Dear customer

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

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

<table>
<thead>
<tr>
<th>Region</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>The United Kingdom, Continental Europe, the Middle East and South Africa</td>
<td>2</td>
</tr>
<tr>
<td>Asia</td>
<td>3</td>
</tr>
<tr>
<td>Australia and N.Z.</td>
<td>4</td>
</tr>
</tbody>
</table>

Example:
The United Kingdom and Continental Europe

Region Number Example:
The United Kingdom, Continental Europe, the Middle East and South Africa
Asia
Australia and N.Z.
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.

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.

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

THIS PLUG IS NOT WATERPROOF—KEEP DRY.

Before use
Remove the connector cover.

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

1. Open the fuse cover with a screwdriver.
2. Replace the fuse and close or attach the fuse cover.

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
  - The United Kingdom (RJA0053-3X)
  - 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)
  - Saudi Arabia (RJA0019-2X)

- 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.

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

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

The United Kingdom and Republic of Ireland

- 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

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

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

**DVD-RAM**
- 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.

**JPEG**
- Recorded with Panasonic SD multi cameras or DVD-Video recorders using the DCF (Design rule for Camera File system) Standard Version 1.0.

**MPEG4**
- 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].

**DivX**
- Created using DivX ver.3.11, 4.x, 5.x [DivX video system/MPEG3, Dolby Digital or MPEG audio system].

**DVD-Audio**
- DVD-A, DVD-V
- Some DVD-Audio discs contain DVD-Video content. To play DVD-Video content, select “Play as DVD-Video” (page 15, Other Menu).

**DVD-Video**
- DVD-V
- Some DVD-Video discs contain DVD-Video content. To play DVD-Video content, select “Play as DVD-Video” (page 15, Other Menu).

**DVD-R (Video)/DVD-RW (Video)**
- Discs recorded and finalized on DVD video recorders or DVD video cameras
- DivX Created using DivX ver.3.11, 4.x, 5.x [DivX video system/MPEG3, Dolby Digital or MPEG audio system].

**DVD-RW (Video)**
- 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).

**Video CD**
- Including SVCD (Conforming to IEC62107)

**CD**
- This unit can play CD-R/RW recorded with the above formats. Close the sessions or finalize the disc after recording.
- WMA, MP3, JPEG This unit also plays HighMAT discs.
- WMA This unit is not compatible with Multiple Bit Rate (MBR: a file that contains the same content encoded at several different bit rates).
- DivX Created using DivX ver.3.11, 4.x, 5.x [DivX video system/MPEG3, Dolby Digital or MPEG audio system].
- 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.)

**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, DVCD and SVCD that do not conform to IEC62107.

**Regarding DVD-Audio**
- Some multi-channel DVD-Audio will prevent down-mixing from their cartridge, 2.6-GB and 5.2-GB DVD-RAM, and unified video recording standard), such as DVD video recorders, DVD video cameras, personal computers, etc.
- “Chaoji VCD” available on the market including CVD, DVCD and SVCD that do not conform to IEC62107.
- Recorded with Panasonic SD multi cameras or DVD-Video recorders using the DVCD and SVCD that do not conform to IEC62107.
- 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."
**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.

### With VIDEO IN or S VIDEO IN

- **Audio/Video cable (included)**

### With COMPONENT VIDEO IN

- **Audio/Video cable (included)**

### With SCART (AV) IN

- **21-pin SCART cable**

- **Audio/Video cable (included)**

*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.

### 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).**

### Back of the unit

**The United Kingdom and Continental Europe**

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

**For the Middle East only (except United Arab Emirates)**

Read the caution for AC mains lead on page 2 before connection.

**Saudi Arabia**

**AC mains lead (included)**

To household mains socket
**Enjoying multi-channel surround sound**

- **WITH COAXIAL IN or OPTICAL IN**
  - Amplifier with a built-in decoder or a decoder-amplifier combination
  - Coaxial cable: Connect to TV.
  - Optical digital audio cable: Do not bend sharply when connecting.
  - **Connect with 5.1 ch AUDIO OUT terminals (right).**

- **WITH AUDIO IN 5.1ch**
  - To obtain maximum performance of DVD-Audio multi-channel PCM sound, this connection is recommended.
  - Amplifier: Audio cable:
  - Connect cables to terminals corresponding to the speakers you have connected.

