

# Operat DVD/CD

Model No. **D**

*Dear cus*

Thank you for purc  
product, please re  
reference.



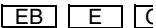
**Region number**  
The player plays C

**Region**

The United King  
Continental Eur  
the Middle East  
South Africa

Asia

Australia and N.



## Caution for AC Mains Lead

### (For United Kingdom and Middle East except United Arab Emirates)

(“EB” or “GC” area code model only)

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.

A 5-ampere fuse is fitted in this plug.

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

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

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

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

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

#### CAUTION!

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY.

THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

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

If in any doubt please consult a qualified electrician.

#### IMPORTANT

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

Blue: Neutral, Brown: Live.

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

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

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

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

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

#### Before use

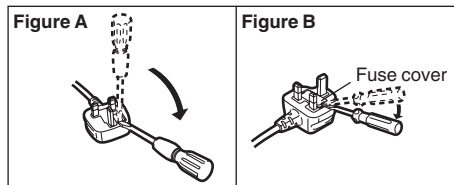
Remove the connector cover.

#### How to replace the fuse

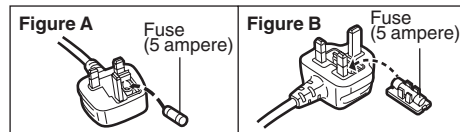
The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.

Illustrations may differ from actual AC mains plug.

1. Open the fuse cover with a screwdriver.



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



## Accessories



Use numbers when asking for replacement parts. (Product numbers correct as of March 2005. These may be subject to change.)

- 1 Remote control (EUR7631090)
- 1 AC mains lead (RJA0053-3X)
- The United Kingdom**
- Continental Europe, United Arab Emirates,**
- South Africa and Asia** (RJA0019-2X)
- Australia and N.Z.** (K2CJ2DA00008)
- 2 AC mains leads
- The Middle East except United Arab Emirates**
- (RJA0053-3X)
- (RJA0019-2X)
- Saudi Arabia**



- 1 Audio/video cable (K2KA6BA00004)
- 2 Remote control batteries

#### Note

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

#### The United Kingdom and Republic of Ireland

### ■ Sales and Support Information

#### Customer Care Centre







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

#### Direct Sales at Panasonic UK

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

## Discs that can be played

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

	<p><b>DVD-RAM</b> <b>RAM</b> <b>JPEG</b> <b>MPEG4</b> <b>DivX</b></p> <ul style="list-style-type: none"> <li>• <b>RAM</b> Recorded with devices using Version 1.1 of the Video Recording Format (a unified video recording standard), such as DVD video recorders, DVD video cameras, personal computers, etc.</li> <li>• <b>JPEG</b> Recorded with Panasonic SD multi cameras or DVD-Video recorders using the DCF (Design rule for Camera File system) Standard Version 1.0.</li> <li>• <b>MPEG4</b> Recorded with 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].</li> <li>• <b>DivX</b> Created using DivX ver.3.11, 4.x, 5.x [DivX video system/MP3, Dolby Digital or MPEG audio system].</li> </ul>
	<p><b>DVD-Audio</b> <b>DVD-A</b> <b>DVD-V</b></p> <ul style="list-style-type: none"> <li>• <b>DVD-V</b> Some DVD-Audio discs contain DVD-Video content. To play DVD-Video content, select "Play as DVD-Video" (→ page 15, Other Menu).</li> </ul>
	<p><b>DVD-Video</b> <b>DVD-V</b></p> <p>—</p>
	<p><b>DVD-R (DVD-Video)/DVD-RW (DVD-Video)</b> <b>DVD-V</b> <b>DivX</b></p> <ul style="list-style-type: none"> <li>• <b>DVD-V</b> Discs recorded and finalized* on DVD video recorders or DVD video cameras</li> <li>• <b>DivX</b> Created using DivX ver.3.11, 4.x, 5.x [DivX video system/MP3, Dolby Digital or MPEG audio system]. Finalize* the disc after recording.</li> </ul>
<p>—</p>	<p><b>DVD-RW (DVD-VR)</b> <b>DVD-RW (VR)</b></p> <p>Discs recorded and finalized* on DVD video recorders or DVD video cameras using Version 1.1 of the Video Recording Format (a unified video recording standard).</p>
<p>—</p>	<p><b>+R (Video)/+RW (Video)</b> <b>DVD-V</b></p> <p>Discs recorded and finalized* on DVD video recorders or DVD video cameras</p>
	<p><b>Video CD</b> <b>VCD</b></p> <p>Including SVCD (Conforming to IEC62107)</p>
	<p><b>CD</b> <b>CD</b> <b>WMA</b> <b>MP3</b> <b>JPEG</b> <b>MPEG4</b> <b>DivX</b> <b>VCD</b></p> <ul style="list-style-type: none"> <li>• This unit can play CD-R/RW recorded with the above formats. Close the sessions or finalize* the disc after recording.</li> <li>• <b>WMA</b> <b>MP3</b> <b>JPEG</b> This unit also plays HighMAT discs.</li> <li>• <b>WMA</b> This unit is not compatible with Multiple Bit Rate (MBR: a file that contains the same content encoded at several different bit rates).</li> <li>• <b>DivX</b> Created using DivX ver.3.11, 4.x, 5.x [DivX video system/MP3, Dolby Digital or MPEG audio system].</li> <li>• This unit is compatible with HDCD (→ page 19, 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.)</li> </ul>

\* A process that allows play on compatible equipment.

- 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 12, Tips for making data discs).

## 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 cartridge, 2.6-GB and 5.2-GB DVD-RAM, and "Chaoji VCD" available on the market including CVD, DVD and SVCD that do not conform to IEC62107.

### Regarding DVD-Audio

Some multi-channel DVD-Audio will prevent down-mixing (→ page 19, 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.

### 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.

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

- Never use alcohol, paint thinner or benzine 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.

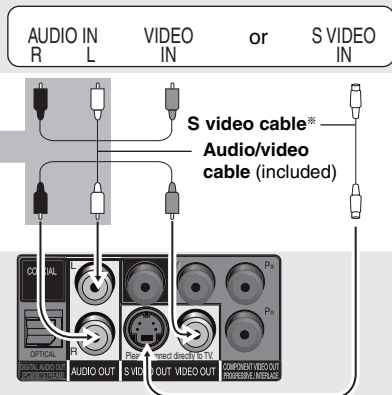


# STEP 1 Connection to a television

- 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 colour.

## Television

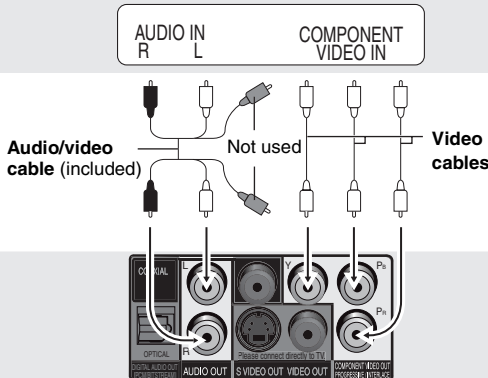
### With VIDEO IN or S VIDEO IN



\*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.

### With COMPONENT VIDEO IN



### To enjoy progressive video

Connect to a progressive output compatible television.

- ① **The United Kingdom and Continental Europe**  
Select "Video/YPbPr" for the component terminals in QUICK SETUP (→ page 5).
- ② Set "Video Output Mode" to "xxxp", then follow the instructions on the menu screen (→ page 14, Picture Menu).

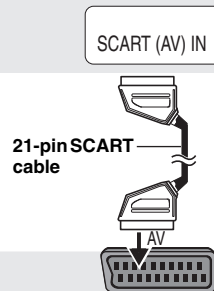
### **The United Kingdom and Continental Europe**

Panasonic televisions with 625 (576)/50i · 50p, 525 (480)/60i · 60p input terminals are progressive compatible.

