speakers.</b>	<ul style="list-style-type: none"> <li>● If you have connected a digital amplifier which does not include decoder, be sure to select "PCM" in "Dolby Digital" or "DTS Digital Surround" in "Audio" tab. (20)</li> </ul>
<b>Effects do not work.</b>	<ul style="list-style-type: none"> <li>● None of the audio effects work when the unit is outputting bitstream signals from the DIGITAL AUDIO OUT or HDMI AV OUT terminal. (8)</li> <li>● Some audio effects do not work or have less effect with some discs.</li> <li>● Night Sound Mode, H.Bass, Advanced Surround, Multi Remaster and Sound Enhancement do not work if you have changed the play speed.</li> <li>● With HDMI AV OUT connections, HDCD discs are played as normal CDs.</li> </ul>
<b>No sound</b>	<ul style="list-style-type: none"> <li>● There may be a pause in sound when you change the play speed.</li> <li>● Audio may not be heard when more than 4 devices are connected with HDMI cables. Reduce the number of connected devices.</li> </ul>

## Troubleshooting guide

### Recording

<p><b>Cannot record to digital recording equipment. (Incorrect sound recorded.)</b></p>	<ul style="list-style-type: none"> <li>You cannot record WMA/MP3.</li> <li>You cannot record DVDs that have protection preventing digital recording.</li> <li>You cannot record DVDs if the recording equipment cannot handle signals with a sampling frequency of 48 kHz.</li> <li>Make the following settings:                             <table style="margin-left: 20px; border: none;"> <tr> <td>– Advanced Surround:</td> <td style="text-align: right;">Off (12)</td> </tr> <tr> <td>– PCM Digital Output:</td> <td style="text-align: right;">Up to 48 kHz (20)</td> </tr> <tr> <td>– Dolby Digital/DTS Digital Surround:</td> <td style="text-align: right;">PCM (20)</td> </tr> </table> </li> </ul>	– Advanced Surround:	Off (12)	– PCM Digital Output:	Up to 48 kHz (20)	– Dolby Digital/DTS Digital Surround:	PCM (20)
– Advanced Surround:	Off (12)						
– PCM Digital Output:	Up to 48 kHz (20)						
– Dolby Digital/DTS Digital Surround:	PCM (20)						

### Unit displays

<p><b>“noPLAY”</b></p>	<ul style="list-style-type: none"> <li>You inserted a disc the unit cannot play; insert one it can. (4)</li> <li>You inserted a blank disc.</li> <li>You inserted a disc that has not been finalized. (4)</li> </ul>
<p><b>“U11”</b></p>	<ul style="list-style-type: none"> <li>The disc may be dirty. (25)</li> </ul>
<p><b>“H□□” or “F7□□”</b> (□□ stands for a number.)</p>	<ul style="list-style-type: none"> <li>Trouble may have occurred. The number following “H” and “F7” depends on the status of the unit. Turn the unit off and then back to ON. Alternatively, turn the unit off, disconnect the AC power supply cord, 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>
<p><b>“nodISC”</b></p>	<ul style="list-style-type: none"> <li>You haven’t inserted a disc: Insert one.</li> <li>You haven’t inserted the disc correctly: Insert it correctly. (9)</li> </ul>
<p><b>“U70-1”</b></p>	<ul style="list-style-type: none"> <li>The connected equipment is not HDMI compatible.</li> </ul>
<p><b>“U70-□”</b> (□ stands for a number.) The actual number following “U70-” will depend on the state of this unit.</p>	<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