**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.

1. **Power ON.**
2. **SETUP**
   - Shows QUICK SETUP screen.
3. **RETURN**
   - Follow the message and make the settings.
4. **ENTER**
   - Press to finish QUICK SETUP.
5. **SETUP**
   - Press to exit.

To change these settings later, select “QUICK SETUP” (page 17, “Others” tab).
Basic play

1 Power ON.
2 Open the disc tray.
3 Load the disc.
4 Start play.

Remote control sensor

Displaying current playback condition ⇒ page 7

Standby/on switch (_IDLE)
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 (_IDLE)
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 [STOP] 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 20, 21).
Convenient functions

Displaying current playback condition (Quick On Screen Display)

Press [QUICK OSD].

Basics ———> Details

Basics

- Current playback number
- Elapsed play time

Details

- 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

ADVANCED DISC REVIEW

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.
- This does not work when playing a play list (page 11).
Convenient functions

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”.

- **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/V) (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.

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”.

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

Starting play from a selected group

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].
3. **DVD-A** To play all groups (page 12, All group play)

Recall recommended audio/video setting (AV Enhancer) Functions

Reproducing more natural audio (Multi Re-master)

<table>
<thead>
<tr>
<th>Setting</th>
<th>Type of music</th>
<th>Other discs</th>
</tr>
</thead>
<tbody>
<tr>
<td>DVD-A</td>
<td>Discs recorded with 48 kHz only</td>
<td></td>
</tr>
<tr>
<td>DVD-V</td>
<td>Discs recorded with 44.1 kHz and 48 kHz only</td>
<td></td>
</tr>
<tr>
<td>VCD</td>
<td>CD</td>
<td></td>
</tr>
<tr>
<td>WMA</td>
<td>MP3</td>
<td></td>
</tr>
</tbody>
</table>

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)

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”.

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.

Convenient when you want to skip commercials etc.

During play, press [MANUAL SKIP].

- This may not work depending on the play position.

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

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

- 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.

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

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

Cinemascope2 ← CinemaScope1 ← American Vista

MPEG4 → DVDX

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 → DVDX 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.

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

Changing play speed

Changing soundtracks

Press [AUDIO] to select the soundtrack.

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

Zoom

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

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

Cinemascope2 ← CinemaScope1 ← American Vista

MPEG4 → DVDX

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 → DVDX 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.

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

Changing soundtracks

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”.

Press [SUBTITLE] to select “On” or “Off”.

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

Quick replay

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

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

Convenient functions

Signal type/data

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

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

Example: 32/2 ch

1: Low frequency effect (not displayed if there is no signal)
2: Mono surround
3: Stereo surround (left/right)
4: Center
5: Front left
6: Front right
7: Front left + Front right
8: 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.

Changing subtitles

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”.

Press [SUBTITLE] to select “On” or “Off”.

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

Quick replay

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

- This may not work depending on the disc’s recording.
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].
4. To start play from the selected content
   - Press [▲ ▼] to select and press [ENTER].

### 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 JPEG

#### 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
- To search by a content or group title

### Searching by a content or group title

1. Press [MENU].
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].

- To switch between guide messages and the elapsed play time indicator
- To search by a content or group title

### Playing data discs

- WMA
- MP3
- JPEG
- MPEG4
- DivX

### Playing from the selected item

- Group and content number currently playing
- Number currently selected
- JPEG
- MPEG4 and DivX video

- 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].
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].

Press [FUNCTIONS] to switch between guide messages and the elapsed play time indicator.

Playing CD

<table>
<thead>
<tr>
<th>MENU</th>
<th>Playing CD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Titles appear with CD text playback.</td>
<td></td>
</tr>
<tr>
<td>1 Press [MENU].</td>
<td></td>
</tr>
<tr>
<td>2 Press [▲ ▼] to select the track and press [ENTER].</td>
<td></td>
</tr>
<tr>
<td>• To exit the screen, press [MENU].</td>
<td></td>
</tr>
</tbody>
</table>

Playing HighMAT™ discs

<table>
<thead>
<tr>
<th>TOP MENU</th>
<th>Playing HighMAT™ discs</th>
</tr>
</thead>
<tbody>
<tr>
<td>While the menu is displayed</td>
<td></td>
</tr>
<tr>
<td>Press [▲ ▼ ◀ ►] to select then press [ENTER].</td>
<td></td>
</tr>
</tbody>
</table>

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].