## Back of the unit

### **The United Kingdom and Continental Europe**

### With SCART (AV) IN



- If the television is compatible with S-video, select "S-Video/YPbPr", or compatible with RGB, select "RGB/No Output" for the AV terminals in QUICK SETUP (→ page 5).

### ■ Connect the AC mains lead last

**FOR THE UNITED KINGDOM AND THE MIDDLE EAST ONLY (EXCEPT UNITED ARAB EMIRATES) READ THE CAUTION FOR AC MAINS LEAD ON PAGE 2 BEFORE CONNECTION.**

### **The Middle East except United Arab Emirates**

Use the AC mains lead that matches the socket for the area you live in.

### **Saudi Arabia**



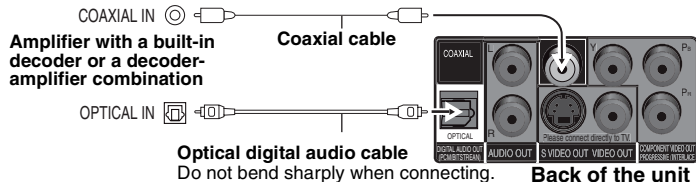
### AC mains lead (included)



To household mains socket

## Enjoying multi-channel surround sound

### ■ WITH COAXIAL IN or OPTICAL IN



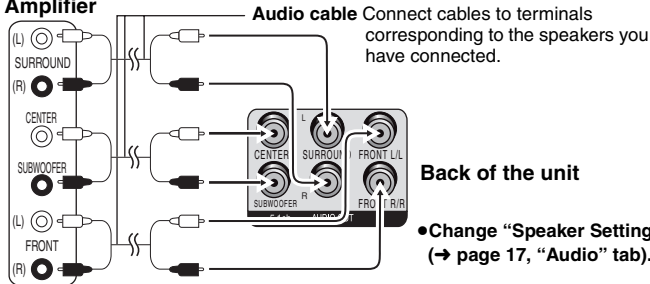
- You cannot use DTS Digital Surround decoders not suited to DVD.
- Even if using this connection, output will be only 2 channels when playing DVD-Audio. To enjoy multi-channel surround sound, connect with 5.1 ch AUDIO OUT terminals (→ right).

Change "PCM Digital Output", "Dolby Digital", "DTS Digital Surround" and "MPEG **Except Asia**" (→ page 17, "Audio" tab).

### ■ WITH AUDIO IN 5.1ch

To obtain maximum performance of DVD-Audio multi-channel PCM sound, this connection is recommended.

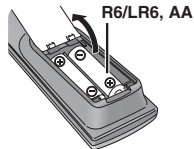
#### Amplifier



• Change "Speaker Settings" (→ page 17, "Audio" tab).

## 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.

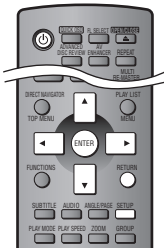
Mishandling of batteries can cause electrolyte leakage which can damage items the fluid contacts and may cause a fire.

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

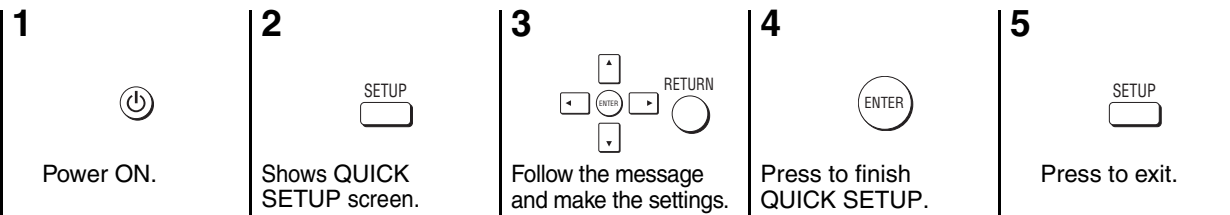
#### ■ Use

Aim at the remote control sensor (→ page 6), avoiding obstacles, at a maximum range of 7 m directly in front of the unit.

## STEP 3 QUICK SETUP



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



To change these settings, first select "QUICK SETUP" (at page 17, "Other" tab).

## Basic play

### 1 Power ON.



### 2 Open the disc tray.



Stop Pause

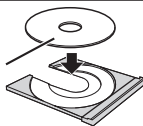


Panasonic

Remote control sensor

### 3 Load the disc.

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



### 4 Start play.



Displaying current playback condition → page 7



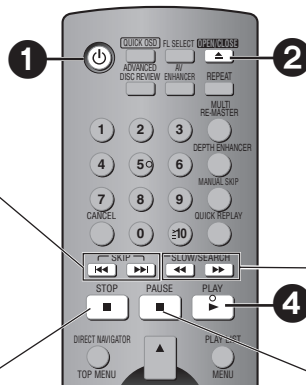
## Skip

- **RAM** **DVD-RW (VR)** Can also skip to the markers.

## Stop

The position is memorized when "▷" flashes on the display.

- Press [▶] (PLAY) to resume.
- Press [■] to clear the position.
- Even after the unit is turned off, the position is memorized (Normal playback only).



## Search (during play)

## Slow-motion (during pause)

- Up to 5 steps
- Press [▶] (PLAY) to restart play.
- **VCD** Slow-motion: forward direction only
- **MPEG4** **DivX** 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.

## Standby/on indicator (⏻)

When the unit is connected to the AC mains supply, this indicator lights up in standby mode and goes out when the unit is turned on.

- To play JPEG, MPEG4 or DivX video contents on DVD-RAM that contain both **RAM** and another format (e.g. **JPEG**), select "Play as Data Disc" (→ Page 15, Other Menu).
- "D.MIX" on the display indicates that a soundtrack with three or more channels can be down-mixed to two channels (→ page 19, 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.

## Group skip

WMA MP3 JPEG  
MPEG4 DivX



- Does not work while paused.

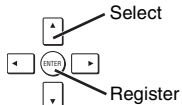
## Frame-by-frame (during pause)

RAM DVD-RW (VR)  
DVD-V VCD



- **VCD** forward direction only

## On-screen item select



## Return to previous screen



## Enter number



RAM DVD-RW (VR) DVD-A DVD-V VCD  
CD

e.g. To select 12: [≥10] → [1] → [2]

WMA MP3 JPEG MPEG4 DivX

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

DIRECT NAVIGATOR



TOP MENU

DVD-A DVD-V

Shows a disc top menu.

RAM DVD-RW (VR)

Plays the programs (→ page 11).

## Disc menu

PLAY LIST



MENU

DVD-V

Shows a disc menu.

RAM DVD-RW (VR)

Plays a play list (→ page 11).

RETURN



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

## Main unit display



FL SELECT

Number display

Time display

## Information screen

JPEG

SUBTITLE



## Convenient functions



QUICK OSD  
(Main unit)

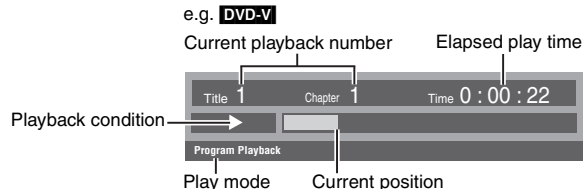
## Displaying current playback condition (Quick On Screen Display)

Press [QUICK OSD].

Basics → Details



### ■ Basics



### ■ Details

e.g. DVD-V

• Details-DVD-Video	
Audio	1 --- DTS 3/2.1ch
Subtitle	- ---
Angle	1/1
Source Aspect	4:3
Title Total Time	0:54:28

- See page 9 for changing soundtracks
- See page 9 for changing subtitles
- See page 9, Angle select for changing angles
- Aspect of current playback title
- Total play time of current playback title

- **MPEG4 DivX** Video and audio information is not displayed during search.



## Reviewing titles/programs to play (Advanced Disc Review)


RAM DVD-RW (VR) (Except still picture part) DVD-V (Except +R/+RW)  
(Normal playback only)

- 1 Press [ADVANCED DISC REVIEW].
- 2 Press [▶] (PLAY) when you find a title/program to play.