<p><b>“Ⓢ”</b></p>	<ul style="list-style-type: none"> <li>The operation is prohibited by the unit or disc.</li> </ul>
<p><b>“Cannot play group xx, content xx”</b> <b>“Cannot display group xx, content xx”</b></p>	<ul style="list-style-type: none"> <li>You are trying to play incompatible group or content. (5)</li> </ul>
<p><b>“Group xx, content xx is protected”</b></p>	<ul style="list-style-type: none"> <li>You are trying to play protected group or content. You cannot play it.</li> </ul>
<p><b>“Cannot play audio”</b> <b>“No audio”</b></p>	<ul style="list-style-type: none"> <li>Audio has not been recorded, or recorded in a format this unit cannot playback. Video playback only is possible. (5)</li> </ul>
<p><b>“Check the disc”</b></p>	<ul style="list-style-type: none"> <li>This disc may be dirty. (25)</li> </ul>
<p><b>“Due to copyright protection, audio cannot be output from HDMI”</b></p>	<ul style="list-style-type: none"> <li>Should you connect equipment that does not support CPPM (28), the audio from the CPPM copy protected DVD-Audio cannot be output from HDMI AV OUT terminal. Connect the audio cable of the Audio/Video cable (L, R) to a HDMI compatible AUDIO IN terminal. (7)</li> </ul>
<p><b>While “HDMI Status” displayed, any items are not underlined</b></p>	<ul style="list-style-type: none"> <li>If you select an item without an “*” in the “Video Output Mode” in Picture Menu, it will not be underlined. (17)</li> </ul>
<p><b>“This disc may not be played in your region”</b></p>	<ul style="list-style-type: none"> <li>You can only play DVD-Video if their region number is “1”, “ALL” or multiple region numbers including “1”. (cover)</li> </ul>
<p><b>No on-screen display.</b></p>	<ul style="list-style-type: none"> <li>Select “On” in “On-Screen Messages” in “Display” tab. (20)</li> </ul>

## Product Service

1. **Damage requiring service**—The unit should be serviced by qualified service personnel if:
  - (a) The AC power supply cord or AC adaptor has been damaged; or
  - (b) Objects or liquids have gotten into the unit; or
  - (c) The unit has been exposed to rain; or
  - (d) The unit does not operate normally or exhibits a marked change in performance; or
  - (e) The unit has been dropped or the cabinet damaged.
2. **Servicing**—Do not attempt to service the unit beyond that described in these operating instructions. Refer all other servicing to authorized servicing personnel.
3. **Replacement parts**—When parts need replacing ensure the servicer uses parts specified by the manufacturer or parts that have the same characteristics as the original parts. Unauthorized substitutes may result in fire, electric shock, or other hazards.
4. **Safety check**—After repairs or service, ask the servicer to perform safety checks to confirm that the unit is in proper working condition.

### Product information

For product information or assistance with product operation:

Refer to “Customer Services Directory” on page 29.

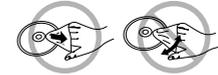
## Maintenance

### ■ Clean this unit with a soft, dry cloth

- Never use alcohol, paint thinner or benzene to clean this unit.
- Before using chemically treated cloth, read the instructions that came with the cloth carefully.
- Cleaning of the lens is generally not necessary although this depends on the operating environment.
- Do not use commercially available lens cleaners as they may cause malfunction.

### ■ Clean discs

Wipe with a damp cloth and then wipe dry.



## Language code list

Abkhazian: 6566	Hindi: 7273	Scots Gaelic: 7168
Afar: 6565	Hungarian: 7285	Serbian: 8382
Afrikaans: 6570	Icelandic: 7383	Serbo-Croatian: 8372
Albanian: 8381	Indonesian: 7378	Shona: 8378
Ameharic: 6577	Interlingua: 7365	Sindhi: 8368
Arabic: 6582	Irish: 7165	Singhalese: 8373
Armenian: 7289	Italian: 7384	Slovak: 8375
Assamese: 6583	Japanese: 7465	Slovenian: 8376
Aymara: 6589	Javanese: 7487	Somali: 8379
Azerbaijani: 6590	Kannada: 7578	Spanish: 6983
Bashkir: 6665	Kashmiri: 7583	Sundanese: 8385
Basque: 6985	Kazakh: 7575	Swahili: 8387
Bengali; Bangla: 6678	Kirghiz: 7589	Swedish: 8386
Bhutani: 6890	Korean: 7579	Tagalog: 8476
Bihari: 6672	Kurdish: 7585	Tajik: 8471
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Burmese: 7789	Latvian, Lettish: 7686	Telugu: 8469
Byelorussian: 6669	Lingala: 7678	Thai: 8472
Cambodian: 7577	Lithuanian: 7684	Tibetan: 6679
Catalan: 6765	Lithuanian: 7684	Tigrinya: 8473
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English: 6978	Marathi: 7782	Uzbek: 8590
Esperanto: 6979	Moldavian: 7779	Vietnamese: 8673
Estonian: 6984	Mongolian: 7778	Volapük: 8679
Faroese: 7079	Nauru: 7865	Welsh: 6789
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Finnish: 7073	Norwegian: 7879	Xhosa: 8872
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Greenlandic: 7576	Quechua: 8185	
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Gujarati: 7185	Romanian: 8279	
Hausa: 7265	Russian: 8285	
Hebrew: 7387	Samoan: 8377	
	Sanskrit: 8365	

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"DTS" and "DTS 2.0 + Digital Out" are trademarks of Digital Theater Systems, Inc.