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].
Changing the play sequences

**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**
- This unit cannot play files recorded using packet write.

**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 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.
  - 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 a 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**

### All group/Program/Random play

<table>
<thead>
<tr>
<th>PLAY MODE</th>
<th>DVD-A</th>
<th>DVD-V</th>
<th>VCD</th>
<th>CD</th>
<th>WMA</th>
<th>MP3</th>
<th>JPEG</th>
<th>MPEG4</th>
<th>DivX</th>
</tr>
</thead>
</table>

**While stopped, press [PLAY MODE].**

All group **(DVD-A) → Program → Random**

- 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)

- To change an item, repeat step 1.
- To clear an item, press [CANCEL] (or select “Clear” and press [ENTER]).

#### 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)**
   - Press the numbered buttons to select a group or a title (page 7, Enter number).
2. **(DVD-A)**
   - Press [►] (PLAY).

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

Press [PLAY MODE] several times while stopped.
Items shown differ depending on the type of software.

**Main menus**

- **Program, Group, Title**
  - To start from a specific item

- **Chapter, Track**
  - 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.

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

- **Video**
  - To display pixel number
  - DivX fps (frame per second) is also displayed.

- **Audio**
  - To display the current bitrate or sampling frequency
  ➔ page 9, Changing soundtracks)

- **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
  ➔ page 9, Angle select)

- **Rotate Picture**
  - ➔ page 9, Still picture rotation)

- **Slideshow**
  - To turn on/off slideshow
  - To change the slideshow timing (0-30 sec)

- **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)
  - To repeat a specified section
  - Press [ENTER] at the starting and ending points.
  - Press [ENTER] again to cancel.

- **A-B Repeat**
  - 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.

- **Marker**
  - ➔ page 7, Reviewing titles/programs to play)
### Using On-Screen Menus

#### Picture Menu

<table>
<thead>
<tr>
<th>Picture Mode</th>
<th>Normal:</th>
<th>Normal images</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cinema1:</td>
<td>Mellows images and enhances detail in dark scenes.</td>
<td></td>
</tr>
<tr>
<td>Cinema2:</td>
<td>Sharpens images and enhances detail in dark scenes.</td>
<td></td>
</tr>
<tr>
<td>Animation:</td>
<td>Suitable for animation</td>
<td></td>
</tr>
<tr>
<td>Dynamic:</td>
<td>Enhances the contrast for powerful images.</td>
<td></td>
</tr>
<tr>
<td>User (Press [ENTER]) to select “Picture Adjustment” (_below)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Picture Adjustment**
- **Contrast:** Increases the contrast between light and dark parts of the picture (−7 to +7).
- **Brightness:** Brightens the picture (0 to +15).
- **Sharpness:** Adjusts the sharpness of the edges of the horizontal lines (−7 to +7).
- **Colour:** Adjusts the shade of the picture’s colour (−7 to +7).
- **Gamma:** Adjusts the brightness of dark parts (0 to +5).
- **Depth Enhancer (_below, page 8, Reducing the rough noise in the background)**
- **MPEG DNR:** Smoothes block noise and reduces the smudging that appears around contrasting sections of the picture (0 to +3).

#### Audio Menu

<table>
<thead>
<tr>
<th>Audio Menu</th>
<th>DVD-RW(DV)</th>
<th>DVD+V</th>
<th>VCD (2 or more channels)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP (Speaker) 1</td>
<td>Natural</td>
<td>SP 2 Enhanced</td>
<td></td>
</tr>
<tr>
<td>HP (Headphone) 1</td>
<td>Natural</td>
<td>HP 2 Enhanced</td>
<td></td>
</tr>
</tbody>
</table>

- **Advanced Surround**
  - When using discs recorded with surround sound, sound seems to come from speakers on either side of you.
  - When using headphones with 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.