- You can also review each 10 minutes. Select "Interval Mode" (→ page 16, "Advanced Disc Review" in "Disc" tab).
- This may not work depending on the play position.
- **RAM DVD-RW (VR)** This does not work when playing a play list (→ page 11).

## Convenient functions



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.

Press **[AV ENHANCER]** to select “Auto”, “User1”, “User2” or “User3”.

 **Functions**  
**AV Enhancer Auto**

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

\*You can change the settings for User1–3 to your preference (→ page 15, “AV Enhancer” in Other Menu).

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


#### Audio settings:

Multi Re-master (→ right), Advanced Surround, Dialogue Enhancer, Sound Enhancement (→ page 14)

#### Video settings:

Picture Mode (→ page 14), Depth Enhancer (→ below).

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



DEPTH ENHANCER

### Reducing the rough noise in the background (Depth Enhancer)

Reduce the rough noise in the background to give a greater feeling of depth.

Press **[DEPTH ENHANCER]** to select from “0” through “+4”.

Depth Enhancer

0

▶

- When you change this setting, “Picture Mode” (→ page 14, Picture Menu) is automatically changed to “User”.



GROUP

### Starting play from a selected group


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

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

- 1 While stopped, press **[GROUP]**.
- 2 Press **[▲ ▼]** or the numbered buttons to select a group and press **[ENTER]**.

- **DVD-A** To play all groups (→ page 12, All group play)

 **Functions**  
**Group Search +1**



MULTI RE-MASTER

### Reproducing more natural audio (Multi Re-master)

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

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

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


**RAM DVD-RW (VR) DVD-A DVD-V 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 higher frequency signals not recorded on the disc, for example, playing DVD-Video recorded with 48 kHz at 96 kHz. (→ page 19, “Sampling frequency” in Glossary)

**WMA MP3**

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”.

 **Functions**

Multi Re-master 1

Off

✓1

2

3

Setting	<b>DVD-A</b> <b>DVD-V</b> <b>CD</b> (LPCM/PPCM) Type of music	Other discs 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

- This feature may not work when connected with DIGITAL AUDIO OUT terminals.
- This may not work depending on the disc's recording.
- This does not work when Advanced Surround (→ page 14) is on.



MANUAL SKIP

### Skipping 30 seconds forward


**RAM**
**DVD-RW (VR)**

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

Convenient when you want to skip commercials etc.

During play, press **[MANUAL SKIP]**.

- This may not work depending on the play position.



REPEAT

### Repeat play

(Only when the elapsed play time can be displayed)

**JPEG**
: Works with all JPEG content although the elapsed play time cannot be displayed)

Press **[REPEAT]** to select an item to be repeated.

 **Functions**  
**Repeat Off**



**PLAY SPEED**

**Changing play speed** **RAM DVD-RW (VR) DVD-V**

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

**Functions**

Play Speed ◀ x1.4

Normal  
✓ Fast  
Slow

- Press [▶] (PLAY) to return to the normal play.
- After you change the speed
  - Multi Re-master (→ page 8), Advanced Surround (→ page 14) and Sound Enhancement (→ page 14) do not work.
  - Audio output switches to 2 ch (Digital output switches to PCM).
  - 96 kHz sampling frequency is converted to 48 kHz.
- This may not work depending on the disc's recording.

**ZOOM**

**Zoom** **RAM DVD-RW (VR) DVD-V VCD MPEG4 DivX**

This feature expands a letterbox picture to fit the screen.

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

**RAM DVD-RW (VR) DVD-V VCD**

**Functions**

Just Fit Zoom ×1.00 ▶

Auto → 4:3 Standard → European Vista → 16:9 Standard

↑ Cinemascope2 ← Cinemascope1 ← American Vista

**MPEG4 DivX**  
Standard → Original  
↑ Full ←

**Fine adjustments (Manual Zoom)**

Press [◀▶] while the menu is displayed. (Press and hold to alter faster.)  
–from ×1.00 to ×1.60 (in 0.01 units), from ×1.60 to ×2.00 (in 0.02 units)

**MPEG4 DivX** only

–from ×2.00 to ×4.00 (in 0.05 units)

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

**ANGLE/PAGE**

**Angle select** **DVD-V** (with multiple angles)  
**Still picture rotation** **JPEG /advance** **DVD-A**

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

e.g. **DVD-V**

**Functions**

Angle 1/4

**AUDIO**

**Changing soundtracks**  
**DVD-A DVD-V DivX** (with multiple soundtracks)  
**RAM DVD-RW (VR) VCD**

Press [AUDIO] to select the soundtrack.

**RAM DVD-RW (VR) VCD**

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

**DivX**

While the menu is displayed

Press [◀▶] to select "L", "R" or "LR".

**DVD-V** (Karaoke discs)

While the menu is displayed

Press [◀▶] to select "On" or "Off" of vocals. Read the disc's instructions for details.

**Signal type/data**

LPCM/PPCM/□□ Digital/DTS/MP3/MPEG: Signal type

kHz (Sampling frequency)/bit/ch (Number of channels)

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

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

**SUBTITLE**

**Changing subtitles** **DVD-V DivX** (with subtitles)  
**VCD** (SVCD with subtitles only) **RAM DVD-RW (VR)** (On/Off only with discs that contain subtitle on/off information)

**DVD-V VCD DivX**

Press [SUBTITLE] to select the subtitle language.

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

**To clear/display the subtitles**

Press [◀▶] to select "On" or "Off".

**RAM DVD-RW (VR)**

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

- Subtitle on/off information cannot be recorded using Panasonic DVD Recorders.

**QUICK REPLAY**

**Quick replay** (Only when the elapsed play time can be displayed)  
(Except **MPEG4 DivX** f, +R/+RW)

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

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

**Functions**

Audio 1

**Functions**

Subtitle ◀ Off ▶

# Using navigation menus



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

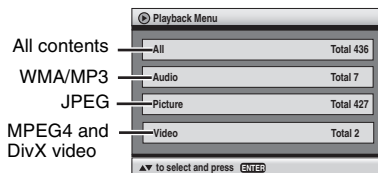
Select "Play as Data Disc" (→ page 15, Other Menu) to play JPEG, MPEG4 or DivX video contents on DVD-RAM that contain both **RAM** and another format (e.g. **JPEG**) or to play HighMAT discs without using the HighMAT function.

### Playing items in order (Playback Menu)

While the menu is displayed

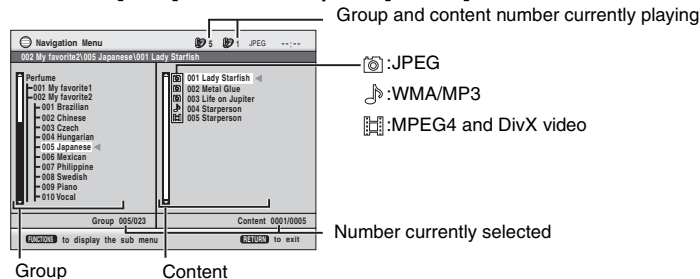
Press [▲ ▼] to select "All", "Audio", "Picture" or "Video" and press [ENTER].

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



### 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].



- 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].

Multi	Groups and content
List	Content only
Tree	Groups only
Thumbnail	Thumbnail images <b>JPEG</b>
Next group	To the next group
Previous group	To the previous group
All	WMA/MP3, JPEG, MPEG4 and DivX video
Audio	WMA/MP3 only
Picture	JPEG only
Video	MPEG4 and DivX video only
Help display	To switch between guide messages and the elapsed play time indicator
Find	To search by a content or group title (→ see below)

### 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].



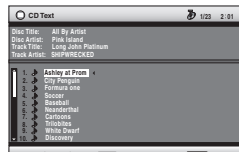


Titles appear with CD text playback.

- 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 elapsed play time indicator.



While the menu is displayed

Press [▲ ▼ ◀ ▶] to select then press [ENTER].