Apparatus Claims of U.S. Patent Nos. 4,631,603, 4,577,216, and 4,819,098, licensed for limited viewing uses only.

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MPEG Layer-3 audio decoding technology licensed from Fraunhofer IIS and Thomson multimedia.

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

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Windows Media, and the Windows logo are trademarks, or registered trademarks of Microsoft Corporation in the United States and/or other countries.



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.

**HDCD**®, HDCD®, High Definition Compatible Digital® and Pacific Microsonics™ are either registered trademarks or trademarks of Pacific Microsonics, Inc. in the United States and/or other countries.

HDCD system manufactured under license from Pacific Microsonics, Inc. This product is covered by one or more of the following: In the USA : 5,479,168, 5,638,074, 5,640,161, 5,808,574, 5,838,274, 5,854,600, 5,864,311, 5,872,531, and in Australia: 669114, with other patents pending.

HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.

# Specifications

<b>Signal system:</b>	NTSC
<b>Operating temperature range:</b>	+5 to +35 °C (+41 to +95 °F)
<b>Operating humidity range:</b>	5 to 90 % RH (no condensation)

## Discs played [8 cm (3 ") or 12 cm (5 ")]:

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

## Video output:

Output level:	1 Vp-p (75 Ω)
Output connector:	Pin jack (1 system)

## S-video output:

Y output level:	1 Vp-p (75 Ω)
C output level:	0.286 Vp-p (75 Ω)
Output connector:	S terminal (1 system)

## Component video output:

Y output level:	1 Vp-p (75 Ω)
P <sub>s</sub> output level:	0.7 Vp-p (75 Ω)
P <sub>r</sub> output level:	0.7 Vp-p (75 Ω)
Output connector:	Pin jack (Y: green, P <sub>s</sub> : blue, P <sub>r</sub> : red) (1 system)

## Audio output:

Output level:	2 Vrms (1 kHz, 0 dB)
Output connector:	Pin jack
Number of connectors:	2 channel: 1 system

## Audio performance:

- (1) Frequency response:
  - DVD (linear audio):  
4 Hz to 22 kHz (48 kHz sampling)  
4 Hz to 44 kHz (96 kHz sampling)  
4 Hz to 88 kHz (192 kHz sampling)
  - CD Audio:  
4 Hz to 20 kHz
- (2) S/N ratio:
  - CD Audio: 115 dB
- (3) Dynamic range:
  - DVD (linear audio): 102 dB
  - CD Audio: 98 dB
- (4) Total harmonic distortion:
  - CD Audio: 0.0025 %

## Digital audio output:

Optical digital output:	Optical terminal
Coaxial digital output:	Pin jack

## HDMI AV output

19 pin  
HDMI Ver.1.2a (EDID Ver.1.3)

## Pickup:

Wave length:	662 nm/785 nm
Laser power:	CLASS II/CLASS I

## Power supply:

AC 120 V, 60 Hz

## Power consumption:

11 W

## Power consumption in standby mode:

**1 W**

## Dimensions (W×D×H):

430 mm×251 mm×43 mm  
(16 <sup>15</sup>/<sub>16</sub>"×9 <sup>14</sup>/<sub>16</sub>"×1 <sup>11</sup>/<sub>16</sub>" )  
approx. 2.2 kg (4.8 lb)

## Mass:

### Note

Specifications are subject to change without notice. Mass and dimensions are approximate.

\*1Conforming to IEC62107

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

\*3Windows Media Audio Ver.9.0 L3

Not compatible with Multiple Bit Rate (MBR)

\*4Exif 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 slender pictures may not be displayed.