#### Dialogue Enhancer

To make the dialogue in movies easier to hear
- **Dolby Digital** (Dolby Digital, DTS, MPEG DNR: 3-channel or over, with the dialogue recorded in the center channel)
- **MPEG4** (Dolby Digital, 3-channel or over, with the dialogue recorded in the center channel)

- **Sound Enhancement**
  To enjoy clear sound by adding higher frequency signals not recorded on the disc.
  - Except MPEG4: **Dolby Digital**

#### Multi Re-master (_below, page 8, Reproducing more natural audio)**

- **Transfer Mode**
  - When you select “xxx p” (progressive) and a confirmation screen appears, select “Yes” only if connecting to a progressive output compatible television.
  - The numbers displayed depend on the geographical location and disc being played. One of the above numbers is displayed.

- **Video Output Mode**
  - *480p/525p/576p/625p (progressive)*
  - *480i/525i/576i/625i (interlace)*
  - When playing PAL discs
    - **Auto:** Detects 25 frame-per-second film content and appropriately converts it.
    - **Video:** Select when using Auto, and the video content is distorted.
  - When playing NTSC disc
    - **Auto1** (normal): Detects 24 frame-per-second film content and appropriately converts it.
    - **Auto2:** Compatible with 30 frame-per-second film content in addition to 24 frame-per-second film content.
    - **Video:** 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 (Interface)” or “P (Progressive)” depending on which constructing method was used when the contents were recorded to disc.
  - **Auto I (Interface)**
  - **P (Progressive)**

- **Digital Filter**
  - When audio is output from 2 ch or 5.1ch AUDIO OUT terminals (_below, page 4, 5)
  - **Normal:** A clear timbre.
  - **Slow:** Gives music atmosphere, with softness and a feeling of depth.

- **Attenuator**
  - When audio is output from 2 ch or 5.1ch AUDIO OUT terminals (_below, page 4, 5)
  - **Switch on if sound is distorted.**

- **Display Menu**
  - **Information** On — 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.
### Other OSD

- **Quick OSD** (page 7, Displaying current playback condition)
- **Bit Rate Display**: RAM, DVD-RW (VBR), DVD-V, VCD, MPEG4, DivX, On → Off
- **GUI See-through**: Off, On, Auto
- **GUI Brightness**: -3 to +3
- **Setup** (page 16, Changing the player settings)

### AV Enhancer

**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**:
- Multi Re-master (page 8, Reproducing more natural audio)
- Advanced Surround/Dialogue Enhancer/Sound Enhancement (page 14, Audio Menu)

**Video settings**:
- Depth Enhancer (page 8, Reducing the rough noise in the background)

1. Select “Save Settings” and press [ENTER].
2. Press [▲ ▼] 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 8, Recalling recommended audio/video setting)

To confirm the settings

1. Press [▲ ▼] 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].

### Setup

- **Play as DVD-Video** or Play as DVD-Audio
- **Play as DVD-VR** or **Play as HighMAT** or **Play as DivX Certified**

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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

Audio
Choose the audio language.

Subtitle
Choose the subtitle language.

Menos
Choose the language for disc menus.

Advanced Disc Review
Select how to review (page 7).

Ratings
Set a ratings level to limit DVD-Video play.
Follow the on-screen instructions.

“Video” tab

TV Aspect
Choose the setting to suit your television and preference.

4:3 Pan&Scan: Regular aspect television (4:3)
The sides of the widescreen picture are cut off so it fills the screen (unless prohibited by the disc).

4:3 Letterbox: Regular aspect television (4:3)
Widescreen picture is shown in the letterbox style.

16:9: Widescreen television (16:9)

TV Type
Select to suit the type of television.

Standard (Direct View TV) CRT Projector LCD TV/Projector Projection TV Plasma TV

Time Delay
When connected with an AV amplifier and Plasma display, adjust if you notice the audio is out of sync with the video.

0ms 20ms 40ms 60ms 80ms 100ms

Video Out (AV/Component)
Choose the video signal format to be output from the SCART and COMPONENT VIDEO OUT terminals (page 4).