Menu:

Takes you to the next menu which shows play lists or another menu.



Play list:

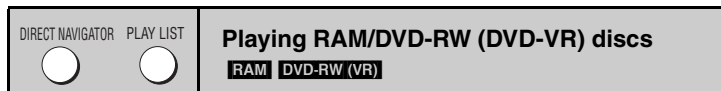
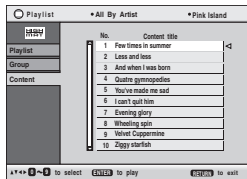
Play starts.

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

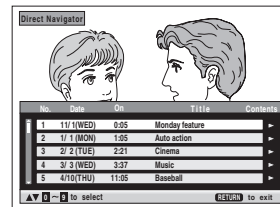
- Press [ANGLE/PAGE] to skip page by page.
- To exit the screen, press [MENU].



- Titles appear only if you have entered them.
- You cannot edit play lists 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 a play list (Only when the disc contains a play list)

- 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 play list).
- 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].

## Using navigation menus

### ■ Tips for making data discs

- If groups were created away from the root like "002 group" in the illustration below, 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.

#### DVD-RAM

- Discs must conform to UDF 2.0.

#### 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.

#### 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.

### 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).

#### WMA (Extension: ".WMA" or ".wma")

- Compatible compression rate: between 48 kbps and 320 kbps
- You cannot play WMA files that are copy protected.
- This unit is not compatible with Multiple Bit Rate (MBR: a file that contains the same content encoded at several different bit rates).

#### MP3 (Extension: ".MP3" or ".mp3")

- Compatible compression rate: between 32 kbps and 320 kbps
- This unit is not compatible with ID3 tags.

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

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

#### MPEG4 (Extension: ".ASF" or ".asf")

- You can play MPEG4 data [conforming to SD VIDEO specifications (ASF standard)/MPEG4 (Simple Profile) video system/G.726 audio system] recorded with the Panasonic SD multi cameras or DVD video recorders with this unit.

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

#### DivX (Extension: ".DIVX", ".divx", ".AVI" or ".avi")

- You can play DivX data created using ver.3.11, 4.x, 5.x [DivX video system/MP3, Dolby Digital or MPEG audio system].
- GMC (Global Motion Compensation) is not supported.
- DivX files greater than 2GB or have no index may not play properly on this unit.
- This unit supports all resolutions up to maximum of 720 × 480 (NTSC)/720 × 576 (PAL).
- You can select up to 8 types of audio and subtitles on this unit.

## Changing the play sequences

PLAY MODE



### All group/Program/Random play

DVD-A DVD-V VCD CD WMA MP3 JPEG MPEG4 DivX

While stopped, press [PLAY MODE].

All group (DVD-A) → Program → Random

↑ Off (Normal play) ↓

- Disable HighMAT disc play to use random and program play. Select "Play as Data Disc" in Other Menu (→ page 15).

### ■ All group play DVD-A

Press [▶] (PLAY).

### ■ Program play (up to 32 items)

1 Press the numbered buttons to select the items (→ page 7, Enter number).

Repeat this step to program other items.

2 Press [▶] (PLAY).

### 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 1.

–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 DVD-A DVD-V WMA MP3 JPEG MPEG4 DivX

Press the numbered buttons to select a group or a title (→ page 7, Enter number).

2 Press [▶] (PLAY).

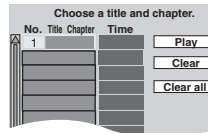
### To exit the all group, program or random mode

Press [PLAY MODE] several times while stopped.

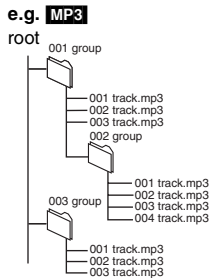
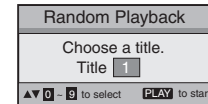
All Group Playback

Press PLAY to start

e.g. DVD-V




e.g. DVD-V



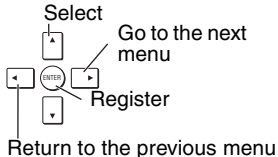
# Using On-Screen Menus

## 1




Press.

## 2




Select the menu.

## 3



Make the settings.

## 4



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
Time	<p>To skip incrementally or decrementally* (Time Slip for play only)</p> <ol style="list-style-type: none"> <li>Press [ENTER] twice to show Time Slip indicator.</li> <li>Press [▲ ▼] to select the time and press [ENTER].                             <ul style="list-style-type: none"> <li>Press and hold [▲ ▼] to alter faster.</li> </ul> </li> </ol> <p>To start from a specific time* (Time Search) To change remaining/elapsed time display</p>
Video	<p>To display pixel number</p> <p><b>DivX</b> fps (frame per second) is also displayed.</p>
Audio	<p>(→ page 9, Changing soundtracks)</p> <p>To display the current bitrate or sampling frequency</p>
Still Picture	To switch still picture
Thumbnail	To show thumbnail images
Subtitle	(→ page 9, Changing subtitles)
Marker (VR)	To recall a marker recorded on DVD-Video recorders
Angle	(→ page 9, Angle select)
Rotate Picture	(→ page 9, Still picture rotation)
Slideshow	<p>To turn on/off slideshow</p> <p>To change the slideshow timing (0-30 sec)</p>
Other Settings	(→ right)

\* Except +R/+RW

## Other Settings

**Play Speed** (→ page 9, 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 8, Repeat play)

### A-B Repeat

Except **MPEG4**  
**DivX**

**To repeat a specified section**

Press [ENTER] at the starting and ending points.  
Press [ENTER] again to cancel.

- **RAM DVD-RW (VR)** (still picture part): Does not work.

### Marker

Except **RAM**  
**DVD-RW (VR)**

**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** (→ page 7, Reviewing titles/programs to play)

**Disc Review**

# Using On-Screen Menus

## Picture Menu

Picture Mode	<b>Normal:</b> Normal images
	<b>Cinema1:</b> Mellows images and enhances detail in dark scenes.
	<b>Cinema2:</b> Sharpens images and enhances detail in dark scenes.
	<b>Animation:</b> Suitable for animation
	<b>Dynamic:</b> Enhances the contrast for powerful images.
	<b>User</b> (Press [ENTER] to select "Picture Adjustment") (→ below)
	<b>Picture Adjustment</b>
	<b>Contrast:</b> Increases the contrast between light and dark parts of the picture (-7 to +7).
	<b>Brightness:</b> Brightens the picture (0 to +15).
	<b>Sharpness:</b> Adjusts the sharpness of the edges of the horizontal lines. (-7 to +7)
	<b>Colour:</b> Adjust the shade of the picture's colour (-7 to +7).
	<b>Gamma:</b> Adjusts the brightness of dark parts (0 to +5).
	<b>Depth Enhancer</b> (→ page 8, Reducing the rough noise in the background)
	<b>MPEG DNR:</b> Smooths block noise and reduces the smudging that appears around contrasting sections of the picture (0 to +3).

Video Output Mode	<b>*480p/525p/576p/625p (progressive)</b>
	<b>*480i/525i/576i/625i (interlace)</b>
	When you select "xxx*p" ( <b>progressive</b> ) and a confirmation screen appears, select "Yes" only if connecting to a progressive output compatible television.
	*The numbers displayed depend on the geographical location and disc being played. One of the above numbers is displayed.

Transfer Mode	If you have chosen "xxx*p" ( <b>progressive</b> ) (→ above), select the method of conversion for progressive output to suit the type of material.
	When playing PAL discs
	<b>Auto:</b> Detects 25 frame-per-second film content and appropriately converts it.
	<b>Video:</b> Select when using Auto, and the video content is distorted.
	When playing NTSC discs
	<b>Auto1</b> (normal): Detects 24 frame-per-second film content and appropriately converts it.
	<b>Auto2:</b> Compatible with 30 frame-per-second film content in addition to 24 frame-per-second film content.
	<b>Video:</b> Select when using Auto1 and Auto2, and the video content is distorted.