\*5MPEG4 data recorded with the Panasonic SD multi cameras or DVD video recorders Conforming to SD VIDEO specifications (ASF standard)/MPEG4 (Simple Profile) video system/G.726 audio system.

\*6The total combined maximum number of recognizable audio, picture and video contents and groups: 4000 audio, picture and video contents and 400 groups.

# Glossary

## **CPPM (Content Protection for Prerecorded Media)**

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

## **Down-mixing**

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

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

## **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 24 frames per second. (Recorded at 30 frames per second as well). Generally appropriate for motion picture films.

**Video:** Recorded at 30 frames/60 fields per second. Generally appropriate for TV drama programs or animation.

## **HDCD (High-Definition Compatible Digital)**

HDCD-encoded CDs sound better because they are encoded with 20 bits, as compared with 16 bits for all other CDs.

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

## **MPEG4**

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

## **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.

# Limited Warranty

Panasonic Consumer Electronics Company,  
Division of Panasonic Corporation of North America  
One Panasonic Way Secaucus, New Jersey 07094

## Panasonic DVD Player Limited Warranty

### Limited Warranty Coverage

If your product does not work properly because of a defect in materials or workmanship, Panasonic Consumer Electronics Company or Panasonic Puerto Rico, Inc. (collectively referred to as "the warrantor") will, for the length of the period indicated on the chart below, which starts with the date of original purchase ("Limited Warranty Period"), at its option either (a) repair your product with new or refurbished parts, or (b) replace it with a new or a refurbished product. The decision to repair or replace will be made by the warrantor.

Product or Part Name	Parts	Labor
DVD Player	One (1) Year	Ninety (90) Days
Rechargeable Batteries (in exchange for defective item)	Ten (10) Days	Not Applicable

During the "Labor" Limited Warranty period there will be no charge for labor. During the "Parts" warranty period, there will be no charge for parts. You must mail-in your product during the warranty period. If non-rechargeable batteries are included, they are not warranted. This Limited Warranty only applies to products purchased and serviced in the United States or Puerto Rico. This Limited Warranty is extended only to the original purchaser and only covers product purchased as new. A purchase receipt or other proof of original purchase date is required for Limited Warranty service.

### Mail-In Service

For assistance in the continental U.S.A. in obtaining repairs please ship the product to:

**Panasonic Services Company**  
Customer Servicer  
Suite B  
4900 George McVay Drive  
McAllen, TX 78503

For assistance in Puerto Rico call Panasonic Puerto Rico, Inc. (787)-750-4300 or fax (787)-768-2910.

When shipping the unit carefully pack and send it prepaid, adequately insured and preferably in the original carton. Include a letter detailing the complaint and provide a day time phone and/or email address where you can be reached.

**IF REPAIR IS NEEDED DURING THE LIMITED WARRANTY PERIOD THE PURCHASER WILL BE REQUIRED TO FURNISH A SALES RECEIPT/PROOF OF PURCHASE INDICATING DATE OF PURCHASE, AMOUNT PAID AND PLACE OF PURCHASE. CUSTOMER WILL BE CHARGED FOR THE REPAIR OF ANY UNIT RECEIVED WITHOUT SUCH PROOF OF PURCHASE.**

### Limited Warranty Limits And Exclusions

This Limited Warranty ONLY COVERS failures due to defects in materials or workmanship, and DOES NOT COVER normal wear and tear or cosmetic damage. The Limited Warranty ALSO DOES NOT COVER damages which occurred in shipment, or failures which are caused by products not supplied by the warrantor, or failures which result from accidents, misuse, abuse, neglect, mishandling, misapplication, alteration, faulty installation, set-up adjustments, misadjustment of consumer controls, improper maintenance, power line surge, lightning damage, modification, or commercial use (such as hotel, office, restaurant, or other business), rental use of the product, or service by anyone other than a Factory Servicer or other Authorized Servicer, or damage that is attributable to acts of God.

**THERE ARE NO EXPRESS WARRANTIES EXCEPT AS LISTED UNDER "LIMITED WARRANTY COVERAGE". THE WARRANTOR IS NOT LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF ANY BREACH OF THIS WARRANTY.** (As examples, this excludes damages for lost time, cost of having someone remove or re-install an installed unit if applicable, travel to and from the servicer, loss of or damage to media or images, data or other recorded content. The items listed are not exclusive, but are for illustration only.)

**ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE WARRANTY OF MERCHANTABILITY, ARE LIMITED TO THE PERIOD OF THE LIMITED WARRANTY.**

Panasonic Puerto Rico, Inc.  
Ave. 65 de Infantería, Km. 9.5  
San Gabriel Industrial Park, Carolina, Puerto Rico 00985

Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied Limited Warranty lasts, so the exclusions may not apply to you.

This Limited Warranty gives you specific legal rights and you may also have other rights which vary from state to state. If a problem with this product develops during or after the Limited Warranty period, you may contact your dealer or Servicer. If the problem is not handled to your satisfaction, then write to the warrantor's Consumer Affairs Department at the addresses listed for the warrantor.

**PARTS AND SERVICE, WHICH ARE NOT COVERED BY THIS LIMITED WARRANTY, ARE YOUR RESPONSIBILITY.**

## Customer Services Directory

Obtain Product Information and Operating Assistance; locate your nearest Dealer or Servicer; purchase Parts and Accessories; or make Customer Service and Literature requests by visiting our Web Site at:

<http://www.panasonic.com/consumersupport>

or, contact us via the web at:

<http://www.panasonic.com/contactinfo>

You may also contact us directly at:

1-800-211-PANA (7262),  
Monday-Friday 9 am-9 pm; Saturday-Sunday 10 am-7 pm, EST.

For hearing or speech impaired TTY users, TTY: 1-877-833-8855

## Accessory Purchases

Purchase Parts, Accessories and Instruction Books online for all Panasonic Products by visiting our Web Site at:

<http://www.pasc.panasonic.com>

or, send your request by E-mail to:

[npcparts@us.panasonic.com](mailto:npcparts@us.panasonic.com)

You may also contact us directly at:

1-800-332-5368 (Phone) 1-800-237-9080 (Fax Only) (Monday - Friday 9 am to 8 pm, EST.)

Panasonic Services Company  
20421 84th Avenue South, Kent, WA 98032  
(We Accept Visa, MasterCard, Discover Card, American Express, and Personal Checks)

For hearing or speech impaired TTY users, TTY : 1-866-605-1277

## Service in Puerto Rico

Panasonic Puerto Rico, Inc.  
Ave. 65 de Infantería, Km. 9.5, San Gabriel Industrial Park, Carolina, Puerto Rico 00985  
Phone (787)750-4300, Fax (787)768-2910

Limited Warranty

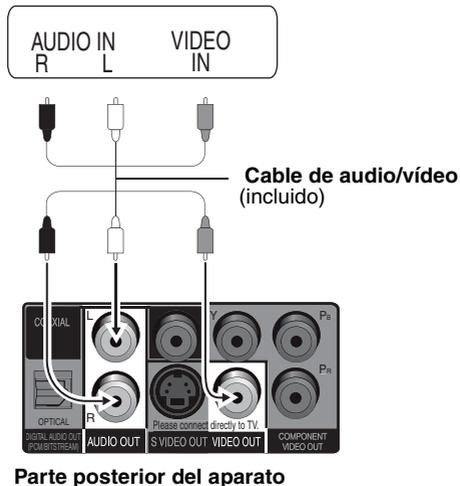
RQT8512

F1104

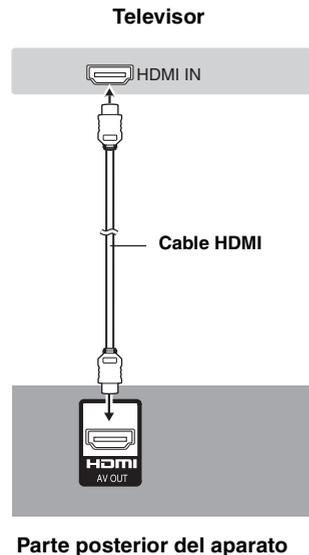
## Conexión

### ■ Conexión a un televisor

Televisor



### ■ Para disfrutar de audio y vídeo de alta calidad (conexión HDMI).

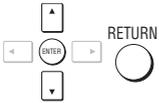


### ■ Conecte el cable de alimentación de CA el último.



## PREPARACIÓN RÁPIDA

Encienda el televisor y seleccione la entrada de vídeo apropiada en el mismo.