Video/YPbPr S-Video/YPbPr RGB/No Output

Still Mode
Specify the type of picture shown when paused.

Automatic Field Frame

NTSC Disc Output
Choose PAL 60 or NTSC output when playing NTSC discs.

PAL60: NTSC discs can be viewed on PAL television.
NTSC: Output signal from NTSC discs remains as NTSC.

NTSC: “NTSC” is the factory preset.

Automatic: (Except Asia)
PAL
NTSC/PAL60: Output will depend on “NTSC Disc Output” setting (page 4).

Picture/Video Output
Choose the video signal format to be output for JPEG, MPEG4 and DivX video.

Automatic: (Except Asia)
PAL
NTSC/PAL60: “NTSC/PAL60” is the factory preset.

If picture output is not smooth during playback, change the setting.
### “Audio” tab

**PCM Digital Output**
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.

<table>
<thead>
<tr>
<th>Off:</th>
<th>When not connected with COAXIAL or OPTICAL terminal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Up to 48 kHz:</strong></td>
<td>When connected to equipment compatible with 44.1 or 48 kHz</td>
</tr>
<tr>
<td><strong>Up to 96 kHz:</strong></td>
<td>When connected to equipment compatible with 88.2 or 96 kHz</td>
</tr>
<tr>
<td><strong>Up to 192 kHz:</strong></td>
<td>When connected to equipment compatible with 176.4 or 192 kHz</td>
</tr>
</tbody>
</table>

- Signals from copy-protected discs are converted to 48 or 44.1 kHz.
- Some equipment cannot handle sampling frequencies of 88.2 kHz, even if they can handle 96 kHz. Read your equipment’s operating instructions for details.

**Dolby Digital**
With COAXIAL or OPTICAL connections (page 5)

- **Bitstream**
- **PCM**

Select “Bitstream” when the equipment can decode the bitstream (digital form of multi-channel data). Otherwise, select “PCM”. (If the bitstream is output to the equipment without a decoder, high levels of noise may be output and may damage your speakers and hearing.)

**DTS Digital Surround**
With COAXIAL or OPTICAL connections (page 5)

- **Bitstream**
- **PCM**

**MPEG Bitstream**
With COAXIAL or OPTICAL connections (page 5)

- **PCM**
- **Bitstream**

**Dynamic Range Compression**
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)

**Speaker Settings**
Choose the settings to suit your audio system and the listening environment (page 18, Changing the speaker setting to suit your speakers).

- **Speaker Type**
  - **Multi-channel:** when 3 or more speakers are connected.
  - **2-channel:** when 2 speakers are connected.
- **Multi-channel Setting** (if you select “Multi-channel”)
  - **Speaker presence and size**
  - **Delay time**
  - **Channel balance**

### “Display” tab

**Menu Language**

<table>
<thead>
<tr>
<th>English</th>
<th>Français</th>
<th>Deutsch</th>
<th>Italiano</th>
<th>Español</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polski</td>
<td>Português</td>
<td>Русский</td>
<td>Svenska</td>
<td>Nederlands</td>
</tr>
</tbody>
</table>

**On-Screen Messages**

| On | Off |

**Background during Play**
Select background during JPEG, MPEG4 and DivX video playback.

| Black | Grey |

### “Others” tab

**FL Dimmer**
Changes the brightness of the unit’s display.

| Bright | Dim |

**Auto Power Off**

| On: The unit switches to standby mode after about 30 minutes in the stop mode. |
| Off |

**DivX Registration**
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)

**Quick Setup**

| Yes | No |

**Re-initialise Setting**
This returns all values in the Setup menus to the default settings.

| Yes: The password screen is shown if “Ratings” are set. Please enter the same password. After “INIT” on the display disappears, turn the unit off and on again. |
| No |

### 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

**Notes:**

1. The original language designed on the disc is selected.
2. Input a code number referring to the table (page 18).
3. If the language selected for “Audio” is not available, subtitles appear in that language (if available on the disc).
4. The United Kingdom and Continental Europe
5. The Middle East, South Africa, Australia and N.Z.
6. 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 is required. (Select settings to suit your preference if desirable.)