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

## Audio Menu

Advanced Surround	<b>RAM DVD-RW (VR) DVD-V VCD</b> (2 or more channels)
	Enjoy a surround-like effect when using 2 front speakers (SP) or headphones (HP) (connect the unit to equipment that has a headphone jack).
	<b>SP (Speaker) 1 Natural SP 2 Enhanced</b>
	<b>HP (Headphone) 1 Natural HP 2 Enhanced Off</b>
	<ul style="list-style-type: none"> <li>• When using discs recorded with surround sound, sound seems to come from speakers on either side of you.</li> <li>• When using headphones with the connected equipment, select "HP 1" or "HP 2".</li> <li>• 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.</li> <li>• Do not use in combination with surround effects on other equipment.</li> </ul>
Dialogue Enhancer	<b>To make the dialogue in movies easier to hear</b>
	<b>DVD-V</b> (Dolby Digital, DTS, MPEG <b>Except Asia</b> , 3-channel or over, with the dialogue recorded in the center channel)
	<b>DivX</b> (Dolby Digital, 3-channel or over, with the dialogue recorded in the center channel)
	<b>On</b> ←→ <b>Off</b>

Multi Re-master	(→ page 8, Reproducing more natural audio)
Sound Enhancement	<b>To enjoy clear sound by adding higher frequency signals not recorded on the disc.</b>
	Except <b>MPEG4 DivX</b>
	<b>On</b> ←→ <b>Off</b>
	<ul style="list-style-type: none"> <li>• This does not work when Multi Re-master (→ page 8) or Advanced Surround (→ above) is on.</li> <li>• This may not work depending on the disc's recording.</li> </ul>

Digital Filter	When audio is output from 2 ch or 5.1ch AUDIO OUT terminals (→ page 4, 5)
	<b>Normal:</b> A clear timbre.
	<b>Slow:</b> Gives music atmosphere, with softness and a feeling of depth.
Attenuator	When audio is output from 2 ch or 5.1ch AUDIO OUT terminals (→ page 4, 5)
	Switch on if sound is distorted.
	<b>On</b> ←→ <b>Off</b>

## Display Menu

Information	<b>On</b> ←→ <b>Off</b>
Subtitle Position	<b>0 to -60 (in 2 units)</b>
Subtitle Brightness	<b>Auto, 0 to -7</b>
4:3 Aspect	<b>To select how to show images made for 4:3 aspect screens on a 16:9 aspect television</b>
	<b>Normal:</b> Laterally stretches images.
	<b>Auto:</b> The standard setting is "Shrink". However this automatically changes to "Zoom" with a letterbox picture.
	<b>Shrink:</b> Images appear in the center of the screen.
	<b>Zoom:</b> Expands to 4:3 aspect ratio.

<b>Just Fit Zoom</b>	(→ page 9, Zoom)
<b>Manual Zoom</b>	(→ page 9, Zoom)
<b>Bit Rate Display</b>	<b>RAM</b> <b>DVD-RW (VR)</b> <b>DVD-V</b> <b>VCD</b> <b>MPEG4</b> <b>DivX</b> On ←→ Off
<b>GUI See-through</b>	Off, On, Auto
<b>GUI Brightness</b>	-3 to +3
<b>Quick OSD</b>	(→ page 7, Displaying current playback condition)


## ■ Other Menu

<b>AV Enhancer</b>	<p><b>To preset the settings</b> You can preset your favorite video/audio effects onto "User1", "User2" and "User3".</p> <p><b>Preparation</b> Adjust the settings indicated below to your preference. (When "Auto" is selected, this is not available.)</p> <p><b>Audio settings:</b> Multi Re-master (→ page 8, Reproducing more natural audio) Advanced Surround/Dialogue Enhancer/ Sound Enhancement (→ page 14, Audio Menu)</p> <p><b>Video settings:</b> Depth Enhancer (→ page 8, Reducing the rough noise in the background) Picture Mode (→ page 14, Picture Menu)</p> <ol style="list-style-type: none"> <li>1. Select "Save Settings" and press [ENTER].</li> <li>2. Press [▲▼] to select the setting location (User1, User2 or User3) and press [ENTER].</li> <li>3. Follow the instructions on the menu screen and press [ENTER] last.</li> </ol> <p><b>To recall the settings</b> (→ page 8, Recalling recommended audio/video setting)</p> <p><b>To confirm the settings</b></p> <ol style="list-style-type: none"> <li>1. Press [▲▼] to select "User1", "User2" or "User3" and press [ENTER].</li> <li>2. Select "Save Settings" and press [ENTER] twice. To exit the screen, select "No" and press [ENTER].</li> </ol>
	<p><b>Setup</b> (→ page 16, Changing the player settings)</p>
	<p><b>Play as DVD-Video</b> or <b>Play as DVD-Audio</b></p> <p>Select "Play as DVD-Video" to play DVD-Video contents on DVD-Audio.</p>
	<p><b>Play as DVD-VR</b> or <b>Play as HighMAT</b> or <b>Play as Data Disc</b></p> <p>Select "Play as Data Disc" to play JPEG, MPEG4 or DivX video contents on DVD-RAM that contain both <b>RAM</b> and another format (e.g. <b>JPEG</b>) or to play HighMAT discs without using the HighMAT function.</p>

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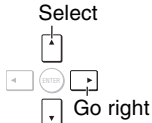
# Changing the player settings

**1**



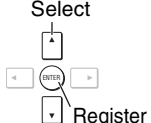
Shows Setup menu.

**2**




Select the tab.

**3**




Select the item.

**4**



Make the settings.

**5**



Press to exit.



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

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

## ■ “Disc” tab

<b>Audio</b> Choose the audio language.	<u>English</u> (Language options) <sup>*1</sup> <u>Original</u> <sup>*2</sup> Other*** <sup>*3</sup>
<b>Subtitle</b> Choose the subtitle language.	<u>Automatic</u> <sup>*4</sup> <u>English</u> (Language options) <sup>*1</sup> Other*** <sup>*3</sup>
<b>Menus</b> Choose the language for disc menus.	<u>English</u> (Language options) <sup>*1</sup> Other**** <sup>*3</sup> • Changing the menu language from QUICK SETUP also changes this setting.
<b>Advanced Disc Review</b> Select how to review (→ page 7).	<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 1 to 7</b> <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.

## ■ “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>Video Out (AV/Component)</b> <sup>*5</sup> Choose the video signal format to be output from the SCART and COMPONENT VIDEO OUT terminals (→ page 4).	<b>Video/YPbPr</b> <b>S-Video/YpBpR</b> <b>RGB/No Output</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>NTSC Disc Output</b> Choose PAL 60 or NTSC output when playing NTSC discs.	<b>PAL60:</b> NTSC discs can be viewed on PAL television. <b>NTSC:</b> Output signal from NTSC discs remains as NTSC. <b>Asia:</b> “NTSC” is the factory preset.	
<b>Picture/Video Output</b> Choose the video signal format to be output for JPEG, MPEG4 and DivX video.	<b>Automatic: (Except Asia)</b> <b>PAL</b> <b>NTSC/PAL60:</b> Output will depend on “NTSC Disc Output” setting (→ above). <b>Asia:</b> “NTSC/PAL60” is the factory preset. • If picture output is not smooth during playback, change the setting.	