-  Encienda.
-  Muestra la pantalla QUICK SETUP.
-  Pulse [**▲ ▼**] para seleccionar “Español” y pulse [ENTER]. Siga el mensaje y haga los ajustes.
-  Pulse para terminar PREPARACIÓN RÁPIDA.
-  Pulse para salir.

## Reproducción básica

-   Encienda. (Aparato principal)
-  Abra la bandeja del disco. (Aparato principal)
-  Introduzca el disco.
-   Inicie la reproducción. (Aparato principal)

### Parada

STOP



La posición se memoriza cuando “▷” parpadea en el visualizador.  
 • Pulse [**▶**] (PLAY) para proseguir.  
 • Pulse [**■**] para borrar la posición.

### Pausa

PAUSE



• Pulse [**▶**] (PLAY) para reiniciar la reproducción.

### Búsqueda

(durante la reproducción)



**Cámara lenta**  
(durante la pausa)

- Hasta 5 pasos
- Pulse [**▶**] (PLAY) para reiniciar la reproducción.
- **VCD** Cámara lenta, en sentido de avance solamente
- **MPEG4** Cámara lenta: No funciona.

### Salto



- **DVD-VR** También puede saltar a marcadores.

### Salto de grupo

**WMA MP3 JPEG**  
**MPEG4**

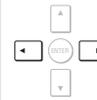


- No funciona durante la pausa.

### Cuadro a cuadro

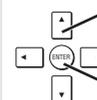
(durante la pausa)

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



- **VCD** Sentido de avance solamente

### Selección de elemento en pantalla



Seleccionar

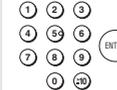
Registrar

### Vuelta a la pantalla anterior

RETURN



### Introducción de números



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

Ej.: Para seleccionar 12:  
[**≧10**] → [**1**] → [**2**]

**WMA MP3 JPEG MPEG4**  
Ej.: Para seleccionar 123:  
[**1**] → [**2**] → [**3**] → [ENTER]

### Menú del disco

TOP MENU



**DVD-A DVD-V**

Muestra un menú inicial de disco.

DIRECT NAVIGATOR

**DVD-VR**

Reproduce los programas.

MENU



**DVD-V**

Muestra un menú del disco.

**DVD-VR**

Reproduce una lista de reproducción.

RETURN



**VCD** con control de reproducción

Muestra un menú del disco.

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## -If you see this symbol-

### 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.

<b>CAUTION</b>	- LASER RADIATION WHEN OPEN. DO NOT STARE INTO BEAM.	FDA 21 CFR / Class II
<b>CAUTION</b>	- VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.	IEC60825-1 / Class 3b
<b>ATTENTION</b>	- RAYONNEMENT LASER VISIBLE ET INVISIBLE EN CAS D'OUVERTURE. EXPOSITION DANGEREUSE AU FAISCEAU.	
<b>ADVARSEL</b>	- SYNLIG OG USYNLIG LASERSTRÅLING VED ÅBNING. UNNGÅ UDSÆTTELSE FOR STRÅLING.	
<b>VARO!</b>	- AVATTAESSA OLET ALTIINNA NÄKYVÄÄ JA NÄKYVÄTÖN LASERISÄTEILLÄ. ÄLÄ KATSO SÄRKEEN.	
<b>WARNING</b>	- SYNLIG OCH OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. BETRÄKTA EJ STRÅLEN.	
<b>ADVARSEL</b>	- SYNLIG OG USYNLIG LASERSTRÅLING NÄR DEKSEL ÅPNES. UNNGÅ EKSPONERING FOR STRÅLEN.	
<b>VORSICHT</b>	- SICHTBARE UND UNSICHTBARE LASERSTRÄHLUNG, WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.	
<b>注意</b>	- 打开时有可见及不可见激光辐射。避免激光束照射。	
<b>注意</b>	- ここを開くと可視及び不可視レーザー光が出ます。 ビームを見たり、触れたりしないでください。	ROLCA0141

(Inside of product)



As an ENERGY STAR® Partner, Panasonic has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

Panasonic Consumer Electronics  
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<http://www.panasonic.com>

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San Gabriel Industrial Park, Carolina,  
Puerto Rico 00985



This manual was printed with soy based ink.