1. Press \[3\] to select an item and press \[ENTER\].
2. Press \[3\] to change the content and press \[ENTER\].

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.

1. Press \[3\] to select an item and press \[ENTER\].
2. Press \[3\] to change the content and press \[ENTER\].
3. While listening to the test signal, press \[3\] 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.)
4. Press \[ENTER\].

Channel balance (c)

1. Select "Test" and press \[ENTER\].
2. While listening to the test signal, press \[3\] 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).
3. The test signal stops.
4. Press \[ENTER\].

To finish the speaker setting

Press \[3\] to select "Exit" and press \[ENTER\].
**About DivX VOD content**

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

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

**Display the unit’s registration code**

(⇒ page 17, “DivX Registration” in “Others” tab)

- 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 [INT] (STOP) and [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.

**DivX**

A video compression format developed by DivX Networks, 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.

**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.

**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.

**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.

**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 handle the plug with wet hands. This can cause electric shock.

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.

**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

<table>
<thead>
<tr>
<th>Issue</th>
<th>Possible Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>No power</td>
<td>Insert the AC mains lead securely into the household mains socket. (4)</td>
<td>Have you forgotten your ratings password? Reset all the settings to Factory Preset.</td>
</tr>
<tr>
<td>The unit is automatically switched to the standby mode.</td>
<td>When “Auto Power Off” is set to “On”, the unit automatically switches to standby after approximately 30 minutes in the stop mode. (17)</td>
<td>Check the batteries are installed correctly. (5)</td>
</tr>
</tbody>
</table>

### No operation

<table>
<thead>
<tr>
<th>Issue</th>
<th>Possible Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>No response when any buttons pressed.</td>
<td>This unit cannot play discs other than the ones listed in these operating instructions. (3)</td>
<td>Check the power or input setting of the connected equipment.</td>
</tr>
<tr>
<td>No response when remote control buttons pressed.</td>
<td>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.</td>
<td>Check that the batteries are installed correctly. (5)</td>
</tr>
<tr>
<td>No picture or sound.</td>
<td>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.</td>
<td>Make sure that progressive output has not been selected when the connected television is not progressive compatible.</td>
</tr>
<tr>
<td>You have forgotten your ratings password.</td>
<td>The batteries are depleted: Replace them with new ones. (5)</td>
<td>Use a multi-system or NTSC television.</td>
</tr>
<tr>
<td>You have forgotten your ratings password.</td>
<td>Point the remote control at the remote control sensor and operate. (6)</td>
<td>Use a multi-system or PAL television.</td>
</tr>
<tr>
<td>You have forgotten your ratings password.</td>
<td>The disc has something recorded on it.</td>
<td>Use the television to change the aspect. If your television does not have that function, change “4:3 Aspect” in Display Menu. (9)</td>
</tr>
<tr>
<td>You have forgotten your ratings password.</td>
<td>While stopped, press and hold [QUICK OSD] and [II] 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.</td>
<td>Change “Source Select” in Picture Menu. (14) DivX</td>
</tr>
</tbody>
</table>
### Troubleshooting guide

#### Menu displays

<table>
<thead>
<tr>
<th>Error Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;NPLAY&quot;</td>
<td>You inserted a disc the unit cannot play; insert one it can. (3)</td>
</tr>
<tr>
<td>&quot;U11&quot;</td>
<td>You inserted a blank disc.</td>
</tr>
<tr>
<td>&quot;H&quot;</td>
<td>You inserted a disc that has not been finalized. (3)</td>
</tr>
<tr>
<td>&quot;NODISC&quot;</td>
<td>The disc may be dirty.</td>
</tr>
<tr>
<td>&quot;U11&quot;</td>
<td>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. If the service numbers fail to clear, note the service number and contact a qualified service person.</td>
</tr>
<tr>
<td>&quot;Authorization Error&quot;</td>
<td>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. DivX (19)</td>
</tr>
</tbody>
</table>

#### Progressive video

<table>
<thead>
<tr>
<th>Issue</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is ghosting when progressive output is on.</td>
<td>Set &quot;Subtitle Position&quot; in Display Menu to &quot;0&quot;. (14)</td>
</tr>
<tr>
<td>Pictures not in progressive output.</td>
<td>Turn off TV's zoom function. Use the other preset aspect ratios or manual adjustment. (9)</td>
</tr>
</tbody>
</table>