## ■ “Audio” tab

<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.	<b>Off:</b> When not connected with COAXIAL or OPTICAL terminal <b>Up to 48 kHz:</b> When connected to equipment compatible with 44.1 or 48 kHz <b>Up to 96 kHz:</b> When connected to equipment compatible with 88.2 or 96 kHz <b>Up to 192 kHz:</b> When connected to equipment compatible with 176.4 or 192 kHz <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>
<b>Dolby Digital</b> With COAXIAL or OPTICAL connections (→ page 5)	<b>Bitstream</b> <b>PCM</b> Select “ <b>Bitstream</b> ” when the equipment can decode the bitstream (digital form of multi-channel data). Otherwise, select “ <b>PCM</b> ”. (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.)
<b>DTS Digital Surround</b> With COAXIAL or OPTICAL connections (→ page 5)	<b>Bitstream</b> <b>PCM</b> Select “ <b>Bitstream</b> ” when the equipment can decode the bitstream (digital form of multi-channel data). Otherwise, select “ <b>PCM</b> ”. (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.)
<b>MPEG</b> <sup>#5</sup> <sup>#6</sup> With COAXIAL or OPTICAL connections (→ page 5)	<b>PCM</b> <b>Bitstream</b> Select “ <b>Bitstream</b> ” when the equipment can decode the bitstream (digital form of multi-channel data). Otherwise, select “ <b>PCM</b> ”. (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.)
<b>Dynamic Range Compression</b>	<b>Off</b> <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)
<b>Speaker Settings</b> Choose the settings to suit your audio system and the listening environment (→ page 18, Changing the speaker setting to suit your speakers).	Speaker type <b>Multi-channel:</b> when 3 or more speakers are connected. <b>2-channel:</b> when 2 speakers are connected. Multi-channel Setting (If you select “ <b>Multi-channel</b> ”) <b>Speaker presence and size</b> <b>Delay time</b> <b>Channel balance</b>

## ■ “Display” tab

<b>Menu Language</b>	<sup>#5</sup> <b>English</b> Polski <sup>#6</sup> <b>English</b> Português <sup>#7</sup> <b>English</b>	Français Svenska Français Русский 中文	Deutsch Nederlands Deutsch Nederlands	Italiano Italiano Italiano	Español Español Español
<b>On-Screen Messages</b>	<b>On</b> <b>Off</b>				
<b>Background during Play</b> Select background during JPEG, MPEG4 and DivX video playback.	<b>Black</b> <b>Grey</b>				

## ■ “Others” tab

<b>FL Dimmer</b> Changes the brightness of the unit's display.	<b>Bright</b> <b>Dim</b> <b>Auto:</b> The display is dimmed, but brightens only when you perform some operations.
<b>Auto Power Off</b>	<b>On:</b> The unit switches to standby mode after about 30 minutes in the stop mode.  <b>Off</b>
<b>DivX Registration</b> Displays the unit's registration code.	You need this registration code to purchase and play DivX Video-on-Demand (VOD) content. (→ page 19, About DivX VOD content)
<b>QUICK SETUP</b>	
<b>Re-initialise Setting</b> This returns all values in the Setup menus to the default settings.	<b>Yes:</b> The password screen is shown if “Ratings” (→ page 16) are set. Please enter the same password. After “INIT” on the display disappears, turn the unit off and on again.  <b>No</b>

### <sup>#1</sup> Language options

#### **The United Kingdom and Continental Europe:**

French, German, Italian, Spanish, Polish, Swedish and Dutch

#### **The Middle East, South Africa, Australia and N.Z.:**

French, German, Italian, Spanish, Portuguese, Russian and Dutch

#### **Asia:** Chinese

<sup>#2</sup> The original language designed on the disc is selected.

<sup>#3</sup> Input a code number referring to the table (→ page 18).

<sup>#4</sup> If the language selected for “Audio” is not available, subtitles appear in that language (if available on the disc).

<sup>#5</sup> **The United Kingdom and Continental Europe**

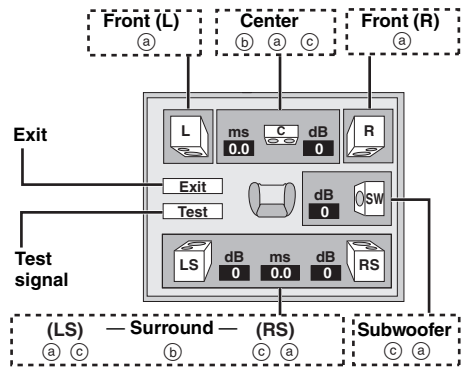
<sup>#6</sup> **The Middle East, South Africa, Australia and N.Z.**

<sup>#7</sup> **Asia**

# Changing the player settings

## Changing the speaker setting to suit your speakers

If you select "Multi-channel" (→ page 17, "Speaker Settings" in "Audio" tab), the following setting (a) is required. (Select settings (b) (c) to suit your preference if desirable.)



### Speaker presence and size (a)

- Press [▲ ▼ ◀ ▶] to select an item and press [ENTER].
- 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.)

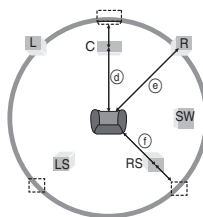
### Delay time (b)

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

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

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

Recommended placement



#### (d) Center speaker

Difference	Setting
Approx. 34 cm	1.0 ms
Approx. 68 cm	2.0 ms
Approx. 102 cm	3.0 ms
Approx. 136 cm	4.0 ms
Approx. 170 cm	5.0 ms

#### (f) Surround speakers

Difference	Setting
Approx. 170 cm	5.0 ms
Approx. 340 cm	10.0 ms
Approx. 510 cm	15.0 ms

### Channel balance (c)

- Select "Test" and press [ENTER].

A test signal is output.

Front (L) → Center → Front (R)

Surround (LS) ← Surround (RS)

- While listening to the test signal, press [▲ ▼] to adjust the volume of the center and surround speakers so they are the same apparent volume as the front speakers (-6 to +6 dB). (The front speakers cannot be adjusted here.)
- Press [ENTER].

The test signal stops.

- No signal is output for the subwoofer. To adjust its volume, play something, then return to this screen to adjust to suit your taste.

#### To finish the speaker setting

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

## Language code list

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

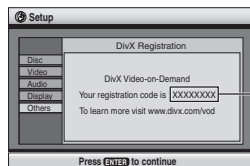
## About DivX VOD content

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

Follow the on line instructions for purchasing DivX VOD content to enter the unit's registration code and register the unit. For more information about DivX VOD, visit [www.divx.com/vod](http://www.divx.com/vod).

### Display the unit's registration code

(→ page 17, "DivX Registration" in "Others" tab)



8 alphanumeric characters

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

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

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

When playing this content

- The number of remaining plays is reduced by one if  
–you press [⏮] or [SETUP].  
–you press [■] (STOP). [Press [⏸] (PAUSE) to stop play.]  
–you press [⏪] [⏩] (SKIP) or [⏮] [⏭] (SEARCH) etc. and arrive at another content or the start of the content being played.
- Resume (→ page 6, Stop) and Marker (→ page 13, Play Menu) functions do not work.

## Glossary

### DivX

A video compression format developed by DivXNetworks, Inc. that compresses video files without any considerable loss of video quality.

### 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.

### HDCCD (High-Definition Compatible Digital)

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

### 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.

## Safety precautions

### Placement

Set the unit up on an even surface away from direct sunlight, high temperatures, high humidity, and excessive vibration. These conditions can damage the cabinet and other components, thereby shortening the unit's service life. Do not place heavy items on the unit.

### Voltage

Do not use high voltage power sources. This can overload the unit and cause a fire. Do not use a DC power source. Check the source carefully when setting the unit up on a ship or other place where DC is used.

### AC mains lead protection

Ensure the AC mains lead is connected correctly and not damaged. Poor connection and lead damage can cause fire or electric shock. Do not pull, bend, or place heavy items on the lead.

Grasp the plug firmly when unplugging the lead. Pulling the AC mains lead can cause electric shock. Do not handle the plug with wet hands. This can cause electric shock.

### Foreign matter

Do not let metal objects fall inside the unit. This can cause electric shock or malfunction.

Do not let liquids get into the unit. This can cause electric shock or malfunction. If this occurs, immediately disconnect the unit from the power supply and contact your dealer.

Do not spray insecticides onto or into the unit. They contain flammable gases which can ignite if sprayed into the unit.

### Service

Do not attempt to repair this unit by yourself. If sound is interrupted, indicators fail to light, smoke appears, or any other problem that is not covered in these instructions occurs, disconnect the AC mains lead and contact your dealer or an authorized service center. Electric shock or damage to the unit can occur if the unit is repaired, disassembled or reconstructed by unqualified persons.

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

# Troubleshooting guide

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

## Power

<b>No power.</b>	<ul style="list-style-type: none"> <li>Insert the AC mains lead securely into the household mains socket. (4)</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. (17)</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. (3)</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 mains lead, 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. (5)</li> <li>The batteries are depleted: Replace them with new ones. (5)</li> <li>Point the remote control at the remote control sensor and operate. (6)</li> </ul>
<b>No picture or sound.</b>	<ul style="list-style-type: none"> <li>Check the video or audio connection. (4, 5)</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 "Initialised" 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. MP3</li> <li>This is normal on DivX video. DivX</li> </ul>
<b>The program and random play functions do not work.</b> DVD-V	<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>

**The on-screen menu shows "2" as a soundtrack option when [AUDIO] is pressed, but the audio does not change.** DVD-A

**Play doesn't start.**

**Play restarts from the beginning of the track when soundtrack is changed.** DVD-A

**Subtitle position is wrong.**

**No subtitles.**

**In A-B Repeat, point B is automatically set.**

**Repeat play is automatically canceled.**

• Even if a second soundtrack isn't recorded, two numbers will normally be shown.

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

• This is normal on DVD-Audio.

• Adjust the position. ("Subtitle Position" in Display Menu) (14)

• Display the subtitles. (9)

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

• A-B Repeat is canceled when you press [QUICK REPLAY].  
 • Repeat play may be canceled when you press [MANUAL SKIP] or [ADVANCED DISC REVIEW].

## Picture incorrect

**Picture distorted.**

**Picture size doesn't fit the screen.**

**Picture stops.**

**The television may display incorrectly or colours appear faded.**

• Ensure that the unit is not connected through a video cassette recorder. (4)  
 • Make sure that progressive output has not been selected when the connected television is not progressive compatible. Press and hold [CANCEL] until the picture displays correctly. The settings will return to "xxxi" (interlace).  
 • Change "Source Select" in Picture Menu. (14) DivX

• Change "TV Aspect" in "Video" tab. (16)  
 • Use the television to change the aspect. If your television does not have that function, change "4:3 Aspect" in Display Menu. (14)  
 • Change the Zoom setting. (9)

• Picture may stop if the DivX files are greater than 2GB. DivX  
 • The unit and television are using different video systems.  
 Asia Use a multi-system or NTSC television.  
 Others Use a multi-system or PAL television.  
 • The system used on the disc doesn't match your television.  
 –PAL discs cannot be correctly viewed on an NTSC television.  
 –This unit can convert NTSC signals to PAL 60 for viewing on a PAL television ("NTSC Disc Output" in "Video" tab). (16)

<b>Menu not displayed correctly.</b>	<ul style="list-style-type: none"> <li>● Restore the zoom ratio to <math>\times 1.00</math>. (9)</li> <li>● Set "Subtitle Position" in Display Menu to "0". (14)</li> <li>● Set "4:3 Aspect" in Display Menu to "Normal". (14)</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. (9)</li> <li>● Zoom function may not work well, especially in dark scenes and may not work depending on the type of disc.</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 "xxxI" (interlace). (14)</li> </ul>
<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>

### Sound incorrect

<b>Sound distorted.</b>	<ul style="list-style-type: none"> <li>● Set "Advanced Surround" in Audio Menu to "Off". (14)</li> <li>● Set "Attenuator" in Audio Menu to "On" if it causes distortion with 2 ch or 5.1ch AUDIO OUT connections. (14)</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>● Match the speaker settings with the connected equipment. (18)</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", "DTS Digital Surround" or "MPEG**1" in "Audio" tab. (17)</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 terminal. (5)</li> <li>● Some audio effects do not work or have less effect with some discs.</li> <li>● Multi Re-master, Advanced Surround and Sound Enhancement do not work if you have changed the play speed.</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 output due to how files were created. <b>DivX</b> (12)</li> </ul>

### Recording

<b>Cannot record to digital recording equipment. (Incorrect sound recorded.)</b>	<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: <ul style="list-style-type: none"> <li>– Advanced Surround: Off (14)</li> <li>– PCM Digital Output: Up to 48 kHz (17)</li> <li>– Dolby Digital/DTS Digital Surround/MPEG*1: PCM (17)</li> </ul> </li> </ul>
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### Unit displays

<b>"NOPLAY"</b>	<ul style="list-style-type: none"> <li>● You inserted a disc the unit cannot play; insert one it can. (3)</li> <li>● You inserted a blank disc.</li> <li>● You inserted a disc that has not been finalized. (3)</li> </ul>
<b>"U11"</b>	<ul style="list-style-type: none"> <li>● The disc may be dirty. (3)</li> </ul>
<b>"H□□" (□□ stands for a number.)</b>	<ul style="list-style-type: none"> <li>● Trouble may have occurred. The number following "H" depends on the status of the unit. Turn the unit off and then back to ON. Alternatively, turn the unit off, disconnect the AC mains lead, and then reconnect it.</li> <li>● If the service numbers fail to clear, note the service number and contact a qualified service person.</li> </ul>
<b>"NODISC"</b>	<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. (6)</li> </ul>

### Television displays

<b>"⊘"</b>	<ul style="list-style-type: none"> <li>● The operation is prohibited by the unit or disc.</li> </ul>
<b>"Cannot play group xx, content xx"</b> <b>"Cannot display group xx, content xx"</b>	<ul style="list-style-type: none"> <li>● You are trying to play incompatible group or content. (12)</li> </ul>
<b>"Group xx, content xx is protected"</b>	<ul style="list-style-type: none"> <li>● You are trying to play protected group or content. You cannot play it.</li> </ul>
<b>"Cannot play audio"</b> <b>"No audio"</b>	<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. (12)</li> </ul>
<b>"Check the disc"</b>	<ul style="list-style-type: none"> <li>● This disc may be dirty. (3)</li> </ul>
<b>"This disc may not be played in your region"</b>	<ul style="list-style-type: none"> <li>● You can only play DVD-Video if their region number is the same or includes the same region number as the unit or if the DVD-Video is marked "ALL". Confirm the region number for the unit on the rear panel. (Cover)</li> </ul>
<b>No on-screen display.</b>	<ul style="list-style-type: none"> <li>● Select "On" in "On-Screen Messages" in "Display" tab. (17)</li> </ul>
<b>"Authorization Error"</b>	<ul style="list-style-type: none"> <li>● You are trying to play the DivX VOD content that was purchased with a different registration code. You cannot play the content on this unit. <b>DivX</b> (19)</li> </ul>
<b>"Rented Movie Expired"*#2 "Rental Expired"*#3</b>	<ul style="list-style-type: none"> <li>● The DivX VOD content has zero remaining plays. You cannot play it. <b>DivX</b> (19)</li> </ul>

\*#1MPEG: **Except Asia**

\*#2 **Except Asia**

\*#3 **Asia**

# Specifications

**Signal system:** PAL 625/50, PAL525/60, NTSC  
**Operating temperature range:** +5 to +35 °C  
**Operating humidity range:** 5 to 90 % RH (no condensation)

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

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

## Video output:

Output level: 1 Vp-p (75 Ω)

Output terminal:

**The United Kingdom and Continental Europe**

Pin jack (1 system)/AV

**Others**

Pin jack (1 system)

## S-video output:

Y output level: 1 Vp-p (75 Ω)

C output level: NTSC; 0.286 Vp-p (75 Ω)

PAL; 0.300 Vp-p (75 Ω)

Output terminal:

**The United Kingdom and Continental Europe**

S terminal (1 system)/AV

**Others**

S terminal (1 system)

## Component video output:

[NTSC: 525 (480)p/525 (480)i, PAL: 625 (576)p/625 (576)i]