#### Sound incorrect

<table>
<thead>
<tr>
<th>Issue</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sound distorted.</td>
<td>Set &quot;Advanced Surround&quot; in Audio Menu to &quot;Off&quot;. (14)</td>
</tr>
<tr>
<td>Sound may not work well.</td>
<td>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.</td>
</tr>
<tr>
<td>Match the speaker settings with the connected equipment.</td>
<td>(18)</td>
</tr>
<tr>
<td>Effects do not work.</td>
<td>None of the audio effects work when the unit is outputting bitstream signals from the DIGITAL AUDIO OUTPUT terminal. (5)</td>
</tr>
<tr>
<td>Multi Re-master, Advanced Surround and Sound Enhancement do not work.</td>
<td>(14)</td>
</tr>
<tr>
<td>No sound</td>
<td>There may be a pause in sound when you change the play speed. Audio may not be output due to how files were created. (15)</td>
</tr>
</tbody>
</table>

#### Recording

<table>
<thead>
<tr>
<th>Issue</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cannot record to digital recording equipment. (Incorrect sound recorded.)</td>
<td>You cannot record WMA/MP3. You cannot record DVDs that have protection preventing digital recording. You cannot record DVDs if the recording equipment cannot handle signals with a sampling frequency of 48 kHz. Make the following settings: – Advanced Surround: Off (14) – PCM Digital Output: Up to 48 kHz (17) – Dolby Digital/DTS Digital Surround/MPEG*: PCM (17)</td>
</tr>
</tbody>
</table>

### Television displays

<table>
<thead>
<tr>
<th>Error Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;NO&quot;</td>
<td>The operation is prohibited by the unit or disc.</td>
</tr>
<tr>
<td>&quot;Cannot play group xx, content xx&quot;</td>
<td>You are trying to play incompatible group or content. (12)</td>
</tr>
<tr>
<td>&quot;Cannot display group xx, content xx&quot;</td>
<td>You are trying to play protected group or content. You cannot play it.</td>
</tr>
<tr>
<td>&quot;Group xx, content xx is protected&quot;</td>
<td>You are trying to play protected group or content. You cannot play it.</td>
</tr>
<tr>
<td>&quot;Cannot play audio&quot;</td>
<td>Audio has not been recorded, or recorded in a format this unit cannot playback. Video playback only is possible. (12)</td>
</tr>
<tr>
<td>&quot;Check the disc&quot;</td>
<td>This disc may be dirty. (3)</td>
</tr>
<tr>
<td>&quot;This disc may not be played in your region&quot;</td>
<td>You can only play DVD-Videos if their region number is the same or includes the same region number as the unit or if the DVD-Videos is marked &quot;ALL.&quot; Confirm the region number for the unit on the rear panel. (Cover)</td>
</tr>
<tr>
<td>No on-screen display.</td>
<td>Select &quot;On&quot; in &quot;On-Screen Messages&quot; in &quot;Display&quot; tab. (17)</td>
</tr>
<tr>
<td>&quot;Authorization Error&quot;</td>
<td>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. DivX (19)</td>
</tr>
<tr>
<td>&quot;Expired&quot;</td>
<td>The DivX VOD content has zero remaining plays. You cannot play it. DivX (19)</td>
</tr>
</tbody>
</table>

### MPEG: Except Asia
- "Rented Movie Expired"s2: The DivX VOD content has zero remaining plays. You cannot play it. DivX (19)
- "Rental Expired": (19) 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 6, 7)
- (2) DVD-RAM (DVD-VR, JPEG 4, 7, MPEG4 5, 7, DivX 6, 7)
- (3) DVD-R (DVD-Video, DivX 6, 7)
- (4) DVD-RW (DVD-Video, DVD-VR, DivX 6, 7)
- (5) BD/BD-R (Video)
- (6) CD, CD-R/RW [CD-DA, Video-CD, SVCD 1, MP3 2, 7, WMA 3, 7, JPEG 4, 7, MPEG4 5, 7, DivX 6, 7, 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:**
- Y output level: 1 Vp-p (75 Ω)
- P-R output level: 0.7 Vp-p (75 Ω)
- C output level: NTSC: 0.286 Vp-p (75 Ω), PAL: 0.300 Vp-p (75 Ω)
- Output terminal: Pin jack (Y: green, P-: blue, P+: red) (1 system)