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 terminal: Pin jack (Y: green, P<sub>s</sub>: blue, P<sub>r</sub>: red) (1 system)

## RGB video output: **The United Kingdom and Continental Europe**

R output level: 0.7 Vp-p (75 Ω)

G output level: 0.7 Vp-p (75 Ω)

B output level: 0.7 Vp-p (75 Ω)

Output terminal: AV

## Audio output:

Output level: 2 Vrms (1 kHz, 0 dB)

Output terminal:

**The United Kingdom and Continental Europe**

Pin jack/AV

**Others**

Pin jack

Number of terminals: 2 channel: 1 system

5.1-channel discrete output (5.1 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)

4 Hz to 20 kHz

●DVD Audio:

●CD Audio:

(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

## Pickup:

Wave length:

662 nm/785 nm

Laser power:

CLASS 2/CLASS 3A

## NORSK

### Pickup:

Bølgeengde:

662 nm/785 nm

Laserstyrke:

Ingen farlig stråling sendes ut

## Power supply:

**The United Kingdom, Australia and N.Z.**

AC 230 to 240 V, 50 Hz

**Continental Europe**

AC 230 V, 50 Hz

**Others**

AC 220 to 240 V, 50/60 Hz

## Power consumption:

### Power consumption in standby mode:

**approx. 1 W**

## Dimensions (W×D×H):

430 mm × 248 mm × 43 mm

## Mass:

2.2 kg

## Note

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

<sup>#1</sup>Conforming to IEC62107

<sup>#2</sup>MPEG-1 Layer 3, MPEG-2 Layer 3

<sup>#3</sup>Windows Media Audio Ver.9.0 L3

Not compatible with Multiple Bit Rate (MBR)

<sup>#4</sup>Exif Ver 2.1 JPEG Baseline files

Picture resolution: between 160×120 and 6144×4096 pixels (sub sampling is 4:2:2 or 4:2:0)

<sup>#5</sup>MPEG4 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.

<sup>#6</sup>DivX 3.11, 4.x, 5.x

GMC (Global Motion Compensation) is not supported.

<sup>#7</sup>The total combined maximum number of recognizable audio, picture and video contents and groups: 4000 audio, picture and video contents and 400 groups.

## CAUTION!

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

## WARNING:

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

## CAUTION!

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

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

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

### The Middle East, South Africa and Asia

THIS UNIT IS INTENDED FOR USE IN TROPICAL CLIMATES.

### The United Kingdom, Continental Europe, Australia and N.Z.

THIS UNIT IS INTENDED FOR USE IN MODERATE CLIMATES.

## SUOMI

### VAROITUS!

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

### VAROITUS:

TULIPALO-, SÄHKÖISKUVAARAN TAI TUOTETTA KOHTAAVAN MUUN VAHINGON VÄHENTÄMISEKSI EI LAITETTA SAA ALTISTAA SATEELLE, KOSTEUELLE, VESIPISAROILLE TAI ROISKEELLE, EIKÄ NESTETTÄ SISÄLTÄVIÄ ESINEITÄ, KUTEN ESIMERKIKSI MALJAKOITA, SAA ASETTAA LAITTEEN PÄÄLLE.

### VAROITUS!

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

TÄMÄ LAITE ON TARKOITETTU KÄYTETTÄVÄKSI LEUDOSSA ILMASTOSSA.

Laite tulee asettaa lähelle verkkopistorasiaa ja pistokkeen täytyy olla sellaisessa asennossa, että siihen on helppo tarttua ongelman sattuessa.

## NORSK

### ADVARSEL!

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

### ADVARSEL:

FOR Å REDUSERE FAREN FOR BRANN, ELEKTRISK STØT ELLER SKADER PÅ PRODUKTET, MÅ DETTE APPARATET IKKE UTSETTES FOR REGN, FUKTIGHET, VANNDRÅPER ELLER VANNSPRUT. DET MÅ HELLER IKKE PLOSSERES GJENSTANDER FYLT MED VANN, SLIK SOM BLOMSTERVASER, OPPÅ APPARATET.

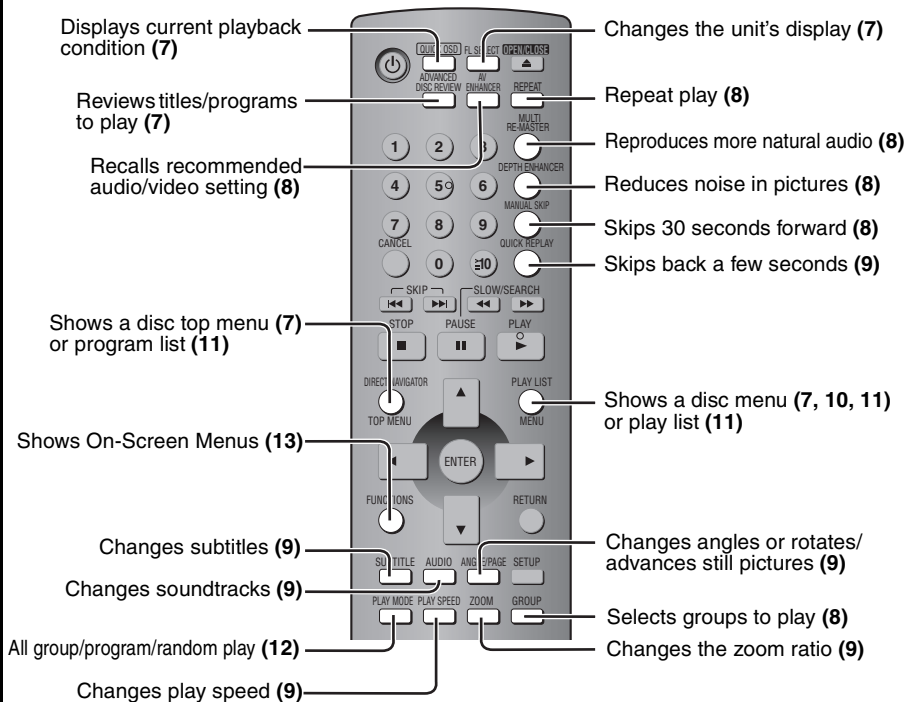
### ADVARSEL!

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

DETTE APPARATET ER BEREGNET TIL BRUK UNDER MODERATE KLIMAFORHOLD.

Utstyret bør plasseres i nærheten av AC-stikkkontakten, og stoppslet må være lett tilgjengelig hvis det skulle oppstå problemer.

# Main feature index (Reference pages are shown in parentheses.)

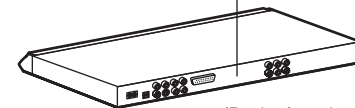


<b>CAUTION</b>	- LASER RADIATION WHEN OPEN. DO NOT STARE INTO BEAM.	FDA 21 CFR / Class II
<b>CAUTION</b>	- VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.	IEC60825-1/Class 3b
<b>ATTENTION</b>	- RAYONNEMENT LASER VISIBLE ET INVISIBLE EN CAS D'OUVERTURE. EXPOSITION DANGEREUSE AU FAISCEAU.	
<b>ADVARSEL</b>	- SYNLIG OG USYNLIG LASERSTRÅLING VED ÅBNING. UNNØDIG EKSPONERING FOR STRÅLING.	
<b>VARO!</b>	- AVATTAESSA OLET ALTIINA NÄKYVÄÄ JA NÄKYMÄTÖN LASERSÄTEILYLLÄ. ÄLÄ KATSO SÄTEESEEN.	
<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. UNNØDIG EKSPONERING FOR STRÅLING.	
<b>VORSICHT</b>	- SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEOFFNET, 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>	- この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。	RQLCA01141

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



## LUOKAN 1 LASERLAITE KLASS 1 LASER APPARAT



(Back of product)

The illustration shows the models for the United Kingdom and Continental Europe.

**Matsushita Electric Industrial Co., Ltd.**  
Web Site: <http://www.panasonic.co.jp/global/>

(En)

RQT8117-B  
F0305AK0



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