**RGB video output:**
- R output level: 0.7 Vp-p (75 Ω)
- G output level: 0.7 Vp-p (75 Ω)
- B output level: 0.7 Vp-p (75 Ω)
- Output terminal: The United Kingdom and Continental Europe: 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

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

**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: approx. 11 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.

- **Audio:**
  - Conforming to IEC62107
  - MPEG-1 Layer 3, MPEG-2 Layer 3
  - Windows Media Audio Ver.9.0 L3
  - Not compatible with Multiple Bit Rate (MBR)
  - Exif Ver 2.1, JPEG Baseline files
  - Picture resolution: between 180×120 and 1614×4096 pixels (sub sampling is 4:2:2 or 4:2:0)
  - 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.
  - DivX 3.11, 4.x, 5.x
  - GMC (Global Motion Compensation) is not supported.

- **Video:**
  - Conforming to SD VIDEO specifications (ASF standard)/MPEG4 (Simple Profile) video system/G.726 audio system.
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.

VAROITUS!
LAITTEEN KÄYTTÄMINEN MUulla KUIN TÄSSÄ KÄYTTÖOHJEESSA MAINITULLA TAVALLA SAATTAA ALTISTAA KÄYTTäJÄN TURVALLISUUSLUOKAN 1 YLITTÄVÄLLE NAKYMÄTÖMÄLLE LASERSÄTEILYLLE.

VAROITUS!
≥ ALÄ ASENA TAII LAITA TAIETTA KABINETTITYYPPISEEN KIRJAKAAPPIN TAI MUUHUN SULJETTUUN TILAAN, JOTTA TUULETUS ONNISTUUVAI. VARMISTA, ETTÄ VERHO TI MIkä ÄN MuU MATERIAALI EI HUONONNA TUULETUSTA, JOTTA VÄLTETÄÄN SÄEDÄNENEMISESTA JOHTUVA SÄHKÖSÄITÄ- TAII TUULIPALOVARAA.
≥ ALÄ PEITÄ LAITTEEN TUULETUSASKOJA SANOMALEHDELLÄ, PÖYTÄLINNALLA, VERHOLLTA TAII MUULLA VASTAVALLLA ESINEELLÄ.
≥ ALÄ ASETA PALAVAA KYNTTILÄÄ TAII MUUAT AVOTULEN LAHDETTA LAITTEEN PAÄLLE.
≥ HAVITA PARISTOT LUONTIO VAIHINGOITTAMATTOMALLA TAVALLA.

VAROITUS!
≥ VARO!
LAITE ON TARKOITETTU KÄYTETÄVÄKSI LEUDOSSA ILMASTOSSA.

Laite tulee asetettua lähelle verkkopistorasiaa ja pistokseen täytetty olla sellaisessa asennossa, että siihen on helppo tarttua ongelman sattuessa.

Detty apparatet er beretnet til bruk under Moderat Klimaførhold. Utstyret bør plasseres i nærheten av AC-stikkontakten, og stopset må være lett tilgjengelig hvis det skulle oppstå problemer.
Main feature index (Reference pages are shown in parentheses.)

- Displays current playback condition (7)
- Reviews titles/programs to play (7)
- Recalls recommended audio/video setting (8)
- Shows a disc top menu (7) or program list (11)
- Shows On-Screen Menus (13)
- Changes subtitles (9)
- Changes soundtracks (9)
- All group/program/random play (12)
- Changes play speed (9)
- Changes the unit's display (7)
- Repeat play (8)
- Reproduces more natural audio (8)
- Reduces noise in pictures (8)
- Skips 30 seconds forward (8)
- Skips back a few seconds (9)
- Shows a disc menu (7, 10, 11) or play list (11)
- Changes angles or rotates/advances still pictures (9)
- Selects groups to play (8)
- Changes the zoom ratio (9)

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